PPL (Public Parking Lot) Specifications

Area/Item	Specifications
Parking Area	LMV – Upto 50% small car (4.5 x 2.3 m), balance large car (5.5 x 2.5 m) LCV – 2.5 x 7.5 m HMV – 3.75 x 12 m
Height	LMV – 2.4 m below beam LCV – 4.2 m below beam HMV – 5.2 m below beam
Ramp width	LMV – 7.5 m two way/4.0 m one way with max. slope of 1:10 and internal turning radius of 4.0 m. Driveway allowed with 6 m two way and 4.5 m one way. LCV – 9 m two way / 6.0 m one way with max slope of 1:12 and internal turning radius of 6.0 m. Driveway allowed with 9 m two way and 7.5 m one way. HMV – 12 m two way/ 9.0 m one way with max slope of 1:12 and internal turning radius of 12 m. Driveway allowed with 13 m two way and 9 m one way.
Staircase	At least one separate staircase from those of the sale building. Distance between fire exits of 90 m with sprinklers.
Lift	At least one dedicated passenger lift if greater than 2 levels
Ticketing system	Automated ticketing system with no/minimal manual intervention: a. When car drives in, a manual operator will issue ticket with bar code based on type of vehicle (this should be replaced with an automated issue system if the PPL is meant only for one vehicle type viz. any one of LMV/LCV/HMV). The ticket will also have directions to the nearest available slot for that vehicle type which will become the designated slot for the said vehicle. At time of entry, the vehicle's plate no will be entered into the system (preferably through camera, which should be linked to the under car scanning system – if this is not possible, then entry to be done by operator manually) such that the ticket and plate no. are matched together, which will enable the security to check whether the car has been parked in its designed slot. No of such operator booths/automated entries should be one per 1000 vehicles (rounded off, or as per detailed traffic study) and there should be one lane for each operator. b. There will be separate payment counter(s), located at easily accessible locations (not at exits). It is suggested to have one payment location for every 500 cars, subject to minimum of 2. The vehicle driver is expected to make payment at these counters and then exit using the ticket through automated exit gates within 15-20 minutes of payment depending on the no. of levels in PPL. c. The exit system should be automated – the driver will show the paid ticket and the machine will read the bar code and open the boom barriers. The no. of exit lanes should be same as no. of entry lanes (or as per proper traffic analysis) and each lane should have one automated machine. The exit boom barrier should be strong enough such that if a person tries to drive through

	those without paying significant damage will be caused to the vehicle. d. Also if a person reaches a exit point without pre-paying, he should be allowed to exit after pressing a 'call attendant' button at which time a person will come, take ticket to a nearby payment machine, process payment at rate + handling charge of Rs. 25/- and come back allowing the vehicle to exit. The advice to pre-pay at designated automated machines and additional charge if they try to exit without having pre-paid should be suitable printed on the ticket at time of issue. e. The entry/exit system should be able to generate log of each vehicle's usage details (including time period and slot used) and give snapshot of all vehicles within the PPL at any given point.
Fire Fighting	a. Addressable zone-wise alarm system, which should be linked to the zones of the fire compartments. The fire curtains (wall + water curtain) should work hand-in-hand with the alarm system. b. The alarm system should be controlled/monitored in the Security room (see details on security below).
Toilets	a. Use good quality CP and Sanitary fittings (not branded) but decent looking. b. Use good quality tiles. c. Doors should be of good quality. d. Toilets should have hand faucets. e. Space for janitor's material viz. janitor closet should be provided. f. Light controls should be centrally located so that mischief makers cannot switch of the lights easily. g. Soap dispensers and hand dryers (or tissue holders) should be provided
Key Common Areas (eg. Waiting Hall, Main external entry from road, Any food service or other prominent public use areas, Any government offices within PPL)	**a. Finished to standard of Lodha's Aspirational product.** b. Air-conditioned, if feasible. c. Good furniture and flooring. d. Consider piped music. e. The finish of the façade (external wall at the main entry to PPL) should be of Lodha standard with proper signage for PPL (e.g. MCGM Public Parking Lot, Apollo Mills). These spaces should not appear to be 'government' spaces. Should be like key common area in a Lodha Aspirational building.
Signage	a. Clear readable signage (along with appropriate lighting to ensure readability in the dark) showing directions to different levels and exit (readable when a person is driving).

