

# Rethinking public spaces and Infrastructure Gujarat



**Research Study**

2020-21



**RCUES**  
Mumbai

**Regional Centre for Urban and Environmental Studies  
All India Institute of Local Self-Government, Mumbai**

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# Preface

The current Covid-19 pandemic has affected the whole world, altering way of living as well as use of spaces in the cities. Lockdowns and long periods of isolation have highlighted the need for public spaces as central to social life, and physical and mental well-being. Physical seclusion with absence of adequate open spaces is one of the major causes of distress among people. The value of accessible open public spaces that allow for movement within dense urban areas has been realized in this pandemic like never before. Ministry of Housing and Urban Affairs (MoHUA) has also emphasized the need of green spaces through its urban missions/schemes like SMART cities, Atal Mission for Rejuvenation and Urban Transformation (AMRUT) etc.

National, state and Local Governments have been at the forefront of pandemic management, incorporating immediate measures like importance of personal hygiene, social distancing protocols, sanitization of spaces, lock-downs etc. to control the spread of pandemic. This has led to institute 'short-term' measures to reduce the transmission of COVID19 and safeguard public health. Governments can further use these COVID responses to pivot to long term, systemic changes in public realm design and management.

Multiple other stakeholders like NGOs, youth networks, for profit, philanthropy organizations etc. have also supported governments in their own capacities to mitigate the situation and provide strategic solutions to urban issues. Officials and decision makers are now focusing on learnings from the crisis to trigger long-term systemic change in which our cities and spaces are planned and managed.

This study on 'Rethinking public spaces and infrastructure' captures the existing status of open public spaces in the Indian context and looks at areas of improvements. The document is arranged as four sections. First section provides the context, background and parameters of analysis followed by sections outlining the study, analysis and recommendations for each of the three types of public spaces selected. Through insights from experts and learnings from case studies, the study suggests recommendations for systemic improvements in design, financing and management measures to make public environments and infrastructures more hygienic, safer, organized, and more agile and resilient.

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# Acknowledgement

I take this opportunity to put on record our deep appreciation for the Ministry of Housing and Urban Affairs for providing us an opportunity for working on this study. I would like to convey our gratitude to the Advisory Committee, RCUES Mumbai for providing us an opportunity to contribute to the task of rethinking public spaces and infrastructure.

I also take this opportunity to express my gratitude towards Shri Ranjit Chavan, President, All India Institute of Local Self Government, for showing confidence in us and valuable support to complete the Report. My sincere thanks are to Shri Rajiv Agarwal, IAS (retd.), Director-General, All India Institute of Local Self Government, Mumbai, who was instrumental in initiating the report and providing encouragement and valuable direction to the report.

This study has been undertaken by Mr. Brijesh Bhata, Program Chair, CEPT University, Ms. Vanishree Harlekar, Visiting Associate Professor CEPT University and their team with RCUES Mumbai. Their contribution and tireless efforts towards this study are highly appreciated. Their relentless work to make this study useful and worthwhile, despite the challenging circumstances of COVID is highly valued and appreciated. I would also take this opportunity to thank all the other stakeholders who have contributed to this study through interviews, discussions, data and knowledge sharing etc.

I would also like to thank team RCUES who worked towards the completion of the report.

I hope this work will be encouraging and helpful for the cities and state governments to take positive steps in reimagining public open spaces and infrastructure in the post COVID era.

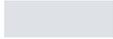
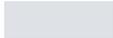
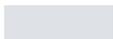
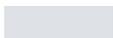
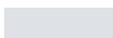
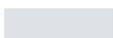
**Director,  
RCUES of AILSG**



Photo courtesy: DNA

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# About the Study

The Regional Centre for Urban and Environmental Studies (RCUES) of All India Institute of Local Self Government (AIIILSG), established by the Ministry of Housing and Urban Affairs (MoHUA) undertakes urban policy research, technical advisory services, and strengthening work capabilities of officials and elected representatives. RCUES as part of its annual work plan, decided to undertake a research study on 'Rethinking Public Spaces & Infrastructure Post COVID 19' to support local governments with policy and design guidelines that will allow them to rethink design and management of these spaces to ensure public health and safety.

Urban Local Governments in India have been at the forefront of COVID management, putting in place immediate measures like sanitation, social distancing protocols, and timed lock-downs to control the spread of pandemic. Governments can further use these COVID responses to pivot to long term, systemic changes in public realm design and management. This study captures the current state of public spaces in the Indian context, looks at areas of improvements, and identifies good practices by local bodies and international cities and encapsulates the findings as policy and design direction for local governments .

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# Study Methodology & Structure

## **1. Encapsulating findings from existing research and identify focus of this study.**

The first step was undertaking a preliminary study and analysis of current issues, review of existing research and literature and gathering views & insights from experts on public spaces post COVID. This helped in the selection of type of public spaces and cases to be studied.

## **2. Analyzing design and management of selected public spaces**

To investigate the design and management of the identified public spaces, site visits were undertaken (where possible), detailed drawings were prepared and data was gathered and analyzed from stakeholder interviews and secondary research. Key insights and findings based on gaps in service delivery and design as well as best practices from across different public spaces was also noted.

## **3. Framing design and policy recommendations**

The recommendations build on insights from the studies and incorporate design, institutional, financing and management framework solutions that can be applied to Indian cities.

The document is arranged as four sections. First section provides the context, background and parameters of analysis followed by sections outlining the study, analysis and recommendations for each of the three types of public spaces selected.



Photo courtesy: The New India Express



Photo courtesy: India Today



Photo courtesy: Outlook India

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# Public Spaces Post Covid

The COVID-19 global pandemic and the associated lockdowns & long periods of isolation have highlighted the need for public spaces as central to social life, and physical and mental well being. The need for open, accessible, inclusive public spaces is especially accentuated in Indian cities with higher densities.

The COVID pandemic has led local governments to institute ‘short-term’ measures of physical distancing, restrictions on the use of public spaces and public infrastructure (like mass transit, community centers, parks, shopping streets), and surface sanitization to reduce the transmission of COVID19 and safeguard public health. Many organizations have also supported governments with tactical urbanism interventions. With these early measures and now the country-wide vaccination drive, governments have been able to successfully manage the immediate threat.

Decision makers are now focusing on drawing lessons from the crisis to trigger long-term systemic change in which our cities are planned and managed. This study will focus on recommendations for systemic improvements in design, financing and management measures to make public environments and infrastructures more hygienic, safer, organized, and more agile and resilient.

**Decision makers around the globe are leveraging short-term COVID response to pivot to long-term systemic changes.**

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# Insights from Research

**‘An early review of the emerging questions by experts on the impact of COVID-19 on public space indicates a greater demand for smaller green spaces or neighborhood parks which serve as places of refuge from the bustling city life.’**

(The impact of COVID-19 on public space: an early review of the emerging questions – design, perceptions and inequities, Jordi Honey-Rosés & Oscar Zapata, Cities & Health Journal, April 2020)

**‘To be resilient in times of crisis, public spaces need to be multi-functional and adaptable. Small neighbourhood spaces can be transformed into pop-up community health centres areas for food distribution or food gardens. The shared use of streets and spaces can allow for organized street vending or for leisure activities.’**

(UN-Habitat key message on COVID-19 and public space, UNHABITAT, May 2020)

**‘More than ever, there is now a case for creating complete streets that offers space for all user groups. This can be done on existing streets by repurposing residual right-of-way and bringing it into the public realm, thereby supporting the requisite physical distancing that maybe required.’**

(Reconfiguring public spaces within the new normal, Jaya Dhindaw, TOI, May 2020)

**‘During the epidemic, the open space in city can be set as a temporary storage spot for materials and temporary patient receiving spots.’**

(Carlo Pisano, Sustainability Journal, July 2020)

**‘Design buildings to support places. The area around the building is enhanced by shade structures and other amenities, making this a comfortable place and an integral part of the community. It shows that “iconic” architecture need not be divorced from the urban fabric, but can exist in constant dialogue with the people and places around it.’**

(UN-Habitat’s Placemaking and the Future of Cities, Nov 2012)

**‘When it comes to cities and smaller neighbourhoods, one cannot rely on a ‘one-size-fits-all’ method to resolve the complex issue of overcrowding and social distancing in dense urban environments. It needs a more decentralised, local area approach where a cluster planning could be considered.’**

(ORF, August 2020)

**‘The initial pandemic event required flex-space in health facilities to meet the surge of patients, a need solved with increased use of relatively safe outdoor space. Flexible outdoor spaces can accommodate a variety of health-related functions by moving select inside programs and amenities outside. Post-pandemic, these outdoor spaces can provide community and public health benefits by hosting farmers markets, yoga classes, health fairs, fun runs, and walking circuits with access to nature.’**

(Beyond Pandemic: Flexible Site Design for Healthcare Facilities, November 2021)



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# Focus: Everyday Public Spaces

Review of existing research and emerging questions by experts on the impact of COVID-19 on public space indicates a greater demand for smaller, neighborhood level, everyday public spaces which serve as places of refuge from the bustling city life. While larger, city-level public spaces function as one-off ‘destinations’ occasionally visited for leisure and picnicking, everyday public spaces provide relief from daily routines, offer opportunities for lingering, observing, and social interaction. They contribute to people’s sense of community. These everyday public spaces will be the focus of this study.

It is the responsibility of local governments to design, operate and maintain these public spaces and infrastructure, as part of the urban commons in our cities. Cities need to embrace bold ideas that will re-imagine public spaces in the post pandemic era. And these ideas need to be demonstrated on ground in the form of key urban improvement projects. However, Municipal budgets are limited and often get utilized towards ‘essential basic services’ like water, sanitation and transport thereby allowing little room for investment in public spaces. More recently, with National Government schemes like AMRUT, Smart Cities Mission and HRIDAY there is some funding being channelized towards public spaces. Local Governments can leverage these funds to drive the public space agenda forward. In addition, Local Governments should find creative ways to finance urban improvement. These include leveraging public private partnerships, land based financing, CSR etc.

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# Rationale for Case Selection

The types of public spaces selected for this study were identified in discussion with the RCUES team based on these considerations:

- ▶ Public spaces that attract a lot of people on a daily basis
- ▶ Public spaces prevalent in different sizes and scales of cities
- ▶ Spaces catering to every-day needs & social interaction
- ▶ Public spaces for which design and policy recommendations can be standardized and scaled across cities
- ▶ Public spaces that can be included in the ambit of national funding programs

## NEIGHBORHOOD PARKS & GARDENS

### *Ahmedabad*

Neighbourhood parks and gardens are the breathable public spots in the city that provide respite to the citizens from the otherwise compact and congested living and working spaces. Neighborhood parks and playgrounds play an important role in enriching everyday urban life in cities. They offer opportunities for relaxation, active & passive recreation and social interaction. The pandemic has elevated the value of these parks and triggered the need to examine how effectively they serve needs of local communities.

The study will examine neighborhood parks in the context of Ahmedabad which has well distributed local-level green spaces.

## NON-RESIDENTIAL, MULTI USE STREETS

### *Pune*

Typically cities allocate 50% land to public spaces of which 30-35% is under streets. Indian streets are as such very versatile in terms of usage, from supporting mobility to hosting a range of activities like open air markets, performances, events, demonstrations, other informal economy activities or simply as a space to pause and enjoy the city. The benefits of complete streets with designated space for all users are clearer than ever. Decision-makers around the world are recognizing this and using COVID-19 responses to advance pedestrian and cycling-friendly urban design. Pune has made significant strides in advancing the sustainable mobility agenda. The study will analyze the factors behind the city's accomplishments.

## URBAN HEALTH CENTERS (OUTDOOR ENVIRONMENT)

### *Ahmedabad*

The COVID pandemic has emphasized the need of decentralized health facilities and the agility and adaptability of these facilities to respond to sudden surge of patients while maintaining safe distance protocols and ensuring patient comfort. One off the most critical design idea that healthcare facilities are considering is to maximize the efficiency of outdoor spaces. Site design of these facilities should ensure adequate space for queuing, seating areas, space for outdoor camps etc. This study will take the example of UHCs in Ahmedabad to demonstrate how the outdoor spaces can be designed to meet these goals.

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# Criteria for Analysis

01



## Location and Distribution

Do cities have well distributed network of the identified public spaces? Are there locational policies that guide distribution and connectivity of these spaces?

02



## Governance and Institutions

Which Government Department(s) are in charge of the Public Spaces Agenda? Are they organized decentrally? What are the existing policies/ procedures that they follow? Are there frameworks that allow people's participation?

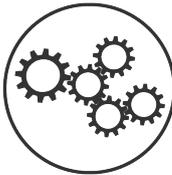
**03**



## **Budgetary Allocations**

What is the budget allocated towards the identified public spaces? Is it efficiently utilized? Is funding through national grants prioritizing these spaces?

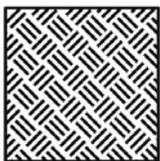
**04**



## **Management Frameworks**

Are the public spaces well maintained and managed? Who maintains them? Are the cities leveraging innovative financing measures for operating and managing these spaces?

**05**



## **Design, Materials and Activities**

What are the typical activities/ programming of the selected public spaces? Do they allow flexibility or potential to act as refuge for people of all groups? What are the key design concerns? Which are the materials commonly used?

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# Synthesizing Learnings

**06**



## Key Insights & findings

Key takeaways are defined based on a review of the public spaces based on the five criteria to provide guidance for design and policy recommendations

**07**



## Design & Policy Direction

Recommendations for local governments borrowing insights and learnings from the different types of public spaces

**08**



## Context Specific Application

Application of the suggested design recommendations at a specific site for two public spaces types

Photo courtesy: The Weather Channel



# Neighborhood Parks and Gardens

AHMEDABAD

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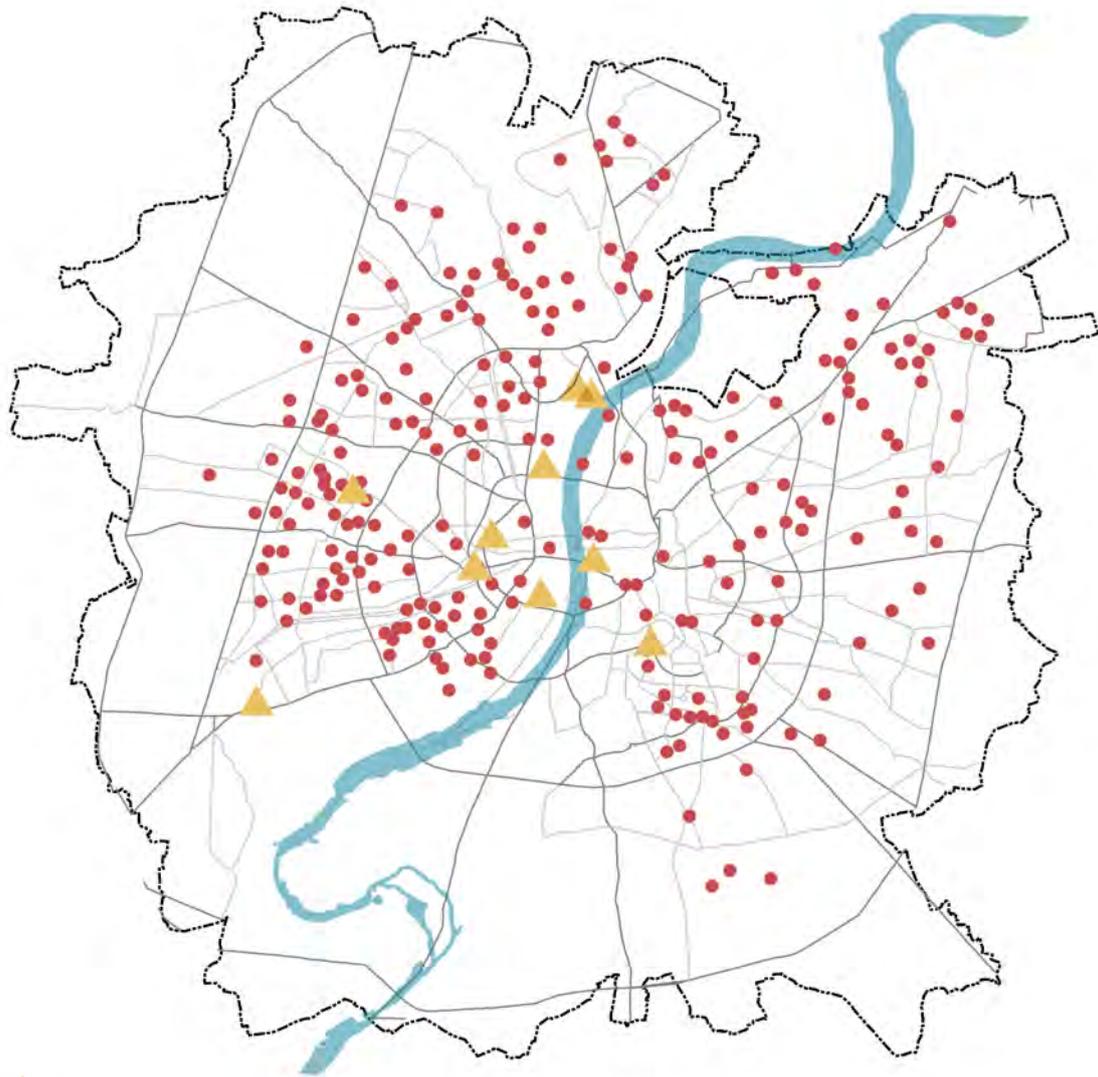
# 01. Location & Distribution

The Ahmedabad Municipal Corporation (AMC) manages a total of 256 parks and gardens in the city, covering an area more than 22.40 lakh sq meters (AMC, 2021). A significant number of these parks are ‘community parks’ or ‘neighborhood parks’ catering to local populations with size ranging from 2500 sqm to 10,000 sqm. The parks are well distributed across all neighborhoods in the city which can be attributed to the TP Scheme mechanism used for urban expansion. Every year additional land for new parks and gardens is identified (15-20 parks) when new TP schemes are announced.



## APPROPRIATING LAND FOR PUBLIC PARKS USING TP SCHEMES

Ahmedabad has been successfully using TP Schemes, a land pooling and land reconstitution mechanism to appropriate land for physical and social infrastructure as the city expands. About 5% of appropriated land is reserved for playgrounds, gardens, and parks. It is perceived as a fairer and more equitable alternative to land acquisition as all landowners share the benefits (by keeping substantial portion of now ‘serviced’ land). The costs are also distributed as all owners lose the same proportion of land. The TP mechanism is increasingly gaining reputation across the country as an effective planning, infrastructure development, financing, and implementation tool. The Ministry of Housing and Urban Affairs, Govt is encouraging local governments to adopt it to implement Smart City Proposals.



▲ City Parks  
 ● Community and Neighbourhood Parks  
 Data Source: AMC

**Ahmedabad (AMC)**  
 0 2 4 6km



**61.59%**

Public open spaces are urban green spaces and parks

**256+**

Parks and gardens distributed across the municipal area of the city

**2,500-10,000 sqm**

Typical size of neighborhood parks and gardens

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## 02. Governance & Institutions

The Garden Department of Ahmedabad Municipal Corporation (AMC) holds the primary responsibility of developing and managing parks and gardens in the city. Other responsibilities of the Gardens Department includes maintenance of traffic islands, beautification of lakes, maintaining tree cover in the city including streets and open plots, and initiating activities to involve the community.

The Department is led by the Parks Director supported by a central team of officers and a technical team of architects, urban designers and civil engineers. This technical team however is involved in designing of larger city level parks like the Riverfront Park. The neighborhood parks are designed with a fixed template for layouts, materials and equipment. The management of parks is decentralized at the zonal level. There are 7 zones in the city. The Gardens Department has a Senior Section Officer for each zone.

The decisions regarding development and design of parks are taken on a project to project basis. The AMC hasn't drafted and adopted any specific policies or guidelines that lay out a vision and drive the agenda for parks and open spaces in the city.

**“The city is doing fairly well in terms of managing of smaller neighborhood parks. They serve the basic needs of all users. The Gardens Department is proactive in maintaining plants & landscape and resolving issues raised by citizens, for example around replacing old and dangerous play equipment”.**

- Landscape Architect & Park User

## 03. Budgetary Allocations

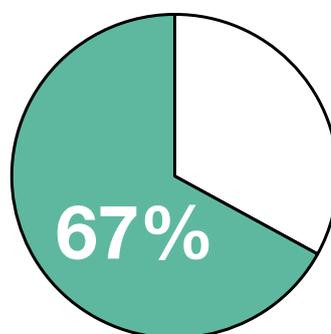
Urban green space is an important investment that local authorities can make on behalf of citizens and their well-being. AMC allocates funds for development, maintenance and upkeep of parks in its annual budgets under the head of 'Public Spaces and Amenities'. Planned capital expenditure for parks for 2020-21 is INR 58 Cr. 72% of this is earmarked for creating new parks, and the remaining is allocated towards civil improvement works in existing parks. Additional funding of INR 15.5 Cr has been allocated towards parks and open space development from state and centrally sponsored schemes like SJMMSVY and AMRUT. The AMC Garden Department also plans to utilize the 15th Finance Commission grants (under the domain of improving air quality) to add and enhance greens spaces in the city (Patel, 2021). However a large portion of the allocated capital expenditure is towards larger city level parks and special projects. Minimal funding is available for development of neighborhood level parks. The Garden Department often works with ward councilors and leverages funds allocated to them to develop neighbourhood parks. The costs of maintaining and managing parks and gardens is also significantly high. The AMC has successfully adopted a PPP model to fund development & maintenance of parks to supplement its own sources.

**INR 150-325/ sq foot**

Construction cost for  
Neighborhood Parks:

**INR 10-30/sq foot**

Monthly maintenance cost for  
neighborhood parks



Actual spending towards public  
open spaces in 2018-19 as a  
percentage of proposed budget

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## 04. Management Frameworks

The management of parks is funded through 4 different models:

**Corporate Social Responsibility (CSR):** The AMC Gardens Department is increasingly leveraging CSR funding (under the area of Environmental Sustainability) to develop and maintain parks in the city. Several city based Corporations like the Torrent Group, Ashima Group and Symphony are currently involved in this initiative with the AMC.

**Public Private Partnership (PPP):** The PPP approach is working well for neighborhood parks. AMC allocates a part of the park land to a retailer to be able to sell products through a kiosk at the site. Currently, AMC has partnered with AMUL through this PPP setting to manage majority of the parks around the city.

**Funded by Trusts and NGOs:** In this model, the local body pays for the capital costs of some of the city's parks, while an NGO/charitable trust/RWA is responsible for the maintenance and operations.

