



Tehran - Boston Engineers
TBE
[Since 1962]

TERMINAL AREA SITE PLAN

SCALE 0 20 40 60 80 Meters

Property Limits
(To Be Enclosed in Barbed Wire)

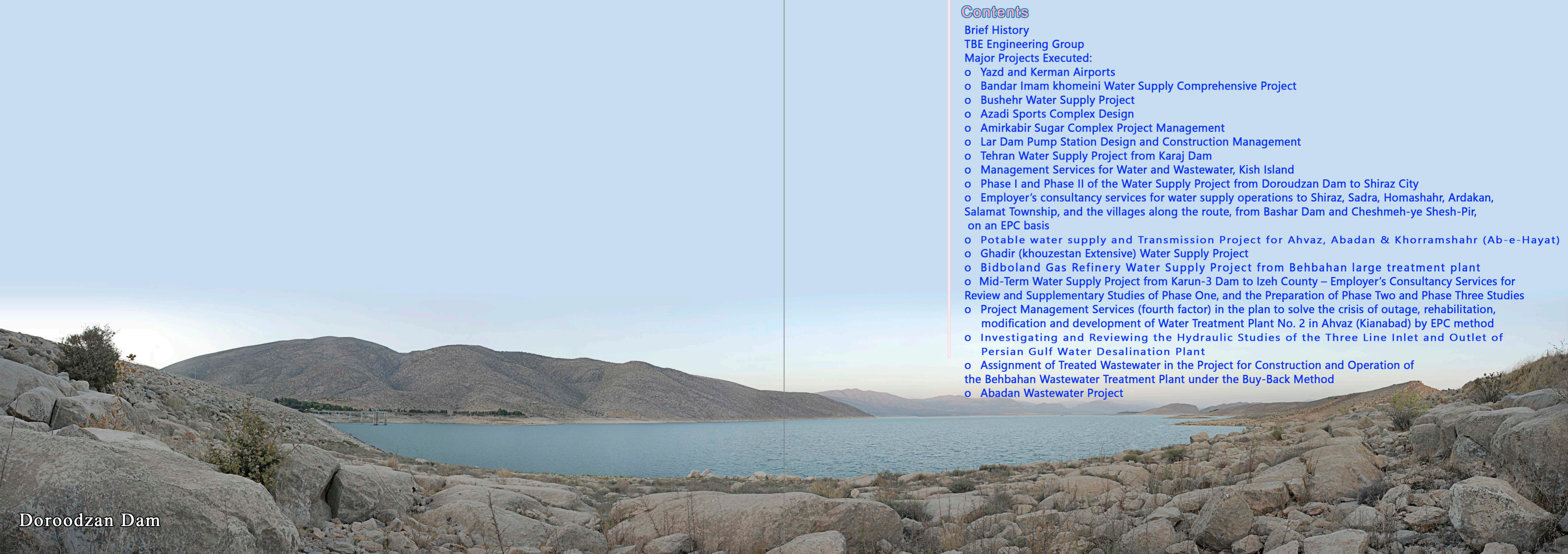
AIRFIELD

DEVELOPMENT PLAN

SCALE 0 200 400 Meters

July 2026 Edition

English



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- o Abadan Wastewater Project

Doroodzan Dam

BRIEF HISTORY

Tehran-Boston Engineers (TBE) was established in 1962 in partnership with the consulting firm of Metcalf & Eddy (M. & E.) of Boston U.S.A. with the object of transferring technology in the field of engineering services.

The objectives of the partnership were :

- o To establish a leading consulting engineering partnership in Iran.
- o To introduce and apply leading world technical standards in design and construction fields of various construction projects.

By the year 1970 the objective was achieved and the affiliation was terminated by mutual consent. Since then TBE resumed its activities as a hundred percent Iranian Consulting engineering firm.

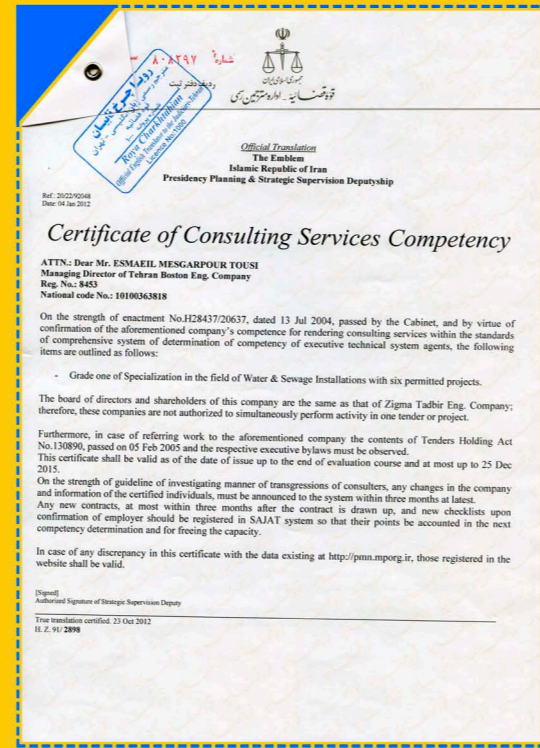
While keeping the original TBE name the local part of the partnership continued the work as a 100% Iranian company.

In more than half century, since its establishment ,TBE has successfully completed many Projects consisting of design, construction, project management, supervision of construction work in the fields of water supply and wastewater projects and other.

Some of the major projects in the above fields are described in the accompanying literature.

Currently, TBE has been classified and graded professionally by planning and Management Organization of Iran as:

- o First Grade in Water and Wastewater Engineering
- o Third Grade in Irrigation and Drainage Networks
- o First Grade in Project Management Services in the Specialty of Water and Wastewater Engineering
- o Third Grade in Contracting Qualification in the Water Sector
- o Fifth Grade in Contracting Qualification in the Oil and Gas Sector
- o Fifth Grade in Contracting Qualification in the Field of Installations and Equipment
- o First Grade in Operation and Maintenance of Supply, Transmission, and Distribution
- o First Grade in Operation and Maintenance of the Treatment Plant
- o Fourth Grade in Operation of Desalination Plants
- o Fourth Grade in Operation and Maintenance of Desalination Plants
- o Third Grade in Operation and Maintenance of Wastewater Treatment Plant

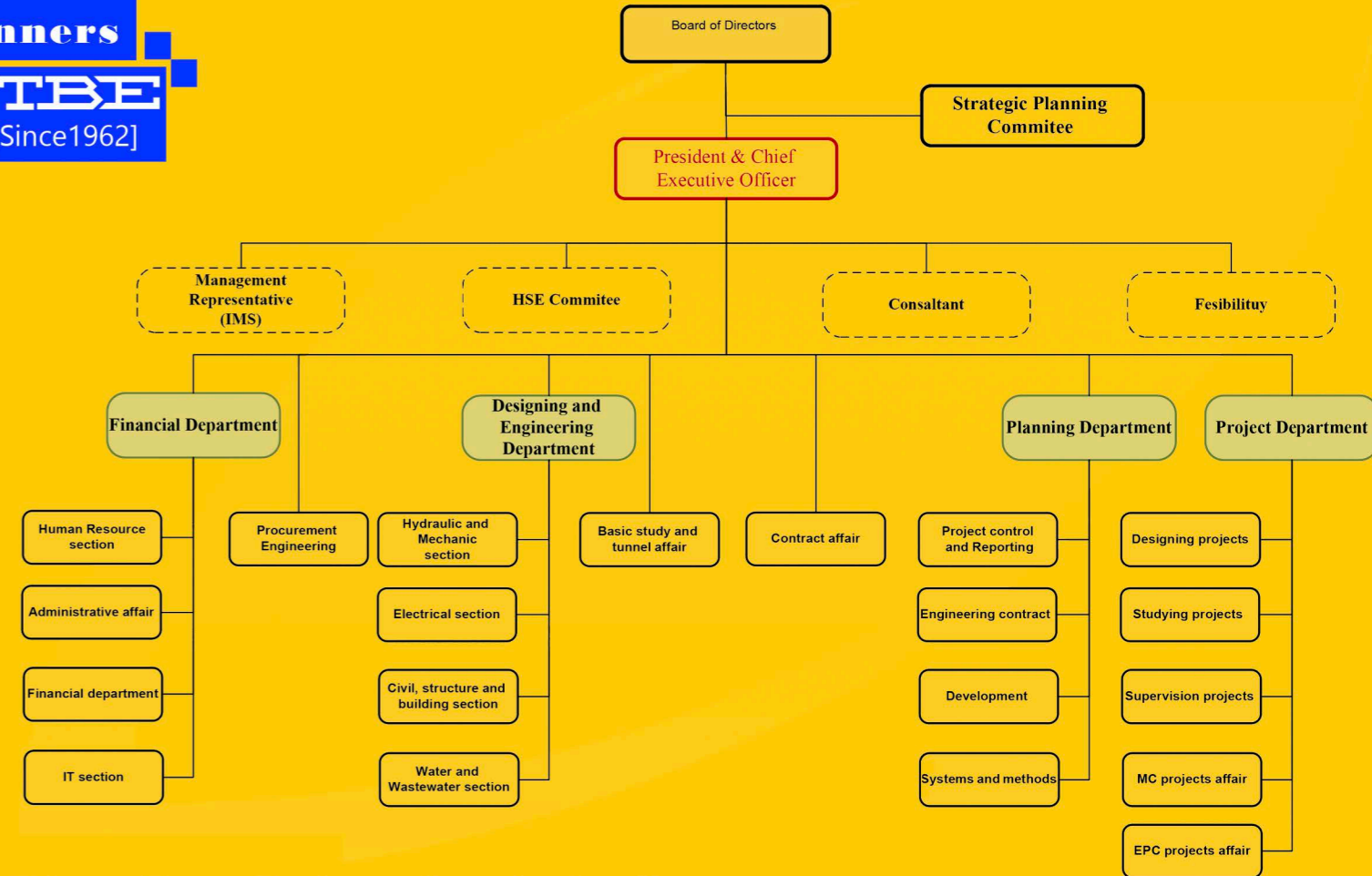


Tehran - Boston Engineers



As a leading Consultant TBE provides engineering services on :

- Water and Wastewater Utility
- Water Supply and Transmission
- Irrigation and Drainage Network
- Water and Wastewater Treatment Systems
- Domestic Wastewater Treatment
- Industrial Wastewater Treatment Plants
- Water Supply from Dam Reservoirs
- Tunnels and Underground Works
- Civil and Structural Works
- River Engineering
- Water Resources Development
- Concrete Protection and Marine Structures



Tehran - Boston Engineers Organization Chart

TBE Engineering Group

At the fifth decade of its activities and in order to expand the domain of its ever offered services on design, procurement and execution of engineering projects, employment of expert and experienced professionals and their motivation and knowledge transfer to different regions of the country and considering the market demand for engineering and technical services, the TBE Engineering Group was established, with subsidiaries as listed hereunder.

OIE OXIN TADBIR ENGINEERS

Oxin Tadbir Company was established in 2003 and is located in Khuzestan Province of Iran. As an independent company of Tehran-Boston Engineers active in offering technical, management and consultation services for to various projects and training local engineers in order to apply world class standards, This company can offer a wide range of services such as:

- Basic design
- Detailed Engineering
- Project management
- Installation and operation management
- Project Control

For the following:

- Water supply and sewage
- Wastewater collection
- Provision of maintenance instructions
- Wastewater treatment

Some of the most important design accomplishments of Oxsin Tadbir Co are as follows:

- Water supply design for Fajr Petrochemical Plant
- Water supply and distribution for Andimeshk city
- Water supply and distribution for Khuzestan steel complex
- Long term Water Supply and Distribution for Emam Petrochemical complex
- Construction of water supply reservoir for Emam Petrochemical complex
- Water supply and distribution for Abadan & Khoramshar cities
- Engineering services for initial and subsequent water supply and distribution system for city of Izeh

TEC Tadbir Eskan Co.

Tadbir Eskan Engineering Co. was established in 2002 in order to construct the steel structures designed by Tehran Boston Eng. As a dependant company Tadbir Eskan, now offers a wide range of services in both steel structures and related equipment.

