

MICHELE J. STEIN, P.E.

Senior Associate



Summary

Michele Stein joined Thornton Tomasetti's Orlando office in 2021. She is a licensed professional engineer in Massachusetts and Florida with over 20 years of experience in geotechnical analysis and design, municipal engineering and construction services, and higher education. She has taught engineering courses for over 15 years. Her geotechnical expertise is in subsurface exploration programs, deep and shallow foundations, slurry walls, ground improvements, settlement analysis, slope stability, landfills and retaining walls. Her expertise expands into municipal design and construction projects including, utilities, pump stations, Inflow/infiltration, stormwater, paving operations, transportation improvements, bridge replacements, creating documents for bid, contracts and litigations involving utility and roadway easements. Michele is also an adjunct professor at the University of Central Florida and Middlesex Community College.

Areas of technical expertise

- Geotechnical Engineering
- Forensic Engineering

Education

- M.S., Civil Engineering, 2002, University of Massachusetts at Lowell
- B.S., Civil Engineering, 1999, Merrimack College
- OSHA 40-hour, 10-hour, and Confined Space Training

Registrations

- Licensed Professional Engineer in AL, FL, MA, MO

Professional activities

- Adjunct Professor, University of Central Florida, 2021-present. Lecturer, "Introduction to Construction Management". Performed "Fundamentals of Engineering" review sessions for "Ethics and Engineering Economics."
- Department Chair of Computer, Engineering and Technology, Middlesex Community College, 2016-2021
- Chair, Engineering Advisory Board, Middlesex Community College, 2016-2021.
- Tenured Professor, Middlesex Community College, 2014-2021. Courses taught include "Introduction to Engineering, Statics and Strength of Materials"
- Site Coordinator, Louis Stokes Alliance for Minority Participation, 2014-2021
- Adjunct professor, Merrimack College, 2006-2015. Courses taught include "Soil Mechanics, Geotechnical Engineering, Geology, Environmental Engineering, Engineering Economics, Ethics and Senior Capstone."

Select project experience

Geotechnical engineering

Overlook Ridge/Rowe Quarry, Revere/Malden, MA.*

Performed preconstruction/preblast surveys, Geotechnical Field Services and QA/QC for site work of 100-acre parcel with 2,400 apartment units and 150,000 square ft. retail/office space.

East Side Water Treatment Plan, Sunnyvale, TX.* Responsible for QA/QC of lime/fly-ash (L/FA) pressure injections for slope stabilization of multiple water levees.

Cambridge Research Park, Cambridge, MA.* QA/QC of soil remediation of the site, construction oversight of slurry wall installation of the 5-level underground garage, monitored and analyzed instrumentation to ensure minimal movement to the walls and the surrounding structures.

Pondside II Housing and Spaulding Gymnasium, Keene, NH.* Analyzed design, monitored the installation of deep foundations including static load testing for a series of dormitory buildings and gymnasium expansion at Keene State College.

Providence Water, West Warwick, RI.* Monitored installation of cast in place mini piles including identifying pile locations, verifying final depth below ground surface, quality control and preparing daily field reports.

One Backlands, East Boston, MA.* Observed subsurface investigations for proposed commercial development by using Geoprobes. Classified subsurface materials, identifying contaminations and sampling for laboratory analysis. Team determined limits of contaminates for off-site removal and treatment.

Maple Meadow Landfill, Wilmington, MA.* Provided engineering evaluations of existing subsurface materials, which entailed developed engineering parameters and analyzed various conditions to determine slope stability for existing Maple Meadow Landfill in relationship to proposed slurry wall design.

*Denotes work performed with previous employer.

MICHELE J. STEIN, P.E.

Bennington Bypass North, Bennington, VT.* Performed engineering evaluations and prepared design reports for new roadways and bridges. Activities were associated with reinforcement of steep slopes, design of deep foundations, recommendations for design of mechanically stabilized earth (MSE) walls and cut and fill slope recommendations.

Forensic engineering

Champlain Tower South Collapse, Surfside, FL. Investigation of the sudden collapse of the tower in 2021.

City Place II Parking Garage, Creve Coeur, MO. Reviewed documentation to investigate if soil erosion from infiltration of a sewer line caused the structural distress on foundation slab and column at the parking garage and formulated opinion for client.

Duck River Dam, Cullman County, AL. Reviewed documentation for leaks in the RCC dam to formulate and write an opinion for the client on the cause.

Green Mount Crossing Mine Mitigation, O'Fallon, IL. Investigated available mine grouting documentation including design, specifications, and as-built documentations. Evaluated the scope, design and methods for mine grouting operations performed for mine subsidence claim.

I595 Pipe Jacking Alignment Issue and Settlement, Davie, FL. Provided expert opinion related to the SR-84 Settlement due to microtunneling operations involving 72-inch and 48-inch nominal diameter pipes extending below a highway during construction.

Wyndham Grand, Clearwater, FL. Reviewed existing plans and design for hotel foundation. Analyzed vibroreplacement stone column ground improvements for design and parameters of shallow foundation portions of building.

Terminal Internacional de Fluidos de Tuxpan (TIFT), Tuxpan, Veracruz, MEX. Reviewed documentation and final report for the settlement litigation of the fuel storage tanks located at the Terminal Internacional de Fluidos de Tuxpan.

Houston Water Works Team vs. Barnard, Houston, TX. Reviewed documentation to formulate expert opinion on various construction delay claims such as the denial for factory cutting a 108-inch RW line and using a Butt-strap for a challenging installation, the design of the exit shaft cofferdam and the crossing of the 108-inch water transmission line over the existing 66-inch water pipe.

Municipal public works

\$99 Million Sewer Expansion Project, Tewksbury, MA.* Responsible for development planning phase to completion and execution of sewer utility system. Involved field inspections, project management planning meetings, public meetings, and easement litigations.

Colonial Drive Water Tank, Tewksbury, MA.* Owner's project manager for 5 MG water tank. Involved from planning stages to execution. Water tank required ground improvements prior to construction involving vibrocompaction. Mediation for ground improvements was required.

Stormwater Management, Dunstable, MA.* Executed stormwater management program for the Town to maintain compliance with EPA's MS4 NPDES permit requirements.

Sworn testimony

Deposition and Mediation, The Dow Company vs. Town of Tewksbury, MA, regarding cost overrun for Vibrocompaction ground improvement prior to installation of 5 MG Water Tank. 2011.

Select papers, lectures and publications

"Axial Capacity of H-Piles," National Academies NCHRP 24-17, Paikowsky and Jodar, Summer 2002 (author)

"Lime/fly-ash (L/FA) Pressure injections for slope stabilization" lunch and learn for consulting firm East Side Water Treatment Plant, Sunnyvale, TX. 2002 (presenter)

"Slurry wall installation" lunch and learn for consulting firm Cambridge Research Park, Cambridge, MA. 2003 (presenter)

CONTACT

Michele J. Stein, P.E.
300 S. Orange Avenue, Suite 1000, Orlando, FL 32817
(O): 917.903.9304
MStein@ThorntonTomasetti.com
www.ThorntonTomasetti.com