

Ground Improvements for Georgia Ports Mason Mega Rail Project

Guoming Lin, PhD, PE, Vice President & Senior Consultant at Terracon

The Port of Savannah's Mason Mega Rail Project—at 85 acres, the largest North American port authority on-dock rail facility—has 18 tracks to operate six 10,000-foot trains. Most of the site was an unregulated industrial landfill over low-lying land along a major drainage canal with banks underlain by soft, compressible soils. Learn how six ground improvement techniques saved \$12 million by mitigating settlement and stability issues: dynamic compaction of landfill, undercut and geogrid stabilization of wetlands, driven prestressed concrete piles for rail-mounted gantry (RMG) cranes and two rail bridges, rigid inclusions for embankment stability, surcharge with wick drains for drainage structures with high fill, and geocell MSE walls on the rail yard's edge.

TUESDAY, SEPTEMBER 17

Three ENGEO Projects Honored in 2024 OPAs Pier 70 Special Use District (SUD) Redevelopment

Pedro Espinosa, PE, GE, Principal

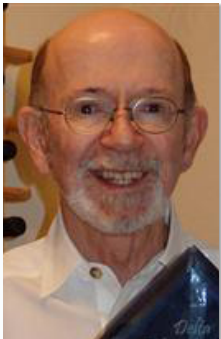
River Islands Community Flood Control Project

Zac Crawford, CEG, Associate

Cale Crawford, PE, GE, Associate

Potrero Power Station Shoreline Stabilization

David Teague, PhD, PE, GE, Associate



WEDNESDAY, SEPTEMBER 18

Limitations of Simplified Analyses of Earthquake-Induced Liquefaction and Settlement

Robert Pyke, PhD, Consulting Engineer

Simplified analyses tend to be very conservative. As such, Dr. Pyke argues that simplified analyses should only be used for screening analyses, if that. Depositional history and asking whether liquefaction and settlement have ever been observed in similar profiles in a similar tectonic setting is generally a better screening method. The presentation includes several examples of overly conservative simplified analyses and illustrates how effective stress nonlinear site response analyses can provide more accurate results and save millions of dollars by eliminating unnecessary ground improvement. Lum Elementary School in Alameda, CA, will be used to illustrate the presentation's argument.

THURSDAY, SEPTEMBER 19

Two 2024 Outstanding Project Award Winners City of Brentwood, Wastewater Treatment Plant Expansion, Phase II (Haley & Aldrich)

Mark Myers, PE, GE, Senior Technical Expert

Dan Peluso, PE, GE, ENV SP, Principal Engineer

Mission Rock, Phase II (Langan)

Scott Walker, PE, GE, Principal

Peter Brady, PE, GE, Senior Project Engineer



FRIDAY, SEPTEMBER 20

Seismic Reinforcement of Puget Sound Dry Docks

Doug Schwarm, PE, GE, Chief Engineer at Atlas Geotechnical

Between February and May 2023, the US Navy executed a fast-paced seismic reinforcement project in three of the dry docks at Naval Base Kitsap. The facilities were built between 1938 and 1980, preceding our recognition of the Cascadia Subduction Zone seismic hazard. The Pacific submarine fleet's maintenance schedule is uncompromising; the time between vessel dockings required very rapid design and construction in order not to distract from the overall mission. Learn about the challenges, like tieback capacity and dewatering issues, Atlas Geotechnical overcame during the four-month design and construction period to successfully complete this project.