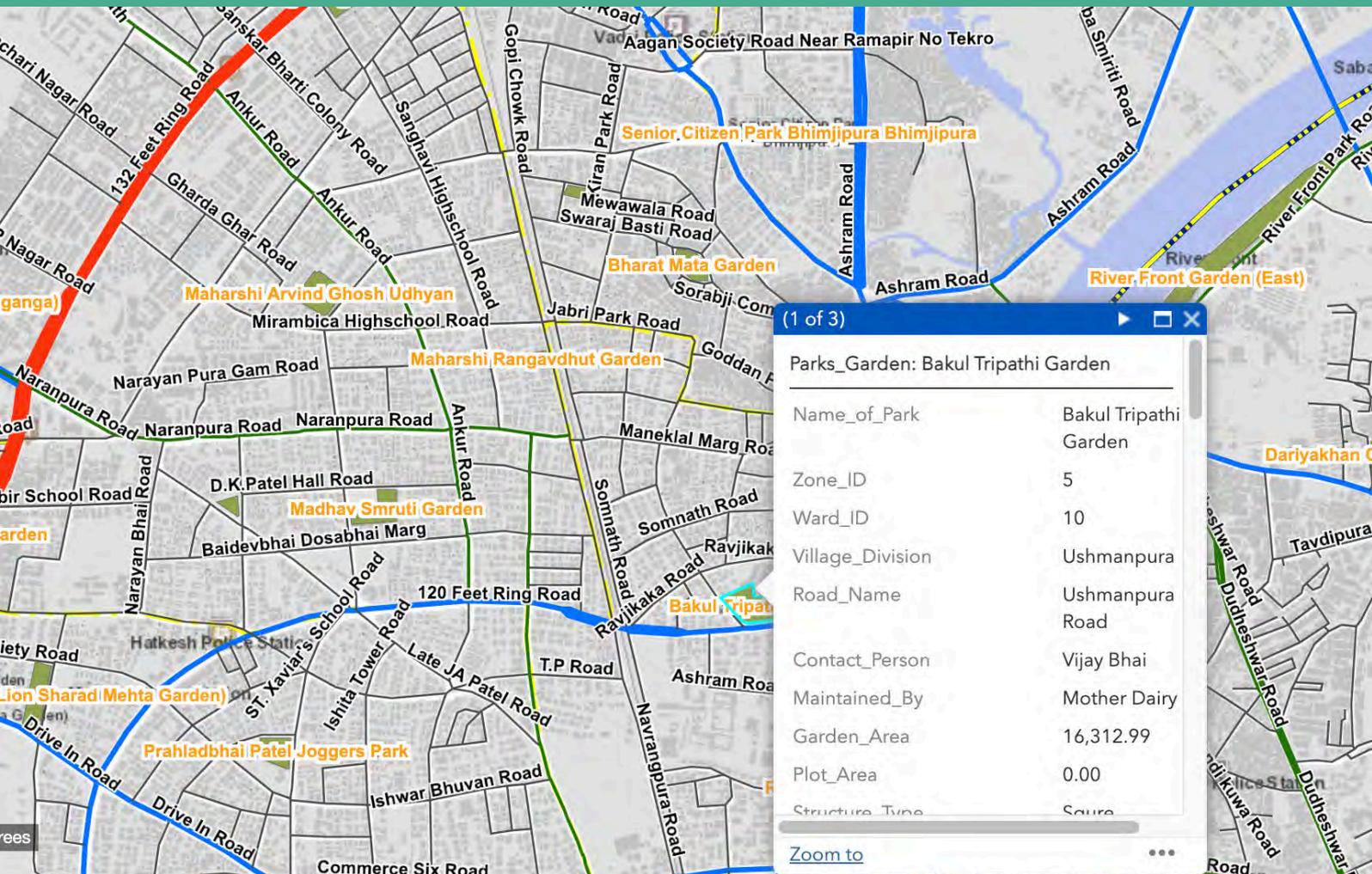
**Maintained by AMC:** The remaining parks are maintained by the Gardens Department. The design and construction is handled in-house and maintenance is outsourced. Agencies are selected through a tendering process. AMC bears both capital and operational costs.

Park maintenance is driven by SOPs established by AMC's Garden Department to meet minimum performance requirements. As a result of the pandemic, there have been no significant improvements to park management regimes. But COVID has prompted AMC to promote more open spaces for activities like yoga and gyms. AMC is also planting more trees in the public parks. (Patel, 2021)



## DIGITAL INVENTORY MANAGEMENT BY AMC

AMC has created an extensive central database and inventory management system that records details about all its facilities, infrastructure, including parks, gardens and plantations across the city. This inventory is currently only available to internal AMC staff and is meant as a tool for inter and intra-departmental coordination. The parks database encapsulates the park's characteristics, availability of services; area of the parks, tree cover, availability of utilities, maintenance model etc. If regularly updated and used as a strategic tool to support decision-making, such inventories can prove extremely helpful in aiding maintenance of infrastructure, facilitating resource allocation, and to plan effective emergency response in crisis situations like the COVID 19 pandemic.





## LEVERAGING CSR TO DEVELOP & MAINTAIN PARKS: CASE OF SYMPHONY PARK

Bodakdev Park in Ahmedabad, is a CSR funded park developed by Symphony Limited, a leading manufacturer of cooling devices. The park is developed on 11,000 sqm of AMC land situated in an area with offices as the primary land use. The land was earmarked for parks but was being used as a dumping ground and was filled with construction debris and temporary encroachments. Symphony Ltd approached AMC to design and develop the garden under its CSR initiative. AMC signed a 5-year MoU with Symphony for development and maintenance of the park land. Symphony selected the landscape architects through a competition. The landscape architects along with Symphony and the AMC team conceptualized the idea of a 'forest park' which would serve as a place of refuge and relaxation for the office going population in the area. Since there were two other public parks in the vicinity catering well to the needs of local residential population, the idea was well received. There was a conscious decision to limit lawn cover and add more trees. 30,000 saplings of native species of trees and shrubs were planted in islands to create the experience of a trail in the forest. Unique art installation enhance the experience. A dried-up lake was revived and integrated to the park design. The park offers adequate seating and an amphitheater to allow smaller gatherings and neighborhood events. The forest park is adequately lit, includes basic amenities of water and toilets , and provides visitor's parking along its periphery. The park receives a daily footfall of 150-200 people, particularly around the evening time.

The park was developed at a total cost of INR 3.9 Cr, born by Symphony which will also maintain it for five years. Building on this experience, AMC is working on a strategy to invite more companies to support the development of parks under their CSR initiatives.



Photo courtesy: Urbscapes



Photo courtesy: Urbscapes



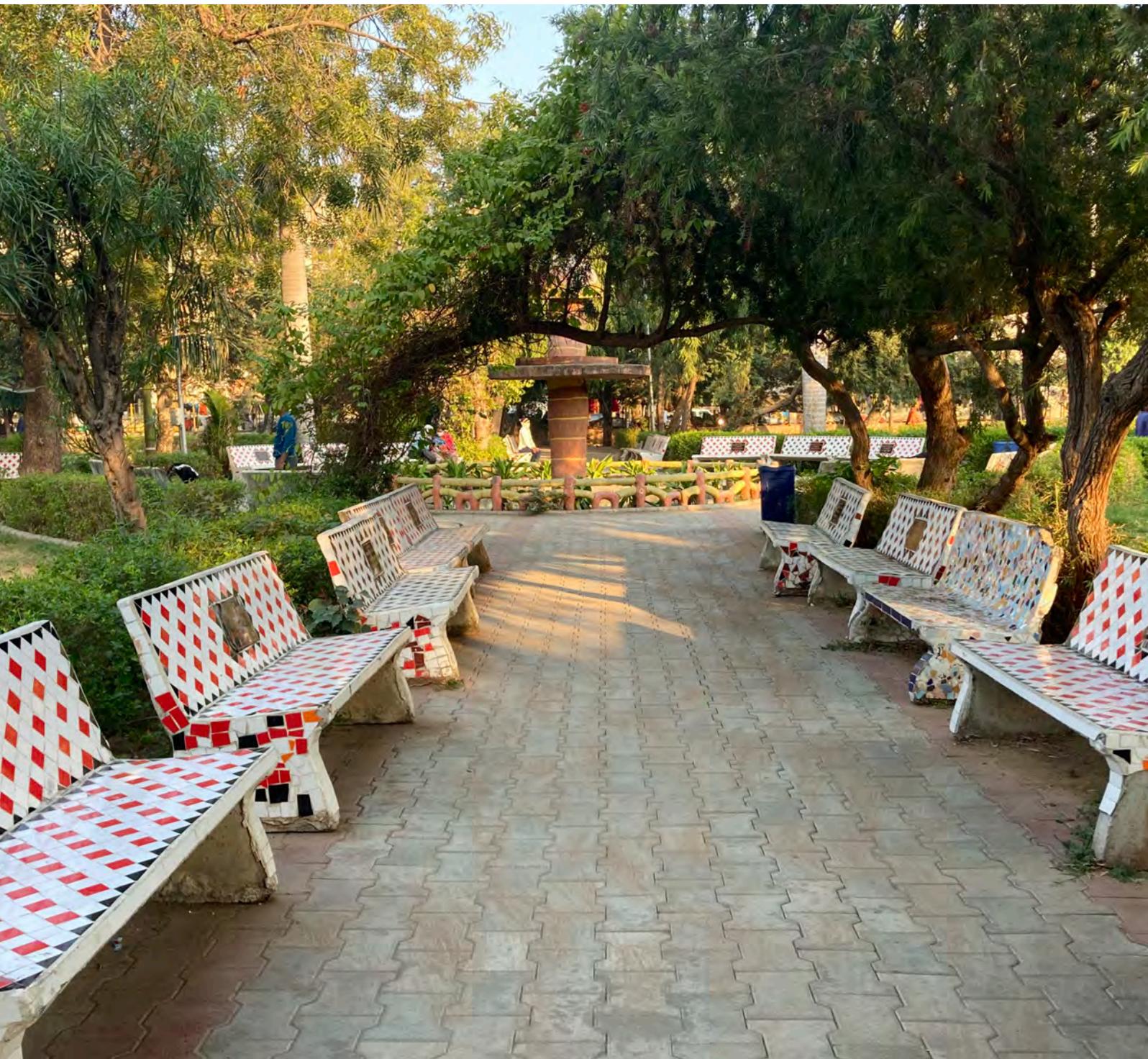
## **PPP APPROACH TO MAINTENANCE OF PARKS: CASE OF AMUL PARKS**

AMC has signed a five-year MoU with AMUL, a milk and dairy cooperative to maintain neighbourhood parks in residential area of the city. The MoU permits AMUL to create a parlour /kiosk within the garden premises to sell consumable products. The location of the parlour is mutually agreed upon, and the size of which is determined by the MoU's norm and also dependent on the site's area. In most cases, the parlour can be accessed from the street and the cooperative earns out of selling from the parlor to the nearby neighborhoods. AMC retains ownership, power, and possession of the property.

In return, AMUL is responsible for all aspects of garden maintenance, including civil work, landscaping, children's play equipment, sitting facilities maintenance and repairs, housekeeping, and solid waste management. It also bears the utility costs and labour costs (gardener, supervisor, watchman, and sweeper). AMUL has sub-let the maintenance to Gujarat Environmental Service Society (GESS). There are instances where the park is too small or is on an interior street where a parlour/kiosk is not viable. Under the MoU, AMUL is still responsible for the maintenance and upkeep of these parks. The model works because AMUL is able to offset the costs of maintenance through the income generated from more commercially viable parks.

One of the primary reasons for AMC partnering with AMUL is because it is a cooperative. Rather than negotiating with businesses that are allegedly only interested in making money by doing business at prime locations, AMC believes the cooperative serves the public interest better.

This PPP model has been successfully put to action for more than six years. AMC saves costs on garden upkeep, AMUL gains access to prime city locations to market its goods as well as advertise and improve its brand image, and the public gains access to well-kept parks and greens, and the opportunity to buy selected necessities and dairy products close to their homes.



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## 05. Design, Layout & Activities

Ahmedabad has a well-distributed system of neighbourhood parks. They provide great opportunities to the surrounding residents to use them for exercise, leisure and social interaction. This makes them one of the most important public spaces that need attention in order to explore their function in the post-COVID scenario. The study of parks is conducted through three key parameters:

### Zones & Activities

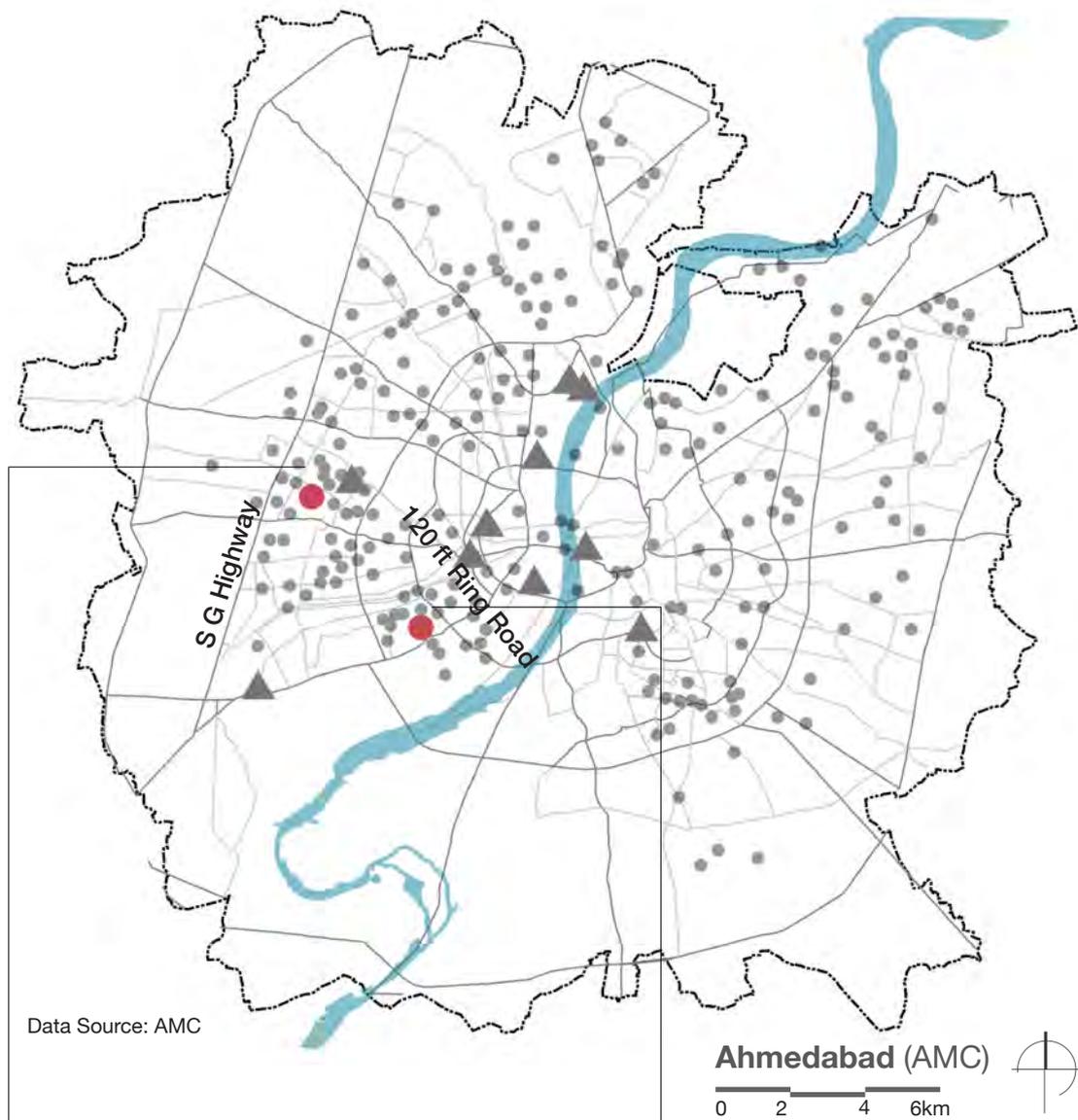
The use and allocation of space within the park boundary is analyzed to understand the available infrastructure for various activities. Various activity zones (like kids' play area, gym area) are demarcated through material distribution and together form a cohesive system within the neighbourhood.

### Usage & Footfall

During the post-lockdown times, operating hours of parks have been restricted. Peak activity hours are analyzed to understand the user-group demographics, activities and peak hour distribution. User engagement with the park is determined by the opportunities and activities available for all.

### Edges & Street Interface

Edges of the park are the interface between the street and park. They determine the user experience in terms of safety, and therefore the use of the park. The edges are analyzed to understand visual and physical interaction with the street. Street interface is further analyzed in terms of activities, usage and user interaction.



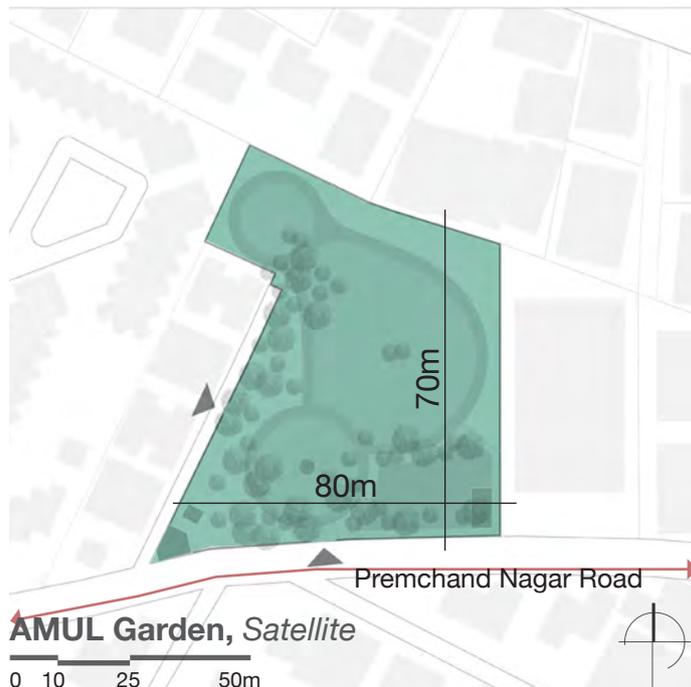
**AMUL Garden, Satellite**



**Prajapati Garden, Vasna**

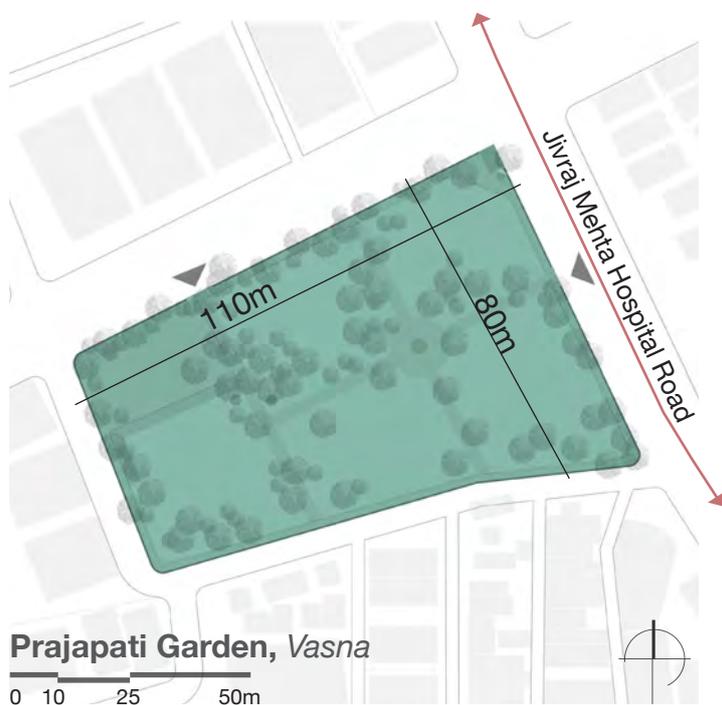
Two neighbourhood parks are selected to conduct the study through the identified parameters.

## CASE STUDIES: CONTEXT



**Operation Hours**  
Pre-COVID: 16hrs  
Post-Lockdown: 7hrs

Area = 5500sq.m.  
Perimeter = 340m.



**Operation Hours**  
Pre-COVID: 16hrs  
Post-Lockdown: 4hrs

Area = 7800sq.m.  
Perimeter = 370m.

The selected cases are identified based on the following criteria:

1. Located in residential neighbourhood
2. Area <10,000 sq.m.



Approach Road



Park Entry

### **AMUL Garden, Satellite**

The park is located in a residential neighbourhood, accessed by a 9m wide road. There are two entrances into the park.



Approach Road

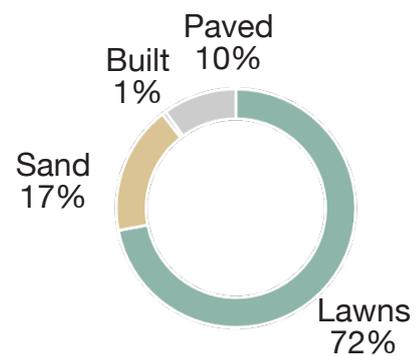
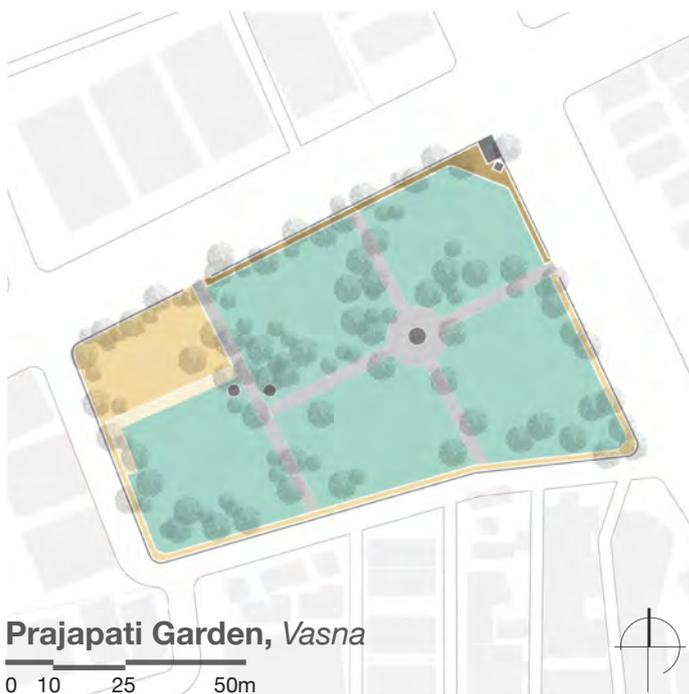
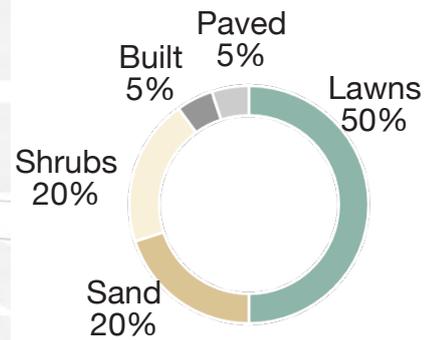
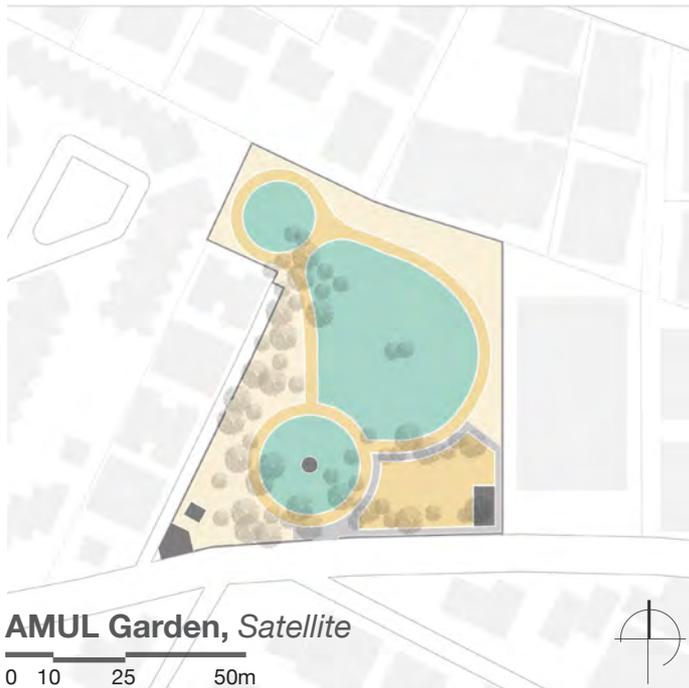


Kids' Play Area

### **Prajapati Garden, Vasna**

The park is located in a residential neighbourhood with a commercial edge along the junction. It is accessed by a 18m wide road and has two entrances.

