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RESEARCH THESIS

related to SIX CROSS CUTTING THEMES UNDER URGENT PROJECT

Parameters Promoting Social Interaction In Common Spaces Of High Rise Apartment

Student Name: Ishika Soni

Guide: Prof. Vibha Gajjar

Batch: 2018-2022

B Arch Program

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NIRMA UNIVERSITY

AHMEDABAD

GUJARAT

INDIA



In the final semester of a Bachelor of Architecture (B. Arch) program, students engage in academic research by selecting an area of interest within the field of architecture. This process typically involves several steps to ensure that the research is rigorous, structured, and valuable. The process starts with a course on Research Methodology in VIII Semester followed by Research Proposal in IX semester. Here's an overview of the process:

1. Choosing an Area of Interest

- **Exploration:** Students begin by exploring various topics within architecture, such as sustainable design, urban planning, architectural history, construction technology, or digital architecture.
- **Narrowing Down:** After exploring, students narrow down their interests to a specific research question or problem. This could be based on current trends, gaps in existing literature, or personal interest.

2. Defining the Research Question

- **Problem Statement:** Students formulate a clear problem statement or research question that their work will address. This defines the scope of the research and sets the direction for the study.
- **Objectives:** Setting clear objectives helps in focusing the research. These could include understanding certain architectural phenomena, proposing new design solutions, or evaluating existing practices.

3. Literature Review

- **Existing Research:** A thorough review of existing literature helps students understand what has already been done in their area of interest. This involves reading academic papers, books, case studies, and other scholarly articles.
- **Gap Identification:** Through the literature review, students identify gaps or areas where further research is needed, which helps in refining their research question.

4. Research Methodology

- **Qualitative vs. Quantitative:** Depending on the nature of the research, students choose between qualitative methods (such as case studies, interviews, or observations) and quantitative methods (such as surveys or statistical analysis).
- **Data Collection:** Students plan how they will collect data. This might involve fieldwork, archival research, simulations, or experiments.
- **Data Analysis:** Once data is collected, students analyze it using appropriate tools and methods. This could involve software for statistical analysis, 3D modeling, or comparative analysis techniques.

5. Design and Proposal Development

- **Conceptual Framework:** Students often develop a conceptual framework that guides the design or theoretical aspects of their research.
- **Prototyping:** In some cases, students create physical or digital models to test their ideas. This is particularly common in research that leads to a design proposal.



6. Documentation and Presentation

- **Writing the Thesis:** The research findings are documented in a thesis, which includes the introduction, literature review, methodology, findings, discussion, and conclusion.
- **Visual Presentation:** Architecture students often need to prepare visual presentations of their research, including drawings, models, or digital renderings.
- **Defense:** Students may be required to present and defend their research in front of a panel of faculty members and peers.

7. Conclusion and Future Research

- **Summary of Findings:** The thesis concludes with a summary of the findings and their implications for the field of architecture.
- **Suggestions for Future Research:** Students may also suggest areas for further study based on their findings, contributing to ongoing academic discourse.

8. Submission and Review

- **Final Submission:** The completed thesis is submitted for review. This may include peer review, faculty evaluation, and sometimes publication in academic journals.
- **Feedback:** Based on the review, students may be asked to make revisions before the final acceptance of their research work.

This process not only helps students gain a deep understanding of a particular area within architecture but also equips them with the skills to conduct independent research, a valuable asset in their professional careers. Some of the research works undertaken by students are listed, examples of the some are also elaborated further.