The activities include the following:

- Specialized buildings
- Residential buildings
- Factories

This company has the capability to provide its clients with the following technical services:

- Consultation (economic evaluation of the projects, budget allocation etc.)
- Feasibility studies
- Design and submission of drawings
- Construction, inclusive of supervision of contracted work

Furthermore, the experienced technical team of the company has the expertise to apply well-known construction regulations such as UBC-IBC, Euro-code, and many other similar regulations. Some of the recent accomplishments of Tadbir Eskan Co. are listed below:

- Design and construction of 4units residential and administrative buildings.
- Designing 1100 units Mehr residential buildings in Esfaryanaen and Parand.
- Designing a water treatment plant for Gamsar city
- Design and construction of 4units administrative buildings in Hashtgerd city

ΣTE SigmaTadbir Engineers

As a Tehran-Boston dependant company, Sigma Tadbir consulting engineers was established in 2010 after employing professionals in oil& gas, petro chemistry and chemical units fields.

This company is offering a wide range of technical services like definition (including market research, economic evaluation and feasibility studies), extension (including technology provision and transfer, contractual services, project management and construction management) and project services (including scheduling and cost management of the projects, conceptual studies and fundamental design and equipment purchase services) to some important sectors and industries such as:

- Oil and gas process facilities
- Oil and gas fields development (Upstream and Surface facilities)
- Transmission and pipeline systems
- Fixed system (system, supplies, storage and...)
- Chemical industry and related facilities

Sigma Tadbir company is already known as the consultant for construction of the 26/24/20 inch oil transfer pipeline between Abadan refinery and pumping station in Tangefani and also 24 inch crude oil transfer pipeline from Sabzab pumping station to Tangefani pumping station and as a result offers the following services to its client:

- Management, planning and project control
- Review and basic engineering design
- Design and detailed engineering
- Procurement engineering services
- Detailed engineering design services (including route selection and mapping, hydrology, geology and geotechnical surveys)

Major Projects Executed

Municipal water Supply

Shiraz Water Supply Project	1970
Bushehr Water Supply Project	1970
Bandar Imam Khomeiny Water Supply Comprehensive Project	1971
Mazandaran Cities Group "A" Water Supply	1971
Water Supply, Transmission and Distribution Network for 17 Khosestan Cities	1979
Emam Khomeini Special Economic Zone, Long Term Water Supply and Transmission	1999
Tehran 6th. Water Treatment Plant	2002
Droudzan Dam Water Transmission Capacity Increase Project and Shiraz Long Term Water Supply	2002
Khozestan South Eastern Cities Long Term Water Supply and Transmission	2003
Shiraz long term Water Supply Project	2012

Urban sewage

Preliminary study of Tehran sewerage project	1971
Sewer Collection & Drainage, of Sarbandar City	1972
Supervision of the Tehran water and wastewater projects	2002
Technical, Economic, Social and Ecology Studies of Fereidunkenar City Sewage Project	2003
Maintenance and preserve of Kish Sewage Treatment plant	2005
Arvand Water and Wastewater System	2008
Wastewater Project of Abadan, Mahshahr, and Andimeshk Cities	2011
Construction of the Wastewater Treatment Plant and Effluent Transmission Pipeline for Behbahan City	2024

Water Utility in Petrochemical Industry

Sea Water Intake Project	2013
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Industrial projects

Qazvin Sewage Collection, Treatment and Disposal System	1970
Istelak Industrial Factories, Sewage Projects	
Toliddaro Industrial Factories Sewage Projects	1976
Water Supply of Iran Steel Industrial National Group	1991
Ahwaz Steel Irrigation Landscape	1995
Maroon Petrochemical Ethane Recovery Unit raw water transmission and treatment	2001
Transmission Condensed Water of Sugar Factory to Irrigation Canal	2003
Investigating and Reviewing the Hydraulic Studies of the Three Line Inlet and Outlet of Persian Gulf Water Desalination Plant	2020

Study and Development

Providing Architectural Design for Power Plants in Some Cities	1966
Providing Maintenance and Operation Manual for Bandar-Emam Water Supply	1969
Khuzestan Water and Power Authority Personnel Training for Maintenance and Operation of Bandar Imam Water Supply	1969
Study of Concrete in Tropical Areas of Iran	1994
Unaccounted for Water in Ahwaz Pilot Plant (International Research Plan, Development and Improvement Of Municipal Water Supply)	1996
Babol Water Supply History Report	2002
Study Under Ground Water of Assaluyeh	2004

Tehran-Boston Engineering Co. is one of the pioneers of engineering services in Iran, which has been involved in large construction projects for nearly 60 years. The company has completed more than 200 projects in its lifetime till now. Therefore it is possible to see various types of construction and industrial projects in the form of different contracts in company's CV. The company has gone through all the steps needed to grow a company so that today, with past experiences, it can accomplish a wide range of engineering services, procurement and construction for large projects with great confidence.

Tehran-Boston Engineering Co. started its activities by providing engineering services (basic studies, design and supervision) and continued to work on EPC projects by providing project management services in projects with diverse specialized fields. Today, its approach is to participate in EPC, EPCC and EPCF projects, either independently or by participating in consortiums of the most experienced Iranian companies. In this way, by putting all of its capabilities into one package, it can guarantee that the client enjoys the high quality of the project.

The following is a brief overview of the past and ongoing projects of this company:

Dam and Tunnel

Lar Dam Pump Station Design and Construction Management	1996
Tehran Water Supply Project from Karaj Dam	2002

Retrofit against earthquake

Retrofit Project for Shiraz Water Supply	2003
Rechecking Contract for Structural Projects of Great Tehran	2007

Civil Structures and Buildings

Yazad and Kerman Airports	1964
Azady Sports Complex Design	1968
Repair Of Concrete Structures In Sarbandar and Marghzar Wastewater Works	1993
Renovation of Industrial and Nonindustrial Buildings Of Fulad Ahwaz	1996
Construction of Telemetry Buildings and Ultrasonic Rooms	2005

Engineering, procurement and construction (EPC)

Ghadir Water Supply Project (Khuzestan Extensive Water Supply Project Design and Construction Supervision)	2009
Erbil International Food and Fruit Market Wastewater Treatment	2013
Investigating and Reviewing the Hydraulic Studies of the Three Line Inlet and Outlet of Persian Gulf Water Desalination Plant	2017

Project Management Contract (MC)

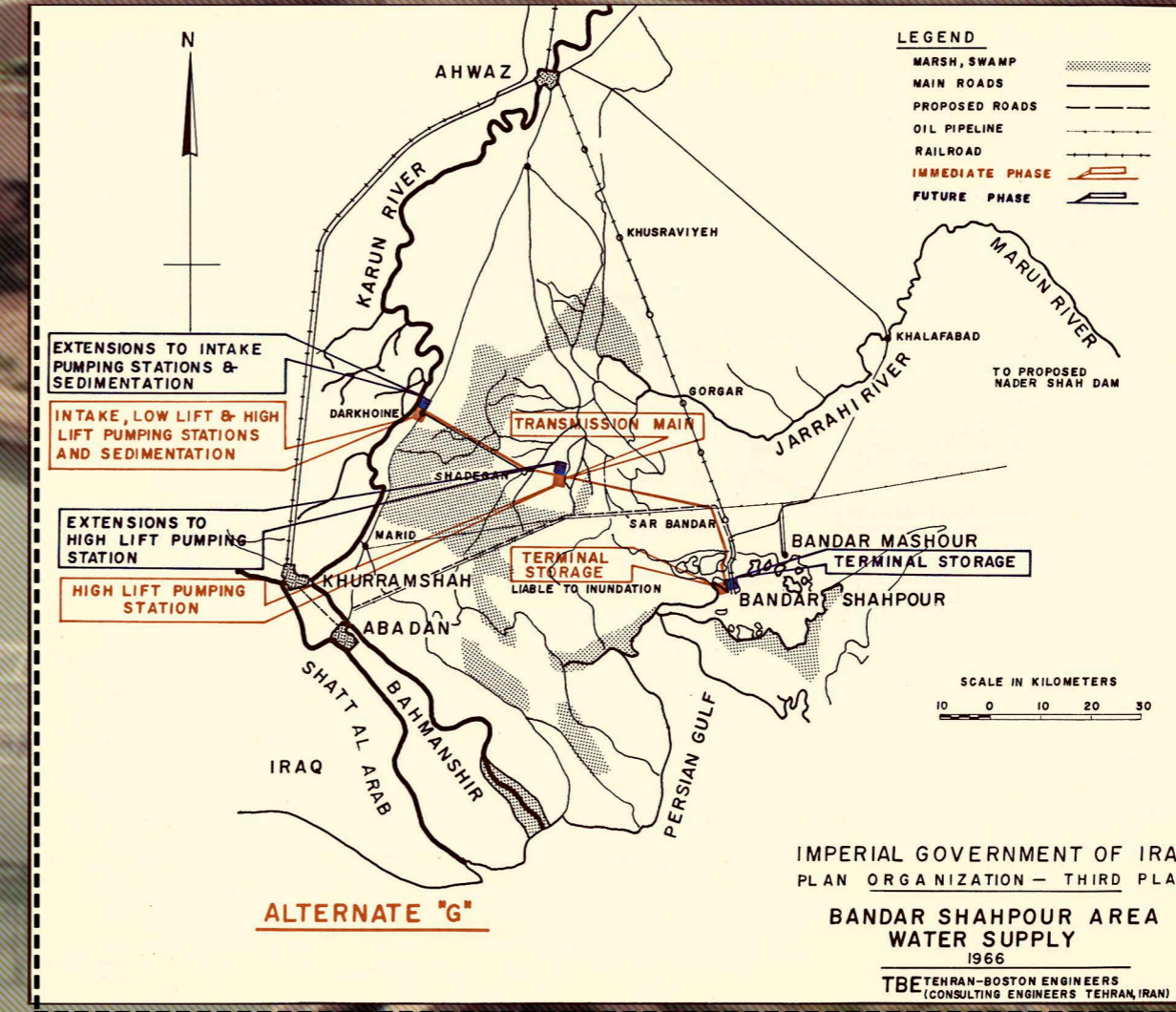
Amirkabir Sugar Complex Project Management	2000
Construction Management of Petrochemical Special Economic Zone (phase1), Water Supply and Transmission Project	2000
Management Services for Water and Wastewater, Kish Island	2009
Project Management Services for Emergency Response, Rehabilitation, and Development of Ahwaz Water Treatment Plant No. 2	2023

Bandar Imam Khomeini Water Supply Comprehensive Project

The preliminary study, detail design and supervision on construction of the project with water flow of 4.9 m³/s capacity consist of an intake pump station on the Karun river, 90 Km of Transmission line (GRP pipelines of 1800 to 1950 mm diameter and open canal with a capacity of water flow 11.5 m³/s), 2 pumping stations (mansouri 1 and 2), 3 water treatment plants with 3, 4.5 and 4 m³/s capacity each and steel reservoirs.

Overview of Services Provided by TBE :

- ✓ Collection and data gathering;
- ✓ Study of water design factors:
 - Characteristics and quality of raw water
 - Determination of treatment
 - Determination and forecast of water demand
 - Site selection for pump stations.
 - Site selection for water treatment plants;
- ✓ Pipeline and open canal Hydraulic Calculation
- ✓ Preparation and submission of the report;
- ✓ Preparation of drawings for civil, mechanical and electrical works;
- ✓ Preparation of tender documents;
- ✓ Carrying out tendering procedure and selection of the contractors;
- ✓ Supervision of construction works.



The Initial Fee:
500,000 \$

Project Location:
Bandar Imam khomeini

Client:
Khuzestan Water and Power Organization

Project Period:
1973 – 1985

Bushehr Water Supply Project

The main objective of this project, which was a high priority, was to provide and supply drinking water for Bushehr and Borazjan Cities. By implementation of this project, daily amount of 10.500 m³ treated water was supplied from Shahpour River. The work consisted of transfer of river water to the reservoir and thereafter to the treatment plant. After completion of treatment process, a high pressure pumping station transfers treated water via pipelines to the Borazjan City's reservoir. From this reservoir, the water is transferred to Bushehr City and Air Force Base via pipelines equipped with break pressure valves.

Overview of Services Provided by TBE:

- ✓ Feasibility Study and Initial Design of the Project;
- ✓ Providing detail led Designs, Bill of Quantities for Equipment and Materials;
- ✓ Performing Hydraulic and Water Hammer Calculations;
- ✓ Preparation of Tender Documents;
- ✓ Supervision of Construction works, Putting into Operation and Handing Over to the Client.

valley behind rock formation

The Initial Fee:
557,000 \$

Project Location:
Borazjan and Bushehr Cities

Client:
Fars Regional Water Authority

Project Period:
1970 – 1972

Azady Sports Complex Design

Present Azadi Stadium as Olympic Stadium was designed to hold the 1974 Asian Games. Its architectural design was done by Abdolaziz Farmanfarmaian and Associates and other engineering services as required by other companies. Tehran-Boston Engineers was responsible for calculations and design of concrete structures, Kan river diversion and artificial lake of the stadium.

