SECURITY DESIGN GUIDELINES

This policy should be read in conjunction with the detailed design intent for commercial security systems and residential security system below.

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A. General Principles:

Deter Criminal Action through detailed design and communication of prevention systems, reduce impact of any criminal action (if it were to occur), detain criminals (by reducing no. of entries / exits and securing them).

1. Security design should be considered as a key part of concept design and integrated into design upfront (rather than a possession add-on).
2. Key elements to address:
    i. Vehicular
        1. Registered Owner/occupier vehicle
        2. Guest vehicle
        3. Registered Service vehicle
        4. None of the above
    ii. Pedestrian
        1. Registered Owner/occupier
        2. Registered Service staff
        3. Guest
        4. None of the above

B. Design Guidelines

	Check 1	Check 2
Vehicular		
Registered Owner/occupier vehicle	Boom barrier controlled access to compound enabled by RFID/ANPR (Automatic Number Plate Recognition)/BLE (Bluetooth Low Energy)/similar. Sticker can be used for Casa and iThink if RFID/ANPR/BLE/similar is not viable due to design or cost reasons. Boom barrier to be located such that atleast 2 cars can wait without encroaching onto external road. No compound level checks for retail.	Separation of guest parking area from Owner/occupier parking. RFID/ANPR/BLE/ code access to Owner/occupier parking. In cases where Dynamic parking is used in commercial buildings (no fixed allotment to individual users), adaptive LED signages near boom barrier, at each floor entrance and at each lane of all parking floors to be installed to dynamically update available parking slots.
Guest vehicle	Authorization from owner/occupier at compound entry. Pre-authorization to be enabled for offices. To be guided to guest parking (earmarked or pay and park). Max. parking time period for a single vehicle to be defined (say 12/24 hours) (to avoid risk of guest parking for long term and related issues). Not applicable for retail in which case the vehicles are straightway directed to pay and park.	CCTV monitoring at entry to each parking floor so that entry/exit of cars can be seen

Service vehicle	Separate entry for service vehicles should be preferred (not applicable for retail and Casa residential). Boom barrier controlled access to compound. For daily vendors such as newspaper, milk etc. stickers should be issued to the vendors after due verification of the agencies by HFM / LH team. . For others, authorization from owner/occupier/HFM (or equivalent) at compound's service vehicle entry. Not applicable for retail in which case the vehicles are straightway directed to pay and park. Boom barrier to be located such that at least 1 service vehicle can wait without encroaching onto external road. No compound level checks for retail.	Parking permitted only into designated service bays. Max. parking time period for a single vehicle to be defined (say 1/2 hours).
None of the above	Such vehicle is not to be allowed entry into the development. If such vehicle is found to have entered the development or if any guest or service vehicle has crossed their time limit within development, same to be informed to security and security to take steps to have such vehicle removed out of the development expeditiously.	
Pedestrian	Hi-end/Luxury/Designer: Verification at entry to development and then at reception/service entry; all elevators (including service) to be access controlled (card / biometric/ BLE). Guest authorization at reception after confirmation from owners. Separate service entry should be provided for service users. ASPI & Other residential: Access control at entry to building (not development)	CCTV: a. All building staircases - At mid-landing just below first habitable floor. In staircases outside building, at mid-landing above the exit onto the road.

	with automated door release for visitors (guests or non-registered service staff) at building entry. Separate service entry not required. Office: Similar authorization for guests and visitors. Deter usage of reception by using web based visitor management system and pre-authorization by host. Self-service touchscreen kiosks/tablets to be placed in the entrance lobby for visitors to receive QR code image on smartphone/QR code printed slip Controlled access to passenger elevators by using QR code (at turnstile / similar, if feasible combine lift call with turnstile check, with option of calling another floor if needed separately). Separate service entry should be provided. Retail (if > 25,000 sft leasable): 1 Baggage scanner and metal detector(s) at each guest entry. Separate service entry should be provided. Service entry: If building has separate service entry, all registered service staff to be allowed from this entry only (if not accompanying an owner/resident). Any non-registered service staff to be authorized at this location by calling concerned unit.	Or if non-habitable building at mid-landing of first floor above entry level. b. All elevators (including passenger, fire, service, parking building, etc; preferably located on the same side as the door since people tend to stand facing the door) c. Entrance lobby of all habitable buildings (and building service entrance lobby) d. Key common areas - KCAs (entry/ exit gates, clubhouse, and temple), vehicle drop-off, and main entry gate to development (such that pedestrian and vehicular entry & exit can be recorded) and kids play areas (indoor and outdoor) need to be monitored by CCTVs. (CCTV shall not be directed at the private areas, swimming pool, inside toilets, changing rooms, etc.) e. Areas which have critical equipment

		and limited footfall of residents eg. IBMS room, mechanical floor, pump room, refuge, terrace, loading bay. Generally place at entry/exit to these rooms if enclosed or at multiple points if not enclosed. f. For Retail: Strategic locations where escalators land such that image of person getting off escalator can be seen + selectively in the corridors.

3. Other areas:
    i. Elevators: See 'Standards for Elevators' policy.
    ii. Staircases: Monitoring by security staff to ensure that fire doors are kept close. HFM to ensure at least 2 daily rounds for the same.
    iii. Refuge: See 'Refuge Area Provisions' policy.
    iv. Central Control room: All developments to have a central control room to monitor all alarms (inside unit, elevator, refuge etc.), CCTV and other similar security and safety measures. To be co-located with the fire control panel or if the same is not feasible, locate at a location which is easy to access for fire or police. The fire panel and central control room should be located such that they (will) have good mobile signal reception. In select projects, the

central control room maybe offsite for economies of scale and in such case, there needs to be good telecommunication between fire control panel location and such offsite central control room.

4. Specialized security review: For any iconic (i.e. high profile from a public perspective (not high end) and hence, likely to be target of anti-social activity) building/development, MEP design shall ensure that security design is done by specialized 3rd party security agency with appropriate experience (Israeli / similar) and completed within 3 months from date of start of sales. These guidelines can be given as an input to the agency but the final design will be their responsibility. The sign-off on the final design shall be done by Ops Strategy OR Director-Design.
5. PPL / similar 3rd party accessible areas with no control of the building operator:
    i. Should be avoided below habitable building footprint (can be done below parking/similar).
    ii. Ensure that the security and control measures stated in 'PPL- Public Parking Lot- Specifications' are implemented.
    iii. If located adjacent to building footprint, boundary between building footprint and PPL should be strengthened on the PPL level to ensure that there is no entry + blast protection from PPL.
    iv. If PPL is/has to be done below building footprint (partially or wholly), Lodha FM to put in well-trained dedicated security staff (in co-ordination with PPL operator) at Lodha cost for 5 years from start of PPL (period to be reviewed every 5 years in discussion with concerned RCEO) to ensure strong security for the PPL. These include ensuring no threat vehicles are allowed to enter PPL, UVSS is being used effectively, CCTVs are being monitored properly, fire system are working, PPL is not being used for anti-social or non-parking activity, abandoned vehicles (beyond stipulated parking hours) are immediately reported to authorities and removed from PPL etc.
6. Separation of all humans and vehicles into 4 categories and appropriate system to deal with each of the 3 categories differentially: Registered, Visitor, Service, non-registered service.

