



ENGINEER: CIVIL/STRUCTURAL

NICHOLAS SMITH, P.E.

EDT Engineers, P.C.
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EDUCATION

2016 **Bachelor of Science, Civil Engineering**
North Carolina State University, Raleigh, North Carolina

EXPERIENCE

August 2022 **Engineering Design & Testing Corp./EDT Engineers, P.C.**
to Present **Charlotte, North Carolina**

Consulting Engineer

Investigate instances of structural damage to building and roof systems and determine cause and severity of damage, experience with concrete slabs, open web steel joists, steel beam, and wood beam/truss supported rooftops.

April 2019 **Network Building + Consulting**
to July 2022 **Blue Bell, Pennsylvania**

Project Engineer

Perform structural analysis and investigations of various local structures including rooftops supported by concrete, steel, and wood beams, wood trusses, brick and CMU walls, billboard structures, brick smokestacks, concrete silos, steel water tanks, telecommunication towers, and concrete foundations. Design and analyze modifications for existing structures that demonstrated insufficient structural capacity per presently enforced codes as outlined by local controlling jurisdictions. Communicate the practiced means and methods with jurisdiction officials to explain engineering standards of structures and work towards a solution that would accommodate all interested parties.

June 2015 **Tower Engineering Professionals, Inc.**
to April 2019 **Raleigh, North Carolina**

Structural Staff Engineer

Research code requirements of existing structures and apply the specified loading to 3D models of structures to determine if structural capacity of the structure in question could sufficiently support the demand. Structures analyzed include rooftops, telecommunications towers, water tanks, and small wind turbines. Researched impact of code changes, including consideration of topographic features, on the resulting wind pressure to determine the change in demand compared to the original design of the structure.

EXPERIENCE

Field Experience and Consulting Activity (partial list)

Rooftop Framing Modification Investigation — *Union City, NJ*

Investigate adequacy of steel beam modifications installed to support existing wood beams supporting the roof.

Duke St. PA — *Lancaster, PA*

Explore structural adequacy of historic district building related to equipment installation.

T-Mobile Stealth Investigation — *Lancaster, PA*

Investigate existing concealed rooftop structures and develop expansion design.

Hotel Equipment Platform Investigation — *Conshohocken, PA*

Investigate existing steel rooftop equipment platform to determine if design intent was met.

West New York 3 — *Guttenberg, NJ*

Destructive rooftop investigation to determine roof structure condition and construction.

REGISTRATIONS and CERTIFICATIONS

Registered Professional Engineer in Florida (95304)

Registered Professional Engineer in North Carolina (050468)

Registered Professional Engineer in South Carolina (40745)

Registered Professional Engineer in Tennessee (127270)

Registered Professional Engineer in Virginia (065725)

National Council of Examiners for Engineers and Surveying Record (#16-292-16)

PROFESSIONAL ORGANIZATIONS

American Society of Civil Engineers (ASCE)

Structural Engineering Institute (SEI)

PRESENTATIONS

“*Exposure Category Determination and Impact on Residential Structures*”, presented at the Engineering Design and Testing Conference, February 2023 in Charlotte, NC

“*Topography Determination and Effects*”, presented at the NB+C ES Office, May 2022 in Blue Bell, PA

“*Drift Snow Determination Procedure and Application*”, presented at the NB+C ES Office, April 2022 in Blue Bell, PA

“*Bolted Connection Analysis*”, presented to NB+C ES via Webinar, April 2020 in Raleigh, NC

“*Tower Modifications*”, presented at the NB+C ES Office, October 2019 in Raleigh, NC

CONTINUING EDUCATION

- 2023 *“Sinkholes and Structural Damage: An Insurance Industry Perspective”*, Engineering Design and Testing Conference
- “Commercial Roof Information, Evaluations, Repairs and Reporting”*, Engineering Design and Testing Conference
- “Assessing Risk of Structure Damage Over Abandoned Coal Mines”*, webinar sponsored by ASCE
- “22nd Annual Paul Zia Distinguished Lecture - Design & Construction of the Rainier Square Redevelopment Project”* – webinar sponsored by North Carolina State University
- “ASCE 7-22 & IBC 2024 Update”*, webinar sponsored by ASCE
- 2022 *“21st Annual Paul Zia Distinguished Lecture - Design & Construction of the Rainier Square Redevelopment Project”* – webinar sponsored by North Carolina State University
- “SEI Standards Series – ASCE 7-22 Overview & Changes”*, webinar sponsored by ASCE
- “Network Building and Consulting – Water Tank Analysis Best Standard Practices”*, Online Seminar
- 2021 *EZ-PDH Design of Commercial Buildings to Mitigate Terrorist Attacks*, Online Seminar
- “Transforming the Rail in Virginia”*, webinar sponsored by ASCE
- EZ-PDH Innovative Building Technology*, Online Seminar
- EZ-PDH Rock Excavations Blasting Design*, Online Seminar