

PARKING POLICY & BYLAWS

Draft Report for stakeholders' consultation

November 2021



Gandhinagar Municipal Corporation



This document is prepared by the Town Planning department, Gandhinagar Municipal Corporation for the purpose of internal deliberations and discussions as part of legal procedure to be followed in establishing the municipal bylaws under relevant subsection of the relevant municipal law.

It also includes various information including verbal information obtained from preliminary discussions with the concerned stakeholders, observations from field reconnaissance conducted during the month of February 2021, and other relevant numerical data obtained from available records for preparing this document. Nothing has come to our attention to cause us to believe that the data provided by various sources are not true or not correct. During the parking demand and supply assessment study in various areas of the city, for lack of availability of data, the makers of this document have made several intelligent assumptions and approximations. Nothing contained herein, to the contrary and in no event shall GMC or any of its staff be liable for any loss of profit or revenues and any direct, incidental, consequential damages incurred by any user of this document. In case this document is to be made available or disclosed to any third party, this disclaimer must be issued to the concerned party

Prepared under section 458 of GPMC Act 1949

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Abbreviations

BUA	Built Up Area
BUC	Building Use Certificate
CATP	Chief Architect and Town Planner
CGDCR	Comprehensive General Development Control Regulations
DP	Development Plan / Development permission
DW1	Dwelling -1
DW2	Dwelling - 2
DW3	Dwelling - 3
E2WS	Equivalent two-Wheeler Space
ECS	Equivalent Car Space
FSA	Floor Space Area
GDCR	General Development Control Regulations
GF	Ground Floor
GMC	Gandhinagar Municipal Corporation
GNA	Gandhinagar Notified Area
GPMC Act	Gujarat Provincial Municipal Corporation Act, 1949
GSRTC	Gujarat State Roads Transport Corporation
GTPUD Act	Gujarat Town Planning and Urban Development Act, 1976
GUDA	Gandhinagar Urban Development Authority
IPT	Intermediate Para-Transit
IRC SP	Indian Roads Congress Specifications
ITS	Information Technology Service
MLCP	Multi-Level Car Parking
NMT	Non-motorised Mode of Transport
O&M	Operations and Management
R&B	Roads and Buildings department, Government of Gujarat
RFID	Radio Frequency Identification
RoW	Right of Way
sq.m	Squared metres
TP Scheme	Town Planning Scheme
UDUHD	Urban Development and Urban Housing Department, Govt. of Gujarat
u/s	Under Section

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1.Introduction to the city

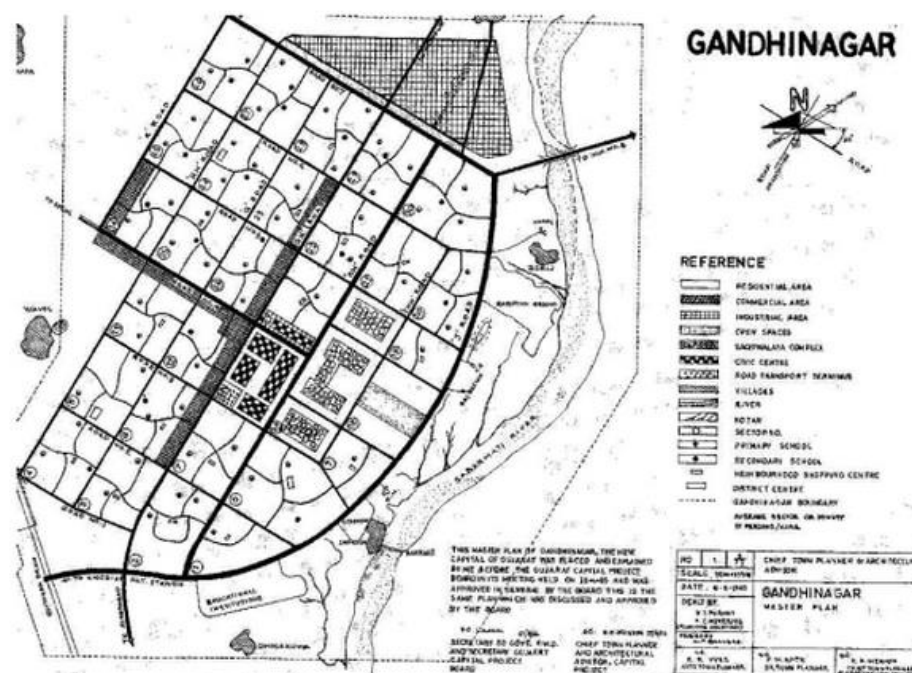
1.1. The origins of Gandhinagar

Gandhinagar, the capital of Gujarat state is the first (green-field) planned city in Gujarat, and India's second. As we all know, the need for a separate capital for the newly formed state of Gujarat was felt even while Ahmedabad, which was the commercial capital of the state, functioned as the administrative headquarters. Land admeasuring 57 square kilometres was acquired from the surrounding villages by erstwhile PWD office of the state government. This land was called as Gandhinagar Notified Area (GNA) which looked after the municipal functions in the city along with the Roads and Buildings (R&B) department.

Planning for Gandhinagar was done by architect H.K. Mewada, and his assistant Prakash M. Apte both of whom had worked with the famous French architect, Le Corbusier (who designed the city of Chandigarh). While Chandigarh was planned by a foreign architect, the administration in Gujarat was keen on having swadeshi architects and planners plan for the city; therefore, Gandhinagar can take pride in being the only city planned in India by the Indians.

1.2. Town planning of the city

Like Chandigarh, urban planning for the city of Gandhinagar was done on the basis of dividing areas into sectors; albeit this may be the only comparison between their urban planning. These sectors were formed from a city-wide road-grid with the major roads (45m wide) surrounding the sectors. The roads in the east-west direction were numbered, whereas the roads running north-south were named after the Gujarati alphabet letters. This was done so that every sector was roughly 1.0km x 0.75km dimensions. The city's master plan was approved in 1966.



At the core of each sector are community facilities such as neighbourhood shopping centres, schools, etc., which were so placed that the distance to be travelled to reach the centre of the sector would be a 'maximum of 10minutes of walking', which is also evident from the sectorial layout. Mr. Apte indicates that the city was planned with bicycles in mind (in his book The Building of Gandhinagar, pg. 14.) and the roads passing through

the middle of the sectors were bicycle tracks. Also, the city was planned for a population of 1.5lakh people but it could accommodate 3lakh people just with an increase of permissible FSI from 1 to 2.

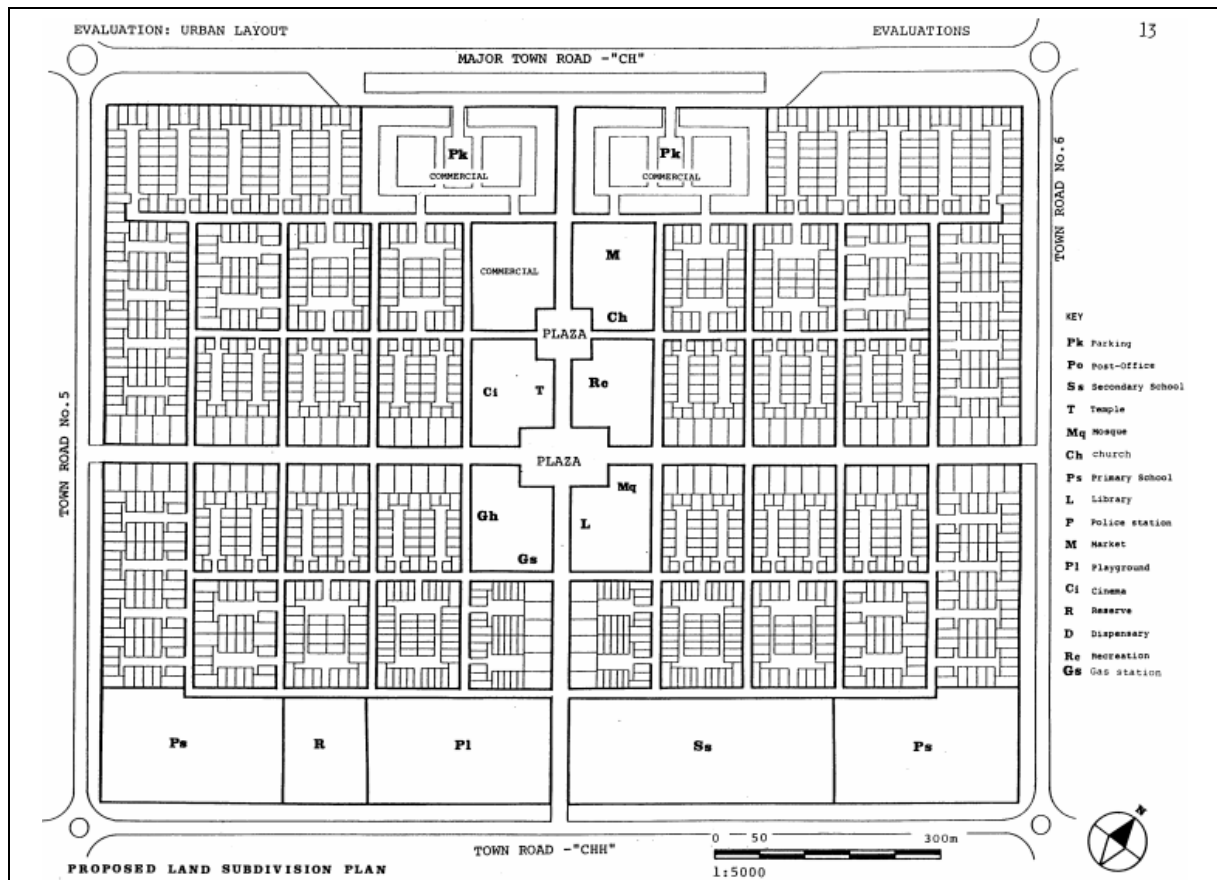


Image source: 'Evaluation of land utilization and circulation system in an urban layout. Case study: the new town of Gandhinagar, India'. 1983 Massachusetts Institute of Technology thesis by Navroz Dabu

Generally speaking, Gandhinagar was planned as an administrative city. Most land was therefore allocated for government offices and related public institutions, with residential and commercial land-use zoning supporting the larger administrative activities spread in the city. The city's master plan was approved in 1966 and revised in 1991 where by the land zoning for commercial and public institutional uses had been significantly increased (ref. - GUDA Development Plan 2024, Volume 1).

Subsequent to the sanction of original master plan, the town planning function in the city was carried out by the office of Chief Architect and Town Planning (CATP). It acted under the Roads and Buildings (R&B) Department that owned all land acquired for the city's development. CATP planned the city in a manner that various activities such as residential, commercial, industrial and institutional, among others were designated areas on the Master Plan.

In 2010, the Urban Development and Urban Housing Department (UDUHD) of the state government made the notified area into Municipal Corporation in 2010; and more recently, it expanded the jurisdictional limits of GMC merging Pethapur Nagarpalika, 18 villages and some areas from the Ahmedabad Urban Development Authority (AUDA) and Gandhinagar Urban Development Authority (GUDA) (see Annexure 1). Today, the city covers an area of approximately 195.6 square kilometres. Town planning in these newly added areas operates under the provisions of the Gujarat Town Planning and Urban Development Act (GTPUD Act) 1976.

GTPUD Act provides a unique facility to urban planners for ensuring that the city's growth takes place in a planned manner through the Town Planning Scheme (TP scheme) mechanism. Whenever the local authority feels an area is developing, it prepares TP scheme in that area, typically 150 to 200 hectares in area, under which existing land parcels are reconstituted in a manner that an appropriate street network is created after deducting standard

percentage of land from each land parcel. Typically, 40% of land from each land parcel is deducted and reserved by the local authority for the following uses:

Table 1 Planning provisions in TP scheme mechanism

Proportion of the TP scheme area	Use
15%	Road Network
10%	Housing for socially and economically backward classes of people
15%	Sale for Residential, commercial or Institutional use*
5%	Parks, playgrounds, open spaces
5%	Social infrastructure such as schools, fire brigade, dispensaries and other public utilities such as treatment plants
Remarks: *proceeds from which are to be used for the purpose of providing infrastructure facilities	

Source: section 40 of GTPUD Act 1976

Although building permissions issued in these TP scheme areas give due consideration to parking requirements through enforcement of prevalent building bylaws, off-street parking facilities may be provided if and where seriously required on lands reserved for public utilities.

1.3. Planning provisions for parking

Parking is given due consideration through stipulations in the building bylaws that are created or updated as part of the city's Master plan / Development plan; and they are often known as the General Development Control Regulations (GDCR).

Neither the city's initial Master Plan nor the subsequent one, or any of the available documentation surrounding these plans provide any evidence of an established set of parking stipulations in the form of a bylaw. Discussion with the office of CATP tells us that established set of bylaws for issuing building permissions could have existed, but such documentation is no longer available in any material form. Available records of approved building layouts of the CATP era do not indicate if the parking (wherever provided) provision is based on such established bylaw. However, CATP's sector layouts procured by the Municipal Corporation in the recent times show plots reserved for parking in various sectors, almost entirely in the commercial zones. This shows that consideration was given to the existing and future parking demand in the city, albeit for commercial developments only. Discussion with the office of CATP revealed that these plots parking reservations are often indicated without specific demarcations whereby they are sublime, and that they may be subject to change or entire removal in cases where there is a requirement for plot allocation and the development in the surrounding areas of the given parking reservation has not taken place.