# ZONES



Both the parks have a good proportion of well-maintained lawns surrounded by jogging tracks. They also provide for variety of activities like kids' play area, gym area, sitting spaces.

# ACTIVITIES



**Interactive Seating Cluster**  
AMUL Garden, Satellite



**Designated Play Area**  
AMUL Garden, Satellite



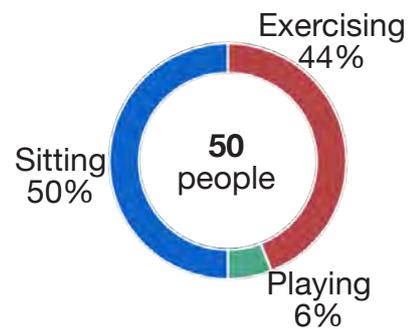
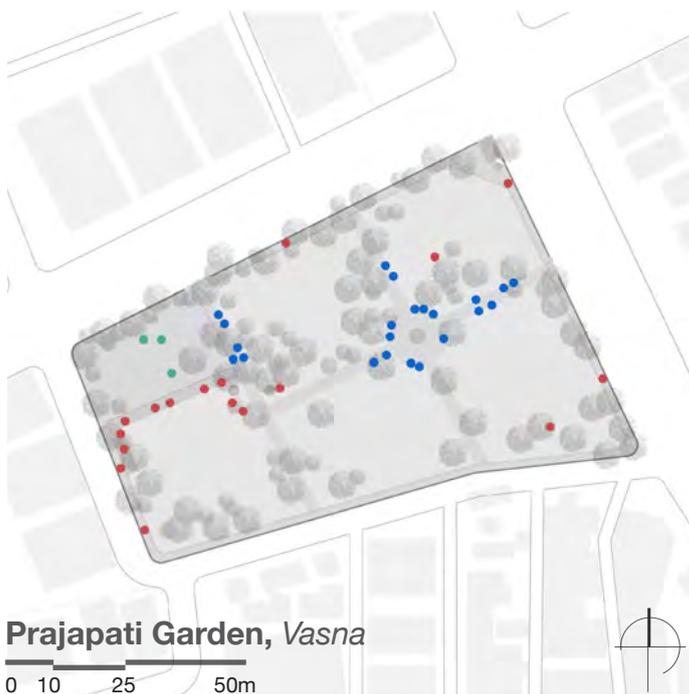
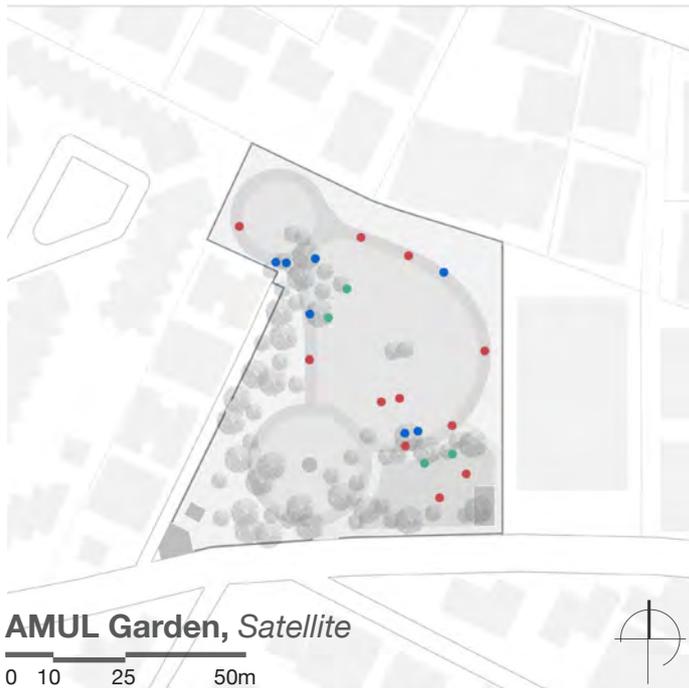
**Empty seating area**  
Prajapati Garden, Vasna



**Visual Porosity**  
Prajapati Garden, Vasna

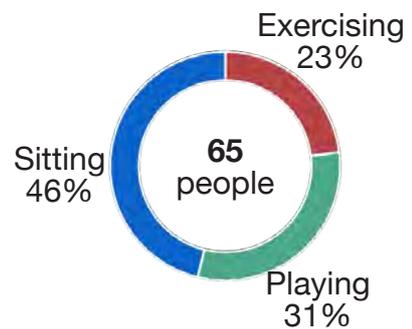
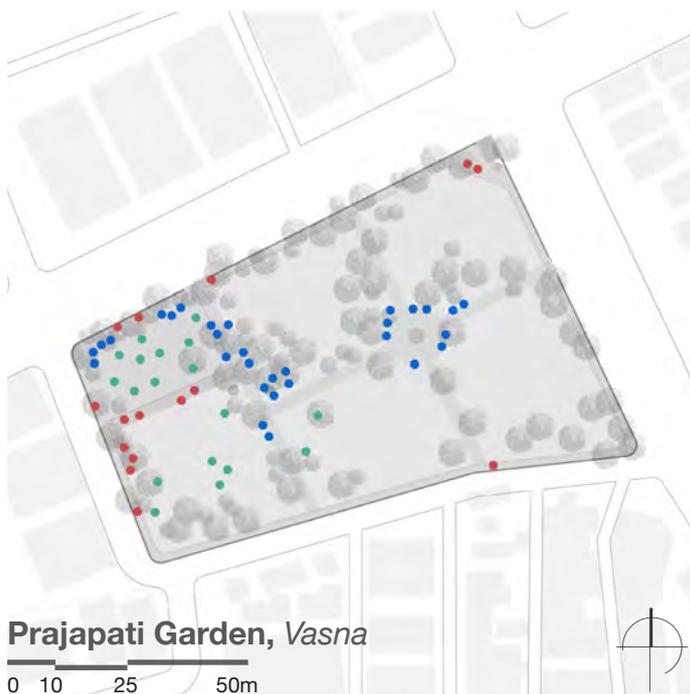
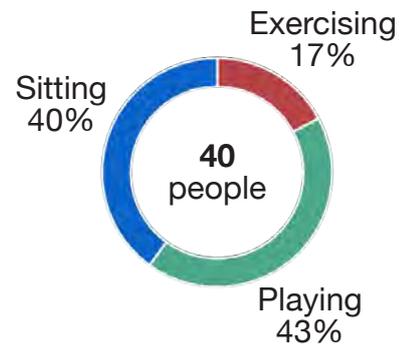
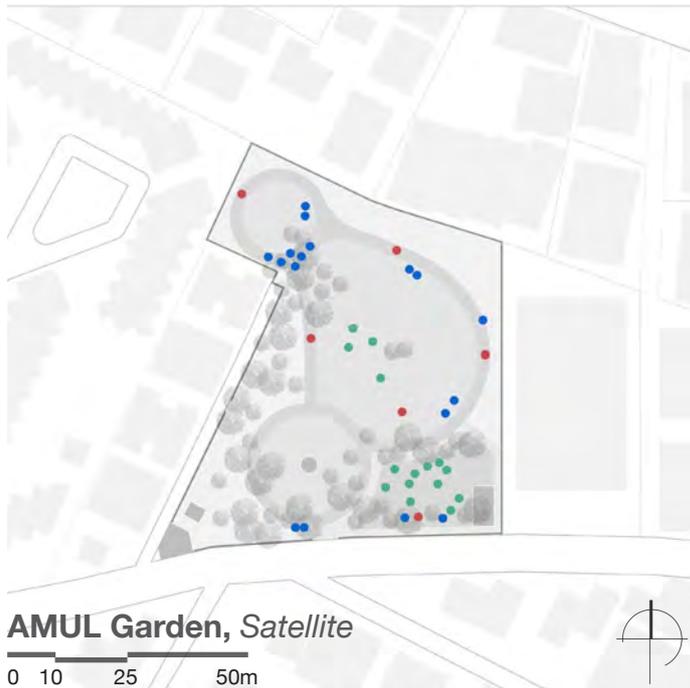
In some portions, there are empty pockets. However, spaces with shade giving trees have a comfortable ambience during the daytime.

## USAGE & FOOTFALL | 8.00AM



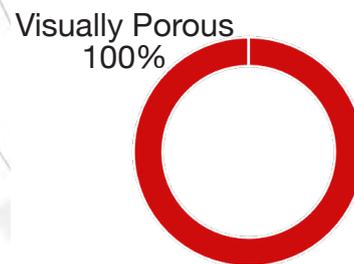
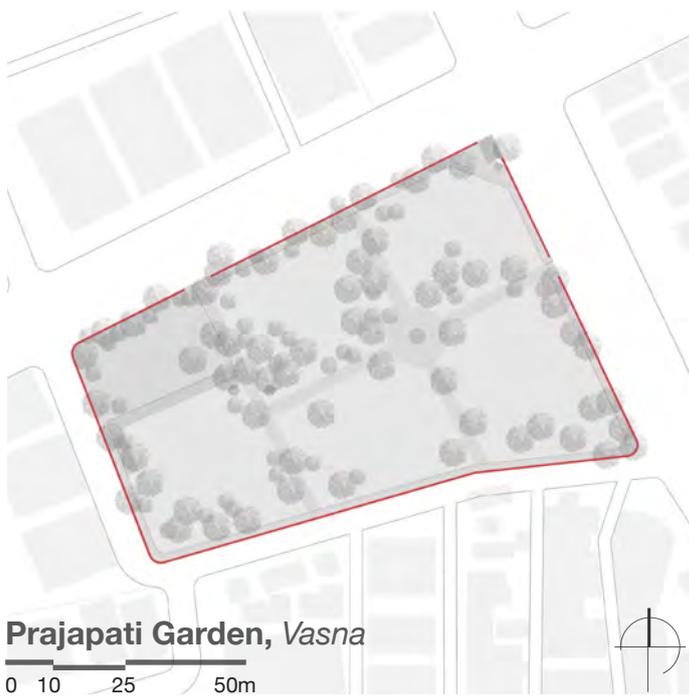
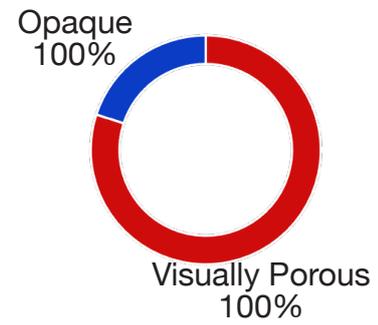
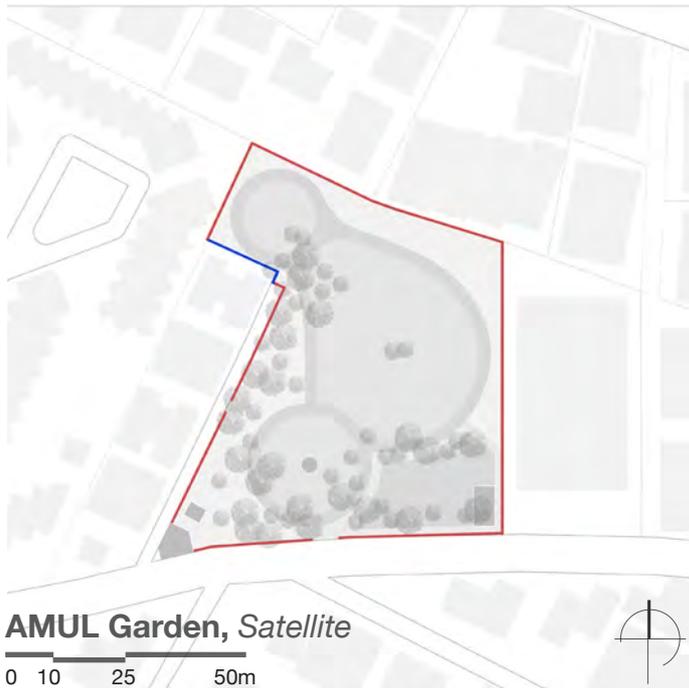
During the early morning hours, users are engaged in activities like yoga, jogging, and gym. There are very few users engaged in playing and leisure activities.

## USAGE & FOOTFALL | 5.00PM



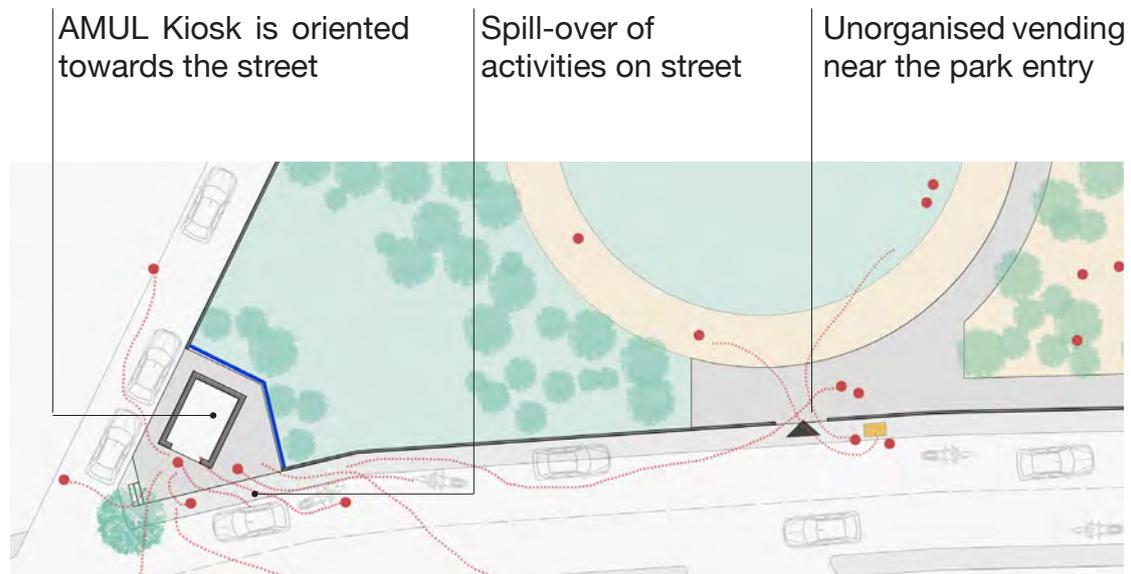
During the evening hours, playing activity increases. Leisure activities are also clustered around the play area as majority users are accompanying children.

# EDGES



Both parks allow for a good visual connection with the street, therefore making it safe for the users.

# STREET INTERFACE

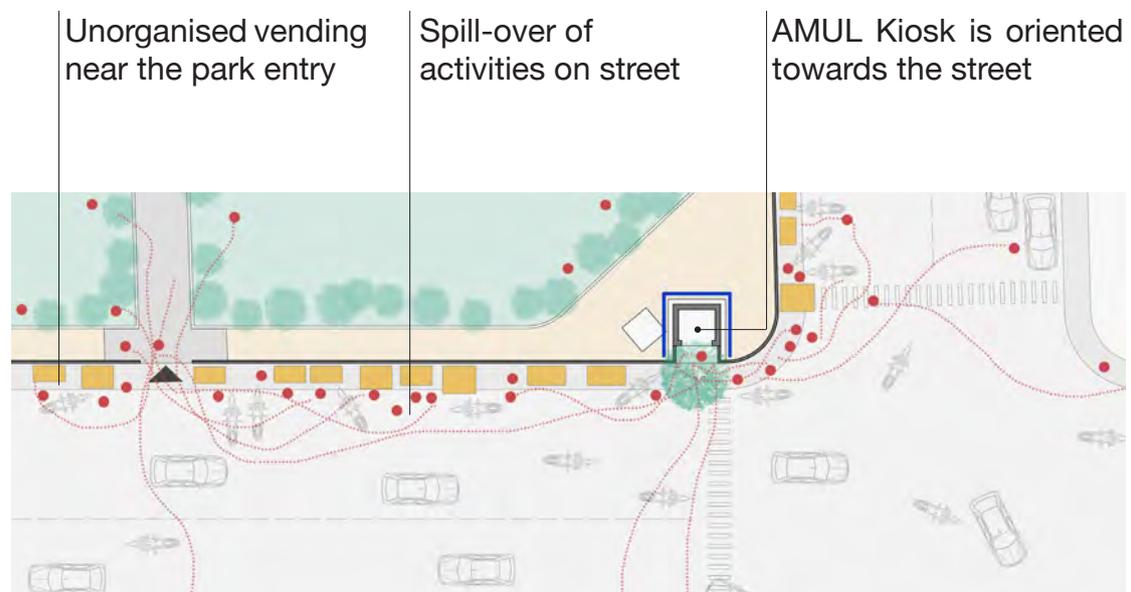


AMUL Kiosk is the only commercial activity that caters to the neighbourhood residents.

■ Vendors  
● User Movement

**AMUL Garden, Satellite**

0 2 5 10m



AMUL Kiosk benefits from its location at a commercial junction.

■ Vendors  
● User Movement

**Prajapati Garden, Vasna**

0 2 5 10m



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## Key Insights & Findings

01. Ahmedabad has a good network of neighborhood level parks. These urban green spaces and parks are an asset to the city. Decisions about design and management of such assets need to be supported by a policy/vision document.
02. Neighbourhood parks cater to the needs of the primary user groups in the surrounding neighbourhood by providing both active and passive recreation opportunities.
03. COVID has prompted AMC to promote more open spaces for exercise and leisure activities. The garden department plans to schedule yoga classes and install equipment for open gyms at these neighbourhood parks. There is an increase in tree plantation drives and development of urban forests across several parks.
04. While users engage in various activities, like exercising, playing within the park; the street interface along the park edge caters to various activities like unorganized vending, eateries. A lack of organisation of such activities creates a spill-over on the public right of way. It is evident that there is a need for infrastructure to cater to the social needs of the neighbourhood community.
05. Re-imagining the Street interface offers an opportunity to integrate multiple uses with the park while appropriating the public right of way.

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# Design & Policy Direction

## 01. Formulate a comprehensive policy that lays out the city's vision for public parks

Institutionalising the development and management of parks through policies can significantly improve the quality of spaces and guide future projects. Policies provide a clear path for local bodies, drive development of public infrastructure in the city and lay down clear systems and standards for design and management. A city-wide policy that focus on form, function, funding and connectivity of these neighbourhood level parks and gardens should be adopted. The policy can encompass: 1) Vision and Goals, 2) Categorization of Parks, 3) Financing models, 4) Design briefs, 5) Standard operating procedures, 6) Engaging design professionals and 7) Guidelines for public and stakeholder involvement.



### CASE STUDY: MELBOURNE PARKS POLICY



Cities are growingly recognizing the need for policies that govern the creation and management of public open spaces. For instance, the Melbourne parks policy describes the city's vision for parks and gardens and establishes broad guidelines for their effective management.

## **02. Leverage alternative finance for development and management of parks**

Local governments need access to adequate revenue sources to finance development of parks and public spaces they are mandated to provide. They also require to put in place robust systems to efficiently manage and utilize these funds. While bigger cities with large economies are beginning to raise their own revenues by improving their financial management, smaller cities do not enjoy the same level of financial autonomy. More than 60-70% of their revenue comes through State grants. It is important for local governments to establish a clear funding strategy and investigate different sources of capital funding including funds from state/national schemes, CSR and private finance through PPP. For financing maintenance, revenue-generating opportunities such as parking fee, fee for hosting exhibits and events should be considered. Governments should also explore voluntary participation of citizens and RWAs and planning and development agreements with developers.

## **03. Create an online spatial inventory for parks that is publicly accessible**

Cities must continually record and update information about current state of parks and gardens, capturing details about their size, available facilities, landscape and plantations, activities and zones, maintenance models and data about the street activities surrounding the plot. Maintaining a dynamic spatial inventory for parks can help local governments visualise data on a map and compare park performance. If the inventory is made accessible to the public it can help citizens discover parks around them, be a part of the upcoming events while also contributing to the database.



## CASE STUDY: ONLINE INVENTORY BY LONDON GARDEN TRUST

With public access, the inventory can become a tool for greater community sharing and active citizen participation in using and planning these neighbourhood level spaces. London Garden Trust for example has created an inventory of historic parks, gardens, squares and green spaces, accessible to the public. It lets citizens search for different types of parks in different areas along with the associated events planned by the local body or the community. The application also allows them to share their experiences.

