



Professional Profile

A chartered engineer with 35 years of expertise in managing the whole lifecycle of large-scale infrastructure projects, including conceptualization, design, review, tender document preparation, feasibility studies, construction supervision, testing, commissioning, and project delivery. This background includes planning, designing, and supervising the construction of a wide variety of public works and real estate projects, including but not limited to: water treatment plants, sewage treatment plants, surface water collection, pumping stations, force mains, district cooling plants, chilled water pipelines, pneumatic waste collection, roads, parking garages, vehicle tunnels, substations, power stations, and high-rise buildings. Dr. Ahmed contributed to several areas, including value engineering, HAZOP research, claim management, dispute settlement, and bid assessment. Additionally, oversee all aspects of the building process to guarantee adherence to quality standards, project controls, health and safety protocols, and environmental protection measures. Members of the project teams that Dr. Ahmed has managed and supervised have included discipline engineers, inspectors, surveyors, and resident and assistant resident engineers. He is well-versed in a wide range of standards and specifications published by organizations such as ASHRAE, QCS, HI, and BS. Several major projects in Qatar, including the Lusail city development, the Ras Laffan industrial area utilities, and the Lusail Expressway, were designed, managed, and supervised during construction by Dr. Ahmed. Furthermore, he has finished the blueprints for major infrastructure projects in Egypt, Saudi Arabia, Syria, Namibia, and the UAE.

EDUCATION

- PhD. Mechanical Engineering- Cairo University, Egypt, 2004.
- MSc. Mechanical Engineering-Mansoura university, Egypt, 1999.
- BSc. Mechanical Engineering- Mansoura University, Egypt, 1988.

REGISTRATIONS

- SCE Saudi Council of Engineers, 1010831
- CE-Chartered Engineer -MIMechE- UK - NO 624262.,2015
- MME-UPDA-Qatar-Grade A- NO. 1750,
- CFPS- Certified Fire Protection Specialist NFPA -2017
- LEED AP- BD+C, GBCI (NO.10761907)
- PMP-NO.1317741
- Certified Energy Manager CEM-AEE-No. 95444
- Consultant Engineer 0301150-Egyptian syndicate of Engineers.

Residency permit:

Valid transferable residency permit in KSA is available

Valid transferable residency permit in Qatar is available

Carrier History

- Dec. 2017 to Date: CDM smith-Inc, Doha, Qatar,
- Feb. 2011 to Dec.2017: Parsons Int. Ltd. Doha, Qatar,
- Nov. 2007– Jan 2011: Gulf Engineering and Industrial Consultancy-GEIC, Qatar
- June 2005 – Nov. 2007: AAW Consulting Engineers Cairo -Egypt

- Jan 2000-June 2005: Environmental Civil Engineering Consulting Center (Enviro-Civic) Cairo -Egypt
 - Feb 1992-Jan 2000: Delta Electricity Production Company, Mansoura- Egypt.
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Projects Experience

Nov 2020- to date

Position: Senior Project Manager

Project: P003-Lusail Expressway-The Best Global Road/Highway Project ENR 2018. With a total cost of 4.4 billion QR.

Roles and Responsibilities

- Oversee and execute project technical, commercial, planning, health and safety, quality, risk, and system compliance.
- Ensure, assess, and formulate suggestions for processing requests for modifications, addenda, and time extensions in accordance with PWA regulations and standards.
- Deliver periodic progress updates.
- Organized and conducted progress and technical meetings.
- Evaluate the contractor's Key Performance Indicators (KPIs) and project efficacy.
- Facilitate progress and technical discussions with the authorities and contractors.
- Assess material quality on-site, issue non-conformance notifications, and supervise the prompt execution of non-conformance rectifications.
- Compile a list of outstanding tasks.
- Address and respond to technical inquiries.
Evaluate and scrutinize modifications to the initial contract submitted by the contractor or the authority.
- Delegating and overseeing project teams while providing advice, direction, coaching, and motivation.
- Communicate project outcomes and/or risks to the relevant management channels and escalate concerns as necessary in accordance with the project work plan.
- Supervise and lead a team of engineers, including resident engineers, responsible for overseeing the building of the project.
- Oversees and documents the status of all project activities, including critical milestones and any factors that may impact project cost or timeline.

