NEDERVELD
Nederveld, Inc.
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Daniel Betz

Forensic Engineering Expertise

Structural Analysis/Design
Review appropriate documents, including project plans and specifications as it relates to the building structure for purposes of design (concrete, steel, wood), in addition to failure analysis and extent of resulting damages to structures. Examples of past work includes failure analysis of collapsed structures (concrete, wood, retaining structures), and various building components (foundations, exterior and interior cladding, structural components) 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, building foundations (residential, multi-family, light commercial) causing differential movement and failure of residential retaining structures causing soil/earth movement.

Building Fenestration/Building Envelope
The building envelope is a building's first line of defense to moisture entry. Identifying the type of system (single versus multiple barrier) and how the various adjoining materials' water, vapor, thermal, and air control layers connect is key to effective moisture management. Examples of past work include multi-family residential stucco installation, exterior cladding installation, and roofing materials.

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. Past work includes design and specification of building upgrade and remodeling and acting as an owner's representative during repair phase.

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

- Best Practices for Vibration Monitoring, Geo-Instruments, April 2019

Education

Bachelor of Science in Civil Engineering
The University of Texas at Tyler, Tyler, TX
December 2012

Associate in Applied Science
Navarro College, Corsicana, TX
May 2008

Licenses & Certifications

E.I.T. - Engineer in Training - Number 50356

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.

Senior Specialist
Lerch Bates, The Colony, Texas
2021 - 2024
Experience in project management of large-scale rehabilitation projects (structural and building enclosure), assessment and remediation design of existing structures, and performing quality assurance observation to ensure conformance to design specifications, effectively communicating expectations to client, contractors.

Staff Engineer (E.I.T.)
Terracon Consulting, Dallas, Texas
2017 - 2021
Duties included creating scope of services for proposals for individual project needs; providing engineering diagnostic (building forensic investigation) of commercial, industrial, and multi-family buildings; managing subcontractors on project specific needs; and providing probabilistic maximum loss (PML) analysis of buildings in seismic active zones within the USA (Note: not licensed to practice/stamp work within these areas).

Engineer in Training
Childress Engineering Services, Richardson, Texas
2013 - 2017
Duties included designing and engineering curtain wall systems and anchorage for multi-story commercial buildings; designing various components of light residential buildings (foundation design, shear wall lateral design and framing member design); designing retaining walls, residential basements, safe rooms, and light structural construction; and field observation/inspection of both new and construction and modifications to existing structures.

Professional Affiliations

Member: Structural Engineers of Texas (SEoT)
Member: NCEES FE for Engineers in Civil and General Discipline