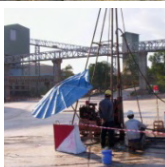


# STATEMENT OF QUALIFICATIONS



**GEO-TECHNOLOGY CONSULTANTS CO., LTD.**  
 43 Thai CC Tower, 15<sup>th</sup> Floor, Room 159  
 South Sathorn Road, Yannawa, Sathorn  
 Bangkok 10120 THAILAND  
 Tel. 0-2672-3010 Fax. 0-2672-3009  
<http://www.gtc.co.th> E-mail : [gtc@gtc.co.th](mailto:gtc@gtc.co.th)



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## COMPANY PROFILE

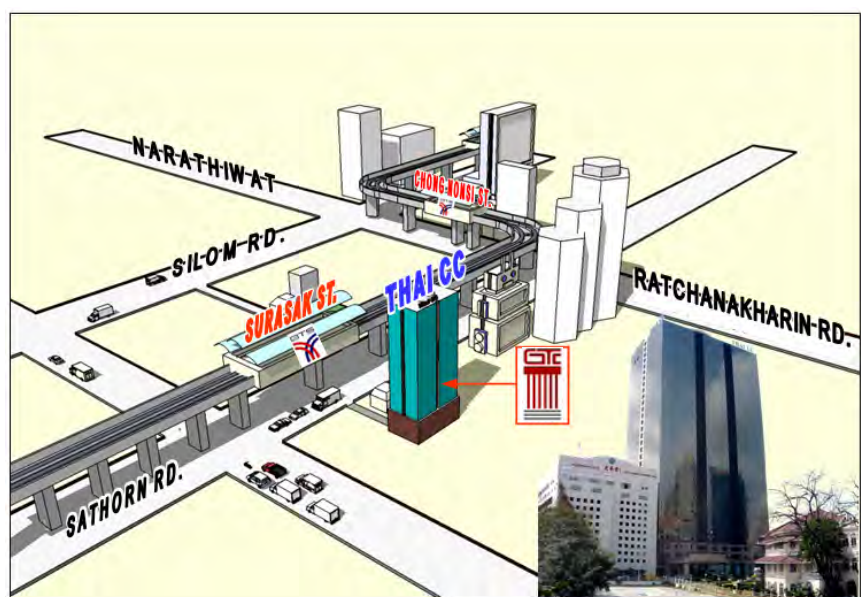
**INTRODUCTION**

**Geo-Technology Consultants Co., Ltd. (GTC)** was founded in **1993** by a group of Thailand's experienced geotechnical and civil engineers, in response to the increasing demand for highly qualified geotechnical and civil engineering services.

As taller buildings and large scale developments such as housing, airport, industrial estates and waste treatment plants are being developed and constructed, the roles of geotechnical engineers, the professionals who have acquired specific technical knowledge of soils, have become essential to the success of any construction projects as they assist project owners in securing project profitability, fund and in protecting public safety. Proper geotechnical engineering ensures firm foundations, stable embankments, durable pavements, leak-proof reservoirs, etc.

GTC's policy is to provide its clients with expertise in geotechnical engineering to the best of care, using state-of-the-art technology. GTC offers subsurface investigations and consulting services in geotechnical engineering and civil engineering for both public and private sectors.

Since its establishment in 1993, GTC has steadily expanded in manpower and supporting facilities due to the growing demand for its services, and has been recognized as one of the leading firms in geotechnical engineering in Thailand. GTC currently maintains over 60 full-time staff, operates a well-equipped laboratory and owns a large number of drilling rigs and field test equipments, with more than **7,500** boreholes or **200,000** m of the total length of soil boring which had been done over the country. GTC's geotechnical engineers and scientists are known for their expertise and quality works rendered to clients. GTC's track record shows scores of returning clients since its existence.



**SERVICES PROVIDED****Subsurface Investigation**

Soil and Rock Boring  
Field Vane Shear Test  
Field Density Test  
Field Permeability Test  
Plate Bearing Test  
Laboratory Soil Testing  
- Physical Test : Atterberg Limits, Sieve Analysis  
- Engineering Test : Consolidation, Triaxial  
- Chemical Test : pH, Impurity, Organic Content

**Instrumentation**

Observation Well  
Settlement Plate  
Piezometer  
Inclinometer

**Survey**

Topographic, Construction and Route Surveys  
Riverbed, Seabed  
Land Development  
Aerial Photography by UAV/Drone

**Performance Test**

Pile Integrity Low Strain Test (Seismic Test)  
Dynamic Pile Load Test  
Cross Hole Sonic Logging Test

**Geotechnical Engineering**

Foundation  
Retaining Structure  
Ground Improvement  
Embankment, Excavation  
Slope Stability  
Pavement

**Environmental Site  
Assessment**

Ground Water Monitoring Well Installation  
Ground Water / Soil Sampling and Chemical Testing  
Analysis of Ground Water Flow Direction

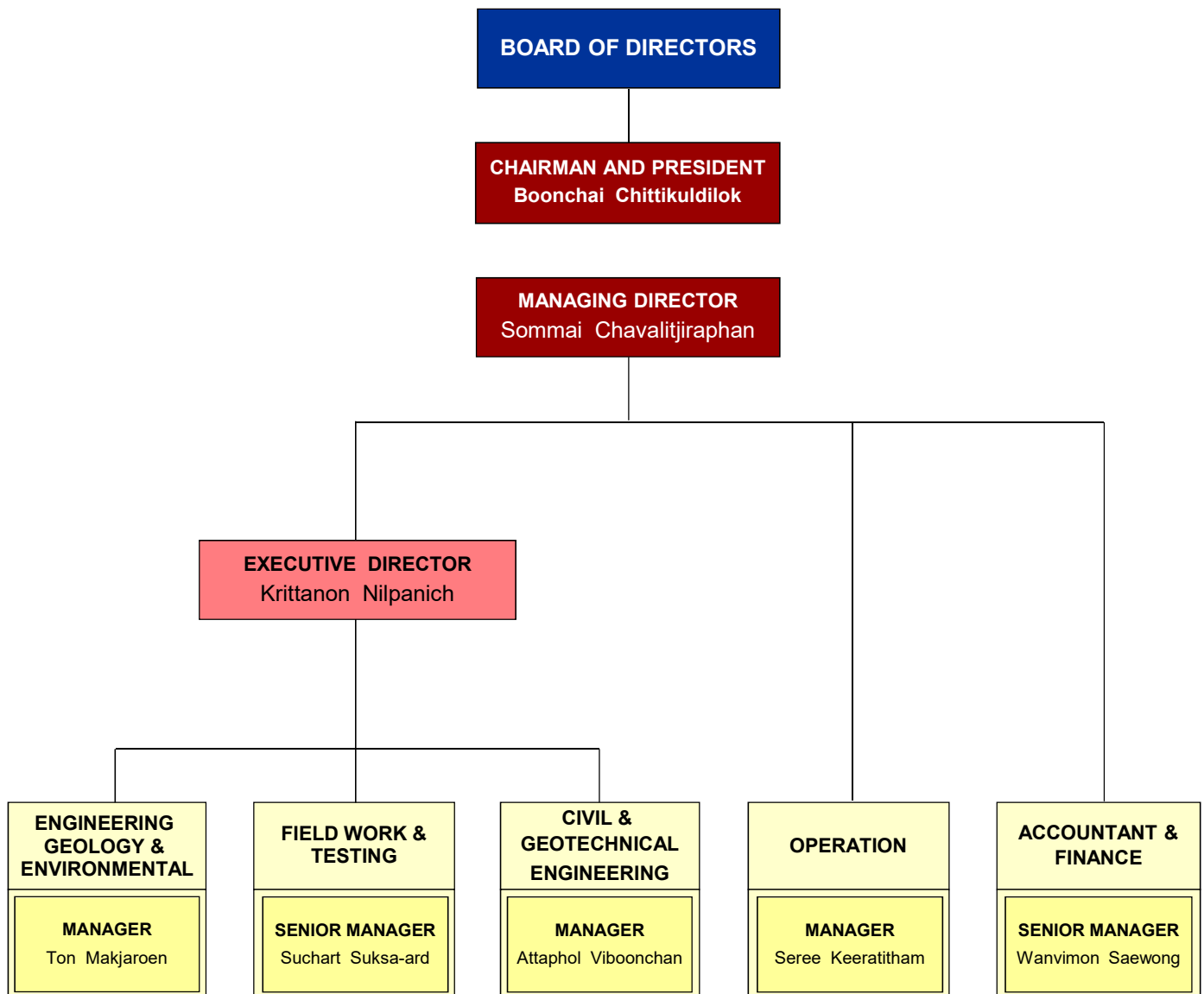
**Civil Engineering**

Structural Design  
Utility Structure  
Drainage  
Forensic  
Construction Supervision  
Construction Management

**Nondestructive Evaluation  
& Structural Condition  
Assessment**

Structural Back Analysis  
Foundation Inspection  
Quality of Concrete  
Crack and Void in Concrete  
Reinforced Steel Bar  
Floor Loading Test  
Parallel Seismic Test



**THE MANAGEMENT STRUCTURE**

**KEY PERSONNEL**

<i>Chairman and President</i>	<b>Mr. Boonchai Chittikuladilok</b> B. Eng. (Civil), Chulalongkorn University, 1972 M. Eng. (Geotechnical), A.I.T., 1975
<i>Managing Director</i>	<b>Mr. Sommai Chavalitjiraphan</b> B. Eng. (Civil), Kasetsart University, 1985 M. Eng. (Geotechnical), A.I.T., 1991 M.B.A., Thammasart University, 1995
<i>Executive Director</i>	<b>Mr. Krittanon Nilpanich</b> B. Eng. (Survey), Chulalongkorn University, 1992 M.B.A., Thammasat University, 2006
<i>Field Work &amp; Testing Senior Manager</i>	<b>Mr. Suchart Suksa-ard</b> B. Sc., Rajabhat Institute Phranakhon, 1995 M.A. (Resources/Environmental), Krirk University, 2001
<i>Accounting &amp; Finance Senior Manager</i>	<b>Miss Wanvimon Sae-Wong</b> B.A. (Acc.), Bangkok University, 1994
<i>Operations Manager</i>	<b>Mr. Seree Keeratitham</b> B.B.A (MIS), Rajamangala Institute of Technology, 1994
<i>Engineering Geology &amp; Environmental Manager</i>	<b>Mr. Ton Makjaroen</b> B. Eng. (Civil), Kasetsart University, 1999 M. Eng. (Geotechnical), King Mongkut's University of Technology Thonburi, 2003
<i>Civil &amp; Geotechnical Engineering Manager</i>	<b>Mr. Attaphol Viboonchan</b> B. Eng. (Civil), King Mongkut's University of Technology Thonburi, 2000 M. Eng. (Geotechnical), King Mongkut's University of Technology Thonburi, 2003
<i>Geotechnical Engineer Civil Engineer Construction Engineer Geologist</i>	<b>Miss Pornthip Sonklin</b> B. Eng. (Civil), Mahanakorn University of Technology, 2002 M.Eng. (Geotechnical), King Mongkut's University of Technology Thonburi, 2004 <b>Mr. Narongchai Meesamut</b> B. Eng. (Civil), King Mongkut's University of Technology Thonburi, 2008 M. Eng. (Geotechnical), King Mongkut's University of Technology Thonburi, 2012 <b>Mr. Natthawoot Phantupan</b> B. Eng. (Civil), Kasetsart University, 2010 M.Eng. (Geotechnical), Kasetsart University, 2015 <b>Mr. Sarawut Tatiyachaimongkol</b> B. Eng. (Civil), Rangsit University, 2002 <b>Mr. Pakpoom Tanapiboonchai</b> B. Eng. (Geological), Suranaree University of Technology, 2008 <b>Mr. Settawut Boonrubjiraroj</b> B. Sc. (Geotechnology), Khon Kaen University, 2014 <b>Miss Plafon Kulpang</b> B. Sc. (Geotechnology), Khon Kaen University, 2018



## **LIST OF EQUIPMENTS**



***Drilling Equipments***

Rotary Drilling Rig (Up to 80 m Deep) including Field Sampling and Testing  
Portable Motorized Cat-Head (Up to 60 m Deep) including Field Sampling  
Field Vane  
Rock Coring



Percussion (Drilling in Riverside Area)



Rotary (Drilling in Highland Area)



Drilling in the Sea (Laem Chabang Port)



Soil/Rock Samples

***Field Soil Testing Equipments***

Standard Penetration  
Cone Penetration  
Plate Bearing

Vane Shear  
Permeability  
Density



Plate Bearing Test



Sand-Cone Apparatuses

***Field Instrumentations***

Inclinometer  
Observation Well

Settlement Plate  
Piezometer



Observation Well



Standpipe Piezometers

**Laboratory Soil Testing Equipments**

1-D Consolidation  
Unconfined Compression  
Particle Size Distribution  
Atterberg Limits, Specific Gravity  
Water Absorption  
LA Abrasion, Flakiness

Triaxial  
Permeability  
Bulk Density  
Hydrometer Analysis  
Compaction and CBR  
Elongation, Chemical Test, etc.



