

# Planning Of Multi-Storied Parking Building For Phule Market Jalgaon

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## ABSTRACT

*The world's population is always growing, and towns and cities have developed around their public transport systems. By increasing car ownership and the demand for travel for various purposes, it has been possible to accommodate the growing population and developing metropolitan centres. No matter their level of wealth or social standing, people now travel in increasingly uncomfortable and occasionally unpleasant circumstances. With a city or town getting bigger, demand for transportation and travel intensity tends to rise significantly, especially when the city centre or other important centres of activity keep expanding in terms of population and employment.*

*Multi-level parking has brought about a number of benefits, including better space utilisation, comfort for drivers because the stress of securing a parking spot is reduced, increased security, and environmental harmony. This project uses a variety of case studies to demonstrate the design of a multi-story parking structure for the alleviation of traffic problems in public spaces. The layout of the deck and ramp, planning of the dimensions, bay width, aisle width, ramp dimensions, planning grid, alignment of paths to exit barriers, means of egress distances, travel distances from the car to the destination, security, visibility, and space are just a few design elements that are taken into account.*

*The tremendous rise in vehicles and the need to accommodate them has made car parking a severe problem. his problem we require parking slots in important markets. Due to our limited land resources, it is crucial to build multilevel parking because it can house a lot of automobiles in one location. 200 cars and 400 bicycles can fit in the multi-level parking that we built for this project. Planning for multilevel parking is based on a framed building, with a G+2 basement and ground floor.*

*Keyword - Building Information Modelling, Project Management, Construction*

## 1. OBJECTIVES

- The aim of this project is effectively manage space by the planning of muliti-storeyed parking building litre in high density central cores with particularly reference to phule market west to effectively manage what is left of spaces in urban centre
- A study of traffic situation of the phule market including the volume of car going to biasness area market and also office which is quite high is made to on in side engineering
- To design a multi-storey car complex which would cut down the amount of open land space used as parking through vertical arrangement of parking stalls in storey above each other.
- To make the complex a public building through the proper integration of ancillary activities this, will ensure the proper functioning of the multi-storey car complex.
- To properly integrate the building structure into the surrounding environs through its proper articulation and aesthetics, beautifying the streetscape.
- To create free space around the building structure this could be landscaped.
- To provide a garage that will improve parking system in phule market and relieve the roads of automobile.
- To direct the flow of arriving and departing motorist to eliminate conflict and reduce usage of signboards etc.
- To provide a garage that will ensure safety of automobile and their user.
- To design an economical viable garage.
- To provide a garage that will restore sanity and aesthetic beauty to phule market estate.

## INTRODUCTION

Now a days smart city projects are gaining a lot of attention. A novel method of effectively using the vertical limits of a building, for this purpose the lower stories with greater earning potential can be kept as commercial space while the higher floors can be used for living purposes. 1.3 OVERVIEW OF PROJECT The idea behind this work is to prepare a detailed plan of a Multi-Level Car Parking with provision for parking area in each floor (G+3). The total area of the Parking system is 5578.12 m<sup>2</sup>. All the important amenities for a Car Parking have been included. The design of all components such as Slab, Beams, Columns and Footing has been done with aid of STAAD PRO. The access to each floor has been provided using staircase. The design has been done in accordance to the Limit state method and conforming to Indian standard code practices.

## METHODOLOGY

1. Information for this research work shall be obtained by a combination of methods classified under the descriptive methodology and divided into both the primary and secondary sources Primary sources The primary sources for data include those methods whereby information is gathered direct from source for this work by the following methods:
  - A. **Interviews:-**  
This method covers the collection of information from people directly involved or affected by the research problem. This is to include a random sample of car owners who work daily within the Marina district, car park security men who monitor the cars parked within the car parks and the movement pattern of these cars, local government officials for Lagos Island who may be able to give out information.
  - B. **Case studies:-**  
This involves the on-site collection of data through field survey of how previous designs have been able to achieve similar solution to this research problem and the problems they have come across. It also includes the areas of problem study, getting down to the affected area of the central business district to see how the problem really affects.
  - C. **Secondary sources:-**  
Secondary sources of information shall be from already collected data by other researchers through books, journals, published and unpublished literatures, and also the internet.
2. To collect data from R.T.O office number of vehicles run on roads of jalgaon city
3. To collect data near the phule market area from municipal corporation of Jalgaon.