Overview of Services Provided by TBE :

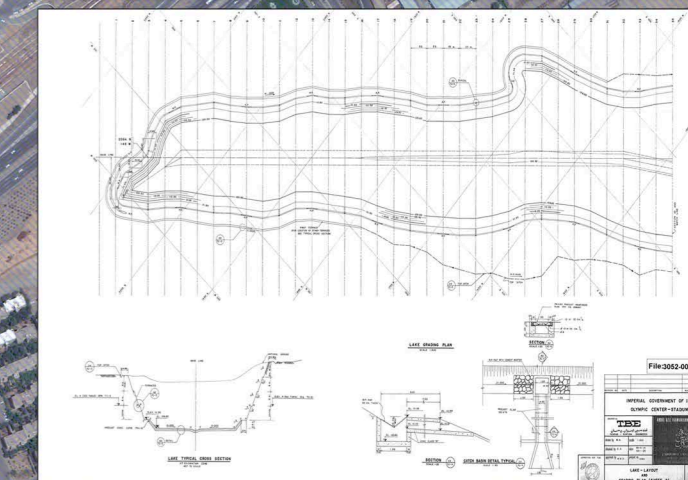
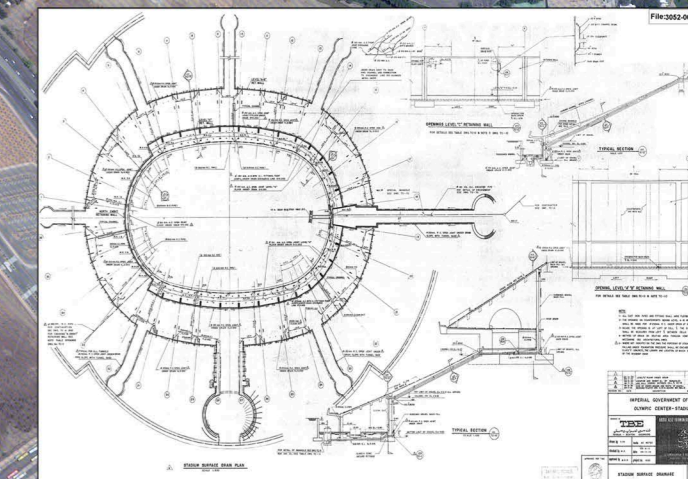
- ✓ Study and design of hydraulic structures and transfer of Kan river water to the artificial lake;
- ✓ Study and design of hydraulic structures of the artificial lake;
- ✓ Study and design of surface and sub surface drainage;
- ✓ Study and design of concrete structures of the stadium;
- ✓ Recommendations on amendments to architectural concepts, where necessary, as result of soil and structural investigation;
- ✓ Supervising soil borings and evaluation of soil test results to be used in design of the lake, dam and stadium structures.

The Initial Fee:
156,000 \$

Project Location:
Tehran

Client:
**Abdol Aziz Farmanfarmaian
and Associates**

Project Period:
1967 – 1969



Amirkabir Suger Complex Project Management



To reduce the import of white sugar it was a priority of the Government to use the potential of the Khuzestan region to grow sugar cane and subsequently to construct sugar factories to produce white sugar for country's use.

The construction of seven such factories was considered as a priority for the purpose.

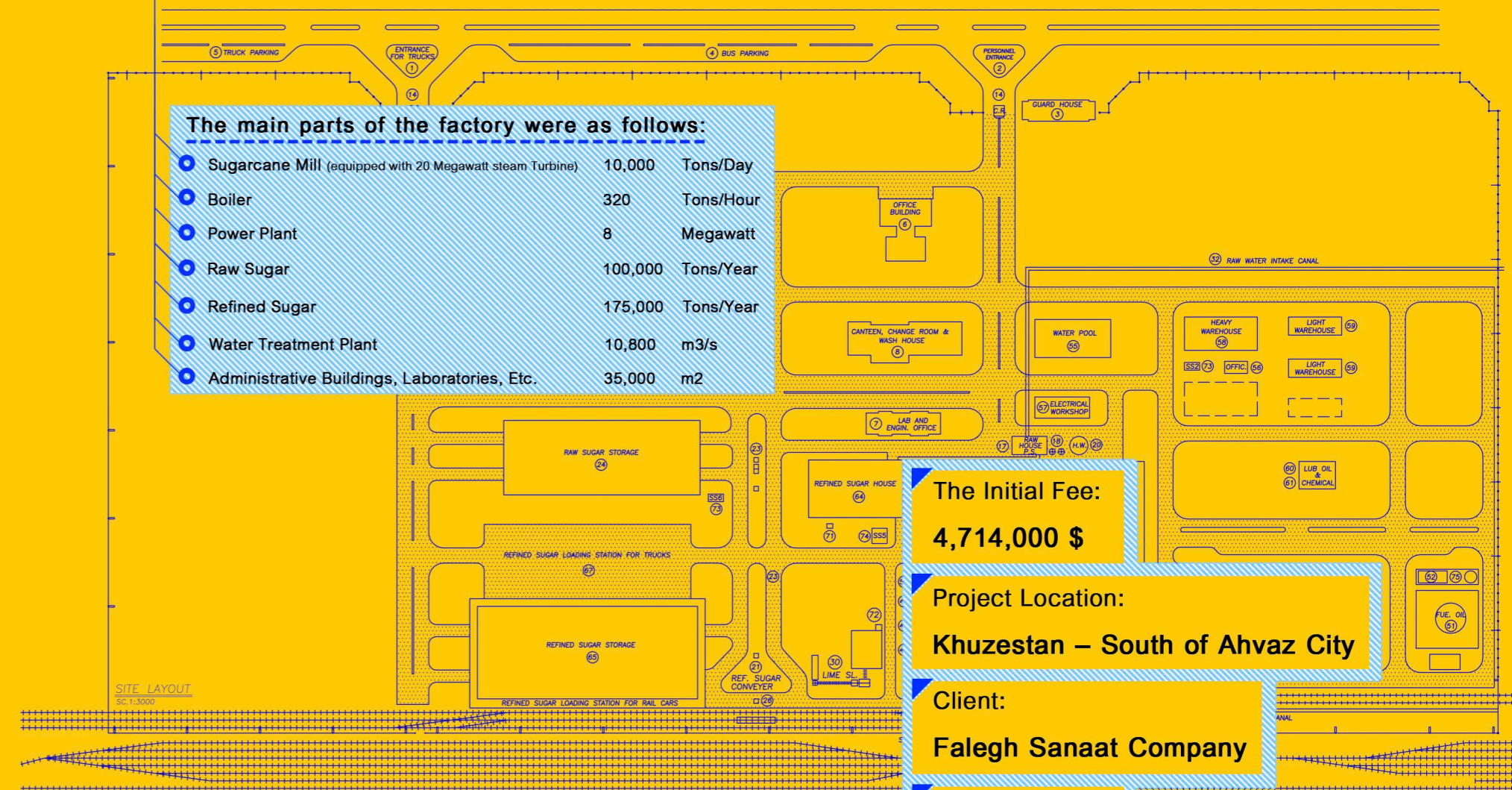
Therefore the land was acquired in appropriate areas of the region and growing sugar cane and construction of the regional sugar factories began. Amirkabir Sugar Production Factory was the second sugar production and refining factory in the series of the factories. Due to experience and expertise of Tehran – Boston Engineers in complexity and diversity of processes and procedures, the management of the project was awarded to TBE. The factory comprises raw sugar production and refining hall sections, raw and refined sugar storages, chemicals, general and open storages, laboratories, water treatment plant, lime furnace, repair and maintenance and machining hall, boilers & power plant which are equipped with state of the art equipment and are currently completely operational. Requirement of various expertise for mechanical, civil, electrical, chemical, agricultural, engineering and also installation and commissioning of equipment and machinery, various control systems was one of the most challenging tasks of the project considering importance of quality, costs and time limitations made the supervision, workshop works, interior and exterior preparations, commencement of the operation and management intensively complex and fulfilling.

Overview of Services Provided by TBE:

- ✓ Project management
- ✓ Engineering services of phase three of the project
- ✓ Workshop management
- ✓ Quality control

The main parts of the factory were as follows:

• Sugarcane Mill (equipped with 20 Megawatt steam Turbine)	10,000	Tons/Day
• Boiler	320	Tons/Hour
• Power Plant	8	Megawatt
• Raw Sugar	100,000	Tons/Year
• Refined Sugar	175,000	Tons/Year
• Water Treatment Plant	10,800	m3/s
• Administrative Buildings, Laboratories, Etc.	35,000	m2



The Initial Fee:
4,714,000 \$

Project Location:
Khuzestan – South of Ahvaz City

Client:
Falegh Sanaat Company

Project Period:
1999 – 2003

LAR DAM

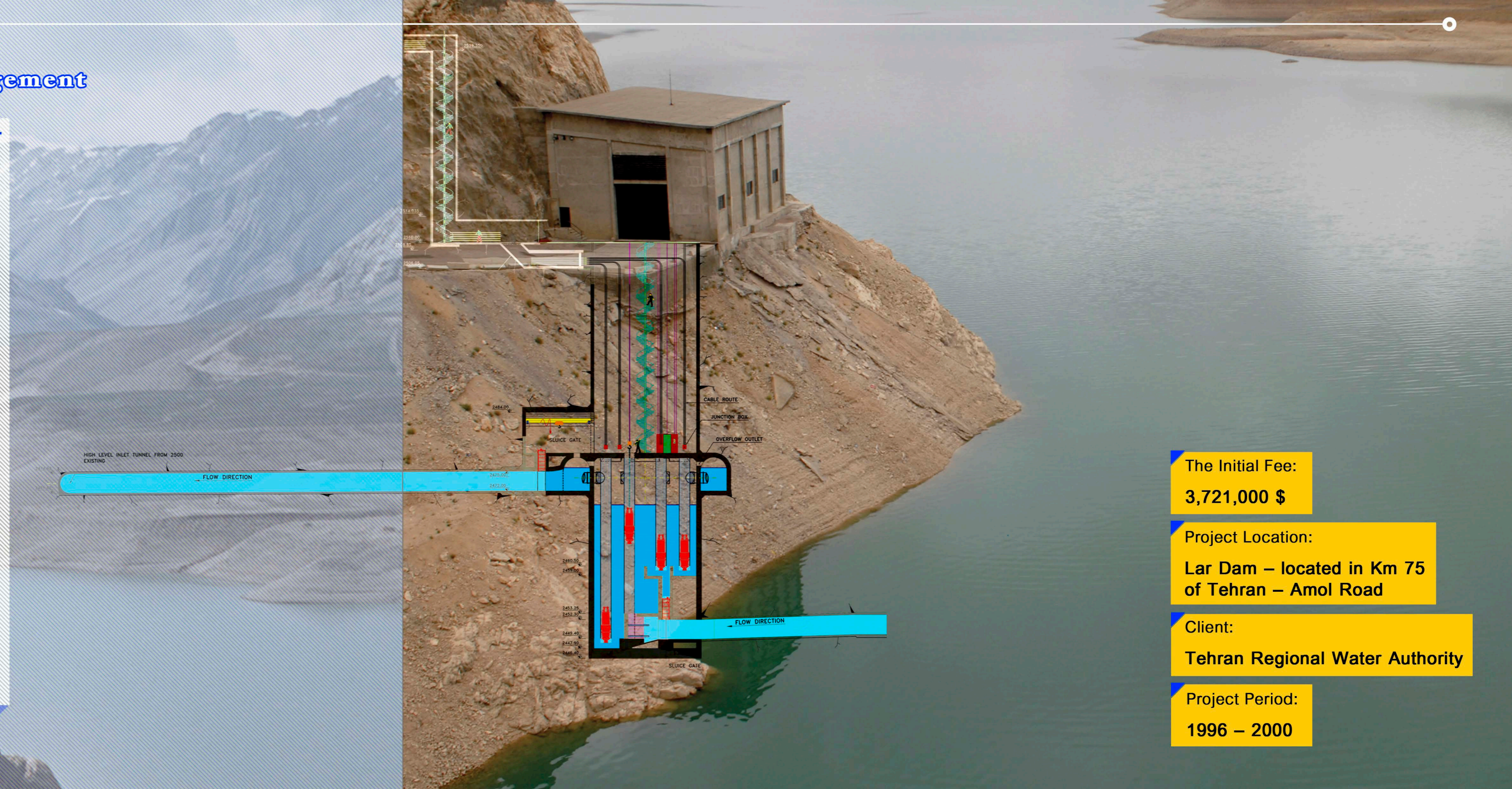
Pump Station Design and Construction Management



Objective of this project was to provide a constant and continuous water flow to Tehran City by means of construction of a shaft, vault and tunnel and also of the pumping station. The main shaft with height of 65 m and diameter of 15.5 m was constructed in main vault of the pumping station with the depth of 35 m with diameter of 25 m. The pumping station of Lar Dam is equipped with 8 submersible pumps pumping the water to the required level. In addition to the main shaft and vault, Lar Dam pumping station includes water transferring tunnel, Control Unit Building constructed in three floors with total building area of 1800 m², building constructed over the main shaft with an area of 510 m² and access roads and passages 850 m long and equipped with all related installations. The pumping capacity of this pumping station is 18.5 m³/sec.