The Lusail Expressway project encompasses approximately 6.5 kilometers of highway, with three principal interchanges, two bridges, two flyovers, six tunnels, and related infrastructure.

1. Automotive tunnels,

Six vehicle tunnels are equipped with firefighting and fire alarm systems, ventilation systems, communication infrastructure, public access systems, intelligent transportation systems, lighting, lighting control systems, and stormwater drainage pumping stations.

2. Three number of cables Tunnels

- Cable tunnels with a diameter of three meters and lengths of 1760m, 723m, and 698m, situated at a depth of 18 meters for high voltage and medium voltage power lines, equipped with ventilation, fire alarm, and drainage systems.

3. Wet Utilities and Pumping Stations

- SW4A pumping station with a capacity of 1500 l/s and 18 m head.
- Pearl Pumping Station with a capacity of 120 l/s and a 50 m head.
- Wahda Pumping Station with a capacity of 140 l/s and a 17 m head.
- Tunnels stormwater pumping stations. (6 No.)
- TSE distribution network with a total length of 15 km.
- Stormwater network and micro tunnels.
- Foul sewer network and micro tunnels.
- Potable water distribution network with a total length of 20 km.

- Chilled water distribution network
 - Water features fountains complete with their pumping system (8 borehole submersible pumps).
4. ITS, Vodafone, Ooredoo, SSDD Networks
5. Utility Compounds
- Pearl utility compound has three 11/0.415 KV substations, a fire pump room, a backup generator room, and a tunnel management control center.
 - The Onaiza utility compound has one 11/0.415 KV substation, a fire pump room, and a backup generator room.

March 2018- Nov 2020.

Position: T&C Manager

- This position's duties include overseeing the commissioning of all mechanical and electrical equipment, pumping stations, and SCADA systems. Thorough testing and commissioning, system integration, authentication of successful integration, handover, and end-user training.
- Evaluate and approve the contractor's plan for testing and commissioning.
- Manages the project's MEP and SCADA operations, including scheduling and coordination. Take charge of the trial operation and make sure everything runs well throughout the testing phase of system integration.
- Oversee a group of T&C engineers that oversee the contractors' testing operations.
- Evaluate and provide comments on the T&C work bundle, which consists of the plans, program, processes, reports, and mitigations.
- Create a list to monitor the development of the T&C pertaining to all assets.
- Supervise client and contractor meetings once a week and once a month to review progress.

Dec 2017 to March 2018

Position: M&E Manager (Head office Support).

- Preparation of the tendering proposals for the following tenders.
- Pre-contract Professional Consultancy Services for the Design of the New District of Doha Pumping Station and Outfall – C796.
- Pre-contract Professional Consultancy Services for the Design of the South of Wakrah Pumping Station and Outfall – C803.
- Post-Contract Professional Consultancy Services for Construction of D Line TSE Pumping Station & Transmission Main – C762.
- **Project:** New Transmission Main and D Line TSE Pumping Station (C762).
The D Line TSE rising main a 1200 mm DI rising main with a total capacity of 120,000 m³/day covers around 65 km.
Assistance with the following project-related technical tasks:
 - The report on the computation of pipeline restricted lengths should be reviewed.
 - Review the report outlining the hydraulic calculation and the capacity of the pump.
 - Review the HVAC calculation report.
 - Review the results of the independent surge study.
 - Checking the shop drawings of the pumping stations and valve chambers.
 - Checking major pump and pipeline component material submittals.

Feb. 2011 – Dec. 2017

Employer: Parsons International -Qatar

Position: Core team, Head of Mechanical Design Engineers

Project: Lusail City Primary Infrastructure Development.

Client: Qatar Diar Company

Lusail City is being developed to the north of Doha, spanning 38 km². It will be home to 200,000 residents, as well as mixed-use retail, commercial centers, hotels, and community facilities.

