



COMPANY PORTFOLIO

Technical Excellence for Sustainable
Development

since
2015



Table of contents

- I. Background**
- II. Our Strategy**
- III. Divisions & Operations**
- IV. Reclamation of Agriculture Lands (Mega Projects)**
- V. International & Funded Projects**
- VI. Water Transmission Projects**
- VII. Water Treatment Plants**
- VIII. Pump Stations**
- IX. Operation & Maintenance**
- X. Sewage Management System**
- XI. Utility Networks**
- XII. Dry Utilities.**
- XIII. Hydrology**

I

Background

Hydro هيدرو

Hydro., Envir. & Infra Str. Studies
للدراسات الهيدرولوجية والبنية التحتية



هيدرو Hydrow

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للدراسات الهيدرولوجية والبيئية والبنية التحتية



About HYDRO., Envir. & Infra Str. Studies

Founded in 2015, HYDRO is a family-owned engineering consulting firm that brings together over 900 dedicated professionals focused on delivering impactful projects that positively influence communities. We are committed to fostering a human-centered, collaborative environment where employees can engage directly with leadership and play an active role in decision-making processes.

As a leader in infrastructure development, we specialize in urban infrastructure, telecommunications networks, electricity distribution, and building design, treatments plants, pumping stations and sewage system. HYDRO has established itself as a prominent player in these fields by consistently delivering high-quality expertise while maintaining strong, lasting relationships with our employees, clients, and partners.

HYDRO was founded by Eng. Yasser Mostafa, a Civil Engineer with more than 30 years of experience in civil engineering management. His vision for HYDRO has been to create an independent consulting engineering firm that provides professional services for integrated infrastructure, including potable water purification plants, wastewater treatment systems, irrigation and drainage networks, stormwater management, solid waste management systems, and environmental studies. The company was established in Cairo, Egypt, with a mission to serve the national development needs of Egypt.

Eng. Yasser Mostafa holds a B.Sc. in Civil Engineering from Ain Shams University (1995) and a Master's Degree in Environmental Engineering from Cairo University (2012). Throughout his career, he has gained extensive experience, starting with his work at the Housing and Building Research Center in the Environmental and Sanitary Division, eventually serving as vice-chairman of Misr Consult for Environmental Studies and Infrastructure Design. Eng. Yasser's leadership has been pivotal in driving HYDRO's commitment to excellence in every aspect of its projects.

HYDRO stands out not only for its expertise but also for the human-centered relationships it builds with everyone involved—whether employees, clients, or partners. We are proud of our reputation as a firm that emphasizes collaboration, transparency, and mutual respect in every project.

A Message from the Chairman "From One Success to Another"

Reflecting on HYDRO's humble beginnings over a decade ago, I am truly inspired by the remarkable journey that has brought us to this point. This outstanding achievement is a testament to the relentless commitment of HYDRO's exceptional team. I am confident that our teams will continue to reach new heights of success, empowered by cutting-edge technology, extensive expertise, and forward-thinking leadership. We will forge ahead, embracing every challenge, and creating solutions that harmonize with the environment while drawing inspiration from the lessons of history, civilization, and culture. Welcome to HYDRO. As the Director of this company, I am deeply proud to lead a team of talented professionals committed to delivering top-notch technical support and services to our clients. Our mission is simple yet ambitious: to provide modern, cost-effective technical solutions of the highest quality. We firmly believe that by applying our intelligence and resources wisely, we can find solutions to any technical challenge through honest and ethical efforts. By doing so, we can make a positive impact on the world. At HYDRO, we are fully committed to excellence in every aspect of our work. Every day, we strive to exceed our customers' expectations. Our dedication to building long-term relationships founded on trust and collaboration is a cornerstone of our success. Through these efforts, we have built an ecosystem that supports the creation and delivery of tailored, multidisciplinary projects of all sizes.

II

Our Strategy

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HYDRO., Envir. & Infra Str. Studies STRATEGY



Mission

The essence of our philosophy is professionalism, foreseeing global situations using talent and experience. This philosophy is integrated through different dynamic approaches that leverages projects' resources to deliver the best quality product on time, budget, and tailored to the specific needs.



Value

Core Values: Unwavering commitment to quality, innovation and exceeding customer expectations, satisfaction and loyalty, responsibility towards society, organizational and individual development, technical excellence coupled with professional ethics, employee dignity and self-respect. Our integrity is about maintaining the highest ethical standards in every interaction and decision



Vision

To be an internationally respected engineering consultancy that provides comprehensive solutions to build world-class, future-proof infrastructure that empowers any country to grow and shape the landscape.

Values



Achievement

Achievement is the heart of HYDRO's culture where each team member is a partner in our success story.



Employees

Our Employees are our greatest asset and intellectual capital to whom we provide full care for their technical and professional development.



Client care

The welfare of our Client is the beginning and end-point of our services which we are committed to perform at the highest levels of quality in order to achieve top client satisfaction.



Continuous Improvement

We are committed to continuous improvement which reflects our belief that perfection is achievable.



Transparency

We firmly believe in transparency and encourage all our employees to stay transparent in all circumstances.



Ethics

We adhere strictly to Ethics in all aspects of our practice, relations and transactions. All members of the HYDRO family uphold our Ethics code up to the highest standards.



Hydro



Strive for Excellence

Through state-of-the-art technologies, the best quality assurance systems, and a pool of outstanding professionals.



Teamwork

Through maintaining teamwork spirit, we reach harmony and synergy among all our working groups in all disciplines leading to success and achieving our goal



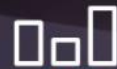
Trustworthiness

We build and maintain the trust of our clients and interested parties by constantly fulfilling our commitments toward them



Innovation

Innovative, out-of-the-box approach is our powerful practice in tackling challenging projects; circulated through all our activities and procedures.



Mutual Respect

We believe in mutual respect as it leads to a pleasant & productive work environment



Promote Sustainability

Through safeguarding the short and long-term welfare of our company, clients, and the world we live in, we never stop ensuring that all our departments/divisions are highly-performing and striving towards sustainability in all dimensions

AT HYDRO., Envir. & Infra Str. Studies

- You're not just a number.
- You matter, and so do your ideas.
- Your skills are important.
- Your contribution is vital.
- You have the right to try, and the right to make mistakes.
- You're not alone – your colleagues play a key role.
- You have our trust.
- You have our support.



III

Divisions & Operations

Hydro هيدرو

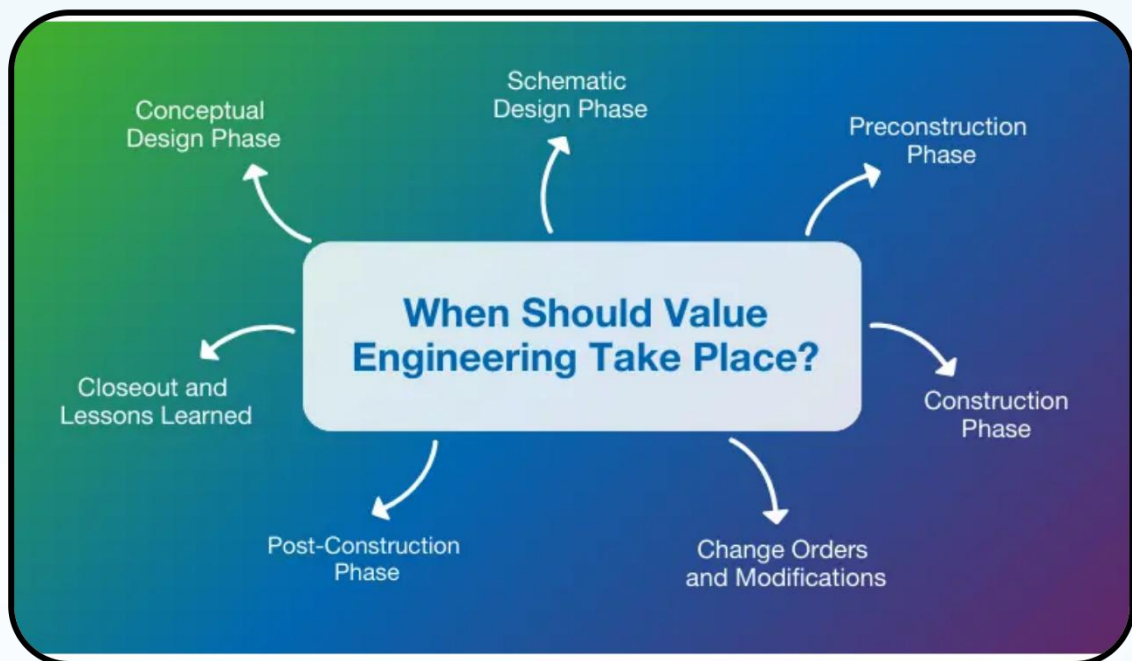
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Value Engineering

[val-(Jyü .en-jä-'nir-ig]

A systematic, organized approach to providing necessary functions in a project at the lowest cost.



SERVICES OFFERED

1

Engineering Services: Conducting feasibility studies, planning, value engineering, and preparing technical specifications and bills of quantities.

2

Design Services: Offering data collection, as well as concept, preliminary, detailed, and final design phases.

3

Tendering Services: Managing conditions of contract, pre-qualification of tenderers, invitations to tender, tender analysis, and delivering final reports to clients.

4

Design and Build Project Participation: Collaborating closely with contractors to develop effective value engineering solutions while maintaining budgetary constraints

5

Construction Supervision: Ensuring quality control, time and cost management, and overseeing claims and commissioning processes.

6

Client Engineer Representation: Integrating within client organizations to manage project interfaces and ensure compliance with quality standards.

TYPES OF PROJECTS



Utility Network



Reclamation



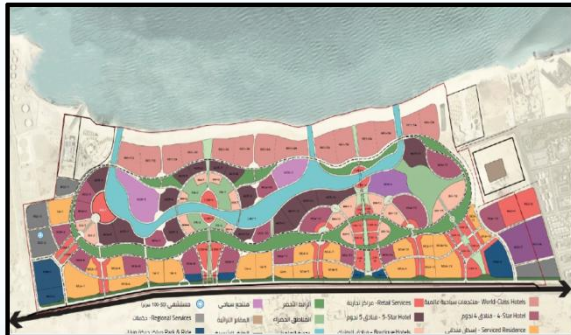
Pump Stations



Industrial works



Treatment plant



Sewage System

PROJECT LIFE CYCLE PHASES



POTENTIAL CLIENTS



وزارة الإسكان والمرافق والمجتمعات العمرانية
Ministry of Housing, Utilities & Urban Communities



ACUD
ADMINISTRATIVE CAPITAL
FOR URBAN DEVELOPMENT
إدارة العاصمة الإدارية الجديدة



QUALITY POLICY

Excellence Through
Commitment

- **Hydro., Envir. & Infra Str. Studies** core focus is ensuring client satisfaction through timely project completion, innovative solutions, and setting industry benchmarks. We encourage feedback from clients and employees to identify improvement opportunities and maintain high-quality standards.
- We adhere to industry regulations, codes, and international standards to guarantee compliance and quality.
- Our designs prioritize aesthetic cost-efficiency, environmental sustainability, and adaptability at each site.
- We are committed to delivering accurate drawings, design estimates, tender schedules, and pre-bid documents on time.
- We maintain an organized system for efficient document filing and retrieval.
- Strict adherence to blueprints, specifications, and regulations is paramount in all our projects.
- Continuous education and active participation from all staff will drive the enhancement of our quality management systems.

Chairman & CEO

Eng. Yasser Mostafa

CERTIFICATE OF REGISTRATION



This Certificate has been awarded to

Hydro هيدرو
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Hydro., Envir. & Infra Str. Studies
Plot No. 2105 Omar Ibn Al - Khattab Street, Al - Meraj
Al - Olwi, Al - Maadi, Cairo, Egypt

In recognition of the organization's Management System
which complies with

ISO 9001:2015 (QMS)

The scope of activities covered by this certificate is defined below

**Engineering Consulting office (Hydrological studies,
Environmental studies, and Infrastructure designs)**

EA Code:- 34

SYNDICATE OF INTERNATIONAL SYSTEM CERTIFICATIONS

Certificate Number: **SIS041222Q179**
Date of Issue of Original Certificate: **29.12.2022**
Date of Issue of latest certificate: **29.12.2022**
Expiry Date: **28.12.2023**
Re-certification Due on: **28.12.2023**

Managing Director

Note: This is an accredited certificate issued by SIS Certifications Pvt. Ltd.

Certified Organization is responsible for maintaining the compliance of the relevant standard rules. Any significant changes in the scope of the certification or standard referred above render this certificate invalid.

Corporate office - SIS Certifications Pvt. Ltd.
Unit No. 514, 5th Floor, Vipul Business Park, Sector-47, Sohni Road, Gurgaon - 122018, Haryana, India.
Key Location: 43 SAUJI BUILDINGS ST, DUBAI SQUARE, CAIRO EGYPT
International Key Location: Qatar, India, Paris, Italy, KSA, Nigeria & Malaysia.
Email us - support@siscertifications.com Call WhatsApp - +91-9643073391
The status of this certificate can be verified on <https://siscertifications.com>
Web - www.siscertifications.com

Issue No.: 01

HEALTH AND SAFETY POLICY

At **Hydro., Envir. & Infra Str. Studies** Consulting Office, the Work Health and Safety (WHS) Policy is based on a belief that the wellbeing of people employed at work, or people affected by our work, is a paramount consideration. People are our most important asset and their health and safety are our greatest responsibility. All persons on site, including contractors and visitors, shall be given equal priority to that of our employees.

The objectives are:

- To achieve an accident-free workplace.
- To comply with the requirements of WHS Acts, Labor Law, Executive Regulations of the Labor Law, Occupational Safety and Health Law No. 12 of 2003, National Authority for Occupational Safety and Health, Codes and relevant industry standards, international standards related to occupational safety and health is ISO 45001.
- To make WHS an integral part of every managerial and supervisory position.
- To ensure WHS is considered in all planning and work activities.
- To involve our employees in the decision-making processes through a continuous programmed of regular communication, consultation and training to ensure that they work in the safest possible manner.
- To manage all potential danger in the workplace through hazard identification, risk assessment and risk control.
- To ensure all actual and potential accident/ incidents are investigated and the causes controlled.
- To provide effective injury management for all employees.
- To ensure that the work team is totally committed to achieving these objectives.

The success of our health & safety management can be measured through the following performance Key Indicators (KPI):

- All work activities are analyzed and planned with due consideration given to implementing WHS controls that are suitable to each given situation.
- Managers ensure that work and workplaces are safe and those incidents or hazards reported to them are investigated and dealt with, Employees keep their work and workplace safe and report all incidents and hazards to their HYDRO Consulting contact,
- Contractors and visitors comply with HYDRO Consulting's WHS requirements they are informed of and report all incidents or hazards they become aware of.

Chairman & CEO
Eng. Yasser Mostafa



ENVIRONMENTAL POLICY

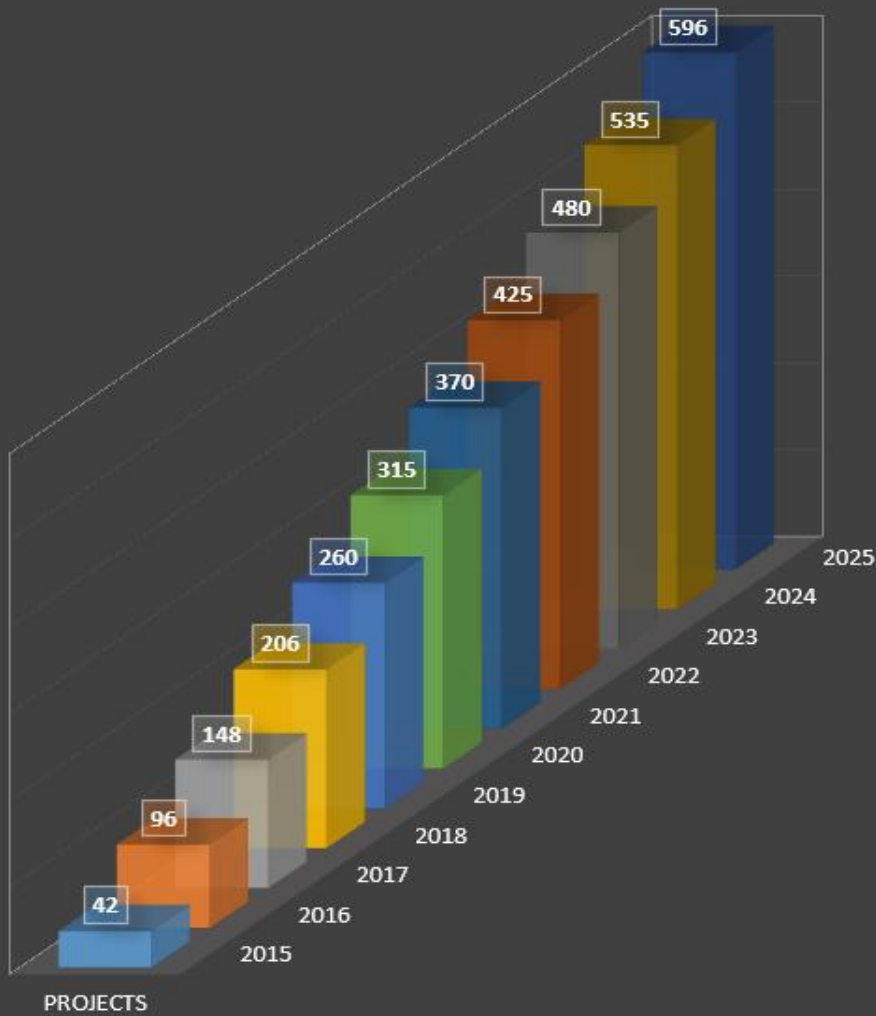
- At **Hydro., Envir. & Infra Str. Studies**, we are committed to delivering engineering solutions that prioritize environmental sustainability, minimize ecological impacts, and promote responsible practices throughout all phases of our projects. Our Environmental Framework and Policy guide our efforts in integrating environmental considerations into every aspect of our operations.
- **Commitment to Sustainability:** Prioritize innovative engineering solutions that minimize environmental impact and promote sustainable development.
- **Compliance with Regulations:** Adhere to local, national, and international environmental laws, codes, and standards.
- **Sustainable Design Practices:** Focus on resource efficiency, energy conservation, and the use of eco-friendly materials throughout the project lifecycle.
- **Environmental Impact Assessment (EIA):** Conduct thorough EIAs to identify and mitigate potential environmental risks before project initiation.
- **Collaboration with Stakeholders:** Engage with clients, government agencies, and communities to address environmental concerns and ensure holistic project planning.
- **Waste Reduction and Resource Management:** Minimize waste through efficient resource use, recycling, and reusing materials wherever possible.
- **Employee Awareness and Training:** Provide ongoing training to staff on environmental best practices and integrate them into daily operations.
- **Continuous Improvement:** Regularly assess and enhance environmental performance to align with industry best practices.
- **Monitoring and Reporting:** Implement systems to track environmental impact and provide transparent reports to stakeholders.

Chairman & CEO
Eng. Yasser Mostafa



PROJECTS GROWTH

2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025



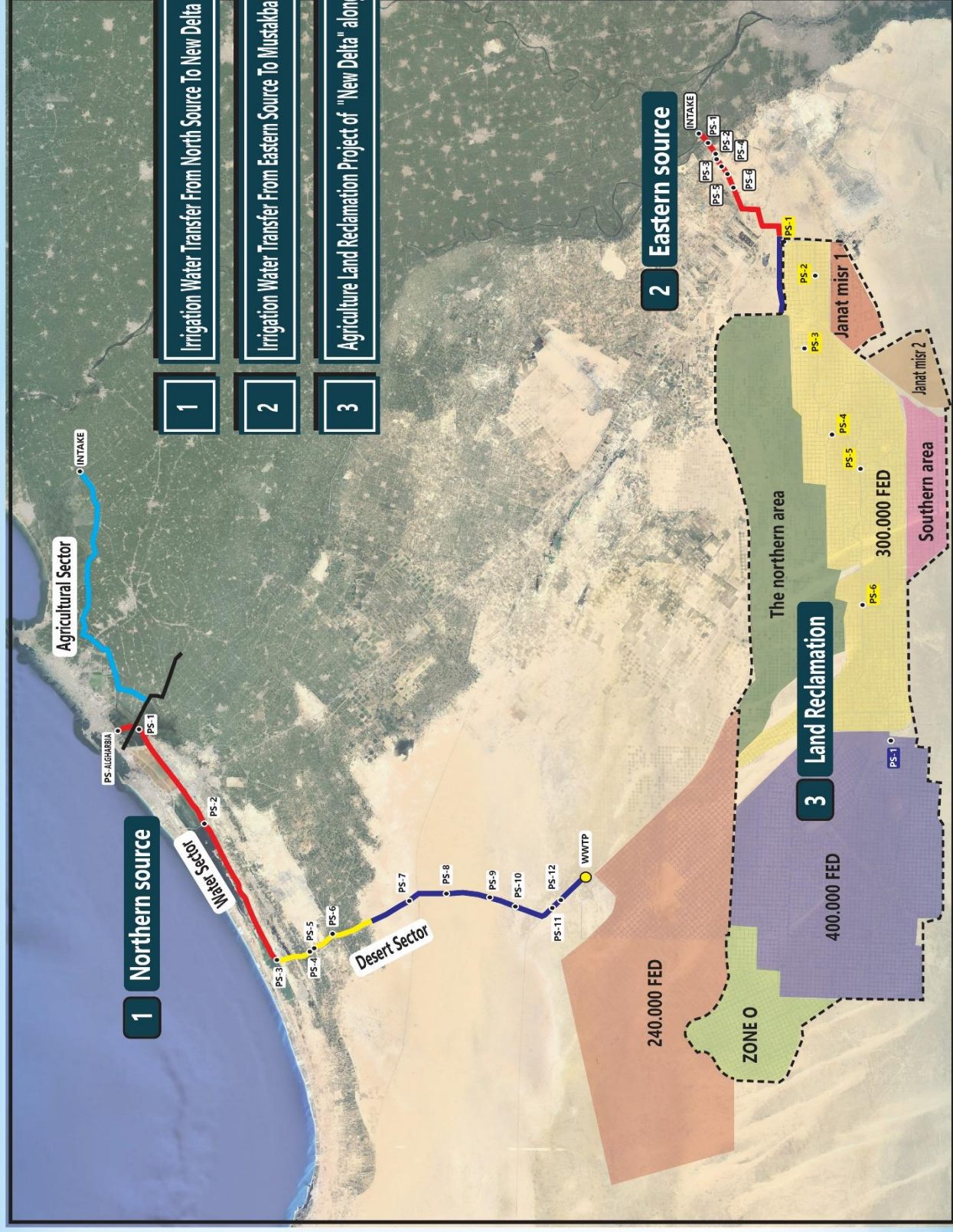
IV

Agricultural Infrastructure and Land Reclamation (Mega Projects)



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Agriculture Land Reclamation Project of "New Delta" along the new Rod El Farag / El Dabaa Corridor

📍 Egypt

Client

- ❑ Future Authority for Sustainable Development

Our Role

- ❑ Client's Consultant

Date

- ❑ January 2023

Budget

- ❑ EGP 225 billion

Project Description

Mostakbal Misr is a national project that aims to deliver millions of cubic meters per day of irrigation water to irrigate number of zones (480,000 Feddans - 300,000 Feddans – The Northern area – The Southern area - Gant Misr) from the irrigation water transfer of Mostakbal Misr Project (1).

