

PEC
ENGINEERING

COMPANY PROFILE

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2024

ABOUT US

PEC Engineering Consulting Company was founded in (2013) we started from a small office in the city of Riyadh and now with the efforts of our team and the passion of our youth we have more than 5 branches in all regions of the Kingdom of Saudi Arabia. And we have gained preference and distinction among companies and with the approval of banks and financing companies and in quality And the integrity of dealing with everyone and customer satisfaction is our measure. The company was also classified in the Central Tenders Committee to enter the field of government projects, and we have many contracts concluded between the government sector and the private sector. PEC has specialized in all engineering consulting works from designing, supervising and issuing licenses of all kinds.



ENGINEERING FIELD

OUR VISION

Our engineering field needs a strong vision like the vision of the Kingdom...

Our ambition is like the Tuwaiq mountain, and our ambition is like the sky. Mohammed bin Salman .

This clear vision is exactly what we rely on in our entity, and for this day and through the coming years we are working to create a new concept of engineering methods and to be a successful and pioneering model in the world and we will work to achieve the vision of the Kingdom.





MOHAMMED AL ROMAIYAN

CHAIRMAN

Inventive spirit and the will to succeed are a crucial part of our corporate culture, They are more than that, however:

They are also the basis for PEC continuing success, Our clients value our company's innovative strength and the creativity of our designs, Every day, your trust strengthens our determination to become even better. As the CEO of the company, this trust means great responsibility for us. Responsibility towards our customers, our partners, and our employees, Providing qualified staff, and acting in a sustainable manner is crucial for us and are firmly implemented in our company worldwide. This is especially accurate in a world that seems to be turning consistently. Taking on new challenges, we recognize the opportunities they present and plan our long-term strategy accordingly. We continually strive to further expand our leading role as a globally-active engineering company. Our employees, who make a vital contribution to the company's success with their knowledge, creativity, and reliability, and are committed in using their expertise spirit to fulfill our clients' requirements in a targeted manner worldwide which are the driving force behind it. This is how we move the world – together

sorry we can't post all of our projects regarding to our clients privacy

OUR STRATEGIES TO SUCCESS

In our engineering designs, we depend on adopting the highest international standards in environmentally and human-friendly building designs, and of course, we strive to put our creative imprint in every design that we do.

**GREEN BUILDING
TECHNOLOGY**



**BUILDING MANAGEMENT
SYSTEM**



RISK MANAGEMENT



AREA OF REFUGE



GREEN BUILDING TECHNOLOGY

Green building (also known as green construction or sustainable building) refers to both a structure and the application of processes that are environmentally responsible and resource-efficient throughout a building's life-cycle: from planning to design, construction, operation, maintenance, renovation, and demolition. This requires close cooperation of the contractor, the architects, the engineers, and the client at all project stages. The Green Building practice expands and complements the classical building design concerns of economy, utility, durability, and comfort. In doing so, the three dimensions of sustainability, i.e., planet, people and profit across the entire supply chain need to be considered.



BUILDING MANAGEMENT SYSTEM

A **BMS** is an innovative control system that monitors and manages various mechanical and electrical services throughout a building or campus. These systems are usually implemented in major facilities and serve a critical role in managing energy consumption. Most BMSs are made up of three main components:

- **Hardware:** Including digital controls, sensors, actuators, and cables
- **Software:** programming and configuration elements for control operations, and programming & maintenance
- **Networking protocols:** Including transfer control or internet protocols and building automation controls

These elements enable maintenance teams to have a holistic view of a building's performance and reduce waste by making real-time improvements.

How Does a Building Management System Work?