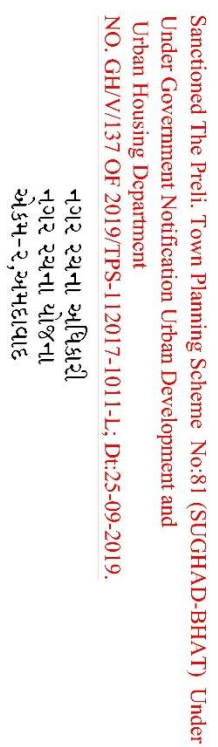
Planning provisions for parking post CATP period come through GUDA's GDCR 2004 and most recently through the currently prevalent CGDCR 2017 brought into force by the State government (Annexure 2 and 3)

To summarize, if it is found that a certain area in the city requires parking, there is a healthy chance for supplying it since there is ample land available for public purposes.

1.4. Methodology

In this report, while we attempt to develop parking policy for Gandhinagar within the legislative framework under which the municipal corporation operates, with respect to the current site situation as well as with a vision for the future of the city, and along the lines already clearly issued by the central government in its guidelines including how other cities (viz. Delhi, Bengaluru, Pune, Surat, and Vadodara) have adopted them. And while we do so, we would like to stress that resolving parking issues just by providing it wherever required is not judicious. Every vehicle added in the city comes with a demand for a certain parking space. So, there is no end to it! On the other hand, lack of adequate parking space results in congested streets and consequently problems of traffic congestion and environmental concerns; negatively impacting the overall quality of life in cities. Therefore, the

question is to what extent parking supply should be provided for different types of land uses? What would be the rationale to work out a balance between parking demand and supply? What kind of policy needs to be advocated to ensure sustainable growth of traffic in a manner that parking of vehicles in the city can be done efficiently, safely and in a planned manner? We attempt answering these questions for Gandhinagar with first understanding parking scenario in the city in Chapter 2, then looking at what constitutes the right approach to solving parking problems including various guidelines issued by the central government in this regard in Chapter 3. And finally after careful consideration of all this information, we suggest various appropriate parking policies in Chapter 4 and in order to implement the Parking Policy, in Chapter 5 we provide detailed by-laws for the same.

$9 \text{ mL} = 20 \text{ mL}$ 

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2. Need for parking policy

2.1. When / why do we need policy?

The term 'policy' indicates guiding principles. Preparing a Parking Policy therefore would be creation of the guiding principles that would determine how parking is carried out in public places. We lay great emphasis on highlighting the fact that the need for having a policy in place for parking does not arise only if there are issues plaguing the parking scenario in the city; in fact, policy requirements arise from the very fact public services need to be organized and administered through a set of standards and rules so that the citizens can avail the services in an orderly manner.

2.2. Parking scenario in the city

2.2.1. Setting a general contextual understanding for parking in the city

Building bylaws typically stipulate parking requirements based on the construction area: on the basis of built-up area (BUA) (as in the 2004 GDCR) or on the basis of floor space area (FSA) (as in the recent 2017 CGDCR). Of these, FSA is a better parameter to measure parking since it excludes areas (such as staircases, lift, parking spaces etc.) that are not actually normally habitable. Since parking requirements are reasonably taken into account when issuing development permission (DP) to any building, and the same is verified before issuing building use permission (BUC), there should ideally be no parking issue in the city. Therefore all parking issue in the city arise from any or a combination of the following events:

1. Existing approved parking spaces within the buildings may be-
 - a. Encroached in varying extent (partial or full),
 - b. Under-utilized due to the following reasons -
 - i. Lack of enforcement of parking behaviour upon the users of the building by the building owner(s) directly or through suitable methods such as security guards,
 - ii. Temporary or permanent obstacles to access into parking spaces;
2. There could be additional parking demand than originally envisaged while issuing DP and BUC to the buildings through:
 - a. Conversion of building use,
 - b. Unauthorized multiplication of number of units (residential or commercial),
 - c. in the area surrounding major activity hotspots;
3. Existing approved parking spaces are not sufficient against the requirements of the current times as vehicular ownership is more common, multiple vehicular ownership more so,
4. Lack of civic parking-behaviour (Irregular and haphazard parking behaviour).

In this sub-section we attempt to present the reader a contextual understanding of parking scenario in the city based on field facts – for the notified area, as well as for the areas added in June 2020.

Notified Area

As described in the previous section, the notified area of the city urban planning involved designation of areas into residential, commercial, institutional, and industrial uses, which was undertaken by the office of Chief Architect and Town Planner (CATP). Of these areas, CATP has had spaces for parking among the major activity centres in the city reserved in its sector layouts; most of them are in the commercial sectors viz. sector 6, 11, 16, and 21. Discussion with the office of CATP revealed to us that where building developments surrounding such parking spaces have reached a certain level indicating near-full development of that pocket / area, such parking spaces are freezed and demarcated in the sector layouts. In remaining places, such parking reservations are only indicative; in fact 'fluid' – meaning the land may be put to some other use or may be allotted to some other organization as the government deems fit. It bodes well for the notified area in Gandhinagar to have these reserved parking spaces, which may be provided as public parking, if not already done so. As the custodian of all public land in the notified part of the city, R&B department has also developed and provided parking in the city

such as the on-street parking along the Vijay complex - Meghmalhar complex road in sector 11, and in the shopping area in Sector 21. Therefore the notified area is distinctly characterized by additional parking spaces.

Areas merged into GMC in 2020

The areas added by the state government into GMC limits in June 2020 can be categorized into TP scheme areas and non-TP scheme areas. These areas may not have plots specifically reserved for parking; however, TP scheme mechanism allows for reserving plots for 'public utility' which typically include utilities such as neighbourhood level water or sewage treatment plants, pumping stations, etc. various kinds of reservation plots available in these areas are enlisted in table X. Although the corporation may utilize plots reserved for Public Utility, Open Space, Neighbourhood centre, or even Sale for Commercial (SFC), we stress that putting to use such spaces for providing parking would be generally discouraged and would be utilized only in the last-resort cases.

Gamtals

Gamtals across the city, are characterized by a central open space owned by the Gram Panchayats (GPs) (now owned by the municipal corporation) and used commonly by the citizens in the GP. Parking in these areas is typically carried out along the narrow lanes. It can be observed that most buildings that exist in the gamtal areas are built without proper consideration of actual parking demand generated from their resulting use. This indicates that parking requirements stipulated in the building bylaws (for such areas) are not followed in these buildings. However since road network is limited in these areas and traffic on the thoroughfare too is limited, this parking deficit does not create significant or chronic issues in these areas. Notwithstanding this fact, parking deficit in gamtal areas cannot be left unsolved.

2.2.2. Field study regarding the parking scenario in Gandhinagar

In this sub-section, we discuss the parking situation at key activity hotspots of the city, which we felt would bring out the various salient aspects of the parking scenario in the city. This study brings spotlight to the specific issues that will require attention while the Municipal Corporation develops and determines appropriate parking policies for the city's needs.

For the residential area, we present a general study describing various elemental issues surrounding parking scenario. For other areas, based on common knowledge of activity hotspots with parking issues we selected certain pockets of study in Sector 6, 11, and GSRTC bus depot area at GH3.

For the purpose of capturing the salient strains of parking scenario in the city, we have undertaken reconnaissance as well as detailed demand and supply study in these selected pockets (hereby referred to as 'study-pockets').

Demand and Supply are studied in terms of the below mentioned aspects:

DEMAND	<ul style="list-style-type: none"> • Parking requirements for each building in the selected study-pocket based on current/prevalent building bylaws in following terms: <ul style="list-style-type: none"> ○ Total parking area required ○ Total parking area required at ground level • Parking requirements according to currently prevalent building by-laws • Other field conditions within/adjacent to the pocket indicating demand (<i>inferred through presence of vehicles parked on-street</i>)
SUPPLY	<ul style="list-style-type: none"> • Parking provided (square meters) within each building premise based on the Building bylaws prevalent at the time of obtaining development permission • parking provided, if any, in form of on-street parking facilities built by R&B department or parking utilization on reserved by CATP

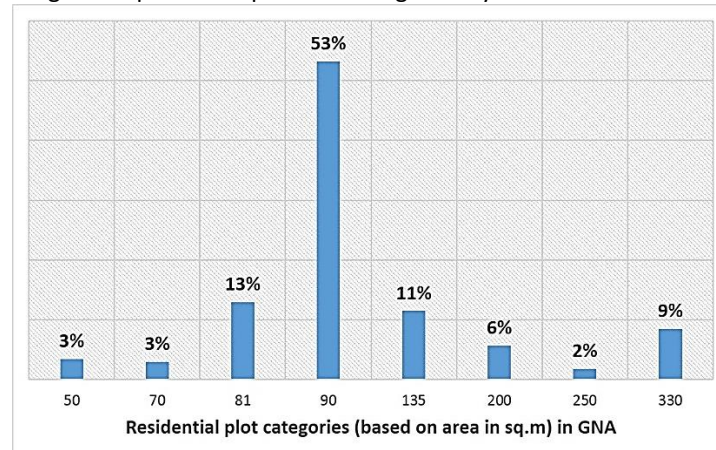
General parking scenario in residential areas

Apart from the major activity hotspots discussed above, we would like to draw attention to the parking scenario in Gandhinagar within the residential areas of the notified area. Parking requirements for most of the residential areas in the notified area are not met by the house-owners; in fact this is a unique condition created by the manner in which planning was decided for the residential areas. Residential areas in the notified area comprise

mainly of plots of sizes 50, 71, 81, 90, 135, 200, 250 or 330 square metres. There are other plots with more area, but these are allocated to the ministers and other such purposes and these are not undertaken for this parking study.

The basic principle for plot allocation to the citizens in this 'administrative' city was economic-grouping, which in-turn was based on government-salary based post (position) -equivalents. In many cases it was also based on social-norms as evident from the plot allocations to members of the political democracy. Plot-size distribution in the city (see Image 2) shows affluent households had the larger plots whereas plot sizes of the less affluent of such groups were smaller.

Image 1 Proportion of plot-size categories by their numbers in GNA



Source: Generated from GIS software calculation of plot sizes

Note: The percentage figures above represent proportion of the total of the selected plot size categories only

Image 2 Plot allocation based on income category

INCOME MONTHLY	GOVT. HOUSING							PRIVATE HOUSING						
	TYPE		AREA PLOT	AREA UNIT	NO. FLOORS	NO. UNITS	NO. PEOPLE	TYPE		AREA PLOT	AREA UNIT	NO. FLOORS	NO. UNITS	NO. PEOPLE
to \$15		1		42 m ²	2	180	900		1	81 m ²	23 m ²	2	240	1200
		2		42 m ²	3	108	540							
\$15 to \$30		1		52 m ²	2	195	975		1	162 m ²	35 m ²	2	168	840
		2		52 m ²	2	35	175		2	105 m ²	50 m ²	1	224	1120
		3		52 m ²	3	140	700							
\$30 to \$60		1		70 m ²	2	64	320							
		2		70 m ²	3	56	280							
		3	396 m ²	35 m ²	3	120	600							
\$60 to \$85		1		90 m ²	1	16	80			135 m ²	50 m ²	3	111	555
		2		90 m ²	2	32	160							
\$85 to \$140				92 m ²	2	168	840		1	200 m ²	84 m ²	1	42	210
									2	875 m ²	60 m ²	3	96	480
									3	1120 m ²	60 m ²	3	156	1080
\$140 to \$200										330 m ²	108 m ²	1	173	865

Source: Evaluation of land utilization and circulation in an urban layout, case of Gandhinagar, a 1983 MIT thesis by Navroz N. Dabu.

Since the allocated plot's size for people was determined on the basis of their gross family income at the time of plot-allocation, in most probability these families must have outgrown their previous economic/ socio-economic status today, becoming more affluent, and also by that logic contributing to growth in parking demand in the city.

It seems, that the pre 2004-GDCR building bylaws did not anticipate vehicular ownership on a scale and of sorts that can be seen today. As we saw earlier, Gandhinagar's original town planning envisaged a city predominantly using cycles for work and other such trips. Perusing through various available building plan approval layouts of various plot-size categories, it can be observed that parking requirements for plots with area 135sqm and below do not appear to be taken into account while issuing development permissions (see images below). On the other hand, while such evidence of parking requirement in residential plots greater than 135sqm also cannot be found within available records, the margin requirements however allow for two-wheeler and four-wheeler parking space within them.

