

# Advanced Quality Systems LLC

AQS



*MEP Design & Engineering Consultancy*

Licensed under QFCA – No. 001005

[www.aqs.design](http://www.aqs.design)

# AQS CONSULTANTS

Advanced Quality Systems LLC (AQS) is an engineering design Group of Engineers delivering innovative and multi-disciplinary Electro-Mechanical Design and Consultancy services in GCC. We conduct business with honesty, integrity and commitment.

We are proud to be part of an exciting time where we see a real opportunity to reshape the building engineering design approach and environment. We deliver scalable and sustainable building solutions, MEP Specialty studies and Analysis using internationally industry well known tools and softwares.



AQS is Founded and Managed by Hani Awni Al Hawamdeh who has 33 years of diverse work experience in Electro-Mechanical Projects Design and Management. Hani holds several industry relevant certifications such as USGBC LEED accreditation, GSAS certification, PMP and is a member of PMI institute USA, and ASHRAE Oryx Chapter in Qatar, being the former president of the latter and Vice chair of the current advisory committee. Hani holds BSc in Mechanical Engineering from Mu'tah University in Jordan and MBA in Finance from University of Leicester in UK.



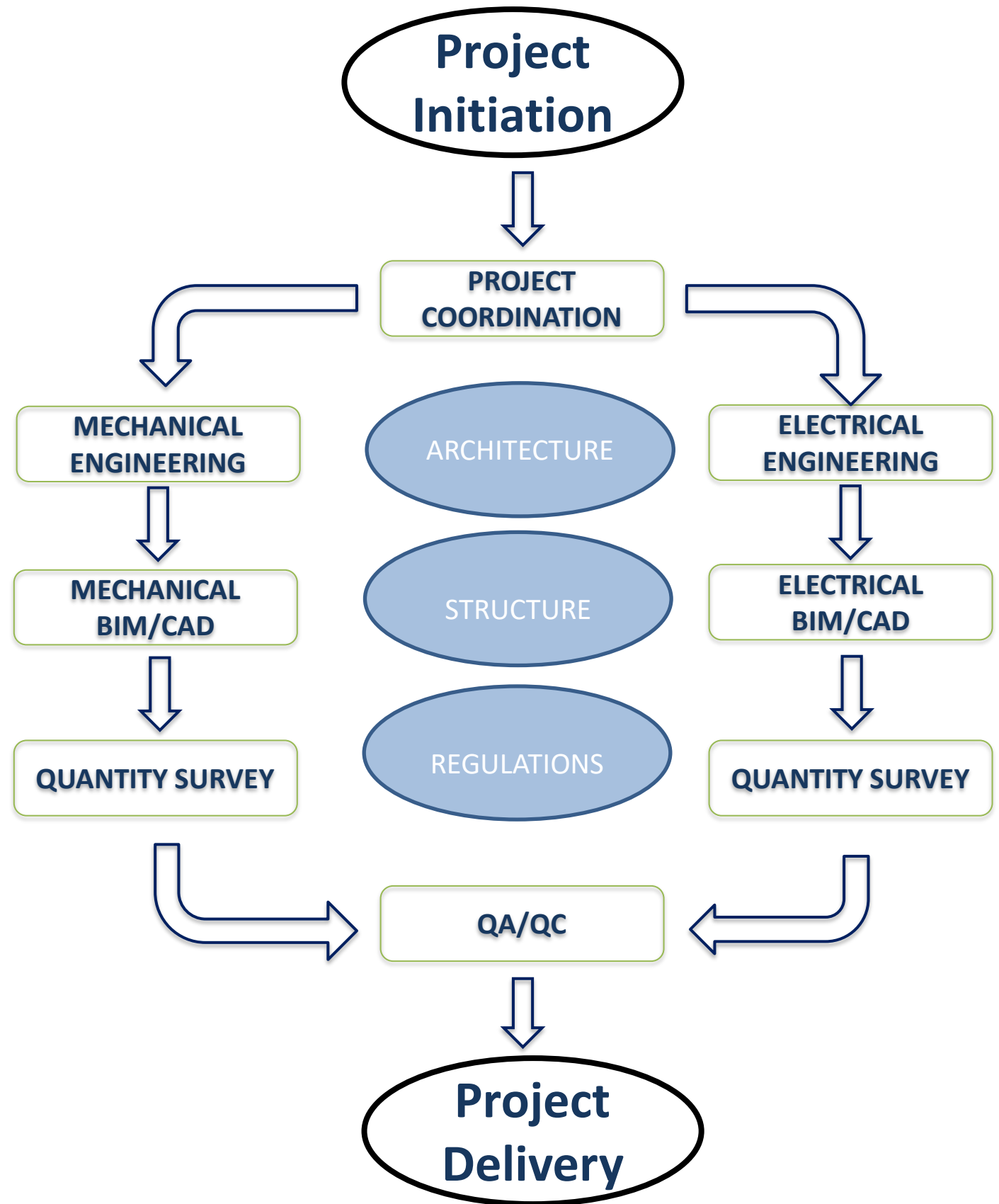


## Our Vision & Values

- Providing our customers with the highest level of quality construction services at fair and market competitive prices.
  - Attention to specific costumers' requirements and providing bespoke, tailored design to ensure costumers feasibility and satisfaction.
  - Ensuring repeated and referral business - achieved by customer satisfaction in all areas including timeliness, attention to detail and service-minded attitudes.
  - Maintaining the highest level of professionalism, integrity, honesty and fairness in our relationships with our clients through innovation, foresight, integrity, and excellent performance.
- Client satisfaction is our utmost goal as we see our repeated clients as our strategic partners.
  - Promoting and maintaining an integral image of AQS as an engineering solution leader in the market.
  - Timely execution of projects with stringent construction budget control.
  - Implementing outstanding health and safety in design standards.
  - Respecting the applied regulations, Codes and Standards .
  - Transparency, accountability, and discipline in all operation areas.
- We simply talk about humanizing of buildings and building performance.**

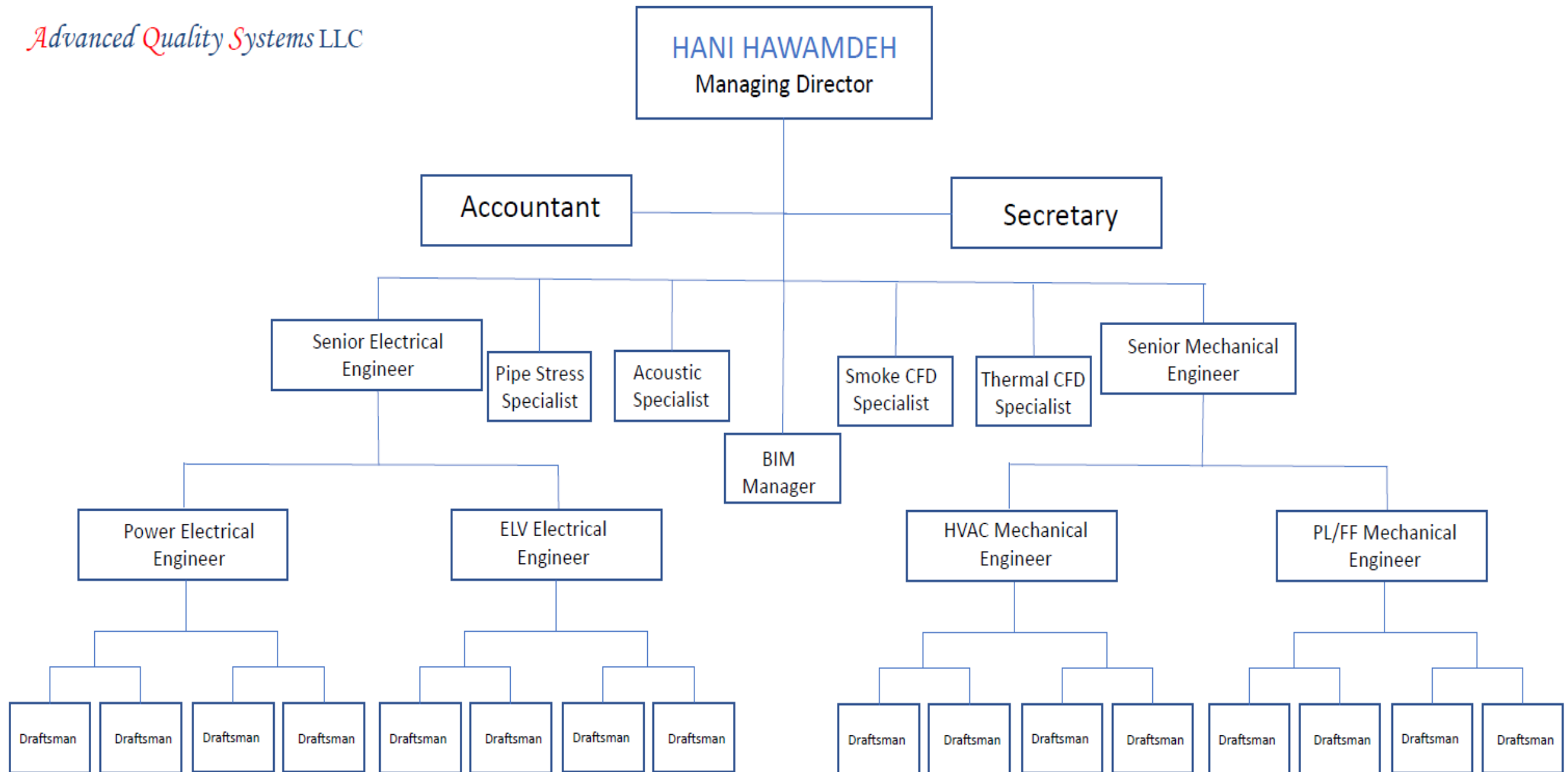
# OUR APPROACH

- Understanding our clients/customers requirements and considering them in the design different aspect, to ensure fit to purpose design.
- Proper coordination and communication with all relevant stakeholders during the design stage to ensure the project stays within budget and time allocations.
- Minding the project allocated budget by providing the right systems, specifications and value engineering.
- Continuous improvements to maintain effective and efficient design methodologies and tools to meet the growing demands and expanding technologies all over.





Advanced Quality Systems LLC



# OUR EXPERTISE

**AQS** team has solid experience in a wide project's spectrum covering:

- Residential & Housing
- Commercial & Businesses
- Corporate & Administrative
- Governmental & Public
- Hospitality , Hotels & Resorts
- Educational & Cultural
- Healthcare Facilities
- Trade Centres, Malls & Hypermarkets
- Sport & Clubs
- Industrial & Factorial
- Master planning & Infrastructure
- High-Rise & Super High-Rise Buildings
- District Cooling Plant
- Primary Power and Distribution Sub Stations
- Military Camps
- MEP Fit out Projects

## ELECTRO-MECHANICAL ENGINEERING & BUILDINGS' PHYSICS SERVICES

Electrical, Mechanical , ELV & Buildings' Physics divisions are ready to carry out all types of electro-mechanical systems designs in accordance with local and International standards to the satisfaction of our clients. But strictly considering quality, efficiency, productivity and sustainability.





