THESIS REPORT ON

"INTEGRATED TEXTILE PARK AS A HYBRID SPACE FOR SOCIETAL PROGRESSION, MOHAMMADABAD, UTTAR PRADESH"

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF:

BACHELOR OF ARCHITECTURE BY KM QURRAT UL AIN 1170101017

THESIS GUIDE

AR. VARSHA VERMA

SESSION 2017-22

TO THE
SCHOOL OF ARCHITECTURE AND PLANNING
BABU BANARASI DAS UNIVERSITY
LUCKNOW.

SCHOOL OF ARCHITECTURE AND PLANNING BABU BANARASI DAS UNIVERSITY, LUCKNOW (U.P.).

CERTIFICATE

I hereby recommend that the thesis entitled "Integrated textile park as a hybrid space for societal progression, Mohammadabad, Uttar Pradesh" "under the supervision, is the bonafide work of the students and can be accepted as partial fulfillment of the requirement for the degree of Bachelor's degree in architecture, School of Architecture and Planning, BBDU, Lucknow.

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Certificate of thesis submission for evaluation

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ACKNOELEDGEMENT

"In the name of god Who is most beneficial and merciful."

Time demands that I express my gratitude to those who have been a part of my stay in B.B.D.U. It's been great, all these years, but life moves on...and so do we...

I express my deepest gratitude to my thesis guide AR VERSHA VERMA, for her valuable dispassionate guidance, critical discussions, suggestions and continuous support all through my B.Arch. thesis.

I express my gratitude to DEAN, AR. MOHIT KR AGRAWAL, Department of Architecture, B.B.D.U., Lucknow, for being there to listen to and solve our problems. I would like to take this opportunity to express my sincere thanks to AR. KESHAV KUMAR.

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My all teachers, your support, encouragement and guidance have given us the strength to embark on this rigorous journey.

I would also like to express my gratitude to various persons without whose help, this Thesis would not have been possible. All the experiences that I shall relate in the following pages would not have been possible without them.

My Family AMMI, ABBU saying thanks is nothing, just accept this as a tribute to what you have imbibed & inspired in me.

It would not be possible without my Senior guide AR. MOHD AFJAL AHMAD My Friend- ANNE, ZARISH, ARPIT

Though words hardly express the true emotions, still I would like to thank all my near and dear ones who helped and guided me.

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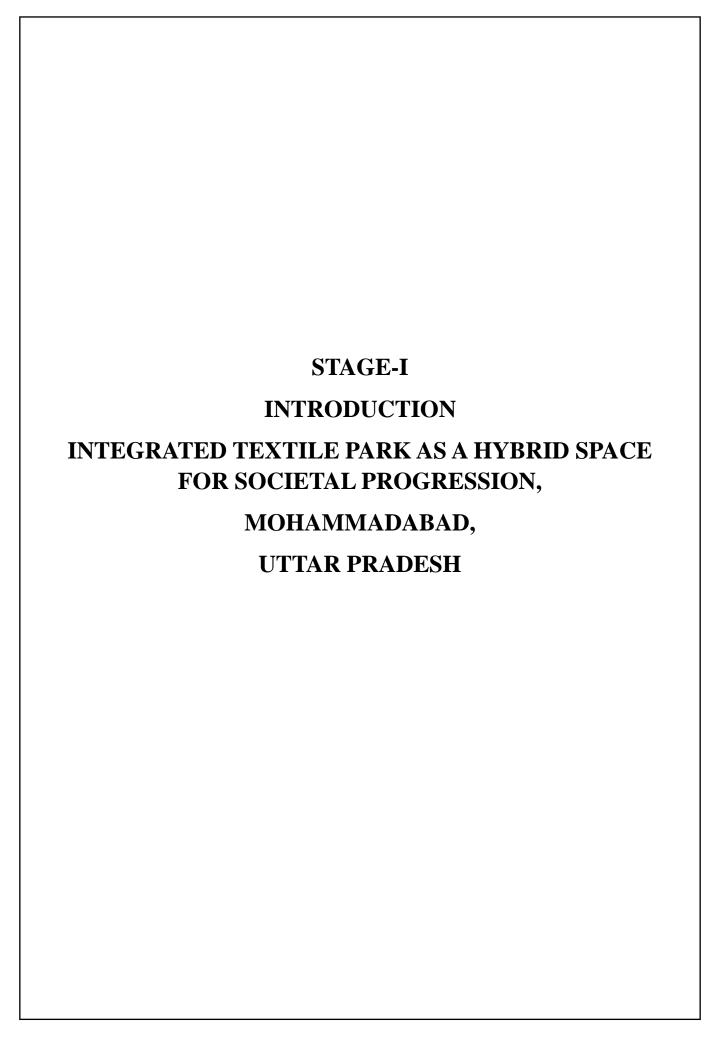
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INTRODUCTION

Integrated Textile Park as a hybrid space for societal progression is like a park which facilitate the production of textile and provide a marketing to the textile industry. It includes administrative block, training center, research institute, exhibition hall, workshops etc. The textile industry is primarily concerned with the production of yarn, and cloth and the subsequent design or manufacture of clothing and their distribution. The raw material may be natural or synthetic using products of the chemical industry.