7. Minimize security manpower requirement for the development to lower operational costs and reduce human dependence/intervention, through effective use of design and technology. Of course while doing this reduction the cost v. benefit tradeoff of higher capital investment v. lower operational cost (due to lower no. of security guards) needs to be weighed such that company's capital expense is not significantly increased.
8. Highest threat is from visitors / service staff. Their access and controls should be planned taking this higher threat into account.
9. Limited no. of entry/ exit from each building (preferably 2, one for resident/ guest, other for service staff). Special attention to be paid to entry into building from parking areas.
10. All elevators to have intercom/equivalent system for emergency and CCTV inside elevator. These are to be monitored at single central control room in development.
11. Transfer elevators are avoidable since they lead to additional travel time for the users. Ideally is direct access from each parking level to the building elevators (same controls as specified above for entrance lobby). In rare situations, transfer elevators may be used in which case there should be covered access from transfer elevators to building elevators at building's entrance lobby level.
12. No system can be 100% fail-proof. We should be sure it prevents criminal intent 95% of the time and will detain criminal, if criminal action were to occur, in the balance 5%.
13. System should rely minimally on security / control personnel acting 100% correctly all the time.
14. All security features (cameras, call units, panels, access control units, etc.) in the customer facing areas (KCAs and lift lobby) need to be integrated with the interior design of the space. The device placement and device aesthetics (look and feel) need to be reviewed by the ID team so that they blend with overall look of the space and do not appear to be out of synch with the ID.

Design Intent for Commercial Security Systems

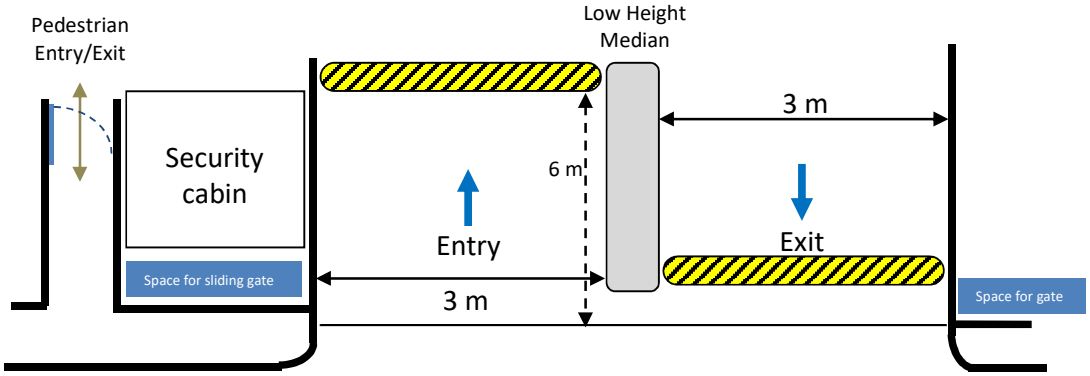
A. Access Control Systems

1. Vehicular access

The vehicular access system should provide easy movement of any vehicle type. The main entry for vehicles into the complex should be controlled by a sliding night gate and for pedestrians by a wicket gate. Depending upon layout at site entrance and expected traffic we can have 2 entry lanes + 1 exit or 1 Entry + 1 Exit lanes.

One entry lane and one exit lane

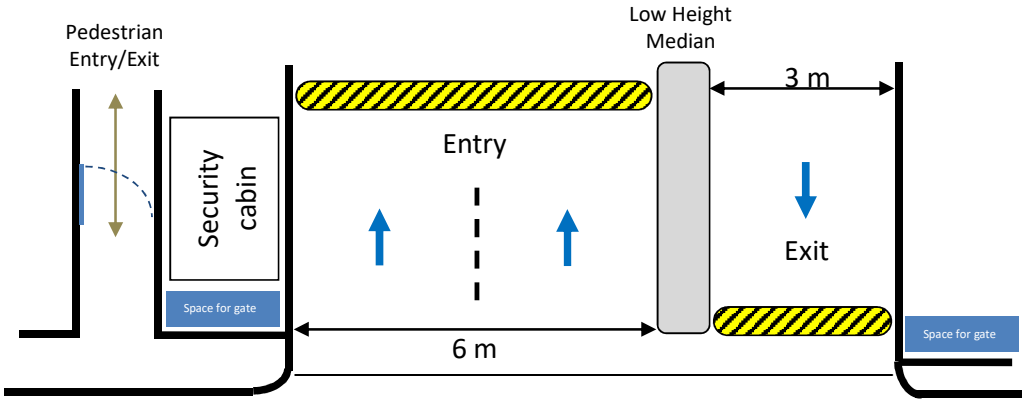
In this case, the security cabin should be situated near the entry lane. This security cabin will be between pedestrian entry and entry lane. A sliding night gate for both the entry/exit lanes and a wicket gate at pedestrian entry will be installed to control the movement in non-office hours. If there is very less resting space for sliding gate then foldable type gate can be planned. If designing low height median is not possible then at least permanent bollards should be placed so that the entry and exit lanes are properly defined visually.



Tentative plan for main gate with one entry & exit

Two entry lanes and one exit lane

If there is enough space at the entrance and heavy traffic is expected then a double entry may be provided. For this type, the security cabin should be planned near left most entry lane only. Sliding night gate for the entries/exit lanes and a wicket gate at pedestrian entry will be installed to control the movement in non-office hours. If there space constraints for sliding gate pocket then the foldable type gate can be planned. If designing low height median is not possible then at least permanent bollards should be placed so that entry and exit lanes are properly defined.

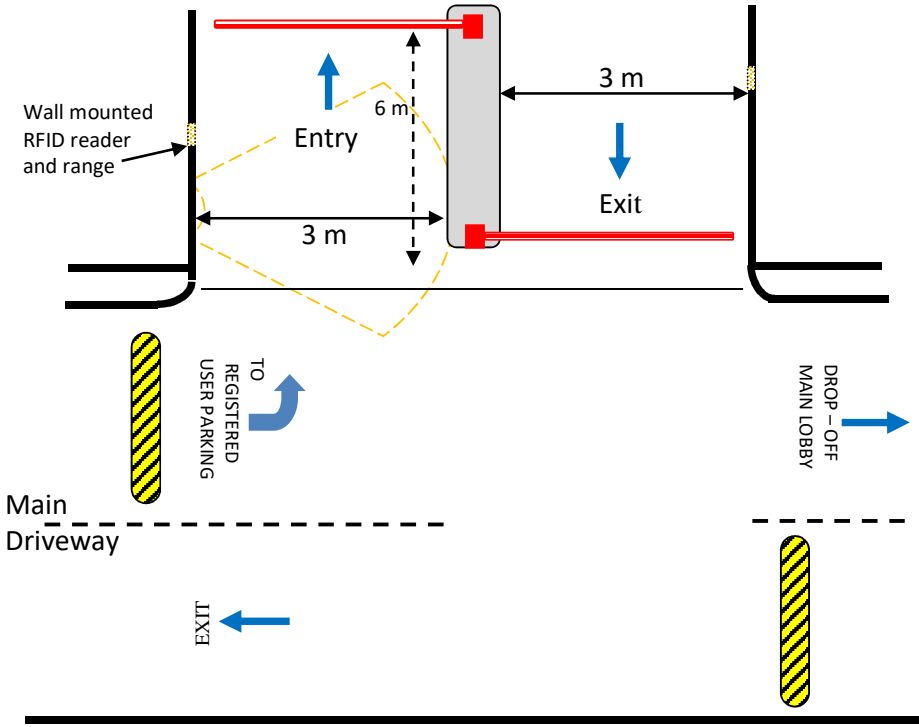


Tentative plan for main gate with two entry lanes/one exit

Parking floor/area

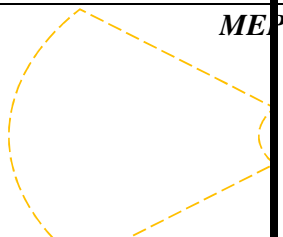
A separate entry/exit to the parking floors other than the main entry will be present in all the commercial establishments. Generally visitor parking is not allowed in the campus. In case visitor parking is allowed then please refer to visitor parking management

