COMPANY PROFILE





















Alfa Geotech Co., Ltd.

(formerly MAA Geotechnics Co., Ltd.) was established in 1997 as a local geotechnical consulting firm. Over the last decade, the company has become a well-established geotechnical consulting company. The company has involved in several major infrastructure projects in Thailand, including highway, airport, land reclamation, petrochemical and power plant projects etc. Today, the company has over twenty (20) geotechnical engineers with various testing equipment and facilities, becoming one of the most active geotechnical consulting firms in Thailand.

21 YEARS Experience

in Geotechnical Engineering







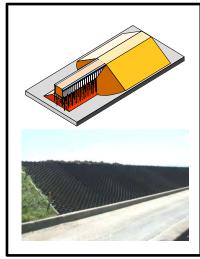


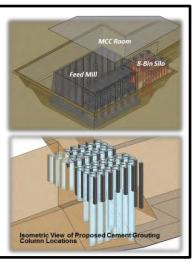


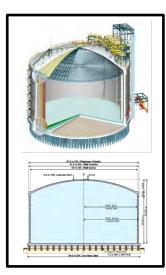


Geotechnical Consultancy

- Ground Improvement
- Foundation Design
- Slope Stability and Settlement Analysis
- Reservoir and Well Design
- Design and Construction Supervision







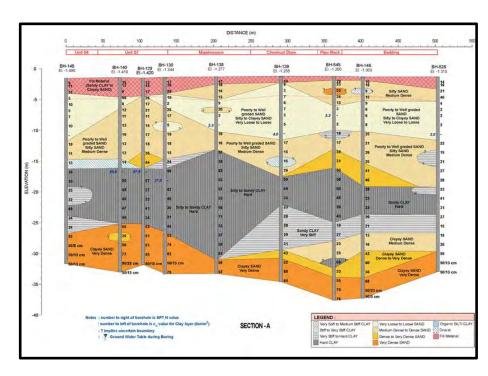




Soil Investigation

Soil Boring







- Cone Penetration Test (CPT)
- Seismic Cone Test
- Dynamic Cone Penetration Test (DCPT)
- Plate Bearing Test
- Downhole Seismic Test
- Pressuremeter Test
- Field Vane Shear Test



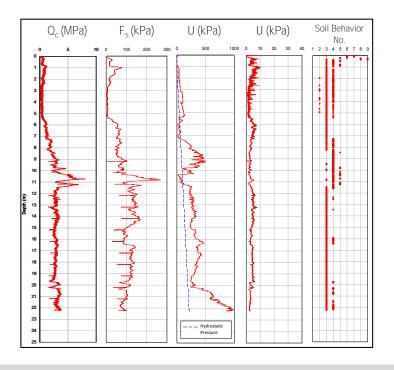
- Soil Resistivity Test
- Thermal Test
- Field Permeability
- Sand Cone Density
- Underground Cable Detector
- Ground Penetration Radar Test
- Half-cell Potential Test
- Ultrasonic Concrete Test



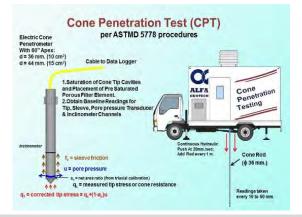


Cone Penetration Test (CPT)

- Suitable for Mobilize and Setup
- Real-Time Measurement











Dynamic Cone Penetration Test (DCPT)