	b. Each parking slot should be marked with a no. painted at the floor level in an easily visible paint. If slot is earmarked for LCV or HMV that should also be stated along with the no. c. Directions to toilet, staircase, exit points and payment points should be marked at eye level (readable when a person is walking). d. Each level should be marked at the staircase landing and lift lobby e. The signage in the parking area at Lodha Excelus, Mahalaxmi (not the Apollo PPL) is a good example of well-conceived signage. f. If the design is such that driveways have two-way movement, clear lane markings should be done
Parking Availability Display	a. Level wise availability display at entrance (total across all vehicle categories). b. Radio controlled remote parking display board which can be placed anywhere within 1 km of the site with an appropriate power point, which can show total no of available slots in full PPL. These are to be located as per Jt CP NOC conditions.
Flooring	a. Floater finish with no additional concrete(to slope only at periphery to address rain water ingress),no slope in the interiors.
Wall finishes	a. Gypsum / cement putty to ensure smooth finish + paint upto height of 1.2 m below slab. Bottom portion to be left as bare concrete. b. Colour should be a non-white colour since the upkeep of the space is not likely to be very good and white shows dirt very easily. c. Paint used can be Flat enamel or Oil Bound Distemper (OBD).
Ceiling finishes	Single coat white putty finish.
Security	a. CCTV cameras (with ability to see after sunset, with internal lighting) – in the levels below ground, night vision cameras aren't required as long as the camera used can capture image for the given illumination level inside the PPL. b. Well finished Security room (air conditioned, if feasible) with good quality monitor screens (3-4 screens minimum) should be used to monitor the CCTV cameras. The same room should be provided with all other BMS functions. c. One watchman cabin at each entrance from road of the PPL. d. If Jt CP NOC, requires a car scanner / explosives detector, provision for same has to be made in all 'in' lanes. Car scanner can be used instead of explosives detector. Monitoring room for car scanner should be near the entrance so that can suspect vehicles can be immediately identified. Camera used for car scanning can also be used in conjunction with Ticketing system.
Services	As far as possible, following services need to be separate for the PPL: a. Water tank b. DG Sets STP and Transformer can be shared if needed OR STP can be avoided by considering PPL as a separate unit and taking discharge directly to municipal drain (for this in-principle ok from Liaison is needed). DG sets should be sufficient to take fire fighting system load and ensure needed ventilation during fire – based on this sizing, during

	normal power outage, the load can be allocated first to ticketing system, then mechanical ventilation system (if any) and thereafter, select lights.
Car wash facility	a. If car wash is asked for in the LOI/Jt CP NOC, adequate space for car wash facility with sufficient water points, hose pipes and drainage shall be planned inside the PPL. b. The space designated for car wash should be separated from rest of PPL to ensure that water doesn't flow across or should have a gradient such that water drains out.
Other Provisions	a. Adequate space for housekeeping stores should be provided. b. Column guards should be provided for all columns. If structural columns of the sale building are exposed in the PPL, special safety measures should be taken at those columns (possibly including concrete strengthening or buffer wall creation) to ensure that the sale building is not affected in case of any collision or attempted sabotage of these columns. Also see "Podium & basement design guidelines" c. Flexi posts or any other protection should be provided for parking slots which are adjacent to driveways and there is a chance that driver may confuse it with driveway (e.g. – slot on the immediate left of the main ramp in Apollo PPL). d. Following conveniences to be provided (with furnishing): a. Staff changing room with lockers, clothes hooks and mirrors (on basis of 20 staff per shift per 1000 cars) b. Staff dining area with tables and chairs (~200-300 sq. ft.)

a. All aspects of the NOC from Jt. CP. Traffic are to be studied and one should comply to the best extent feasible. If any items is not going to be complied with or going to be complied with in a manner different from what is stated in the NOC (due to cost/practicality reasons), a written note for the same should be prepared and consent of Director-Operations/COO/HOD-Design (any one) taken.
b. For any norms not stated here, refer to (in order of priority):
    a. Finishing of Back of House Common Areas
    b. Podium and Basements Design Guidelines

    For abundant clarity, in case of any conflicting norms, the norms of this policy (PPL – Public Parking Lot – Specifications) shall apply.
c. Please refer the below mentioned documents for Design Intent & Draft BOQ along with this policy:
    1. Parking Management System_v3_20.05.2014.
    2. Draft BOQ for Parking Management System.(excel sheet)_v2_01.05.2014