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REVIEW PAPER ON PARKING CHARACTERISTICS AND ANALYSIS OF SECTOR 22-C CHANDIGARH

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Abstract - *This paper summarizes the ongoing researches about the study and analysis of parking characteristics of Chandigarh. The main focus of this research was to improve the parking problems of Chandigarh. Proper design of car parking zone is extremely necessary for good transporting system. If there will be lack of car parking zone and facility then it will be a chaotic condition for everybody. However coming up with any car parking zone is not a straight forward job. It seeks plenty of parameters that we would like to grasp and would like to search out with the assistance of straightforward knowledge by applying some techniques. Parking plays an important role in mobility, access and the economic development of cities at the same time. It is a profitable business for both the private and public sectors. The car parking market is a sector of the economy that has increased in importance as the market for cars has grown. The car-parking sector has always been of great importance in terms of urban mobility since it is a fundamental element in achieving a high level of accessibility in the city centers. In fact, many businesses and municipalities see an adequate supply of parking especially for visitors as crucial for their competitive growth. As the number of cars increases with no initiatives and alternatives to combat the current scenario, many problems arise especially to the limited number of parking lot. This can give a significant effect especially to commercial property. Parking issues come from the public behavior itself. The public come to the market and simply park their vehicle anywhere and everywhere they like.*

Key Words: car parking, congestion, parking accumulation, parking duration,delay…

1. INTRODUCTION

India is a developing country. It has the second largest road network across the world at 4.7 million km. This road network transports more than 60 per cent of all goods in the country and 85 per cent of India's total passenger traffic. Road transportation has rapidly increased over the years with the improvement in connectivity between cities, towns and villages in the country.

The Indian roads carry almost 90 per cent of the country's passenger traffic and around 65 per cent of its freight. In India sales of automobiles and movement of goods by roads is growing at a rapid rate. Cognizant of the need to create an adequate road network to cater to the increased traffic and movement of goods, Government of India has set earmarked 20 per cent of the investment of US$ 1 trillion reserved for the infrastructure during during the 12th Five-Year Plan i.e for the year of (2012–17) to develop the country roads.

1.1 History of Chandigarh

Chandigarh is a city and a union territory of India that serves as the capital of the Indian states of Haryana and Punjab. As a union territory, the city is governed directly by the Union Government and is not part of either state. Chandigarh is bordered by the state of Punjab and Haryana. Chandigarh is considered to be a part of the Chandigarh capital region or Greater Chandigarh, which includes Chandigarh, and the city of Panchkula (in Haryana) and cities of Kharar, Kurali, Mohali, Zirakpur (in Punjab).

Chandigarh, nick name is "The City Beautiful" which is obliged to a Chandi temple and an adjoining Fort for its name. it is located at the foothills of Shivalik range of Himalayas. Chandigarh is also known for its beautiful gardens. Chandigarh is the first planned modern city of India designed by Le Corbusier, a famous French architect of that time and he built the final plan to build the city of Chandigarh. He was accompanied by several other architects and added a touch of artistry to the city buildings. The buildings were made of bumpy bricks in proper geometrical shapes which is now an identity of the Chandigarh.

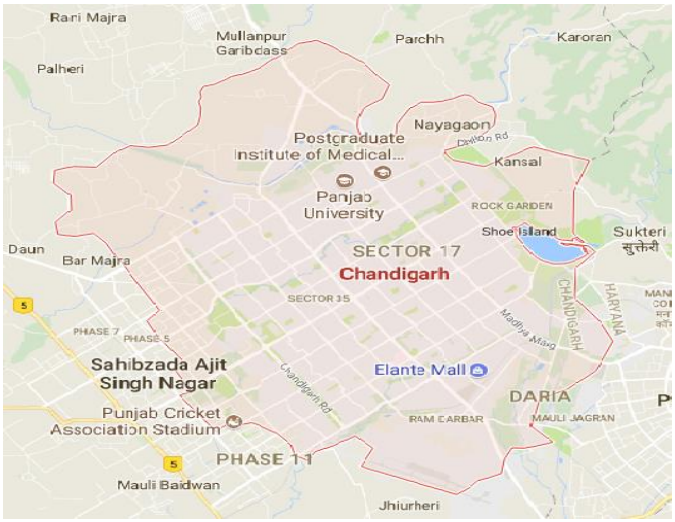

Fig -1: Map of Chandigarh

1.2 Parking Problems of Chandigarh

A necessary element of a city is parking. The supply of parking spaces in Chandigarh is a growing concern among planners and residents.