Roles and Responsibilities

- Assess and evaluate the outputs of design consultants, including master plans, drawings, specifications, multidisciplinary coordination, design criteria, and calculation reports.
- Directed prospecting efforts and offered technical insights for client proposals and bid preparation.
- Assess the adequacy of infrastructure dimensions and equipment, identify critical activities and risks, and engage proactively in value engineering workshops.
- Develop RFPs, technical scopes of work, tender papers, and conceptual designs, securing preliminary approvals from relevant authorities.
- Assess proposals, establish criteria, and respond to tenderers' queries before and after bidding.
- Support project managers in overseeing contractors, regulatory bodies, stakeholders, and consultants.
- Evaluate and observe Factory Acceptance Tests (FATs), Site Acceptance Tests (SATs), testing procedures, inspection protocols, and method statements as required.
- Aiding with contract modifications/change orders, evaluating and negotiating claims and entitlements. Facilitate effective testing and commissioning, resolve any issues, and finalize paperwork.
- Executed design evaluations on all MEP systems and surge assessments, encompassing force mains, wastewater treatment facilities, and pumping stations.
- Evaluate CFD and smoke control systems for light rail transit stations and subterranean parking facilities.

Construction Packages

1-Pumping Stations and Wet Utilities

- Main stormwater pumping station (SW1) with capacities of 7000 L/s and a 2600-meter length marine outfall.
- SW3 & SW4 stormwater pumping stations, each with a capacity of 3100 L/s, and 1400-meter-long marine outfalls.
- RPS1, RPS2, RPS3, & RPS4 combined potable and fire water pumping stations.
- Irrigation pumping stations (IR1, IR2, IR3, & IR4) each of 320 L/s, 65 m head.
- PSB: sewage pumping station of 1950 L/s complete with force main, main pumps, screening system, carbon odor control system, standby generator, PLC, and control system.
- PS1, PS2, PS3, and PS4 North and South Qetifan islands foul sewage pumping stations.
- Marina District cooling plants 1, 2, and 3, each with a capacity of (2380, 2340, and 845 TR).
- 66 kV & 11 kV substations.
- Foul sewerage, irrigation, stormwater, and potable water networks.
- Sewage Treatment Plant: 50,000 m³/day and TSE pipeline

2.Underground Utilities

Utility Tunnels

- CP1, the wet utility tunnel, is approx. 18 km long with cross-lateral sections of the tunnel to serve the Lusail development marina plots.
- Dry service the main utility tunnel has 19 zones, including EV & EHV (11kV & 66kV) cable networks. Telecom Cables Network MEP Services Cable Network.
- The works include all MEP systems, SCADA-control & monitoring of all tunnel ventilation systems (TVS), sump pit systems, fire alarm systems, CCTV & access control systems (ACS), HV, MV systems, and central battery systems.

Vehicular Tunnels

- Road A3 Tunnels A&B. The tunnel is a two-tube road tunnel between CP7B and CP7C at Lusail City. Each tunnel tube is one-directional traffic. Each tube is about 650 meters in length, 13.5 meters in width, and 7.5 meters in depth.
- Road A1 Tunnels Road A1 in CP07B is connecting various parts of Lusail City with Lusail Towers and Plaza and waterfront commercials. The project contains three separate tunnels, A1-1 North

and South. Each tube is about 531 meters in length, Tunnels A1-2 and A1-3 Each tube is about 540 meters in length.

- LRT - FXH02 Station LRT station is running above the Road A1 tunnel and under the Lusail Plaza. LRT has 3 levels. Ground level connects LRT to the plaza level, Concourse Level connects the Station with the Lusail Towers and Platform level connects the station to the underground public car park area.

Underground Car Parking

- Underground car park structure located in the Waterfront commercial area in Lusail City, construction package. It consists of four car parks (P2, P3, P4, and P5) that are designed to host 2200 cars.
- P07B - Lusail Plaza - Five-level underground parking structure designed to host two thousand cars.

3. Building projects

Design check of the MEP (firefighting& drainage).

- Lusail - CP16 Utility tunnel VIP access and control building.
- Lusail CP25 Hub Offices Package. (Two-story office building to accommodate two thousand employees).