Consolidometer Tester



Triaxial Apparatus

**Pile Integrity Testing Equipment**

Seismic Test

Sonic Logging Test



Pile Integrity Tester



Sonic Logging Tester

**Surveying Instruments**

Total Station      Automatic Level      Aluminium Tripod & Staff 3M  
Theodolite with Electronic Distance Measurement



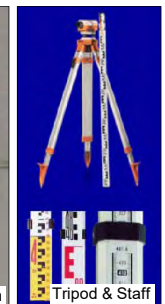
Total Station



Automatic Level



Single Prism



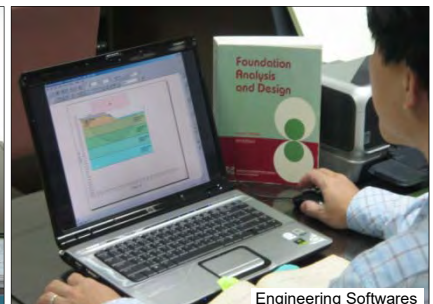
Tripod & Staff

**Computer Facilities**

Most up-to-date computer hardwares and application softwares for  
Geotechnical and Civil Engineering  
Computer Graphic Design



Computer & AutoCAD



Engineering Softwares



# **EXAMPLES OF GTC'S PROJECT TRACK RECORDS**

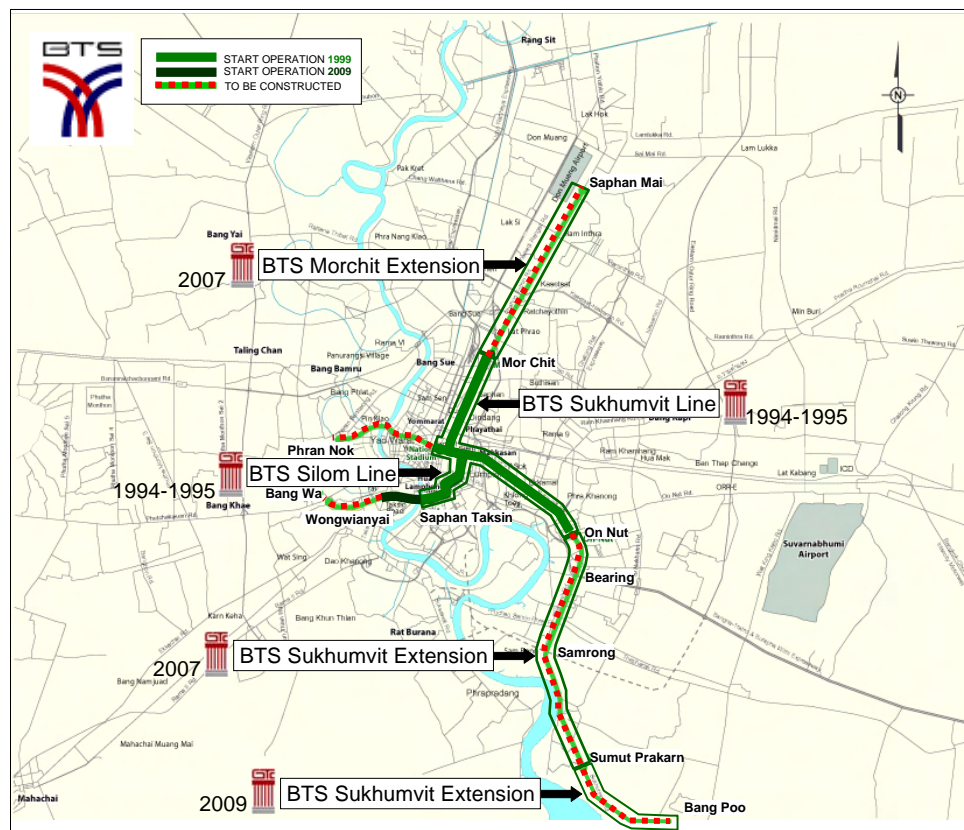
**GEOTECHNICAL ENGINEERING**



# **GEOTECHNICAL ENGINEERING**

## **MASS TRANSIT PROJECTS**



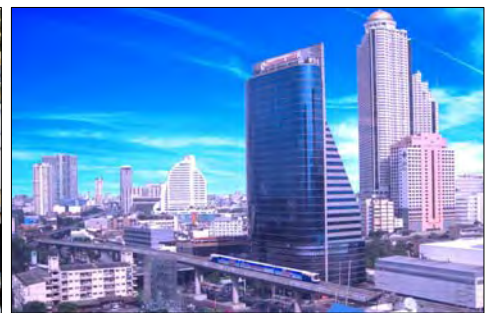


The Bangkok Mass Transit System

- Project** : Bangkok Transit System, 1994-1995  
**Location** : BTS Sukhumvit Line and Silom Line  
**Client** : Italian-Thai Development PCL  
**Job Descriptions** : Subsurface Investigation  
 - 12 Boreholes @ 60 m (1994)  
 - 96 Boreholes @ 60 m (1995)



BTS Sky Train



Saphan Taksin Station – Surasak Station



Soil Boring on at Poochao-Samingprai Road



Soil Boring on Sukhumvit Road

- Project** : Study for BTS Extension Networks, 2004  
**Location** : Sukhumvit Road, Bang Na-Trad Road, Phahon Yothin Road  
 Rama I Road Ratchadamnoen Road Phran Nok Road, and Charansanitwong Road  
**Client** : Utility Design Consultants Co., Ltd.  
**Job Descriptions** : Subsurface Investigation  
 - 27 Boreholes @ 60 m, 7 Field Vane Shear Tests



Soil Boring on Sukhumvit Road



Soil Boring at Bang Na

- Project** : Study for BTS Sukhumvit Extension (On Nut – Samrong), 2002  
**Location** : Sukhumvit Road, On Nut to Samrong  
**Client** : Utility Design Consultants Co., Ltd.  
**Job Descriptions** : Subsurface Investigation  
 - 10 Boreholes @ 60 m



Soil Boring on Sukhumvit Road



Soil Boring under Bridge (Khlong Samrongon)

- Project** : Detailed Design for BTS Sukhumvit Extension (Bearing – Samut Prakarn), 2007  
**Location** : Sukhumvit Road, Soi Bearing to Sumut Prakarn  
**Client** : Utility Design Consultants Co., Ltd. / BMSE Cosortium  
**Job Descriptions** : Subsurface Investigation  
 - 34 Boreholes @ 60 m, 5 Field Vane Shear Tests



Soil Boring on Sukhumvit Road (Erawan Museum)



Soil Boring on Sukhumvit Road



- Project** : Detailed Design for BTS Mochit Extension (Morchit – Saphan Mai), 2007  
**Client** : Geotechnical & Foundation Engineering Co., Ltd. (GFE) / TEAM  
**Location** : Phahon Yothin Road  
**Job Descriptions** : Subsurface Investigation  
 - 36 Boreholes @ 60 m, 24 Field Vane Shear Tests, 25 Standpipe Piezometers



Soil Boring on Phahonyothin Road



Soil Boring at Major Ratchayothin

- Project** : Bangkok Transit System, 2009  
**Location** : BTS Sukhumvit Extension (Samutprakarn - Bang Poo)  
**Client** : Utility Design Consultant Co., Ltd.  
**Job Descriptions** : Subsurface Investigation  
 - 20 Boreholes @ 60 m

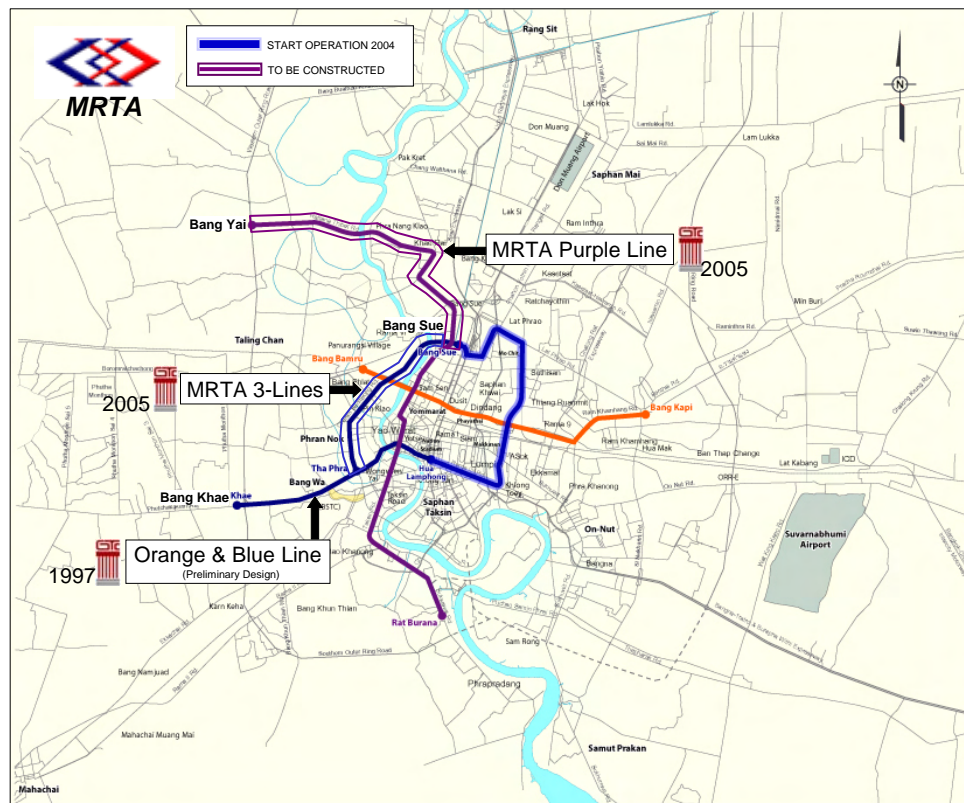


Soil Boring at Soi Bang Poo Municipal 92



Soil Profile along Project Route





The New Mass Rapid Transit Network

**Project** : Detailed Design for MRTA Purple Line, 2005  
**Location** : Bang Yai – Bang Sue (Purple Line)  
**Client** : BBMT  
**Job Descriptions** : Subsurface Investigation  
 - 47 Boreholes @ 60, 65 and 85 m

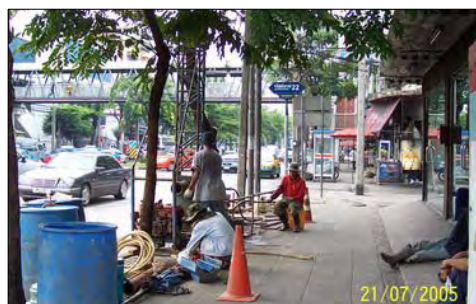


Soil Boring at Phra Nang Klao Bridge



Soil Boring on Rattana Thibet Road

**Project** : Detailed Design for MRTA 3-Lines, 2005  
**Location** : Bang Sue – Tha Phra (Blue Line)  
**Client** : BMTD CONSORTIUM  
**Job Descriptions** : Subsurface Investigation  
 - 25 Boreholes @ 65 m



Soil Boring at Soi Charansanitwong 22



Marking Level of Swelling of Bentonite Property Testing

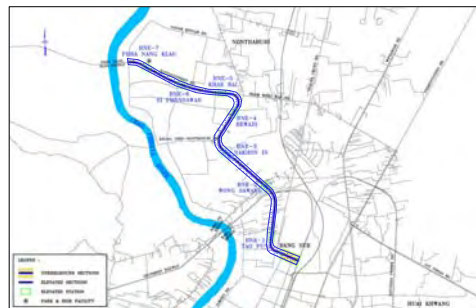
<b>Project</b>	: Preliminary Design of Orange Line (Phase I) and Blue Line Extension (POB), 1997
<b>Location</b>	: Bangkok
<b>Client</b>	: Asian Engineering Consultants Corp., Ltd.
<b>Job Descriptions</b>	: Subsurface Investigation and Geotechnical Design - 45 Boreholes @ 50 m and 45 Field Vane Shear Tests for Orange Line - 31 Boreholes @ 50 m and 30 Field Vane Shear Tests for Blue Line



Orange Line (OR)