Image 3 GF layout of 70sqm residential plot

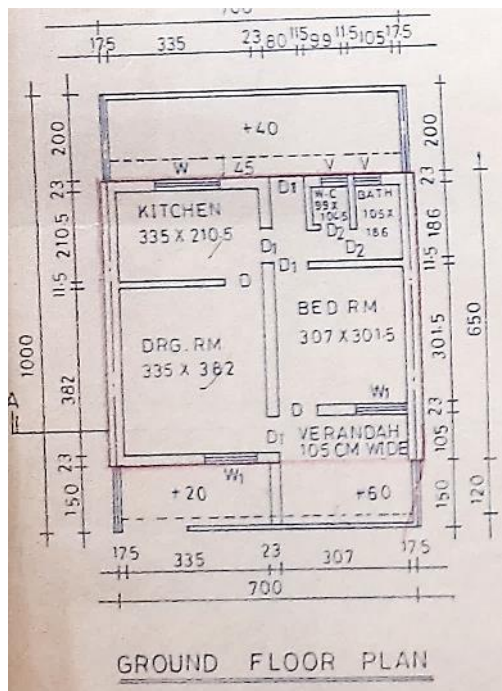


Image 4 GF layout of 81sqm residential plot

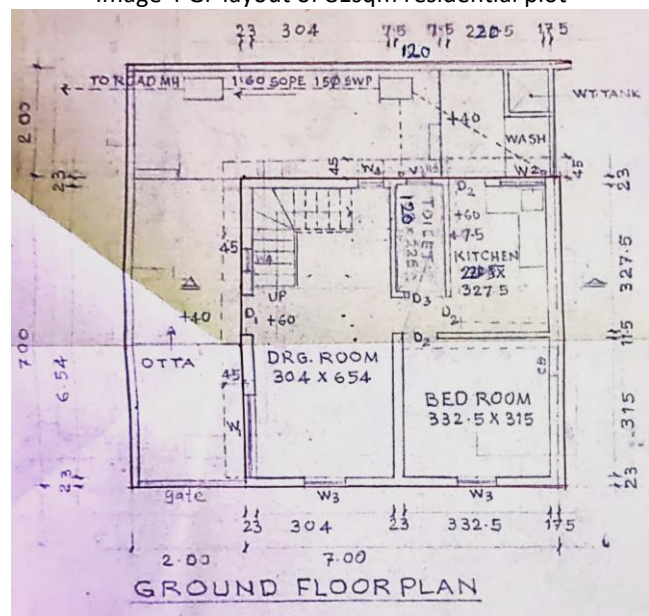


Image 5 A typical 2m side margin in 81 and 90sqm plot categories in GNA



Building permissions and occupancy certificates issued for these >135sqm residential plots subsequent to coming in force of GDCR-2004 do indicate parking provision. Also, it should be noted that DW3 (i.e. apartments / flats) type residential units have always been issued building permissions after required parking as per prevalent building bylaws. But building permissions issued prior to GDCR-2004 for such DW3 purposes may not show any traces of having weighed-in on parking requirements old layouts. The <135sqm category of plots cover more than

80% of all residential plots in the city. Therefore, it can be said that most of the residential area in the city lacks adequate parking

Image 6 GF layout of 90sqm residential plot

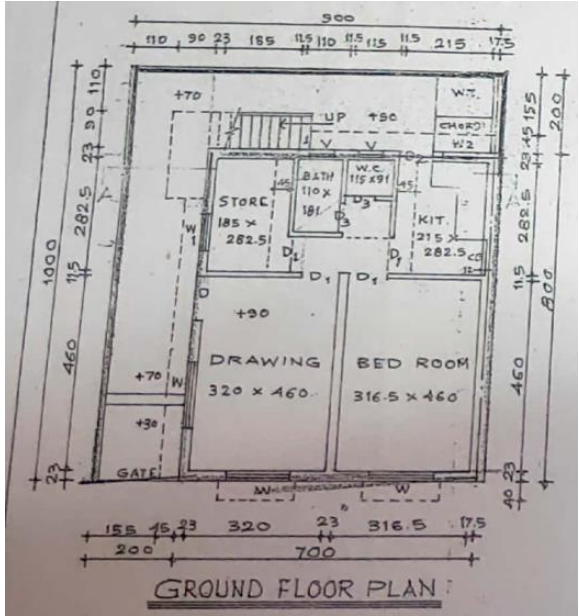


Image 7GF layout of 135sqm residential plot

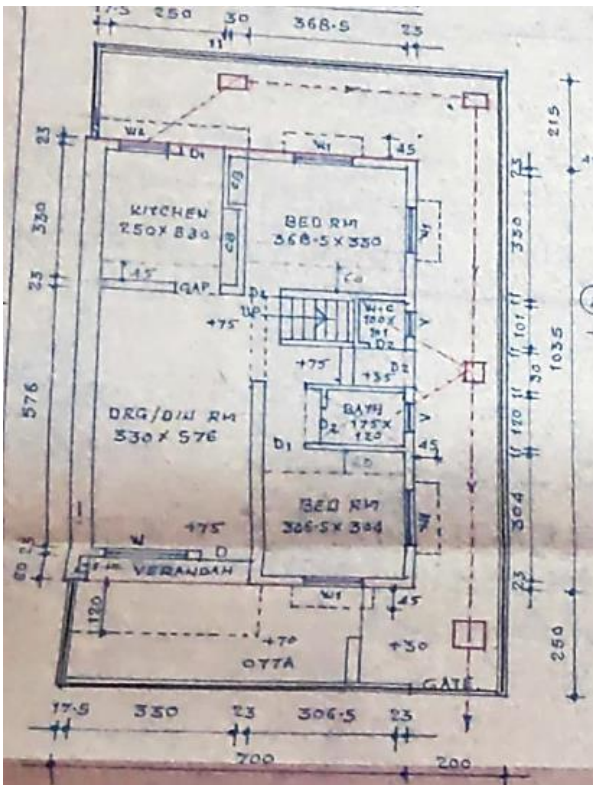


Image 8 A typical 135sqm residential plot in GNA



Image 9 A typical 200sqm residential plot in GNA



Image 10 GF layout of a typical 200sqm plot

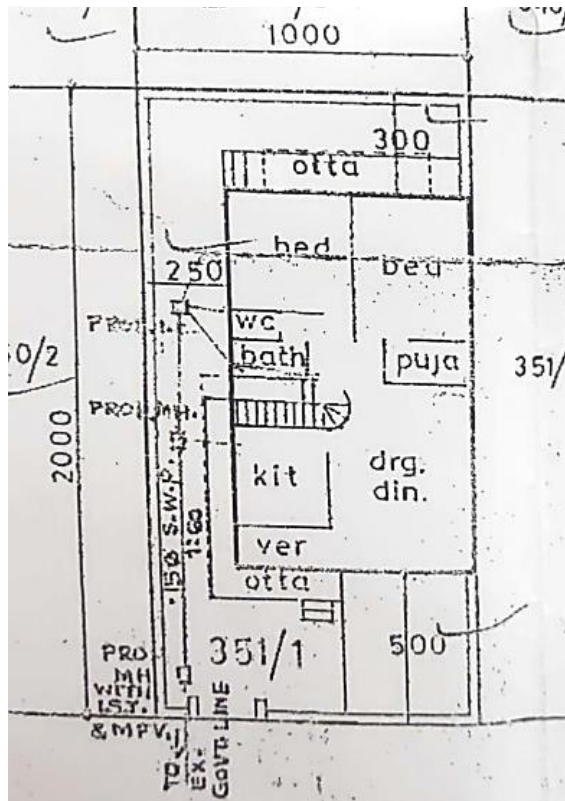


Image 11 GF layout of a typical 250sqm plot

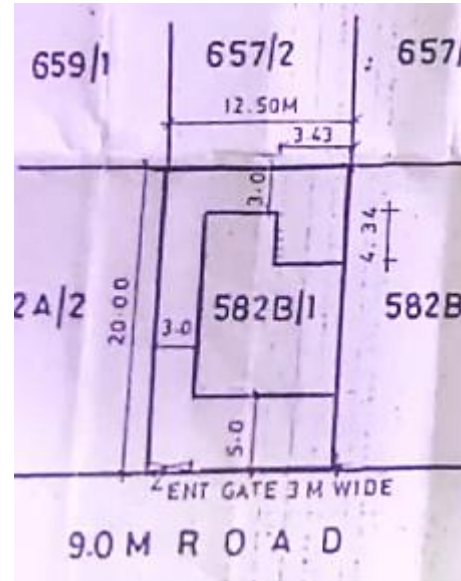


Image 12 A typical 250sqm residential plot in GNA



Image 13 GF layout of a 330sqm residential plot in GNA

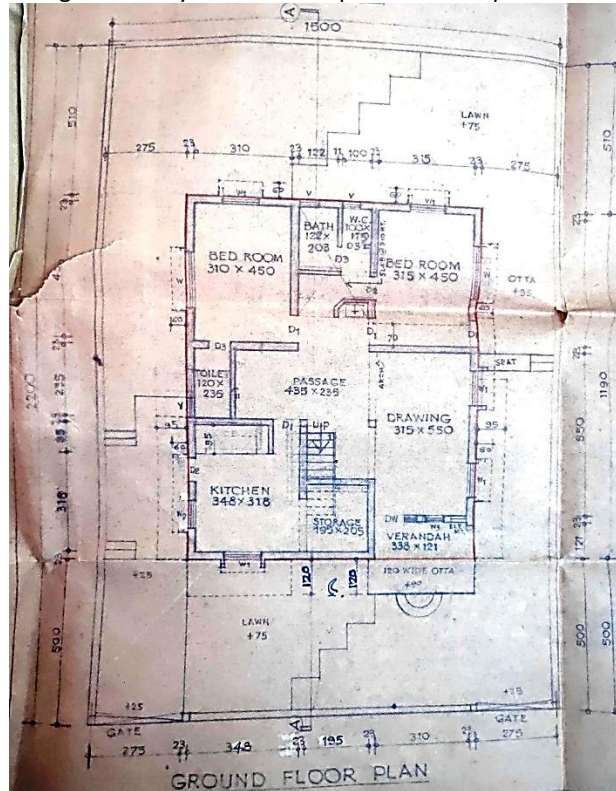


Image 14 A typical 330sqm residential plot in GNA showing space for car parking



It is also interesting to note that some level of building regulation is provided even in the Sanad, i.e. the property ownership document for the notified lands (see Image 15). Building regulations mentioned in the Sanad document include control over the type of use (residential), margin requirements (thereby determining coverage), the maximum number of units that can be built, and a general provision putting liability on the plot-owner to adhere to the building bylaws prevalent at any point in time while undertaking any development work.

In absence of parking stipulations in the historical bylaws, parking is carried out mostly on public land – in the common plots, and outside the plot-boundary thereby encroaching upon the RoW of the local access roads. This negatively impacts the quality of life in the residential areas.

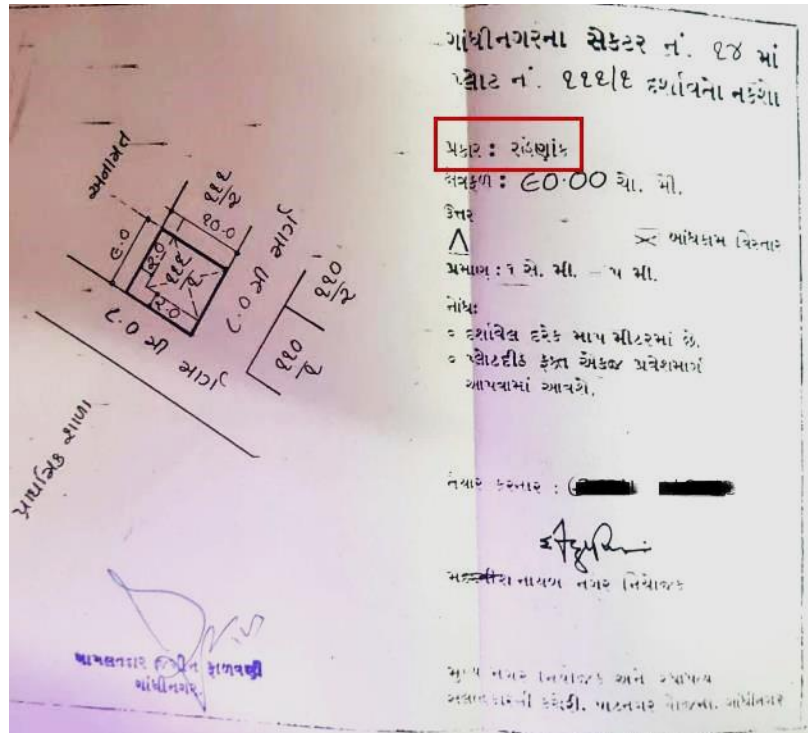


Image 15 Sample sanad of a residential plot indicating architectural control



Image 16 Parking on a typical 6m internal road in a residential area in GNA

Common plots are an integral feature of the city's town planning as described in Chapter 1; and it is important that parking on these common plots is understood from the correct viewpoint. Common plots are multi-purpose in nature, being put to different uses by the surrounding residents such as for family events, plantations and regular recreational activities apart from providing for parking. While these common plots are owned by the R&B department they are used by the residents around them on common or collective ownership basis. Many common plots in the city are encroached upon by temporary sheds, plantations, religious structures, fencing and other sorts of encroachment. Add on all of this, since common plots were never meant exclusive or even implicit public-parking function, and due to their multi-purpose / multi-functional nature, there is a need to resolve the serious parking deficit through gradually phasing out parking in common plot and the local level RoWs in the long run. Parking should either be eliminated entirely in the long run, or at least, it should be judiciously limited in these spaces.

Image 17 A social gathering in the background in a common plot



In light of this serious parking deficit in residential areas, while we should aim at gradually eliminating or at least limiting the use of entire common plots for parking, we could also ensure parking within the plots to the maximum possible extent. Parking provision in residential building units appears to be possible for two-wheelers to some extent and can be seen practically utilized in many instances even for small four-wheelers. Marginal space of 2.5m and above can be seen in plots-sizes greater than 200sqm, which are suitable for accommodating one ECS and a couple of E2WS even today. However, the corporation needs to encourage official parking provision in all residential building units in appropriate sizes, and not just as make-shift solution.

Parking provisions in residential areas outside this notified area must also be characterized by such parking deficit arising from lacuna in prevalent building bylaw, or where such bylaws stipulated parking, the lack of enforcement of it.

In view of all of the above, the Municipal Corporation shall amend necessary regulations in the prevalent building bylaws to encourage adequate parking provision by the vehicle owners and until this practice reaches full coverage, it will regulate residential parking on the aforementioned public spaces in safe manner.

