Company Brochure

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COMPANY BROCHURE

CAPABILITIES & INFRASTRUCTURE

SAPIENT TECHNO CONSULTANTS is a fast growing multi disciplinary consulting engineering firm based at Surat and having offices at Surat and Ahmedabad. The company, formed by a group of technocrats, specializes in providing design, engineering and project management consultancy services in following areas of interest:

- Water & Waste Water Management
- Water Recycle & Re-use
- Environmental engineering
- Infrastructure - Water & Sewerage Network, Industrial Parks / SEZ, etc.
- Civil Engineering – Land Survey, Geo-technical investigations, etc.
- Bio-gas based power generation
- Electrical Power Distribution (LT/MV)
- Electrical Sub Stations (up to 66KV)
- Instrumentation, Automation and SCADA Solutions
- Water Audit & Leak Detection Services

We would humbly put forward that this is an opportunity for us to help conserve scarce resources and serve society and we are committed to this cause.

Established in the year 2006, within a short span the company has emerged as an innovative and cost effective solution provider and having adequate infrastructure to sustain the growth in coming times.

We are a team of experts having rich and varied experience in multidisciplinary fields in similar industry working for several reputed organizations and have contributed in execution of several prestigious projects successfully within the country for various corporate clients, government and municipal bodies. The team is ably supported by subordinate engineering staff, CAD & Computer operators.

The confidence placed in us by our clients can be judged from the fact that within a short span we have successfully completed more than 100 projects including water supply, treatment and distribution schemes; sewage treatment plants, sewage pumping stations, industrial effluent and common effluent treatment plants, water recycling / re-use, process automation for water and waste water treatment, water audit, etc.

Our expertise & experience in design and handling various process technologies include the most basic to the advanced state-of-the-art process as under:

- **Sewage Treatment**
  - ✓ Conventional Activated Sludge Process
  - ✓ Upflow Anaerobic Sludge Blanket (UASB) Process
  - ✓ Extended Aeration Process
  - ✓ Sequential Batch Reactor (SBR) Process
  - ✓ Moving Bio Batch Reactor (MBBR) Process
  - ✓ Anaerobic, Anoxic & Oxic (A2O) Activated Sludge process for biological nutrient removal

- **Tertiary Treatment**
  - ✓ PSF / ACF
  - ✓ Membrane Filtration (UF / MBR)
  - ✓ RO System

- **Water Treatment**
  - ✓ Clari-flocculator
  - ✓ Tube Settler / Lamella Clarifier
  - ✓ Reactor Clarifier
  - ✓ Rapid Gravity sand Filtration

In short, we can provide ***comprehensive multi disciplinary consultancy*** for a project right from conceptualization and technical feasibility to project planning, survey and investigation, basic design & cost estimation, detailed design & engineering, contract documents, construction supervision, Inspection and quality control, project management, and commissioning of project - ***All under one roof***.

Infrastructure

Well furnished offices at Surat & Ahmedabad

Combined Office space of approx. 6000 Sq. ft

Having more than 25 computers with networking facility

Plotting & Printing facilities (up to A0 size)

CAD Software for Drawing Generation

High Speed Internet facility

Registration / Empanelment as Approved Vendor

- ➢ Surat Municipal Corporation
- ➢ Vadodara Municipal Corporation
- ➢ Ahmedabad Municipal Corporation
- ➢ Gujarat Infrastructure Development Board
- ➢ Gujarat Rural Housing Board
- ➢ Gujarat Police Housing Board
- ➢ Guwahati Metropolitan Development Authority
- ➢ Odisha Urban Infrastructure Development Authority
- ➢ World Bank

LIST OF SOME MAJOR CLIENTS

- ✓ Ahmedabad Urban Development Authority
- ✓ Surat Municipal Corporation
- ✓ Ahmedabad Municipal Corporation
- ✓ Vadodara Municipal Corporation
- ✓ Gujarat Electricity Board
- ✓ Bhavnagar Municipal Corporation
- ✓ Public Works Department, Daman
- ✓ Gujarat Industrial Development Corporation
- ✓ Gwalior Municipal Corporation
- ✓ CEPT University
- ✓ Municipal Corporation of Jalandhar, Punjab (MCJ)
- ✓ Iffco, Kalol Unit
- ✓ IIT Gandhinagar
- ✓ Balotra Water Pollution Control & Research Foundation Trust (BWPC&RFT)
- ✓ Greater Noida Industrial Development Authority (GNIDA)
- ✓ Dishman Infrastructure Limited (SEZ Project)
- ✓ Fairdeal Textile Park
- ✓ ITDC Limited
- ✓ Doshion Veolia Water Solutions Pvt. Ltd.
- ✓ Subhash Projects & Marketing Ltd.
- ✓ Jyoti Buildtech Pvt. Ltd
- ✓ Triveni Engineers (I) Ltd.
- ✓ Vibhor Vaibhav Infrastructure P. Ltd.
- ✓ Gujarat Enviro Protection & Infra. Ltd.
- ✓ Avadh Developers Pvt. Ltd.
- ✓ Rajkamal Builders Infrastructure Pvt. Ltd.
- ✓ HCP Designs & Proj. Mgmt. P. Ltd.
- ✓ Pali Water Pollution Control, Treatment & Research Foundation (PWPCTRF)

LIST OF MAJOR PROJECTS EXECUTED TYPE & TECHNOLOGY WISE

SEWAGE TREATMENT PLANT

Conventional Activated Sludge Process


- ✓ 240 MLD Sewage Treatment Plant at Vasna, Ahmedabad for AUDA
- ✓ 180 MLD Sewage Treatment Plant at New Pirana, Ahmedabad for AMC
- ✓ 66 MLD Sewage Treatment Plant at Dindoli, Surat for SMC
- ✓ 60 MLD Sewage Treatment Plant under UIDSSMT at Gwalior for GMC
- ✓ 42 MLD Sewage Treatment Plant at Kanpur for U.P. Jal Nigam
- ✓ 60 MLD Sewage Treatment Plant at Old Pirana, Ahmedabad for AMC
- ✓ 35 MLD Sewage Treatment Plant at Vasna, Ahmedabad for AMC
- ✓ 70 MLD Sewage Treatment Plant at Vinzol, Ahmedabad for AUDA
- ✓ 30 MLD Sewage Treatment Plant at Gajadharpura, Jaipur for JDA
- ✓ 30 MLD Sewage Treatment Plant at Ralawata, Jaipur for JDA