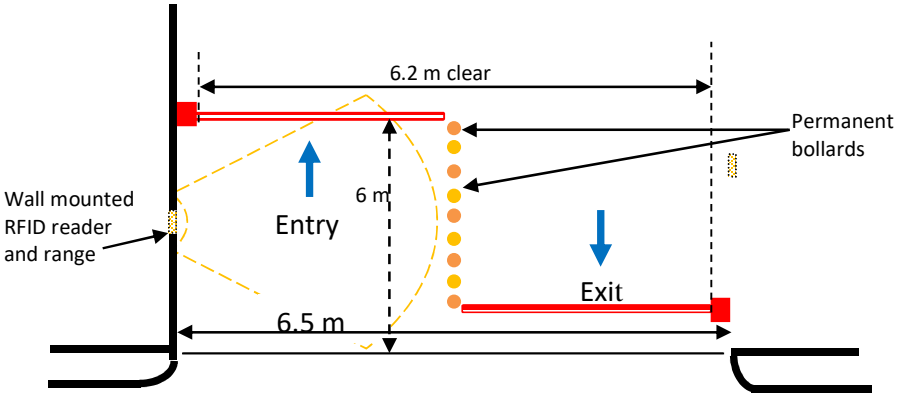
section below. The entry/exit will be RFID/ANPR/BLE controlled with boom barriers. Entry to parking floor for vehicles will be unmanned as only registered cars are allowed to park inside the premises. At the top of parking floor entry, height restriction signage should be planned.



Tentative plan for parking floor/area entry & exit

In case a low height median is difficult to design for separating entry and exit lanes then below arrangement can be considered.





Tentative plan for parking floor/area entry & exit

Dynamic Parking in Commercial Buildings:

In cases where dynamic parking allocation is used in commercial buildings (i.e. majority of parking slots are not allocated on individual basis), following equipment to be installed:

1. **Automatic Number Plate Recognition (ANPR)**

ANPR based vehicle authorization and boom barrier operation with RFID/ card/ BLE as secondary method



2. **Signage at Entry**

Shows available parking slots at each parking floor and updates available spaces in real time



3. **Signage at each Parking Bay**

Shows available parking slots in each lane on every floor and updates available spaces in real time

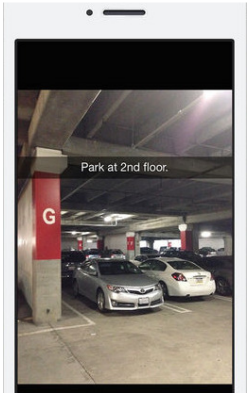


4. **Sensor based Slot detection**

Camera / Ultrasonic sensor detects presence of car and LED light for indication of available parking slot



5. **Find My Car**
   ANPR based car finding from Mobile app (Not applicable if Ultrasonic sensor used)



- Access card for registered vehicles
  Automatic Number Plate Recognition will be the primary method for allowing access to the parking floor/area to registered users. Bluetooth Low Energy/RFID card will be the secondary method in case ANPR does not work. Registered vehicles need not

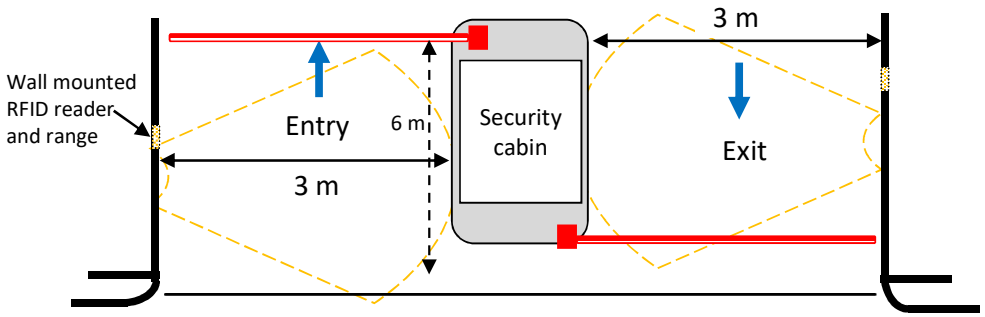
be checked before/after entry into the parking area. The access system should be able to show the number of registered vehicles in the building/complex at any given point of time. This data will be kept on local server for minimum 7 days. Card details will be updated annually on confirmation with the local admin department otherwise they will automatically expire after completion of 1 year from the date of issue. The data captured on the cards should include but not limited to vehicle owner name, car registration number, office name, designated floor, parking no., etc.

- Self driven vehicle
  These users must be able to enter parking area and park their vehicle safely in the designated space. Proper signage should be provided for easy guidance.

- Chauffeur driven vehicle
  The chauffeur should be able to drop off the registered user in the drop off zone and should be able to enter the parking area and park his/her vehicle safely in the designated space. Drivers lounge and related facilities should be provided as per current policy.

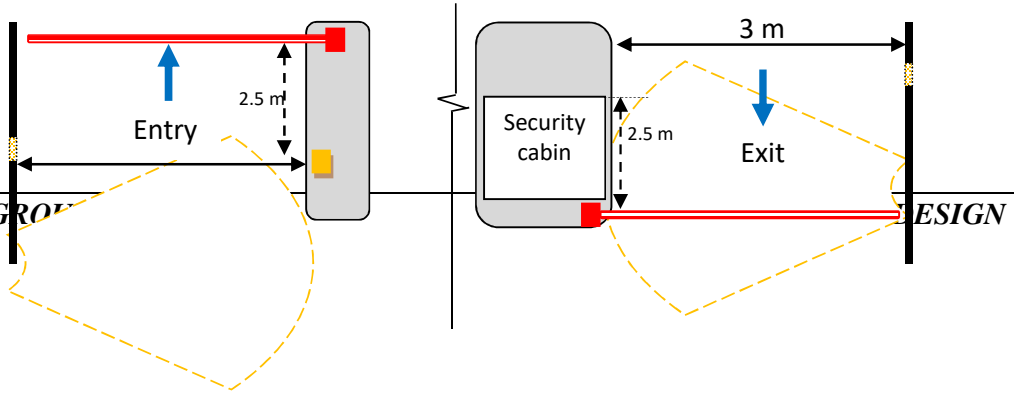
– Visitor vehicle
  If visitor parking is allowed in the building/complex parking area, it should be on pay and park basis unless it is < 10 nos. The rates should be defined as per nearest PPL/government controlled parking zone in the vicinity. Signage for these parking rates and general parking guidelines should be visible clearly at the entry to the parking area. *(Refer guidelines issued for Geeta Supremus)*

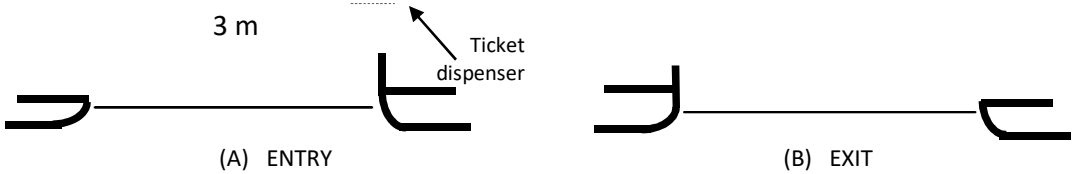
  Visitor vehicle management
  In case the parking entry and exit are combined, a security cabin should be planned at the median. For visitor pay and park system a programmable ticketing device will be used to issue tickets from the cabin and at exit the details of issued ticket will be scanned by the security person and receipt will be generated on a pre-programmed tariff. The ticketing machine will have an in built printer to issue slip and receipts. For ticketing machine details refer to this link below.
  (http://posmachine.in/balajihandheld/products/balaji-pos.html)



Tentative plan for combined entry/exit for pay and park at parking area

In case the entry/exit lanes are not combined then there will be a ticket dispenser at entry for visitors only as the boom barrier will not open for them. At exit lane an operator will be present in a cabin which will collect the payment as per the applicable preprogrammed tariff. For details regarding the setup please refer to the PPL policy and its addendum.





