URBAN DESIGN GUIDELINES FOR THE CROWN Residential Zone
# Urban Design Guidelines for the Crown in the Residential Zone

## Auroville 2015

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INTRODUCTION

The Crown is envisioned as a ring, running through the 4 zones, with important public services along it and providing a continuity of street life, with a distinct style for each zone. It will comprise of a central carriageway/road with pedestrian pathways and buildings on either side. It will be the main hub, the spine, the very heart of Auroville’s city life.¹

This document aims to outline design guidelines for the section of Crown along the sectors 1 and 2 of the Residential Zone. This corresponds to the existing paved stretch of the same between surrender and solar kitchen. This section of the crown is the major artery that connects various residential communities to each other and to other parts of the city.

VISION

The crown will consist of inviting streetscapes and open spaces to encourage movement of pedestrians and cyclists thereby effectuating a shift in our existing trend of increasing reliance on motorized vehicles. The pedestrian experience on the Crown will be enhanced through landscape design, street furniture and safe streets.

Places of daily interests will be brought within walking distance of the residential communities to help with the shift to increased pedestrian activity.

PURPOSE OF THE GUIDELINES

These guidelines are intended to provide the Town Development Council (TDC) with a framework for siting of buildings and projects on the crown. They are also intended as a reference for project holders, planners, architects and residents who are engaged in designing parts of the crown and the residential zone, or are building there.

EXECUTIVE SUMMARY

The Crown will be a significant part of the city’s open space which will add character to the place, providing a hub for social interactions and neighbourhood activities. It will be developed as a shared space for motorised and non-motorised traffic.

The street shall be primarily for pedestrians and cycle traffic, and very little slow moving motorized traffic, with the provision of easy movement of emergency vehicles such as ambulance, fire trucks, etc. Pedestrians and cyclists shall have the “right of way” over motorized traffic at all times except in case of emergency vehicles.

The built volume on the crown shall have mostly public buildings on both sides of the street as outlined in the Master Plan 2025 document, with some residences in upper floors. Building heights shall vary in different sections to break the monotony while avoiding visual chaos of form, texture and colour.

Spontaneous interaction spaces for the residents will be encouraged by different but harmonious built volumes set back from the street and sometimes going over or across the street, thus creating courtyards and plazas at different scales.

Pedestrian comfort will be heightened by providing ample green areas with shade providing trees, street furniture, water features, city / public art (sculptures, installations, etc.).

Mixed Land Use will be promoted so that there is activity at all times of the day.

Sensible design of Street Elements will be used to achieve the goal of slow and less motorized traffic.

There will be Universal Right of Access.

Public Transport will be promoted to reduce the intensity and impact of motorized transport.
URBAN DESIGN GUIDELINES

1. MOVEMENT
The Crown road should be developed as a shared space for motorised and non-motorised traffic. Cyclists and pedestrians should have the right-of-way.

1.1 CONNECTIVITY
Crown area should be connected to residential communities through internal walkways and cycle paths. These paths should intersect the Crown at periodic intervals to provide access to amenities for people living in the residential zone. These paths should either go through buildings or between them, in order to allow pedestrians and cyclists to cut through the building mass, and enter the gardens and other sub zones of the city centre.²

Needs of daily errands should be located on the crown so as to be within walking distance of the communities.

1.2 PEDESTRIAN FRIENDLY
Pedestrian walkways will contain the street life; expanding and contracting in width to accommodate other necessary and significant out-door space for a varied street life. Walkways and bridges should link neighbouring buildings to create a unified pedestrian circulation also vertically and horizontally on the upper levels.³

The minimum width of the walkways should be 1.5m.⁴ Vertical drops or vertical rises in pedestrian walkways should be avoided as they can cause falls and wheelchairs to bottom out. They should be well lit. The activities along the walkways should provide natural surveillance to make walking safe at any time of the day or night. The sidewalks should be continuous and covered as much as possible – with canopy projections or arcades from adjacent buildings, free standing shading structures or by natural canopies of trees. When walks exceed 60m in length it is desirable to provide rest area adjacent to the walks at convenient intervals of 30m for bench/ resting areas.⁵