Upflow Anaerobic Sludge Blanket (UASB) Process


- ✓ 43 MLD Sewage Treatment Plant at Ataladra, Vadodara for VMC
- ✓ 10 MLD WWTP for Paper Mill-3, Al Hoty Stanger Ltd., Jeddah, Saudi Arabia
- ✓ 43 MLD Sewage Treatment Plant at Kapurai, Vadodara for VMC
- ✓ 30 MLD Sewage Treatment Plant at Nari Road, Bhavnagar for BMC (DPR Approved, Work Under Progress)

SEWAGE TREATMENT PLANT

Sequential Batch Reactor (SBR) Process

- ✓ 56 MLD Sewage Treatment Plant at Bapudham, Ghaziabad for GDA
- ✓ 50 MLD Sewage Treatment Plant at Noida for New Okhla Indl. Devp. Authority
- ✓ 56 MLD Sewage Treatment Plant at Govindpuram, Ghaziabad for GDA
- ✓ 36 MLD Sewage Treatment Plant at Agra for Agra Development Authority
- ✓ 20.5 MLD Sewage Treatment Plant at Sanand for AMC (DPR Approved, Work Completed, Trial Run balance)
- ✓ 10 MLD Sewage Treatment Plant at Sargasan, Gandhinagar for R&B Dept., Capital Project Divn.-3, Gandhinagar (GOG) (With Recycling of treated sewage for gardening / horticulture purpose)
- ✓ 8 MLD Sewage Treatment Plant at Bharatpur, Rajasthan for RUIDP (Work under Progress)
- ✓ 4 MLD STP followed by Tertiary Treatment (UF) at Shantigram Township, Ahmedabad for ATRECO including Recycling for non-portable use
- ✓ 45 MLD Sewage Treatment Plant at Ruvapari Road, Bhavnagar for BMC (DPR approved, Work in progress)

SEWAGE TREATMENT PLANT

Bio-Gas based Power Generation


- ✓ 43 MLD Sewage Treatment Plant at Ataladra, Vadodara for VMC
- ✓ 66 MLD Sewage Treatment Plant at Dindoli, Surat for SMC
- ✓ 60 MLD Sewage Treatment Plant at Gwalior for GMC
- ✓ 42 MLD Sewage Treatment Plant at Kanpur for U.P. Jal Nigam

Extended Aeration (ASP) Process

- ✓ 22.5 MLD Sewage Treatment Plant at Ankleshwar for GIDC

Moving Bio Batch Reactor (MBBR) Process

- ✓ 25 MLD Sewage Treatment Plant at Khajod for Surat Municipal Corporation
- ✓ 15 MLD Sewage Treatment Plant at Vesu for Surat Municipal Corporation

A_2O Process
(Nutrient Removal with Biological & Tertiary Treatment)

- ✓ 30 MLD Sewage Treatment Plant at Hyderabad, for HMDA
- ✓ 20 MLD Sewage Treatment Plant at Hyderabad, for HMDA


WATER TREATMENT PLANT

Conventional with Clariflocculator

- ✓ 200 MLD Water Treatment Plant at Raska, Ahmedabad for AMC
- ✓ 90 MLD WTP at Kosad & 32 MLD at Mota Varachha for North zone, SMC
- ✓ 78 MLD WTP at Dindoli for New SE Area, SMC
- ✓ 119 MLD at Biliya, 3.2 MLD at Ajasar & 3.1 MLD WTP at Nachana for PFBS Lift Project, PHED, Rajasthan
- ✓ 18.16 MLD Water Treatment Plant at Kalol based on Narmada Canal based Water Supply Scheme for Iffco
- ✓ 210 MLD Water Treatment Plant at Variav, Surat for SMC
- ✓ 90 MLD Water Treatment Plant at Sarthana, Surat for SMC
- ✓ 19.2 MLD Water Treatment Plant at Sanand for AMC
- ✓ 200 MLD Water Treatment Plant at Kotarpur, Ahmedabad for AMC
- ✓ 100 MLD Water Treatment Plant at Sanchore for SPML
- ✓ 19 MLD Water Treatment Plant at Gagreen for SPML
- ✓ 7 Nos. Water Treatment Plant of various capacities (200 m^3/hr to 700 m^3/hr) at Agartala for ITD-ITDCEM JV

Conventional with Lamella Clarifier

- ✓ 50 MLD Water treatment Plant at Nimeta for Vadodara Municipal Corporation
- ✓ 40 MLD Water Treatment Plant at Shivpuri, M.P. on PPP basis
- ✓ 150 MLD at Katargam, 150 MLD at Sarthana & 50 MLD at Jahangirabad WTP for Surat Municipal Corporation
- ✓ 210 MLD Water Treatment Plant at Greater Noida for GNIDA

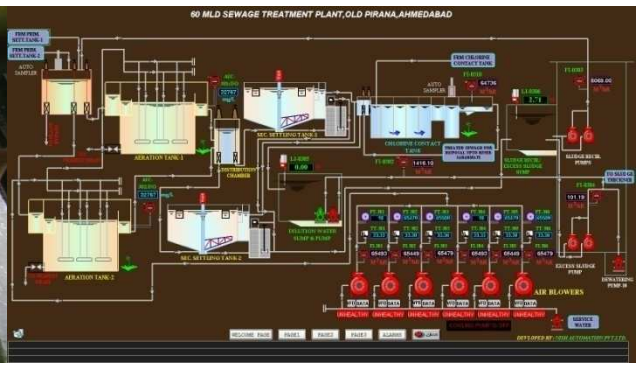
Industrial Waste Water (Effluent)