Implementing a BMS throughout a building plays a critical role in managing internal conditions throughout the day. These systems connect to various sensors, valves, and switches and monitor them to manage activity efficiently. BMS monitor the following elements across a building:



TERMINAL AIR DEVICES

Terminal air devices such as VAV boxes, fan coils, unit ventilators and the like are dispersed throughout the facility and are the “touch point” of providing occupant comfort to the intricacies of a building’s HVAC system. With so many Terminal Air devices in a facility, a physical inspection of all of these critical components is nearly impossible. Yet their poor performance is harming occupant comfort and wasting energy. Leveraging BMS is a practical means to ensure efficient and proper operation of your vast campus of Terminal Air Devices, and puts you squarely on a path for proactive facility maintenance and less at the tyranny of constant reactive hot and cold calls.



LIGHTING CONTROL SYSTEMS

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HVAC SYSTEMS

HVAC systems are crucial for maintaining occupant comfort. A BMS monitors duct temperature, pressure, humidity, and exhaust temperature to ensure operational efficiency



CENTRAL HEATING

Having a functioning central heating system is important for maintaining occupant comfort during the winter. Utilizing a BMS helps your team monitor performance and reduce energy usage.



CHILLED WATER SYSTEM

Chillers are frequently seen in large buildings and are one of the biggest energy consumers for a structure. Implementing a BMS generates long-term cost savings by extending the asset life of this expensive equipment. A BMS regularly monitors a chiller plant's behavior and issues an alert when water temperatures reach improper levels.



RISK MANAGEMENT

Risk management is the process of identifying, assessing and controlling financial, legal, strategic and security risks to an organization's capital and earnings. These threats, or risks, could stem from a wide variety of sources, including financial uncertainty, legal liabilities, strategic management errors, accidents and natural disasters.

AREA OF REFUGE (AOR) IN HEIGH RISE BUILDINGS

An area of refuge is a designated location within a building specially designed to hold people safely during an emergency. In other words, an area of refuge is set aside for situations when evacuation may not be possible or is otherwise unsafe. For example, patients in a hospital may not be able to use a stairwell to exit the building because there is a fire. People can wait in the area of refuge safely until rescued by firefighters or emergency rescue teams. This area may also have the name “area of rescue assistance.”

