

Architecture Portfolio

by

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01

PAEDIATRIC CARE CENTRE

Panvel, Maharashtra, India.

Architectural Design • Thesis • Individual • 2019-20

"if a place can make you happy, it can also make you well"

– Esther Sternberg.

Healthcare is one of India's largest sectors in terms of revenue and employment. Paediatrics, one of the major branches in the field of medicine, plays a crucial role in improving the overall health of children.

However, the infrastructure of the public healthcare facilities in India is not on par with that of private healthcare facilities. Taking this project was primarily motivated by this reason.

In this project, the design focuses on creating a healing environment, which offers emotional support and functionality to enhance the process of healing, in a public healthcare facility for children.

The process included carrying out various surveys to understand the patients' needs and requirements. The design of Paediatric care centre aimed to engage the patients in the process of healing and recovery.



Existing Profile Of The Site

The area is a mix of flat and hilly areas with the Kalundre river passing at a distance of approximately 300 meters from the site. The site is located in the rapidly urbanizing zone of NAINA (Navi Mumbai Airport Influence Notified Area). Panvel railway station is the nearest and has the most effective transit facility in the area.

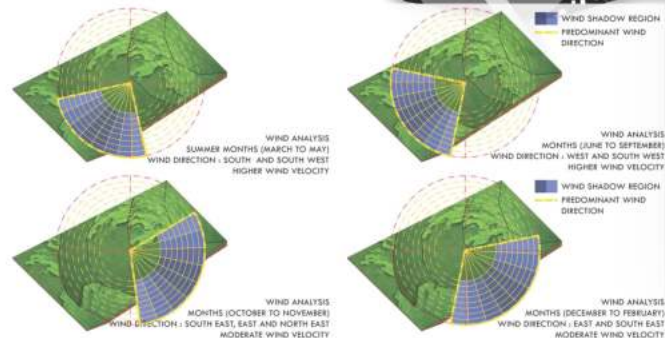
The context of the site comprises a mixture of retail shops, low-rise housing along residential & commercial buildings.

As of today, there is no development around the area. However, CIDCO (City and Industrial Development Corporation of Maharashtra) has reserved plots around the site. These plots include mixed-used buildings, a school with an attached playground, and a ground service reservoir.

Climate Study & Wind Analysis

The general climatic regime is fairly equitable since seasonal fluctuations of temperature are not significantly large.

The maximum day temperature ranges between 28 degrees to 32 degrees Celsius, while the minimum temperature is between 17 degrees to 27 degrees Celsius.



Concept & Design

The main concept of this project was to create maximum open spaces on and around the structure as well as to connect the structure with green spaces, creating the best experience for the users.

The design focused to create a healthcare facility that offered a radically different setting, which challenged the stereotypical view of the public healthcare environments.

The design recreates the charm and naturalistic ambience, enhancing staff efficiency in a patient-centered care environment.

Zoning & Massing

The massing of the structure wraps around a central garden and opens out to the adjacent therapy garden.

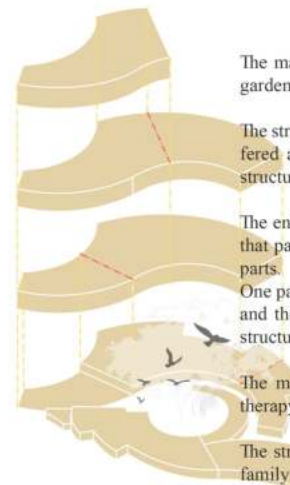
The structure is designed to capitalize on the views offered and at the same time to draw nature into the structure.

The entire mass of the structure is divided by an axis that passes through the structure, splitting it into two parts.

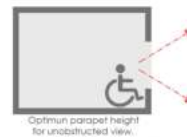
One part of it is a ground structure with a roof garden and the other part of it is a ground plus three story structure.

The main central axis connects the entrance to the therapy garden via a transitional space.

The structure includes therapy areas, patients rooms, family rooms, dormitories, staff quarters.

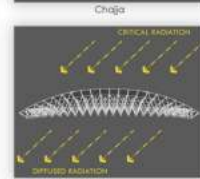
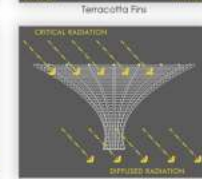
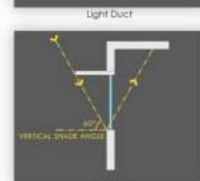
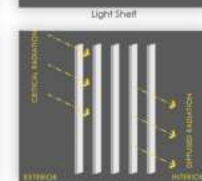
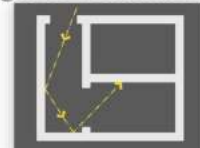
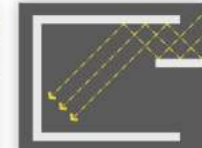
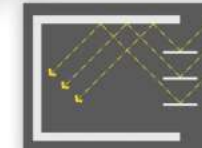


Barrier Free Movement



Optimum furniture height. Provision for vertical access.

Light & Ventilation



The entire mass of the structure is divided by an axis that passes through the structure, splitting it into two parts.
The main central axis connects the entrance to the therapy garden.
The central area has a recreational space accessible from all the therapy rooms.