Scope of Work

Complete design package for all disciplines

- (7) Main Pumping Stations, total number of pumps is 55, maximum head is 27 m and maximum discharge is 10 million m³/ day.
- (303) Boosters with maximum head is 75 m and maximum discharge for a pump is 230000 m³/day
- Open channel with the length of 300 km including 10 Sub-branches, with maximum depth is 4.82 m and maximum width is 18 m.
- (7) Pipelines with diameter 3000 mm and a total length of 2,320 km divided to GRP, Steel, HDPE , Concrete
- Sub-pipelines Irrigation networks of total length 2025 km.
- (19) Intakes
- (6) weirs
- (25) Concrete Bridge Culverts
- (1) Pipe Jaking.
- (3) Aqueducts.
- (5) Connection Chambers.
- (3) Canal connection to a pipeline
- (2400) Irrigation Pivot Center with diameter range from 735 to 820 meter to cover area range from 100 feddans to 125 feddans / pivot.
- 1300 Farmer's buildings
- Estimated electrical capacity of 205 Megawatt - (9) Electrical Distributors.
- Scada System (Main Control Room in Administration building of Future Authority Main Building)
- Main and submain roads with the length of 8750 KM.

Hydro Services:

- Concept and Detailed Design
- Construction Supervision



Irrigation Water Transfer from North Source to New Delta Region

South El- Dabaa - Egypt

Client

Water Department - Engineering Authority

Our Role

Client's Consultant

Date

July 2020

Budget

EGP 190 billion

Project Description

- The New Delta Project is a major agricultural initiative in Egypt aimed at enhancing food security. It includes the Agricultural Wastewater Treatment Plant in the El Hammam area, North Coast, with a capacity of 7.5 million cubic meter of water per day. The project involves collecting agricultural drainage water from the North Delta and transporting it to El Hammam Wastewater Treatment Plant through a 168 km-long water route, which combines open channels and pipelines, divided into three sectors.

Scope of Work

Full design package of the following

Agriculture Sector (Starting zone)	Water Sector (Middle zone)	Desert Sector (End zone)
Trapezoidal Open Channel width 20-meter, depth 3meter Path (50 km)	Rectangular Open Channel Path (50 km) width 24 meter, depth 5.25 meter + Closed Channel (3.6 km)	Combined pipelines (Pipes path 176 km (22 km * 8 branch) diam. 2500 mm or 6 branches 3000 mm) / Trapezoidal Open Channel Path (42km) width 18m, H= 5 meter and 9 pipelines GRP 2600mm and CS 2800 and 3000 mm
.....	(4) Pumping Stations	(9) Pumping Stations
(2) Regulators	(1) Regulator	(4) Weirs
(3) Syphons	(3) Syphons	
(1) Box Culvert	(4) Box Culverts	(2) Box Culverts
(23) Pipe Culverts		(4) Pipe Culverts
.....	(1) Aqueduct pipe	(1) Aqueduct pipe
.....	(2) Spillways	(7) Spillways
.....		(1) Slow down Chamber
.....		(1) Connection Chamber
Service Road 100 km	Service Road 100 km	Service Road 128 km
(20) Car bridges + (8) pedestrian Bridges	(13) Car Bridges + (5) pedestrian Bridges	(6) Car Bridges

Hydro Services:

- Concept and Detailed Design
➤ Construction Supervision

Irrigation Water Transfer from Eastern Source to Mustakbal Misr 1

Northwestern Part of Egypt

Client

Water Department - Engineering Authority

Our Role

Client's Consultant

Date

August 2022 and April 2023

Budget

EGP 64 billion

Project Description

Mustakbal Misr is a national project that will deliver 10 million m³ of irrigation water daily from the Roseta Nile River branch to areas west of the Cairo Ring Road and Sheikh Zayed City, via a 41.4-kilometer pipeline. This project aims to support agricultural development and urban expansion in the region.

Scope of Work

Preparing a comprehensive design package covering all disciplines for the project.

1. A regulator, measuring 55m by 32.5m, has 7 openings, each 3.6m wide. It is equipped with stop logs of 7.60m and 9m in height, along with a sluice gate that is 10m high.
2. The 1st open channel is 2.6 km long, with a bottom width of 36 meters, a top width of 64.5 meters, and a water depth of 4.11 meters. The 2nd channel is 15 km long, with a bottom width of 18 meters, a top width of 41 meters, and a water depth of 4.8 meters.
3. Crossings beneath significant landmarks:
 - A. 250-meter pipe jacking crossing under the Cairo-Alexandria Desert Road, with jacking pits (9.25m x 63.5m x 9.95m and 9.25m x 14.5m x 9.95m) and receiving pits (9.20m x 63.5m x 9.17m and 9.20m x 14.5m x 9.17m), containing 11 steel pipes (2500 mm diameter) within concrete sleeves (3200 mm diameter).
 - B. 200-meter pipe jacking under the Sumed pipeline, with jacking pits (23m diameter, 11.14m depth x 3 and 18.5m diameter, 11.14m depth x 1) and receiving pits (22m diameter, 11.73m depth x 3 and 18m diameter, 11.73m depth x 1), containing 11 steel pipes (2200 mm diameter) within concrete sleeves (3400 mm diameter).
 - C. A 90-meter open-cut crossing under the Birkash Road, with a jacking pit (4.6m x 67.5m x 6.9m) and a receiving pit (5.35m x 67.5m x 8.25m), containing 11 steel pipes (2200 mm diameter) within concrete sleeves (3200 mm diameter).
 - D. 200-meter open-cut crossing under the Dabaa Road, with a jacking pit (9.25m x 46m x 7.40m) and a receiving pit (8.8m x 46m x 9.27m), containing 11 steel pipes (2200 mm diameter) enclosed in concrete sleeves (3700 mm diameter).
4. The 11 pipelines, each with a diameter of 2500 mm and a combined length of 255 km, are made up of 30,241 meters of GRP, 90,638 meters of prestressed concrete, and 134,548 meters of carbon steel.
5. (6) pumping stations, each with a capacity of 10 million m³/day, 14 pumps (11 working + 3 stand-by), and an average head of 20 to 27 meters, along with service buildings.
6. (3) weirs, each with a width of 18 meters.
7. 320-meter siphon using the pipe jacking method under the Beheira and Nassery canals and the railway, with 3 jacking pits (23m diameter, 21m depth) and 3 receiving pits (23m diameter, 23.5m depth), containing 9 concrete sleeves, each 3200 mm in diameter.
8. Box culvert under the regional ring road, 18.6m by 181.5m in size, featuring 4 openings (4.2m wide each) with 8 sluice gates and weed screens.
9. Connection chamber converting pipes to canals, with the canals measuring 20m x 50m x 8.6m.
10. (3) Car bridges: one with dimensions 10m x 20m, and the other two with dimensions 10m x 30m.
11. Low and medium voltage network
12. Scada system
13. Two intakes are present: one with dimensions of 7.8m by 51.8m, containing two 3m-wide channels, stop logs of 5m and 6m, sluice gates of 6.45m, and a weed screen with a 72° tilt; and another with dimensions of 3.7m by 37m, containing one 2.25m-wide channel, stop logs of 3m and 64m, sluice gates of 4.5m, and a weed screen with a 60° tilt.
14. By pass channel between pumping stations
15. Cathodic protection for steel pipes
16. Road with a length of 48 kilometers.

Hydro Services:

- Concept and Detailed Design
- Construction Supervision

Kom Ombo Land Reclamation of 147 000 Feddans (61 740 Hectares)

Aswan-Egypt

Client

- ❑ Future Authority for Sustainable Development

Our Role

- ❑ Client's Consultant

Date

- ❑ January 2024

Budget

- ❑ EGP 22 billion

Project Description



The Kom Ombo - Aswan Land Reclamation Project is a national initiative designed to deliver 3 million cubic meter of irrigation water per day from the Nile River to irrigate 147,000 feddans (61,740 hectares). This project is a key effort to enhance agricultural productivity and support local economies in the region.

Scope of Work

Complete detailed design package and Tender documents for the 147,000 feddans including:

- (Hydraulic – Architectural – Structural – Mechanical – Electrical – Control – MEP - Roads).
- (1) Main pumping station, $Q= 3,000,000 \text{ m}^3/\text{day}$ (12 working + 3 Standby), Head = 83 m.
- (3) Force main diam. 2500mm, length 10500 linear meter.
- Open channel with the length of 85 km in addition of 4 Sub-branches of Length 59 km.
- Sub-pipelines Irrigation Networks of total length 750 km.
- (4) Intake regulators
- (2) weirs
- (8) bridge culverts
- (7) box culverts
- (1) Connection Chamber
- (932) Irrigation pivots center
- (73) Boosters
- Estimated electrical capacity of 160 Megawatt - (4) Electrical Distributors.
- Main and submain roads with the length of 1200 km

Hydro Services:

- Concept and Detailed Design
- Tender Documents

Irrigation Water Transmission Project of Reclamation of 465,000 Fed.(195,300 Hec.)

📍 Sinai - Egypt

Client

❑ Water Department-Engineering Authority

Our Role

❑ Contractor's Consultant

Contractor

❑ Hassan Allam Construction– Concord for Engineering and Contracting - El Zahy – Comet - Al-Sewedy – Madkour - AlHady AlNabawi- Abd Al Hamid Soliman- Khaled Rashad- Nasr Al-Sherbini –

Date

Heraa

❑ March 2020

Budget

❑ EGP 21 billion

Project Description

➤ A major national project aimed at reclaiming 465,000 feddans in Sinai through the transfer of water, primarily sourced from the Nile River, along with groundwater reserves and water resulting from Bahr El-Baqar wastewater treatment plant to the designated agricultural areas in North and Central Sinai. Advanced irrigation methods and efficient water management practices are utilized to optimize the use of the transferred water. The project also includes the development of extensive infrastructure, such as pipelines, pumping stations, and irrigation canals, designed to ensure the effective distribution of water throughout the targeted agricultural areas.

Scope of Work

Prepare shop drawings for all works related to the pumping stations and pipelines, covering:

➤ Hydraulic, Architectural, Structural, Mechanical, Electrical, Control, MEP and Roads

The scope of Hydro includes:

- (9) pumping stations, Total no of working pumps = 37 and Standby = 12 , Q per pump =518 m3/day,
- Pipelines made from various materials with total path length: 75,350 km
 - Prestressed Concrete with a diameter of 2200 mm and a length of 255,960 km
 - Carbon Steel with a diameter of 1600 mm and a length of 41,860 km
 - GRP with a diameter of 1400 mm and a length of 6,060 km

Hydro Services:

➤ Shop drawings



Toshka Agricultural Land Reclamation - 375,000 Fed. (157,500 Hect.)

📍 South Valley - Egypt

Client

❑ Armed Forces Engineering Authority

Our Role

❑ Contractor's Consultant

Contractor

❑ Orascom, Hassan Allam Construction, Concord for Engineering & Contracting, WATANIYA for General Contracting, Al-Sewedy, Kharafi National for Infrastructures, SIAC, Somit Awad Khalifa, MCC, Madkour, El Zahy

Date

❑ February 2022

Budget

❑ EGP 7 billion

Project Description

The New Valley Project "Toshka" Project consists of building a system of canals to carry water from Lake Nasser to irrigate part of the sandy wastes of the Western Desert of Egypt, which is part of the Sahara Desert. It is a major national land reclamation initiative spearheaded by the Government of Egypt to increase agricultural land across Egypt involving horizontal expansion and land reclamation.

Wadi Toshka Lakes was naturally generated from water behind High dam of Aswan, this overflow of water made the Agricultural project possible which started year 2002; the project was expanded by new canals, networks and pumping stations. The project included the new zones of: A, B, C, D, E, F, G, H, I, J, K, L1 and L2. The Scale of the project is huge with road networks and pipelines stretching for hundreds of kilometers, more than thirty pumping stations: [Zone A (13) new pumping stations, zone B (5) pump stations, zone C (3) PSs, zone F (2) PSs, zone G (3) PSs, zone J (2) PSs and zone K (10) PSs]

Scope of Work

- The shop drawings provide detailed specifications for construction, ensuring accuracy during the construction phases for all disciplines (Hydraulic – Architectural – Structural – Mechanical – Electrical – Control – MEP – Roads).
- Water Transmission pipelines
- Canals: Drawings will include dimensions, alignment, cross-sections, material details (e.g., concrete or geomembrane), and features like gates and spillways.
- (134) Boosters
- Irrigation Networks: Diam 160 to 1400 with total length of 1584 km
- Valve Chambers: Design for chambers, valve sizes, and installation details.
- Low-Voltage Network Panels: Electrical panel designs, circuit connections, and specifications.
- Pivot Irrigation Systems: Detailed layout and components for pivot irrigation setup.
- Water Transmission pipelines: Routing, structural design, and material specifications for water transfer.
- Road Networks: Shop drawings will cover road alignment, pavement structure, drainage systems, and structural elements like bridges and embankments.

Hydro Services:

- Shop drawings
- As-built drawings



V

International & Funded Projects



FUNDED PROJECTS

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للدراسات الهيدرولوجية والبيئية والبنية التحتية

GRP PIPES for Cooling unit 3 and 4 – El Dabaa Nuclear Power Plant

📍 El Dabaa - Egypt

Client

❑ The Nuclear Power Plants Authority (NPPA)

Our Role

❑ Contractor's Consultant

Contractor

❑ Titan 2

Date

❑ March 2025

Budget

❑ US\$ 30 billion

Project Description

- The El Dabaa NPP project is Egypt's first nuclear power plant, featuring four Russian-designed VVER-1200 reactors (Generation III+). The cooling system, particularly the large-diameter intake and outfall lines that often use GRP due to its corrosion resistance in seawater environments, is a critical part of the plant's infrastructure.
- The shop drawings are a detailed set of documents produced by HYDRO (such as a GRP manufacturer) for the main contractor (Titan-2, in this case, a subcontractor to Rosatom's engineering division) to use for the actual fabrication, installation, and quality control processes.

Scope of Work

The scope of work for the shop drawings of the GRP pipes at the El Dabaa NPP involves creating detailed documentation for manufacturing and installing the cooling water systems GRP PIPES diam. 1000 and 3000 mm for Units 3 and 4, Key aspects include:

- General Assembly, installation layouts, and isometric drawings showing all pipe components, dimensions, and support details.
- All drawings and calculations must align precisely with the specific Amantit supplier data sheets for pipes, elbows, and fittings, and strictly adhere to AWWA M45 and AWWA C950 standards.
- Ensuring seamless integration with civil engineering designs and obtaining formal approval from the main contractor (Titan-2/Rosatom).

Hydro Services:

- Shop drawings



Samaraa WTP 132,000m³/ day, Intake , 4 Boosters and Transmission Lines

Salah El Din Governorate - Iraq

Client

Ministry of Construction and Public Municipalities - General Directorate for Water –Baghdad - Iraq

Our Role

Sub-consultant to the Main Consultant

Date

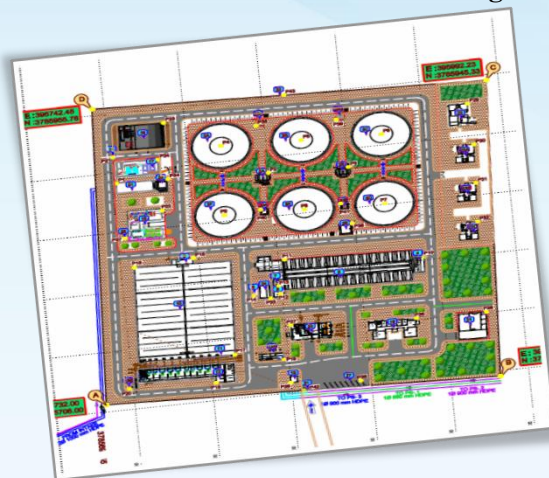
July 2025

Budget

US Dollars 132 Million

Project Description

The Samarra Water Treatment Plant has a design capacity of 6,000 m³/h of treated water, based on 22 hours of daily operation. Raw water is abstracted at the intake and conveyed to the chemical treatment stage, where coagulation and flocculation are achieved using alum dosing, followed by primary disinfection via chlorine. The conditioned water enters the clariflocculators for floc formation, clarification, and sludge separation. The clarified effluent is subsequently directed to the rapid gravity (sand) filtration units for final polishing. Treated filtrate is collected in the ground storage reservoir, from which high-lift pumping units convey the water to four downstream booster pumping stations for distribution to the service networks.



Scope of Work

- The project includes the detailed design review of a 6,000 m³/hr Water Treatment Plant (WTP), 4 booster stations, and the associated transmission and distribution pipelines, supplied from Tigris River via a new intake. The review covers:
 - Intake Structure : Verify hydraulic and structural design for drawing water from Tigris River.
 - Water Treatment Plant (6,000 m³/hr) :Review treatment processes, hydraulic profile, mechanical/electrical systems, chemical dosing, and storage tanks.
 - Booster Stations (Baldrooz & Imam Asker) :Check pump selection, hydraulic head, surge protection, layouts, and all MEP systems.
 - Transmission & Distribution Pipelines: Intake to Samarra WTP: 2,000 m, DI PN16 & HDPE PN10, 6,300 m³/h (1,750 L/s)To Booster 1 (University): 4,000 m, DI 700 mm / HDPE 900 mm, 2,000 m³/h (556 L/s)To Booster 2 (Banat Al-Hasan): 7,900 m, DI 450 mm / HDPE 560 mm, 800 m³/h (222 L/s)To Booster 3 (Al-Jubriyah Road): 6,700 m, DI 800 mm / HDPE 900 mm, 2,500 m³/h (694 L/s)To Booster 4 (Al-Qala'a): 3,300 m, DI 400/350 mm / HDPE 500 mm, 700 m³/h (194 L/s)Electrical, Control & SCADA :Check power supply, automation, instrumentation, and interconnection between facilities.
 - Civil & Structural Works :Review buildings, foundations, supports, and site layouts.
 - Compliance & Deliverables: Ensure all designs, drawings, and BOQs meet project specifications and standards.

Hydro Services:

- Detailed Design Review
- Tender Documents

Baladrooz WTP 44,000 m³/ day , Intake, Two Boosters and Transmission Lines

📍Diyala Governorate - Iraq

Client

❑ Ministry of Construction and Public Municipalities- General Directorate for Water – Baghdad - Iraq

Our Role

❑ Sub-consultant to the Main Consultant

Date

❑ July 2025

Budget

❑ US Dollars 44 Million

Project Description

➤ The Baladrooz Water Treatment Plant is engineered for a nominal output of 2,000 m³/h of potable water, based on 22 hours of continuous operational availability. Raw water is withdrawn at the intake structure and routed to the chemical pretreatment stage, where controlled alum dosing ensures coagulation, supported by chlorine application for initial disinfection and oxidation. The conditioned water is subsequently directed to the lamella plate settlers, where high-rate clarification is achieved through increased effective settling surface area and accelerated floc-sludge separation. The clarified overflow is conveyed to the rapid gravity filtration units, where residual suspended solids and turbidity are removed through multi-layer sand media filtration. Post-filtration, the treated water is transferred to the ground storage reservoirs for hydraulic equalization and buffering. From these reservoirs, high-lift pumping assemblies deliver the finished water to the Baladrooz Booster Station and Imam Askar Booster Station, enabling onward transmission and integration into the distribution network.