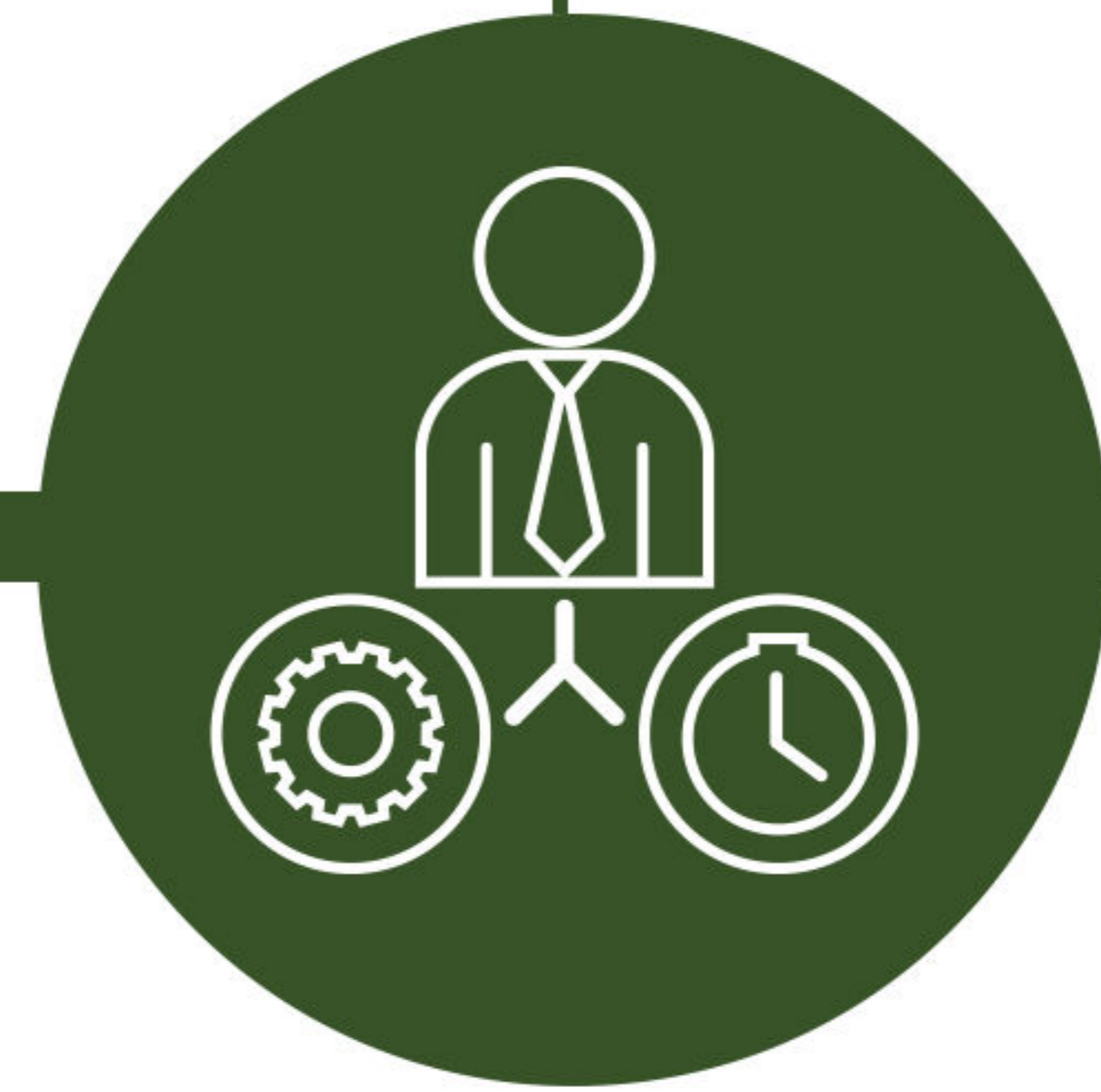


OUR SERVICES

DESIGNING
& ENGINEERING



PROJECT MANAGEMENT
OFFICE (PMO)



CONSTRUCTION



COMMISSIONING



DESIGNING & ENGINEERING

PEC provides design services for all types of developments, ranging from the residential, commercial and mixed use to the more specific and specialized like schools, shopping malls, hotels, industrial, hospitals and military. In this connection, PEC has produced master plans for sustainable communities in different countries. Our designs rely on the original outlook of our designers and adhere to the applicable and relevant codes and standards. We provide the following services:

- Architecture
- Interior design
- Exterior design
- Master planning
- Structural
- Infrastructure
- Civil
- MEP
- Safety
- Information Tecnology
- Q.S. Services



PROJECT MANAGEMENT OFFICE (PMO)

PEC team has provided project management services to Saudi Arabia's projects in designing, constructing, managing, and commissioning large and small, highly complex projects. Our unique and customized technical solutions. Our multidisciplinary projects teams works in plans that to be ensure each project meets economic, environmental, technical, and safety requirements



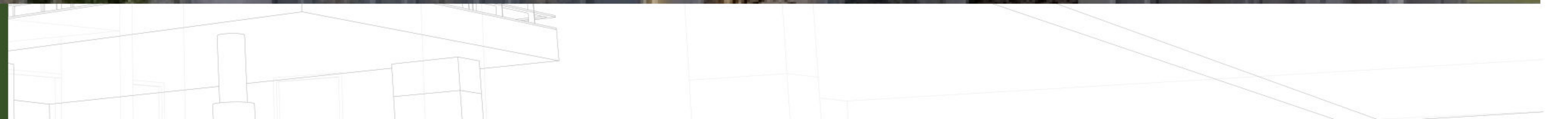


ARCHITECTURE

Building architects create design plans for building development projects. These professionals use their analytical, technical research and creative skills to create drawings and sketches of a building. Often, these professionals ensure buildings adhere to various rules and regulations laid by the government. They survey the local environment near the construction site to understand that it is safe for constructing building. These professionals can work as residential building architects to design houses of private clients or industrial architects to design airports, hospitals, offices storage facilities and power plants.