1.3 CYCLING

³Ibid.
⁵“Guideline & Space Standards For Barrier Free Built Environment For Disabled & Elderly Persons,” n.d.
Cyclists will share the carriage way with motorised traffic but will have the right-of-way over motorised traffic. Crossings and turns for cyclists should be clearly marked and demarcated if needed. Cycle paths joining the Crown should be clearly marked as well. Bollards or other restricting devices may be used at the entrance to cycle paths to deny access to motor vehicles. However, care should be taken that these devices provide unhindered access to cyclist of all ages and pedestrians. Minimum clear width between restricting devices should be 1.5m to accommodate any type of bicycle or wheelchair.\(^6\)

### 1.4 MOTORISED VEHICLES

There should be, at any given time, unobstructed access for emergency vehicles along the Crown. Minimum vertical clearance of 5.00m should be provided in order to allow unobstructed movement of emergency vehicles.\(^7\)

### 1.5 INTERSECTIONS

Kerb ramps should be provided at all intersections.\(^8\) Perpendicular ramps allow pedestrians and people in wheelchairs to access the sidewalk perpendicular to halted traffic, and to enter into the crosswalk directly in their line of travel. Perpendicular kerb ramps are preferred over the use of a less protected single ramp. For more details, please refer to the addendum.

### 2.0 URBAN LANDSCAPE

#### 2.1 STREET LIFE

The Crown will be a significant part of the city’s open space which will add character to the place, providing a hub for social interactions and neighbourhood activities. Hence, opportunities should be sought to create courtyards or front gardens to soften the building mass along the street. This can be done effectively by setting back buildings on the Crown to create small plazas, courtyards, play areas etc. This setback also ensures there is a proper growing space for trees, reinforces the streetscape and creates a quality pedestrian environment.

The built form should be located between 0-4m from the site line. Corners or corner buildings should have a greater setback at the street level to create more public space at the intersection and to facilitate the visual connection between streets and avenues. At corner sites, the front setback should be a minimum of 1.2m or the corner should be chamfered or rounded to increase the visibility across the intersection.10

2.2 RELATIONSHIP WITH THE RESIDENTIAL ZONE
The spaces between the crown buildings and residential communities should not be fenced, unless there is a compelling reason to do so. They should act as a contiguous landscape which at times could be a pedestrian trail, or a cycle path, or a natural swale for surface water management. Some areas could widen into plazas or public parks as well.11

2.3 VEGETATION
The design of street tree layout should be considered in relation to the buildings and other streetscape elements. Street trees should be selected and designed for water conservation. They should be used to
- Foster human scale,
- Define spaces,
- Reinforce paths and edges,
- Screen utility areas, and,
- Enhance the visual amenity of the area.

Landscaping should incorporate local indigenous species. Allow sufficient room for tree canopies to grow and develop without conflict with other building elements.

2.4 STREET FURNITURE
Public facilities have to be provided for along the Crown which address the safety and needs of its pedestrians and cyclists. Streetscape amenities such as benches, trash receptacles, planters, lights, kiosks, drinking fountains, bike racks etc., should be integrated in an aesthetic manner with the other features of the Crown. The streetscape design

9Based on a study of Urban Design Guidelines of several cities
10Ibid.
should unify areas with distinct character.

Street furniture may be fixed to the sidewalk if adequate clear passage for pedestrians (1.20 m) and emergency access to the building entrances is provided.\textsuperscript{12} Lighting should be provided through the use of pedestrian-scaled pole fixtures, or fixtures may be attached to the face of the building. The type and size of pole fixtures should be as consistent as possible along a single block.

\subsection*{2.5 PUBLIC INFRASTRUCTURE}

Water Fountains (Drinking):
Allow sufficient space around the water fountain to make it easily accessible for wheel chair users. Depending on the type of water fountain allow a space about 0.70m high and 0.35m deep under the fountain.\textsuperscript{13}

Bus stops:
The bus stop area should be equipped with a roof and bench. Two rows of guiding blocks for persons with impaired vision should be provided 0.30m away from the bus stop pole on the sidewalk.\textsuperscript{14} Adequate lighting should be installed around bus shelters to ensure personal safety and security.