Scope of Work

- The project includes the detailed design review of a 2,000 m³/hr Water Treatment Plant (WTP), two booster stations, and the associated transmission and distribution pipelines, supplied from El Rooz Canal via a new intake. The review covers:
 - Intake Structure : Verify hydraulic and structural design for drawing water from El Rooz Canal.
 - Water Treatment Plant (2,000 m³/hr) :Review treatment processes, hydraulic profile, mechanical/electrical systems, chemical dosing, and storage tanks.
 - Booster Stations (Baldrouz & Imam Asker) :Check pump selection, hydraulic head, surge protection, layouts, and all MEP systems.
 - Transmission & Distribution Pipelines:
 - Review HDPE PN10 pipelines delivering flows between 42–444 L/s with diameters 250–800 mm.
 - Verify pipeline lengths, hydraulic calculations, connections, and valve arrangements.
 - Electrical, Control & SCADA :Check power supply, automation, instrumentation, and interconnection between facilities.
 - Civil & Structural Works :Review buildings, foundations, supports, and site layouts.
 - Compliance & Deliverables: Ensure all designs, drawings, and BOQs meet project specifications.

Hydro Services:

- Detailed Design Review
- Tender Documents.

Zanboor WTP 22,000m³/day , An intake, One Booster (El Khalis) and Transmission Line

📍 Diyala Governorate - Iraq

Client

❑ Ministry of Construction and Public Municipalities-General Directorate for Water – Baghdad - Iraq

Our Role

❑ Sub-consultant to the Main Consultant

Date

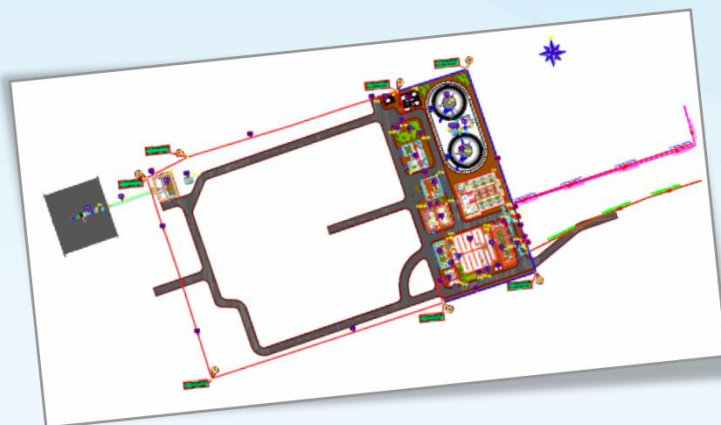
❑ July 2025

Budget

❑ US Dollars 22 Million

Project Description

- The Zanboor Water Treatment Plant is designed for a nominal production capacity of 1,000 m³/h of treated water, based on 22 hours of effective daily operation. Raw water is abstracted at the intake structure, where it first passes through mechanical screening before entering the raw water basin. The flow is then conveyed to the chemical treatment stage, where coagulation with alum and pre-chlorination are applied. The conditioned water is introduced into the clariflocculator units to achieve floc formation, clarification, and sludge separation. The clarified effluent is subsequently directed to the rapid gravity (sand) filtration units for final turbidity and solids reduction. The filtered water is collected in the ground storage reservoirs, from which high-lift pumping units deliver the final product to El Kholes Booster Station and onward to the Dojmah and Jizani distribution networks.



Scope of Work

- The project includes the detailed design review of a 1,000 m³/hr Water Treatment Plant (WTP), One booster station, and the associated transmission and distribution pipelines, supplied from Tigris River via a new intake. The review covers:
 - Intake Structure : Verify hydraulic and structural design for drawing water from Tigris River.
 - Water Treatment Plant (1,000 m³/hr) :Review treatment processes, hydraulic profile, mechanical/electrical systems, chemical dosing, and storage tanks.
 - Booster Station (El Kholes) :Check pump selection, hydraulic head, surge protection, layouts, and all MEP systems.
 - Transmission & Distribution Pipelines:
 - Review HDPE PN10 pipelines delivering flows between 42-56 L/s with diameters 250–560 mm.
 - Verify pipeline lengths, hydraulic calculations, connections, and valve arrangements.
 - Electrical, Control & SCADA :Check power supply, automation, instrumentation, and interconnection between facilities.
 - Civil & Structural Works :Review buildings, foundations, supports, and site layouts.
 - Compliance & Deliverables: Ensure all designs, drawings, and BOQs meet project specifications.

Hydro Services:

- Detailed Design Review
- Tender Documents.

VI

Water Transmission Projects



هيدروHydro

Hydro., Envir. & Infra Str. Studies
للدراسات الهيدرولوجية والبنية التحتية

Irrigation Water Transmission Pipelines from the WWTP to the Pumpstation in R8 Area

New Administrative Capital – Cairo, Egypt

Client

New Urban Communities Authority

Our Role

Client's Consultant

Date

February 2023

Budget

EGP 2.8 billion

Project Description

- The project involves supervising a 1500 mm irrigation water pipeline from the wastewater treatment plant to storage tanks and pump station in the R8 residential area. It includes a pump station, underground tanks, and necessary infrastructure such as valves and flow measurement systems, aiming to provide a sustainable water supply, optimize irrigation, and reduce dependence on freshwater sources.

Scope of Work

The construction supervision of involved disciplines for the 1500 mm diameter irrigation water transmission pipelines from the wastewater treatment plant to the irrigation storage tanks and pump station in the R8 area:

- 1500 mm ductile iron irrigation water transmission pipeline : total length: 43,500 meters and associated Components 30 chambers: 11 for air, 11 for washing, 8 for flow measurement
- Irrigation Tanks : Five tanks with a total capacity of 200,000 m³
- Pumping Station
 - Pump Room 1: Phase 1(2 working +1 standby) & Phase 2(3 working + 2 standby) : Q / pump = 116,760 m³/day, head of 158 m
 - Pump Room 2: Phase 1(One working +One standby) & Phase 2 (2 working + 2 standby): Q / Pump = 45,000 m³/day, head of 90 m
- Station components:

• Fence, Main Gate & Guard room	• Administrative building & Mosque	• Service Transformer Building
• Guard Towers	• Water hammer room	• Electrical Control Panel Building
• Suction Pit and Pump Room	• Generator House & Fuel tank	• Workshop and Warehouse building
• Underground Storage Tanks	• Inlet Valve Chambers	• Emergency Exit Gate
• Power Transformer Building	• Distribution Valve Chambers on the 1800 mm Pipeline	• Flow measurement chamber at the 100 mm outlet & the 1800 mm Outlet

Hydro Services:

- Construction Supervision



The 1500 mm Diameter Gravity Pipeline in the Mosalles El Amal Region

📍 Cairo - Egypt

Client

❑ New Urban Communities Authority

Our Role

❑ Client's Consultant

Date

❑ October 2024

Budget

❑ EGP 157 million

Project Description



- The project involves rerouting certain pipelines due to conflicts with infrastructure works along the road. This includes the 1500 mm gravity pipeline in Mosalles El Amal, which is being modified to avoid interference with road construction activities and other industrial projects in the area. The pipeline's rerouting ensures proper integration with existing infrastructure while maintaining functionality and compliance with safety standards.

Scope of Work

The full design package, tender documents and construction supervision for the gravity pipeline, and associated manholes includes: 1500 mm C.H.D.P.E. pipes, spanning a total length of 2,855 meters. Trenchless installation of reinforced concrete jacking pipes, comprising a jacking shaft with a 7-meter internal diameter and 6-meter depth, and a receiving shaft with a 5-meter internal diameter and 6-meter depth, over a total drive length of 178 meters 18 manholes.

Hydro Services:

- Concept, detailed design and tender documents
- Construction Supervision

Force main 1200 mm from the sewage P.S. at the center of New Cairo City to the South Investors Station

📍 Cairo, Egypt

Client

☐ New Cairo Development Authority - New Urban Community Authority (NUCA)

Our Role

☐ Client's Consultant

Date

☐ December 2018

Budget

☐ EGP 230 million

Project Description

- The project involves the supervision of a 1200 mm diameter force main pipeline from the Sewage Pumping Station in New Cairo City Center to the South Investors Station to the south extension. This includes the supply, installation, and testing of prestressed concrete pipes, along with the construction of washing and air chambers and pipe jacking at key intersections. The scope also includes the installation of reinforced concrete pipes, utility relocation (water, gas, irrigation, electrical), waterproofing, and road restoration. Additionally, the project covers the installation of water hammer protection, air tanks, compressors, electrical panels, and roadworks such as asphalt resurfacing, curbstones, paving slabs, and lighting poles.

Scope of Work

The full design package, tender documents and construction supervision of the Pipeline Installation and testing:

- Force mains pipeline prestressed concrete pipes (1200 mm diameter, 10-bar pressure), total length: 4200 meters and 4000 meters.
- A reinforced concrete pipes (1400 mm diameter), total length: 80,000 meters.

Washing and Air Chambers:

- 3 washing and air chambers along the 1200 mm pipeline route.
- Pipe Jacking:
- Pipe Jacking under the teseen road intersection (75 meters, 3200 mm diameter pipeline) with related chambers and fittings.
- Water Hammer Protection: Water hammer protection devices to safeguard the pipeline from pressure surges including Air Tanks (80 m³ capacity), Compressors, and Electrical Panels:

Utility Relocation:

Relocation of conflicting utilities, including Roadworks and Site Restoration

- Asphalt road restoration (24,000 m²) and concrete curbstones (3000 meters).
- Concrete slabs (10 cm thick, 2000 m²) and interlocking tiles (8 cm thick, 20,000 m²).
- 9 lighting poles.
- Reinstatement of all disturbed surfaces.

Water lines (UPVC, 200 mm, 300 mm, 225 mm) and GRP water line (500 mm).

Irrigation lines (UPVC, 9-inch and 4-inch).

Gas lines (180 mm).

Electrical cables

Hydro Services:

- Concept, detailed design and tender documents
- Construction Supervision



5 km, 2200 mm Water Pipeline from Intake Structure to Booster Pumping Station, Barqash City,**Giza , Egypt****Client**☐ New Urban Communities Authority**Our Role**☐ Client's Consultant**Date**☐ September 2023**Budget**☐ EGP 600 million**Project Description**

- The project involves the installation of a 5 km transmission water pipeline, with a diameter of 2200 mm, extending from the Intake Structure to the Booster Pumping Station in Barqash City, Phase I – El Sheikh Zayed, Egypt. It also includes the study and installation of a proposed steel force main line to handle the maximum discharge from the operational pumps at the station. This is necessary to address the issues with the existing two GRP force main pipelines, which are prone to failures. The new steel line will prevent disruptions in the water supply, ensuring the continuous operation of the pumps that feed the tanks and booster pumps supplying the Sheikh Zayed water treatment plant.

Scope of Work

Survey work and complete design package for:

- A 5 km steel pipeline with a 2200 mm diameter, including connection chambers, air valve chambers, and all necessary components.
- All valves and fittings within the chambers are made of ductile cast iron, PN16, ensuring durability and resistance to high pressure.

Hydro Services:

- Concept, Detailed Design and Tender documents
- Construction Supervision



Sewage Gravity Pipelines from El Banafeseg, Mirage, Jasmine, and Stations 1, 3, and 7 connecting to the Main line

📍 New Cairo - Egypt.

Client

❑ New Urban Communities Authority (NUCA)

Our Role

❑ Client's Consultant

Date

❑ October 2022

Budget

❑ EGP 420 million

Project Description

➤ The project involves supervising the main gravity lines connecting multiple stations in the New Cairo Extension area, extending to the Al-Gabal Al-Asfar Station. The pipeline network spans various sections, including El Banafeseg, Mirage, and Jasmine stations in the 1st Settlement, as well as Stations 1, 3, and 7 across the 1st and 2nd sectors of the New Cairo Extension area. The system includes a variety of pipe sizes, ranging from 1400 mm to 1800 mm concrete pipes.

Scope of Work

Supervision of the sewage main gravity lines from various stations to the main gravity line leading to the El Gabal El Asfar Water Treatment Plant, covering:

El Banafeseg Pump Station (1st Settlement):

➤ 1400 mm concrete pipes, 4,000 meters in length and 27 manholes

Mirage Pump Station (1st Settlement):

➤ 1200 mm concrete pipes, 1,400 meters in length and 16 manholes

Jasmine Pump Station (1st Settlement):

➤ 1200 mm concrete pipes, 3,130 meters in length

➤ 1500 mm concrete pipes, 3,000 meters in length

➤ 34 manholes

Pump Station 1:

➤ 1400 mm corrugated polyethylene pipes, 800 meters in length and 6 manholes

Pump Station 3:

➤ 800 mm UPVC pipes, 2,600 meters in length and 37 manholes

Pump Station No 7:

➤ 1800 mm concrete pipes, 3,700 meters in length and 27 manholes

Hydro Services:

➤ Construction Supervision



Water Transmission Pipelines of the New Ismailia Station

📍 Ismailia - EGYPT

Client

- ❑ Water Department - Engineering Authority

Our Role

- ❑ Client's Consultant

Date

- ❑ August 2018

Budget

- ❑ EGP 160 million

Project Description

- The water transmission pipelines of the New Ismailia Station are part of a crucial infrastructure project in Ismailia, Egypt, designed to supply clean and reliable water to the region. This project is particularly important given Ismailia's growing population and its strategic location along the Suez Canal.

Scope of Work

1. Design Phase: Includes hydraulic and capacity design, route planning and surveying, material selection, pump stations and control systems, as well as environmental and safety considerations.
2. Supervision Phase: Involves construction oversight, ensuring compliance with standards, coordination with stakeholders, testing and commissioning, and final documentation and handover.

Key components include:

- a) Raw Water Transmission Pipeline: 6,500 meters of HDPE pipes, 900 mm diameter, PN 10, with necessary manholes and chambers.
- b) Filtered Water Transmission Pipeline: 10,000 meters of pipes, 900 mm diameter, SDR 13.60, 12.50 bar operating pressure, with required manholes and chambers.
- c) HDPE Pipe Pushing Works: 8,100 meters of 800 mm HDPE pipes for filtered water transport below the Suez Canal using HDD (Horizontal Directional Drilling) for a 250-meter stretch, including air and wash valves.
- d) Water Hammer Works: Steel water hammer tank (60 m³ capacity) for 13 km pipeline, with a minimum grade of 37, inside the water treatment plant.
- e) Steel Structure Bridge: A 55-meter bridge over the Port Said Canal.
- f) Control and Monitoring (SCADA): Involves control and monitoring systems in valve chambers and discharge equipment, particularly for the sections before and after the Suez Canal crossing.

Hydro Services:

- Concept and Detailed Design
- Construction Supervision



The 2500 mm Gravity Pipeline Located East of the New Administrative Capital Airport.

📍 Cairo, Egypt

Client

❑ New Urban Communities Authority

Our Role

❑ Contractor's Consultant

Contractor

❑ Hassan Allam Construction

Date

❑ May 2017

Budget

❑ EGP One billion

Project Description

- The Gravity Pipeline Project located east to the New Capital Airport involves a concrete pipeline with diameters of 2500 mm, 2250 mm, and 2000 mm, designed to collect wastewater from the R7, R8, and Diplomatic districts. Spanning 20 kilometers, this pipeline connects 144 manholes along the airport. Its primary purpose is to transport sewage from these districts to two main gravity lines, each with a diameter of 3400 mm.

Scope of Work

The complete design package of the gravity pipeline has a total length of 19,750 linear meters and includes 144 manholes. It is divided into the following sections:

- 2000 mm concrete pipes with a length of 5,819 meters.
- 2250 mm concrete pipes with a length of 4,390 meters.
- 2500 mm concrete pipes with a length of 9,511 meters.
- 3000 mm concrete pipes with a length of 12 meters.

Hydro Services:

- Concept, Detailed Design
- Shop drawings



Decent Life Initiative “Gravity Networks and Force Mains” Markaz Malawy / Deir Mawas**Minya Governorate - Egypt****Client****□ National Organization For Potable Water and Sanitary Drainage "NOPWASD"****Our Role****□ Contractor's Consultant****Contractor****□ Care Company for Contracting and Maintenance****Date****□ October 2022****Budget****□ EGP 350 million****Project Description**

- The "Haya Karima" initiative in Minya The "Haya Karima" initiative in Minya includes several districts, with the goal of improving the living conditions and infrastructure in the region.
- Our target project is focused on 21 villages located in the Markaz of Deir Mawas and Malawy, involving the development of a gravity network and force mains.

Scope of Work

Survey Work, Geotechnical Investigation report and Complete design package for all disciplines for the following:

- The gravity network is composed of pipes with diameters ranging from 200 mm to 1200 mm, covering a total length of approximately 300 km.
- The force mains have diameters ranging from 200 mm to 800mm, with a total length of approximately 63km.

Hydro Services:

- Concept, Detailed Design and Tender documents
- Construction Supervision

VII

Water Treatment Plant Projects



هيدرو Hydro

Hydro., Envir. & Infra Str. Studies
للدراسات الهيدرولوجية والبيئية والبنية التحتية

 Alexandria - Egypt

❑ The Construction Authority for Potable Water and Wastewater

☐ Client's Consultant

☐ **May 2023**

Budget

☐ EGP 2.5 billion

Project Description

- **Al-Seyouf plant is the largest plant at the Potable water company in Alexandria, where the plant has been operated since 1934 on an area of about 247000 m² (approximately 60 feddans) with a design production capacity of 840000 m³/day, and the plant contains several operating systems such as Italba and Pulsator. The total design capacity of the Italba system is 720000 m³/day and the total design capacity of the Pulsator system is 120000 m³/day. The plant is fed with turbid water from El Mahmoudia Canal through 2 intakes for the plant, the old intake with 3 pipes with a diameter of 800 mm each, and the new intake with 8 pipes with a diameter of 1000mm each, and the plant has 11 tanks with a total storage capacity of 89.5 thousand m³ .**
- **Our project comprises in the implementation of the expansion of the potable water treatment plant in Al-Seyouf with a production capacity of 175,000 m³/day.**

Scope of Work

- **Survey Work, Geotechnical report and Environmental impact assessment study.**
- **Proposing a suitable technology to handle the sludge treatment for the whole plant**
- **Evaluate contractors in the bid stage and review the design issued by the Contractor during construction stage**
- **Complete design package for all disciplines of all units related to the expansion stage Layout**

• Flash mixing tank	• Raw water sump	• Transformer
• Flocculation tank	• Raw water pumps	• Generator
• Italba clarifier	• Treated water pumps	• Lamella settling tanks
• Rapid sand filters	• Chlorination building	• Gravity belt thickener building
• Treated ground reservoir	• Chemical building	• Alum storage tank

Hydro Services:

- **Design studies / Concept design**
- **Construction Supervision**
- **One Year of Operation and Maintenance**



About El Nomros Water Treatment Plant 2nd phase, capacity 61,000 m³/ day

📍 Giza - Egypt

Client

❑ Construction Authority for Potable Water and Wastewater

Our Role

❑ Client's Consultant

Date

❑ April 2021

Budget

❑ EGP 900 million

Project Description

➤ The project aims to design the 2nd phase of the drinking water treatment plant in Abu al-Nomros, with a daily production capacity of 61,000 m³, bringing the total treated water capacity to 122,000 m³/day. Several treatment options were proposed and evaluated to identify the most effective solution. Due to space constraints for the 2nd phase, a comparison of different treatment methods was conducted. The optimal solution chosen was the direct use of continuous sand filters (DynaSand). Additionally, the study includes the sludge treatment process of both phases.

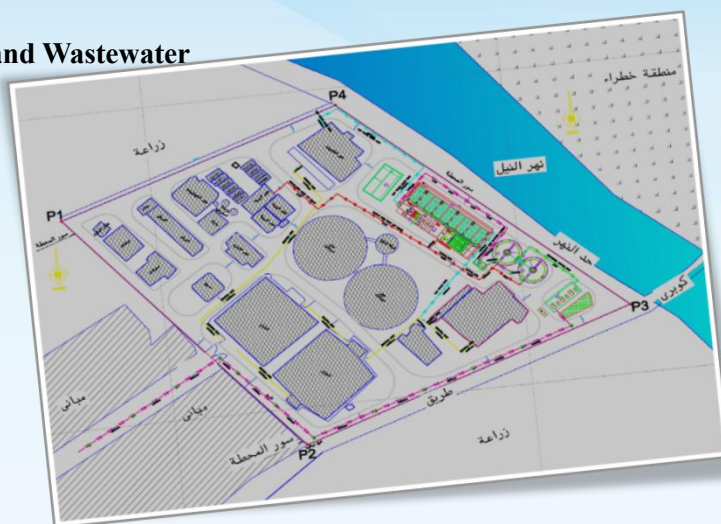
Scope of Work

- Topographic survey, soil investigation and hydraulic calculations.
- Study the existing intake and its capacity to accommodate the second stage flow.
- Environmental Impact Assessment Study.
- Complete design package for all disciplines (Process, Arch, Structure., Electrical, Mechanical, Plumbing, HVAC) for the below units:

• Substation Building	• Chlorine Building	• Supernatant Pump Station
• Fuel Tank	• Gravity Sludge Pumps	• Supernatant of Mechanical Dewatering
• Fine Screen	• Dynasand Continuous Filters	• Mechanical Dewatering Building
• Homogenization Tank to Wash Water	• Lamella Tanks for Wash Water	• Alum Storage Tank (50tons)

Hydro Services:

- Concept and Detailed Design
- Tender Documents



New Cairo Water Treatment Plant 3rd phase, capacity 500,000 m³/ day

📍Cairo Governorate - Egypt

Client

❑ Construction Authority for Potable Water and Wastewater

Our Role

❑ Client's Consultant

Date

❑ December 2025

Budget

❑ EGP 10 billion

Project Description

➤ The project aims to design the 3rd phase of the drinking water treatment plant in new Cairo , with a daily production capacity of 500,000 m³, bringing the total treated water capacity to 1.5 million m³/day. The treatment technology based on Super Pulsators for sedimentation and Rapid Sand filtration, the sludge will be handled with gravity thickeners and drying beds, lamella settlers used for filters backwash water concentration. the study includes the EIA study.