- ✓ 63 MLD Effluent Treatment Plant for Ash Water and Other Drain Water Reclamation & Recirculating system for GSECL-UKAI
- ✓ 10 MLD Effluent Treatment Plant at Fairdeal Textile Park
- ✓ 12 MLD Effluent Treatment Plant for Pali Water Pollution Control, Treatment and Research Foundation
- ✓ 2 MLD CETP for Vraj Integrated Textile Park Ltd. (Chiripal Group)
- ✓ 6 MLD ZLD with Solar Ponds for Balotra Water Pollution Control & Research Foundation Trust (BWPC&RFT)
- ✓ 66.40 MLD CETP with ZLD for Pali Water Pollution Control, Treatment & Research Foundation (PWPCTRF)

Infrastructure Projects

- ✓ 34 MLD Water supply scheme consisting of Intake work, Water treatment plant, UGSR, ESR & Piping distribution network at Daman.
- ✓ 85 cusec Capacity Water Treatment plant at Greater Noida for Greater Noida Industrial Development Authority (GNIDA)
- ✓ Infrastructure Development of Kaliabid Area which consist of 40 km drainage network, 85 km storm drain network, 85 km water supply network and 80 km length for road network for Bhavnagar Municipal Corporation
- ✓ Up- gradation of for Drainage Network, Sewage Pumping Station, Rising Main & Sewage Treatment Plant for Bhavnagar Municipal Corporation
- ✓ Infrastructure Development of Fairdeal Textile Park which consist of drainage network, strom drain network, water supply network, Fire Water network & RO network for Fairdeal Textile Park
- ✓ Landfill closure & cover for secured landfill sites for hazardous waste at Vapi for Vapi Waste & Effluent Management Co. Ltd.
- ✓ Infrastructure Development of Drainage network, Storm drain network, Water supply network, Fire Water network & RO network for Kejriwal Textile Park.

Water Recycle Projects



- ✓ 63 MLD Effluent Treatment Plant for Ash Water and Other Drain Water Reclamation & Recirculating system for GSECL-UKAI
- ✓ 10 MLD Effluent Treatment Plant at Fairdeal Textile Park
- ✓ 2 MLD CETP for Vraj Integrated Textile Park Ltd. (Chiripal Group)
- ✓ Effluent Recycling Plants for existing 6 Nos. CETPs, aggregating to 66.40 MLD, 20 MLD capacity new CETP with ZLD, Land fill site development / sludge disposal yard for PWPCTRF at Pali
- ✓ 30 MLD Sewage Treatment Plant at Hyderabad, for HMDA
- ✓ 20 MLD Sewage Treatment Plant at Hyderabad, for HMDA
- ✓ 10 MLD Sewage Treatment Plant at Sargasan, Gandhinagar for R&B Dept., Capital Project Divn.-3, Gandhinagar (GOG) (With Recycling of treated sewage for gardening / horticulture purpose)
- ✓ 4 MLD STP followed by Tertiary Treatment (UF) at Shantigram Township, Ahmedabad for ATRECO including Recycling for non-portable use
- ✓ 1.2 MLD Tertiary Treatment (UF) at IIT Gandhinagar including Recycling for non-portable use

PUMPING STATION

Intake Well / Water Distribution Station

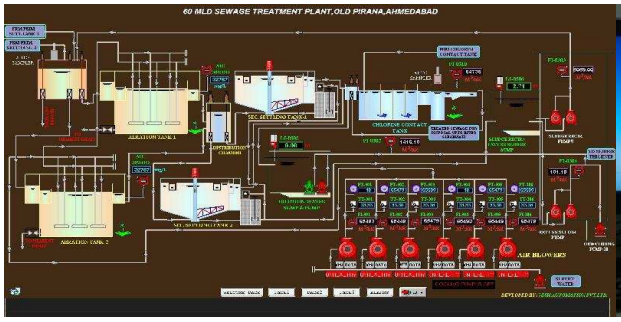
- ✓ Intake Well & 7 Nos. Water Distribution Stations for New East and South East area for SMC Surat
- ✓ Intake Well and 8 Nos. Water Distribution Station for New West and South West Area for SMC
- ✓ Intake Well at Durgapur for Matix Fertilizer & Chemicals Ltd.
- ✓ Intake Structure & 3 Nos. pump house each at Karannagar, Dhadhusan and Red Laxmipura
- ✓ Water supply Scheme from Dhanki to Navada, NC-26 Package of GWIL for SPML
- ✓ Water supply Scheme from Dhanki to Ratanpur, NC-32 Package of GWIL for SPML
- ✓ Intermediate Pumping Station, Sauni Yojna Link 2, Package3 near Bhimdad Reservoir for SPML
- ✓ Intermediate Pumping Station, Sauni Yojna Link 2, Package3 near Goma Reservoir for Eassar projects
- ✓ 850 MLD Raw Water Pumping Station at Kotarpur for AMC

Sewage Pumping Station

- ✓ 285 MLD Sewage Pumping Station at Vasna, AUDA
- ✓ 102 MLD Sewage Pumping Station at Vinzol, AUDA
- ✓ Sewage Pumping Station at Motera, AMC (Under Progress)
- ✓ 200 MLD Sewage Pumping Station at Jamalpur for AMC
- ✓ 4 Nos. Sewage Pumping Station at Gandhinagar, GUDA
- ✓ 4 Nos. Sewage Pumping Station at Bhavnagar, BMC (Under Progress)