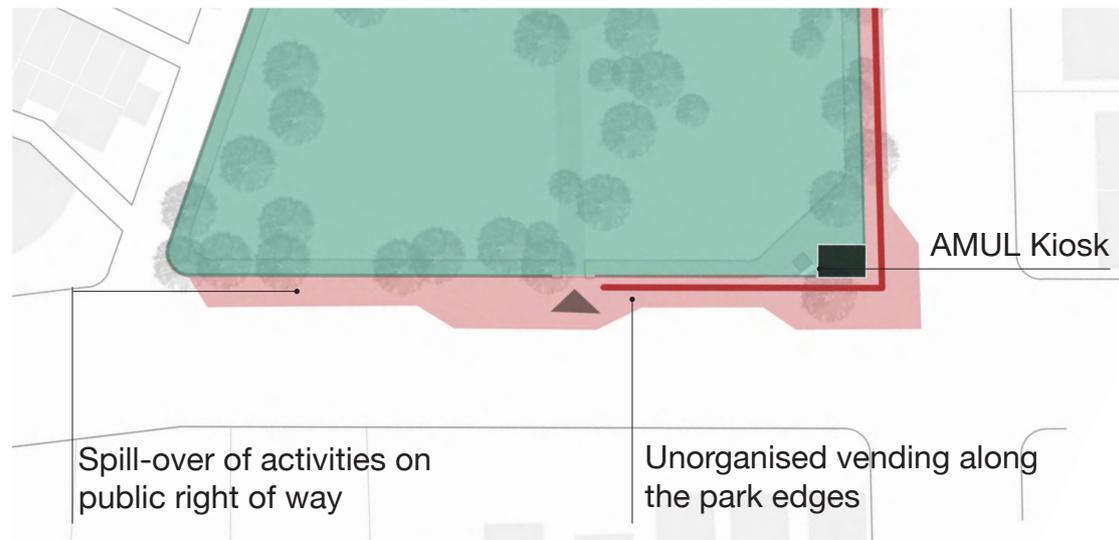
## CASE STUDY: INVENTORY OF PUBLIC SPACES IN MUMBAI



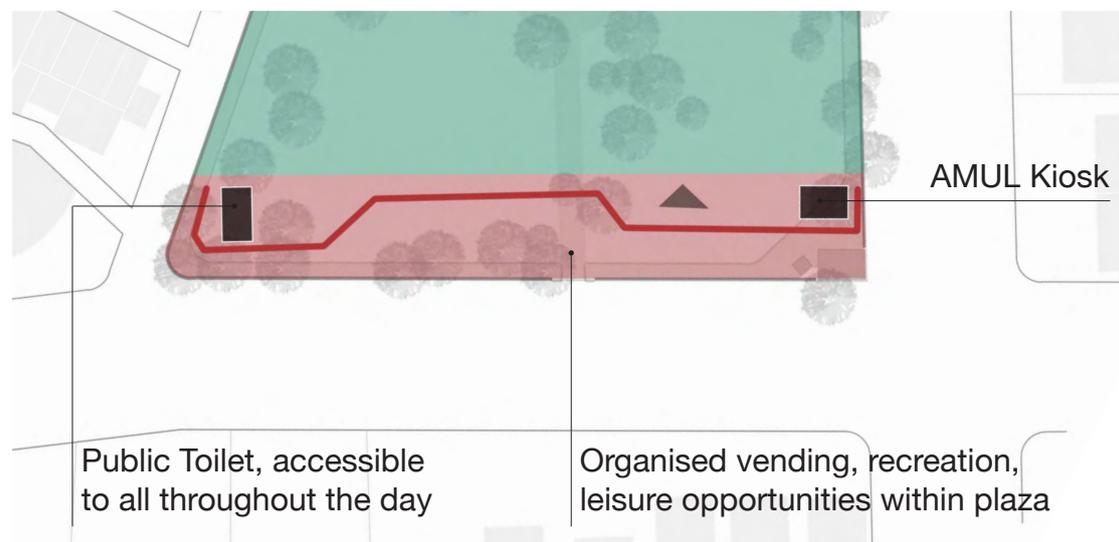
Aside from municipal governments, citizen groups and NGOs in several cities have taken the initiative to study and establish an inventory list of parks and their amenities. CitiSpace, for instance, a citizens' group dedicated to preserving Mumbai's open spaces, has created a fact file inventory of the city's 600 designated public open spaces and their current state.

## 04. Re-imagine park-street interface as 'neighborhood common', a shared, multipurpose space accessible to all.

### Existing Scenario



### Re-imagined park-street interface



The plaza is envisioned as a flexible design that can cater to context-specific demand for each park. It acts as a multi-purpose community space that provides opportunity for social interaction.

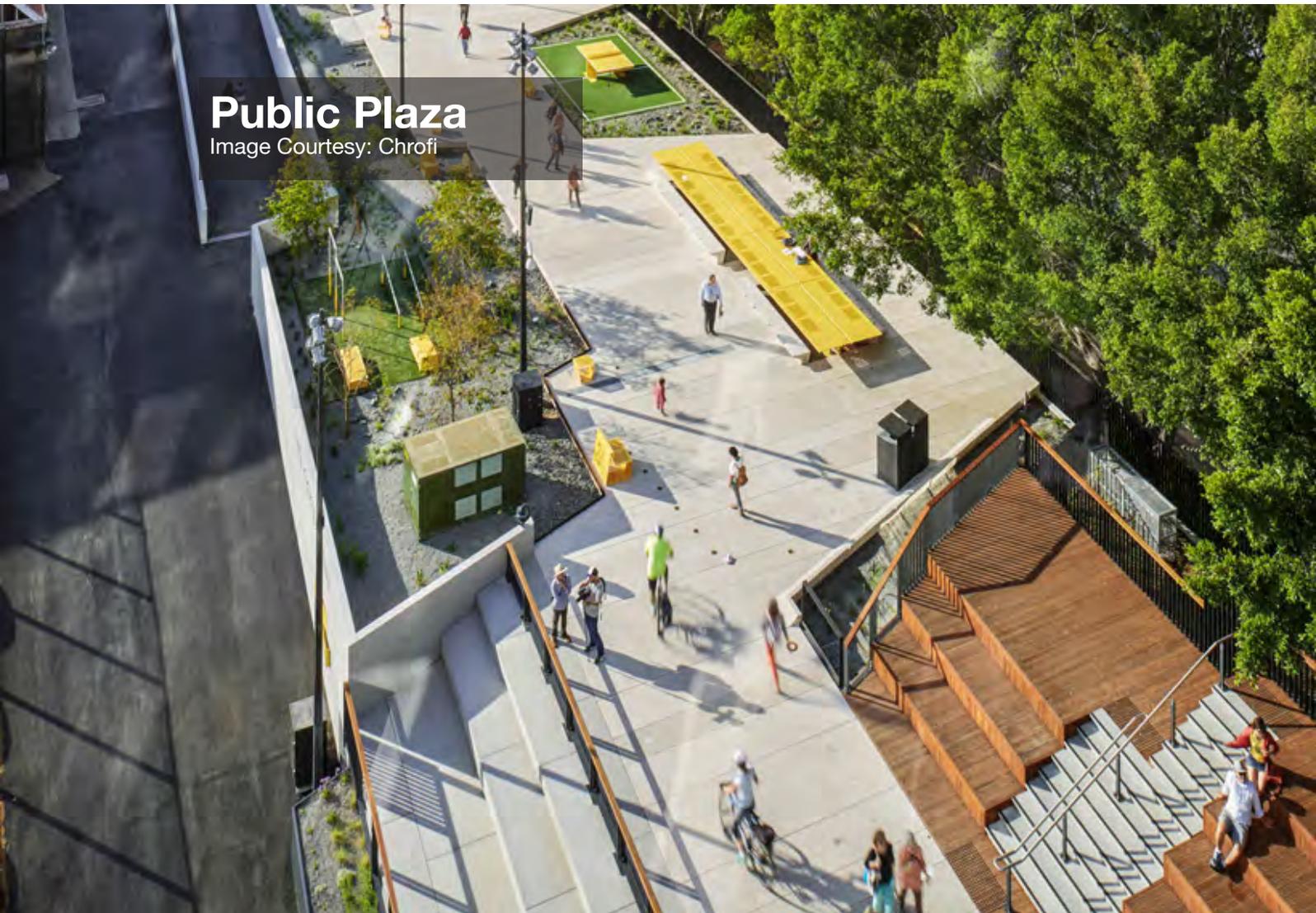
# Existing Scenario

Prajapati Garden, Vasna

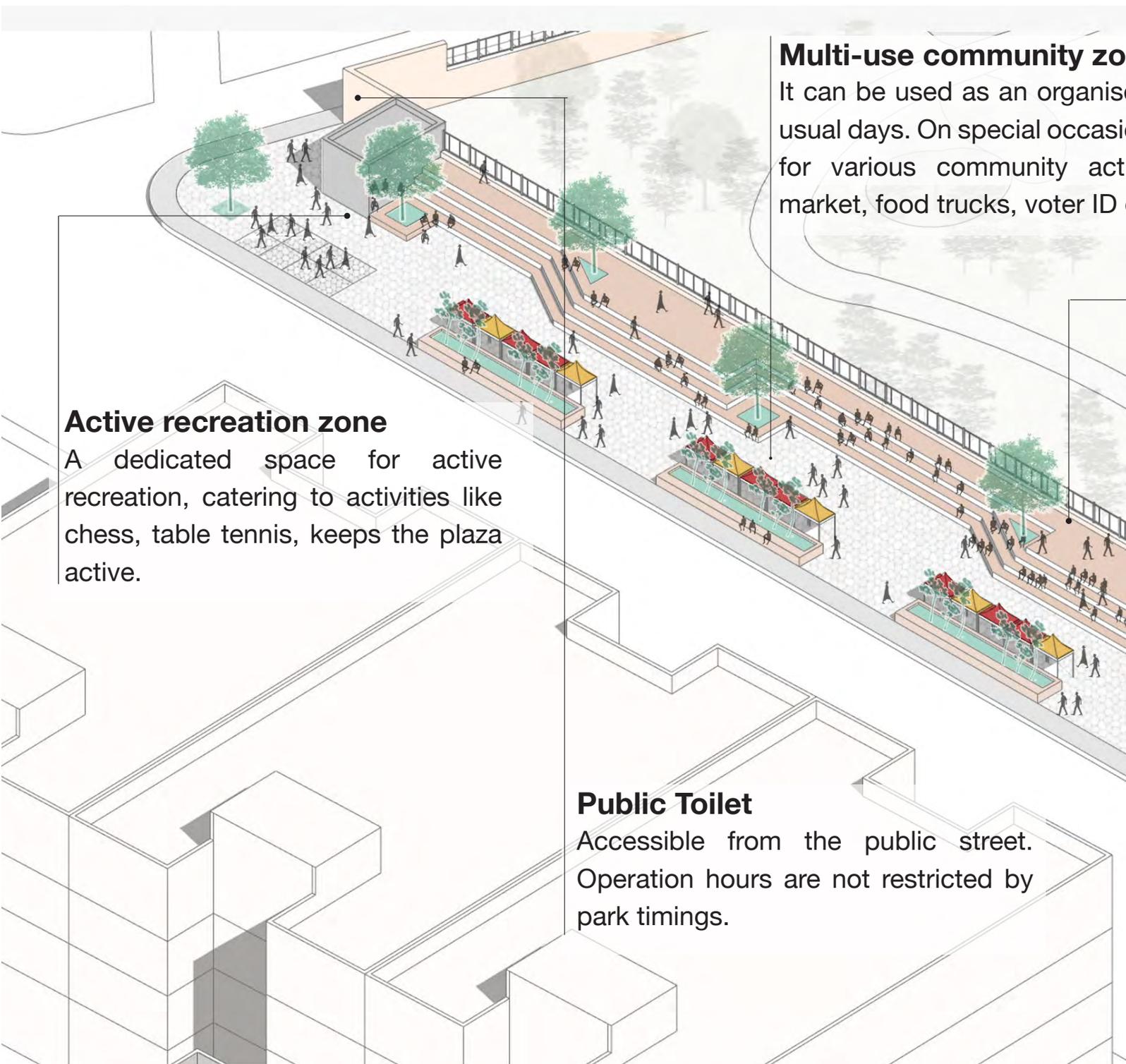


# Public Plaza

Image Courtesy: Chrofi



# Prototype Design



## Active recreation zone

A dedicated space for active recreation, catering to activities like chess, table tennis, keeps the plaza active.

## Multi-use community zone

It can be used as an organised space on usual days. On special occasions, it can be used for various community activities like a market, food trucks, voter ID.

## Public Toilet

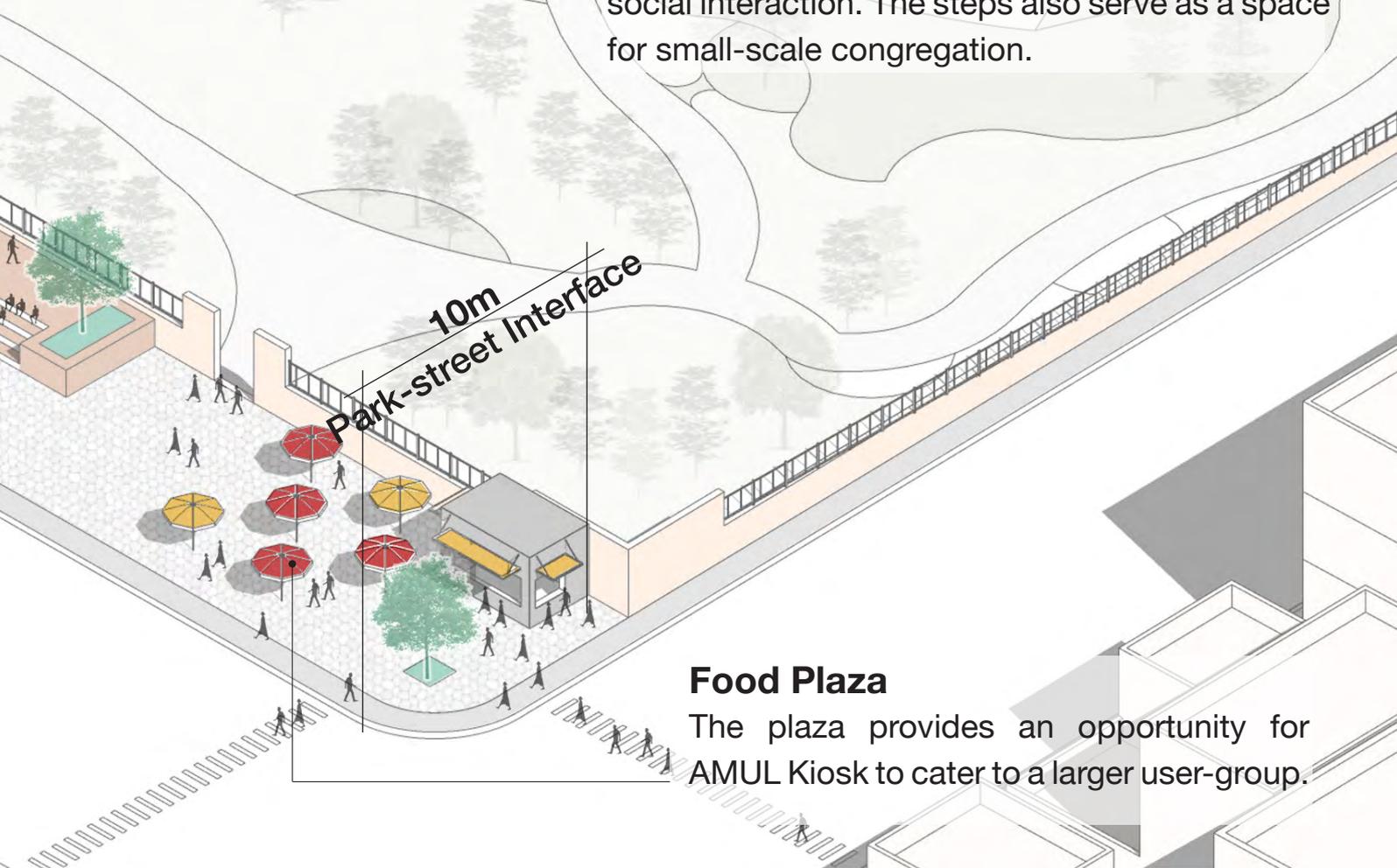
Accessible from the public street. Operation hours are not restricted by park timings.

ne  
ed vending zone on  
ons it can be utilised  
ivities like farmers  
distribution.

## Park-Street Interface

### Opportunities for Social Interaction

It can be used as a space for passive recreation, social interaction. The steps also serve as a space for small-scale congregation.

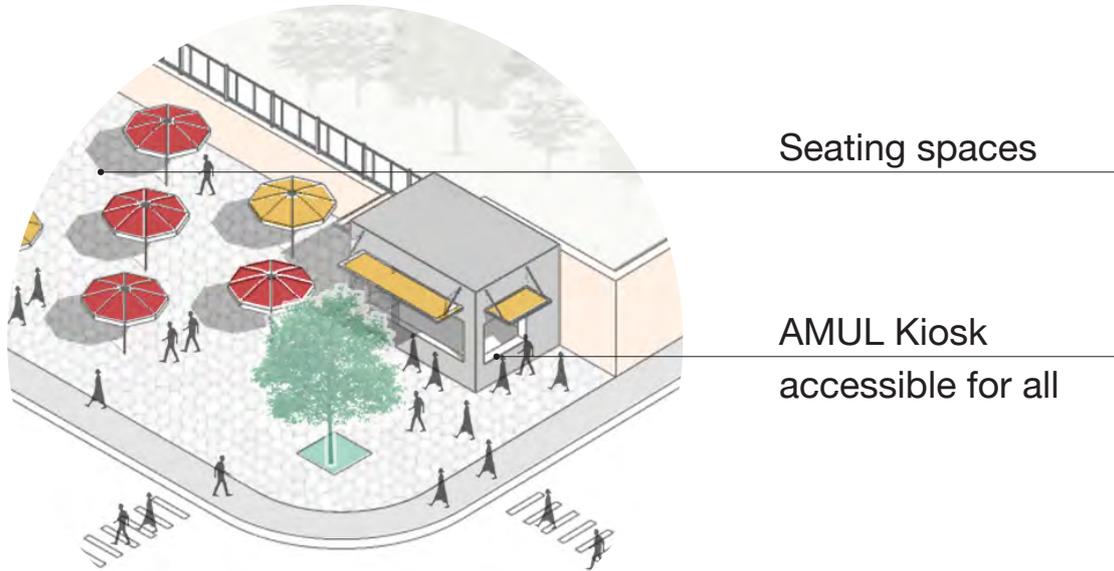


### Food Plaza

The plaza provides an opportunity for AMUL Kiosk to cater to a larger user-group.

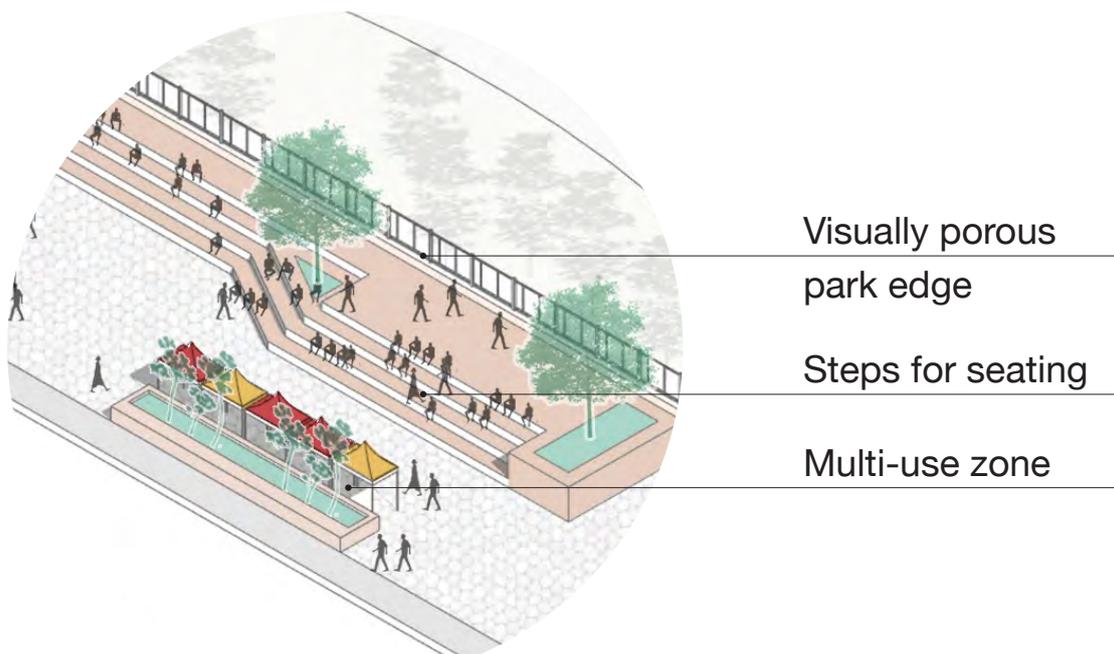
## Food Plaza around the AMUL Kiosk

The junction provides an opportunity to create a food plaza around the AMUL kiosk, with seating spaces.



## Seating Spaces along the edge

The edge along the park is envisioned as steps that provide opportunities for social interaction and passive recreation.



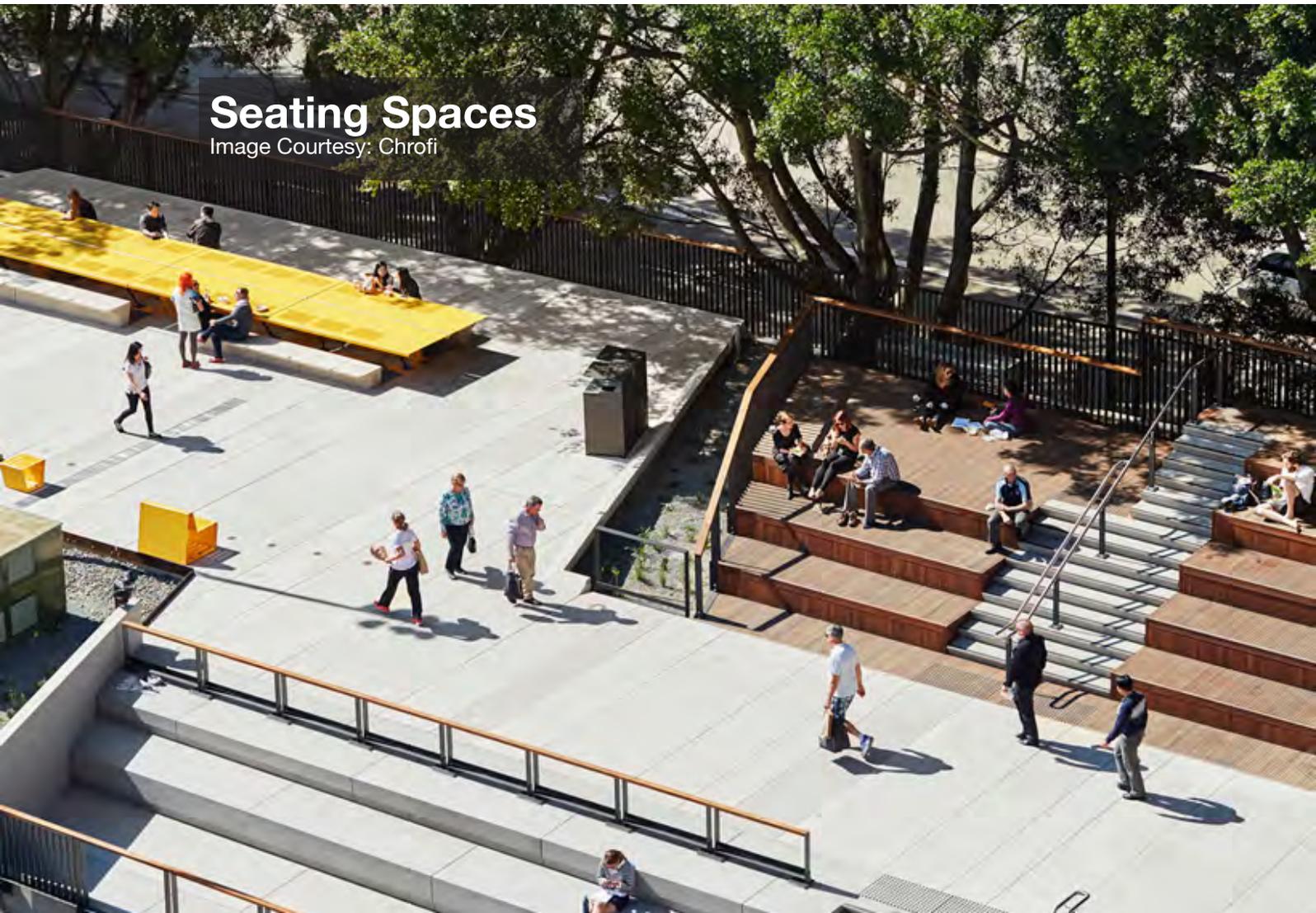
## Food Plaza

Image Courtesy: Shiftspace



## Seating Spaces

Image Courtesy: Chrofi



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9. Narendra Mangwani, C.-f. U. (2020, December). Interview with park developer. (B. Bhatha, S. Islam, T. Lashkari, & V. Herlekar, Interviewers)
10. Patel, J. (2021, January). Interview with Director, Garden Department, AMC. (T. L. Brijesh Bhatha, Interviewer)
11. Sen, A., & Mukherjee, P. (n.d.). SMARTGREEN URBANISM: Ahmedabad City's Perspective. Ahmedabad.
12. Shah, D. (2015). Public garden maintenance through PPP- A case of Ahmedabad, India. Ahmedabad.
13. Shastri, P. (2018, June 30). Buildings ate up 31% green spaces in Ahmedabad since 1990. The Times Of India.
14. Urbscapes. (2019). Symphony Forest Park. Ahmedabad.

