

IREC

OUR ABILITY YOUR SOLUTION

Infra Research Engineering & Consulting

An Integrated Engineering & Infrastructure Consultancy

11+ Years of Innovation, Engineering & Client Trust

SECTORS

- Railways
- Highways/ Expressways
- Tunnels/ Bridges/ Structures
- Water & Irrigation
- Environment & Natural Resources
- Infrastructure

CORE CAPABILITIES / AREAS OF INTEREST

- Engineering & Design
- Geospatial & GIS
- Geotechnical & Geophysical
- Environment/ Forest/ Wildlife
- Hydrology
- PMC

IREC - AT A GLANCE

An integrated engineering & infrastructure consultancy

IREC (Infra Research Engineering & Consulting), established in **2015**, is an Integrated Engineering & Infrastructure Consultancy with **11+ years** of experience across major infrastructure projects in India.

IREC has undertaken assignments associated with **Indian Railways, RVNL, IRCON, IIT Kanpur** and other **IIT consortiums, cGanga**, the **National Institute of Hydrology** and **Government Departments**, building experience across diverse and technically demanding infrastructure requirements.

> Our multidisciplinary approach combines engineering expertise, field experience, data and specialist capabilities to develop practical, reliable solutions tailored to each project.



CAPABILITIES | **RELIABILITY** | **RESPONSIVENESS** | **INTEGRITY**









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VISION & MISSION

IREC
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VISION

To be a trusted engineering and infrastructure consultancy, recognized for delivering dependable solutions that contribute to sustainable infrastructure development.

MISSION

To deliver practical, high-quality engineering solutions by combining technical expertise, technology and innovation—while remaining responsive to client requirements and committed to sustainable outcomes.



CAPABILITIES | RELIABILITY | RESPONSIVENESS | INTEGRITY

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TECHNICAL FOUNDATION

Strong In-house Capabilities. Robust Institutional Strength.



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GEOTECHNICAL & ENVIRONMENTAL LABORATORY



In-house facilities/ collaborations supporting material testing, environmental assessment and field-to-report technical workflows.

POOL OF EXPERTS



Access to experienced professionals, domain specialists, scientists and academic expertise across multidisciplinary requirements.

ADVANCED EQUIPMENT & INSTRUMENTS



Modern field and surveying equipment enabling accurate data acquisition, investigation and technical assessment.

INSTITUTIONAL & TECHNICAL PARTNERSHIPS



Institutional and technical collaborations that strengthen specialist expertise, knowledge access and project delivery.

FIELD CAPABILITY | **TECHNICAL EXPERTISE** | **TECHNOLOGY** | **COLLABORATION**

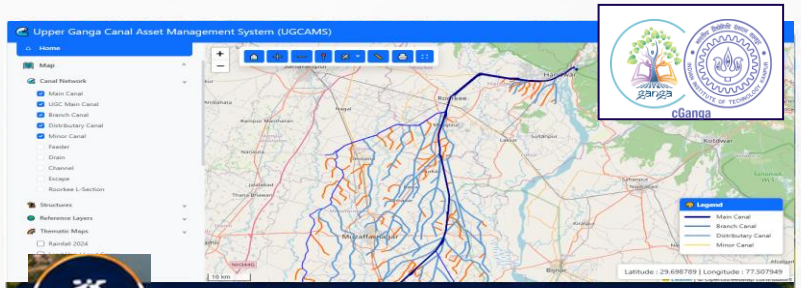
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SIGNATURE PROJECTS

Delivering Excellence Across Roads, Railways, Bridges & Tunnels



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NAMAMI GANGE PROJECT, UTTARAKHAND & UTTAR PRADESH

- Digital Database Development of 25,000 km of Canal Network & Drainage Systems for cGanga (Consortium of 7 IITs and NIH, Roorkee)



1.2 KM LONG ALMORA URBAN TUNNEL, UTTARAKHAND

- Preliminary Design of Tunnel connecting Dharanaula Road to Lower Mall Road, Almora



LANKA–SILCHAR NEW BG RAIL LINE, ASSAM

- EIA for 147 Km long New BG Rail line(Greenfield Project)