OTHERS

Automation & SCADA Projects



- ✓ SCADA based controls old drainage network comprising of 6 STPs & 23 Nos. SPS for Surat Municipal Corporation
- ✓ SCADA / Telemetry & integration of Tube wells in Jalandhar City for MCJ
- ✓ Water supply Pipe Line SCADA (Pokran to Santra Bhakhri), Water supply SPR-2A & 2B Package of PHED, Rajasthan for SPML
- ✓ Electrical & Instrumentation with PLC & SCADA works for 30 MLD CETP for Bhatgam Washing Ghat Suddhikaran Yojna Pvt. Ltd. (A SPV of Jetpur Dyeing and Printing Association) at village Bhat., Dist. Junagadh
- ✓ Electrical & Instrumentation with PLC & SCADA works for Water supply Scheme from Dhanki to Navada, NC-26 Package of GWIL for SPML
- ✓ Electrical & Instrumentation with PLC & SCADA works for Water supply Scheme from Dhanki to Ratanpur, NC-32 Package of GWIL for SPML

Water Audit

- ✓ Water Audit work of Kalol City for CEPT University, Ahmedabad
- ✓ Water Audit work for the towns of Santrampur, Morbi, Palitana, Navsari & Bardoli, for CEPT University, Ahmedabad

PROJECT DESCRIPTION SHEETS

SEWAGE TREATMENT PLANT
CONVENTIONAL ACTIVATED SLUDGE PROCESS
70 MLD, AUDA, VINZOL, AHMEDABAD

Client	Ahmedabad Urban Development Authority, Ahmedabad, Gujarat
Project Cost	INR 287.5 Million
Scheme	Under JnNURM
Status	Completed
Salient Features	• Modular Design (2 x 35 MLD Streams) • Major Units of STP comprises of ✓ Inlet Unit (Stilling Chamber, Mechanical Fine Screen Chamber, Mech. Grit chamber, Flow Measuring Channel) ✓ Primary Clarifier ✓ Aeration Tank (With Diffuser Aeration System) ✓ Secondary Clarifier ✓ Chlorine Contact Tank & Chlorination Room ✓ Sludge Pump Houses – Primary Sludge, Return Activated / Excess Sludge, Thickened Sludge, Digested Sludge ✓ Sludge Thickener ✓ Sludge Digester ✓ Mechanical Dewatering system (Belt Filter Press) ✓ Gas Flaring System • Plant Operation with PLC/SCADA System
Services Provided	As associate Consultants for: • Preparation of Detailed Project Report (DPR) • Preparation of Bid Documents (on EPC basis) • Bid Evaluation • Review & Approval for Design & Engineering Drawings / Docu. • Project Management Consultancy (PMC) Services including ✓ Project Monitoring / Progress Review ✓ Construction Supervision ✓ Quality Audit and Material Inspection

TERMINAL SEWAGE PUMPING STATION
102 MLD, AUDA, VINZOL, AHMEDABAD

Client	Ahmedabad Urban Development Authority, Ahmedabad, Gujarat
Project Cost	INR 111.27 Million
Scheme	Under JnNURM
Status	Completed
Salient Features	• Civil Works for 102 MLD ultimate Avg. Flow, Peak Factor 2.0 • Electro-mechanical Works for 136MLD Peak flow at present with provision to upgrade for 204MLD peak flow in future • Major Equipment of TSPS for present requirement comprises of ✓ Vertical Centrifugal Pumps, Non-clog type, 2 nos. (1W + 1S) 2835 m3/hr @ 16m head, 200KW motor 2 Nos. (2W) 1420 m3/hr @ 16m head, 95KW motor raitng ✓ Electric Actuator operated delivery valves ✓ Mechanical Rake Type Bar Screen, 20mm opening ✓ Grit Mechanism with 1 m^3 bucket capacity ✓ 11KV Switchyard ✓ 11/0.433KV, 1000 KVA Distribution Transformers, 2 nos. (1W + 1S) ✓ LT panel with Soft Starters for Sewage Pumps ✓ PLC for Level based Auto operation of Pumps ✓ SCADA System with remote connectivity to PLC/SCADA at 70MLD STP at Vinzol site
Services Provided	As associate Consultants for: • Preparation of Detailed Project Report (DPR) • Preparation of Bid Documents (on Item Rate basis) • Bid Evaluation • Design & Issue of Construction Drawings • Review & Approval for Vendor Drawings / Documents • Project Management Consultancy (PMC) Services including ✓ Project Monitoring / Progress Review ✓ Construction Supervision ✓ Quality Audit and Material Inspection

SEWAGE TREATMENT PLANT
CONVENTIONAL ACTIVATED SLUDGE PROCESS
240 MLD, AUDA, VASNA, AHMEDABAD

Client	Ahmedabad Urban Development Authority, Ahmedabad, Gujarat
Project Cost	INR 842 Million
Scheme	Under JnNURM
Status	Completed
Salient Features	• Modular Design (4 x 60 MLD Streams) • Major Units of STP comprises of ✓ Inlet Unit (Stilling Chamber, Mechanical Fine Screen Chamber, Mech. Grit chamber, Flow Measuring Channel) ✓ Primary Clarifier ✓ Aeration Tank (With Diffuser Aeration System) ✓ Secondary Clarifier ✓ Chlorine Contact Tank & Chlorination Room ✓ Sludge Pump Houses – Primary Sludge, Return Activated / Excess Sludge, Thickened Sludge, Digested Sludge ✓ Sludge Thickener ✓ Sludge Digester ✓ Mechanical Dewatering system (Belt Filter Press) ✓ Gas Flaring System • Plant Operation with PLC/SCADA System
Services Provided	As associate Consultants for: • Preparation of Detailed Project Report (DPR) • Preparation of Bid Documents (on EPC basis) • Bid Evaluation • Review & Approval for Design & Engineering Drawings / Docu. • Project Management Consultancy (PMC) Services including ✓ Project Monitoring / Progress Review ✓ Construction Supervision ✓ Quality Audit and Material Inspection