Scope of Work

- Topographic survey, soil investigation and hydraulic calculations.
- Environmental Impact Assessment Study.
- Complete design package for all disciplines (Process, Arch, Structure., Electrical, Mechanical, Plumbing, HVAC) for the below units:

• Substation Building	• Chlorine Building	• Supernatant Pump Station
• Fuel Tank	• Gravity Sludge Pumps	• Gravity Thickeners
• Rapid Sand Filters	• Super Pulsators	• Drying Beds
• Homogenization Tank to Wash Water	• Lamella Tanks for Backwash Water	• Alum Storage Tank (50tons)

Hydro Services:

- Concept and Detailed Design
- Tender Documents



The Cairo Wastewater Treatment Plant (capacity 330,000 m³/day) - Southern Extension Area

📍 New Cairo Governorate - Egypt

Client

❑ New Cairo City Government Office

Our Role

❑ Client Consultant

Date

❑ October 2025

Budget

❑ EGP 12 billion

Project Description

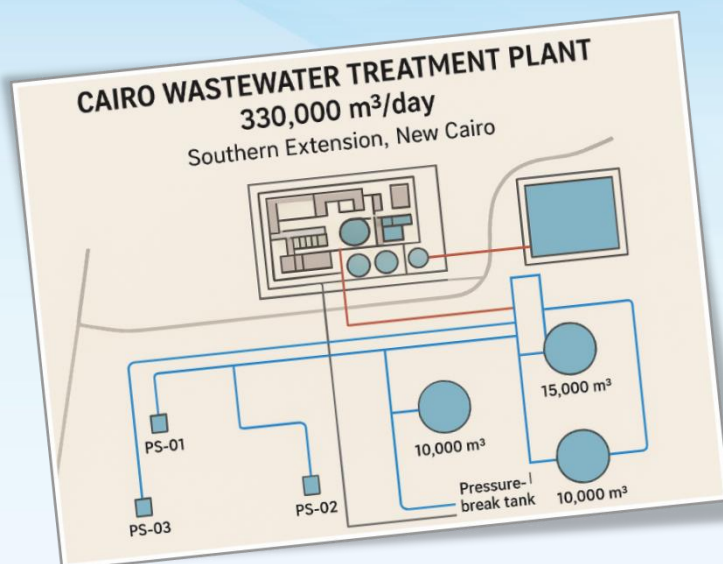
- The project covers the full engineering design and tender document preparation for Phase I of the New Cairo WWTP (160,000 m³/day on 60 feddans, ultimate 330,000 m³/day), together with Pumping Stations 1, 2, and 3, all related force mains (350–1400 mm), a 120,000 m³ ground reservoir, a 300 m³ pressure-break tank, a 4,000 m³ elevated tank, and two irrigation reservoirs (15,000 m³ with 85-m booster and 10,000 m³ with 70-m booster). The assignment includes all engineering disciplines and the preparation of the Environmental Impact Assessment.

Scope of Work

- The project covers the construction, supply, installation, testing, and commissioning of a full wastewater treatment system and associated facilities, including:
 - Main Treatment Plant – Phase 1 : Construction of the first phase of the wastewater treatment plant on a 60-feddan area with a treatment capacity of 160,000 m³/day.
 - Pumping Stations (PS-01, PS-02, PS-03) : Complete civil, mechanical, electrical, and control works for three lift stations, including pumps, valves, piping, control panels, and all site development works.
 - Force Mains: Supply and installation of multiple pressurized pipelines:
 - 1200 mm & 1400 mm force mains from PS-01
 - 1200 mm line from PS-02 to PS-01
 - 350 mm line from PS-03 to PS-01
 - 1000 mm line from PS-02 to the Arab Contractors junction
 - Water Storage Facilities
 - 12,000 m³ storage tank (without pump room)
 - Pressure-breaking tank (25 m height, 300 m³ capacity)
 - Elevated tank (35 m height, 4000 m³ capacity)
 - Irrigation Tanks & Booster Systems
 - 15,000 m³ irrigation tank with 85 m manometric head pumps
 - 10,000 m³ irrigation tank with 70 m manometric head pumps
 - Testing, Commissioning & Handover
 - Full system integration, performance testing, commissioning, training of operator staff, and handover of all assets.

Hydro Services:

- Concept, Detailed Design
- Tender Documents



Manshaet El Kiram Wastewater Treatment Plant 10,000 / 20,000 m³/day

📍 El Qalubiya - Egypt

Client

❑ Construction Authority for Potable Water and Wastewater

Our Role

❑ Client's Consultant

Date

❑ February 2018

Budget

❑ EGP 400 million

Project Description

➤ The wastewater treatment plant in Manshat Al-Karam, Shibin Al-Qanater, is a vital project under Egypt's "Hayah Karima" initiative, aimed at improving rural infrastructure. Initially designed with a capacity of 10,000 cubic meters per day, the plant's future capacity will increase to 20,000 cubic meters daily to meet growing demands using ASBR System. The facility will serve 24 villages, receiving and treating raw sewage to ensure safe water discharge into the Belbeis drain.

Scope of Work

The **Design review and Supervision** tasks include:

➤ Review design and supervision of all plant units. Evaluate test results and review surveying works. Assist the client in handing over site dimensions, boundaries, and levels to the contractor. Review contractor schedules and execution methods, ensuring quality control adherence. Review civil works requirements and material sourcing. Perform cost analysis and manage the bill of quantities. Analyze payment certificates and resolve contractual issues. Monitor commissioning tests. Contribute to the creation of as-built documentation. Participate in both initial and final project handovers.

➤ Plant Units:

• Inlet building and screening	• Workshop and warehouse	• Aeration tanks
• Mechanical dewatering	• Administration building	• Chlorine contact tank
• Electrical room	• Chlorine House	• Filter control panel building
• Control room	• Pump room	• Guard House & Fence

Hydro Services:

➤ Design Review

➤ Construction Supervision.



WWTP in 6th of October City (capacity 150,000 – 300,000 m³/day) with a total capacity of 3.5 million m³/day

📍 Giza Governorate - Egypt

Client

❑ New 6th of October City Authority

Our Role

❑ Client's Consultant

Date

❑ May 2020

Budget

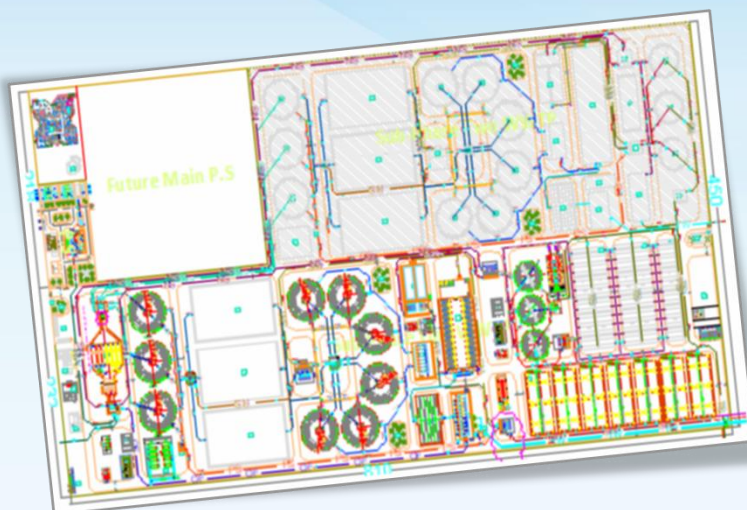
❑ EGP 14 billion

Project Description

- The new sewage treatment plants in new 6th of October city have a total capacity of 3.5 million m³/day, serving 6th of October, Hadayek October, and New 6th of October, Sphinx , New Zayed , Jiryan . The first phase has a capacity of 150,000 – 300,000 m³/day. Designed according to Egyptian Law 44/2000 and the national sewage treatment standards, the plants use a conventional activated sludge system with tertiary treatment. The treated water will be used for irrigation inside and outside the city .

Scope of Work

- The design package covers civil guide drawings of process units and complete package of civil works, electrotechnical works, and HVAC for all units and site utilities, including:
- Water, drainage, storm, irrigation, firefighting and electrical networks.
- Specifications for all disciplines for all project components.
- Plant components include:



• Inlet Chamber	• Distribution Chamber of Aeration Tanks	• Rapid Sand filters
• Main Distribution Room	• Aeration Tanks	• Chlorine Contact Tank
• Grit Removal Chamber	• Distribution Chamber of Final Sedimentation Tanks	• Treated Water Pump Station
• Distribution Chamber of Primary Sedimentation Tanks	• Final Sedimentation Tanks	• Return & Excess Sludge Pump Station
• Primary Sedimentation Tanks	• Intermediate pump Station	• Filters Waste Backwash Tank
• Belt Press Filters	• Head Work Blowers Building	• Workshop & Warehouse
• Sand Drying Beds	• Air blower building	• Mosque
• Sludge Stacking Area	• Administration Building	• Guard House
• Supernatant Pump Station	• Laboratory	• Parking and Green Areas
• Chlorine Building	• Substation 1 and 2	• Aerobic Digesters

Hydro Services:

- Concept and Detailed Design
- Tender Documents
- Construction Supervision

Rehabilitation of El-Kattameya Wastewater Treatment Plant 80,000 m³/ day

📍 Cairo - Egypt

Client

❑ New Cairo Development Authority

Our Role

❑ Client's Consultant

Date

❑ October 2020

Budget

❑ EGP 350 million

Project Description

- The Kattameya wastewater treatment plant, originally established with a capacity of 80,000 m³/day using Conventional Activated Sludge System, has been out of service for several years due to operational issues. The current project aims to rehabilitate the plant's treatment lines up to secondary treatment capacity and includes a study to expand its capacity to 100,000 m³/day. A consultancy study has assessed the plant's condition and identified necessary upgrades, such as equipment replacement, sludge management, aeration improvements, and water quality control.

Scope of Work

- Assessment of Kattameya Wastewater Treatment Plant's capacity and potential expansion from 80,000 m³/day to 100,000 m³/day, including rehabilitation.
- Civil works, rather than electromechanical systems, limit capacity expansion.
- At 80,000 m³/day, primary and secondary sedimentation tanks are overloaded.
- Aeration tanks are at their design organic load limit, though reduced organic content in incoming wastewater could help.
- Sludge handling units are overloaded, requiring additional equipment.
- Expanding to 100,000 m³/day exceeds design limits and reduces treatment efficiency.
- Overloading could compromise treated water quality.
- Recommendation to maintain the current capacity of 80,000 m³/day and optimize existing infrastructure.

Hydro Services:

- Tender documents



Phase 1 - New Capital Wastewater Treatment Plant Capacity 250,000 m³/day

📍 New Administration Capital - Egypt

Client

- ❑ Holding Company for Water and Wastewater (HCWW)

Our Role

- ❑ Contractor 's Consultant

Contractor

- ❑ Hassan Allam Construction

Date

- ❑ October 2018

Budget

- ❑ EGP 12 billion



Project Description

- The New Administrative Capital of Egypt aims to drive sustainable development and positively impact the economy. The targeted project involves a tertiary wastewater treatment plant with a capacity to treat 250,000 m³/day of wastewater for reuse in irrigation using ASBR system followed by tertiary treatment. It includes the plant, auxiliary buildings, an inlet pump station, networks, roads, and a 100,000 m³ irrigation tank. Civil guide drawings have been provided by the general process contractor, and Hydro team will proceed according to the outlined scope.

Scope of Work

The design package covers civil works, electrical works, and HVAC for both process and non-process buildings, including:

- Water, drainage, firefighting, storm, irrigation, and electrical networks.
- Specifications for civil works in process buildings, along with complete specifications for non-process buildings and all project components.

Plant components include:

IPS Building	Crystallization Building	Electrical Building
M a i n Distribution Room	Irrigation and Chlorine Injection Tank	Store and Workshop Building
C h l o r i n e Building	Primary Sedimentation Tanks	Sludge Thickening Building
N e w Administrative Building	Fence, Security Room & Mosque	Filtration Building
H e a d W o r k Building	ASBR Tanks	Generators and Transformers Building

Hydro Services:

- Detailed Design
- Shop Drawings
- As-built.

The Expansion of Matay Water Treatment Plant Capacity 34000 m³/day

Minya Governorate - Egypt

Client

Holding Company for Water and Wastewater (HCWW)

Our Role

Contractor's Consultant

Contractor

Concord for Engineering and Contracting

Date

May 2020

Budget

EGP 500 million

Project Description

- This project involves an expansion phase that will increase the capacity from 34,000 to 68,000 cubic meters per day treated water using Chemical Sedimentation followed by Filtration and Disinfection. This enhancement aims to better meet the city's drinking water demands, contributing to the ongoing efforts to improve infrastructure and the quality of drinking water services for residents. The Water Treatment Plant (WTP) will provide clean, potable water to the entire city of Matay.

Scope of Work

- Prepare design drawings for civil works based on the electromechanical process provided by the contractor "IETOS," and deliver a complete design package for non-process buildings and infrastructure utilities.
- Plant Components are:

• Rapid Mixing Tank	• Concentrated Sludge Lift Pumps	• Chemicals Building
• Flocculant and Coagulation Building	• Filter Wash and Clarification Waste Lift and Storage Pumps	• Generation Building & Transformer Building
• Rapid Sand Filter Building	• Drying Beds	• Sludge Thickening Tanks
• Ground Storage Tank	• Chlorine Injection Cylinders and Equipment Building	• Admin. Building & Guard Room

Hydro Services:

- Concept and Detailed Design
- Shop drawings
- As-built drawings



(Hayah Karima Initiative) El Sheikh Shibika Secondary WWTP (40,000/70,000 m³/day)

Minya Governorate - Egypt

Client

National Authority of Potable Water and Sewage (NOPWASD)

Our Role

Contractor's Consultant

Contractor

International Environmental Technologies and
Hassan Allam Construction

Date

January 2022

Budget

EGP 800 million

Project Description

- The sewage treatment plant project, located in Sheikh Shibika village, Darwa, in Markaz Malawi, South Minya Governorate, spans 35 Feddans and has a production capacity of 70,000/40,000 cubic meters per day using Extended Aeration System. The plant will serve 21 villages in the area.
- This project is part of the presidential "Hayah Karima" (Decent Life) initiative, which aims to improve the living standards of citizens in underserved rural areas and enhance essential public service

Scope of Work

- Based on the civil guide drawings provided by the process designer "Intech," Hydro has developed the complete design package for all plant units, encompassing architectural, structural, mechanical, and electrical aspects. The package also includes the preparation of bills of quantities and technical specifications for civil works.
- Plant units include:

• First and second stage distribution chambers	• Settling tanks	• Chlorine building
• Inlet and screening chamber	• Chlorine contact tank	• Generator, fuel tanks, sludge storage,
• Grit removal chamber	• Sludge thickener	• Air blower
• Flow measurement chamber	• Sand drying beds	• Administrative building
• Aeration tank distribution chamber	• Return and excess sludge pump station	• Laboratory and workshop
• Aeration tanks	• Thickened sludge pump station	• Storage areas, and site work
• Sedimentation tank distribution chamber	• Supernatant pump station	• Transformer building

Hydro Services:

- Detailed Design
- Shop Drawings



(Hayah Karima Initiative) Malawi Secondary WWTP (20,000/40,000 m³/day)

Minya Governorate - Egypt

Client

□ National Authority of Potable Water and Sewage (NOPWASD)

Our Role

□ Contractor's Consultant

Contractor

□ Care Company for Contracting and Maintenance

Date

□ March 2022

Budget

□ EGP 600 million

Project Description

- The sewage project in Malawi Center, Minya Governorate, part of the "Hayah Karima" initiative, aims to enhance local infrastructure. Located on 12 feddans, it has an initial capacity of 20,000 m³/day, expandable to 40,000 m³/day using Extended Aeration System. The project includes pumping stations, pressure lines, and a secondary wastewater treatment plant. It will serve the villages of Nazlet Hamzawy, Nazlet Shamroukh, and Al-Bayadiya, improving environmental health and water safety for the community.

Scope of Work

- The project entails the preparation of design drawings for drainage networks, gravity pipelines, force mains, pumping stations, and secondary treatment plants, addressing architectural, structural, mechanical, and electrical aspects. It also includes the preparation of bills of quantities, technical specifications for civil works, and the review of electromechanical technical proposals.
- The Plant Units involved

• Inlet chamber	• Settling tanks	• Transformer & Generator
• Screening chamber	• Chlorine contact tank & Chlorine building	• Fuel tanks
• Grit removal chamber	• Sludge thickener	• Sludge storage
• Flow measurement chamber	• Sand drying beds	• Air blower
• Aeration tank distribution chamber	• Return and excess sludge pump station	• Administrative building
• Aeration tanks	• Thickened sludge pump station	• Laboratory
• Sedimentation tank distribution chamber	• Supernatant pump station	• Workshop & Storage areas

Hydro Services:

- Detailed Design
- Shop Drawings



(Hayah Karima Initiative) Tanuf WWTP (20,000 to 40,000 m³/day) Markaz Deir Mawas

📍 Minya Governorate - Egypt

Client

☐ National Authority of Potable Water and Sewage (NOPWASD)

Our Role

☐ Contractor Consultant

Contractor

☐ Concord for Engineering & Contracting

Date

☐ March 2022

Budget

☐ EGP 600 million

Project Description

- The Tanuf wastewater treatment plant expansion project in Markaz Dier Mawas, covering 17 Feddans, includes sewer networks, lift stations, WWTP, and force mains. The plant will serve approximately 16 main villages and their surrounding areas, as well as Markaz Dier Mawas, with a capacity of 20,000 to 40,000 m³ / day using Extended Aeration System. This project is part of the "Hayah Karima" presidential initiative, aimed at developing rural Egypt. It will provide sanitation services to around 300,000 people in villages such as Al-Rahmaniya, Al-Amariya Al-Gharbiya, Al-Nasriya, and others.

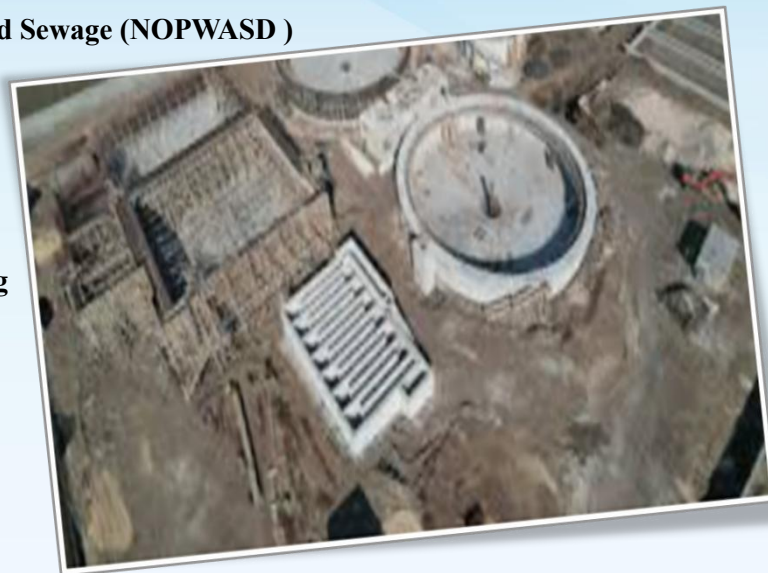
Scope of Work

- The project involves the preparation of design drawings for drainage networks, gravity pipelines, force mains, pumping stations, and secondary treatment plants. Based on the civil guide drawings provided by the process designer, a comprehensive design package has been created for all units of the secondary treatment plant, including architectural, structural, mechanical, and electrical components. The package also includes bills of quantities and technical specifications for civil works.
- The Plant (WWTP) includes:

• Inlet chambers	• Chlorine contact tanks	• Fuel tanks
• Screening and grit removal chambers	• Sludge management facilities	• Storage areas
• Flow measurement chambers	• Pump stations	• Administrative building
• Aeration tanks	• Transformers	• Laboratory
• Sedimentation tanks	• Generators	• Workshop

Hydro Services:

- Detailed design
- Shop drawings
- As-built



East Port-Said Industrial Zone Tertiary Wastewater Treatment Plant (25,000 m³/day)

Port Said Governorate- Egypt

Client

Suez Canal Economic Zone

Our Role

Contractor's Consultant

Contractor

Concord for Engineering & Contracting

Date

October 2022

Budget

EGP 400 million

Project Description

The East Port-Said industrial zone covers 63 km² and is designated for various manufacturing activities and industrial clusters. The wastewater treatment plant, with a capacity of **25,000 m³/day** using **Conventional Activated Sludge with DAF units as a primary**, employs advanced **tertiary treatment** to ensure the water is clean, compliant with regulations, and safe for reuse in water-intensive processes. This treatment meets stringent cleanliness standards required for water reuse.

