# Hydro هيدرو

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

2022
REV. 002

# COMPANY PROFILE

Our Expertise Is Your Prosperity

- Design
- Studies
- Construction Supervision
- Design Review
- Shop Drawings

www.hydro-eg.com

# CEO LETTER

## ENG. YASSER MOSTAFA

*Dear Clients*

We have established **Hydro** since 2015 as an ambitious startup form within the engineering arena. Now, I am impressed with what was achieved.

We have managed to acquire and provide successful delivery of wide-range of projects throughout our domestic market in Egypt. The firm is now expanding to consider new markets in the Middle East and Africa.

Our mission, vision, goals and values are mainly directed and committed to achieve your satisfaction. We consider you as growth and success partners, thus we can guarantee offering, excellence, innovation and integrity service within a positive approach.

A seasoned engineer with grasp of practical engineering experience combined with a robust academic background. He has acquired a professional membership in accredited institutions and syndicates.

Eng. Yasser has robust technical experience combined with his academic accomplishments in the business arena as MBA holder. Both evidence his on-going commitment to continuing personal and professional developments.

Also, he has covered various projects and worked in pioneer consulting firms within Egypt in addition to vast experience with Mega projects.

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# HYDRO MAIN TEAM

**ENG. YASSER MOSTAFA**
M.SC. , PMP, MBA
CHIEF EXECUTIVE OIFFICER

**ENG. MOHAMED SOBHY**
CPM, MBA, SFC, YB, AGILE-PMO, FIDIC, CLAIMS
EXECUTIVE DIRECTOR / COO

**PROF. HAZEM SALEH**
PH.D. IN CIVIL & ENV. ENGINEERING
HEAD OF FUNDED / INTL. PROJECTS

**ENG. AHMED M. AMEEN**
B.SC. IN CIVIL ENGINEERING
TECHNICAL MANAGER

**DR. MOHAMED BADAWI SAYED**
PH.D. IN ELECTRICAL POWER ENGINEERING
HEAD OF ELECTRICAL DEPARTMENT

**DR. MOHAMED AWAD**
PH.D. IN WATER & WATER STRUCTURES
HEAD OF STRUCTURAL DEPARTMENT

**DR. SHERIF AL-SHARKAWY**
PH.D. IN CIVIL ENGINEERING
HEAD OF ROAD DEPARTMENT

**ENG. SHERIF AL-ARABY**
B.SC. IN MECHANICAL ENGINEERING
HEAD OF MECHANICAL DEPARTMENT

**DR. RANA HASSAN RASHAD**
PH.D. IN GEOTECHNICAL ENGINEERING
GEOTECHNICAL TEAM LEADER

**DR. AMR HASSAN**
PH.D. IN CIVIL ENGINEERING
SPECIFICATION & CODES EXPERT

**DR. HESHAM SAID**
PH.D. IN ELECTRICAL ENGINEERING
ELECTRICAL MEP TEAM LEADER

**DR. AHMED SAID**
PH.D. IN ELECTRICAL ENGINEERING
ELECTRICAL MEP TEAM LEADER

**DR. YASSER ARAFA**
PH.D. IN ELECTRICAL ENGINEERING
CONTROL TEAM LEADER

**DR. MOHAMED AL-SHWWAF**
PH.D. IN GEOTECHNICAL ENGINEERING
GEOTECHNICAL TEAM LEADER

**ENG. MAGED MOUNIR**
B.SC. IN CIVIL ENGINEERING
SUPERVISION PROJRCTS MANAGER

**ENG. NOHA KAMEL**
B.SC. IN CIVIL ENGINEERING
PROJECT MANAGER

**ENG. SHAZLY AHMED**
M.SC. IN ELECTRICAL ENGINEERING
ELECTRICAL DEPARTMENT TEAM LEADER

**ENG. MOHAMED ASHRAF**
B.SC. IN ELECTRICAL & TELECOMMUNICATION
TELECOM & AUTOMATION TEAM LEADER

**ENG. MOHAMED AL-SHAFAEY**
B.SC. IN MECHANICAL ENGINEERING
MECHANICAL MEP TEAM LEADER

**ENG. ALAA NABIL**
B.SC. IN MECHANICAK ENGINEERING
MECHANICAL DEPARTMENT TEAM LEADER

**ENG. MONA MOSTAFA**
B.SC. IN CIVIL ENGINEERING
HEAD OF WATER & IRRIG. DEPT.

**ENG. MONA SAAD**
B.SC. IN ARCHITECTURAL ENGINEERING
HEAD OF ARCHITECTURAL DEPARTMENT

**ENG. MAHMOUD AL-ASHRY**
M.SC. IN CIVIL ENGINEERING
QC DEPARTMENT MANAGER

**ENG. SHERY GALAL**
B.SC. IN CIVIL ENGINEERING
HEAD OF WASTEWATER & STORM DEPT.

**ENG. SHEHTA IBRAHIM**
M.SC. IN CIVIL ENGINEERING
HEAD OF IRRIGATION DEPARTMENT

**ENG. KAREEM GABER**
B.SC. IN CIVIL ENGINEERING
STRUCTURAL TEAM LEADER

**ENG. MOHAMED SHEDID**
B.SC. IN CIVIL ENGINEERING
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**ENG. KHALED AL-GAMAL**
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**ENG. WALEED ABD AL-MOATY**
B.SC. IN CIVIL ENGINEERING
DRAINAGE TEAM LEADER

**ENG. MARZOUQ ABD AL-MOHSEN**
B.SC. IN CIVIL ENGINEERING
PROJECT MANAGER

**ENG. MAHA FARRAG**
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WASTEWATER & STORM TEAM LEADER

**MRS. HADEAR KHAMIS**
B.SC. IN COMMERECE
HR MANAGER

**MR. ASHRAF YUSUF**
B.SC. IN COMMERECE
FINANCIAL MANAGER

**MR. MOHAMED WAGIH**
B.SC. IN COMMERECE
GRAPHIC MANAGER

**ENG. AHMED DEYAA**
B.SC. IN INFORMATION TECHNOLOGY
IT MANAGER

# HYDRO STRATEGY

## VISION

We believe in the role of engineering to sustain the welfare and value of human life.
**HYDRO** is playing an effective role in achieving that goal.

## MISSION

**HYDRO** provides integrated engineering consultation service meeting its client satisfatcion through collaborative and effcient work environmentour team members are our winning investment, we exert every effort to enhance their productivity and synergy , focusing on quality and value added services as our competitve edge.

*Safisfatcion through collaborative and effcient work environment from our team membe ..*

# HYDRO VALUES

**HYDRO** is recognized as an organization with the highest standards with the following corporate values:

## ETHICS

We adhere strictly to ethics in all aspects of our practice , relation and transaction.

## KNOWLEDGE

We value learning, coaching and development; all learning opportunities will be pursued; we will coach one another; we will take responsibility to gain the necessary development for our field of work.

## EMPLOYEES

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

## TEAMWORK

We will work together, provide support to each other, and listen to one another. We will value our individual strengths and compensate for our individual weaknesses; as a team, we will stand strong; we will cooperate to achieve our firm's goals.

## CLIENT EXCELLENCE

The welfare of our client in the beginning and end point of our services which we are committed to preform at highest levels of quality in order to achieve top client satisfaction we settle for no less.

## SOCIAL

We will promote a sustainable business model; we will manage and minimize our environmental impacts; we will invest in our local communities; we will provide a safe and fair environment for our workforce.

# HYDRO GOALS

## OVERALL GOALS

Operating within the values described above we have set ourselves a series of goals. The financial goals are to ensure we have the financial strength to achieve our values and reward our stakeholders whilst the remaining goals seek to ensure we meet our stakeholder expectations.

## FINANCIAL GOALS

- **Revenue and profitability:** We believe that we can be profitable from our business. We aim to show both revenue growth and an increase in profitability year by year.
- **Cash flow:** We aim to maintain enough working capital to cover our operational expenses.

## STRATEGIC GOALS

- **Client satisfaction and retention:** We aim to achieve a high rate of customer satisfaction and improve on that rate year by year. We aim to have repeat business as a result of the positive experience enjoyed by our clients as well as having a high retention rate.
- **Product innovation:** We will develop innovative products that speak our clients' language.
- **Risk and return:** While risk cannot be eliminated entirely, we aim to identify the risks relating to each product and/or project and mitigate these risks to the least possible level.
- **Targeting relevant markets:** We have identifed our target market as Egypt, Middle East and Africa. We will build on this existing target market through networking, tendering and client referrals/testimonials.
- **Employee development:** We will recruit the best candidates and train them when appropriate. We will make opportunities available for our staff to improve their skills. We will have a development scheme in place to ensure that all members of our workforce can meet their full potential.

# ABOUT HYDRO

**HYDRO** for hydrology, environmental and infrastructural studies is a renowned multi-disciplined engineering firm employing a staff of professionals comprised of civil, architectural, mechanical, electrical and environmental engineers and construction supervision crews supported by distinguished administrative teams.

Our staff presents a highly qualifed firm aiming to accomplish projects varying in size, scope and/or complexity.

To ensure the most level of quality and reliability, core market sectors that reflect the strength and talent of our staff. **HYDRO** provides a comprehensive range of professional services within niche sectors including: generation of environmental impact assessment studies, hydrology studies, potable water plants, wastewater plants, potable water networks, irrigation networks, storm networks and sewage networks.

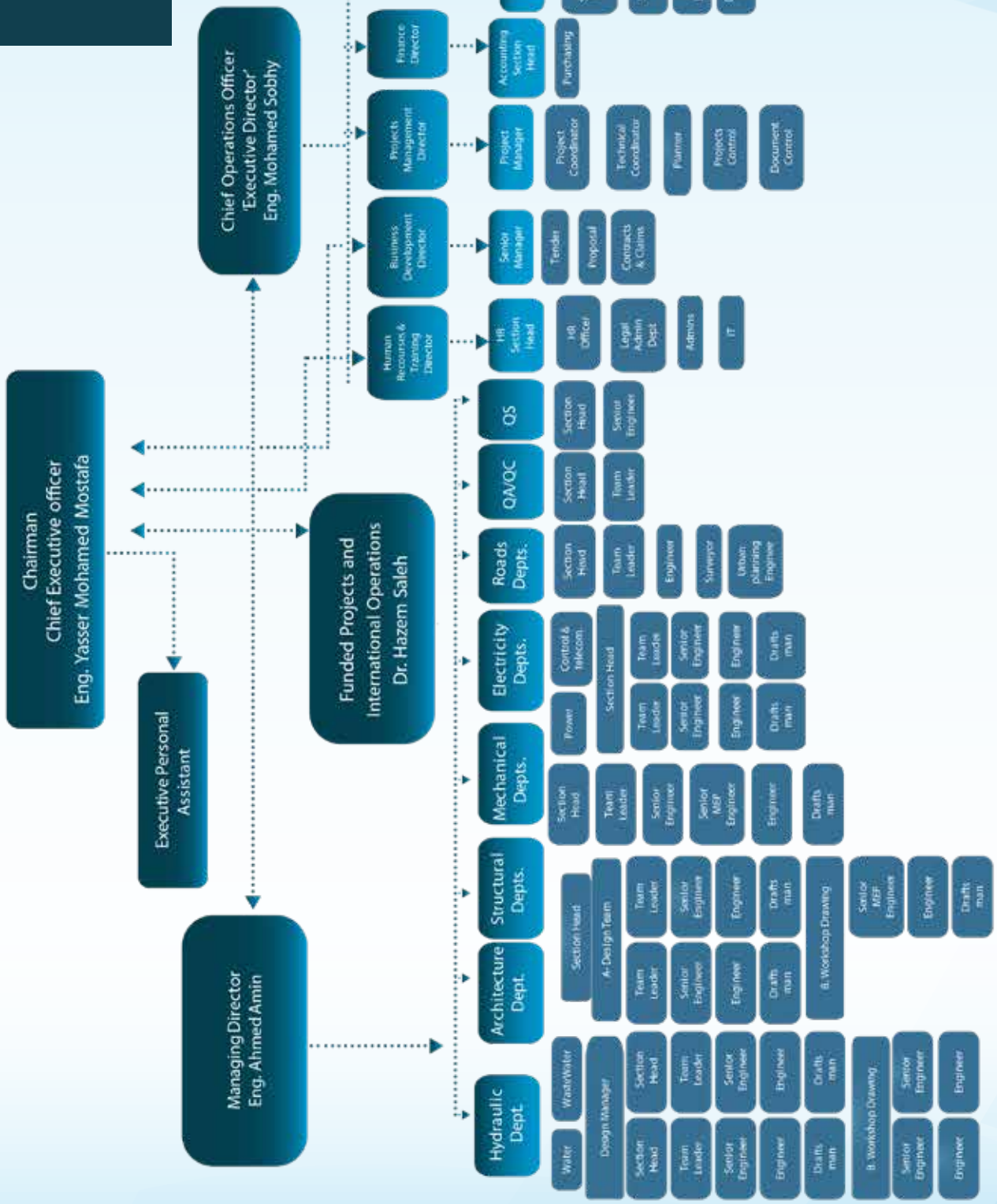
- **Incorporated: 2015**
- **Founder: Eng. Yasser Mostafa**
- **Egyptian Engineering Syndicate Registration: 5/4755**
- **Consultant Engineering registration: 6370/1**

In a very short period, **HYDRO** acquired a perceptible goodwill within the for its technical knowledge, rigorous standards and novel approach in design and consulting.