6 KM LONG GANGA RAILWAY BRIDGE, PATNA

- Tender Document Preparation for 6 Km long Ganga Railway Bridge on PPP Basis



100MW SOLAR POWER PLANT PROJECT AFRICA

- Feasibility study for solar power plant in Zimbabwe



NH-2 WIDENING TO 6-LANES, UTTAR PRADESH

- Detailed Design for 6-lane Widening from 4-lane (192 Km) Varanasi-Aurangabad

1. CLIENT FOCUSED
Committed to client satisfaction through transparent communication & reliable support

2. TIMELY DELIVERY
Strong planning & execution framework ensuring on-time project completion

3. POOL OF EXPERTS
Experienced professionals with deep domain knowledge & proven track record

4. INSTITUTIONAL TRUST
Trusted by leading government organizations & railways

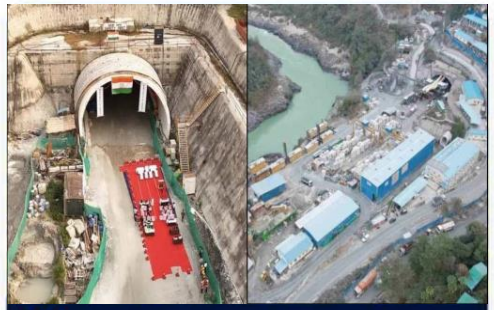
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RAILWAYS & TRANSPORTATION



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SELECT RAILWAY CREDENTIALS



RISHIKESH – KARNPRAYAG NEW BG RAIL LINE
128 Km long comprises of multiple tunnels & bridges/viaduct Greenfield New BG rail



4 NEW BG RAIL SECTIONS
Baramulla-Uri(50 Km) | Sopore-Kupwara(33.70 Km) | Anantnag-Pahalgam(77.7 Km) | Avantipore-Shopian(27.6 Km)
FLS study of 189 Km long new Rail Line Project in Jammu & Kashmir



BALUKPONG-TENGA-TAWANG RAIL LINE
192 Km long New BG Rail in the State of Arunachal Pradesh



SARDEGA-PATHHALGAON RAIL PROJECT ODISHA
128 Km New BG Rail



SWAMIHALLI-RAYADURG NEW BG RAIL
70 Km long New BG Rail in the state of Karnataka

ULTIMATE CLIENTS

रेल विकास निगम लिमिटेड
Rail Vikas Nigam Limited

INDIAN RAILWAYS
NORTHERN RAILWAY

NORTHEAST FRONTIER RAILWAY
1958

South Western Railway

CAPABILITIES / AREA OF INTEREST

- Reconnaissance & detailed topographic survey
- GIS mapping, Data analysis & reporting
- Geotechnical & geophysical investigations
- Alignment planning & route optimization
- DGPS & Total station survey
- DPR preparation & engineering support
- Environmental impact assessment (EIA)
- Stakeholder consultation & coordination
- Construction monitoring & quality assurance
- Project management & advisory services

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HIGHWAYS & EXPRESSWAYS



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SELECT HIGHWAYS & EXPRESSWAYS CREDENTIALS



CONSTRUCTION SUPERVISION OF 11 ROAD PACKAGES IN THE STATE OF ASSAM, 2 LANE 300 KM FUNDED BY ADB

2-Lane, 300 km Road Projects for PWD, Govt. of Assam, under Dainichi Consultants Inc.; Japan



NH-2 WIDENING TO 6-LANE, UTTAR PRADESH

192 Km-long widening from 4 lanes to 6 lanes, Varanasi-Aurangabad, Uttar Pradesh



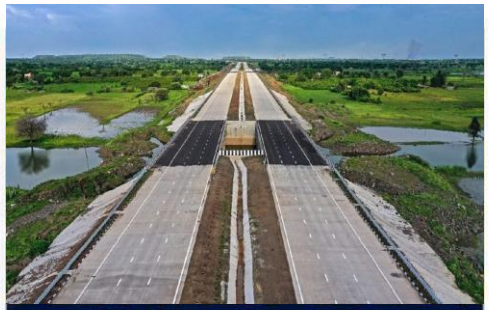
1.2 KM LONG ALMORA URBAN TUNNEL

Preliminary design of tunnel, Dharnaula Road-Lower Mall Road, Almora, Uttarakhand



APPROACH ROAD FOR RISHIKESH - KARNPRAYAG BG RAIL PROJECT

126 Km New BG Rail project, Uttarakhand



RAMTEK-GONDIA/BHIVAPUR – BHANDRA/DAULTAVAD–YELVA STATE HIGHWAY

Three State Highways in the state of Maharashtra

ULTIMATE CLIENTS

DAINICHI CONSULTANT INC.

SomaROADIS

PUBLIC WORKS DEPARTMENT UTTARAKHAND

रेल विकास निगम लिमिटेड Rail Vikas Nigam Limited

भा रा रा प्रा NHAI

CAPABILITIES / AREA OF INTEREST

- Detailed Design & Engineering
- Highways & Expressway Planning
- Topographic & Route Survey
- Geotechnical Investigations
- Tunnel Design & Engineering
- Highway Alignment & Route Finalization
- DPR Preparation & Engineering Support
- Bridge Design & Tender Support
- GIS Mapping, Data Analysis & Reporting
- Environmental Impact Assessment (EIA)
- Construction Monitoring & Quality Assurance
- Project Management & Advisory Services

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BRIDGES / TUNNELS / STRUCTURES



