

JOSEPH SCHUSTER, P.E., S.E.

Principal



Summary

Joe Schuster is a principal and leads the forensics practice in Thornton Tomasetti's Newark office. He has a broad range of engineering experience, including the design and renovation of steel, concrete, masonry, wood, glass, and aluminium buildings and building components. Since joining TT in 2018, Joe has specialized in the investigation of distressed and failed structures and building enclosures. His project work has included the investigation of structural collapses, the analysis of façade failures and façade installation issues, the evaluation of slip/trip and fall accidents, and the analysis of building damage due to adjacent construction. Joe routinely consults with attorneys, insurers, building owners, engineers and architects in support of construction litigation and personal injury claims. He has lectured at Rutgers University on structural forensics and given presentations for the NJ State Bar Association and the Practicing Law Institute.

Areas of Technical Expertise

- Forensic Structural Engineering
- Façade Forensics
- Slip/Trip and Fall Accidents
- Property Loss Consulting

Education

- M.S., Structural Engineering, 2007, Stanford University
- B.S., Civil Engineering, 2006, Cornell University

Registrations

- Licensed Professional Engineer in DC, MD, NJ, NY, and PA
- Licensed Structural Engineer in IL
- Post Disaster Assessment: ATC-20 and ATC-45 Certified
- 10-hour Occupational Safety and Health Administration (OSHA) Training Course in Construction Safety and Health

Professional Activities

- Member, ASCE, Forensic Engineering Division, Committee on Dissemination of Failure Information, 2021-present
- Member, Structural Engineers Association of New York (SEAoNY), Codes Advisory Committee, 2010-present

Select Project Experience

Forensic Structural Engineering

Morristown Airport, Morristown, NJ. Investigation and litigation support following collapse of steel-framed hangar building.

Multiple Projects, NJ. Investigation and litigation support relating to roof collapses under snow loads.

Multiple Projects, Newark, NJ and New York, NY. Condition assessment, code review, and litigation support related to damage caused by activities at adjacent construction sites.

Parks Facility, Jersey City, NJ. Investigation of cracking in concrete basin following renovations of historic fountain.

Multiple Projects, NJ and NY. Structural and building envelope investigations following storms and fires. Evaluation of wind damage, flood damage, fire damage, and slope failures.

Multiple Projects, NJ and PA. Investigation of building rooftop signage failures following high winds.

Façade Forensics

Private Museum, MD. Investigation of glass breakage and evaluation of alleged construction deficiencies of glazing system. Structural analysis of glass and structural components.

Condo High Rise, New York, NY. Evaluation of scope of damage to glass and terra cotta façade following crane accident. Investigation of a dislodged operable window.

Hotel High Rise, New York, NY. Investigation of alleged curtainwall installation defects. Evaluation of concrete slab tolerances and reports of water intrusion.

Multiple Projects, NY and NJ. Investigation of glass defects including delaminations and IGU fogging.

Multiple Projects, NY and NJ. Evaluation of spontaneous glass breakage.

Multiple Projects, NY, NJ, and PA. Investigation of window operability issues.

*Denotes work performed with previous employer.

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Multiple Projects, DC, NY and TN. Evaluation of metal panel facades including panel deformations and fastening issues.

Confidential Project, Washington, DC. Investigation of stone facade and sealant failures.

Clinton Parkview Apartments, New York, NY.* Investigation and litigation support for new building with distressed brick masonry façade. Design of brick and sealant repairs following litigation.

Condo Building, New York, NY. Investigation of brick facade collapse following recent repairs and facade inspection work.

Structural Engineering

455 W 19th Street, New York, NY.* Design of new 12-story 30,000-square-foot concrete residential building, including review of precast concrete façade shop drawings and design of façade attachment.

Iona College, New School of Business, New Rochelle, NY.* Design of 41,000-square-foot expansion of historic building with new steel-framed structure.

Printing House Townhouse, New York, NY.* Design of 4-story steel and CMU residences.

United States Golf Association Complex, Far Hills, NJ.* Design of 3-story CMU, steel and wood truss building to house museum exhibits and library.

