

DAVID FUSCO, P.E., LEED AP

Principal



Summary

David Fusco is the leader of the Thornton Tomasetti Tampa office and has an extensive career in the structural design of buildings, including iconic projects such as the Florida Polytechnic and St. Pete Pier. He is now focused on forensic evaluations for buildings and bridges in addition to designing. David has worked on several significant forensic investigations, including the Hard Rock Hotel collapse in New Orleans, the Emory College parking garage collapse in Atlanta, and the I4-Ultimate bridge collapse in Orlando. He also has extensive experience designing and investigating buildings with wood-framing, cast-in-place concrete, precast concrete, masonry, structural steel, steel joist, tilt-up panel, composite construction, and building envelope components including roofing, stucco, EIFS, and thin brick. David is actively involved in professional organizations, speaks frequently at schools, and mentors high school students.

Areas of Technical Expertise

- Structural Engineering
- Forensic Building Envelope Investigations
- Emergency Response

Education

- B.S., Civil Engineering, Structural Engineering and Construction Management, 2005, Rutgers University School of Engineering

Registrations

- Registered Professional Engineer in FL, GA, LA, NJ, TN, and TX
- LEED Accredited Professional

Professional Activities

- FSEA State Board, President, 2024
- FSEA State Board, President Elect, 2023
- FSEA State Board, Bay Area Director, 2019-2022
- Leadership Tampa Bay Class of 2021
- ACE Mentorship Program
- ENR 2020 Young Professional
- President, FSEA Bay Area Chapter, 2018
- SAME Young Member, SAME Tampa Post's Young Engineer of the Year, 2016

Select Project Experience

Forensic Investigations

Hurricane Ian Projects, various locations, FL. Building structural assessments, analysis and preparation of written reports. Included multiple damage assessment investigations of various commercial buildings, including office, retail, multi-family residential, government and church facilities. The investigations included projects with windows, wood, brick, masonry and stucco.

Clearwater Parking Garage Collapse

, Clearwater, FL.

Emergency response for the partial collapse of a stairwell in a multi-story parking garage. Scope included on-site supervision of the demolition as the lead forensic engineer and leading a team of demolition specialists to systematically remove partially collapsed portions of the structure to gain access to a trapped victim for extraction.

Hard Rock Hotel, New Orleans, LA. Emergency response and deconstruction at the partial collapse site of the Hard Rock Hotel. Worked with local municipality, Urban Search and Rescue Team LA to assess the stability of the collapse site and develop a plan with demolition contractors DH Griffin and CDI to make the site more secure to allow more conventional recovery and deconstruction.

I4-Ultimate Bridge Collapse, Orlando, FL. Forensic investigation involving a precast girder collapse during the construction of a new roadway bridge. Included the review of temporary erection and bracing systems, and loads imposed during construction, including vibration and wind analysis.

Emory Parking Garage Collapse, Atlanta, GA. Emergency response and forensic engineering services, and continuous on-site presence following a partial collapse during construction of a 16-story precast parking garage.

*Denotes work performed with previous employer.

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Hurricane Michael Projects, Panama City, FL. Building structural assessments, analysis and preparation of written reports. Included multiple damage assessment investigations of various commercial buildings, including office, retail, multi-family residential, government and church facilities. The investigations included projects with wood, brick, masonry and stucco.

Warehouse Tornado Damage Assessment, Nashville, TN. Provided structural damage assessment for warehouse facility including determination of substation structural damage and alteration documents. The project included the construction documents for the repair of the pre-engineered metal building, masonry wall and concrete foundation.

Eurofreezer Warehouse, Hialeah, FL. Provided forensic engineering to determine the causation of observed structural deficiencies. The investigation involved issues with slab on ground and slab over foam infill.

Structural Design

St. Petersburg Pier, St. Petersburg, FL.* New iconic pier featuring a tram stop, welcome and event plaza, cultural grove, interactive water play, coastal thicket walk, playground, changing room, sea grass habitat, tilted lawn and lawn bowl, kayak and paddle boathouse, environmental centers, overlook bar and grill, water lounge, fishing pier and bait shack.

Florida Polytechnic University Innovation, Science and Technology Building, Lakeland, FL. World-renowned architect, Santiago Calatrava, designed 2-story building providing classrooms and laboratories, a large central atrium and several outdoor assembly spaces.

University of Pennsylvania Health System, Fisher Translational Research Center, Philadelphia, PA. Structural design of a 530,000-square-foot research tower accommodating two vivarium floors and five interdisciplinary research laboratory floors. The facility meets industry-standard vibration criteria. The fast-track project expected to receive LEED silver rating.