## ABOUT JALGAON

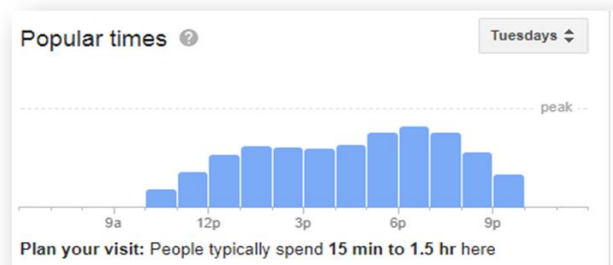
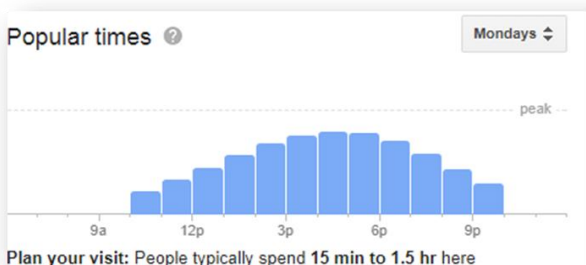
It is a major city in western India, located in north of Maharashtra state within region -of Khandesh. It is the administrative headquarters of Jalgaon district. Jalgaon has a municipal corporation, and had 460,228 residents at the 2011 census (530,911 populations with extended area).<sup>[1]</sup> It is 59 km (37 mi) from the Ajanta Caves. Jalgaon, can be reached by National Highway 6 or with a Railway and has an airport through private jet (Daily passenger flight will be starting from 15 September 2017).

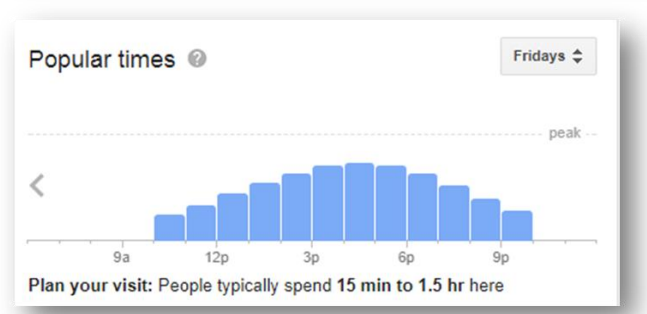
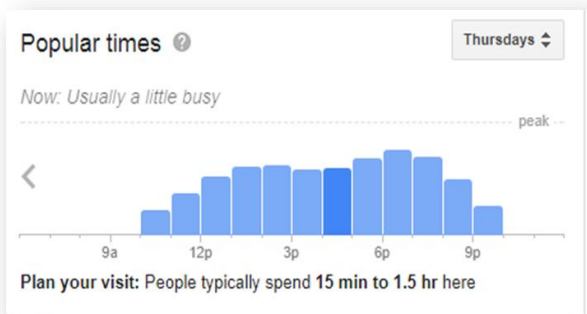
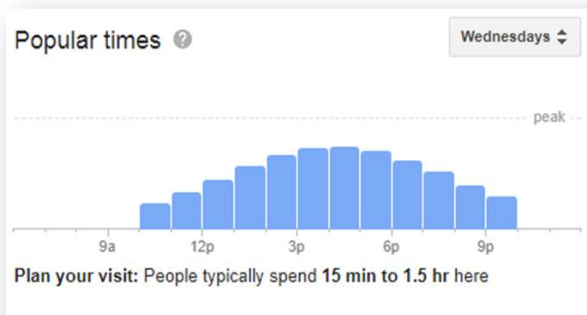
The city, with industrial areas, schools, hospitals, shopping malls and residential areas, has communications and transport infrastructures. Known as Banana City,

## PHULE MARKET

ADDRESS: JDCC Bank Colony, Shahunagar ,Jalgaon, Maharashtra 425001

FOLLOWING ARE THE GRAPHS PEOPLES SPENT TIME IN PHULE MARKET





## METHOD OF ANALYSIS

GENERAL A building may be either load bearing or framed structure or a combination of both. Generally, the framed structures are adopted these days. Beyond this framed structures are preferred due to improved strength and better service life. Reinforced concrete buildings consist of slabs, beams and columns continuously placed to form a rigid structure. This continuous system leads to greater redundancy, reduced moments and distributes the loads more evenly. The effects of horizontal loads such as wind and earthquakes are spread over the whole structure increasing its safety considerably. The floor is supported on the beams which may be directly supported on columns or on beams which are then supported on columns. A building frame is a three dimensional i.e. a space structure. It can be idealized as a system of interconnected two-dimensional vertical frames. The frames can be solved independently i.e. as a plane frame or a space frame. The degree of accuracy to which a structural analysis is carried out depends upon the importance of the structure. A wide range of approaches have been used for buildings of various heights and importance, from simple approximate methods to complex techniques using computers.

## 4. EXECUTIVE SUMMARY & FUTURE SCOPE

1. The scope of this project shall be restricted to space planning and management in the planning of a multi-storied parking building.
2. The detailed planning proposal for construction by the Municipal Corporation Jalgaon Government.
3. The project is based on analysis of the case studies, interviews, journals, questionnaires etc.
4. The scope of work is based on the population it is intended to serve.
5. Phule market (Jalgaon) is the central business district near serving the banks and offices, shops, hotels and government offices the population of cars are between 700 to 1000.
6. As a multi-storey parking building, it will serve as a commercial building, public building as well as a car park generating revenue.

## REFERENCES

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