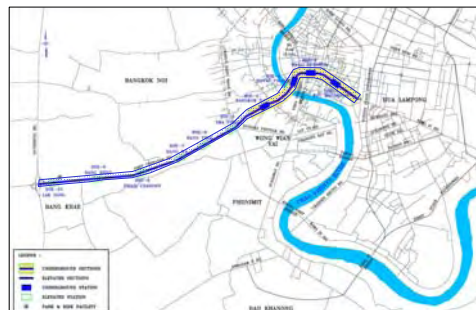
Soil Boring at Bang Lam Phu



Blue Line North Extension (BNE)



Soil Boring on Rattana Thibet Road

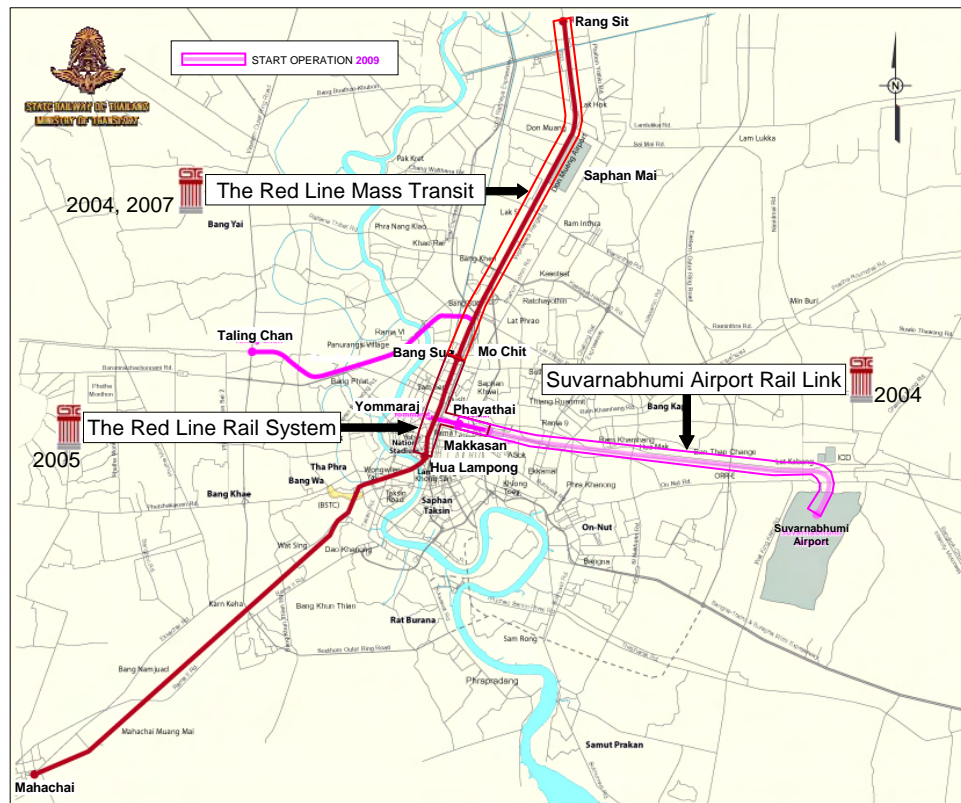


Blue Line South Extension (BSE)



Field Vane Shear Test on Phetchakasem Road





The Suvarnabhumi Airport Rail Link and Red Line Rail System

**Project** : Suvarnabhumi Airport Rail Link, 2004  
**Location** : Phaya Thai – Suvarnabhumi Airport  
**Client** : Asian Engineering Consultants Corp., Ltd.  
**Job Descriptions** : Subsurface Investigation  
 - 102 Boreholes @ 60 m



Soil Boring at Ramkhamhaeng



Soil Boring at Klong Ton



Ramkhamhaeng Station



Railway Construction at Klong Ton

- Project** : Study for The Red Line Mass Transit (North Corridor)  
Bang Sue – Rangsit and Bang Sue Station, 2004
- Location** : Bang Sue to Rangsit
- Client** : Asian Engineering Consultants Corp., Ltd.
- Job Descriptions** : Subsurface Investigation  
- 20 Boreholes @ 50 m, 20 Field Vane Shear Tests



Soil Boring near UCOM Building

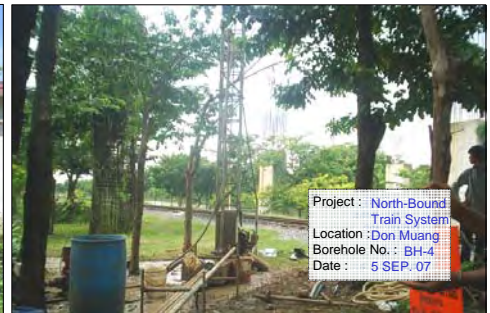


Soil Boring at Bang Sue Station

- Project** : Plan Improvement for The Red Line Mass Transit  
Bang Sue – Rangsit and Bang Sue Station, 2007
- Location** : Bang Sue to Rangsit
- Client** : Asian Engineering Consultants Corp., Ltd.
- Job Descriptions** : Subsurface Investigation  
- 5 Boreholes @ 70 m, 5 Field Vane Shear Tests



Soil Boring at Bang Sue Station

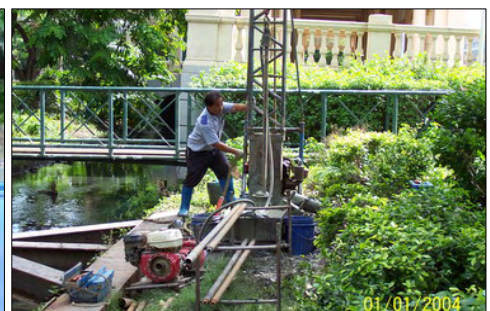


Soil Boring at Don Muang

- Project** : The Red Line Rail System (Missing Link)  
Bang Sue-Makkasan and Bang Sue-Hua Lampong Sections (10 km), 2005
- Location** : Bang Sue, Makkasan and Hua Lampong
- Client** : Asian Engineering Consultants Corp., Ltd.
- Job Descriptions** : Subsurface Investigation  
- 31 Boreholes @ 60 m, 33 Field Vane Shear Tests



Soil Boring at Policy and Planning Office of Transportation



Soil Boring at Suan Chitlada Station



# **GEOTECHNICAL ENGINEERING**

## **INDUSTRIAL PROJECTS IN MAP TA PHUT**



- Project** : PTT Chemical I-1 Road, 2008  
**Location** : EIE Industrial Estate and IRPC Area, Map Ta Phut, Rayong  
**Client** : PTT Chemical PCL.  
**Job Descriptions** : Geotechnical Investigation and Topographi Survey  
 - 58 Boreholes @ 15 m - 8 Test Pits & Field Density Tests  
 - 14 Plate Bearing Tests - 8 Observation Wells  
 - 4 Electrical Resistivity Tests - 24 Chemical Tests  
 - Survey 300 Rai

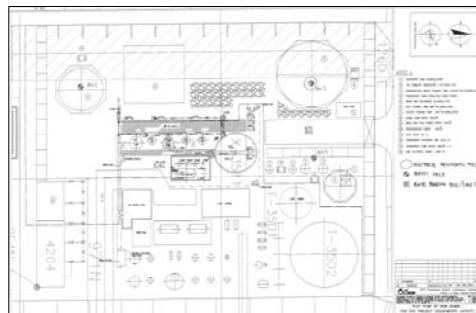


Soil Boring at BH-2

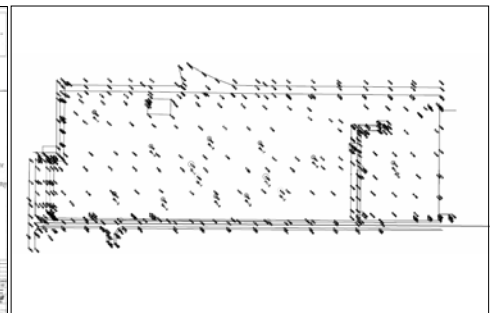


Plate Bearing Test at PL 2/1

- Project** : EPS Project, 2008  
**Location** : PTT Chemical I-1 Road, Map Ta Phut, Rayong  
**Client** : PTT Chemical PCL.  
**Job Descriptions** : Geotechnical Investigation and Topographi Survey  
 - 13 Boreholes @ 12 m - 3 Test Pits & Field Density Tests  
 - 6 Plate Bearing Tests - 2 Observation Wells  
 - 3 Electrical Resistivity Tests - 12 Chemical Tests  
 - Survey 6 Rai



Location of Boreholes at Zone 6



Topographic Survey Map

- Project** : METATHESIS Project (OFFSITE), 2008  
**Location** : Map Ta Phut, Rayong  
**Client** : PTT Chemical PCL.  
**Job Descriptions** : Geotechnical Investigation  
 - 8 Boreholes @ 20 m - 2 Down Hole Tests  
 - 2 Electrical Resistivity Tests



Soil Boring at BH-2



Soil Boring at BH-5

- Project** : Pipe Line Distribution Package No.1, 2008  
**Location** : Eastern Industrial Estate Map Ta Phut, Rayong  
**Client** : SGS (Thailand) Limited  
**Job Descriptions** : Geotechnical Investigation and Topographi Survey  
 - 3 Boreholes @ 20 m - 3 Electrical Resistivity Tests  
 - Survey Absolute Distance 1,320 m



Soil Boring at BH-2



Suveying on Site

- Project** : The MOC Cracker, 2007  
**Location** : MOC Cracker, Map Ta Phut, Rayong  
**Client** : Austrian Energy & Environment  
**Job Descriptions** : Geotechnical Investigation  
 - 6 Boreholes @ 25 m - 2 Test Pits & Field Density Tests



Soil Boring at BH-1



Soil Boring at BH-6

- Project** : Thai Tank Terminal Project, 2006  
**Location** : Map Ta Phut Industrial Port, Rayong  
**Client** : Thai Tank Terminal Ltd.  
**Job Descriptions** : Subsurface Investigation  
 - 20 Boreholes @ 15 m



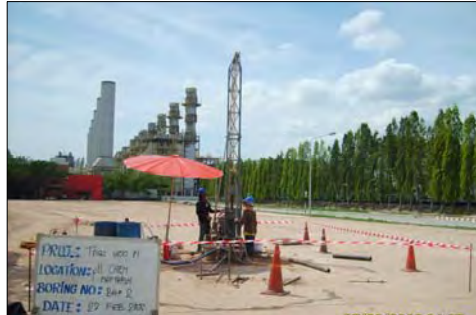
Soil Boring at BH-13



Soil Boring at BH-1



**Project** : PTTCHEM METATHESIS Plant , 2008  
**Location** : PTT Chem I-4 Road, Map Ta Phut, Rayong  
**Client** : Thai Woo Ree Engineering Co., Ltd.  
**Job Descriptions** : Geotechnical Investigation  
 - 5 Boreholes @ 25 m



Soil Boring at BH-2



Soil Boring at BH-3

**Project** : GHU Spare Reactor, 2008  
**Location** : Map Ta Phut Industrial Estate, Map Ta Phut, Rayong  
**Client** : Thai Woo Ree Engineering Co., Ltd  
**Job Descriptions** : Geotechnical Investigation  
 - 2 Boreholes @ 22 m  
 - 1 Electrical Resistivity Test



Soil Boring at BH-2



Syscal R1 Plus Resistivity Meter

**Project** : THPP#3, 2008  
**Location** : MOC Cracker, Map Ta Phut, Rayong  
**Client** : SK Engineering & Construction Co., Ltd.  
 Thai Woo Ree Engineering Co., Ltd.  
**Job Descriptions** : Geotechnical Investigation and Topographic Survey  
 - 16 Boreholes @ 25 m  
 - 4 Test Pits & Field Density Tests  
 - 10 Plate Bearing Tests  
 - 6 Electrical Resistivity Tests  
 - 3 Down Hole Tests  
 - Survey 24 Rai



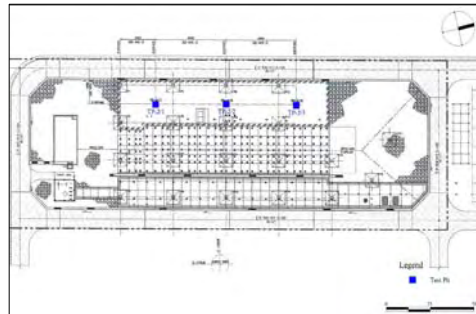
Surveying on Site



Plate Bearing Testing

**Project** : 32020-MOC, 2008  
**Location** : MOC, Map Ta Phut, Rayong  
**Client** : Technip Engineering (Thailand) Ltd.  
**Job Descriptions** : Geotechnical Investigation  
 - 3 Test Pits  
 - 6 Field Density Tests

