

"SECON has done a great job and are capable of producing the same in any challenging job assigned"

Badger Energy Inc., USA

"Our main regret is that we didn't know of your existence at the time of starting work, that would have certainly solved many problems for us."

Spie-Capag/ NKK/ Toyo Consortium

# SECON

(CMMI Level 3, ISO 9001: 2008, NABL Accredited)



## Photogrammetry, LiDAR and Remote Sensing

- Aerial Triangulation
- Stereo Compilation
- Feature Collection (Topographic/ Planimetric Maps)
- Digital Terrain Model
- Orthophoto Rectification and Mosaicing
- Satellite Image Processing
- Geospecific 3D City Modelling
- LiDAR Data Classification
- Aerial Photography, Hyperspectral and LiDAR Acquisition



## Route Planning, 3D Corridor Mapping and Generation of GIS Database

- Conceptual engineering study and route optimisation
- Centre line and detailed route survey
- Soil stratification, soil resistivity and corrosion survey
- Hydrological and geotech investigation for major river crossings
- ROU/ROW acquisition, way leave license and clearance
- Generation of GIS/ MIS database
- Detail engineering for raw water sourcing, storage and make up circulation.
- EIA and EMP studies



## Underground Utility Detection (GPR), Non Destructive Testing (NDT)

Ground Penetrating Radar (GPR) is one of the latest available Geophysical techniques used for exploring the sub-surface to determine & validate the presence of underground utilities subject to soil conditions

- Detection and Interpretation of Buried Utilities, Water, Sewerage, Electrical and Optical Cables also be used for soil stratification including delineation of rock profile upto shallow depth
- Pipe Locator for buried Pipeline and carrying out NDT



## Ground Water and Resistivity Surveys

- Resistivity surveys for stratification
- Ground water and hydrological investigations for water table, yield and pumping hydraulics, aquifer studies
- Study of flow pattern, catchment area, bathymetry of river and sea bed, cyclonic storms, silt pattern and site selection for dumping dredged materials
- Hydraulic model study for bank protection
- Data collection, flood level, tide level and scour depth

## Underwater Leak Detection and Turnkey Solutions

- Diving services, videography and study of underwater structures
- Leak detection and evaluation
- Design of protection structures on turnkey for arresting leakage in underwater dams, shafts, tunnels and bulkheads



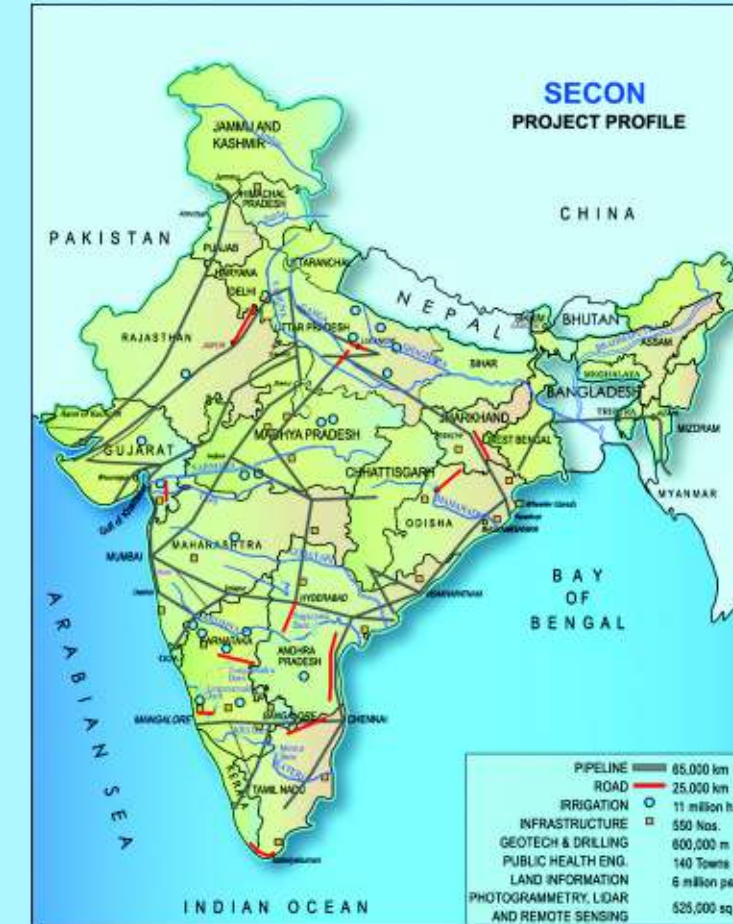
## Airborne and Ground Geophysical Surveys

