

# **PUBLIC PARKING POLICY FOR**

## **MUNICIPAL CORPORATION TOWNS OF PUNJAB**

### **GOVERNMENT OF PUNJAB**

#### **(Department of Local Government)**

#### **A. Introduction**

Rapid urbanization and economic growth has increased travel demand leading to rapid motorization and increased vehicle ownership in cities of Punjab. In some cities the rate of annual increase in vehicle numbers is higher than the annual growth of population in the state. This has created enormous demand for scarce and valuable land for roads and parking with multitude of adverse consequences including air pollution, fuel wastage, congestion and chaos, and unsafe road conditions.

Parking demand is insatiable and exponential across all class of cities that are growing rapidly. About 37.5 per cent of the state's population is urban which is higher than the national average of 31 per cent and has witnessed a high ratio of urban to rural growth. Sustainable transportation along with parking measures is needed at the early stages of growth to improve liveability of all classes of cities. Amritsar and Ludhiana are in the million plus category; and there are 14 Class I Towns, with a population between 1 to 10 lakhs, such as Muktsar, Patiala and Bathinda, which have recorded growth rates between 30 – 40 per cent during the past decade. With a total of 16 Class I towns the state is likely to see a rapid increase in urbanization as well as motorization.

Due to urban growth, motorisation rate is high in the state. According to the Statistical Abstract of Punjab, 2015-16, over the last 3-4 years, there has been a steady growth in motorisation in Punjab at around 10 percent per annum. Since 1980 the number of total vehicles in Punjab increased by over 25 times. More than 60 per cent of the total registered vehicles in Punjab are concentrated in the six major districts i.e. Ludhiana, Jalandhar, Amritsar, Patiala, Hoshiarpur and Gurdaspur with Ludhiana having the maximum with 20 per cent share. Particularly for personal vehicles, the rate of motorization has been way higher than the overall rate of motorisation, and even close to 19 percent for cars in some of the recent years. This shows increasing propensity towards private vehicular ownership in the State.

Thus, demand for valuable land to park vehicles is growing. Parking demand from new annual registration of cars is equivalent to finding additional land the size of 56 football fields in Chandigarh, 32 in Amritsar, 77 in Ludhiana, 31 in Patiala and 15 in Bhatinda. This is not sustainable in land constrained cities. Free and unorganised parking induce more traffic and lead to chaotic parking pressure on roads, severe encroachment of public spaces, air pollution, wastage of fuels, erosion of pedestrian and green spaces, iniquitous use of road space, degradation of quality of life in residential neighbourhoods, and unsafe road conditions. This adversely affects the liveability and wellbeing of cities. At the same time, vehicles occupy precious space that could otherwise be put to more efficient and equitable use. Parking remains as suboptimal utilization of land which is a scarce resource in cities that should be put to more urgent uses and basic services for all and affordable housing.

To address this problem the department of Local Government, Punjab in association with relevant public agencies as well as other partners proposes to adopt and implement appropriate policies along with comprehensive parking measures to promote sustainable transportation strategies and discourage growing dependence on personal motor vehicles. Such a mechanism, should aim to ensure optimal use of scarce public land; prioritise pedestrians, cyclists and users of mass public transit, emergency vehicles, differently abled persons, and para transit including non-motorised vehicles over personalised motor vehicles; and enforce parking management strategies based on "user pays" principle designed to moderate and reduce parking demand while providing

for parking needs. This document presents public parking policy for Municipal Corporation towns of Punjab.

## **B. Scope of the policy**

The policy may apply to and in relation to all public parking spaces within all Municipal Corporation cities in Punjab that owned or managed by all public and private authorities. It may also be applicable in respect of parking places for the use of general public such as Cinema halls, hospitals, malls, educational institutions, airport, railway stations etc.