- 3 Plate Bearing Tests



Location of Geotechnical Investigations

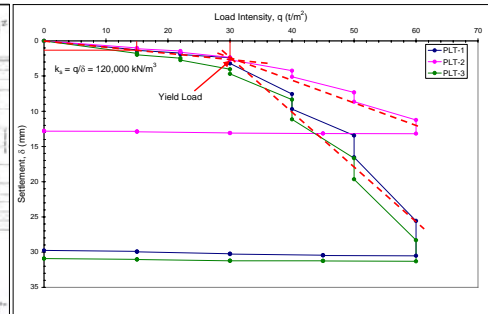


Plate Bearing Test Results

**Project** : The Cracking Furnace Unit , 2007  
**Location** : MOC Cracker, Map Ta Phut, Rayong  
**Client** : Technip Engineering (Thailand) Ltd.  
**Job Descriptions** : Geotechnical Investigation  
 - 17 Boreholes @ 25 m  
 - 12 Electrical Resistivity Tests

- 5 Observation Wells

- 6 Test Pits & Field Density Tests

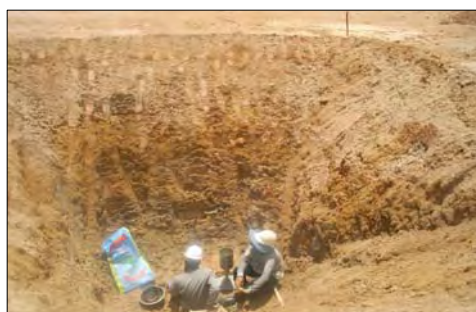


Soil Boring at BH-15



Field Density Testing at TP-4

**Project** : Field Density Test, 2007  
**Location** : MOC Cracker, Map Ta Phut, Rayong  
**Client** : Technip Engineering (Thailand) Ltd.  
**Job Descriptions** : Field Density Test  
 - 20 Field Density Tests



Field Density Testing



Field Density Testing



# **GEOTECHNICAL ENGINEERING**

## **ENVIRONMENTAL SERVICES**



- Project** : Shell Savannakhet Depot, Hazardous Waste Treatment Center, 2008  
**Location** : Savannakhet Province, Lao People's Democratic Republic  
**Client** : ENSR (Thailand) Co., Ltd.  
**Job Descriptions** : Soil Boring and Groundwater Monitoring Well Installation  
 - 16 Groundwater Monitoring Wells @ 6 m  
 - Well Leveling Survey



Soil Boring



Well Development

- Project** : Environmental Site Assessment at ESSO Chongnonsri Lubes Oil Blending, 2008  
**Location** : Chongnonsri District, Bangkok  
**Client** : ENSR (Thailand) Co., Ltd.  
**Job Descriptions** : Soil Boring and and Groundwater Monitoring Well Installation  
 - 25 Groundwater Monitoring Wells @ 3-6 m  
 - Well Leveling Survey



Well Completion



Well Leveling Survey

- Project** : Waste Treatment Center, 2008  
**Location** : Amphur Kaeng Khoi, Saraburi  
**Client** : Better World Green Public Company Limited  
**Job Descriptions** : Soil Boring and Groundwater Monitoring Well Installation  
 - 10 Groundwater Monitoring Wells @ 6 m  
 - Well Leveling Survey



Soil Boring



Well Completion

- Project** : HOYA LENS THAILAND LTD., 2008  
**Location** : Amphur Thanyaburi, Pathumthani  
**Client** : SGS (Thailand) Limited  
**Job Descriptions** : Soil Boring and Groundwater Monitoring Well Installation  
- 10 Groundwater Monitoring Wells @ 6 m  
- Well Leveling Survey



Concrete coring



Soil Boring

- Project** : SCT Work , 2008  
**Location** : Amphur Nakhon Luang, Phra Nakhon Si Ayuthaya  
**Client** : SGS (Thailand) Limited  
**Job Descriptions** : Soil Boring and Methane Gas Monitoring Well Installation  
- 5 Groundwater Monitoring Wells @ 5 m  
- Well Leveling Survey



Soil Boring



Well Completion



# **GEOTECHNICAL ENGINEERING**

## **OTHER PROJECTS**



**Project** : Hatairat Road, 2009  
**Location** : Lumlukka, Pratum Thani  
**Client** : Bahchakij Co., Ltd  
**Job Descriptions** : Subsurface Investigation  
 - 14 Boreholes @ 40 m  
 - 10 Boreholes @ 25 m  
 - 30 Field Vane Shear Tests



Soil Boring



Field Vane Shear Test

**Project** : Nakornpathom 3004 Road, 2009  
**Location** : Amphur Puttamonthon, Nakornpathom  
**Client** : Utility Design Consultant Co., Ltd.  
**Job Descriptions** : Subsurface Investigation  
 - 10 Boreholes @25 m  
 - 35 Test Pits

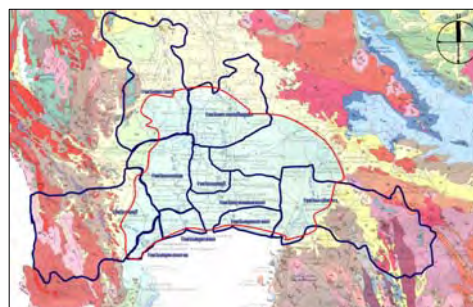


Soil Boring



Test Pit

**Project** : Soil Information of 7 Provinces of Central Thailand, 2009  
**Location** : Bangkok, Phra Nakhon Si Ayutthaya, Suphan Buri, Nonthaburi, Nakorn Pathom, Samut Sakhon, Samut Prakarn, Ratchaburi, Samut Songkhram, Chachoengsao  
**Client** : Kasetsart University  
**Job Descriptions** : Subsurface Investigation  
 - 30 Boreholes @25 m



Project Sites



Soil Boring at Nokorn Prathom



**Project** : MTT New Jetty No.3 and No.4 Project, 2008  
**Location** : Map Ta Phut Industrial Estate, Rayong  
**Client** : Italian-Thai Development PCL.  
**Job Descriptions** : Subsurface Investigation  
 - 8 Boreholes @ 7-26 m



Drilling in the Sea



Rock Coring/Sampling of BH-02

**Project** : Express Way No.81 Bang Yai to Kanchanaburi, 2008  
**Location** : Nonthaburi, Nakhon Pathom, Ratchaburi and Kanchanaburi  
**Client** : Geotechnical & Foundation Engineering Co., Ltd.  
**Job Descriptions** : Subsurface Investigation  
 - 56 Boreholes @30 m & 18 Boreholes @50 m  
 - 21 Field Vane Shear Tests  
 - 190 Test Pits



Project Route

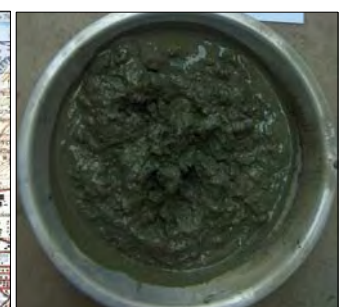


Soil Boring at BH-73

**Project** : 22 Kv Submarine Cable Extension to Koh Lan and Kho Si Chang, 2008  
**Location** : Chon Buri  
**Client** : AAMC (Thailand) Co., Ltd.  
**Job Descriptions** : Soil Investigation  
 - Soil Samples 37 Locations @2 m from Seabed



Survey Line between Kho Si Chang and Sriracha



Soil Sample at BH-4 (1.00-2.00 m)

**Project** : Rayong, 2007  
**Location** : Amphoe Pluak Daeng, Rayong  
**Client** : Thai Nippon Road Co., Ltd.  
**Job Descriptions** : Subsurface Investigation  
 - 31 Boreholes @ 10 m and Material Testing



Soil Boring



Soil Testing

**Project** : Bangkok University Landmark Complex, 2006  
**Location** : Khlong Luang, Pratum Thani  
**Client** : Bangkok University  
**Job Descriptions** : Subsurface Investigation  
 - 1 Borehole @ 44 m



Soil Boring

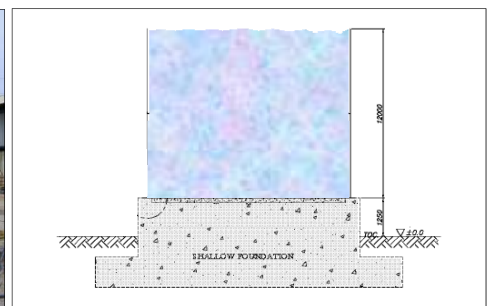


Model of the BU Landmark Complex

**Project** : Waste Water Tank, 2006  
**Location** : Map Ta Phut Industrial Estate, Rayong  
**Client** : Bayer Thai  
**Job Descriptions** : Subsurface Investigation and Geotechnical Design  
 - 1 Borehole @ 30 m  
 - Waste Water Tank Design



Soil Boring near the Existing Tank



Foundation Design



**Project** : Shambala, 2005  
**Location** : Koh Samui, Suratthani  
**Client** : Destination Properties  
**Job Descriptions** : Subsurface Investigation  
 - 2 Boreholes @ 2 m



Koh Samui Map



Site Plan

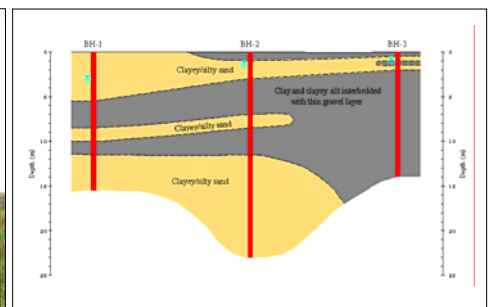


Soil Boring

**Project** : Biomass Power Plant, 2005  
**Location** : Prachinburi  
**Client** : Inter Project Management  
**Job Descriptions** : Subsurface Investigation  
 - 3 Boreholes @ 23 m



Soil Boring



Soil Profile

**Project** : The Expressway and Rapid Transit Authority of Thailand (ETA), 2004  
**Location** : Bang Phli – Suksawat Expressway, Bangkok  
**Client** : CH. Karnchang Public Company Limited  
**Job Descriptions** : Subsurface Investigation  
 - 47 Boreholes @ 60 m (7 Contracts)



Soil Boring

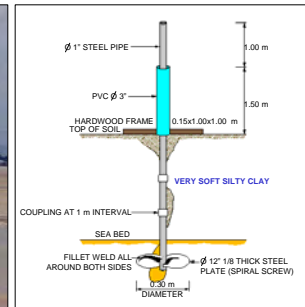


Kanchanapisak Bridge

- Project** : Laem Chabang Phase II, 2000  
**Location** : Chonburi  
**Client** : Italian-Thai Public Company Limited  
**Job Descriptions** : Subsurface Investigation – Offshore  
 - 3 Onshore Boreholes @ 6 m, 3 Offshore Boreholes @ 11 m  
 - 6 Field Vane Shear Tests  
 - 5 Surface Settlement Plates



Surface Settlement Plate Installation



Settlement Plate Drawing

- Project** : Stefan Pirker's House, 1999  
**Location** : Patong Beach, Phuket  
**Client** : Architects 49 Limited (A49)  
**Job Descriptions** : Subsurface Investigation and Topographic Survey  
 - 3 Boreholes @ 12 m  
 - Topographic Survey 3 Rai



Project Site

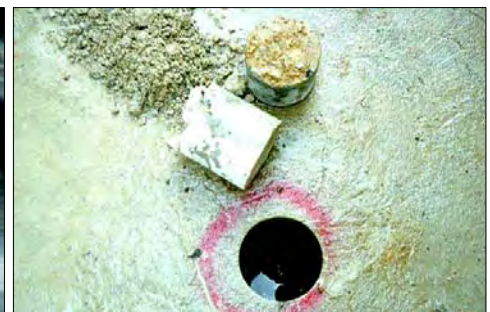


Soil Boring

- Project** : Soil Contamination Investigation for Chrysler, 1998  
**Location** : Bangkok  
**Client** : Kennedy & Donkin Co., Ltd.  
**Job Descriptions** : Subsurface Investigation  
 - 6 Boreholes @ 5 m



