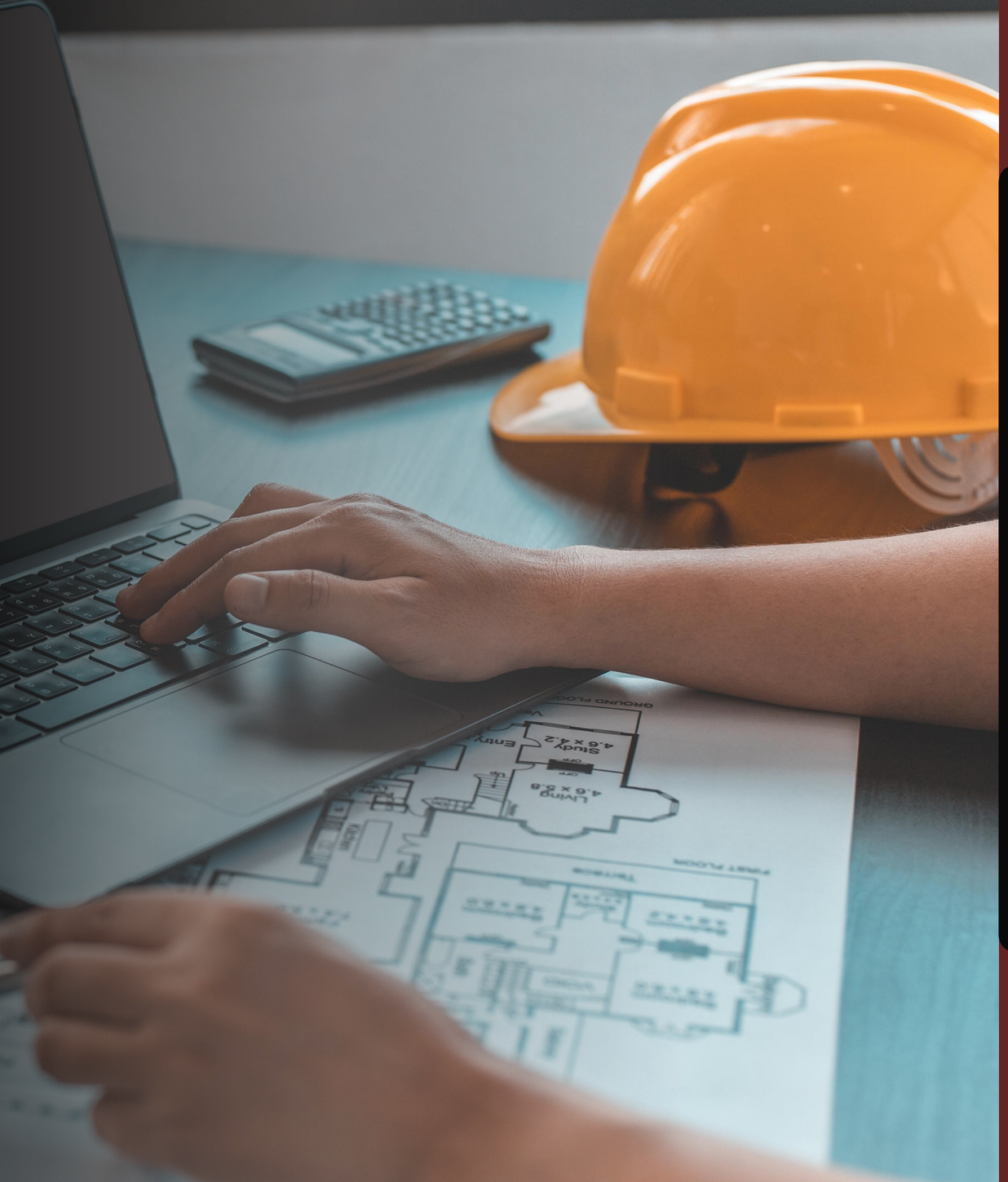
Integrated Consulting Services Pvt. Ltd.

19-G1, Johar Town, Lahore, Pakistan
Tel: (92)-42-35315660, 35315661
Email - info@ics.com.pk



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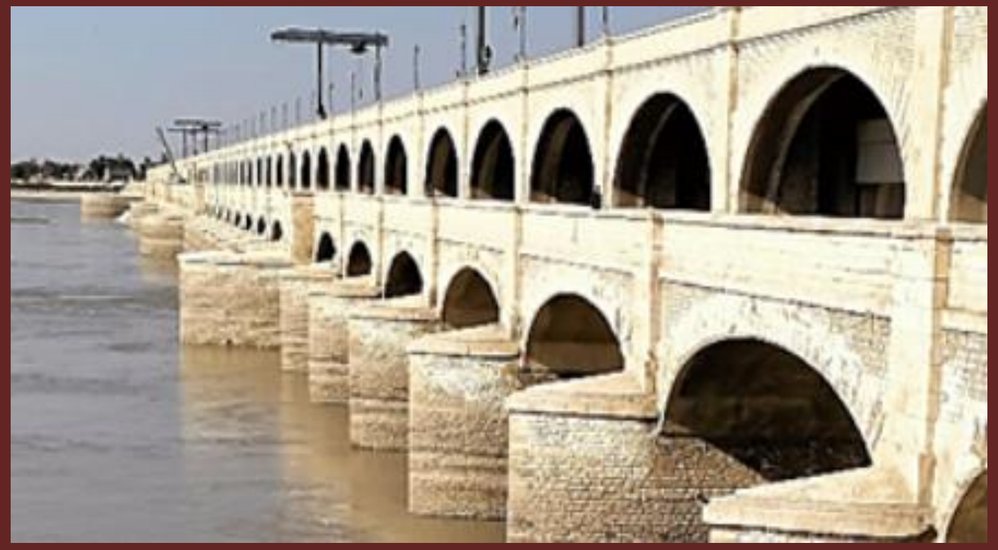


Introduction

Integrated Consulting Services (Pvt.) Ltd. (ICS) is A private consultancy firm established in July 2004, providing comprehensive engineering consultancy services.

ICS is a Sister Concern firm of, M/s Kashif Aslam & Associates (KAA), as two Directors of ICS and KAA are common. KAA specializes in Architectural and Engineering development of infrastructure works. The two firms complement each other's expertise.

This profile includes experience details of both ICS and KAA.

Services Offered - Water Resources

- Project planning
- Planning and supervision of topographic and bathymetric surveys
- Planning and supervision of Geotechnical Investigations
- GIS based studies
- Climate Change Risk Assessment Studies
- Design of project components
- Quantity estimation and bidding (bid preparation, contract preparation, bid evaluation and award)
- Construction supervision
- Physical and Mathematical Modelling
- Software Development

Services Offered - Architectural & Building Design

- Master Planning
- Architectural Designs including Interior Design
  - Engineering Design
    - Structural Design
    - Mechanical, Electrical, Plumbing, Fire fighting
    - Landscape Design
- Project Management
  - Project Planning
  - Project Coordination
  - Contract Management
  - Construction supervision

Muhammad Aslam Rasheed

Chief Executive of ICS, holds an MSc in Civil Engineering (Hydraulics) from Utah State University, USA, and brings vast international experience in water resources development, hydrologic and hydraulic design, and project planning across more than 150 projects worldwide.

Has been providing services to ADB, FAO, World Bank

Muhammad Uzair

Mr. Muhammad Uzair, Director of ICS, holds an MSc in Civil Engineering (Water Engineering and Management) and brings over 23 years of expertise in hydraulic and hydrological studies, water resources planning, infrastructure development, and mathematical and physical modeling for dams, barrages, and flood protection projects in Pakistan.

Also provides consultancy in individual capacity to ADB and FAO

Kashif Aslam

Mr. Kashif Aslam, Shareholder and Chief Architect, holds a Bachelor's degree in Architecture and brings over 30 years of international experience in architectural design, master planning, and contract management, having led the design and execution of more than 60 landmark projects across Pakistan, Saudi Arabia, UAE, Turkmenistan, and beyond.

Board of Directors

Donor Agencies

THE WORLD BANK

ADB ASIAN DEVELOPMENT BANK

USAID | PAKISTAN
FROM THE AMERICAN PEOPLE

JICA
Japan International Cooperation Agency

Consultants and Partners

SJ SURBANA JURONG

DMC LAHORE (PVT.) LIMITED
DEVELOPMENT & MANAGEMENT CONSULTANTS

rdc
PROGRESSIVE EXCELLENCE
ONE COMPANY | Infinite Solutions
SINCE 1977

LM Landell Mills

ARTELIA

ba berkeley

NESPAK

HPK Halcrow Pakistan (Pvt) Ltd

برقاب

Government Agencies and Departments

PAKISTAN AIR FORCE

WAPDA
Water and Power Development Authority

Irrigation Department

LILONGWE WATER BOARD

PIEDMC
PUNJAB INDUSTRIAL ESTATES DEVELOPMENT & MANAGEMENT COMPANY

وزارة الخارجية العمانية
Foreign Ministry of Oman

DHA LAHORE

DHA GUJRANWALA

AKRSP

Private Entities

PEPSICO

JDW
JDW Group

engro

HUBCO

MEZAN
Beverages Pvt. Ltd.