HISTORY AND BACKGROUND-

In 1725 AD 300 lakh meters of cloth was being exported from India to Europe. The 1st textile mills was setup in Mumbai in 1854 by C.N. Dawar. The 1st cotton spinning mills was setup in 1861 by "Seth Ranchhodmal Chotalal". Gradually more textile mills begin to come up in places like Mumbai, Ahmedabad, Chennai & Indore. One major area of influence has been in textiles, which are cloths or fabrics. Indian textiles are generally produced from one of three materials. Cheaper and more accessible textiles were historically made of cotton, which grows in central and northeastern India. Wool is used in many textiles as well, traditionally spun from the fleece of mountain goats. The finest of this fleece is woven into a soft fabric called pashmina, known around the world as cashmere.

NEED OF THE TOPIC

In a developing country like India, the Textile Industry is very important, for it has to meet the demand for clothes of the Indians and exports too. The Textile Industry contributes nearly 30% of the value of exports, and employs more than 55 million labors. Some parts of India, viz., western and southern region are largely dependent on this industry. Besides, many people are engaged in either cotton production, or the garment industry, many factories produce the machines required for the textile industry etc. Thus the Textile Industry is very important to India's economy, directly or indirectly.

AIM & OBJECTIVE:

To design the proposed Integrated Textile Park,

The main objectives are-

- To promote textile industry in the region.
- To provide platform for marketing.
- To highlight the identity & character of the city.

To provide knowledge of governmental scheme.

Scope in Uttar Pradesh

Uttar Pradesh has a rich heritage in textile and handicraft, which notably spans silk work in Varanasi, Chikan and Zari work in Lucknow, carpets in Bhadohi, and textile product in Pilkhuwa and Farrukhabad. According to the survey there are 15 towns are connected to the main hub of textile called Farrukhabad for **Examples:G**ursaiganj,Talgram,Kaimganj,Chibramau, Saraiprayag,Tirwa etc

ABOUT THE PLACE

Ancient history of Farrukhabad district dates back to remote antiquity. Large numbers of stone statues are found at Sankisa and Kampil. Farrukhabad can claim great antiquity in sculpture. The Aryans settled here, who were close allies of kurus. the traditional history of Farrukhabad district is gleaned from the puranas and Mahabharata. this region rose into great prominence during the Mahabharata period. Kampilya was the capital of South Panchala. Panchala figures in the tenth position in the list of the 16 premier states (Mahajanpada) in the time of lord Mahavira and lord buddha and is said to have comprised the region covered by the present districts of Bareilly, Badaun and Farrukhabad.

METHODOLOGY

By combining the visual quality with the textural quality to enhance the usability and characteristic of various art forms that have profound expression with the fashion design. It will give a boost to the textile industry of that area.

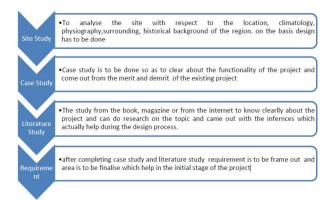
SCOPE

- Social, cultural & economical upliftment of society.
- Exploration of weaver skills and creativity.
- Creating opportunity and providing employment.
- Create an environment of awareness through workshop and training centre.

LIMITATIONS

Due to limited knowledge in project typology and time constraint for the scale of proposal, consideration for the proposal shall be restricted to certain level of detailing.

RESEARCH METHODOLOGY



SITE DETAIL

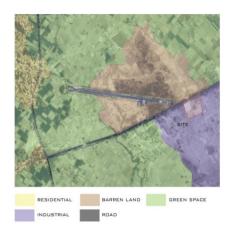
Site is located on state highway-29 in district Farrukhabad. The state highway connects to Aligarh-Kanpur national highway-34. It is about 2km from the main city of Mohammadabad.

SITE AREA AND LOCATION WITH SITE PLAN

- •34301.9 SQM.
- •8.4 ACRES.

GOOGLE IMAGE-





TENTATIVE PROJECT REQUIREMENT WITH ESTIMATE BUILT-UP

Administrative block, Training center, Research institute, Exhibition hall, Workshops area, hostel block, canteen, O.A.T., parking etc.

Estimate built-up area is approx.- 30000sq.mt.

SWOT ANALYSIS

strength

- · low cost skilled labour
- growing domestic market
- · raw material supply
- · high performance machineries

weakness

- · textile engineering skills
- · availibility of water
- slow speed of sample development
- · cost of maintainance

opportunity

- · R&D and product dovelopment
- · mass production capacity
- · technical textile
- · low cost dyeing and chemical

threat

- competition in domestic market
- · ecological and social awareness
- availability fuel for steam generation
- · availability of electrical power

STAGE-II SITE AND CLIMATE STUDY

LOCATION-

Site is located on state highway-29 in district Farrukhabad. The state highway connects To Aligarh-Kanpur national highway-34. It is about 2km from the main city of Mohammadabad.



GOEGRAPHICAL LOCATION-

Farrukhabad district is a district of Uttar Pradesh state in Northern India. The district is part of Kanpur Division. Farrukhabad is situated between Lat. 26° 46' N & 27° 43' N and Long. 79° 7' E & 80° 2' E. It is bounded by Badaun & Shahjahanpur on the north, Hardoi on the east,

Kannauj on the south and Etah & Mainpuri on the west.