A necessary element of a city is parking. The supply of parking spaces in Chandigarh is a growing concern among planners and residents. registered in the city, car parking is erratic, most drivers parking wherever they find space. On residential streets, car owners are taking over driving lanes, although there is space for parking lanes. In the markets, tuk-tuks, two wheelers, and cars compete for space, often not using designated spaces. Since Chandigarh is planned city provides parking nearly everywhere from parks and schools to markets and houses. However the daily influxes of cars from outside the city and the high number of vehicles per household have resulted parking shortage in certain areas. Large market areas such as Sector 22 and the Madhya Marg markets experience the most congestion. Although there are pay-to-park systems lots are consistently full during the day especially between 5-9pm. It is observed that the parking shortage was often due to inefficient use of the lots rather than lack of space. Drivers frequently ignore marked spaces taking up as many as two full spaces with one vehicle. Consequently a full lot will contain fewer cars than spaces.

2. LITERATURE REVIEW

Bonsall (1991) presents various data collection methods that are used to gather information on parking spaces. He also discusses the role of technology in the advancement of these methods as well as the availability of data to assess the use and impacts of parking spaces.

Axhausen and Polak (1991) use stated preferences data to model travelers response to changes in parking attributes and show that journey purposes has a strong impact on the value of time and consequent parking choices.

Shiftan and Burd-Eden (2001) also use stated preference survey data to model the likely response of drivers to parking policy alternative (increase in parking costs and decrease in parking availability). They found that workers are more likely to change mode or time of travel than to change destination or activity. They also found that non-workers are more sensible to policies than workers.

Tong et al. (2004) present a method based on cluster analysis to construct aggregate parking accumulation profiles at car parks to increase the efficiency of survey data collected for this purpose. Accumulation profiles reveal the number of cars parked at various locations throughout the day. These authors state that such profiles assist transport professionals in the decision process. Actually they can validate parking demand models assist the development of real time parking information systems or be used to evaluate various traffic management strategies.

Marsden (2006) provides an interesting review of the literature relating to the behavioral response of drivers to a series of real or hypothetical parking policies. He concludes that the assumption that parking constraint makes center less attractive and discourage. Economic development is not confirmed and needs to be challenged.

Alberta and Mahalel (2006) present a study aimed at evaluating the differences in attitudes towards congestion tolls and parking fees in order to predict the impact of each of these policies on demand for trips and on travel behavior. They use data from a stated preference survey. They show that congestion tolls have a greater impact on travel behavior than parking fees and suggest that this is due to the fact that the latest are more accepted and that it is more appealing to choose another time for the journey (and avoid tolls) than to change destination.

Kelly and Clinch (2006) discuss the variance of price impacts on different trip purposes initially and as tariffs increase progressively. As they say with much of the research examining how parking policy will affect cars and congestion in the network clearly there is individual impacts which must also be investigated. They use on-street survey data to measure such impacts.

Farzanmanesh, Ghaziasgari and Abdullah (2008) Department of environmental sciences university Putra Malaysia described an ideal method for parking site selection by the use of GIS, fuzzy logic and weighting criteria to determine proper parking sites. Suitable place for parking is selected for one of the high traffic regions of Esfahan city in Iran.

Objectives and Scope of Study

> To determine existing parking demand and its characteristics for Sector 22-C Chandigarh.
> To resolve and examine existing parking area for Sector 22-C Chandigarh.
> To resolve future parking needs. The parking of past year is studied and other alternatives are discussed.
>To resolve the peak hours in which the vehicle congestion takes place

3. CONCLUSION

On the basis of the investigation, the following conclusions have been made Parking is an acute problem worldwide if parking is not properly designed it will lead to the following Ill-effects.

Congestion: Parking takes considerable street space leading to the lowering of the road capacity. Hence speed will be reduced, journey time and delay will also subsequently increased. The operational cost of the vehicle increases leading to great economical loss to the community.

Accidents: If the parking operation i.e parking and un-parking is not done with Care, it will leads to accidents which are referred to as parking accidents. Common type of parking accidents which occur while driving out a car from the parking area are careless opening of the doors of parked cars and while bringing in the vehicle to the parking lot for parking.

Environmental Pollution: Parking also causes pollution to the environment because stopping and starting of vehicles while parking and un-parking results in noise and fumes. Which causes not only environmental pollution but also affect the aesthetic beauty of the buildings because cars parked at every available space creates a feeling that building rises from a plinth of cars.

Obstruction to Fire-Fighting operations: Parked vehicles may also obstruct the movement of firefighting vehicles during fire. Sometimes they block access to hydrants and access to buildings.

Therefore it is necessary to design and analysis the parking lots so as to minimize the above ill effects of parking and make the movement and operation of vehicles smoothly on the roads.

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