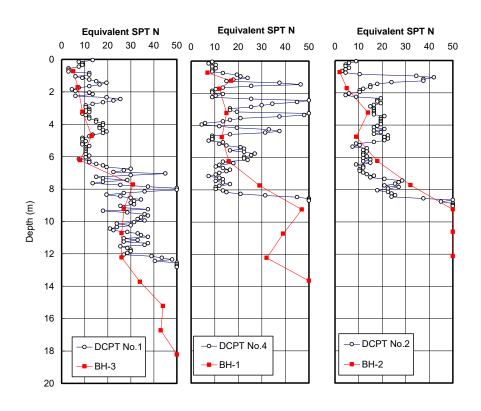


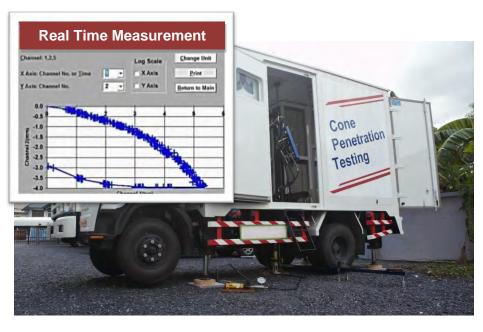






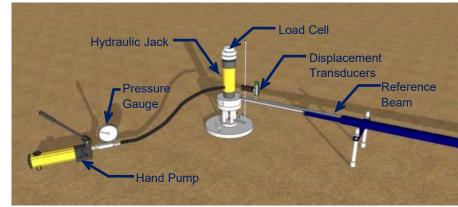
Plate Bearing Test

- Real-Time Measurement
- ASTM D1194, D1196 and DIN 18134







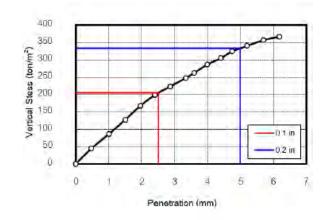


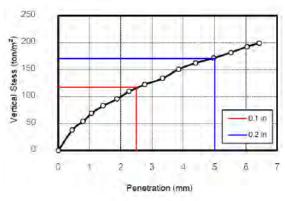




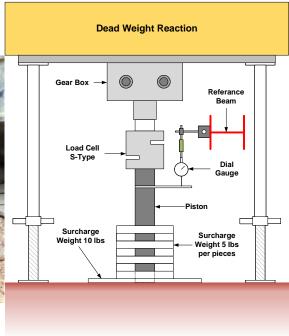
CBR Test

• ASTM D4429









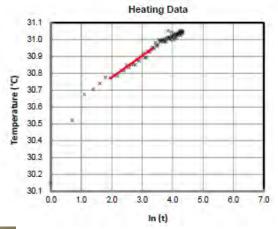


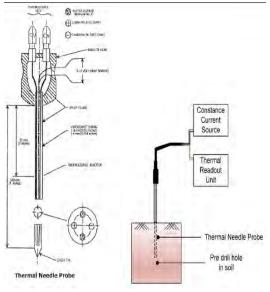
Thermal Conductivity

• ASTM D5334









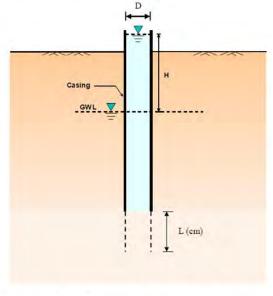


Field Permeability

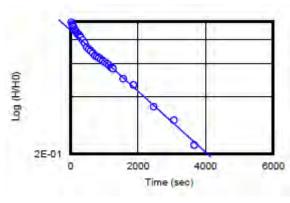
Hvorslev's Method

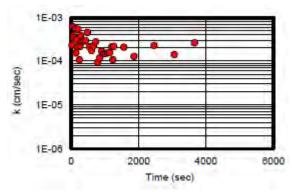


(Hvorslev, U.S. Crops of Engineers, W.E.S)



FORMULA	LEGEND
	k = Coefficient of permeability (cm/sec)
$q \ln \{ L/D + \sqrt{1+(L/D)^2} \}$	q = Flow rate (cm³/sec)
K =	D = Diameter of test section (cm)
$2\pi LH_c$	L = Length of test section (cm)
	H _c = Constant piezometer head (cm)