Tentative plan for separate entry/exit for pay and park at parking area

Note:

- Security cabin should be open type and minimum 1.5 m x 1.5 m with a small fixed desk with two lockable drawers and a chair with proper light points and ventilation
- Minimum distance of opening in security cabin from boom barrier should be 2.5 m. This will allow the operator to give tickets and also collect cash from the driver in case of visitor vehicle
- Holding area before the boom barriers should be minimum for 1 car length (Max 6 m, Min 5 m) in each lane

- Self-driven vehicle
  The visitor should have an easy access to complex through the main gate. If there is no visitor parking than a suitable signage should planned indicating the same.

- Chauffer driven
  These cars should be allowed entry into the complex up to the drop off and back to the visitor parking area or outside the premises.

Movement within parking floor/area for users/chauffeurs

Separate transfer lifts should be planned for movement within the parking floors. These lifts will open at all the parking floors and at reception level only. This will help all unregistered users to authenticate at the reception desk for forward movement. Lifts which connect from parking directly to office floors should be avoided. In case it is unavoidable then access control with proper ventilation is needed in all the parking floor lift lobbies. *(Refer Geeta Supremus parking floor design).*

There should be free movement for users in between the parking floors and office floors respectively. A separate access controlled entry should be established at the first mid-landing of staircase between the first habitable floor and the parking floor. This

controlled access will restrict the movement of non-registered users like driver, etc into the office floors and record movement of registered users through that door. Also, no panic bar should be installed on the staircase doors of the parking floors so as to allow a free movement within. Panic bars will be installed in the staircase doors of all the office floors towards the habitable space.

- Service user vehicle
  Service vehicles come during office hours and sometimes in non office hours. A separate manual controlled entry into the complex should be planned for these vehicles if possible. If not then they will enter from the main gate and lead towards the loading/unloading bay which should be near the service lift. Loading/unloading happens while the vehicle is stationed in the reverse direction. Efficient space planning for the service vehicle movement needs to be planned. A security desk near the parking/service lift area would be planned to regulate and record the service user movement. The service lift will only open on the loading/unloading bay floor and the office floors. Service lift will not open at any of the parking levels.

- Public transport vehicle
  Auto/Taxi (as applicable) should have an alighting bay either outside the complex or near drop off of the building. Separate drop off outside complex for Buses should be planned for large commercial complexes with signage *(for e.g. iThink Technocampus, Simtools)*. A pedestrian walkway from the alighting bay towards main lobby should be planned if it is outside complex.

- Two wheeler
  Two wheeler parking should be planned in the parking area for 15-20% of the total four wheelers parking count. Separate space should not be allocated but space unusable for four wheelers should be used to its maximum.

2. Pedestrian access

Pedestrian access planning is mainly governed by the occupancy expected in a building/complex. At the main entry into the complex a separate pedestrian entry through wicket gate should be planned. All the pedestrians will be allowed access into the building lobby and control will be implemented at the lobby only. The pedestrian access will be monitored and controlled by providing proximity card readers/Bluetooth Low Energy (BLE) readers/Palm Vein at suitable entry points within the building. At any

given point of time the access system should be able to show number and type of users with their details in the building. This data will be kept on server for minimum 7 days.

Following types of pedestrian access methods will be planned:

- iThink / Excelus: Palm Vein recognition (Morpho/equivalent) + QR Code
- Supremus: Bluetooth/Card (HID) + QR code

Whenever there are multiple segments in the same campus, the technology suitable for the segment (brand) that occupies maximum area in the campus will be used in all buildings of the campus.

- Bluetooth Low Energy (BLE) credential on smartphone
  Registered user will have an open access from complex main gate to the lift lobby and will be provided digital credential that will be stored on their smartphones. BLE readers installed on turnstiles will read these credentials when the user taps/shakes his/her smartphone in the close proximity of the readers and the system will "log-in" the user in the building.
- Palm Vein Recognition (MorphoWave)
  Palm vein readers will be installed near the turnstiles and the biometric credential of the users will be stored on servers. User will simply wave his/her hand on the reader and turnstile will allow access to the lifts while "logging-in" user in the system.
- Visitor access QR code paper slip/QR code digital image
  Visitors will have an open access from complex main gate to the lift lobby. For visitors to access the desired office floor they have to compulsory reach the entrance lobby area for registering themselves on self-service touchscreen kiosks/tablets placed in the lobby. These kiosks/tablets will be used to capture visitor photograph, mobile number and based on OTP verification, users with smartphones will be sent an SMS containing a link of a QR code image, while others can use the kiosk to print a QR code paper slip. For managing, authenticating the visitor entry Web based visitor management solutions should be used.

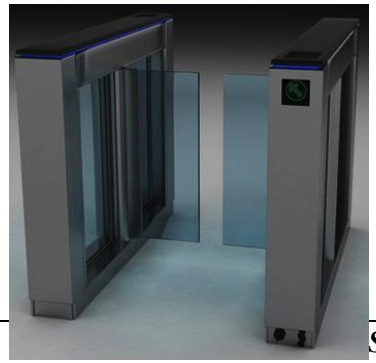
Web based visitor management system

Web based visitor management system is one of the most efficient system for regulating and authenticating visitors in the building. In this system, a website address is set up for the building and authorized users or their hosts/sponsors can go to the website and fill in the expected visitor credentials for pre-authorization. The visitor will get a SMS with a random generated code, one hour before the expected time on his/her mobile phone with a greeting message. When the visitor comes to the reception after being frisked at entry, he/she will use the kiosk/tablet to get the QR code paper slip/image. If the visitor is not pre authorized then he/she will used the kiosk/tablet to raise a visitor request which will then be approved by the host. Upon approval he will get an SMS with a random generated code and same process will be repeated as mentioned above. To encourage pre-authorization there should be a separate kiosk/tablet for pre-registered and non-registered visitors. Signage of pre-registered visitors should be put up on the desk reading “Pre-registered visitors only”.

Every time a new visitor comes his/her photo and other credentials are recorded into the system. This data is always available in the internal server securely. If the visitor comes second time in the complex then he/she will get the image/paper slip based on pre-registration. The credentials will not be asked again for authentication as the system will show the previous details of the visitor.

The visitor will scan the QR code image/printed paper slip while entering the lift lobby on the turnstiles to “log-in” the building. At the time of exit the visitor will again scan the slip in the designated turnstile to “Log-out”.





Example of bi-directional turnstile and flap barrier





Example of QR code image on smartphone/A7 size visitor paper slip

- Property Manager/FM
  The property manager should be able to move in the building through all access doors/entries.

- Service staff

The service staff should be able to move in the building through all access doors/entries except the BMS/control room. Provision for their biometric attendance machine will be made in the main campus security room/FM office. Service staff cards will be issued daily from HFM/BMS room for their movement into the building, changing room and other areas.