Building Envelope Design and Repair

Colonial Elementary School, Fort Myers, FL.* Mechanical equipment room addition, Ft. Myers, FL. Structural and exterior envelope design including design of masonry wall, steel joists roof, and specifications for stucco finish.

Residential Project, Lakewood Ranch. Investigation of water intrusion through intersection of balcony and stucco-clad wall. The project included the conceptual repair protocol of the wood framing and stucco damage.

Warehouse Project, Pinellas Park. Damage assessment of warehouse building after tornado event. The project included the conceptual repair protocol of the standing seam roofing system.

Sworn Testimony

Trial Experience

Renwick v. Murray Homes LLC d/b/a Murray Homes and Stephen J. Murray, regarding dispute over structural modifications to components and cladding of an existing condominium building. November 3, 2021.

Deposition Experience

Prein Lake Hosp. v. Diversified Constr. Serv., Inc., et al, regarding extent of structural damage to light-framed wood hotel building. October 12, 2023.

Plaza Tower Master Ass'n., Inc. v. Culpepper Constr. Co., Inc. et al, regarding alleged construction defects involving thin brick over CMU and framed walls. April 21, 2023.

Renwick v. Murray Homes LLC d/b/a Murray Homes and Stephen J. Murray, regarding dispute over structural modifications to components and cladding of an existing condominium building. May 19, 2021.

Campus Gators Prop. Owner, LLC v. Beal Derkenne Constr., LLC, et al, regarding alleged construction defects involving stucco finish over wood-framed walls. April 21, 2021.

Litigation

Plaza Tower Master Ass'n., Tallahassee, FL, provided testifying expert services. Issues involved thin brick exterior wall systems.

JW Marriott Bonnet Creek, Orlando, FL, regarding litigation support for defense of general contractor for partial failure of 7th floor slab and shoring during construction. The investigation of the hotel building included review of concrete shear walls, post-tensioned slabs, and temporary shoring systems.

Summer Key Condo., Jacksonville, FL, regarding litigation support for defense of stucco subcontractor for alleged construction defects related to stucco installation.

Sanford Gateway Condo., Orlando, FL, regarding litigation support for defense of structural engineer.

Bahama Bay II Condo., Kissimmee, FL, regarding litigation support for defense of insurance company for alleged structural damage to multiple buildings related to a sinkhole. The investigation included evaluation of slab on grade, wood-framed walls with stucco.

Valdivia/Olympus v. Danco Roofing, Tampa, FL, regarding litigation for insurance company subrogation.

Confidential University Project, Tampa, FL, regarding litigation support for defense of architect standard of care as it relates to structural deficiencies.

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Toscana Condo., Miami, FL, provided non-testifying expert services such as review of documents, attendance at destructive testing, analysis, and preparation of written reports. Issues involved concrete basement walls and post-tension slabs with stucco.

Palma Bella Condo. Ass'n Inc. v. W.G. Yates & Sons Constr. Co. and DMC Real Estate Dev., Tampa, FL, regarding litigation support for defense of PT contractor.

Select Papers, Lectures and Publications

"Day in the Life of a Structural Engineer," University of South Florida Undergraduate Students, May 2023 (presenter)

"Building Information Modeling," 11th Annual Construction Law Conference in Florida, October 21, 2022 (co-presenter)

"BIM: Useful Tools and Key Legal Considerations," Construction Law Institute Conference, March 2022 (co-presenter)

"OSHA Inspections and Forensic Engineering," Florida Transportation Builders Association Conference, January 2022 (co-presenter)

"High Stakes Inspections: Forensic Engineering," Ogletree Deakins Safety Symposium, December 2021 (co-presenter)

"When Tragedy Strikes: Managing an OSHA Inspection and the Aftermath," Hillsborough County Bar Association, September 2021 (co-presenter)

"Structural Engineering Challenges in Coastal Environments," University of Central Florida Graduate Students, May 2021 (co-presenter)

"Structural Engineering," ACE Mentor Program, 2021, 2019, 2018 (presenter)

"Structures Presentation," University of South Florida Undergraduate Students, April 2021, June 2019, February 2018 (presenter and co-presenter)

"Jabil Headquarters Structural Design Challenges and Vibration Analysis," ASCE Florida Section Seminar Series, October 6, 2020 (presenter)

"Drag Trusses," Structure Magazine, June 2019 (co-author)

"Structures Presentation," University of South Florida Undergraduate Students, June 2018 (co-presenter)

CONTACT

David Fusco
400 N. Ashley Drive, Suite 2125, Tampa, FL 33602
813.906.1250
DFusco@ThorntonTomasetti.com
www.ThorntonTomasetti.com