## Interviews

Name	Designation	Date	Points of Discussion
Narendra Mangwani	Co-founder, Urbscapes	28.12.2020	CSR model, Design of Symphony Park, Role of professionals
Jignesh Patel	Director, Garden Department (AMC)	28.01.2021	AMC's vision and views for parks post COVID, functioning of Gardens Department funding, Issues & challenges
Anuj Malhotra	Senior Planning Consultant, SRDFCL	29.12.2020	Working with AMC as an urban designer, design concerns



Photo courtesy: ITDP



# Non Residential Streets

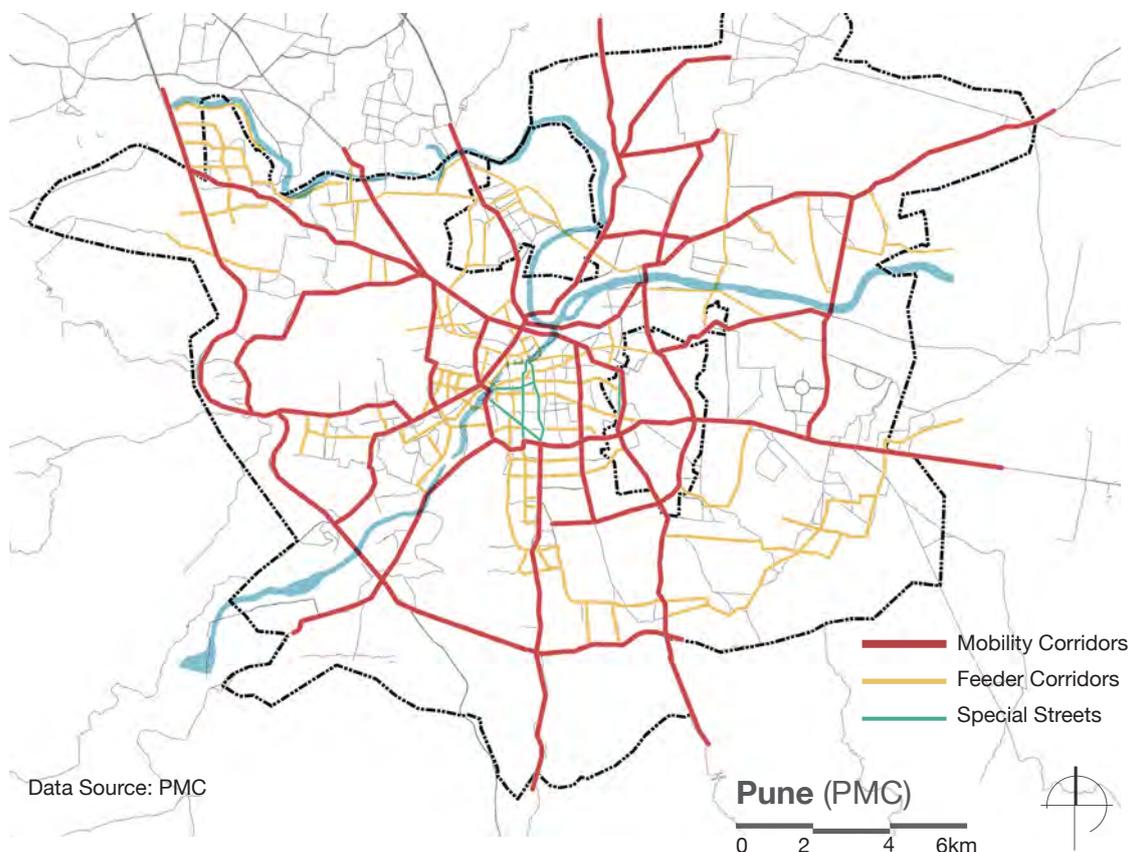
PUNE

# 01. Location & Distribution

Pune's road network is approximately 2,065 kilometres long. 60% of the streets are local streets with a width of less than 12 metres, 25% are sub-arterial roads with a width of 15-24 metres, and only 15% are arterial roads or mobility corridors with a width of 30-60 metres. The city has a different design strategy for each of the three types of streets. Under the Pune Streets Program, a total of 100 kilometres of Pune streets have been identified for redesign and development. In addition, as part of the Smart City plan, 27 kilometres of street redesign under the Area-Based Development and 18 kms for retrofitting have been selected. All this together accounts for 7% of the total street network in the city.

## 100 kms

Streets to be redesigned under Pune Streets Program





## PUNE STREETS PROGRAM

Streets are vital public spaces that go beyond serving as channels for mobility. They play a prominent role in shaping the identity, culture and history of a city. Indian streets cater to a range of different functions; they are used for commute, host economic activities, are social hubs and serve as platforms for civic engagement. Acknowledging this, the Pune Municipal Corporation launched the Pune Streets Program (PSP) to build ‘complete’ city streets that cater to diverse uses. The aim was to develop a road network that was welcoming to pedestrians and cyclists and that followed best design practises from the industry. Complete streets would cater to all user groups and activities - large and continuous footpaths, protected pedestrian crossings, separate cycle tracks, conveniently located bus stops, clearly marked on-street parking, organised street vending, plantations and green cover, improved street infrastructure and play areas for kids, and properly scaled and lit carriageways.

The PSP was the culmination of several important initiatives by PMC to advance sustainable transport. PMC had put in place a Comprehensive Mobility Plan for Pune City (2012), under National Urban Transport Policy. It started building scattered cycle tracks and footpaths at a few locations around the city. But, the work undertaken by contractors was not upto the mark and far from best practices for street design. It was then, that ITDP and local NGOs started pushing for redesigning Pune streets as complete streets. In 2013, the PMC decided to start the process for empanelment of experienced urban designers as consultants. PMC also wanted to create it’s own street design guidelines that respond to the local context and have acceptability within departments. But the discussions went on for years without any constructive development.

Finally, the smart city mission in 2015 gave the required impetus to the PSP project. Mr. Kunal Kumar, the commissioner of the city then, supported the idea and drove the project. The PMC targeted developing 100 kms under the Corporation's budget and additional 27 kms + 18 kms to be redesigned and retrofitted using Smart City funds. To begin with, two empaneled consultants were engaged to design the JM road and Aundh road as pilots to demonstrate placemaking and equitable street redesign. PMC had to build a momentum to get the implementation on track. The design changes under the PSP were backed by institutional reforms, policies and guidelines that further helped enhance the capacity of the ULB. The two pilots also successfully demonstrated ways of public involvement and outreach. Test-runs, public consultation sessions and discussions on various forums were conducted to garner support and take feedback from the public and other stakeholders. Pune's strong leadership was a key factor instrumental in the success of the Pune Streets Program. The Pune Streets Program has been lauded across the country and has received several national awards for pushing the sustainable streets agenda forward. How the success of the pilot phase translates to improvements in citywide network is yet to be seen.



Photo courtesy: Purple Realtors

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## 02. Governance & Institutions

Pune Municipal Corporation's Road Department is responsible for designing, constructing and maintaining all roads and pavements that fall within the PMC limits. It is currently implementing the Pune Streets Program. From adopting and implementing progressive policies, building institutional capacity, ensuring community participation and private collaboration, coordinating with different departments, channelizing funds to monitoring and managing high quality pilot project execution, the Roads Department has been at the helm of advancing the Complete Streets agenda in Pune. Key steps and reforms taken by the PMC in this direction include:

### **Developing Policies and Guidelines**

Pune is one of the few cities to successfully put in place policies, plans and guidelines for street design. The city adopted the Urban Street Design Guidelines (2016) with an aim to create a street system that could accommodate growth, provide transportation options, and keep the city liveable. The Pedestrian Policy(2016) emphasizes the importance of ensuring high-quality and protected pedestrian facilities, as well as efforts to minimise vehicle use. The Pune bicycle plan(2016) and the Parking Policy (2018) have also been approved. These documents incorporate a series of design statements and drawing templates that explain the desired elements and qualities that shape development and redesign of streets in the city, while serving the motorized and non-motorized users alike. They also provide insights into the processes for design and implementation of various elements in street projects. These documents were developed in close coordination with PMC staff and approved by the elected representatives. They lay out a clear direction and serve as a basis for addressing any differences that might arise due to change in leadership or conflicts with other stakeholders.

### **In-house Urban Design Cell**

PMC has instituted an in-house urban design cell comprising of urban designers and planners within the Road department. The cell supports the engineers in carrying out surveys, mapping and street design. It also serves as the coordination interface for design consultants and contractors. It was the first time in the country that such a cell was set-up recognizing and reinforcing the importance of designing street as public spaces. With the help and support from the professionals of the Urban Design Cell, the Road department was able to effectively execute projects. For the capacity building of the entire team PMC had further organised study tours, trainings, workshops and lectures to encourage them to look at best practices, while also understanding the processes and policies.

### **Institutionalizing Stakeholder Involvement through Non-Motorized Transport (NMT) Committee**

Pune has always had active citizen participation in governance through the representation of non government stakeholders on committees. PMC has adopted the same approach to involve different stakeholders in the decision-making process for design and development of streets. The 'Non-Motorized Transport Committee' has permanent members including Road Department engineers, traffic police, PMPML operators, elected representatives, NGOs, environmentalists, and experts. Involvement of NGOs in pushing the public agenda through the NMT committee has been crucial for implementing street improvement projects. Since elected officials are also members of the committee, they are consulted and brought on board to ensure that there are no disruptions later on. The NMT committee meets once a month to review project progress as well as issues raised by the public. Since streets also carry a number of utilities installed and maintained by different departments, the NMT committee often holds meetings with the involved departments to review operations and maintenance roles and responsibilities.

### **Leveraging National Funding to Push the Vision Forward**

The Pune Smart City Development Corporation Ltd. (PSCDCL) is undertaking design and development of 27 kms of streets under the Area Based Development and 18 kms for retrofitting under the 'Smart City Complete Streets Project'. A portion of the smart city funding for Pune will be diverted to this project. Like PMC, PSCDCL has also empaneled consultants for design and implementation. The 9 km of streets in a neighbourhood, including the DP road in Aundh has been completed under the smart city mission funding.

### **Empaneling Design Consultants**

PMC recognizes that streets need to be viewed and designed as public spaces. It has empaneled 4 nationally acclaimed architecture design firms, BI Group Inc., HCP Design, Planning and Management Pvt. Ltd., Oasis Designs Inc. and Design & Planning Counsel. These consultants have been given a package of 25 kms each for redesign and development, which would ensure uniformity in the design language and better integration on ground, across their individual streets. The Urban Design Cell works closely with the empaneled consultants and contributes their knowledge of the local context and on-the-ground facts, whilst the empaneled consultants bring their design skills to the table and see the project through to completion.

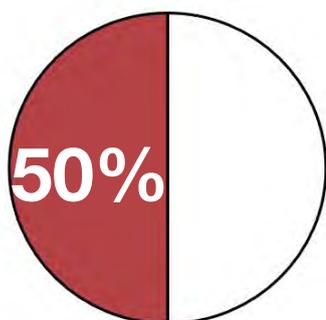
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## 03. Budgetary Allocations

Just like most other Indian cities, a big part of Pune city's budget goes toward transportation and road development. The city's transportation budget for 2020-21 is around INR 1000 Crores (which includes budget for projects by Road department, PMPML and Projects departments). But what PMC has done differently is that it has prioritized sustainable transport and NMT in the budget.

The city has made budgetary provisions to fund good quality footpaths and cycle tracks under the PSP. Around 50% of the city's transport budget is allocated towards sustainable transportation. The city allocates INR 500 Crores every year towards widening footpaths, laying cycle tracks, upgrading street infrastructure, and redesigning and expanding city bus systems. On top of this, the budget received under Pune's Smart City Proposal have also been used to develop streets as public spaces.

With a significant budget allocation, the road department is adequately funded. But performance in the previous years have shown that the pace of project execution is slower, and hence the budget of the road department often goes underutilized.



Of Transport Budget towards  
NMT and Sustran Projects

### **Additional funds allocated**

For street design and development of  
streets under Smart Cities Mission

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## 04. Management Frameworks

Streets are complex public space when it comes to management and maintenance since they cater to a diverse group of users and encompass several utilities and services, each installed and managed by a different department or even private agencies. For instance utility installation like water supply is by the PMC water supply department, electricity by MSEB, gas lines by ONGC and MNGL etc. Other services like street sweeping is under SWM department and landscaping by the garden department. Each utility and service has its own peculiar requirement. The Road Department is hence required to coordinate with multiple other agencies to ensure efficiency in installation/ upgradation or maintenance. In order to ensure that everyone is on the same page, there is a system of staff training organised for these allied departments.

For improving the maintenance of street, the contractor that implements the project is retained for an additional five years via an extended contract with additional payments. This arrangement encourages them to use high-quality materials and building methods, reducing their workload and potential costs for future. Their detailed scope of work is clearly mentioned in the tender. Pune also has an online civic complaint redressal system and road maintenance vans for quick repairs and speedy redressal of citizen's complaints.

**“The Road department is currently in the process of developing Standard Operating Procedures (SOPs) that will provide step-by-step instructions to personnels from various departments to carry out routine operations and maintenance work efficiently.**

- Sustainable Transport Practitioner, NMT committee member

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## 05. Design, Layout & Activities

Pune is one of the few cities in India to have successfully institutionalised policies, plans and guidelines for street design with the aim to transform streets into public places. This makes it an important case study to understand the design focus and implementation methodology. The study of streets is conducted through the following three key parameters:

### **Use & Allocation of Street Space**

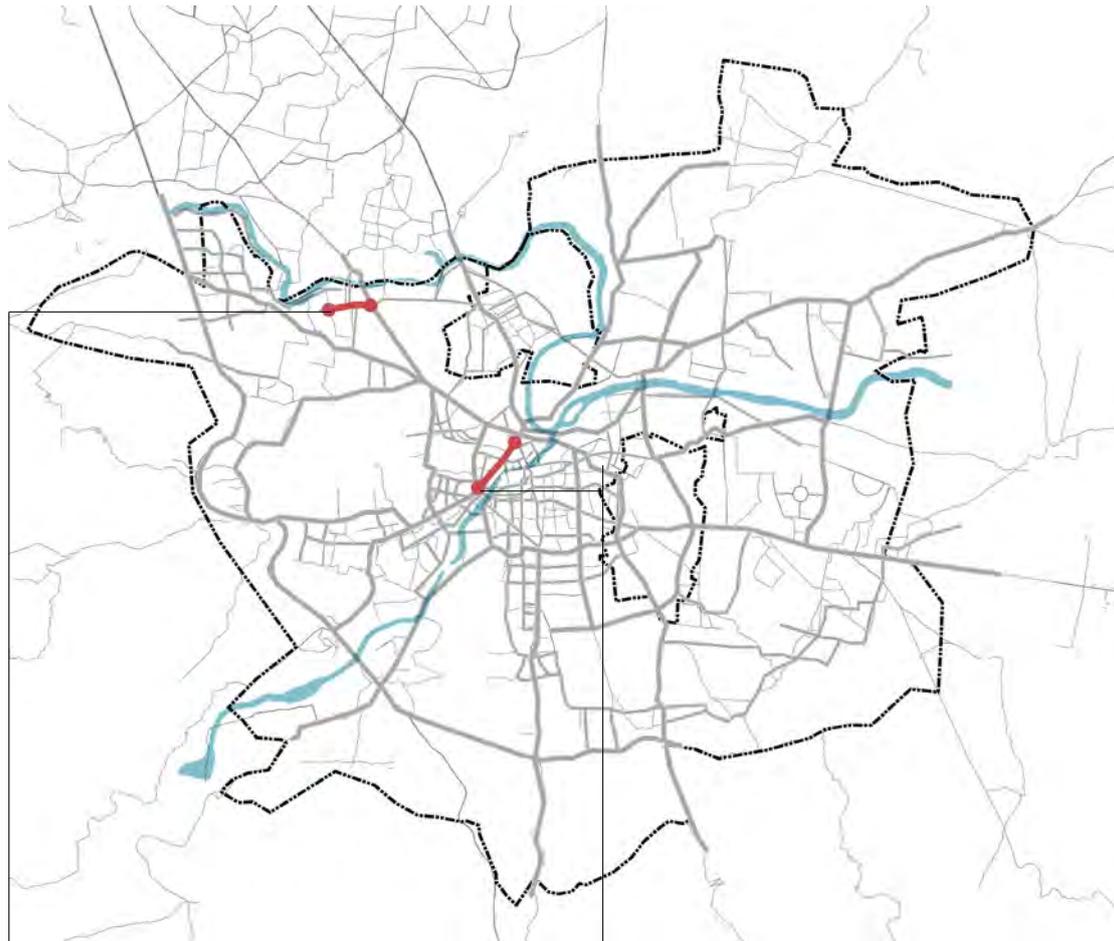
The use and allocation of street space represents the priority user-group. The public right of way is analysed to understand the space allocation for various activities within the street. A comparison of the use and allocation before and after intervention gives a clear picture of the need for appropriating the public right of way.

### **Pedestrian and Cycle Infrastructure**

Pedestrian and cycle infrastructure are at the centre of street design strategies in Pune. While pedestrian priority is ensured through wider footpaths, making built edges porous, enhances the pedestrian experience. Dedicated cycle tracks promote non-motorised transport modes.

### **Opportunities for Social Interaction**

Streets in Pune are designed to serve as public spaces in the city. Therefore, the street edges are reorganised to provide opportunities for social interaction. Multi-use zones cater to a variety of user-groups, therefore keeping the streets active throughout the day.



Data Source: PMC

**Pune (PMC)**  
0 2 4 6km



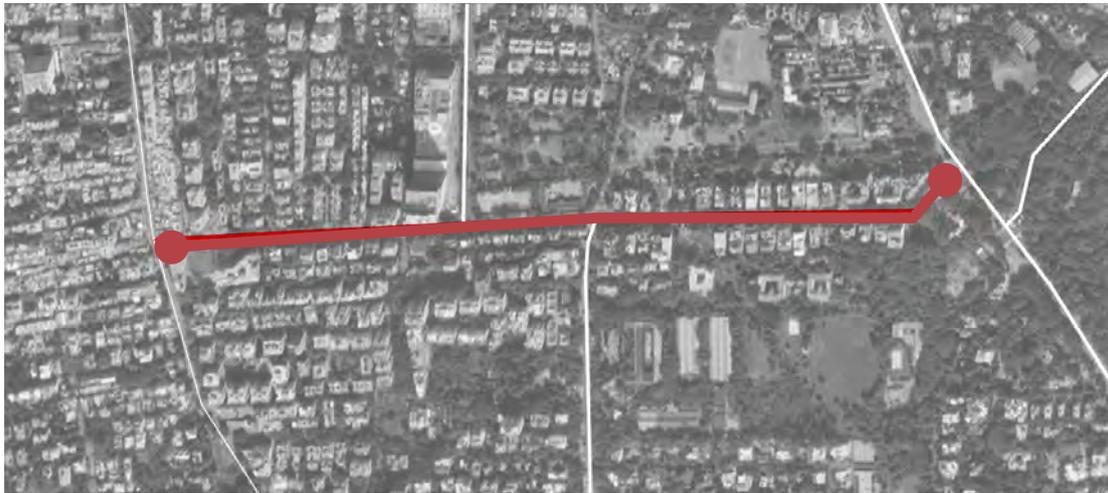
**D.P. Road, *Aundh***



**J.M. Road**

Two streets are selected to conduct the study through the identified parameters.

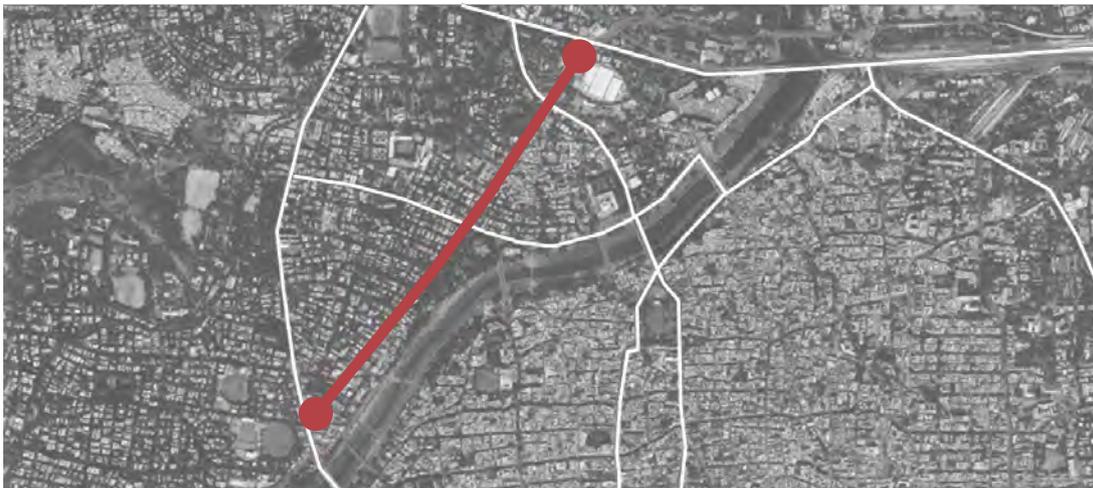
## CASE STUDIES: CONTEXT



### **D.P. Road, Aundh**

Length = 1.5km

Design by: Prasanna Desai Architects



### **J.M. Road**

Length = 2km

Design by: Oasis Designs Inc.