TERMINAL SEWAGE PUMPING STATION
285 MLD, AUDA, VASNA, AHMEDABAD

Client	Ahmedabad Urban Development Authority, Ahmedabad, Gujarat
Project Cost	INR 275.63 Million
Scheme	Under JnNURM
Status	Completed
Salient Features	• Civil Works for 285 MLD Avg. Flow, Peak Factor 2.0 • Electro-mechanical Works for 300MLD Peak flow at present with provision to upgrade for 570MLD peak flow in future • Major Equipment of TSPS for present requirement comprises of ✓ Vertical Centrifugal Pumps, Non-clog type, 3125 m3/hr @ 25m head, 315KW Motor Rating, 6 Nos. (4W + 2S) ✓ Electric Actuator operated delivery valves ✓ Mechanical Rake Type Bar Screen, 20mm opening ✓ Grit Mechanism with 1 m^3 bucket capacity ✓ 11KV Switchyard ✓ 11/0.433KV, 2000 KVA Distribution Transformers, 2 nos. (1W + 1S) ✓ LT panel with Soft Starters for Sewage Pumps ✓ PLC for Level based Auto operation of Pumps ✓ SCADA System with remote connectivity to PLC/SCADA at 240MLD STP at Vasna site
Services Provided	As associate Consultants for: • Preparation of Detailed Project Report (DPR) • Preparation of Bid Documents (on Item Rate basis) • Bid Evaluation • Design & Issue of Construction Drawings • Review & Approval for Vendor Drawings / Documents • Project Management Consultancy (PMC) Services including ✓ Project Monitoring / Progress Review ✓ Construction Supervision ✓ Quality Audit and Material Inspection

SEWAGE TREATMENT PLANT
CONVENTIONAL ACTIVATED SLUDGE PROCESS
180 MLD, AMC, PIRANA, AHMEDABAD

Client	Ahmedabad Municipal Corporation, Ahmedabad, Gujarat
Project Cost	INR 241.1 Million
Scheme	Under JnNURM
Status	Completed
Salient Features	• Modular Design (3 x 60MLD Streams) • Major Units of STP comprises of ✓ Inlet Unit (Stilling Chamber, Mechanical Fine Screen Chamber, Mech. Grit chamber, Flow Measuring Channel) ✓ Primary Clarifier ✓ Aeration Tank (With Diffuser Aeration System) ✓ Secondary Clarifier ✓ Chlorine Contact Tank & Chlorination Room ✓ Sludge Pump Houses – Primary Sludge, Return Activated / Excess Sludge, Thickened Sludge, Digested Sludge ✓ Sludge Thickener ✓ Sludge Digester ✓ Mechanical Dewatering system (Belt Filter Press) ✓ Gas Flaring System • Plant Operation with PLC/SCADA System
Services Provided	As associate Consultants for: • Preparation of Bid Documents (on EPC basis) • Bid Evaluation • Review & Approval for Design & Engineering Drawings / Documents

SEWAGE TREATMENT PLANT
CONVENTIONAL ACTIVATED SLUDGE PROCESS
60 MLD, AMC, OLD PIRANA, AHMEDABAD

Client	Ahmedabad Municipal Corporation, Ahmedabad, Gujarat
Project Cost	INR 598.7 Million
Scheme	Under JnNURM
Status	Completed
Salient Features	• Major Units of STP comprises of ✓ Inlet Unit (Stilling Chamber, Mechanical Fine Screen Chamber, Mech. Grit chamber, Flow Measuring Channel) ✓ Primary Clarifier ✓ Aeration Tank (With Diffuser Aeration System) ✓ Secondary Clarifier ✓ Chlorine Contact Tank & Chlorination Room ✓ Sludge Pump Houses – Primary Sludge, Return Activated / Excess Sludge, Thickened Sludge, Digested Sludge ✓ Sludge Thickener ✓ Sludge Digester ✓ Mechanical Dewatering system (Belt Filter Press) ✓ Gas Flaring System • Plant Operation with PLC/SCADA System
Services Provided	As associate Consultants for: • Preparation of Bid Documents (on EPC basis) • Bid Evaluation • Review & Approval for Design & Engineering Drawings / Documents

SEWAGE TREATMENT PLANT
CONVENTIONAL ACTIVATED SLUDGE PROCESS
35 MLD, AMC, VASNA, AHMEDABAD

Client	Ahmedabad Municipal Corporation, Ahmedabad, Gujarat
Project Cost	INR 159.1 Million
Scheme	Under JnNURM
Status	Completed
Salient Features	• Major Units of STP comprises of ✓ Inlet Unit (Stilling Chamber, Mechanical Fine Screen Chamber, Mech. Grit chamber, Flow Measuring Channel) ✓ Primary Clarifier ✓ Aeration Tank (With Diffuser Aeration System) ✓ Secondary Clarifier ✓ Chlorine Contact Tank & Chlorination Room ✓ Sludge Pump Houses – Primary Sludge, Return Activated / Excess Sludge, Thickened Sludge, Digested Sludge ✓ Sludge Thickener ✓ Sludge Digester ✓ Mechanical Dewatering system (Belt Filter Press) ✓ Gas Flaring System • Plant Operation with PLC/SCADA System
Services Provided	As associate Consultants for: • Preparation of Bid Documents (on EPC basis) • Bid Evaluation • Review & Approval for Design & Engineering Drawings / Documents