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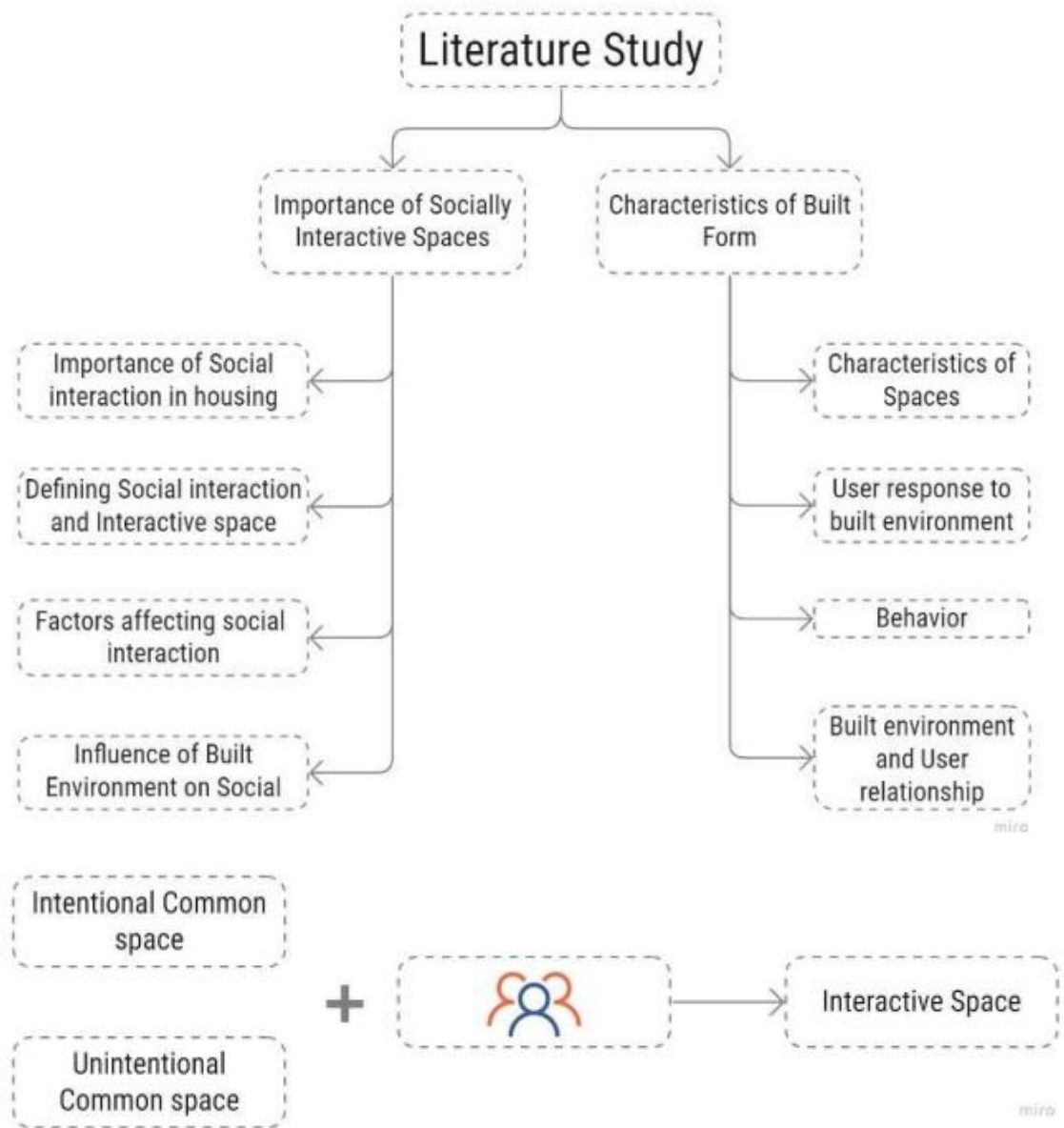
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Aim

To study the parameters of built environment that promotes social interaction among residents of High rise Apartments.

Objectives

1. To study the importance of interactive spaces in high-rise apartments.
2. Examining the characteristics of built environment that affects social interaction.
3. To generate a comparative chart of the inferences procured from case study



