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RESPONDING TO PARKING DEMAND FOR CENTRAL BUISNESS DISTRICT OF KOLKATA

Dr. Satyaki Sarkar

Associate Professor, Department of Architecture, Birla Institute of Technology, Mesra, Ranchi(India)

ABSTRACT

Central buisness District of Kolkata, better known as B.B.D. Bag area is presently the hub of most of the administrative and economic activities of the state and its hinterland. Over the last century, various offices and commercial establishments have set up their outlets without caring much about the social, environmental condition and other prerequisites that the area must have to house the increasing demand. One of the prime concerns that govern the area presently is the tremendous demand for parking space. With more people thronging the area during the office hours and minimum of decisions taken on the administrative policy level, the parking problem not only has remained inherent in character but has also become sky – kissing.

This paper examines the parking demand for the area including a gap analysis and tries to provide the possible solutions to meet the present demand.

Keywords: Parking Demand, Central Business District, Parking Management, Policy

I INTRODUCTION

India's transport sector is large and diverse. The urban areas across the country are increasing by leaps and bounds and so are the problems associated with it. With certainty, parking is a major problem in urban cities which has been increasing challenges both in developed and developing countries since there is a direct inter-relationship between the transportation infrastructures and land use management. The present Central Business District of Kolkata engulfs the area from which the present city has sprung up more than three hundred years before. Over the ages, the area has gradually transformed into an intense Central Business District of Kolkata where all roads in Kolkata leads. This area was named Dalhousie Square and renamed Binoy Badal Dinesh Bagh after independence, which invariably shortened to BBD Bag. Over the passage of time various offices and commercial establishments have set up their outlets without caring much about the social and environmental condition. The area at present is totally trapped

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within the clutches of commercialization. Severe dearth of land and space has been created due to tremendous economic pressure and is gasping for more to accommodate more of trasportational, recreational and parking facilities.

But amidst of all B.B.D. Bag is extraordinary. The urban heritage that exists over there, built during various phases since its birth, constitutes a living concept of technology and morphology. But, with the changing scenario of urban structure of the city of Kolkata and rise in the affordability of people, expectations of services provided to the stakeholders by the local government is becoming sky-kissing. This is infact casting a dark spell on this area and parking has become as integral part of the problems associated with this area.

II PARKING MANAGEMENT

Parking is an essential component of the transportation system. Parking planning is undergoing a paradigm shift, a fundamental change in how a problem is perceived and solutions evaluated. The old paradigm assumes that parking should be abundant and free at most destinations. It strives to maximize supply and minimize price. The old paradigm assumes that parking lots should almost never fill, that parking facility costs should be incorporated into the costs of buildings or subsidized by governments, and that every destination should satisfy its own parking needs. Presently, parking facilities are a major cost to society, and parking conflicts are among the most common problems facing designers, operators, planners and other officials. The management of the provision and use of parking spaces initially emerged out of "important but rather narrow concerns about safety and the obstruction of traffic flow on the streets" (IHT, 2005, p19). This led to policies to manage parking on the highway, to consider parking standards at new developments and to provide off-street public car parks. With the realization of the inability of cities to cope with unrestrained increases in car traffic those management goals have emerged into a consideration of the degree to which parking policy contributes to the wider economic, environmental and social policies of towns and cities (Valleley et al., 1997). Well designed parking policies, in various ways, contribute to the promotion of a more efficient use of the transport network, lower emissions, higher densities and better, more inclusive urban design (IHT, 2005; Shoup, 2005a; Stubbs, 2002; Valleley et al. 1997). Parking policy should not be developed in isolation but as part of local and regional spatial and transport planning processes (Marsden and May, 2005). Parking policy acts as glue between the implementation of land-use and transport policies.