- Aeromagnetic, Gravimetric, TDEM and Associated Airborne Geophysical Survey for Hydrocarbon, Mineral and Ground Water Exploration
- Gamma-ray spectrometry
- Electrical Resistivity Profiling
- Seismic Refraction and Seismic Reflection Tests



## Our Core Strengths

- Over 3 decades of experience. (established 1981)
- Financially sound, stable and zero debt company
- ISO 9001:2008 quality management processes, NABL, and CMMI Level 3 certification
- Large database of projects, reference materials and customized software
- Major share of pipeline, irrigation and road projects in India
- Has both the engineering and GIS based software development expertise to design and manage critical infrastructure and assets. The only organization in India that has both capabilities.
- Experienced professionals and global business partners
- Highly motivated and mobile crew exposed to different terrain conditions
- High precision tools for survey and geotechnical investigation
- Comprehensive in-house testing laboratory
- 105,000 sft company-owned office space having campus like environment



## 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)

## Corporate Office

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# GIS Driven Multidiscipline Engineering Consultancy



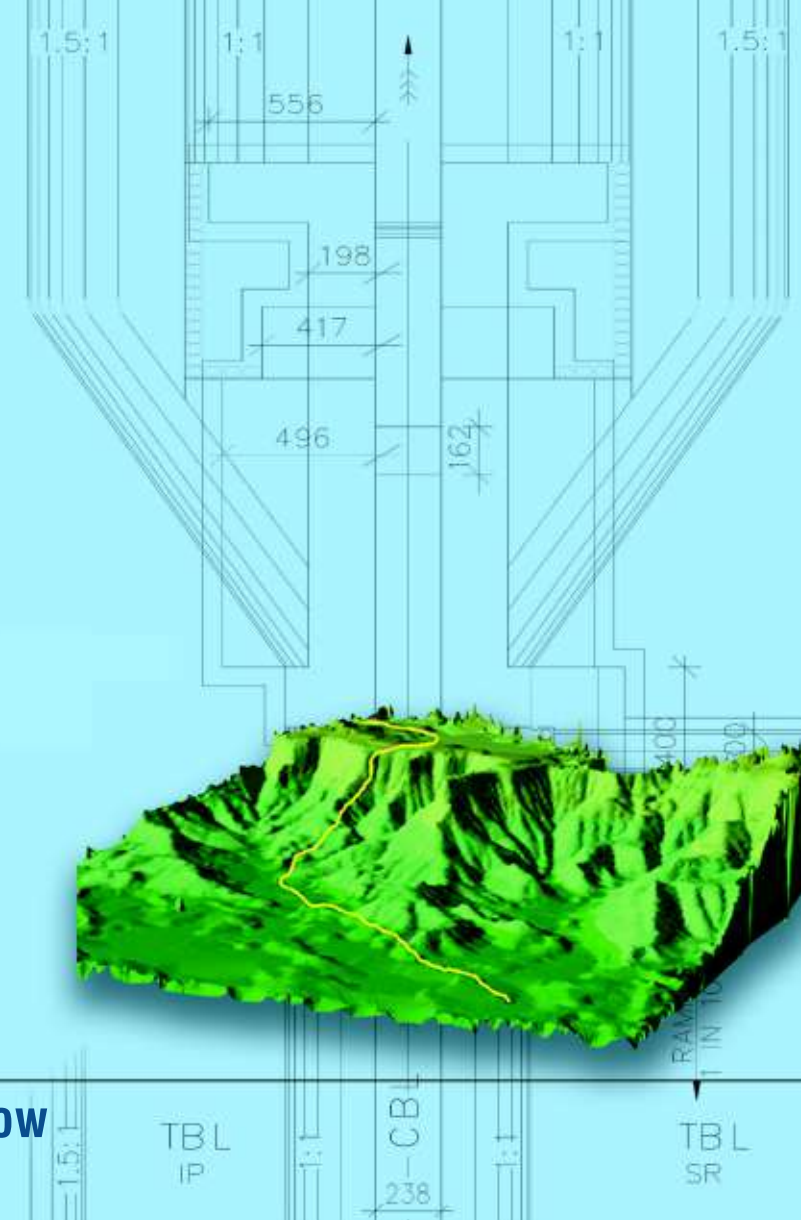
## Design Consultancy and Engineering Services