TOPOGRAPHY-

The district is a level plane, varied only by a few gentle undulations and slopes, sometimes abrupt, which lead down to the river valleys. The highest recorded elevation is 167m. above sea level at Mohammadabad and the lowest 145.69 m. at Mau Rasulpur in the Trans Ganga flats of Tehsil Farrukhabad. The only marked variation of level is between the two divisions, the upland or bangar,



Topography of farrukhabad



Topography of site

SITE INTRRODUCTION -

The total site area is about 8.4 Acres which is connected with state highway-29 connects to Aligarh-Kanpur national highway-34. It is about 2km from the

main city of Mohammadabad.

Project Name - Integrated Textile Park As A Hybrid Space For Societal Progression In Mohammadabad

Client Name- Textile Park Prvt. Lmt.



8.4 Acres Plot Area-

F.A.R.-2

Location-Mohamadabad, Farrukhabad

Propsed-Yes

The climate of the district is Climatecharacterised by a hot dry summer and pleasant cold season.



ROAD

BYE LAWS

MAXIMUM GROUND COVERAGE - 50% FLOOR AREA RATIO (FAR) - 2 SET BACK: - 15_M - FRONT - 9м - SIDE - 9M - BACK



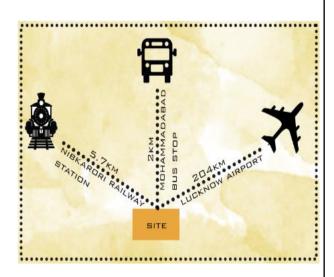
Nibkarori Railway StationApprax.5.7kms Mohammadabad Bus StopApprax.2km Lucknow Airport204 kmAirstrip opp. to the site

CATCHMENT AREAS-

The main catchment areas near site are Mohamadabad.

Sakwai, Khimshepur, Kanhepur, sirauli lie in the radius of 15 kms from the site. Also this areas are famous in zardozi work, textile and handloom works. The city and government offices are further away at 20 kms from the site.





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Catc	nment	areas	near	the	sit

5.N 0.	PARTICULARS	NAME	DISTANCE AND DIRECTION (APPROX.)
1.	Nearest railway station	Farrukhabad Railway station	15 kms., N-E
2.	Nearest	Mehammadahad	3.3 kms., N W
	populated area	Sakwai	2 kms., N-W
		Shekh pur khajuri	0.5 kms., N
З.	Nearest road	Sansika Rd.	3.2 kms., S-W
4.	Nearest school	VPSM public school	4.3.kms., N-E
		Ekana International School	1 km., N-E
		Bhartiya Vidhyalaya inter college	2.3 kms., S W
		Jawahar Navodaya vidhyalaya	3.3 kms., S-W
5.	Nearest hospital	Sumangalam hospital	2.1 kms ₁ S W
		CHC hospital	3.3 kms., N-W
6.	Place of worship	Baba khatu shyam temple	1.2 kms., N-E
		Masjid kaithan nagla	2.7 kms., S-W
7.	Water bodies	Panchal ghat ganga bridge	20.9 kms, N-E

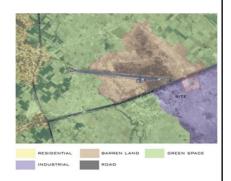
SITE SURROUNDINGS-

The surounding land use comprises mostly industrial use and baren land. The areas near the site boundary are largely vacant and covered in vegetation. There is a Farrukhabad Airstrip opposite to the site.

GENERAL FEDBACKBACK TO THE PROJECT -

The surrounding region have positive feedback for the project as the surroundings will benefits from the presence of such an integrated park in the area.

<u>PUBLIC AMENITIES NEARBY-</u>There are petrol pump, hospital, bank, bus-stand nearby.



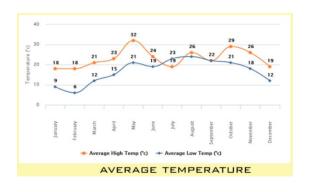
CLIMATE

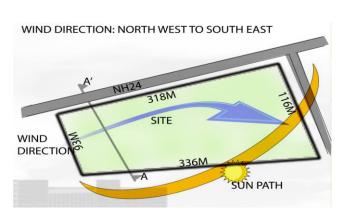
The climate of the district is characterized by a hot dry summer and a pleasant cold season. Climate can easily understand with the help of summer, winter, average annual rainfall and humidity and so many factors are given below:-

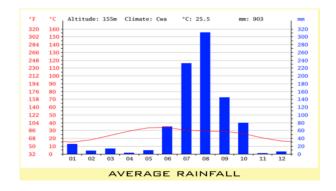
Wind direction is northwest to southeast

Sun direction is generally north east to west via south

Maximum temperature is generally 45°c in summer and minimum temperature is 6°c in winter

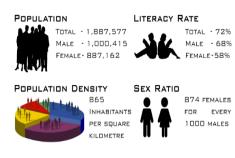






DEMOGRAPHY

According to the 2011 census farrukhabad district has a population of 1,887,577. Its population growth rate over the decade 2001–2011 was 20.2%. Males constitute 53% of the population and females 47%. Farrukhabad has an average literacy rate of 72%, higher than the national average of 59.5%: male literacy is 68%, and female literacy is 58%. In farrukhabad-cum-fatehgarh, 16% of the population is under 6 years of age.