Cored Concrete from Pavement



Typical Cored Concrete and Augured Soil Sample



- Project** : Samut Prakarn Wastewater Management, 1998-2001
- Location** : Samut Prakarn
- Client** : NVPSKG Joint Venture for Pollution Control Department
- Job Descriptions** : Subsurface Investigation, Construction Supervision
- 72 Boreholes @ 20-40 m, 47 Field Vane Shear Tests @ 12 m
  - 7 Piezometers, 5 Observation Wells (Sukhumvit Road to WWTP Site)
  - 20 Boreholes @ 25 m, 20 Field Vane Shear Tests @ 15 m (Channel/Berm)
  - 13 Boreholes @ 40 m (Outfall)
  - 4 Piezometers (Monitoring of Failed Roads)
  - 8 Field Permeability Tests (Bottom Surface Treatment Pond)
  - 8 Boreholes @ 15 m, Field Vane Share Tests @ 15 m (Channel/Berm)
  - 28 Hand Augers (Fill Underneath Channel/Berm)
  - Design Channels/Berms, Polder System, Permanent Bridge, Precast Beams
  - Pipe Support in Around, Bridges above RAS Manholes, New Khlong
  - Pile Load Tests
  - Slope Protection and New Access
  - Monitoring of Failed Roads
  - Review of Structural of Clarifiers
  - Fill Underneath Channel/Berm
  - Engineering During Construction



Soil Boring in Marshland



Soil Boring in Canal



Arrangement for Compressive Load Test



Measurement in Observation Wells



Channels/Berms Design and Construction Supervision



Wastewater Treatment Pond

- Project** : Laem Chabang Port – Phase II, 1996  
**Location** : Laem Chabang, Chonburi  
**Client** : Asian Engineering Consultants Corp, Ltd. (AEC) for Ports Authority of Thailand (PAT)  
**Job Descriptions** : Subsurface Investigation  
 - Offshore 5 Boreholes @ 25 m  
 - Silt Pond 4 Boreholes @ 10 m and 5 Boreholes @ 25 m  
 - Building 11 Boreholes @ 20 m  
 - Observation Tower 2 Boreholes @ 25 m  
 - Substation 1 Borehole @ 35 m  
 - Marine Service Office 1 Borehole @ 27 m  
 - Water Supply 1 Borehole @ 15 m



Soil Boring in the Sea



Soil Boring in the Sea

- Project** : Vararom Theparak Village, 1996-1997  
**Location** : Samut Prakarn  
**Client** : Quality Houses PLC.  
**Job Descriptions** : Subsurface Investigation, Geotechnical Analysis and Design  
 - 18 Boreholes @ 30 m



Soil Boring in the Pond

- Project** : Ratchaburi Landfill, 1996-1997  
**Location** : Ratchaburi Industrial Waste Treatment Facility, Ratchaburi  
**Client** : General Environmental Conservation Public Company Limited  
**Job Descriptions** : Subsurface Investigation  
 - 17 Boreholes @ 15 m



Ratchaburi Landfill Site



New Cell (Left) and Vent for a Closed Cell (Center)



# **EXAMPLES OF GTC'S PROJECT TRACK RECORDS**

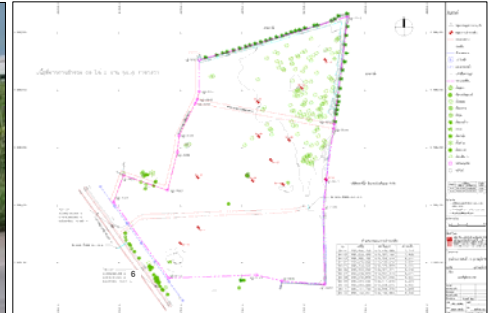
## **SURVEY**



**Project** : THAI BEV Distribution Center, 2009  
**Location** : Amphoe Phunphin, Suratthani  
**Client** : Thai Beverage Public Company Limited  
**Job Descriptions** : Topographi Survey  
 - Survey Area 70 Rai



Surveying on Site

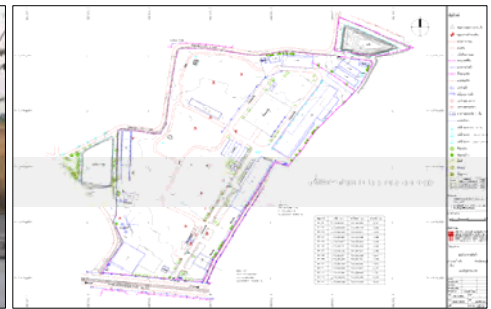


Topographic Survey Map

**Project** : THAI BEV Distribution Center, 2009  
**Location** : Amphoe Banbung, Chonburi  
**Client** : Thai Beverage Public Company Limited  
**Job Descriptions** : Topographi Survey  
 - Survey Area 65 Rai



Surveying on Site

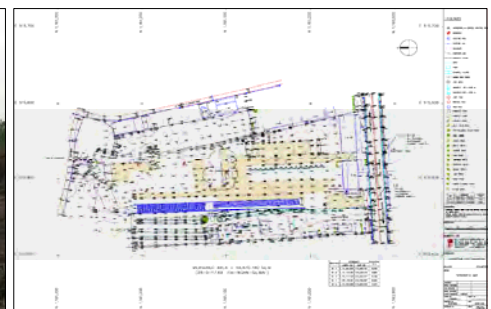


Topographic Survey Map

**Project** : Carrefour Chumporn, 2009  
**Location** : Amphoe Mueang, Chumporn  
**Client** : Contour Company Limited.  
**Job Descriptions** : Topographi Survey  
 - Survey Area 30 Rai



Surveying on Site



Topographic Survey Map

**Project** : PTT Chemical I-1 Road, 2008  
**Location** : EIE Industrial Estate and IRPC Area, Map Ta Phut, Rayong  
**Client** : PTT Chemical Public Company Limited  
**Job Descriptions** : Topographi Survey  
 - Survey Area 300 Rai



Soil Boring at BH-2

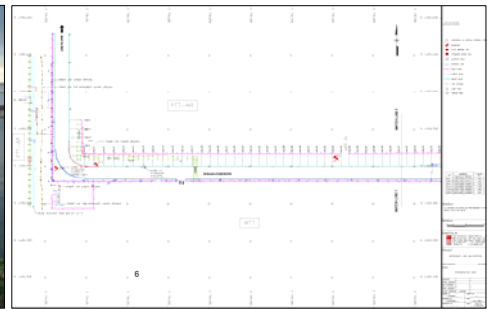


Plate Bearing Test at PL 2/1

**Project** : 48" Crude Line Relocation, 2008  
**Location** : Map Ta Phut Industrial Estate, Map Ta Phut, Rayong  
**Client** : Technip Engineering (Thailand) LTD.  
**Job Descriptions** : Topographi Survey  
 - Survey Alignment ~ 5 Km.



Surveying on Site

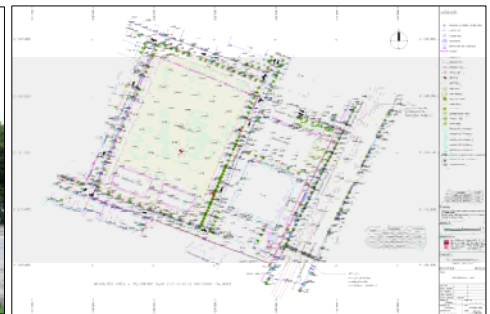


Topographic Survey Map

**Project** : The Bhumirajanagarinda Kidney Institute, 2008  
**Location** : Phayathai, Bangkok  
**Client** : TCC Property Development CO.,LTD.  
**Job Descriptions** : Topographi Survey  
 - Survey Area 13 Rai



Surveying on Site

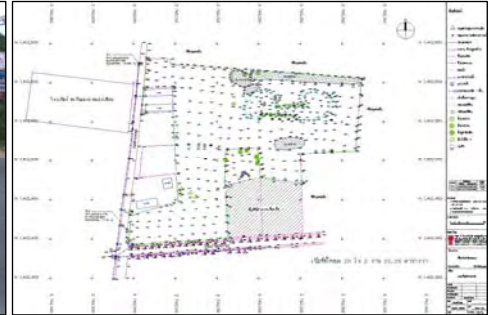


Topographic Survey Map

**Project** : Rayong Land, 2008  
**Location** : Amphoe Muang, Rayong  
**Client** : Rayong Sinthanee Co., Ltd.  
**Job Descriptions** : Topographi Survey  
 - Survey 20 Rai



Surveying on Site

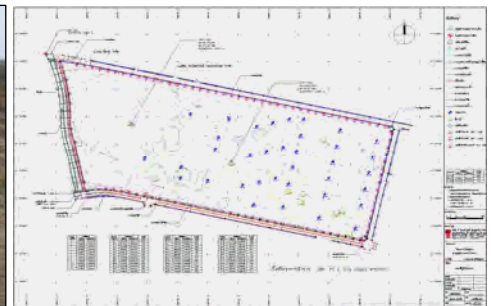


Topographic Survey Map

**Project** : Osotsapa Factory, 2008  
**Location** : Rojana Industrial Estate, Ayutthaya  
**Client** : Osotsapa Co., Ltd.  
**Job Descriptions** : Topographi Survey  
 - Survey Area 260 Rai



Surveying on Site

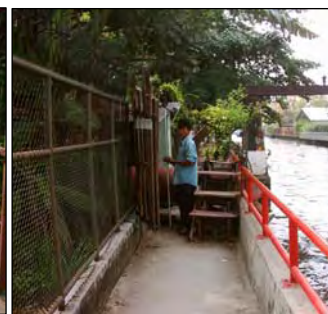


Topographic Survey Map

**Project** : Royce Private Residence Sukhumvit 31, 2008  
**Location** : Sukhumvit 31, Bangkok  
**Client** : Major Development PCL.  
**Job Descriptions** : Topographic Survey  
 - Survey Area 4 Rai



Surveying on Site



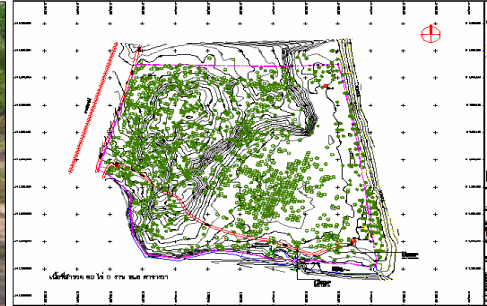
Model



**Project** : Khun Rachot's House, 2007  
**Location** : Thap Sakae, Prachuapkhirikhan  
**Client** : ARJ Studio  
**Job Descriptions** : Topographic Survey and Geotechnical Investigation  
 - Survey 80 Rai and 4 Boreholes @ 5 m



Surveying on Site



Topographic Survey Map

**Project** : Dockyard, 2006  
**Location** : Thap Sakae, Prachuapkhirikhan  
**Client** : ES Offshore & Marine Engineering  
**Job Descriptions** : Hydrographic Survey  
 - Hydrographic Survey area 250 m along the beach and 300 m in the sea



Surveying on the Beach

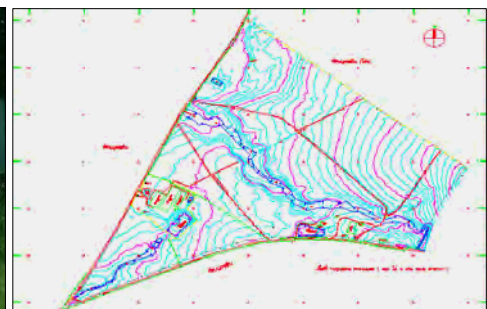


Survey Equipments (GPS &amp; Echo Sounder)

**Project** : Prime Nature Sriracha, 2006  
**Location** : Sriracha, Chonburi  
**Client** : Prime Nature Villa Co., Ltd.  
**Job Descriptions** : Topographic Survey  
 - Survey Area 485 Rai

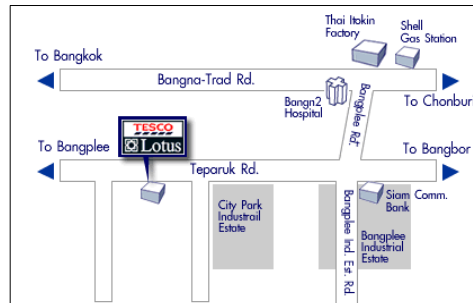


Project Site

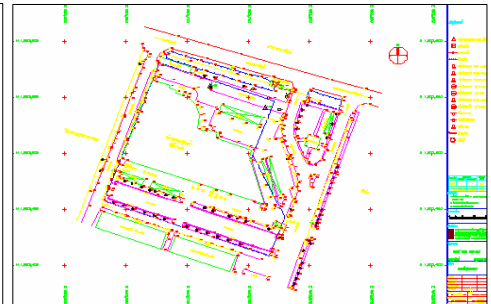


Topographic Survey Map

**Project** : Tesco Lotus, 2006  
**Location** : Teparak Road, Samut Prakarn  
**Client** : Wisit Engineering Consultants Co., Ltd.  
**Job Descriptions** : Topographic Survey  
 - Survey 10 Rai