- Concept Design (Exterior+Interior)
- Analysis
- Shop Drawings
- 3D-Modeling
- 2D-Drawings
- Building license
- Urban Design
- Landscape Design





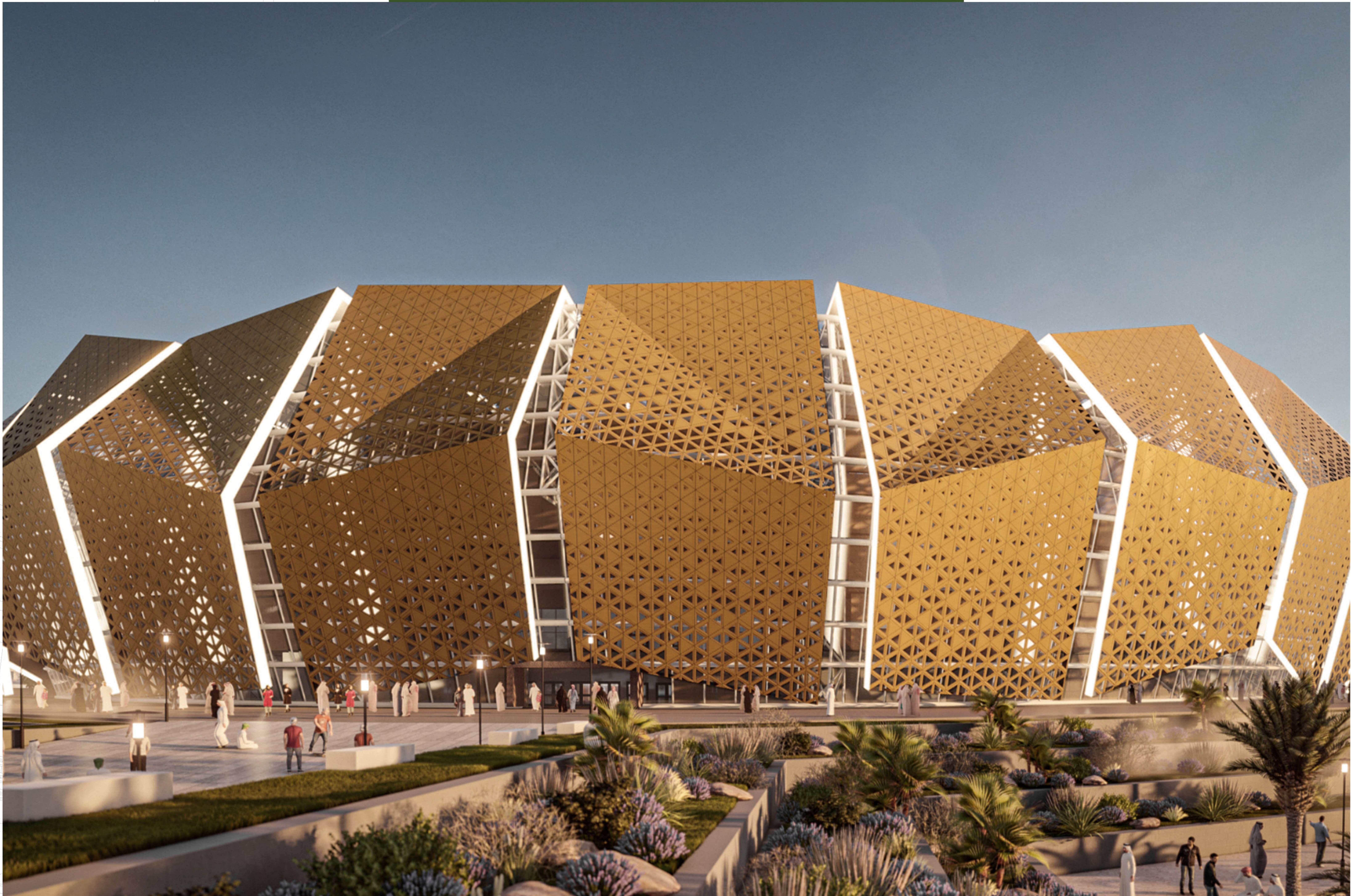


















INTERIOR DESIGN

It is the art, science, and business planning of a creative, technical, sustainable, and functional interior solution that corresponds to the architecture of a space, while incorporating process and strategy, a mandate for well-being, safety, and health, with informed decisions about style and aesthetics.

















EXTERIOR DESIGN

Exterior design refers to the physical architecture and organizational elements of the outside-facing components of a building. Exterior design encompasses both physical structures as well as personal and artistic designs such as paint color, roof shape and material, decks, patios, gardens, and more.































VILLA 07



CIVIL ENGINEERING

Civil Engineering is a vital and important profession that deals with the design, construction, and maintenance of buildings and other structures. It also includes the development of public works such as highways, bridges, dams, tunnels, airports, and sewage systems that are essential to our modern lives. Civil engineers are problem solvers and develop solutions to challenges ranging from limited resources to extreme weather conditions. They strive to find ways to make our society more efficient and sustainable as civil engineering is undergoing rapid change with artificial intelligence increasingly becoming part of the picture. Artificial intelligence allows engineers to design structures more accurately, efficiently, costeffectively, and quickly than ever before. In the near future, we can expect to see a greater role for AI in civil engineering projects as it takes on more complex tasks and allows us to create better quality infrastructure projects with fewer resources.

MECHANICAL ELECTRICAL AND PLUMBING (MEP)

Mechanical, electrical and plumbing (MEP) refers to the installation of services which provide a comfortable space for the building occupants. In residential and commercial buildings, these elements are often designed by specialized MEP engineering firms. The part of Mechanical in the overall MEP system is almost 70% of the total work. MEP's design is important for planning, decision-making, accurate documentation, performance - and cost-estimation, construction, and operating/maintaining the resulting facilities

