Scientific Journal of Impact Factor (SJIF): 4.72

e-ISSN (O): 2348-4470
p-ISSN (P): 2348-6406

International Journal of Advance Engineering and Research Development

Volume 4, Issue 3, March -2017

Literature review on planning proposal for parking facility

Patel Krupali*[1], Khushbu bhatt[2], Siddharth gupte[3]

[1]Civil Department, Parul University Limda, Vadodara,krupalipatel.kv@gmail.com
[2]Civil Department, Parul University, Limda, Vadodara. khushbu.bhatt @paruluniversity.ac.in
[3] Civil Department, Parul University, Limda, Vadodara. siddharth.gupte@paruluniversity.ac.in

Abstract — *All Indian cities face serious parking problems. Although the park has a negligible effect on the quality of transport, but no damage to the engine life due to parking. Anonymous because of an increase in traffic in India, parking has become the new problem with pollution and poor quality roads. There are two types of parking, which are off-street parking and the other is parking on the street. Off-street parking is common in large shopping centers and huge theaters and offices that are used by employees and customers, otherwise parking on the street is traffic problem caused as parking is directly controlled by market forces, strong demand and is considered public property. Some might argue that parking is one of the minor problems of urban transport, but this view has led to their exclusion from the political framework, causing many traffic obstacles. This results in poor quality of urban transport, improper use of land and social and environmental costs on the rise. I referred to the work and concluded that the park and ride facility is recognized as an effective way to reduce the number of private use, especially in the central part of the urban areas. The mobile application will help reduce the time lost in the search for a parking space and to increase the efficiency of the time parking system. It uses smart parking sensors, wireless communication technology, data analysis to solve the parking problems. Intelligent parking solutions can be used to identify available parking with the aid of sensors. Multilevel parking came with a series of pads as they are equipped with a series of advantages, such as the optimum use of the space for the convenience of drivers, because stress to fight for parking is removed, more safety and environmental harmony. Several of the parking management strategies can increase affordability, economic efficiency and equity.*

***Keywords*-:** *parking lots design; planning; ITS system; parking space; Multi-level parking*

I. INTRODUCTION

Parking is the act of stopping and uncoupling cars and leave them unemployed. Parking on one or both sides of a road is often allowed, although sometimes with restrictions.Proper design of the parking is very important for a good transportation system. If there is the lack of parking and services, then it will be a chaotic condition for all. But the design of any parking space is not an easy job. Research many parameters that need to know, we need to find with the help of simple data using any technique. A systematic study of the characteristics of the car and demand and regulatory measures the park that is possible to control the car park is useful to an engineer and traffic planner.

Parking Accumulation: It is defined as the number of vehicles parked at a given instant. Normally this is expressed by the accumulation curve. Accumulation curve is obtained by plotting graph bays number of employed with respect to time.

Parking Volume: The volume of parking is the total number of vehicles parked for a specified time. This does not account for the repetition of the vehicle. the actual volume of vehicles entering the zone is recorded.

Cargo Parking: parking fees gives the area under the curve of accumulation. It can also be obtained by simply multiplying the number of vehicles that occupy the parking area in each time interval with the time interval. It is expressed as hours of the vehicle.

Average duration of parking: The percentage of the total hours of the vehicle on the number of parked vehicles.
Term parking cargo volume = car park / parking lot.

Parking rotation: The ratio of the number of vehicles parked on the duration and number of parking spaces available. This can be expressed as the number of vehicles by length of time the bay.

Index Parking: The parking fee is also known as employment or efficiency. It is defined as the ratio between the number of slots occupied in the time duration and the total space available. It provides an additional measure of how well the car park is used. The parking index can be found in the following way

= Parking Load Index / parking capacity

II. LITERATURE SEARCH

Maps of Rajkot-management solution parking at the urban transport problems Learn k Hingrajia and Pratik D Vagadia (September 2015) has studied most of the vehicles are parked for very brief periods during peak hours, because the trade. The area is also related to several important destinations in the malls and shopping so that the traffic flow is obstructed because of the existing car park on the street. The results in loss and delay time occurring for long trips. To avoid these delays and to maximize the space available in most area of parking or parking on the roof are solutions

Jaydipsinh P.Chudasama, Dr.L.B.Zala (2012) Rating Parking: A case study of Amul Anand Dairy Road; The author has worked in the volume of parking and parking policies, had taken the study area was the commercial center of the city of Anand. Two types of surveys to count the volume that had been used survey vedio recording, the survey of land use and parking survey that had been used for enrollment recording techniques were conducted. He analyzed the data gave the suggestion Amul Dairy road is the use of mixed territory. The right of way is 30 m. Traffic composition shows the highest ratio of 2 wheels than others. The data analysis shows that parkers car parks are the maximum short-term and long-term Parker are minimal. In the street parking is prevalent throughout the section of the survey.