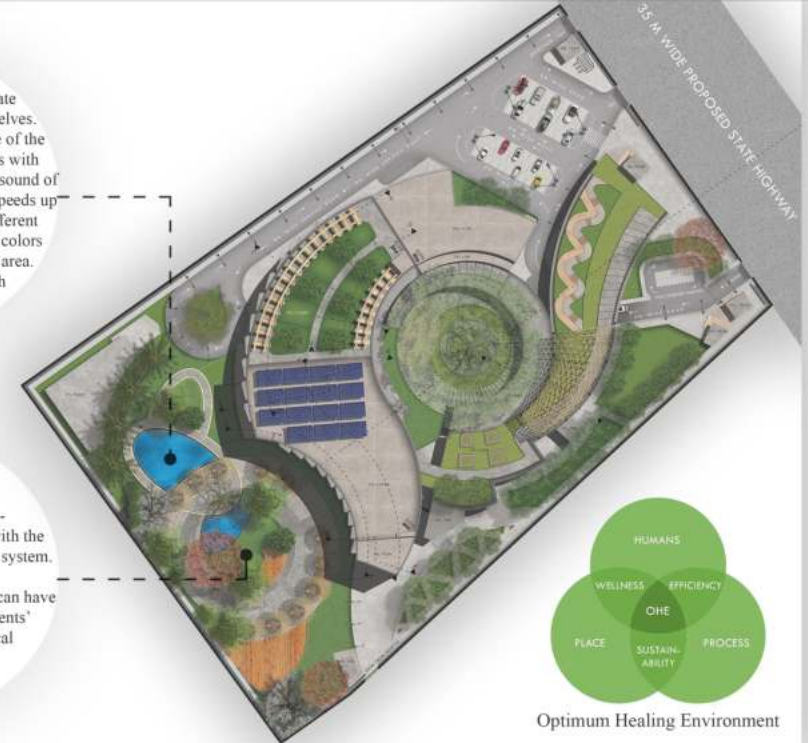
Ground Cover Area: 40% of the total site area = 7460 sq m.

Programs: Therapy Areas, Patient rooms, Family rooms, Dormitories, Staff quarters, Administration office, Pantry, Service blocks, AHU rooms.



A place where the patients can relax, stimulate the senses, and renew themselves. It is designed on the west side of the plot that provides the patients with various types of natural scents, sound of birds, fresh air that ultimately speeds up the recovery process. The different types of flowers with various colors increases the serenity of the area. It also offers a pond with lawn of various types.

Sound therapy is based on the premise - the frequencies can interact with the body's energy to rebalance the system. The sound of chirping of birds can have powerful effects on the patients' physical and psychological well-being.



Section 01





02

LOCAL BAHÁ'Í HOUSE OF WORSHIP

Bihar Sharif, Bihar, India.

Architectural Design • Competition • Individual • 2018-19

"Nature is God's Will and is its expression in and through the contingent world. It is a dispensation of Providence ordained by the Ordainer, the All-Wise."

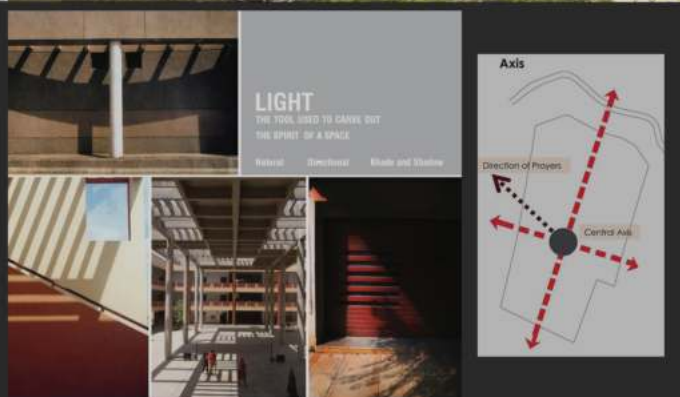
- Bahá'í Writings.

From Baha'i writings, it was found that the relationship between man and the environment is an important aspect of faith. Baha'i faith involves the implicit understanding that nature is to be respected and protected.

The architecture of the centre has been inspired by these principles and translated into an appropriate place of worship for the community, also keeping in mind the values of Unity of God, Unity of Religion, Unity of Humanity, and Equality of men and women.

As a designer, I have used the concept of 'Biophilic design' for the architecture of the Baha'i House of Worship to reflect and enhance the connection of the user to values of faith and nature.

Biophilic architecture encompasses the use of natural light, ventilation, water, and landscape features to create a more productive built environment.



Seating Pods



Seating Pods



Stepped Seating



Courtyard

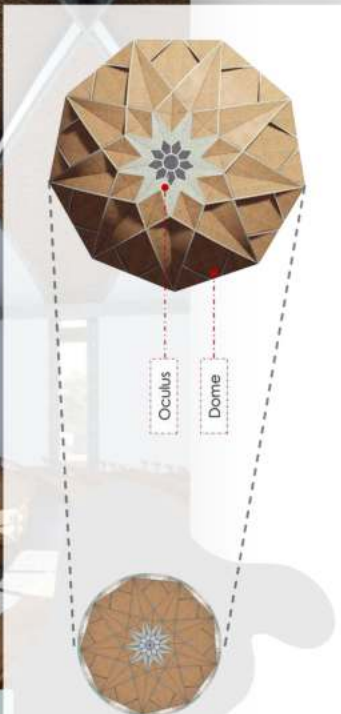


Water Channels



1. Main Road
2. Entry
3. Parking
4. Admin Block
5. Water Channel
6. Waterbody
7. House Of Worship
8. Courtyard

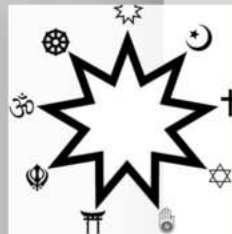
9. Kund
10. Stepped Seating
11. Parasol
12. Tree Grove
13. Outdoor Seating
14. Toilets
15. Landscaped Area



The Oculus at the apex of the dome is in the form of a nine-pointed star with the Prophet's name.

The ribbed dome is a spiritually neutral shape that nullifies the negative and positive forces.

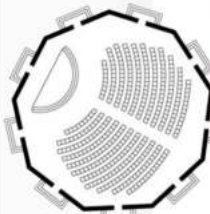
The Parasol unifies the House of Worship with the landscape elements.