Overview of Services Provided by TBE:

- ✓ Project Evaluation and Submission of the Report;
- ✓ Preparing draft maps and performing initial estimation;
- ✓ Preparation of execution drawings;
- ✓ Implementing technical design and determining final costs of work;
- ✓ Preparing tender Documents for Civil and Pump Station Works;
- ✓ Evaluation of offers and Submission of reports on the tenders;
- ✓ Supervision of the work performed by the contractors.



The Initial Fee:
3,721,000 \$

Project Location:
Lar Dam – located in Km 75
of Tehran – Amol Road

Client:
Tehran Regional Water Authority

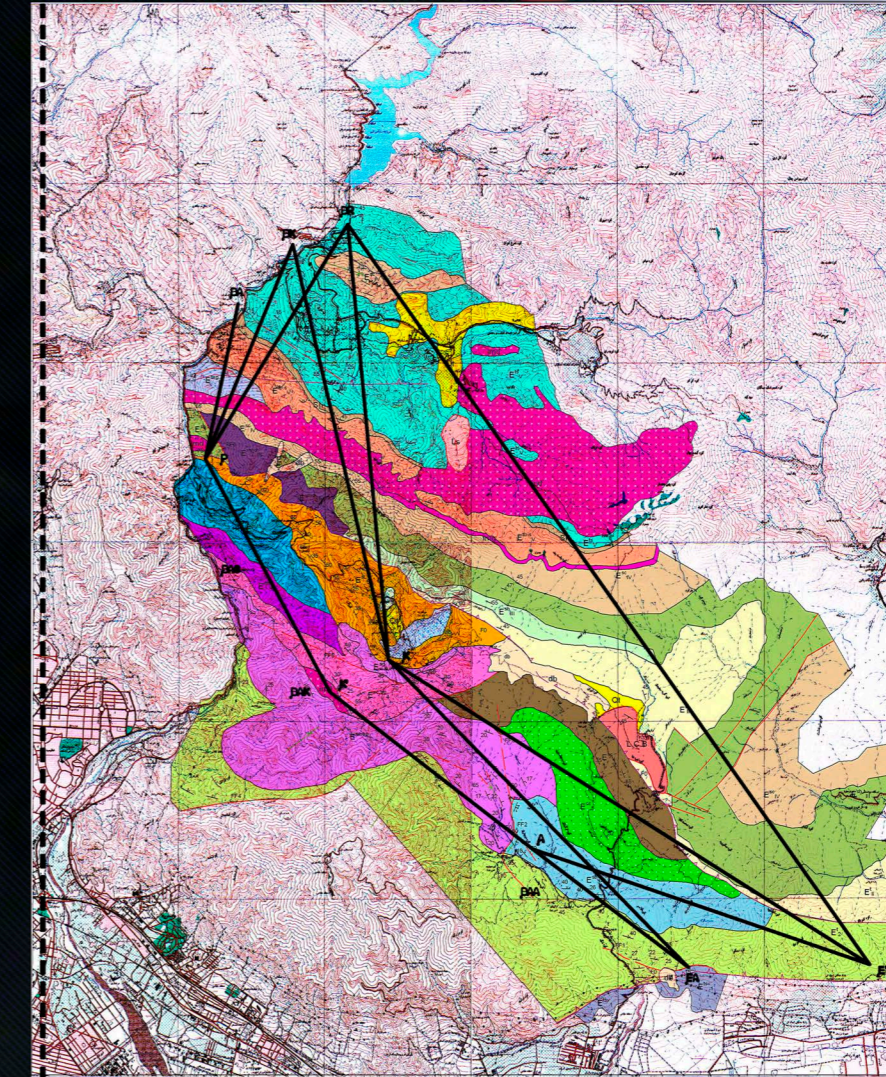
Project Period:
1996 – 2000

Tehran Water Supply Project from Karaj Dam

This project was considered to increase water supply capacity from downstream of Karaj Dam to North-West of Tehran by construction of an intake and transmission tunnel with length of 30 km, and discharge capacity of 16 m³/s to supply water to Water Treatment Plant Number 6.

Overview of Services Provided by TBE :

- ✓ Survey of different alternatives of draw-off construction facilities;
- ✓ Survey of different options of transmission including tunnel, pipeline and culvert;
- ✓ Survey of different Hydraulic Structures and Mechanical Installations related to each option;
- ✓ Survey of needed energy, electric utilities and power transmission for each option;
- ✓ Technical-economical studies to construct Hydroelectric Power Station;
- ✓ Survey of measurement, control systems and monitoring equipment;
- ✓ Survey of environmental effects and recommend methods of reducing negative effects;
- ✓ Survey of systems, excising utilities and providing reconstruction strategy, improvement and development as needed;
- ✓ Provide surveying services, geotechnical and soil mechanic analyses;
- ✓ Provide second stage program study and third stage construction work;
- ✓ Provide EPC tender documents for construction and transmission tunnel;
- ✓ Call for EPC tenders in order to construct the first section of the water transmission tunnel.



The Initial Fee:
969,000 \$

Project Location:
From Karaj dam to
Tehran 6th. Water Treatment Plant

Client:
Tehran Regional Water Organization

Project Period:
2002 – 2003

KISH ISLAND

Management Services for Water and Wastewater



To provide water supply and removal of waste water was a priority consideration of the Water and Wastewater Authority of the Kish Island. Service management inclusive of development, establishing, and optimization of operations of water and wastewater systems, water treatment, fresh water generation, and storage were the projects duly considered by the Authority.

Main parts of the project include the following :

- ✓ Wastewater system in North part of West area;
- ✓ Water transportation system for providing water to Didaniha and Ghilan Park and collecting wastewater from coastal village;
- ✓ Upgrading Central and Mirmohanna water treatment capacity;
- ✓ Wastewater treatment 10000 m³ per day;
- ✓ Wastewater system in East part of the North area;
- ✓ Pumping stations for wastewater;
- ✓ Central stations and water storage tanks of 20000 m³ capacity.

The Initial Fee:

682,000 \$
388,000 \$

Project Location:

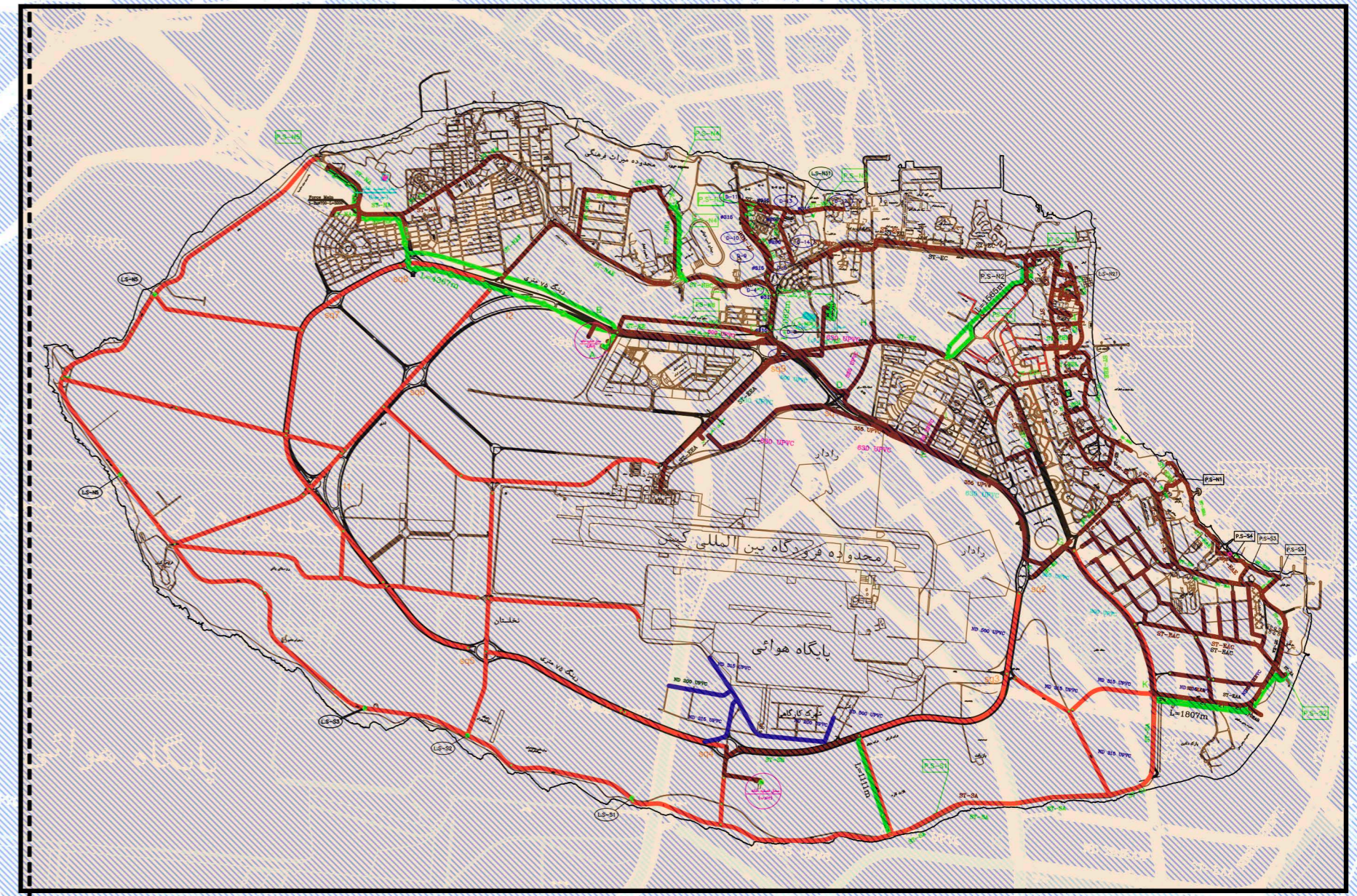
Kish Island

Client:

Kish Water Company
Kish Investment and Development Company

Project Period:

2008 – 2014



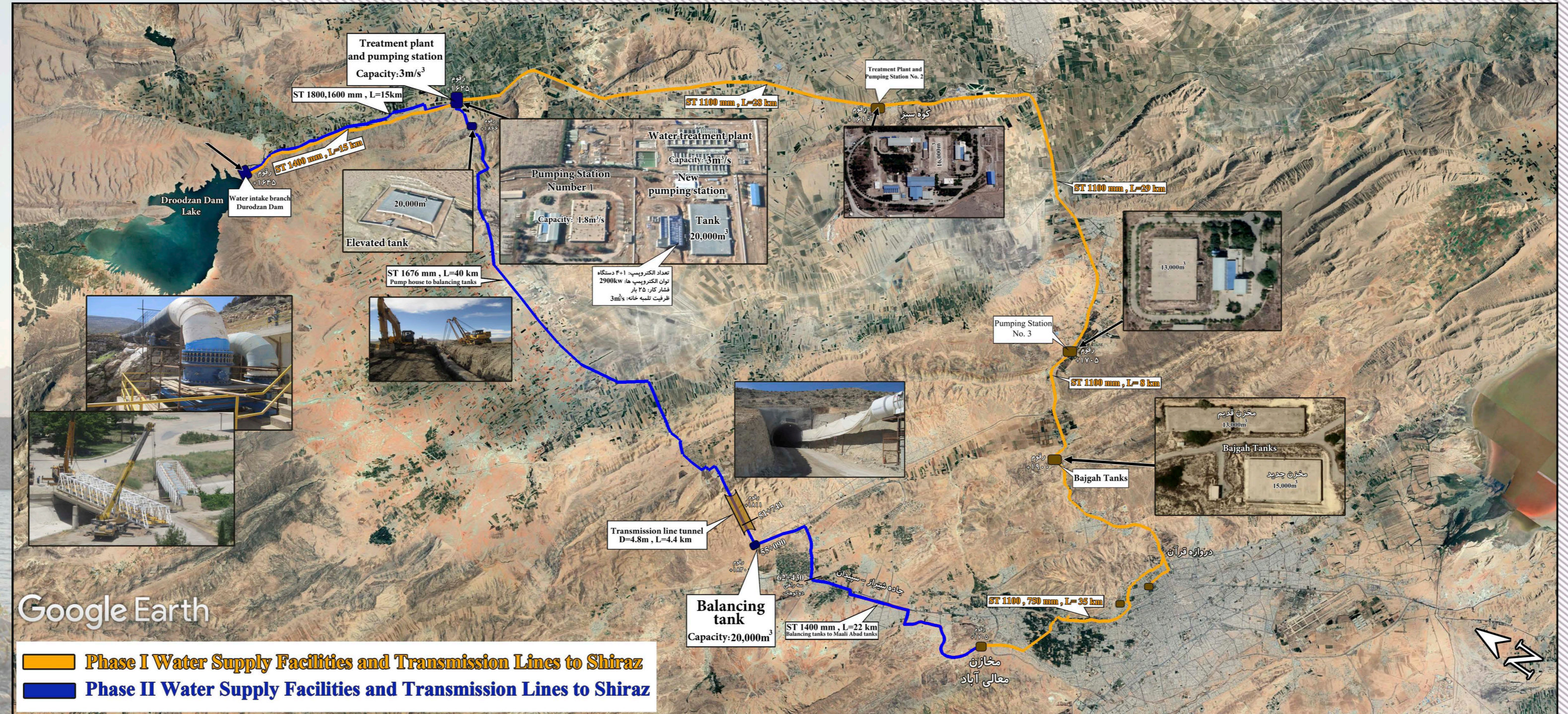
Phase I and Phase II of the Water Supply Project from Doroudzan Dam to Shiraz City

Phase I

Preliminary studies, design and supervision of the construction and implementation of this project include a water intake tower on the lake of the Doodzan Dam, 110 km of transmission line (steel pipe with a diameter of 1100 and 1400 mm), 2 pumping stations, a treatment plant and several concrete water storage tanks with a total capacity of 80,000 cubic meters. The withdrawal rate from the lake is 2.7 cubic meters per second, of which 0.9 cubic meters per second (without treatment) is allocated to the Shiraz Petrochemical Plant, and the remaining 1.8 cubic meters per second is treated and flows towards the city of Shiraz.

Design Engineering Services:

- Data Collection
- Route surveying and feasibility study for the pipeline alignment
- Choosing a location for a pumping station
- Water Demand Estimation and Forecasting
- Water Treatment Plant Site Selection
- Performing Hydraulic Calculations
- Preparation and Presentation of Technical Reports
- Preparation of Civil, Mechanical, and Electrical Engineering Drawings
- Preparation of Tender Documents
- Conducting Tender Procedures and Contractor Selection
- Resident and General Supervision of Project Execution



Google Earth

- Phase I Water Supply Facilities and Transmission Lines to Shiraz
- Phase II Water Supply Facilities and Transmission Lines to Shiraz

Phase II

The objective of this project is to provide potable water for the City of Shiraz based on the projected demand up to the year 1405 (2026/2027). The feasibility studies and detailed design of the project had previously been carried out by Tehran Boston Consulting Engineers.

Following the completion of the studies and design works for the Shiraz potable water transmission system expansion project, a separate contract was awarded under which Tehran Boston Consulting Engineers was assigned to supervise the construction and implementation of the supplementary water transmission pipelines, tunnel, water treatment plant, and pumping station associated with the Shiraz water supply system.

The scope of services includes both resident (site) supervision and general (high-level) supervision of the project execution.

Design Engineering Services:

- Phase III Engineering Services – General Supervision of Project Implementation
- Resident Supervision Engineering Services for Water Transmission Line Construction
- Resident Supervision Engineering Services for Tunnel Construction
- Resident Supervision Engineering Services for Water Treatment Plant Construction
- Resident Supervision Engineering Services for Pumping Station Construction

The Initial Fee:
73 Million \$

Project Period:
2012 – Present

Project Location:
Fars-Shiraz

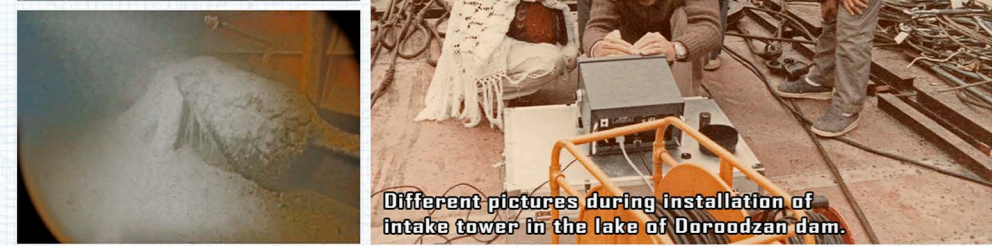
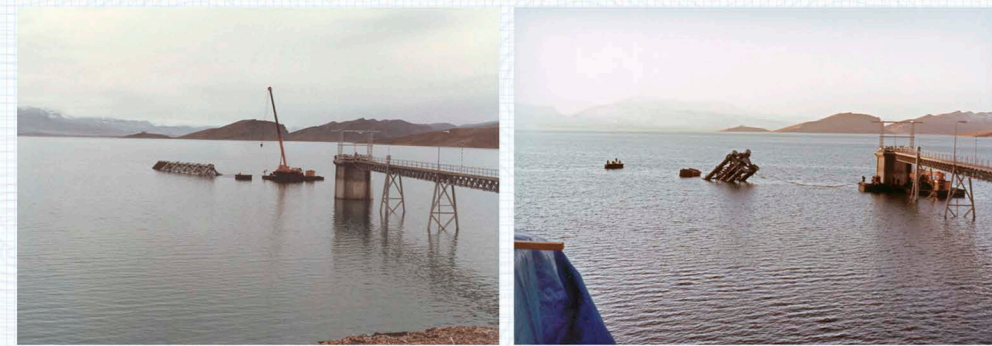
Client:
Fars Regional Water Organization

The Initial Fee:
100 Million \$

Project Period:
1970-1986

Project Location:
Fars-Shiraz

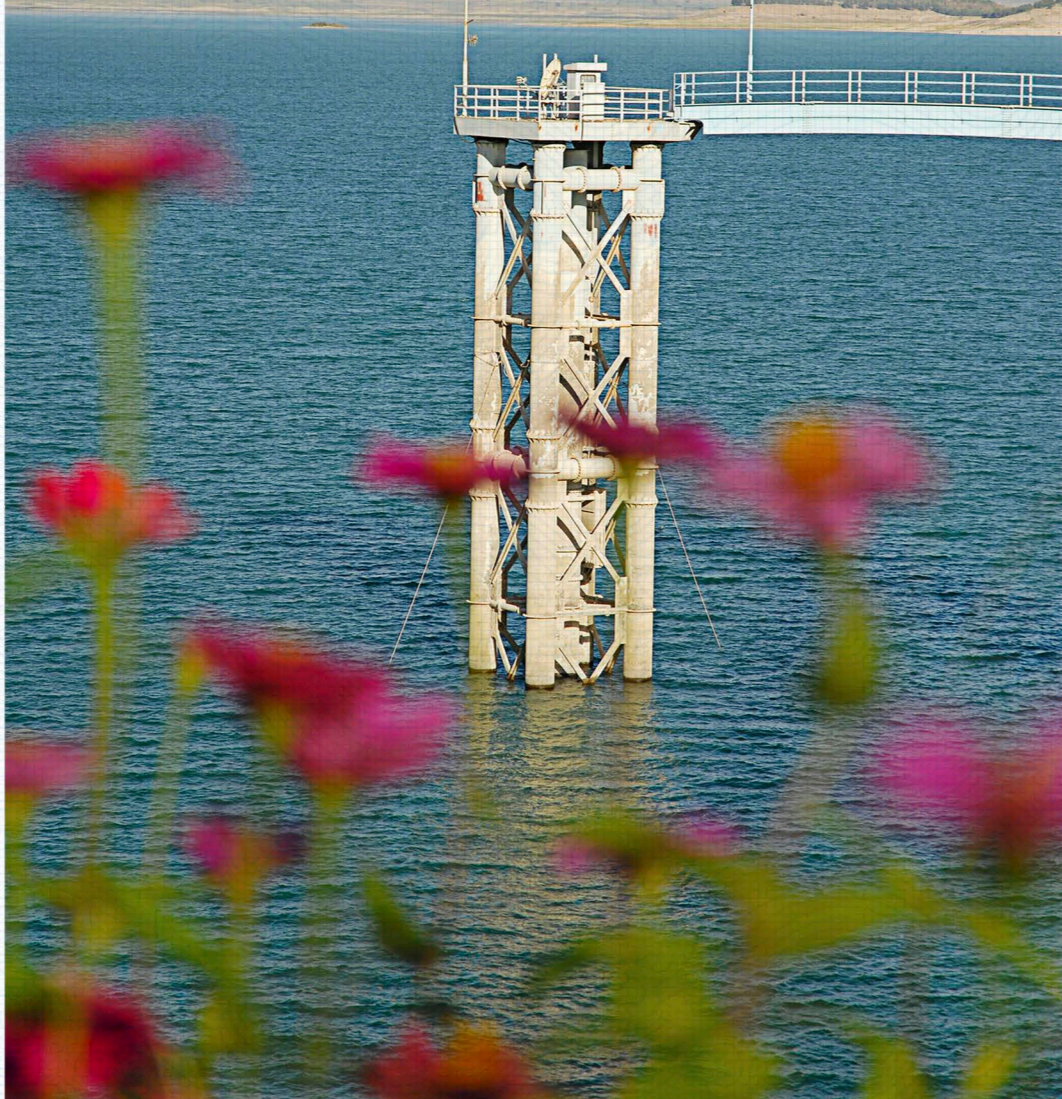
Client:
Fars Regional Water Organization



Different pictures during installation of intake tower in the lake of Doroodzan dam.