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SELECT BRIDGES/TUNNELS/STRUCTURES CREDENTIALS



NH-2 WIDENING TO 6 LANE , UTTAR PRADESH
192 Km long 6 lane widening from 4 lane, Varanasi-Aurangabad, Uttar Pradesh



1.2 KM LONG ALMORA URBAN TUNNEL
Preliminary design of tunnel, dharnaula road-Lower Mall road, Almora, Uttarakhand



6 KM LONG GANGA RAILWAY BRIDGE, PATNA
Tender document preparation for 6 km-long Ganga Railway Bridge on PPP basis.



MINICOY & AGATTI AIRPORT STUDY, LAKSHADWEEP ISLANDS
Traffic, EIA and Coral Study for the Airports Authority of India

ULTIMATE CLIENTS

Soma ROADIS

भा रा रा प्रा NHAI

PUBLIC WORKS DEPARTMENT UTTARAKHAND

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IL&FS CONSULTING ENGINEERS

CAPABILITIES / AREA OF INTEREST

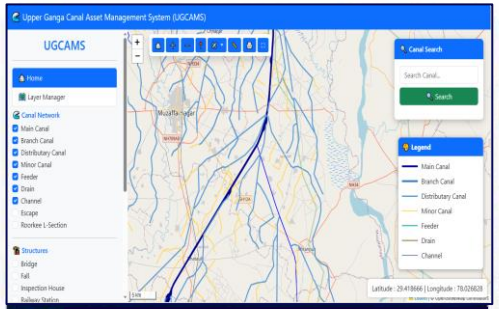
- Tunnel Design & Engineering
- Structural Design & Analysis
- Bridge Design & Engineering
- Geotechnical Investigations
- 3D Modeling & BIM (Structures)
- Foundation Design
- DPR Preparation & Engineering Support
- Construction Methodology & Planning
- Quantity Estimation & BOQ
- Material Testing & Quality Assurance
- Construction Monitoring & Safety
- Project Management & Advisory Services

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GIS / REMOTE SENSING

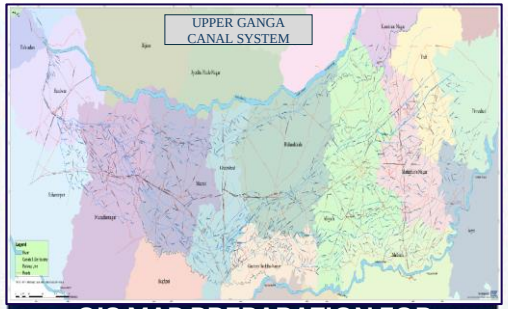
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SELECT GIS / REMOTE SENSING CREDENTIALS



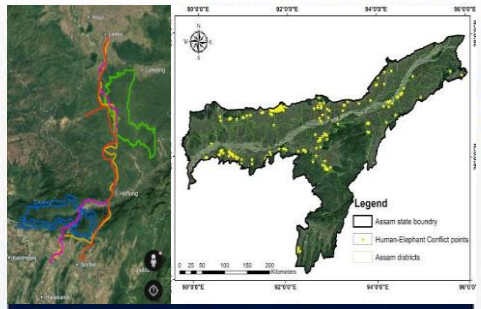
UPPER GANGA CANAL ASSET MANAGEMENT SYSTEM

Comprehensive Geoportal for UGC for effective asset management, monitoring & information access



GIS MAP PREPARATION FOR GANGA ORGANIZATION, ROORKEE

Detailed map of UGC for the Irrigation Department, Roorkee



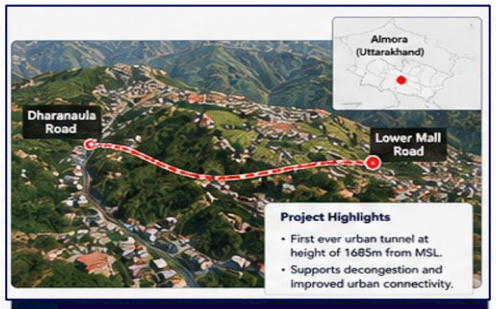
LANK–SILCHAR RAILWAY ALIGNMENT, ASSAM

Creation of GIS layers for the proposed alignment to assess site selection and environmental impacts



RISHIKESH-KARNPRAYAG RAIL PROJECT, UTTARAKHAND

Military Siding Tunnel land assessment & mapping using GIS & Remote Sensing techniques



ALMORA URBAN TUNNEL, UTTARAKHAND

Preliminary design support for an urban tunnel in Almora, Uttarakhand, using GIS software for accurate data analysis.