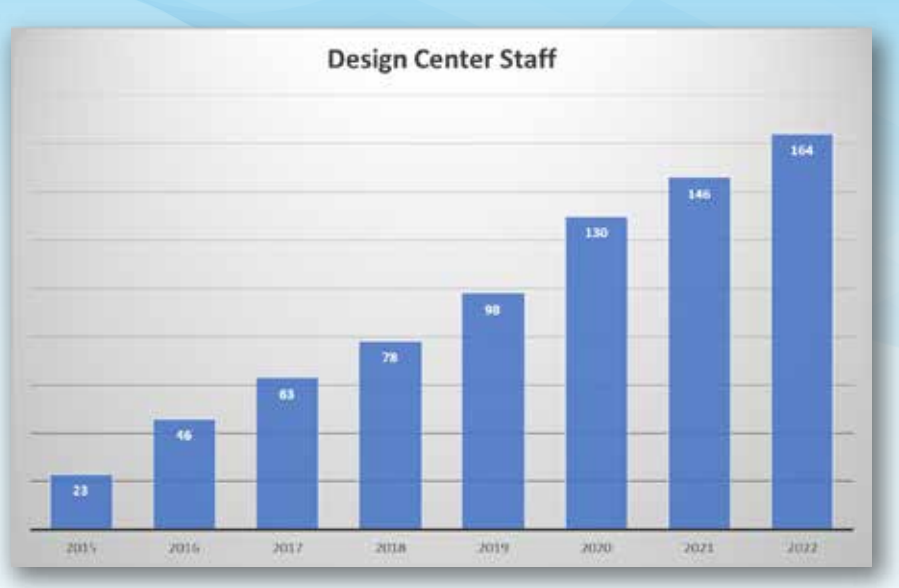
**HYDRO** take pride in the integrity and technical application of our services and endeavor to undertake the objectives of each client.

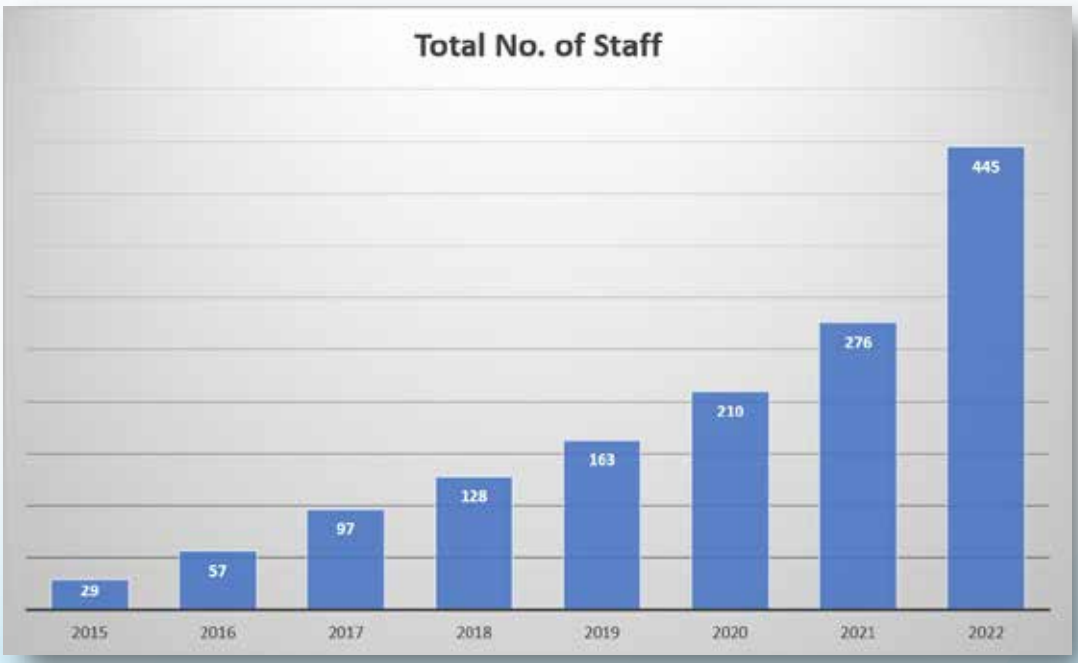
Consequently, our successes on is recognized by our reputable Clients and organizations through positive testimonials/recommendations.

# HYDRO ORGINZATION CHART



# HYDRO STAFFING





# HYDRO SERVICES PROVIDED

**HYDRO's** FIELDS OF SPECIALIZATION & SERVICES :

## DESIGN DOCUMENTS/WORKSHOP DRAWINGS

- Hydraulic Design (Potable water, irrigation, Sewerage, Storm networks & open channels).
- Treatment Plants.
- SCADA & Control & SMART applications.
- Mechanical Works.
- Structural Works.
- Architectural Works.
- MEP Works.
- Roads & Highways.
- Utilities Crossings.
- Tnnels Works.

## CONSTRUCTION SUPERVISION

- Management.
- Contracts Reviews.
- Prepare, review & approve BOQs.
- Prepare and follow project Time Schedules.
- Health & Safety Plans.
- Quality Control.
- Method Statements.
- Inspection of Material.
- As-Built & WorkShop Drawings.
- Follow up project execution.
- Manage VOs

## STUDIES

- EIA.
- Topography.
- Geology.
- Traffic.
- Hydrology.
- CFD models.
- Hydraulic Analysis.
- Water Hammer.

# DISCIPLINES

## WATER AND ENVIRONMENT

- Water Networks.
- Sewerage Networks.
- Water Drainage Networks.
- Irrigation Networks.
- Subsurface Drainage Networks.
- Water Treatment Plants.
- Municipal and Industrial WWTPs.
- Desalination Plants.
- Hydraulic Analysis.
- Anti-Hammer Systems.
- Environmental Impact Assessment.
- Pump Stations.
- Environmental Audits.
- SCADA System.
- Transmission lines.
- Water Structures.
- Open Channels.

## TRANSPORTATION

- Highways and Intersections.
- Road Networks Design.
- Traffic Impact Assessment.
- Pavement Structural Design.
- Tunnels, Bridges and Special Structure.
- Traffic Signage.

## ELECTRICAL

- Medium Voltage Network.
- Low Voltage Network.
- Street Lighting Network.
- Telecomunication Network.
- Sewage and Water Pumping Station Including Power and Control System.
- Interior Electrical Works for Building.

## MEP / PLUMBING

- Plumbing and Piping.
- Fire Alarm and Fighting.
- HVAC.
- Central Air Conditioning Systems.

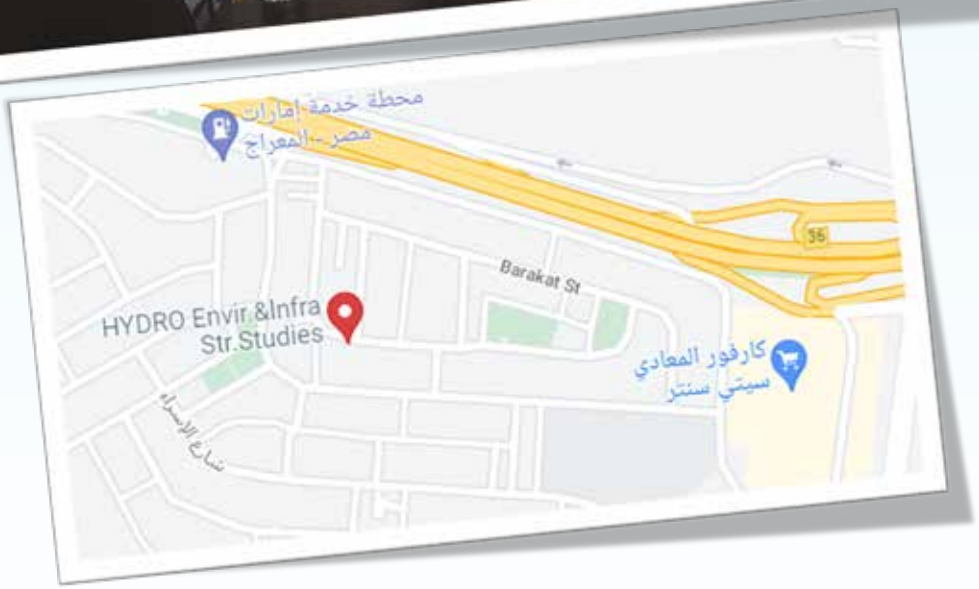
## OTHERS

- Geotechnical Investigation and Foundation Studies.
- Soil Improvment and Advanced Foundation.

# CLIENTS

وزارة الإسكان والمرافق والمجتمعات العمرانية
Ministry of Housing, Utilities & Urban Communities
وزارة الموارد المائية والري
NOPWASD
هيئة المجتمعات العمرانية
ACUD
ADMINISTRATIVE CAPITAL FOR URBAN DEVELOPMENT
العاصمة الادارية للتنمية العمرانية
CAPW
ORASCOM CONSTRUCTION
ELSEWEDY ELECTRIC
HASSAN ALLAM
PROPERTY MANAGEMENT
CONCORD
The Arab Contractors
TMG
COMET
SAMCRETE
ROWAD
Modern Engineering
شركة النصر العامة للمقاولات
مدينة نصر للإسكان والتعمير
MADINET NASR
HOUSING & DEVELOPMENT
KHARAFI NATIONAL
EAST PORT SAID INDUSTRIAL ZONE
CCM
PETROJET
SIAC CONSTRUCTION
CIVILAND
ELSEWEDY ELECTRIC
ENVIRONMENTAL SOLUTIONS
ERC
Egyptian Resorts Company
MADKOUR
Citygate
Developments
AHMOS
For Contracting & Trading
INTECH - اينتك

# CONTACT US

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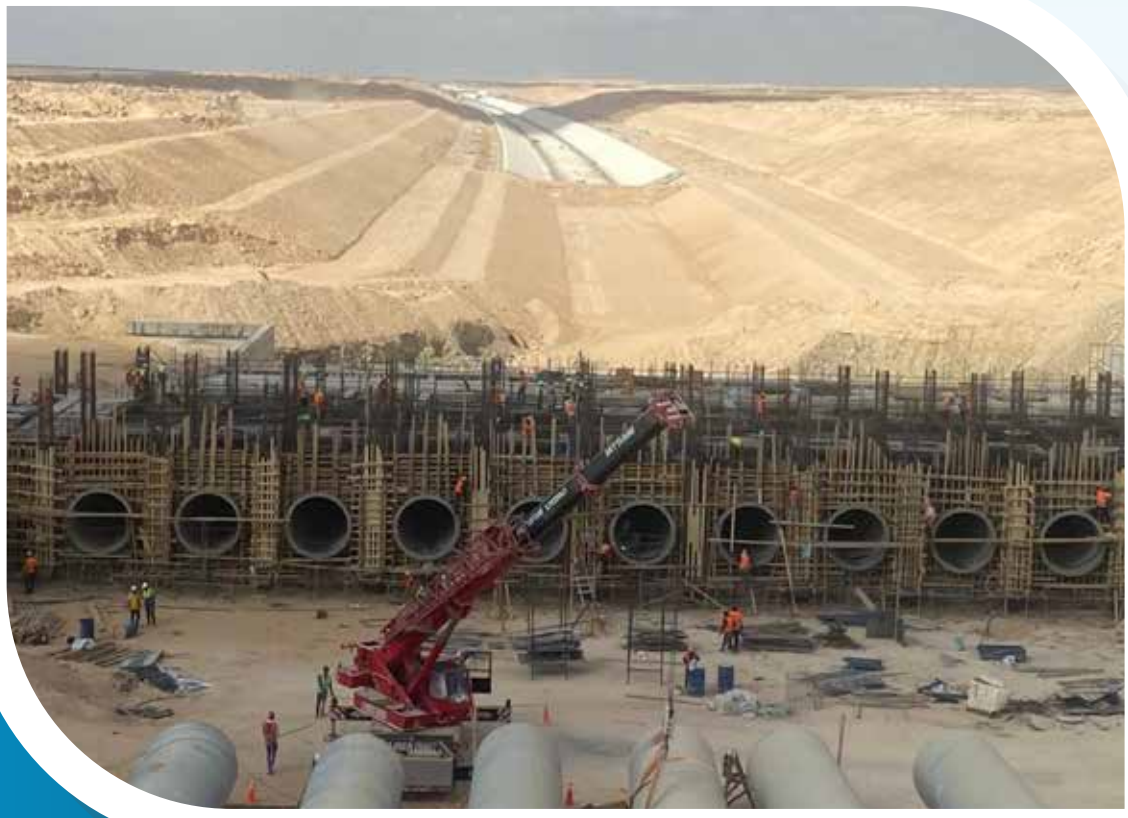
# MEGA Projects