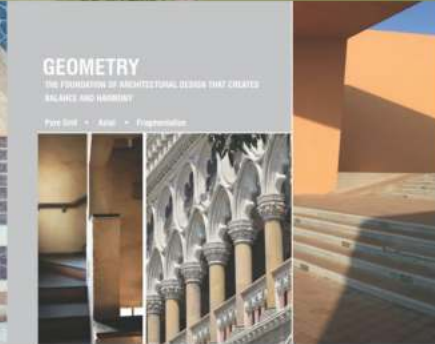
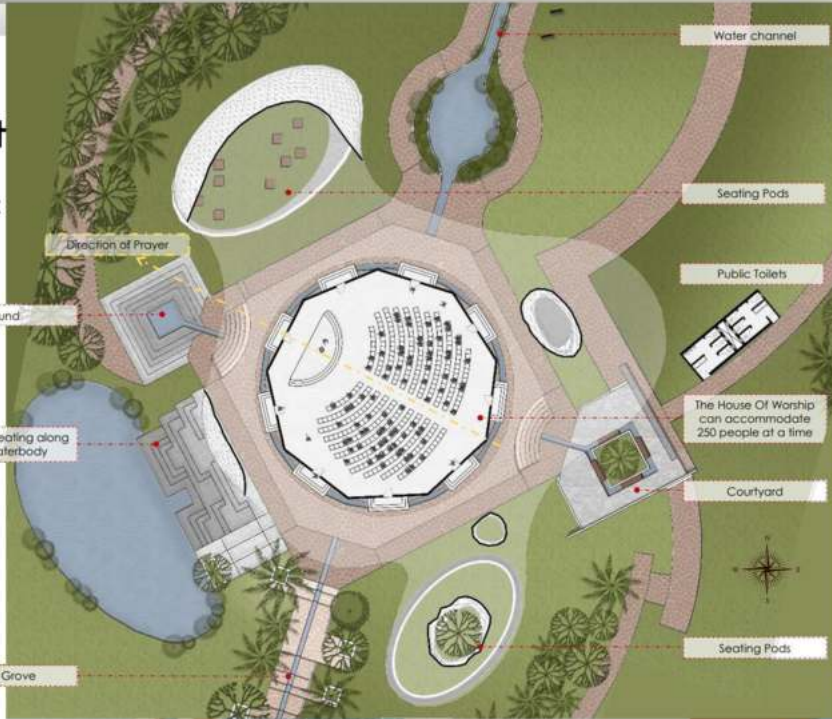
Bahai's Faith symbol depicting Unity of Religion.



The nine vertices of the Bahai's Faith symbol formulate into a nonagon which is the base of the House of Worship.



Each sides of the nonagon acts as nine different entrances to the House of Worship.



GEOMETRY

THE FOUNDATION OF ARCHITECTURAL DESIGN THAT CREATES BALANCE AND HARMONY

Pure Form • Color • Proportion

MATERIAL
WORKING WITH AN ARRANGEMENT OF MATERIALS AND GREAT TRADITIONS TO ENHANCE THE BUILT FORM
Natural • Local • Innovation



INDIAN INSTITUTE OF MANAGEMENT

Visakhapatnam, Andhra Pradesh, India.

Architectural Design • Competition • Group • 2018

"he who does not know his way to the sea should take a river for his guide"

- Blaise Pascal

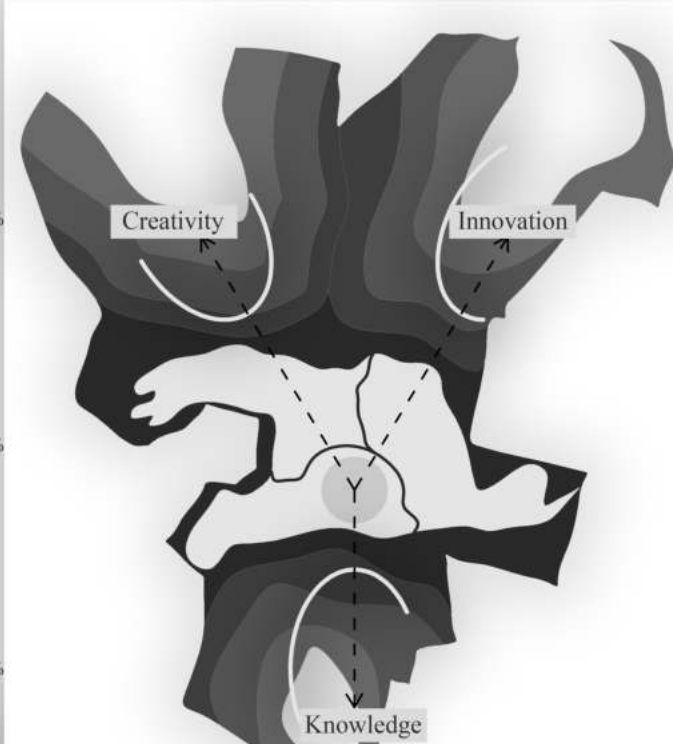
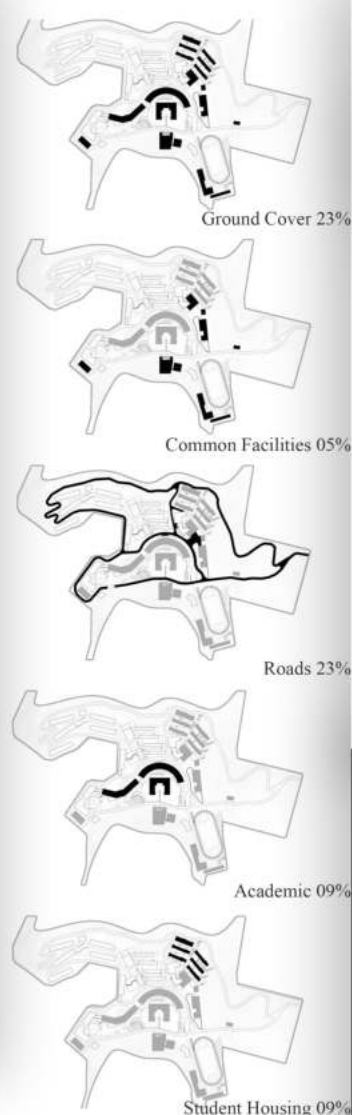
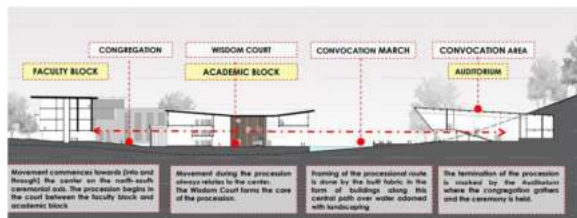
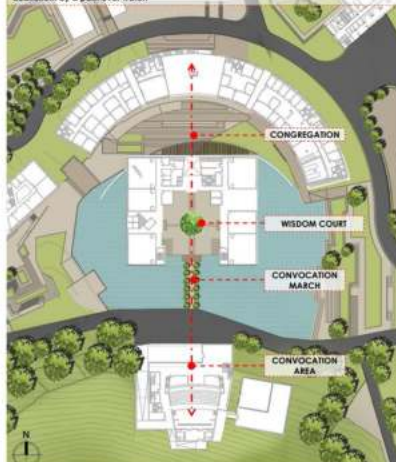
The design concept of IIM Visakhapatnam is derived from the Gosthani river as it emerges through the rock creating the magnificent Borra Caves.