Soil Resistivity Test



Downhole Seismic Test







Pressuremeter Test



Field Vane Shear Test







Sand Cone Test



Underground Cable Detect

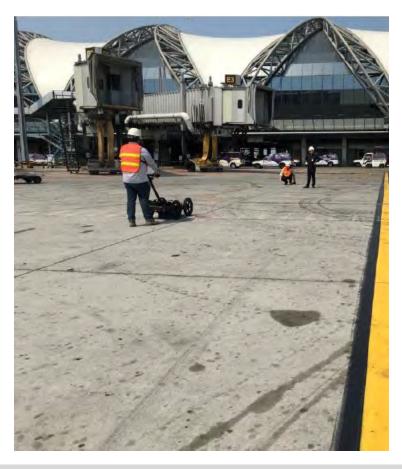


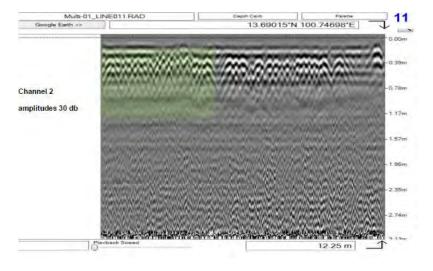


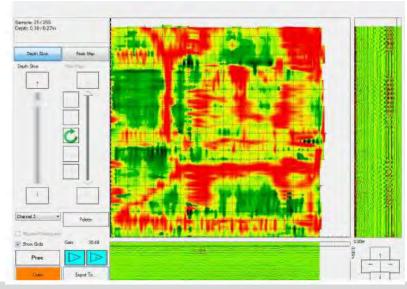


Ground Penetrating Radar

Provides Plan and X-sectional Results











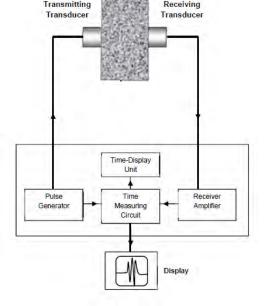


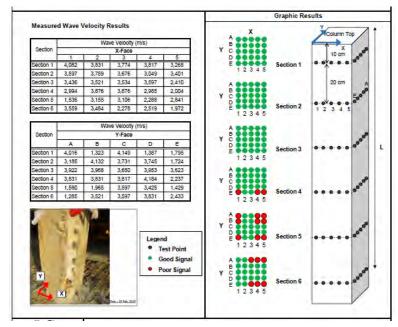
Ultrasonic Concrete Test

ASTM C597







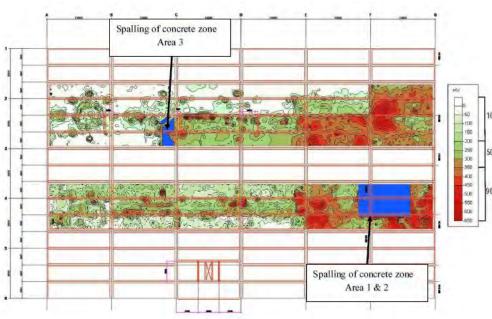


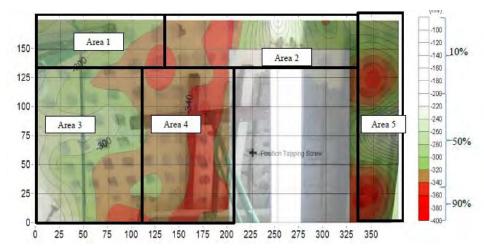


Half Cell Potential Test

• ASTM C876











Pile Testing

- Low Strain Integrity Test (PIT)
- Dynamic Pile Analyzer (PDA)
- Static Pile Load Test
- Crosshole Sonic Logging Test





Pile Testing

Low Strain Integrity Test (PIT)



Dynamic Pile Load Test (PDA)







Pile Testing

Static Pile Load Test



Crosshole Sonic Logging Test







Instrument Supply, Installation and monitoring

- Tiltmeter
- Strain Gauge
- Settlement Plate
- Soil Movement Monitoring (Inclinometer)
- Horizontal Inclinometer
- Piezometer Monitoring
- Magnetic Extensometer
- Vibration Monitoring
- Sound Level Monitoring





Strain Gauge



Settlement Plate







Tiltmeter





Soil Movement Monitoring (Inclinometer)