## MEGA PROJECTS:

| | | |
|---|---|---|
| **1** | Sustainable rural sanitation services program (SRSSP) | - Beheira, Dakahliya & Sharkiya, Egypt |
| **2** | Smart City - Egyptian army HQ | - New Administrative Capital, Egypt |
| **3** | Land reclamation project south of Al-Dabaa Axis | - Alexandria, Egypt |
| **4** | Reclamation of 465,000 feddans in Sinai | - North Sinai, Egypt |
| **5** | Water Transfer from eastern source to Mostakbal Misr | - Giza, Egypt |
| **6** | Reclamation & irrigation networks in Toshka | - Toshka, Upper Egypt, Egypt |
| **7** | Diverting New Cairo sewerage system to AL-Gabal Al-Asfar WWTP | - New Cairo, Egypt |
| **8** | Hayah Karima in Minya (7WWTPs) | - Minya, Egypt |
| **9** | Al-Warraq island infra-structure planning | - Al-Warraq Island, Egypt |

# SUSTAINABLE RURAL SANITATION SERVICES PROGRAM (SRSSP)

**BEHEIRA, DAKAHLIYA & SHARKIYA GOVERN., EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

MOTT MacDonald

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

The development objective of the sustainable Rural sanitation services program for results project for Egypt is to strengthen institutions and policies for increasing access and improving rural sanitation services in the Governorates of Beheira, Dakahliya, and Sharkiya in Egypt. The program activities are described through three key result (improved sanitation access, improved operational systems & practices of water and sanitation company (WSCs), strengthened national sector framework and the scope of each results area.

## HYDRO SCOPE:

Complete work shop drawing packages for implementation of the sewage network project - sewage pumping stations - expulsion lines according to the program for each (2) villages with the following components:

- 35 km of new sewage network.
- 1.6 km of rehabiltation of sewage network.
- 3.7 km of forcemain lines.
- Rehabilitation of Pump Station (mechanical, electrical and civil) works.

# SMART CITY - EGYPTIAN ARMY HQ

**NEW ADMINISTRATIVE CAPITAL, EGYPT**

■ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Engineering Authority - Department of Military Works

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

The new strategic headquarter for Egyptian Armed Forces with area of 4500 hectares in the New Administrative Capital.

## HYDRO SCOPE:

- Design of Smart Water Network (Filing Booster, Filling pipelines, Main Booster Pumps, Main Tanks, 18 Sub tanks, Network Pressure and Flow Monitoring and Control in addition to Leak Detection System).
- Design of Smart Irrigation Network (Filing Booster, Filling pipelines, Main Booster Pumps, Main Tanks, 15 Sub tanks, Network Pressure and Flow Monitoring and Control in addition to Leak Detection System).
- Design of Smart Electricity Network (560+ LV MDB and + 200 MVSWG).
- Design of Smart Wastewater Pumping Stations (17 Lift Stations).

# LAND RECLAMATION PROJECT SOUTH OF AL-DABAA AXIS

**ALEXANDRIA, EGYPT**

■ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Engineering Authority - Department of Water
Engineering Authority - Department of Military Engineers

## OUR ROLE:

Owner Design & Supervision Consultant

## PROJECT DESCRIPTION:

Hammam city is a national project that aims to deliver 7.5 million $m^3$ per day of irrigation water from different sources along the path to the west towards a waste water treatment plant located at hammam city for the reclamation of 362,000 feddans.
The path stretches along 114 kilometers. The project consists of the following:

- (12) Pumping Station.
  Agamy PS 180,000 m3/d.
  Gharbiya PS 630,000 m3/d.
- (12) Culverts.
- (4) Weirs.
- (3) Syphons.
- (17) Car Bridges.
- (5) Pedestrian Foot Bridges.

## HYDRO SCOPE:

- Preparing the design drawings for all works required for the project including:
  Hydraulic – Architectural – Structural – Mechanical – Electrical – Roads.
- Supervision on all different works to ensure quality and the execution is going according to designs and construction standards.

# RECLAMATION OF 465,000 FEDDANS IN SINAI

**NORTH SINAI, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENTS (Pumping Stations):

| | | | |
|---|---|---|---|
| Comet | [PS3] | Abd El-Hamid Soliman | [PS9-8] |
| Hassan Hussein | [PS10] | Al-Zahi | [PS15] |
| Concord | [PS6-5-4] | | |

## CLIENTS (Pipelines):

| | | |
|---|---|---|
| Heraa | Diagram constructions | Khaled Rashad |
| Al-Sewedy | Al-Hadi Al-Nabawi | Al-Zahi |
| Madkour | Abd Al-Hamid Soliman | Nasr Al-Sherbini |

## OUR ROLE:

■ Contractors Consultant

## PROJECT DESCRIPTION:

A mega national project that aims to reclaim 465,000 feddans in Sinai by delivering millions of cubic meters of irrigation water per day from different sources.
The project consists of (15) pumping station and pipelines of different materials (Prestressed Concrete – Carbon Steel – GRP) with diameters of (2200 mm - 1600 mm - 1400 mm) stretching across (61,020 km - 12,310 km - 20,20 km) respectively with a total path length of 75,350 km and a total pipelines length of 359,830 km.

## HYDRO SCOPE:

• Preparing shop drawings and detailed design drawings for all the works required for the pumping station and pipelines including: Hydraulic - Architectural - Structural - Mechanical - Electrical - Roads.

# WATER TRANSFER FROM EASTERN SOURCE TO MOSTAKBAL MISR PROJECT SITE

GIZA, EGYPT

■ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Engineering Authority - Department of Water

## OUR ROLE:

Owner Design & Supervision Consultant

## PROJECT DESCRIPTION:

Mostakbal Masr is a national project that aims to deliver 10 million $m^3$ per day of irrigation water from the Rasheed Nile branch to the west of the ring road and the west of the Sheikh Zayed City. The path stretches along 41.4 kilometers starting at Rasheed branch.
The project consists of the following:

- 12 Pipelines with a 2500 mm diameter and a total length of ~310 km.
- Open channel with the length of 16.24k m.
- (6) Pumping stations (2+12) units.
- (5) Water crossings.
- (3) Weirs.
- (3) Car Bridges.
- An aqueduct and a chamber to convert the path from a channel to pipes.

## HYDRO SCOPE:

- Preparing the design drawings for all works required for the project including: Hydraulic – Architectural – Structural – Mechanical – Electrical – Roads.
- Supervision on all different works to ensure execution quality and the construction is going according to designs and standards.

# RECLAMATION & IRRIGATION NETWORKS IN TOSHKA

**TOSHKA, UPPER EGYPT, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENTS (Canals):

Concord for Engineering & Contracting
Hassan Allam Construction
WATANIYA for General Contracting
Egyptian Company
Shorbagy Company
International Group for Contracting

## CLIENTS (Networks):

ORASCOM
Hassan Allam Construction
Concord for Engineering & Contracting
WATANIYA for General Contracting
Al-Sewedy Electric

## OUR ROLE:

Contractors Consultant

## CLIENTS (Pump Stations):

Madkour Group
Al-Sewedy Electric

## PROJECT DESCRIPTION:

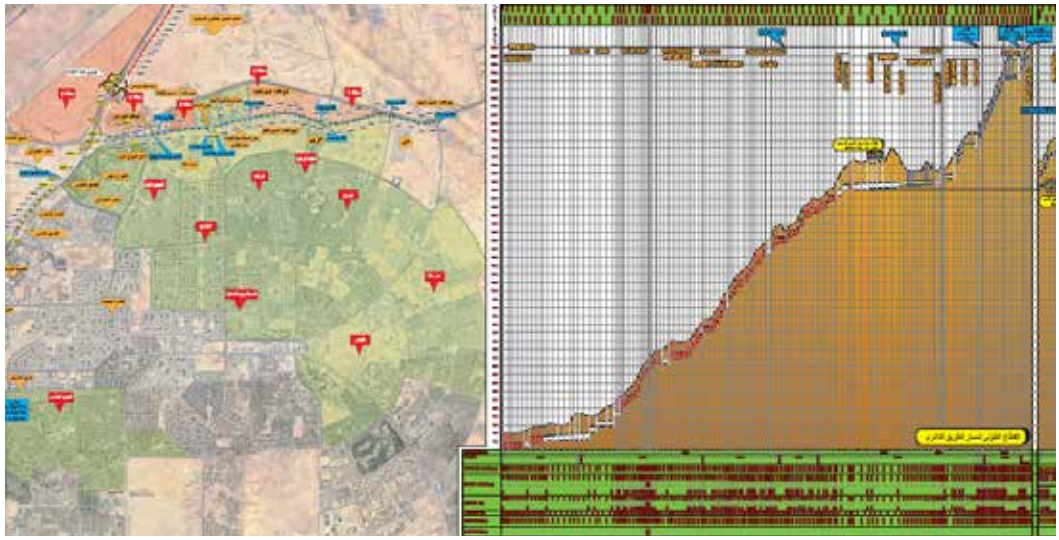
Wadi Toshka Lakes was naturally generated from water behind High dam of Aswan, this overflow of water made the Agricultural project possible which started year 2002; Continued in 2019 the project was expanded by new canals, networks and pumping stations. The project included the new zones of: A, B, C, 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 hudreds of kilmeters, 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].

## HYDRO SCOPE:

Prepare all workshop drawings for canals, road networks and pump stations.

# DIVERTING NEW CAIRO SEWERAGE SYSTEM TO AL-GABAL AL-ASFAR WWTP

**NEW CAIRO, EGYPT**



■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

New Urban Communities Authority (NUCA)

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

New Cairo is one of the most important cities among the new housing projects in Cairo. The Egyptian government found it was essential to find modern solutions that would guarantee stability and sustainability of this mega project for more upcoming years.
Part of the reforming plan is to study and fix the current sewage system besides setting a futuristic plan to avoid any problems in the future.

## HYDRO SCOPE:

- Technical study of the sewage system including all existing stations along with a study of the current and future flows.
- Study the current network ability to handle flows to be diverted to Al-Gabal al-asfar WWTP, taking into consideration areas that have problems and any expected problems in the future along with putting effective emergency plans.

# HAYAH KARIMA IN MINYA (7WWTPs)

**MINYA, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENTS:

Military production
Concord for Engineering & Contracting
Care
Intek
Hassan Allam Construction (HAC)

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

Starting from the national initiative by the Egyptian Presidency to provide critical services for the class which need it the most in rural and boundary areas in order to guarantee proper living conditions (Hayah Karima); came the projects to develop the infrastructure sewer network for 40 villages in Minya in the areas of Dermoas and Mallawi. The project consist of many sewer networks and 6 waste water treatment plants in (Mallawi – Sheikh Shebikah – Tanouf – Eastern Ameriyah – Delga – Der Abo Hennes – Al-badraman).

## HYDRO SCOPE:

- Preparing hydraulic and electro-mechanical design drawings for the sewage networks.
- Prepare design drawings for the waste water treatment plants including:

Architectural – Structural – Hydraulic – Electromechanical.

# AL-WARRAQ ISLAND INFRA-STRUCTURE PLANNING

**AL-WARRAQ ISLAND, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

New Urban Communities Authority (NUCA)

## OUR ROLE:

Client's Consultant

## PROJECT DESCRIPTION:

Al-Warraq Island development is a part of the Egyptian Government's vision to develop Cairo into a 21st Century Global City. This project will set a new standard in Egypt's modernization initiatives, over the next decade, by offering a high international standard and quality of life for the residents of Cairo.
The MoHUUC approved the general strategic plan for the development of a new urban community of Al-Warraq Island proposed to be developed on stages, at an investment cost of EGP 10.5 billion with investment cost for the first stage amounting to EGP 2 billion, including construction works, the development of the corniche, and the main infrastructure works.

## HYDRO SCOPE:

Hydro is assigned the design of infrastructure works including: water supply, sewerage and storm drainage networks, pumping stations, water treatment plant, wastewater treatment plant, in addition to other utilities as telecommunication.and EIA considerations.