- Establishment of Property Ownership Records and GIS Based Land Information Systems
- Irrigation, Flood Control & Water Management
- Cross Country Pipeline Transportation Routing
- Right of Way Acquisition & Permitting
- Public Health Engineering & Electrical Engineering
- Highway Engineering & Construction Supervision
- Environment Impact & Management Plan
- Town Planning & Urban Development
- GIS Driven Software Development

## Investigation and Services

- Photogrammetry, LiDAR and Remote Sensing
- Engineering, Property and Hydrographic Surveys
- Geotech (Soil) Investigation and Foundation Engineering
- Airborne and Ground Geophysical Surveys
- Route Planning, 3D Corridor Mapping and GIS Database
- Terrain Evaluation and Geological Appraisal
- Ground Water and Resistivity Surveys
- Underwater Leak Detection and Turnkey Solutions for Dams and Underwater Structures
- Underground Utility Detection (GPR)

Total Solution from a Single Window



SECON is driven by customer satisfaction, on-time service and continuous improvement in products and services.

"SECON has completed the multidiscipline assignment in a meticulous and professional manner to our satisfaction."  
Defence Research & Development Organization, INDIA

"The first consultant to execute the job in a professional way. We have no hesitation in recommending SECON to others."  
Govt. of Andhra Pradesh, Dept. of Irrigation

SECON Private Limited is an ISO 9001:2008, CMMI Level 3 certified, NABL Accredited, GIS Driven Multidiscipline Engineering Company. SECON established in 1981.



SECON is one of the leading Multidiscipline Engineering Consulting Firms and one of the largest and oldest Surveying and Investigation firms in India. SECON has worked for clients all across the world especially in India, North America, Australia, Africa, Middle East and Europe.

SECON is probably the only company in India to offer a Total Solution from a Single Window for Planning, Design, Construction Supervision, GIS Solutions and related Survey & Investigation

### The scope of services provided by SECON encompasses:

- Preparation of macro and micro level base maps using Field, Satellite and Aerial data collection techniques.
- Field investigation services for Survey and Geotechnical Engineering.
- Assistance in permitting and obtaining project related clearances from the concerned authorities
- Detail engineering, preparation of bid documents and project report
- Construction supervision, contract management, inspection services, quality control and certification
- Comprehensive GIS driven data capture, processing and creation of GIS database and GIS Asset Management Systems



### Design Consultancy and Engineering Services

#### Highway Engineering and Construction Supervision

Over 25,000 km experience of mapping, design/construction supervision of highways

#### Survey and Investigation

- Feasibility study, control survey, corridor survey and setting out
- Geotech, material, pavement and hydrological investigations
- Traffic, inventory and condition survey
- Environmental and Social Impact Assessment
- Land acquisition and relocation of utilities
- Asset Inventory Survey and Data Collection



#### Design Engineering

- Design of road geometrics, intersections and cross drainage works
- Design of bridges, flyovers, ROBs and related structures.
- Cost estimate, BOQ and Detailed Project Report

#### Supervision Consultancy

- Project and contract management
- Technical control, project monitoring and inspection services
- Quality control and certification
- Claims, reviews and arbitration



### Asset Management and Maintenance

- Field Asset inventory
- GIS Based Asset and Maintenance Management
- Highway Asset and Maintenance Management System



### Irrigation, Flood Control and Water Management

Over 50,000 sq.km of Survey, Investigation using Modern Technology  
30,000 sq. km of Design of Irrigation and Water Management projects