TOTAL | PARCO

USGROUP

LIBERTY BUILDERS
PROPERTY DEVELOPERS

SKB
ENGINEERING & CONSTRUCTION

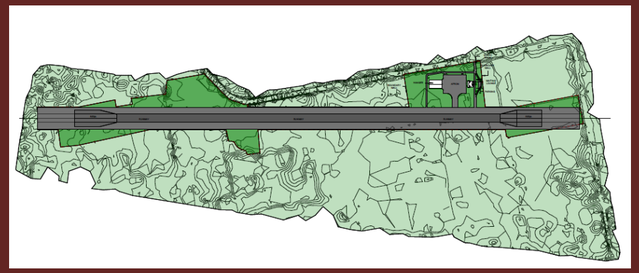
NFC

Notable Clients

ICS

Company Portfolio

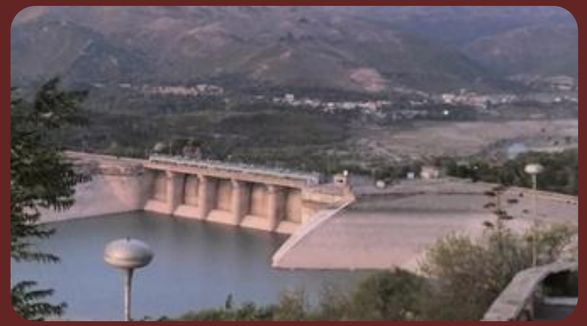
BIM and Other Modeling Capability



Airports and Air Bases

Buildings and Area Planning

Infrastructure Works



Dams, Hydropower and Barrages

Irrigation and Drainage

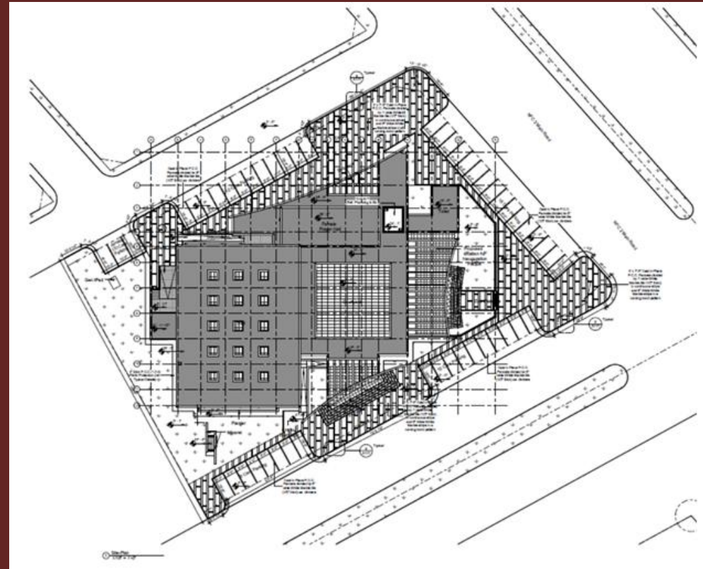
Others

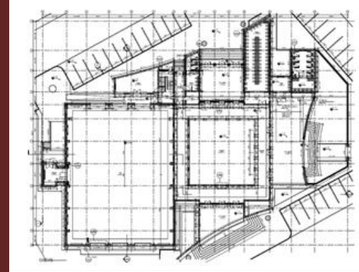
Service Segments

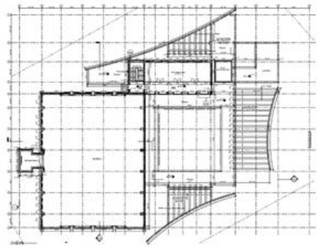
BIM and Other Modeling Capabilities

BIM - Sample Work

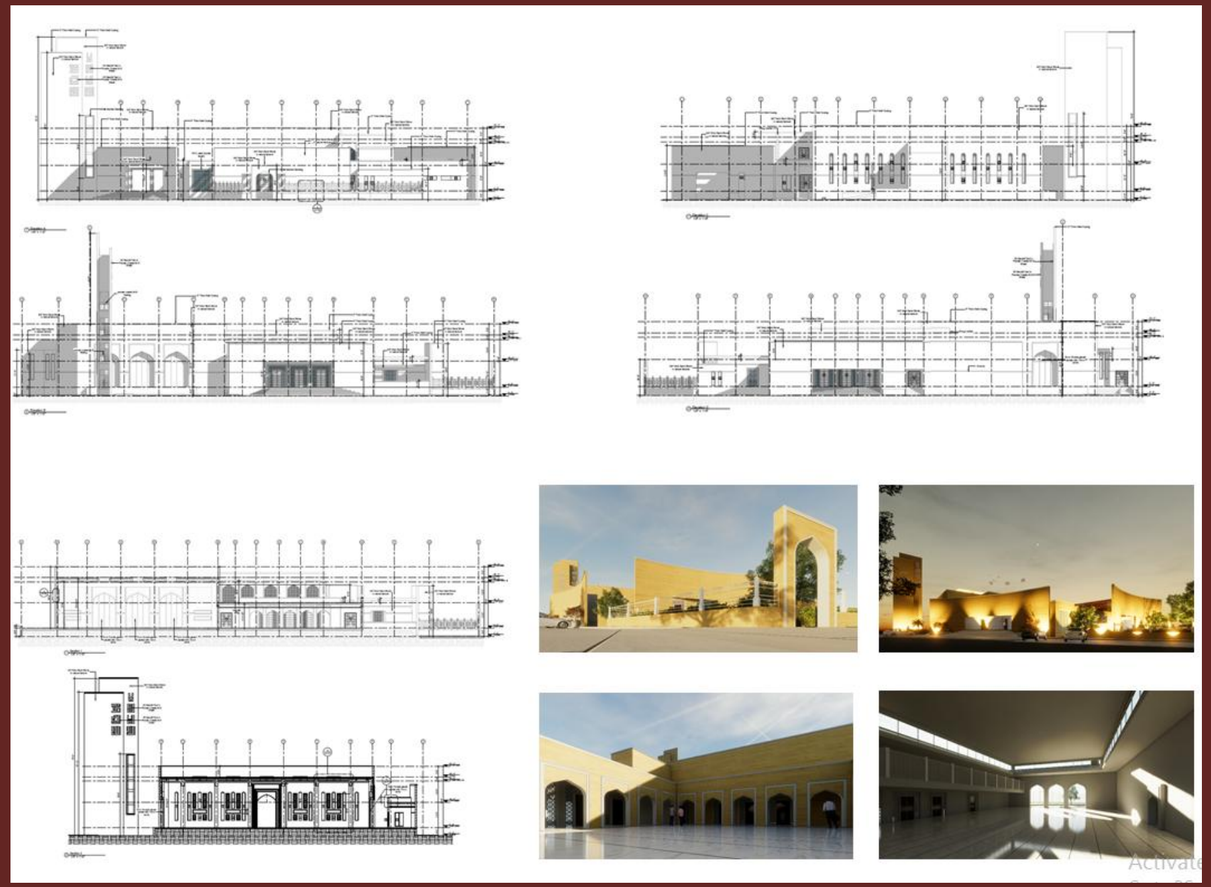
BIM - Sample Work

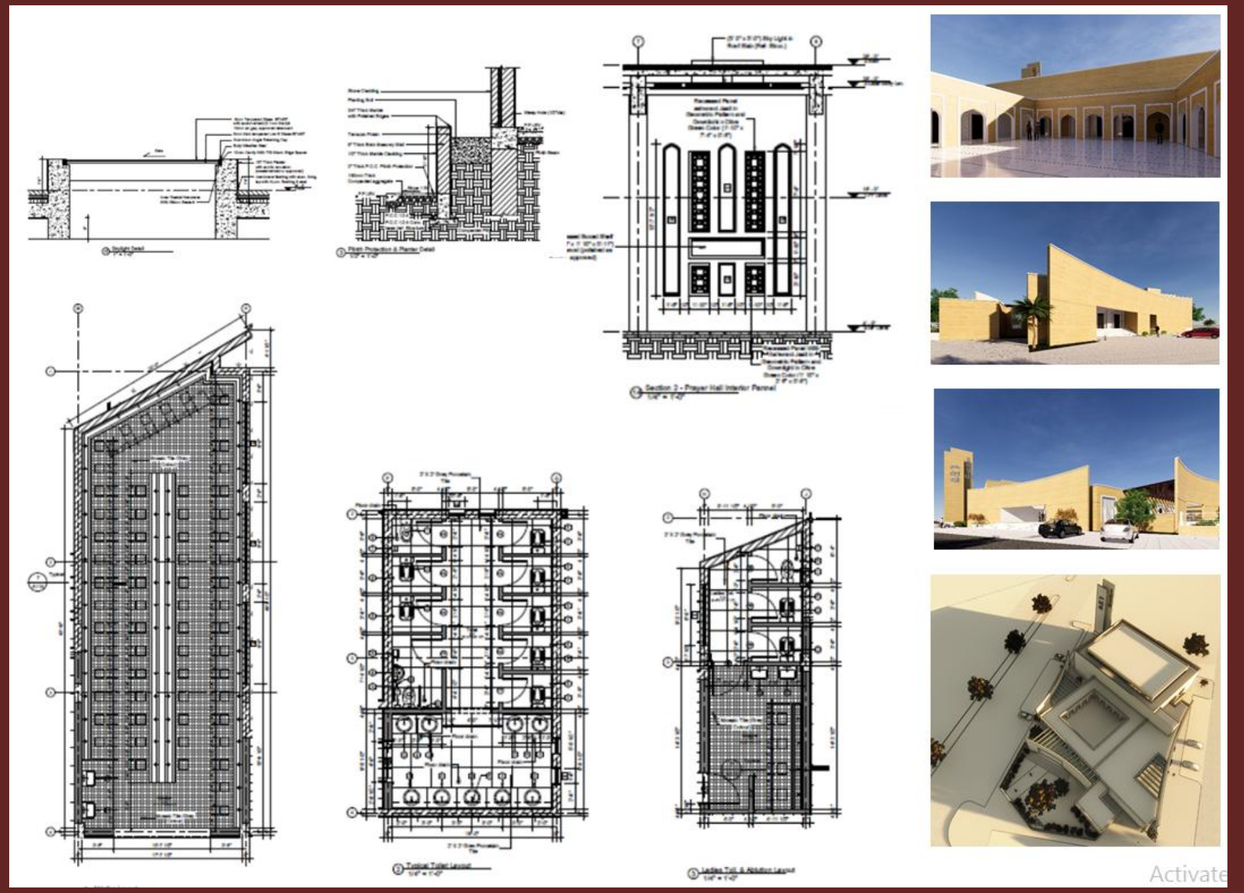




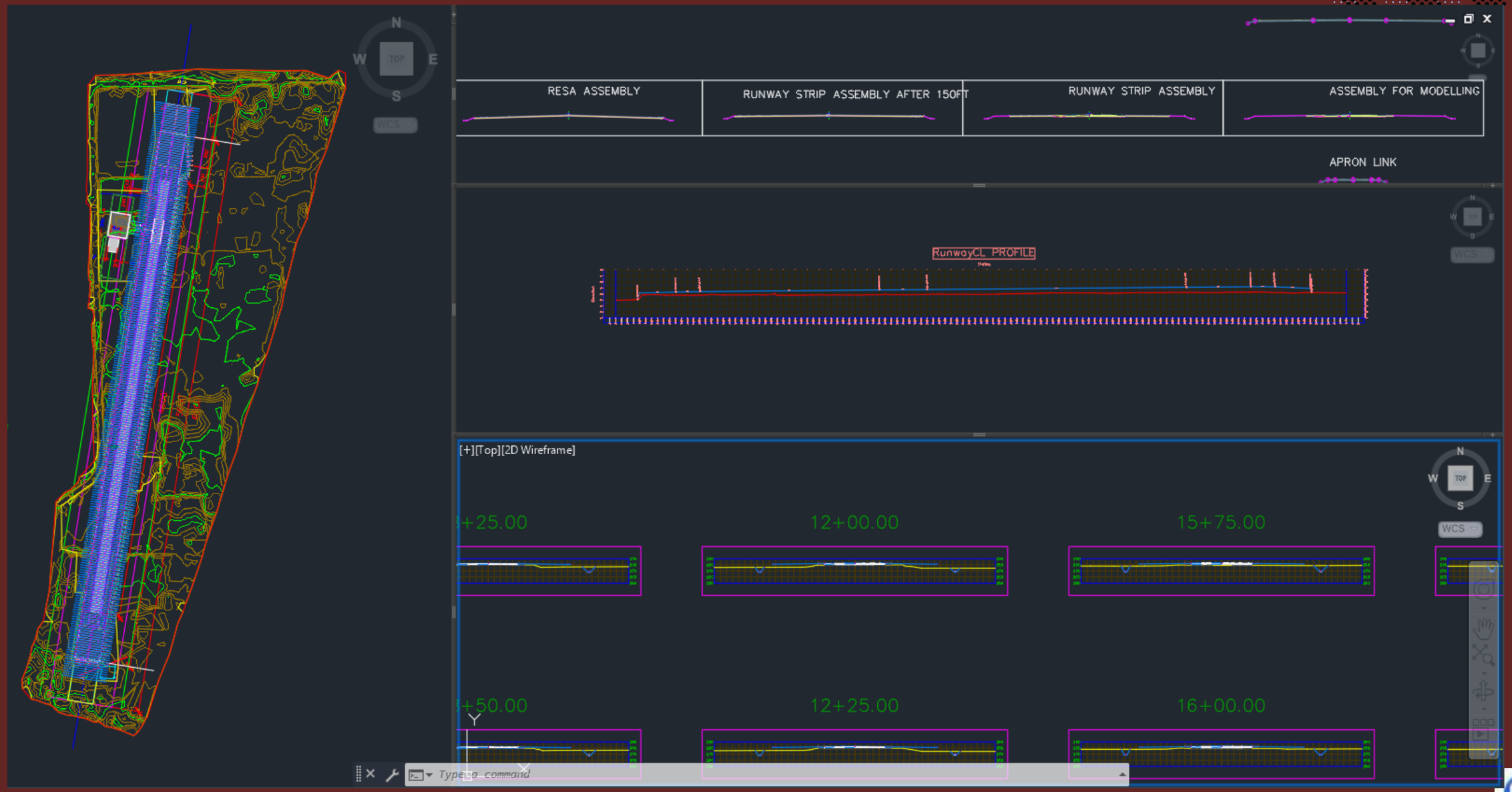


BIM - Sample Work

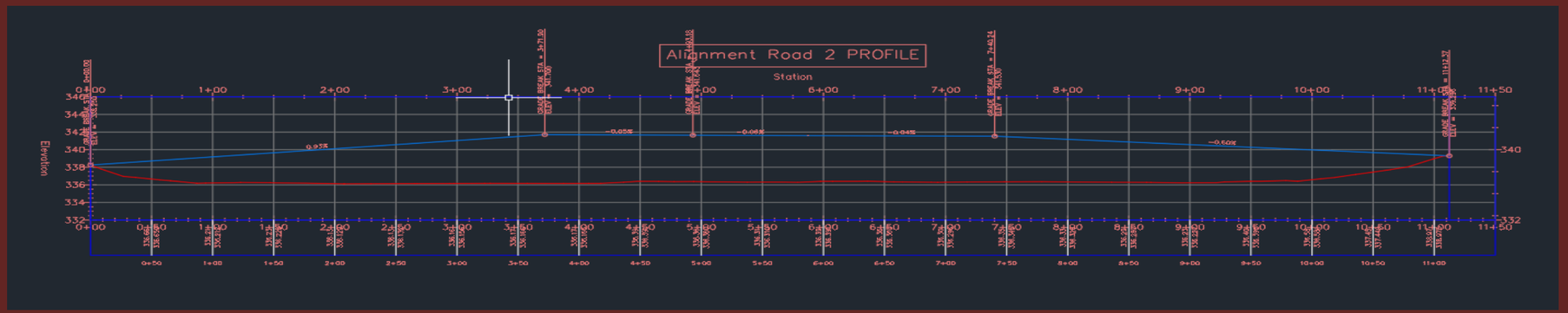




Autodesk Civil 3D – Sample Work

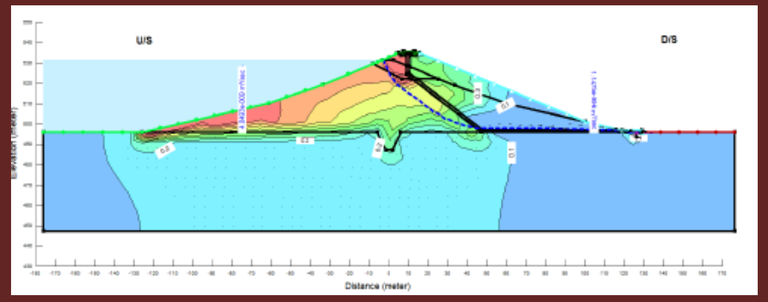


Autodesk Civil 3D – Sample Work

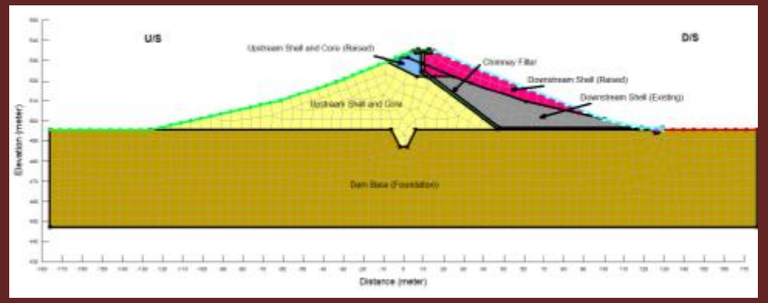


Mathematical Modelling

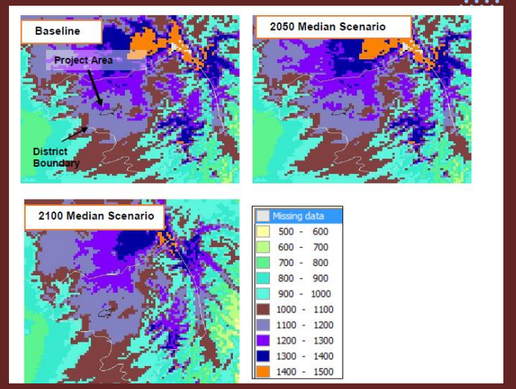
SEEPAGE ANALYSES



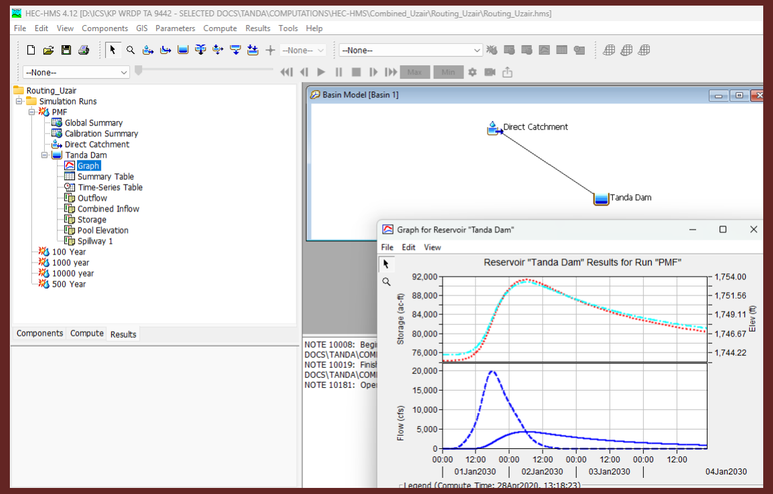
SLOPE STABILITY ANALYSES



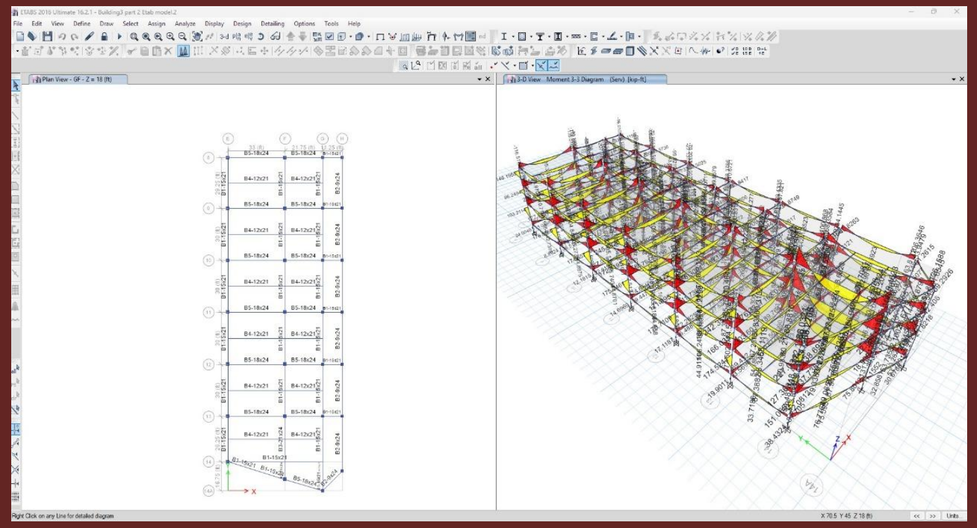
Climate Change



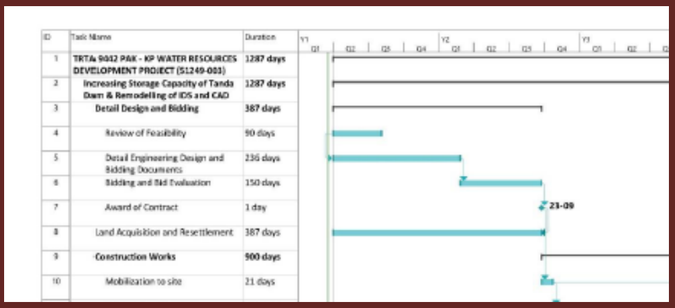
HEC HMS – HYDROLOGICAL MODELLING



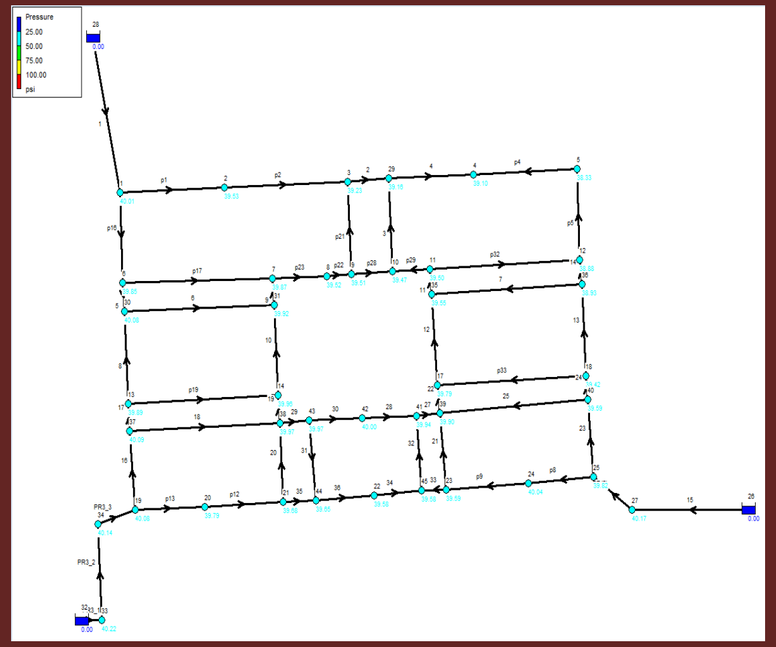
STRUCTURAL DESIGN / ANALYSES



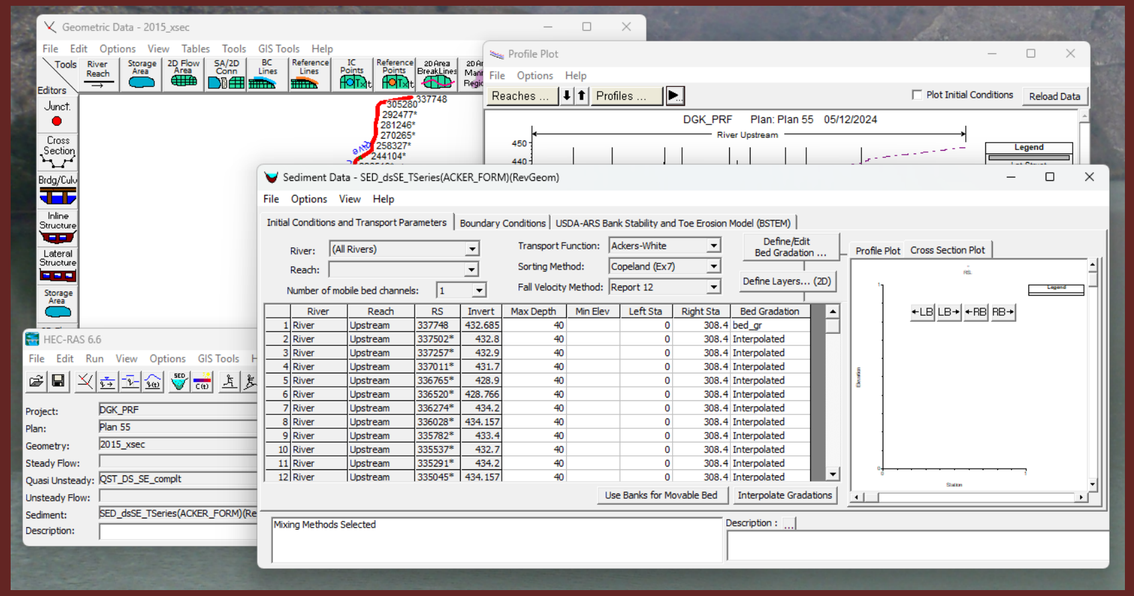
CONSTRUCTION PLANNING



EPA Net – Pressure Pipe Flow Analyses



HEC RAS – 1D/2D HYDRODYNAMIC MODELLING



FAARFIELD – RUNWAY PAVEMENT

Federal Aviation Administration FAARFIELD 2.1 Structure Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: JDW Runway