The selected cases are identified based on the following criteria:

1. Executed and responding to city needs
2. Diverse user-groups are engaged with the street



Photo courtesy: ITDP

### **D.P. Road, Aundh**

Universal accessibility was the central idea for the design of D.P. Road. The street is also known as ‘Urban Mall under the Tree Canopy’ for its vehicle-free shopping experience.



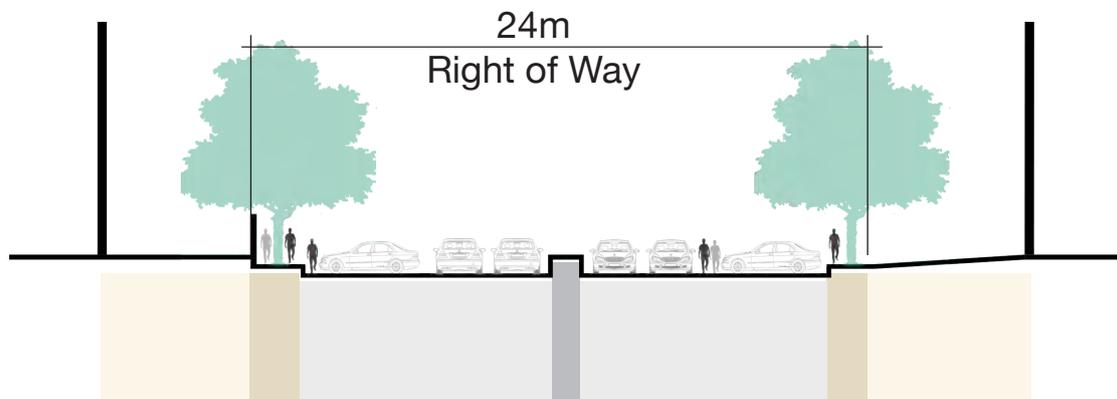
Photo courtesy: Oasis

### **J.M. Road**

The central idea behind the design of J.M. Road was to reclaim spaces along the street and make them destination public places. It aims to integrate all public land-uses adjoining the street.

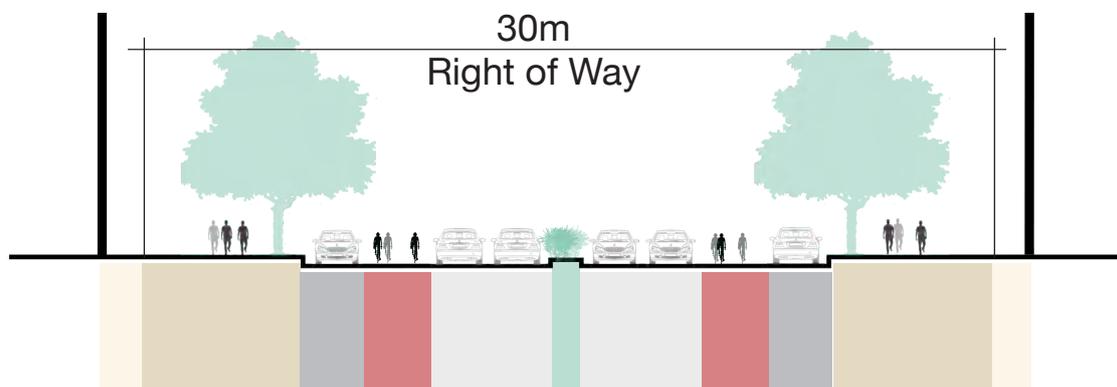
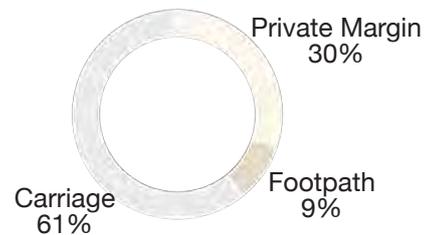
# USE & ALLOCATION OF STREET SPACE

## D.P. Road, Aundh



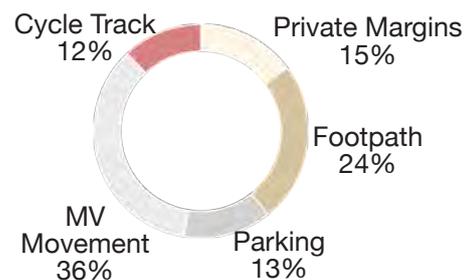
### Before Intervention:

1. Unorganised parking on carriageway
2. Narrow, discontinuous footpaths
3. Non-porous edges



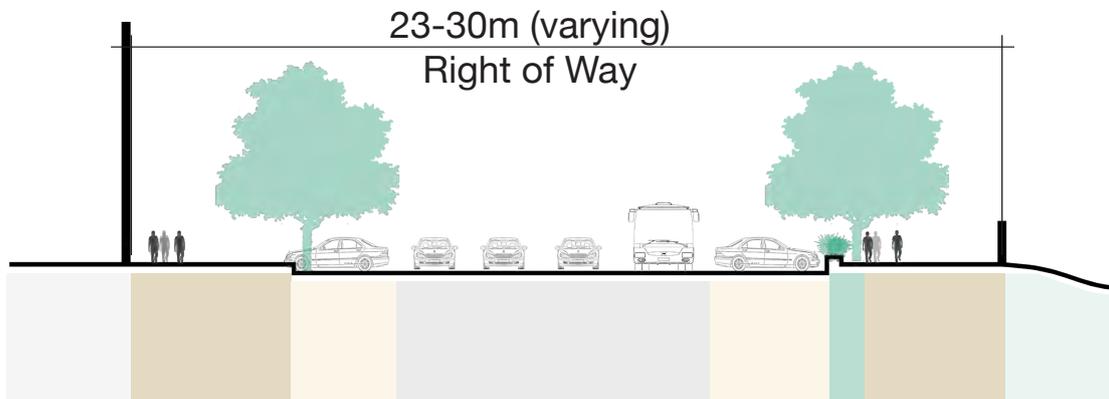
### After Intervention:

1. Organised parking space along the street
2. Wide, continuous footpaths that prioritise pedestrians
3. Porous edges improve walkability experience



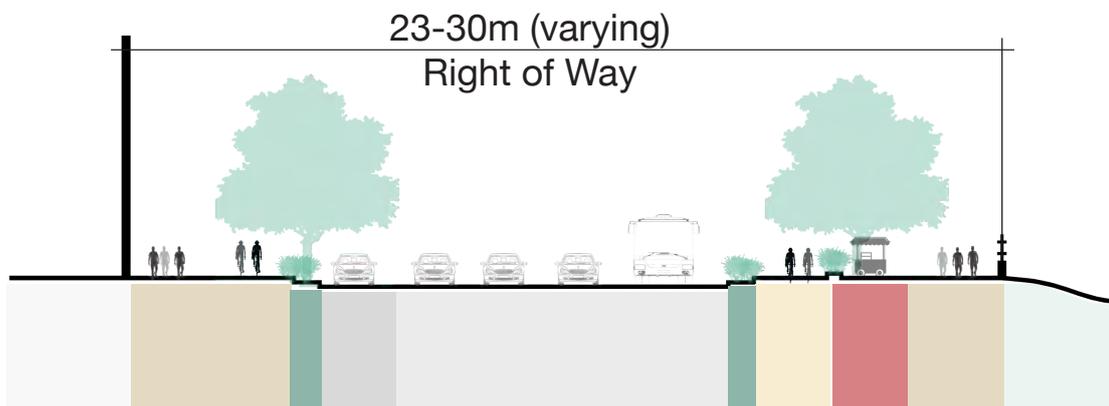
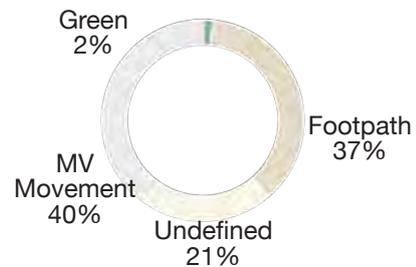
# USE & ALLOCATION OF STREET SPACE

## J.M. Road



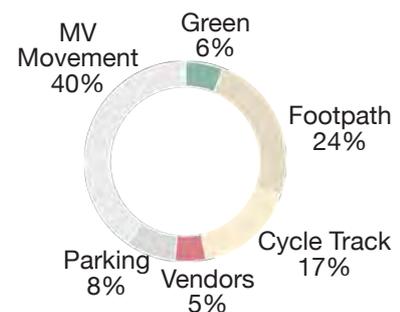
### Before Intervention:

1. Unorganised parking on carriageway
2. No activity on wide footpaths
3. Non-porous edges



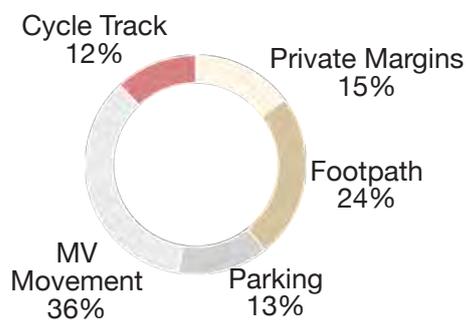
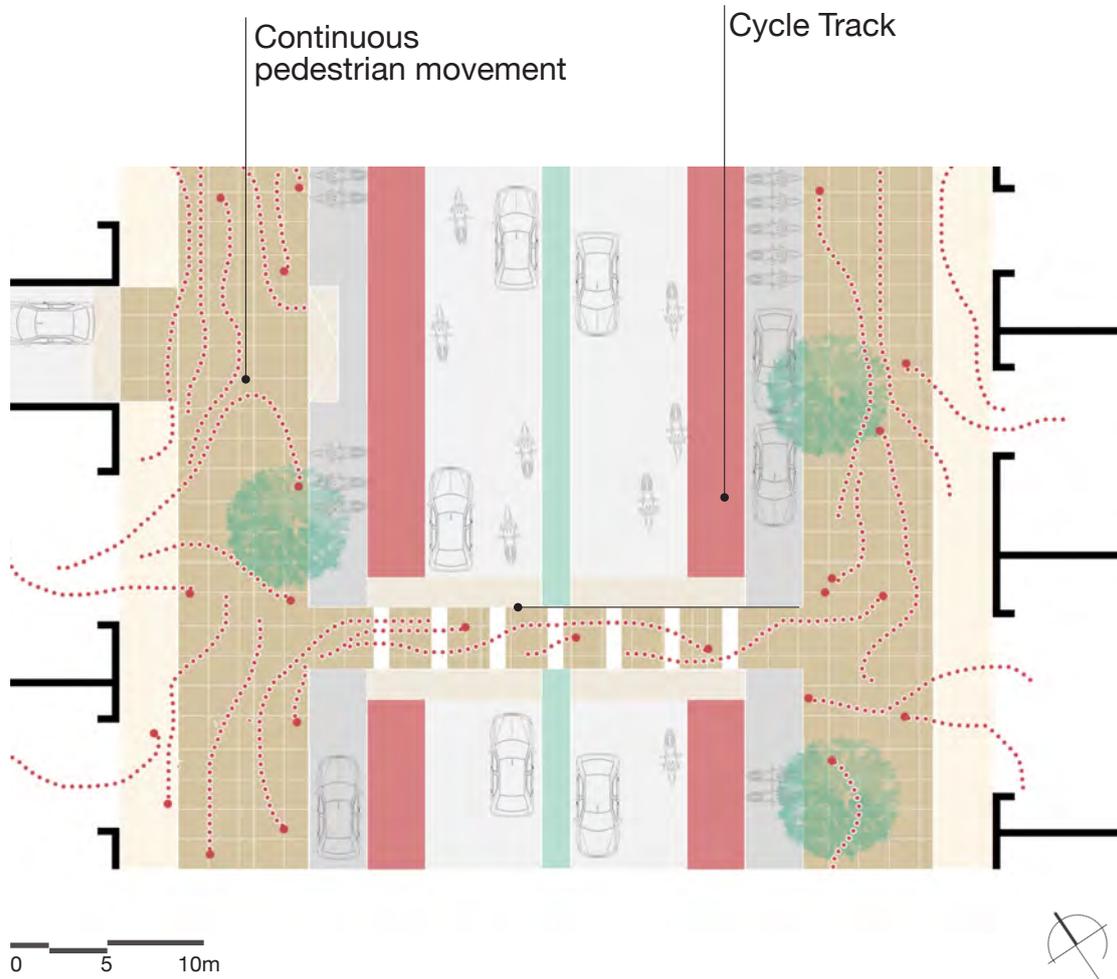
### After Intervention:

1. Organised parking space along one edge of the street
2. Multi-use zones to activate footpaths as public space
3. Porous edges improve walkability experience



# PEDESTRIAN & CYCLE INFRASTRUCTURE

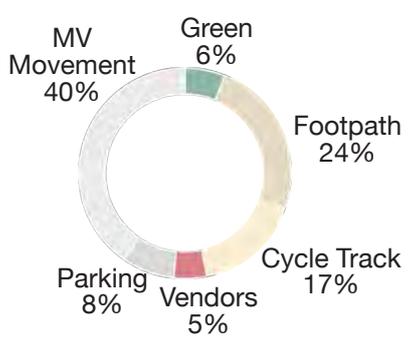
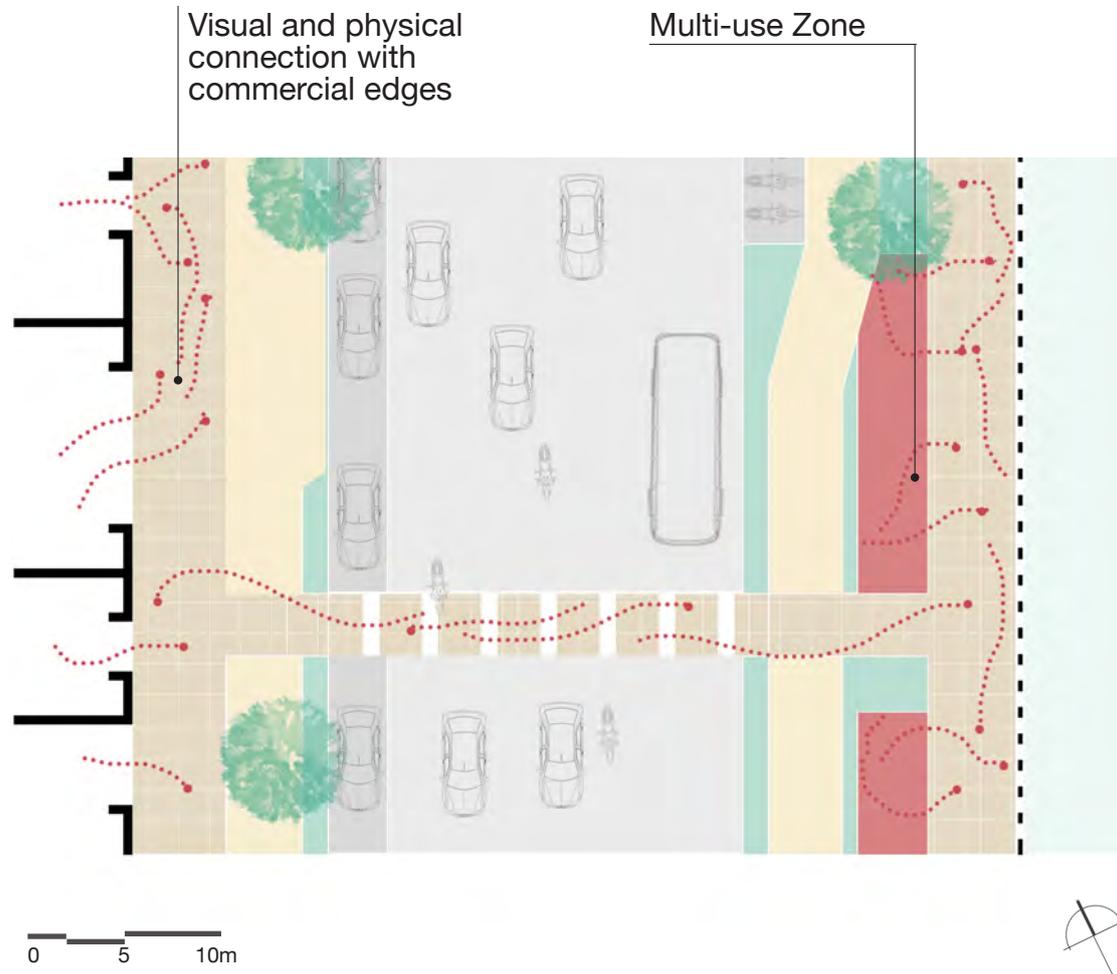
## D.P. Road, Aundh



Boundary walls are removed and private margins are reclaimed to widen footpaths as the right of way increases from 24m to 30m. Vehicle parking is organised, making space for cycle tracks.

# OPPORTUNITIES FOR SOCIAL INTERACTION

## J.M. Road



Multi-use zone for various activities (like vendors, play area) are introduced along the footpath, thereby making the street a destination public space. Right of way remains same.

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## Key Insights & Findings

01. Pune, like many other cities, faced reluctance to allocate resources towards street design. However, after implementing two high-quality pilots, these projects themselves have become outreach tools to build support from the public and even the elected wing.
02. Street design approach in Pune caters to the demands of the City, where streets are designed to serve as public places within the city, providing opportunities for recreation and social interaction.
03. The first phase of the street design project has transformed Aundh's D.P. Road and J.M. Road into multi-use public places. This implementation represents a good response from the people, making it evident that there is a need for such places in the city.
04. PMC has developed a system that focuses on the transformation of streets into vibrant public places through appropriate policies and budget allocation. However, the on-ground implementation, based on the past records, has been slow. Therefore, there is a need to institutionalise the process for quick implementation. Development of construction guidelines which aim to standardise the design can be used as a tool to simplify procedures.

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# Design & Policy Direction

## 01. Implement pilot projects to demonstrate how ideas of streets as public spaces can be put to action

One of the prime reasons for implementing public projects pilots is to demonstrate the benefits of visible urban improvement, build trust, garner support from stakeholders and test how large scale project implementation works out for the local body. When the benefits are tangible and visible to the citizens, there is a greater sense of acceptance and ownership built around the project. The pilot also allow the project team to finalize materials and technology to be used for construction. Pilots often lay the path for public as well political support for larger urban transformation projects.



## PRUDENT USE OF SMART CITIES FUNDS FOR STREET DESIGN

Several cities are using central schemes to fund urban infrastructure pilots. For instance, under the smart cities funding, cities have chosen to demonstrate street redesign pilots as part of the Area-Based Development Plan. Chennai for example has developed a few pedestrian friendly streets under the smart city funding and have now scaled the project to convert 75 kms into Complete Streets.

## 02. Use pilots to build consensus around streets as multi-use spaces

Typically, Indian cities are designed exclusively for mobility. The pandemic has brought to light the need and rights of pedestrians as rightful street users. There is an increasing recognition of streets as people centric valuable public spaces that can be better leveraged to serve a multitude of users. Cities are increasingly promoting pilots in 'slow' streets, closing lanes for traffic and opening spaces for pedestrians and cyclists. They have also started expanding the program through other initiatives like open street restaurants or turning parking spaces into green spaces with outdoor seating arrangements. The aim is not just providing more space to practice physical distancing but also an opportunity to re-imagine and transform urban spaces to increase walkability/cycling, allowing adequate space for socialization and recreation activities. Lessons from Pune reveal how a consistent momentum was built around streets as multi use spaces. In order to succeed cities need:

- ▶ A strong and committed leadership
- ▶ Involvement of various stakeholders including NGOs, elected officials, experts, international advocacy organizations, and other stakeholders in decision-making to create a sense of ownership for the projects
- ▶ Outreach initiatives to involve citizen groups in the agenda.
- ▶ Robust institutional framework, formulating systems and adopting policies, plans and guidelines to give direction to the project
- ▶ Inter-Departmental Coordination
- ▶ Training programs for staff to sensitize them on issues of equitable mobility and complete streets
- ▶ Resource allocation through own sources, leveraging national funding or alternative financing



Photo courtesy: PCA- Stream



## STREET TRANSFORMATION IN PARIS

COVID-19 has accelerated ambitious goals and programs for transforming city streets to increase space for walking, cycling and other activities. For instance, Paris has turned more streets exclusively for cyclists and pedestrians with an effort to reduce dependence on public and private vehicles. The French government has promised a budget of 20 million euro to spur cycling. 50 kms of bike lane have been created in Paris. Other arrangements have also been made to pedestrianize streets and extend sidewalks. The city is also planning to turn Champs-Elysees, the capital's most famous avenue street, into an extraordinary garden, reducing space for vehicles by half, turning roads pedestrian friendly and creating green areas to improve the air quality.



Photo courtesy: ITDP



Photo courtesy: ITDP

### **03. Establish systems to scale up execution of multi-use streets across the city**

Scaling up street design at a city level necessitates a systematic approach. Reducing ambiguity through structured designs, clearly specified technology and materials would allow expanding the pilot across the city. Pilots can be developed taking into consideration the local context. However, to scale the same project would require consistent system and standardized solutions that can be easily replicated around different locations in the city.

Projects must also be system driven and should not stop at a person specific leadership. In the case of Pune, for example, with a change in leadership pace of project execution became slower and it became a challenge to scale the solution.

At the same time local governments must also overcome budgetary constraints and plan prudently to finance the expansion. Pilots can be supported through national funding but for expansions, cities must rely on their own sources and look for opportunities to raise funds. In-house human resource capacity to implement projects must be assessed and increased as per requirements. It is crucial that the team is well-trained and hands-on on the project guidelines which will allow faster and more efficient implementation.

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## Interviews

Name	Designation	Date	Points of Discussion
Pranjali Deshpande	Independent practitioner (Sustainable Transport)	04.01.2021	Member of govt. committee, co-author of street design guidelines
Abhijit Lokre	Partner, The Urban Lab	07.01.2021	Street design and project implementation
Sujata Hingorani	Partner and principal landscape architect, Oasis Design Inc.	19.02.2021	Street Design and project implementation



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# Outdoor Environment of Urban Health Centers

AHMEDABAD

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# 01. Location & Distribution

The COVID pandemic has emphasized the need for decentralized health facilities and the agility and adaptability of these facilities to respond to sudden surge of patients while maintaining safe distance protocols and ensuring patient comfort.

Urban health centers (UHCs) represent the first tier of the Indian health care system, and are now at the forefront of managing the pandemic, from carrying out tests to leading vaccination drives. Ahmedabad with a population of 55.7 Lakh people (Census 2011) has 77 UHCs, which serve as the first interface for patients for their primary healthcare needs. The city has 48 wards with an average population of 1.18 Lakh in each ward. There is at least one UHC in each ward, making the primary healthcare delivery and service reasonably decentralized. As per the National Urban Health Mission (NUHM) directive, one urban primary health care center should ideally serve 50,000 population or 25-30,000 slum population. In Ahmedabad, each UHC serves a population of 75,000 people.