58 Metropolitan Avenue, Williamsburg, Brooklyn, NY.* Design of a 7-story 60,000-square-foot masonry and precast-concrete residential building.

Harborside Plaza 1, Jersey City, NJ. Evaluation of 1920s concrete flat plate slab with deterioration due to imbedded chlorides. Design of concrete repairs.

Multiple Buildings, New York, NY. Structural design of feature stairs and egress stairs.

Multiple Buildings, New York and New Jersey. Design of repairs for sidewalks and sidewalk vaults.

Multiple Buildings, New York and New Jersey. Design of concrete repairs for parking garages.

Personal Injury Investigations

Shopping Center, Marlton, PA. Investigate slip and fall accident at painted curb in parking lot on behalf of property management company.

Grocery Store, Bronx, NY. Evaluation of trip and fall accident at NYC sidewalk on behalf of property owner.

Shopping Center, Newtown, PA . Investigate trip and fall accident at concrete pavement on behalf of behalf of engineer of record.

Synagogue, New York, NY. Investigate cause and origin of structural collapse that caused multiple injuries during building demolition.

Sworn Testimony

Deposition, Access Theater, Inc. v. Battery Dance Corp., regarding dispute of alleged building damage due to vibrations from dance classes. August 8, 2023.

Deposition, Facade Tech., LLC v. CNY Constr. 701 LLC, regarding dispute of alleged glass curtainwall and metal panel installation defects at a hotel. December 5, 2022.

Deposition, Board of Managers of the St. Tropez Condo. v. JMA Consultants, regarding the collapse of a masonry cavity wall. November 18, 2022.

Deposition, HITT Contracting v. Glenstone Found., regarding dispute of alleged contractor errors during installation of large format structural glass at museum. June 11, 2021.

Alternative Dispute Resolution

Dispute between a building owner and design team, regarding alleged design deficiencies in exterior wall system that resulted in cracks and spalls in a newly constructed 12-story residential building.

Dispute among an owner, general contractor and design team, regarding alleged design and construction deficiencies.

Dispute among an owner, general contractor and design team, regarding alleged design and construction deficiencies in concrete topping slab that resulted in excessive cracking.

Dispute among a condominium association, design team and general contractor, regarding alleged design and construction deficiencies that led to unstable condition of exterior walls following repair work of a 1950s-era residential building.

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Select Papers, Lectures and Publications

"Glass Breakage Investigations," TT Forensics Newsletter, March 2022 (author)

"An Engineer's and Architect's Perspective," New Jersey State Bar Association Construction Law Section, January 2022 (co-presenter)

"Investigation of Roof Collapses under Snow Loads," TT Forensics Newsletter, February 2021 (author)

"Mitigation of Risks Arising from Adjacent Construction," Practicing Law Institute's Building Better Construction Contracts Seminar, New York, NY, December 2019 (presenter).

"A Renovated Retrofit Guide," Modern Steel Construction, July 2018 (co-author)

"AISC Design Guide 15, Rehabilitation and Retrofit Guide, 2nd Edition," American Institute of Steel Construction, May 2018 (co-author)

"Design of Strengthening for Existing Steel Members," live AISC webinar, December 2020 and March 2018 (presenter)

"Design for Entertainment," CREATE+CONSTRUCT 2016: Symposium on Cultural and Religious Structures, New York, NY, September 2016 (presenter)

"Expansion of Existing Buildings in New York City: Structural Challenges and Solutions," New York Real Estate Journal, Industry Leader Spotlight, July/August 2014 (author)

"A Practical Guide to the 16-Hour SE Licensing Exam," Structural Engineer, Part I, March 2013; Part II, April 2013 (author)

"SE Structural 16-Hour Engineering Practice Exam for Buildings," Professional Publications, Inc., August 2012 (author)

"Expanding a New Landmark: The Stable at 23 Cornelia Street," Structural Engineering and Design, June 2011 (author)

CONTACT

Joseph Schuster
1085 Raymond Blvd, Suite 901, Newark, NJ 07102
973.286.6126
JSchuster@ThorntonTomasetti.com
www.ThorntonTomasetti.com