POPULATION GROWTH INCOME SOURCES 20.2% OVER THE DECADE 2001-2011

VEGETATION

Tropical thorn is predominant on the site. Most of the site is barren land and wild grass cover on northeast side. There are no major trees on the site.

SERVICES

If we are talking about services on that perticular site then we have following services are:-

DRAINAGE

The drainage channel is underground along the road, basically below footpaths along the road and is maintained by local municipal corporation

SOIL

The main soil of the district is a good alluvial loam with sufficient moisture and is mostly rausli in texture.

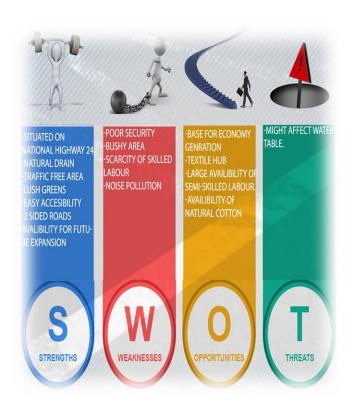




ELECTRICITY

There is a sub station present for the supply of electricity on the opposite side of the site.

SWOT ANALYSIS





SYNTHESIS

LAND ENVIRONMENT.
WATER ENVIRONMENT.
AIR ENVIRONMENT.

STAGE-III CASE STUDY

TRADE FACILITATION CENTRE VARANASI

PRIMARY OBJECTIVE

- Cultivation and enhancement of rich traditions of crafts of the ancient city of Varanasi. 5 2
 Marketing support to weavers and artisans in National & International markets
- Platform for showcasing for region's Handlooms & Handicrafts products.
- Trade Facilitation, export and one-stop shop to domestic enterprise and foreign buyers.
- Linking handloom & handicrafts product promotions with domestic & international tourism



PROJECT BRIEF

- Location : Bada Lalpur, Varanasi
- Total Land Area: 7.93 Acres
- Total Constructed Area: 43,450 Sq.M

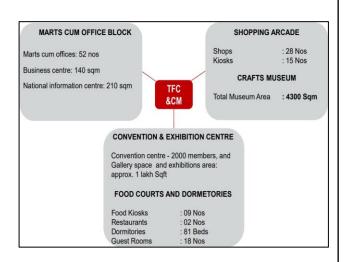
KEY FACTS

- Tentative Project Cost : Rs. 300 Crores
- 1st Phase inaugurated by Hon'ble PM: 22nd Dec 2016 Comprising Entrance Plaza, Crafts Museum and Shopping Arcade
- Expected Completion : July 2017
- Implementing Agency : NHDC

KEY LANDMARKS AND DISTANCES

- Airport : 20 km (60 min)
- Sarnath: 12 km (45 min) On completion of Varanasi Bypass, Airport will be 30 min and Sarnath will be 20 min away
- Railway Station : 10 km (40 min)
- BHU : 18 km (70 min)







BIRD EYE VIEW OF TFC & CM, VARANASI

FACILITY CHART-

Floors	BLOCK 1 Marts cum Office	BLOCK 2 Convention Centre cum Exhibition	BLOCK 3 Food Court cum Guest House	BLOCK 4 Shopping Arcade	Entrance Plaza	BLOCK 5 Museum
Basement (2 levels)	Parking capacity (369 no'	s of cars 434 no's of 2 wheelers	approx.)	-	-	
Ground Floor	Marts (11 no's) Exhibition Space (open courtyard) Public Amenities	Convention Centre with VIP Lounge and green rooms. Atrium (Triple height) Exhibition Gallery Atrium and convention center can be converted to exhibition space. Public Amenities	Food Kiosks (9 no's) Kitchen Area/ Store Indoor Seating Area Courtyard Seating Area Public Amenities Courtyard can be converted to multipurpose exhibition space.	Enquiry Counter Shops (14 no's), Space for Klosks.	Entrance Plaza with courtyard surrounded with 18 M high petals	Not applicable in the present scope of work
1st Floor	Marts (13 no's) ATMs (2nos) Gallery (1no) Public Amenities	Marts (8 Nos) Exhibition Gallery all around atrium Public Amenities	Restaurants (2nos) with Kitchen Areas Public Amenities	Shops (14 no's) Lounge		
2nd Floor	Marts (15 Nos) Business Centre Public Amenities	Marts (4 Nos) Exhibition Gallery all around atrium.	15 Nos Dormitory Rooms (Total 81 Beds) Office Space Lounge Seating Public Amenities	NA		
3rd Floor	Marts (10 nos) Govt. Office (3 nos) National Centre for Trade Information	NA	Double Occupancy Guest Rooms with attached toilets (18 no's), Common Hall and Pantry Office Space Public Amenities	NA		

OTHER SUPPORTING FACILITIES PROVIDED-

- Surface Parking with Parking capacity (82 no's of cars approx.)
- Stand-by generator Supply and Uninterruptible Power Supply
- Central Air-conditioning and Ventilation System
- Kitchen and Food Kiosks provided with Exhaust System
- Lifts and Escalators
- Fire Detection, Firefighting and Public Address System
- EPBX, Server Room and BMS System
- Rain Water Harvesting System
- Sewage Treatment Plant (STP)
- Fresh Water and Treated Water Supply
- Internal Electric Substation
- HVAC Plant Room
- Pump Room and Under Ground / Over Head Tanks
- Emergency exits for easy evacuation
- Interestingly landscaped and shaded courtyards with water bodies of international standard

GALLERIES-

HANDICRAFT GALLERY

• From brightly colored beautiful toys to mesmerizingly crafted metal and wooden artworks, the handicraft gallery is present on first floor to offer glimpse of the age old tradition of handicraft in Varanasi.