Public toilets:
Public toilets should be provided along the Crown and designed to provide maximum visibility while maintaining privacy. They should have clear exterior signage. They should be located on a continuous accessible path of travel from other accessible facilities in the area such as public plazas, green areas, stores etc. The location and appearance of the toilets should be sympathetic to the surroundings. The toilets should provide for the needs of differently abled people and other special needs such as pregnant women, elderly, and parents with children etc. Access for the disabled and wheelchairs needs to be considered. An accessible unisex toilet should be provided to allow caregivers, including those providing assistance to members of the opposite sex, to provide assistance and supervision.\textsuperscript{15} To improve ease of access, toilet units (one or two cubicles) should be dispersed throughout an area rather than concentrated into a centralised toilet facility.

\begin{quote}
\textsuperscript{12}Central Public Works Department, India, “Guideline & Space Standards For Barrier Free Built Environment For Disabled & Elderly Persons,” 1998.
\textsuperscript{13}Central Public Works Department, India, “Guideline & Space Standards For Barrier Free Built Environment For Disabled & Elderly Persons.”
\textsuperscript{14}Ibid.
\end{quote}
2.6 STREET ART
Street and land art are to be encouraged along the Crown. Art should be used as a medium to unify areas with a theme, and at a pedestrian level, to create visual interest to the passer-by. In doing this, care should be taken to ensure safety of pedestrians. Art could be used to help create a neighbourhood identity. Consideration should be given to a design that encourages using streets for festivals, parades, and other cultural events that promote community living and a sense of place.
When appropriate, consideration should be given to commissioning artists to create unique street elements such as light poles, benches, trash cans, manhole covers, tree grates, etc.

2.7 PAVING
Paving of public, semi-public and private spaces should be integrated through the choice of consistent materials and detailing. Variations in paving should only occur where it reinforces and identifies the special character of an area (e.g. main streets or civic areas). Any change in level should be clearly defined as to be visible and safe for the pedestrian.
Tactile paving should be selected to guide the vision impaired. Warning blocks should be provided as necessary. Finishes should have non-slip surface with a texture traversable by a wheelchair. 16

2.8 SIGNAGE
Signage should contribute to the overall quality and unique character of the Crown area. They should also integrate with and complement the same vis-a-vis materials and colour. Care should be taken to ensure that the scale and character of the Crown buildings is not compromised by the size and number of signs. Location of signage for crossing and safety cautions should be chosen carefully so as to not be obscured by any trees or street furniture/art, providing full visibility from all sides.
Signs should be designed and located so that they are easily legible by using suitable letter size (not less than 20 mm. high). The signage should be mounted 2.0 m above floor level. 17 For visually impaired persons, information board in Braille should be installed on the walls at a suitable height and it should be possible to approach them

16 Central Public Works Department, India, “Guideline & Space Standards For Barrier Free Built Environment For Disabled & Elderly Persons.”
17 Ibid.
closely. To ensure safe walking there should not be any protruding sign which creates obstruction in walking.
The symbols/information should be in contrasting colour and properly illuminated so that people with limited vision may be able to differentiate amongst primary colours.\textsuperscript{18}

\textbf{2.9 SURFACE WATER DRAINAGE}

This section needs to be written.

\textsuperscript{18}Samarthayam, “Model Building Bye Laws_Access Standards.pdf,” n.d.
3.0 URBAN STRUCTURE

In the residential zone, one of the main functions of the crown is to provide for the daily needs of the residents which include essential services as well as socio-cultural needs. This will include restaurants, collective kitchens, community dining, various shops and services, coffee shops, cinemas, exhibition spaces, book stores, recreation centres, theatres and art-galleries, healthcare facilities, pharmacy, bakery etc.

3.1 MIXED USE

In order to promote life at most times of the day/night, it is recommended that different kinds of buildings are located on the crown. This should include essential services such as financial service, health centre, post office, etc. that operate during the day as also convenience stores, pharmacy, etc. that could be open till later. Other amenities that would foster life further into the evening/night would be restaurants, cafes, art galleries, exhibition spaces, multi-media centres, gymnasium, library, etc. It should also include offices and residences.