- Temporary service user
  Temporary service users are generally courier delivery, document collectors, food delivery, etc. Their entry will be controlled and monitored through the service gate and service lift area. They should be manually frisked at the service entry security gate.

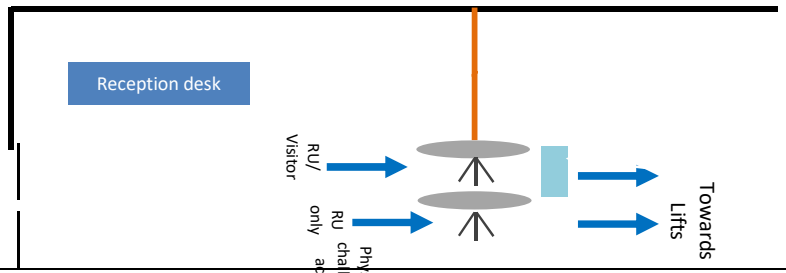
Main entrance to lobby

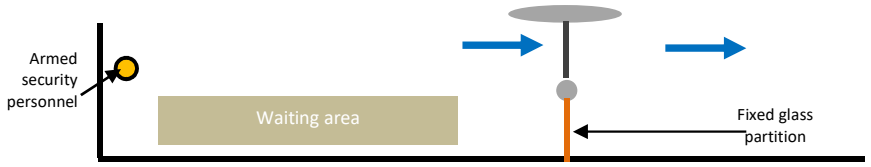
Main lobby entry/ exit sliding gates should be wide enough to allow ease of movement as per the expected foot falls.

Lift lobby

Lift lobby entry/exit are controlled by turnstiles. Number of turnstiles should be planned as per the expected footfalls. A compulsory access controlled flap barrier needs to be planned for allowing physically challenged user movement. As the turnstiles are unmanned a manual override switch should be given at the reception for any worst case scenario. This manual override will only open the flap barrier and no other turnstile.

There will be no metal detector and baggage scanner in the main entrance lobby. Metal detector and baggage scanner machine with a frisking booth adjoining the turnstiles to be provided in service lobby only..





Tentative plan for entrance lobby

B. Surveillance systems

- CCTV system
- FA and PA system
- Metal detector (Only for service entry in offices and Xperia retail)
- Handheld metal detector (Only for service entry in offices and Xperia retail)
- Intercom

One intercom connection in all the floors/office (as applicable) will be provided by Lodha which will be connected with the reception.

- Baggage scanner and frisking

(Please follow existing policies for the above)

C. Auxiliary requirements

- BMS/Control room
- FM office
- Drivers toilet/Drivers lounge
- Signage

(Please follow existing policies for the above)

Design intent for Retail Security Systems (Experia mall)

Objective of security systems are to address the following risks only:
1. Theft
2. Eve-teasing
3. Act as deterrent to untrained/ novice attacker or miscreants

It is recognized, that commercial / retail security systems are not suitable to credibly deter or stop trained criminals / terrorist activities. That can only be done by the State police and hence, are not addressed in this document.

A. Securing the premise perimeter

Motorized rolling shutters provided at
- Pedestrian entrances on ground level
- At the parking entry and exit into LG/ Basement as applicable

B. Customer pedestrian entry points

1. Visitors walk through the Door Frame Metal Detector (DFMD), and carry any bags along
   - If no alarm, a person walks in without being frisked or bags checked
   - If alarm goes off, security will frisk them
   - **Men:** Visitor will stand on a step up stool (required to check lower part of body which is missed otherwise), and uniformed male guard will frisk visitor and check any bag using a hand held metal detector
   - **Women:** Visitor will go into a frisking booth (metal frame, cloth bound, with table inside) after the DFMD, and uniformed lady guard will frisk visitor and check any bag using a hand held metal detector
2. Along with uniformed guards, there will be visible bouncers (of good built) at the main entries only – gives a clear impression to trouble makers to 'lay off'

3. Prominent signage will be displayed at all entry points mentioning “This area is under CCTV surveillance”. Number of entries to be covered are (as applicable)
   - Main entries
   - Lift lobby each from parking
   - Escalator lobby
   - Travelator lobbies

C. Customer vehicle entry points

1. Indicator at entrance to parking ramp on Ground level to display number car empty slots in UG, LG, Basement and Ground levels; (based on software programming of cars entering & exiting premises). Note, of the total parking spots available, some spots (to be defined by Mall mgmt) will be blocked for 2 wheelers. The display of available car spots will be using the "car only" spots
2. Entry parking levels
   - One lane for both 2 & 4 wheel vehicles
   - Automatic ticketing dispensing machine to have 2 buttons - one each for 2 & 4 wheeler vehicles - with capability to generate either a 2 or a 4 wheeler ticket
   - 2 boom barriers where smaller arm can be opened when 2 wheeler ticket button is pressed and allow only 2 wheelers, and can both arms to open when 4 wheeler ticket button is pressed
   - No security checks of vehicle. No UVS for cars or manual checking of car boot and 2-wheelers
   - Vehicle stops to get automated entry ticket. Car number plate scanner at entry, captures image of car number plate and prints it on the entry ticket
   - Corresponding boom barrier opens and vehicle moves into the designated parking level
   - Boom barrier has to be strong such that vehicle cannot push it open without getting ticket
   - Clearly demarcated bays at parking levels. No separate indicator display at floor entry will be given

3. Payment and Exit
   - Vehicle owner pay at payment booths - 1 per level in the lift lobby at LG & basement
   - Payment slip is issued. No manual intervention for person to collect monies and issue slips
   - The automated machine can be one which accepts only cash notes of select denomination + credit card
   - Boom barrier before exit to open on scanning the entry ticket (with bar code), if the payment matches with the time slot the car was parked for
   - If boom barrier is not opening (malfunction in scanner/ time clock out/ customer does not have exit pass), passenger to use "call attendant" button; nearby parking attendant to come and
   - Use hand-held ticket dispenser to collect payment and charge a fine of 50% of minimum applicable tariff, if payment related issue
   - else manually over ride boom barrier in case of boom barrier malfunction/ time lapse of 1-2 minutes
   - The exit boom barrier should be strong enough such that if a vehicle tries to drive through those without paying, significant damage will be caused to the vehicle
   - The scheme of payment at a booth away from exit point, will need support of prominent signage to aid visitors; signage on parking rates to be displayed both at entry and exit

4. Payment and Exit
   - As Ground will be treated as overflow parking, no automatic payment machine will be used
   - Customer will pay at Exit at the manned booth
   - Operator will confirm the payment and open the boom barrier for exit

5. Parking analytics/ reports
   - The entry/exit system should be able to generate log of each vehicle's usage details (including time period, type of vehicle, date, day of week) and give list of all vehicles within the parking at any given point

For details on parking management, please refer to the addendum for Public Parking Lot policy.