# OUR SERVICES

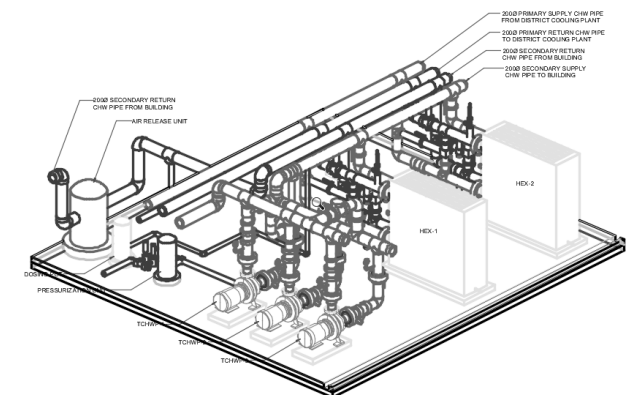
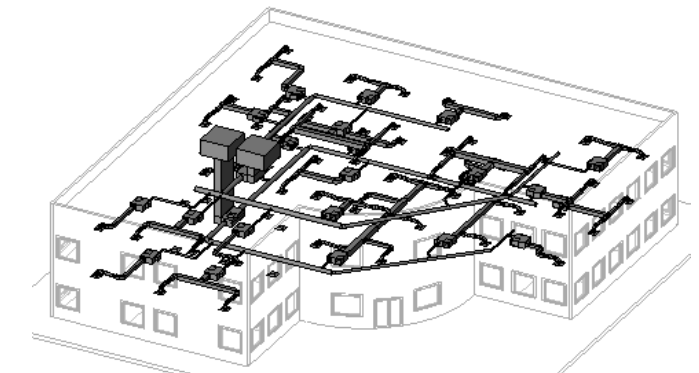
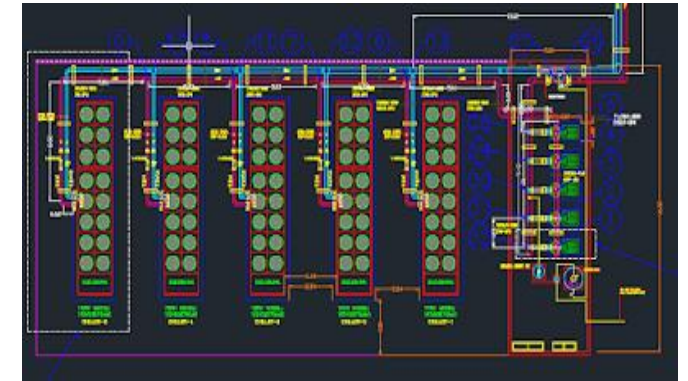
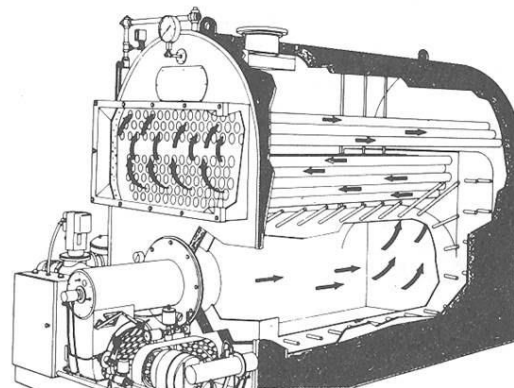
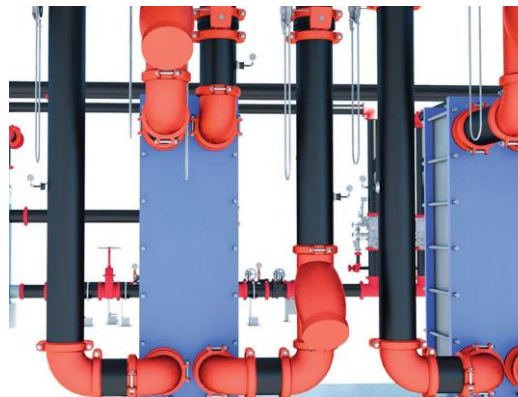
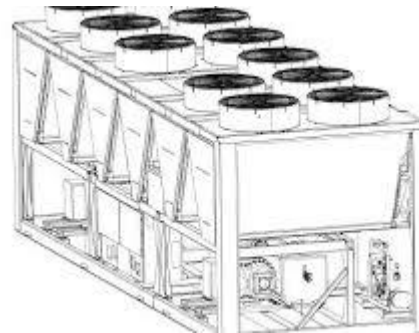
**AQS** can deliver the following Services:

- Infra structure networks design and coordination profiles – using Civil 3D
- Pipe Stress Analysis for Chilled water, Heating and process piping networks
- Networks Hydraulic Modeling
- Piping and systems surge modeling & analysis
- District cooling Plants design
- Outdoor cooling Design, Modeling & Analysis
- Thermal CFD Modeling & Analysis
- Smoke CFD Modeling & Analysis
- Pollution Dispersion Modeling & Analysis
- Landscape Shading Modeling & Analysis
- Environmental Acoustics Design, Modeling & Analysis
- Indoor Acoustics Design, Modeling & Analysis
- Indoor HVAC systems design
- PHE system design
- Firefighting systems design
- Swimming pools & Water features Design
- Dew Point & Humidity Control Assessment, Modeling & Problem Solving
- Passive Arch Life Safety Design
- Crowded Evacuation Modeling
- Electrical Systems design
- Short Circuit Analysis
- Harmonics Distortion analysis
- Load Flow Analysis HV & MV network design
- Arch Flash Analysis
- Motor Start Analysis
- ELV system design
- Oil & Gas Flare Radiation Analysis



# HVAC SYSTEMS

In addition to our vast experience in HVAC systems designs; AQS engineers are active members in ASHARE local chapters and at the International Society Level. This interactive collaboration gives us high exposure to all new HVAC industry technologies applied within the region



- **Chilled Water Piping Network Stress Analysis**
- Heat Load Estimation & Analysis
- In Door Thermal Analysis & Control
- Air Cooled Chillers - Chilled water Systems
- Water Cooled Chillers – Chilled Water Systems
- Central Cooling Plants
- Chilled water pump rooms and distribution networks
- ETS rooms design
- Package and DX systems
- VRF Systems
- Air movement and Duct work distribution networks.
- Space heating Systems
- Boilers and Calorifiers
- In Door Air Quality Analysis & Control



# DISTRICT & CENTRAL COOLING PLANTS



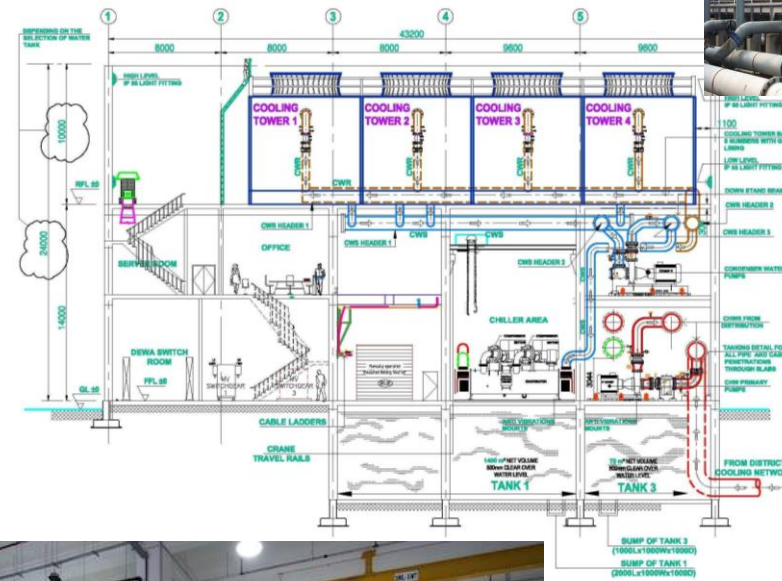
AQS HVAC engineers had the opportunity to design different Central cooling plants and been part of larger consortiums to design mega district cooling plans in the region.

We conduct feasibility assessments and provide recommendations to our clients for the best and most suitable central cooling systems.

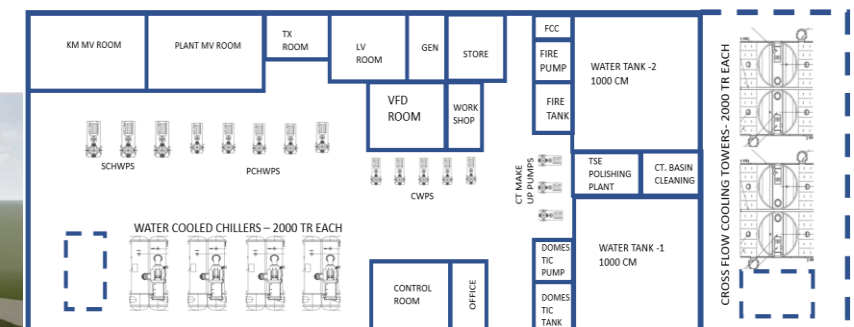
Following the applicable international Codes and ASHRAE standards, Proper equipment selection and optimized energy designs are a must.

Our Scope of specialty covers:

- District Energy Assessment Studies & Master Planning
- Feasibility Studies & Financial Modeling
- Value Engineering & Design Optimization
- Thermal Energy Storage(TES)
- Energy Transfer Stations (ETS)
- Pumping Systems & Pre-insulated Chilled water Networks
- TSE Polishing Plants & Blow Down management system



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CENTRAL COOLING PLANT - SPACE PALNNING

# PIPING NETWORKS STRESS ANALYSIS

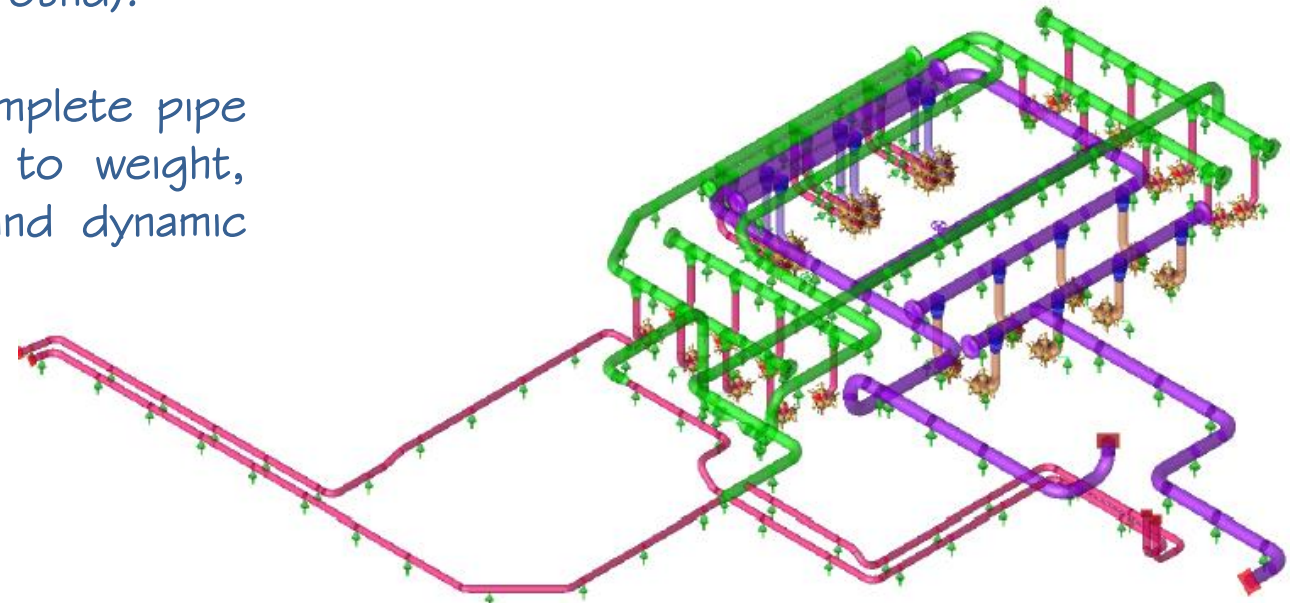
AQS Pipe Stress Analysis team has very strong capability to do all types of piping network stress analysis, especially for chilled water networks (above and below ground).

We are professional in CAESAR II where a complete pipe stress analysis of piping systems subjected to weight, pressure, thermal, seismic and other static and dynamic loads.