## COVID Response and Preparedness

During COVID testing was further decentralized. The UHCs themselves limited their operations. Temporary testing kiosks were set up at more than 100 locations across the city. These kiosks were under the management of UHCs in the respective ward. Team of Doctors and support staff from the UHCs carried out the testing as per set protocols. The kiosks were set up on open spaces or on footpaths near residential neighborhoods, main roads, near markets and shopping malls.

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## 02. Governance & Institutions

The Ahmedabad Municipal Corporation (AMC) is a fairly strong local government and the health care is a function managed by the city, unlike in many other cities where the State Government is still the primary provider of health care services.

The Health Department of AMC is responsible for the operations and maintenance of an Urban Health Centers in the city. Each UHC has a Medical Officer (MO) who is responsible for the overall operations and management of the center and for staffing and planning of outreach activities. The MO's tasks include planning vaccination campaigns, setting up medical camps in slum areas, weekly clinics, setting up routine activities, ensuring the laboratory is operational, and that all medications and equipment are available. MO is supported a team of specialist doctors, technicians, clerical staff and multi-purpose health workers who administer the primary healthcare services. UHCs provide services like OPD (consultation), basic lab diagnosis, as well as preventive and promotive aspects of all communicable and non-communicable diseases. During COVID, additional contractual staff was hired to cater to test patients at various kiosks in the city. The daily operations were halted during the lock down and the staff was directed towards COVID testing .

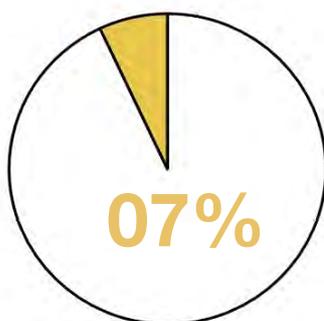
The construction of the UHCs , its infrastructure, site design and planning for parking and access, laying utilities, internal layout and other infrastructure etc lies with the Engineering Department of AMC. Several UHCs have small gardens within their site. The Garden Department supports in landscaping and maintenance of these green areas.

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## 03. Budgetary Allocations

Ahmedabad has seen a 50% increase in its health care budget from the previous year. In its 2020-2021 budget, AMC has earmarked a budget of INR 691 Cr towards health (ToI, 2021). This amounts to 7% of the total budget. In 2018-19, the actual expenditure towards health was INR 377 Cr (out of an estimated budget of INR 465 Cr).

In Ahmedabad, like many other cities the tertiary health care facilities often get more attention and budgets for both capital expenses, operations and management. AMC has allocated INR 16.5 Cr for construction of new UHCs in its capital budget for 2020-21 under Gujarat Urban Health Project. INR 40 Crores has also been allocated for day-to-day operations of the UHCs. Under NUHM guidelines, State Government shall provide funding support for building of new Urban Public Health Centers and other additional infrastructure. Each UHC will get INR 2.5 lakh as untied grant every year for local public health action and for its maintenance and upkeep. Budget for UHC infrastructure is typically allotted considering the building infrastructure, interiors and equipment, and also utilized for the same. It is important to recognize that UHC's also need supportive outdoor environments. Resource allocation towards outdoor facilities such as the right paving, access ramps, seating, shaded areas, drinking water etc. should be equally prioritized.



**of the 2020-21 budget  
allocated towards health**

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## 04. Facility Management

A cursory analysis off the UHCs in Ahmedabad has brought to light specific shortfalls in site management including organizing patient flows for routine OPD and temporary drives and checkup camps, lack of queue management, enough shaded seating in outdoor areas, and accessible toilets and drinking water facilities.

Because of the pandemic, there has been an overall surge in the number of people seeking services at a UHCs. Public facilities are also coming out of the shadow of being seen as ‘only for the poor’. This is an opportunity to rethink these facilities and build spaces that are convenient, sanitary, accessible and appealing.



### STATE GUIDELINES CONCERNING OUTDOOR ENVIRONMENTS OF UPHCs

Several State Governments in India have developed guidelines for design and operations of UHC. The guidelines also provide some direction for site design. The service delivery framework for Urban Primary Health Centers (UPHC) developed by the Government of Odisha for example has includes several provisions that can improve site design and outdoor environment for such public facilities. The documents offers guidelines that govern the location and siting of the UHC, necessary bilingual signage for different services, adequate seating arrangements for waiting attendants and patients, entrance with barrier free access and provision of toilets and water facilities .

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## 05. Design, Layout & Activities

Ahmedabad has a well-distributed system of Urban Health Centres, such that there is at least one in each ward. These urban health centres have a considerable amount of open space around them, which is an opportunity to create a positive environment.

The study of Urban Health Centres is conducted through three key parameters:

### Edges

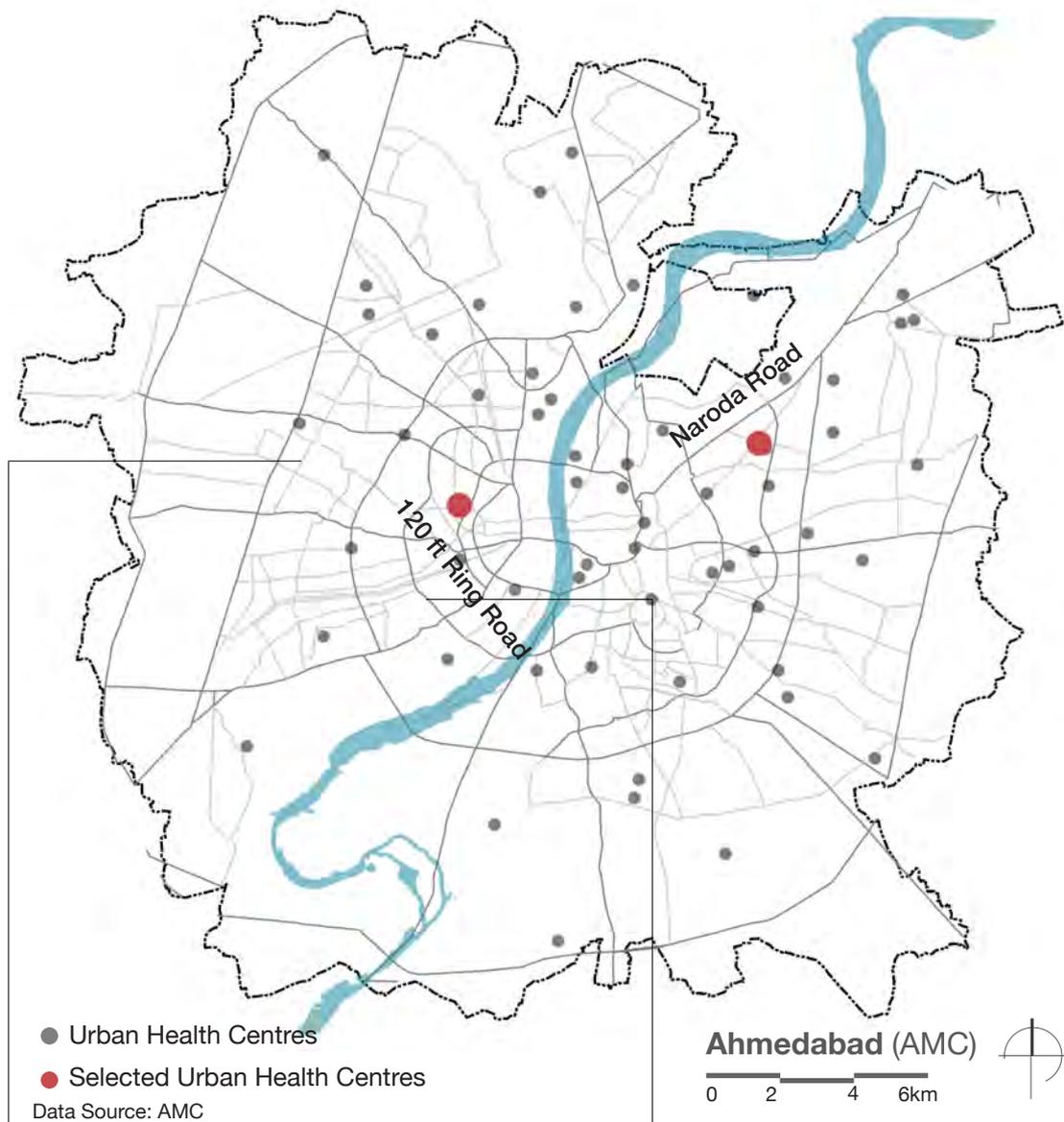
Edges of the Site are analysed to understand the visual and physical interaction with the street. It determines the accessibility of the site and ease of way finding for the users.

### User Comfort

User comfort in outdoor public open spaces can be assessed by the amount of shaded spaces available for the patients as well as their attendants during waiting hours. Tree cover is studied as an important element in this aspect.

### Zones & Activity Mapping

During the post-lockdown times, number of people visiting the Urban Health Centres for routine OPD has reduced considerably. Zones are analysed to understand the usable area within the Site. Peak activity hours are analysed to understand the distribution of activities.



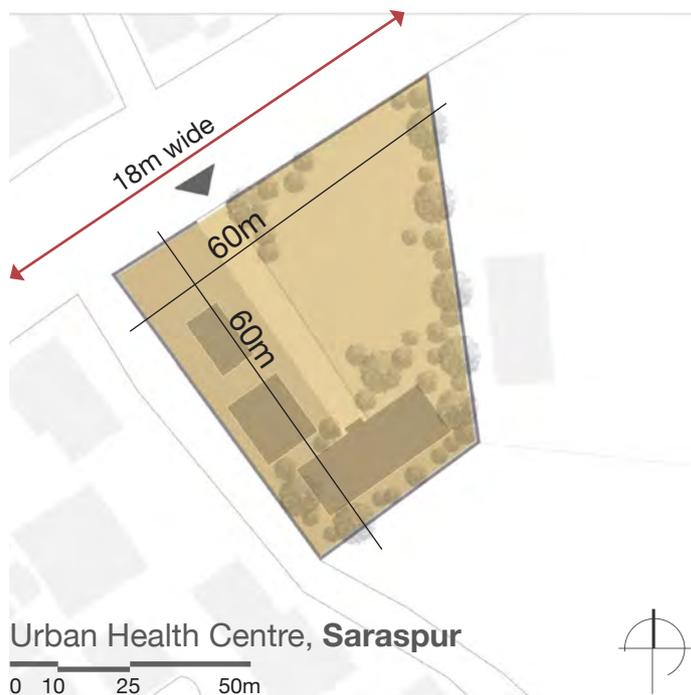
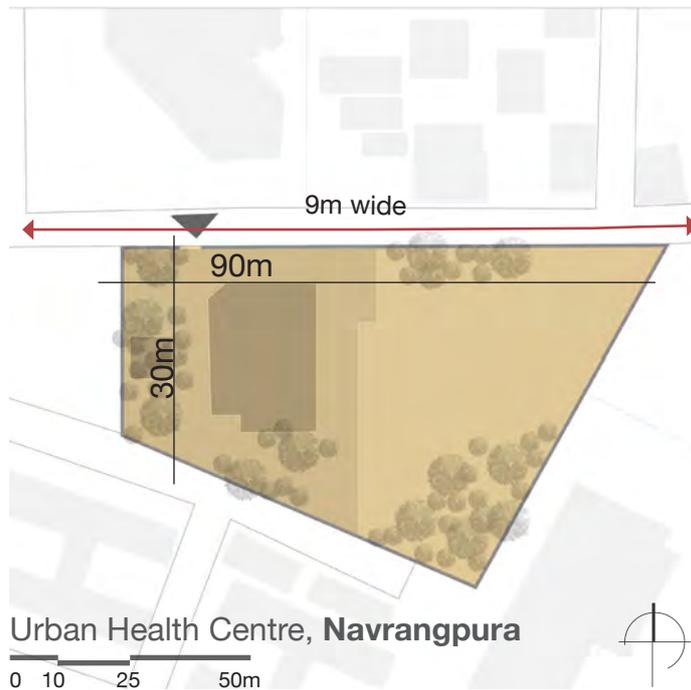
Urban Health Centre,  
**Navrangpura**



Urban Health Centre,  
**Saraspur**

Two Urban Health Centres are selected to conduct the study through the identified parameters.

## CASE STUDIES: CONTEXT



Navrangpura Urban Health Centre lies in the western part of the city while Saraspur Urban Health Centre lies in the eastern part.



Frontage



Side Area

### Urban Health Centre, Navrangpura

The Urban Health Centre is located in a pre-dominantly residential neighbourhood, accessed by a 9m wide road.



Frontage

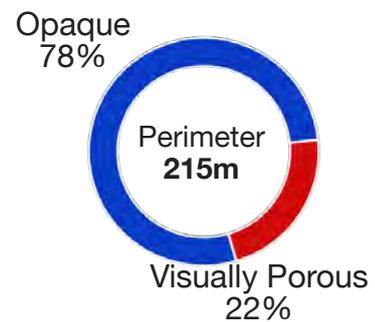
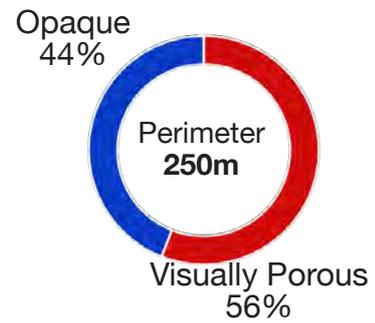
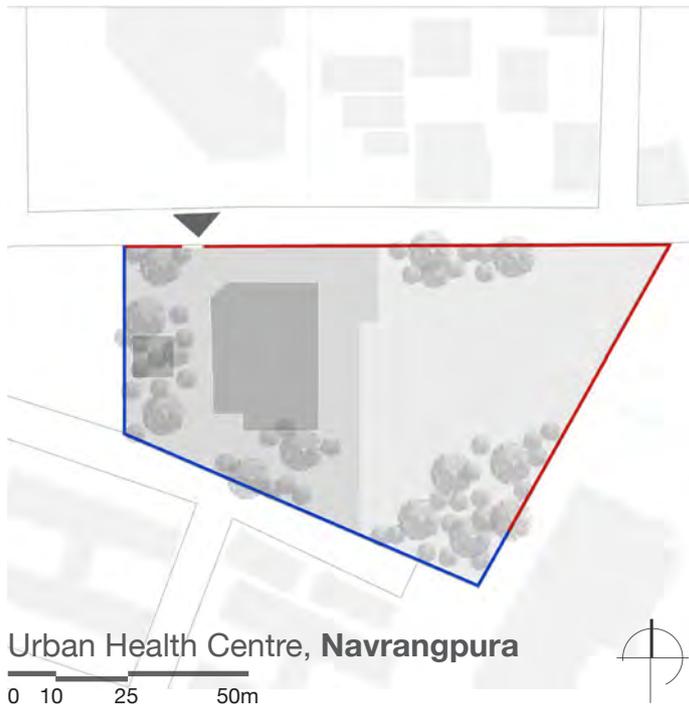


Side Area

### Urban Health Centre, Saraspur

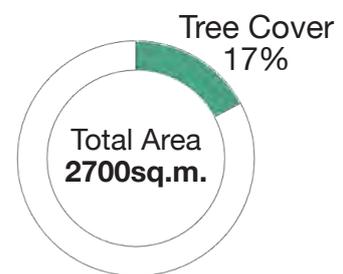
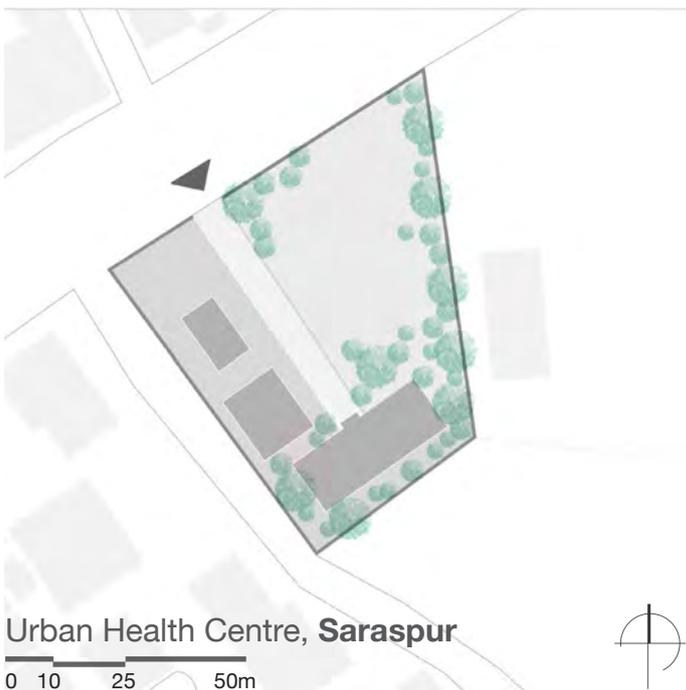
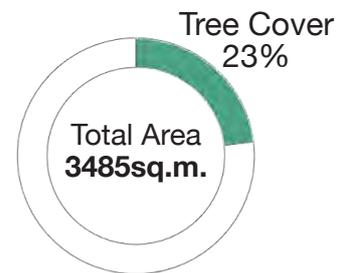
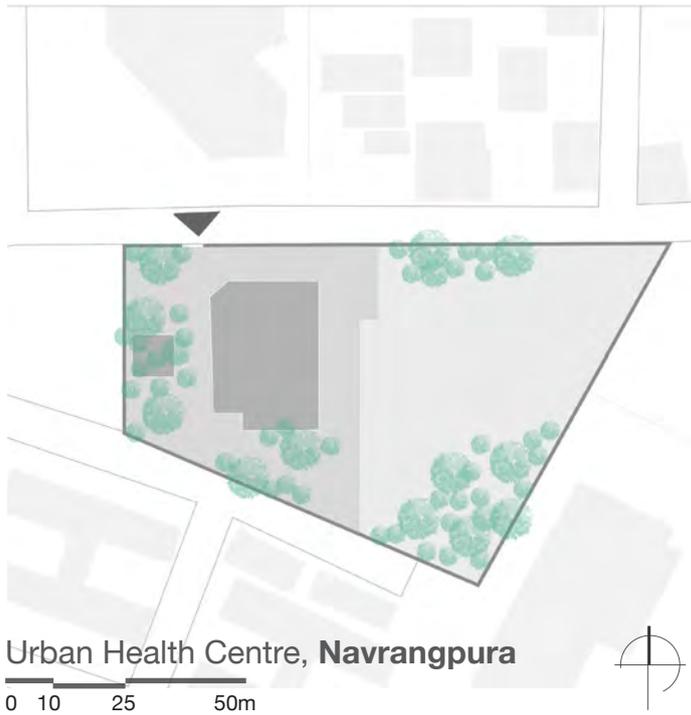
The Urban Health Centre is located in a pre-dominantly residential neighbourhood, accessed by a 18m wide road.

# EDGES



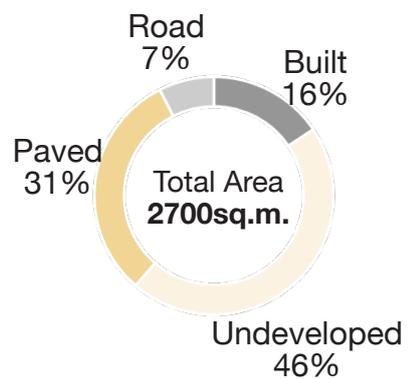
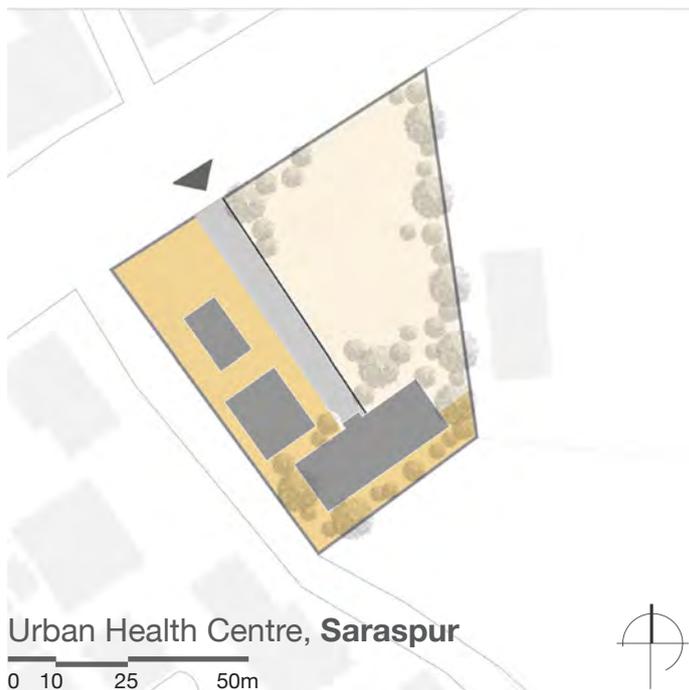
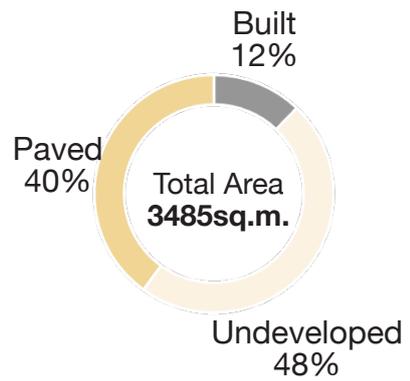
Both the Urban Health Centres have a visually porous edge towards the access road, thereby making it easily identifiable.

# TREE COVER



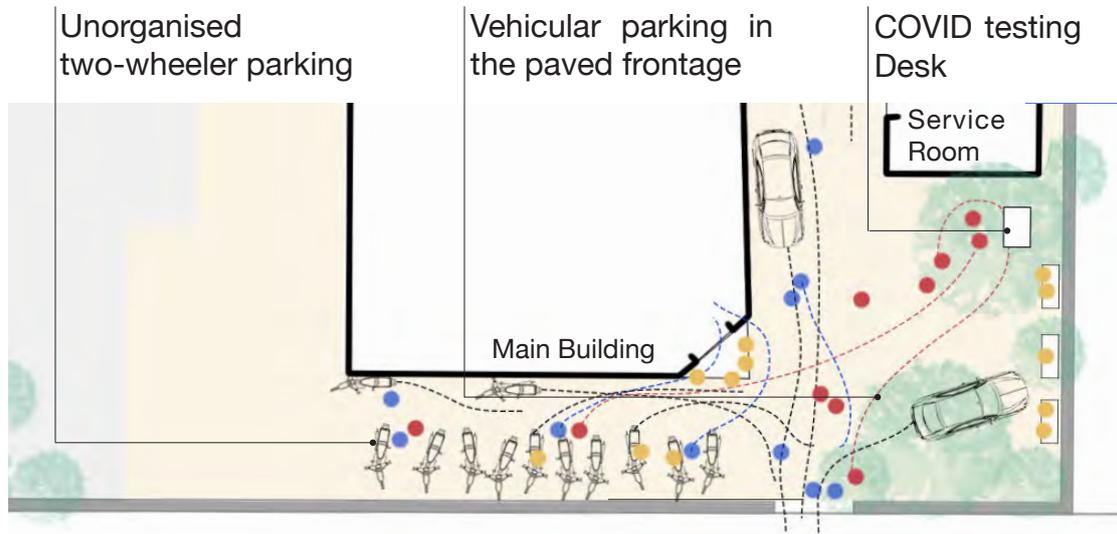
Tree Cover is spread throughout the undeveloped area within the Site. However, there is a need for more tree cover to be integrated with the paved areas.