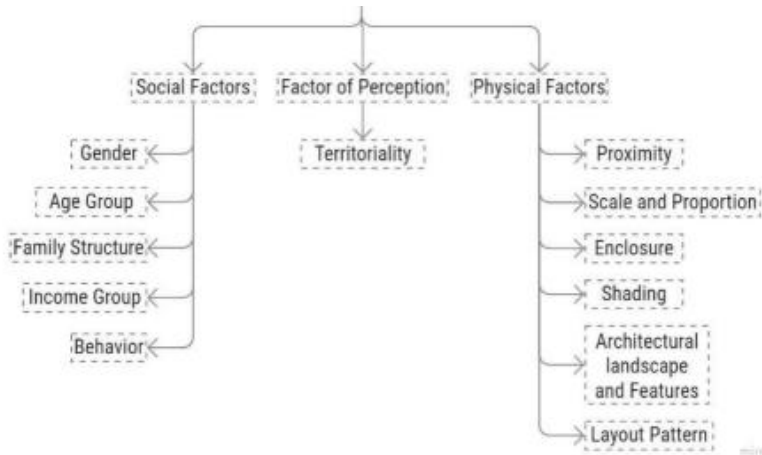


Figure 4: Factors affecting social interaction

Most people's environmental experiences begin in and around their own homes, and an architect is charged with finding the greatest design solutions amid the many constraints in order to create the best possible prospective environment.

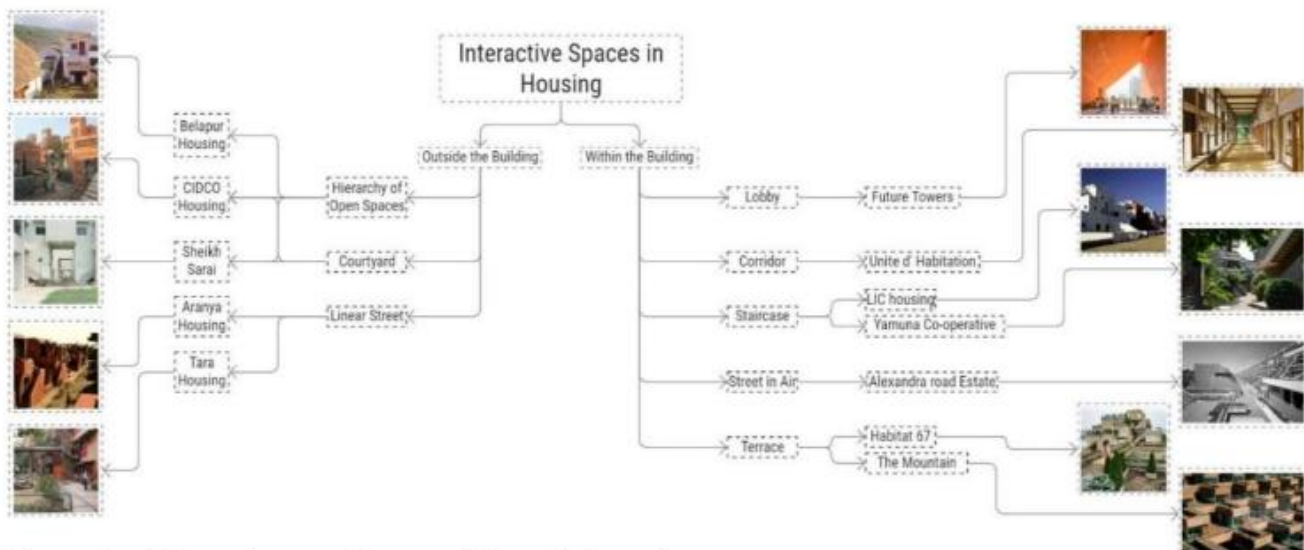
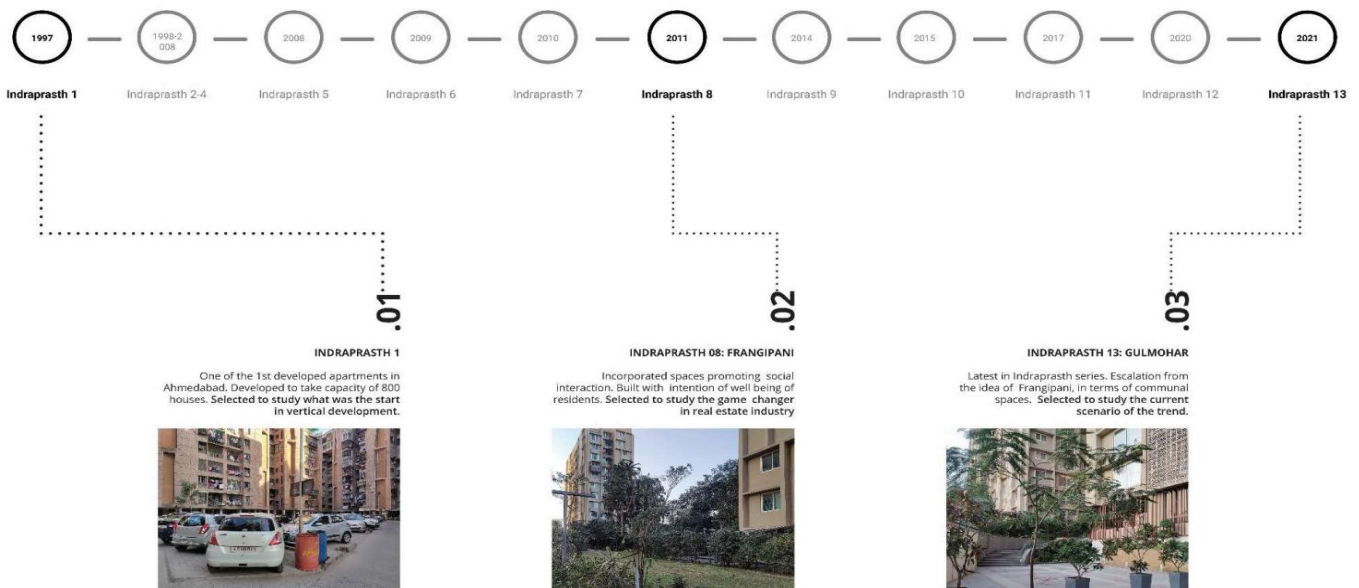