- Piping thickness verification
- Integrity of Piping supporting system
- Pipe support loads
- Piping Supports Design
- Steel structure and anchor bolts design
- Pumping systems Surge Analysis Simulation

**CAESAR II**<sup>®</sup>  
Pipe Stress Analysis

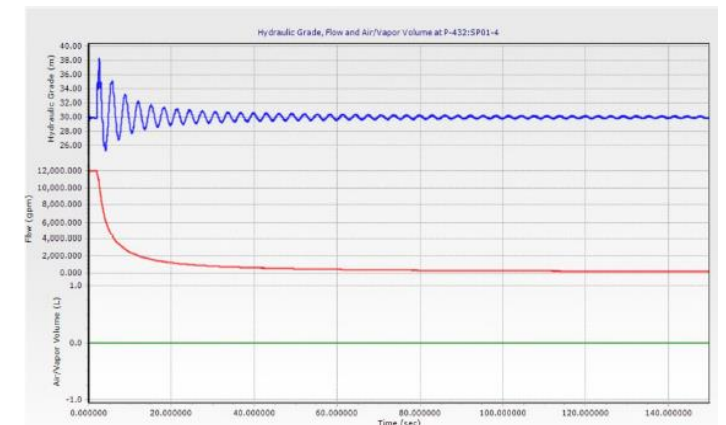
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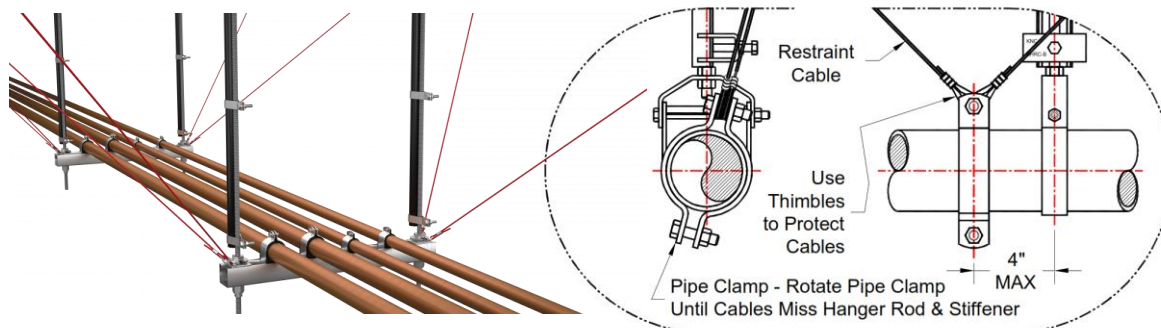
Piping Network Stress Analysis

## SEISMIC STRESS ANALYSIS

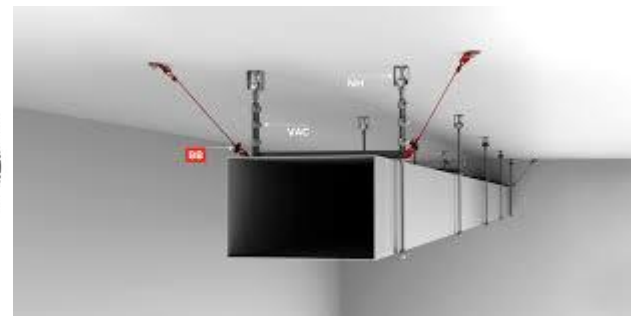
Provide detailed seismic analysis and restraint details for above ground piping systems, duct works, mechanical equipment and electrical panels so that all equipment and attachments are kept in place in case of an earthquake acting on the buildings.



Surge Analysis Simulation



Seismic Stress Analysis – bracing design



**AQS**



# OUTDOOR COOLING DESIGN

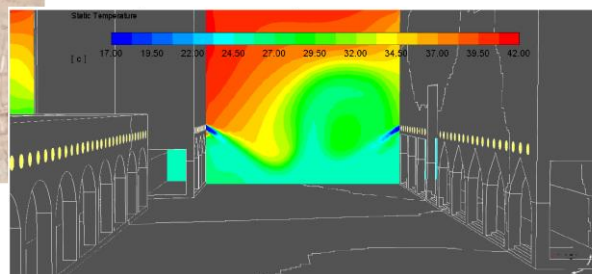
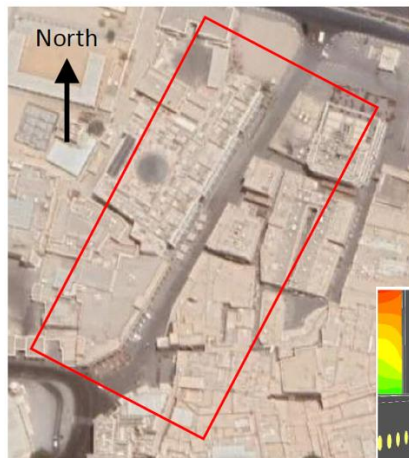
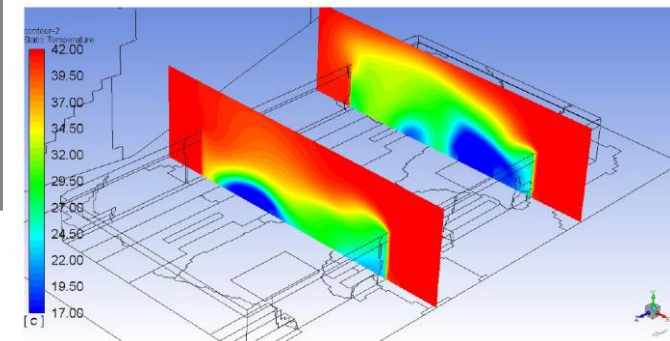
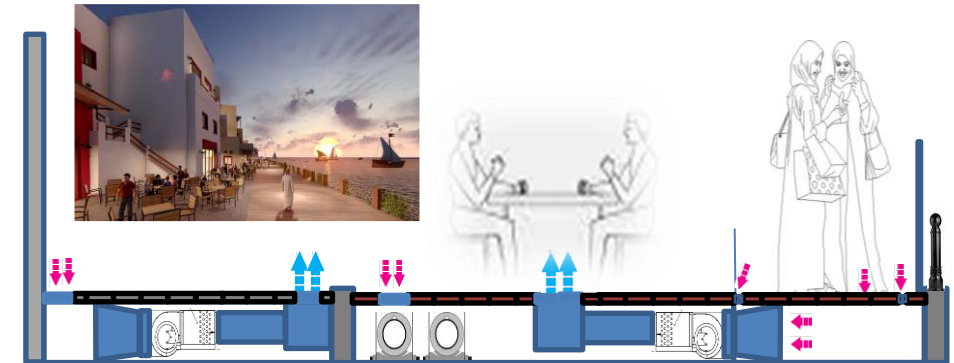
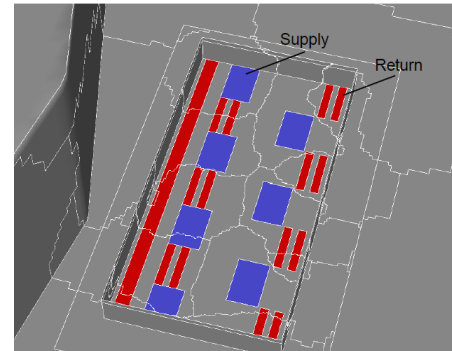


AQS are experts in the design and analysis related to the Outdoor Cooling and Comfort Analysis:

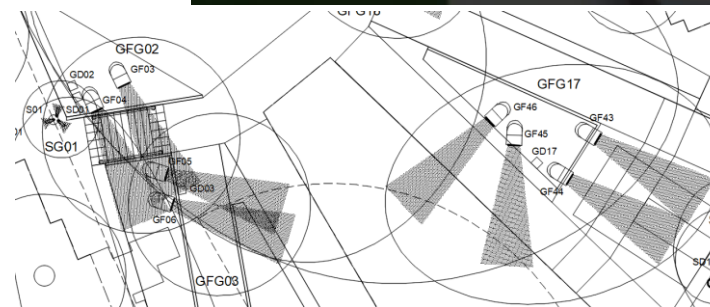
- Air Cooled Positive Displacement Systems
- Evaporative Cooling – Dry Mist Systems
- Outdoor Air Cooled Customized Systems

AQS offers the service of doing different CFD analysis that can play an integral role in all areas of building design, providing accurate and time-efficient simulations of building performance relating to air flow, temperature, pressure and other similar parameters.

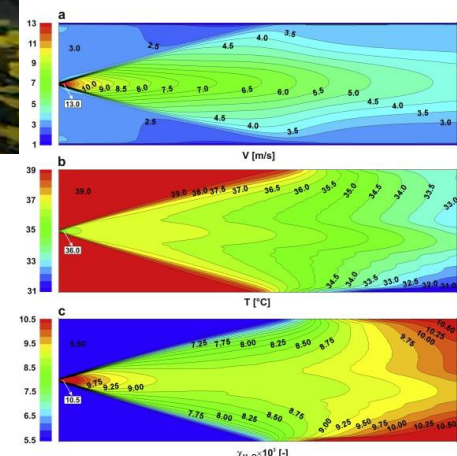
Air Cooled Positive Displacement Systems



Outdoor Air Cooled Customized Systems



Evaporative Cooling – Dry Mist System



All Year days/hours analysis for Temperature and RH%

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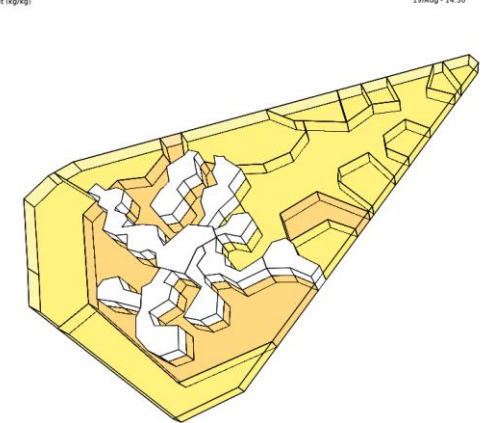
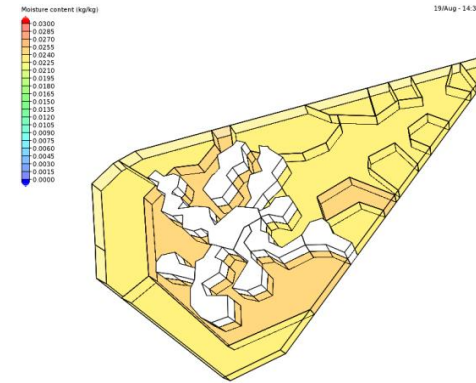
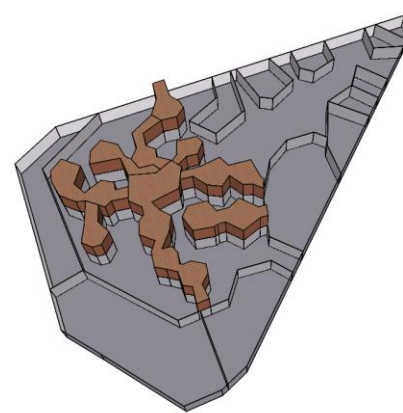
# OUTDOOR COOLING & THERMAL COMFORT ANALYSIS



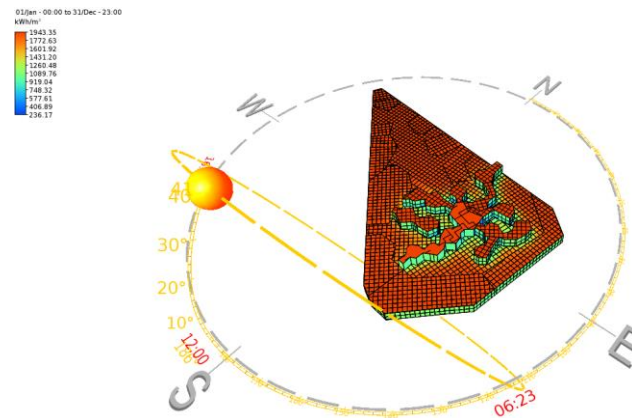
AQS offers the followings Modeling, Simulation and Analysis that are essential for the design and successful sizing of the system arrangement:

## IES ( Integrated Environmental Solutions )

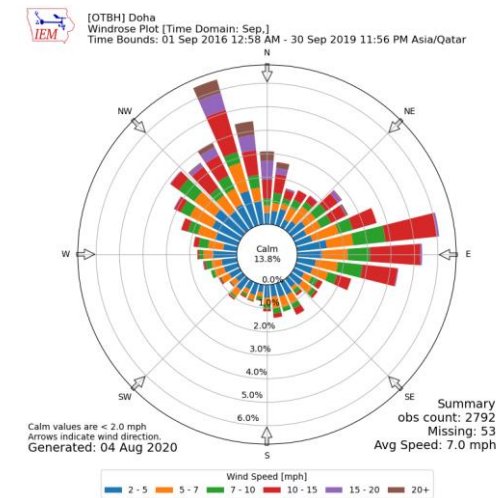
- Microclimate analysis to identify the optimum conditions for the system operation and proposed control logic
- Annual Hourly analysis for tempered areas throughout the year including:
- Psychometrics Analysis : Dry-Bulb temperature & Relative Humidity
- Annual Thermal Comfort Analysis - Standard Effective temperature (SET)