Horizontal Inclinometer







Magnetic Extensometer





Piezometer Monitoring



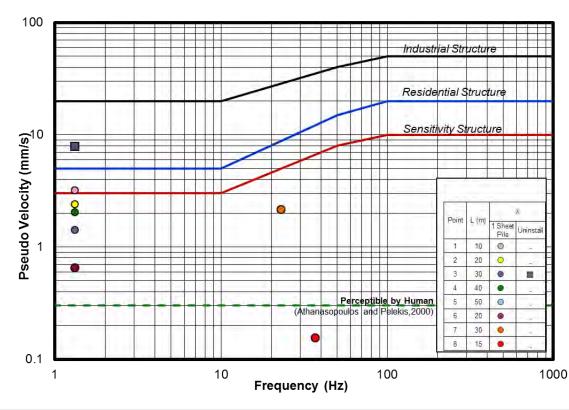




Vibration Monitoring

• DIN-4150





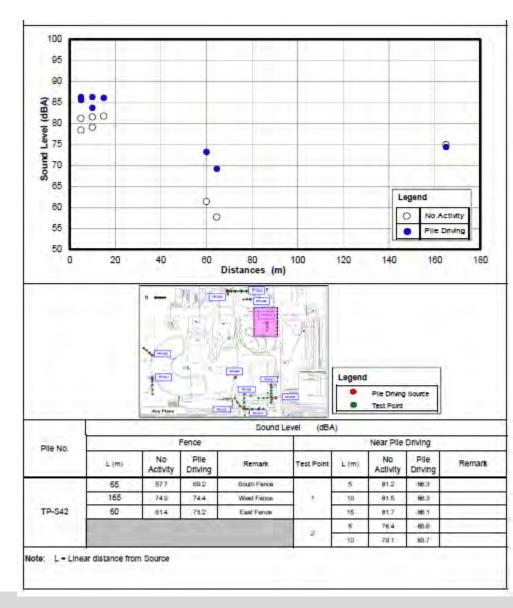




Sound Level Monitoring

ASTM E1014









Soil Laboratory Test

- Basic Physical Properties Test
- Strength Tests
 - Unconfined Compression Test
 - Triaxial Compression Test (UU, CU, CD)
 - Direct Shear Test
- Consolidation Tests
 - One Dimensional Oedometer
 - Constant Rate of Strain (CRS)
- Chemical Test (pH, Chloride, Sulphate and Organic Content)
- Electrical Test
 - Soil Box Resistivity Test
 - Thermal Conductivity Measurement
- Compaction & CBR Test
- Permeability Test





Soil Laboratory Test













Rock & Aggregate Test

- Basic Properties
- Rock Core Preparation
- Uniaxial Compression Test with and without Strain Gauge
- Point Load Test
- Los Angeles Abrasion Test
- Soundness Test
- Alkali Reaction Test
- Specific Gravity and Absorption of Coarse Aggregate









Geotextile Testing

- Tensile Strength
- Grab Strength
- Trapezoid Tearing Strength
- Index Puncture Resistance
- CBR Puncture Strength
- Bursting Strength
- Apparent Opening Size (AOS)
- Thickness
- Permeability Test
- Discharge Capacity











Project Experience





PTTGC -PO/ORP

Map Ta Phut, Rayong



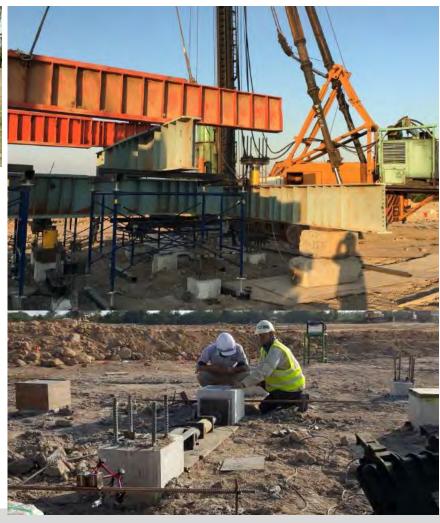


- Soil Boring over 50 nos.
- In-situ Test
 - Downhole Seismic
 - Plate Bearing Test
 - Resistivity Test
 - Thermal Test
 - DCPT
 - CPT





- Pile Testing
 - PDA
 - Static Pile Load Test
- Vibration and Sound Monitoring
- Topographic Survey
- Geotechnical Consultant







PTTLNG Phase I & II

Map Ta Phut, Rayong



- Soil Boring over 50 nos.
- In-situ Test
 - Downhole Seismic
 - Plate Bearing Test
 - Resistivity Test
 - Pressuremeter Test
 - CPT

- Pile Testing
 - PDA
 - Static Pile Load Test
- Tank Settlement Monitoring
- Geotechnical Consultant

















Upstream Project for Hygiene and Value Added Products (UHV)

IRPC, Rayong







- Soil Boring over 100 nos.
- In-situ Test
 - Downhole Seismic
 - Plate Bearing Test
 - Resistivity Test
 - Pressuremeter Test

- Pile Testing
 - PDA over 500 Piles
 - Static Pile Load Test
- Topographical Survey