Study pocket - Sector 6

The study pocket in sector 6 (see image below) is interesting because all of a unique system of ignoring parking regulations. The selected pocket has 18 plots forming a U-shape with a large plot of land 'reserved' by CATP flanked by them. There is a service road parallel to the GH road providing access to this plot from the main road as well as internal town roads leading to the interiors of sector 6 (see image below). All of the plots in the selected pocket are commercial, 15m deep and 10m wide on the front, with only a 2.5m wide frontal margin for the ground level indicated on the Sanad (see Image 19), which meant the remaining land would be the ground-coverage.

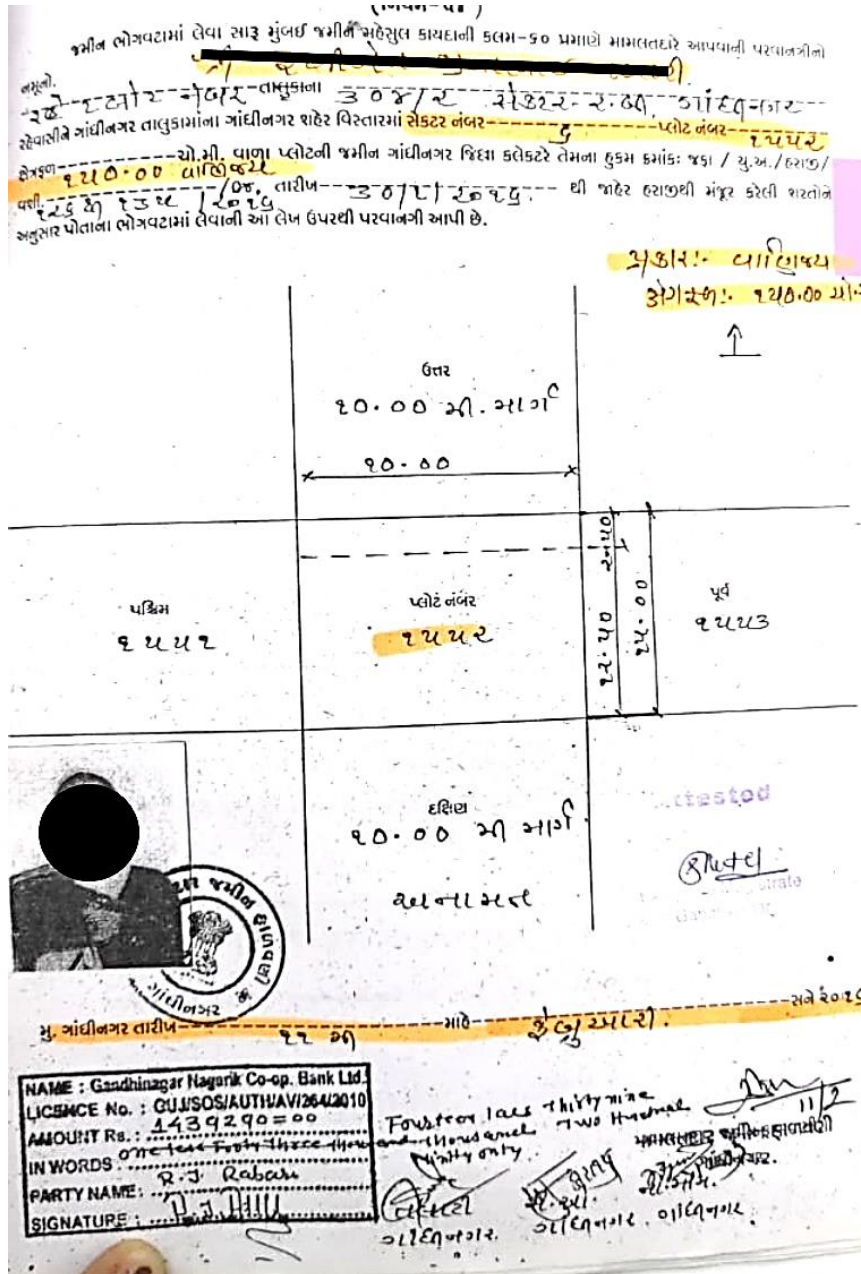
Image 18 Study pocket selected in Sector 6



Since Sanad has always had superseded building bylaws, provisions such as margins within the plot and between two buildings including parking requirements from the latter were not considered for these plots. The built-form resulting from this unique architectural control exercised by Sanad is such as that of a three large building

complexes with a continuous passageway at the plinth-level along each of these building-complexes. The 2.5m wide passageway does not indicate any strategic function.

Image 19 Sample sanad allotted for plots in the sector 6 study pocket



In absence of parking provisions in any of these buildings, the parking requirements are met by the central reserved plot. Even then, the current building bylaw stipulations indicates parking deficit (see Table 2 below), which only further aggravates if all the plots saw full permissible built up. Parking demand is further increased in the pocket with informal economic activities along the service road and on the open plots immediately adjoining in the north and west of this selected pocket. Readers are requested to refer to **Error! Reference source not found.** for detailed figures on plot-wise construction and parking demand versus supply.

Table 2 Statistical analysis of parking demand versus supply in sector 6 study pocket

Number of buildings	18			
Total Built up Area	15,891			
Total Floor Space Area	11,365 (approx.)			
Parking requirements	Demand (current building bylaws)		Supply	
	According to present built space (sq.m)	According to maximum permissible built space (sq.m)	Within the plot (sq.m)	Reserved public parking (sq.m)
<i>Total</i>	3,410	3,524	0	~2,160
<i>Visitors' parking at ground-level</i>	341	353	0	

Image 20 Satellite image showing parking scenario in sector 6 study pocket



Let us discuss the salient observations from this study pocket. The technical parking deficit arising from the unique architectural control in this plot is further aggravated by presence of informal economic activities. Given this situation, and also absence of any other public space; the municipal corporation may opt for economically increasing the capacity of existing parking space. Determining parking charges for this pocket would also require considering representations from the plot owners in this pocket since parking deficit largely a systemic failure. Lastly, additional parking demand caused by informal economic activity may need to be regulated in a manner that illegal hawking and vending is not indirectly legitimized if additional parking provisions were to consider demand arising against such demand.

Image 21 Additional parking demand encroaching road-space in sector 6 study pocket



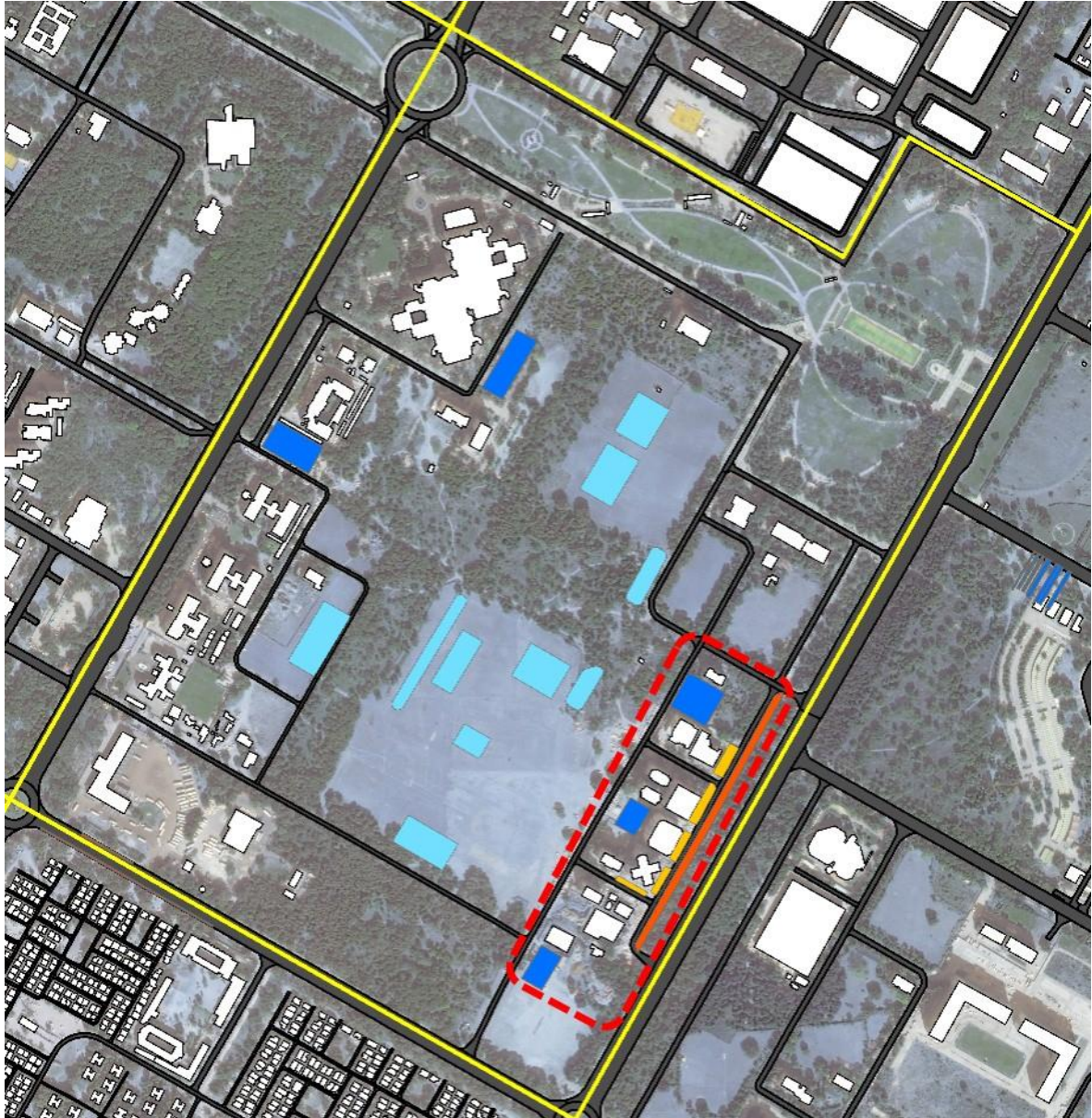
Image 22 Additional parking demand on adjoining un-alloted open plots in the sector 6 study pocket



Study pocket - Sector 11

Sector 11 is one of the two prime commercial centres in the city. With a lot of un-built open plots, it is not as developed as Sector 21, the other commercial sector. CGDCR allows building heights up to 25m and even 35m in this sector, which indicates the significance accorded to it as the future downtown of the city.

Image 23 Study pocket selected in sector 11



The study pocket chosen in this sector comprises 15 building units, construction and parking details of which are shown in **Error! Reference source not found.** The pocket is also flanked by large un-allotted open land to its west and south. There are three parking reservation plots within this selected study pocket; these reservations admeasure approximately 5,237sqm (see Table 3), of which two can be seen under physical development for parking at present.

Perusing available records pertaining to building permissions issued to the buildings in this pocket, it was observed that parking requirements were considered while according building permissions to each of these buildings even in the pre-2004 GDCR era; albeit, no reference to parking stipulations and its calculation is made either on the approved layouts or within the decision making process noted on the respective files. Available

parking within this study pocket falls significantly short of the total parking requirements as well as in terms of visitors' parking to be made available at the ground-level. Owing to this, and other factors described here, there is a huge demand for on-street parking in this pocket. The gigantic un-allotted open space adjoining westward to this study pocket bears witness to this fact in form of a huge swathe of parked vehicles (see image below).

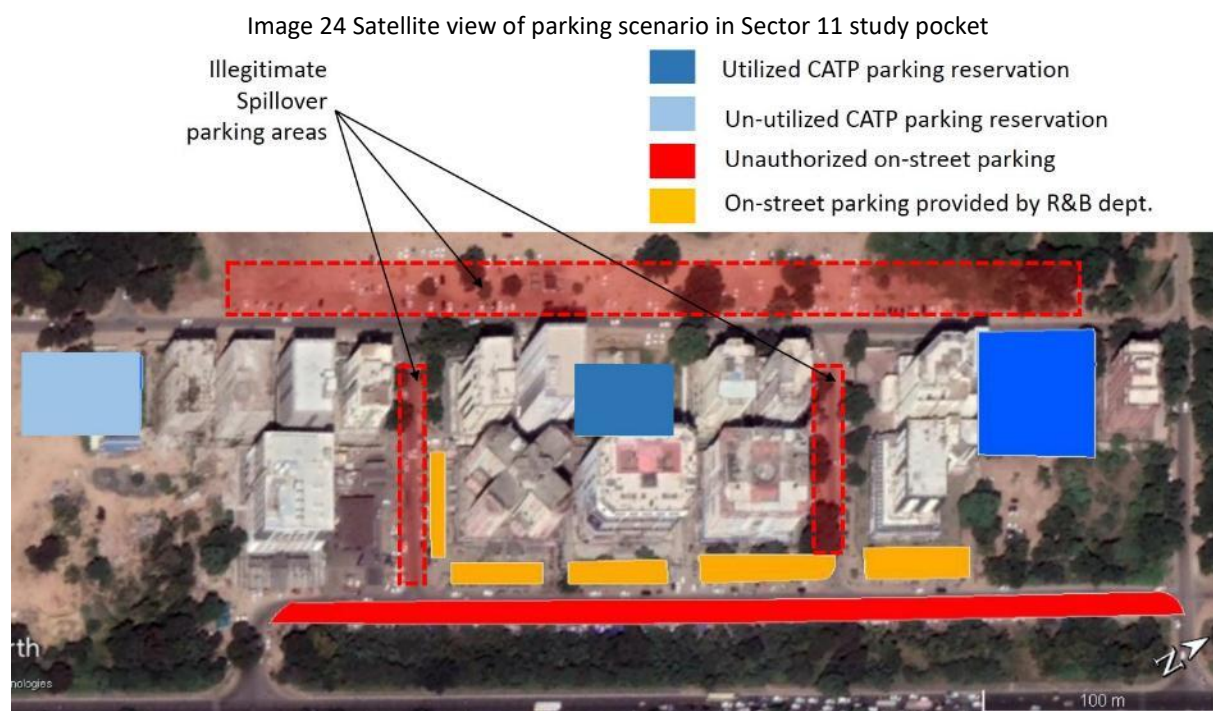


Table 3 Statistical analysis of parking demand versus supply in sector 11 study pocket

Number of buildings	15			
Total Built up Area	90,240 sqm			
Total Floor Space Area	61,609 sqm (approx.)			
Parking requirements	Demand (current building bylaws)		Supply	
	According to present built space (sq.m)	According to maximum permissible built space (sq.m)	Within the plot (sq.m)	Reserved public parking (sq.m)
<i>Total</i>	22,386	1,54,675	16,588	~5,237
<i>Visitors' parking at ground-level</i>	4,477	15,467	1,933	

So, despite the parking provisions within these buildings, parking issues are common in this pocket as can be seen in on-street parking surrounding every building here. Let us discuss the salient observations made in this study pocket. Parking deficit in this pocket arises partly from the pre-2004 GDCR requirements, partly from illegal encroachments, and where any of these two are not applicable, there is lack of enforcement of parking behaviour. Let us see them one by one.