Figure 5: 'Quassi spaces' potential use in housing. (Developed further from unpublished thesis Nishi shah, 2016)

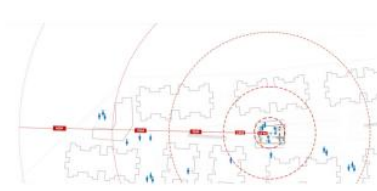
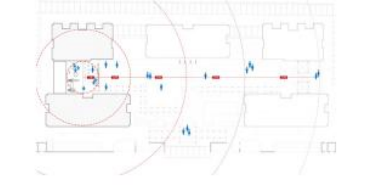
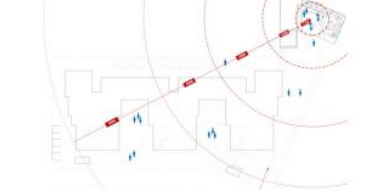


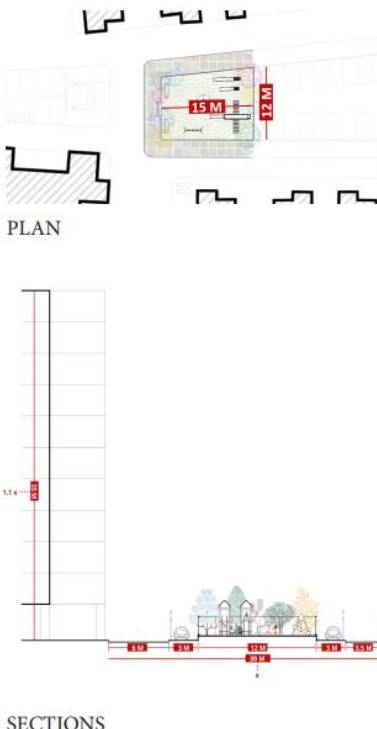
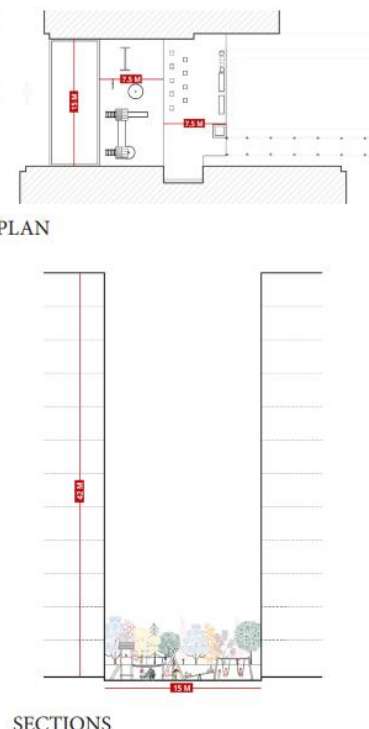
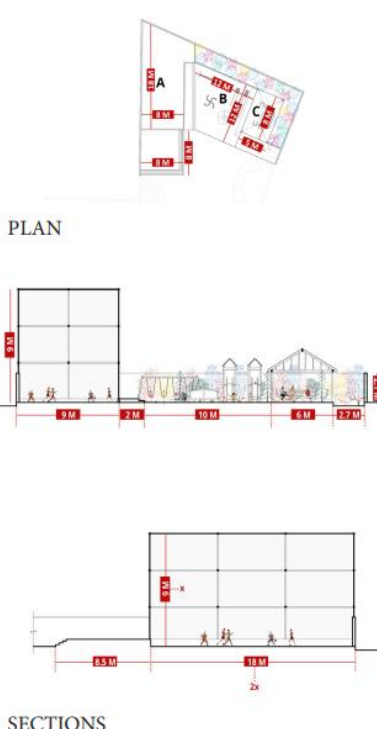