Scope of Work

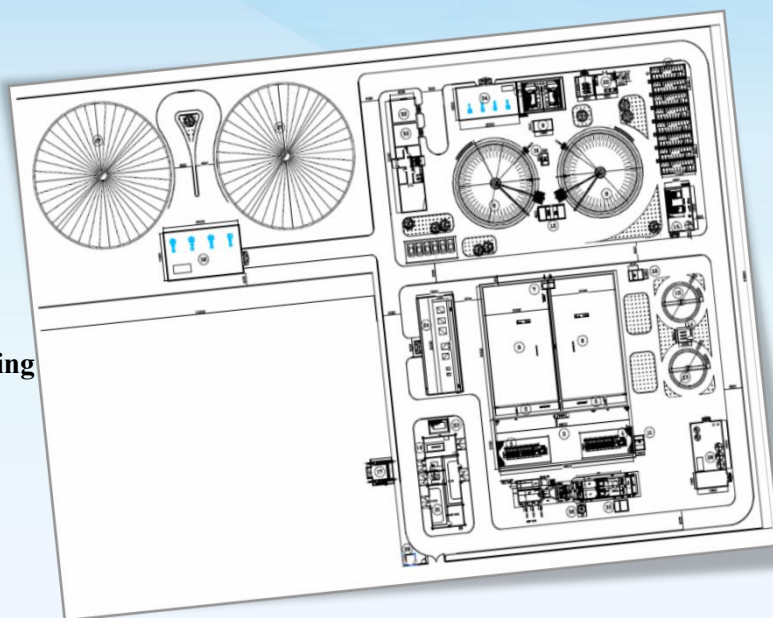
Design of civil / electrical / MEP work of all process and non-process units according to the civil guide drawings provided from the process general contractor "Ietos" in addition to network layout design (water, sewage, storm, firefighting, roads, electrical).

Plant Components:

• Head work	• Ras & was sump	• Dewatering room
• Lifting pump station	• Thickened sludge pump station	• Generator, Substation and Fuel tank
• Chlorination building	• Oil & Grease chamber, Holding tank	• Air Blower
• Disk filter	• Air Blower and Scum sump	• Chemical building
• D r y i n g b e d s Supernatant	• Fuel tank,	• Guard room & fence

Hydro Services:

- Detailed design
- Shop drawings



(Hayat Karima Initiative) Delga Secondary WWTP Capacity of 15,000 m³/day

Minya Governorate - Egypt

Client

National Authority of Potable Water and Sewage (NOPWASD)

Our Role

Contractor's Consultant

Contractor

Military Production Company

Date

December 2021

Budget

EGP 370 million

Project Description

The expansion of the wastewater treatment plant in Delga village, part of the "Hayah Karima" presidential initiative, is being developed on a **42,000 m² area (approximately 10 Feddans)** and will **serve three villages** with treated water **using Extended Aeration System**. The project is designed to improve living standards in underserved rural areas and enhance essential public services. Once completed, the plant will have a daily treatment capacity of around **15,000 cubic meters**.

Scope of Work

- Developed a complete design package for all plant units of the **secondary treatment plant**, based on civil guide drawings provided by the process designer.
- The design package includes architectural, structural, mechanical, and electrical aspects, as well as bills of quantities and technical specifications for civil works.

The plant units are:

• Inlet chamber	• Chlorine contact tank	• Generator
• Screening chamber	• Sludge thickener	• Fuel tanks
• Grit removal chamber	• Sand drying beds	• Sludge storage
• Flow measurement chamber	• Return and excess sludge pump station	• Air blower
• Aeration tank distribution chamber	• Thickened sludge pump station	• Administrative building
• Aeration tanks	• Supernatant pump station	• Laboratory
• Sedimentation tank distribution chamber	• Chlorine building	• Workshop
• Settling tanks	• Transformer	• Site work

Hydro Services:

- Detailed design
- Shop drawings



VIII

Pumping Stations



هيدروHydro

Hydro., Envir. & Infra Str. Studies
للدراسات الهيدرولوجية والبيئية والبنية التحتية

13 Pumping Stations, Sewage & Agricultural Drainage Collection Project,

📍 Dabaa Corridor (New Delta Project) - Egypt

Client

- ❑ Water Department – Engineering Authority

Our Role

- ❑ Client's Consultant

Date

- ❑ May 2022

Budget

- ❑ EGP 300 billion

Project Description

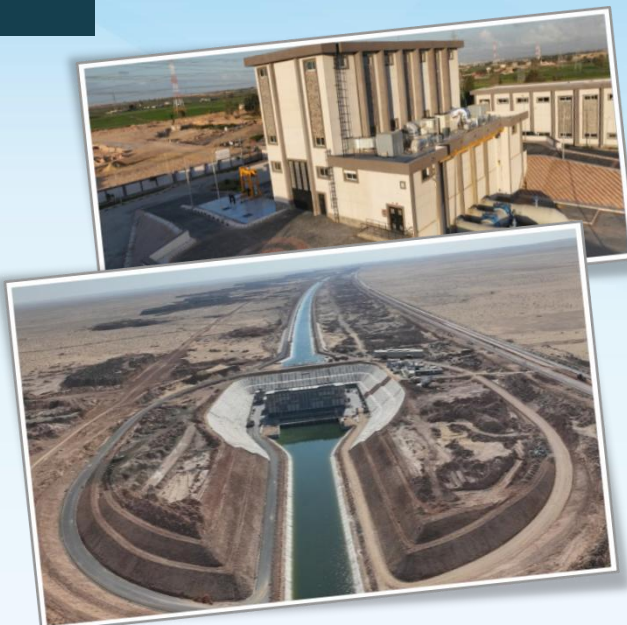
- The New Delta Project is a flagship initiative for Egypt's future, representing one of the country's largest agricultural endeavors. It aims to reclaim over 1 million feddans of desert land to the west of the Nile Delta. Spanning a total of 2.2 million feddans, including infrastructure developments, the project seeks to increase Egypt's cultivated land by 15% through a combination of treated agricultural drainage, groundwater, and surface water. The project covers approximately 688,000 feddans south of the Dabaa axis and west of the old delta.
- A key component of the project is the collection and transportation of agricultural drainage water from the North Delta to the treatment plant, facilitated by a 165 km network of open channels and pipelines. Thirteen pump stations, strategically distributed along a 114 km stretch, are integral to this process, playing a vital role in the collection and transfer of sewage and agricultural drainage, with a combined capacity of 6 million cubic meters per day.

Scope of Work

- Complete design package for all aspects of the 13 pump stations includes civil works, architectural finishing, electromechanical systems, infrastructure, landscaping, and road works. A total of 160 pumps have been installed across the stations, with 85% in operation and the remaining 15% serving as standby pumps. The manometric head ranges from 15 meters to 30 meters.
- Although the components of the 13 pump stations vary, the following elements are common to each, with differences between stations: Station Manager's Building, Transformer Buildings, Generator Buildings, Mosque Building, Administrative Building, Distribution Building, Security Room, Fuel Tanks, Flow Measurement Rooms, Valve Rooms, Water Hammer Chambers, Fire Tank, and Warehouse and Workshop Building.

Hydro Services:

- Concept and Detailed Design
- Construction Supervision



Pumping Stations No.	Maximum flow
1 - 2 - 3 - 4 - 5	6.5 million m ³ /day/ station
6	One million m ³ /day
7 - 8 - 9 -10 -11 -12	7.5 million m ³ /day/station
Western treatment plant	600 000 m ³ /day

Sewage Gravity / Pump station / Force Mains for the Urban Expansions in the North & South of Moshir

📍 Cairo - Egypt

Client

Sanitary Drainage Authority for Greater Cairo

Our Role

Client's Consultant

Date

October 2021 and May 2023

Budget

EGP 4.3 billion

Project Description

- The project aims to connect the sewage system to the urban expansions in the North and South Moshir corridor. This will be done through a gravity sewage network, complemented by pumping stations to lift and transfer wastewater, and force mains to channel the flow to treatment or disposal facilities. This setup ensures effective sewage management for the growing urban areas.

Scope of Work

Survey Work, Geotechnical Investigation report and Complete design package for all disciplines for the following

- The Gravity network consists of pipes ranging from 500 to 1000 mm in diameter, utilizing UPVC pipes for sizes up to 600 mm and precast concrete pipes for larger diameters, with a total length of approximately 36350 linear meter.
- The Force mains include three 1000 mm ductile iron pipes (12,200 meters total), an 800 mm HDPE pipe (3,000 meters), and 1400 mm pre-stressed concrete pipes (8,450 meters).
- Pump Stations No. (1, 2, 3, 4) and the mechanical Data for the pumps are as follows:

Pump Stations	Total Discharge Capacity	Discharge per pump	Manometric Head
Pump Station 1	2684 L/sec or 231,897 m³/day	671 L/sec./pump (6 pumps in total: 4 operating, 2 spare)	91 meters
Pump Station 2	1490 L/sec or 128,736 m³/day	745 L/sec./ pump (4 pumps in total: 2 operating, 2 spare)	80 meters
Pump Station 3	710 L/sec or 61,344 m³/day	355 L/sec./pump (4 pumps in total: 2 operating, 2 spare)	50 meters
Pump Station 4	5128 L/sec or 443,059 m³/day	1282 L/sec./pump (6 pumps in total: 4 operating, 2 spare)	63 meters

- The Pump Stations No. (1, 2, 3, 4) includes design works across all disciplines, including Civil, Mechanical, Electrical, Fire Protection, Air Conditioning, and Ventilation, with the following components:

Fence and site utilities	Fuel tank base	Generator building
Flow measurement	Pump house	Transformer building
Valve room	Security building	Administrative building
Surge tank and surge tank base	Distribution building	Storage and workshop buildings

Hydro Services:

- Concept & Detailed Design
- Tender Documents



1200 mm Water Transmission line from the East Port Said Desalination Plant to the Pump Station 150,000 m³/day

East Port Said - Egypt

Client

- Water Department – Engineering Authority

Our Role

- Client's Consultant

Date

- March 2021 & January 2022

Budget

- EGP 2.2 billion

Project Description



- Our project, consisting of the transmission line and the pump station, is located within the Suez Canal Economic Zone (SCZone), a key hub for industrial and economic development in Egypt. The 28 km, 1200 mm HDPE water transmission pipeline will transport treated water from the East Port Said Desalination Plant to the pump station, which has a capacity of 150,000 m³/day. This infrastructure is crucial for meeting the region's growing water demands and supporting the sustainable development of the SCZone.

Scope of Work

- A complete design package covering all disciplines for the project, including the design and supervision of:
 - Pipeline HDPE 1200 mm –PN 10, 28 km, including valve chambers and all associated mechanical works.
 - Pumping Station (290*197) m includes Six water tanks, each with a capacity of 25,000 m³, chlorination building, administration building, warehouse, workshop, valve chambers, pump room, electrical distribution system, transformer rooms, generator rooms and fuel tank, water hammer protection system, security building, mosque, as well as infrastructure and site works.
- Summary of the pumping station:

Component	Specification	Component	Specification
Pumping Station Capacity	150,000 m ³ /day	Head (Vertical Lift)	60 meters
Number of Pumps	5 pumps	Water Tanks	6 tanks (GLS)
Flow per Pump	290 L/s	Capacity per Tank	25,000 m ³ /day per tank
Total Flow Rate (for 5 pumps)	1,450 L/s or 125,400 m ³ /day	Total Tank Storage Capacity	150,000 m ³ /day

Hydro Services:

- Concept, Detailed Design and Tender Documents
- Construction Supervision

Hayah Karima Initiatives "20 Pumpstations" Markaz Damanhur

Beheira – Egypt

Client

- Northern Military Zone Command – Engineering Authority

Our Role

- Client's Consultant

Date

- August 2022

Budget

- EGP 2 billion

Project Description

- The "Haya Karima" initiative in Beheira includes six Markaz: "Damanhour, Kafr El-Dawar, Abu Homs, Hosh Essa, Abu Al-Matamir, and Wadi Al-Natron," with a total of 43 main villages. Our project focuses on Markaz Damanhour, aiming to serve 20 villages by designing and supervising the implementation of 20 pumping stations, gravity networks, and force mains to serve these 20 villages.

Scope of Work

Survey Work, Geotechnical Investigation report, complete design package and supervision for all disciplines for the following:

- The gravity network is composed of pipes with diameters ranging from 200 mm to 1200 mm, covering a total length of approximately 230 km.
- The force mains have diameters ranging from 200 mm to 1000 mm, with a total length of approximately 67 km.
- A total of 20 pump stations, with the following details:

No	Total Discharge Capacity	Head (m)	No	Total Discharge Capacity	Head (m)	No	Total Discharge Capacity	Head (m)
1	104 L/sec or 8985 m ³ /day	10	8	35 L/sec or 3024 m ³ /day	10	15	60 L/sec or 5184 m ³ /day	10
2	36 L/sec or 3110 m ³ /day	8	9	780 L/sec or 67392 m ³ /day	12	16	100 L/sec or 8640 m ³ /day	10
3	110 L/sec or 9504 m ³ /day	10	10	410 L/sec or 35424 m ³ /day	11	17	50 L/sec or 4320 m ³ /day	10
4	35 L/sec or 3024 m ³ /day	9	11	675 L/sec or 58320 m ³ /day	12	18	100 L/sec or 8640 m ³ /day	9
5	110 L/sec or 9504 m ³ /day	10	12	100 L/sec or 8640 m ³ /day	10	19	280 L/sec or 24192 m ³ /day	12
6	260 L/sec or 22464 m ³ /day	11	13	270 L/sec or 23328 m ³ /day	10	20	200 L/sec or 17280 m ³ /day	11
7	220 L/sec or 19008 m ³ /day	11	14	424 L/sec or 36633 m ³ /day	11			

- The Pump Stations Components are :

Hydro Services:

- Concept, Detailed Design
- Tender Documents
- Construction Supervision

Fence and site utilities	Fuel tank base	Generator building
Flow measurement	Pump house	Transformer building
Valve room	Security building	Administrative building
Surge tank and surge tank base	Distribution building	Storage and workshop buildings



Water Transmission Lines on The Galala Plateau, Strategic Reservoir and Pump Stations

Galala City - Ain Sokhna - Egypt

Client

Water Department – Engineering Authority

Our Role

Client's Consultant

Date

September 2016

Budget

EGP 1.2 billion

Project Description

- Al Galala City, one of Egypt's most ambitious developments, is poised to become a leading tourist and residential hub.
- Situated on the El-Galala plateau between Ain El-Sokhna and Zafarana, at an altitude of 542 meters, the city covers over 18,000 feddans. It offers world-class amenities, including an international medical city, the region's first Olympic village, and various residential and tourism zones. To ensure a reliable water supply, Al Galala hosts Egypt and the Middle East's first desalination plant, featuring a reverse osmosis system with a daily capacity of 150,000 m³.

Scope of Work

Complete design package and supervision of work of all disciplines:

- Transporting 150,000 m³/day of water from the desalination plant to Galala plateau, raising it 542 meters through 4 booster stations.
- 4 booster stations each will include pump room, generator house, fuel water, water hammer and other related facilities.
- Six strategic tanks, each with a capacity of 25,000 m³, diam. 56 meter and 10-meter height
- Three steel pipelines, each 14 km in length with a diameter of 700 mm, including all necessary accessories, fittings, and related components.
- SCADA system integration.

Hydro Services:

- Concept and Detailed design drawings
- Construction Supervision



New Cairo Sewage Pumping Station & The force main pipe from the Pump Station to Sewage Network

📍 Cairo - Egypt

Client

❑ New Cairo City Development Authority

Our Role

❑ Client's Consultant

Date

❑ July 2017 and June 2020

Budget

❑ EGP 4 billion



Project Description

- The project involves building a sewage pumping station and a force main pipeline system to serve New Cairo and the New Administrative Capital in Egypt. It includes the installation of pre-stressed and reinforced concrete pipes, manholes, air chambers, GRP covers, washing chambers, valves, elbows, and a pressure relief chamber. Tunneling or open excavation methods will be used for certain crossings. Electrical and control systems, featuring Remote Terminal Units (RTUs), along with control, power, and fiber optic cables, will ensure efficient operation and communication.

Scope of Work

Full design package and the construction supervision of :

The Force main:

- 25,000 linear meters of pre-stressed concrete pipes (1600 mm diameter, PN 10) with internal steel cylinders.
- 1225 meters of reinforced concrete pipes (3400 mm diameter).
- Manholes, chambers, air chambers, wall connections, GRP covers, and joints, washing chambers, valves, elbows, flow meters, and a pressure relief chamber.
- Nine crossings (3400 mm diameter, 45 to 185 meters in length), constructed using tunneling or open excavation methods.
- Medium voltage electrical and control works, including an RTU control system, control cables, power cables, and fiber optic cables.

The Sewage Pump Station (4) spans an area of 317m by 130m, and its components include:

- A Pump House housing 8 pumps, each with a capacity of 1330 L/sec (equivalent to 114,912 m³/day per pump) and a head of 28 meters.
- Various essential buildings and facilities, such as the Inlet Building, Mechanical Screening and Sand Removal, Administrative Building, Storage and Workshop, Security Room, Fuel Tank, and both Medium and Low Voltage Generator Buildings.
- Additional infrastructure includes a Distributor Building, Mosque, Water Hammer Tank, Flow Measurement Room, Crossing Pump Room, Screening Building, Fire Tank, and Control and Monitoring Building.
- The station is also equipped with Emergency Pumps to ensure operational reliability.

Hydro Services:

- Concept and Detailed design drawings
- Construction Supervision

Relocation of Borg El Arab Water Station Intake from Mariout Canal (Km 40) to Nubaria Canal (Km 83.7)

📍 Alexandria - Egypt

Client

❑ Construction Authority for Potable Water and Wastewater (CAPW)

Our Role

❑ Contractor's Consultant

Contractor

❑ Concord for Engineering and Contracting

Date

❑ February 2016

Budget

❑ EGP 640 million



Project Description

- The project aims to operate the Mariout 1 station by utilizing water from the Al-Omum Drain at kilometer 85 of the Nubaria Canal, providing 2 million m³/day. It will blend Desert Reclamation Drain water with Mariout Canal water for agricultural use, thus conserving Nubaria Canal water. The project will also improve the quality of drinking water to meet the Egyptian Ministry of Health standards and international guidelines. Additionally, it will reduce operational costs for lifting turbid water to the 40-kilometer treatment plant by connecting directly to the clarifiers and lower maintenance costs for lifting pumps. Reusing 65,000 cubic meters of water in the second phase is also part of the plan.

Scope of Work

Preparing shop drawings and as-built of :

- **Raw Water Intake:** Nubaria Canal at km 83.7 with a Capacity: 660,000 m³/day
- **Raw Water Pumping Station:** 11 working pumps (2,500 m³/h each) + 6 standby pumps Head: 28 m, Electrical: 225 KW/pump, 2 sumps (31×7×2.77 m)
- **Transmission Pipelines:** 3 pre-stressed concrete lines, 1600 mm dia., 13.4 km (total 40 km)
- **Pump Station Buildings:** Workshops, stores, fuel tank, transformer, generator, administration, security, low-voltage room, general site works
- **Hydraulic Lines:** 2 steel pipelines (800 mm) serve 17 pipelines (600 mm)
- **Valve Chambers:** Main valve, water hammer system, 4 flushing, 7 air, 5 flushing/maneuvering, 2 flow meter chambers
- **Crossings:** Marioubliis Canal, Tahrir Drain, Railway, Nubaria Drain
- **Distribution Chamber:** Size: 12.5 × 8.5 × 14 m Entry: Three 1600 mm pipelines Exit: One 1200 mm, three 1500 mm, one surplus 1000 mm pipeline, Sludge Chamber : Collects raw water for sludge separation and reuse
- **Connections to Distribution Networks:** Degremont Outlet: 1200 mm (400 m), Hors Outlet: 1500 mm (50 m) and **Future steel pipeline:** 1500 mm diameter

Hydro Services:

- Shop Drawings
- As-built Drawings

Sewage Pumping Stations (PS1 43,200 m³/day and PS2 17,280 m³/day) - Industrial Zone

📍 East Port Said - Egypt

Client

❑ The Suez Canal Economic Zone

Our Role

❑ Contractor's Consultant

Contractor

❑ Hassan Allam for Construction

Date

❑ April 2020

Budget

❑ EGP 350 million



Project Description

- The East Port Said Sewage Pump Station is an essential / key infrastructure component within the Suez Canal Economic Zone (SCZone) in Egypt. Located in this strategically important industrial and logistics hub.
- The SCZone, which is positioned along the northern entrance of the Suez Canal, is designed to support industrial, commercial, and residential growth, and the sewage pump station is a key element in maintaining the area's environmental and operational sustainability.

Scope of Work

Preparation of detailed design, shop drawings and as-built drawings for the architectural, structural, electromechanical, and infrastructure components, as well as site work, for two pump stations:

- Pump Station 1 has a capacity of 500 liters/second (43,200 m³/day), H = 42 meter.
- Pump Station 2 has a capacity of 200 liters/second (17,280 m³/day), H= 21 meter.

Both stations are equipped with similar components, including a pump station building, substation, RMU (Ring Main Unit), guard room, water hammer protection system, valve chamber, odor control system, and flow meter chamber.

Hydro Services:

- Detailed Design
- Shop Drawings
- As-built Drawings

El-Mahismah Pump Station (2) (4000 L/sec. or 345,600 m³/day)

📍 Ismailia – Egypt

Client

❑ Water Resources and Irrigation Ministry

Our Role

❑ Contractor's Consultant

Contractor

❑ Concord for Engineering & Contracting

Date

❑ April 2018

Budget

❑ EGP 217 million



Project Description

- The Pumping Station (2) located west of the Suez Canal, aimed at supplying and lifting water to the Al-Mahsama Siphon. The project includes 3 pumping stations, and 1 standby, with a capacity of 4500 L/sec each or 389,000 m³/day.

Scope of Work

- Preparation of shop drawings and as-built drawings for the pumping station (2) drawings for all disciplines (civil, mechanical, electrical, plumbing, etc.).
- The project consists of the following components: pump house (three pumps (working) and one standby unit, each with a capacity of 4000 L/sec, or 345,600 m³/day), control panel building, suction basin, discharge basin, administrative building, guard room, and fence.