Shiraz

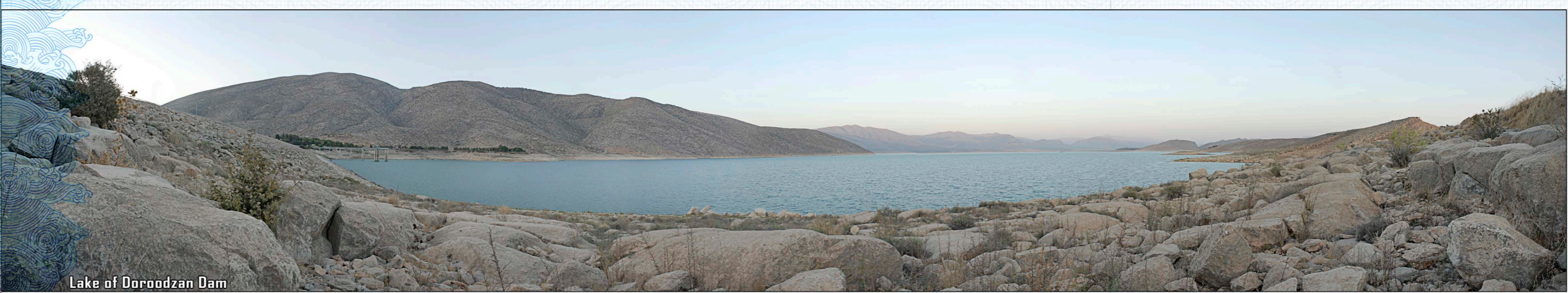
Water Supply Project



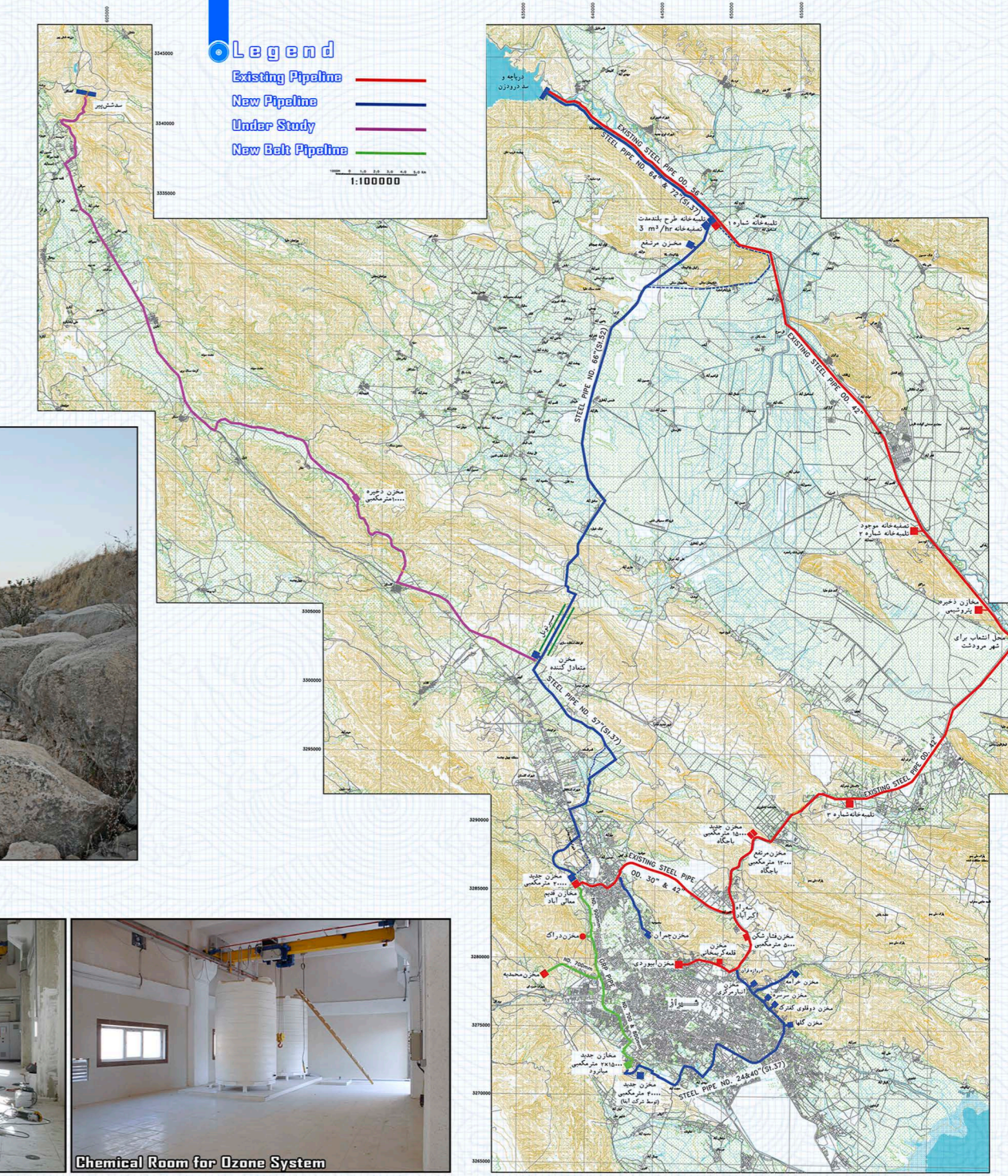
Pipe laying for extension of the Shiraz water supply project



Intake Tower, Capacity 5 m³/sec



Lake of Doroodzan Dam



Sand Filters



Sand Filters



Chlorine Cylinders



Filtered Water Reservoir



Ozone Reactors



Ozone Reactors



Chemical Room for Ozone System

Employer's Consultant Services for Water Supply Operations to Shiraz, Sadra, Homashahr, Ardakan, Shahrak Salamat, and the villages along the route from Bashar Dam and Cheshmeh Sheshpir under the EPC method.

Purpose of the project:

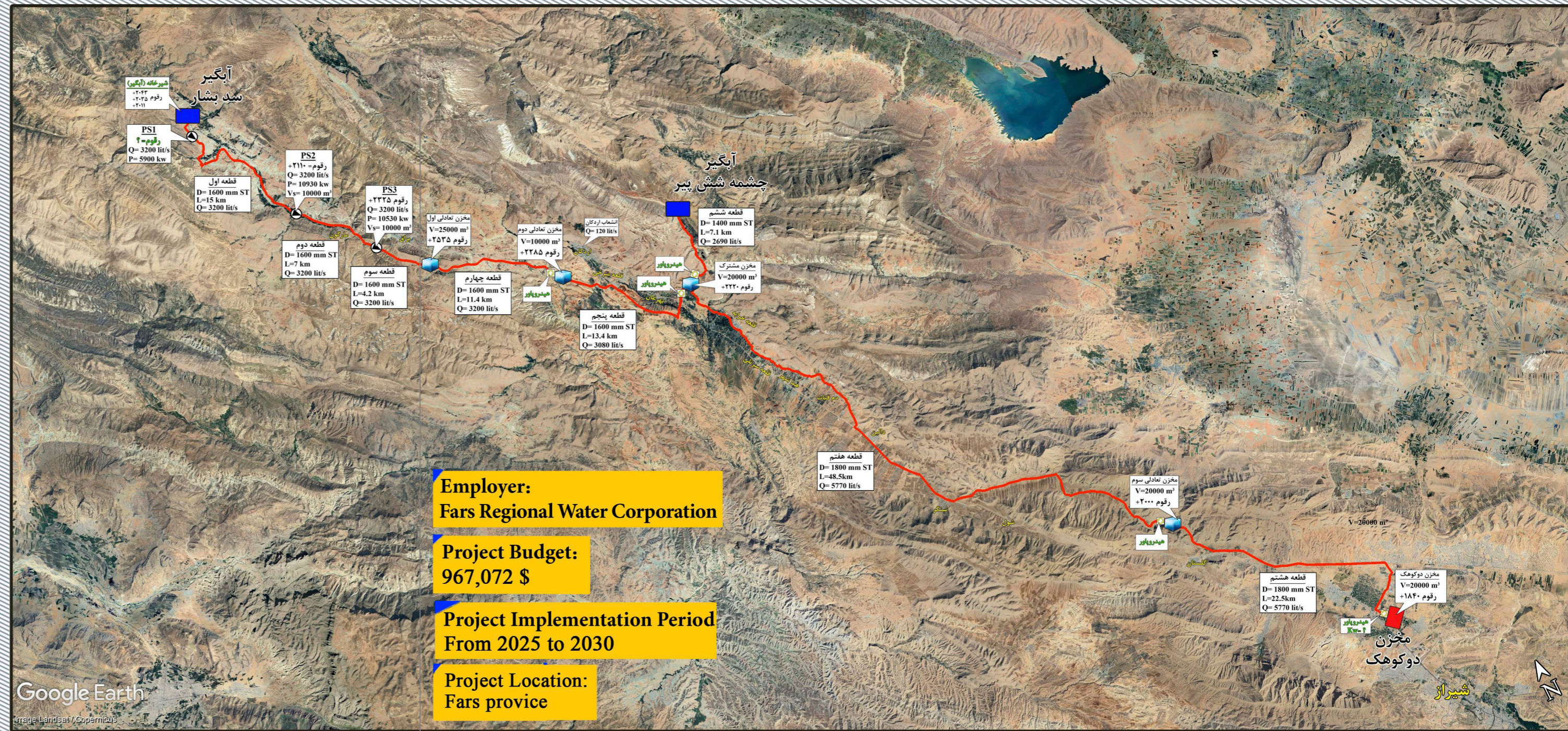
To meet the quantitative and qualitative drinking water needs of Shiraz, Sadra, Homashahr, Ardakan, Shahrak Salamat, and the villages along the route, the Fars Regional Water Company intends to carry out water supply operations with a capacity of 9.5 cubic meters per second from the sources of Bashar Dam and Cheshmeh Sheshpir.

Description of Water Supply and Transmission System Components:

- Procurement and construction of main water transmission lines, 129 km in length.
- Construction of suction and pressure-regulating tanks along with auxiliary buildings, with a total storage capacity of 95,000 m³.
- Construction of 3 pumping stations.
- Construction of an access road, 100 kilometers in length.

Description of Engineering Services:

Preparation of tender documents under the EPC method.



KHOUZESTAN

Potable water supply and Transmission Project for Ahvaz, Abadan & Khorramshahr (Ab-e-Hayat)

Basic studies, detail design and construction supervision of this project, which is a combination of two potable water supply projects in Ahvaz and Abadan & Khorramshahr, started in 1996 and were operated in 2001 in Ahvaz and in 2004 in Abadan & Khorramshahr.

In this project, 1320 lit/sec of potable water is taken from wells in Shooshtar and with a pump station in Galalak village is transmitted to destination through 234 km pipeline (94 km to Ahvaz and 140 km to Abadan & Khorramshahr reservoirs) of steel, GRP and Ductile Iron, which the diameters of them varies from 250mm to 1200mm. In Ahvaz 1070 lit/sec is taken out and 250 lit/sec of potable water is transmitted to Abadan & Khorramshahr.

The components of this project are as follows:

Semi deep wells named Fellman wells with equipment and water collection network.

Reservoirs with capacities of 12,000 and 20,000 cubic meters.

4 pump stations with total 16 electro-pumps.

Arched steel bridge with a span of 115 meters and width of 5.5 meters

234 km long of steel, cast iron and GRP transmission pipeline with diameters of 250 to 1200 mm.

Project Location:
Khuzestan

Client:
Khuzestan Water and Sewage Company

Project Period:
1994 – 2004

The Initial Fee:
46,000,000 \$

Galalak, Veys, Shadegan, Ahvaz, Abadan, Khorramshahr



Ghadir Water Supply Project

Khuzestan Extensive Water Supply Project Design and Construction Supervision

Objectives of this project is to supply water to southern and central cities of Khuzestan province that include Ahwaz, Abadan, Khorramshahr, Shadegan, Susangerd and other cities and villages which are on the rout of the water transmission lines.

Main parts of the project have been designed with three priorities: first preference is water transmission project to Abadan and Khorramshahr from MC1 canal, second is water transmission project from the canal located in lower part of the bridge in

Om-ol-Dabes to Ahwaz and Shadegan and the third is water transmission project from Dez dam to Om-ol-Dabes and cities bordering Andimeshk road. Parts of the project consist of pumping stations, water treatment, booster pumping stations, storage tanks, foundation work, installation of pipes and pipework and construction of access road. Total population which is covered by this project is 4.7 million and total water flow is 24 m³/s including a total length of transmission pipework of 880 Km made of steel and GRP pipes of 800 to 2400 mm diameter.

Design Services Provided by TBE :

- ✓ Providing documents for EPC contract and participating in signing of the contract documents;
- ✓ Reviewing reports of first stage studies and submitting report on this;
- ✓ Preparing drawings and aerial photography, surveying and supplying master plan of intake location, utility, transportation lines and buildings;
- ✓ Performing environmental, cultural heritage, archeology studies of the pipe line route, intake location and utilities;
- ✓ Preparing geological maps, completing geology studies, studying pedology and Geotechnics of intake location, utilities and transportation lines;
- ✓ Detailed design (second phase) of project components such as intake, transportation and related buildings service, road, pass through rivers, water treatment plant, intake and booster pumping stations, tanks, telemetry and other related works.