IES Modeling

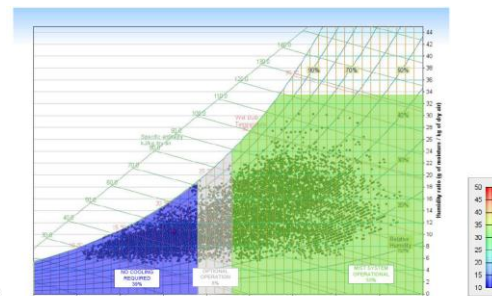
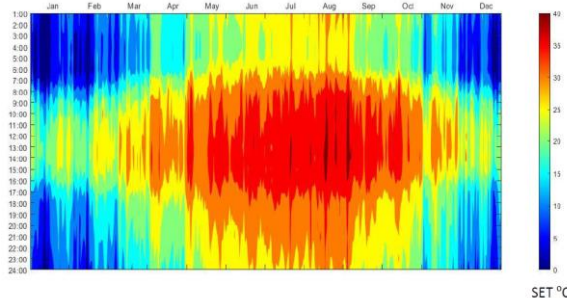


Sun Path & Shading Analysis

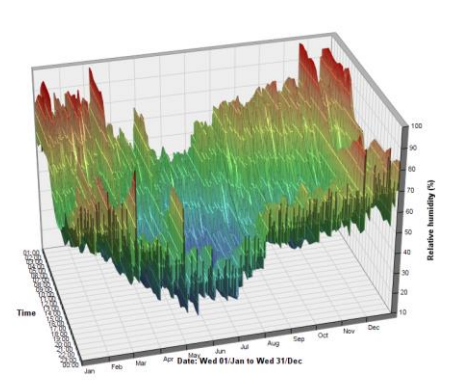
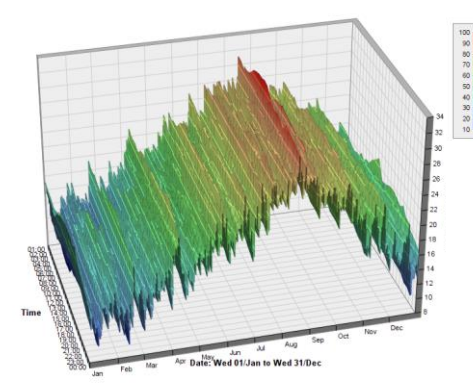
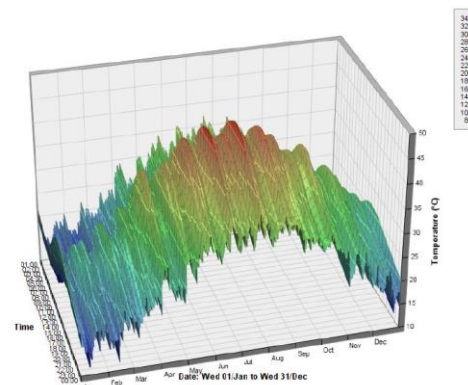


Prevailing Wind Analysis

## Annual Comfort Analysis



Psychrometric Analysis



All Year days/hours analysis for Temperatures and RH%

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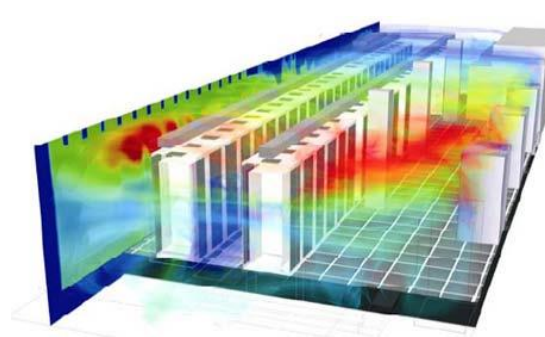


# COMPUTATIONAL FLUID DYNAMICS (CFD) & THERMAL COMFORT ANALYSIS

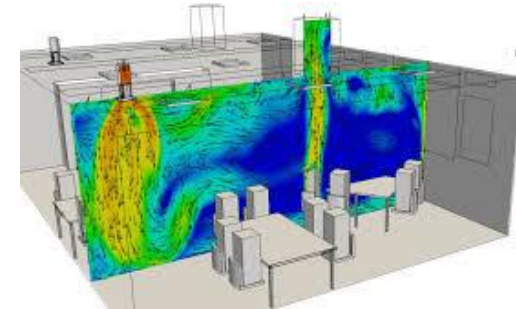


AQS offers the service of doing different ANSYS - CFD analysis that can play an integral role in all areas of building and/or outdoor cooling systems design, providing accurate and time-efficient simulations of building or neighborhood performance in relation to air flow, temperature, pressure and other similar parameters.

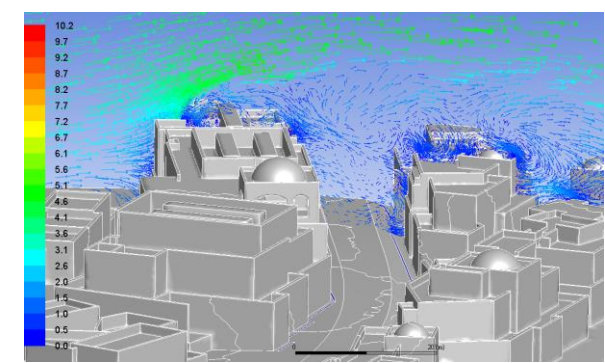
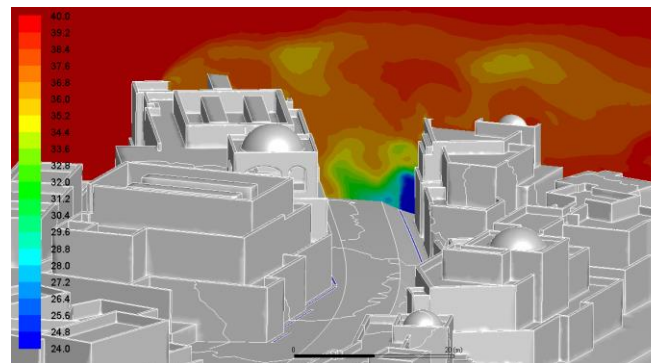
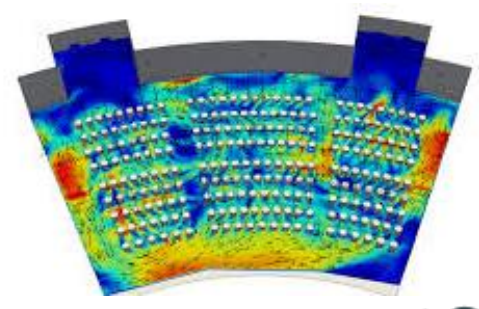
- General Indoor / Outdoor Thermal comfort
- Auditorium Thermal comfort
- Building Engineering CFD
- Data Centers Cooling systems Verification



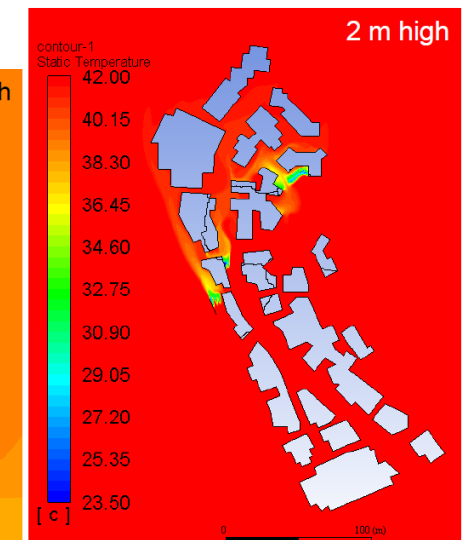
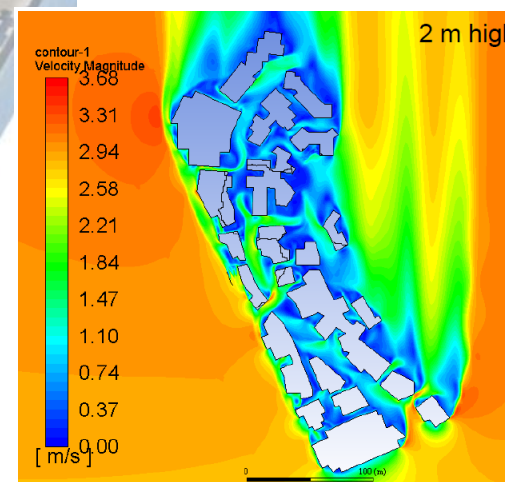
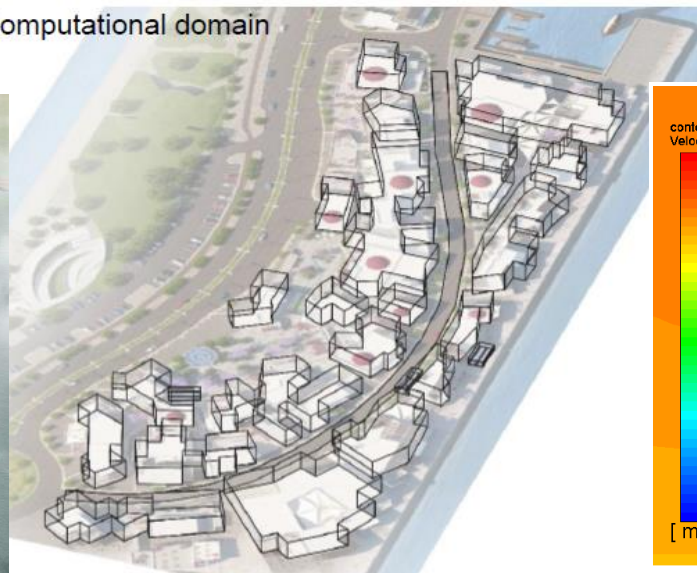
Indoor Thermal Analysis



Indoor Auditorium Comfort Analysis



Computational domain



Outdoor CFD Analysis using ANSYS Software

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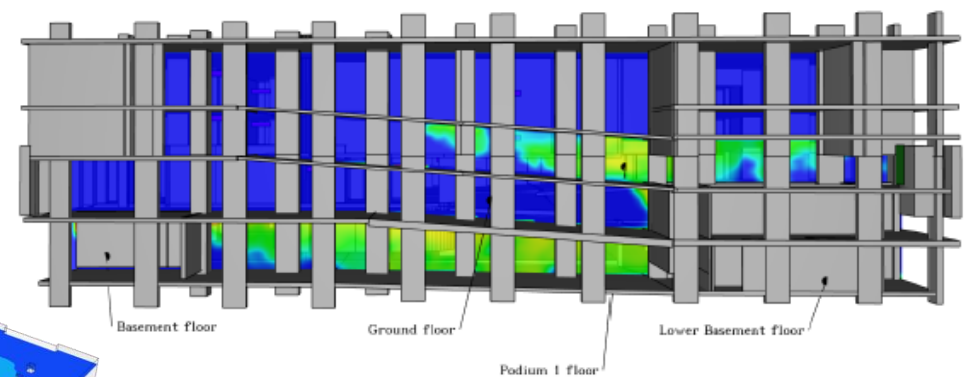
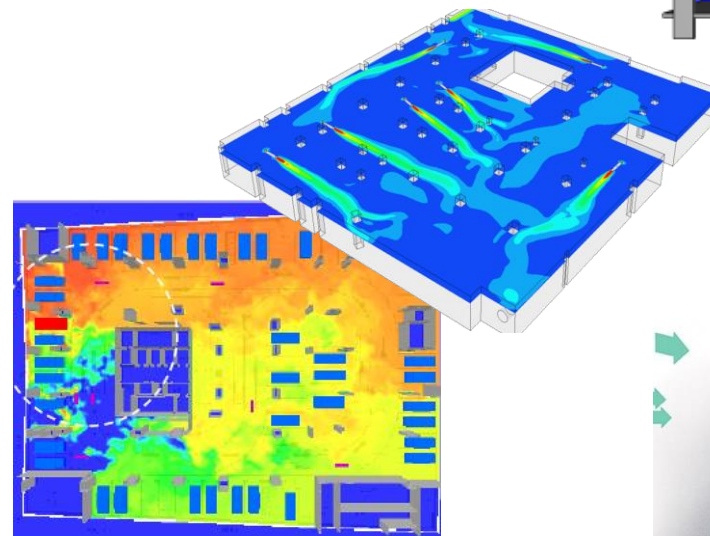
# COMPUTATIONAL FLUID DYNAMICS (CFD)

## .... SMOKE MANAGEMENT SYSTEMS:

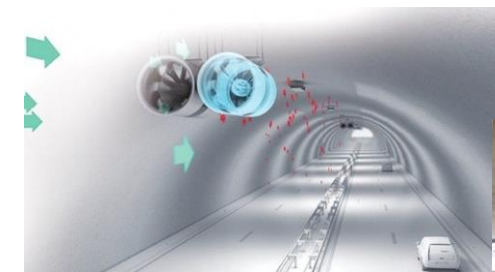
CFD Modeling services are being done through our subsidiary company **AQS- FIRE RATERS** to support the work of the design team and to ensure compliance with continuously evolving building codes and local authority's acceptance criteria.