	Indraprastha 1	Indraprastha 8, Frangipani	Indraprastha 13, Gulmohar
• Location	<p>Architect: Hiren Patel Built in: Year 1997 Development type: New development Floors: 12 Story high Number of building blocks: 15 Blocks No. of houses on each floor: 2-4 Houses Plot Area: 22199sqm/ 2.22ha Density: 700 people/ ha Ground coverage: 7155 sqm/ 0.71ha Location: Indraprasth Tower, Drive In Road, Nilmani Society, Memnagar, Ahmedabad, Gujarat</p>	<p>Architect: Hiren Patel Built in: Year 2011 Development type: New development Floors: 12 Story high Number of building blocks: 5 Blocks No. of houses on each floor: 2-4 Houses Plot Area: 9602 sqm/ 0.96ha Density: 458 people/ ha Ground coverage: 2445 sqm/ 0.24 ha Location: INDRAPRASTH 8 FRANGIPANI, Tulip Bungalow Rd, Thaltej, Ahmedabad</p>	<p>Architect: Hiren Patel Built in: Year 2021 Development type: New development Floors: 13 Story high Number of building blocks: 3 Blocks No. of houses on each floor: 2-4 Houses Plot Area: 7160sqm/ 0.71ha Density: 608 people/ ha Ground coverage: 2552 sqm/ 0.25ha Location: INDRAPRASTH 13 GULMOHAR, Vastrapur, Ahmedabad, Gujarat</p>
• Activity mapping	<p>Morning 7:30am- 8:30am</p> <p>Afternoon 3:00pm- 4:00pm</p> <p>Evening 6:00pm- 7:00pm</p>	<p>Morning 7:30am- 8:30am</p> <p>Afternoon 3:00pm- 4:00pm</p> <p>Evening 6:00pm- 7:00pm</p>	<p>Morning 7:30am- 8:30am</p> <p>Afternoon 3:00pm- 4:00pm</p> <p>Evening 6:00pm- 7:00pm</p>
• Active nodes	Kids Play Area, Walkways , Sitting area, Club House	Kids Play Area, Walkways , Sitting area, Cricket play area	Kids Play Area, Walkways , Sitting area, Lobby