Public buildings:
Public buildings can contribute to the liveliness and ambiance of the crown by providing for some of the functions outdoors or in semi-covered spaces opening onto the crown. These can also contribute to public art.

Offices and residences:
Offices should occupy the ground floor and the first floor in cases where the public area is connected at the upper level. Residential spaces should constitute the upper floors in order to accord privacy to the residents.19

3.2 SERVICING AND UTILITY

Most of the infrastructure and services will be located on the crown road. This includes, underground cables and pipes serving the different utilities such as electricity, telephone, optic fibre and water as well as the vehicles that service the different buildings. However, in order to keep the character of the crown to be pedestrian friendly, the timings of service

vehicles would have to be managed. Also, the service entry to all the buildings will have to be away from the crown either toward the side or the back.

3.2.1 PARKING
Locate parking areas to the side of rear of the buildings, internal to the building, or below ground where necessary. No parking should be provided on the crown except for emergency vehicles or limited no. of short terms spots.

3.2.2 LOADING/UNLOADING
Loading facilities should be designed as an integral part of the building(s) which they serve and these areas should be away from the crown.

3.2.3 TRANSFORMER/SUBSTATION
The mechanical services should be located at the sides or rear of the buildings. If they are visible from the street they should be properly screened.

3.2.4 GARBAGE COLLECTION
All buildings should provide bins for waste and recyclables. These could form part of the streetscape if integrated with other crown amenities. Otherwise, they should be integrated into the design of the buildings providing for easy collection and dispatch to the disposal and sorting facilities.

4. BUILT FORM
The buildings along the crown should be a harmonious mix of differing forms to avoid monotony. At the same time they have to relate to a variety of open spaces while providing optimum spaces for spontaneous and organised street life.

4.1 VOLUMES
Buildings heights on the crown shall not be more than three stories high, although certain features and/or sections of buildings could go higher to break the monotony. At places the buildings could be raised on stilts with lower areas also designed as nodes for public interaction and also connect the crown to the other landscapes and communities on the inside of the crown.

4.2 GRADE
The plinth of the buildings and their relationship to the semi-covered and public areas of the crown play an important role in determining fluidity of functions and character of the crown. The plinth should not be too high above the ground level directly in front of the

access to the building; this will allow for better transition from public to private space and also avoid a long barrier-like flight of stairs up to the front porch or stoop.

4.3 HEIGHT
Adjacent building heights should not vary by more than 25% of the neighbouring buildings. Buildings should be designed with consideration for the effect of building height on shading and views.

4.4 OPEN SPACE BETWEEN BUILDINGS
Every building should be visually and physically connected to the next buildings so as to create a harmonious continuity and impart an urban language to the crown. Any proposal for a crown building should illustrate and provide for a suitable connection to the future or existing developments adjacent to it. In case of providing a link through the crown buildings to the residential or park areas on either side, the open space between adjacent buildings should be wide enough for cycle paths and providing adequate light and ventilation to the habitable spaces. When possible and appropriate, pathways and bridges connecting adjacent buildings are encouraged to provide continuity of public movement and access.

4.5 LIGHT AND VENTILATION
The building envelope should be designed with adequate window openings to bring in fresh air into the building, thereby ensuring good indoor air quality. Buildings should have sufficient openings in at least two different directions, so as to allow good cross-ventilation.21

Daylight should be considered as an important element at the design stage. At the same time, care should be taken to prevent glare.

4.6 PEOPLE FRIENDLY
Buildings should make every effort to link the interior public spaces directly to the sidewalk, street and outdoor public spaces through design as well as programming. Placement of entries, level changes, windows, doors and other elements should be used so as to clearly and seamlessly link interior and exterior public space.

4.7 FAÇADE TREATMENT
Building materials should be selected with a view to project a consistent language to the crown building. Use materials in combination to create contrast, enhance human scale, and reduce the apparent bulk of a building. Colour should not be used as the predominant feature of a building. Large expanses of highly reflective materials and large areas of monotonous, sheer materials (such as polished granite and curtained wall glazing) should be avoided.