## **C. Objective and guiding principles**

The overall goal is to have a parking policy as a travel demand management tool that should be able to reduce the parking demand as well as the traffic volume and encourage use of sustainable transportation. This will help to bring down pollution, congestion, improve road safety and ensure equitable use of land. This policy takes cognizance of the National Urban Transport Policy, 2006, that has recognized parking demand entails enormous cost and uncontrolled parking supply encourages car dependency. It has recommended use of parking as a restraint measure. Use graded scale of parking fee that could recover the economic cost of the land used in parking. Address the needs and give preference in the allocation of parking space for public transport vehicles and non-motorized modes.

The guiding principles of parking policy will promote and ensure:

- Equity and safety on roads and public spaces
- Promote sustainable modes of transport
- Parking should be based on user pay principles and not enjoy subsidy. Its revenue potential should be tapped for local area development.
- Adopt parking caps as standards; ensure more efficient uses of space and keep in view the opportunity cost of land
- Ensure proper, efficient and upgraded management and enforcement of parking rules. Give priority to short term parkers over long term parkers in on-street parking.
- Protect green areas and neighbourhood parks from parking encroachment
- Meet the parking needs of public transport, non-motorised transport, and commercial vehicles
- Promote parking approaches for multi-modal integration
- Reduce automobile dependence and promote car free development in city centre
- Promote locally appropriate innovative management strategies in line with the demand management principles. Encourage car free areas and park and walk strategies in crowded areas.
- Design and provision of parking spaces will address the needs of all road users and accessibility barrier
- Reduce air pollution, transport energy use, green house gas emissions, noise pollution, road injuries and deaths
- Improve attractiveness and wellbeing of the cities and reduce traffic delays to productive time loss to boost urban economy

## **D. Key elements of the parking policy**

### **1. Area Parking Plans**

This policy recommends the creation of "Area Parking Plans" as the basic unit and method of parking management in cities of Punjab. The urban local agencies responsible for making arrangements of parking in their respective jurisdictions may prepare local area specific / integrated parking plans (henceforth Area Parking Plans) by 31.03.2018. These parking plans should also define timelines for implementation in phased manner.

Municipal Corporation will subdivide the city into multiple parking zones or parking management area. This will be the main unit for administering parking regulations and

management. Each parking zone consists of the entire street network — including streets with paid parking, free parking, and no parking — as well as any public off-street parking. The management of on-street as well as any publicly-owned off-street parking in each zone will be managed by a single operator.

Each stretch of a street between two intersections, called a block, would be the smallest unit of parking management. Such a block may be designated as paid parking, free parking, or no parking. A block may be redesignated from time to time (e.g., a free parking block may be redesignated as a paid parking block). A few parking slots within each paid parking block may be designated for special purposes like free bicycle parking, taxi or autorickshaw stand, or disabled parking.

Any new area developments (Mall, High-rise and large building etc.) requiring the Environment Impact Assessment and any fresh notification of commercial/ mixed land use streets may only be carried out after the Area Parking Plan is suitably modified, based on a Traffic impact assessment, to incorporate its requirements.

While preparing the Area Parking Plans, survey and inventories legal parking areas in a given area, demarcate them on ground, and design them to meet the needs of all road users. Municipal Corporation will define parking slots in each block only if it is consistent with the design goals for the street and only after providing ample space for other important and priority purposes such as footpaths, cyclists, trees, public transport infrastructure, street vending and public utilities, emergency vehicles, disable access, para transit pick up and drop off, (where ever possible). Parking slots should be defined through physical means such as curbs, bulb-outs, paving and road markings. Road signage will be erected that clearly communicates parking rules to the public (vehicle type, peak and off-peak parking rates, time limits, mandatory clearance times / days, etc.). It will pay attention to personal motor vehicle parking within the building being used by the vehicle occupant, allot parking slots and encourage priced short-duration on-street parking and overnight parking for transport vehicles. Bicycle parking may be provided on every block at no cost.

