

2019-259

# Antoinette D. "Tina" Meskel, PE

## President / Principal Engineer



### Education:

BSCE - University of Pittsburgh, 1990  
MBA - University of North Florida, 2007

License: Florida PE 56999

Total Experience: 27 Years

**Summary of Relevant Experience:** Ms. Meskel holds a BS degree in Civil Engineering from the University of Pittsburgh and a MBA from the University of North Florida. She is a licensed Professional Engineer (P.E.) in Florida and Georgia with over 27 years of experience in geotechnical engineering consulting and subsurface investigation services. More than 20 of these years have been spent in practice in Florida and Georgia.

### PROJECT EXPERIENCE:

**City of Jacksonville, New Southbank Riverwalk – Jacksonville, FL - Principal Geotechnical Engineer** responsible for geotechnical explorations and analysis for replacement of approximately 3,650 feet of riverfront boardwalk. Field explorations included barge and landside SPT drilling, continuous split-spoon sampling, undisturbed "Shelby" tube sampling, grouting and rock coring. Laboratory testing included soil and water corrosion series profiles and soil index property and strength testing. Analysis was performed including concrete/steel composite pile and prestressed precast concrete pile axial and lateral capacity analysis. Deep foundation design and construction, and pile testing program recommendations were provided.

**City of Jacksonville, Miscellaneous Dredge and Waterway Infrastructure – Jacksonville, Florida - Principal Geotechnical Engineer.** Scope of work included evaluating the subsurface conditions at multiple sites in the area of distressed waterway structures, primarily bulkhead walls and ramp slabs. MAE's field work included performing Standard Penetration Test (SPT) borings using track-mounted and Tripod drilling equipment on land sites and barge-mounted drilling equipment on waterway projects. Reporting included estimating geotechnical engineering soil properties required for new bulkhead wall design, including soil unit weight, friction angle, cohesion and earth pressure coefficients. Recommendations were also provided for construction of future ramp slabs, including replacement of deleterious soils with structural fill.

**USACE Indefinite Delivery Contract for A-E Services for Core Drilling and Laboratory Testing within FL Boundaries of the Jacksonville District, Puerto Rico, US Virgin Islands and the Caribbean Area – Principal Engineer, QA/QC Manager.** The services under this contract consist of core drilling and geotechnical subsurface sampling using continuous and standard SPT

methods, large diameter coring within rock units, sonic drilling, vibracoring, field and in situ testing, geophysical site investigations, field and laboratory testing of materials, chemical analytical laboratory testing, site preparation and project coordination.

**City of Jacksonville, Hamilton Jersey Drainage Improvements – Jacksonville, Florida - Principal Geotechnical Engineer** responsible for study and design phase geotechnical explorations for improvements to drainage ditches and swales, and construction of below grade utilities including a 66-inch storm sewer within the Lakeshore neighborhood of the Ortega area of the City of Jacksonville. Project tasks included multiple field investigations, Standard Penetration Test (SPT) and auger boring drilling, field permeability testing, and muck probing to delineate limits of deleterious soils. Reports were prepared which included recommendations for pipeline and manhole construction, pavement reconstruction, pond and ditch remediation considerations, and long-term slope stabilization methods.

**JEA Total Water Management Plan (TWMP) – Jacksonville, FL - Principal Engineer / Geotechnical Engineering QA/QC Engineer.** Responsibilities for this project included design review support to the Program Manager (CH2M Hill) for Segments 5 and 6 of the TWMP Project. Geotechnical design deliverables prepared by others were reviewed to address overall completeness of field scope and design and constructability of recommendations provided, and to ensure consistency between segment designs and JEA standards. Responsible for QA/QC during Construction Engineering Inspection services performed during construction of Segment 4A, Bert Road to Alderman Road, and Segment 5, Oaks Ansley Road to Bradley Road. Segment 4A corridor was constructed within the North Arlington Expressway Service Road, requiring total roadway rehabilitation for 1,000 feet with extensive detours

and MOT that included coordination with the JTA bus system and COJ Traffic Engineering. The project included an open cut of Arlington Expressway for installation of the WM and Atlantic Boulevard for installation of both the WM and FM in the same trench. Segment 5 corridor was constructed within the median of Arlington Expressway and Southside Boulevard and required total roadway rehabilitation for 2,400 feet, extensive long-term detours, and MOT that included coordination with all stakeholders.