Likewise, the stream of knowledge shall flow into a student, nurturing a mind, and therefore imparted into the world.

The concept of the master plan zoning represents the institution's philosophy of nurturing Creativity, Innovation, and Knowledge, which are essential qualities for the development of the student.



CONVOCATION PROCESSION is envisaged on graduation day which commences in the congregation area in the faculty block, passes through the wisdom court and leads to the auditorium by a path over water.



Location : Visakhapatnam, Andhra Pradesh.

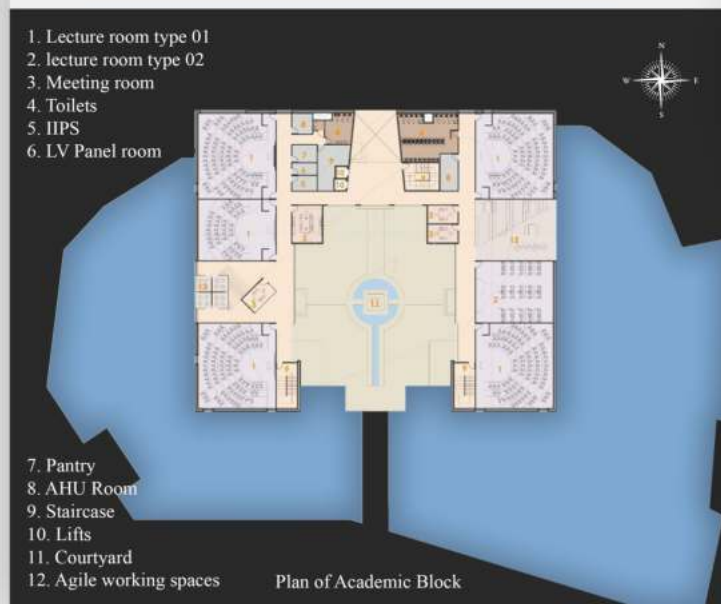
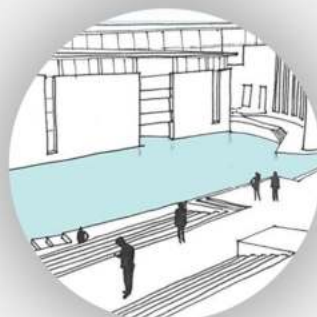
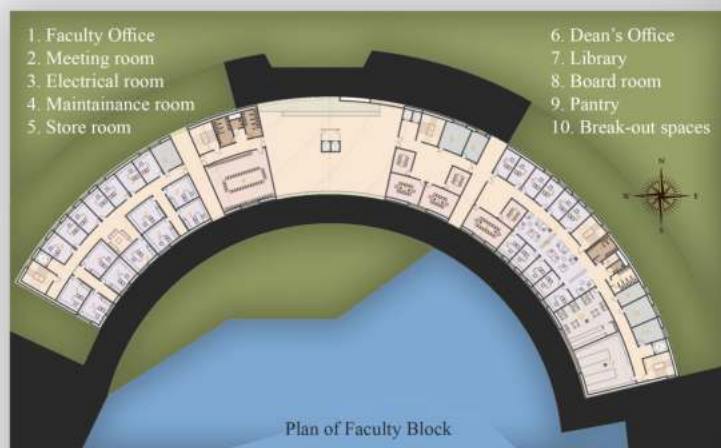
Site Area : 232 Acres

