

Mark Andrews, P.E.

Associate Principal



Summary

Mr. Andrews joined Thornton Tomasetti in 2007 and has more than 13 years of experience in executing and supervising structural analysis and design, condition assessment, forensic investigation, renovation, litigation support, and property loss consulting projects. He has experience in a range of construction materials, including reinforced concrete, steel, cast iron, masonry, and wood.

Areas of Technical Expertise Include

- Property Loss Consulting
- Forensic Structural Engineering and Emergency Response
- Structural Engineering – Alterations and Rehabilitations
- Building Code Analysis

Education

- M.Eng., Civil Engineering, Structural Concentration, 2006, Rensselaer Polytechnic Institute, Troy, NY
- B.S. Civil Engineering, 2006, Rensselaer Polytechnic Institute, Troy, NY

Registrations

- Licensed Professional Engineer (Florida, New Jersey, New York)

Select Project Experience

Property Loss Consulting

Hurricane Michael, Arbor Properties, Multiple Locations, FL. Investigation of 70+ multi-family wood-frame residential buildings to assess the extent of damage due to Category 5 hurricane.

Hurricane Irma, Confidential Retail Malls and Rental

Properties, Multiple Locations, FL. Investigation to determine extent of hurricane-related damage to several dozen buildings over multiple locations, containing over one hundred commercial and retail tenants.

Hurricane Irma, Confidential Hotel Chain

, Multiple Locations, FL. Investigation to determine extent of hurricane-related damage to multiple hotels, including interior and exterior envelope conditions. Analysis to determine potential loss-related upgrades required by code.

Confidential Parking Deck and Retail Store Partial Collapse

, Yonkers, NY. Investigation to determine scope of damage, repairs, and cause of the partial collapse. Analysis to determine potential loss-related upgrades required by code.

Confidential Sidewalk Vault Partial Collapse

, New York, NY. Investigation to determine scope of damage and repairs to a deteriorated and partially collapsed sidewalk vault. Analysis to determine potential loss-related upgrades required by code.

Confidential Clothing Retailer Distribution Center, Fire

Damage Assessment. Investigation of 750,000+ SF facility's structural, architectural, mechanical, electrical, and plumbing systems to determine the extent of damage due to fire event.

CAT-90 Sandy, Confidential Passenger Railroad, New York, NY. Investigation of facilities to determine the extent of damage including facilities and tunnels related to passenger rail.

CAT-90 Sandy, Confidential Transportation Network, New York, NY. Investigation across an entire mass transit system to determine the extent of damage, including facilities related to commuter rail (overland and underground), and bridges and tunnels (both railway and vehicular).

Contact

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Tropical Storm Irene, Confidential Commuter Railroad, NY/NJ. Investigation of a rail line to determine the extent of damage, including overland rail and supporting structures.

Confidential Airport, Post-Tornado Assessment. Damage assessment of the main terminal, three passenger concourses and the surrounding support facilities following an EF2 tornado.

Chelsea Piers, Pier 61, New York, NY. Investigation of pier's superstructure and substructure to determine scope of damage, repairs, and cause and origin of the partial collapse.

Forensic Structural Engineering and Emergency Response

221 W 17th Street, Post-Fire Stabilization, New York, NY. Emergency response in the wake of a fire. Stabilization and partial deconstruction of the building constructed of wood and steel floor framing with cast iron columns and brick masonry bearing walls.

Post Disaster Evaluations, NY, NJ and CT. Structural evaluations of commercial and residential structures in the wake of the 2011 Virginia Earthquake, Tropical Storm Irene and CAT-90 Sandy, including confidential office tower, confidential data center, and confidential sports stadium.

1201 Louisiana Blvd, Houston, TX. Structural evaluation of a 38-story commercial office property after Hurricane Ike, including damage to elevator shafts and egress stair CMU cores. Included remedial repair design.

Atlanta Botanical Garden, Canopy Walk, Atlanta, GA. Evaluation of a steel pedestrian bridge design and investigation of collapse during construction.

The Dunes at Shoal Harbor, Port Monmouth, NJ. Structural investigation and evaluation of an existing three-module townhouse structure enduring extensive fire damage. Scope included construction documents for the temporary stabilization of the remaining structure during demolition and reconstruction, and evaluation of original design and construction.

Structural Engineering - Alterations and Rehabilitations

Empire State Building, Broadcast Tower Upgrade, New York, NY. Structural investigation, analysis, and design services related to multiple proposed upgrade schemes to the iconic building's broadcast tower.

Empire State Building, Elevator Shaft Repairs, New York, NY. Evaluation of the building's 69 elevator shafts, which are over 35,000 linear feet in height, end to end, and are constructed of terracotta block and steel framing encased in concrete and terracotta block. The project included design and construction administration for the shafts' large-scale repair scheme, including full-height replacement of the columns' block encasement with a spray-on fire-resistive material system.

Empire State Building, Construction Hoist, New York, NY. Installation of a 30-story construction hoist to the building exterior to facilitate additional work at the building.

Empire State Building, Observatory Upgrade, New York, NY. Structural investigation, analysis, and design services related to multiple proposed overhaul schemes to the building's two public observatory levels.

330 Hudson Street, Local Law 11/98 Repairs, New York, NY. Scaffold inspection to assess the condition of the masonry façade in order to develop scope of repairs.

Seafarers' Center, Newark, NJ. Investigation of existing building which had undergone partial renovation. Remedial design to complete renovation, including structural and building envelope systems.

Sworn Testimony

Hearing, Ashkenazy Acquisition Corporation, Mall at Cross County, Yonkers, NY, regarding Appraisal, May 2018.

Deposition, National Railroad Passenger Corporation vs. Arch Specialty Insurance Company, et al., U.S. District Court for the Southern District of New York, March 19, 2015.

Papers, Publications, and Presentations

"Early & Combined Involvement of the Adjustment Team" presentation, Loss Executives Association 2020 Winter Meeting, Fort Lauderdale, FL, January 2020 (Co-presenter)

"This Old House: Is it Historic or Just Tired?" presentation, Property & Liability Resource Bureau 2019 Claims Conference, Indianapolis, IN, April 2019 (Co-presenter)

Presentation at Young Professionals Day, Loss Executives Association, New York, NY, June 2, 2016 (Co-presenter)

"Introduction to BIM, FIM, laser scanning, and using drones," The Hartford Construction Litigation Seminar, Hartford, CT, April 12, 2016 (Co-presenter)

"CAT-90 Sandy: FEMA Flood Mapping and Lessons Learned," presentations to Gen Re, Munich Re, Ascot, and XL Catlin, London, UK, June 2014 (Co-presenter)

"CAT-90 Sandy: FEMA Flood Mapping and Lessons Learned," presentation to Gen Re, Stamford, CT, October 14, 2013 (Co-presenter)

"CAT-90 Sandy: FEMA Flood Mapping and Lessons Learned," presentations to AIG, Munich Re, and Swiss Re, London, UK, June 2013 (Co-presenter)

"CAT-90 Sandy Response," Thornton Tomasetti 2013 Annual Meeting, New York, NY, May 9, 2013 (Presenter)