



Geophysical and Stratification Analysis

- Electrical Resistivity Tests, vertical electric sounding, soil resistivity and seismic studies
- Detection of underground utilities by pipeline locator & Ground Penetrating Radar (GPR)
- Soil stratification along the alignment and sampling
- Laboratory tests, generation of subsoil stratification profile
- Corrosion and Aggressivity Survey for cross country pipelines
- Corrosion of concrete structures in marine environment

Land Reclamation and Hydro-biological Study

- Extensive Investigation in low-lying submerged coastal areas for Topography, Hydrography, Analysis of bay water and soil for physical, chemical, biological and engineering properties
- Limiting permissible ranges for organic loads, pesticide, toxic level, contaminants, biodegraded losses that influence the location, design and construction of shrimp farm
- Soil permeability and rate of percolation
- Stability of earth structures like bunds, canals, reservoirs and maximum use of local soil
- Reclamation study, site grading, banking of ponds, channels, cyclone protection bunds

Other services include

Design Consultancy and Engineering Services

- GIS driven Software Development
- Highway Engineering & Construction Supervision
- Irrigation, Flood Control & Water Management
- Cross Country Pipeline Transportation
- Environment Impact & Management Plan
- Town Planning & Urban Development
- Right of Use Acquisition & Permitting

Investigation and Services

- Engineering, Property and Hydrographic Surveys
- Route Planning, 3D Corridor Mapping, Generation of GIS Database
- Terrain Evaluation and Geological Appraisal
- Geotech, Soil Investigation and Foundation Engineering
- Ground Water and Resistivity Surveys
- Underwater Leak Detection and Turnkey Solutions
- Traditional Data Conversion and Fusion

Projects Executed include

- Nuclear and Thermal Power plants
- Refineries and Petro chemical Complexes
- Metros and Airports
- Major/Minor River Crossings for HDD
- Missile Launching Base
- Steel and Industrial plants
- Oil/Gas pipelines
- Soil Contamination test
- Tunnels, Highways and Expressways
- Water Supply and Sanitation
- Dams, Barrages and Canals



Awards

- **Best Professionally Managed Company 2014** - Construction Industry Development Council (CIDC)
- **Geospatial Company of the Year 2013** - India Geospatial Forum 2014
- **Best Project for Urban Infrastructure 2011** - Construction Industry Development Council (CIDC)
- **Export Excellence Award (Gold) 2010** - Federation of Karnataka Chambers of Commerce & Industry (FKCCI)
- **Export Excellence Award (Silver) 2008** - Federation of Karnataka Chambers of Commerce & Industry (FKCCI)
- **Certificate of Appreciation 2012** - Gas Authority of India Limited (GAIL)
- **Woman Consultant of the Year 2012** - Consulting Engineers Association of India (CEAI)
- **Woman Consultant of the Year 2009** - Consulting Engineers Association of India (CEAI)

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International Offices: Tripoli (Libya) <http://www.secon.in>

GEOTECH ENGINEERING SERVICES

Our Expertise in Soil has Many Layers and Solutions



Design Consultancy and Geotech Engineering Services

- Foundation Design and Geotech Investigation
- Material Testing and Pavement Design
- Slope Stability Analysis and Mitigation
- Geological and Hydro-geological Appraisal
- Geophysical and Stratification Analysis
- Land Reclamation and Hydro-biological Study

Investigation and Services

- Extensive Vertical, Horizontal and Inclined Drilling
- Material and Pavement Investigation for Highways and Structures
- Specialised Investigations, Testing and Sampling
- Ground Water and Resistivity Surveys
- Hydro-biological Investigation for Land Reclamation
- In-house Lab Testing for Physical and Chemical Parameters
- Aggressivity and Corrosion Survey
- Engineering and Land Surveys
- Detection of Underground Utilities using Ground Penetrating Radar (GPR)

Total Solution from a Single Window

GIS Driven Multidiscipline Design Consultancy

SECON is an ISO 9001:2008, NABL Accredited and CMMI Level 3 Certified Multidiscipline Engineering and Mapping Firm, established in 1981.

SECON is one of the leading Multidiscipline Engineering Consulting Firms and one of the largest and oldest Surveying and Mapping firms in India.

SECON has worked for clients all across the world especially in India, North America, South America, Canada Australia, Africa, Middle East and Europe.

SECON is probably the only company in India to offer a comprehensive solution for Geospatial Services right from Survey and Data Collection, Design Engineering and GIS Based software Development. This comprehensive domain experience of over three decades in all types of terrain sets it apart from other Geospatial companies.