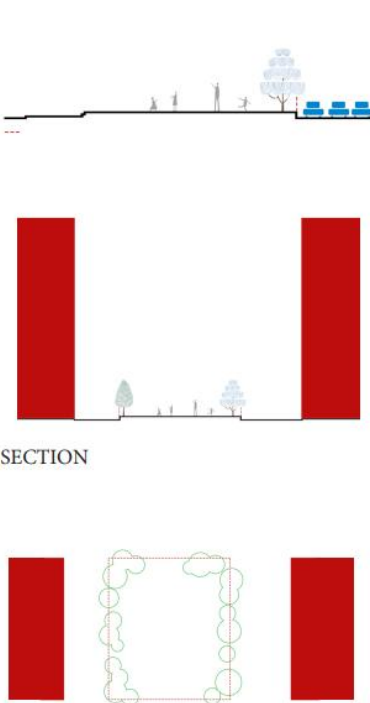
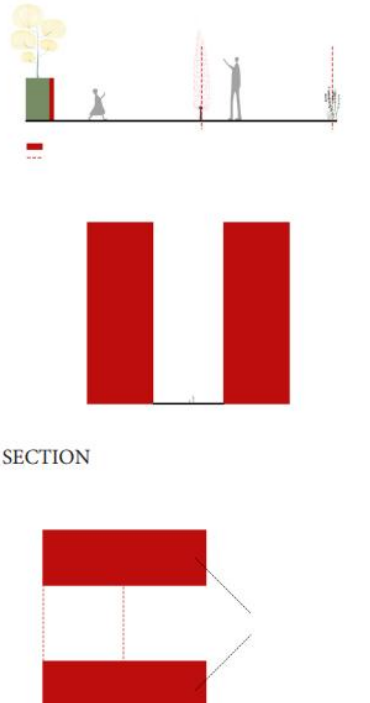
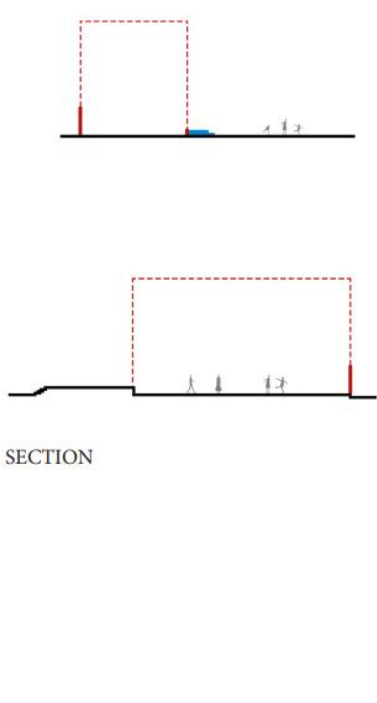
	Indraprastha 1	Indraprastha 8, Frangipani	Indraprastha 13, Gulmohar
• Location	<p>Located in the center of the society. Acts as a focus point.</p>	<p>Located on one end of the society, between two buildings.</p>	<p>Located on the end of society, away from the apartment blocks.</p>
Inferences	The kids play area in Indraprastha 8 is the most effective choice because it is situated between the built mass, offering both enclosure and safety. In contrast, the location of the play area in Indraprastha 13 does not allow for effective surveillance.		

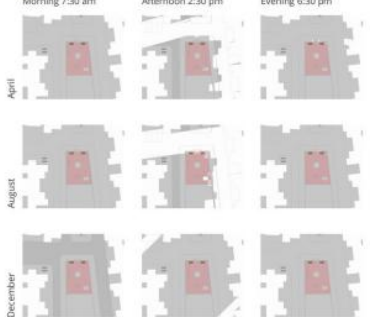
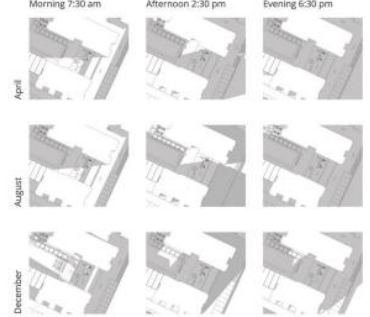



<p>• Proximity</p>	 <p>Maximum distance to be traveled to reach kids play area is 175 m . The play area falls outside of the social field of vision.</p>	 <p>Maximum distance to be traveled 100m, falls under social field of vision. It is visually connected to the rest of the society and is in close proximity to amenities such as an indoor kids play area and a water cooler.</p>	 <p>The maximum distance required to reach the space is 126m. Furthermore, the placement of the space does not allow for a direct visual connection from the rest of the society.</p>
<p>Inferences</p>	<p>The kids play area in Indraprastha 8 is located within the social field of vision, with a maximum distance of 100m, making it easily accessible and allowing parents to maintain surveillance. On the other hand, in Indraprastha 1, despite being situated in the central blocks A and E, falls outside the social field of vision. The same applies in Indraprastha 13.</p>		