D. Mall management, service staff & retailer staff pedestrian entry points

1. Retailer staff – can enter through main customers or service entry
   - Show retailer ID card (no access cards given to them)
   - Manual bag check during entry and noting of contents in register
   - No baggage scanners
   - Manual bag check during exit
   - No frisking of people

2. Mall management staff – allowed to enter only through service entry
   - They show access-cum-ID card, clock in/ out time
   - Manual bag check during entry and noting of contents in register
   - No baggage scanners
   - Manual bag check during exit
   - No frisking of people

Note: Service provision to be kept for installing walk in metal detector at service entry, in case required for Police NOC

E. Mall management, service staff & retailer staff vehicle entry points

Open air free parking near service entry (Dedicated for retailer staff and mall management – no customer entry)

- Only registered cars with Proximity access cards (as issued by mall management) allowed
- No security checks for vehicles

- Boom barrier with proximity card reader at service entry
- Uniformed security guard present to note numbers of registered vehicles coming in, and also can do manual over-write of switch in case of proximity car reader failure
- No payment booth and no boom barrier at service exit

F. Service/goods vehicle entry point

1. Service/goods vehicle entry gate
   - Uniformed security guard to check challan with lorry driver and then open the boom barrier at service entry
   - Security to note the vehicle number and challan number in register
   - No separate security checks for vehicles, or goods
   - Goods to be off-loaded in retailer staff presence
   - CCTV to monitor activity of checking and transporting material into mall at the two entries on Ground from the loading bays. Prominent signage for CCTV monitoring

G. Common area monitoring

- Common areas will be under CCTV monitoring; Prominent signage will be displayed mentioning “This area is under CCTV surveillance”
- Plain clothed guards to survey area in 2 atriums, outside plaza and food court
- Cameras should be tamper proof
- It is also essential to have recorded images to be stored for 30 days (no archive) of all critical areas to facilitate investigations of reported incidents
- Refer to annexure 1 for details of location, count and type of CCTV (fixed, fixed outdoors and PTZ)

H. Access Control

Tiered access card system for mall management staff; to be issued by Mall management only to authorized mall management staff. For e.g. engineering service room access only to MEP staff and senior mall management; but HK staff to have access to only BOH & cafeteria

I. Communication systems for security staff

1. Security Guards to have walkie talkies for communication with other posts across the mall - total expect 30 number of walkie talkies
2. Intercom connectivity
   - Help-desk/ reception on Ground floor atrium to have intercom connectivity with BMS room, mall management office, and the lost & found desk
   - The intercom available in the lift cars shall be able to dial only one number, that of the BMS room

Design Intent for Residential Security Systems

(Casa, Aspirational, Hi-end and Luxury)

A. Access control systems

Access control system consists of hardware and software designed to control entry into selected areas and manage movement of people/vehicles within. The system is designed to increase security by defining access permissions based on area and time for each user and maintaining a log of all events. Two types of access system covered here are:

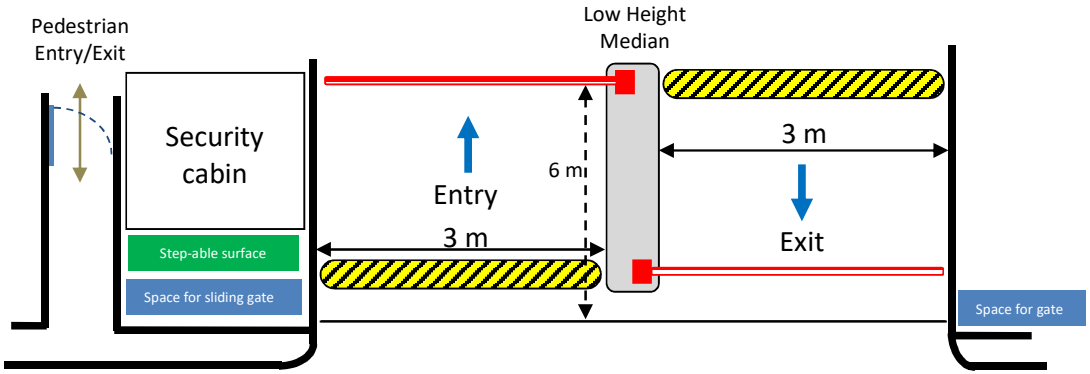
1. Vehicular access
2. Pedestrian access

1. Vehicular access

The vehicular access system should provide controlled movement of any vehicle type. The main entry for vehicles into the complex should be controlled by a long range RFID boom barriers and sliding night gate. Pedestrian movement will be controlled by a turnstile/wicket gate as applicable by project grade. Depending upon layout of site entrance, expected traffic and applicable CFO norms we can have 1 Entry + 1 Exit lanes or 2 entry lanes + 1 exit.

<u>One entry lane and one exit lane</u>

This arrangement is to be followed when there is no visitor parking in the premises and expected traffic is low (*e.g. Primero*). In this case, the security cabin should be situated near the entry lane. This security cabin will be between pedestrian entry and vehicle entry lane. An intercom connected with flats (video to flats as per project type) will placed in the security cabin. A sliding night gate for both the entry/exit lanes and a wicket gate at pedestrian entry will be installed to control the movement in late night hours. If there is very less resting space for sliding gate then foldable type gate can be planned. If designing low height median is not possible then at least permanent bollards should be placed so that the entry and exit lanes are properly defined visually. Enough space in-front of cabin should be planned for people to stand so as to be verified as per process.

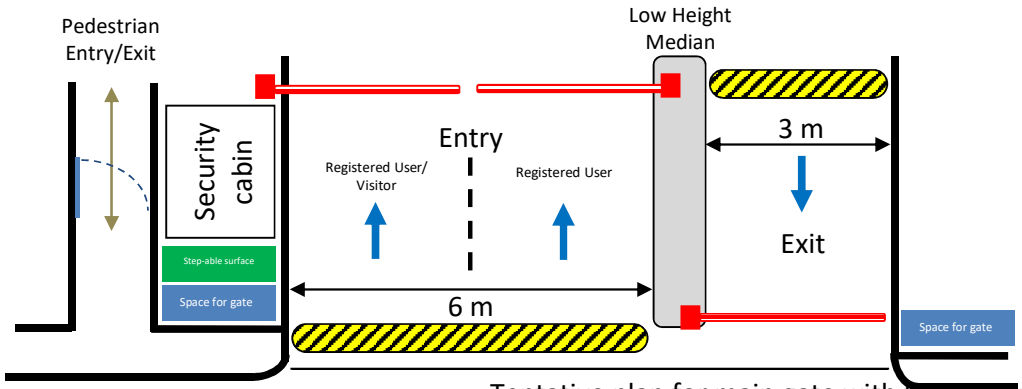


Tentative plan for main gate with one entry & exit

Two entry lanes and one exit lane

If there is only one entry/exit planned into the complex then this arrangement at the main entrance should be provided *(e.g. Luxuria)*. For this type, the security cabin should be planned near left most entry lane only. An intercom connected with flats (video to flats as per project type) will placed in the security cabin. Sliding night gate for the entries/exit lanes and a turnstile/wicket gate (as applicable) at pedestrian entry will be installed to control the movement in late night hours. If there is a space constraint for

sliding gate pocket then the foldable type gate can be planned. If designing low height median is not possible then at least permanent bollards should be placed so that entry and exit lanes are properly defined. Enough space in-front of cabin should be planned for people to stand so as to be verified as per process.