MECHANICAL ELECTRICAL AND PLUMBING (MEP)

MEP specifically encompasses the in-depth design and selection of these systems, as opposed to a tradesperson simply installing equipment. In countries of Asia such as, China and Saudi Arabia the use of MEP is increasing in building construction projects due to extreme climates in summer and winter. For example, a plumber may select and install a commercial hot water system based on common practice and regulatory codes. A team of MEP engineers will research the best design according to the principles of engineering, and supply installers with the specifications they develop. As a result, engineers working in the MEP field must understand a broad range of disciplines, including dynamics, mechanics, fluids, thermodynamics, heat transfer,, electricity

MECHANICAL ELECTRICAL AND PLUMBING (MEP)

In (HVAC) {heating ventilation and airconditioning} we need to calculate many different things to get the best design implementation result like :-

Plumbing:

- Watersupply
- Water supply pipe sizing
- Tank size calculation
- Pumps selection
- Valveselection
- Hot water system calculations
- Drainage system
- Pipe sizing
- Water rain drainage
- Load calculations
- Ducts sizing
- Chilled water system calculations
- Chiller pipes calculations
- Flow rate calculations
- AHU selections
- Split unit and window type selection
- Fan coils selection



SAFETY DEPARTMENT

Introduction

We have the department specialized in Engineering Safety and Fire include a highly specialized technical team with full knowledge of Civil Defense requirements, SBC Codes – NFPA standard – Fire Protection code – ASHRAE code and full knowledge of health and safety environment requirements, NEPOSH & OSHA.

Highly qualified fire & safety engineer specialized in all kinds of all safety systems: fire fighting system, fire alarm system, life safety system, sound evacuation systems, smoke management system and health and safety environment in Construction site, Industrial site and Events.