Nov. 2007 to Jan 2011

Employer: GEIC -Qatar

Position: MEP Manager

Roles and Responsibilities:

- Organizing and supervising internal disciplines and subconsultants.
- Controlling project budgets and resource allocation.
- Strong communication skills are demonstrated, including the ability to present designs to customers and teams and provide feedback.
- Prepare design reports, drawings, and tender documents and follow up with authorities for final approval.
- Provide technical assistance and support to the design team to ensure that projects are completed within budget and on schedule.

Projects:

1. **Ras Laffan:** Design for Wet Utilities Distribution Network for Support Service Area Phase I & II.
Client: Qatar Petroleum (QP).

The project scope encompasses the provision of FEED design and tender documents for the specified elements.

- Network for the transmission and distribution of electrical power.
 - A potable water system comprising four tanks, a pumping station, and an 80-kilometer distribution network.
 - The fire water network comprises four fire water tanks, two fire water pumping stations, and an extensive network exceeding 80 kilometers in length.
 - The sewage collection system comprises twenty-nine pumping stations distributed throughout the site, along with gravity and rising mains that facilitate the collection and transportation of sewage to treatment plants.
2. **Barwa Al-braha WWTP;** (12000m³/day). Design of Al-Braha STW tanker reception and TSE injection facilities, including tanker filling station, inlet pumping station, and TSE pumping station.
 3. **Barwa precast factory.**

June 2005 – Nov.2007

Employer: AAW consulting Engineers-Egypt

Position: Principal Mechanical Design Engineer,

Roles and Responsibilities:

- Collaborating with the project lead team, managing the MEP team, and ensuring the completion of deliverables.
- Successfully oversaw numerous design initiatives.
- Successfully guided the multidisciplinary design team in the completion of the design tasks.
- Review and verify design reports, specifications, BOQs, and drawings that have been prepared by others.
- Obtain the final approvals by preparing the design reports, drawings, and tender documents and following up with all relevant authorities.
- Ensure that the design team can complete the projects within the budget and schedule constraints by managing and providing technical support and guidance.

Pumping Stations and Wastewater Treatment Plants

- North Jeddah Sewage Pump Station, 2,500,000 m³/day
Saudi Ministry of Water and Electricity, General Water, Makkah Region, 2007. Development of a preliminary design report for a design-and-build contract. The pump station receives effluent from a 70-meter-deep tunnel with a diameter of 3 meters.
- Al-Amerya Sewage Pump Station, Egypt, 1,500,000 m³/day. Client: Greater Cairo and Alexandria wastewater project execution organization. Prepared a preliminary design report for a design and construct contract to expand the pump station, which is responsible for the collection and pumping of sewage water from Greater Cairo to the Al-Gabal Al-Asfar wastewater treatment facility. The pump station has a shaft diameter of 42 m and a depth of 30 m.
- Alexandria East Wastewater Treatment Plant, Egypt, 800,000 m³/day. Evaluated the current wastewater treatment plant, collected data, and developed conceptual design and tender documents for rehabilitation and expansion to increase capacity to 800,000 m³/day.
- Namibia Ministry of Agriculture, 2007: Irrigation Pumping Stations. The development of a preliminary design report, complete design drawings, and tender documentation for two irrigation systems with pumping stations that operate at 1100 l/s and 500 l/s.
- 2.0 million m³/day Water drawn from Al-Assad Lake at Al-Furat River to the Damascus Combination Basin. The work encompasses the collection, purification, and transmission of water. Create design drawings and specifications for the intake, water treatment facility, and two booster pumping stations.
- Adra Industrial and Sewage Treatment Plant (45000+120000): 165000 m³/day, Syria. 2005–2006: General Company for Studies and Consultations. Drafting preliminary design report, full drawings, and tender documents.
- Sewage Pump Stations DS130 and DS 165, Dubai Municipality, UAE, 2006. preparing preliminary design report, detailed drawings, and tender documentation.
- Civil Project 411 (PS-W2 & PS-W7), Public Works Authority (Ashghal) (DA), June 2005-November 2007. Part-time design review and construction supervision of Wakra and Wukair sewage pump stations.
- Doha City Small- and Medium-Scale Industrial Area Planning and Development, Phase II, 2005, Ministry of Industry. The detail design of new pump house and two 6-MIG ground reservoirs.