# Smart Cities

## SMART CITIES PROJECTS:

| | | |
|---|---|---|
| **1** | Hall 8000 - International City for Olympic Games | - New Administrative Capital, Egypt |
| **2** | Al-Galala transmission lines project | - Galala City, Egypt |
| **3** | Misr International Olympic City | - New Administrative Capital, Egypt |
| **4** | New Al-Warrak Island | - Al-Warraq Island, Egypt |
| **5** | Egyptian Army HQ | - New Administrative Capital, Egypt |

# HALL 8000 - INTERNATIONAL CITY FOR OLYMPIC GAMES

**NEW ADMINISTRATIVE CAPITAL, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Engineering Authority - Department of Military Engineers

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

A Covered Hall with capacity of 8000 people for hosting World and Olympic championships of various sports such as: Judo - Boxing - Wrestling - Karate - Taekwondo - Weight Lifting and others.

## HYDRO SCOPE:

Preparing the design drawings for:

- Electrical.
- Light current.
- Control.
- MEP works.

# AL-GALALA TRANSMISSION LINES PROJECT

**GALALA CITY, EGYPT**

■ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Engineering Authority - Department of Water

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

The New Galala city on the red sea cost above Galala mountain 790 m above sea level. The sea water have been desalinated through the establishment of the first desalination plant in Egypt and the Middle East in the resort of Galalah, producing 150,000 $m^3$ of water per day for drinking.
. The program consists of the following projects:

- RO plant with capacity 250,000 $m^3$/day
- Four boosters and three pipelines DN 700 with 14 km length.
- Six strategic tanks with capacity 50,000 $m^3$ each and a pumping station.

## HYDRO SCOPE:

- Preparing the design drawings to lift 150,000 $m^3$/day from the desalination plant to Galalah at a height of 500 m from the desalination plant to seven pump stations with the size of 75 m x 75 m.
- Necessity study of the lines protecting from water hammer and preparing longitudinal profiles for three pipelines with 14 km length and diameter of 800 mm.
- Design and execution supervision of the SCADA system.
- Design and supervision works.

# INFRA-STRUCTURE DESIGN FOR MISR INTERNATIONAL OLYMPIC CITY

**NEW ADMINISTRATIVE CAPITAL, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Engineering Authority - Department of Military Engineers

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

A complete Olympic City built according to international standards and international federations requirements. It was constructed on two phases, the first phase is an international shooting club consists of eight different shooting fields and 250 rooms hotel; the second phase consists of ten different sports facilities as follows:

- Football stadium with a capacity of 90,000 spectators.
- Covered Hall with a capacity of 15,000 spectators.
- Covered Hall with a capacity of 8,000 spectators.
- Aquatic Games Complex.
- Main Tennis and Sub Tennis fields.
- Squash Hall.
- Equestrian games complex.
- Two football practicing fields.

## HYDRO SCOPE:

- Design of smart infrastructure networks (water irrigation chilled water fire fighting electricity).
- Design of telecommunication infrastructure network (active and passive).
- Design of smart poles distribution layout including (surveillance, public address, digital signage and Wi Fi distribution).

# INFRA-STRUCTURE DESIGN FOR NEW AL-WARRAK ISLAND

**AL-WARRAQ ISLAND, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

New Urban Communities Authority (NUCA)

## OUR ROLE:

Client's Consultant

## PROJECT DESCRIPTION:

A complete renovation and replanning for Al-Warrak island with area of 6.4 square kilometers for urban development and transform it into smart city.

## HYDRO SCOPE:

- Design of smart infrastructure networks (water irrigation chilled water fire fighting electricity).
- Design of telecommunication infrastructure network (active and passive).
- Design of smart poles distribution layout including (surveillance, public address, digital signage and Wi Fi distribution).
- Design of intelligent transportation system (ITS).

# EGYPTIAN ARMY HQ

**NEW ADMINISTRATIVE CAPITAL, EGYPT**

■ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Engineering Authority - Department of Military Works

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

The new strategic headquarter for Egyptian Armed Forces with area of 4500 hectares in the New Administrative Capital.

## HYDRO SCOPE:

- Design of Smart Water Network (Filing Booster, Filling pipelines, Main Booster Pumps, Main Tanks, 18 Sub tanks, Network Pressure and Flow Monitoring and Control in addition to Leak Detection System).
- Design of Smart Irrigation Network (Filing Booster, Filling pipelines, Main Booster Pumps, Main Tanks, 15 Sub tanks, Network Pressure and Flow Monitoring and Control in addition to Leak Detection System).
- Design of Smart Electricity Network (560+ LV MDB and + 200 MVSWG).
- Design of Smart Wastewater Pumping Stations (17 Lift Stations).

# MEP Projects

## MEP PROJECTS:

| | | |
|---|---|---|
| **1** | Aswan Industerial complex | - Aswan, Egypt |
| **2** | Badr train station | - Badr City, Egypt |
| **3** | VIP Residential Compound | - New Administrative Capital, Egypt |
| **4** | Construction of the Tahya Misr Dialysis Center | - Aswan, Egypt |
| **5** | Obour Steel Factory | - Obour City, Egypt |

# ASWAN INDUSTRIAL COMPLEX

**ASWAN, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Engineering Authority - Department of Military

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

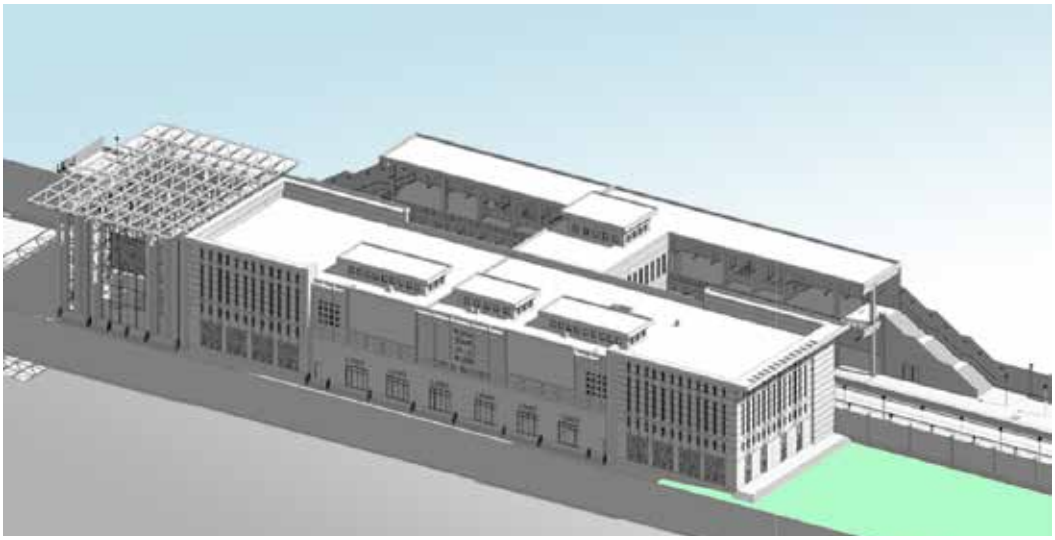
The industrial complex in Aswan governorate aims to accommodate artisans in an organized (instead of informal) industrial zone. The project is located on an area of 2500 sqm and includes 316 workshops covering all service trades (such as carpentry, blacksmithing, plumbing, electricity, construction works, ... etc.).

## HYDRO SCOPE:

- Design of water, sewerage and firefighting networks for site, including water reservoirs and pumping stations.
- Approval of fire fighting designs from the Civil Defense Authority in Aswan Governorate.
- Shop drawings package for site general layout.

# BADR TRAIN STATION

**BADR CITY, EGYPT**



☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Concord for Engineering & Contracting

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

The project is a part of the country's vision to establish a solid transportation network to connect Greater Cairo with relatively new cities such as Badr City and the new administrative capital. The project requires a consulting service in the fields of electrical, mechanical and light current parts that will be shown in detail in the following points.

## HYDRO SCOPE:

The engineering services of workshop drawings of the Badr train station project; The scope of works includes:

- Workshop drawings package of the MEP networks.
- Workshop drawings package of Light current and telecommunications networks.
- Workshop drawings package of the firefighting system.

# CONSTRUCTION OF THE TAHYA MISR DIALYSIS CENTER

**ASWAN, EGYPT**

■ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Aswan Government

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

The project Consists of a 3 elements:

- Dialysis centre building with area 1400 $m^2$ (with 40 chairs, water tank, fence, guard room and main gate).
- Medical gas chamber building.
- Electrical equipment room.

## HYDRO SCOPE:

For Electric Works:

- Load calculation.
- Lighting works .
- Fire alarm.
- Telephone works.
- Camera works.
- Audio works.

For MEP Works:

- Plumping works.
- HVAC.
- Fire fighting.
- Sewage works.

# OBOUR STEEL FACTORY

**OBOUR CITY, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Concord for Engineering & Contracting

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

Steel factory at the industrial area of Obour City, the steel fabrication process includes (Forming mill - ENF beveling - Hydro test - coating), the factory consists of:

- Administrative building 594.6 $m^2$.
- Security building 16.275 $m^2$.
- Electric transformer (1) ,(2) rooms 122 $m^2$.
- Factory hangar 37183 $m^2$.
- Staff break building.
- Pump house.
- Electric Generator.
- Electric panels Building 187 $m^2$.
- Loading Area.

## HYDRO SCOPE:

Prepare Design's for Electrical components:

- MV network.
- LV Network.
- 2 Dry transformers.
- Medium voltage switchgear.
- Low voltage switchgear 4000A 0.4V.
- Emergency lighting and standby generator.
- 3 Separate earthing systems (Transformers - Generator - Control Panels).

Light current network:

- Fire Alarm.
- Telephone System.
- CCTV Network.

# Water Purification, Desalination and Wastewater Treatment Plants

## WATER PURIFICATION, DESALINATION & WASTEWATER TREATMENT PLANTS PROJECTS:

| | | |
|---|---|---|
| **1** | 1st stage of tertiary treatment of the New Capital WWTP | - New Administrative Capital, Egypt |
| **2** | Rubeiki industrial wastewater treatment plant | - Badr City, Egypt |
| **3** | Borg Al-Arab industrial wastewater treatment plant (Aerated Ponds) | - New Borg Al-Arab Indust. Area, Egypt |
| **4** | Abou Al-Nomros water treatment plant | - Abou Al-Nomros, Egypt |
| **5** | Seven wastewater treatment plants | - Minya Governorate, Egypt |
| **6** | Nasr City water purification plant (Abu Oweikal) | - Cairo, Egypt |
| **7** | Al-Gabal Al-Asfar WWTP, phase III pump station | - New Cairo, Egypt |
| **8** | Al-Gabal Al-Asfar wastewater treatment plant | - Qalyub, Egypt |
| **9** | Al-Nubaria conduit water intake to the water treatment | - Borg Al-Arab, Al-Nubaria, Egypt |
| **10** | Infra-structure of west Port Said Port | - Port Said, Egypt |
| **11** | Water Treatment plant in Kom Afshin | - Kom Ashfin - Qalyub, Egypt |
| **12** | Borombol WWTP | - Borombol - Giza, Egypt |

# 1ST STAGE OF TERTIARY TREATMENT OF THE NEW CAPITAL WWTP

**NEW ADMINISTRATIVE CAPITAL, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

New Urban Communities Authority

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

The New Administrative Capital of Egypt is a Mega Project aiming at providing sustainable developments with a huge positive impact on the Egyptian economy.
The master plan is to create a global city with smart infrastructure.
The new WWTP in new capital will treat about 250,000 $m^3$/day as a first stage as tertiary treatment and the effluent will be reused for irrigation.

## HYDRO SCOPE:

Preparing of workshop drawings for first stage as tertiary treatment and the effluent will be reused for irrigation by capacity of 250,000 $m^3$/day.

# RUBEIKI INDUSTRIAL WASTEWATER TREATMENT PLANT

**BADR CITY, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Concord for Engineering & Contracting

## OUR ROLE:

Main Contractor's Consultant

## PROJECT DESCRIPTION:

The project aims at rehabilitation and upgrading of existing industrial wastewater treatment plant (from 8,000 $m^3/d$ to 12,000 $m^3/d$) subject to overload of organic matter, COD and high salinity. Process supplier incorporates international practice in such upgrade including catalytic oxidation, two stage biological treatment, and advance phenton oxidation to meet discharge regulations. Ultimately the plant shall be subject to similar capacity extension.

## HYDRO SCOPE:

- Review with process supplier the adequacy of proposed works to cope with discharge limits.
- Design of civil and site works.