**Engineering Testing Services Annual Contract: Soil Borings, Underwater Condition Surveys, and Related Tests for the City of Jacksonville – Duval County, FL – QA/QC Officer** for this multi-year, City-Wide Continuing Services contract. MAE is providing engineering testing services on various design and/or construction projects through the Public Works Department and other Jacksonville using agencies. MAE manages a comprehensive team of engineers and field and laboratory technicians to complete multiple task orders to meet the scheduling needs of design and construction projects including horizontal and vertical construction.

**Asphalt Testing/Inspection and Routine Testing Annual Contract for the City of Jacksonville – Duval County, FL – QA/QC Officer** for this multi-year, City-Wide Continuing Services contract. MAE manages a comprehensive team of engineers, field technicians and laboratory technicians to complete multiple task orders to meet the scheduling needs of design and construction projects including horizontal and vertical construction.

**City of Jacksonville, Duval County Unified Courthouse – Jacksonville, Florida - Foundation Installation Program Manager.** Construction inspection and management of day to day activities for the installation of Auger Cast-in-Place (ACIP) Pile foundations including the construction of 1,673 ACIP piles. One thousand, one hundred ninety-four (1,194) piles were constructed as 16-inch diameter 125-ton compression piles, and 479 piles were constructed as, 18-inch diameter 125 ton tension piles. Two compression piles and one tension pile were load-tested to 2.5 times the design loads. One compression pile was loaded to failure. Pile Integrity Testing (PIT) was also performed.

**FDOT District 2 Districtwide Geotechnical Engineering, FL – Principal-In-Charge and QA/QC Officer** to support the FDOT Materials Office for various design and construction projects throughout the district. MAE's Scope of Services includes subsurface explorations and geotechnical engineering, including land-side and deep water barge drilling, field permeability testing and groundwater monitoring; construction services including auger cast pile, driven pile inspection/testing and drilled shaft inspection services; emergency services involving sinkholes and pavement surveys/evaluations; and design-related work associated with bridge replacements and roadway widening, and services to investigate ongoing infrastructure distress issues. The contract includes concrete

and asphalt plant services, and lab and field testing of construction materials. Final work products will include presentation of field and lab data, performing analyses and presentation of recommendations in draft and final reports.

**The Shipyards – Jacksonville, Florida - Senior Geotechnical Engineer** responsible for geotechnical explorations, analysis and construction inspection for the extension of the existing Northbank Riverwalk and seawall, below-grade drainage structures, multi-story building and 1,600 feet of pedestrian pier. Project tasks included barge and landside SPT drilling, Cone Penetrometer Testing (CPT), dilatometer testing, undisturbed sampling, and rock coring. Laboratory testing included soil index property testing, rock unconfined compressive strength tests, and unconsolidated, undrained triaxial testing. Engineering analysis included deep foundation alternatives for structure support including driven piles, auger cast-in-place piles, drilled shafts and stone column soil improvement. Geotechnical analysis was performed and recommendations provided for new bulkhead walls to be constructed approximately 200 feet water-side of the existing wall; analysis included settlement of fill material placed over 50 feet of very soft silty clay, and analysis of multiple sheet pile wall designs; construction recommendations were prepared for dewatering and complete demucking, partial demucking and staged construction, and fill consisting of Geofam blocks.

**City of Jacksonville, Lower Eastside Drainage, Phase 3 – Jacksonville, Florida - Principal Geotechnical Engineer.** The scope of work included exploring subsurface and pavement conditions along the alignment of a proposed stormwater collection system. Field work included SPT and auger borings, and pavement coring. Recommendations were provided for pipeline and manhole support, and pavement design and reconstruction.

**City of Jacksonville, Multiple Park Improvement Projects – Duval County, FL - Principal Geotechnical Engineer.** MAE is teamed with JBC Planning and Engineering, LLC to provide Geotechnical Engineering Consulting for multiple City of Jacksonville park projects including: Scott Park – project included drainage improvements, new parking areas and a new pavilion structure; geotechnical services for the project included Double Ring Infiltrometer (DRI) testing and soil borings. Charles "Boobie" Park – restroom and concessions structures additions; services included field explorations and recommendations for shallow foundation design; Kinwood Ave Pedestrian Bridge Replacement –project responsibilities included performing a geotechnical exploration, preparing recommendations for deep foundation support on helical piers, and construction inspection services.