Structure: Runway

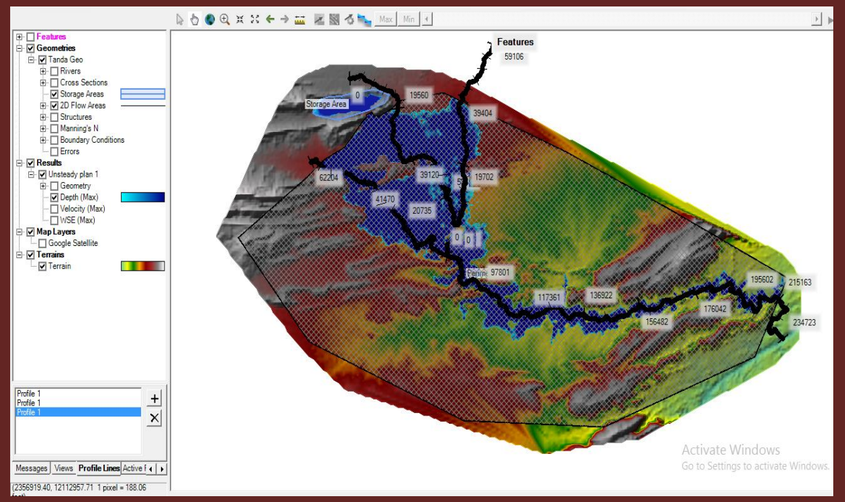
Analysis Type: HMA on Aggregate

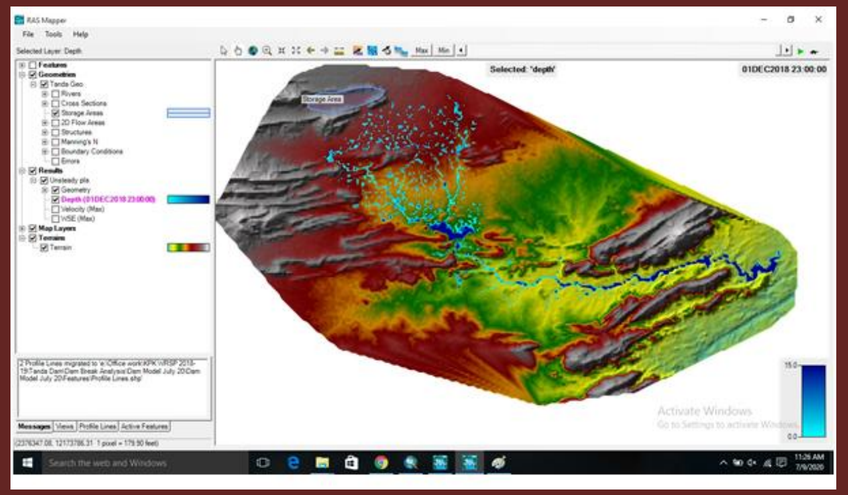
Last Run: Thickness Design 2025-11-12 11:25:31

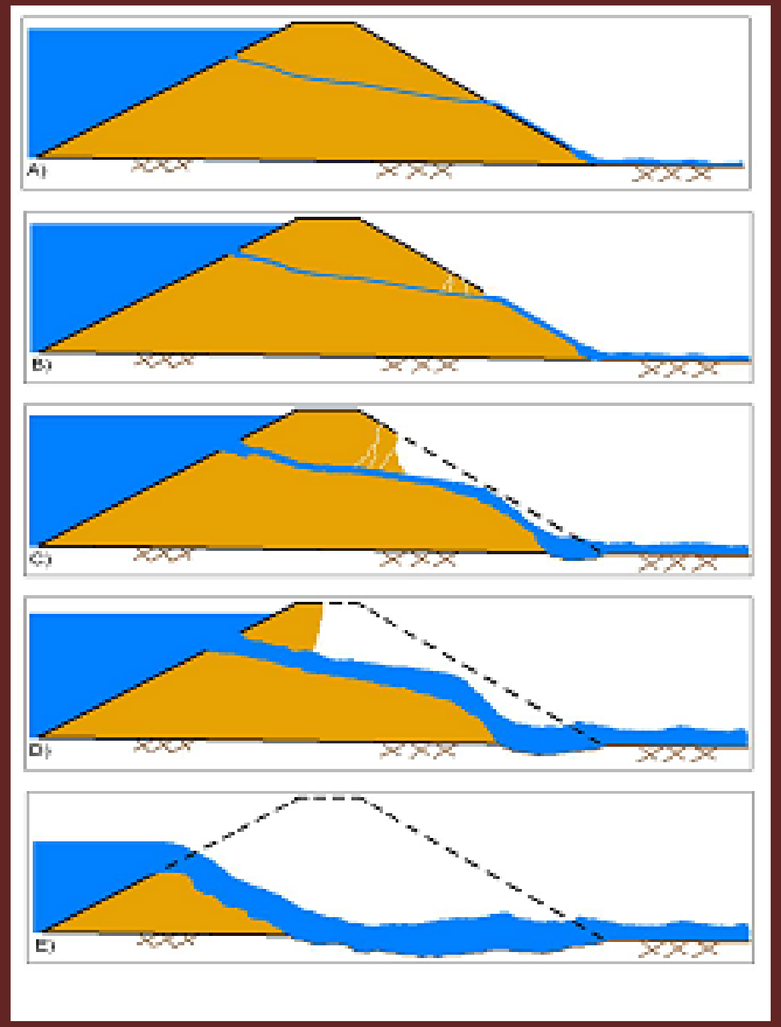
Design Life = 20 Years

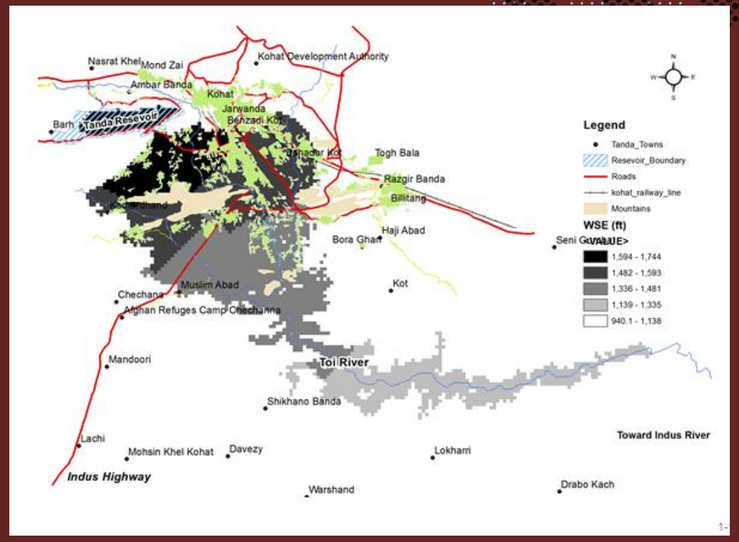
Total thickness to the top of the subgrade = 15.0in.

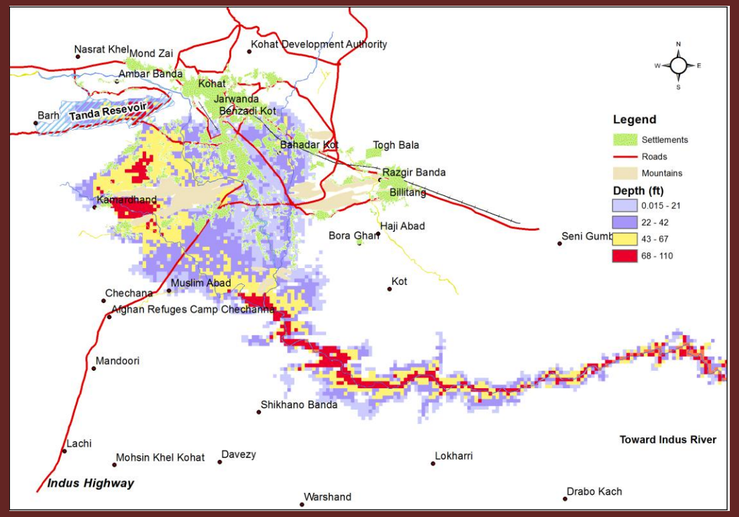
Dam Break Analysis – Sample Work





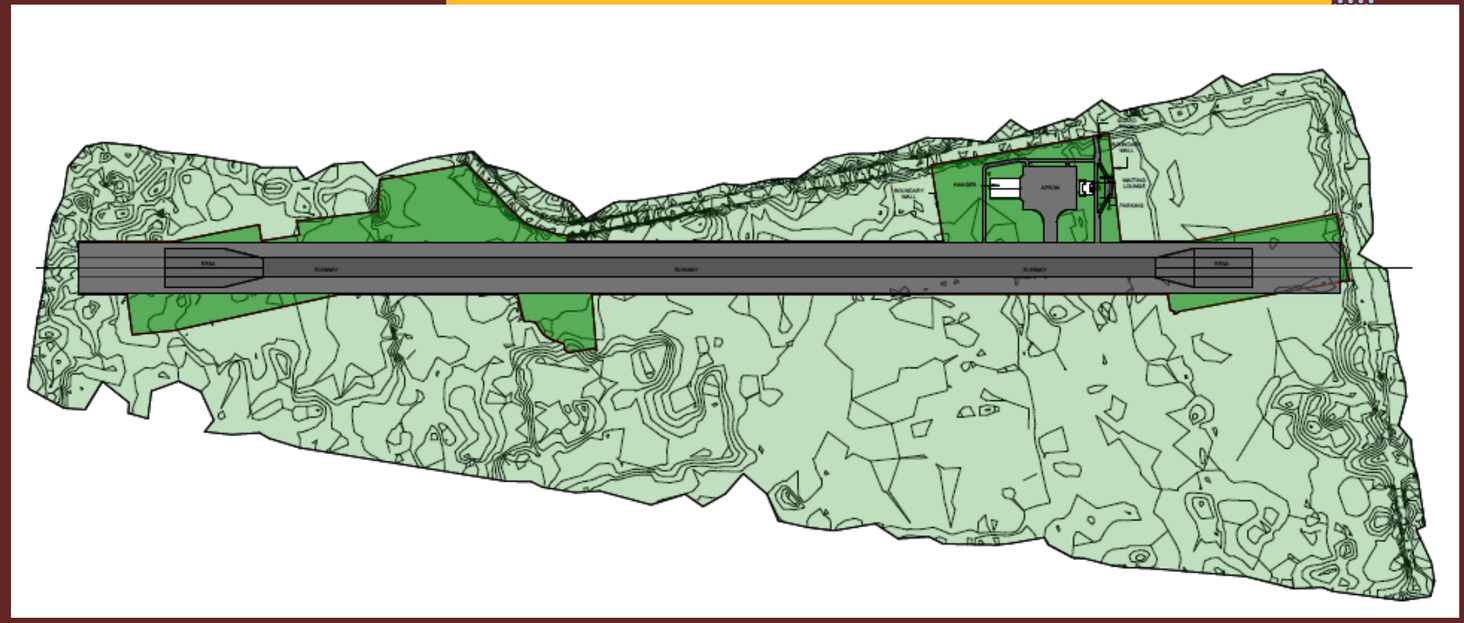






Airports and Air Bases

JDW Sugar Mills engaged services of the ICS to upgrade and redesign runway for Jamal Din Wali Sadiqaabad, Rahim Yar Khan. ICS responsibilities include Topographic survey, review of geotechnical investigations, geometrical and structural design of runways, taxiways, turnpads etc. In addition, design of water supply and drainage system for infrastructure, access roads and design of stormwater drainage system is also part of ICS responsibilities. It also included hanger, lounge area and other allied infrastructure.



Design of Runway, Hanger and Allied Infrastructure for Jamal Din Wali Sadiqabad, Rahim Yar Khan

Project Duration – 6 months (Jul 2025 – Dec 2025)

Project Duration - 6 Years (Sep 2015 - Dec 2021)

ICS in association with Kashif Aslam & Associates was responsile for the following: Greenfield - Master Planning, Building Design, Infrastructure Building Design, Landscape, Complete building engineering services, Generation Power Plant, Water Treatment Plant, Sewerage treatment Plant. In addition,

(i)Water Source Identification studies

(ii)Design of Water Supply System including treatment plant

(iii)Design of Sewerage System including waste stabilization ponds

(iv)Design of grey water supply system for irrigation water supply of Project Area.

(v)Design of Flood Protection System comprising flood bypass drains and embankments, which will divert flood waters away from the Project Area.

(vi)Design of Storm water drainage system

(vii)Assist and advise in design of roads, runways and other infrastructure as required.

Infrastructure Design Support Services at Bholari Air Base

Project Duration – 5 Years (Oct 2008 – Dec 2013)

ICS in association with Kashif Aslam & Associates was responsible for the following:

- Brownfield Master Planning
- Building Design
- Infrastructure Building Design
- Landscape
- Complete building engineering services

Infrastructure Design Services for Shahbaz Airbase Project

Project Duration – 2 Years 3 Months (Aug 2013 – Nov 2015)

ICS in association with Kashif Aslam & Associates was responsible for the following:

- Brownfield Master Planning
- Building Design
- Infrastructure Building Design
- Landscape
- Complete building engineering services

Infrastructure Design Services for Mushaf Airbase Project

Buildings and Area Planning

Project Duration - 6 Years (Mar 2011 - Mar 2017)

Client:
Nazaria e Pakistan Trust

Location:
Lahore, Pakistan

Project Cost:
4,365,384 USD

Covered Area
107,005 ft2

Status:
Completed

Services Provided:
Complete Design (Architecture, Structure, MEP, Interior, Landscape, etc.) & Project Supervision & Management

Aiwan-i-Quaid-e-Azam

Location:
Lahore, Pakistan
Project Cost:
93,000,000 USD
Covered Area
850,000 ft2
Status:
Concept Design Completed
Services Provided:
Complete Architecture Design
Structural Design
MEP Services
Top Supervision

Gulberg City Center

Project Duration - 9 Months (Dec 2021 - Sep 2022)

Client:
Punjab Industrial Estate Developments & Management Company

Location:
Multan Industrial estate

Project Cost:
11,012,163 USD

Covered Area
574,553 ft2

Status:
Completed

Services Provided:
Master Planning & Infrastructure Design

Multan Industrial Estate Development

Client:
DHA Gujranwala
Location:
Gujranwala, Pakistan.
Project Cost:
51.25 Billion PKR
Area
10,724,451 ft2
Status:
In Progress
Services Provided:
Complete Design (Master Planning, Infrastructure development design, Architecture, Structure, MEP, Interior, Landscape, etc.) and Project Supervision & Management

DHA Vantage Down Town, Gujranwala

Client:
DHA Gujranwala
Location:
Gujranwala, Pakistan.
Project Cost:
28 Billion PKR
Area
2,742,680 ft2
Status:
In Progress
Services Provided:
Complete Design (Architecture, Structure, MEP, Interior, Landscape, etc.) & Project Supervision & Management

DHA-Gujranwala, Sector-H

Client:
Liberty Builders
Location:
Lahore, Pakistan
Project Cost:
33,000,000 USD
Covered Area
439,000 ft2
Status:
Design/Construction phase
Services Provided:
Complete Architecture Design

Zee Avenue

Project Duration - 4 Months (May 2011 - Aug 2011)

Client:
Nazaria e Pakistan Trust

Location:
Lahore, Pakistan

Project Cost:
625,000 USD

Covered Area
107,000 ft2

Status:
Continued

Services Provided:
Complete Design (Architecture, Structure, MEP, Interior, Landscape, etc.) & Project Supervision & Management

Aiwan-i-Nazaria- i-Pakistan

Client:
Diran Guest House, Hotels & Resort Private Limited, Minapin, Gilgit.
Location:
Minapin, Gilgit.
Project Cost:
15,974,570 USD
Covered Area
98879.8 ft2
Status:
Completed
Services Provided:
Complete Design (Architecture, Structure, MEP, Interior, Landscape, etc.)

Diran Guest House, Minapin, Gilgit

Client:
Egerton Heights
Location:
Egerton Road , lahore
Project Cost:
13,100,000 USD
Covered Area
127,000 ft2
Status:
Feasibility
Services Provided:
Complete Design (Architecture, Structure, MEP, Interior, Landscape, etc.)

Egerton Heights

Project Duration - 8 Months (Sep 2024 - Apr 2025)

Client:
PepsiCo International (Pvt.) Ltd.