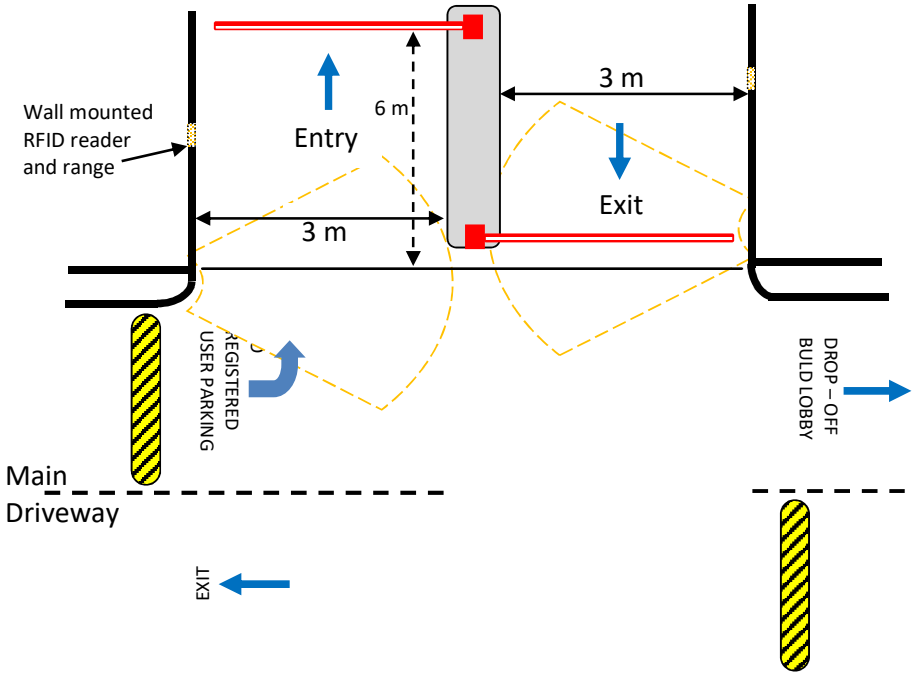
Tentative plan for main gate with two entry lanes/one exit

Boom barrier can have sticker / hanger with large size font to indicate lane usage eg. 'residents only', 'visitors'. This can reduce signage requirement and improve traffic flow. (For reference check Bellissimo entrance)



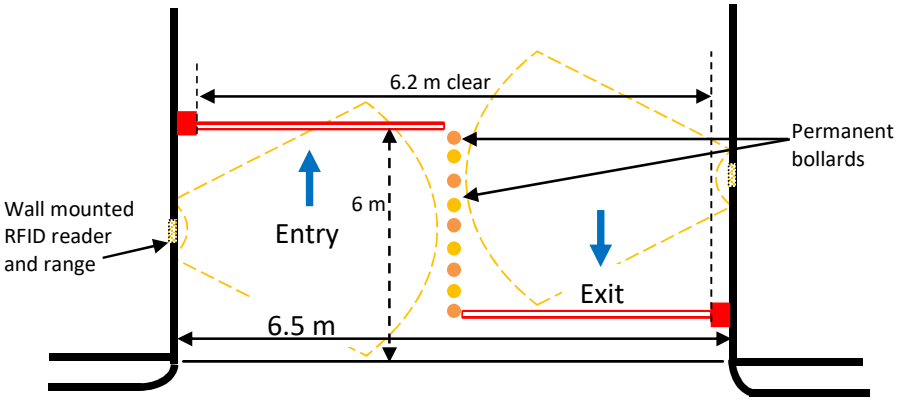
Parking floor/area

A separate one point controlled entry/exit to the parking floors/area other than the main entry can be planned inside a campus. These will be unmanned and will be controlled by long range RFID boom barriers as only registered cars are allowed to park inside this area. Generally visitor parking is not allowed in the customer parking area but safeguarding against public vehicle/visitor vehicles to park inside the customer parking should be of the essence. In case visitor parking is allowed then please refer to visitor parking management section below. At the top of parking floor entry, height restriction signage should be planned.



Tentative plan for parking floor/area entry & exit

In case a low height median is difficult to design for separating entry and exit lanes then below arrangement can be considered.



Tentative plan for parking floor/area entry & exit

- Registered vehicles
  There will be only one type of RFID access cards that will allow access to parking floor/area which will be issued to the registered user against the assigned car park slot. The vehicle owner (cars & two wheelers) should get a branded long range (~3m) RFID card. Registered vehicles need not be verified before/after entry into the complex/parking area. The access system

should be able to show the number of registered vehicles in the building/complex at any given point of time. This data will be kept on local server for minimum 7 days. Card/sticker details will be checked annually by the HFM team. The data captured on the cards should include but not limited to vehicle owner name, car registration number, flat number, designated floor, parking no., etc.

- Self driven vehicle
  These users must be able to enter parking area and park their vehicle safely in the designated space. Proper signage should be provided for easy guidance.

- Chauffeur driven vehicle
  The chauffeur should be able to drop off the registered user in the drop off zone and should be able to enter the parking area and park his/her vehicle safely in the designated space. Drivers lounge and related facilities should be provided as per current policy.

– Visitor vehicle
  In case there is visitor parking inside the complex then the area should be well guided by signage and should be near main drop off of cluster/building. Visitor vehicle will be verified by the security guard at the entry and the process of verification is defined in the security steps below. Access to the main drop-off should be freely accessible after the controlled main entry.

  - Self driven vehicle
    The visitor should have a controlled access to complex through the main gate. If there is no visitor parking than a suitable signage should planned indicating the same.

  - Chauffer driven
    These cars should be allowed entry into the complex up to the drop off and back to the visitor parking area or outside the premises.

- Service user vehicle
  Service vehicle/users come throughout the day and should be closely monitored. A separate manual controlled entry into the complex should be planned for Luxury and optional for others categories. If service vehicles are entering from the main gate then they should be let in only after verification and should be guided to the drop off zone near the service elevator of the building. As the service entry is access controlled (Luxury, Hi-end and Aspirational) a temporary access card will be given to the service user to access a particular building. Record of the service user movement will be maintained at the security gate only. For Casa projects, service user movement will be through the main lift lobby hence their movement will be recorded by the building level security guard (if applicable). The service lift will only open on the loading/unloading bay floor, amenity floors and the residential floors. Service lift will not open at any of the parking levels.

- Public transport vehicle
  Auto/Taxi (as applicable) will be allowed inside the complex up to the main drop off of the building. The chauffer/vehicle occupant will be verified as per the security steps below and then only the vehicle will be allowed inside the complex.

- Two wheeler
  Two wheeler parking should be planned in the parking area for 15-20% of the total four wheelers parking count. Separate space should not be allocated but space unusable for four wheelers should be used to its maximum.

2. Pedestrian access

Pedestrian access planning is mainly governed by the type of project. At the main entry into the complex a separate pedestrian entry through wicket gate should be planned. Pedestrian entry should be wide enough for two people to walk simultaneously. For Luxury, Hi-end and Aspirational projects there will be a turnstile to control and record the entry of registered users and service user if is through the same entry. In luxury projects, the service entry will be separate so the turnstile should not open for any service user.

All the pedestrians will be allowed a controlled access up to the building lobby after verification (Intercom/VDP) at the main gate. The pedestrian access will have access to the main lobby entrance and building level controls will be planned here. At any given

point of time the access system should be able to show number and type of users with their details in the building. This data will be kept on server for minimum 7 days.

Following types of pedestrian access will be planned

- Registered user access
  All registered users will have a controlled access from the complex main gate through turnstiles (as applicable). The registered users should get "R" branded proximity cards (as applicable). Card details will be checked by HFM annually. The data captured on the card should include the assignee name, building no, flat number, relation to owner, assignee contact number, assignee email ID, owner contact no and owner email ID.

  For high-end and luxury, there will be a reception in the lobby and an access control will be set up in the passenger lifts. For luxury there will be an additional biometric access system in lifts which will work in conjunction with the access control system. The residents/registered workers will have access to all floors of the building.

  For Aspirational projects, the user will swipe the access card on to the access card reader of the entrance lobby and will enter the lobby which will be unmanned.

  For Casa projects, access control on lobby doors is optional.

- **Visitor access**
  Visitors will have a controlled access from complex main gate to the lift lobby after security verification at the main gate.