**AQS- FIRE RATERS** are a group of Certified Fire Protection Specialists (CFPS) and members of the Institution of Engineers (MiFireE) who have had the opportunity to work on a number of prestigious Fire and Life Safety projects in the region.

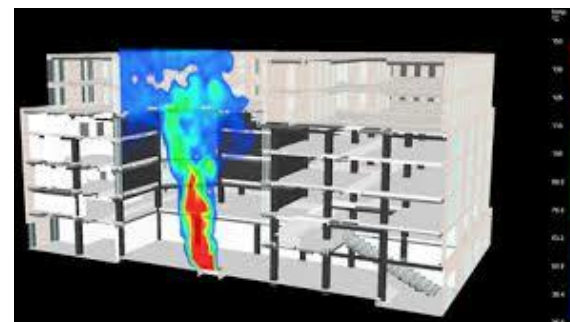
- Car parking smoke management systems
- Tunnel smoke ventilation
- Atriums
- Auditorium
- Indoor thermal comfort
- Outdoor thermal comfort (outdoor cooling analysis)
- Fluid Flow Studies for HVAC & Plumbing Systems
- Evacuation Modeling & Analysis



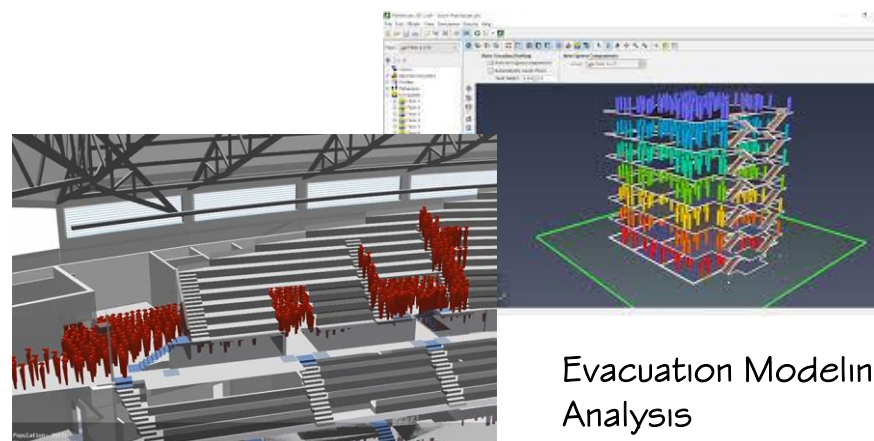
Car Park Smoke CFD Modeling



Car Park & Tunnels  
Ventilation Design

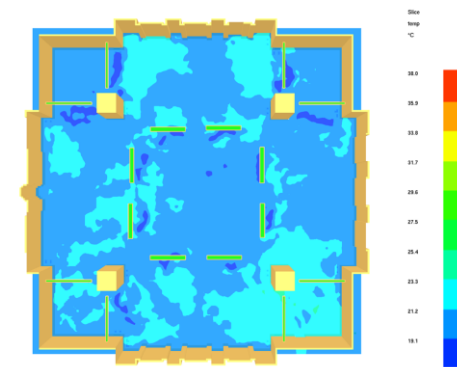


Atrium CFD Smoke Modeling



Evacuation Modeling &  
Analysis

Figure 2: Temperature contours:



Air Movement &  
Deflection Modeling

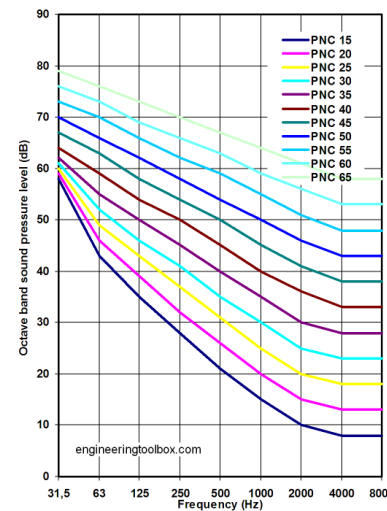
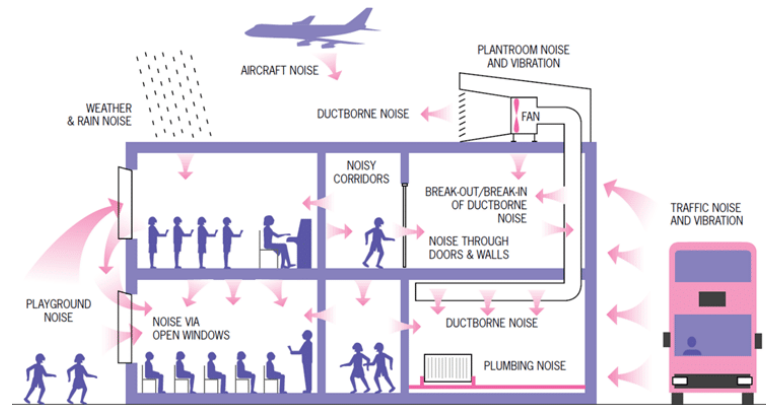


# ACOUSTICS & VIBRATION CONTROL



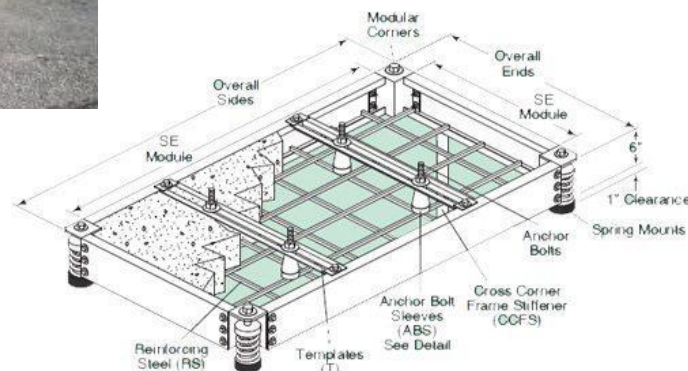
AQS Acoustics and Vibration control Specialists provide different acoustic assessments and solutions that cover all typologies of buildings and facilities:

- Performance venues and acoustically demanding spaces (Auditorium, Theater & Studio Design)
- Room Interior Acoustics
- Sound Insulation and cross talking management
- Building Envelope Acoustic Performance
- Traffic Noise Modeling
- MEP Acoustic and Vibration control Design



SOLUTIONS

- Environmental Acoustic Impact Assessment based on BS 4142

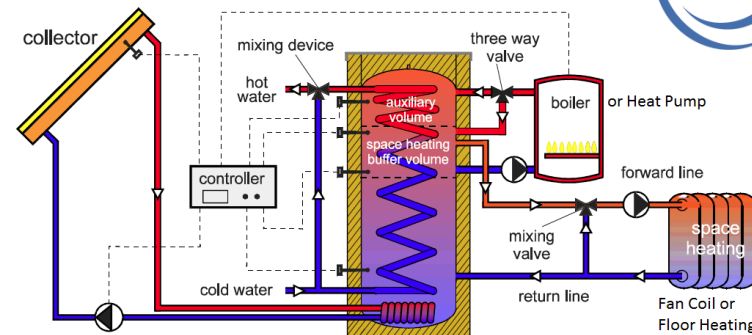


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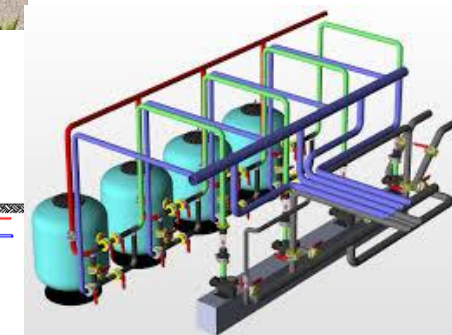
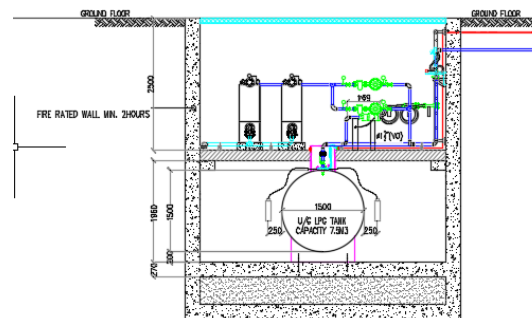
# PLUMBING SYSTEMS

In addition to full knowledge and experience with the local applied regulations; being ASPE members, AQS plumbing engineers have full access to the international innovations and professional networks in the field. This gives huge exposure to different plumbing systems designs and technologies needed for any type of buildings, facilities and developments.



## • Domestic Water Networks Pipe Stress Analysis

- Domestic Cold- water System
- Domestic Hot- water systems
- Solar water system Design
- Water Filtration & RO system
- Irrigation Systems
- Swimming Pools & external Jacuzzi
- Water Features & Fountains
- Steam Boilers & Steam networks
- LPG Systems Distribution networks
- Fuel Systems Storage and Piping



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# BUILDINGS' DRAINAGE & STORMWATER SYSTEMS

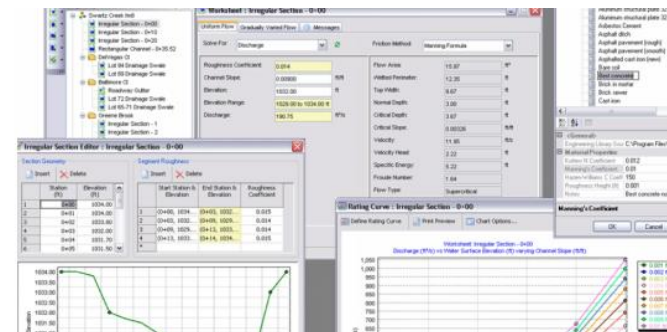
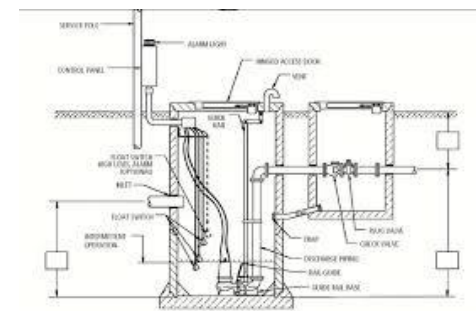
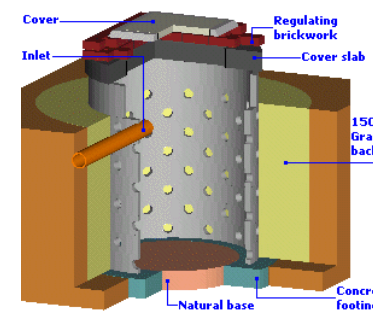
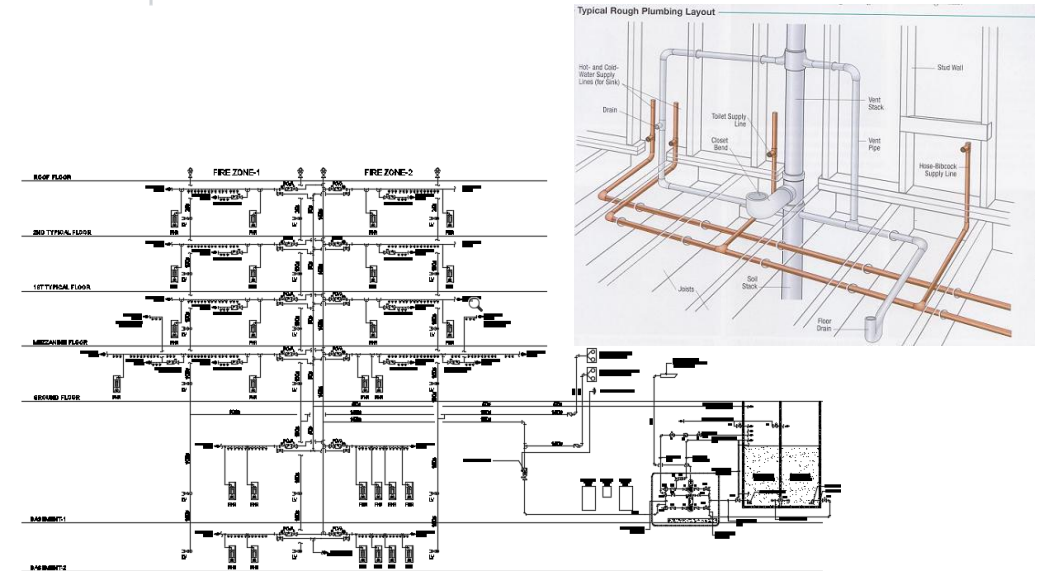