Location:
Haripur, Pakistan

Project Cost:
533,980 USD

Project Area:
16,040 ft2

Status:
Construction in Progress

Services Provided:
Design (Architecture, Structure, MEP, Interior, Landscape, etc.) and Construction Supervision

Employees Social Block and Salt Room at PepsiCo, Hattar

Client:
Mezan Beverages (Pvt.)
Location:
Multan Industrial Estates
Project Cost:
5 Billion PKR
Covered Area
494,000 ft2
Status:
In Progress
Services Provided:
Master Planning, Architectural, Interior Design and Landscaping

MEZAN
Beverages Pvt. Ltd.

Mezan Beverages (Pvt.)-Plant at MIE, Multan

Project Duration - 23 Months (Apr 2014 - Mar 2016)

Client:
USAID Pakistan

Location:
Islamabad, Pakistan

Project Cost:
6,000,000 USD

Covered Area
70,400 ft2

Status:
Complete 2017

Services Provided:
Complete Design (Architecture, Structure, MEP, Interior, Landscape, etc.) & Project Supervision & Management

Center for Advance Studies Energy NUST

Project Duration - 27 Months (Jul 2013 - Oct 2015)

Client:
USAID Pakistan

Location:
Karachi, Pakistan

Project Value:
6,900,000 USD

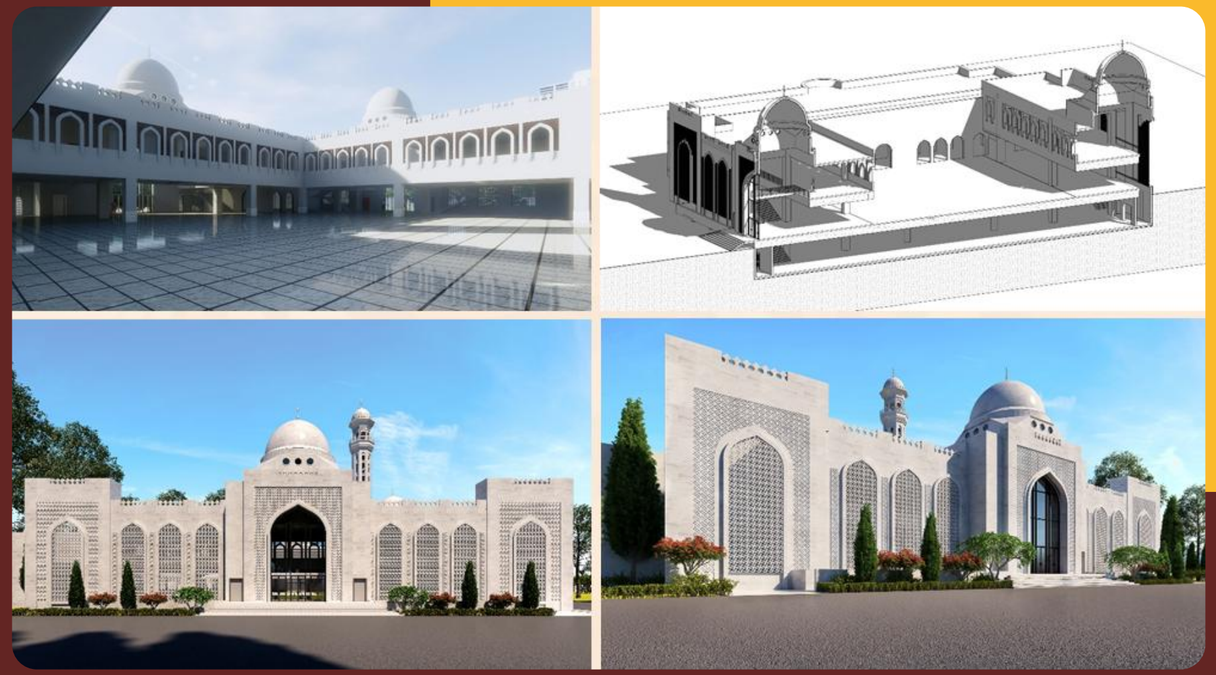
Covered Area:
86,400 ft2

Status:
Complete 2015

Services Provided:
Complete Design (Infrastructure, Architecture, Structure, MEP, Interior, etc.), Project & Supervision Management

Jinnah Post Graduate Medical Center

Client:
Jamia Ashrafia
Location:
Lahore
Project Cost:
247,267 USD
Covered Area
34,908 ft2
Status:
Completed
Services Provided:
All architectural and engineering design and consultation services



Jamia Ashrafia

Client:
Surbana Jurong
Location:
Islamabad , Pakistan
Project Cost:
101,000,000 USD
Covered Area
1,496,603 ft2
Status:
In progress
Services Provided:
Complete Design (Infrastructure, Architecture, Structure, MEP

Health Care City

Client:
Jaguar Heights
Location:
Lahore, Pakistan
Project Cost:
96,000,000 USD
Covered Area
2,520,510 ft2
Status:
Ongoing
Services Provided:
Complete Design (Architecture, Structure, MEP, Interior, Landscape, etc.)

Jaguar Mall

Client:
Nazaria e Pakistan Trust
Location:
Lahore, Pakistan
Project Cost:
412,000 USD
Covered Area
15,000 ft2
Status:
Under Construction
Services Provided:
Design (Architecture, Structure, MEP, Interior, Landscape, etc.)

Aiwan-e-Quaid-e-Azam Mosque

Client:
US-Group
Location:
Lahore, Pakistan
Project Cost:
7,905,138 USD
Covered Area
215,000 ft2
Status:
Under Construction
Services Provided:
Detailed Architecture, Interior, Structure, MEP Design, Top Supervision

Sunshine Hostel

Client:
US-Apparel
Location:
Sunshine project Bypass road
Project Cost:
106,047 USD
Covered Area
18,028 ft2
Status:
Design completed
Services to be Provided:
Complete architectural design and consultation

Sunshine Mosque

Client:
NFC ECHS Lahore
Location:
Lahore, Pakistan
Project Cost:
180,851 USD
Covered Area
30,291 ft2
Status:
In progress
Services Provided:
Design (Architecture, Structure, MEP, Interior, Landscape, etc.)

Sector Mosque NFC Employees Housing Society

Project Duration - 3 Months (Oct 2015 - Dec 2015)

Client:
Pakistan Air Force

Location:
Sargodha, Pakistan

Project Value:
52,000,000 USD

Covered Area:
15,000 ft2

Status:
Complete

Services Provided:
Complete Design (Architecture, Structure, MEP, Interior, etc.)

ACE Auditorium

Project Duration - 11 Months (Aug 2010 - Jul 2011)

Client:
Ministry of Foreign Affairs Oman

Location:
Islamabad, Pakistan.

Project Value
31,666,666 USD

Covered Area:
82,900 ft2

Status:
Design Complete

Services Provided:
Complete Design (Architecture, Structure, MEP, Interior, Landscape, etc.)

Royal Embassy - Sultanate of Oman, Islamabad

Chancery Building, Diplomatic Staff Housing, Ambassador's Residence

Project Duration - 8 Months (Mar 2011 - Nov 2011)

Location:
Islamabad, Pakistan

Project Value:
100,000,000 USD

Covered Area:
17,000,000 ft2

Status:
Design Complete

Services Provided:
Complete Design (Architecture, Structure, MEP, Interior, Landscape, etc.)

Crystal Courts

Location:
Budaiyyah, Bahrain
Project Cost:
53,000,000 USD
Covered Area
696,960 ft2
Status:
Design Complete
Services Provided:
Complete Design (Architecture, Structure, MEP, Interior, Landscape, etc.)

Souk Al Arabia

Project Duration - 4 Years (Sep 2006 - Jul 2010)

Location:
Manama, Bahrain

Project Value:
12,800,000 USD

Covered Area:
246,000 ft2

Status:
Complete

Services Provided:
Design Review & Re-Engineering of Architecture, Structure, MEP Services, Project Supervision & Management

Marvida Tower

Project Duration - 39 Months (Mar 2007 - Jun 2010)

Location:
Doha, Qatar

Project Value:
14,000,000 USD

Covered Area:
140,000 ft2

Status:
Complete

Services Provided:
Complete Architecture Design

Al Mansoor Tower

Project Duration - 4 Months (Jan 2025 - Apr 2025)

Client:
Nayyab Group

Location:
Bankers Society , Lahore

Project Cost:
150,000,000 PKR

Covered Area
10,500 ft2

Status:
Complete

Services Provided:
Complete Design (Architecture, Structure, MEP, Interior, Landscape, etc.)

Food Market, Bankers Society

Client:
Defense Housing Authority
Location:
Phase 6, DHA, Lahore, Pakistan
Project Value:
6,08,695 USD
Covered Area:
50,400 ft2
Status:
Completed
Services Provided:
Complete Design (Infrastructure, Architecture, Structure, MEP, Interior, etc.)

DHA Commercial Plaza

Client:
Pakeeza Mall of Phallia LLP
Location:
Phallia, Pakistan
Project Cost:
36,666,666 USD
Covered Area
750,000 ft2
Status:
Feasibility
Services Provided:
Design consultancy

Pakeeza Mall of Phallia

Client:
Jamia Tur Rasheed
Location:
Lahore, Pakistan
Project Cost:
157,042 USD
Covered Area
20,028 ft2
Status:
Under Construction
Services Provided:
Complete Architecture & Interior Design

Jamia Tur Rasheed Mosque

Client:
Technical Associate Pakistan
Location:
Upper mall , Lahore
Project Cost:
133,333 USD
Covered Area
51,700 ft2
Status:
Complete
Services Provided:
Detailed Architecture, Interior, Structure, MEP Design, Top Supervision

Etihad Apartments

Project Duration – 25 Months (Jan 2011 – Feb 2013)

Client:
Pakistan Sports Board

Location:
Jacobabad, Pakistan.

Project Cost:
270,000 USD

Covered Area
37,700 ft2

Status:
Completed

Services Provided:
Complete Design (Architecture, Structure, MEP, Interior, Landscape, etc.) & Project Supervision & Management

City Sports Complex Jacobabad

Project Duration - 14 Months (May 2020 - Aug 2021)

Client:
Housing Directorate GHQ

Location:
Askari 11

Project Cost:
2,212,707 USD

Covered Area
129,240 ft2

Status:
Complete

Services Provided:
Complete Design (Infrastructure, Architecture, Structure, MEP, Interior, etc.), Project & Supervision Management

Askari Apartments

Project Duration - 62 Months (Sep 2006 - Nov 2011)

Location:
Reef Island, Bahrain

Project Cost:
30,000,000 USD

Covered Area
300,000 ft2

Status:
Complete

Services Provided:
Complete Design (Architecture, Structure, MEP, Interior, Landscape, etc.)

Le Reef Luxury Apartments

Client:
Punjab Industrial Estate Development and Management Co.
Location:
Sundar Industrial Estate
Cost
333,000 USD
Covered Area:
8689 ft2
Status:
Concept design completed
Services Provided:
All architectural and engineering design and consultation services

Punjab Industrial Estate Development and Management Office

Project Duration - 26 Months (Oct 2020 - Feb 2022)

Client:
PAF Base - Quetta

Location:
Quetta, Pakistan

Project Cost:
2,000,000 USD

Covered Area
47295 ft2

Status:
Concept Design Complete

Services to be Provided:
Design (Architecture, Structure, MEP, Interior, Landscape, etc.)

Sports Complex Samungli Air Base, Quetta

Project Duration - 8 Months (Nov 2022 - Jul 2023)

Client:
US Apparel

Location:
Glaxo Town , Lahore

Cost
1,429,297 USD

Covered Area:
7,235 ft2

Status:
Completed

Services Provided:
All architectural and engineering design and consultation services

US-3 Facility

Client:
NFC ECHS Lahore
Location:
Lahore, Pakistan
Project Cost:
156,851 USD
Covered Area
27,291 ft2
Status:
Design Completed
Services Provided:
Design (Architecture, Structure, MEP, Interior, Landscape, etc.)

Central Mosque NFC Employees Housing Society

Project Duration - 34 Months (Aug 2012 - Jun 2015)

Client:
Defense Housing Authority

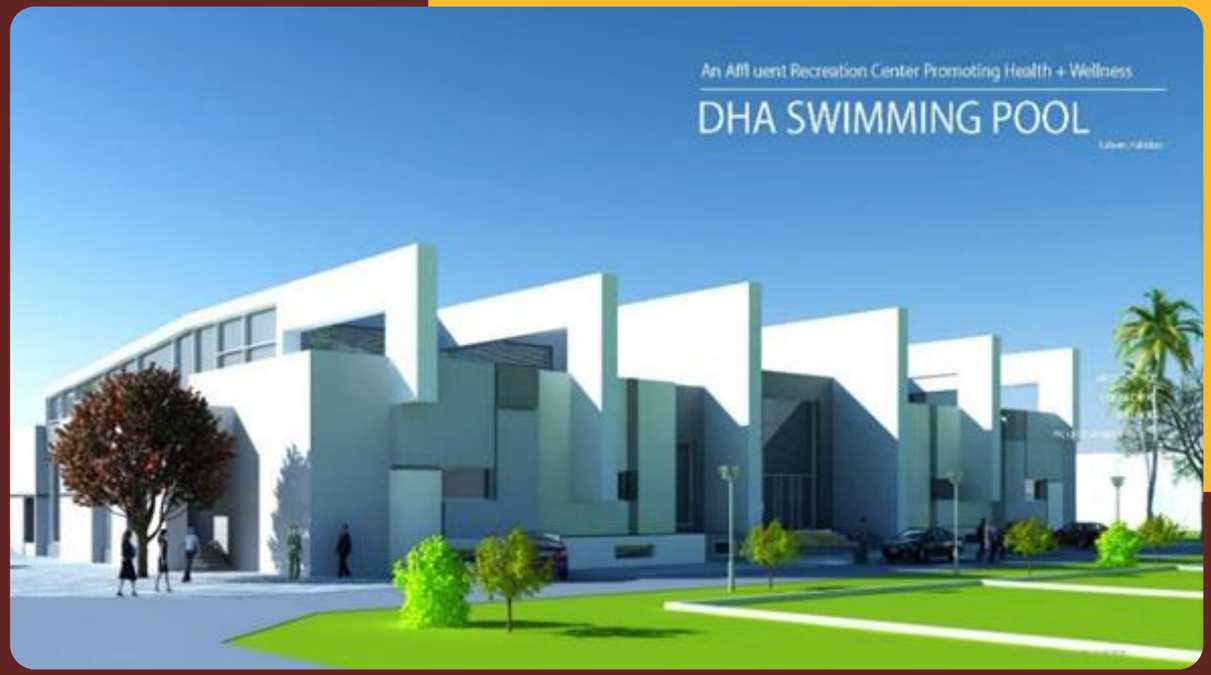
Location:
Lahore, Pakistan

Project Cost:
1,538,461 USD

Covered Area
54,993 ft2

Status:
Complete

Services to be Provided:
Olympic Standard Design (Architecture, Structure, MEP, Interior, Landscape, etc.) & Top Supervision



DHA Swimming Pool

Client:
BARQAAB (Pvt.) Ltd.
Location:
Lahore, Pakistan
Cost
1,814,236 USD
Covered Area:
32,366 ft2
Status:
In Progress
Services Provided:
Survey, Geotechnical Investigation, Design (Architecture, Structure, MEP, Interior, Landscape, etc.) and Top Supervision

BARQAAB House

Infrastructure Works

Project Duration – 1 Month (May 2025 – May 2025
Project Cost: US$ 1,684

Project Overview

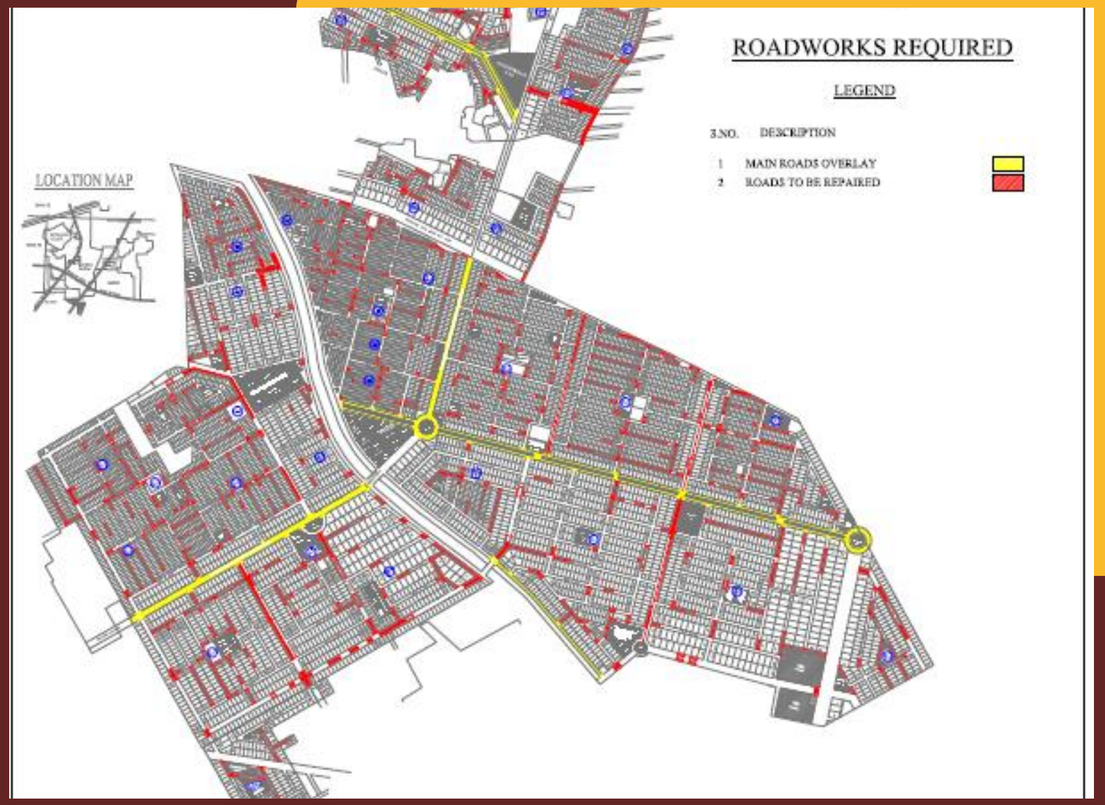
- Residential development in Lahore
- Two phases: Phase 1 and Phase 2
- Phase 1: Minimal subgrade treatment
- Phase 2: Reinforced base layers and formal drainage networks