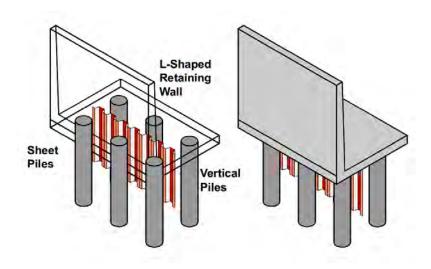






Tostem

Nava Nakorn Industrial Zone, Pathum Thani



- Flood Protection Wall Design
- Water wells Installation









Hitech Industrial Estate

New Flood Protection Barrier System





- Design of Perimeter Dike Protection (11 km)
- Topographical Survey
- Geotechnical Investigation









Suvarnabhumi Airport

Maintenance Apron Expansion

 Consulting service for design of ground improvement via vacuum consolidation and soil cement column methods

1st Midfield Satellite Aprons and 3rd Runway

 Consulting service for design of ground improvement via PVD and vacuum consolidation methods for construction.

1st Midifield Satellite Building

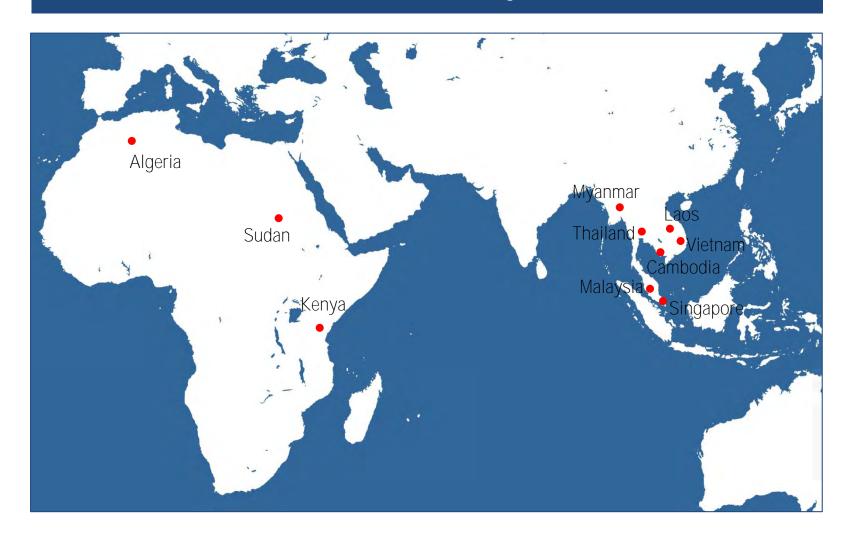
• Review of soil factual reports and preparation of geotechnical interpretative report, design check of pile foundation and diaphragm wall design including of possible causes of pavement damage on existing airfield pavement and provide solutions to minimize such problem in new pavement.







Oversea Project





Vietnam



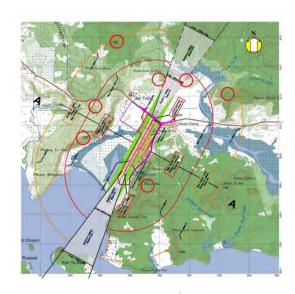


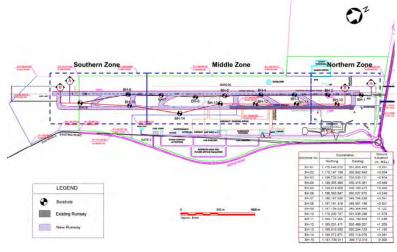
Cambodia

Sihanoukville International Airport

- Geotechnical Investigation
- The Design of New Runway









Coal Power Plant, Sihanoukville,

Sihanoukville, Cambodia











- Soil Boring over 24 nos. (onshore and offshore
- Rock Coring
- In-situ Test
 - Field Permeability
 - Plate Bearing Test
 - Resistivity Test

- Downhole Seismic
- Topographic Survey
- Bathometric Survey
- Geotechnical Consultant









Malaysia

Kualalumpur International Airport 2 (KLIA2)

- Consultancy Service on Geotechnical Evaluation Works
- Geotechnical Aspects of Fuel Hydrant Rectification Works

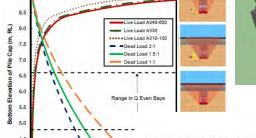


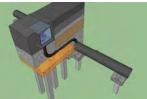


KLIA2, Fuel Hydrant Rectification Works

Malaysia







- Evaluate Pile Load
- Evaluate Pile Integrity
- Estimate Pile Capacity and Settlement
- Modification of Pipe Supports
- Recommendation in

future pipeline support Review and Compare MTM (Magnetic Tomography)

Geotechnical Consultant