Parallel parking configuration should be preferred over angular and perpendicular parking configurations for all three- wheeled and four-wheeled vehicles including motor cars, light commercial vehicles (LCV), buses and trucks. Perpendicular parking configuration should be preferred for motorised two wheelers as well as bicycles. If traffic speeds above 40 km/h are expected, then a bulb out should protect such two- wheeler and bicycle parking to reduce the danger of collisions. The Area Parking Plans should include arrangements both for commercial and non-residential areas and residential areas.

The parking arrangements should not impinge on the free movement of traffic. No-parking zones and spaces should be clearly defined in the plan and on the ground through appropriate signage for knowledge of the general public and for ease of enforcement. Siting of on-street and off-street parking and other design aspects should be as per the concerned provisions of this policy. The civic agencies should also endeavour to earmark and provide adequate number of spaces for the temporary parking of vehicles seized and impounded for violation of these rules by the enforcement agencies.

## **2. Principles for management of on-street parking**

Even when off-street parking is available to users of personal motor vehicles, it is often under-utilised due to the low or no cost of on-street parking and poor enforcement. Municipal Corporation will ensure that on-street parking should be managed and enforced effectively. The parking space provided within the buildings / building complexes as per the applicable building bye-laws may be fully utilized before permitting any on-street parking for the occupants/ visitors. Well demarcated on-street parking will be optimally utilised to reduce demand for too many off-street structured parking. Adopt design guidelines for parking that will unsure critical areas including intersections, footpaths and pedestrian crossing, entry into buildings and emergency services, hospitals, educational institutions are free from parking and parking spaces are at safe distance.

Para-transit vehicles (autos, taxis, E-rickshaws, cycle rickshaws) may be given priority in on-street parking spaces for halting and pick up and drop off. Short duration parking will enjoy priority over long duration parking.

Create active street frontage. Parking in the front setback creates an undesirable separation between footpaths and activity within buildings. Further, stilt parking on the street facing edge of buildings create inactive and potentially unsafe spaces. The Department./Municipal Corporation may desire to change building regulations to ensure active edges and prohibit parking in the front setback.

### **3. Principles for management of off-street and multi-level car parking**

The long duration parking that is more than 3 hours will be discouraged in the on-street parking spaces and can be taken to off-site parking spaces and connected with feeder services. The vehicles of long term parkers including shopkeepers, office goers and other users need to park in off street parking facilities only.

Multi-story parking structures may only be considered and planned if the local area parking plans require them and surface area parking cannot meet the demand or to free up surface areas to restore green areas and parks. Such structures, if needed, should will take should not be based on the floor area ratio but take into account the capacity of access road and adjoining streets so that entry and exit from the parking lot does not aggravate congestion.

Instead of planning multilevel parking structures only as stand-alone parking structures, office and retail buildings will be constructed and encouraged to provide public parking facilities to optimise the use of available space. This can help to meet the demand for both parking as well as growing demand for official and commercial space in the cities. Otherwise use stack parking wherever needed based on the area plan.

Promote integrated management off-street and on-street parking to harmonise parking charges in both and leverage structured parking to curtail congested on-street parking and also free up public spaces for parks, greenery and other uses.

To reduce parking pressure and chaos on-street parking should be priced higher than the off-street parking.

To optimise use of available parking spaces promote shared and public parking instead of individually parking spaces in public spaces. Develop strategies to share off-street parking facilities between different uses like commercial and residential or hospitalities that have different peak hours of parking demand. For example, an off-site office facility that is not used during evening and night may be used by cinemas, restaurants or neighbouring residences in the evening as a paid shared parking facility.

### **4. Residential parking permits**

Residential parking permits for on-street parking may be issued to residents living in a parking zone at a slightly discounted rate compared to the applicable rate. Such permits should be valid only in the parking zone where the residence is located (called the home parking zone). In case a vehicle is parked in a non-home parking zone (a zone other than the one where the permit is valid), parking rules of the non-zone district should apply without any discounts.