Challenges

- 120 km road network
- Significant wear over past decade
- Causes: Increasing traffic, seasonal flooding, deferred maintenance

Consultancy Services by ICS

- Commissioned for assessment, quantity take-off, cost estimation, and prioritization
- Structured into three principal tasks
- Completed in 15 days with report submission



Survey, Assessment, Estimation and Prioritization of Roads for Improvement in all Phases of WAPDA Town, Lahore

Project Duration - 7 Months (May 2024 - Dec 2024)
Project Cost:US$25,000

Overview

- Supplies water to over 1.2 million people
- Sources: Lilongwe River, Kamuzu Dam I and II
- Current treatment capacity: 125 MLD
  - Water Treatment Works I and II
  - Bunda Plant (serves Bunda College and nearby areas)

Challenges

- Algae blooms, high turbidity, aging infrastructure
- Need for enhanced efficiency and sustainability by 2031

Infrastructure Investment Plan

Malingunde Water Supply Project:

  - New treatment plant
  - Expanded network (pumps, pipes, storage tanks)
- Upgrades to Bunda Water Supply Network and Treatment Works I and II
- Goal: Increase production from 110,000 m³/day to 125,000 m³/day

ICS Role (Subconsultants to Pamodzi Consulting Limited)

- Optimize design and implementation
- Refine Bunda Water Supply System
- Supervise infrastructure installation
- Address inefficiencies to boost capacity
- Ensure quality control

Construction Supervision of Optimization of Bunda Water Supply Network and Packaged Treatment Plant and Priority Efficiency Improvement Measures for LWB's Treatment Works I and II

Project Duration – 3 Months (Nov 2023 – Jan 2024)
Project Cost:US$5,960

Project Background

- Pipe crossing cum pedestrian bridge over Mastuj River, Miragram
- Initially constructed by AKRSP in 1998
- Served local community until damaged by floods in 2019
- Reconstructed, but damaged again in 2021
- Rebuilt with wider span, damaged again in 2022

ICS Role (Subconsultants to Berkeley Associates)

- Conduct hydrologic studies
- Perform hydraulic design
- Plan bridge reconstruction
- Prepare relevant parts of Tender Documents

Design of Hydraulic Structure for Crossing Irrigation Channel Across the River

Project Duration – 1 Year (Nov 2010 – Dec 2011)
Project Cost – US$ 29,020

Project Overview

- Bridges damaged in 2010 floods in Khyber Pakhtunkhwa Province
- ICS tasked with hydrological and hydraulic design services for restoration

ICS Responsibilities

- Estimate 2010 flood levels at bridge sites
- Determine floods for various return periods
- Estimate Highest Flood Levels (HFL)
- Hydraulic design for scour protection
- Design necessary nullah training works

Hydrological and Hydraulic Studies for Damaged Bridges in Khyber Pakhtunkhwa Province During 2010 Floods

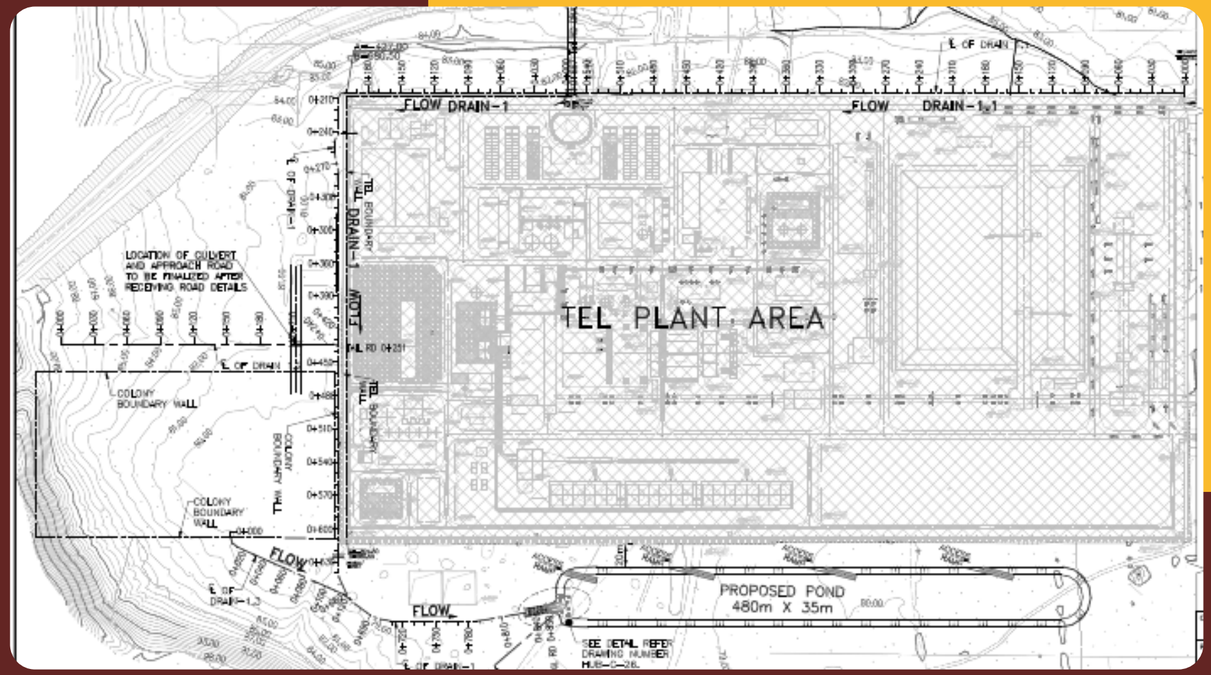
Project Duration – 5 Months (Jun 2022 – Oct 2022)
Project Cost:US$6,400

Project Overview

- ICS, as sub-consultant to Berkeley Associates, provided design services
- Focus: Stormwater bypass drain and rainwater pond
- Purpose: Manage stormwater from coal power plant, site colony, and surrounding areas

ICS Responsibilities

- Design construction drawings for:
  - Stormwater bypass drain
  - Rainwater pond for stormwater disposal



Detail Design and construction drawings for storm water drain and rainwater disposal arrangement for Hubco Thar Energy Limited Coal Fired Power Plant

Project Duration – 5 Months (Jun 2004 – Oct 2004)
Project Cost: US $ 520

Project Overview

- Location: 110 km south of Makkah
- Power and desalination plant using petroleum-based thermal energy
- Issue: Ash dump (1 km²) on sloping ground (NW-SE gradient) prone to flooding from runoff
- Concern: Flooding risks environmental degradation of ash dump site

ICS Responsibilities

- Conducted comprehensive hydrological study
- Analyzed rainfall data, topographic sheets, and satellite images
- Identified catchment areas contributing inflow to the site
- Determined stormwater runoff discharge and site impact
- Statistically analyzed daily rainfall using computer model
- Estimated maximum flows for 50-year and 100-year return periods
- Calculated high flood levels

Outcomes

- Designed flood protection system:
  - Earth embankments
  - Diversion channels to mitigate flooding and protect ash dump

Hydrological Studies for Ash Dumping Area of Shoaiba Power Station, Saudi Arabia

Project Duration -16 Months (Feb 2005 - Jun 2006)
Project Cost: US $ 18,000

Project Overview

- 25 MGD Reverse Osmosis Water Treatment Plant
- Supplies desalinated seawater to Gawadar port city
- Collaboration with Qadri Associates (Quetta) and Kashif Aslam and Associates (Lahore)

ICS Responsibilities

- Process selection and design
- Engineering design of infrastructure:
  - Intake system
  - Water reservoirs
  - Pumps

Feasibility Study of Water Desalination Plant for Gawadar

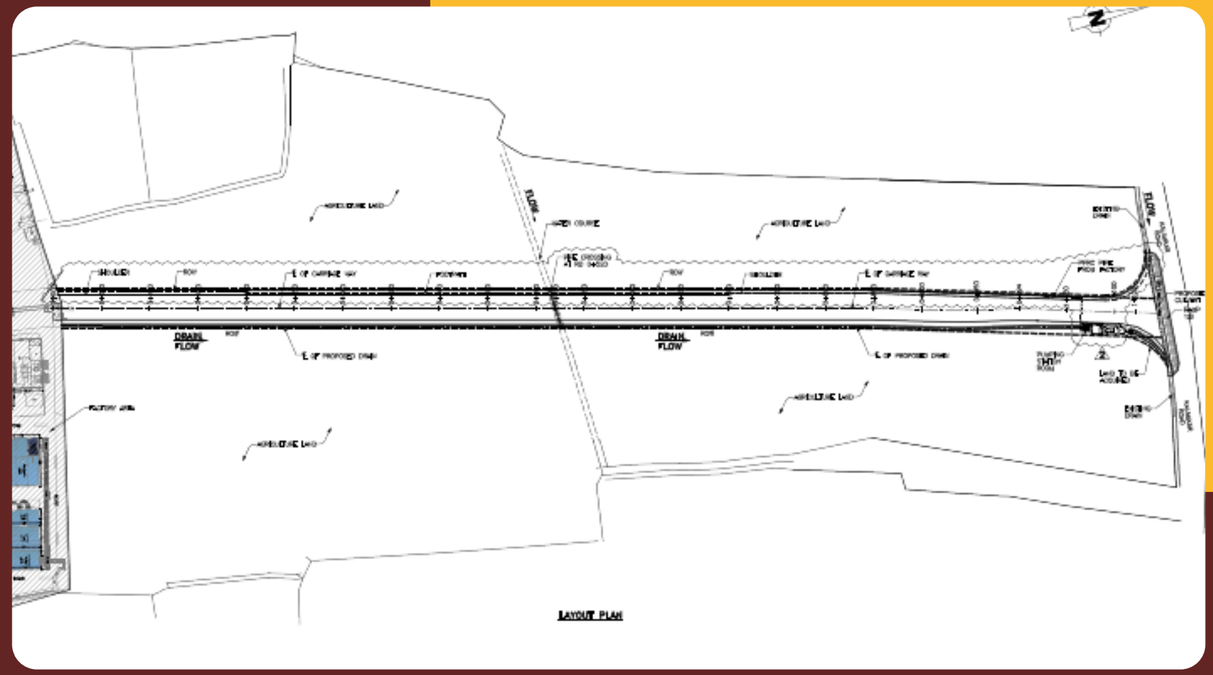
Project Duration - 10 Months (Feb 2022 - Dec 2022)
Project Cost: US$ 1,300

Project Overview

- ICS, as sub-consultant to Kashif Aslam & Associates
- Services for US Apparel Unit 3 in Lahore

ICS Responsibilities

- Design, tendering, and top supervision of:
  - Additional road connecting to Kalamkar Road
  - Stormwater drain
  - Pumping station



Development of additional connecting road between US Apparel Unit 3 to Kalamkar Road along with stormwater drain and pumping station

Project Duration - 1 Month (Apr 2022 - Apr 2022)

Project Overview

- Location: New Gosha e Ahbab Cooperative Housing Society, Lahore
- ICS provided infrastructure analysis services

ICS Responsibilities

- Analyzed existing infrastructure
- Prepared As-built design report
- Detailed analysis of:
  - Water supply system
  - Sewerage and stormwater drainage system

Development of As-Built Design Report for Water Supply and Sewerage Network for New Gosha-e-Ahbab Cooperative Housing Society, Lahore

Project Duration – 2 Months (Dec 2018 – Jan 2019)
Project Cost – US$ 2000

Project Overview

- Location: New Gosha e Ahbab Cooperative Housing Society, Lahore
- ICS provided services for piped water supply scheme using direct tubewell pumping

ICS Responsibilities

- Conducted detailed design
- Prepared cost estimates
- Provided Bill of Quantities for vendor quotations

Project Status

- Construction of the water supply system completed

Detail Design for Water Supply Scheme and Tubewell for New Gosha e Ahbab Cooperative Housing Society Lahore

Project Duration - 5 Years (Oct 2008 - Dec 2013)

Client:
Pakistan Air Force

Location:
Jacobabad , Pakistan

Length
22 km

Cost
PKR 650 Million

Status:
Completed

Services Provided:
Design of the Road

Roads Network-Shahbaz Air Base

Project Duration - 19 Months (Sep 2011 - Apr 2013)

Client:
Wapda

Location:
Kaghan Valley, Pakistan

Project Value:
PKR 900 Million

Road Length:
67 km

Status:
Complete

Services Provided:
Design of Road

Suki Kinari - Access Road

Dams, Hydropower and Barrages

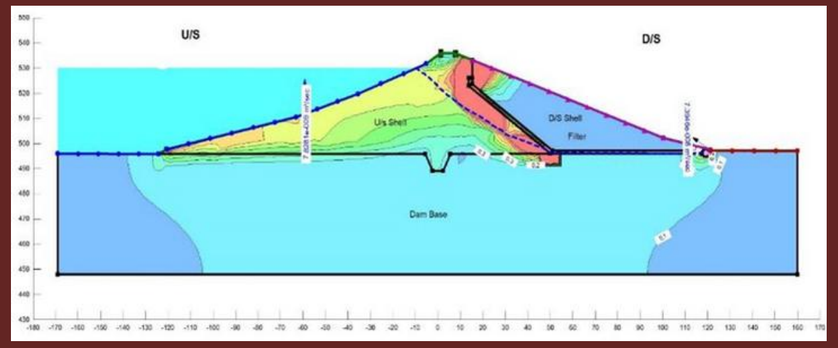
Project Duration – 4.5 Years (Jun 2018 – Dec 2022)
Project Cost – US$ 989,919

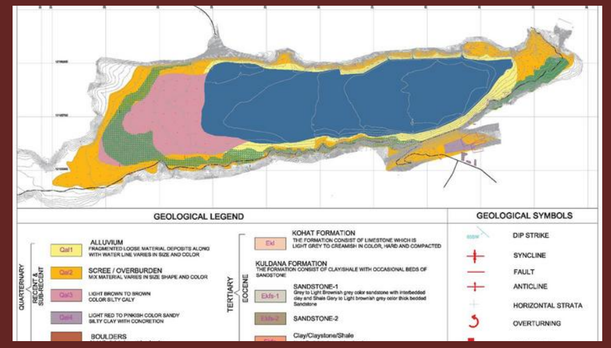
Project Overview

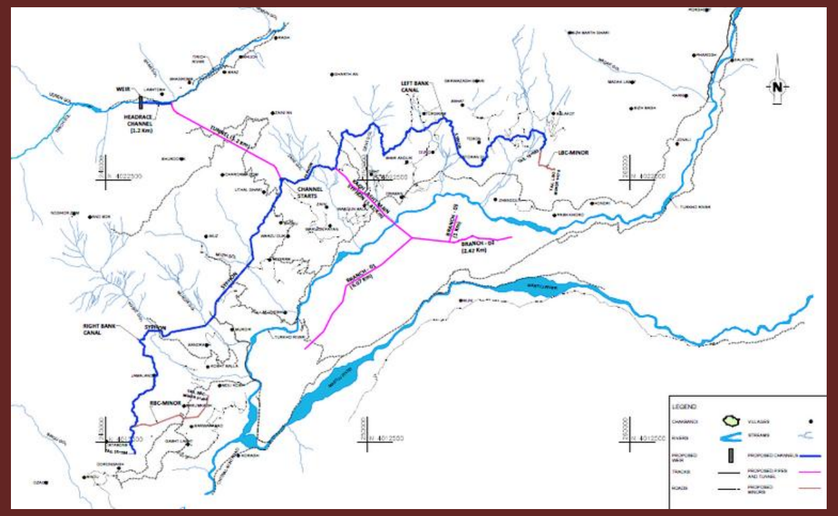
- ICS as lead consultant in JV with Halcrow Pakistan
- Funded by Asian Development Bank (ADB)
- Feasibility study for three irrigation schemes:
  - **Mulkoh Irrigation Scheme**: Dam, irrigation tunnel, irrigation system, command area development
  - **Tanda Dam**: Raising dam, remodelling irrigation system, command area development
  - **Pehur Main Canal**: Remodelling and capacity enhancement