ULTIMATE CLIENTS

cGanga

NORTHEAST FRONTIER RAILWAY 1958

रेल विकास निगम लिमिटेड
Rail Vikas Nigam Limited

CAPABILITIES / AREA OF INTEREST

- GIS Mapping & Spatial Analysis
- Remote Sensing & Image Processing
- Digital Terrain Model (DTM/DEM)
- Land Use / Land Cover Mapping
- Hydrological & Drainage Modeling
- Corridor & Alignment Mapping
- Data Collection, Integration & Management
- Change Detection & Monitoring
- 3D Visualization & Web GIS
- GPS Survey & Geospatial Data Generation
- Environmental Mapping & Impact Assessment
- Project Management & Advisory Services

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ENVIRONMENT & NATURAL RESOURCES

EIA | FOREST CLEARANCE | WILDLIFE | BIODIVERSITY | COASTAL & CORAL



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BHANUPALI-BILASPUR-BARNALA BG RAILWAY, PUNJAB/HP
Alignment study, DPR & EIA in the state of Punjab and Himachal Pradesh



SIVOK-RANGPO BG RAIL, WB & SIKKIM
Design of T7-T8 & T11-T14 Tunnel project



RISHIKESH-KARNPRAYAG RAIL PROJECT, UTTARAKHAND
Forest Clearance & EIA



SILAPATTHAR-BAME-ALONG NEW BG RAIL, AP
DPR & EIA Study for 180 Km long rail line in the state of Arunachal Pradesh



MINICOY & AGATTI AIRPORT, LAKSHADWEEP ISLANDS
DPR, Environment & Coral study

ULTIMATE CLIENTS

INDIAN RAILWAYS NORTHERN RAILWAY

NORTHEAST FRONTIER RAILWAY 1958

रेल विकास निगम लिमिटेड
Rail Vikas Nigam Limited

IL&FS CONSULTING ENGINEERS

CAPABILITIES / AREA OF INTEREST

- Environmental Impact Assessment (EIA)
- Environment Management Plan (EMP)
- Forest Clearance & NPV Compliance
- Wildlife Studies & Wildlife Clearance
- Biodiversity Assessment
- Social Impact Assessment (SIA) & R&R
- Ecological Surveys (Flora & Fauna)
- GIS based Environmental Mapping
- Land Use / Land Cover Mapping
- Environmental Monitoring & Auditing
- Coastal & Coral Environment Studies
- Regulatory Liaison & Compliance Support

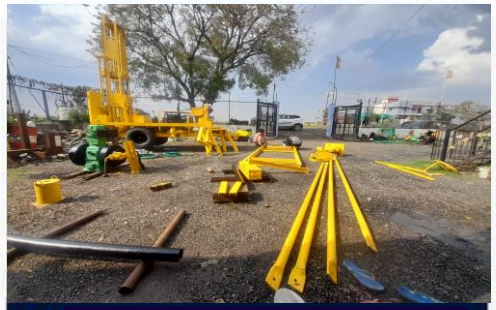
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OTHER SECTORS CREDENTIALS



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SELECT OTHER SECTORS CREDENTIALS



SARDEGA-PATHHALGAON, ODISHA
NX Size core drilling for FLS



100 MW SOLAR PV POWER PLANT, AFRICA
Feasibility study for a solar power plant in Zimbabwe



UPCL TRANSMISSION LINE, UTTARAKHAND
8.2 km, 33 kV transmission line: Gullar–Shivpuri



UTTARAKHAND TOURISM
Forest clearance support for the development of an International Convention Centre and Wellness City



PASULOK BARRAGE, RISHIKESH
Hydrological Studies

ULTIMATE CLIENTS

Introsoft Solutions An ISO 9001:2008 Certified company

African Engineering Services

UPCL Uttarakhand Power Corporation Ltd

Uttarakhand Tourism

CAPABILITIES / AREA OF INTEREST

- Feasibility Studies & DPR Preparation
- Topographic, Engineering & Utility Survey
- Geological & Geophysical Investigations
- Hydrological & Water Resource Studies
- Environmental & Social Impact Assessment
- Master Planning & Infrastructure Design
- Resource Estimation & Site Evaluation
- GIS Mapping & Spatial Analysis
- Cost Estimation, BOQ & Quantity Survey
- Construction Monitoring & Supervision
- 3D Modeling, Visualization & Reporting
- Project Management & Advisory Services

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A NOTE FROM IREC

IREC brings together multidisciplinary engineering, environmental, and infrastructure expertise, supported by field experience, technical capabilities, and a network of professionals and institutional associations.

Our demonstrated project experience reflects assignments undertaken by IREC, while the capabilities and areas of interest presented in this profile represent the wider range of services we are positioned to undertake.

We look forward to creating value through technical excellence, responsive delivery and long-term professional partnerships.

THANK YOU

Infra Research Engineering & Consulting Pvt. Ltd.

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We look forward to working with you.

Experience that we have built.

Capabilities that we bring.

Partnerships that we seek.