SEWAGE TREATMENT PLANT
UPFLOW ANAEROBIC SLUDGE BLANKET (UASB)
43 MLD, VMC, ATALADRA, VADODARA

Client	Vadodara Municipal Corporation, Vadodara, Gujarat
Contractor	Rajkamal Builders Infrastructure Pvt. Ltd., Ahmedabad
Project Cost	INR 186.7 Million
Scheme	JnNURM
Status	Completed
Salient Features	• Treatment - UASB process followed by Extended Aeration • Bio-gas based power generation (330KWe gas engine) • Major Units of STP comprises of ✓ Inlet Unit (Stilling Chamber, Mechanical Fine Screen Chamber, Mech. Grit chamber, Flow Measuring Channel) ✓ UASB Reactor ✓ Pre-Aeration & Aeration Tank ✓ Secondary Clarifier ✓ Return Activated Sludge sump & Pump Houses ✓ Sludge Thickener ✓ Gas Holder, Gas Flaring System & Gas Engine ✓ Refurbishing of existing SPS, providing 1800 m3/hr @19.1m TDH Submersible Non-clog sewage pumps, 135KW motor rating, 6 Nos. (4W + 2S) ✓ PLC based controls for Level based auto operation of Sewage Pumps at SPS & for Captive Power Generation Plant • VMC received JnNURM award for being the best city for project implementation of STP at Ataladra – one of the few projects in the country completed successfully on UASB and generating bio-gas based power resulting in cost saving for VMC
Services Provided	• Preparation of Basic Engineering Design (Process & Hydraulic) • Detailed Engineering including Preparation of G.A. Drawings & Civil Design, Piping, Electro-mechanical & Instrumentation Works • PMC Services including Supervision over Construction, Testing & Commissioning of Bio-Gas based Captive Power Generation Plant

SEWAGE TREATMENT PLANT
UPFLOW ANAEROBIC SLUGE BLANKET
43 MLD, VMC, KAPURAI, VADODARA

Client	Vadodara Municipal Corporation, Vadodara, Gujarat
Contractor	Rajkamal Builders Infrastructure Pvt. Ltd., Ahmedabad
Project Cost	INR 255.5 Million
Scheme	JnNURM
Status	Completed
Salient Features	• Treatment - UASB process followed by Extended Aeration • Major Units of STP comprises of ✓ Terminal Sewage Pumping Station comprising of 900 m3/hr Submersible Non-clog sewage pumps, 67KW motor rating, 6 Nos. (4W + 2S) ✓ Inlet Unit (Stilling Chamber, Mechanical Fine Screen Chamber, Mech. Grit chamber, Flow Measuring Channel) ✓ UASB Reactor ✓ Pre-Aeration & Aeration Tank ✓ Secondary Clarifier ✓ Return Activated Sludge sump & Pump Houses ✓ Sludge Thickener ✓ Gas Holder & Gas Flaring System ✓ PLC based controls for Level based auto operation of Sewage Pumps at SPS & for Captive Power Generation Plant
Services Provided	• Preparation of Basic Engineering Design (Process & Hydraulic) • Detailed Engineering including Preparation of G.A. Drawings & Civil Design, Piping, Electro-mechanical & Instrumentation Works

SEWAGE TREATMENT PLANT
A_2O ACTIVATED SLUDGE PROCESS - ULTRAFILTRATION
20 MLD, HMDA, HYDERABAD

Client	Hyderabad Metropolitan Development Authority, Hyderabad
Contractor	Triveni Engineering & Industries Ltd.
Project Cost	INR 280.0 Million
Scheme	JICA
Status	Completed
Salient Features	• Anaerobic, Anoxic & Oxic Activated Sludge process for biological nutrient removal followed by Membrane Filtration (UF System) & Disinfection • Plant designed to achieve treated sewage parameters as under for discharge in to Hussain Sagar Lake: BOD : < 2 mg/L. COD : < 70 mg/L TSS : < 2 mg/L. Turbidity : < 2 mg/L. TN : < 10 mg/L • Plant Operation with PLC/SCADA System
Services Provided	• Preparation of Basic Engineering Design (Process & Hydraulic) • Detailed Engineering including Preparation of G.A. Drawings & Civil Design, Piping, Electro-mechanical & Instrumentation Works

SEWAGE TREATMENT PLANT
A_2O ACTIVATED SLUDGE PROCESS - SAND FILTRATION
30 MLD, HMDA, HYDERABAD

Client	Hyderabad Metropolitan Development Authority, Hyderabad
Contractor	Triveni Engineering & Industries LTD.
Project Cost	INR 625 Million
Scheme	JICA
Status	Under Execution
Salient Features	• Anaerobic, Anoxic & Oxic Activated Sludge process for biological nutrient removal followed by Rapid Gravity Sand Filtration & Disinfection • Plant designed to achieve treated sewage parameters as under for discharge in to Hussain Sagar Lake: BOD : < 5 mg/L COD : < 70 mg/L TSS : < 5 mg/L Turbidity : < 5 mg/L TN : < 10 mg/L TP : < 0.5 mg/L • Major Units of STP comprising of ✓ Inlet Sewage Works (SPS) ✓ Inlet Unit (Stilling Chamber, Mechanical Fine Screen Chamber, Mech. Grit chamber, Flow Measuring Channel) ✓ Anaerobic, Anoxic and Oxic (A_2O) activated sludge process ✓ Coagulant addition ✓ Secondary Clarification / Sedimentation ✓ Rapid Sand Filtration & Disinfection ✓ Sludge Sump & Pump House ✓ Mechanical Sludge Dewatering • Plant Operation with PLC/SCADA System
Services Provided	• Preparation of Basic Engineering Design (Process & Hydraulic) • Detailed Engineering including Preparation of G.A. Drawings & Civil Design, Piping, Electro-mechanical & Instrumentation Works

SEWAGE TREATMENT PLANT
SEQUENTIAL BATCH REACTOR (SBR / CASP) PROCESS
56 MLD, GDA, BAPUDHAM, GHAZIABAD

Client	Ghaziabad Development Authority, Bapudham, Ghaziabad, U.P.
Contractor	Vibhor Vaibhav Infra Pvt. Ltd
Project Cost	INR 650 Million
Scheme	-
Status	Completed
Salient Features	• Major Units of STP comprises of ✓ Inlet Unit (Stilling Chamber, Mech. Fine Screen Chamber, Mech. Grit chamber) ✓ SBR Basin ✓ Chlorine Contact Tank & Chlorination Room ✓ Sludge Sump & Pump House ✓ Mechanical Dewatering system (Centrifuge) ✓ Plant Operation with PLC/SCADA System
Services Provided	• Preparation of Basic Engineering Design (Process & Hydraulic) • Detailed Engineering including Preparation of G.A. Drawings & Civil Design, Piping, Electro-mechanical & Instrumentation Works