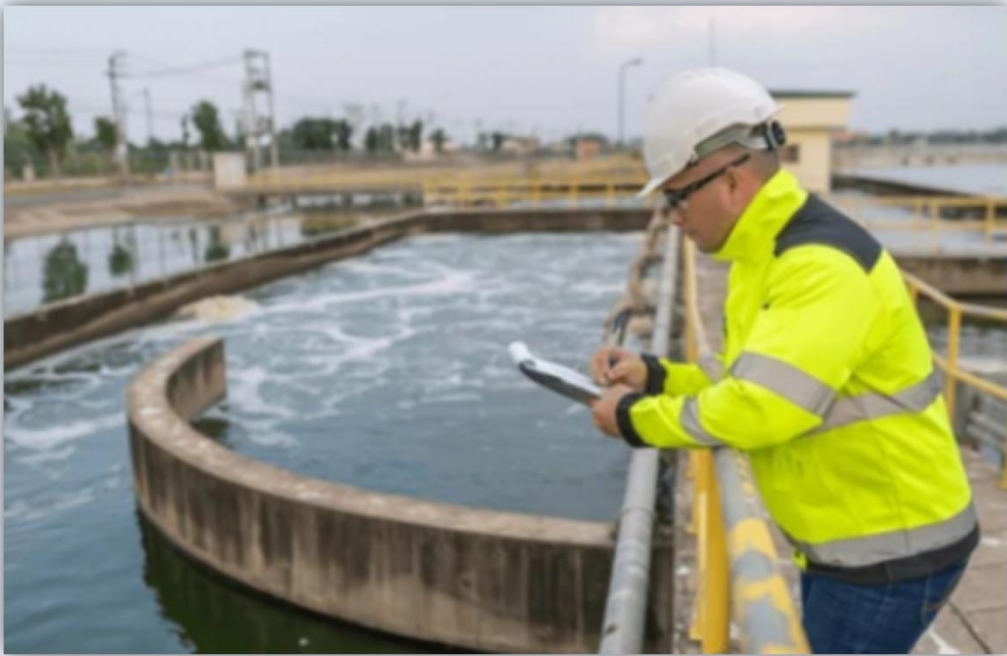
Hydro Services:

- Shop Drawings
- As-built Drawings

IX

Operation & Maintenance

CHALLENGES OF WATER RESOURCES



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للدراسات الهيدرولوجية والبيئية والبنية التحتية

Alexandria East WWTP Extension and Upgrade (capacity 800,000 m3/day)

📍 Alexandria, Egypt

Client

❑ Construction Authority for Potable Water and Wastewater (CAPW)

Our Role

❑ Client's Consultant

Date

❑ November 2025

Budget

❑ EGP 10 billion

Project Description



- The Alexandria East Wastewater Treatment Plant extension and upgrade is a major infrastructure project managed by Egypt's Construction Authority for Potable Water and Wastewater (CAPW), aimed at expanding the facility's capacity from primary treatment to a full secondary treatment facility with an average capacity of 800,000 m³/day. With a total estimated budget of approximately €185 million (around 10.23 billion EGP) financed by the European Investment Bank (EIB) and EU grants, the project is designed to improve sanitation for over 1.5 million residents in East Alexandria. A key feature is the integration of advanced sludge treatment and biogas energy recovery systems, which will cover 60-80% of the plant's power needs, contributing to both environmental protection of Lake Maryout and El Mex Bay and sustainable operations..

Scope of Work

- The scope of work for the Operation and Maintenance (O&M) of the Alexandria East WWTP covers daily the supervision of the operation, maintenance, and compliance of the following:
 - Daily Operations: Continuous monitoring and process control of all primary and new secondary treatment units.
 - Optimization of chemical dosing, aeration, and flow management.
 - Laboratory analysis and monitoring of influent and effluent quality to ensure permit compliance.
 - Operation of disinfection systems before discharge.
 - Maintenance: Implementation of comprehensive preventive maintenance (PM) for mechanical, electrical, and instrumentation equipment.
 - Rapid response corrective maintenance and spare parts management.
 - Asset condition assessment and record keeping.
 - Sludge & Energy: Operation of new sludge digestion and dewatering facilities.
 - Management of biogas generation and energy recovery systems.
 - Safe disposal of screenings, grit, and dewatered sludge.
 - Compliance & Safety: Enforcement of strict health, safety, and environmental (HSE) protocols.
 - Detailed record-keeping and submission of compliance reports to the client and regulatory agencies.
 - Ensuring adequate staffing and ongoing operator training.

Hydro Services:

- Operation and Maintenance Supervision



70

The Current and Future Integrated Sewage System for The New City of Borg El Arab City

📍 Alexandria, Egypt

Client

☐ New Urban Communities Authority (NUCA)

Our Role

☐ Client's Consultant

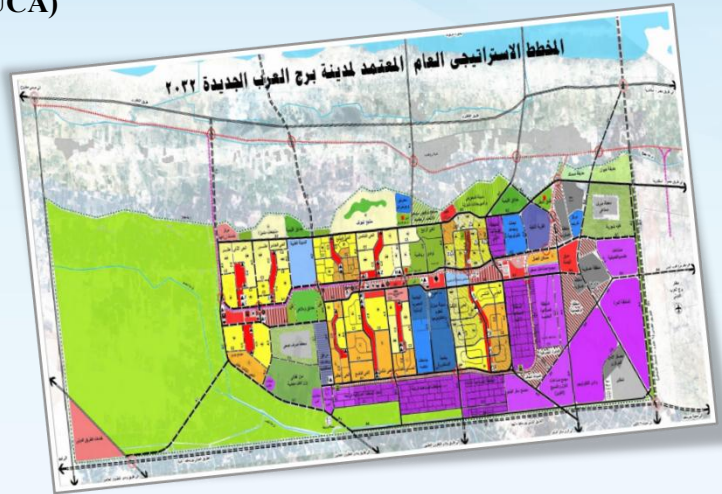
Date

☐ August 2023

Budget

☐ EGP 2.6 billion

Project Description



The Integrated Sewage System for Borg El Arab City, Alexandria, Egypt, is a key infrastructure project aimed at improving wastewater management in the rapidly growing city. The current system is limited, with many areas relying on basic septic tanks. The future system will expand the sewage network, upgrade treatment plants, and incorporate water reuse for irrigation and industrial use. This project will enhance public health, reduce environmental pollution, and promote sustainable water management, supporting the city's development and long-term sustainability.

Scope of Work

Survey work, concept, detailed and design tender documents of the following tasks:

- Develop a general layout for the new sewage network, pumping stations, and treatment plants in Borg El Arab, ensuring integration with the existing infrastructure, while reviewing and assessing both existing and new treatment plants to determine their combined capacity and performance, and connecting all components via a SCADA system.
- Evaluate the current performance of the Phase 1 aerated oxidation ponds and analyze various operational scenarios.
- Identify necessary operational adjustments to reduce suspended solids and COD levels exceeding discharge limits.
- Assess the overall capacity of the integrated existing sewage system.
- Design of Force main: diam. 560 mm and L= 1726 meter

Hydro Services:

- Concept and Detailed Design
- Tender Documents.

Five Villages Wastewater Network Expansion

Matrouh - Egypt

Client

- Drinking Water and Sanitation Company in Matrouh

Our Role

- Client's Consultant

Date

- July 2020

Budget

- EGP 218 million

Project Description

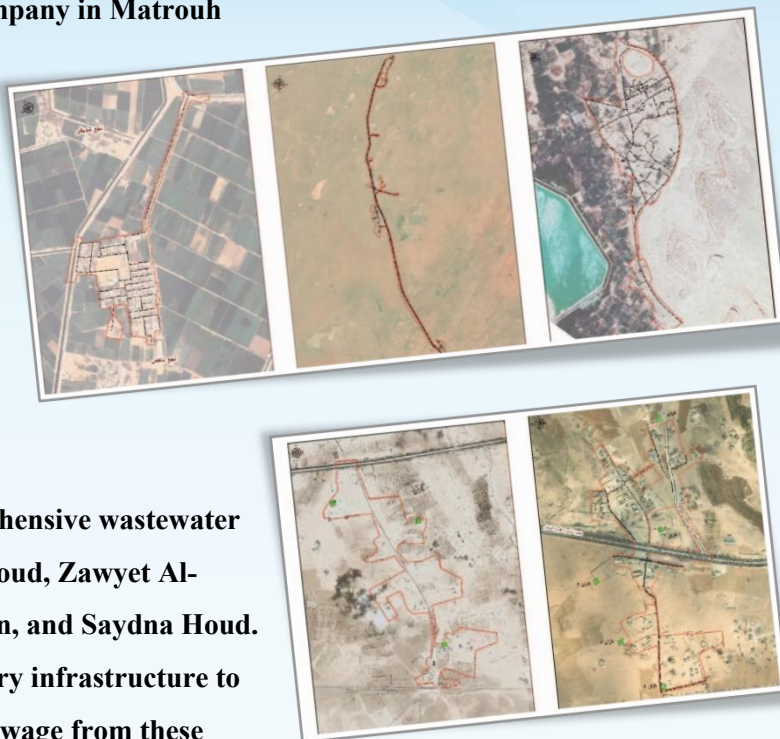
- The project aims to provide comprehensive wastewater services to the villages of Abo Mazhoud, Zawyet Al-Awamah, Sedi Shbeeb, Bahi Al-Deen, and Saydna Houd. Its primary goal is to install necessary infrastructure to collect, transport, and likely treat sewage from these communities, improving public health and environmental conditions in the region

Scope of Work

- The scope of work for the detailed design and tender documentation involved multi-disciplinary engineering teams covering all technical aspects of the project:
- 1. Hydraulic & Mechanical teams handled the design for pipe sizing, pump specifications, and overall flow management.
- 2. Structural & Architectural teams focused on the design of the pumping station buildings, foundations, and related site structures.
- 3. Electrical teams managed the power supply, control systems (SCADA), and instrumentation necessary for operation.
- 4. Roads teams ensured proper site access and coordinated utility integration with existing infrastructure.
- The output is a set of detailed drawings, technical specifications, and BOQ used for the construction tender.

Hydro Services:

- Detailed Design
- Tender Documents



Sewage System Extension Project for New Cairo City and Urban Expansions Along the Suez Road

📍 El-Gabal El-Asfar WWTP , EGYPT

Client

- ❑ Construction Authority for potable water and waste water – New Urban Communities Authority

Our Role

- ❑ Contractor's Consultant

Contractor

- ❑ Water Department – Engineering Authority

Date

- ❑ June 2020 and January 2022

Budget

- ❑ EGP 4 billion

Project Description

- This project aims to extend the sewage network to a section of New Cairo City and its surrounding urban expansions along the Suez Road, linking it to the El-Gabal El-Asfar wastewater treatment plant. The work involves the design, construction, and installation of the necessary infrastructure to collect and transport wastewater to the treatment plant for processing and disposal.

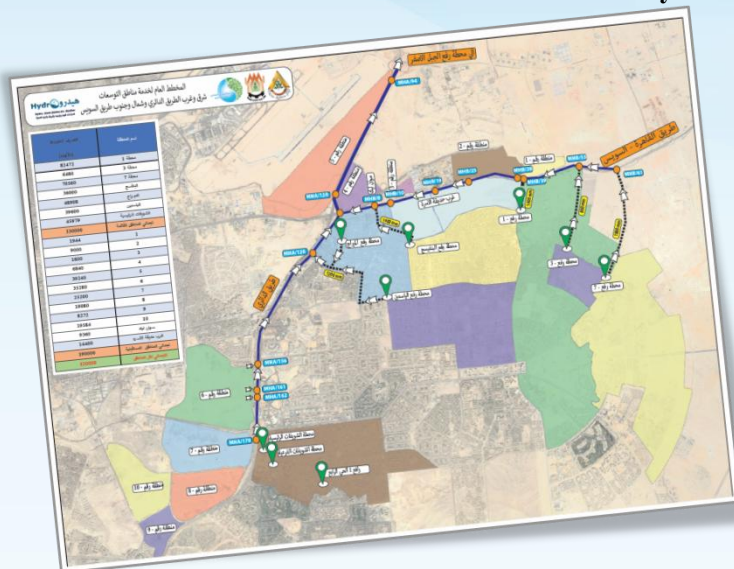
Scope of Work

Complete design for all disciplines and construction supervision of the following:

- Piping: A total of 15,179 meters of 3400 mm pipes, consisting of 12,923 meters of open-cut installation, 2,256 meters of pipe jacking, and 76 manholes.
- Pipe Jacking : Conducted along the entire project route with pipe diameters of 2000 mm, 2250 mm, 2700 mm, 3000 mm, and 3400 mm, covering 38 crossings and a total length of 9,772 meters.
- Pipes (2000 mm and 2500 mm): A total length of 6,069 meters with 35 manholes.
- Pipes (2000 mm and 2250 mm): A total length of 8,252 meters with 51 manholes.

Hydro Services:

- Concept and detailed design
- Tender documents
- Construction Supervision



Sewage System for Haud Nagih for Villages(El-Motawaa - Sharshima - Sakakra – Ezbet El Prince)

Sharkia, Egypt

Client

- Sharkia Water and Wastewater Company

Our Role

- Contractor's Consultant

Contractor

- Al-Shams for Contracting & Engineering Works

Date

- December 2020

Budget

- EGP 126 million

Project Description

- The sewage system project in the Houd Negaih area of Sharkia Governorate is part of the Sustainable Sanitation Services in Rural Areas Program (SRSSP). This initiative aims to enhance rural sanitation services and strengthen related institutions and policies within the Delta Governorates of EGYPT.
- The project consists of a wastewater network, Force-main and pumping stations.

Scope of Work

Civil & Structural Shop Drawings: Detailed plans for all concrete structures (foundations, chambers, manholes) and earthwork details. **As-Built Drawings:** Final records of exact pipeline routes, depths, gradients, and manhole locations.

Mechanical: Shop Drawings: Precise layouts for pumps, piping systems, valves, and ventilation equipment detailing materials and assembly. **As-Built Drawings:** Final schematics showing actual locations, specifications, and serial numbers of all installed mechanical equipment.

Electrical & Instrumentation : Shop Drawings: Detailed wiring diagrams, cable tray layouts, single-line diagrams, and control panel specifics. **As-Built Drawings:** Final confirmed wiring, actual cable routes, locations of panels, and instrumentation devices as installed.

Architectural : Shop Drawings: Detailed plans for finishes, doors, windows, and internal building layouts associated with project facilities. **As-Built Drawings:** Final floor plans, elevations, and material schedules reflecting the exact dimensions of the completed structures.

Hydro Services:

- Shop Drawing
- As- Built



XI

Public Utilities



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Shams El Hekma Utility Network Spanning (5,700 Feddans or 2394 Hectares)

El Hekma - Egypt

Client

□ New Urban Communities Authority (NUCA)

Our Role

□ Client's Consultant

Date

□ December 2024

Budget

□ EGP 19 billion

Project Description

- Ras El Hekma is a utility infrastructure development project located along Egypt's North Coast, near Ras El Hekma, about 100 kilometers west of Alexandria. The project aims to provide essential utilities, including water, electricity, and sewage systems, to support the growing demand from the luxury residential, commercial, and recreational developments in the area. Shams Ras El Hekma will enhance the region's infrastructure, contributing to the economic growth and sustainability of the North Coast while improving the quality of life for residents and visitors

Scope of Work

- The Supervision of work includes:
 - Sewage Transmission Pipeline: 6 km in length.
 - Sewage Networks: 126 km of pipes with diameters ranging from 200 mm to 2000 mm.
 - Water Networks: 144 km of pipes with diameters ranging from 100 mm to 1200 mm.
 - Sewage Pumping Station & Treatment Plant: 150,000 m³/day capacity.
 - Road Network: 135 km in total length.

Hydro Services:

- Construction Supervision



The Southern Extension Area Infrastructures Utilities (12,000 Fed. / 5040 Hect.)

📍 New Cairo - Egypt

Client

- ❑ New Cairo City Government Office

Our Role

- ❑ Client's Consultant

Date

- ❑ October 2024

Budget

- ❑ EGP 8 billion

Project Description

- The project involves the planning, detailed engineering design, and construction supervision of infrastructure works in Sectors 1, 2, 3, 5, 6, and 8 of the Southern Extension Zone of New Cairo City, in the Arab Republic of Egypt. The total area covered by the project is approximately 12,000 feddans (about 50,40 hectares). The scope of work includes: Design of the primary and secondary networks for the following utilities: Potable water supply network, Wastewater (sewage) network, Stormwater drainage network, Medium and low voltage electrical networks, Telecommunications and fiber optic networks, Public lighting, Hydraulic and technical studies for network alignments, Preparation of shop drawings, technical specifications, and tender documents. Supervision of the construction works on-site, including quality control, schedule monitoring, and safety compliance

Scope of Work

- Design and supervision of the following utilities, including manholes, chambers, and related components:
- Sewage / Storm Water Network: 120 km in length, using UPVC/HDPE pipes with diameters ranging from 315 mm to 3000 mm.
- Water and Fire Protection Network: 140 km in length, using HDPE pipes with diameters ranging from 160 mm to 1500 mm.
- Irrigation Network: 140 km in length, using HDPE pipes with diameters ranging from 110 mm to 1000 mm.

Hydro Services:

- Concept and Detailed Design
- Construction Supervision



Infrastructure Networks for the Urgent 1st phase “15,000 Fed.” and the Infrastructure Networks “1,500 Fed.”

📍 New Sphinx City - Egypt

Client

- ❑ New Urban Communities Authority

Our Role

- ❑ Client's Consultant

Date

- ❑ August 2024

Budget

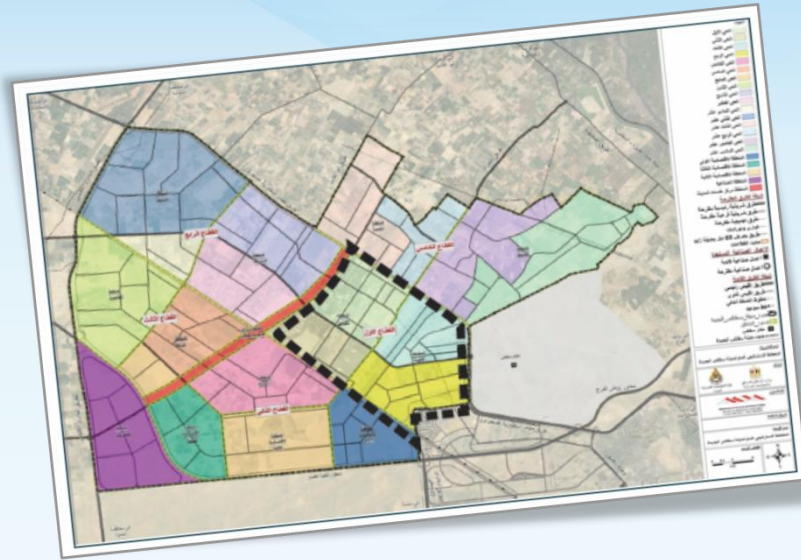
- ❑ EGP 800 Million

Project Description

- New urban communities are considered an effective solution for managing population growth and fostering more balanced urban development. Our targeted project, New Sphinx City, is designed to be a major settlement hub, strategically situated, Sphinx City lies just 10 km from Sphinx Airport and 20 km from Sheikh Zayed City, among other key locations.

The development plan for New Sphinx City includes several land uses across different sectors:

- Integrated Urban Development: 6,906 Feddans
- Investment Zone: 484 Feddans
- Residential and Agricultural Areas: 3,323 Feddans
- Urban infrastructure services : 110 Feddans



Scope of Work

Preparation of **the master plan and tender documents** – Infrastructure networks for New Sphinx City.

The project includes two phases:

- Urgent phase (15,000 feddans)
- Detailed phase (1,500 feddans)

It comprises the following:

- **Wastewater network:** 4 zones, with pipe diameters ranging from 300 mm to 1800 mm, and a total length of 107,855 meters.
- **Potable water network:** A main transmission line of 1200 mm diameter (4,870 meters long), in addition to 4 distribution zones with diameters ranging from 100 mm to 800 mm, with a total length of 60,540 meters.
- **Road network:** 72 kilometers in total length.
- **Irrigation network:** With diameters ranging from 110 mm to 900 mm, totaling 92 kilometers in length

Hydro Services:

- Concept and Detailed Design
- Tender Documents

The Development and Upgrading of The Arish Water Network

📍 Sinai - Egypt

Client

❑ Holding Co. for Potable Water and Wastewater in North and South Sinai

Our Role

❑ Client's Consultant

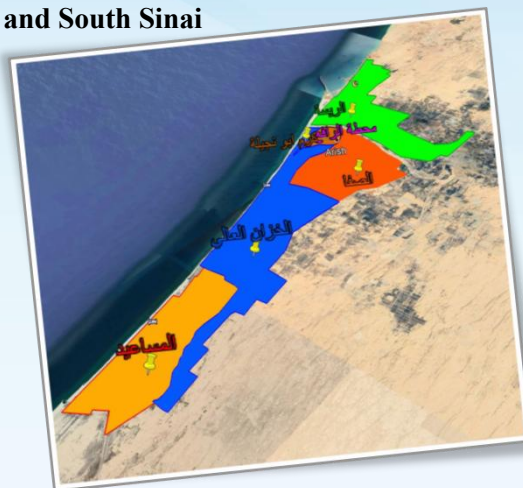
Date

❑ July 2018

Budget

❑ EGP 3 billion

Project Description



The strategic project aims to fully rehabilitate and upgrade the water infrastructure in several priority areas in North and South Sinai, in order to improve service quality, ensure network efficiency, and secure sustainable access to potable water for local communities.

The works include the following: installation of new pipes and transmission and distribution lines, implementation of household connections, installation of control valves, and construction of pumping stations. These interventions are essential to enhance the network's capacity to accommodate urban growth and address challenges associated with the increasing demand for water.