Proposed Site Area : 20 Acres

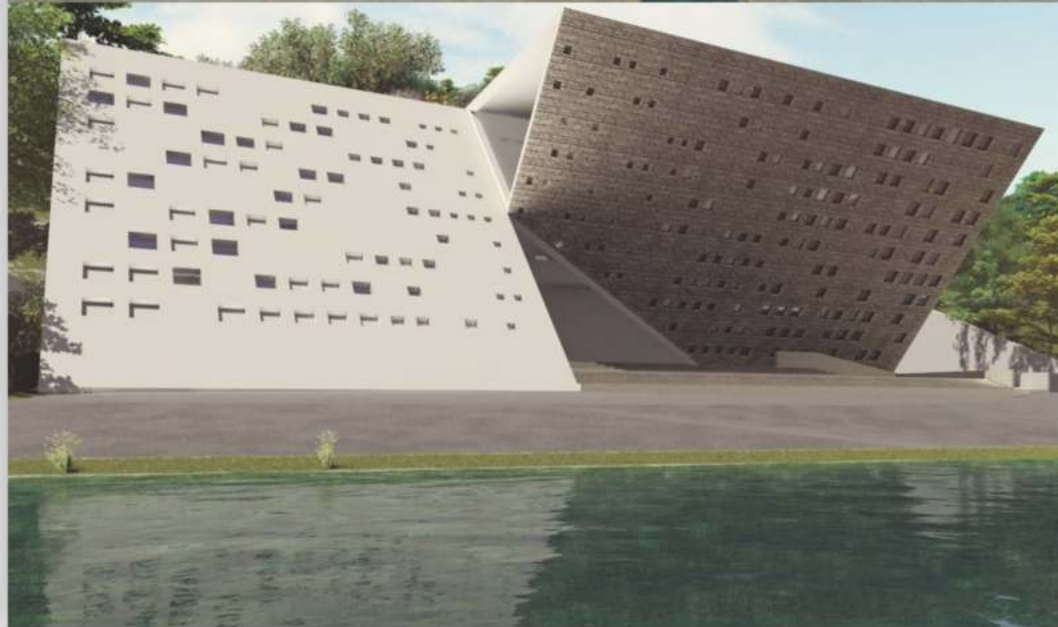
Latitude : 17°52'55.13" N

Longitude : 83°21'46.60" E

Programs : Academic zone, Academic block, Faculty block, Auditorium, Processional path, Residential zone, Married students hostel, Single room hostel.



South - West Facade Elevation





04

IB SCHOOL, BORLA

Mumbai, Maharashtra, India.

Architectural Design • Project • Individual • 2019

Think • Play • Participate



Mission Statement

Learning must extend beyond the classroom. It should filter through the walls and encourage children to think freely.

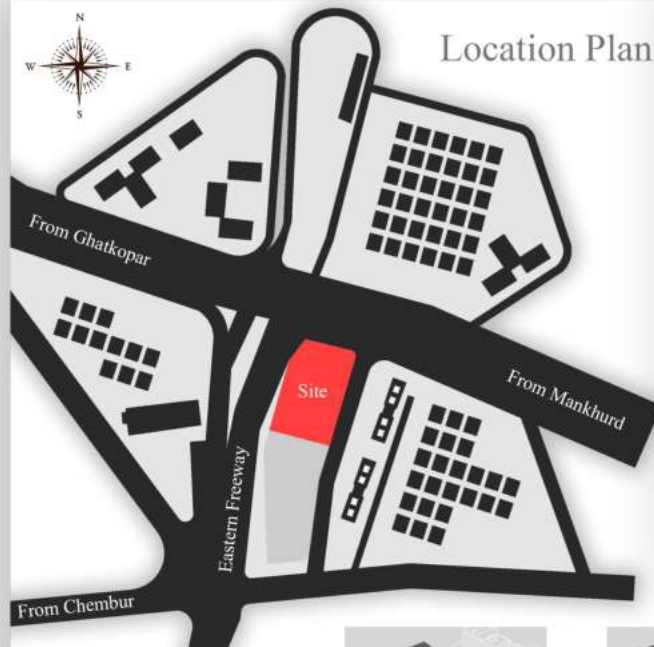
The spaces of learning must nurture interaction and engagement.

It must raise their spirits and inspire them to be innovative and bold.

It must make them feel secure enabling them to make choices that are brave.

It must leave in their being a sense of place, a sense of comfort and develop each individual with their own strong identity, that will always be intertwined with the philosophy of the school.

Location Plan



About the Site

Chembur, Mumbai

Co-ordinates : 19°03'43.2"N 72°54'53.1"E

Total Plot area : 8050 sq.m. ~ 86650 sq.ft.

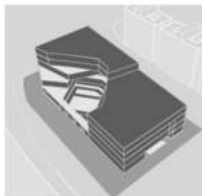
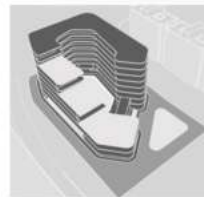
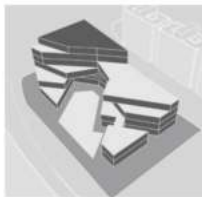
Total Plot area allocated for IB School : 4900 sq.m. ~ 52750 sq.ft.

Total Permissible Building Height : 30 m

Programs

Reception, Admin Offices, Faculty Lounge, Co-ordinator's Office, Staff Dining, Transport Office, Meeting Rooms, Store Rooms, Academics Areas, Shared Academic Areas, Shared Facilities, Common Facilities, Services.

Mass & Void



"I think that the ideal space must contain the elements of magic, serenity and mystery"
- Louis Barragan

Facade Design

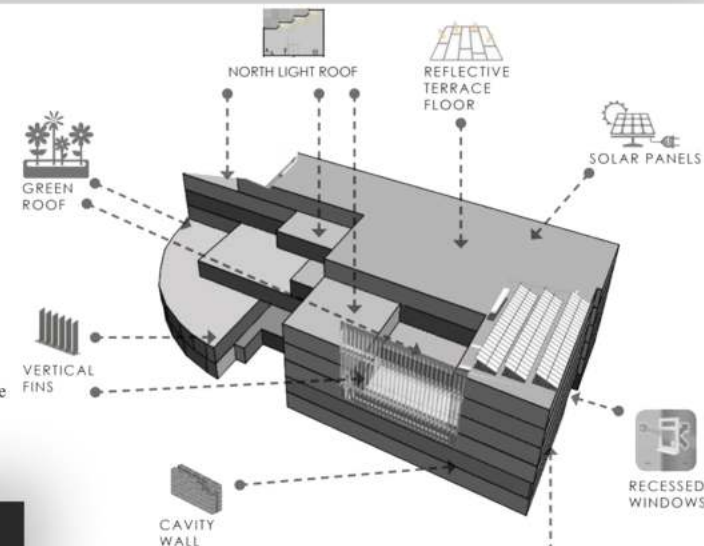
Exterior architectural colors have the potential to play a significant role in the revitalization of neighborhoods.