Construction Services Provided by TBE :

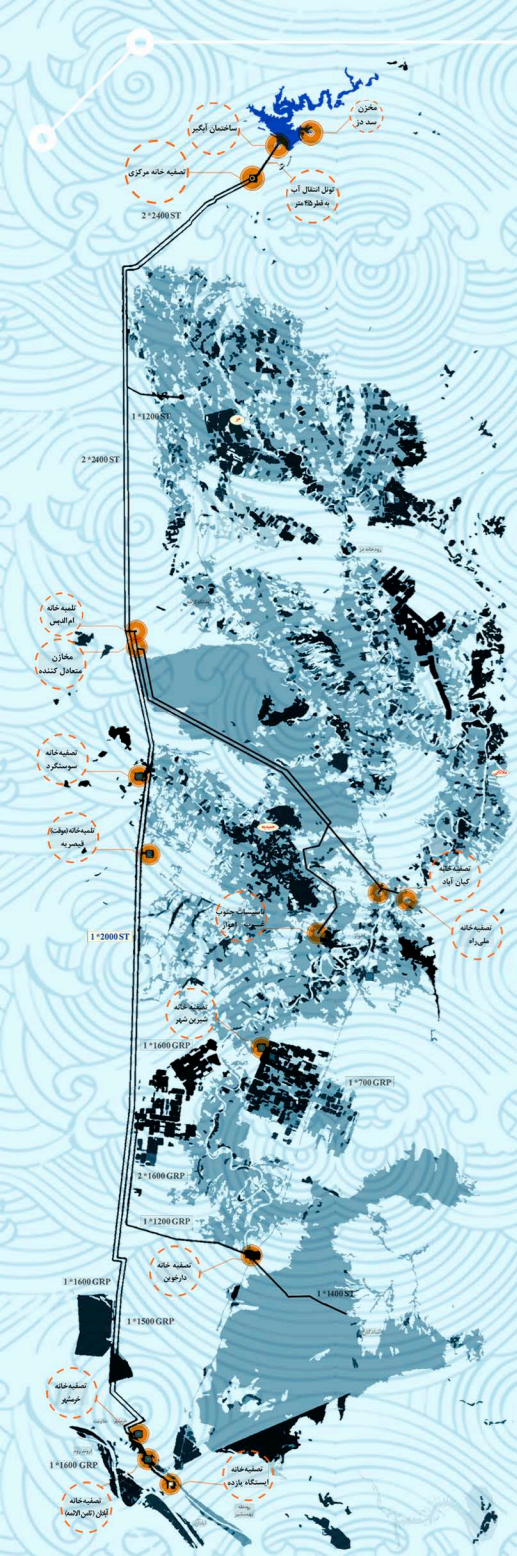
- ✓ Provision of tender documents for execution and procurement, participate in holding required formalities and reviewing received documents from the bid participants and choosing contractors;
- ✓ Engineering services to purchase equipment such as pipes, joints, accessories, pumps, water treatment plant, controls, switchgear and telemetry;
- ✓ Engineering services for technical inspection during construction at manufacturers works, packaging, and the like;
- ✓ Planning services for studies, procurement and project control;
- ✓ Engineering services for field supervision of all activities related to the contract including manufacture, transportation and installation that should be performed by the main contractor and subcontractors;
- ✓ Performing quality control tests on equipment and materials as required.

The Initial Fee:
40,232,000 \$

Project Location:
Khuzestan

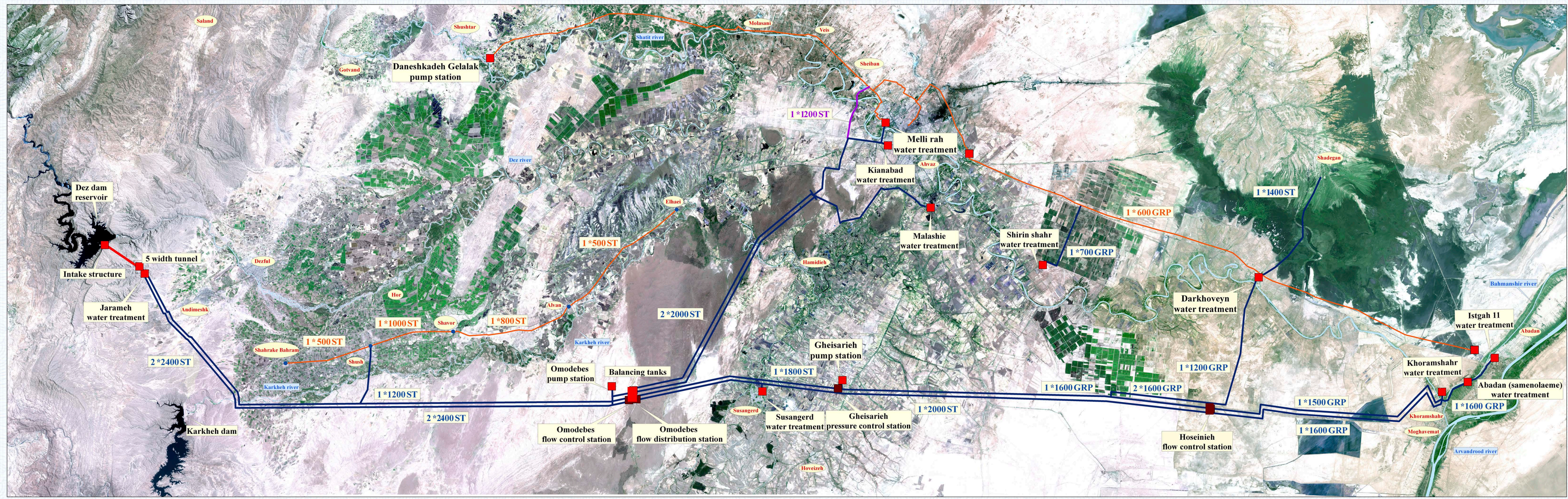
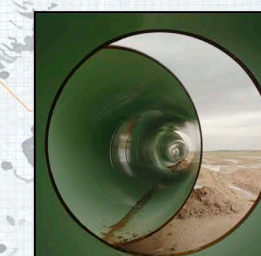
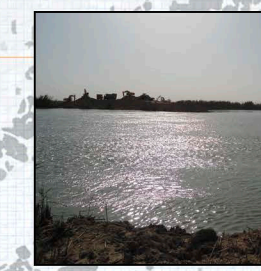
Client:
**Khuzestan
Water and Power Organization**

Project Period:
2008 – 2019



Ghadir Water Supply Project

Khuzestan Extensive Water Supply Project Design and Construction Supervision



KHOUZESTAN

Bidboland Gas Refinery Water Supply Project from Behbahan large treatment plant

The project is Engineering, Procurement and Construction of (EPC) a 25,000 cubic meter per day water supply system for the Persian Gulf gas refinery. Which includes components such as a water intake, water transmission pipe line from the water intake to Behbahan Water Treatment Plant, WTP reconstruction, WTP pumpstation development, water transmission pipe line from the WTP to the site near the refinery parking lot, one 8,000 m3 reservoir, one pumping station near 8,000 m3 reservoir, and the water transmission pipe line from this reservoir to the water delivery point at Bidboland refinery which are 2 x 17,000 m3 reservoirs. The first phase of the project involves the temporary supply of water from the wells of Amir Hazer with a flow rate of 4000 cubic meters per day.

The Initial Fee:
7,000,000 \$

Project Location:
Khuzestan

Project Period:
2017 – 2019

Client:
Sazeh-Jahanpars Consortium

مخزن و تصفیه خانه
حجم مخزن: ۸۰۰۰ مترمکعب
تعداد الکترومپ: ۳+۱ دستگاه
با دبی ۷۵lit/s و هد ۴۰ متر

چاه شماره ۶
الکترومپ
با دبی ۵۰lit/s و هد ۶۰ متر

چاه شماره ۲
الکترومپ
با دبی ۴۵lit/s و هد ۶۳ متر

پالایشگاه گاز بیدبلند
خلیج فارس

تصفیه خانه بزرگ بهبهان

ساختمان شیمیایی واحد اختلاط

زلال ساز شرقی زلال ساز غربی

واحد تصافی مخزن تعدیل

بازسازی و توسعه ایستگاه پمپاژ مخزن آب صاف

دیزل ژنراتور

افزایش ظرفیت ایستگاه پمپاژ
تعداد الکترومپ: ۳+۱ دستگاه
با دبی ۱۰۰lit/s و هد ۷۶ متر

توسعه ایستگاه پمپاژ
تعداد الکترومپ: ۳+۲ دستگاه
با دبی ۱۵۰lit/s و هد ۳۰ متر

ساختمان ترانسفورماتور

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Project Management Services (fourth factor) in the plan to solve the crisis of outage, rehabilitation modification and development of Water Treatment Plant No. 2 in Ahvaz (Kianabad) by EPC method

The Khuzestan province is located in the south of Iran. Ahvaz city is the capital of Khuzestan province. The height of this city is about 16 meters above sea level. Ahvaz city has a dry climate and relatively little rainfall, and most of the precipitation occurs in the autumn and winter seasons. The average annual rainfall is about 211 millimeters and more than half of it occurs in winter. The average maximum and minimum temperature is 33 and 18 degrees Celsius, respectively, and it exceeds 50 degrees Celsius on some days in the summer season. In terms of relative humidity, it has high humidity and reaches 90% on some days. The average annual relative humidity is equal to 47%. Water Treatment Plant No. 2 in Ahvaz provides drinking water to about 60% of the population of Ahvaz.

Quantitative and qualitative goals of the project:

- controlling the process of the treatment plant and determining the deficiencies of retention times, surface charges, chemical balances, along with providing solutions and applying them to other items of the engineering complex.
- performing quantitative and qualitative calculations through the water flow simulation model in the treatment plant (gravity and under pressure) in combination of different consumption scenarios (minimum and maximum hourly and daily) and water supply from Ghadir and Karun and a combination of the two with the minimum and maximum turbidity of Karun and its effect on the performance of the treatment plant and Energy consumption (before and after reforms).
- Reform of concrete structures
- Reform of mechanical, electrical and electromechanical facilities (repair or replacement)
- Reform of instrumentation system and installation of control and monitoring system (repair or replacement)
- Studies and designs Necessary to perform the aforementioned services

Water Treatment Plant No. 2 in Ahvaz (Kianabad)



The Initial Fee:
4,340,000\$

Project Period:
2022– 2024

Project Location:
Khuzestan

Client:
Khuzestan Water
and Sewage Company

Karun River

Medium-term water supply plan from Karun 3 Dam to Izeh County

Consulting services for first-stage review and supplementary studies, conducting second-stage and third-stage studies

Project goal:

In order to meet the medium-term quantitative and qualitative drinking water needs of Izeh County, Khuzestan Water and Wastewater Company intends to implement a medium-term water supply plan of 836 liters per second from the Karun 3 Dam source.

The population of Izeh County for the 1410 horizon is 171,883 people in the urban sector and 83,046 people in the rural sector. The average annual water need for the medium-term horizon of 1410 of Izeh County is 19.2 million cubic meters. The maximum daily coefficient is 1.8. Of this amount, 15.3 million cubic meters will be supplied from Karun 3 Dam.

Design engineering services:

- Review and supplemental studies of the reservoir and its pumping station
- Review and supplemental studies of 3000 cubic meter suction and balance tanks
- Review and supplemental studies of pumping station number one
- Review and completion studies of the transmission line and access road, and conducting studies and preparing initial (base) maps of the shock and pressure control system.
- How to supply electricity to the reservoir and its pumping station, pumping station number one, and the balance tank
- Preparing a description of surveying services
- Preparing a description of geotechnical services



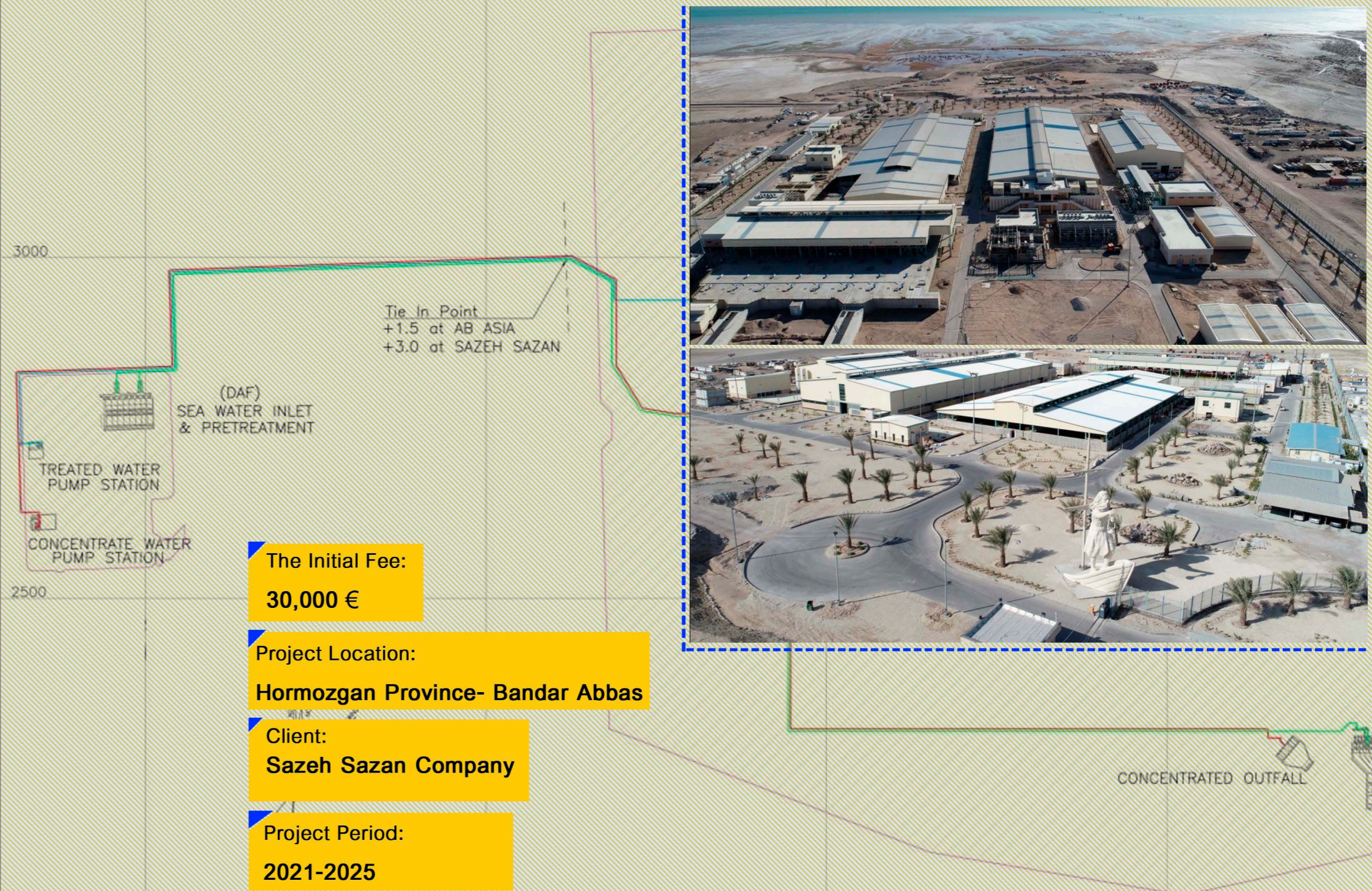
Investigating and Reviewing the Hydraulic Studies of the Three Line Inlet and Outlet of Persian Gulf Water Desalination Plant