Scope of Work

The following areas are involved in the rehabilitation and renewal of the water network:

- Water Transmission Line: 560 mm diameter, 4.3 km in length.
- Al-Masa'id Area: UPVC pipes ranging from 110 mm to 630 mm in diameter, totaling 86.5 km.
- High Tank Area: UPVC pipes ranging from 110 mm to 630 mm in diameter, covering 244 km.
- Al-Safa Area: UPVC pipes ranging from 110 mm to 710 mm in diameter, spanning 148 km.
- Karm Abu Najeela Area: Pump station with a capacity of 7,000 m³/day, and UPVC pipes from 110 mm to 315 mm in diameter, covering 29 km.
- Al-Raisa Area: UPVC pipes from 110 mm to 315 mm in diameter, totaling 133 km in length

Hydro Services:

- Design Review
- Construction Supervision

Infrastructure Work of Up Town Project -Administrative Control Authority Land

6th of October City, Egypt

Client

6th of October City Authority

Our Role

Client's Consultant

Date

May 2020

Budget

EGP 980 million

Project Description

6th of October City is a modern urban development located near Cairo, aimed at supporting residential and commercial growth. Our project in Zone Y1, covering 3,482 feddans, is a pivotal area within the city. It focuses on the development of essential infrastructure, including water supply, sewage systems, irrigation, firefighting services, and road construction

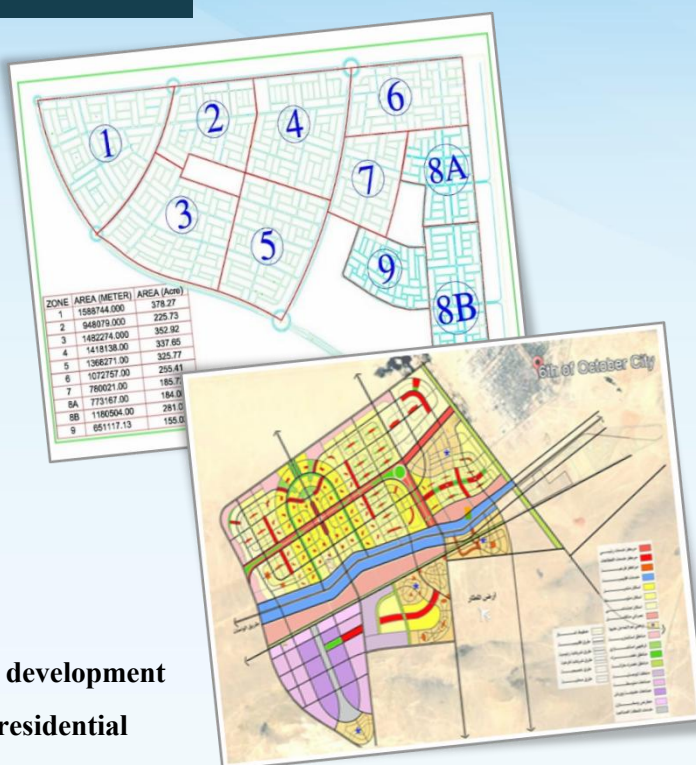
Scope of Work

Design and Supervision of:

- **Sewage Network (Drainage and Storm):** UPVC pipes (160, 200, 250, and 315 mm), L = 370 km, concrete pipes (800 to 1600 mm), L= 9180 linear meters and vitrified clay pipes (300 to 600 mm) with a total length of 23444 linear meters, including 145 rectangular sewage manholes, 6126 circular sewage manholes, and 2050 stormwater manholes.
- **Irrigation Network:** HDPE irrigation pipes (100 mm to 250 mm) with a total length of 112 km .
- **Water Network:** UPVC pipes (110 mm to 600 mm) with a total length of 350 km, along with 35 valve chambers of various prototypes.
- **Firefighting:** 625 ductile iron fire hose connections (2.5 inches, with 2 openings).
- **Roads:** L= 2076 meters.

Hydro Services:

- Conceptual design and detailed design
- Tender documents
- Construction Supervision



The Utility Networks in the "Beit Al Watan" (86 Feddans or 36 Hectares)

El Sheikh Zayed -Egypt

Client

- New Urban Communities Authority (NUCA)

Our Role

- Client's Consultant

Date

- March 2024

Budget

- EGP 300 million

Project Description



- The "Beit Al Watan" project, situated in El Sheikh Zayed, Egypt, is a large-scale real estate development spanning 86 feddans. It is designed to offer a mix of residential, commercial, and recreational spaces for Egyptian citizens. Developed by the government, the project seeks to meet the increasing demand for modern housing and amenities, with an emphasis on luxury and sustainability.

Scope of Work

The comprehensive design package for all disciplines and the preparation of tender documents covers a variety of engineering tasks, ensuring adherence to approved technical standards and specifications for the successful delivery of the project. These tasks include:

- **Sewage Network:** Pipe diameters ranging from 200 mm to 315 mm, with a total length of 4,480 meters.
- **Water and Irrigation Supply Network:** Pipe diameters ranging from 100 mm to 200 mm, with a total length of 7,575 meters.
- **Road Network Design:** Total length of 9.5 km.

Hydro Services:

- Conceptual design and detailed design
- Tender documents

Infrastructure Networks Development for El Rehab City (65 Feddans or 27.3 Hectares)

📍 New Cairo - Egypt

Client

- Work Military Dept.- Engineering Authority

Our Role

- ❑ Client's Consultant

Date

- October 2024

Budget

- EGP 150 million

Project Description

- New urban communities, such as Al Rehab City, are pivotal in addressing population growth and promoting balanced urban expansion. Located to ease overcrowding in Greater Cairo and the Delta region, Al Rehab City is a prime example of Egypt's smart city initiative. Spanning about 65 feddans (27.3 hectares), it includes residential buildings, service facilities, and a mosque. Situated along key transportation routes, the city also boasts 6.5 feddans (2.73 hectares) of green spaces, combining urban living with recreational areas.



Scope of Work

- The study, design package, and documentation cover the following components:
- Sewage System: A 3.5 km network with pipe diameters ranging from 200 mm to 500 mm.
- Stormwater Drainage: A 3.5 km network with pipe diameters ranging from 200 mm to 600 mm.
- Water Supply: A 5 km network with pipe diameters ranging from 90 mm to 355 mm.
- Irrigation Network: A 4 km network with pipe diameters ranging from 32 mm to 110 mm.
- Firefighting Network: A 4 km network using HDPE 200 mm pipes, PN16.
- Tank Works: A 2000 m³ water tank designed to fulfill the demands of water supply, irrigation, and firefighting.

Hydro Services:

- Concept and Detailed Design

Infrastructure Work for Road Link 1 Surrounding the La Vista Residential District

📍 New Administrative Capital - Egypt.

Client

- ☐ New Urban Communities Authority (NUCA)

Our Role

- ☐ Client Consultant

Date

- ☐ December 2023

Budget

- ☐ EGP 144 million

Project Description

- The supervision of the utility infrastructure works includes overseeing the installation of utility pipelines (UPVC and HDPE) for stormwater, sewage, irrigation, and water supply systems, stormwater catch basins, sewage manholes, and the role involves ensuring adherence to design specifications, coordinating with contractors, inspecting quality and materials, and monitoring progress. Additionally, the supervisor manages safety, budget, and scheduling to ensure the successful and timely completion of the infrastructure, supporting the development of the New Administrative Capital.

Scope of Work

Supervision of:

- **Sewage and Stormwater Network:** UPVC stormwater pipes with a 160 mm diameter, UPVC sewage pipes ranging from 225 mm to 560 mm in diameter, and HDPE sewage pipes with a 630 mm diameter, with a total length of 12,900 meters for the sewage network.
- **Water Network:** HDPE pipes with diameters of 500 mm and 800 mm, totaling 2,000 linear meters.
- **Irrigation Network:** HDPE pipes with diameters ranging from 110 mm to 500 mm, covering 11,275 linear meters.
- **Stormwater Catch Basins and Sewage Manholes:** 205 stormwater catch basins and 204 sewage manholes.

Hydro Services:

- Construction Supervision

Fire Protection Network for the General Site of the Camp in Robeiky

📍 Cairo - Egypt

Client

❑ Military Works Department-Engineering Authority

Our Role

❑ Client's Consultant

Date

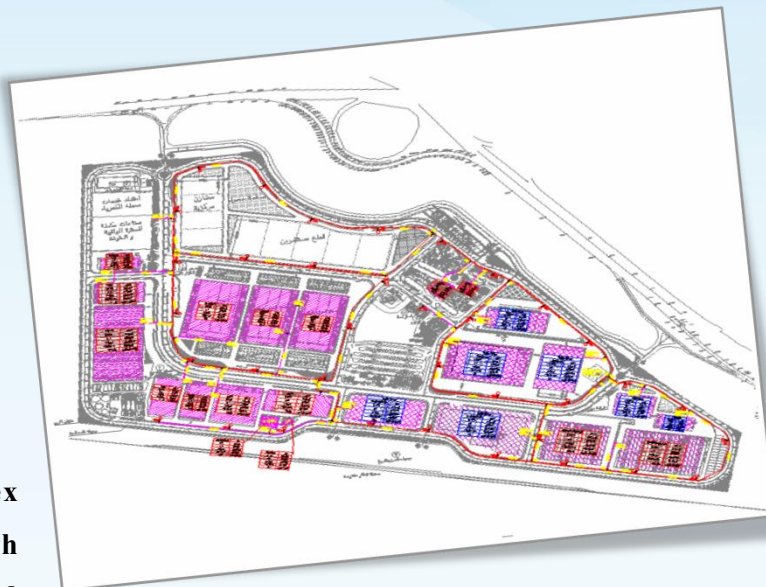
❑ March 2021

Budget

❑ EGP 50 million

Project Description

- The project is an industrial complex divided into manufacturing units with various simple industrial engineering and chemical industries, as well as service facilities for factories and employees.



Scope of Work

Fire Protection Network Design and Supervision for an area of 880,801 m²

- **Water Firefighting System:** Powered by the existing fire pump network (1300 gallons/min at 6 bar), including fire pipes, sprinklers, and 14 double-type fire hose boxes (1-inch and 2.5-inch hoses)
- **Gas-based Fire Suppression:** Total flooding aerosol gas system with integrated sensors and alarms
- **Automatic Sprinklers:** Activated at 68°C, installed in administrative areas, warehouses, and areas with ceilings over 80 cm
- **Fire Valves:** UL/FM certified, designed for 20 bar pressure, made of ductile iron
- **Manual Fire Extinguishers:** CO₂ (6 kg) and ABC powder (6 kg) extinguishers strategically placed throughout the factory
- **Fire Alarm System:** Addressable system with heat and smoke detectors, including beam sensors for high-ceiling areas
- **Electrical Systems:** Designed to meet the building's electrical capacity
- **Escape Routes and Signage:** Fire-resistant doors, wide escape routes, and clear emergency exit signage
- **Ventilation:** Fire-resistant fans for effective smoke extraction
- **Emergency Lighting:** Automatically activated during fire or power failure

Hydro Services:

- Concept and Detailed Design
- Construction Supervision

The Utility Infrastructures of Ayan Compound (250 Feddans or 105 Hectares)

📍 New Cairo – Egypt

Client

❑ Military Works Department- Engineering Authority

Our Role

❑ Client's Consultant

Date

❑ February 2024

Budget

❑ EGP 400 million

Project Description



Ayan Compound is located in the heart of New Cairo, near the Ring Road, offering easy access to essential services, schools, hospitals, and major roads. The project consists of:

- **Residential Area:** Villas and apartments covering 720,000 m².
- **Commercial Area:** Business Park, clubhouse, and commercial buildings spanning 207,000 m².
- **Service Area:** Hospital and hotel covering 130,000 m².

Scope of Work

- **Sewerage network 1:** total length of 11 km and diameters ranging from 200 to 560 mm.
- **Sewerage network 2 :** total length of 2 km and diameters ranging from 200 mm.
- **Storm Network 1 :** total length of 6 km and diameters ranging from 200 to 600 mm.
- **Storm Network 2 :** total length of 7 km and diameters ranging from 200 to 600 mm.
- **Water network:** total length of 23 km and diameters ranging from 110 to 450 mm.
- **Irrigation network:** lengths of 7 km and diameters ranging from 90 to 250 mm.
- **Firefighting Network:** total length of 12 km and a diameter ranging between 110 and 250 mm.
- **Civil and Electromechanical Works:** two stormwater reservoirs (one of capacity 2600 m³ and the other of capacity 4200 m³), a water and fire reservoir (7000 m³ capacity), and an irrigation reservoir (1100 m³ capacity).

Hydro Services:

- Concept and Detailed Design
- Construction Supervision

The Utility Infrastructure for Raville Compound (1,355 Feddans or 569 Hectares)

📍 New Cairo – Egypt

Client

❑ Military Works Department- Engineering Authority

Our Role

❑ Client Consultant

Date

❑ February 2024

Budget

❑ EGP 1.6 billion

Project Description

➤ Raville Compound, covering 1,355 feddans (569 hectares) in New Cairo, offers a luxurious lifestyle with modern architecture and extensive green spaces. It includes diverse residential units, essential services, and recreational amenities. The compound features:

- A residential area
- A commercial area with a business park, clubhouse, and commercial buildings
- A service area with a hospital and hotel



Scope of Work

The full design package, covering all disciplines, includes:

- **Sewage Network:** Approximately 40 km, with UPVC pipes ranging from 200 mm to 630 mm in diameter.
- **Stormwater Network:** A 15,000 m³ stormwater management tank and 31 km of UPVC pipes (diam. from 110 mm to 630 mm).
- **Water Network:** Two reservoirs (18,000 m³ and 26,500 m³ capacities) and 43.5 km of HDPE pipes (diam. from 110 mm to 800 mm).
- **Irrigation Network:** A 15,000 m³ reservoir and 31.4 km of HDPE pipes (diam. from 110 mm to 630 mm).
- **Firefighting Network:** Approximately 40.4 km of HDPE pipes (diam. from 160 mm to 200 mm).
- **Pump Station:** A 60,000 m³/day capacity facility, covering 50 x 50 m, with plant units and a 3 km force main HDPE pipeline (800 mm diameter).

Hydro Services:

- Concept and Detailed Design
- Construction Supervision

North Teseen Utilities – New Cairo

📍 New Cairo - Egypt

Client

- ☐ New Cairo City Government Office

Our Role

- ☐ Contractor's Consultant

Contractor

- ☐ Concord for Engineering & Contracting

Date

- ☐ January 2018

Budget

- ☐ EGP 400 million



Project Description

- The utilities of North Teseen in New Cairo typically include a range of essential services designed to support residential and commercial developments, these utilities are crucial for the area's development, enhancing living conditions and supporting economic activities.

Scope of Work

Supervision of the following utilities, including manholes, chambers, and others:

- Sewage Network:

21 km in length, with diameters ranging from 200 mm to 1500 mm

- Water Network:

14 km in length, with diameters ranging from 200 mm to 900 mm

- Irrigation Network:

50 km in length, with diameters ranging from 100 mm to 200 mm

Hydro Services:

- Shop Drawings

XII

Dry Utilities



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Hydro., Envir. & Infra Str. Studies
للدراسات الهيدرولوجية والبنية التحتية

Infrastructures Utilities of the Western Side Development (2503 Fed./ 1051 Hect.)

📍 New Alamein - Egypt

Client

❑ Military Works Department - Engineering Authority

Our Role

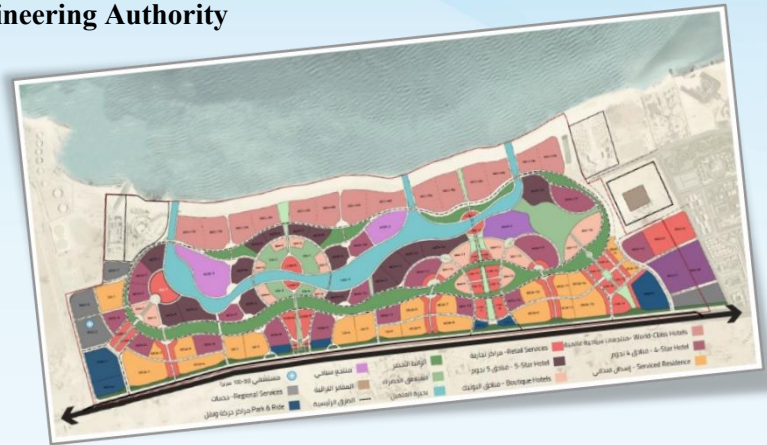
❑ Client's Consultant

Date

❑ May 2024

Budget

❑ EGP 12 billion



Project Description

The project is located on the western side of the City of Alamein, covering a total area of 2,503 Feddans (1,051 hectares) and a built-up area of 4,605,700 m². It comprises a mix of developments, including hotels, residential units, commercial spaces, and regional service facilities. Additionally, the project features extensive parks, green areas, and open spaces, aimed at enhancing the quality of life for residents and visitors.

Scope of Work

The complete design package for the project includes comprehensive planning and design across all disciplines to ensure successful implementation and adherence to technical standards. The package consists of the following components:
Force mains: 24650 linear meters, Sewage / Storm Network Design: Detailed design of pipes ranging from 200 mm to 1,400 mm in diameter, with a total length of 34,766 meters.

The water and fire network consists of 39,912 meters of pipes (200 mm to 500 mm in diameter) and four 8,000 m³ capacity tanks, each with pumps having different heads and discharge rates:

➤ Four tanks equipped with pumps, heads and discharge rates as below:

- Tank 1: 70 m head, 8,015 m³/day discharge
- Tank 2: 75 m head, 8,479 m³/day discharge
- Tank 3: 65 m head, 8,254 m³/day discharge
- Tank 4: 70 m head, 6,605 m³/day discharge

Irrigation Network / Tanks / Pump Room: Design of pipes from 160 mm to 400 mm in dia., totaling 50,406 meters.

➤ Four irrigation tanks equipped with pumps, heads and capacities, as below:

- Tank 1: Pump head = 72 m, flow rate = 4,749 m³/day, volume = 5,000 m³.
- Tank 2: Pump head = 59 m, flow rate = 4,784 m³/day, volume = 5,000 m³.
- Tank 3: Pump head = 65 m, flow rate = 4,843 m³/day, volume = 5,000 m³.
- Tank 4: Pump head = 57 m, flow rate = 4,802 m³/day, volume = 50,000 m³.

Irrigation Transmission Main Line: Design of a 3,225-meter line with a 630 mm diameter.

Road Network : Road network spanning 37,500 meters in length.

Medium and Low Voltage Network: 13 medium voltage distributors, each with a 30 MVA capacity and design of the medium and low voltage distribution networks.

Lighting Systems: Design for road, landscape, and garage lighting systems, including high mast lights (8 meters in height) spaced 30 meters apart.

Hydro Services:

- Concept and Detailed Design
- Construction Supervision

Al-Warraq Master Plan: Innovative and Sustainable Infrastructure for Water and Sanitation

📍 Giza - Egypt

Client

☐ New Urban Communities Authority (NUCA)

Our Role

☐ Client Consultant

Date

☐ July 2021

Budget

☐ EGP 4 billion



Project Description

Al-Warraq Island, located in the Nile River in Giza Governorate, is a major urban development project aimed at enhancing Greater Cairo. Part of Egypt's vision to transform Cairo into a 21st century global city, the project will set new standards for modernization and offer a high quality of life to residents. The Ministry of Housing, Utilities, and Urban Communities (MoHUUC) has approved the strategic plan for developing a new urban community on the island, with a total investment of EGP 10.5 billion. The first phase, costing EGP 2 billion, includes construction, corniche development, and essential infrastructure works, with additional plans for residential, commercial, and public facilities.

Scope of Work

Urgent Phase (68 Feddans): The utility network is summarized as follows:

- **Sewage Network:** length of 3510 m with diameters ranging from 200 mm to 700 mm.
- **Stormwater Drainage Network:** length of 4685 m with diameters ranging from 160 mm to 630 mm.
- **Water and FF Network:** length of 13 km with diameters ranging from 63 mm to 710 mm.
- **Irrigation Network:** length of 8 km with diameters ranging from 32 mm to 200 mm.
- **Compact Wastewater treatment plant :** capacity of 3600 m³/day

Complete Strategic Plan for 1500 Feddans:

- **Sewage Network:** Diameters from 160 mm to 1700 mm.
- **Stormwater Drainage Network:** Diameters from 200 mm to 1200 mm.
- **Water Network:** Diameters from 50 mm to 1400 mm.
- **Irrigation Network:** Diameters from 50 mm to 1000 mm.
- **Telecommunication Infrastructure:** Network design for providing telecommunications, internet, and cable services across the development.

Hydro Services:

- Concept and Detailed Design
- Tender Documents

The Utility Infrastructure in the Medical City (230 Fed.) and the 1200mm Sewage Line

📍 New Administrative Capital - EGYPT

Client

☐ The New Urban Communities Authority (NUCA)

Our Role

☐ Client's Consultant

Date

☐ December 2022

Budget

☐ 1.1 billion

Project Description



- The Medical City, located on Ain Sokhna Road near the New Administrative Capital, covers an area of approximately 230 Feddans (about 930,000 square meters). This large medical complex is intended to accommodate a range of healthcare facilities, including hospitals, specialized medical centers, research institutions, and other health services.

