

Mohamed Mansour

Senior Geotechnical Engineer

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EDUCATION

Ph.D., Geotechnical Engineering, 2019

M.Sc., Public Works Engineering, 2014

B.Sc., Civil Engineering, 2011

ACCREDITATIONS

Professional Engineer (TX, NV)

Professional Engineer (ON, Canada)

Dr. Mansour brings more than 15 years of experience in geotechnical and forensic engineering, supporting complex infrastructure and building projects across the United States, Canada, and the Middle East. Throughout his career, Dr. Mansour has developed extensive experience in investigating complex geotechnical problems, evaluating distressed and deficient structures, developing practical engineering solutions and remediation plans, and providing technical leadership from investigation through design and construction.

Dr. Mansour also has significant experience managing projects, coordinating multidisciplinary teams, and communicating technical findings and recommendations to clients and stakeholders.

Dr. Mansour's areas of expertise include, but are not necessarily limited to, the following areas:

- Assessment and design of retaining and Mechanically Stabilized Earth (MSE) Walls.
- Deep excavation and shoring systems.
- Deep and shallow foundations.
- Slope stability and stabilization measures.
- Ground improvement.
- Numerical modelling analysis and simulation.

WORK EXPERIENCE

Aperture, LLC, Carrollton, TX, USA, June 2024 – Present, Senior Geotechnical Engineer

KGS Group, Mississauga, ON, Canada, January 2022 **–** June 2024, Geotechnical Engineer

Geotechnical Research Center, Western University, London, ON, Canada, January 2020 – December 2021, Postdoctoral Associate/Geotechnical Engineer

Roterra Piling Ltd, Acheson, AB, Canada, May 2019 – October 2019, Geotechnical Design Engineer

Geotechnical Research Center, Western University, London, ON, Canada, September 2014 – October 2019, Researcher/Geotechnical Engineer

Soil Mechanics and Foundation Research Laboratory, Giza, Egypt, September 2011 – August 2014, Researcher/Geotechnical Engineer

REPRESENTATIVE PROJECT EXPERIENCE – PARTIAL LISTING

Hydraulic Infrastructure

El Paso, TX: Evaluated levee embankment construction, borrow material suitability, and compaction requirements for the Sunland Park Levee project.

Greater Madawaska, ON: Supervised geotechnical construction activities, including bedrock preparation and earthfill embankment construction, during the Calabogie Generating Station redevelopment.

Matabitchuan, ON: Conducted geotechnical investigations and designed foundation and shoring systems to support demolition and redevelopment activities at Matabitchuan Generating Station.

Last revised: October 12, 2026

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St. Marys, ON: Performed a dam safety assessment of Wildwood Dam.

Brampton ON: Conducted a forensic causation analysis of a wingwall failure at Claireville Dam and designed a replacement mechanically stabilized earth (MSE) wall.

Infrastructure

Dallas, TX: Conducted forensic assessments of approximately 100 MSE walls, including internal, external, and global stability analyses.

Rogers TX: Evaluated the leakage potential of a buried gas pipeline subjected to cycles of soil heave and consolidation using numerical modeling.

Bowmanville, ON: Assessed pavement and infrastructure conditions at Darlington Nuclear Generating Station in connection with the transportation of a heavy modular reactor.

Industrial

Convent, LA: Completed a detailed causation analysis for a catastrophic geotechnical failure and structure collapse of an iron ore dome.

Cochrane, ON: Performed subgrade inspections and supervised excavation and backfilling activities for warehouse and transformer building construction at Otter Rapids Generating Station. Assisted in preparing civil and geotechnical design-build specifications.

Municipality

Toronto, ON: Performed slope stability analyses and developed erosion control and slope stabilization measures for Parkview Hill and Yellow Creek.

Brampton, ON: Designed riverbank stabilization and scour protection measures for the Crawley Park riverbank.

Residential and High Rise

Austin, TX: Evaluated deficiencies in the design of more than 180 drilled shafts supporting multistory buildings.

Gordonville, TX: Evaluated deficiencies in pier foundations at XCS Ranch and developed revised foundation designs and engineering recommendations for new constructions.

Health Care

Dallas, TX: Conducted a forensic causation analysis of subgrade settlement at Parkland Hospital.

PUBLICATIONS – PARTIAL LISTING

Mansour, M.A.; Newson, T.; Peterson, C.J. Windthrow Resistance of Trees: Geotechnical Engineering Approach. Trees 2024, 38, 373–391. https://doi.org/10.1007/s00468-024-02488-8.

Mansour, M.A.; El Naggar, M.H. Optimization of Grouting Method and Axial Performance of Pressure-Grouted Helical Piles. Canadian Geotechnical Journal 2022. 59(5): 702-714. https://doi.org/10.1139/cgj-2021-0093.

Mansour, M.A.; Rhee, D.M.; Newson, T.; Peterson, C.; Lombardo, F.T. Estimating Wind Damage in Forested Areas Due to Tornadoes. Forests 2021, 12, 17. https://doi.org/10.3390/f12010017.

Mansour, M.A.; Soliman, A.M.; El-Naggar, M.H. High Capacity Grouted Helical Piles. In Proceedings of the 41st Annual Conference on Deep Foundations, Deep Foundations Institute (DFI), 2016, pp. 241–248.

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