Water desalination of two hundred thousand cubic meters in Bandar Abbas is one of the seawater desalination installations to be transferred to Gol Gohar, Sarcheshmeh, and Chadormelo mines in the plan to supply and transfer water from The Persian Gulf. This installation has been constructed by Sazeh Sazan Company in the form of BOO Contract. Sea water is provided and transferred by the Company and is transferred by Ab Asia Company to water desalination installations and after desalination, both the water desalinated and condensed effluent are returned to Persian Gulf Water Desalination Plant. Purified or desalinated water are transferred to the installations and the effluent is discharged into the sea. The capacity of the Persian Gulf Water Desalination Plant is two hundred thousand Cube Meters a day which should be more than five hundred thousand cube meters a day considering the recycling coefficient. Therefore, about three hundred cubic meters of the condensed effluent is discharged into the sea through three pipelines. Tehran Boston Engineers Company had been in charge of reviewing the hydraulic studies of these three lines when nearly 90% of the operation was completed. This review was applied to ensure that hydraulic desalination plant has the necessary assurance for commissioning and operation.

Design of Engineering Services:

- ✓ Consolidation and integration of information from each transmission system
- ✓ Hydraulic study of each of the three lines at Steady and Transient States
- ✓ Investigating water hammering and presenting simulation results for protection
- ✓ Providing short, medium and long-term solutions



The Initial Fee:
30,000 €

Project Location:
Hormozgan Province- Bandar Abbas

Client:
Sazeh Sazan Company

Project Period:
2021-2025

Sewage disposal in the construction and utilization project of Behbahan sewage treatment plant by the buy back method

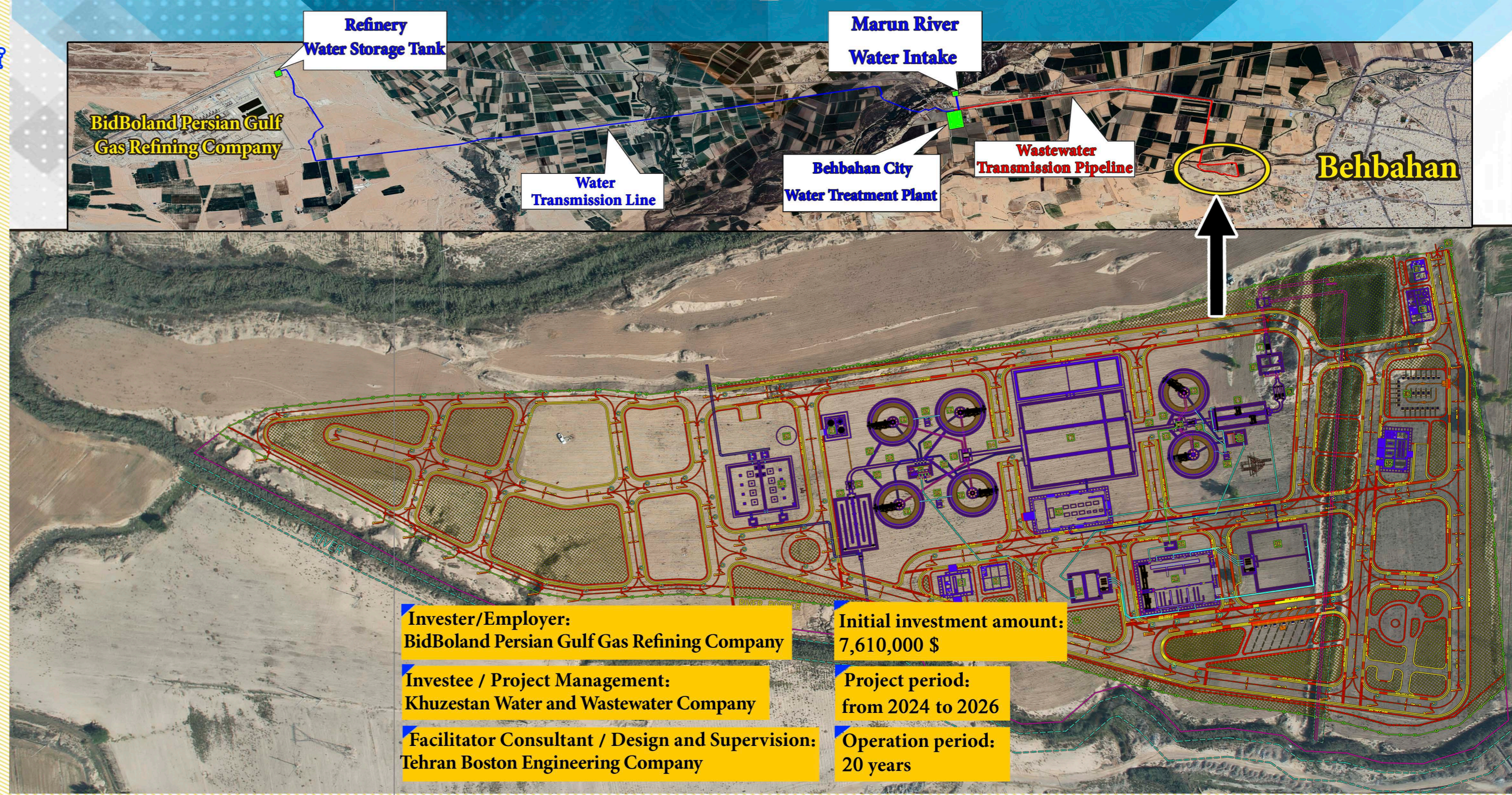


Purpose of the project:

- Improving environmental indicators
- Preventing environmental pollution by blocking more than 36,000 cubic meters of sewage from entering the Maroon River every day
- Recycling water and using sewage as a suitable water capacity for the Persian Gulf's Bidboland Gas Refinery
- Not withdrawing water from Maroon river by the Persian Gulf's Bidboland Gas Refinery Company
- Using the power of the Persian Gulf's Bidboland Gas Company to invest in the construction and operation of the Behbahan Wastewater Treatment Plant.
- Preventing the absorption of urban wastewater into the ground and the contamination of underground water.

Description of engineering and supervision services:

- Provision of facilitation services and preparation of buy back contract documents.
- Review and completion of the first phase studies and verification and optimization of the best option
- Ancillary engineering services (geotechnics, mapping, etc.)
- Detailed design (preparation of executive drawings and technical specifications)
- Preparation of quantity surveyor documents
- Cooperation in tendering and contractor selection procedures
- Field and supreme supervision



Investor/Employer:
Bidboland Persian Gulf Gas Refining Company

Investee / Project Management:
Khuzestan Water and Wastewater Company

Facilitator Consultant / Design and Supervision:
Tehran Boston Engineering Company

Initial investment amount:
7,610,000 \$

Project period:
from 2024 to 2026

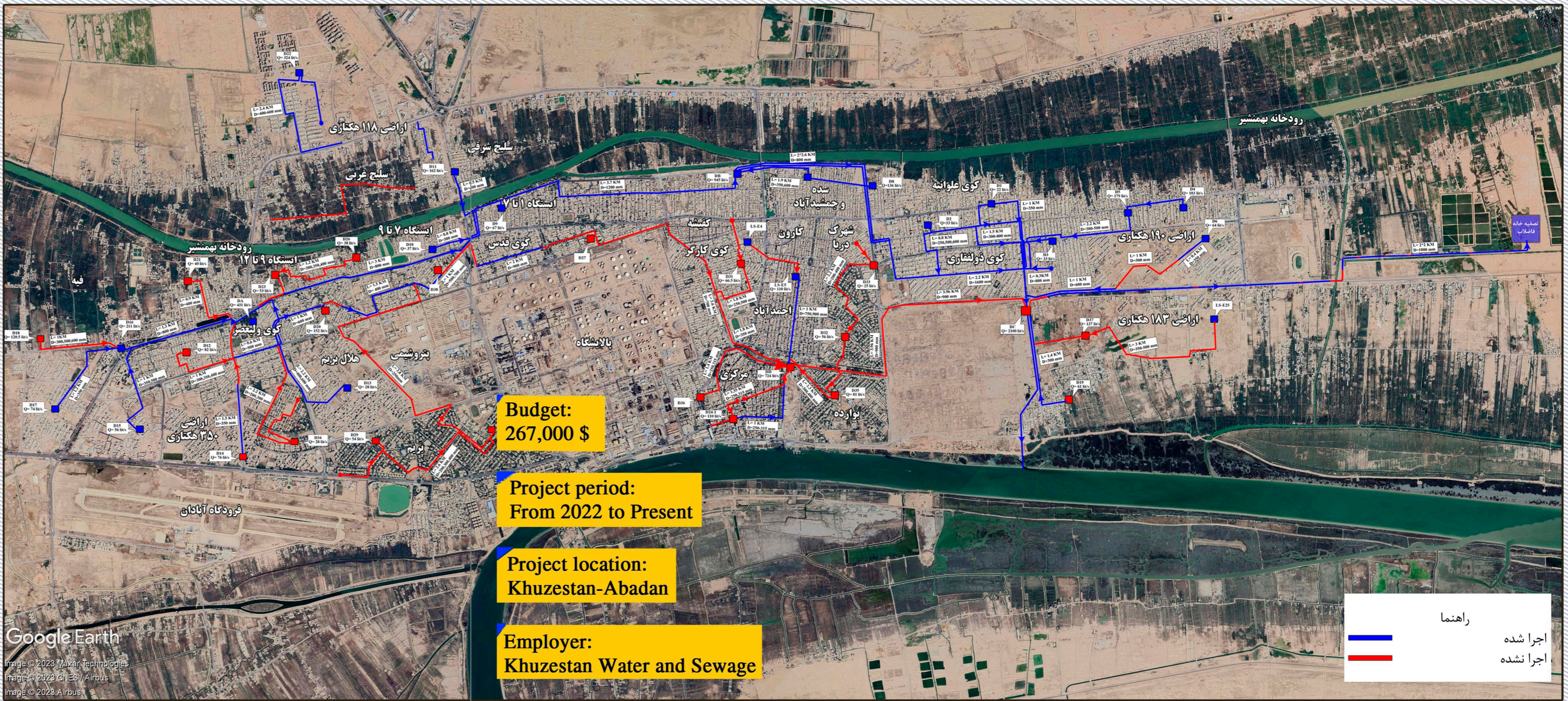
Operation period:
20 years

Abadan City Sewage Project

Operational Description Monitoring Services

Project goal:
 This project is intended to collect, treat, and dispose of Abadan's wastewater. The components of the project include a collection network consisting of pipes and manholes, pumping stations, and a wastewater treatment plant. The treated wastewater will be usable for agricultural and industrial purposes.

- Job Description:**
- Supervising the implementation of 635 km long sewage branch lines
 - Supervision of the implementation of 391 km long sewage sub-network lines
 - Supervising the implementation of main network and transmission lines with a length of 114 kilometers
 - Supervision of the construction of 41 pumping stations



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