Prof. Deepak Tiwari, Dr. Supriti Dubey (2013) "One of Bhopal study with reference to the users' satisfaction with the parking space and the accessibility of the market" His paper concluded that during weekends and public demand for vehicle parking exceeds the supply, and consequently, has a negative impact on retail sales and not only that, but causes severe dissatisfaction while shopping. This paper studies the different aspects of external variables that influence the satisfaction of the buyer for purchasing. The study is descriptive in nature and self-designed questionnaire to collect primary perception was used. In a questionnaire on the road, retailers and consumers were asked their views on the switch in the market area that can be easily done i) the existing policy, ii) Maximum parking, iii) the remote parking iv) study is an attempt to explore matters relating to the above parameters. The questionnaires were developed for the collection of primary and secondary data is collected through books, magazines and surf the network, this is an investigation work for the solution of problems in the design of an optimal place car. parking management and accessibility of the market and its related factors are shopping satisfaction variables to different buyers in different markets. Data collected from the questionnaires are processed using SPSS. This study examined the variables to determine the level of satisfaction among buyers of the commercial city of Bhopal. The parking management is relatively less in the Old than the New Bhopal Bhopal. It suggests that the multi-storey car park would be the best option. The relationship between different factors acquiring satisfaction with overall satisfaction shows that there is a buyer overall satisfaction less positive

Ms. Priyanka. Kolhar (2012) Management Plan off street parking for the city of Dharwad, Karnataka, India; In this article the author has investigated the practices of parking survey accumulation and parking provision. The parking demand models have been developed using the SPSS software. He had made three types of survey poll parking space, method of investigation used enrollment accumulation. Interview designed for analysis of willingness to pay. It was found that the maximum accumulation occurs in the morning between 12: 00-14: 00 and 17: 00-8: 00 at night.

To solve the parking problems, we recommend a short-term immediate solution to congestion pricing, as the cost of operation and maintenance is much lower for the administration of the parking lot on the way to the road. But, according to the future demand for parking in the study areas, you can implement a long-term management plan (which provides parking garage).

Jun Chen, Zhang Hui (2011) Coordination of Planning of Urban Planning Street parking and off-road "The authors studied to optimize the planning design of urban parks, this paper first analyzed the characteristics of street and off-street parking. In second, the distribution patterns established street parking and off-road, respectively, with the aim of minimizing the distances cars target driver the corresponding restrictions be combined to determine the coordinated deployment model. Finally, it was shown that in a case has demonstrated the maneuverability of the method. Conclude that there are no discrepancies between the parking needs on the street and off-street parking and the presence of parking durations, factors considered by the parked parking and impacts on traffic flows. models location are established on the street and off-street parking to meet the short and long term parking requirements, respectively. Parameters such as the upper limit of the distance of walking and impact on traffic flows on the road are used to meet the different needs of Parkers parking and traffic flows.

Eduardo Barata (2010) made parking problems in the UC campus: To establish the Research Agenda; This study emphasizes the importance of adopting integrated policies for parking management in order to ensure not only a more efficient use of parking spaces available, by balancing supply and demand and bring revenue to cover the cost of parking, but also the attractiveness of ways alternative transportation.
Provision of parking and demand flows within the UC campus is estimated. The results indicate that the parking is inadequate and overcrowded.To think critically about these issues, and identify areas of research to address the socio-economic implications, some policy proposals, but theoretically engage in a pragmatic way.

In their paper, the authors discussed the implementation of off-street parking regulations and its contribution to a reduction of private car traffic from the road. "Juliane Stark, Roman Klementschitz (2008) study area. It has the effectiveness and acceptance of these" new "tools on the basis of survey results stated preference and gave recommendations for the implementation of the results of a ' efficiency analysis performed for the Vienna area, Niederoesteerreich and Burgenland in Austria. have used the method to analyze the elasticity of the off-street parking. a stated preference survey was conducted through telephone derivatives of the subjective reason for motorists to turn shopping for car use. then oversees timeout to limit the capacity of the parking facilities purchases were made and then analyzed decided that parking fees installing parking shopping user.