- Survey and Investigations
- Compendium Planning for Irrigation Command Area( Macro & Micro)
- Water Availability Studies, Flood estimation, capacity assessment.
- Integrated River Basin Planning
- Feasibility Reports and Detailed Project Reports
- Design of Hydraulic Structures and Cyclone protection works
- Modernization, Re Structuring, Rehabilitation and Re settlement plans
- Water Management and On Farm Development works
- Leak detection and turnkey solution.
- Project Management and Construction Supervision
- Hydraulic model study, flood control and protection measures
- Water Management and On Farm Development works
- Underwater Leak Detection and Turnkey Solutions for Dams and Structures
- Project Management and Construction Supervision



### Cross Country Pipeline Transportation

Over 65,000 km of Pipeline corridor projects

#### Pre Construction

- Reconnaissance, feasibility study, generation of GIS database, 3D terrain modelling and evaluation
- Route optimization and identification of pipeline corridor
- Geological, geo-physical, foundation and stratification study for horizontal direction drilling
- Socio-economic, environmental impact study and management
- Right of Use (ROU) acquisition, site selection for intermediate stations, permitting and way leave license

#### During Construction

- Application Development, As-Built Data Capture and Field Services for Pipeline Construction Management

#### Post Construction

- Software and field services for GIS based Pipeline Asset and Corridor Management



### Public Health and Electrical Engineering

- Preparation of Basemap
- Survey and Investigation
- Feasibility, Planning, Design
- Rate Analysis, Detailed Quantity Calculation, Bill of Quantities & Cost Estimates
- Preparation of Tender Documentation and Vendor Evaluation
- Project Implementation Supervision and Generation of As Built Drawings



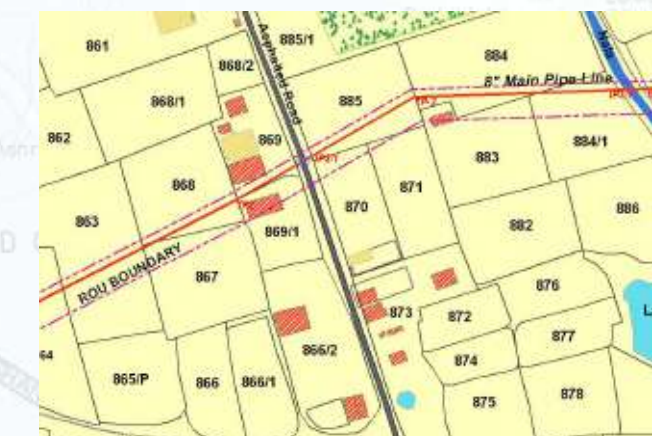
### Environment Impact and Management Plan

- Extensive data collection and analysis
- Pollution monitoring, spill prevention and waste disposal
- Identification and evaluation of environmental impact
- Risk analysis and disaster management
- Develop vegetation, wildlife and habitat protection schemes
- Preparation of comprehensive EIA and EMP report for forest and environmental clearance
- Water supply and waste water treatment



### GIS driven Software Development

Web enabled GIS software development for asset and maintenance management of Infrastructure projects.



### Investigation and Services

#### Engineering, Property and Hydrographic Surveys

- Control survey, monumentation for planimetric and height control
- Rapid updation and large scale surveys using satellite imagery and aerial photographs
- 3D contouring, terrain modelling and deformation study
- Property line survey, validation for large infrastructure projects
- Alignment surveys for utilities and transportation networks
- High precision engineering survey and setting out
- Sub bottom profiling and related investigations
- Route optimisation of navigation channels
- Ocean engineering, harmonic analysis for tides, current and wave studies

### Town Planning and Urban Development

- Engineering survey and investigation
- Land use analysis, conceptual and layout plan
- Design of approach roads and internal road network
- Design of water supply scheme, storm water and under ground drainage (UGD) system
- Design of power supply and distribution network
- Environmental impact study and rehabilitation

### Right of Use Acquisition and Permitting

- Assistance in site selection and evaluation
- Property & cadastral survey and validation
- Data management system for property inventory
- Assistance in Right of Use acquisition, permitting and way leave license
- Valuation of land, crop and fertility loss for land compensation



### Geotech, Soil Investigation and Foundation Engineering

- Over 7,00,000 meters of geotechnical investigation and drilling
- Extensive drilling in all strata and data collection
- Specialised testing, plate load, SCPT & DCPT, sampling, permeability, vibration, triaxial and consolidation
- In-house testing of physical and chemical parameters for soil and water
- Foundation engineering and report