> MUSEUM SHOPS

 A very unique platform availed to those interested in GI products, i.e Geographically Indicated products. These are the products with specific quality and reputation due to their certain geographical origin. Varanasi is the hub of GI products. Trade Facilitation Center is providing a unique consumer-artist interface in the form of Museum shops.

CARPET GALLERY

 The history of the Bhadohi carpets dates backs to more than 400 years. Every minute details of these fine quality hand woven carpets has been taken care by artisans.

> TEXTILE GALLERY

 The elegant Banarasi Sarees are always high in demand, all thanks to its fine quality and beautiful Zari work. The textile gallery has a very illustrated display depicting various schools of hand loom from various prat of Uttar Pradesh.









DETAIL PROJECT DESCRIPTION-

- The Trade facilitation and Crafts Museum is mainly comprised of five blocks as detailed below-
- BLOCK 1: MARTS CUM OFFICE BLOCK:
- G+3 structure, having total built-up area of 6,050 sq. mt (excluding basements).

GROUND FLOOR

The ground floor of the block consists of Marts (11 Nos) and a large central courtyard capable of hosting events and exhibitions.(excluding basements).

MAJOR ATTRACTION

- 1.Craft Museum and Exhibition Hall (with space of 1500 people)
- 2. Convention Center
- 3.Amphitheater
- 4. Souvenir Section
- 5.Offices and Craft Store Spaces
- 6.Bank and ATMs
- 7. Foreign Money Exchange Service
- 8. Guest House and Dormitory
- 9. Food Court and Restaurant
- 10.Parking Space

Description	Total Units	Unit Size (mm)
	3	3735 x 8185
Mart	1	3935 x 8185
iviait	1	3905 x 8185
	6	3920 x 8185

FIRST FLOOR

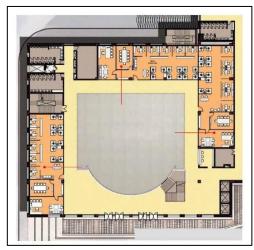
The first floor of the block consists of Marts (13 Nos), 2ATM blocks and exhibition gallery capable of hosting events and exhibitions.

Description	Total Units	Unit Size (mm)
	3	3735 x 8185
	1	3935 x 8185
Mart	1	3905 x 8185
	7	3920 x 8185
	1	4655 x 8185
ATM	2	3780 x 4220
Gallery	1	7535 x 17955

SECOND FLOOR

The second floor of the block consists of Marts (15 Nos) and business center capable of organizing meetings and conferences.

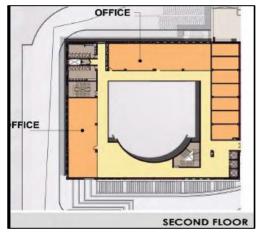
Description	Total Units	Unit Size (mm)
	3	3735 x 8185
	1	3935 x 8185
Mart	1	3905 x 8185
Walt	7	3920 x 8185
	1	4655 x 8185
	2	3780 x 4220
Business center	1	7905 x 17955



GROUND FLOOR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

FACILITIES AVAILABLE

- Marts shall be provided as warm shell facility with all basic amenities installed such as flooring, false ceiling, partitions, ambient lighting, central AC etc.
- All core services such as electrical, fire alarm, fire-fighting, air-conditioning, plumbing, power backup etc.
- Lift lobby with 3 passenger elevators.
- Public amenities for gents, ladies and physically handicapped.
- Common areas are non-air conditioned and finished with flooring, false ceiling, ambient lighting, firefighting, systems, PA system etc.

BLOCK 2: CONVENTION CUM EXHIBITION HALL:

G+2 structure, having total built-up area of 7560sq. mt (excluding basements).

GROUND FLOOR

- The ground floor of the block consists of triple heighted state of the art convention center sizing 52 M x 33 M and is one of the largest capacity convention center presently available in the region.
- The convention hall is accompanied with VIP lounge, green room for both male and female participants along with adequate public amenities.
- The triple heighted atrium provides a grand entrance to the block and capable of hosting events and exhibitions.

FIRST FLOOR

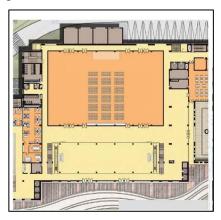
• First Floor consists of Marts (8 Nos) along with Exhibition Gallery.