# ZONES



Both the Urban Health centres have a paved area leading to the main building. About half of the site is an undeveloped area.

# ACTIVITY MAPPING

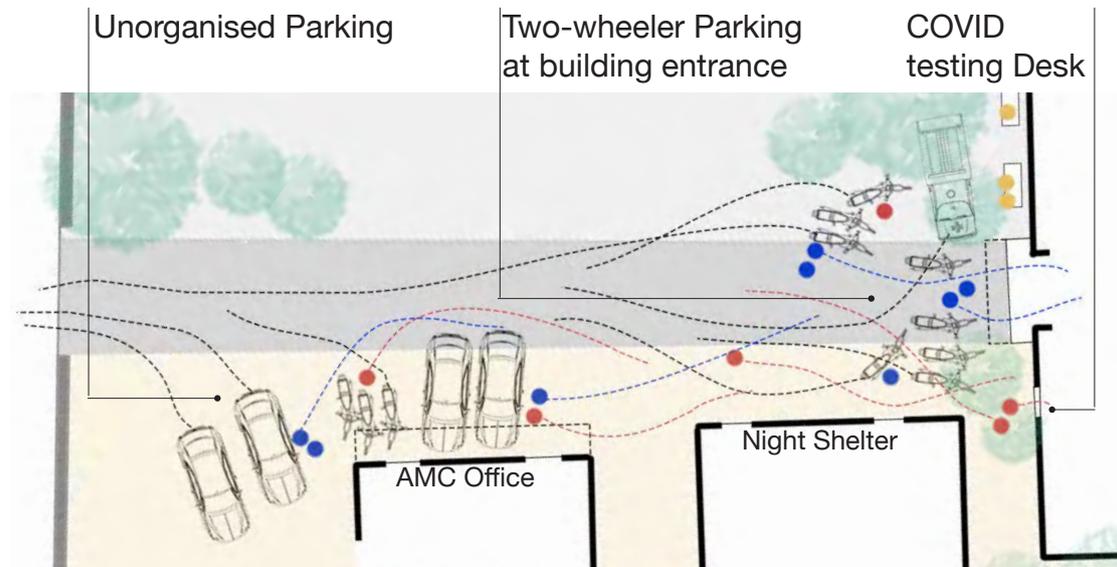


People use vehicles and building plinth for sitting.  
No separate route for COVID patients.

Urban Health Centre, **Navrangpura**



- COVID Patient Movement
- Routine Patient Movement
- Vehicle Movement
- People Sitting



Lack of circulation space for people due to unorganised parking.

Urban Health Centre, **Saraspur**



- COVID Patient Movement
- Routine Patient Movement
- Vehicle Movement
- People Sitting

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## Key Insights & Findings

01. The decentralized location and operation of UHCs in Ahmedabad were critical in providing health care services during the pandemic. The sites investigated were well-managed and day-to-day operations were carried out smoothly.
02. There is surplus land available in some UHC premises and is left un-utilized. This can be put to use for other uses like building supporting facilities or new amenities that will enhance the user experience. The immediate area surrounding UHC (margin spaces) however should be considered in design.
03. While the outdoor spaces in UHCs are used for different activities like waiting, ancillary services, temporary triages, they are treated as residual spaces and not organized to maximize efficiency. Patient comfort is not prioritized. There is limited seating and waiting area with sparse tree cover and no shade. There is a conflict between people and vehicular movement. Also there is limited opportunity to efficiently integrate temporary drives and services without affecting the regular and critical services. COVID has provided the opportunity to create positive and pleasing outdoor environments around health facilities that are welcoming and that pay attention to patient comfort while taking care of these details.
04. The city set up temporary kiosks on street sides as an immediate COVID response. But they also created nuisances of traffic and crowding in public spaces. There is a potential of integrating these temporary triage structures within public health facility compounds.



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# Design & Policy Direction

## 01. Create a positive pedestrian friendly outdoor environment for patients and their attendants

Typically, Urban Health Centres have one entrance, which is used both for pedestrian and vehicular movement. The public open space around the main building is pre-dominantly occupied by parking, leaving very few pockets for people's use. Patients and their attendants are observed to be sitting in close proximity on the building plinth, and vehicles, due to a lack of shaded seating spaces. This creates congestion zones where people often come in close contact with the infected patients.

Vehicular and pedestrian interaction within the site creates conflict areas, forcing people to spend more time inside the building. The available open space is an asset, which can be appropriated to increase the amount of space for people. A segregation of pedestrian and vehicular traffic, along-with a designated parking space will help in increasing the amount of public open space usable by people.

User comfort is a key parameter in improving the experience of the available open space. In order to create a positive and comfortable environment, shade giving trees can be integrated within the paved open space. Informal seating spaces can be designed within and around shaded area that can serve as an outdoor waiting area.

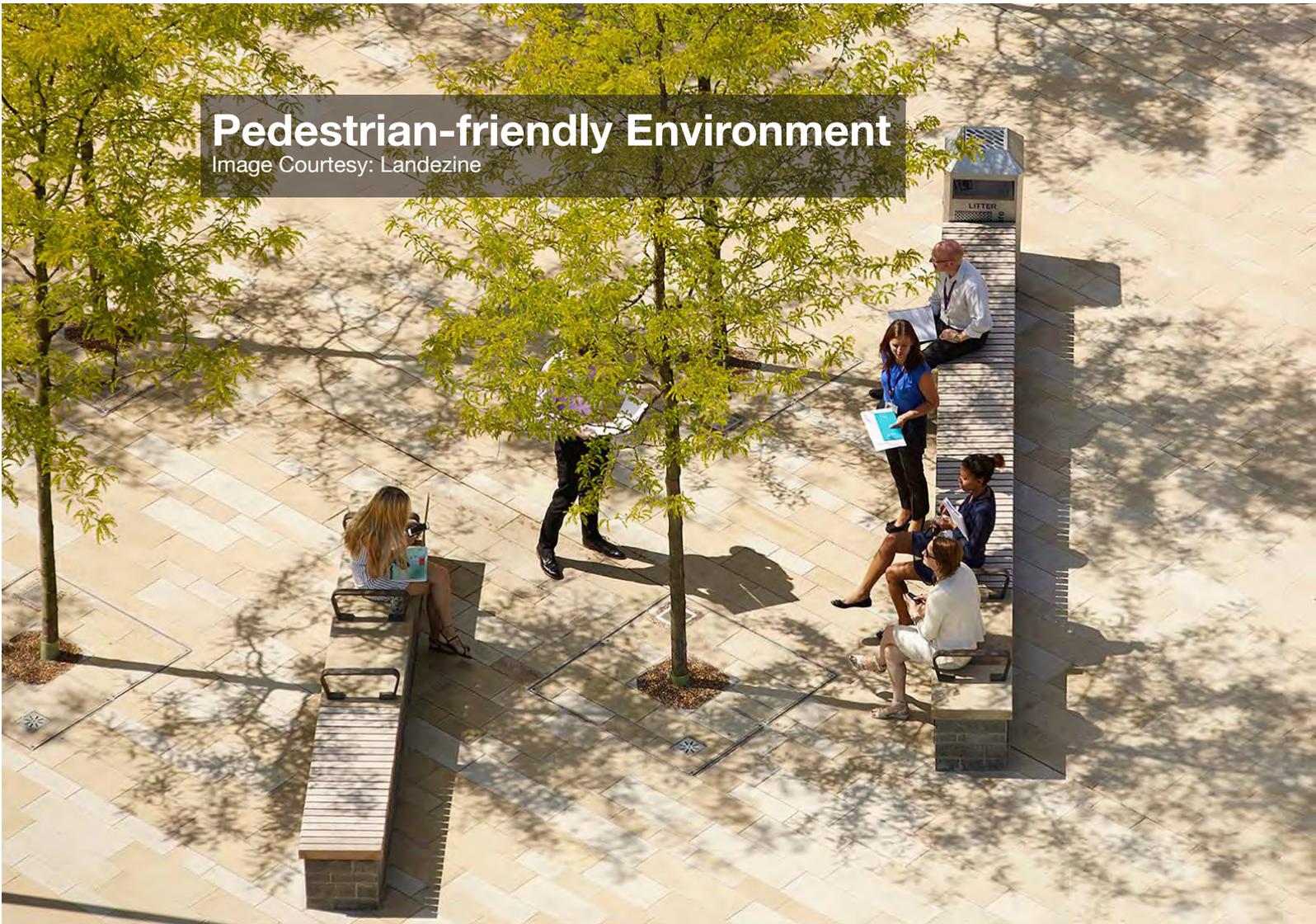
## Existing Scenario

Urban Health Centre, Navrangpura



## Pedestrian-friendly Environment

Image Courtesy: Landezine



## **02. Provide a flexible multi-use space with possibilities of seating, vaccination drives, other temporary medical camps**

The COVID-19 pandemic has bought our focus to the need for spaces to accommodate activities like health checkups, vaccination drives and other temporary medical camps.

Provision of a permanent shaded area which can serve as a flexible multi-use space is essential. This area can be used as a waiting area, accommodating benches, during usual days. It can be modified to function as a comfortable shaded space for queues ensuring social distancing, seating for staff members during temporary medical camps.

## **03. Provide space for amenities like canteen, toilet, drinking water, which can be accessible to all outside the main building.**

Public open spaces around the Urban Health Centres are often used as waiting spaces by the patients as well as their attendants. However, people enter the main building to access basic amenities like toilets.

Introduction of basic amenities like canteen, toilet, for people can promote the use of public open space as a waiting area. This will minimise the interaction of people within indoor spaces. This will promote a healthy outdoor environment where people can interact with each other within safe distance.

## Existing Scenario

Urban Health Centre, Navrangpura

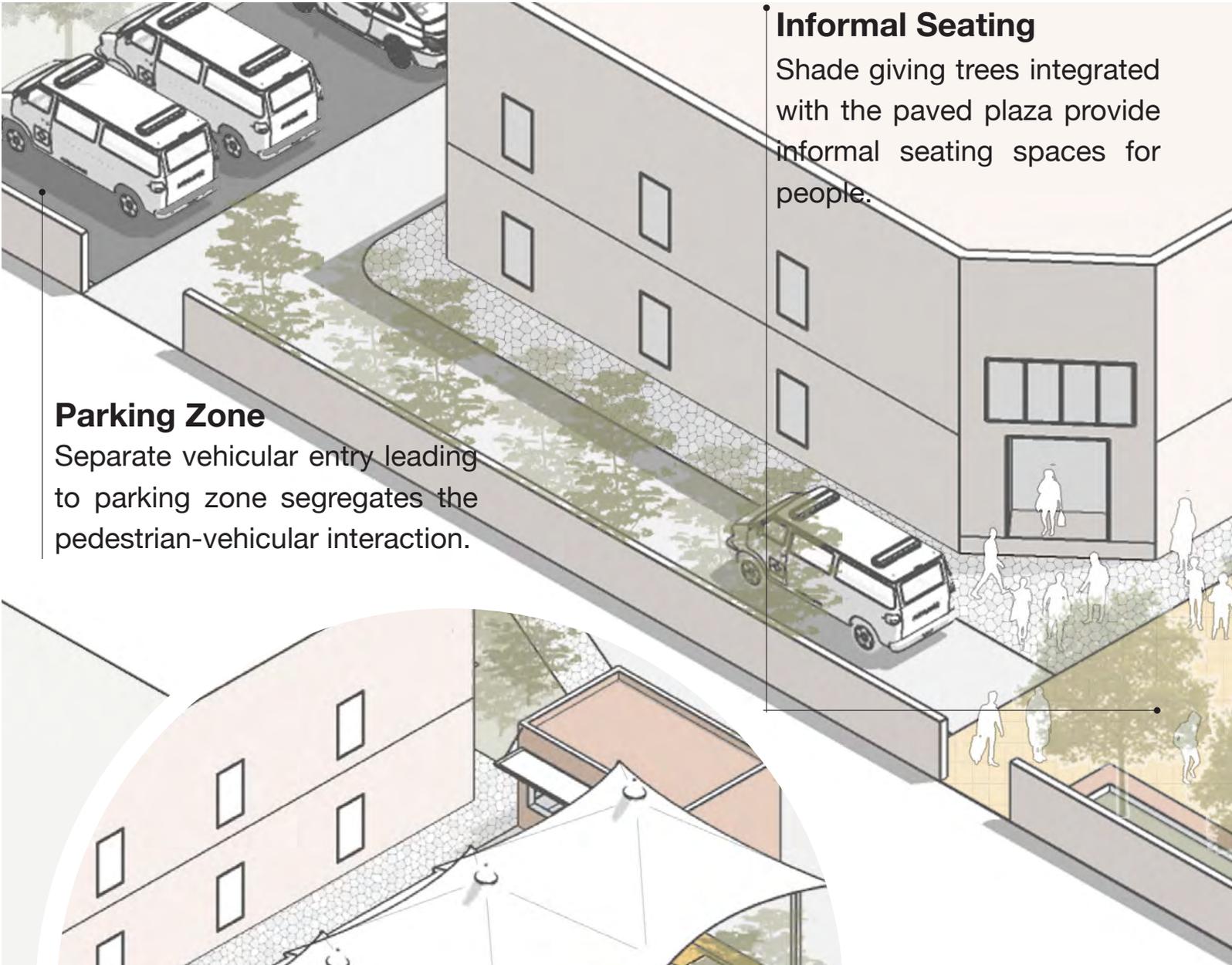


## Flexible, Multi-use Shaded Space

Image Courtesy: GroundWork Architecture



# Prototype Design

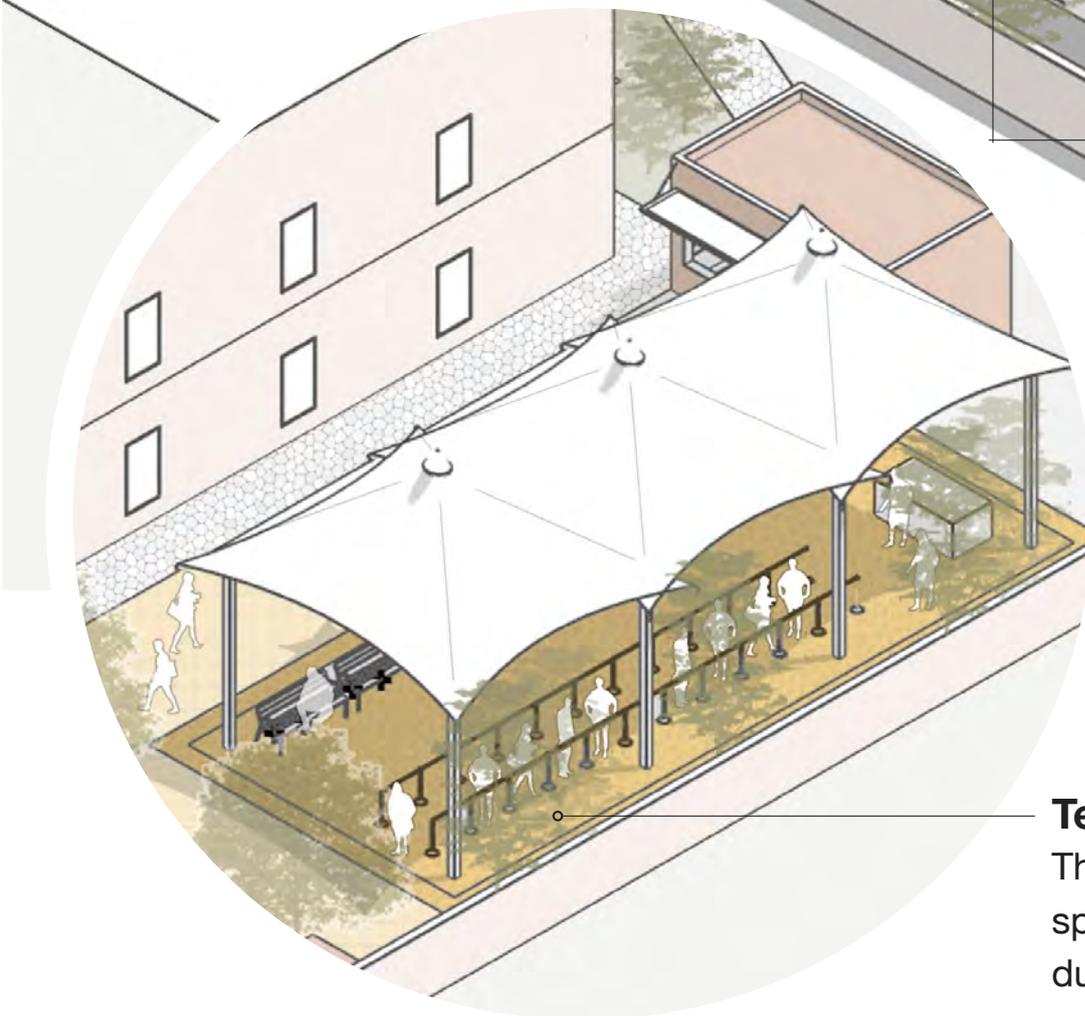


## Informal Seating

Shade giving trees integrated with the paved plaza provide informal seating spaces for people.

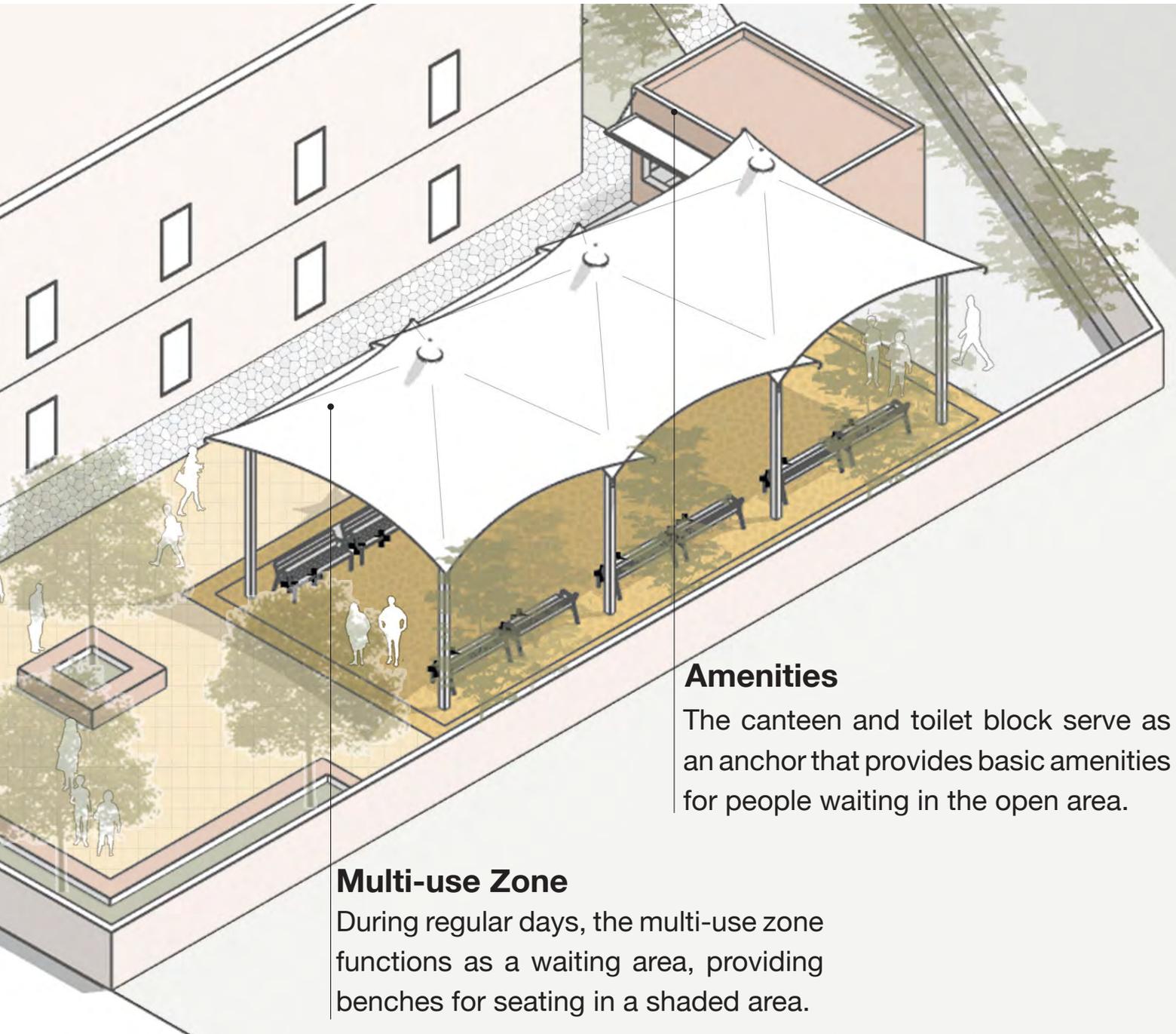
## Parking Zone

Separate vehicular entry leading to parking zone segregates the pedestrian-vehicular interaction.



## Temporary Medical Camp

The Multi-use zone functions as a space for organising queue, waiting, and treatment during temporary medical camps.



**Amenities**

The canteen and toilet block serve as an anchor that provides basic amenities for people waiting in the open area.

**Multi-use Zone**

During regular days, the multi-use zone functions as a waiting area, providing benches for seating in a shaded area.

comfortable  
waiting space  
s.

## 04. Leverage CSR funds for developing outside environments and supporting facilities at UHCs

Local governments can involve companies and private organizations to support construction and maintenance of healthcare infrastructure as part of their 2% mandatory spending on CSR. 24% of the total CSR funding is towards healthcare and wellness in India, where the money is mainly used for organizing health camps, building hospitals or for the upkeep of these facilities.

The design of outdoor environments of UHCs which often is neglected because of lack of resources can be templated and packaged into projects and pitched to companies to access CSR funds. The following table presents the average block costs for implementing key improvements towards patient safety and comfort. It is estimated that it will cost an amount of INR 25 Lakh to upgrade the public areas of one UHC.

S. No	Particulars	Cost (per sqm)	Estimated area (sqm)	Estimated cost
01	Development of outdoor landscape (paving, landscaping benches, shade structure)	INR 2,000	300	INR 6,00,000
02	Development of ancillary amenities building (with public toilets, drinking water and canteen)	INR 15,000	80	INR 12,00,000
03	Ancillary costs			INR 7,00,000
04	Total costs			<b>INR 25,00,000</b>



## Source and References

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