1. Systemic parking deficit within the buildings

We infer from the available records that pre-2004 GDCR building regulations did not anticipate vehicular ownership and usage to the extent and of the sorts as seen today. This is why parking provisions in the CATP approved buildings in this study pocket is limited. In fact in many cases such as that of plot no.20, the approved parking is for cars and cycles only (see Annexure 5). Additionally, a unique feature of building permissions issued to commercial buildings was that storage space for the commercial activities was encouraged in the basement. Therefore, parking space had to be the remnant after leaving storage space.

These stores have over the time been converted into offices and shops thereby creating additional parking demand in the building.

2. Under-utilization of existing parking

Another common theme of parking scenario in this study pocket is the under-utilization of existing approved parking within the buildings. This is manifest through a number of ways:

- a. Existing parking is made inaccessible to the users by hindrances to entry gates such as locked gates and irregular parking;
- b. Existing parking spaces are illegally encroached upon by conversion into workspaces and shops. In nearly all cases, these spaces have been purchased by the present shop-owners unbeknownst of the fact that these are unauthorized properties;
- c. Existing parking spaces remain under-utilized because of lack of enforcement of parking behaviour - parking for the building taking place on-street despite availability of ample parking within the building.

3. Additional parking demand

Additional parking demand; as seen in other parts of the city and as is by now accepted as the typical issue in our Indian cities, is created by informal economic activities taking place in the spaces surrounding these buildings as well as under the conditions mentioned in 2(b) above. Parking demand is also increased when building complexes comprise visitor-intensive usages such as shops, pan parlours, photocopy & medical shops, restaurants etc. Parking requirements of commercial spaces differ on the basis whether they are concerned with office buildings or with retail and mercantile activities; parking scenario in this pocket seems to have been influenced with this too.

Image 25 spillover parking demand met by open spaces in Sector 11



Image 26 Unauthorized on-street parking resulting from under-utilization of approved private off-street parking seen in sector 11 study pocket



Image 27 On-street parking opposite Meghmalhar complex created by R&B

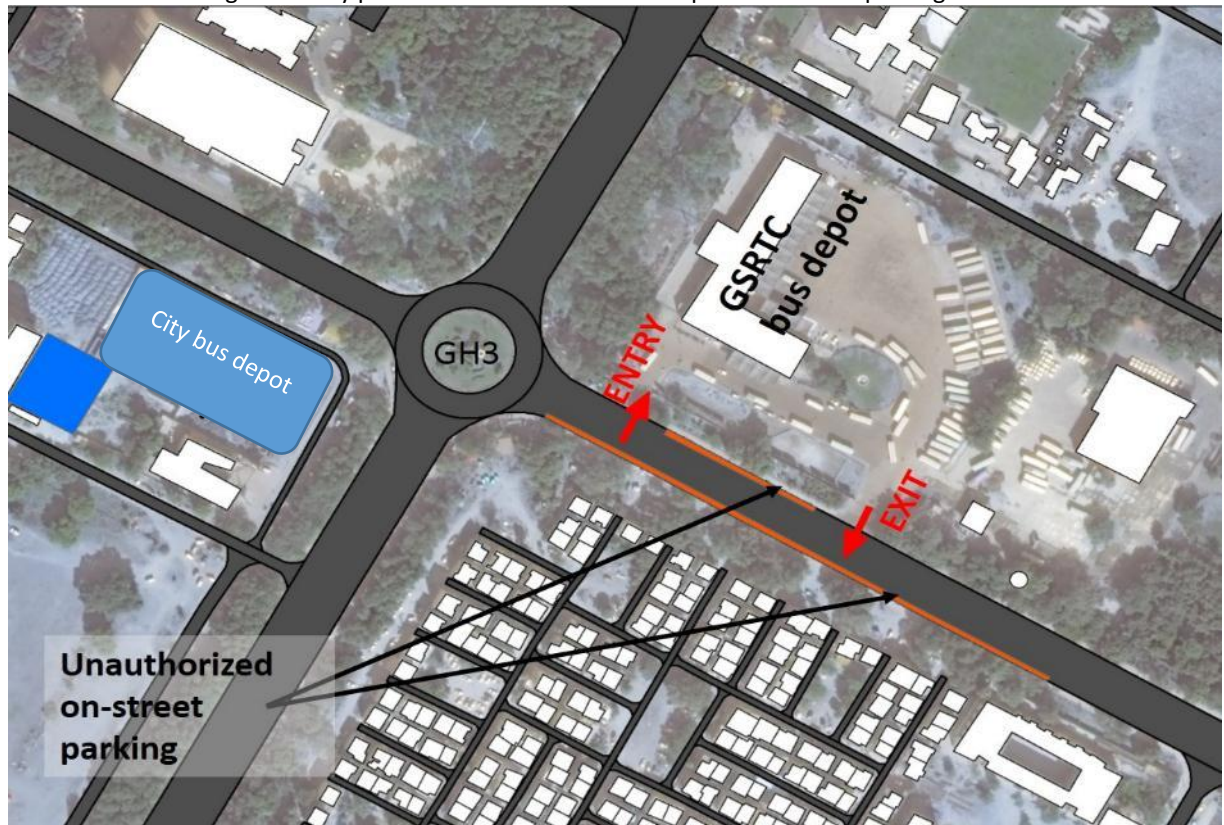


It helps that there is availability of public parking space available in the form of reserved parking plots. Two of them are being physically developed for parking use, whereas the other can be developed too. The aforementioned facts indicate that the municipal corporation requires to enforce parking behaviour, reclaim existing under-utilized parking spaces, determine line of action against encroachments (after making appropriate deliberations on the fact that these unauthorized spaces have been purchased with sale deeds over a long period of time), and may also deliberate capacity-augmentation of existing public on-street and off-street parking spaces.

Study pocket – GH-3 intersection (GSRTC Bus depot and City bus depot)

The GH-3 junction is the main public transit node in the city. It has GSRTC bus depot, the main and only bus depot for state-wide transportation and the city bus depot, the main and only bus depot for city-wide bus transportation; both of these depots are on either sides of the GH-3 junction (see image below).

Image 28 Study pocket selected at GH3 with representation of parking scenario



Parking scenario in this pocket of the city is characterized by large number of IPT (auto-rickshaws mainly) parked on the streets. Appropriate parking provision for IPT catering to the transient passengers is not evident in this place. There is an old signage for rickshaw stand near the City bus depot, however there is no proper parking space for auto-rickshaws and they remain parked on the footpath.

Image 29 On-street parking of IPT (autorickshaw) outside GSRTC bus depot



Parking of IPTs is prohibited along the stretch of the road abutting the GSRTC bus-depot. These boards are indicated both at the entry and exit points. However, auto-rickshaws can be seen parked parallel in a single line between the entry and exit gates. Parking of auto-rickshaws and sometimes, even four-wheelers can also be seen within the footpath spaces in this pocket.

Image 30 No parking sign board at entry and exit gates of the GSRTC bus depot



Image 31 Inadequate rickshaw stand outside City bus depot



Image 32 Unauthorized on-street and off-street parking opposite GSRTC bus depot owing to informal economic activities in residential zone



Image 33 Pay and park facility inside GSRTC bus depot for park and go bus-users



3.The right approach to Parking policy

In this section we illuminate the readers about various salient aspects about the science behind parking and some of the basic principles that need to be followed in determining parking policies for a city.

3.1. The parking conundrum

Parking is an act of stopping and disengaging a vehicle and leaving it unoccupied. Proper provision of parking spaces is an important element of transportation, building design, quality of life and the environment. But the demand for parking is aggressive, and more importantly insatiable. It is aggressive because of the number of places a vehicle requires parking – basically anywhere it is taken to. Generally speaking, a private vehicle remains idle for 95% of the time of the day; i.e. to say that it remains active only when it is utilized for the travel. Also, each vehicle typically comes with an inbuilt requirement of more than two parking spaces – one, at the residence of the owner, the other at the workplace, and then there are other places including recreational and other activities carried out by the owner where it will require adequate parking space. And it insatiable because of the reason we just described as well as for the reason that vehicle ownership is perennially on the rise. Every vehicle added in the city comes with a demand for a certain parking space. Therefore there is no end to it. On the other hand, lack of adequate parking space results in congested streets and consequently problems of traffic congestion and environmental concerns; negatively impacting the overall quality of life in cities. Therefore, the question is to what extent parking supply should be provided for different types of land uses? What would be the rationale to work out a balance between parking demand and supply? What kind of policy needs to be advocated to ensure sustainable growth of traffic in a manner that parking of vehicles in the city can be done efficiently, safely and in a planned manner?

3.2. Types of approach to parking

Based on the above mentioned parking conundrum, local governments have three basic approaches to providing parking in the city.

1. Conventional approach – where the thought is that parking needs to be supplied wherever there is demand and however much the demand stands; and that parking is a public-facility to be provided to the citizens plentiful and free of charge. In most cities, including Gandhinagar, the current approach to parking falls under this category. Even our building bylaws (CGDCR 2017) have adopted this approach in developing regulations for parking.
The problem with this approach is that abundant parking supply instigates travel demand to such destinations by use of private vehicles. Dependency on private vehicles is increased and usage of public transport is indirectly discouraged.
2. Management approach – where the thought is that parking supply, and even ‘demand’ for that matter, can be managed by leveraging multiple tools available with the corporation such as through strategic pricing, control or release of supply, through intentioned regulations controlling parking behaviour in different parts of the city, all of which serve the common aim of achieving the city’s larger transportation policies.
3. Market approach – where the thought is that parking needs to be charged on the same line as other commodities and that demand and supply will achieve its own market guided balance. This approach basically calls for pricing parking based on economics of land and the market existing in the city for parking. We discuss this further in the following sub-section.

3.3. Parking economics

Looking at parking as commodity

There is a misunderstanding among common citizens and ill-informed elected representatives to believe that parking is a service that the local authority needs to provide to its citizens, 'free of cost'. India is a rapidly developing country; every year there is humongous increase in vehicle ownership. The problem arising from this ever-increasing vehicle ownership is the lack of space required for parking. Land is a scarce resource given its limited supply and ever-increasing demand. In such cases, it would be very difficult to determine to what purposes it should be allocated – to agriculture, to inevitable urbanization, to much-needed public infrastructure projects and to economic activities such as industries. Land allocation therefore needs to be determined in strategic and prioritized manner. Therefore, parking is to be seen as a commodity. When it is seen as a commodity, it would not only be just a capital asset for the municipal corporation, and therefore the municipal corporation would strive to achieve the full value of that commodity. And, since governments administer upon principles of social justice, the 'value' would mean monetizing parking assets within direction aimed at achieving larger social principles.

Understanding the risks of parking subsidy

A common principle of allocation of any resource across the world governments is of prioritizing resources for the disadvantaged groups of the community over the more affluent. Therefore social and economic motives do not justify subsidies in parking. Subsidies are for people with limited means and choices to live life, to strive for economic development, and people demanding parking do not fall in this category. Parking is subsidized when it is either free or supplied at discounted prices (i.e. not reflecting the true value of the land) wherever it is charged by public authorities. So if the governments utilize their limited economic and land resources for providing parking, it is increasing inequality in the society. Also, subsidized parking where the true cost of parking is not borne by the user engenders and fosters a behaviour for private-vehicle preference; this in turn increases parking demand, traffic congestion and environmental concerns.

Determining pricing value

There could be various ways for arriving at a value while pricing parking. It could be lump-sum based on commonly used values in other cities, which could often be representative of just a token value; it could be this same lump-sum value but multiplied by some unanimously agreed upon factor, or any other way. But most well-intentioned research from specialized agencies working in the sector, as well as our central government guidelines recommend arriving at this value based on the real value of land parcel occupied by that vehicle. So, legitimately parking pricing in Gandhinagar would have to be arrived from processing the value of jantri for the land in question. The jantri rates are determined by the land registrar office, established under the revenue department of the state government.