# BORG AL-ARAB INDUSTRIAL WASTEWATER TREATMENT PLANT (AERATED PONDS)

**NEW BORG AL-ARAB INDUSTRIAL AREA, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

New Urban Communities Authority (NUCA)

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

The industrial complex of New Borg Al-Arab city west of Alexandria is hosting an increasing number of industries including heavy, medium and small industries.
The existing aerated oxidation ponds are receiving increased flows and loads. Hydro is conducting the assessment of phase 1 Treatment Plant performance and upgrade works to meet with discharge limits and enable effluent reuse.

## HYDRO SCOPE:

- Assess current performance of phase 1 aerated oxidation ponds with due consideration of loading from different discharge zones.
- Identify operational works requirements to decrease suspended solids and COD as the two main parameters exceeding discharge limits.
- Investigating various scenarios of aerated oxidation ponds operation considering:

networks discharge complying with limits, as well as two additional scenarios of higher discharge.

# ABOU AL-NOMROS WATER TREATMENT PLANT

**ABOU AL-NOMROS, EGYPT**

■ Design ■ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Cairo Potable Water Organization

## OUR ROLE:

Client's Consultant

## PROJECT DESCRIPTION:

The project aims at constructing phase 2 of the existing Water Treatment Plant to increase its capacity by an additional 65,000 $m^3/d$ of product water. Phase 2 shall be completely independent including sludge management facility and power supply arrangements.
The project also considers the applicable environmental regulations and practice.

## HYDRO SCOPE:

- Process design and hydraulic calculations.
- EIA study.
- Detailed design and tender documents.

# SEVEN WASTEWATER TREATMENT PLANTS IN MINYA

**MINYA, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

National Organization for Potable Water & Sanitary Drainage
NOPWASD

## OUR ROLE:

Client's Consultant

## PROJECT DESCRIPTION:

Through Haya Karima project for rural areas in various governorates, the current project includes the design of six wastewater treatment plants namely: (i) Mallawy, (ii) Tanouf, (iii) Delga, (iv) Deer Abou Hennes, (v) Al-Sheikh Shebeika, (vi) Nazlet Al-Badraman and (vii) Al-Amiria. These biological treatment plants are planned and designed for ultimate capacities (ranging from 7,500 $m^3/d$ to 70,000 $m^3/d$) while phase 1 design documents are issued for capacities ranging from 5,000 $m^3/d$ to 40,000 $m^3/d$. Effluent compliance with discharge limits were considered including the need of nutrients removal if required according to the case studied.

## HYDRO SCOPE:

- Process design and hydraulic calculations.
- Review and electro-mechanical design.
- Review of civil works design

# NASR CITY WATER PURIFICATION PLANT (ABU OWEIKAL)

**CAIRO, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Hassan Allam Construction (HAC)

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

Abu Oweikal water treatment plant which is owned by Ministry of Housing, Utilities and Urban development, Construction Authority for Potable Water & Wastewater (CAPW) is capable of purifying 500,000 $m^3$/day.

The project consists of the following:

- Upgrading the intake pump station.
- Upgrading the booster (2) pump station.
- Construction of new WTP.
- Construction of new two filtered water pipe lines for feeding Nasr city.

## HYDRO SCOPE:

Preparing the workshop drawings of all works required including:

- Hydraulic works.
- Electrical works.
- Structure and architecture works.
- Mechanical works.
- Control system.

# AL-GABAL AL-ASFAR WWTP, PHASE III PUMP STATION

**QALYUBIA, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Construction Authority for Potable water & Wastewater (CAPW)

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

Al-Gabal Al-Asfar wastewater treatment plant is considered the most important treatment plant in the east Nile sector, it has the capacity of 3 million cubic meters per day and it is now in the process of constructing a new phase with capacity of 500 thousand cubic meters per day, which would cover the consumption of most areas in the Greater Cairo.

All connections on the existing chambers, drain and the connection with the future phase of the project.

## HYDRO SCOPE:

Prepare design drawings and the tender documents for the pump station of Al-Gabal Al-Asfar third phase:

- Hydraulic works.
- Electrical works.
- Structure and architecture works.
- Mechanical works.
- Control system.

# AL-GABAL AL-ASFAR WASTEWATER TREATMENT PLANT

**QALYUBIA, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Hassan Allam Construction (JAC) J.V Orascom

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

Al-Gabal Al-Asfar wastewater treatment plant is located northeast of Cairo, Egypt. The plant conducts primary & secondary treatment of wastewater, removes grit and uses sedimentation, clarification, aeration, settling and chlorination to treat wastewater effectively. Treated effluent from this plant is used to plant olive, jojoba and flowers in a 40 Acre stretch of land adjoined to it. The current project aims at enhancing performance of infrastructure utilities at site to maintain proper operation.

## HYDRO SCOPE:

Prepare workshop drawings for piping between administration buildings, water, sludge, drain, scum and overflow systems which consists of polyethylene, concrete and ductile cast iron pipes. The work includes pipe diameters ranging from 150 mm up to 3000 mm. In addition to utility networks for sewage, potable water, service water, firefighting, irrigation and electrical shop drawings.

# AL-NUBARIA CONDUIT WATER INTAKE TO THE WATER TREATMENT PLANT

**AL-NUBARIA, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Concord for Engineering & Contracting

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

Within Country's plan to develop infrastructure and utilities across all governorates to keep up with the fast growth of population and to enhance the potable water services across the country; Borg Al-Arab project was started to design a water intake, transmission lines and water treatment plant for Al-Nubaria conduit water.

## HYDRO SCOPE:

- Prepare workshop drawings for the water intake on "Al-Nubaria" conduit.
- Prepare workshop drawings for the transmission lines 15 Km long from the water intake to the water treatment plant.
- Prepare the workshop drawings for the pump station.

All the above drawings are produced including all the special parts, levels, chambers and cross sections. All works are done according to the specifications and the Egyptian code of practice.

# INFRA-STRUCTURE OF WEST PORT SAID PORT

**PORT SAID, EGYPT**

- ■ Design
- ■ Studies
- ☐ Construction Supervision
- ☐ Design Review
- ■ Shop Drawings

## CLIENT:

Suez Canal Engineering Authority

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

- Industrial waste water treatment plant 25000 $m^3$/day design.
- Infra structure design of network (drainage sewer lines - storm - water - irrigation).
- Design of pump stations.

## HYDRO SCOPE:

- Design of WWTP.
- Design of infra structure network.
- Design of pump stations.

# WATER TREATMENT PLANT IN KOM AFSHIN

**KOM AFSHIN, QALYUB, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Hassan Allam Construction (HAC)

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

The water treatment plant is located at Kom Afshin village, Qalyub, Qalyubia governorate. Water source is from Ismailia canal with capacity of 68000 $m^3/D$.

## HYDRO SCOPE:

Preparing design drawings for second phase.

# REHABILITATION OF AL-WASTAH WWTP

**AL-WASTA, BANI SUWAIF, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Construction Authority for Potable water & Wastewater (CAPW)

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

Capacity of the wastewater treatment plant is 15,000 $m^3$/day.

## HYDRO SCOPE:

Prepare of the workshop drawings for the plant.

# REHABILITATION OF AL-KHAYRI WWTP

**DAMANHUR, BEHIRA, EGYPT**

■ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Northern Melitary Region

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

Al-Khayri sewage treatment plant in Damanhour is considered the largest sewage treatment plant in the Beheira governorate, with a design capacity of 90,000 $m^3$/day as a first stage and 160,000 $m^3$/day as a final stage. This plant treats sewage using a conventional activated sludge system.

## HYDRO SCOPE:

Reaching the most important determinants of developing the station represented in the following:

- Changing the electrical supply network and panels for the first stage.
- Changing the surface hobbies of the aeration basins in the first stage.
- Adding a chlorine building for the first stage and what is needed to inject chlorine into the contact tank.
- Adding a sludge receiving and lifting station to support the existing station for transferring the excess sludge to the station's condensing basins (and from there to the existing drying basins).
- Adding a new entrance building (reception, refineries and sand sequestration) with a capacity of 90,000 $m^3$/day to reduce the burden on the current entrance works (so the total disposal will be 160,000 $m^3$/day) and linking the new entrance building to the distribution channel for the first and second phases.

# REHABILITATION OF MONSHAET AL-KERAM WWTP

**MONSHAET AL-KERAM, QALYUBIA, EGYPT**

☐ Design ☐ Studies ■ Construction Supervision
■ Design Review ☐ Shop Drawings

## CLIENT:

Construction Authority for Potable Water & Wastewater (CAPW)

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

Wastewater lreatment Plant (WWTP) for Monshaat Al-Keram in Shebin Al-kanater, Qalyubia Governorate, with a capacity of 10,000 $m^3$/day extendable to 20,000 $m^3$/day in total, including all necessary civil and electromechanical work inside the plant boundaries.
The treatment plant is constructed as a compact system including the following compartments:

- Inlet flow meters.
- Inlet quieting chambers.
- Pretreatment (fine screens and, grit and grease).
- Biological treatment ASBR (Advanced Sequential Batch Reactor).
- Disk filters.
- Disinfection.
- Sludge treatment.

## HYDRO SCOPE:

- Audit of hydraulic calculations and drawings.
- Audit of electromechanical accounts and shop drawings.
- Reviewing the feeding and drainage networks of the general site and the fire station at the station.
- Supervising the implementation of the station.

# REHABILITATION OF KATTAMEYA WWTP

**NEW CAIRO, EGYPT**

■ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Badr Constructions

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

The treatment plant with a capacity of 80 thousand $m^3$/day has been established with the activated sludge system several years ago, during which it was subjected to phases of operation and discontinuation around and inside some basins or units (outside the scope of the current study). Therefore, the current project was launched to rehabilitate the treatment lines (up to secondary treatment) at the Kattameya plant, with a capacity of 80,000 $m^3$/day.

## HYDRO SCOPE:

Rehabilitation of the station by:

- Determine the current status of the station.
- Review the hydraulic design of the existing units.
- Determining the electromechanical equipment and supplies that need to be replaced.
- Studying the extent to which the current basins accommodate to increase disposal.

# Water Supply Networks

## WATER SUPPLY NETWORKS PROJECTS:

| | | |
|---|---|---|
| **1** | Hydraulic equilibrium of transmission lines 1400 mm | - 6th of October City, Egypt |
| **2** | Bait Al-Watan & Iskan Al-Shabab | - 15 May City, Egypt |
| **3** | Al-Galala transmission lines project | - Al-Galala, Egypt |
| **4** | Ain Sokhna transmission line project | - Ain Sokhna, Egypt |
| **5** | Water riser with a capacity of 140,000 $m^3$ | - Ismailia, Egypt |
| **6** | Development of drinking water network system | - Arish, Egypt |
| **7** | Wadi Hagul water booster station | - Wadi Hagul - SUEZ, Egypt |
| **8** | Transmission line for water station | - New Ismailia, Egypt |
| **9** | Cairo Capital Irrigation tanks (100,000 m3 IRR tank) | - New Administrative Capital, Egypt |

# HYDRAULIC EQUILIBRIUM OF TRANSMISSION LINES 1400 MM

**6TH OF OCTOBER CITY, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Concord for Engineering & Contracting

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

Implementation of the water carrier pipeline for the 6th of October City (New Urban Communities Authority).
Project consists of:

- Total pipe length is 11450m (8750 m x 1400 mm + 2700 m x 1000 mm)
- (7) Wash valve chamber on pipe diameter 1400 mm and (3) on pipe diameter 1000mm.
- (5) Air valve chambers on pipes with diameter 1400 mm and (2) on pipes diameters 1000 mm.
- Route contains (6) connection valve chambers.
- Project contains underground Al-Wahat Railway crossing.

## HYDRO SCOPE:

Preparing workshop drawings for pipeline plus all valve's chambers (air-wash connections and railway crossing).

# BAIT AL-WATAN & ISKAN AL-SHABAB

**15 MAY CITY, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
■ Design Review ■ Shop Drawings

## CLIENT:

Samcrete

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

15th of May City, a city of the first generation that was constructed by the new urban communities authority, it is considered as the main link between Upper Egypt and Greater Cairo.
The main purpose is to provide residency for people from the Surrounding areas like Maadi, who works within the industrial areas of the city.
As per the Egyptian government initiative to keep the expatriates seeking job opportunities and/or immigration, it presented Bait Al-Watan and Iskan Al-Shabab project that goes along with plan through the New Urban Community Authority.
The project consists of:

- Two Water transmission lines.
- Pump station.

## HYDRO SCOPE:

- Design review and prepare of workshop drawings for hydraulic, mechanical, electrical, architectural and structural disciplines.
- Design review and workshop drawings for all utilities of all field works (WSD surveying, soil investigation and calculations for cut and fill).