In each home parking zone, the number of residential permits issued should not exceed the number of parking spaces. Residential parking permits should be valid for a period of one year. There should be no designated parking slot for a permit holder. Holding a permit does not guarantee a parking spot. The price of these permits will be based on the demand. The price may be revised upwards by up to 50% if there is any waiting list for permits at the end of each year. Permit holders may choose to return their residential parking permit and not pay the applicable permit fee.

There are several benefits of residential permit for the residents. Residents are assured parking spaces in their neighbourhood. This allows equitable sharing of local parking spaces among residents. This will control multiple car ownership. People by deciding not buy multiple cars can save on permit fee. This incentivises lower car ownership. This will also prevent parking encroachment from neighbouring colonies

Unbundle parking from property. Developers of residential apartments or commercial buildings must hand over parking areas to organisation like 'housing society'.

On all lanes and streets a lane may be earmarked for unhindered movement of emergency vehicles like ambulance, fire tenders police vehicles, etc. No parking may be allowed on this lane. Make special provisions for visitors

## 5. Principles for parking pricing

The principle of dynamic pricing will be adopted based on variable pricing and made responsive to demand. Based on the base price to be decided by the Municipal Corporation progressive increase in rates with parking duration will be followed.

On-street parking fee to increase exponentially with duration to discourage long duration of on-street parking; on-street parking charges will be higher than the off-site parking charges to prevent crowding on the road. Parking fees will be based on location, time of day/week, duration of parking and size of vehicle. Higher parking fee should be charged at higher-demand locations and during higher-demand times compared to low-demand locations and times. The parking fee should be proportional to the size of vehicle, i.e., larger vehicles will be charged higher than smaller vehicles. This approach would ensure efficient use of both on-street parking and off-street parking facilities, as well as free up road space for other uses such as creation of footpaths, cycle tracks, bus rapid transit, and public spaces.

As a principle the appropriate price is that which will ensure occupancy of at least 85 percent of the available parking spaces at a given time and there is no glut of parked cars.

Municipal Corporation should not subsidise either on-street or off-street parking (including multi-level parking) for personal motor vehicles, implicitly or explicitly. Municipal Corporation should not invest in new off-street parking facilities. With management, and enforcement of on-street parking, and optimal parking pricing private development of off-street parking facilities — bearing the full cost of land, construction, maintenance, and operations — becomes a viable business that can recoup its investment directly from parking users without any form of cross subsidy.

Parking fees will be revised every quarter.

## 6. Parking violation and penalty

Parking violations can be categorised into two primary types — non-payment of parking fees, and parking in a no-parking zone. The enforcement system should address both types of violations. To ensure effective implementation of parking rules, parking service provider should manage parking enforcement in coordination with the traffic police. Enforcement officers will monitor parking violations through regular random spot checks or other means agreed upon in the contract. The Service Provider should be paid a fee for registering an offense and clamping or towing the vehicle on behalf of the Traffic Police.

A user must pay the applicable parking fine through the parking system website, using a smart phone app, or at the processing facility in order to have a vehicle unclamped or released from the facility. Enforcement officers of the service provider should not be authorized to directly collect fines. The PMW, in consultation with the Traffic Police, will develop and adopt a system for revenue sharing of fines between the Service Provider, Traffic Police, and MC.

The levels of parking fines for illegal parking should depend on the seriousness of the offence. For example, parking violations that seriously endanger other road users should attract a higher fine than less serious violations. Fines should be set in terms of a multiple of the nearest on-street parking price. Furthermore, the fine payable should be the relevant multiple of the nearest on-street price multiplied by the time elapsed between detection of the violation and payment of the fine.

**Note:-** Presently, the traffic police of punjab is mainly mandated to take action against unauthorized parking. In order to achieve the desired results, all stake holders will have to act in concert to deal with this problem. In addition to the traffic police the enforcement power of challaning may be delegated to the officer's of the Municipal Corporation under the provisions of relevant act. The officers of the level of Inspector or so for challaning shall be decided by the Municipal Corporation.