Jan 2000-June 2005

Employer: Enviro-Civic- Egypt

Position: senior Mechanical Engineer,

Roles and Responsibilities:

- The preparation of a preliminary design report, detailed design drawings, and tender documents.
- The design review, construction supervision, testing, and commissioning of wastewater treatment plants, drinking water treatment plants, and pumping stations.

1.Construction Supervision

- El-Obour City Potable Water Treatment Plant (220,000 m³/day), Egypt, New Urban Communities Authority. The treatment facility processes 220,000 cubic meters per day. Pump station no. 2 comprises four pumps with a capacity of 1450 L/s and a head of 60 m, along with two reservoirs totaling 50,000 m³. Pump station no. 3 comprises four pumps, each with a capacity of 1450 L/s and a head of 92 m, alongside reservoirs totaling 50,000 m³. Twin ductile rising mains with a diameter of 1400 mm and a total length of 80 km.
- 200,000 m³/day wastewater treatment plant Aerated Lagoons, at 10th of Ramadan City. The treatment method comprised primary treatment components, including four mechanical screens, four grease and grit removal tanks, four primary settling tanks, and four aerated lagoons, each equipped with 100 surface aerators rated at 45 kW, along with a chlorine system.

2.Design and Design check

- The Gabal El-Asfar Cairo Wastewater Treatment Plant (Contract 19-500,000 m³/day) in Egypt is under the management of the Executive Agency for Sewage Projects in Greater Cairo. Evaluation of the design for the intake pumping station, screening and sand removal systems, primary sedimentation tanks, aeration tanks, final clarifier tanks, sludge thickening tanks, mechanical dewatering facility, chlorine contact tanks, and dual fuel generator.
- New Borg El Arab City Reservoir Pumping Station (200,000 m³/day), Egypt, New Urban Communities Authority.
- New Borg El Arab City Wastewater Treatment Plant (20,000 m³/day). Egypt, New Urban Communities Authority.
- North of Suez. Gulf Water pipeline with total length of 120-kilometer with two booster pumping stations each of 250,000 m³/day.
- North Sinai- Inhabitancy Village's Potable Water Treatment Plant and Intake Pump Station of 85,000m³/day.
- New Cairo City Sewerage Pumping Stations, Egypt, New Urban Communities Authority, 2002–2005:
 - El-Banfsg Pump Station: (250,000 m³/day).
 - El-Yasmin Pump Station: (275,000 m³/day).
 - South Academy Pump Station (300,000 m³/day).
 - South Investors Pump Station: (430,000 m³/day).
 - City Centre Pump Station: (400,000 m³/day).
 - Investors Extension Pump Station: (400,000 m³/day).
 - Fifth Community Pump Station (400,000 m³/day).

Building Projects: Conduct a design review of MEP works, evaluate material submittals, supervise testing and commissioning, and facilitate handover to the client for the specified projects.

- Elbehira Electrical Control Centre, a six-story structure.

- Canadian Embassy building located in Cairo.

Feb1992-Jan 2000

Employer: Middle Delta Electricity Production Company, Egypt.

Position: Mechanical Engineer,

Installation, testing, commissioning, and operation of Talkha Steam Power Station (2×210 MW), including intake works, intake pumping stations, boilers, steam turbines, and all feed water pumps, fuel pumps, etc.

Software Skills

- Pipe Flow Expert 5.12

- Bentley Hammer V8i.
- AFT Impulse and AFT fathom.
- Spec-sizer 101 Generators Sizing- "Caterpillar"
- HAP5.1
- MS- Office (Excel, Word, and Power Point)

International Codes and Standards

Dr. Ahmed is familiar with the following international codes and standards:

- ANSI/HI Pump Standards
- ISO 5208, Pressure testing of valves
- API 610 pumps design
- ISO 2531 specs. for ductile iron pipes, fittings, and accessories for pressure pipelines.
- EN 545 Ductile iron pipes, fittings, accessories and their joints for water pipelines requirements and test methods
- IEC34-5, Classification of the degree of protection provided by enclosures of rotating machines.
- ISO 3046-1 Reciprocating internal combustion engines performance.
- ASME Boiler and Pressure Vessel Code Section VIII Division1
- NFPA
- ASHRAE
- QCS 2014
- QCDD regulations