3.4. Parking guidelines of the central government

The 2006 National Urban Transport Policy (NUTP) of the Government of India mentions its objectives for parking in the following manner:

- Parking occupies valuable land therefore the need for determining the principles of allocation of parking space.
- Parking fees, and graded at that; aimed at recovering economic cost of land used for parking.
- Levying parking fees will encourage public transport by making it more attractive.
- Preference for PT and NMT in parking space combined with making them accessible to work spaces will engender sustainable transportation scenario in our cities.
- Unclog the road carriageway from parking in residential areas.
- The state-governments are to ensure parking stipulations are appropriate in their building bye-laws.

The principles of parking policy suggested by IRC guidelines for parking facilities in urban areas in their 2015 document (IRC SP 12: 2015) can be enlisted into following:

1. To achieve optimum utilization of available parking spaces
2. Turnover of each available space must be increased
3. To discourage long term parking
4. To carry out rationalization of available parking spaces
5. Long term parking shall be accommodated on off street lots
6. Quality of the parking facility should be considered as important as quantity, including aesthetics, security, and accessibility and user information.
7. High parking fee should be charged in order to make the use of public transport attractive.
8. The parking fee should reflect the value of the land that is occupied.
9. Public transport vehicles and non-motorized modes of transport shall be given preference in the parking space allocation. This along with easier access of work places to and from such parking spaces can encourage the use of sustainable transport systems.
10. Park and ride facilities for bicycle users with convenient interchange are a useful measure.
11. Effective management of parking space through use of ITS technologies
12. To free the public carriageway from parked vehicles impeding the smooth flow of traffic in residential areas also by changing the byelaws.
13. Parking is a consumer commodity, not a legal right. No subsidized parking is to be provided in public spaces. User must pay full cost of parking facility based on land opportunity cost, capital cost, O&M costs and temporal demand.
14. To ensure accessibility to maximum number of people, parking for para-transport/ feeder modes is to be prioritized and subsidized. In areas designated for private parking, short term parkers must be prioritized over long-term parkers, in order to maximize turnover and enable economic vibrancy.
15. Spaces already designated for parking must be utilized to highest efficiency and financial viability.
16. Parking management is to be used as a demand management tool – to decrease use of private vehicles and thus reduce overall demand of parking, and shift travel to public transport, para-transport & non-motorized modes.
17. Private vehicle must be parked on 'a fully-paid rented or owned' private space.

Based on all of the discussions above, it would be judicious for the municipal corporation to adopt the principles outlined by the central government and fit them in its own context while developing its own parking policy.

4. Policy proposals

Parking scenario described in the previous section highlights the need for policy intervention in the way vehicular parking takes place in the city. In this section we identify various objectives based on the field observations, and we also suggest these objectives as policies in treating how parking takes place in the city. The reader is hereby encouraged to first have read the preceding chapters before reading through this chapter.

4.1. Enforcing parking in existing facilities

Although the prevalent building bylaws provide for adequate parking in every building / development by stipulating parking requirements that are based on the utilized floor space area in it (See Annexure 3 **Parking provisions in the current CGDCR-2017**), often building usage is characterized by either of two scenarios:

- (i) Parking areas are built into saleable spaces (usually offices/shops),
- (ii) Parking areas remain vacant while parking mostly takes place in the marginal spaces or on the abutting streets.

This leads to a situation where marginal space as well as the road space that should otherwise be available for public purposes such as walking, cycling and other street infrastructure is occupied by parking. This also creates a false appearance of parking-deficit in the area, leaving existing available off-street parking in these buildings either under-utilized or un-utilized. In worse cases, lack of enforcing parking in such available parking-spaces indirectly encourages diverting parking space into commercial usage, creating un-planned demand that surpasses parking demand originally approved while issuing development permissions to such buildings.

GMC will enforce parking in the existing facilities in the following manner:

1. Development permission will be granted / issued to the developer / builder of such buildings on the condition that he/she will ensure all future parking demand generated in the building will be supplied through the in-house parking facility approved.
2. This assurance will be given to the competent authority issuing building permission in the form of an affidavit. This affidavit will also mention that any further sale and/or sub-letting, sub-leasing, or any form of change in ownership of whole or part of the habitation units in these buildings will also involve giving an undertaking of assuring that parking will take place within parking approved vide the latest building development/use permission. A copy of all such subsequent affidavits being made upon selling/sub-letting will be shared with the competent authority.
3. Builders or association of owners of a building complex will appoint a security personnel to guide and enforce parking by building users and visitors in approved parking spaces at the ground level or at basement as provided.
4. Enforcement of utilizing existing parking space will be also helped by having high parking charges for on-street parking where such on-street parking have been identified due to other factors but in accordance with the principles mentioned in section 4.3.
5. Wherever possible, parking spaces that have been converted into spaces for commercial activities will be reclaimed by issuing notices to relevant parties.
6. Where it is decided by the Municipal Corporation that reclaiming of approved parking spaces is not possible and where such spaces have long been sold to naïve buyers, parking requirements for activities taking place in such buildings or portions of such building complexes as the case may be, will be met by nearby on-street or off-street parking places. Opinion of the Fire Officer will be obtained to make sure that there is no threat of fire hazard by the unauthorized construction.
7. Parking charges will not be subsidized for catering to parking demand in cases described above.

4.2. Local-area approach to parking supply and creation of city-wide parking plan

Supply against any parking demand at any given location is not necessarily met by looking within the limits of the individual road or individual parking but by looking within a certain walkable distance of radius surrounding the spot of demand. Also, it is not necessary that one would find parking space available at the spot of demand. Therefore, whenever the need for parking supply is identified it will be done on the basis of accessibility at the local area level for all such demand spots; in other words, identification of parking supply, if needed, would be done on the basis of providing the required parking within walkable distance radius of the spot where demand is felt needing supply.

Towards this purpose, GMC shall prepare a city wide parking plan indicating all off-street parking plots and on-street parking spaces that it shall have identified based on local area level demand-supply assessments across the city. The plan shall include both parking provided by the local authority (CATP, R&B, or GMC) as well as parking available in all individual buildings, thereby creating a comprehensive inventory of available parking space in the entire city. Establishing this base-map of parking inventory would support preparing a base for creation of a real-time user-accessible online portal (web-based or mobile-app based, or both) for the end-users.

The city wide area parking plan shall be prepared within four months of notification of these rules and will involve discussion with all key stakeholders including resident associations (societies), traffic police, associations in commercial areas such as vendors or shops, etc.

Preparation of the city wide parking plan shall be guided by the following principles:

1. The parking plans shall be prepared within four months of notification of these rules.
2. Area Parking Plans shall be revised periodically on the basis of changing demand.
3. The process of preparing Area Parking Plans (for the first time) shall be largely based on the following steps:
 - i. The city wide Parking Management Plan will be divided into parcels of land, hereby referred to as 'Parking zones' to be delineated on the basis of factors such as land use (residential, commercial, institutional, or combination of any of these), level of activity and perceived aggravation of parking problem.
 - ii. Identify existing parking inventory in each zone
 - iii. Assess the extent of various kinds (on-street, off-street, illegal) of parking in these zones during weekdays and weekends. This shall also include assessments of parameters such as parking turn-around time, duration, and vehicle type for each parking lot.
 - iv. Assess the willingness to pay around each of these public parking lots or zones and then also assess the likely demand for parking at these places (to be done only for the first time).
 - v. Identify suitable location for on-street / off-street parking, which will be judiciously allocated based on the following principles:
 - a. Prioritizing off-street parking over on-street parking to the full possible extent.
 - b. Identified off-street locations will have proper vehicular as well as pedestrian access (entry/exit).
 - c. Demarcation of on-street and off-street parking will be done in a manner so as to allow free movement of public walking and cycling spaces.

4.3. Charging for parking

All land comes with value attached to it; therefore when parking is free, or even when it is heavily subsidized, it incurs an opportunity cost for the public authority. And since it is the disadvantaged (i.e. economically weaker sections of the society) that have the first right to the public money, free or heavily subsidized parking supply against an inevitably ever increasing vehicular ownership essentially indicates that the poor are subsidizing the

rich. Therefore it is imperative for public authorities such as Municipal Corporations to charge for supplying parking; and charge appropriately at that.

The following principles will be followed while determining the parking charges in the city:

1. Parking on public land should not be provided free of cost and utilization of any designated public parking space shall be charged the true cost of parking (i.e. the proportional cost of land and operational costs to begin with, and may also subsequently include adding environmental and social impact costs built into the particular parking space).
2. The Municipal Corporation shall arrive at a Base Value for parking charges for different types of vehicles for the city. It is recommended that the base value be arrived on the basis of the prevailing *Jantri* rates and shall be indicative of the benchmark in determining parking charges subject to the location characteristics. Parking charges for special cases such as premium or discounted and in other cases may be determined on the basis of the base value for that area.
3. Parking charges will be revised by the Municipal Corporation once in every 2.5 years on the basis of the same principles as mentioned in this policy document
4. On-street parking will be charged higher than off-street so as to ultimately move all on-street parking to off-street over a period of time. This is because on-street parking causes abrupt hindrance to the traffic-flow. Typically, on-street parking will be charged at-least two to three times the rate of off-street parking in the related parking zone.
5. Parking will be charged differentially, i.e. charging according to the level of demand against supply conditions at the location and in its immediate vicinity, and other factors aimed at encouraging use of public and non-motorized means of transport over private and motorized vehicles. Some of the guiding principles for this may be:
 - a. Pricing parking in commercial places higher than in residential areas. For this, in areas where there is mixed use development, where more than 30% of built-up area is commercial, the parking zone would be deemed as commercial.
 - b. Parking charges for long duration (more than 2 hours in residential areas and more than 1 hour in commercial areas) on-street parking will be exponentially higher than short duration parking.
 - c. The corporation may choose to prohibit long-duration on-street parking either on all locations or on select locations (such as commercial, transit and other major activity hotspots). Requisite signage may also be provided indicating maximum duration of parking.
 - d. Parking charges for private motor-vehicles within 250 metres of a public transit station such as metro stations or bus depots should be charged higher so that public transit functions such as bus-bays, pick-up and drop-off points, cycle stands, ITP stands etc. may be convenient.
 - e. Off-street parking public facilities within or near mass transit stations such as metro, BRTS, bus stations and bus depots shall be priced at subsidized rate for park-and-ride users to facilitate and encourage usage of these mass transit modes of transport. The rate of subsidy shall be 25% of the base value of that parking location.
6. Parking longer for long duration without necessary prepaid ticket would be considered abandonment of vehicle and therefore will attract necessary impounding by the authority/agency; and the impounded vehicle will be returnable to the owner upon payment of requisite penalty.
7. Parking for cycles shall be free.
8. Charges for parking permits in residential areas will also be determined by the corporation from time to time on the aforementioned principles on the basis of true value of land determined from *Jantri* rates, on the basis of detailed survey and studies and thereafter as deemed appropriate.
9. As part of implementation of this parking policy where in the initial phases parking in residential areas will be identified to be supplied on common plot and RoW, parking permits for such parking will be charged 10% higher than in normal cases.
10. Parking charges for residential permits for two-wheelers will be high enough to incentivize parking provision within the plot-margins by such owners
11. Demand for parking and parking permits by those vehicle owners whose plots have had parking approved during building permissions but such spaces have been encroached upon by unauthorized construction and not withstanding provision in section 4.7(5)(a), the corporation decides to

allow/provide on-street/off-street parking; in such cases the charges shall be at least 1.5 times the prevailing normal rates for that location.

4.4. Discouraging On-street parking and its regulation

On-street parking facilities involves taking away portions from the active thoroughfare and allocating it to vehicles remaining idle thereby creating abrupt hindrances to the smooth flow of vehicles during the activity of parking the vehicle as well as while joining back into the active traffic flow. Also, there is a great possibility of the concerned local authority having to take away space that should otherwise ideally be available for pedestrians, walkways, cycle-tracks, and street-furniture including plantations. Since on-street parking causes great trouble for seamless movement of the thoroughfare traffic as well as pedestrians, on-street parking shall be less desirable among all parking options considered by the Municipal Corporation. Wherever provided on-street parking is provided, it shall be regulated according to the following principles:

1. On-street parking shall be provided only when there is no alternative for off-street parking within the 250m radius distance of the activity spot requiring supply and after ensuring that seamless movement of traffic will be avoided while providing parking on that particular stretch.
2. On-street parking will be prohibited in the following areas:
 - i. On major roads having transit hubs like metro stations, bus depots, BRTS stations, and railway station. On-street parking will be prohibited up to 250m on either sides of entry and exit of such stations and also on the lane opposite to these entry/exits.
 - ii. On any major road where any form of off-street parking is already available up to a distance of 500m.
 - iii. On streets with high pedestrian activity such as shopping clusters, *haats*, craft bazaars, etc.
 - iv. 15metres on either side of pedestrian crossings
 - v. Streets with high frequency of public bus movement.
 - vi. Streets abutting parks, gardens and spaces for public recreational activities.
 - vii. Roads with RoW less than 9m.
 - viii. Along 50m stretch from intersections on major roads (arterial and sub-arterial roads) and 25m stretch from such intersections on minor roads (collector streets and neighbourhood lanes).
3. All on-street parking will be designed and clearly demarcated in accordance with the guidelines issued in IRC SP 12-2015 and IRC SP 35. On-street parking can also be indicated through physical means such as kerbs, bulb-outs and signage apart from pavement markings.
4. All road spaces where there is no demarcation indicating on-street parking shall be deemed as no-parking zones.
5. Parallel on-street parking will be prioritized over other forms unless site conditions indicate reasonable feasibility. As general rule, cycles and two-wheelers will be allowed to have perpendicular on-street parking; three and four wheelers will follow parallel on-street parking.
6. On-street parking at any given location shall be prioritized for pick-up and drop-off, loading/unloading and short-duration parking. Long duration parking to be discouraged through measures according to 4.3(5)(b)&(c) and 4.3(6).
7. All on-street parking provision in the city will make parking convenient to the users in the following order of priority
 - i. Pedestrians and Cyclists
 - ii. Mass Public transit (buses, metro) and related multi-modal integrated facilities
 - iii. Emergency vehicles
 - iv. Differently-abled
 - v. Para-transit (pick-up and drop)
 - vi. Hawkers / vending zone with seating and resting areas (where such areas are designated)
8. On-street parking shall be used only for short-duration parking (not exceeding 2hours) thereby discouraging long duration parking. Long duration parking may be allowed by charging exponentially significantly higher as mentioned in 4.3(5)(b).