Majority of traffic Challans are still being done manually and sub-optional use of CCTV/Cameras is the norm at present. In case of challaning / towing of one illegally parked vehicle, the other vehicle owners

*immediately flee from the spot. Instead of manually challaning, a recording / photography of illegally parked vehicles should be done through Camera / Video Camera and challans should be sent at the address of the violators. By this method, more illegally parked vehicles can be identified and challaned instead of one or two vehicles at a time. It will prove to be a deterrent as well. An App should be developed on which the public can send information of illegally parked vehicles/ junked vehicles to concerned authorities for better enforcement*

## **7. Parking fee exemptions**

The following types of vehicles may be exempted from parking fees when parked in designated slots during certain periods:-

- Bicycles parking should be free of charge at all times.
- Parking fee may not apply on passenger auto rickshaws and taxis when parked in designated slots meant for their parking.
- Parking fee may not apply on commercial motor vehicles used for delivery of goods if they occupy a paid car parking slot, provided that it is for no longer than 15 minutes during off-peak parking hours. However, parking fee should apply on such vehicles during peak parking hours.

## **8. Demarcate and limit parking supply where necessary**

Parking supply, including off street and on street parking, should be limited to avoid overwhelming the road network in the zone. Municipal Corporation will set caps on the total quantum of parking available in each parking zone. If a parking zone has reached its parking supply cap, then any construction of additional off-street parking spaces (public as well as private, including multi-level car parking) would need to be balanced with a reduction in on-street parking.

## **9. Principles for upgrading parking lot design and management**

The Municipal Corporation will reform the parking contract agreements and management systems to ensure upgradation of management of parking lots and adoption of latest technology for organising parking spaces; install on-street parking meters, computerised parking slips with timers, and public information system to inform about the availability of parking spaces to inform users about parking availability. This can be used to assess parking demand; reduce parking violation.

To meet the growing need of expanding fleet of electric vehicle Electric Vehicle Charging Facilities will be set up in parking facilities for night time charging.

All parking lots – on-street and off-street, will have to be designed to make special provision for parking by differently abled that are consistent with the guidelines and specification of Bureau of India Standard's, National Building Code of India of 2016, IRC:SP:12:2015 and Harmonized Guidelines and space standards for barrier free built environment for persons with disability and elderly persons, 2016 of the Ministry of Urban development.

Parking management will have to ensure that junk, abandoned and unclaimed vehicles that occupy public spaces are removed and scrapped.

## **10. Parking operations and revenue management**

While the purpose of parking pricing is to manage demand and reduce traffic pressure, this also has a huge revenue potential that can be unlocked by adopting pricing strategies for parking spaces. This revenue can be used to invest in local area development as well as development of sustainable mobility modes such as public transport and non-motorised transport. Municipal Corporation will earmark the revenue from parking management for local investments in sustainable modes of transport. Specifically, it will develop mechanisms whereby a good portion of the parking revenue from an area of the city is spent on improving walking and cycling facilities and urban space within that area. Moreover, the Road Safety Policy of Government of Punjab has provided for use of parking revenue for infrastructure for non-motorised transport.

Municipal Corporation will adopt an appropriate mechanism to ensure that all parking revenue, including fines/penalties, should be deposited directly in an escrow account overseen by an officer/independent financial manager. The Service Provider will not retain any user payment revenue directly. Surplus revenue, after paying the fee to the Service Provider, Traffic Police, and any other expenses, should be channelised to promote local area improvements such as better walking and

cycling facilities, public spaces, and access to high-quality public transport, either directly through the MC or through the dedicated Urban Transportation Fund (UTF)

### **11. Prioritise sustainable modes of transport**

Municipal Corporation will give priority to facilities for sustainable modes of transport over parking, on the street as well as off the street (such as intermodal facilities). Park-and-ride facilities for four-wheelers are an extremely expensive and inefficient way to get passengers for mass transit. Rather than creating park-and-ride facilities, Municipal Corporation will develop feeder connections and improve intermodal integration between various public transport modes. MC should also give priority to sustainable modes of transport in its spending.