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III PRESENT PARKING STATUS

The Central Business District of Kolkata area comes within ward no.45 of Kolkata Municipal Corporation. The local government has made an extensive list of permissible on-street and off-street parking. The parking spaces has been leased out to various organizations which in return gives the local government an amount of Rupees 6490 per year against which they collect the parking fees from the respective user. A total of 931 on-street parking spaces are being leased off every year by the local government for the ward no. 45. Total number of permissible off street parking spaces in this ward is 343. A detail of the roads in ward no. 45 with allowed on-street parking is shown below:

Street No	Name of the road	No. of permissible parking
54	Canning Street	50
55	Jackson Street	8
56	Under Braborn road flyover	25
57	Braborn road West	32
58	Braborn road East	10
1	Armenian Ghat	5
2	Bankshall Street	43
6	Church Lane	14
16	Esplanade row West	41
17	Ezra Street	4
18	Fairlie Place	33
19	Garstin Place	5
21	Hare Street	30
23	India Exchange Place	55
28	Larkin Lane	14
32	Narendra Ch. Dutta Sarani	15
33	N.S. Road	102
39	Pollock Street	14
41	Rabindra Sarani	20
43	Radhabazar Street	16

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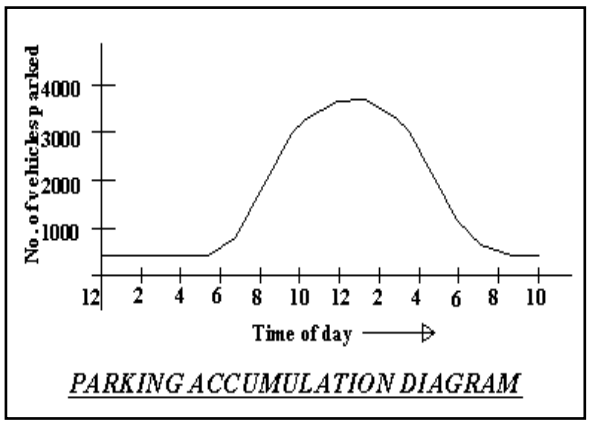
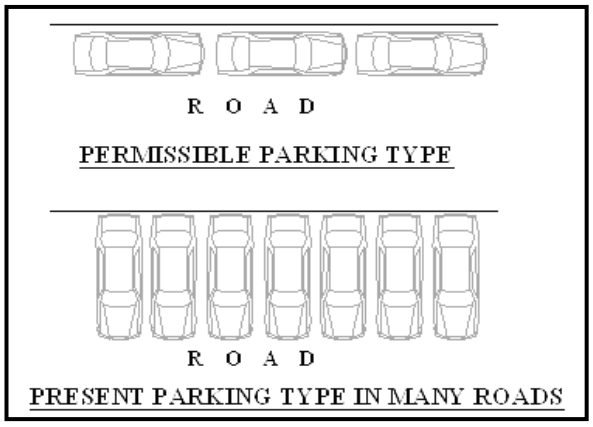
49	Strand Road	130
50	Swallow Lane	11
52	Vansitart Row	13
59	Wellesly Place	54
61	Clive Row	30
63	K.S.Roy Road	26
64	Fancy Lane	22
67	Govt. Place North	15
68	Old Court House Street	10
69	Koilaghata Street	22
70	Jackson Lane	20
71	Jamunalal Bajaj Street	20
	Parking lot of BBD Bag square	800
Total number of permissible on street parking spaces in ward no. 45 -		1731

Source: Data on parking, Kolkata Municipal Corporation

A study of the present scenario of parking reveals that though the number of permissible car parking spaces in this ward is 1731, the total number of cars parked in the allotted parking space at a given point of time is 5250. The organizations to whom the spaces have been rented out are infact accommodating more cars within the permissible space thereby reducing the driveway which infact goes a long way in creating traffic congestion.



PARKING ACCUMULATION DIAGRAM



Source: All drawings by author

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Further study on time and number of car parked in this ward [shown graphically in parking accumulation diagram] do reveal that the parking demand reaches its peak at the mid-day and lessens down after dusk which infact reiterates the parking character of any Central Business District.

IV PARKING DEMAND OF THE AREA

The parking demand for the area as calculated below considering the approximate floor space for different usages shows a huge gap between the demand and the supply. The approximate floor spaces have been obtained from landuse map and landuse survey data of the Kolkata metropolitan area.