- Internal drainage Systems
- Lifting Pumping Stations
- Grey Water System
- External Sewerage piping networks & septic Tanks
- Treated Effluent Systems (TSE) and networks
- Storm Water systems , Soak away Stems, Holding tanks and network
- **Networks Hydraulic Flow Analysis**

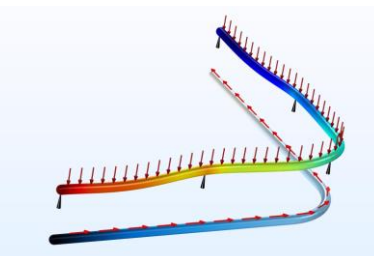
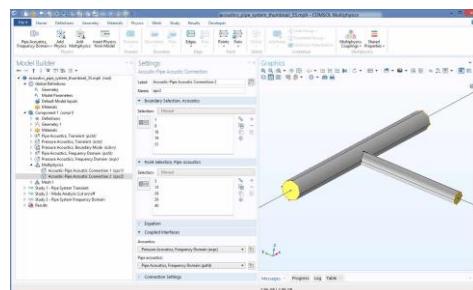
## INFRASTRUCTURE NETWORKS DESIGN

Specialty in designing different infra structure wet piping networks for Military Camps, Mixed Use Developments, University camps, Seaports and Airports

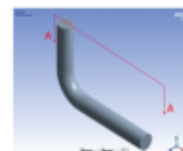
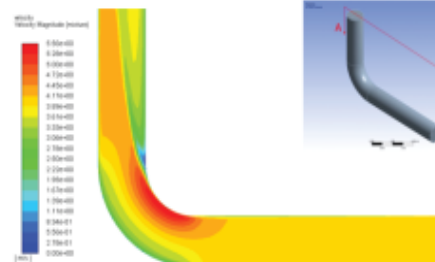
- Chilled water networks
- Pumping stations
- Water Distribution
- Sewage Networks
- Stormwater Networks
- Gas Networks
- Networks Hydraulics and Stress Analysis
- Fluid Flow Studies for HVAC & Plumbing Systems



Hydraulic Calculations



Flow, heat transfer, and mechanical stress analysis in a piping system



**AQS**



# FIRE FIGHTING / PROTECTION SYSTEM

## Prescriptive Approach:

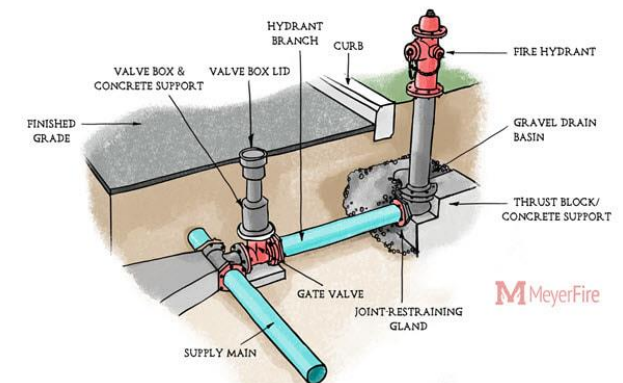
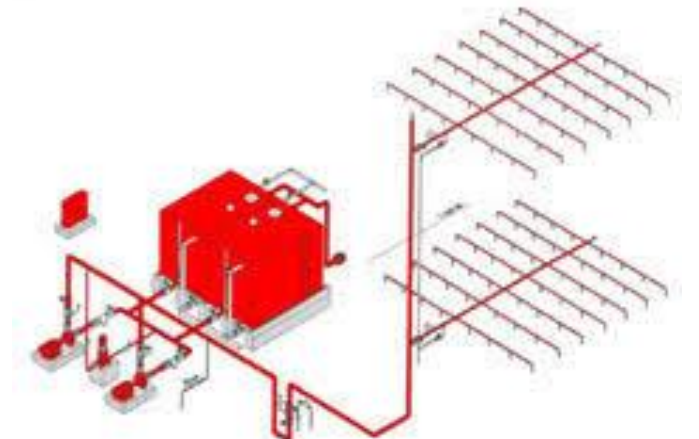
Our certified Fire Protection Specialists (CFPS) use their extensive knowledge to ensure that fire protection objectives are achieved. The journey starts by Code consulting and local AHJ applied regulations compliance and continues through eth different stages of design.

## Performance Based Design Approach:

For special projects and cases where Prescriptive Code requirements do not apply, a Performance Based Design Approach, based on NFPA applied methodology, is efficiently used by conducting professional engineering Analysis to demonstrate Passive and Active system effectiveness and Building Safety.

## Systems....

- Supervised Automatic Sprinkler System.
- Stand-pipe system
- External Hydrants piping networks
- Clean agent system
- Pre-action and Deluge system
- Hydraulic Calculations



# ELECTRICAL POWER & ELV SYSTEM

AQS offers design services of all types of electrical systems from Power Distribution to Low Voltage System in accordance with the National and International standards to the top quality, efficacy, productivity and to the satisfaction of our clients.



## Power & Lighting Systems

- Medium and Low Voltage Switchgear and Cabling
- Electrical Distribution System
- Low Voltage Power & Control System
- Lighting and Lighting control Systems
- Structured Cabling - Fiber to Fiber and Copper to Fiber
- Central Battery and UPS Systems
- Renewable Energy and Energy Efficiency
- Solar power design
- Low energy lighting (LED)
- Power saving and monitoring System
- Energy storage solutions (ESS)
- Lightning Protection Systems
- Earthing and Bonding Systems

## Life Safety Systems

- Fire Detection & Alarm Systems
- Fire Telephone Systems
- Smoke Control Systems
- VESDA System

## Sound and PAVA Systems

- Professional Sound & BGM Systems
- PAVA Systems
- Assistive Listening System
- Nurse Call & Bed Head Systems

## Security Systems

- CCTV & Surveillance Systems
- Access Control Systems
- Intruder Detection Systems
- Hostile Vehicle Mitigation(HVM)
- Security Management Systems
- Intercom Systems
- Gate Barrier System

## ICT Infrastructure Systems

- ICT Structured Cabling Systems and Infrastructure
- Outside Plant Cabling Systems
- WIFI Network System Infrastructure
- IP TV & SMATV System
- Room Management System

## ELV Systems

- Lighting Control Systems
- Parking Guidance Information Systems
- Parking Management Systems
- Queue Management System
- Master Clock System
- Nurse Call& Bed Head System

## Utilities & Control Systems

- Building Management Systems
- PLC SCADA Systems
- Energy Metering Systems (Thermal, KWH & Water)
- Irrigation Control Systems
- Utility Monitoring & Controlling Systems

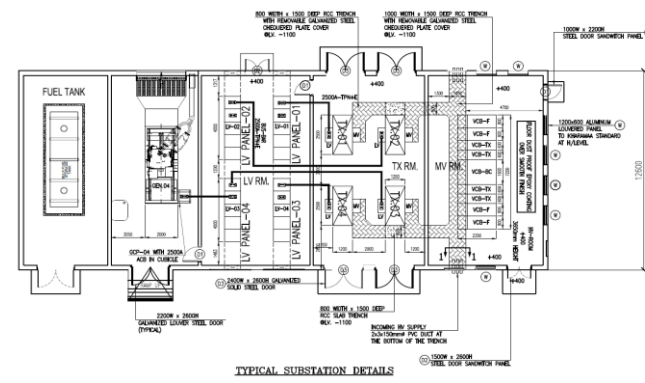


# POWER DISTRIBUTION SYSTEMS

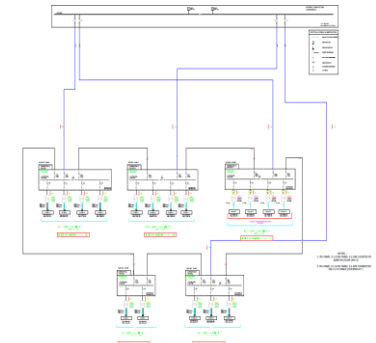
Medium & Low Voltage Power  
Distribution Systems & Networks



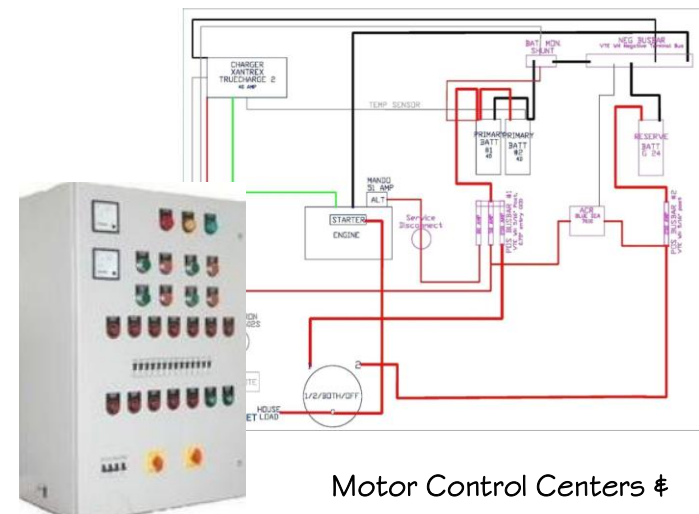
Dry & Oil Type transformers



11 KV Substations Design



SLD Diagrams &  
Discrimination Analysis



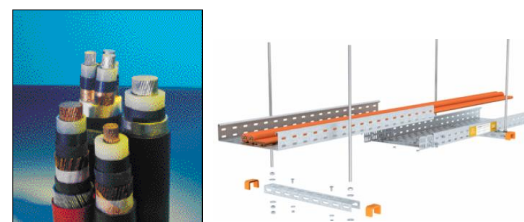
Motor Control Centers &  
Motor control Panel



LV- Main Distribution Boards  
(M.D.B) & Power Factor  
Corrections



Electrical Power Containment  
and cabling System



Busbar Trunking System

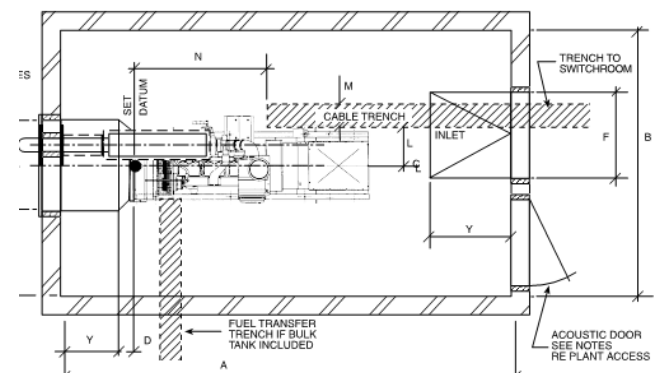


Sub-Main Distribution,  
and Distribution  
Boards

Feeder Pillar &  
Retractable  
Feeder Pillar



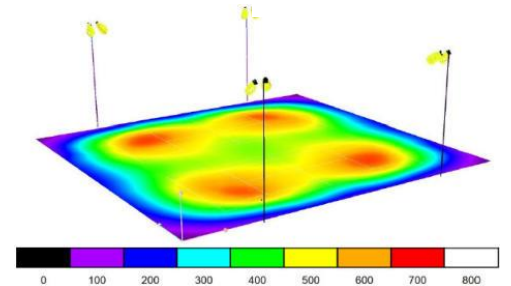
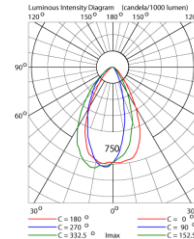
Diesel Generators