# GALALA CITY WATER SUPPLY PROGRAM

**GALALA CITY, EGYPT**

■ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Engineering Authority - Department of Water

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

The New Galala city on the red sea cost above Galala mountain 790 m above sea level. The sea water have been desalinated through the establishment of the first desalination plant in Egypt and the Middle East in the resort of Galalah, producing 150,000 $m^3$ of water per day for drinking.
The program consists of the following projects:

- RO plant with capacity 250,000 $m^3$/day
- Four boosters and three pipelines DN 700 with 14 km length.
- Six strategic tanks with capacity 50,000 $m^3$ each and a pumping station.

## HYDRO SCOPE:

- Preparing the design drawings to lift 150,000 $m^3$/day from the desalination plant to Galalah at a height of 500 m from the desalination plant to seven pump stations with the size of 75 m x 75 m.
- Necessity study of the lines protecting from water hammer and preparing longitudinal profiles for three pipelines with 14 km length and diameter of 800 mm.
- Design and execution supervision of the SCADA system.
- Design and supervision works.

# AIN SOKHNA TRANSMISSION LINE PROJECT

**AIN SOKHNA, EGYPT**

☐ Design ☐ Studies ■ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

International Consultant Engineering (ICE)

## OUR ROLE:

Infrastructure Consultant

## PROJECT DESCRIPTION:

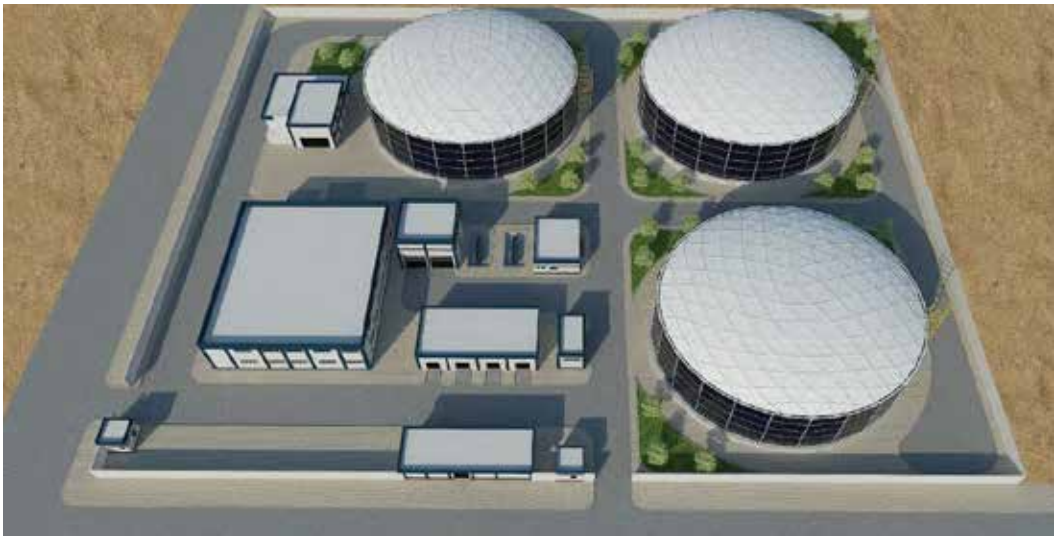
The project consists of the design of water transmission pipeline connecting water source with the industrial area at Sokhna Area.

## HYDRO SCOPE:

Preparing all required workshop drawing packages All Site supervisor Duties and Project management and/or coordination.

# WATER RISER WITH A CAPACITY OF 140,000 $M^3$ / DAY

**ISMAILIA, EGYPT**



■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Egyptian Armed Forces - Engineering Authority

## OUR ROLE:

Owner Consultant

## PROJECT DESCRIPTION:

The National Authority for Potable Water and Sanitation is implementing (6) new projects for Ismailia feeding stations in new residential areas including new Ismailia city and Suez Canal development projects area.

## HYDRO SCOPE:

Our scope is Preparing:

- Design drawings for mechanical, structural and architectural works.
- All design drawings needed for service buildings.

Project Consist of:

- Mechanical, structural and architectural works.
- The general location of service buildings.
- Design drawings and longitudinal sections of the water pipelines with diameters ranging from 400 mm to 900 mm.

# DEVELOPMENT OF DRINKING WATER NETWORK SYSTEM

**ARISH, EGYPT**

☐ Design ☐ Studies ■ Construction Supervision
■ Design Review ☐ Shop Drawings

## CLIENT:

Holding Company for Drinking Water & Sanitation - North & South Sinai

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

Arish city is under continuous upgrade of the provided infrastructure services that enables higher living standards in the served communities. Therefore, the HCWW in Sinai launches different projects to implement various components of infrastructure components.

## HYDRO SCOPE:

- Survey current situation of the drinking water network in Al-Arish city and its extentions (surface water - groundwater wells - desalination plants - lifting stations - tanks).
- Prepare the hydraulic analysis of the existing situation and accordingly identify network problems and shortcomings.
- Analysis of urgent solutions to enhance network performance and the preparation of alternatives and recommendations for urgent solution.
- All site supervision duties and project management and/or coordination including review of all workshop drawings and assuring that all quality standards are implemented.

# TRANSMISSION LINE FOR WATER STATION

**NEW ISMAILIA, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Engineering Authority of Egyptian Army

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

The establishment of new cities, according to the presidential statement on the achievements of the presidency. The new Ismailia city east of the Suez Canal Steps of development in Sinai and one of the steps to eliminate terrorism in the urban society in Sinai. New Ismailia: 900 meters from the Suez Canal, the new city of Ismailia is located east of Canal Suez. First model city in Egypt was the special needs of roads, houses, land and facilities.

## HYDRO SCOPE:

- Design of 2 transmission lines with diameters 900 mm from the water intake in Port Said channel to the desalination plant, this pipeline path includes a siphon 60 m long and air and wash chambers.
- Producing design drawings for 2 lines 900 mm width from the desalination plant to New Ismailia City with alteration of two 900 mm lines to three 700 mm when passing the Suez Canal, these lines use the H.D.D (Horizontal Directional Drilling) with length almost 250 meters, these lines include both air and wash valves.
- Studying what is necessary to protect lines from the water hammer for the 13 km line and preparing longitudinal profiles for all pipelines.

# CAIRO CAPITAL IRRIGATION TANKS (100,000 M3 IRR TANK)

**NEW ADMINISTRATIVE CAPITAL, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

New Urban Communities Authority (NUCA)

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

The tank is part of the New Cairo Capital tanks project located along the regional road to be used in irrigation of the fields in the area, capacity of the tank is 100,000 $m^3$. The project consists of 5 tanks and 5 subsidiary.

## HYDRO SCOPE:

Prepare workshop drawing for Station Buildings and tanks.

# Sewerage & Stormwater Networks

## SEWERAGE & STORMWATER NETWORKS PROJECTS:

| | | |
|---|---|---|
| **1** | Al-Gabal Al-Asfar WWTP - New Cairo pipeline | - New Cairo, Egypt |
| **2** | Al-Behira sewerage project for 13 villages | - Al-Behira, Egypt |
| **3** | ASWAN - Eight Villages wastewater project | - Aswan, Egypt |
| **4** | Urgent solution for Alexandria stormwater problem | - Alexandria, Egypt |
| **5** | Al-Gabal Al-Asfar wastewater treatment plant | - Qalyubia, Egypt |
| **6** | Tag Sultan compound networks | - New Cairo, Egypt |
| **7** | Marsa Matrouh - Five Villages wastewater project | - Marsa Matrouh, Egypt |
| **8** | Al-Sherouk pump station No.3 | - Al-Sherouk City, Egypt |
| **9** | Al-Senbellawein sustainable rural sanitation services program (SRSSP) | - Al-Dakahliya, Egypt |
| **10** | Borg Al-Arab pump stations | - Borg Al-Arab, Egypt |
| **11** | Countryside sustainable development wastewater project | - Hehia, Al-Sharkeyah, Egypt |
| **12** | 20.000 Residential Units | - Al-Kayan, Egypt |
| **13** | Sewerage gravity lines 1,3,7 | - New Cairo, Egypt |
| **14** | BARWA – City Gate | - New Cairo, Egypt |
| **15** | Barhamtosh village wastewater network | - Dakahliya Governorate, Egypt |
| **16** | Drainage network for Burj village | - Behira, Rasheed, Egypt |
| **17** | Sewage system for 4 villages | - Fakos, Al-Sharkeya, Egypt |
| **18** | Kafr Abo Nasr Village (3 Villages) | - Dakrnes - Mansoura, Egypt |

# NEW CAIRO PIPELINE - AL-GABAL AL-ASFAR WWTP

**NEW CAIRO, EGYPT**

■ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Construction Authority for Potable water & Wastewater (CAPW)

## OUR ROLE:

Owner Design & Supervision Consultant

## PROJECT DESCRIPTION:

Delivering wastewater services through a 42 km main pipeline with diameters ranging from 3400 to 2000 mm, including 10k m of crossovers, connecting parts of New Cairo and urban extensions along Suez-road and areas west of the ring road with Al-Gabal Al-Asfar WWTP.

## HYDRO SCOPE:

- Design drawings.
- Supervise the execution of works and submit periodic reports.
- Coordinate between contractors and planning consultant.
- Approve material quality tests and equipment.
- Approve workshop drawings.

# AL-BEHIRA SEWERAGE PROJECT FOR 13 VILLAGES

**AL-BEHIRA, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

HORSE

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

Within the national development plan, World Bank has funded 750 $ million sanitation sector to support the second integrated sanitation infrastructure projects in different governments includes sewage for 13 villages in Behira (Zahr Sand, AL-Eshra, Al-Khamseen, Al-Sabakhna, Hassan Sabry, Kheneisa, Rostom, Abo Olla, Om Al-Laban, Heteita, New Mansheyya, Kom Sohaib, Al-Maateen).

## HYDRO SCOPE:

Preparing tender drawings & documents in addition to preparing hydraulic, architectural and structural workshop drawings (lift stations, sewage networks, force main lines) for the collection and transmission of the 13 villages.

# ASWAN - EIGHT VILLAGES WASTEWATER PROJECT

**ASWAN, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Engineering Authority - Department of Military Works

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

The Aswan villages wastewater project would provides a long-term sustainable prosperity and addresses distinct issues faced by Egypt. The plan was to establish a new sewerage network which would deliver wastewater services to the area.

## HYDRO SCOPE:

Supervision for the following:

- Sewerage Networks (50 km).
- Forcemains (11.8 km).
- (4) Pump Stations.

# URGENT SOLUTION FOR ALEXANDRIA STORMWATER PROBLEM

**ALEXANDRIA, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
■ Design Review ■ Shop Drawings

## CLIENT:

Arab Contractors

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

Due to the climate changes in Egypt; especially in Alexandria, the government has allocated a portion of its budget to find solutions for rain water pools problem in Alexandria ASAP.
Hydro in cooperation with Arab Contractors Company worked together on finding solution for:

- Carrefour downtown district, Al-Mandara district and Al-Asafra district.

## HYDRO SCOPE:

Review design drawings, plus preparation of workshop drawings for storm water networks; the force mains from the Pump stations to the suggested outfall, electromechanical works for the storm water lifting stations.

# AL-GABAL AL-ASFAR WASTEWATER TREATMENT PLANT

QALYUBIA, EGYPT

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Hassan Allam Construction (HAC)

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

Al-Gabal Al-Asfar Wastewater Treatment Plant is capable of cleansing 1.7 million cubic meters of waste water daily. Located at the northeast border of Cairo, Egypt. The plant conducts primary and secondary treatment of water, removes grit and uses sedimentation, aeration, final settling and clarification and chlorination techniques to purify water completely to treat wastewater effectively.
treated effluent from this plant is used to plant olive, jojoba and flowers in a 40 Acre stretch of land adjoined to it.
The current project aims at enhancing the performance of infrastructure utilities at site to maintain proper operation.

## HYDRO SCOPE:

Prepare workshop drawings for piping between administration buildings, water, sludge, drain, scum and overflow systems which consists of polyethylene, concrete and ductile cast iron pipes. The work includes pipe diameters ranging from 150 mm up to 3000 mm. In addition to utility networks for sewage, potable water, service water, firefighting, irrigation and electrical workshop drawing.

# TAG SULTAN COMPOUND NETWORKS

**NEW CAIRO, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

International Consultant Engineering (ICE)

## OUR ROLE:

Infrastructure Consultant

## PROJECT DESCRIPTION:

Within the country approach to build new cities, focusing on New Cairo as it is one of the most important cities in Egypt.
Tag Sultan occupies an area of 300,000 square meters, considered as one of Egypt's luxurious housing compounds.

## HYDRO SCOPE:

Preparing design & workshop drawings for the storm water drainage networks, first phase "Teegan".