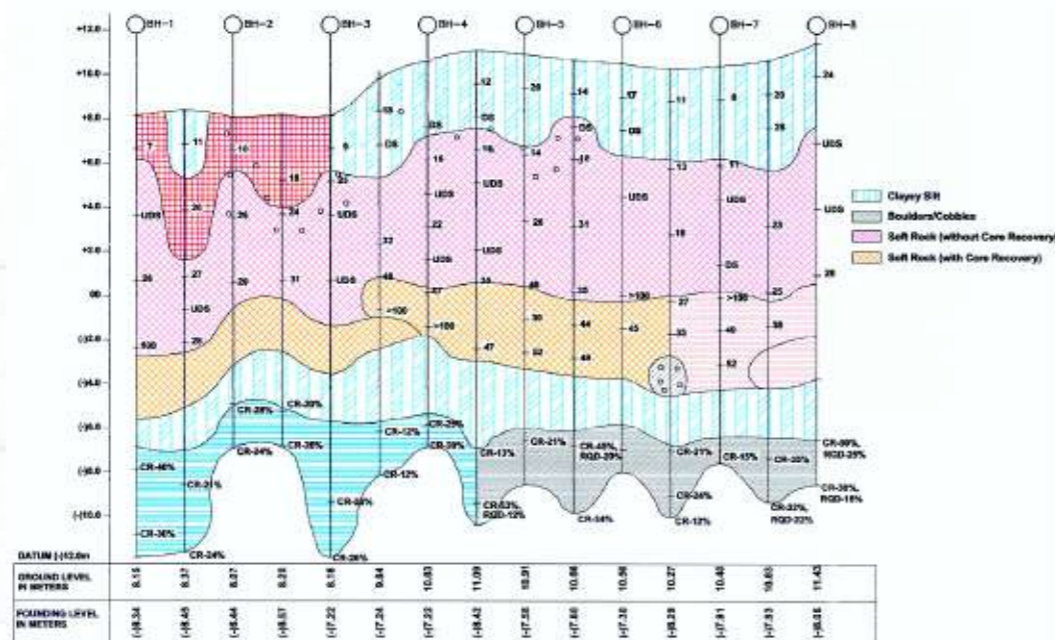


Geotech Investigation

Our capabilities in Geotechnical investigation and soil testing are well acclaimed in industry for infrastructure development. SECON is fully equipped to undertake boring and drilling by rotary and hydraulic rigs followed by comprehensive in-house testing report and recommendations. SECON has over 300,000 meters of Geotechnical Investigation and Drilling experience.

Foundation Design and Geotech Investigation

- Design of open, well and pile foundations for bridges, buildings, structures, dams, barrages, cyclone bunds, missile launching sites, oil storage tanks and terminals etc
- Site selection, specifications for geotechnical investigation plan, borehole location, depth, termination criteria, testing, recommendation and critical review of geotechnical report
- Marine denudation, alluvial tidal deposition, erosive tidal action, jetties and dredging
- Study and analysis of land slips, snow gallery, side hill cutting and failures
- Ground improvements by sand piling, stone columns and soil replacement
- Material and Density control, site grading and land filling for major earth works
- Evaluation of dynamic soil constants, dynamic shear modulus, damping value, liquefaction potential



Material Testing and Pavement Design

- Identification of quarry sources and testing of materials
- Condition Survey (Benkelman beam, Bump Integrator, Trial pits etc)
- Detailed Design of Flexible and Rigid Pavements for Highways and Airports
- Construction Supervision, Field Lab Testing and Quality Control including PMC
- Concrete Mix Design



Geotech Investigation

- Extensive vertical, horizontal, inclined drilling with hydraulic and rotary machines
- Field and laboratory tests including Standard Penetration Test, Vane Shear Test, test pits, density, index properties, compaction, triaxial, direct shear, consolidation, sampling etc
- Static and Cyclic Plate Load Test
- Static, Dynamic and Piezo Cone Penetration, Permeability, Block Vibration Test
- Pressuremeter, Cross Hole Seismic Test



- Boring and casting piles
- Vertical, uplift, lateral and compressive tests
- UTM for extensive tests on rock and nondestructive testing
- Material tests - strength of concrete, steel, aggregates, brick etc
- Chemical tests - anions, cations, pH, presence of bacteria, organic matter, total dissolved solids and all tests for potability of water using modern digital equipments



Geological and Hydro-geological Appraisal

- Geological mapping for land, sea coast and shore protection
- Drilling in rock, blasting, core sampling and rock anchoring
- Petrographic study of rock and its characteristics such as joint patterns, weathering, rock mass quality, faults, fissures and other identified parameters
- Ground Water Table, yield and aquifer studies



- Hydraulic model study for bank protection, flood / tide level, scour depth etc
- Bathymetry of river and sea bed, tidal studies and harmonic analysis
- Particle gradation, evaluation of silt factor and scour depth
- Surveillance for checking of Pipelines and under water structures like dams, Inwell shafts