9. On-street parking shall not be provided on major roads within 250metres radius of public transit stations such as metro stations and bus depots. However on-street parking may be provided for pick-up and drop facilities or short duration parking for IPT and non-motorized public transport vehicles.

4.5. Encouraging Off-street parking and its regulation

While on-street parking would cater to the short-duration parking needs, all long-duration parking requirements such as those in office-spaces, shopping centres, etc. shall be catered by off-street parking facilities in the city. Off-street parking facilities help escape the downsides posed by on-street parking to the free flow of vehicular as well as pedestrian traffic. However, off-street parking facilities are often left under-utilized in absence of strict enforcement. This can be generally seen by vehicles parked outside the designated off-street parking, often on the streets and in haphazard manner.

The corporation shall encourage and regulate off-street parking according to the following principles:

1. Off-street parking shall be prioritized over on-street provision while allocating parking facilities in any parking zone. This will be done through principles mentioned in section 4.3(4) and 4.4(2)(ii).
2. Parking capacity in existing off-street parking facilities across the city shall be augmented through fiscally prudent alternatives such as stacked parking machines, which can be, if need be, shifted and utilized at other locations in the city.
3. Provision of multi-level car parking (MLCP) facilities shall be made only after demand assessment indicates the need along with economic viability, as well as when it also indicates that the use of public transit would not be impacted by the provision of such a facility.
4. Subject to the conditions met in clause (3) above, where the corporation identifies the need for MLCP, it shall build them on public-private partnership (PPP) modes and shall also seek to recover the costs of doing so through exploration of value capture financing methods.
5. While on-street parking will be prohibited in places mentioned in section 4.4(2)(v), off-street parking facilities shall be provided to cater to parking demand in such places that attract visitors on the city or larger scale. Such places that cater to the local and neighbourhood level citizenry shall not be provided off-street parking facilities at the cost of consuming space for pedestrians, plantations and other street furniture.
6. Off-street parking facilities within or near public mass transit stations shall clearly indicate ECS/E2Ws for park-and-ride users.
7. Conversion of privately owned plots into public off-street parking facilities will be encouraged by the following measures:
 - i. exemption from scrutiny and amenities charges while issuing development permission,
 - ii. the corporation may enter into an agreement with the owners of such plots to facilitate development and operations of off-street parking where the owner himself/herself may lack the wherewithal to operate such facility,
 - iii. Appropriate property tax discounts can also be decided by the corporation
 - iv. Such privately owned public-parking facilities will be included into the citywide database of parking inventory
8. Pre-paid parking permits for office-goers and building owners can be issued for off-street parking in commercial areas. The permits will function in the same way as described for the residential permit. Charges for this permit will be in accordance with the charging principles of this policy document
9. The corporation will encourage shared parking. Building owners who have spare parking spaces within their premises shall be encouraged to rent such parking spaces to other vehicles. Such parking spaces will
10. The design of all off-street parking shall follow the guidelines mentioned in IRC SP 12-2015. Such facilities shall indicate demarcations for ECS, E2WS, cycles, and IPT. These facilities shall also leave space for future installation of charging points for electronic vehicles.

4.6. Discouraging illegal and irregular parking behaviour

Parking discipline shall be encouraged in the city. This will be done through the following policy measures:

1. Parking in no-parking zones and/or parking in areas prohibited for parking by various sections in this policy document will attract fine.
2. Vehicles parked within the designated parking spaces but done so irregularly so as to inconvenience parking by other vehicles will attract fine.
3. Vehicles attracting fine in cases mentioned in points (1) and (2) above will be towed or impounded. The vehicle shall be released only after payment of the designated penalty amount.
4. The corporation will have to identify an appropriate place for gather all such towed vehicles.
5. The corporation shall determine the parking penalty structure. It shall represent the true value of administering these rules including towing impounding, occupying the street/parking space illegally/irregularly, and occupying space in the site in point (4) above.
6. Towed/clamped vehicles unclaimed for more than 7 days shall be handed over to the transport department.

4.7. Parking in Residential areas

The Municipal Corporation shall strive to protect residential spaces in manner that they may be characterized by high quality of life including scope for light recreational activities for the citizens in general and for the children and the elderly in particular. On-street parking not only renders such spaces unsafe for them but in many cases it can also be a hindrance for movement of emergency vehicles such as fire-tenders and ambulances. The quality of life in residential areas will improve if streets in these areas are kept safe for pedestrians and cycling at all times.

Regarding the issue of parking in residential areas it should there are two aspects that need to be borne in mind. One that the burden of providing parking for private vehicles lies on their owners. The other, that the need for on-street parking in such areas is derived from violation of parking rules prescribed in the building bylaws.

In view of these aforementioned facts, the corporation shall adopt a policy of discouraging on-street parking as far as possible and at the same time actively aim to eliminate all on-street parking in residential areas over a period of time. This will be done by charging for parking in accordance with the relevant principles described in section 4.3 as well as in accordance to the following principles:

1. Side margin on the entry-side of all residential plots will either have no change in level throughout or will have a ramp to allow for two-wheeler parking in all building permissions being issued construction permission from the ground-level.
2. Side margin for DW1 and DW2 categories for all buildings will be minimum 3m wide all along or at least for a length of 8m depth to allow for parking for at-least 1 ECS or two E2WS.
3. Parking charges for residential permits for two-wheelers will be determined according to 4.3(10).
4. All on-street and off-street parking that is provided by the local authority in residential areas will be issued Parking Permits for every parking needs after ascertaining whether such parking requirement can or cannot be satisfied within the already approved parking in buildings.
5. (a) Residential buildings with existing / approved parking facility will not be issued with this Parking Permit.
(b) However, such parking spaces when encroached by unauthorized construction may be provided permits at 1.5 times the prevailing normal rates in that area in accordance with section 4.3(11).
6. Additional parking requirements generated by housing that is built after coming in force of these regulations, whether afresh from the ground level or in the form of addition to an existing building will not be permitted unless this additional parking requirement is suitably available for use within existing parking spaces either within the plot boundary or within nearby off-street parking facilities.

Provided that such development permission may be obtained by the plot owner upon submitting an indemnity bond in this regard.

7. Additional housing will not be allowed to satisfy parking requirements from existing on-street facilities since it is the aim of the corporation to eventually eliminate on-street parking, more so in residential areas.
8. The parking permit shall be issued for a period of one year. These permits may also be available on monthly, quarterly and half-yearly basis under special circumstances. These permits will have to be renewed upon expiry of its term period.
9. In cases of transfer of vehicle ownership where parking permit's validity has not expired and where the new vehicle owner requires public parking facility, the permit's validity period as it may stand on the date of actual transfer may be extended up to its original deadline after it is found that public on-street / off-street parking space is available at the new location.
10. In cases where a new owner does not require the parking permit described in point (9) above to be continued, the original owner may:
 - i. Get an appropriate refund after deduction of administrative charges and delist the permit in case where the permit-holder no longer requires the permit. Parking of the same vehicle thereafter in any of the public parking facilities will attract penalty or charges in accordance with section 4.3 of this policy document; or,
 - ii. Revise the parking permit updated with new details of the new vehicle in case where the permit holder purchases a new vehicle, which may have the validity extended according to 4.7(8) upon payment of appropriate charges.
 - iii. Charges for the revised parking permit may be a fixed nominal amount decided by the corporation in manner not below 10% of the annual parking permit charge and in no cases below 500 rupees. These charges will be receivable to the corporation for administrative service including updation of the database and issuance of the new permit tag.
11. Priority may be given to the residents falling along a particular street or immediately surrounding an off-street facility while issuing permits for the respective parking facility.
12. On-street parking in the residential areas, if and where provided will follow the following guidelines:

Table 4 Suggested thumb-rules for on-street parking in residential areas

Road width	Road functionality	Status of parking (2W & 4W)
9m & below	-	To be decided by the corporation*
9m to 12m	Caters to local traffic	
9m to 12m	Connects to major road	
Above 12m	Caters to local traffic	Permitted on both sides
Above 12m	Connects to major road	Permitted on any one side
Above 12m	Major traffic road	To be decided by the corporation*
*Note: While designing the local area specific Area Parking Plan, local characteristics of the road such as road function, pedestrian and traffic volumes, availability and suitability of the road, access for emergency vehicles etc. shall be taken into account apart from the aforementioned thumb-rules.		

or

Road width	One-way road	Two-way road
9m to 12m	One side parallel parking	Parking not permitted
12m to 15m	One side parallel parking	One side parallel parking
15m to 18m	Two-sided parallel parking	One side parallel parking
Greater than 18m	Two-sided parallel parking	Two-sided parallel parking
Note: While designing the local area specific Area Parking Plan, local characteristics of the road such as road function, pedestrian and traffic volumes, availability and suitability of the road, access for emergency vehicles etc. shall be taken into account apart from the aforementioned thumb-rules.		

13. Owing to reasons described earlier, elimination of on-street parking in residential areas will be eliminated done in a phased manner to avoid sudden inconvenience to the citizens and thereby to ensure easier adoption.

14. Upon elimination of on-street parking space at any point in time, the resultant space that is freed up shall be provided for improving walking, cycling, appropriate recreational activities, street-infrastructure (and for vending/hawking spaces subject to the location specific demand assessment and to the city's vending zones plan).
15. In line with the aim of the corporation to eventually eliminate all on-street parking, the corporation will move to auction based parking permits from the general parking permit system after a period of 3years.
16. The minimum bidding price for the auction based parking permit system will not be less than the minimum annual parking permit fee on the basis of land value determined from the prevalent *jantri* rates.
17. The corporation shall set up a transparent and efficient mechanism for recording, escalating and resolving grievances of the citizens regarding such residential parking.

4.8. Unified city-wide Parking management

4.8.1.General parking management

The general administration of all public parking provided by the corporation will be based on the following principles:

1. The corporation shall create a Traffic Cell under the Estate department that will be entrusted with the task of monitoring the enforcement of all designated parking in the city including operation and management (O&M). The corporation will determine an appropriate staffing for this cell.
2. The corporation may also however sub-let the O&M work to a private contractor in which case, the corporation shall prefer a single contractor for managing all the designated public facilities in the city so that economies of scale may attract interest in such work. Even so, the principles of revenue management mentioned in sub-section 4.9 shall be followed.
3. Concerned field officers of the traffic cell will conduct surprise field visits to verify O&M work by the concerned field staff / agency staff and enforcement of parking rules.
4. Along with the above principles, the principles of digital parking management indicated below will also be followed.
5. The Municipal Corporation will identify and allot land/space for parking towed vehicles in consultation with relevant stakeholders.

4.8.2.Digital parking management

Parking implementation and management by the municipal corporation shall be done by a robust framework of digital tools and technology in accordance with the general parking management principles described in section 4.8.1 before. Digital and real-time management of all parking will enable transparency as well as help in decision making with respect to continuous inflow of data regarding demand-against-supply in the city. This may include a range of digital tools from digital receipt issuing and parking duration measuring metres, RFID readers, etc. to a unified database at the control room with technology that allows seamless and real-time connectivity with the field devices.

1. The corporation shall create a complete spatial database of all parking available within the buildings as well as in form of off-street and on-street parking facilities as indicated in section 4.2.
2. Priority may be accorded to first creating a digital database of public parking facilities, both off-street and on-street.
3. The corporation may create a real-time web/mobile based portal for the citizens to identify location and availability of parking space at any of the public parking facilities. The same may be also indicated at each parking site
4. Parking permit tags will be based on RFID or QR code, whichever efficient and advantageous in the longer run in administrative terms. These permits will include unique identification numbers that

indicate information on the vehicle registration database, vehicle type, geo-spatial data indicating the location for which the vehicle holds the permit.

5. Penalty charges for parking of vehicles without relevant parking permits will be implemented by digital parking metres that generate receipt held by the personnel/guard. The receipts generated by these hand-held metres will include information of vehicle number plate, registration number, duration of parking and the relevant parking penalty/ fees taken.
6. All data for parking activities described in aforementioned points (1) to (4) shall be conveyed to the corporation's centralized monitoring cell that will host the city-wide real-time geo-spatial database.
7. All public off-street facilities will have a display board indicating the availability of parking spaces for the different categories of vehicles, provided the parking is of a sufficient size allowing for economic hosting of such board. On-street facility will not provide such digital sign boards.

4.9. Revenue management

The revenue generated from the collection of parking fees and fines would be collected and maintained in a separate account created by the municipal corporation. These funds would be utilized only for covering the operational costs, for the maintenance as well as improvement of parking spaces and its administrative system, for development of new parking lots, for strengthening of parking enforcement, and carrying out awareness among citizens regarding parking behaviour. Where possible, it may also be utilized for improvement in the quality of pedestrian and open spaces (such as walkways, cycle tracks, tree plantation and other street furniture), to improve transit infrastructure such as bus bays and bus-stops.