Architectural facades are arguably the most visible aspect to convey the character of a city and contribute a sense of place more so than any other aspect of the urban fabric.

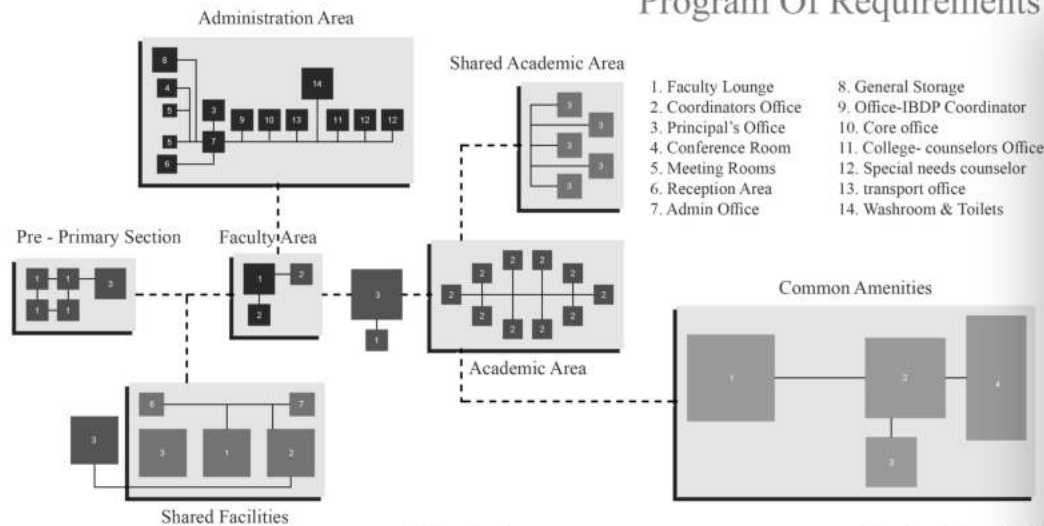
The facade treatment is envisaged in an earthy red grit finish with exposed aggregates of different sizes to create a natural variation on the vertical surface within economic constraints.

It enhances the life of the building through its robust weather protection and crack-resistant abilities.

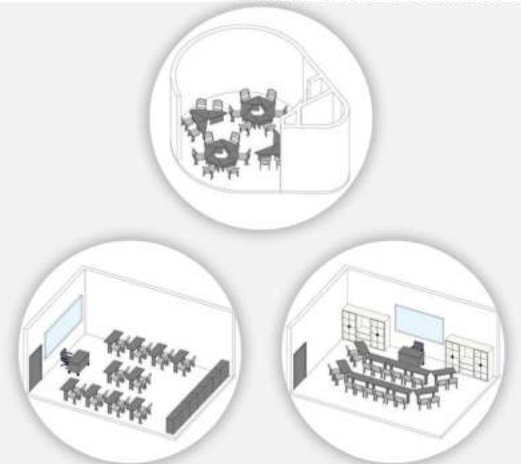
The wood-textured slats and louvered shutters provide a strong architectural vocabulary to the building.



Program Of Requirements



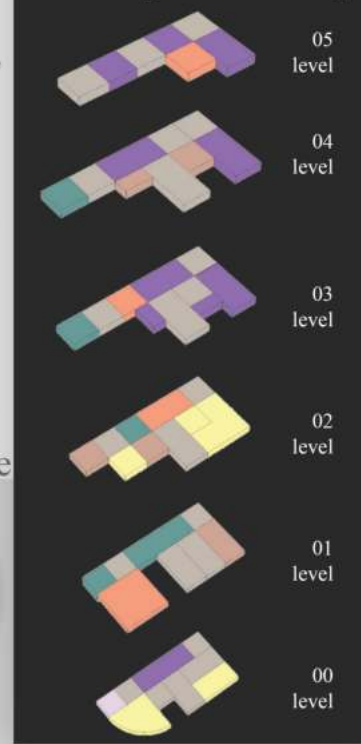
Classroom Module



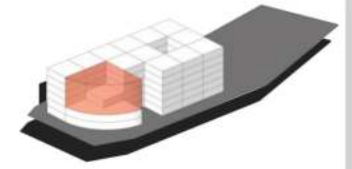
Lab Module



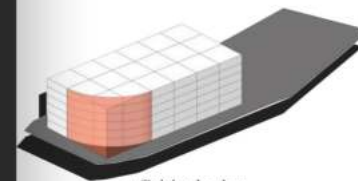
Form. Space. Identity.



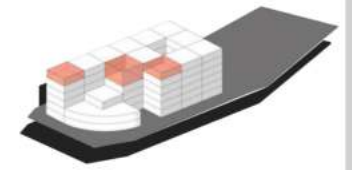
Academic Areas
Shared Academic Areas
Shared Facilities
Common Areas
Administration
Kitchen
Circulation & Other Services



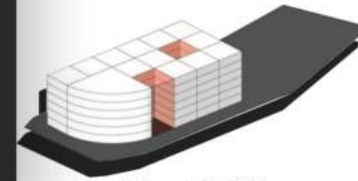
Terrace Garden



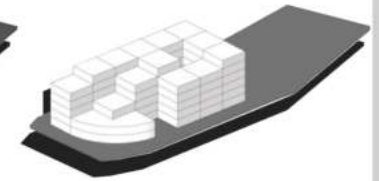
Critical edge



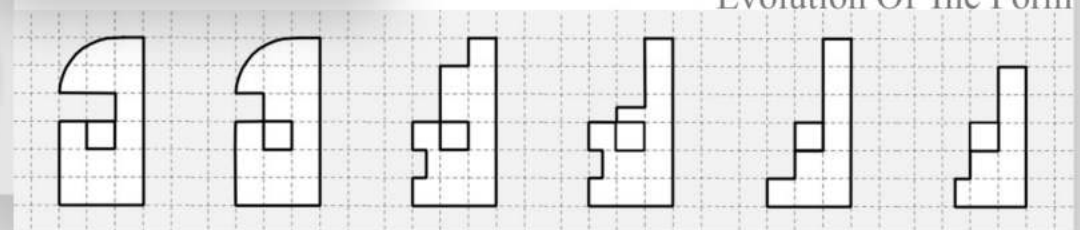
North light



Cut - out for light



Evolution Of The Form





Sydhavn Skole,
Denmark.

