

Infrastructure Sector



MULTI-STOREY CAR PARK

Introduction

The Multi-storey car park is one of the businesses that are still virgin in the country. A building of six levels accommodating approximately 80 spaces each on a site of approximately 0.5 acres located in one of the busy areas of the city centre would give the proposed park a wide catchment area. The park is planned to accommodate 500 vehicles with an occupancy rate of 80% per day.

In its basic form the proposed car park building should be rectangular, with the footprint fully occupying the available site with two access ramps. The construction works to completion will take up to 12 months at a cost of US \$2,280,000. On completion of construction the car park is estimated to generate a profit margin of 26% per annum and a payback period of 3 years 3 month.

Design considerations

The design shall include both architectural and structural plans. The proposed Car-park architectural design will consider the customer carefully and provide a system that is simple and safe. It must however, be compatible with the locality and follow the guidelines established by the Local Planning Authority in terms of appearance and scale. These principles of use and planning tend to control the size of the car park, circulation facilities, and geometric design requirements. Parking yards, stairs and ramps are the major features in the design and the design must have all stairs rise to the full height of the building, giving access/exit to all levels including the roof. Interior ramps are most commonly used.

Parking structures are subjected to the heavy and shifting loads of moving vehicles, and must bear the associated physical stresses. It is therefore imperative that expansion joints are used between sections not only for thermal expansion but to accommodate the flexing of the structure's sections due to vehicle traffic.

Construction Process

The site shall be cleared and leveled and left to settle ready for Construction will be started just like any other storey building taking into consideration the pressure it is bound to hold. It is proposed that frameless 'structural' glazing is used to the outer walls of the stair towers allowing daylight to flood in and clear views out. The solid walls and roof elements of the stairs are finished in smooth white render, enhancing the simple, clean lines.

Capital Investments Requirements

Capital investment item	units	Qty	@ in US \$	Total
Land (0.5 Acres)	No.	1	600,000	600,000
Site Development(Excavation & filling)		1	400,000	400,000
Construction of 6 Storey Parking Block		1	1,600,000	1,600,000
Site Management		1	40,000	40,000
Office Equipment	No	1	25,000	25,000
Computer Equipment		1	10,000	10,000
Motor Vehicle	No	1	20,000	20,000
Breakdown Towing and Emergency Repairs		2	60,000	120,000
Preliminary Expenses	No	1	50,000	50,000
Total			2,805,000	2,865,000

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Production and Operating Costs

Operational costs Per Year

	Per/month	Per Year
Staff Salaries	3,200	38,400
Other Staff Costs	4,690	56,280
Motor vehicle operations and maintenance	300	3,600
Office Supplies	500	6,000
Utilities (Water, Electricity & Telephones)	300	3,600
Public Relations	60	3,600
Building Insurance	833	10,000
Depreciation Expenses	-	-
Total Operating Costs	9,883	121,480

1. The service is assumed to be provided for 312 days per year.
2. Depreciation assumes Buildings at 2%, MV at 20%, computers 10% and Equipments at 12.5%.
3. A production Month is assumed to have 26 work days.

Service Costs and Price Structure in US\$

Item	% of Occupancy	Lots	Lots available Per Day	Lots available Per Yr	UPx	Rve/ Mth	Rve /Yr
Parking Fee Revenue							
2 Hourly Parking Lots	20%	4	4	384.0	1	384	119,808
2 Hourly Parking Lots	30%	2	2	288.0	2	432	134,784
Day Long Parking Lots	50%	1	1	240.0	3	600	187,200
Overnight Parking Lot	20%	1	1	96.0	4	384	119,808
Sub-Total						1,800	561,600

Revenue from Advertising

	No. of Levels	No. Per Level	Total Bill Boards	UPx	Revenue/ Month	Revenue /Yr
Advertising space	6	60.0	360.0	900	27,000	324,000

Revenue from Breakdown Towing & Emergency Repairs

	Annual Traffic Handled	% Requiring Emergency	annual No requiring Service	UPx	Revenue/ Month	Revenue /Yr
Breakdown Towing & Emergency Repair Services	314,496	2.5	7,862	10	6,552	78,624
Grand Total					35,352	964,224

Profitability Analysis

Profitability Item	Per day	Per Mnth	Per year
Revenue:			
Parking Fee	69	1,800	561,600
Advertising Space Fee	1,038	27,000	324,000
Towing & Emergency Repairs Fee	252	6,552	78,624
Sub-Total	1,360	35,352	964,224
Less: Operating Costs	729	18,960	230,405
Profit	630	16,392	733,819

Market Viability:

The market demand for parking yard is increasing every year due to the increased number of people purchasing vehicles as it has become a necessity rather than a luxury good.

Risks

The business risk associated with this idea is the thief of Vehicles if the security is not well monitored.