### **12. Overnight parking of transport vehicles**

To meet the parking demand of the transport and commercial vehicles as well as the public transport buses the Municipal Corporation will identify and notify roads and spaces for granting permission for overnight parking upon payment. Such earmarked spaces will be earmarked in a manner that it does not cause congestion and crowd in residential areas. Proof of parking may be mandated for such vehicles.

For bus parking multi-level parking structures may be allowed in depots and terminals.

### **13. Parking management in old city areas**

This will require special area management approach. Identify off-street and remote parking areas around the old city area so that on-street parking can be minimized on the narrow lanes. Pedestrianise the inner city streets as much as possible and allow intermediate public transport system with improved traffic circulation schemes for different modes. Remove encroachments from footpaths to facilitate smooth pedestrian movement and enable 'park-and-walk' and 'park-and-ride' strategies. This will help to decongest the area. The movement of heavy vehicles needs to be banned in the old City. To serve the commercial activities in the area light commercial goods vehicles can be allowed restricted entry during the night and early morning at designated hours for loading and unloading. Appropriate sites for this may be identified.

### **14. Parking for multi-modal integration in railway stations, airports and mass transit systems**

Municipal Corporations within their jurisdiction will implement plans for Airports, railway stations, metro stations, Inter State Bus Terminus and other mass transit points to improve access and multimodal integration for easy access. They may follow appropriate design guidelines for easy transfer to other connecting systems, including buses and para transit, with adequate pedestrian access.

### **15. Parking management for hospitals, educational institutions and heritage buildings**

These building typologies will require customised approach keeping in view their special needs. In hospitals and medical establishment create pick up and drop off places at convenient places to access hospitals for patients and visitors to hospitals. Reserve part of the on-street parking for them.

For school parking ensure as far as possible provision of staff parking within the school premises. Earmark special parking bays on street for pick up and drop off of students for only fixed hours in morning and afternoon. The requirements of schools at opening and closing times should be given special attention in view of the bulk movement in a short time span which can cause congestion and be a hazard for the children. Comfortable and safe pick up and drop arrangements should be prioritised over long term parking.

Heritage buildings will be required to develop separate parking plans.

### **16. Parking for Community and Recreational facilities**

This policy will aim to manage parking spill over through parking controls in adjacent to community, recreational, social and cultural facilities, including Park land. Regional parks and sporting facilities should have a minimum parking restriction on both weekdays and weekends. Some community or recreational facilities, including parks, have small street frontages. In these circumstances, parking control should be consistent with the capacity of the surrounding streets to

minimize encroachment and prevent non-compliance.

#### **17. Notified green areas, neighbourhood parks and green spaces to be kept free from parking**

Area parking plans need to maintain judicious mix of green spaces for healthy neighbourhoods to reduce health risk among residents and children. All green areas and neighbourhood parks need to be protected from parking.

#### **18. Regulating off-street private parking provisions through standards**

Towns/Cities require a minimum quantum of parking to be built along with any building development. Further, a developer can build more or less unlimited amount of parking even though there are restrictions on the quantum of built space for people in terms of floor space index (FSI) restrictions. But this excessive supply of cheap parking ends up encouraging private vehicle use, even if good public transport is available. Requirements for parking increase the price of real estate as developers are not able to use land efficiently. If a large portion of a commercial building's area must be devoted to parking, it cannot be used for productive commercial uses. Also, as parking costs are typically bundled with the price of the unit, residents who do not travel by personal vehicle are forced to pay for parking spaces. Thus, while management of public-parking is the first step towards encouraging a shift to sustainable transport, it needs to be supported by various land-use planning and regulatory measures. Some such measures are outlined below:-