Terraces for games,
gardening and recreation.

Hierarchy of public,
semi-public and private
spaces.



Fuji Kindergarden,
Japan.

Continuous space that allows
for learning and play.

Architecture functions as a
giant playground.

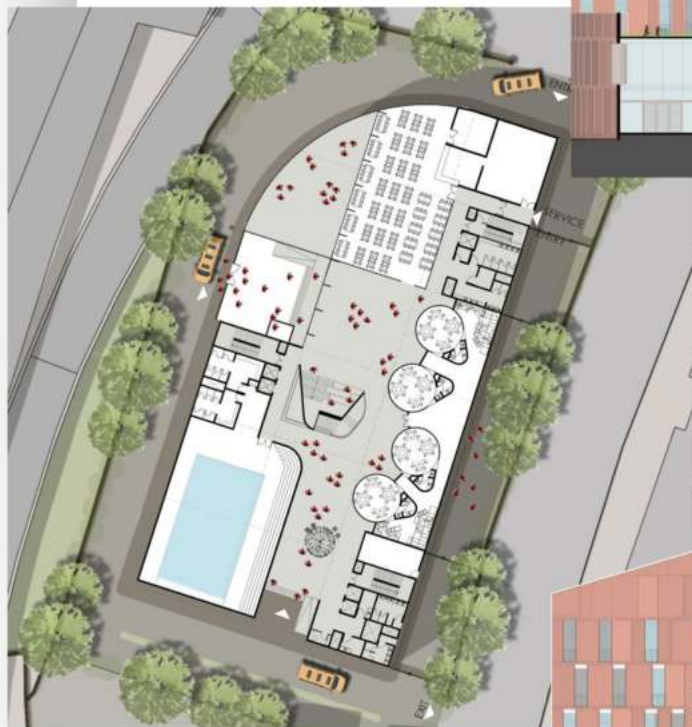


Helleurp School,
Denmark.

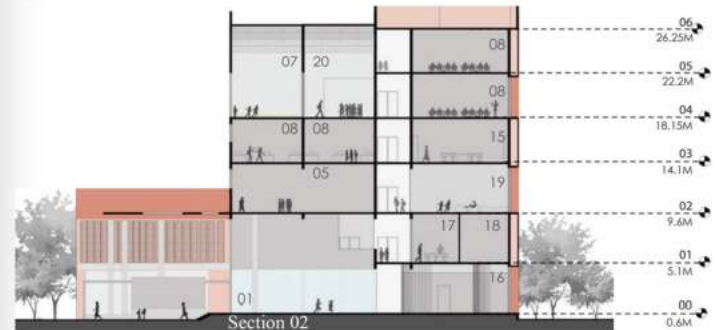
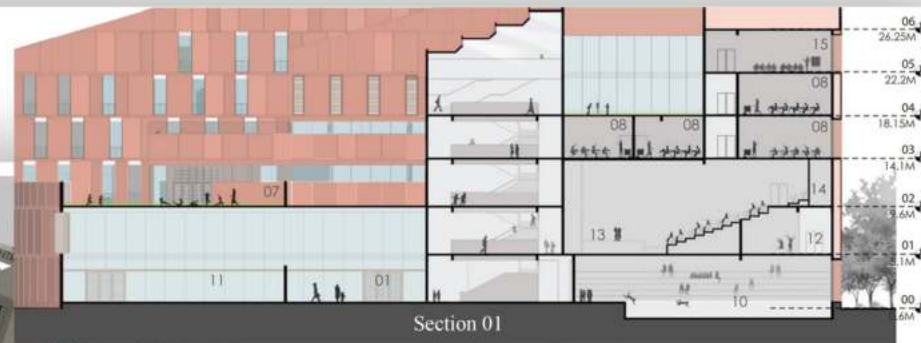
Open, organic interior
design, cubical exterior form.

The stairway form is used as
the central atrium.

