

Dukhan New Roads & Upgrading of Existing Roads

Client

Qatar Petroleum (QP)

Scope of Work

Traffic impact study
Survey works
Soil investigation
Sketch design
Preliminary development
Detailed design

Location

Dukhan, Qatar

Types of Activities

Roads

- Horizontal alignment
- Vertical alignment
- Structural design of pavement
- Singing, marking and road safety

Storm Drainage

- Rainfalls calculations
- Catchment area analysis

- Storm pipelines network
- Crossing culverts, catch basins and manholes
- Protection of existing facilities and networks

Irrigation

- Irrigation water demand
- calculations
- Irrigation network routing
- Irrigation system components

Landscape

- Analysis and investigation to existing landscape
- Landscape design for the new areas
- Plantation selection.

Street Lighting

- Selection of electrical substation
- Electrical loads calculations
- Single line diagram
- Cables network routing

The Dukhan field covers an area of 767 km² approximately stretching north to south and east to west about 80 and 17 km respectively. It comprises oil and gas facilities and supporting infrastructures & services which are connected with a dual carriage way spine for ease of traffic movement.

Upgrade of the existing roads was essential to facilitate accessibility and timely emergency response through incorporating installations to complete Dukhan road network.





The project phases were developed along the spine road connecting QP staff accommodation to near Dukhan Operations Management Building. The total number of housing units is approximately 1,680 to accommodate about 800 families and 880 bachelors. Likewise, the new Dukhan Operations Management Building has been completed and is operational. It accommodates about 600 personnel. Due to these facilities, there will be substantial increase in the traffic on these roads. Hence, there is a critical need to upgrade the existing roads to cope with increased traffic.

The project aims to facilitate access to QP installations lying north west of the Dukhan Town (Khattiyah north area) for fire fighting vehicles as well as day-to-day maintenance operations. The road started at the QP Accommodation building roundabout to the Khattiyah north roundabout with an average length of 6.50Km, passing over many gas and pipelines crossings which were considered in the design process.