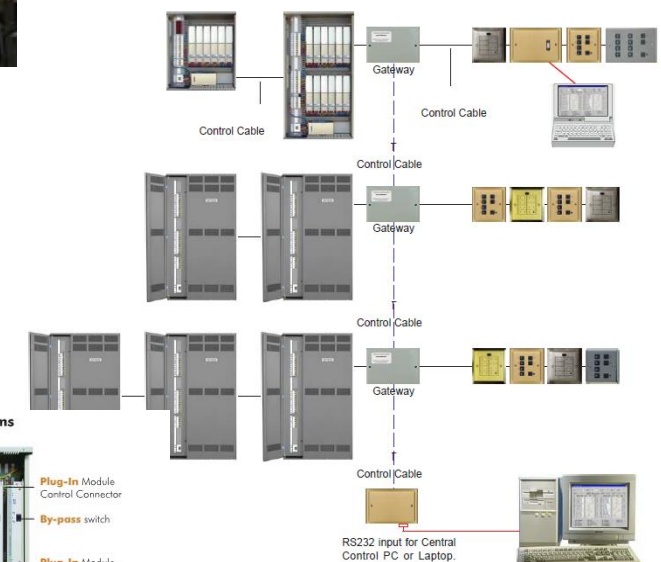
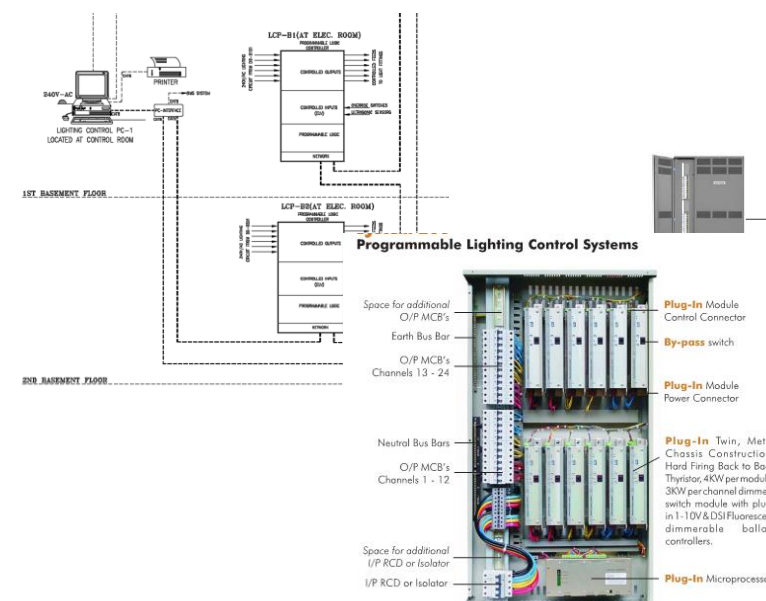
# LIGHTING SYSTEMS

- Internal Lighting
- External lighting
- Façade lighting
- Landscape lighting
- Street lighting
- Exit sign (CBS & Self Contained)
- Emergency lighting (CBS & Self Contained)
- Special lighting requirements



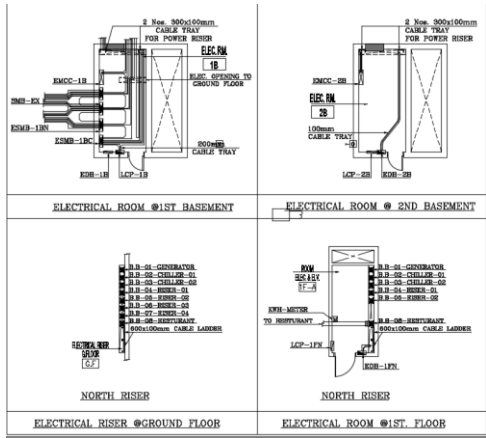
## LIGHTING CONTROL SYSTEMS

- Normal switching
- Dimming control system
- Motion detection system
- Day lighting control
- Home automation solutions



# SMALL POWER DISTRIBUTION AND CABLE MANAGEMENT SYSTEM

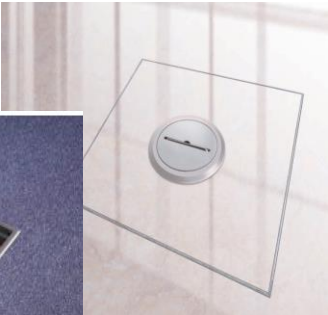
AQS Electric Design Engineers pay very close attention to ensure coordination with Arch, ID and in space mechanical loads.



Electrical Power Containment and Cabling System



Raised floor System



Screed Floor Boxes

Skirting Trunking



Flush Trunking



Overhead system

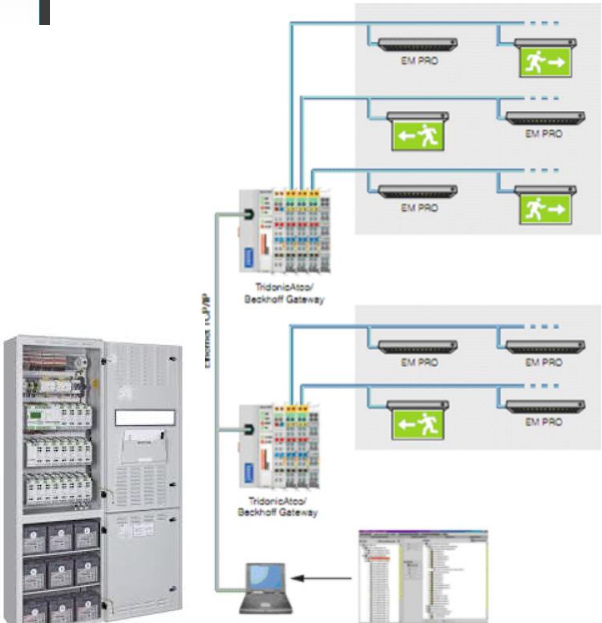
Sub-Main Distribution, and Distribution Boards



Small Power Installations



Uninterruptible Power System (U.P.S)



Central Battery System



# SHORT CIRCUIT & LOAD FLOW ANALYSIS

AQS has in house full capacity to perform Short Circuit & load Flow Analysis using ETAP (Electrical Transient Analyzer Program)

ETAP Software is used with understanding of the different interfaces required for design, simulations and analysis of generation, transmission, distribution and utilization of electrical power systems.

## Simulation & Analysis

- Short Circuit
- Motor Acceleration
- Harmonics
- Arc Flash
- Load Flow

## Dynamics & Transients

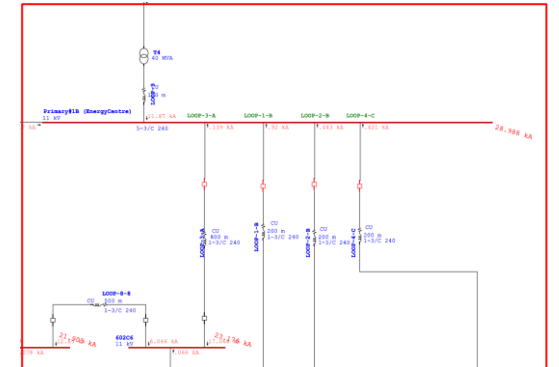
- Transient stability
- Parameter Estimation
- Generator Start-Up

## Distribution System

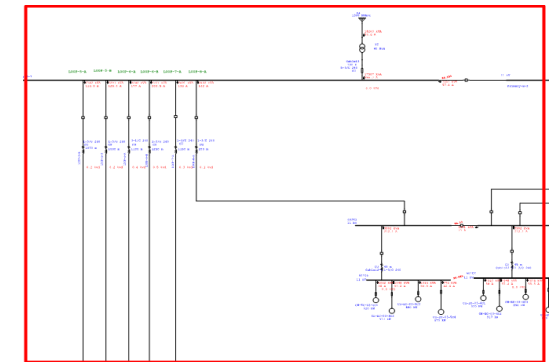
- Unbalanced Load flow
- Optimal Power Flow
- Capacitor placement
- High voltage DC
- Reliability assessment
- Tap Optimization

## DC Systems

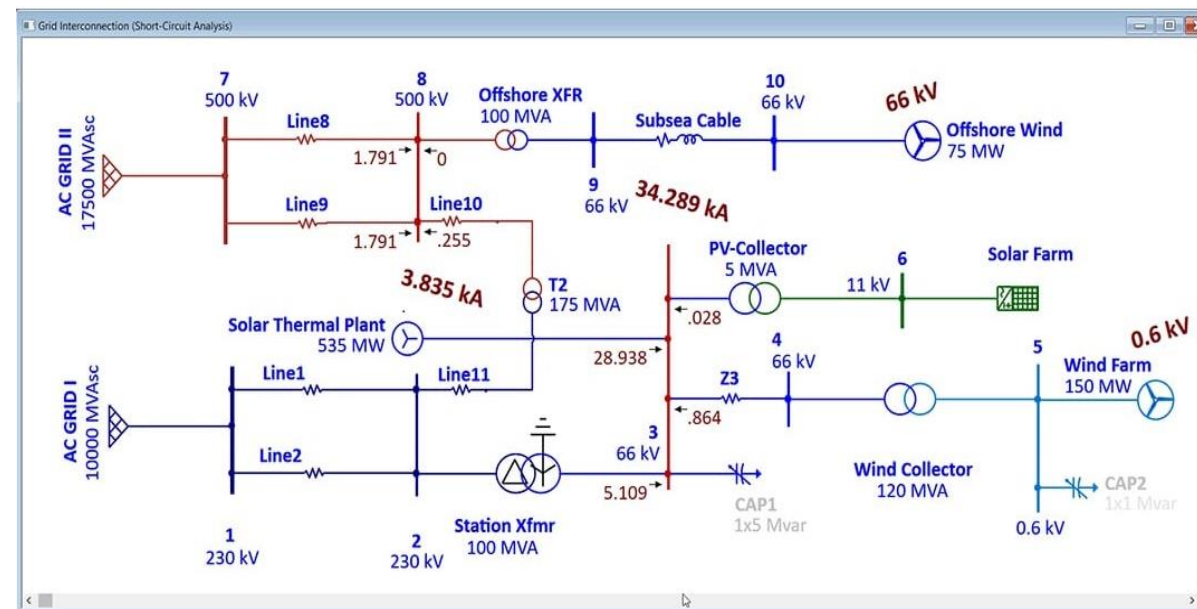
- DC short Circuit
- DC Load flow
- Battery size & discharge



SC analysis



LF analysis



## MEP CAD & BIM SERVICES

Our Company has the technical capability to provide advanced BIM solutions and CAD drafting/detailing services. We maintain MEP design proficiency to facilitate engineers for designing and detailing high performance electro-mechanical Systems. Our services are associated with design development right from concept, detail design to installation phases and are directed towards serving clients to meet their project goals competently.

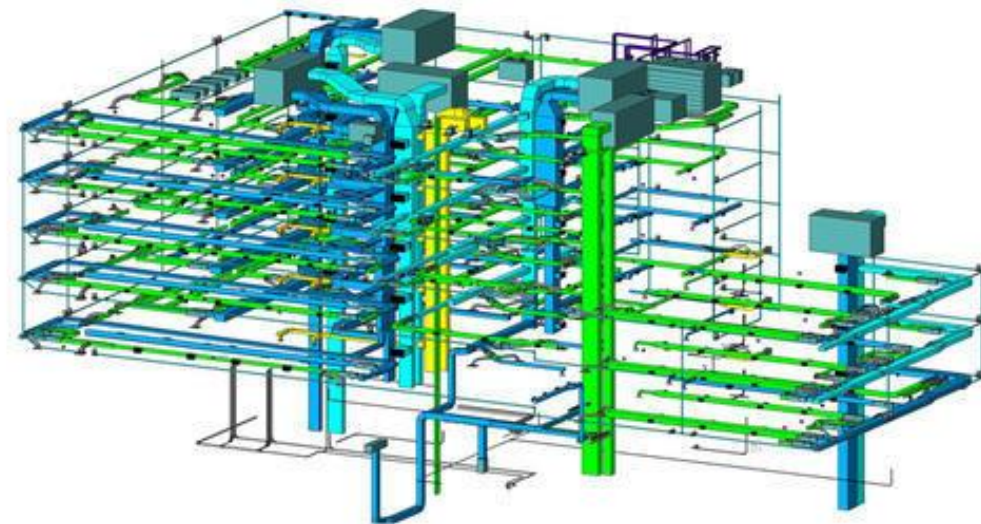
### BENEFITS OF BIM MODELING

**COORDINATION:** Modernize communication with 3D visualization among all participants for quick decision-making during design and pre-construction phase.