# AL-SHEROUK PUMP STATION NO.3

**AL-SHEROUK CITY, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Al-Nasr for Buildings and Construction (EGYCO)

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

Rehabilitation of pumping station No.3 in Shorouk City including:

- A new set of pumps with corresppnding pipes.
- Construction of a new valve room complete with valves, special pieces and Water hammer tank.
- Electric transformers.
- Electric switchgear 22 kV.
- Control panel.

## HYDRO SCOPE:

Preparing the work shop drawings of the:

- Electrical works.
- Light current.
- MEP works.

# AL-SENBELLAWEIN SUSTAINABLE RURAL SANITATION SERVICES PROGRAM (SRSSP)

**SENBELLAWEIN, BARHAMTOUSH & KAFR AL-SHAHID MOSTAFA, DAKAHLIYA, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Al-Nasr for Building and Construction (EGYCO)

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

The development objective of the sustainable Rural Sanitation Services Program for results project for Egypt is to strengthen institutions and policies for increasing access and improving rural sanitation services in the Governorates of Beheira, Dakahliya, and Sharkiya in Egypt. The program activities are described through three key result (improved sanitation access, improved operational systems & practices of water and sanitation company (WSCs).

## HYDRO SCOPE:

Complete work shop drawing packages for implementation of the sewage network project - sewage pumping stations - expulsion lines according to the program for each (2) villages with the following components:

- 35 km of new sewage network.
- 1.6 km of rehabiltation of sewage network.
- 3.7 km of forcemain lines.
- Rehabilitation of Pump Station (mechanical, electrical and civil) works.

# BORG AL-ARAB PUMP STATIONS

**BORG AL-ARAB, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Badr Constructions

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

The project aimed to raise the efficiency of the pumping stations by replacing pumps, constructing new building and building a new fence around stations.

## HYDRO SCOPE:

Prepare workshop drawings for the pumping stations including:

- Mechanical works.
- Electrical works.
- Structural works.

# COUNTRYSIDE SUSTAINABLE DEVELOPMENT WASTEWATER PROJECT

**VILLAGES AT NOGIEH AREA, HEHIA, SHARKEYAH, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Al-Shams for Contracting & Engineering Works

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

Within Sharkiya Governorate water and wastewater company's plan to deliver, improve and maintain wastewater services in the area, The project consisted of a wastewater network, forcemains and pumping stations.

## HYDRO SCOPE:

Review workshop drawings for the following disciplines:

- Mechanical work.
- Electrical work.
- Structural work.
- Architectural work.

# 20.000 RESIDENTIAL UINTS

**AL-KAYAN, EGYPT**

■ Design ☐ Studies ■ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Engineering Authority - Department of Military Works

## OUR ROLE:

Client's Consultant

## PROJECT DESCRIPTION:

Design and supervision of the construction of the sewage networks, discharge lines and pumping stations for the districts of (Safwa – Loloa – Gawhara – Zohor) that serves 20,000 residential units at Kayan.

## HYDRO SCOPE:

- Design works for the networks and pumpstations.
- Revision of the survey works.
- Revision of shop drawings and borehole reports submitted by contractors.
- Supervision of the construction works.

# SEWERAGE GRAVITY LINES 1,3,7

**(BANAFSIG - MIRAJ - YASMIN) NEW CAIRO, EGYPT**

■ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

New Cairo City

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

Design and Supervision construction works of the main gravity lines of Banafsig, Mirage, Yasmin at the 1st settlement and the main gravity lines number No. 3,7 ,1 for the first and second sector at the New Cairo extension with connects to the main gravity line to Al-Gabal Al-Asfar.

## HYDRO SCOPE:

Design and Supervise construction execution including revising borehole reports submitted from the contractors and revising the shop drawings and the periodic test of materials and following up time schedules.

# Integrated Roads & Utilities

## INTEGRATED ROADS & UTILITIES PROJECTS:

| | | |
|---|---|---|
| 1 | Investment Area, Cairo International Airport | - Cairo, Egypt |
| 2 | Mansoura (1) project | - New Administrative Capital, Egypt |
| 3 | Mansoura (3) project | - New Administrative Capital, Egypt |
| 4 | Mansoura (7) project | - New Administrative Capital, Egypt |
| 5 | North Ninety road project | - New Administrative Capital, Egypt |
| 6 | North Ben Zayed road project | - New Administrative Capital, Egypt |
| 7 | R3 District project | - New Administrative Capital, Egypt |
| 8 | South Ninety road project | - New Administrative Capital, Egypt |
| 9 | East Port-Said industrial area infra-structure | - Arish, Egypt |
| 10 | Al-Galala compound & mall networks | - Al-Galala, Egypt |
| 11 | Utilities for 3000 feddans (Reqaba Edareya Land) | - New 6th of October City, Egypt |
| 12 | The Anti-Terrorism Unit utilities | - Egypt |
| 13 | Project 110 utilities | - Cairo, Egypt |
| 14 | Sharm Al-Sheikh resort | - Sharm Al-Sheikh, Egypt |
| 15 | Infra-structure networks, Marassi | - North Coast, Egypt |
| 16 | New Administrative capital Airport Utilities | - New Administrative Capital, Egypt |
| 17 | Beit Al-Watan Utilities & Land settlement | - New Cairo, Egypt |
| 18 | Nasr Gardens Housing project | - Cairo, Egypt |
| 19 | Tahya Misr project | - Aswan, Egypt |
| 20 | Farming 3000 feddans of forestry | - Ayyat, Egypt |
| 21 | Hayah Karima in Behira | - Behira, Egypt |
| 22 | Infra-Structure of west Port Said port | - Port Said, Egypt |
| 23 | West Al-Sherouk housing project | - Al-Sherouk City, Egypt |
| 24 | 150 feddans October project utilities | - 6 October City, Egypt |
| 25 | Infra-Structure of Sheikh Zayed City extension | - Sheikh Zayed City, Egypt |
| 26 | Utilities for Nasr Al-Noba | - Aswan, Egypt |
| 27 | Construction of new Slaughterhouse | - Matrouh, Egypt |
| 28 | Utilities for 6 Buildings - GabAL Al-Zalat | - Aswan, Egypt |
| 29 | BARWA – City Gate | - New Cairo, Egypt |

# INVESTMENT AREA, CAIRO INTERNATIONAL AIRPORT

**CAIRO, EGYPT**

☐ Design ■ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

International Consultant Engineering (ICE)

## OUR ROLE:

Design Consultant

## PROJECT DESCRIPTION:

The project aims to enhance the efficiency of investment areas at Cairo Airport and increase its capacity with a total cost of 150 billion pounds.

## HYDRO SCOPE:

- Preparing Tender documents including drawings, specs and bill of quantities for the following networks:
- Water supply - landscape irrigation - firefighting - sewage.
- Electricity - street lighting - CCTV.
- Data and telecom networks.
- Lift stations and sewage treatment plant.

# MANSOURA (7) PROJECT

**NEW ADMINISTRATIVE CAPITAL, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Concord for Engineering & Contracting

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

The New Administrative Capital of Egypt is a mega project aiming at providing sustainable developments with a huge positive impact on the Egyptian economy.
The master plan is to create a global city with smart infrastructure. Mansoura project (MNS7) is one of the projects inside the New Administrative Capital which extends for over 500 feddan.

## HYDRO SCOPE:

- Review the general layout to check the hierarchy of the roads network, number and width of the road lanes and foot paths.
- Preparing the workshop drawings for sewer network, potable water network and irrigation network.
- Preparing the workshop drawing for electrical network including medium voltage, low voltage and street lighting network.

# NORTH NINETY ROAD PROJECT

**NEW ADMINISTRATIVE CAPITAL, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Concord for Engineering & Contracting

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

The New Administrative Capital of Egypt is a mega project aiming at providing sustainable developments with a huge positive impact on the Egyptian economy.
The master plan is to create a global city with smart infrastructure. North Ninety road is one of the high way projects inside the New Administrative Capital which extends for over 12 Km.

## HYDRO SCOPE:

- Review the general layout to check the hierarchy of the roads network, number and width of the road lanes and foot paths.
- Preparing the workshop drawings for sewer network, potable water network and irrigation network.
- Preparing the workshop drawing for electrical network including medium voltage, low voltage and street lighting network.

# NORTH BEN ZAYED ROAD PROJECT

**NEW ADMINISTRATIVE CAPITAL, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Concord for Engineering & Contracting

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

The New Administrative Capital of Egypt is a mega project aiming at providing sustainable developments with a huge positive impact on the Egyptian economy.
The master plan is to create a global city with smart infrastructure. North Ben Zayed road is one of the high way projects inside the New Administrative Capital which extends for over 12 Km.

## HYDRO SCOPE:

- Review the general layout to check the hierarchy of the roads network, number and width of the road lanes and foot paths.
- Preparing the workshop drawings for sewer network, potable water network and irrigation network.
- Preparing the workshop drawing for electrical network including medium voltage, low voltage and street lighting network.

# R3 DISTRICT PROJECT

**NEW ADMINISTRATIVE CAPITAL, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Concord for Engineering & Contracting

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

The New Administrative Capital of Egypt is a mega project aiming at providing sustainable developments with a huge positive impact on the Egyptian economy.
The master plan is to create a global city with smart infrastructure.

- Water pipes with diameters 110 mm to 1400 mm.
- Sewage pipes with diameters 200 mm to 2250 mm.
- Irrigation pipes with diameters 110 mm to 1400 mm.

## HYDRO SCOPE:

- Review the general layout to check the hierarchy of the roads network, number and width of the road lanes and foot paths.
- Preparing the workshop drawings for sewer network, potable water network and irrigation network.
- Preparing the workshop drawing for electrical network including medium voltage, low voltage and street lighting network.

# SOUTH NINETY ROAD PROJECT

**NEW ADMINISTRATIVE CAPITAL, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Petrojet

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

The New Administrative Capital of Egypt is a mega project aiming at providing sustainable developments with a huge positive impact on the Egyptian economy.
The master plan is to create a global city with smart infrastructure. North Ben Zayed road is one of the high way projects inside the New Administrative Capital which extends for over 11.6 Km.

## HYDRO SCOPE:

- Review the general layout to check the hierarchy of the roads network, number and width of the road lanes and foot paths.
- Preparing the workshop drawings for sewer network, potable water network and irrigation network.
- Preparing the workshop drawing for electrical network including medium voltage, low voltage and street lighting network.

# EAST PORT-SAID INDUSTRIAL AREA INFRA-STRUCTURE

**PORT SAID, EGYPT**

☐ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Hassan Allam JV Orascom

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

East Port-said is an important economic destination in Egypt hosting the newly upgraded port and the industrial area east of Suez Canal. Several infrastructure projects are launched to support such economic activities, among which the scope of the current project.

## HYDRO SCOPE:

Prepare workshop drawings for the following:

- Sewage network.
- Irrigation network.
- Water network.
- Force-main.

# AL-GALALA COMPOUND & MALL NETWORKS

**AL-GALALA CITY, EGYPT**

☐ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Hassan Allam Construction (HAC)
Concord for Engineering & Contracting

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

Al-Galala New City is one of the largest projects in Egypt, which is located on the Red Sea in one of the country's most important tourist and entertainment destination. The city occupies an area of 19,000 acres which consists of a Seaside Hotel, Mall, Mountain hotel, Water park, Marina and Al-Galala cable cars.

## HYDRO SCOPE:

All Site supervision duties and project management and/or coordination including reviewing all workshop drawings and assuring that all quality standards are implemented. Project consists of:

- Drainage network length of 38 km with diameters of 200 to 1400 mm.
- Water network with a length of 38 km with diameters of 110 to 900 mm.
- Irrigation network with a length of 38 km with diameters of 110 to 800 mm.
- Rain drainage network with a length of 18 km with diameters of 250 to 2300 mm.
- Two pump stations and three filling lines with 9 km length.
- Smart water distribution network inside the city.

# UTILITIES FOR 3000 FEDDANS (REQABA EDAREYA LAND)

**NEW 6TH OF OCTOBER CITY, EGYPT**

■ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

6 October City

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

New 6th of October city is a meaningful venture that is characterized by the presence of infrastructure networks providing a sustainable prosperity that attracts development leaving a positive impact on the Egyptian economy. The master plan is to create a global city with smart infrastructure for enhancing the quality of life.

## HYDRO SCOPE:

Preparing design drawings for the following:

- Road network.
- Sewage and storm network.
- Irrigation network.
- Water and firefighting network.

All site supervision duties and Project management and /or coordination including to review all Workshop drawings and assuring that all quality standards are implemented.