Location Map



Topographic Survey Map

**Project** : Hua Hin, 2006  
**Location** : Khao Takieb, Prachuapkhirikhan  
**Client** : Bangkok Boutique Co., Ltd.  
**Job Descriptions** : Topographic Survey and Subsurface Investigation  
 - Survey 7 Rai and 6 Boreholes @10-15 m



Project Site



Topographic Survey Map

**Project** : Arnold Residence, 2006  
**Location** : Sukhumvit 22, Bangkok  
**Client** : Mr. Stephane  
**Job Descriptions** : Topographic Survey and Geotechnical Investigation  
 - Survey 3 Ngan and 2 Boreholes @ 30 m



Existing Building



Surveying on Site

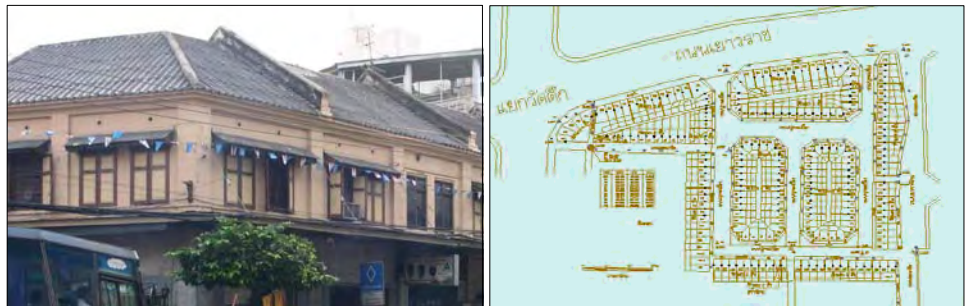
**Project** : Warehouse Construction, 2004  
**Location** : Ladkrabang, Bangkok  
**Client** : CP 7-Eleven  
**Job Descriptions** : Topographic Survey  
 - Survey 110 Rai



Bench Mark of the Project

Topographic Survey Map

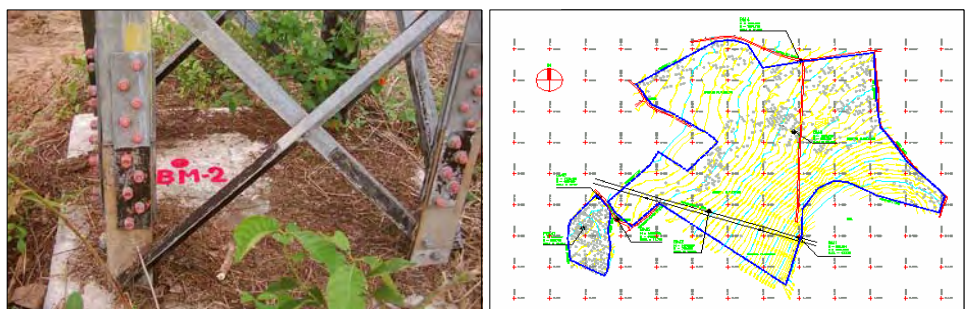
**Project** : Sampeng Trade Center, 2004  
**Location** : Yaowarat, Bangkok  
**Client** : Metro Regent  
**Job Descriptions** : Topographic Survey and Evaluation of the Existing Buildings  
 - Survey 5 Rai



Existing Buildings

Topographic Survey Map

**Project** : Pattaya House, 2003  
**Location** : Pattaya, Chonburi  
**Client** : Buraran Property Co., Ltd.  
**Job Descriptions** : Topographic Survey  
 - Survey 266 Rai



Bench Mark

Topographic Survey Map





## EXAMPLES OF GTC'S PROJECT TRACK RECORDS

### PILE TEST

- SEISMIC TEST
- DYNAMIC LOAD TEST
- CROSS HOLE SONIC LOGGING TEST

**Project** : Pruekpirom Regent Rajchapruet Sathorn, 2006-Present  
**Location** : Rajchapruet Sathorn Rd., Bangkok  
**Client** : Quality House Public Co., Ltd.  
**Job Descriptions** : Tested on 4,733 Piles

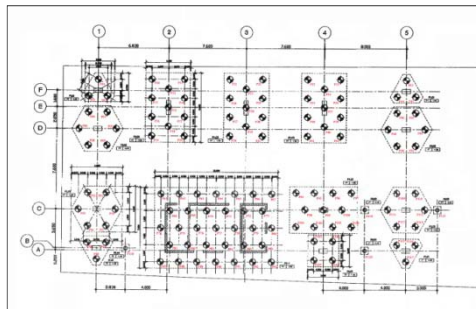


Pruekpirom Regent Rajchapruet Sathorn



Driven Piles

**Project** : 8 Stories Building, 2008  
**Location** : Charoenkrung 91/1, Bangkok  
**Client** : Golden Build Co., Ltd.  
**Job Descriptions** : Tested on 121 Piles



Foundation Plan



Seismic Testing on Bored Pile

**Project** : Prateep's Residence, 2008  
**Location** : Sukhumvit Rd, Thong Lor 23, Bangkok  
**Client** : Golden Build Co., Ltd.  
**Job Descriptions** : Tested on 143 Piles

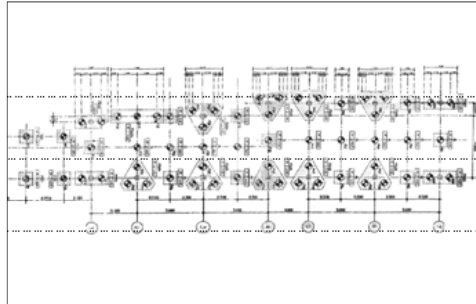


Foundation Plan



Seismic Testing on Bored Pile

**Project** : Mechanical Building of Panyapiwat Institute of Technology, 2007  
**Location** : Changwattana Rd, Nonthaburi  
**Client** : Golden Build Co., Ltd.  
**Job Descriptions** : Tested on 67 Piles



Foundation Plan



Seismic Testing on Bored Pile

**Project** : Uniland Golf Club's Club House, 2006  
**Location** : Muang, Nakorn Pathom  
**Client** : Uniland Golf and Country Club  
**Job Descriptions** : Tested on 269 Piles

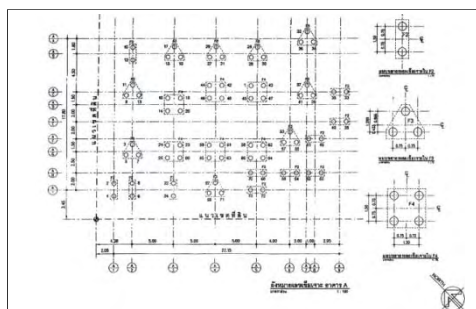


Installed Piles at Club House Area



Seismic Testing on Driven Pile

**Project** : Khun Isara's House, 2006  
**Location** : Panya Village, Pattanakarn Road, Bangkok  
**Client** : Golden Build Co., Ltd.  
**Job Descriptions** : Tested on 193 Piles



Foundation Plan



Bored Pile Head Preparation for Seismic Test



**Project** : Toyota @United, Bang-Na, 2015  
**Location** : Bang-Na, Bangkok  
**Client** : Toyota @United Co., Ltd.  
**Job Descriptions** : Tested on 11 Piles



Foundation &amp; Column Key Plan



Dynamic Load Testing on Spun pile

**Project** : Construction of Highway 34 intersection with Highway 3001 (Part 1), 2015  
**Location** : Samutprakarn Province.  
**Client** : Chok Chai Civil Limited Partnership  
**Job Descriptions** : Tested on 160 Piles



Location of Project Site



Dynamic Load Testing on Driven pile

**Project** : Motorway Route No. 6 (Section 33), 2017  
**Location** : Bang Pa In – Saraburi – Nakhon Ratchasima  
**Client** : Tipakorn Co., Ltd.  
**Job Descriptions** : Tested on 140 Bored Piles



Pile Head



Cross Hole Sonic Logging Test



# **EXAMPLES OF GTC'S PROJECT TRACK RECORDS**

**CONSTRUCTION SUPERVISION**

- Project** : Suvarnabhumi Airport Rail Link and City Air Terminal, 2005-2009  
**Location** : Makkasan – Suvarnabhumi Airport, Bangkok  
**Client** : Asian Engineering Consultants Corp., Ltd.  
**Job Descriptions** : Construction Supervision  
 - Materials Control



Construction Supervision



Makkasan Terminal

- Project** : Track Doubling and Installation of Signaling and Telecommunication System (Chachoengsao-Laem Chabang), 2007-Present  
**Location** : Cha Choeng Sao - Chonburi  
**Client** : Asian Engineering Consultants Corp., Ltd.  
**Job Descriptions** : Construction Supervision  
 - Materials Control



Positive Bending Moment at Rail Seat



Location Map of Route Track Doubling

- Project** : Bangna-At Narong Expressway (Third Stage Southern Route), 2005  
**Location** : Bangna, Bangkok  
**Client** : Asian Engineering Consultants Corp., Ltd.  
**Job Descriptions** : Construction Supervision  
 - Materials Control



Construction Supervision ( Bangna Junction)



Bangna-At Narong Expressway (Top View)



- Project** : Southern Outer Bangkok Ring Road (S-OBRR), 2004  
**Location** : Suksawat – Bang Phli, Bangkok  
**Client** : Asian Engineering Consultants Corp., Ltd.  
**Job Descriptions** : Construction Supervision  
 - Materials Control



Construction Supervision



The Bridge Crossing the Chao Phraya River, Suksawat Road to Bang Phli Road

- Project** : The Industrial Ring Road (IRR), 2000  
**Location** : Klong Toey Port, Pu Chao Saming Phrai Road in Samut Prakarn, Suksawat Road to the West and Rama III Road to the North  
**Client** : Asian Engineering Consultants Corp., Ltd.  
**Job Descriptions** : Construction Supervision  
 - Materials Control



Construction Supervision



The Two Suspension Bridges, Crossing in the Chao Phraya River

- Project** : Bang Na – Bang Phli – Bang Pakong Expressway (BBBE), 1996  
**Location** : Bang Na Bang Pakong Highway, Bangkok  
**Client** : Asian Engineering Consultants Corp., Ltd.  
**Job Descriptions** : Construction Supervision  
 - Materials Control



Construction Supervision



Bang Na to Bang Pakong Expressway

**Project** : *Khun Somkriat's House, 2006*  
**Location** : *Bang Krauy, Nonthaburi*  
**Client** : *Khun Somkriat*  
**Job Descriptions** : *Construction Supervision and Seismic Test*  
- *Construction Supervision for Additional House*  
- *Seismic Testing on Piles*



Construction Supervision



Construction Supervision

**Project** : *Investigation of Building Settlement, 1998*  
**Location** : *Baan Narisa – Thonburi Rom, Pracha U-thit, Bangkok*  
**Client** : *Siam Sindhorn Co., Ltd.*  
**Job Descriptions** : *Construction Supervision*  
- *Construction Supervision for Underpinning and Lifting House*



Investigation Settlement Causing Cracks in House



The Project House



# **EXAMPLES OF GTC'S PROJECT TRACK RECORDS**

## **STRUCTURAL ASSESSMENT**



- Project** : Refiner, 2009  
**Location** : Building PM#1 Banpong, Ratchaburi  
**Client** : Siam Kraft Industrial Co., Ltd.  
**Job Descriptions** : Structural Assessment for Grid Line A-A1/1-2 of Building PM#1  
 - Elevation and Section - Strength of Concrete by Rebound Hammer  
 - Dimension of Steel Bar by Ferro Scan - Back Analysis Calculation



Elevation Check for Structure Assessment



Rebound Hammer Test

- Project** : ESP Gas Turbine Plant, 2009  
**Location** : Map Ta Phut Industrial Estate, Rayong  
**Client** : Qualitech Engineering and Construction Co., Ltd.  
**Job Descriptions** : Assessment of Voids in Foundation Concrete  
 - Impact Echo Test 46 Points



Impact Echo Test



Foundation Concrete of ESP Gas Turbine Plant

- Project** : Ground Floor Checking of Distribution Warehouse, 2009  
**Location** : Nongsumsak, Banbung, Chonburi  
**Client** : Thai Beverage Logistics Co., Ltd.  
**Job Descriptions** : Structural Assessment, Load Capacity of Ground Floor of Distribution Warehouse  
 - Plate Bearing Test - Coring Sample Compression Test  
 - Rebound Hammer - Dimension and Steel Bar by Ferro Scan  
 - Impact Echo Test - Foundation Inspection  
 - Back Analysis Calculation



Ferro Scan for Location of Steel Bar



Plate Bearing Test on Ground Support

**Project** : ARRK Factory No.4, 2008  
**Location** : Factory No. 4 ,Bang Kradi Industrial Park, Pathumthani.  
**Client** : SGS (Thailand) Co., Ltd.  
**Job Descriptions** : Assessment of Quality of Structural Concrete and Depth of Surface Crack  
- Ultrasonic Pulse Velocity (UPV) Test 23 points at Beam and Column



