Dedicated to my loving family.

Master of Architecture

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Jeddaar Auto Mall

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Abstract

This Project demonstrates a constructive approach in Jeddaar, Jeddaar district where the building would be a symbol of luxury. The area will gain a common platform to different car dealers to display their cars and add to their competition under one roof which would be convenient for customers to compare cars. The building has twelve show rooms, each with a display area, offices, and a service area. The roof structure spaces facilitate a large open area beneath it. A series of concrete arches is the most significant element of design in the building since it not only holds the roof structure but also brings to uniqueness and defines the character of the building. With its free scheme plan beneath it, customers will have a better view of cars presented in show rooms. The structural spaces in lower floors are separated from the roof to facilitate different structure spaces. The project is designed to attract visitors as well as local residents to address the growth and the new visual life of the Middle East's wealthiest city.
The project is located on King Abdullah Street—a very important street in the city; the street starts from the old city of Jeddah and goes through the city until it reaches King Abdul Aziz Airport in the north. The city is divided into three parts: the northwestern area is the old city, the northeastern area is the commercial area (downtown), and the northwestern area is the new residential area. The new area is in development, though there are several projects being proposed. Jeddah Auto Mall’s new site is planned to be in this new area. Compared to the old city, this developing area is considerably valuable for prospective developers. Some parts of King Abdullah Street are important places for companies and commercial developments. The street hosts some of the most powerful companies in Saudi Arabia. Along the street are also shopping centers, which attract many customers and tourists into this part of the city.
The primary structure of Jeddah Auto Mall is the roof. Concrete arches (3m by 3m) hold the roof, eliminating the need for column support, which gives visitors a free and open view. The Arches going across the building were inspired by an old type of Arabic structure called the "Qanun." Beams run along the building, perpendicular to the arches which support the structure.

Structure systems on the lower floors are completely separated from the roof structure system. Precast concrete columns and beams start at the service floor plan and go until the show room floor level. Some parts of the structure like the floor plates will be cast onsite.
Site Plan

The auto mall site has two entrances, west from King Abdullah Street, and east from Alkhuwaid Street. Parking lots are available for guests on both sides. Parking lots are located in the front of each entrance so visitors can park the car and enter the building by walking the shortest route possible. Handicap parking is available, as well as circles for dropping passengers off in front of the entrances. Also, each show room has its own parking space so dealers may park the stock of cars they decide to have onsite.
The show room plan is a column free level. Visitors will enter the building from the highest level, which is three meters and a half above the ground level. Being at this height will give a clear view of the show rooms below, which are only one meter and half above ground. Customers will have the choice of going to the show room they are interested in visiting by ramps. Show rooms do not have walls so that sales people may see customers visiting their show room. Steps lead from the show room to the office areas in case visitors want information about the car.
This plan has most of the working space of each unit. Offices as well as meeting rooms are located here. Every unit has a sales manager office, sales personal offices, and a meeting room. Since this floor is on the same level as the ground level, four secondary entrances (emergency exits) were placed to assist visitors in exiting the building. There are four concourses on this floor so visitors can rest and enjoy their stay in the building. There is also room for small shops, such as: loan agents, ATMs, car accessories shops, and car insurance companies.
Service Floor Plan View

This floor is three meters and a half under ground level. Each of the show room units has its own service area where small car services as well as inspections are performed. The service area can also be used to prepare sold cars to be taken by owners. Each unit has its own entrance as well as rest area to welcome customers having their car serviced. Offices and some utilities are included on this floor for each unit.

Legend

A. Showroom
B. Service area
C. Emergency exit
D. Waiting area - Reception
E. Office
F. Storage room
Enlarged Plans
Photographic Credits

All images are by the author unless noted otherwise.

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