Description	Total Units	Unit Size (mm)
Mart	1	10420 x 3735
	5	10420 x 3920
	1	7790 x 3920
	1	7790 x 4105

SECOND FLOOR

• Second Floor consists of Marts (4 Nos) along with Exhibition Gallery

Description	Total Units	Unit Size (mm)
	1	10420 x 3735
Mart	2	10420 x 3920
	1	10420 x 4105



GROUND FLOOR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

FACILITIES AVAILABLE

- Convention Hall shall be provided as warm shell facility with flooring, false ceiling, acoustical door, electrical fixtures, central air-conditioning, speakers etc. as per the design guidelines for the facility.
- VIP lounge shall be provided with toilet, pantry and restroom with flooring, false ceiling, partitions, ambient lighting, central air-conditioning, sanitary fittings etc.
- Marts shall be provided as warm shell facility with flooring, false ceiling, aluminum glazed door, electrical fixtures, central air-conditioning, power points, telephone and data points etc. as per the design guidelines for the facility.
- Common areas are air conditioned and finished with flooring, false ceiling, ambient lighting, firefighting, systems, PA system etc.
- Public amenities are provided for gents, ladies and physically handicapped.
- Lift lobby with 2 passenger elevators.
- All core services such as electrical, fire detection and fire-fighting, PA system, air-conditioning, plumbing, power backup etc.
- 2 sets of escalators between ground and first floor.

BLOCK 3: FOOD COURT CUM GUEST HOUSE:

G+3 structure, having total built-up area of 7470sq. mt (excluding basements).

GROUND FLOOR

- The ground floor of the block consists of food court with both indoor and outdoor seating spaces.
- The courtyard space has been envisaged to be converted to form exhibition space or area for other activities as per requirement.

Description	Total Units	Unit Size (mm)
Kiosk1	7	3920 x 5570
Kiosk2	1	3735 x 5570
Kiosk3	1	4910 x 13640
Cash Counter	2	5140 x 2585
Kitchen Addition Area	1	18045 x 2770
Indoor AC seating area	1	40900 x 13700
Outdoor Seating area	1	26600 x 26970

FIRST FLOOR

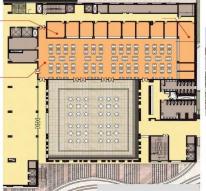
• First floor consists of restaurants as detailed below.

Description	Total Units	Unit Size (mm)
Restaurant 1	1	30155 x 14790
Restaurant 2	1	13025 x 19270
Kitchen Space	1	28610 X 5500
Shop	1	2400 x 2255

SECOND FLOOR

- · Second Floor consists of dormitories and
- an office space as detailed below:

Description	Total Units	Unit Size (mm)	Beds
Dormitory (Type 1)	1	10420 x 7700	10 Nos
Dormitory (Type 2)	1	7790 x 5875	6 Nos
Dormitory (Type 3)	2	5255 x 8785	5 Nos Each
Dormitory (Type 4)	4	3920 x 8785	5 Nos Each
Dormitory (Type 5)	2	8220 x 3920	4 Nos Each
Dormitory (Type 6)	1	8220 x 4970	4 Nos
Dormitory (Type 7)	1	10485 x 5685	6 Nos
Dormitory (Type 8)	1	5560 x 11070	6 Nos
Dormitory (Type 9)	1	3905 x 11070	6 Nos
Dormitory (Type 10)	1	4105 x 11070	5 Nos
Office	1	6340 x 11770	•



GROUND FLOOR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

THIRD FLOOR

Third Floor consists of total 18 double occupancy guest rooms with attached toilets and an office space

FACILITIES AVAILABLE

- Food Kiosks shall be provided as warm
- shell facility only with flooring, false
- ceiling, partitions, ambient lighting, central
- AC, exhaust system etc.
- Indoor seating space is air-conditioned Courtyard seating is non-air-conditioned
- and complete with all basic amenities installed..
- Seating furniture for indoor and outdoor courtyard seating space. Interesting lighting fixtures to adequately illuminate the courtyard.
- Only main tap off points for all core services such as electrical, fire alarm, fire fighting, airconditioning, water supply and drainage, power backup etc. provided.
- 81 single occupancy beds and lockers shall be provided for dormitories.
- All other requirements such as beddings, drapes, television unit etc. in rooms shall not be provided by the Authority.

BLOCK 4 : SHOPPING ARCADE

- G+1 structure having total built-up area of 2,300 sq. mt.
- Shopping Arcade has a total of 28 Shops, located on Ground and First floor levels, having an area of about 320 Sq. ft.

FACILITIES AVAILABLE

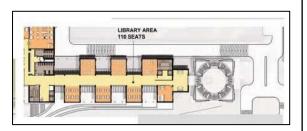
- Common areas are non-air conditioned and finished with flooring, false ceiling, ambient lighting, firefighting, systems,PA system etc.
- 2 passenger lifts are installed along with fire staircase.
- Space for installation of tensile structures for Kiosks, lighting, paved area along with landscape is provided on the ground floor between shop units.

BLOCK 5 : CRAFT MUSEUM

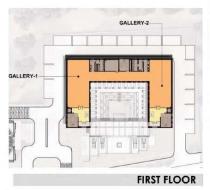
- The Museum block, a G+2 structure having total built-up area of 3950 sq. mt..
- It is envisaged to create a story-driven and engaging experience for visitors, the museum and the exhibition gallery includes provision for display of textiles, carpets and handicrafts
- in an engaging environment.
- Amphitheater: The open air theatre surrounded by the arms of the Museum Block has been designed to accommodate 250 to 300 guests and shall host multiple cultural events and light and sound shows.