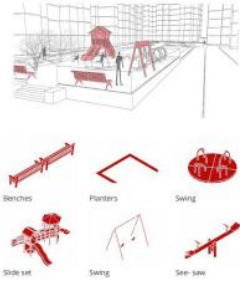


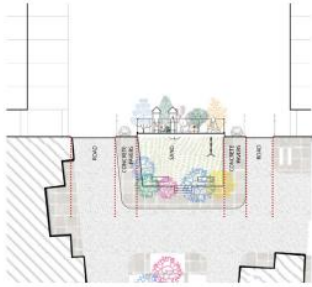
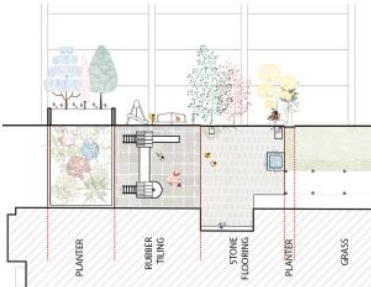
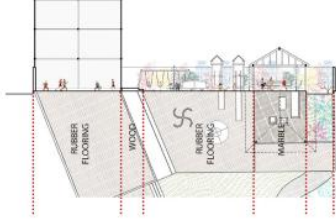
<p>• Scale and Proportion</p>	 <p>PLAN</p> <p>SECTIONS</p> <p>The aspect ratio is 1:1.1, the space no longer maintains an enclosed feeling, and its intimacy factors are reduced.</p>	 <p>PLAN</p> <p>SECTIONS</p> <p>The aspect ratio of nearly 3 creates a sense of enclosure and safety in the space.</p>	 <p>PLAN</p> <p>SECTIONS</p> <p>There are two kids play area, one is cricket play area and another is kids play. Scale of both can hold upto 8-10 kids. And the space feels open.</p>
<p>Inferences</p>	<p>Indraprastha 8 provides a more enclosed and secure space due to its location between buildings. It offers designated areas for seating and play, creating an environment where children can play freely and parents can feel comfortable leaving their children to play. While others lack this feature, they are more open and less private.</p>		



• Enclosure	 <p>SECTION</p> <p>PLAN</p>	 <p>SECTION</p> <p>PLAN</p>	 <p>SECTION</p>
Inferences	<p>The area is enclosed by wire mesh barricades and has a limited number of trees planted in the vicinity. And due to the presence of cars all around the area becomes unsafe.</p>	<p>The play area is bounded by two sides of apartment buildings, which are 40m high, providing shade and a confined space for kids to play.</p>	<p>The area seems open due to absence of physical boundary, On other hand the presence of metal mesh enclosure creates a sense of openness and a safe environment.</p>
<p>The play area between apartment buildings offers a sense of enclosure and safety for kids. In contrast, the first scenario, despite having wire mesh barricades, feels more open due to the absence of a physical boundary, but the presence of cars reduces its safety.</p>			

• Shade			
Inferences	<p>Faces north-south, shaded for most of the day, except afternoons. Sparse trees can't provide enough shade. Area is inactive during afternoons.</p>	<p>With the aspect ratio of 2.8 and the orientation towards east the area is shaded almost throughout the day and receives morning light</p>	<p>Play area's orientation (West) and placement results in it being mostly used in the evenings when it is shaded.</p>
<p>To ensure a lively kids play area in a hot and dry climate, it is important to position it in a shaded location. In the first two scenarios, where the area is shaded all day, children are active regardless of the time. However, in the third scenario, the play area is only active during the evenings.</p>			



<ul style="list-style-type: none"> Architectural elements and landscape features 			
<ul style="list-style-type: none"> Size of group and configuration 	<p>The presence of benches and swings attracts groups of kids, elderly individuals, and women with their children, who can often be seen in the area.</p>	<p>Groups of Men, women and kids are generally seen in the area, presence of elements like swings, benches, planters, and connectivity to other activities attract people to the area.</p>	<p>Wooden seating and a gazebo nearby attracts groups of men, women and elderly people. And swings and enclosed net area attracts kids, encouraging them to play in the space.</p>
<ul style="list-style-type: none"> Material and Texture 	 <p>Sand in the play area along with the concrete paved pathways around gives the notional boundary of the space.</p>	 <p>Rubber flooring used for play area and seating are polished stone paved, marking the usage of the space.</p>	 <p>Rubber flooring used for play area and seating are stone paved, marking the usage of the space.</p>