**EFFICIENCY:** Reduce RFI's, work slowdowns and rework by checking the precision and fullness of drawings before starting construction on-site/off-site.

**QUALITY:** Refining Quality by producing accurate Shop Drawings directly from the 3D BIM model which could also be used for pre-fabrication, Quantity take-off's and data base for asset management.

**SAVINGS:** Pre-construction and Pre-fabrication reviews facilitating better utilization of manpower, better construction quality, minimizing rework and wastage, all of which translates into cost efficiency.



SOLUTIONS

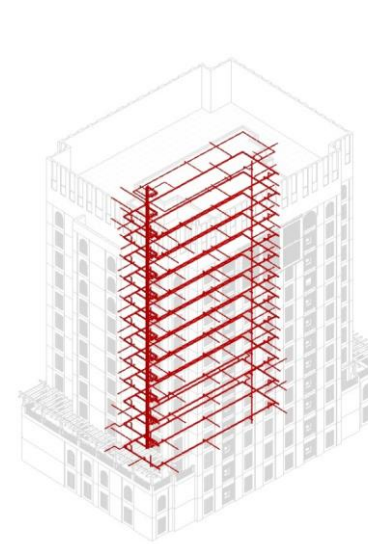


# COORDINATION & CLASH DETECTION ...

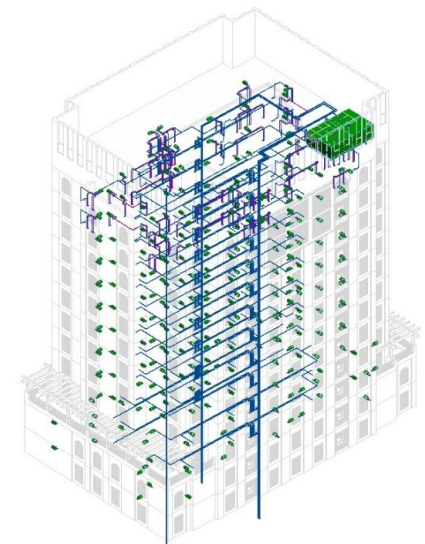
AQS team believes that for Architects to meet their dreams; Engineering systems need to be optimized and structured in full harmony with the proposed envelopes shapes and challenges.

AQS team had successfully managed fully coordinated MEP designs of large number of high rise and super high-rise buildings in the MENA region by using **Revit** and **Navisworks** softwares; systems were carefully coordinated and seamlessly amalgamated within the building Structure and Architecture.

MEP systems are designed to fully comply with the applicable local and international codes and standards to ensure the highest level of building and tenant's safety and security.



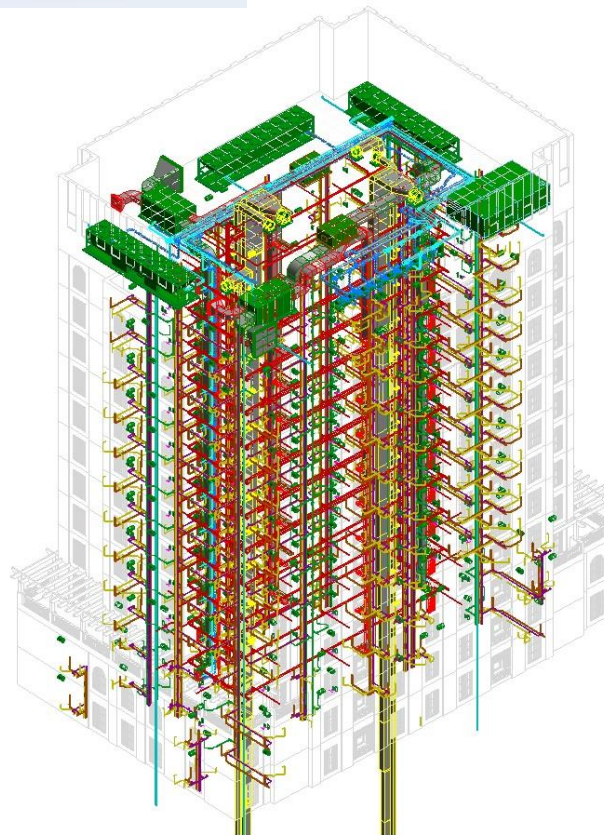
FIRE FIGHTING SYSTEM



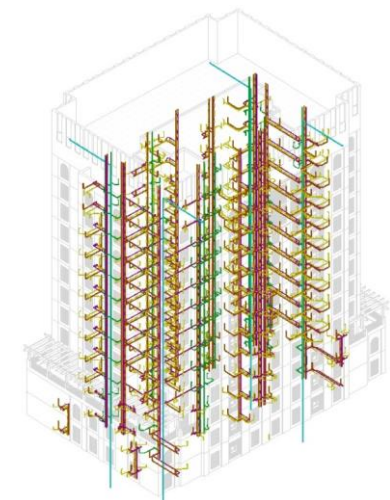
DOMESTIC COLD WATER



CHILLED WATER SYSTEM



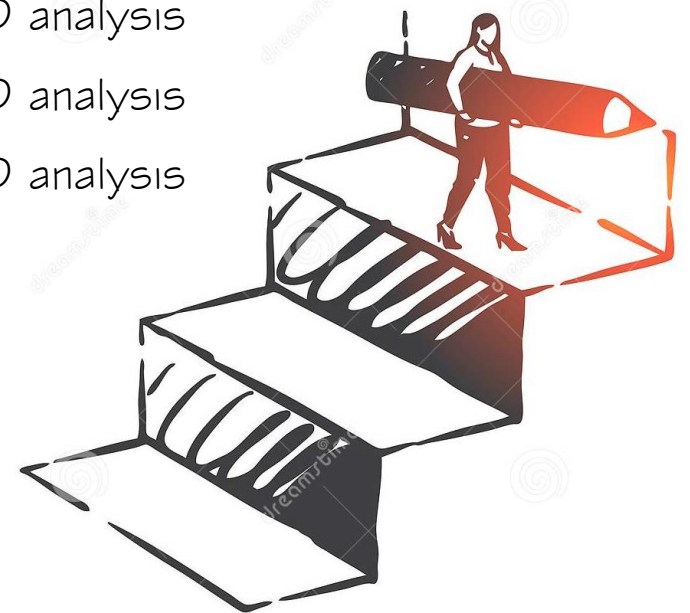
MECHANICAL SYSTEMS  
COMPOSIT MODEL



DRAINAGE NETWORK

# AQS PROJECTS REFERENCE LIST

- Tembek Hospital – Atrium Smoke Management Design and CFD analysis
- Dream Hotel – Out Door Cooling System Design & Thermal CFD analysis
- Nishan Tower – Car Park ventilation system design and CFD analysis
- QNCC / SC: Power re allocation assessment and Temporary Power Supply design
- Mozoon Towers: Chilled water System Piping Network Pipe Stress analysis
- Lusail Stadium Bowl cooling air diffusers performance assessment and analysis
- Lusail Stadium – Pollutant Dispersion & Discrete Flow CFD Modeling for the outer void ventilation
- The Pearl Floresta Gardens P1 23 – Car Park ventilation system design and CFD analysis
- The Pearl Floresta Gardens P1 25 – Car Park ventilation system design and CFD analysis
- The Pearl Floresta Gardens P1 26 – Car Park ventilation system design and CFD analysis
- The Pearl Floresta Gardens P1 27 – Car Park ventilation system design and CFD analysis
- The Pearl Floresta Gardens P1 28 – Car Park ventilation system design and CFD analysis
- The Pearl Floresta Gardens P1 29 – Car Park ventilation system design and CFD analysis
- The Pearl Pearlita Gardens – Chilled water Hydraulic Analysis
- QFZ – AL Khair Building – Fit Out MEP design
- QFZ – Ras Abu Funtas BIP Building Fit Out MEP Design
- QFZ – Um Al Huol : Ware House Design and Supervision





# AQS PROJECTS REFERENCE LIST

- Doha Oasis – Smoke Management Verification CFD Analysis
- Floresta Gardens – Hot Tapping Welding Design Calculations
- PWA / Corniche ( Dubai Tower ) Tower Rehabilitation – MEP Design
- Qetaifan Island Water Park – Pipe Stress Analysis
- Qetaifan Island Water Park – Third Party Services
- Yasmin city at Lusail – Chilled water Network Pipe Stress Analysis
- Beach Resort – North Doha – MEP Design
- SC / AL Janoub Stadium : Temporary Power- Packaged Substations Design
- SC / AL Thumama Stadium : Temporary Power- Packaged Substations Design
- SC / Lusail Stadium : Temporary Power- Packaged Substations Design
- SC / Ras Abu Aboud Stadium : Temporary Power- Packaged Substations Design
- SC / AL Rayan Stadium : Temporary Power- Packaged Substations Design
- Falcon 5 Air Base: Piping networks stress analysis
- Falcon 5 Air Base : Seismic Design and Analysis
- Falcon 5 Air Base : Audio / Video System Seismic Design and Analysis
- PWA / Qatar National Museum : Galleries Cooling and Humidity Control
- PWA / Qatar National Museum : Main Entrance & Public Areas Cooling and Humidity Control



# AQS PROJECTS REFERENCE LIST

- Lusail Stadium Concourse: Smoke management system
- Qatar Airways- Oryx Tower: Chilled Water Pipe Stress Analysis
- Qatar Airways- Oryx Tower: MEP Acoustics & Vibration Control
- Al Hazm Mall – Design of New 4000 TR Water Cooled Chillers Central Cooling Plant
- AirPort Road Mixed Use Development – MEP Acoustics
- Qetaifan Island Hotel – Design & Supervision of MEP Fit out Works
- Lusail Towers – Car Park Management System
- Qatar Airways Accommodation- Old Airport – Acoustics Assessment & Design
- Qatar Airways Accommodation- Old Airport – Heat Load Assessment
- Qatar Airways Accommodation- Old Airport – ESP & THL Calculations
- Qatar Airways Accommodation- Old Airport – Chilled Water Pipe Stress Analysis
- Qatar National Museum – Energy Park MEP & Outdoor Evaporative Cooling Design
- Mina District – Latin Restaurant MEP Fit out Design
- Mina District – Outdoor Cooling Assessment
- Mina District – Outdoor Cooling – Mist System CFD Analysis
- Kharaj Tower – HVAC system Design
- AKH /LA MESA Restaurant – MEP Fit out
- SC / AL Janoub Stadium – Lounges MEP & Acoustics Design





# AQS PROJECTS REFERENCE LIST

- Lusail Stadium Concourse: Acoustics and Noise Control
- Qatar National Museum – Energy Park – Land scape Shading Analysis
- Aspire Host Country Media Center at Mushaireb – MEP and Acoustics Design
- La Bodega Restaurant at Sant Ridges Hotel– Outdoor cooling design & IES Analysis
- Al Udied Air Base : Main wet Utilities Networks Design
- Private Engineering Office – Al SHOURA COUNIL Acoustics & Vibration Control Design
- Al Emadi Residential Compound – Construction Supervision
- Carrier – Q Rail Chiller Yard Noise Control Assessment & Design
- Al Mandaloun Restaurant at Sant Ridges Hotel– Outdoor cooling design& CFD Analysis
- Qatar Air Ways Accommodation – Seismic Analysis and Design
- Q Rail- Green Line- Chilled Water network Hydraulic Modeling
- Camel Racing Track – MEP concept Design
- Al KASS Studio – Acoustic Modeling and Assessment
- Private Palace MEP Systems Design





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**“AQS always has optimal and effective  
MEP solutions to satisfy our Clients “**

***AQS Team***