



SERVICES DESIGN TECHNOLOGY International



Horizontal & Vertical  
Transportation Services



# SDT professional services

SDT offers a wide-ranging variety of professional services. We understand the requirements and offer projects of all sizes and kinds ranging from feasibility Horizontal and Vertical transportation studies.

Our work covers all phases of service and includes:

- Basis of Design
- Traffic Study
- Initial Lift Characteristics
- Study Result
- Data related to architecture, structure and Electromechanical design

We are the leaders in this consultancy with respect to alliance and other relationship-based contracting approaches due to our capability of collaborating effectively.

We collaborate with clients to design horizontal and vertical transportation to make the circulation inside the project at the highest level of international standards and safety.

Our services are modified according to the clients' project and budget requirements. We make use of our skills on projects.

# Design Study

Design Study describes the systems that was considered for the buildings and provides a base for the development of detail study using the international standards such as European Standard EN81-1.

The following design points are described:

- Traffic study
- Data related to Architecture
- Data related to Structure
- Data related to Life Safety
- Data related to Electrical
- Data related to Mechanical

## Traffic Study

The detailed traffic study will be re-done in details upon clarification of the final architectural design. The output of the study will be the values of the following parameters based on the calculated population per floor:

- Interval
- Handling capacity
- Average waiting time

## Criteria for hotel guest lifts

- Study based on number of way traffic
- Required Interval
- Required Handling capacity

## Initial Lift Characteristics

Based on the well dimensions and provided architectural drawings, the following lift characteristics could be provided

- Machine room
- Speed
- Capacity
- Lift dimension
- Doors
- The elevation requirements

## Initial Study Results

- Apartment Population
- Parking Population
- The calculated parameters





# Data Collection

## Data related to Architecture

- Minimum Well width
- Central Opening door
- Minimum Well depth
- Pit depth
- Headroom height

The following details should be taken into account:

- Actual needed lift characteristics
- Hall / lobby finishing: Landing doors, Hall calls, Hall lanterns
- Car finishing: wall, car door, Car operating panels, ceiling, handrails, mirror
- Other accessories

## Data related to Structure

- Pit floor under the car buffer, reaction load
- Pit floor under the counterweight buffer, reaction load
- The ceiling will be provided with hooks on specific places stated by the lift supplier

## Data related to Life Safety

- Need for Landing door fire rating and required rate
- Behavior of lift in case of fire and need for alternate floor
- Need for fire-fighters lift

## Data related to Electrical

- Maximum line supply
- Main power needed
- Car and well lighting
- Well lighting
- Power supply
- Socket outlets
- Behavior in case of power failure
- Intercommunication wiring between the lift well and a permanently attended location.
- Requirement for BMS or supervisory panel.
- Requirements for fire return control

## Data related to Mechanical

The temperature should be kept in the machinery space located on the top of the well between 5 and 40 deg.C; ventilation openings of 1% of the well area is required.

Measures are to be taken into consideration if natural ventilation is not sufficient to keep the temperature in the range stated above, also the estimated heat emission of the machines per lift.

# Why SDT?

The main reasons why our clients choose us due to:

- our experience in delivering practical cost-effective solutions to the transit designs
- our independence and academic integrity;
- our long-term focus, reflecting the long-term nature of study;
- our focus on maximizing the benefit of projects.

## Previous Projects

- Summerland KemPinski Hotel & Resort -Lebanon
- Hill Top - Lebanon
- Ghana Building residential complex -Ghana
- Exxon Mobil Compound - Nigeria
- Lagos building - Nigeria
- GTH General Teaching Hospital-Iraq
- Al Rashid Shopping Mall – KSA- Dammam, 400 000 sqm
- Al Rashid Hotel – KSA-Dammam, 300 Keys
- Al Rashid Hotel – KSA-Khobar , 57,000 m2
- Rotana Hotel- Dammam-KSA
- Hilton Hotel (4 star)- Qatar
- CNBC Building- Qatar



## About SDT

SDT international was established in 1991 as an engineering consulting company that provides comprehensive range of services in the Structural, Mechanical, Electrical, Infrastructure, Environmental and Plumbing design.

For the past 22 years, we have been a pioneering force in the planning, design and implementation of development projects in the Middle East, UK and Australia.

With six offices in six countries, we employ high caliber specialized engineers capable to apply innovative approaches to design and deliver practical and cost effective solutions.

UK . Lebanon .KSA. Qatar. Dubai. Australia

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