4.10. Encouraging new paradigms in parking behaviour

The Municipal Corporation would like to encourage and engender new paradigms of parking behaviour that have been identified as international best-practices as part of preparing its citizens for the 21st century. These practices include the following:

1. Parking stipulations in the building bylaws would be reduced gradually. The corporation may first reduce parking stipulations along mass-transit corridors. Later, commercial and residential areas may also be taken. This will encourage the use of mass public means of transport.
2. The corporation will encourage unbundling of parking spaces within residential buildings whereby parking spaces available in the building is purchased by the buyer. If a buyer who does not wish to own a private vehicle will then not have to purchase it while buying the property. This will thereby free-up parking space for someone else within the building or even from surrounding who would want to buy up this parking space. Such unbundling of parking and its effective management will create a healthy ecosystem of parking market in the city. Ways of doing the same for commercial and other such private-use buildings will be explored and replicated too.
3. GMC would explore newer ways of value capture financing for its parking facilities such as advertisement spaces for private businesses, etc. This will help extract the full value of rent that could be achievable from all the parking estate.
4. GMC will undertake information dissemination activities to engender behavioural change among the citizens and residents of the city with the intention of widespread adoption of parking behaviour for the 21st century paradigm.

5.Way forward

After comprehensive discussions with all the concerned stakeholders (viz. R&B department, CATP office, and the elected representatives) the municipal corporation will undertake due process of establishing these policies according to the following methodology:

Table 5 Procedural actions to be taken under provisions of law for establishing the parking policy and bylaws

Procedural actions for establishing the parking policy and bylaws	Provisions of law (GPMC Act 1949)
Approval from the Standing Committee	u/s 458
Approval from the General body	u/s 459
Publishing the policy in the Official Gazette and also issuing a public notice in a couple of locally prominent newspapers inviting suggestions and comments from the general public and all concerned parties.	u/s 460 (a & b)
Consideration of all the suggestions and comments	u/s 460 (d)
Revised approval from the Standing Committee	
Revised approval from the General body	
Sending the proposal to State Government for approval	u/s 461
Publishing in the Official Gazette and coming into force	u/s 462

While the corporation will undertake the aforementioned legal procedure to establish the parking policy and bylaws, it will also in the meanwhile float a Request for Proposal (RFP) to invite worthy private agencies to undertake comprehensive city-wide demand and supply assessment survey with the aim of creating a database of all existing parking as well as parking to be supplied, whether on-street or off-street. Once this is done, the municipal corporation will also undertake the process of identifying the means of administering these parking bylaws in accordance with the provisions indicated in Chapter 4.

Also, once the selected agency prepares the parking master plan, the Municipal Corporation will undertake the following activities:

Once, the city-wide Area Parking Plan is created, its implementation will be done in two steps:

- a. Infrastructure Creation – this will include demarcation of on-street and off-street facilities with necessary signage and creation of new facilities. For this, the Municipal Corporation will have to select an appropriate agency to undertake the said civil works at existing and proposed facilities.
- b. Operation and Management – this will include operating the public parking sites, maintaining the infrastructure

Annexure 1 Govt. of Gujarat notification for expansion of GMC area

NOTIFICATION

Urban Development and Urban Housing Department,
Sachivalaya, Gandhinagar.
Dated the 18th June, 2020.

*Constitution
of India.*

NO.KV/48 of 2020/GMC/902020/928/P:-WHEREAS the Government of Gujarat, in exercise of the powers conferred by sub-section (2) of section 3 of the Gujarat Provincial Municipal Corporations Act, 1949 (Bom. LIX of 1949) under Government Notification, Urban Development and Urban Housing Department No.KV-46 of 2010-MNA-102009-5771(i)/P, dated the 16th March, 2010 had constituted the City of Gandhinagar;

AND WHEREAS having regard to the population of the areas, the density of the population therein, the revenue generated for local administration, the percentage of employment in non-agricultural activities and the economic importance of the areas, it is considered necessary to include certain areas in the existing local limits of the Municipal Corporation of the City of Gandhinagar;

NOW, THEREFORE, in exercise of the powers conferred by clause (2) of article 243Q of the Constitution of India, the Government of Gujarat hereby specifies the areas of the following Municipality, Village Panchayats and Revenue Surveys of the areas of the Village Panchayats as specified in the Schedule-1, Schedule-2 and Schedule-3 respectively to be the larger urban areas and includes such larger urban areas which shall form the part of the Municipal Corporation of the City of Gandhinagar.

The Government land situated within the areas of the Municipality, Gram Panchayats and revenue villages as specified in the Schedules shall not vest in the Municipal Corporation of the City of Gandhinagar.

SCHEDULE-1

No.	Name of the Municipality	Name of the Municipality included
1.	Pethapur	Pethapur

SCHEDULE-2

No.	Name of the Village Panchayat	Name of the Village included
1.	Kudasan	Kudasan
2.	Raisan	Raisan
3.	Randesan	Randesan
4.	Sargasan	Sargasan
5.	Koba	Koba

No.	Name of the Village Panchayat	Name of the Village included
6.	Vasana Hadmatiya	Vasana Hadmatiya
7.	Vavol	Vavol
8.	Kolavada	Kolavada
9.	Por	Por
10.	Ambapur	Ambapur
11.	Amiyapur	Amiyapur
12.	Bhat	Bhat
13.	Sughad	Sughad
14.	Zundal	Zundal
15.	Khoraj	Khoraj
16.	Koteswar	Koteswar
17.	Nabhoi	Nabhoi
18.	Randheja	Randheja

SCHEDULE-3

No.	Name of the Village Panchayat	Areas
1.	Tarapur	Guda Town Planning Scheme No. 09 Survey No. / Block No. 266/C/paiki, 267/paiki, 268/paiki, 269, 270/A, 270/B, 271/A/paiki, 272/paiki, 273/paiki, 274/paiki, 285/paiki
2.	Uvarsad	Guda Town Planning Scheme No. 09 Survey No. / Block No. 628/paiki, 629/3B, 630, 631, 632, 633/1, 633/2, 633/3, 634/1, 634/2, 634/3, 635, 636, 637, 638, 639/1/1, 639/1/2, 639/2/A, 639/2/B, 641/1/1, 640/1, 640/2, 640/3, 649/paiki, 640/4, 641/2/B, 641/1/2, 641/2/A, 642, 643, 644, 645, 646, 647, 659/2, 648, 650, 651/1, 651/2, 652, 653, 654/1, 654/2, 655/1, 655/2, 656/1, 656/2, 657/1, 657/2, 658/1/paiki, 658/2, 658/3, 659/1/paiki, 660/paiki, 662/2/C paiki, 663/1, 663/2/paiki, 664, 665, 666, 667/1/paiki, 667/2, 668/paiki, 669/paiki, 670/3/paiki, 670/4/paiki, 670/5/paiki, 670/6
3.	Dholakuva	Guda Town Planning Scheme No. 04 Survey No. / Block No. 23/paiki, 24/paiki, 26/2, 30/paiki, 31/paiki, 34/paiki, 36/paiki, 37/paiki, 38, 54/paiki Guda Town Planning Scheme No. 05 Survey No. / Block No.22, 23/paiki, 24/paiki Guda Town Planning Scheme No. 06 Survey No. / Block No.54, 55, 58, 59, 60, 61, 62

No.	Name of the Village Panchayat	Areas
4.	Indroda	Guda Town Planning Scheme No. 05 Survey No. / Block No. 21, 22, 23, 24, 521/A
5.	Lavarpur	Guda Town Planning Scheme Proposed No. 25 Survey No. / Block No. 449/paiki, 450/paiki, 451/paiki, 452/paiki
6.	Shahpur	Guda Town Planning Scheme Proposed No. 25 Survey No. / Block No. 81 to 107, 108/paiki, 109/paiki, 111/paiki, 112/paiki, 113/paiki, 114/paiki, 115 to 137, 138/paiki, 139, 140/paiki, 152/paiki, 153/paiki, 154/paiki, 155 to 185, 186/paiki, 203/paiki, 223/paiki, 224/paiki, 226/paiki, 229/paiki, 230/paiki, 231/paiki, 232/paiki
7.	Basan	All Survey Numbers of Basan Gram Panchayat of GUDA areas.

By order and in the name of the Governor of Gujarat,


(Anand Zinzala)

Joint Secretary to Government

To,

- The Secretary to Hon. Governor of Gujarat, Gandhinagar. (By letter).
- The Principal Secretary to Hon. Chief Minister, Swarnim Sankul-1, Sachivalaya, Gandhinagar.
- The PS to Hon. Deputy Chief Minister, Swarnim Sankul-1, Sachivalaya, Gandhinagar.
- The PS to all Hon. Ministers, Swarnim Sankul-1 & 2, Sachivalaya, Gandhinagar.
- The PS to all Hon. Minister of State, Swarnim Sankul-2, Sachivalaya, Gandhinagar.
- The Joint Secretary to Hon. Chief Secretary, Sachivalaya, Gandhinagar.
- The Secretary, Gujarat Legislative Assembly, Gandhinagar. (By letter)
- The Additional Chief Secretary, Revenue Department, Sachivalaya, Gandhinagar.
- The Additional Chief Secretary, Panchayat, Rural Housing and Rural Development Department, Sachivalaya, Gandhinagar.

Annexure 2 Parking provisions in GUDA's GDCR-2004

Sr. No.	Type of use	Parking space Required	Remarks
1	Residential (Flats/Apartments)	15% total built up area of all floors	(1) Dwelling units Above 80 Sq. m. built up area 50% of the total parking space requirement shall be reserved for cars. (2) Upto 80 Sq. m. built up area 25% of the total parking space requirements shall be reserved for Cars. (3) 10% of total parking space requirements shall be reserved for visitors
2	Cinema theater, public assembly hall, auditorium, stadium etc	1 Sq m. per seat	50% of the total parking space requirements shall be reserved for Cars.
3	Industrial	10% of Building Unit	50% of the total parking space requirements shall be reserved for cars.
4	Convenient shopping, commercial and business establishments including business office, bank, hotel, guest house, lodge, eating house, restaurant, institutional building etc. and Health facilities including Hospitals & Nursing Homes etc.	30% of maximum allowable built up area.	50% of the total parking space requirements shall be reserved for cars. 10% of the total parking space requirements shall be provided in the front at ground floor for visitors
5	Community buildings such as community hall/ marriage hall/ community wadi/ recreational club/ and religious building, party plot, club house etc	30% of Maximum Allowable Built up Area	50% of the total parking space requirements shall be reserved for cars
6	Primary schools. Secondary and higher secondary schools Colleges and coaching classes	20 Sq.m. for every 100 students. 50 Sq.m. for every 100 students 70 Sq.m. for every 100 students	For computing number of students 0.75 sq. m. floor area is equal to 1 (one) student.
7	Special building for uncommon uses : (a) Stock exchange (b) Grain market, Timber market, Iron market, Agricultural market, and such other Wholesale Trade.	For (a) and (b) 30% of total built up area of all floors.	For (a) 50% of the total parking space requirement shall be reserved for cars. For (b) 50% of the total parking space requirement shall be reserved for heavy motor vehicles. Competent Authority/ Municipal Commissioner shall specify the number and types of vehicles likely to be use in addition to Col. No. 4 For (a) and (b) of col. Nb2

Annexure 3 Parking provisions in the current CGDCR-2017

1. Parking spaces for vehicles shall be provided within the Building-unit for every new Building and /or extension in existing building constructed for the first use and /or when the use of old building is changed to any of the uses mentioned in the table below:

Table 6.45: Parking requirement

No.	Type of Use	Minimum Parking Required	Visitor's Parking (% of required parking)
(1)	(2)	(3)	(4)
1	Dwelling-1, Dwelling-2	<ul style="list-style-type: none"> • 1 car parking - for more than 100 sq.mts and up to 300 sq.mts of plinth area per unit. Additional 1 car parking for every 100.00 sq.mts or part there off of plinth area per unit. • This shall be permitted within the marginal space. 	Nil
	Dwelling-3	20% of Total Utilised FSI	10%
2	Mixed Use (Residential + Commercial), Mercantile, Religious, Hospitality, Transport	<ul style="list-style-type: none"> • Dwelling-1,2 or 3, as the case may be. • For other uses %of utilized F.S.I. : <ul style="list-style-type: none"> - 30% if building unit up to 750 sq. mts. - 40% if building unit above 750 to 2000 sq.mts. - 50% if building unit more than 2000 sq.mts. 	<ul style="list-style-type: none"> • Residential 10% and • Commercial 20%
3	Assembly-1,2&3	50% of Total Utilised FSI	20% of the required parking
	Assembly-4	50% of Building-unit Area	
	Assembly-Stadium I	1.25 sq. mts of parking area per person of the Total stadium capacity	
4	Institutional Buildings, Public-Institutional Buildings	<ul style="list-style-type: none"> • 50% of Total Utilised FSI • For Hospitals and nursing homes, additional parking of Ambulance shall be provided at the ground level. 	20%
5	Industrial-1,2,3&4; Storage,	10% of the Total Utilised FSI	Nil
6	Educational	<ul style="list-style-type: none"> a. Primary & Pre-schools- 25% of the Total Utilised FSI b. Secondary & Higher Secondary Schools - 40% of the Total Utilised FSI c. Colleges and coaching classes -40% of the Total Utilised FSI, d. Facility for drop-off and pick-up shall be provided within the premise. 	10%
7	Sports & Leisure	25% of Building-unit Area	10%
8	Recreation	10% of Building-unit Area	10%
Note:-50% of the visitor parking shall be provided at ground level.			