# PROJECT 110 UTILITIES

**AL-KAYAN, EGYPT**

☐ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Engineering Authority - Department of Military Works

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

The project consists of:

- Main drainage network with total length of about 87 km.
- Main irrigation network with total length of about 85 km.
- Sub-networks (drainage, water, irrigation and roads).
- (13) pumping stations.
- (18) storage ground water, irrigation and fire tanks.
- One main irrigation lift.
- Force main lines from the project to the treatment plant.
- Irrigation transmission line diameter 1000 mm from the treatment plant to the main irrigation crane project.

## HYDRO SCOPE:

All site supervision duties and project management and/or coordination including reviewing all workshop drawings and assuring that all quality standards are implemented.

# SHARM AL-SHEIKH RESORT

**SHARM AL-SHEIKH, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Raafat Miller Consulting (RMC)

## OUR ROLE:

Road Works Consultant

## PROJECT DESCRIPTION:

The resort is located in one of the most recognized areas of Sharm Al-Sheikh City and is considered one of important resorts which is characterized by its luxury, beautiful beaches, lagoons and landscapes. The road network of the resort will be designed to serve the villas and apartments and match with the distinctive landscape provided.

## HYDRO SCOPE:

Design of road network as a part of overall infrastructure design of the project. The road network system provides safe and easy access to all activities and services blocks of all Sharm Al-Sheikh resort including collector and local Roads, supplemented by necessary road furniture, traffic control devices and adjoining road side development.

# INFRA-STRUCTURE NETWORKS, MARASSI

**NORTH COAST, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Hassan Allam Construction (HAC)

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

125 kilometers from the chanting Alexandria and only a few kilometers away from Al-Alamein, Marassi is the upcoming gateway to Egypt, sending out worldwide invitations across the Mediterranean. Marassi is a 6.5 million square meter gated, master-planned year-round destination resort.

## HYDRO SCOPE:

Prepare workshop drawings and coordination for the following utilities:

- Combined system for sewer and storm drainage networks.
- Combined system for potable water and fire network.
- Irrigation network.
- Electrical networks including medium voltage, low voltage and street lighting.
- Telecommunication networks.

# NEW ADMINISTRATIVE CAPITAL AIRPORT UTILITIES

**NEW ADMINISTRATIVE CAPITAL, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Hassan Allam Construction (HAC)

## OUR ROLE:

Contractor Consultant

## PROJECT DESCRIPTION:

new Administrative capital International Airport which is located in the area of Katameya-New Cairo, will be dedicated to serve New Cairo, Cairo Capital, Port Said, Ismailiya and Suez. The new airport serves Cairo's growing number of international travelers and reduces the pressure on Cairo International Airport.

## HYDRO SCOPE:

Prepare the workshop drawing for the following utilities:

- Combined system for sewer and storm drainage.
- Potable water networks. • Firefighting network. • Irrigation networks.
- Electrical network. • Light current network.

Workshop drawing included:

- Coordinates. • Dimensions. • Special pieces. • Levels. • Sections for clarifications.

Hydro team is considering the main purpose of the workshop drawings to solve all the intersections of the utilities according to the engineering aspects, standards and codes of practice. This coordination will be showed in additional sections and plans.

# BEIT AL-WATAN UTILITIES & LAND SETTLEMENT

**NEW CAIRO, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Al-Nasr for Buildings and Construction (EGYCO)

## OUR ROLE:

Contractor Consultant

## PROJECT DESCRIPTION:

As per the Egyptian government initiative to keep expatriates seeking job opportunities and/or immigration, it presented Bait Al-Watan project that goes along with the plan through New Cairo City, the project started with 1200 acres. The project consists of:

- 3,500,000 cubic meters of excavation and 4,000,000 cubic meters of filling for roads work as the total area of the roads is 110 km.
- Potable water network ranging from 100 mm up to 600 mm with a total length of 75 km.
- Irrigation network which ranges from 50 mm up to 160 mm.
- Sewer network which ranges from 200 mm up to 800 mm with total length 70 km.
- Water and irrigation valve chambers and firefighting taps.
- Internal road networks.
- Settlement work for land plots.

## HYDRO SCOPE:

Preparing workshop drawings for all utilities and roads in addition to performing all the field work survey, soil investigation and calculating the cut and fill volumes.

# NASR GARDENS HOUSING PROJECT

**6TH OF OCTOBER CITY - FAYOUM, EGYPT**

☐ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Al-Nasr for Buildings and Construction (EGYCO)

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

The Project is a residential project within the National Housing Project with area of 155 acres Plot No. 41 between Faiyum Street and 6 October City.

## HYDRO SCOPE:

Site supervision and project management, by assisting owner team during the defect's liability period (one year) for (Sewage networks, Potable water network, Irrigation network, Electric network, Site lighting, Telephone network, Surveying and Road works).

# TAHYA MISR PROJECT - ASWAN

**ASWAN, EGYPT**

☐ Design ☐ Studies ■ Construction Supervision
■ Design Review ☐ Shop Drawings

## CLIENT:

Engineering Authority - Department of Military Works

## OUR ROLE:

Client's Consultant

## PROJECT DESCRIPTION:

The project includes various activities where the consultant task was to supervise a variety of works including water and sewerage networks and treatment works, supervision the construction of public service components as the Dialysis Hospital, industrial zones infrastructure in Genina and Shebbak areas, etc.

## HYDRO SCOPE:

Supervise the execution of the following:

- The sewage networks of (8) villages.
- (4) pumping stations.
- Water station of Enaba.
- Genina and Shebbak waste water treatment plant.
- Supervise the construction of the dialysis unit.
- Industrial zone utilities at Genina and Shebbak.
- Rehabilitation of Nasr Al-Noba youth center.

# FARMING 3000 FEDDANS OF FORESTRY

**AYYAT, EGYPT**

☐ Design ☐ Studies ■ Construction Supervision
■ Design Review ☐ Shop Drawings

## CLIENT:

Construction Authority for Potable water & Wastewater (CAPW)

## OUR ROLE:

Client's Consultant

## PROJECT DESCRIPTION:

Preparing designs and supervision the execution of zone (Y1) Administrative Authority land - 6th of October (10) points with an area of 3482 feddans.

## HYDRO SCOPE:

- Design works for the following networks (Water – Irrigation – Sewage – Firefighting – Roads).
- Supervise the construction to ensure works are executed according to drawings and relevant codes and follow up with the time schedule.
- Prepare periodic invoices.
- Revise the as-built drawings.
- Coordinate and prepare preliminary and final handing over letters between the owner and the contractor.

# HAYAH KARIMA - BEHIRA

**BEHIRA, EGYPT**

■ Design ☐ Studies ■ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Northern Melitary Region

## OUR ROLE:

Client's Consultant

## PROJECT DESCRIPTION:

The project is constructed among Haya Karima initiatives and considers the design of water and sewage networks for Behira's villages which have no sewage system. They are more than 20 main villages and thier appurtenances with networks and lift stations with force main (the whole sewage system).

## HYDRO SCOPE:

- Process design and hydraulic calculations.
- Electromechanical designs.
- Review workshop designs.
- Construction supervision.

# INFRA-STRUCTURE OF WEST PORT SAID PORT

**PORT SAID, EGYPT**

- ■ Design
- ■ Studies
- ☐ Construction Supervision
- ☐ Design Review
- ■ Shop Drawings

## CLIENT:

Suez Canal Engineering Authority

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

- Industrial waste water treatment plant 25000 $m^3$/day design.
- Infra structure design of network (drainage sewer lines - storm - water - irrigation).
- Pump stations design.

## HYDRO SCOPE:

- Design of WWTP.
- Design of infra structure network.
- Design of pump stations.

# WEST AL-SHEROUK HOUSING PROJECT

**AL-SHEROUK, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
■ Design Review ■ Shop Drawings

## CLIENT:

Concord for Engineering & Contracting

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

Al-Sherouk is a city located at the northeast of Cairo and at the north of New Cairo, in the province of Cairo, in Egypt, which is part of Greater Cairo. The city is part of the third generation of cities established upon decision of 1995. The establishment of the city within the framework of the efforts of the Egyptian state for urban expansion to achieve several development goals.
The work thus involves several infrastructure components including roads, storm drainage, sewerage system, water supply and irrigation.

## HYDRO SCOPE:

- Review general layout to check the hierarchy of the roads network, number and width of road lanes.
- Create Roads setting out plans showing the coordination of roads items and edges and parking areas and create roads dimension plans showing the dimension of roads items and edges and parking areas.
- Preparing work shop drawings for the storm networks, sewage networks (200 mm to 700 mm), potable water network (63 mm to 315 mm), irrigation network and fire networks.

# 150 FEDDANS OCTOBER PROJECT UTILITIES

6 OCTOBER CITY, EGYPT

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Etihad

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

In the light of the urban development and the construction of new cities to keep up with the population comes the October project, the project area is 150 Feddan. The main purpose of the work shop drawing is to solve all the intersections of the utilities according to the engineering aspects, standards and codes of practice, this coordination will be showed in additional sections and plans.

## HYDRO SCOPE:

Preparing workshop drawings and/or utilities coordination for the following networks:

- Sewer networks.
- Potable water networks.
- Irrigation networks.

# INFRA-STRUCTURE OF SHEIKH ZAYED CITY EXTENSION

**SHEIKH ZAYED CITY, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

New Urban Communities Authority (NUCA)

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

Infrastructure works Sheikh Zayed city extension - phase one (Regulation No.77). Preparing Development vision and strategic view for Sheikh Zayed City expansion and preparing the detailed scheme of the prioritized areas from study scope.

## HYDRO SCOPE:

- Concept design.
- Road design and workshop drawings.
- Water, sewer, firefighting, irrigation and storm networks.
- Medium voltage and low voltage networks.
- Telecommunication - street lighting - structure DWG – BOQs.

# UTILITIES FOR NASR AL-NOBA

**ASWAN, EGYPT**

■ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

Department of Military Works

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

The project consist of:

- Road works.
- Water network.
- Waste water treatment plant.
- Electrical network.
- Water tank.

## HYDRO SCOPE:

- Road works.
- Water network.
- Valve chamber.
- House connection.
- Water ground tanks.
- Sewer networks.
- Force main.
- Waste water treatment plant.
- Mechanical and structural . designs for valve chambers.
- Mechanical, electrical and structural designs for pump stations.
- Electrical network.
- Mechanical and structural designs for ground water tank.
- Mechanical and structural designs for WWTP.

# CONSTRUCTION OF NEW SLAUGHTERHOUSE

**MATROUH, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Ministry of Housing, Utilities and Urban Communities
Housing and Building National Research Center

## OUR ROLE:

Contractor's Consultant

## PROJECT DESCRIPTION:

The project is part of the development and raising efficiency of Marsa-Matrouh slaughterhouses by Matrouh governorate.

## HYDRO SCOPE:

Preparing the work shop drawing of all disciplines including:

- Mechanical.
- Electrical.
- Structure.
- Architecture.
- MEP.

# UTILITIES FOR 6 BUILDINGS - GABAL AL-ZALAT

**ASWAN, EGYPT**

☐ Design ☐ Studies ☐ Construction Supervision
☐ Design Review ■ Shop Drawings

## CLIENT:

Engineering Authority - Department of Military Works

## OUR ROLE:

Contrctor's Consultant

## PROJECT DESCRIPTION:

The project consist of:

- Sewer network.
- Electrical cables.
- House connection.

## HYDRO SCOPE:

Preparing shop drawing for the following:

- Valve chamber.
- House connection.
- Sewer networks.
- Mechanical and structural designs for house connection.

# BARWA – CITY GATE

**NEW CAIRO, EGYPT**

☐ Design ■ Studies ☐ Construction Supervision
☐ Design Review ☐ Shop Drawings

## CLIENT:

City Gate Development

## OUR ROLE:

Owner's Consultant

## PROJECT DESCRIPTION:

Water management and conventional water sources has become one of the main concerns for those who are interested in urban development in Egypt. The treatment and reuse of wastewater for irrigation purposes offers a renewable source of water rich with organic particles that are useful for the soil and plants. And despite its advantages, reused sewage water can also be harmful. Therefore, this environmental impact study report aims to study the effects of treated effluent reuse for irrigating green areas and golf fields in City Gate project in New Cairo.

## HYDRO SCOPE:

- Review proposed designs of project components and elements from environmental perspective and possible modifications in project elements to comply with environmental regulations set by the EEAA.
- Assess significance of potential environmental impacts (positive/negative, reversible/irreversible, direct/indirect, long term/immediate impacts as well as avoidable/unavoidable impacts).
- Propose suitable mitigation measures to reduce/eliminate environmental negative impacts;
- Prepare EMP plan, proposed mitigation measures with responsibilities/cost and plan of actions.
- Obtain environmental approval from EEAA for the proposed project.

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