OUR SERVICES

- Study, Design and review of fire protection, life safety system and smoke management systems for residential, commercial and industrial enterprises.
- Site Supervision Service.
- Occupational Safety and Health Consulting.
- Receipt of works and licenses.



OUR CLIENTS



المملكة العربية السعودية
الشؤون الخاصة لخادم الحرمين الشريفين



الشؤون الخاصة لسمو ولي العهد
CROWN PRINCE PRIVATE AFFAIRS

المملكة العربية السعودية
الديوان الملكي



OUR CLIENTS

وزارة السياحة
Ministry of Tourism



وزارة الثقافة
Ministry of Culture



وزارة التعليم
Ministry of Education



شركة المياه الوطنية
National Water Company



وزارة الحجاز
Ministry of Hajj and Umrah



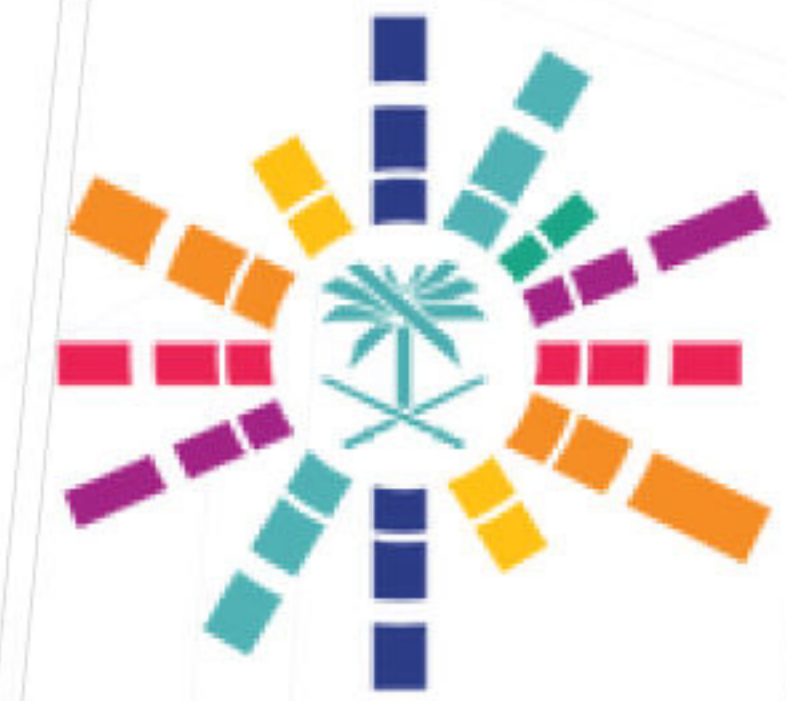
SDAIA
الهيئة السعودية للبيانات
والذكاء الاصطناعي
Saudi Data & AI Authority