Marcello Marinho Berenger Vianna (2004) intelligent transport systems and parking management: the potential implementation in a Brazilian city; the problems arising from the gap between demand and supply of parking places are becoming more acute in most cities. These difficulties are seen especially in the most densely populated are poorly served by public transport and in which the planning and the use of existing areas is inadequate. It is defined and defended for some time the importance of controlling parking lots as part of the traffic demand management process and travel, together with the need to ensure a closely related conceptual approach. This article presents a methodology that supports the feasibility of implementing an integrated parking system based on Internet resources. This process includes the development of a logical architecture to process and transfer data and information. To test the proposed procedure, a city of medium size Brazilian was considered in the Grande Rio de Janeiro-Nitero'i. For the analysis it was selected a particular area of investigation that covers about two square kilometers with a significant number of parking spaces. Expected through the implementation of the proposed system results indicate that the benefits derived from it are the lower levels, where appropriate, to the traffic congestion in the area in question, and reduce air pollution.

Robert Deacon and Jon Sonstelie (1991). Consumers choose the size of the purchases to minimize the total cost of purchases of goods with the lowest price, which includes the purchase and storage costs. The waiting time in the queue increases until the market is cleared. The authors point out that consumers are not better than a maximum price, even if suppliers are worse, thus generating a net loss of rationing waiting. (See also & Sonstelie Deacon [1985 1989], and Deacon [1994]).

III. CONCLUSION

As we know that parking is a very common problem in everywhere with the phenomenal increase in personalized motor vehicles, one of the major problems confronted by the motorists is the acute shortage of parking space. The demand for parking has increased in alarming proportion in central Business District areas and other/activity centres of the cities. The provision of multilevel parking and their effective use emerges as the most viable initiative in the cities. Proper parking manage reduce the congestion on the road.

The improvement of parking conditions has a direct impact not only on the improvement of traffic conditions and road safety in the area considered, but also on the local economy. Consequently, the use of quantified results from the proposed methodology could assist in improving the design of the appropriate parking programe for a specific area and its implementation. The switch to off-street parking, which can free valuable road space to be better exploited, improving the overall quality of life of an area, can be achieved in a more secure way if the parameters influencing this switch as well as the magnitude of their effects are known.

Different method use for parking survey like videography, telephonic survey, license plate survey, in-out survey this all survey done we can get parking parameters.

REFERENCES

[1] Eduardo Barata(2010) “Parking problems at the UC Campus: Setting the research agenda” 12 th WCTR, July 11-15, 2010- Lisbon, Portugal

[2] Prof. Deepak Tiwari, Dr. Supriti Dubey(2013) “ A study of Bhopal with reference to Car Users satisfaction for Parking Space and Accessibility to the Market”IRC’s international J. of multidisciplinary research in social & management science Vol. 1,issue 4, 21-31

[3] Jaydipsinh P.Chudasama,Dr.L.B.Zala(2012) “Parking evaluation: A Case Study of AmulDairy road Anand” Indian journal of research Vol. 1,issue 5,177-180

[4] Juliane Stark, Roman Klementschitz(2008) “Off-Street Parking Regulations For Shopping Facilities: Potential Impacts and Scope of Implementation” J.of Urban planning and development (ASCE) Vol. 134,173-179

[5] Jiang Yangsheng1, Peng Bo1, DAI Luchuan1, Chen Yanru2, Parking Demand Forecasting of Urban Comprehensive Development Blocks Involving Shared Parking and Location Condition" ICTE 2011 © ASCE 2011 ,829-834

[6] Mr. Mohammed Khalandar Khan, Raghavendra R Kattimani(2014) "Appraisal of Multilevel car parking Facility at KG road –CBD area. Benglura city" International Journal of Research in Engineering and Technologyad,Vol. 3,issue 8,76-91

[7] Marcello Marinho Berenger Vianna(2004) Intelligent transportation systems and parking management: implementation potential in a Brazilian city

[8] Mrs Priyanka. Kolhar(2012) "Off-Street Parking Management Plan For Dharwad city,Karnataka,India"J. of Engineering Research and Studies(JESR) vol. 3,issue 2,67-71

[9] T.Subramani(2012) "Parking Study on Main Corridors in Major Urban Centre" International Journal of Modern Engineering Research Vol. 2,issue3,742-74