SEWAGE TREATMENT PLANT
SEQUENTIAL BATCH REACTOR (SBR / CASP) PROCESS
56 MLD, GDA, GOVINDPURAM, GHAZIABAD

Client	Ghaziabad Development Authority, Govindpuram, Ghaziabad, U.P.
Contractor	Vibhor Vaibhav Infra Pvt. Ltd
Project Cost	INR 650 Million
Scheme	-
Status	Completed
Salient Features	• Major Units of STP comprises of ✓ Inlet Unit (Stilling Chamber, Mech. Fine Screen Chamber, Mech. Grit chamber) ✓ SBR Basin ✓ Chlorine Contact Tank & Chlorination Room ✓ Sludge Sump & Pump House ✓ Mechanical Dewatering system (Centrifuge) ✓ Plant Operation with PLC/SCADA System
Services Provided	• Preparation of Basic Engineering Design (Process & Hydraulic) • Detailed Engineering including Preparation of G.A. Drawings & Civil Design, Piping, Electro-mechanical & Instrumentation Works

SEWAGE TREATMENT PLANT
SEQUENTIAL BATCH REACTOR (SBR / CASP) PROCESS
50 MLD, NOIDA, U.P.

Client	New Okhla Industrial Development Authority, Noida, U.P.
Contractor	Jyoti Build Tech (P) Ltd.
Project Cost	INR 680 Million
Scheme	-
Status	Completed
Salient Features	• Major Units of STP comprises of ✓ Inlet Unit (Stilling Chamber, Mech. Fine Screen Chamber, Mech. Grit chamber) ✓ SBR Basin ✓ Chlorine Contact Tank & Chlorination Room ✓ Sludge Sump & Pump House ✓ Mechanical Dewatering system (Centrifuge) ✓ Plant Operation with PLC/SCADA System
Services Provided	• Preparation of Basic Engineering Design (Process & Hydraulic) • Detailed Engineering including Preparation of G.A. Drawings & Civil Design, Piping, Electro-mechanical & Instrumentation Works

WATER TREATMENT PLANT
CONVENTIONAL WATER TREATMENT PROCESS
200 MLD, AMC, RASKA, AHMEDABAD

Client	Ahmedabad Municipal Corporation, Ahmedabad, Gujarat
Project Cost	INR 325.15 Million
Scheme	Under JnNURM
Status	Completed
Salient Features	• Major Units of WTP comprises of ✓ Raw Water Sump & Pump House ✓ Inlet Unit (Stilling Chamber with Pre-Chlorination, Flow Measuring Channel, Alum Mixing Unit – Hydraulic Jump) ✓ Clari-flocculator ✓ Aeration Tank (With Diffuser Aeration System) ✓ Rapid Gravity Sand Filter (Variable Declining Rate) ✓ Clear Water Sump with Post-Chlorination ✓ Chlorination / Chlorine Tonner Room ✓ Treated Water Sump & Pump House (Existing) ✓ Spent Backwash Recycling System ✓ Sludge sump & Pump House ✓ Chemical House • Plant Operation with PLC/SCADA System
Services Provided	As associate Consultants for: • Preparation of Bid Documents (on EPC basis) • Bid Evaluation • Review & Approval for Design & Engineering Drawings / Documents

WATER TREATMENT PLANT
CONVENTIONAL WATER TREATMENT PROCESS
50 MLD, VMC, NIMETA, VADODARA

Client	Vadodara Municipal Corporation, Vadodara, Gujarat
Contractor	Rajkamal Builders Infrastructure Pvt. Ltd., Ahmedabad
Project Cost	INR 70.20 Million
Scheme	JnNURM
Status	Completed
Salient Features	• Major Units of WTP comprises of ✓ Flow Measurement, Stilling Chamber & Flash Mixer ✓ Flocculator ✓ Sludge Blanket Lamella Clarifier (Tube Settler) ✓ Rapid Gravity Sand Filters (Declining Rate) ✓ 4ML capacity Clear Water Reservoir ✓ Dirty Backwash Recycling System
Services Provided	• Preparation of Basic Engineering Design (Process & Hydraulic) • Detailed Engineering including Preparation of G.A. Drawings & Civil Design, Piping, Electro-mechanical & Instrumentation Works

COMMON EFFULENT TREATMENT PLANT
SEQUENTIAL BATCH REACTOR (SBR / CASP) PROCESS
12 MLD, PALI

Client	Pali Water Pollution Control, Treatment and Research Foundation
Project Cost	INR 1600 Lacs
Status	Completed
Salient Features	• Major Units of CETP comprises of ✓ Inlet Unit (Receiving Chamber, Mech. & Manual Fine Screen Chamber, Inlet chamber, Parshall Flume, Grit chamber) ✓ Raw Effulent Transfer Sump & Pump house ✓ Tilted Plate Separator ✓ Pre Sedimentation tank (Equalization Tank) ✓ Flash Mixer ✓ Clariflocculator ✓ SBR Basin ✓ Chlorine Contact Tank & Chlorination Room ✓ Sludge Sump & Pump House ✓ Sludge Thickner ✓ Thickned Sludge Sump & Pump House ✓ Treated Water tank ✓ Mechanical Dewatering system (Centrifuge) ✓ Chemical Building ✓ Water storage Tank ✓ Pressure Filter ✓ Activated Carbon Filter ✓ Plant Operation with PLC/SCADA System
Services Provided	• Preparation of Basic Engineering Design (Process & Hydraulic) • Preparation of E & I Design Philosophy • Detailed Engineering including Preparation of Electro-mechanical & Instrumentation Works • Preparation of AS-BUILT drawings along with O & M manual. • Technical Evaluation of offer given by Vendors for major electromechanical & Instrumentation equipment.