KAFD
مركز الملك عبدالله المالي



الجامعة السعودية الإلكترونية
SAUDI ELECTRONIC UNIVERSITY
2011-1432



الهيئة العامة للترفيه
General Entertainment Authority



Hilton



الجميع للسيارات
ALJOMAIH AUTOMOTIVE



مصرف الراجحي
alrajhi bank



شركة بيجي المحدودة
BG Ltd Co

Marriott
HOTELS · RESORTS · SUITES

OUR CLIENTS



جامع الشيخ محمد بن سعد بن ماجد المهنا

MEMBERS



شركة المياه الوطنية
National Water Company



وزارة الشؤون البلدية
والقروية والإسكان

وزارة التجارة
Ministry of Commerce



الهيئة السعودية للمهندسين
SAUDI COUNCIL OF ENGINEERS

CERTIFIED



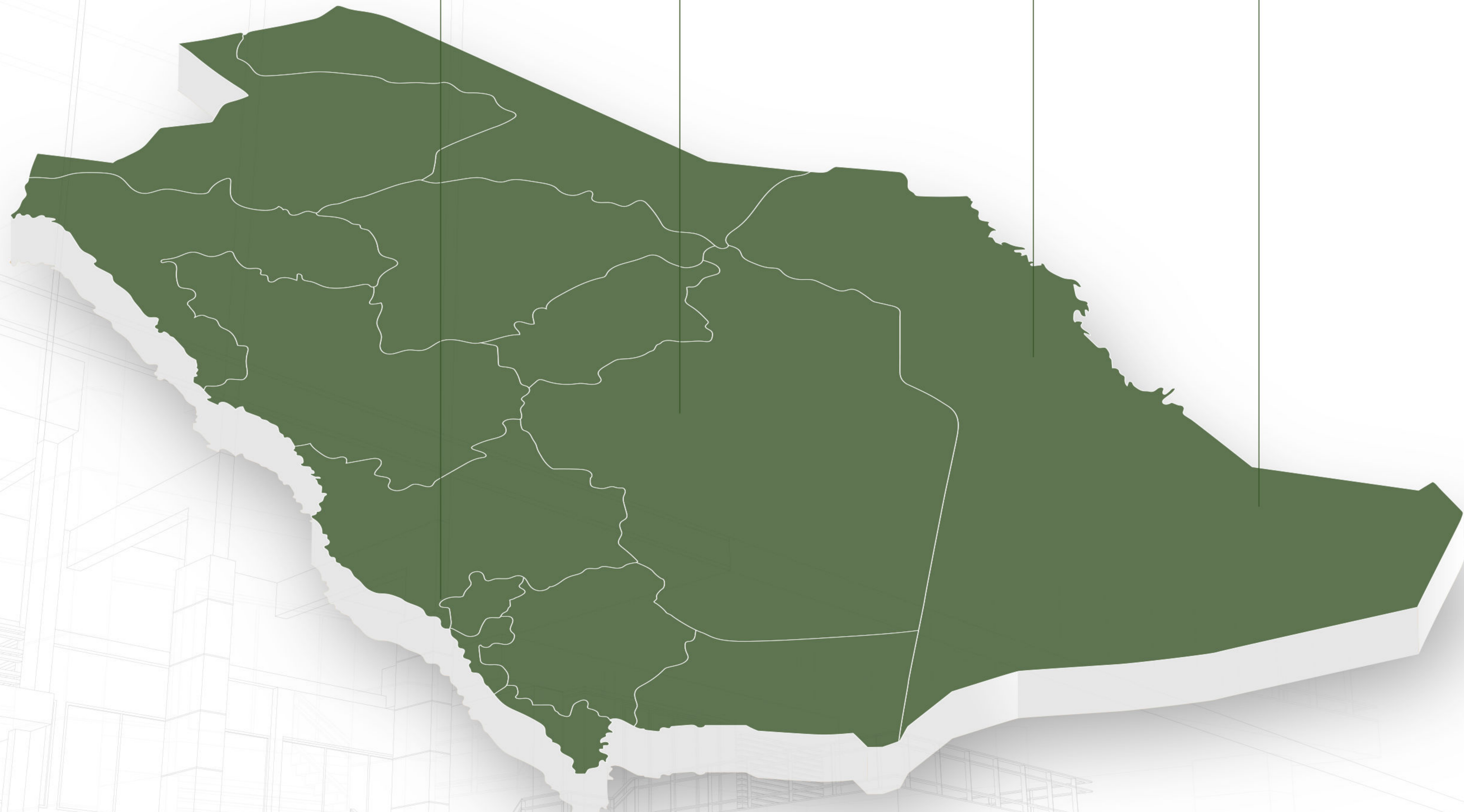
OUR BRANCHES

RIYADH
AL OROUBA ROAD,
TULIP TOWER

AL-KHOBAR,
KING ABD ULAZIZ.ST

WADI
AL-DWASER

AL-KHOBAR,
KING ABD ULAZIZ.ST



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