- **Adopt parking maximums across the city.** Parking is a function of road space, not built space i.e. existing road work in any part of the city cannot accommodate more than a defined number of vehicles, irrespective of built density. Hence, minimum parking requirements may be removed across the city. Municipal Corporation may modify development control regulations to limit the number of parking slots (equivalent car space) per 100 sq meter to be provided in a plot area. Further, any parking that is created as part of a development, except for that of bicycle parking, should be charged a parking development fee that is equivalent to or more than the development fee charged for floor space meant for use by people.
- **Adopt people-oriented building design guidelines.** Avoid parking setbacks. Instead, encourage built form that contributes to street life. Ensure access to off-street parking facilities may not obstruct the pedestrian environment.
- **Increase built density along rapid transit corridors.** Given the growing network of rapid transit in the city, the city must ensure that the majority of future population get to live, work and play within walking distance of rapid transit corridors. In other words, areas with good connectivity to public transport must have higher built densities as compared to other areas so that the travel needs of the population are met through sustainable modes. Modify development regulations to increase built density along rapid transit corridors. Focus on improving access to transit, through NMT improvements, augmenting feeder services and increasing transit capacity. Avoid park-and-ride facilities.

#### **19. Governance framework for management and enforcement of parking**

For strong oversight, planning and monitoring of parking management and enforcement as well as fixing and periodic revision of parking charges an empowered Authority and a Management Cell may be set up with representation from Municipal Corporation, all land owning agencies, traffic police, among others. This body will be responsible for supervision and monitoring of implementation of local area plans and parking pricing. This Authority will also include professionals and experts to provide the technical guidance in the matter.

## **20. Institutional structure for parking management and revenue**

Successful implementation of parking management system will involve cooperation between multiple stakeholders (such as Municipal Corporation, traffic police, planning agencies, operators and others) at different stages of implementation. To manage all aspects of parking in the city and to coordinate with various stakeholders, MC will create a Parking Management Wing (PMW). The PMW should have competent officers/professionals who are capable of managing and overseeing these complex and highly technical tasks.

The following should be the key functions of PMW:-

- Coordinate with various relevant agencies to develop a parking management strategy.
- Assess parking demand in parking management zones and designate parking and no-parking areas in consultation with the Traffic Police and other agencies.
- Determine parking fee structures and fines. Review parking rates periodically to ensure price structures reflect changing demand patterns.
- Develop key performance indicators to monitor operator performance (eg. occupancy rates in paid parking areas, the number of parking violations etc.).
- Procure services of external agencies to conduct parking studies from time to time and to develop a parking management plan.
- Outsource parking operations to service provider(s) who will develop an operating plan, implement an IT based parking management systems, manage fee collection, enforce parking rules, and provide customer care.
- Ensure that the operator is fulfilling all contractual obligations.

The PMW should adopt the following model to contract out parking operations to private sector agency(s):-

- The contract for parking operations should be awarded to a Service Provider through a transparent bidding process i.e. e-tendering.
- The Service Provider will receive a service fee for setting up the parking management (and enforcement) system and operating it, subject to service level benchmarks.
- The Service Provider will be entitled to a bonus in case of good performance. Conversely, appropriate penalties may be levied on the service provider in case of poor performance.

The service provider should develop an information technology (IT) based system that will do the following:-

- Provides quick and hassle-free payment options to the customers through mobile-phone based payment systems via an e-wallet linked to a registered vehicle and phone number.
- Captures real-time monitoring data from parking control officers and smart parking meters to provide feedback on parking system performance and support the adaptation and improvement of parking policies to meet the changing travel demands of users.
- Provides transparent means to enforce parking rules.
- Ensure real-times access to all project data, such as a real-time information feed from parking operations and enforcement, to the PMW and the Traffic Police.

To this end, MC will work with the Town Planning Department/ Planning Authority to ensure requisite changes are made to Development Control Regulations, Master Plan / Development Plan and others. The Comprehensive Mobility Plans should be referred, where ever prepared.

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