Pokran-Falsund-Balotra-Siwana (PFBS) lift project to meet Drinking Water Demands based on Indira Gandhi Main Canal (IGMC) for PHED, Rajasthan

Client	Public Health Engineering Department, Rajasthan
Project Cost	INR 311.64 Crores
Status	Completed
Salient Features	Major Units project comprises of ✓ Raw Water Pump House with Vertical Turbine Pumps at Head Works(HW)-1,2 & 3 at Nachana, Ajasar & Biliya respectively as under: a. HW-1: 5 nos.(3W+2S), 2728.80 m³/hr @84m head (850 kW motor rating) b. HW-2: 5 nos.(3W+2S), 2728.80 m³/hr @84m head (850 kW motor rating) c. HW-3: 2 nos.(1W+1S), 5655.60 m³/hr @34m head (425 kW motor rating) ✓ 119 MLD capacity Water Treatment Plant at Biliya, 3.1 MLD capacity Water Treatment Plant at Ajasar & 3.2 MLD capacity Water Treatment Plant at Nachana Based on conventional water treatment process: Clariflocculator + Rapid Gravity sand filter ✓ PLC/SCADA based control for all Head Works & Water Treatment Plants ✓ 33 kV Switch yard with HV & MV power distribution at HW-1, 2 & 3.
Services Provided	• Preparation of basic engineering package comprising of process & hydraulic design for treatment plants • preparation of G.A. Drawings and detailed engineering for Piping, Mechanical, Electrical & Instrumentation with PLC based Automation Works

545 MLD Water Supply Scheme
NC-32 from Dhanki to Ratanpar

Client	Gujarat Water Infrastructure Limited, Gandhinagar
Project Cost	INR 246.07 Crores
Status	Completed
Salient Features	• Major Project Component include: ✓ Pump House with, a. Vertical Turbine Pump (Main pump), 8 nos. (6W+2S), 3800 m³/hr @83 m head (6.6KV, 1200 kW motor rating. b. Submersible Pump (Trimmer pump), 2 nos. (1W+1S), 1900 m³/hr @83 m head (6.6KV, 600 kW motor rating) ✓ PLC/SCADA based control system ✓ 6.6KV HV & MV power distribution
Services Provided	• Preparation of Design Philosophy / Conceptual Design Report for Electrical, Instrumentation & Automation works • Detailed engineering for Electrical & Instrumentation with PLC based Automation Works • Technical specifications and Evaluation of vendor offers / drawings

553 MLD Water Supply Scheme
NC-26 from Dhanki to Navada

Client	Gujarat Water Infrastructure Limited, Gandhinagar
Project Cost	INR 267.21 Crores
Status	Completed
Salient Features	• Major Project Component include: ✓ Pump House with Submerged Centrifugal Pump, 11 nos. (8W+3S), 2880 m³/hr @69 m head (6.6KV, 700 kW motor rating) at Dhanki ✓ PLC/SCADA based control system ✓ 66 kV Switch yard with 6.6KV HV & MV power distribution
Services Provided	• Preparation of Design Philosophy / Conceptual Design Report for Electrical, Instrumentation & Automation works • Detailed engineering for Electrical & Instrumentation with PLC based Automation Works • Technical specifications and Evaluation of vendor offers / drawings

AUTOMATION & CONTROL BASED ON PLC WITH SCADA
6 NOS. STP AND 23 NOS. PUMPING STATIONS

Client	Surat Municipal Corporation, Surat, Gujarat
Project Cost	INR 306.34 Million
Scheme	JnNURM
Status	Completed
Salient Features	• To implement SCADA System for monitoring along with latest Instrumentation and Automation with PLC based controls for existing 23 nos. Sewage Pumping Stations and 6 nos. Sewage Treatment Plants with emphasis on: ✓ Quality treatment deploying latest technologies ✓ Improve process / equipment efficiency and reliability ✓ Adopting measures for lowering the cost of treatment and maintenance • The 23 nos. pumping stations and 6 nos. treatment plants forming part of sewerage system for Old City of Surat were proposed to be provided with seamless connectivity over dedicated communication network and with facility to monitor and store data for all these plants at Central Control Room of SMC and Zonal Data to be monitored at respective Zonal Treatment Plant.
Services Provided	• Preparation of Detailed Project Report (DPR) • Conceptualize, prepare Detailed Design and BOM for the proposes automation and control system • Prepare Bid Documents • Evaluation of Bid Documents • Routine Site Visit / Assistance to SMC during execution of Work, as required by client

WATER AUDIT
KALOL, SANTRAMPUR, MORBI, PALITANA, NAVSARI, BARDOLI

Client	CEPT University, Ahmedabad, Gujarat
Project Cost	INR 2.59 Million
Scheme	Bill and Melinda Gates Foundation
Status	Completed
Salient Features	• Water audit carried out for the cities of Kalol, Santrampur, Morbi, Palitana, Nasvsari and Bardoli • Flow measurement carried out using Portable Flowmeter for pipeline & water meters for household connection • Kalol City Water Supply-17.26 MLD, Population-1,50,000 (2010 Census) • Santrampur Town Water Supply-2.27 MLD, Population-19,468 (2011 Census) • Morbi City Water Supply-35.37 MLD, Population-1,94,129 (2011 Census) • Palitana City Water Supply-19.37 MLD, Population-63,540 (2011 Census) • Navsari City Water Supply-43.58 MLD, Population-1,60,100 (2011 Census) • Bardoli City Water Supply-20.25 MLD, Population-60,824 (2011 Census)
Services Provided	• Site Survey – Understanding of water supply system • Household Survey • Quantity Measurement ✓ Water Produced at Source ✓ Estimating Water Supply per Day ✓ Measurement of Water Supply from Treated Water Mains ✓ Estimating Treated Water Conveyance Losses ✓ Measurement of Water Supply received at WDS ✓ Measurement of Water Supplied from WDS ✓ Estimating Losses at WDS ✓ Measurement of Consumption (Household) with Water Meter ✓ Analysis of Data and Computation of NRW