UPV Test at Column



UPV Test at Beam



## OUR CLIENTS



<b>CLIENTS</b>	<b>PROJECT NAMES</b>	<b>JOB DESCRIPTIONS</b>
ABB Power Generation Sdn Bhd	Investigation for Bo Win 2 CCPP	Subsurface Investigation
Advance Agro PCL	Burnt Lime Project, 304 Industrial Park	Subsurface Investigation
Aeronautical Radio of Thailand Ltd.	Design Remedial Retaining Wall, Phuket	Subsurface Investigation and Design
Alandic (Thailand) Ltd.	Telecom Tower, Uttaradit	Subsurface Investigation
ARbay Co., Ltd.	The Cloudy Bay Project at Hua Hin	Topographic Survey, Subsurface Investigation
Architects 49 Ltd.	Stefan Pirker's House, Phuket	Topographic Survey, Subsurface Investigation
	The Royal Bangkok Sport Club	Topographic Survey, Subsurface Investigation
	Assakul's Residential Housing	Topographic Survey, Subsurface Investigation
Architectural Engineering 49 Limited	The Danet Gateway, Abu Dhabi, UAE	Geotechnical Design
	Khun Achara's House	Subsurface Investigation
Arun Chaiseri Consulting Engineers	Elite Kraft Paper Co., Ltd. Project, Sakaew	Subsurface Investigation
	May Ko Hospital	Subsurface Investigation
ASCE Construction	Pantai Norasing Housing	Topographic Survey, Subsurface Investigation
Asdecon Corporation Ltd.	Soil Investigation for Industrial Waste Land Fill	Subsurface Investigation
Asia Tech Pulp and Paper	Asia Tech Pulp and Paper Mill	Subsurface Investigation
Asian Engineering Consultants Corp., Ltd.	Track Doubling Project-Package I	Geotechnical Investigation, Design and Supervision
	Pumping Station at TGCI	Subsurface Investigation
	Design for Bridge in Cambodia	Geotechnical Design
	New Highway, Sri Lanka	Geotechnical Design
	PTTEP Siam Limited at U-Thong	Construction Supervision
	Bang Na-Bang Phli-Bang Pakong Expressway	Quality Assurance for Foundation Design
	Huai Mae Prix Reservoir	Geotechnical Investigation and Design
	Ban Pong - Kanchanaburi Motorway	Geotechnical Investigation and Design
	Lat Krabang Inland Container Depot	Construction Supervision for Ground Improvement
	Thai-Lao Bridge Construction, Mukdahan	Construction Supervision
	Red Line Mass Transit	Subsurface Investigation
	Pracharaj Utit-Rattanakosin 200 Year Road	Geotechnical Investigation and Design
	Pakret Bridge and Road Extension	Geotechnical Investigation and Design
Asian Properties Co., Ltd.	Bridge Failure at Place North Park	Advice on Remedial Works
Austrian Energy & Environment	The MOC Cracker, Map Tha Phut	Geotechnical Investigation
Baan Suk Paisan Co., Ltd.	Sukpisarn Housing at Rama 3	Subsurface Investigation
Bangkok Boutique	Hua Hin Project at Khao Takieb	Topographic Survey, Subsurface Investigation
Bangkok University	Bangkok University Landmark Complex	Subsurface Investigation
Bayer Thai Co., Ltd.	Waste Water Tank, Map Ta Phut	Subsurface Investigation
	Bayer Thai Building Project Maptaphut	Subsurface Investigation
Blue Hill Co., Ltd.	Tropical Paradise Garden Project, Hua Hin	Survey and Structural & Civil Design
Blue Lotus Hua-Hin (Thailand) Co., Ltd.	Blue Lotus Hua-Hin, Prachupkirikhan	Subsurface Investigation
Boonkriat & Napol Co., Ltd.	Thap Sakae Housing, Prachuapkirikhan	Subsurface Investigation
Boutique Land Ltd	Boutique Land Project, Sukhumvit Soi 16	Subsurface Investigation
Brom Wiwat Construction Co., Ltd.	Highway 345 Bang Khu Wat, Pratumthani	Subsurface Investigation
Burapha Golf Club	Midrise Condominium and Reservoir R3	Topographic Survey, Subsurface Investigation
Buraran Property Co., Ltd.	Baan Ping Fah Project at Pattaya, Chon Buri	Topographic Survey, Subsurface Investigation
CASA Ville Co., Ltd.	Casacity Eakamai-Ramindra Nuanchan 1	Subsurface Investigation
	Casa Ville Eakamai-Ram Intra, Rama 5	Geotechnical Investigation and Wall Design
Cementhai Chemical Co., Ltd.	TPE / HDPE #4	Geophysical Survey

## Our Clients

<b>CLIENTS</b>	<b>PROJECT NAMES</b>	<b>JOB DESCRIPTIONS</b>
CH. Karnchang PLC	Klong SBIA Section 1	Subsurface Investigation
CH2M HILL Lockwood Greene	Chevron Project, Khon Kaen, Srisakate	Subsurface Investigation and Groundwater Well
Chan Issara Development PCL	CID Condominium at Soi Sukhumvit 42	Subsurface Investigation
Chuchawal-De Weger Internationaal Ltd.	Thai Beer Plant Basin	Geotechnical Investigation and Settlement Analysis
Civil Design	STC Feed Plant, Petchburi	Subsurface Investigation
	Rak Chai Cold Storage	Subsurface Investigation
	Egg Hatching Plant, Saraburi	Subsurface Investigation
CNC Int.	Non Wovens Factory, Rayong	Subsurface Investigation
Coffey (Thailand) Ltd.	Caltex Oil Terminal and Depot, Chongnonsi	Subsurface Investigation and Groundwater Well
	ESSO Service Station at Rangsit, Haad Yai	Subsurface Investigation and Groundwater Well
Construction & Engineering Law Limited	Sriracha Golf Lodge Project, Sriracha	Subsurface Investigation
C.P. SEVEN ELEVEN PCL	CP 7- Eleven Warehouse Construction	Topographic Survey
CP HEIL Co., Ltd.	CP-Heil Factory, Bang-Pa-In	Subsurface Investigation
CPB Property Co., Ltd.	Royal Ceremony Garden and Pavilions	Topographic Survey and Building Evaluation
Damp Instrument Ltd.	Khleng Tha Dan Dam, Nakon Nayok	Subsurface Investigation
Destination Properties Co., Ltd.	Shambala Project, Koh Samui, Suratthani	Subsurface Investigation
Dwp Cityspace Co., Ltd.	Plam Hills, Petchaburi	Topographic Survey
Dynamic Engineering Consultants Co., Ltd.	UFM Port Project, Phrapradaeng	Subsurface Investigation
E49	Sukhaphiban 3 Shopping Mall	Topographic Survey, Subsurface Investigation
	Bangkok Museum	Topographic Survey, Subsurface Investigation
	Koh Chang Ferry	Subsurface Investigation
	Feltex Factory, Rayong	Topographic Survey, Subsurface Investigation
	Khun Aram's Residence	Topographic Survey, Subsurface Investigation
	Khun Dusit's Home at Pa Tong, Phuket	Topographic Survey
Eastern Seaboard Environmental Complex	Clay Liner Testing for ESBEC's Landfill	Materials Testing
EHL Design Co., Ltd.	Residence at Yen-Areka II	Subsurface Investigation
Emerald Land (Thailand) Ltd.	Phulay Height Project, Krabi	Topographic Survey, Subsurface Investigation
ENSR (Thailand) Co., Ltd.	SHELL Retail Stations at Phrae, Phayao, Krabi	Subsurface Investigation and Groundwater Well
	Shell Autoserv in Macro, Chiang Mai	Subsurface Investigation and Groundwater Well
	ESSO Retail Station Project, Phuket	Subsurface Investigation and Groundwater Well
Envi-Expert Co., Ltd.	Sanitary Landfill for A. Banpong, Ratchburi	Subsurface Investigation
ES Offshore&Marine Engineering Co., Ltd.	Dockyard Project, Thap Sakae	Geotechnical Investigation, Hydrographic Survey
Fah Chuan Development Co., Ltd.	Jame Yee Khlong Sam Wa, Bangkok	Low-Strain Integrity Test (Seismic Test)
Four Axis Co., Ltd.	Pumping Station , Rayong	Field Test
Freyssinet (Thailand)	Highway No. 116, Lumpoon	Plate Bearing Test
GE Toshiba Co., Ltd.	GE Toshiba Silicons Plant, Rayong	Subsurface Investigation and Groundwater Well
General Environmental Conservation PLC	Ratchaburi Landfill	Subsurface Investigation
	Landfill Volumes for GENCO, Map Ta Phut	Subsurface Investigation
Geotechnical & Foundation Engineering Co., Ltd.	BTS Morchit Extension (Morchit - Saphan Mai)	Subsurface Investigation
	Yard of STP&I, Laem Chabang Port, Chonburi	Subsurface Investigation, Plate Bearing Test
	Cha-Am Resort, Phetchaburi	Subsurface Investigation
	Tunnel, Ratchapruet-Nakorn In	Subsurface Investigation
GHD (Thailand) Ltd.	ESA for Esso Retail Stations	Subsurface Investigation and Groundwater Well
	Environmental Site Assessment for Caltex	Subsurface Investigation and Groundwater Well
Golden Build Co., Ltd.	Honda's Color Center	Low-Strain Integrity Test (Seismic Test)

<b>CLIENTS</b>	<b>PROJECT NAMES</b>	<b>JOB DESCRIPTIONS</b>
Golden Build Co., Ltd.	Khun Terdsak's House	Low-Strain Integrity Test (Seismic Test)
	Khun Isara's House in Panya Village	Subsurface Investigation
	Baan Bang Na Project	Geotechnical Investigation and Analysis
Golden Land Property Development PLC	Master Asoke & Rama 3	Subsurface Investigation
Growing Infinity Co., Ltd.	Harrow International School	Subsurface Investigation
HHG Ltd.	Hua Hin Gardens Project	Topographic Survey, Subsurface Investigation
Hua Hin Tropical Homes Co., Ltd.	Tropical Garden Village Project, Hua-Hin	Topographic Survey, Subsurface Investigation
IGN (Thailand) Ltd.	Bang Pakong Real Estate	Subsurface Investigation
Inter Akitek Co., Ltd.	Soil Investigation at Sukhumvit Soi 31	Subsurface Investigation
Interdesign Co., Ltd.	Grand Diamond Cliff Resort, Phuket	Subsurface Investigation
InterProject Management Co., Ltd.	Biomass Power Plant, Prachinburi	Subsurface Investigation
Iran Embassy	Subsurface Investigation for Iranian Embassy	Subsurface Investigation
Italian-Thai Development PCL	Bangkok Transit System (BTS)	Subsurface Investigation
	Klong Sip Kao-Kaeng Khoi Railway	Geotechnic Investigation and Instrumentation
	Taksin and Rachada Interchange	Subsurface Investigation
JICA	Saraburi Ceramic Factory	Subsurface Investigation
	Laem Chabang Phase II	Subsurface Investigation - Offshore
	Road Disaster Prevention Plan	Subsurface Investigation
Kennedy & Donkin Ltd.	Contamination Investigation Sites, Bangkok	Subsurface Investigation
KKT Engineering Co., Ltd.	Lincon Plaza Hotel, Chonburi	Subsurface Investigation
	Rajamangala Institute of Technology, Pathum	Subsurface Investigation
	Oakwood Project, Sukhumvit 24	Geotechnical Instrumentation
KPK Quantity Surveyors (Thailand)	Trisara Beach Resort Phase, Phuket	Subsurface Investigation
K-TECH Construction PCL	RaSa Tower, Bangkok	Subsurface Investigation
	Rama Garden Hotel, Bangkok	Compaction Test and Field Density Test
	Carrefour, Chaengwattana	Compaction Test and Field Density Test
Lakewood Real Estate	HomePro, Rama II	Compaction and CBR Test
	Road Cracks in Lakewood	Investigation and Recommendation
	Housing at Prachachuen	Geotechnical Investigation and Wall Design
Land and Houses PLC	Chaiyapruet Bangna-Suvarnabhumi km. 26	Subsurface Investigation
	Ladawan Prachachen	Geotechnical Investigation and Civil Works Design
	L & H Phuket	Design of Infrastructure
Lawana Beach Properties Co., Ltd.	Road Settlement at LH Chonlada Bangkhen	Site Investigation and Analysis
	Slope Stability for Theparak Pond	Detailed Design
	Wrapoom Housing Estate, Sukhumvit 44	Subsurface Investigation
Lawana Beach Properties Co., Ltd.	Villa Lawana, Samui	Subsurface Investigation
Loxley Properties Development Co., Ltd.	Loxley Warehouse	Investigation of Warehouse Settlement
Mai Derm Co., Ltd.	Piravej Hospital, Ayudhaya	Subsurface Investigation
Warnes Associates Co., Ltd.	Soil Investigation at Phulay, Krabi	Subsurface Investigation
Major Development Public Co., Ltd.	Royce Private Residence Sukhumvit 31	Topographic Survey, Subsurface Investigation
Meinhardt (Thailand) Ltd.	Wang Noi and Bangpa In Project, Ayutthaya	Topographic Survey, Subsurface Investigation
METECH Co., Ltd.	Phuket Fantasea	Design of Ground Anchors
	Royal Cliff Beach Resort	Design of Soil Nailing
	Puket Airport	Subsurface Investigation
Metro Regent Co., Ltd.	Sampeng Trade Center	Survey and Evaluation of the Existing Building