PARKING DEMAND CALCULATION

TYPE	APPROX. FLOOR AREA [SQFT]	REQD. PARKING PER 1000 SQFT	TOTAL REQD.
Commercial	25,00,000	2.5 x 0.25 = 0.725	1810
Offices and administrative	40,00,000	3.8 x 0.25 = 0.95	3800
Residential	5,00,000	1.1 x 0.25 = 0.275	140
		Total Required	**5750**

Source: Institute of Transportation Engineers Publication, 1987a,b

So the conclusion from the study of the parking scenario of the area can be summarized as:

- There is a shortage of approximately 4000 parking spaces in this area.
- Survey of commuters in this area shows that number of stakeholders, [about 25%] cannot bring their vehicles due to shortage of parking.
- Government faces loss in revenue due to parking shortage, as the local government rents off the identified parking spaces to other organizations.
- Shortage of parking leading to illegal occupancy of road by vehicles resulting in road constriction, which ultimately leads to traffic congestion.

V RESPONDING TO PARKING DEMAND

To respond to the emerging parking demand and severe parking space shortage, new principles and policies needs to be laid down after identifying the goals. The goals based on which the principles, policies and recommendations that needs to be adopted for parking are:

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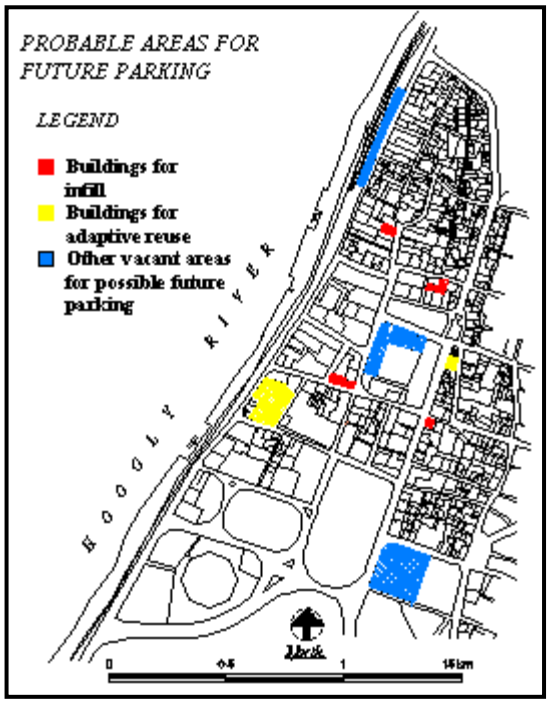
Goals

- To free the streets from illegal parking thereby utilizing the available driveway and reducing traffic congestion.
- To meet parking demand.
- Parking uses that compliment the pedestrian friendly environment and creates good neighbours to commercial and office establishments.

Principles, Policies and Recommendations

- Ensure that the area's public and private circulation network is made up of accessible routes.
- Utilize ground floor or basements of upcoming buildings to allocate parking.
- Adopt new design guidelines for parking structures.
- Create multilevel parking in vacant spaces.



VI PROBABLE AREAS FOR FUTURE PARKING

The area contains numerous buildings, which are in a deplorable state of affairs or remain unutilized. Amongst these buildings, survey conducted suggests that few are in good structural state and can be further used through adaptive reuse. Others, as the survey reveals are in severe dilapidation or under ruins and new constructions are expected in those sites through sensitive infills. Both for buildings considered for adaptive reuse and for infill, the ground floors can be designed to accommodate parking. Since all

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these plots belongs to Kolkata Municipal Corporation, designing or redesigning these for accommodating parking would not welcome hassles. Simultaneously, there are certain areas which are vacant and multilevel car parks can be designed to respond to the need of the hour.

By utilizing the vacant and unused spaces as shown in the figure, we can gain atleast 20,000 square feet space within which the present demand can be met. Also it can be made mandatory on the part of the local government to provide ground floor parking spaces for upcoming new buildings such that these new constructions can atleast serve their own requirements of parking.

The parking spaces can be attractively designed to such that they instill new urban design characters into the area and can create good neighbourhood locations to office and commercial spaces.

VII CONCLUSION

The parking problem in the Central Business District of Kolkata is severe and is increasing day by day by leaps and bounds. With more people thronging in this core and with affordability of users increasing as is reflected by increasing car ownership pattern for the city, parking problems if not dealt immediately in this area might turn out to be a curse for the city as a whole.

So for responding to the parking demand for the area, meticulously incorporation of feasible solution is the need of the hour. Probable spaces if capitalized to the best of the limits will not only go on a long way to curb the demand but will help to generate more funds for the local government. Also new regulations for modern constructions should be made such that they can house their own parking within the precincts. This will at the same time solve the problem of traffic congestion and will serve to make Kolkata clean and beautiful.

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