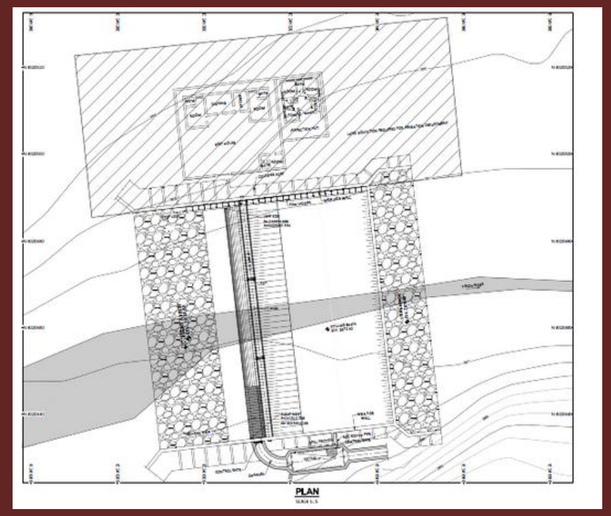
ICS Responsibilities

- Conducted feasibility-level designs
- Performed environmental and resettlement studies
- Supported ADB in preparation of Board Documents









Khyber Pakhtunkhwa Water Resources Development Project (ADB Technical Assistance)

Khyber Pakhtunkhwa Water Resources Sector Project (ADB Technical Assistance)

Project Duration – 25 Months (Aug 2014 – Sep 2016)

Project Cost – US$ 966,197

Project Overview

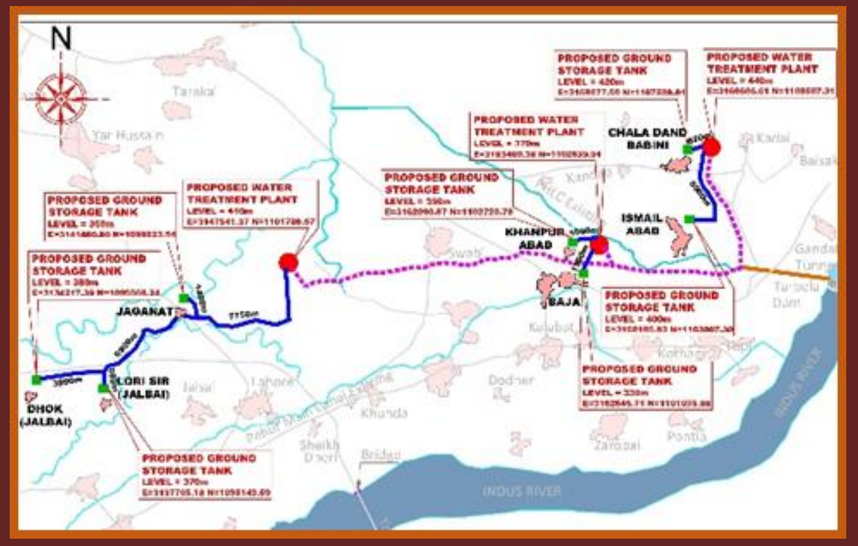
- ICS as lead consultant in JV with Halcrow Pakistan
- Funded by Asian Development Bank (ADB)
- Feasibility study for three irrigation cum water supply schemes:
  - **Chapra Dam Project**: 42m high dam, irrigation system, high-efficiency irrigation
  - **Chamak Mira Dam Project**: 42m high dam, irrigation system
  - **Pehur High Level Canal Extension (PHLCE)**: Canal extension and enhancement

ICS Responsibilities

- Conducted feasibility-level designs
- Performed environmental and resettlement studies
- Supported institutional reform
- Prepared bidding documents
- Developed Integrated Agriculture Water Resources Plan (IAWR) for rain-fed and arid areas of KPK
- Evaluated feasibility of rural drinking water supply schemes for Swabi and Haripur (later dropped by KP Government due to surface water treatment requirements)

Project Outcomes

- Prepared PC-I for PHLCE, securing US$90M loan between GoKP and ADB
- Developed working paper for Climate Resilient Water Resources Development Project
  - Included Chapra and Chamak Mira dams, plus other dams recommended by KPID
- ADB launched separate TA for Climate Resilient Water Resources Development Project in KP



Project Duration – 19 Months (Sep 2011 – Apr 2013)

Project Cost – US$ 182,350

Project Overview

- Largest private sector hydropower initiative in Pakistan
- Run-of-river project with 850m high design head
- Annual production: Over 3000 GWh
- Capacity increased from 840 MW to 870 MW based on consultant design
- Supported by internationally renowned sponsors

Principal Components

- 54.5m high dam above river bed
- Two spillways
- Power tunnel, tailrace tunnel, access tunnel
- Desander, powerhouse, O&M staff housing facilities

ICS Role (JV with NESPAK and Coye et Bellier)

- Project management
- Hydraulic design
- Project planning
- Assistance in geotechnical design
- Investigations and dam layout studies
- Power optimization studies
- Preparation of basic design and bidding documents
- Design of employer's colony and infrastructure
- Bid evaluation and EPC contract negotiation
- Ensuring timely deliverables

870 MW Suki Kinari Hydropower Project

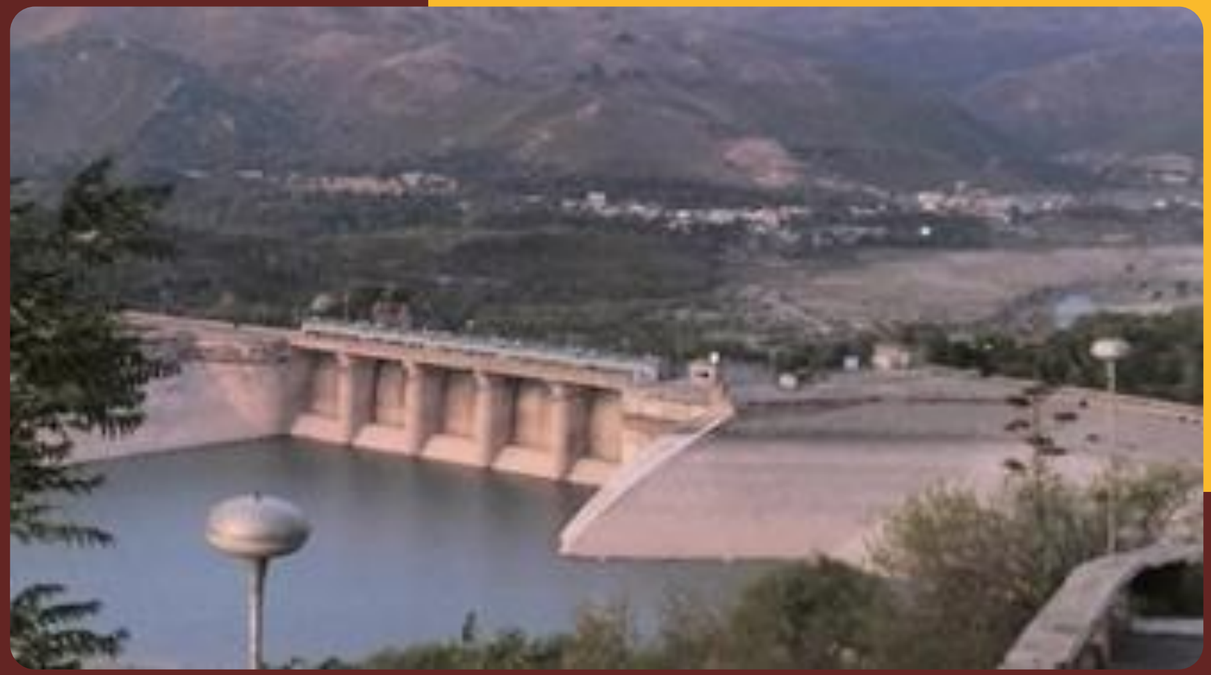
Project Duration – 5 Months (Apr 2025 – Aug 2025)
Project Cost: US$ 4,255

Project Overview

- ICS in Joint Venture with Development & Management Consultants (DMC) and Power Aim (PA)
- Conducted 5th periodic inspection of Khanpur Dam
- Dam details:
  - Commissioned: 1985
  - Type: Earth & Rockfill
  - Height: 51m
  - Initial live storage: 87,012 acre-ft
  - Catchment area: 308 sq. miles
  - Purpose: Municipal, industrial water supply, and irrigation for Punjab and Khyber Pakhtunkhwa

ICS Responsibilities

- Hydrological assessment
- Assessment of concrete hydraulic structures



5th Periodic Inspection of Khanpur Dam

Project Duration – 9 Months (Feb 2024 - Oct 2024)
Project Cost – US$ 9,000

Project Overview

- Constructed: 1937
- Issues: Increased silt entry into right bank canals, capacity constraints
- Current flood capacity: 900,000 cfs
- Target flood capacity: 1,500,000 cfs

Hydraulic Model Studies

- Two-dimensional hydrodynamic model of entire barrage (Open Telemac 2D)
- Three-dimensional hydrodynamic model of right pocket (Open Telemac 3D)
- Physical scale model (1:75) of right pocket developed at Artelia, France laboratory
- Purpose: Study silt entry and recommend mitigation measures

ICS Responsibilities

- Client coordination for data collection
- Processing of discharge and sediment data
- Assistance in development of physical and numerical models
- Interpretation of model results

Hydraulic Model Studies for Sukkur Barrage

Project Duration – 7 Months (Sep 2022 – Mar 2023)
Project Cost – US$ 2,800

Project Overview

- Client: Engro Power Pvt Limited
- Location: Tharparkar coal power plant
- Issue: Burnt coal ash disposal in an environmentally acceptable manner
- Solution: Design of a new ash dam due to existing dam nearing capacity

ICS Responsibilities (Subconsultants to Berkeley Associates)

- Dam planning
- Design of drainage system for the proposed ash dam

Detail Design and Tendering for Ash Disposal Dam

Project Duration – 13 Months (Apr 2017 – May 2018)
Project Cost – US$ 29,400

Project Overview

- Tarbela Dam: Largest Zoned Earth Fill Dam in Pakistan
- Inspection led by ICS Chief Executive as Team Leader
- Team: High-level experts from various consultants
- Conducted two inspections:
  - Low reservoir level inspection
  - Full reservoir level inspection

Key Activities and Outcomes

- Physical inspection of the dam
- Compiled findings from expert inputs
- Presented principal findings to WAPDA
- Issued comprehensive report to WAPDA

Sixth Periodic Inspection of Tarbela Dam

Project Duration – 6 Months (Jul 2012 – Dec 2012)

Project Cost: US$ 8,260

Project Overview

- Location: 35 km North-East of Islamabad
- Owner: Capital Development Authority (CDA) Islamabad
- Purpose: Supply 42 MGD of drinking water to Islamabad
- Components:
  - Main Dam
  - Main Spillway and Auxiliary Spillway
  - Treatment Plant
  - Transmission Main

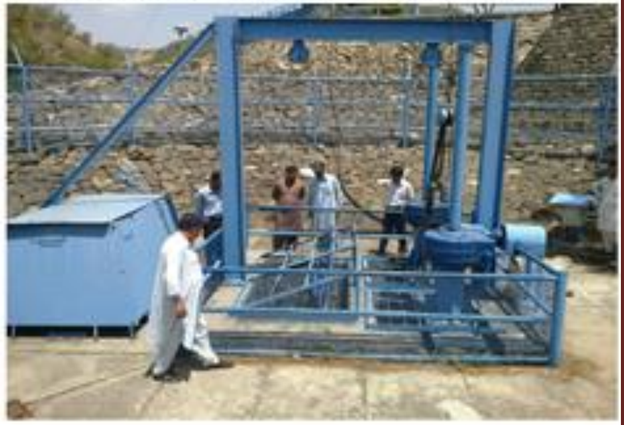
Inspection Details

- Conducted by WAPDA's Dam Safety Organization
- Multidisciplinary inspection team:
  - Specialists in Geotechnical Engineering, Geology, Instrumentation, Hydraulic and Concrete Structures, Hydrology and Sedimentation, and Mechanical Works
- Objective: Perform physical inspection of dam and appurtenant works
- Outcome: Findings submitted to Team Leader for compilation of final inspection report

Crack on Dam Crest

Intake Gate Structure

Spillway Stilling Basins



Intake Gate Structure

Fourth Periodic Inspection of Simly Dam

Project Duration – 6 Months (Jan 2011 - Jun 2011)

Project Cost – US$ 8,390

Project Overview

- Commissioned: 1971
- Location: Chashma, Pakistan
- Functions: Irrigation, power generation (184 MW), cooling water for CHASNUPP
- Structure:
  - Waterway: 3,120 ft (52 bays, 60 ft each)
  - 7 undersluice bays (left), 4 undersluice bays (right), 41 standard bays
  - Crest levels: Undersluice RL617 ft, Standard RL622 ft
- Design discharge: 950,000 cusecs (gates), 1,100,000 cusecs (energy dissipation, incl. 20% concentration)
- 2010 Flood: 1,038,873 cusecs passed, exceeding design capacity

Inspection Context

- 5th periodic inspection post-2010 flood
- Focus: Safety assessment of barrage components

Inspection Details

- Conducted by WAPDA's Dam Safety Organization
- Multidisciplinary team:
  - Specialists in Geotechnical Engineering, Geology, Instrumentation, Hydraulic and Concrete Structures, Hydrology and Sedimentation, Mechanical Works
- Objective: Physical inspection of barrage and appurtenant works
- Findings submitted to Team Leader for final report compilation

ICS Responsibilities

- Provided Team Leader services
- Provided structural design specialist
- Conducted physical inspection
- Prepared final inspection report

View Upstream of the Chashma Barrage

Condition of Concrete Blocks and Stone Apron after 2010 Floods

5th Periodic Inspection of Chashma Barrage

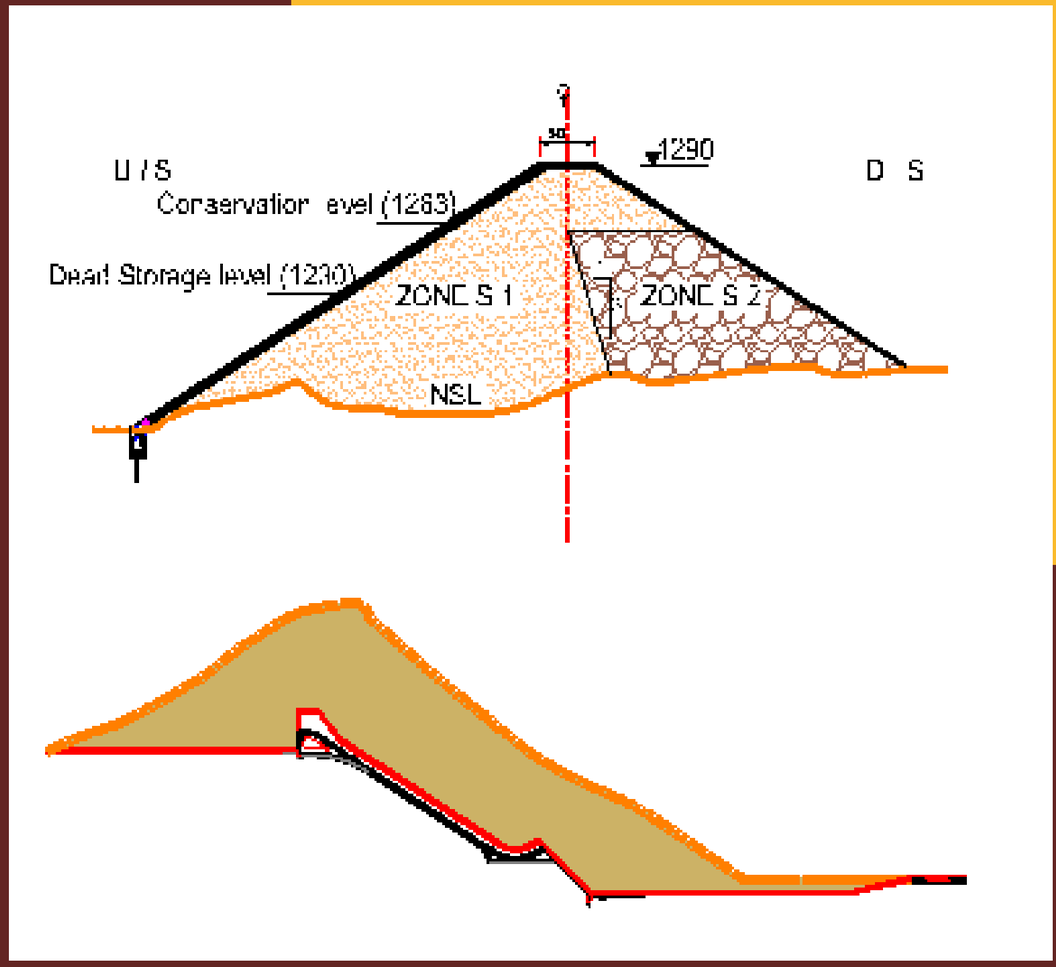
Project Duration - 13 Months (Apr 2009 - May 2010)
Project Cost: US $ 26,060

Overview

- Client: Saadullah Khan Brothers
- JV: EGC, ICS, SMEC, Kashif Aslam & Associates
- 165 ft dam, 700 KW powerhouse, 32,000-acre irrigation
- Dam: ACRD (alt. CFRD), ungated spillway (104,000 cfs)

ICS Responsibilities

- **Design Briefs**: Layout, survey, river diversion, hydrology, geology, embankment, spillway, intake/tunnel
- **Technical Specs**: Base course, grouting, earth/rockfill, tunneling, rock bolts, concrete, shotcrete
- **Infrastructure**: Colonies, roads
- **O&M Colony**: Layout, water/sewerage cost provisions
- **Deliverables**
- Tender designs, drawings, quantities
- Technical specifications



