PERSONNEL QUALIFICATIONS

Justin B. Nevill | Associate III

EDUCATION

- University of Texas at Austin
  - Bachelor of Science, Architectural Engineering, 2016
- University of Illinois at Urbana-Champaign
  - Master of Science, Structural Engineering, 2018

PRACTICE AREAS

- Repair and Rehabilitation
- Structural Analysis/Computer Applications
- Nondestructive Evaluation
- Wind Damage
- Disaster Response
- Foundations

PROFESSIONAL AFFILIATIONS

- American Association for Wind Engineering (AAWE)
- Council on Tall Buildings and Urban Habitat (CTBUH)
- Structural Engineering Association of Illinois (SEAOI)

TECHNICAL COMMITTEES

- American Society of Civil Engineers (ASCE) - Performance-Based Wind Engineering
- CTBUH - Engineering Assembly

CONTACT

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EXPERIENCE

Justin Nevill joined WJE in 2022 with experience in condition assessments, analysis of existing structures, construction period services, and wind engineering. Mr. Nevill has worked with various structural materials, including prestressed and conventionally reinforced concrete, steel, masonry, and wood. His projects have involved nondestructive evaluation of reinforced concrete structures using sounding and ground penetrating radar.

As a doctoral student at the University of Illinois at Urbana-Champaign, Mr. Nevill studied the effect of freestream turbulence on wind loads, quantification of tornado resilience for wood structures, and tornado wind speed estimation. He designed and managed large-scale field and wind tunnel experiments to determine the relative effects of wind speed, acceleration, and turbulence on building aerodynamics. Mr. Nevill designed, programmed, deployed, and managed a suite of wind monitoring instrumentation to support ongoing research in thunderstorm wind loads.

REPRESENTATIVE PROJECTS

Repair and Rehabilitation

- Plainfield School District - Plainfield, IL: Condition assessment, repair cost estimation, flatness/levelness testing of concrete slab-on-ground, concrete sounding of slab-on-ground and footings, and construction period services of steel-framed structures with masonry infill walls
- Chicago Public Schools - IL: Field inspection of reinforced concrete repairs
- Gateway at Tempe - Tempe, AZ: Condition assessment and repair design of wood-framed balconies and elevated walkway

Structural Analysis/Computer Applications

- Black Hawk - Chicago, IL: Structural analysis of stepped, two-way podium slab
- Michigan Avenue - Chicago, IL: Structural analysis of reinforced concrete parking structure based on as-built condition

Wind Damage/Disaster Response

- Multiple Residential Structures - MI: Internal consultant on aerodynamic and terrain effects on building loads
- Tornado Damage Reconnaissance - Albany, GA (2017), Naplate, IL (2017), and Cookeville and Nashville, TN (2020): Damage surveys, including assessment of pre-storm condition and damage initiation, wind speed estimation using damage patterns, and EF Scale determination *

Foundations

- Lady Bird Lake Boardwalk - Austin, TX: Construction inspection of 1.5-mile-elevated structural steel walkway geotechnical inspection of drilled pier sockets, testing, and inspection of reinforced concrete *
- Hill Country Galleria - Austin, TX: Geotechnical inspection of drilled pier sockets, including construction over landfill *

** Projects prior to WJE*

PUBLICATIONS

- Rhee, Daniel R., Justin B. Nevill, and Franklin T. Lombardo. "Comparison of Near-Surface Wind Speed Estimation Techniques Using Different Damage Indicators from a Damage Survey of Naplate, IL EF-3 Tornado." *Natural Hazards Review*, 2022.
- Zaldivar de Alba, Antonio, Franklin T. Lombardo, Jason Lopez, and Justin Nevill. "Development and validation of a mobile bluff-body to understand extreme wind loading." *Journal of Wind Engineering and Industrial Aerodynamics*, 2021.
- Nevill, Justin B. and Franklin T. Lombardo. "Empirical resilience model for light-framed wood residential buildings." *Engineering Structures*, 2021.
- Nevill, Justin B. and Franklin T. Lombardo. "Structural functionality scale for light-framed wood buildings with indicators for windstorm damage." *Journal of Structural Engineering*, 2020.
- Nevill, Justin B. 2017. Development of a wind engineering field laboratory to characterize transient winds. Paper presented at the 2017 Americas Conference on Wind Engineering.