Scope of Work

Supervising the installation of the following systems:

- Sewage Line: Concrete pipes, 1200 mm diameter, with a total length of 2,566 meters.
- Sewage Network: UPVC pipes, spanning 7,770 meters in total.
- Stormwater Network: HDPE/UPVC pipes, covering 9,424 meters, PN 6.
- Water Network: HDPE pipes, with a total length of 12,563 meters, PN 16.
- Irrigation Network: HDPE pipes, extending 12,312 meters, PN 10.
- Fire Network: HDPE pipes ranging from 160mm to 500mm, with a total length of 11,415 meters.
- Medium Voltage Distributors: Five units.
- Medium Voltage Network: M.V. Cable (3*400) mm², L= 96 km & (3*240) mm², 50 km
- Low voltage Network and Grounding Systems, LV. Cables totaling 89 km
- Electrical Systems for street lighting, lighting cables, covering 142 km

Hydro Services:

- Construction Supervision

Utilities in the Western Area of the Stock Exchange & Main Sewage Pipeline diam. 2250/2500mm, L= 22 km

📍 New Administrative Capital - EGYPT

Client

- ❑ The New Administrative Capital Authority

Our Role

- ❑ Client's Consultant

Date

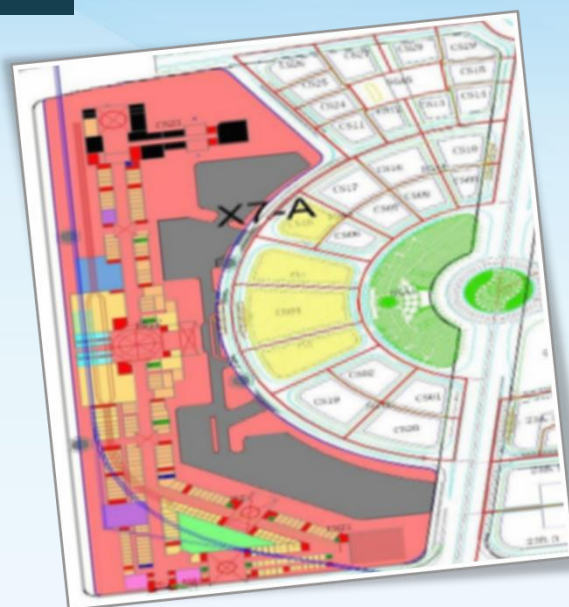
- ❑ August 2022

Budget

- ❑ EGP 95 million

Project Description

- The project is a key infrastructure development designed to meet the operational requirements of the financial district in the New Administrative Capital. It is part of the broader development plan for the New Administrative Capital, currently under construction in multiple phases, and is intended to support the expanding needs of Egypt's new governmental and business hubs.



Scope of Work

Supervision of :

- Main sewage pipeline (2250/2500 mm) with a length of 22 km
- Utility Networks (Water, Sewerage, Irrigation, Firefighting Systems):
 - Sewage Network: HDPE pipelines (160 mm to 500 mm diameter) totaling 5,470 meters, along with 630 mm HDPE pipes (PN 6) covering 990 meters.
 - Water Network: HDPE pipelines, 180 mm diameter with a length of 1,200 meters, 250 mm diameter with a length of 5,100 meters, 315 mm diameter with a length of 600 meters, and 355 mm diameter with a length of 80 meters
 - Irrigation Network: HDPE pipelines rated PN16 ,110 mm diameter (2,600 meters), 160 mm diameter (3,500 meters), and 200 mm diameter (80 meters).
 - Firefighting network: HDPE pipe, PN16 and diameter of 180 mm and a length of 360 meters.
- The network is equipped with valves, chambers, and all necessary accessories to ensure efficient operation and control of the system.
- Medium Voltage Networks: M.V. cables (3*240) mm², L= 13 KM
- 2 Services Transformers 200 and 630 KVA
- One Electrical Distribution in addition to structural works (foundation, framework, walls, roof), supervise finishing works (plastering, flooring, painting) and monitor electromechanical works (HVAC, electrical, mechanical systems).
- Low voltage cables
- Exterior Lighting Works

Hydro Services:

- Construction Supervision

The Utilities Infrastructure of the Parking of the International Egypt Olympic City

📍 New Administrative Capital, EGYPT

Client

❑ Department of Military Engineers

Our Role

❑ Client's Consultant

Date

❑ December 2023

Budget

❑ EGP 800 million

Project Description

- Egypt's International Olympic City in the New Administrative Capital is a state-of-the-art venue designed to host global sporting events like the Olympics. The city features world-class sports facilities, modern accommodations, and smart technologies for efficient management. Its parking design incorporates advanced low-current systems, including smart parking management, surveillance, access control, and real-time monitoring.

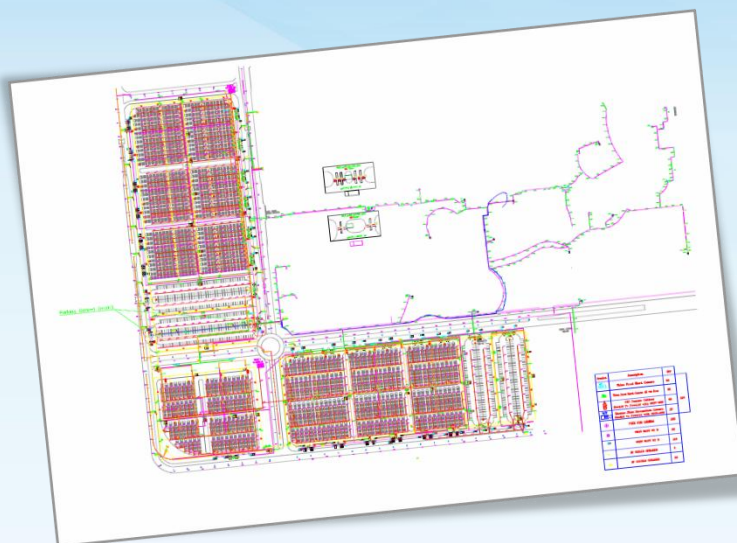
Scope of Work

Design Package and Construction Supervision of :

- **Stormwater Storage:** 4,500 m³ capacity tank connected to 10 km of UPVC pipes and 1 km of CHDPE pipes.
- **Fire-Fighting Network:** 13 km of HDPE pipes for the parking area and a network serving 34 secured low voltage chambers.
- **Low Voltage Infrastructure:** Includes transformers, cables, electrical rooms, and related components.
- **Extra Low Voltage Network:** Covers Public Address (PA), Fire Alarm, CCTV Surveillance, Intercom, Communication Networks, and Access Control.
- **Smart Network Solutions:** Energy management, smart lighting, integrated facility management, smart security, and telecommunications.
- **Parking Area Lighting:** Comprehensive lighting system for the parking area.

Hydro Services:

- Concept and Detailed Design
- Construction Supervision



Utility Networks of Yacht Marina Resort

📍 New El Alamein - EGYPT

Client

❑ Military Works Department-Engineering Authority

Our Role

❑ Client's Consultant

Date

❑ February 2024

Budget

❑ EGP 220 million

Project Description

- The Yacht Marina Resort is located on the coast road in El Alamein City, in a prime location.
- The resort hotel is a luxury facility primarily intended for vacationers, situated near special attractions like beaches, scenic, and historic areas. The resort includes: 196 villas, each with a floor area of 260 m² and A hotel with the following features: Basement: 26,040 m², Ground floor: 26,040 m², First floor: 9,580 m², Second floor: 9,580 m², Third floor: 9,580 m², Fourth floor: 9,580 m², Roof floor: 9,573 m², with 180 rooms, Restaurants and cafes, Outdoor shopping area, a mosque and a club

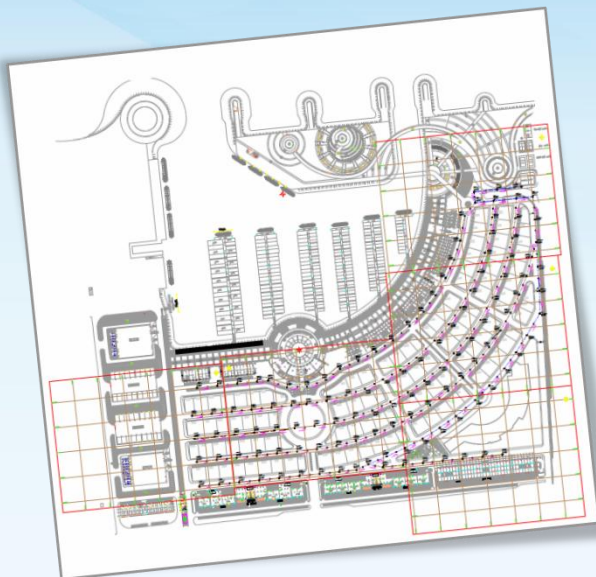
Scope of Work

Supervision of site activities in coordination with the Client and its authorized representatives includes the following components:

- Sewage Network: 8 km with pipe diameters from 200 mm to 300 mm.
- Water Network: 8 km with pipe diameters from 90 mm to 160 mm.
- Fire Network: 8 km made of HDPE, with pipe diameters from 110 mm to 200 mm, PN 16.
- Water and Fire Tank: 1,200 m³ capacity.
- Irrigation Tank: 500 m³ capacity.
- Pumping Station: 3,500 m³/day capacity.
- Wastewater Treatment Plant (WWTP): 500 m³/day capacity.
- Medium Voltage Distributor: 19 MVA (Mega Volt Amperes).
- Service Transformers: 21 units.
- Medium Voltage Cables: (3*300) mm², 10 km in length.
- Low-Voltage Cables: 64 km in length.
- Lighting Systems: Installation of street and landscape lighting.

Hydro Services:

- Review Design
- Construction Supervision



Mostkbal City Development Utilities and Infrastructures Work (5200 Feddans or 2184 Hectares)

 New Cairo - EGYPT

Client

❑ El Mostakbal for Urban Development

Our Role

☐ **Contractor's Consultant**

Date

❑ Concord for Engineering & Contracting

Contractor

❑ **December 2023**

Budget

❑ EGP 2 billion



Project Description

➤ **Mostakbal City, the first smart green city in East Cairo, embodies a new concept of modern living. Established through extensive market studies to meet the needs and expectations of developers and investors, it includes comprehensive utilities and vast green areas, planned meticulously to ensure sustainable development for both the present and future. Spanning (5,200 feddans).**

Scope of Work

The project includes various essential utility networks such as drinking water, irrigation, and sewage systems with manholes and chambers. The networks consist of preparation of Shop drawings:

- **Sewage / Storm Network: Ductile Iron Pipes:** Up to 2,800 meters in length with diameters ranging from 300 mm to 800 mm.
- **Water Network: UPVC Pipes:** Up to 7,000 meters in length with diameters up to 630 mm / **CHDPE Pipes:** Up to 350 meters in length with diameters up to 900 mm.
- **Gravity Network: Reinforced Concrete Pipes:** Used for gravity flow systems, with diameters up to 1,300 mm and lengths up to 1,550 meters.
- **Valve Chambers:** With diameters ranging from 200 mm to 800 mm.
- **Smart Service Connection Chambers:** 300 mm diameter ductile iron and 250 mm diameter UPVC pipes.
- **Storm Drainage Chambers:** 120 chambers with dimensions 0.6 m x 0.6 m.
- **Electrical Network: Measurement and Control Devices** required for efficient operation.

Light Current Network: Smart and telecommunication networks.

Medium Voltage Network (MV1 and MV2).

Low Voltage Network (LV, PS1, and PS2).

Hydro Services:

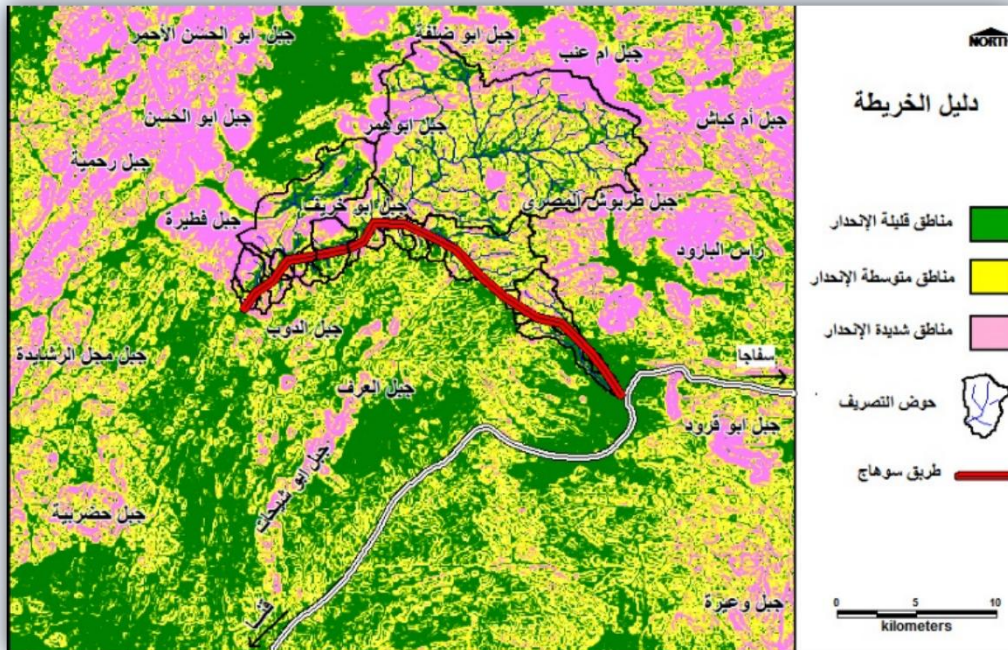
Street Lighting Network: Including lux calculations for optimal lighting.

Empty Sleeves Composed Network: For future use and expansions.

➤ Shop Drawings

XIII

Hydrology



هيدروHydro

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للدراستات الهيدرولوجية والبيئية والبنية التحتية

Hydrological Study of the 110 km Qena-Safaga

📍 Safaga, Egypt

Client

☐ Ministry of Transport -General Authority for Roads Bridges and Land Transport

Our Role

☐ Contractor's Consultant

Contractor

☐ International Consulting Engineers

Date

☐ February 2015

Budget

☐ EGP 220 million

Project Description

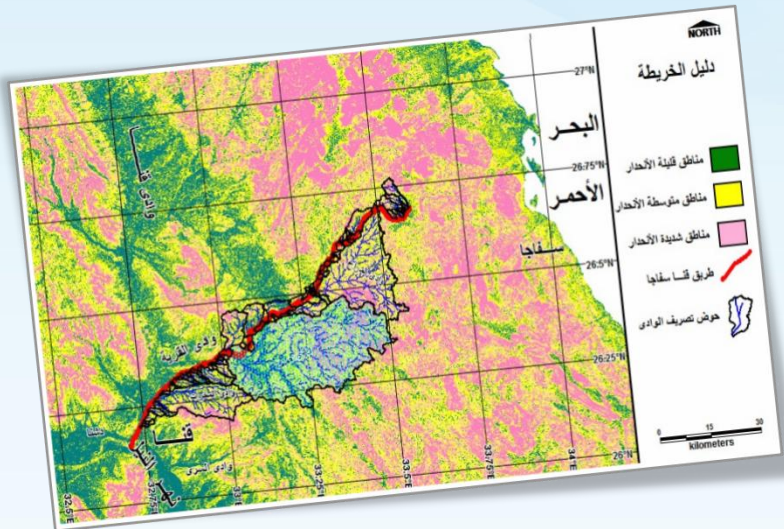
- The development of the 110 km Qena-Safaga Road involves a comprehensive series of studies and protection works to ensure the project's success and sustainability. These studies focus on various aspects that will influence the design, construction, and long-term functionality of the road

Scope of Work

- The key components of these studies and protection works are:
 - The Morphological,
 - Topographical,
 - Geological,
 - Meteorological,
 - Hydrological,
 - Hydraulic Studies
 - Protection Works

Hydro Services:

- Studies



Hydrological Study of the 27 km Tunnel- Ayoun Moussa Road

📍 Ayoun Moussa , EGYPT

Client

☐ Ministry of Transport -General Authority for Roads Bridges and Land Transport

Our Role

☐ Contractor's Consultant

Contractor

☐ International Consulting Engineers

Date

☐ February 2015

Budget

☐ EGP 190 million

Project Description

➤ The development of the 27 km Tunnel-Ayoun Moussa road involves a comprehensive series of studies and protection works to ensure the project's success and sustainability. These studies focus on various aspects that will influence the design, construction, and long-term functionality

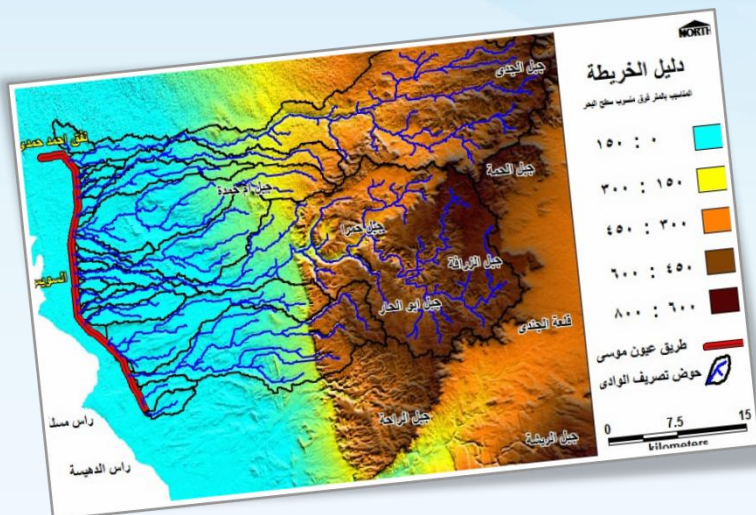
Scope of Work

➤ The key components of these studies and protection works are:

- The Morphological,
- Topographical,
- Geological,
- Meteorological,
- Hydrological,
- Hydraulic Studies
- Protection Works

Hydro Services:

➤ Studies



 Red Sea , EGYPT

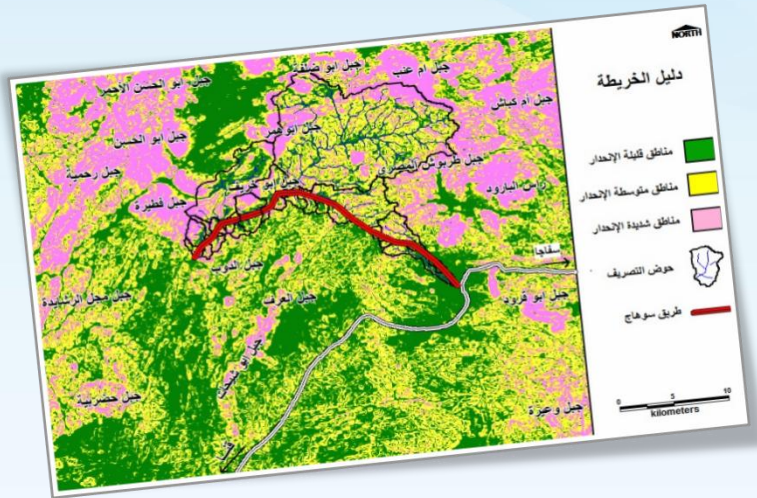
☐ Ministry of Transport -General Authority for Roads Bridges and Land Transport

☐ Contractor's Consultant

☐ International Consulting Engineers

February 2015

❑ EGP 200 million



➤ **The development of the 30 km Sohag-Red Sea road involves a comprehensive series of studies and protection works to ensure the project's success and sustainability. These studies focus on various aspects that will influence the design, construction, and long-term functionality of the road**

➤ **The key components of these studies and protection works are:**

- **The Morphological,**
- **Topographical,**
- **Geological,**
- **Meteorological,**
- **Hydrological,**
- **Hydraulic Studies**
- **Protection Works**

➤ Studies

Hydrological Study of the 22 km Middle East-Cairo Road

📍 Cairo, EGYPT

Client

☐ Ministry of Transport -General Authority for Roads Bridges and Land Transport

Our Role

☐ Contractor's Consultant

Contractor

☐ International Consulting Engineers

Date

☐ February 2015

Budget

☐ EGP 180 million

Project Description

➤ The development of the 22 km Middle East-Cairo Road involves a comprehensive series of studies and protection works to ensure the project's success and sustainability. These studies focus on various aspects that will influence the design, construction, and long-term functionality of the road

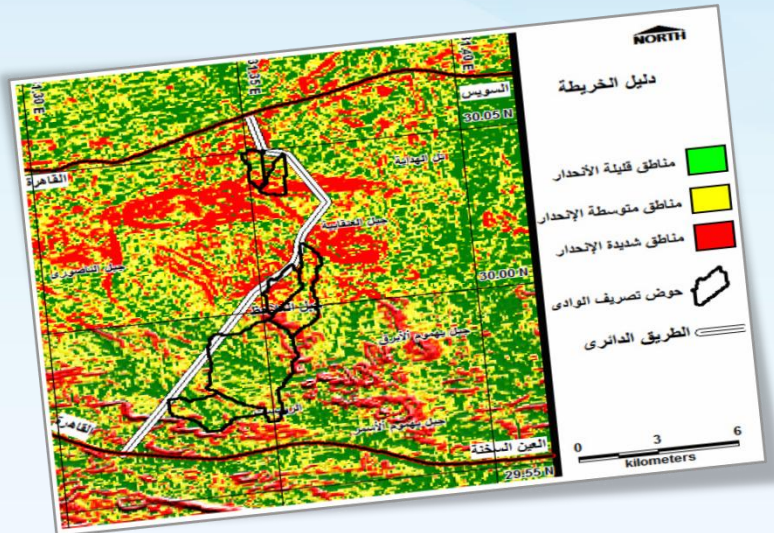
Scope of Work

➤ The key components of these studies and protection works are:

- The Morphological,
- Topographical,
- Geological,
- Meteorological,
- Hydrological,
- Hydraulic Studies
- Protection Works

Hydro Services:

➤ Studies



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