Pre-bid Services for Daraban Zam Dam

Project Duration – 2 Months (Dec 2009 - Jan 2010)
Project Cost – US$ 5,470

Overview

- Location: 35 km NE of Karachi, Hub River
- Purpose: Water supply (100 MGD Karachi, 15 MGD Lasbela), irrigation (21,000 acres)
- Components: 15,640 ft dam (152 ft high), 5,742 ft saddle dam, 6,020 ft spillway (458,000 cfs), outlet sluice

Inspection

- Date: Dec 14–18, 2009
- By: WAPDA Dam Safety Organization
- Team: Experts in geotechnical, geology, instrumentation, hydraulic/concrete, hydrology, mechanical
- Objective: Inspect dam and appurtenant works

ICS Role

- Team Leader services
- Prepared final inspection report

Fourth (4th) Periodic Inspection of Hub Dam Balochistan

Project Duration - 12 Months (May 2009 - May 2010)
Project Cost:US $ 20,990

Overview

- Location: 27 km north of Gwadar, Balochistan
- Completed: 1994-95
- Purpose: Municipal water supply for Gwadar, Jiwani, Nigor, and nearby villages
- Structure: Rolled earth fill dam, 21m high
- Components: Main embankment, two auxiliary dams, intake structure, spillway, water works

ICS Role (Subconsultants to OSTKR Engineering Consultants)

- Conducted general inspection of dam and appurtenant works with OSTKR
- Performed hydrological studies for water availability and flood estimates
- Proposed remedial measures
- Prepared proposals for dam restructuring to extend project life
  - Raise storage level by 3.7m

Restructuring of Akra Kaur Dam Balochistan

Project Duration – 10 Months (Aug 2007 – Jun 2009)
Project Cost:US $ 34,060

Overview

- Location: River Sutlej
- JV: ICS, NESPAK, NDC

Scope of Work

- Review of feasibility study
- Design of emergency spillway (50,000 cfs)
- Detailed design of project works
- Preparation of tender documents
- Construction planning
- Social and environmental assessment (EIA/EMMP, RAP as needed)

ICS Responsibilities

- Construction planning
- Geotechnical engineering
- Structural design
- Quality assurance
- Compilation of Project Planning Report

Islam Barrage - View from downstream side

Aerial View of Existing Barrage

Detailed Design of Rehabilitation Works of Islam Barrage

Project Duration – 2 Months (Sep 2007 - Oct 2007)
Project Cost – US$ 7,230

Overview

- Location: Tail of C-J Link Canal
- Scope: Finalize feasibility study, optimize power generation

Scope of Services

- Review previous reports and existing data
- Assess C-J Link Canal flows for project life
- Determine optimal unit size, equipment configuration, plant layout
- Conduct load flow, short circuit, and transmission stability studies
- Design studies for location, orientation, and structural safety
- Perform Environmental Impact Assessment (EIA)
- Develop construction planning, project cost estimates, O&M costs
- Conduct financial and economic analysis, including tariff determination

ICS Responsibilities

- Geotechnical studies
- Construction planning
- Infrastructure design of colony
- Quality assurance

Pre-Tender Services for Winder Dam

Project Duration - 8 Months (Oct 2013 - Jun 2014)
Project Cost: US$ 48,790

ICS was engaged by World Bank for Technical Assistance for Hydropower Assessment of Punjab. From the list of about 800 sites, ICS is required to screen and rank sites that are developable and need to be pursued for further development. The Project also includes identification of strategies needed for development of these hydropower projects, modes of implementation, incentives and mechanisms needed for involvement of private sector and identification institutional reforms required.

Identification of Hydropower Potential in Punjab

Project Duration – 10 Months (Aug 2010 - Jun 2011)
Project Cost – US$ 31,430

Overview

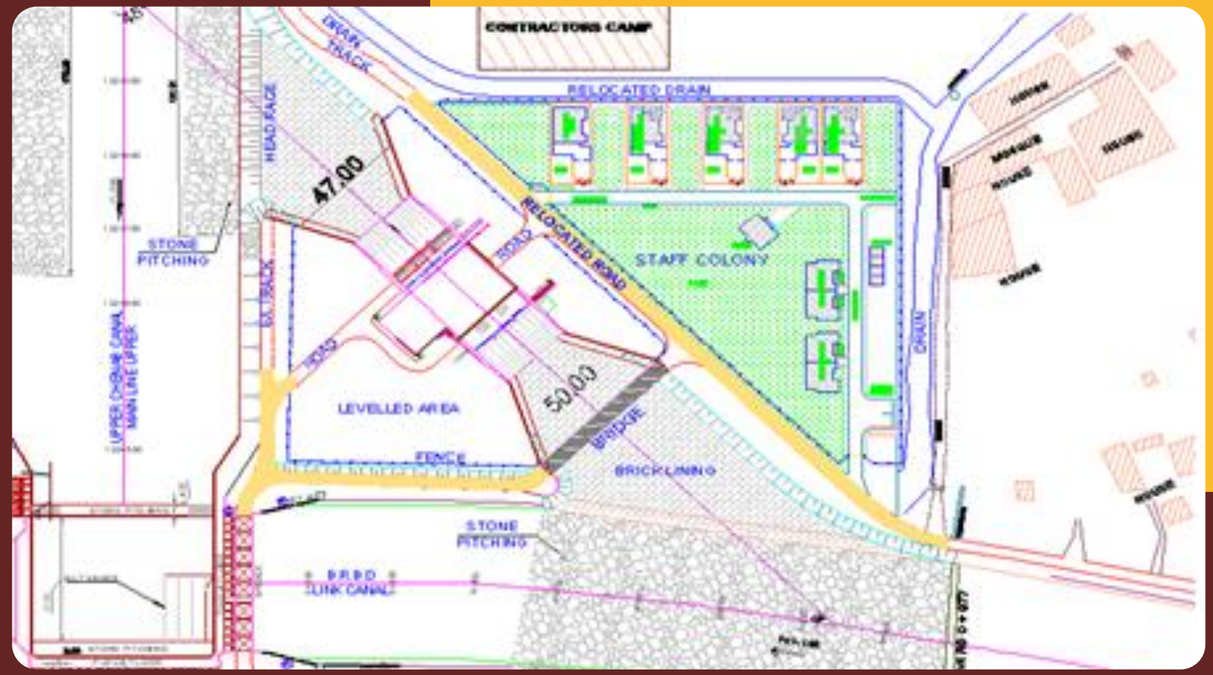
- Location: RD 0+000, BRBD Canal, Sialkot
- JV: ICS, PPGS, EI

ICS Responsibilities

- Project management
- Power optimization and sediment modeling
- Layout optimization
- Topographic and geotechnical survey supervision
- Civil works and infrastructure design
- Cost estimates and construction planning
- Social and environmental examination
- Review of laws and regulations
- Reports: Inception, Design, Feasibility
- O&M Staff Colony planning (water, sewerage, drainage)

Associate Responsibilities

- Hydromechanical and electrical studies
- Financial analysis and tariff determination



Feasibility Study 2 MW Hydropower Plant on BRBD Canal at RD 0+000

Project Duration – 10 Months (Aug 2010 – Jun 2011)
Project Cost: US $ 6500

Overview

- Client: Tarakai Energy
- Sites: Two on BRBD Canal, one on LCCL Canal (advertised by PPDB)
- Initial Scope: Feasibility studies requested by Client
- ICS Recommendation: Conduct pre-feasibility studies due to site challenges

Key Findings

- **BRBD Canal Sites**: Non-perennial, limiting feasibility
- **LCCL Canal Site**: Low power potential (0.57 MW), not viable or attractive for power dispatch
- Outcome: Pre-feasibility confirmed sites' infeasibility

Actions and Results

- ICS conducted pre-feasibility studies
- Presented findings to PPDB
- PPDB returned Bank Guarantees to Client

Aerial View of BRBD Reach RD 433+958 to RD 481+760

Pre-Feasibility Studies for Hydropower Projects

2.76MW HPP On BRBD Canal at RD 433+768 to RD 481+760

3.14MW HPP on BRBD Canal at RD 509+712

2.4MW HPP on LCCL Canal within reach RD 140+060 to RD182+960

Project Duration – 2 Months (Sep 2010 – Oct 2010)
Project Cost – US$ 4,640

Overview

- Client: JV of Etimaad Engineering (Pakistan) and Hunan Allonward (China)
- Projects:
  - 4.04 MW plant at Deg Outfall
  - 5.38 MW plant at Chianwali
- Components: Power channel, powerhouse, gated spillway, approach road, bridges, retaining walls, offices, residences

ICS Services for EPC Bid

- Technical specifications for selected civil works
- Hydraulic design and head loss calculations
- Power and energy studies
- Design parameters and methodology
- Comprehensive list of drawings for contractor's detailed design

Pre- tender Services for two Hydropower Plants on Upper Chenab Canal

Project Duration - 11 Months (Mar 2008 - Feb 2009)
Project Cost: US $ 31,780

Overview

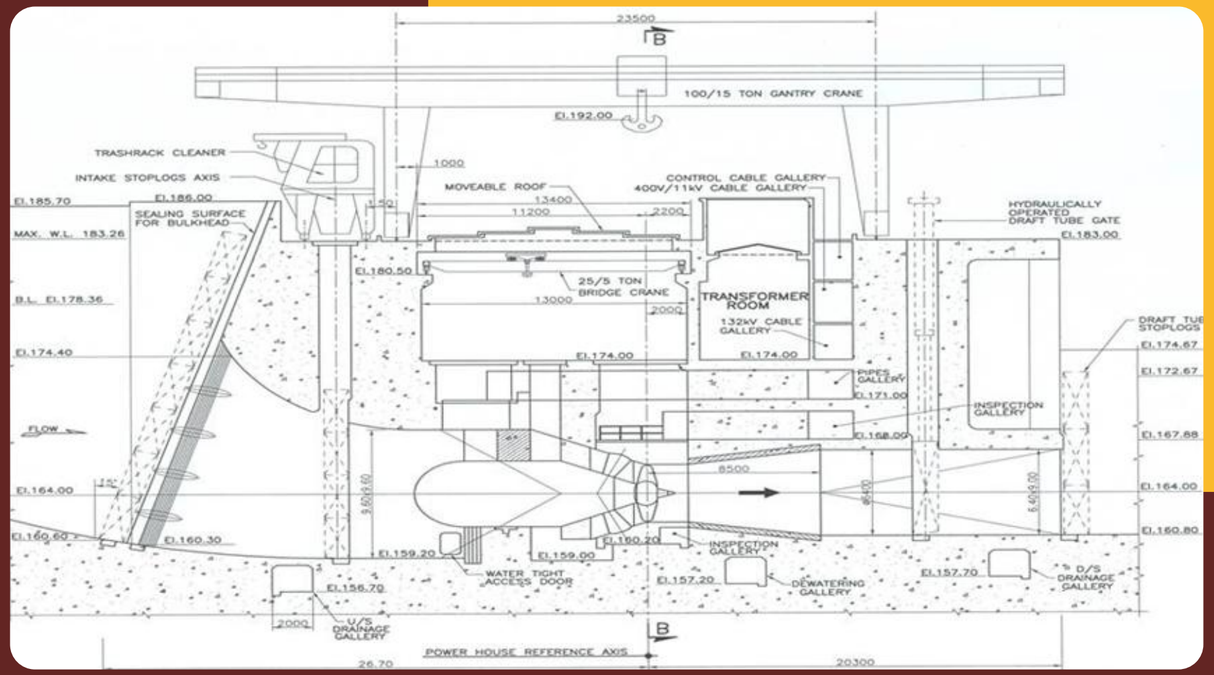
- Location: Tail of C-J Link Canal
- Scope: Finalize feasibility study, optimize power generation

Services

- Review reports and data
- Assess C-J Link Canal flows
- Optimize unit size, equipment configuration, plant layout
- Conduct load flow, short circuit, transmission stability studies
- Design studies for location, orientation, structural safety
- Perform Environmental Impact Assessment
- Develop construction planning, cost estimates, O&M costs
- Conduct financial and economic analysis, tariff determination

ICS Responsibilities

- Geotechnical studies
- Construction planning
- Infrastructure design of colony
- Quality assurance



Review and Updating of Feasibility Study of 44 MW Hydropower Plant at Tail of C.J. Link Canal.

Irrigation and Drainage

Project Duration – 2011 - Ongoing
Project Cost – US$ 415,000

Overview

- Joint Venture: ICS, NESPAK, Electra

ICS Responsibilities

- Hydraulic design
- Geotechnical assessment
- Quality assurance
- Construction supervision

Detailed Design and Construction Supervision for the Remodelling of WARSAK Canal

Project Duration – 38 Months (Aug 2016 – Oct 2019)
Project Cost – US$ 265,000

Overview

- Client: Asian Development Bank (ADB) funded
- JV: ICS as sub-consultants/associates to NESPAK
- Beneficiaries: Over 300,000 people
- Irrigation Area: 168,000 acres

Major Features

- Main Canal: 116 km
- Distributaries/Minors: 210 km
- Watercourses and Command Area Development
- Laser Land Levelling
- Farmer's Capacity Building Activities

ICS Responsibilities

- Agronomy support
- Field surveys
- Design support in:
  - Hydraulics
  - Agronomy
  - Structural Design
- Support preparation of:
  - PC-I document
  - Financing modalities with ADB
  - Bidding documents

Detail Design Services of Jalalpur Irrigation Project

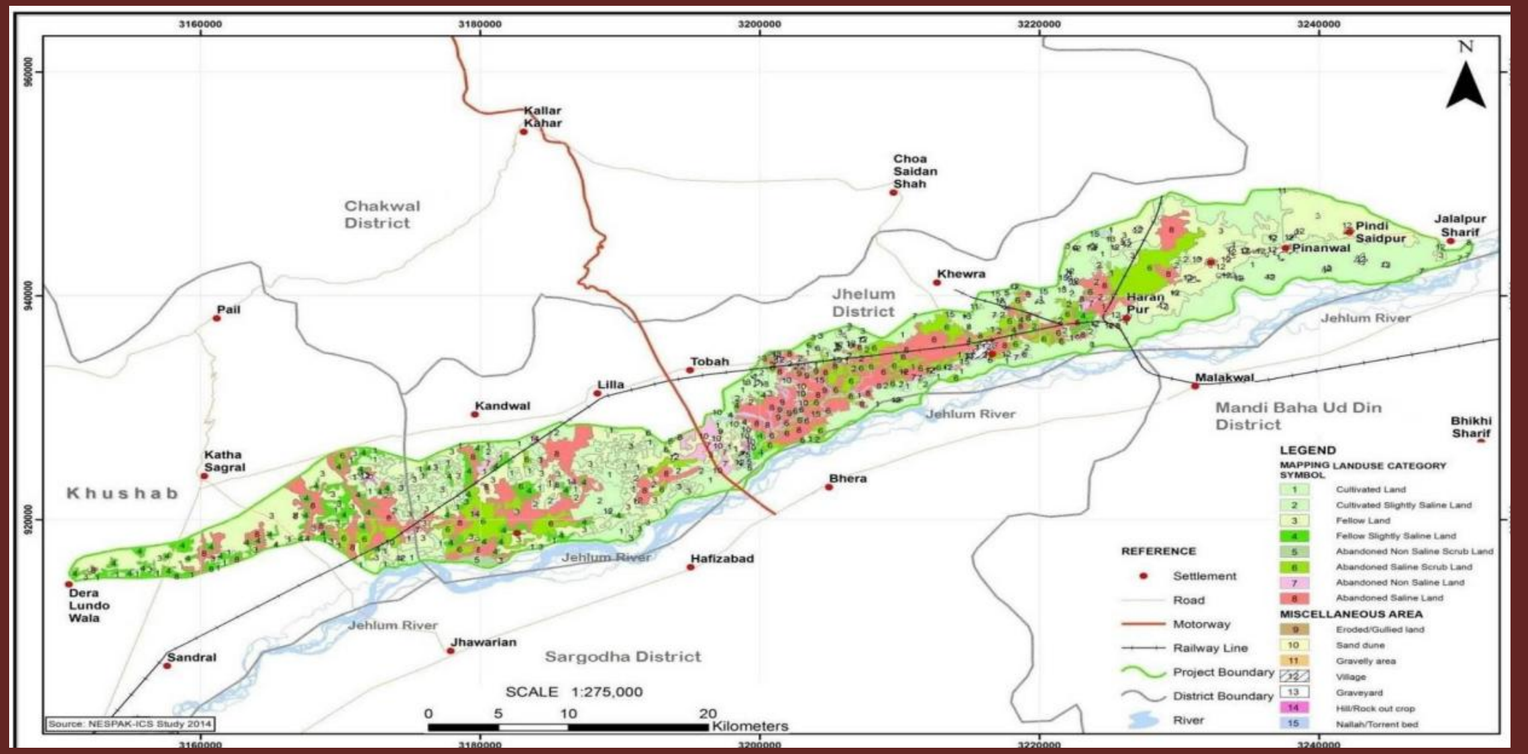
Project Duration – 19 Months (Apr 2014 – Nov 2015)
Project Cost – US$ 199,599

Overview

- Client: Asian Development Bank (ADB)
- JV: ICS with NESPAK
- Location: Pind Dadan Khan and Khushab Tehsils, Punjab, Pakistan
- Gross Command Area: 185,000 acres

ICS Responsibilities

- Hydraulic design
- Project management assistance
- Agricultural studies
- Social and resettlement studies