Case Studies

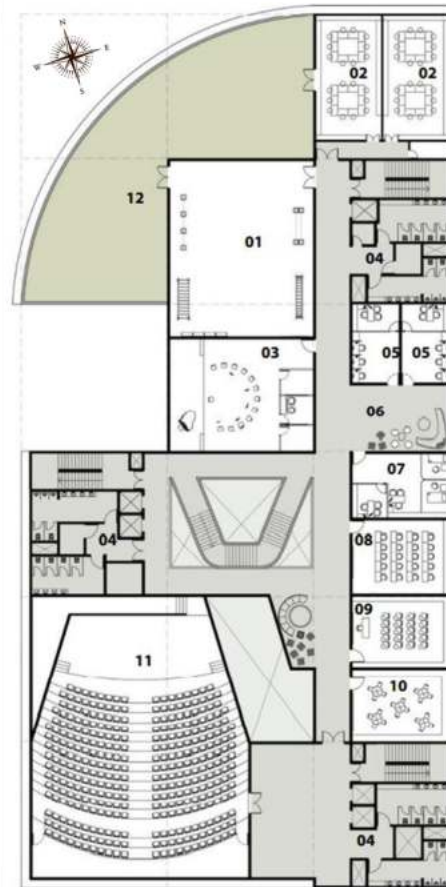


Site Plan

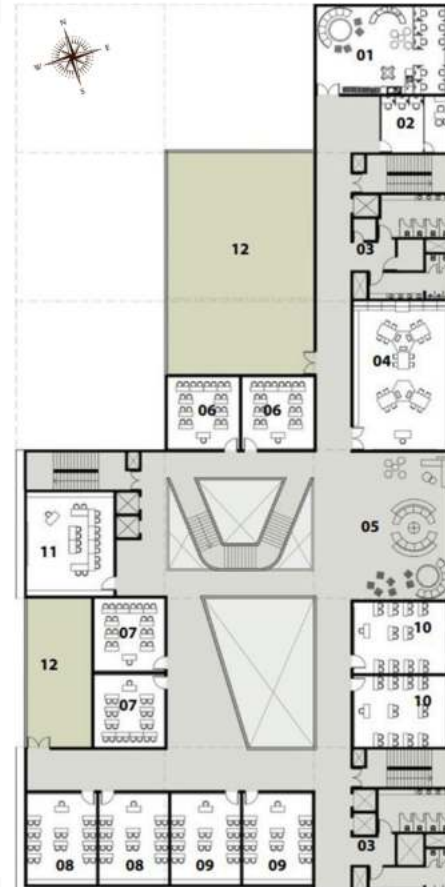




- | | |
|--------------------------|--------------------------|
| 01. Library | 08. Secretary Cabin |
| 02. DP/CP Faculty Lounge | 09. Waiting Area |
| 03. Coordinator's Office | 10. Admin Office |
| 04. Toilet Block | 11. Staff Office |
| 05. Conference Room | 12. Dance & Drama Studio |
| 06. Principal's Office | 13. Green Room |
| 07. Meeting Room | 14. Transport Office |



- | | |
|----------------------------|------------------|
| 01. Gym | 07. Infirmary |
| 02. Art Studio | 08. Computer Lab |
| 03. Music & Recording Room | 09. Science Lab |
| 04. Toilet Block | 10. Math Lab |
| 05. Special Needs Room | 11. Auditorium |
| 06. Break-Out Space | 12. Terrace |



- | | |
|--------------------------|--------------------------|
| 01. Faculty Lounge | 07. Grade II Classrooms |
| 02. Coordinator's Office | 08. Grade III Classrooms |
| 03. Toilet Block | 09. Grade IV Classrooms |
| 04. Physics Lab | 10. Grade V Classrooms |
| 05. Break-Out Space | 11. Language Lab |
| 06. Grade I Classrooms | 12. Terrace |



- | | |
|--------------------------|---------------------------|
| 01. Faculty Lounge | 06. Grade VIII Classrooms |
| 02. Coordinator's Office | 07. Grade VII Classrooms |
| 03. Toilet Block | 08. Grade VI Classrooms |
| 04. Collaborative Space | 09. Chemistry Lab |
| 05. Grade IX Classrooms | 10. Biology Lab |

THE POL HOUSING STREET

Ahmedabad, Gujarat, India.

Research • Documentation • Group • 2015

A Pol, in India, is a housing cluster that comprises many families of a particular group, linked by caste, profession, or religion. Pols are typical of urban centers in Gujarat, especially of Old Ahmedabad. Pol architecture is an interesting evolution in urban living space.

Pols were originally made as a protection measure when communal riots necessitated greater security dating from 1738 during Mughal-Maratha rule (1738–1753), in Ahmedabad.

Task : The challenge was to document the entire Pol Housing street, in Ahmedabad, which functions as a paying guest facility for visitors.

Pols are almost entirely inhabited by Hindus, in some cases by a settlement of families belonging to one caste, and in others by families of several of the higher castes, Brahmins, Vanias, Suthars, and Kanbis.

A typical pol in Ahmedabad has only one or two entrances and also some secret entrances known only to people residing in a pol.

This pol contains old beautiful houses with internal courts having intricate wooden carved facades with columns and fresco work done around court walls or ceilings.

Each pol is protected by a gateway closed at night as a safeguard against thieves.

Inside is one main street, with crooked lanes branching on either side. Most vary in size from five or ten to fifty or sixty houses.

Looking at an entrance gateway to a pol, children playing in the courtyard, chowk of the pol makes this housing type so interesting. It shows the public spaces and their uses and how these spaces are linked to the built mass of the pol. These structures have a clear sense of the climate, culture, tradition, activities, people around them.





ORCHHA STREET MODEL

Orchha, Madhya Pradesh, India.

Design Fair • Sem 04 • Group • 2016-17

This was a huge 8 feet x 10 feet model made by me and two of my batchmates, wherein the task was to map the whole street of an upcoming project, in Orchha, Madhya Pradesh, and to make a physical model.

06

EXTRA CURRICULAR

ACA, Mumbai, India.

Activities • Group / Individual • 2015-20

COMMUNITY CENTRE

Orchha, Madhya Pradesh, India.

Architecture Design • Sem 04 • Individual • 2016-17

This is a model of a Community Centre. The centre complemented the glorious and magnanimous heritage of Orchha town with its fort, palaces, temples, and architecture.



ALLIED DESIGN PROJECT

Mumbai, Madhya Pradesh, India.

Allied Design • Sem 02 • Individual • 2015

It is an allied design project in the first year. Here the task was to draw an abstract and later to convert it into a three-dimensional model. The idea was to see the visualization power.

WALL ART

Mumbai, Maharashtra, India.

Competition • Sem 03 • Group • 2016

This artwork was executed by our team at Dahisar Railway Station and at Borivali Railway Station as a part of Station Make Over Project conducted by Making a Difference Foundation and Mumbai First.



Dahisar Railway Station



Borivali Railway Station

07



THE AESTHETIC IMPULSE

by

Mihir Vishwasrao

Instagram | @theaestheticimpulse

Illustrations • Digital Art • Individual • 2021

Softwares:

Procreate, Adobe Photoshop, Adobe Illustrator.





With a sharp eye for details and the constant pursuit of knowledge, I intend to use the power of design and technology to make the world a better place.

✉ ux.mihirvishwasrao@gmail.com
Mumbai, India.