4.8 DESIGN DETAILS
Blank walls should not face directly to the street. Building services such as drainage pipes together with security grills/screens, ventilation louvers and car park entry doors, should as far as possible, be located away from the crown and should be coordinated and integrated with the overall facade design. Utilize landscaping treatments to soften the mass of building form (e.g. strategic placement of trees, shades and vines, along with surface materials such as pavers.)

4.9 ACCESS
Public access to buildings should be clearly visible from the main avenues of approach. Access path from entry and surface parking shall be 1.80m wide, having even surface without any steps. Slope if any shall not have gradient more than 5%.22

**Approach to plinth level:** Every building should have at least one entrance accessible to the handicapped and shall be indicated by proper signage. This entrance shall be approached through a ramp together with the stepped entry.

**Ramped Approach:** Ramp should be finished with non-slip material to enter the building. Minimum width of the ramp should be 1.80m with a maximum gradient of 1:12. Length of the ramp should not exceed 9.0m having double handrail at heights of 0.80m and 0.90m on both sides extending 0.30m beyond top and bottom of the ramp. Minimum gap from the adjacent wall to the hand rail should be 0.50m.23

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23IbCentral Public Works Department, India, “Guideline & Space Standards For Barrier Free Built Environment For Disabled & Elderly Persons.”
4.10 PRIVACY
Use transitional space to make people aware of the act of leaving one territory and entering another. This is important for establishing a sense of control and a definition of responsibility.

5.0 SAFETY AND COMFORT
The development of crown area should promote natural surveillance of the public realm, including open space, pedestrian routes, public transport stops and residential areas, through the design and location of physical features, activities and people to maximise visibility by:  
(i) Orientating windows, doors and building entrances towards the street, open spaces, pedestrian routes and public transport stops;
(ii) Avoiding high walls, blank facades and landscaping that obscures direct views to public areas;
(iii) Creating a complementary mix of day and night-time activities, such as residential, recreational and community uses, that extend the duration and level of intensity of public activity;
(v) Ensuring that rear service areas and access lanes are either secured or exposed to casual surveillance.

BIBLIOGRAPHY

Auroville’s Future. “Auroville Universal Township - Master Plan 2004 Directions for Growth.”
Auroville’s Future, n.d.
Central Public Works Department, India. “Guideline & Space Standards For Barrier Free Built
http://www.adelaidecitycouncil.com/planning-development/city-
planning/development-plan/.
“Guideline & Space Standards For Barrier Free Built Environment For Disabled & Elderly
Persons,” n.d.
https://igbc.in/igbc/redirectHtml.htm?redVal=showGreenHomesnosign.
San Diego, Association of Governments by Community, Design and Architecture, and San
Speck, Jeff. “Why 12-Foot Traffic Lanes Are Disastrous for Safety and Must Be Replaced
Now.” CityLab, October 6, 2014. http://www.citylab.com/design/2014/10/why-12-
foot-traffic-lanes-are-disastrous-for-safety-and-must-be-replaced-now/381117/.
U.S Department of Transportation, New Jersey Division. “Designing Pedestrian Facilities for
Accessibility,” n.d.
ADDENDUM
Details for Universally Accessibility

1. INTERSECTIONS
Ramps at intersections must be aligned with crosswalks to help wheelchair users orient themselves to cross the street.

![Ramps perpendicular to halted traffic to maintain line of travel](image)

Figure 1: Ramps perpendicular to halted traffic to maintain line of travel

2. PUBLIC INFRASTRUCTURE
Bus stops:
Two rows of guiding blocks for persons with impaired vision should be provided 300 mm. away from the bus stop pole on the sidewalk. The bus stop area should be equipped with a roof and bench.

![Two rows of guiding blocks for persons with impaired vision](image)

Figure 2: Two rows of guiding blocks for persons with impaired vision

Public Toilets:
One special W.C. in a set of toilet shall be provided for the use of differently abled with essential provision of wash basin near the entrance.
3. ACCESS

Every building should have at least one entrance accessible to the differently abled and shall be indicated by proper signage. This entrance shall be approached through a ramp together with the stepped entry.