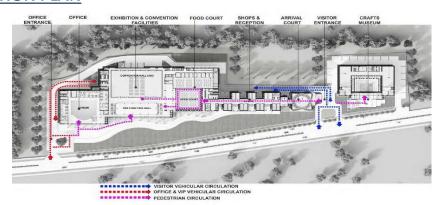




> VIEWS



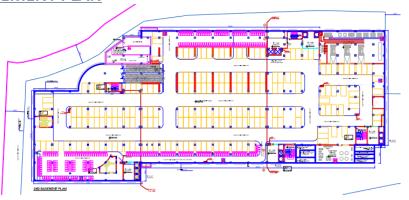
CIRCULATION PLAN



> SITE PLAN



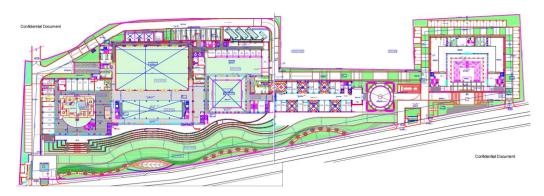
> SECOND BASEMENT PLAN



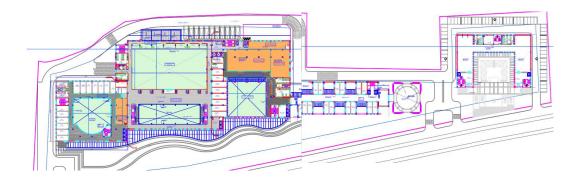
FIRST BASEMENT PLAN

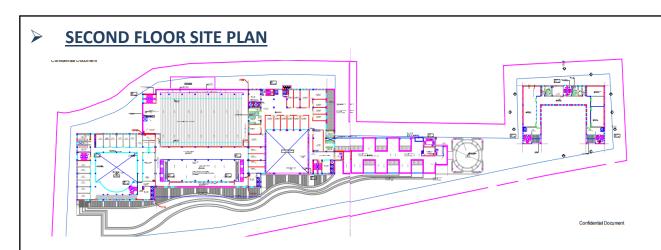


GROND FLOOR SITE PLAN

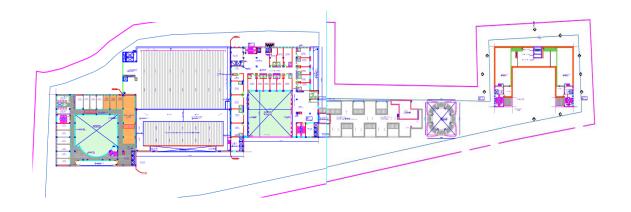


FIRST FLOOR SITE PLAN





> THIRD FLOOR SITE PLAN



GANGA MAKI TEXTILE STUDIO, UTTARAKHAND

❖ INTRODUCTION

- Ganga maki textile studio is a collaborative project which is undertaken by the maki studio from Japan and commissioned to one of the India's leading architectural firm studio Mumbai.
- The project is innovation of tradional craft and local material.
- The complex took 4 year of complete. It was design by the architect Bijon Jain and his team, the time was taken to innotively and carefully combined different natural material to produce the finely textured, functioning facility



SITE-ANALYSIS -

Location: Bhogpur, 30km from Dehradun, Uttarakhand

Topography:Sloping

Climate: Sub-tropical climate during summer and below 5 degree during winter

Rainfall – 1285mm per annum

Accessibility – 60km away from Dehradun airport

Soil type- Brown forest soil

Geographical features- Good range of view point of the mighty Himalayas

Built up Area – 1300 Sq m

Ganga Maki Textile Studio depends on a close relationship with the sun and the moon because we use the existing agricultural terraces to cultivate indigo.

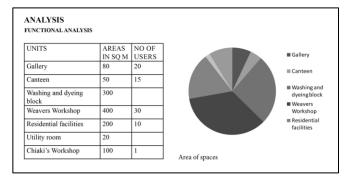
PROJECT BRIEF

Architect – Bijoy Jain Firm – studio Mumbai, maki studio, Japan Client – Chiaki Maki Project size- 1300 sq.mt. Year of Completion – July 2016





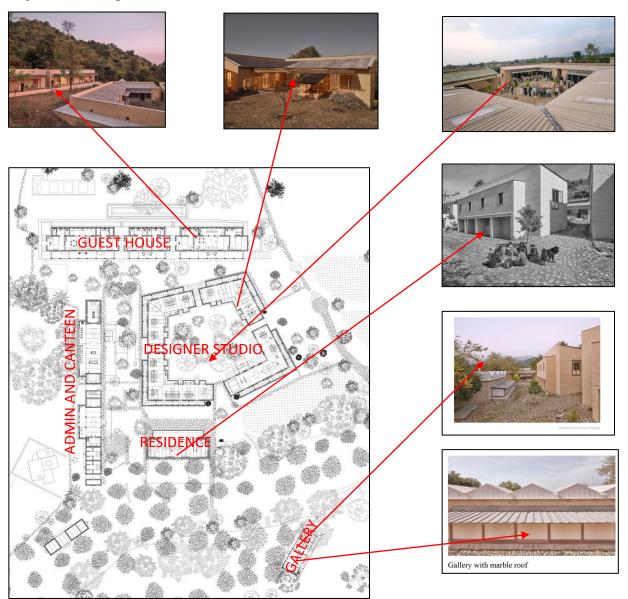
ANALYSIS FUNCTIONAL ANALYSIS



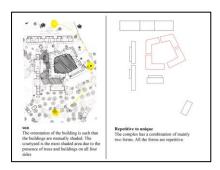
NO	DESCRIPTION	ANALYSIS	
1	Structure	Load bearing	
2	Material	Brick, Stone	
3	Wall finish	Lime	
4	Roof	Sloping roof with marble, corrugated cement sheet, bamboo,	
5	Height of walls	4-6 m	
6	Wall thickness	30	
7	Flooring	Stone	
9	Foundation	Stone	
10	No of storey	1	