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Mitrapairat & Son Co., Ltd.	Amaranth Hotel King Kaew Rd., Samut Prakarn	Subsurface Investigation
Mitsui Toatsu Plant Services, Inc.	Mitsui TOATSU	Subsurface Investigation
MKS Engineering Co., Ltd.	Ura Mila's House	Subsurface Investigation
Moon Beam Equipment Co., Ltd.	Prommitre Production & Moon Beam Equipment	Topographic Survey, Subsurface Investigation
MPAC Engineering/PDI	M.E.C. Bang Na Trad Highway	Subsurface Investigation
Era Studio Ltd.	Arnold Residence Project, Sukhumvit 22	Topographic Survey, Subsurface Investigation
Municipality	Nakhon Sawan Road and Bridge	Subsurface Investigation
Na Wiman Co., Ltd.	De Viman Le Condominium, Cha-Am	Topographic Survey, Subsurface Investigation
North Park Property Co., Ltd.	Residential Housing Development	Geotechnical Investigation, Site Formation
NPP Group Co., Ltd.	Aerothai's Residence, Phisanulok	Topographic Survey, Subsurface Investigation
Nuch Daeng Realestate Co., Ltd.	Wang Sam Ran Resort, Prachin Buri	Subsurface Investigation
Num Sai 304 Co., Ltd.	Flood Pump Area, Sri Mahapohdi, Prachinburi	Subsurface Investigation
NVPSKG & NWWI Joint Venture	Samut Prakarn Wastewater Treatment Plant	Subsurface Investigation
Observer Construction Co., Ltd.	Zephyr Property for Hua-Hin	Subsurface Investigation
Osotsapa Co., Ltd.	Rojana Industrial Estate, Ayutthaya	Topographic Survey, Subsurface Investigation
Pal Consultants Co., Ltd.	Waste Water Management, Samut Sakorn	Subsurface Investigation
	Tunnel Underpass for Railway, Yala	Subsurface Investigation
	FS of Fang - Chiang Dao Road, Chiang Mai	Subsurface Investigation
PB Asia Ltd.	Contamination Land at Samut Sakorn Indus.	Subsurface Investigation, Monitoring Wells
	Prapradaeng-Samut Prakarn for PB Asian	Subsurface Investigation
Power-P PCL.	Piezometers for Clarifiers, Samut Prakarn	Piezometer Installation
Prae-Wa Development Co., Ltd.	Pre-wa Soil Investigation	Subsurface Investigation
Prime Nature Villa Co., Ltd.	Prime Nature, Hua Hin	Subsurface Investigation
	Sriracha Project	Topographic Survey
Preuksa Real Estate PCL	Passorn 13 Housing Project	Subsurface Investigation
PTTEP PCL	PTTEP's Pond in Suphanburi	Subsurface Investigation
PTT Chemical Public Company Limited	PTT Chem I-1 Road	Geotechnical Investigation and Topographical Survey
	EPS	Geotechnical Investigation and Topographical Survey
	PTTCHEM METATHESIS Plant	Geotechnical Investigation and Geophysical Survey
Pyramid Development International Corp., Ltd.	Katanoi Project, Phuket	Subsurface Investigation
	Flyover at Kabin Buri	Subsurface Investigation
Quality Houses PCL	Vararom Theparak Village	Geotechnical Investigation and Stability Analysis
	Laddarom Ramkhamhaeng	Geotechnical Investigation and Wall Design
	Laddarom Ratchapruek-Pinklao	Geotechnical Investigation and Wall Design
	Pruekpirom Regent (Charan 35)	Geotechnical Investigation and Wall Design
	Pruekpirom Regent Ratchapruek-Sathorn	Subsurface Investigation
	Laddarom Ratanathibeth	Geotechnical Investigation and Wall Analysis
		Subsurface Investigation
Raimond Land PCL	Charoenakorn River Front Project, Bangkok	Subsurface Investigation
Ratanabutr Construction Co., Ltd.	Health Center in Prathum Thani	Subsurface Investigation
RITTA Co., Ltd.	Pumping Station 202	Subsurface Investigation
River Engineering Co., Ltd.	Khlong Bang Lam Phu Project	Subsurface Investigation
Royal Irrigation Department (RID)	Huai Khayung Reservoir	Geotechnical Investigation and Design
Rung Sin Co., Ltd.	Phuket Mission Hills Golf Club, Phuket	Subsurface Investigation
Rung Kai Co., Ltd.	Construction of CHOK Factory Building	Subsurface Investigation

<b>CLIENTS</b>	<b>PROJECT NAMES</b>	<b>JOB DESCRIPTIONS</b>
RUST PPK	Bangkok Waste Water Project Stage II	Bangkok Waste Water Stage 2
S. Sukij Prasert Co., Ltd.	Khun Sunate's House, Nong Kham	Low-Strain Integrity Test (Seismic Test)
Samart Project Consultants Co., Ltd.	Hemaraj Power Generator	Subsurface Investigation
Samwa (Thailand) Co., Ltd.	Factory in Amphur Muang, Chachoengsao	Subsurface Investigation
Seacon Hotel and Resort Co., Ltd.	Seacon Square Hotel, Hard Mai Kaew, Phuket	Topographic Survey, Subsurface Investigation
Seafan Resort & Spa Co., Ltd.	The Mango Tree at Koh Samui, Suratthani	Subsurface Investigation
See Sang Karn Yotha (1979) Co., Ltd.	Underground Transmission Line (Bangkapi)	Subsurface Investigation
	Bridge Foundation for Nam Phong-Udonthani	Geotechnical Investigation and Design
	Pipe-Jacking Factory, Samut Prakarn	Ground Improvement Design
Shedden Uhde (Thailand) Co., Ltd.	Raw Water Storage Pond Project 56-0130	Subsurface Investigation
Siam Retail Development Co., Ltd.	Fashion Island	Topographic Survey, Subsurface Investigation
Siam Seaport Terminal & Warehouses Co., Ltd.	Ao Udom Jetty Arbitration	Geotechnical Consultant
Siemens Power Generation Asia Pacific	Amata Block II, Bang Pakong	Topographic Survey, Subsurface Investigation
Summit Auto Seats Industry Co., Ltd.	Resort at Koh Kood, Trad	Topographic Survey
Supalai PCL	Supalai Vill Circle-Pinkloa Rama5, Bangyai	Subsurface Investigation
T.O'Connor & Sons Pty. Ltd.	Trench Collapse near Sathorn Road	Subsurface Investigation
TAAK Interior and Architect Co., Ltd.	Baan Rim Haad, Cha-Am	Topographic Survey, Subsurface Investigation
	Chomtien Beach Project, Chonburi	Topographic Survey, Subsurface Investigation
	Baan Rim Haad, Cha-Am	Topographic Survey, Subsurface Investigation
Tanayong PCL	Bangkok Transit System Rajadamri Road	Subsurface Investigation
Tarathip Panja and Associates & Interior	Thepwattana Chemical Factory, Bangpoo	Subsurface Investigation
TCC Property Development Co., Ltd.	Rose Hotel at Suriwong Road	Topographic Survey
Technip Engineering (Thailand) Ltd.	Cracking Furnace Units, Map Tha Phut	Subsurface Investigation
	32020-MOC	Soil Investigation Advise for Paving
Thai Alliance Engineering & Construction	R.O. Plant at Map Ta Phut Industrial Estate	Subsurface Investigation
Thai Civil 37 Co., Ltd.	Field Density Test at SC-13	Field Density Test
Thai Engineering Consultant Co., Ltd.	MRTA Blue Line North: Bang Sue–Tha Phra	Subsurface Investigation
Thai Nakano Co., Ltd.	Suncall (Thailand) Project, Amata Nakorn	Subsurface Investigation
	UTLC-Phase 2, Well Grow, Bangna-Trad	Subsurface Investigation
Thai Nippon Steel Co., Ltd.	New Yard at Bang Pakong River, Chachoengsao	Subsurface Investigation, Current Measurement
Thai Nippon Steel Engineering & Construction	Construction Project, Samutprakarn	Subsurface Investigation
Thai Shell Exploration and Product Ltd.	Thai Shell Exploration, Phisanulok	Subsurface Investigation
Thai Shimizu Co., Ltd.	Construction Site of Takao Eastern Company	Subsurface Investigation
Thai Tank Terminal Ltd.	Thai Tank Terminal Maptaphut Industrial Port	Subsurface Investigation
Thai Woo Ree Engineering	THPP #3, Rayong	Topographic Survey, Subsurface Investigation
	GHU Spare Reactor	Geotechnical Investigation and Geophysical Survey
	PTTCHEM METATHESIS Plant	Geotechnical Investigation
Thonburi Plaspac Co., Ltd.	Thonburi Plaspac's Factory, Samut Sakorn	Subsurface Investigation
Tierra Design Pty Ltd.	De Geer's Residence, Chiang Rai	Topographic Survey
Tomaryk Design (Thailand) Co., Ltd.	Icandi Villa Project, Pranburi	Topographic Survey, Subsurface Investigation
	Goldcrest Properties Project, Hua Hin	Topographic Survey, Subsurface Investigation
	Baan Ing Phu Project, Hua Hin	Topographic Survey
	Zephyr Valley Project, Hua Hin	Topographic Survey
	Tropical Paradise Project, Hua Hin	Structural and Civil Designs
TPI Polene PCL	TPI Polene Silo Project, Saraburi	Subsurface Investigation

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Tycoons Worldwide Group (Thailand) Co., Ltd.	Tycoons Worldwide Group	Subsurface Investigation
Udon Intertrade Co., Ltd.	Base Course for Unifab Equipment	Subsurface Investigation
UniLand Golf and Country Club	Uniland Golf & Country Club, Nakorn Pathom	Low-Strain Integrity Test (Seismic Test)
United Distribution Business Co., Ltd.	UD Warehouse, Bangkok	Topographic Survey, Subsurface Investigation
Utility Design Consultant Co., Ltd.	Underground Pipe Detection	Subsurface Investigation
	BTS Extension Networks	Subsurface Investigation
	BTS Sukhumvit Extension (Bearing-Samut Prakarn)	Subsurface Investigation
	PTT Gas Pipeline	Subsurface Investigation
	Klong Pasicharoen Road	Subsurface Investigation
Vichitbhan Construction Co., Ltd.	Expressway Project Stage 3 (S1 Project)	Subsurface Investigation
Vis Consultants Co., Ltd.	Waste Water Treatment Plant-Bangpoo	Subsurface Investigation
	Wastewater Treatment in North	Subsurface Investigation
	Landfill in Kanchanaburi	Subsurface Investigation
White Lotus Residence (Hua Hin) Co., Ltd.	Hua Hin Golf Course Project	Topographic Survey, Subsurface Investigation
Wisit Engineering Consultants Co., Ltd.	Motor Factory Project at Amata, Rayong	Topographic Survey, Subsurface Investigation
	Yamaha Warehouse Extension, Bang Na	Subsurface Investigation
	Tesco Lotus, Chaipayoom	Topographic Survey, Subsurface Investigation
	Facilities for Tourists on River, Kanchanaburi	Subsurface Investigation
	Prime Nature at Hua Hin	Topographic Survey
Woods Bagot (Thailand) Ltd.	Fisherman Village Plaza, Koh Samui	Topographic Survey, Subsurface Investigation
	Resort Construction, Samui	Subsurface Investigation
Zenith Mechanical Co., Ltd.	Rust Protection System Project, Lopburi	Subsurface Investigation
Zurn Industries, Inc.	SPP Cogeneration Plant, Sriracha	Subsurface Investigation