

Boyd Smart, PE

Forensic Engineering Expertise

Structural Analysis/Design

Review appropriate documents, including project plans and specifications as it relates to the building structure for purposes of failure analysis and extent of resulting damages.

Origin & Cause

Determine the source and responsible party or element related to the failure of a structural or architectural element, or water damage in a building. Examples of past work include failure of roofing and wall cladding causing moisture entry, humidity and condensation related losses, and groundwater entry.

Inspection and Evaluation of Roofing Systems

This includes steep and low slope roofs as well as various types of roofing materials, including both common and unique roofing applications. Past work involved offering opinions and repairs related to installation deficiencies and storm-related damages, including for hail and wind.

Qualifications & Training

- Avoiding Problems in Masonry Construction, American Society of Civil Engineers, February 2025
- Lateral Bracing of Flexural Members, American Society of Civil Engineers, February 2023
- Advanced Snow Loads Using ASCE 7-16, American Society of Civil Engineers, February 2023
- Design of Wood Connections, American Society of Civil Engineers, February 2023
- Structural Building Condition Surveys: Looking for Trouble, American Society of Civil Engineers, December 2022
- Construction Vibrations, American Society of Civil Engineers, December 2022
- Connection Solutions for Wood Framed Structures, American Society of Civil Engineers, December 2022
- Practical Design, Construction, and Repair Guidelines for Shotcrete Application, American Society of Civil Engineers, December 2022
- Reinforced Masonry Design and Construction, American Society of Civil Engineers, December 2022
- Design of Wood Beams and Joists, American Society of Civil Engineers, December 2022
- Ethics in Sustainable Development for Civil and Structural Engineers, American Society of Civil Engineers, December 2022
- Lessons From Failures of Building Envelope, American Society of Civil Engineers, December 2022
- Mass Timber Structural Floor and Roof Design, American Society of Civil Engineers, February 2022

Education

Bachelor of Science in Civil Engineering
Western Michigan University
December 2016

Licenses & Certifications

PE - Professional Engineer
Licensed by the State of Michigan - Number 6201309754

Employment History

Forensic Engineer

Nederveld, Inc.

March 2021 – Present

Duties include forensic engineering analysis relating to building pathology, structural damage due to fire, structural damage from vehicle impacts, storm damage (wind, snow, hail), seismic, and water loss events, calculations, and plan of repair design.

Transportation Construction Engineer

AECOM, Grand Rapids, MI

May 2018 – March 2021

Duties included assist project engineer in construction oversight for full reconstruct of vehicle and pedestrian bridges, freeway pavement, sign structures, and retaining walls. Review and approve of quality control plans. Coordinate plan changes and construction activities with field staff. Responsible for tracking and providing material analysis reports for stakeholders at key project milestones. Inspect, document, and monitor contractor work operations in compliance with contract standards and specifications for highway infrastructure project.

Structural Engineer

William A. Kibbe & Associates, Inc., Grand Rapids, MI

February 2017 – April 2018

Duties included performing calculations for new and renovations to commercial buildings involving concrete, steel, masonry and timber. Prepared specifications for all divisions that pertained to specific projects. Coordinated with mechanical engineers, architects and field engineers to verify selected mechanical units, existing site conditions, wall sections, and various building components to minimize potential construction issues.

Professional Affiliations

Member: American Society of Civil Engineers (ASCE)

Member: National Council of Examiners for Engineering and Surveying (NCEES)

Expert Witness Experience

Depositions

January 2024

Marvin Bleiberg and Erin Bleiberg vs Auto-Owners Insurance Company

Circuit Court for the County of Oakland, Case No. 23-201777-CK

January 2025

Auto-Owners Insurance Company, Subrogee of Drew Shoemaker vs Elieff Brothers Exteriors, Inc., a Michigan Corporation and Elieff Brothers, Inc., a Michigan Corporation vs Slater Solutions, LLC, a domestic limited liability company and Southwell Builders Inc., a domestic profit corporation

Circuit Court for the County of Clinton, Case No. 24-12434-CZ