NEDERVELD
Nederveld, Inc.
Phone: 800.222.1868
ngloudeman@nederveld.com

Nicholas Gloudeman

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. Examples of past work includes failure analysis of collapsed structures (concrete, steel, wood, masonry), and various building components (windows, doors, glass, piping, roofing, exterior and interior cladding) as well as damage assessment of building structures after a fire.

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.

Building Fenestration/Building Envelope
The building envelope is a building's first line of defense against moisture entry. Identifying the type of system (single versus multiple barrier) and how the various adjoining materials' water and air barriers connect is key to effective moisture management.

Building Pathology/Construction Defects
The building pathologist relies on an in-depth knowledge of building design, construction, use, and changes as well as assessing the environment of use and the materials and how these interrelate to systematically identify, investigate, and diagnose defects in a building.

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 damage, including for hail and wind.

Education

Bachelor of Science in Mechanical Engineering
University of Pittsburgh Swanson School of Engineering, Pittsburgh, PA
April 2015
Graduated Cum Laude

Licenses & Certifications

NFRC – Certified Simulator Program – Certification No. CS-23-0137
PE – Professional Engineer
Licensed by the State of New Jersey - Number 24GE06208500

Employment History

Forensic Engineer
Nederveld, Inc.
2024 - 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.

Design Engineer
AVRO Consult Engineering, P.C., New York, NY
2015 - 2019

Senior Design Engineer
AVRO Consult Engineering, P.C., New York, NY
2019 - 2024
Managed up to 30 projects per year as the company's primary structural engineer from proposal through design, fabrication, and installation. Trained and led a team of design engineers. Drafted fee estimates, work plans, project schedules, and proposals for bids. Provided structural analysis using First Principles and Finite Element Analysis (FEA). Produced design calculations and shop drawings to ensure code, safety, and construction compliance. Coordinated with architect, engineer of record, fabricators, and installers from design assist through installation.

Notable projects include: Saint Nicholas National Shrine, World Trade Center, New York, NY; US Bank Stadium, Minneapolis, MN; Gotham Residential, New York, NY; Museum of the American Arts and Crafts Movement, Saint Petersburg, FL; 220 Central Park South, New York, NY; and South Landing Residential, Spokane, WA.

Co-op
Curtiss Wright Electro-Mechanical Division, Cheswick, PA
2013 - 2014
Produced solid edge models of Reactor Coolant Pump components for thermal and mechanical tests in ANSYS. Assisted in the production of fee estimates, work plans, project schedules, and proposals for bids.