Jalalpur Irrigation Project (ADB Technical Assistance for Preparation of Feasibility Study)

Project Duration - 46 Months (Aug 2009 - Jun 2013)
Project Cost:US $ 520,960

Overview

- Funding: ¥12,832 million loan from JICA
- Project Cost: Rs 4,148 million
- Benefitted Area: 655,240 hectares
- Scope: Civil works for channel lining (≤50 cusecs), rehabilitation/up-gradation of higher capacity channels, repair/replacement of hydraulic structures
- Coverage: 236 distributaries/minors
  - Lined: 1,160 km
  - Rehabilitated: 900 km
- Irrigation Zones:
  - Bahawalpur (Bahawalnagar, Bahawalpur districts)
  - DG Khan (Dera Ghazi Khan, Rajanpur districts)
  - Faisalabad (Hafizabad, Faisalabad, Jhang, Toba Tek Singh districts)

ICS Responsibilities (JV with NESPAK and HALCROW)

- Design of channel lining, rehabilitation, and up-gradation
- Design of hydraulic structures and buildings per latest standards
- Resident supervision of civil works
- Ensure material specifications and execution per design

Punjab Irrigation System Improvement Project

Project Duration – 3 Years (Feb 2022 – Feb 2025)

Overview

- Client: Joint Venture led by NESPAK
- ICS Role: Sub-consultant
- Subprojects:
  - Rehabilitation and Upgradation of Upper Jhelum Canal System
  - Remodeling and Upgradation of DG Khan Canal System
  - Greater Thal Canal Phase-III (Dhingana, Noorpur, Mehmood Sub Branch Systems)
  - Remodeling of R-Q, Q-B, and B-S Link Canals

ICS Responsibilities

- Climate change studies
- Sediment transport modeling
- Model studies
- Agronomic studies
- Livestock development and range management studies

Sr.	Sub-project	Culturable Command Area (ha)
1	Rehabilitation and Upgradation of Upper Jhelum Canal System Project	244,328
2	Remodeling and Upgradation of DG Khan Canal System Project	384,082
3	Greater Thal Canal Phase-III (Dhingana Branch, Noorpur Branch and Mehmood Sub Branch Systems) Project	440,850
4	Remodeling of R-Q, Q-B and B-S Link Canals Projects	1,083,159
	Total	**2,152,419**

Punjab Water Resources Management – Detail Design of Canals and Link Canals

Project Duration – 3 Years (Feb 2021 – Feb 2024)

Overview

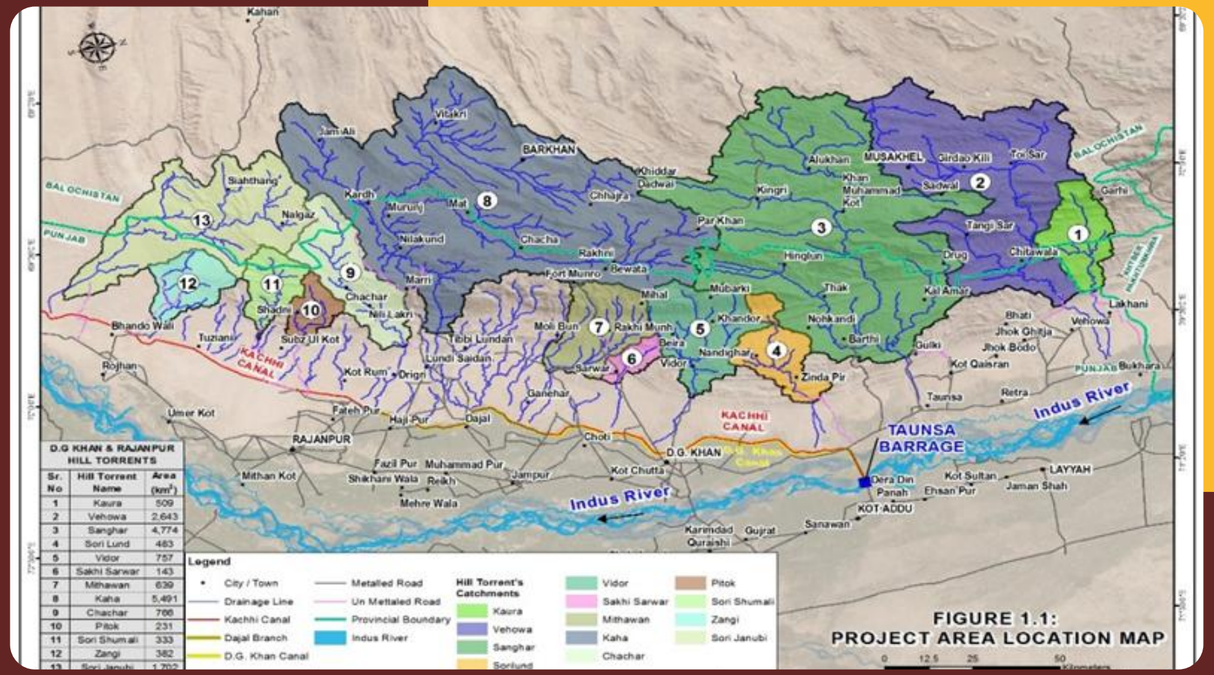
- Client: JV of NESPAK and ACE, ICS as sub-consultant
- Location: Suleiman Mountainous Range, DG Khan and Rajanpur Districts
- Context: 200+ hill torrents, 13 major (7 in DG Khan, 6 in Rajanpur), frequent flooding (2001, 2008, 2010, 2012, 2013, 2015)
- Objective: Recommend interventions for improved water and agricultural productivity, support project readiness

Project Scope

- Update feasibility studies
- Detailed design, tender and construction drawings
- Cost estimates, social safeguard documents, PC-Is, bidding documents
- Technical specifications

ICS Responsibilities

- Hydraulic design of dams
- Model studies
- Climate change risk assessment
- Range management studies
- Livestock development studies
- Assist in developing project drawings and cost estimates



Harnessing of Hill Torrents of DG Khan and Rajanpur Districts

Project Duration – 6 Months (Apr 2019 – Sep 2019)

Project Cost – US$ 134,980

Overview

- Client: Asian Development Bank, Landel Mills (ICS as sub-consultant)
- Location: Central Punjab
- Objective: Irrigate 704,000 ha of unproductive land
- Scope: Complete Greater Thal Canal (GTC) scheme, covering 440,000 ha
- Existing: Main canal and Mankera branch (65 km) completed in 2010
- Water Source: Chashma-Jhelum link canal (Indus River diversion)

Project Components

- Construct three branch canals:
  - Chaubara (73 km)
  - Dhingana (91 km)
  - Mahmood (54 km) and Nurpur (58 km)
- Associated structures for reliable monsoon (kharif) irrigation
- On-farm command area development for entire GTC scheme

ICS Responsibilities

- Agricultural development
- On-farm water management
- Economic analyses
- Environmental and social safeguards
- GIS studies

Preparing Greater Thal Canal Project (ADB Technical Assistance)

Project Duration – 1 Year (Mar 2015 – Mar 2016)
Project Cost – US$ 147,700

Overview

- Client: World Bank funded
- JV: NDC and EGC, ICS as sub-consultant/associate
- Location: Pothohar Region
- Scope: Project preparation, detailed design, bidding documents, construction supervision
- Components: Dams, command area development, High Efficiency Irrigation System

Project Activities

- Feasibility studies
- Bid design and bidding
- Construction supervision

ICS Responsibilities

- Agronomy support
- Field surveys
- Design support to project team

Pothohar Climate Smart Irrigated Agriculture Project (PCSIAP)

Preparation of "Disaster Mitigation and Preparedness Plan" for Soan Valley.

Project Duration – 18 Months (Jan 2006 – Jun 2007)
Project Cost – US$ 24,230

Overview

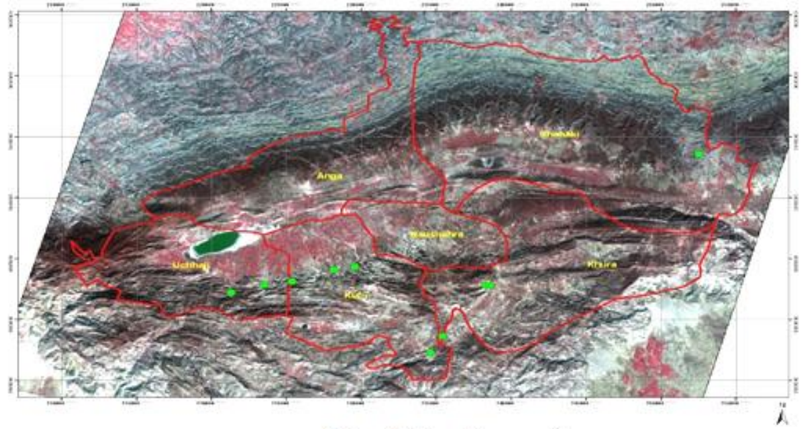
- Client: NESPAK (lead), ICS as associate/sub-consultant
- Location: Soan Valley, Khushab, Punjab (585 km², 45 km x 13 km)
- Population: ~277,000
- Objective: Strengthen community resilience against natural disasters
- Pilot project for PPAF's Disaster Mitigation and Preparedness Program

Project Scope

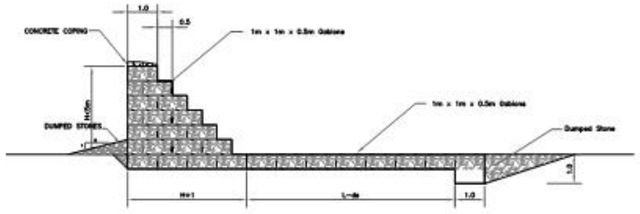
- Develop Disaster Mitigation and Preparedness Plan (DMPP)
- Focus: Flood and drought protection, water conservation, early warning systems
- Sub-projects: Delay action dams, check dams, irrigation channels, community/household water management
- Ensure optimal use of surface and sub-surface water and natural resources

ICS Responsibilities

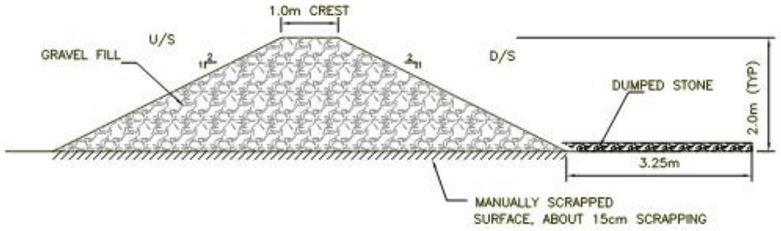
- Team leadership
- Water resources studies
- Geotechnical studies
- Design of delay action and check dams
- Agro-economic studies



Delay Action Dams sites



DELAY ACTION DAM (GABION)



CHECK DAM

Project Duration – 10 Months (Jan 2006 – Sep 2006)
Project Cost – US$ 67,500

Overview

- Client: Asian Development Bank (ADB)
- Associates: ICS with Halcrow Pakistan (Lead) and Halcrow Group (UK)
- Focus: Lower Bari Doab Canal (LBDC) command area

Objectives

- Improve water resources management at all levels
- Strengthen institutional frameworks for irrigated agriculture and water resources
- Rehabilitate and modernize irrigation infrastructure for sustainable O&M
- Enhance environment for improved agricultural productivity

ICS Role

- Support water resources management studies
- Assist in capacity building and institutional framework development
- Contribute to infrastructure rehabilitation and modernization designs
- Promote sustainable agricultural productivity enhancements

Punjab Irrigated Agriculture Development Sector Project including feasibility study for rehabilitation of Balloki Barrage and Lower Bari Doab Canal System.

Project Duration – 3 Years (Feb 2019 – Feb 2022)
Project Cost – US$ 37,500

Overview

- Client: Asian Development Bank, Landell Mills (ICS as sub-consultant)
- Objective: Enhance Integrated Flood Risk Management (IFRM) in ADB's Developing Member Countries (DMCs)
- Focus: Strengthen IFRM solutions, promote basin-wide and nature-based solutions (NBSs) for flood resilience and climate change adaptation

Project Outputs

- **Output 1: Enhanced IFRM Knowledge**
  - Develop technical notes and reference guides for IFRM approaches and project design
- **Output 2: Flood Risk Evaluations**
  - Conduct IFRM-based benchmarking to assess DMC vulnerability to floods and climate change
- **Output 3: IFRM Integration in ADB Investments**
  - Provide technical support to integrate IFRM into design of three flood management projects

ICS Responsibilities

- Provided National Flood Risk Management Specialist for Pakistan
- Liaised with national stakeholders
- Conducted SWOT analysis
- Supported capacity building for IFRM implementation

Strengthening Integrated Flood Risk Management (ADB Regional Technical Assistance)

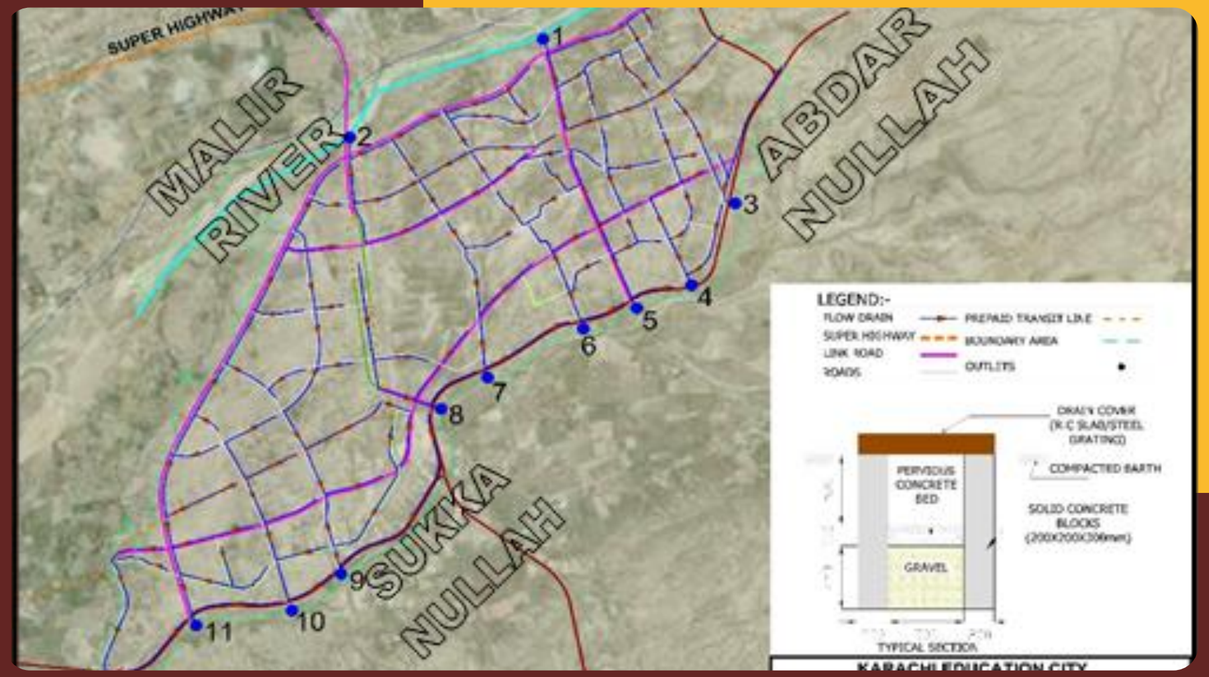
Project Duration – 5 Months (Mar 2011 – Jul 2011)
Project Cost: US$ 14,000

Project Overview

- Location: Northeast of Karachi, between Malir River, Sukka Nullah, and Abdar Nullah

ICS Responsibilities

- Water source identification studies
- Storm water estimation
- Storm water management (reuse and disposal)



Master Planning of Karachi Education City

Others

Project Duration - 14 Months (Oct 2018 - Dec 2019)

Client:
Total Parco Pakistan Ltd.
Location:
Karachi, Pakistan
Cost
833,333 USD
Covered Area:
30,000 ft2
Status:
Complete
Services Provided:
Architecture & MEP Layouts, Interior Design and Construction Supervision

Total Parco Pakistan Limited- Regional Office

Project Duration – 7 Months (Dec 2011 – Jun 2012)
Project Cost:US$ 75,856

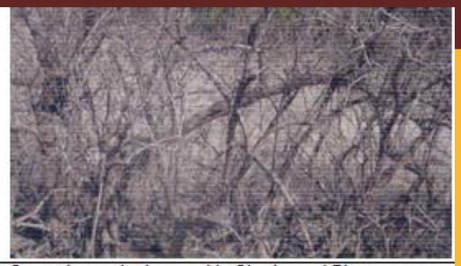
Overview

- Context: Severe flooding across Pakistan in July–August 2010
- Client: World Bank
- Location: Sindh Province
- Objective: Assess rural and urban livelihood susceptibility to environmental changes and 2010 flood impacts, and evaluate household-level recovery factors
- JV: ICS with International Development Consultants (IDC)

ICS Responsibilities

- Client coordination
- Overall project coordination
- Conducting field surveys
- Preparation of household survey report

Agricultural land underwater, highly polluted with toxic chemicals after flood



Stunted growth observed in Shrubs and Plants

Field visit with the WB study Coordinator at the project area.

Household Listing Survey

Photograph of Training Session

Household Interview

Household Survey of Flood Affected Areas in Sindh, Pakistan

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