  In Luxury and Hi-end projects, visitors will need to reach the reception desk for second stage verification. They will be verified by the receptionist via intercom/VDP and then will be issued a programmed visitor proximity card and will be guided towards the lift. Visitor card programming facility will be with the reception computer and the visitor card should allow him to press the programmed desired floor only.

In Aspiration projects, visitors will need to call the desired flat number from the lobby door unit. After verification from the flat occupant, he/she will press the desired button in the flat VDP unit for the main lobby door to open. If the door remains open for more than 30 sec then an alarm should be set in the lobby and BMS/security room.

In Casa projects, visitors will be verified at main security gate via intercom and directed towards the building lobby. Credentials of visitor will be recorded at the main security gate only.

- **Long time visitor access card**
  Long time visitors will be given an access card after collecting refundable deposit as mentioned in table above. If there is visitor parking in the complex then overnight parking will be on first come basis. This card will give him access to common areas and the desired floor.

- **Property Manager/FM**
  The property manager should be able to move in the building through all access doors/entries.

- **Service staff**
  The facilities management service staff should be able to move in the building through service access doors/entries only. Provision for their biometric attendance machine will be made in the main campus security room/FM office. Service staff cards will be issued by HFM after verification of documents. Daily domestic staff will be issued cards on resident request and police verification only. Domestic help to only use service elevator with access to Residents' Floor, Club level KCA and Project Entry-Exit. These cards will expire after 1 year of date of issue and will have to be reissued.

- **Temporary service user**
  Temporary service users are generally courier delivery, newspaper delivery boy, milk delivery boy, document collectors, food delivery, etc.

For luxury, Hi-end and Aspirational projects, their entry will be controlled and monitored through the separate service gate (as applicable) and through service lift area. They should be manually frisked at the service entry as per the project category and should be given temporary access card by HFM as applicable. Temporary cards will be given against depositing photo IDs at the main security gate while entering. These ID's will be returned only if the proximity card is returned by the temporary service user at the main security gate.

In Casa projects, they will be verified at main security gate via intercom and directed towards the building lobby. Credentials of the user will be recorded at the main security gate only.

B. Security steps

Following is the summary of security steps to be used across various projects as outlined earlier.

S.No.	Security steps	Casa	Aspirational	High-end	Luxury
1	Verification of visitor (pedestrian/car) at entrance to development/complex	Optional, through intercom	Mandatory, through intercom/VDP	Mandatory, through intercom/VDP	Mandatory, through intercom/VDP
2	Control of owner cars entry to development/complex (or if multiple parking areas, then appropriately restricted to each) through RFID / equivalent	Optional	Mandatory	Mandatory	Mandatory
3	Separate Service entry to development/complex with metal detector and baggage scanner / manual bag checking. Entry and Exit control through swipe card /equivalent.	NA	Optional	Mandatory	Mandatory
4	Building level access control through card + intercom based access control system (door connected to this system)	Mandatory	Mandatory	Mandatory, if 5. not implemented	NA

5	Separate service entry to building with card based access control system	NA	Optional, consider only if there is separate service lobby.	To be implemented if 3. not implemented	NA
6	Visitor check at building lobby with metal detector + baggage scanner	NA	NA	NA	NA
7	Visitor verification at building reception through VDP; Guests are issued relevant access card for using elevators	NA	NA	Mandatory	Mandatory
8	Lifts with access control limited to relevant floors (residents - all floors, guests & authorized domestic staff – lobby, KCA floor(s) and destination floor only); Service lift: Authorized domestic and FM staff + verified other entities – lobby, KCA and destination floor only).	NA	NA	Mandatory* (swipe card /equivalent)	Mandatory* (swipe card /equivalent or biometric or retina / equivalent)

* If the given stairwell has a servant toilet/shower area on the mid landing, then the panic bar + sensor in staircase door shall NOT apply and staircase door shall operate as per regular norms i.e. openable from both sides.

C. Surveillance systems

- CCTV system

CCTVs to be installed in buildings to ensure all travel is documented – CCTVs to be placed as per table placed in section B of this document. Adequate CCTV footage storage (generally 30 days). Cameras to be able to capture image at night time.

- FA and PA system
- Metal detector
- Handheld metal detector
- Intercom

One VDP/intercom connection in all the flats/KCA/Security/HFM and operational rooms (as applicable) will be provided by Lodha which will be inter-connected.

- Baggage scanner and frisking

(Please follow existing policies for the above)

D. Auxiliary requirements

- BMS/Control room
- FM office
- Security cabin
- Garbage room
- Drivers toilet/Drivers lounge
- Service staff changing room with lockers
- Amenities as per brochure
- Signage

(Please follow existing policies for the above)

C. Equipment guidelines:

1. ID cards (for residents / guests / service staff etc.) must be proximity cards (depending on cost economics and life of the card as determined by contracts team). Such cards are required for Residential and office projects but not for retail projects.
2. If access control exists, then turnstiles and "manual override switch" in the security cabin (that allows guard to allow pedestrian access for guests after validation) needed.
3. Boom-barrier to be controlled by ANPR/BLE/RFID or remote (depending on cost economics determined by contracts team and project brochure)
4. CCTVs should be of stationary and night vision (as required), PTZ cameras should be avoided due to significantly higher cost
5. In case VDP is provided, intercom and panic button to be integrated with the VDP. In luxury / high-end projects, where there is a manned reception, we provide discrete video connectivity from the reception desk to the unit VDPs (may be wireless through online connectivity or any other viable mode). However, typically, the camera units for this purpose at the reception are very unsightly and do not blend with the finishes of the area. To avoid this, we can provide a separate camera behind the reception desk such that can allow the unit owners to view the visitor should he choose to do so.

Above guidelines to be updated based on technological innovations and security situation evolution, keeping general principles constant.

Guidelines for ID cards:

	R (Resident)	DS (Domestic Staff)	V (Visitors)	SS (Service Staff)
1 BHK	4	NA	Low cost cards only (hotel variety) with validity of 24 hours. For Long-term visitors, same cards to be issued with refundable deposit (Rs. 100/- or card cost+15%, whichever is higher) with validity of 30 days.	As required by HFM. Assume 1 per 10,000 sq. ft. of saleable area.
1.5 BHK	4	NA		
2 BHK	5	1 (for overnight stay DS only) (0 for casa)		
2.5 BHK	5	1 (for overnight stay DS only) (0 for casa)		
3 BHK	5	1 (for overnight stay DS only) (1 for casa)		
4 BHK or larger	6	2 (for overnight stay DS only) (1 for casa)		

iThink Supremus Excelus	One every 60 sq. ft. of leasable/saleable area	As needed on cost basis as stated below – will cover all categories of outsourced staff like housekeeping etc.	Total available – one visitor card for every 1000 sq. ft. of leasable area	As required by HFM. Assume 1 per 10,000 sq. ft. of saleable area.
Notes	Additional/replacement cards may be issued on chargeable basis (Rs.250 or card cost+15%, whichever is higher).	Additional/replacement cards may be issued on chargeable basis (Rs.250 or card cost+15%, whichever is higher).		
		Residential - For day only staff, proximity cards will be issued by HFM. The main entry security desk will issued day-use DS Cards (low-cost like visitor) by taking the photo ID and return the photo ID when the day staff leaves.		

- As far as possible, more than one point (max. 2) of verification / checking / issuance should be avoided for any person to avoid irritation. Further, if cards are being issued through electronic system (e.g. visitor ID card), entry into registers etc. should be avoided.
- Resident, overnight stay DS and SS cards should be durable and not easily prone to deprogramming/damage (e.g. Ones used at Lodha Excelus, Mahalaxmi).



Tentative BOQ for IBMS (Security) 2015.