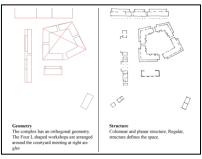
MATERIAL USED IN BUILDING

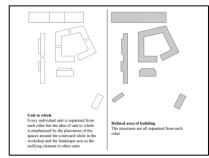
- Locally available material are innotively used for construction.
- The main spaces are made of bricks, finished with lime, and are covered by asbestos free cement sheet roof, and paved with stones floor.
- Adjacent working area have lime floor and stone slab roofs

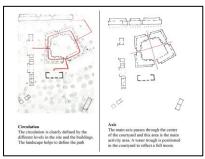


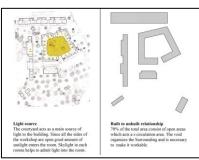
DETAIL PROJECT DESCRIPTION

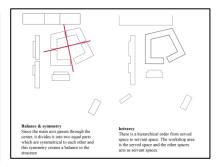












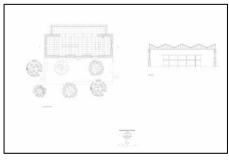
❖ DETAIL PROJECT DESCRIPTION

> WORKSHOP BLOCK

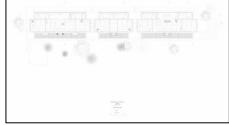




≻GALLERY BLOCK

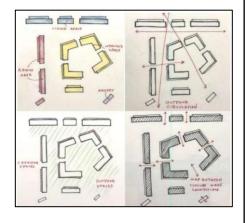


> RESIDENCE BLOCK



>INFERENCES

- The innovative combination traditional craft and local material propels us to rethink how craft is understood.
- The deign of studio shows how to incorporate both weavers and the designer at the same place by giving importance to both.
- Diffused light is used in Innovative roof • studio. techniques provided.
- This project says that virtue is gained not because of impressive array of natural material nor because it was handmade. The value is gained because of how the material is used in keeping with their intrinsic character and the purpose.
- Courtyard spaces are centred to give inclusive feeling to the people working in the studios.
 - Dying unit placed is separately to avoid fumes and heating.

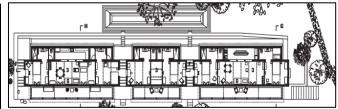


❖ DETAIL PROJECT DESCRIPTION

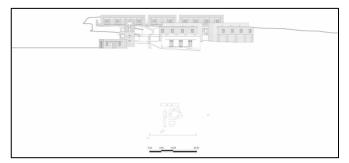
ADMIN AND CANTEEN BLOCK



GUEST-HOUSE BLOCK



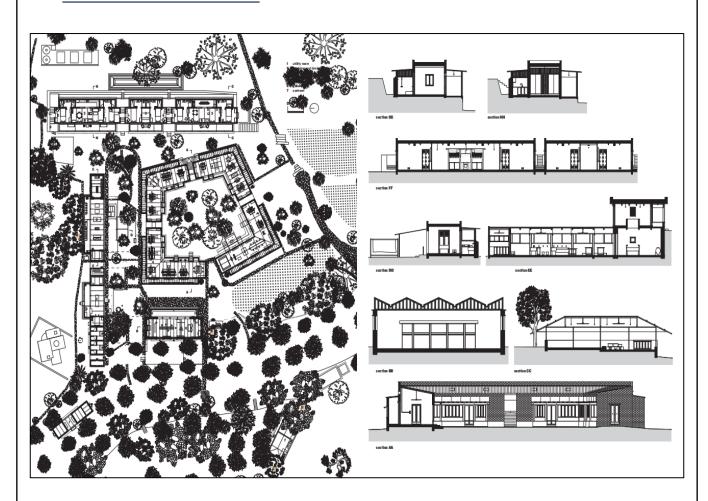
❖ SITE ELEVATION



❖ SITE SECTION



> SITE PLAN AND SECTIONS



LITERATURE STUDY

KHAMIR CRAFT RESOURCE CENTRE, KUTCH

❖ INTRODUCTION

Khamir operates out of the unique campus in Kukma, Kuchchh, which is located 15 km from Bhuj. The district is surrounde by ocean on one side, the Rann of Kuchchh, a vast salt dessert, on the other. Once a major trade hub of indus valley delta, Kuchchh has long been a melting defined by fluid boundaries.

It is a meeting point of people, and traditions across a diversity of ecosystem and terrains. The campus is a space of artisian, resource group and institutions, buyers, suppliers and craft lovers around the world to gather under one roof to exchange ideas, collaborate and learn.

PROJECT DETAIL

• Project: Khamir Craft Redource Centre

• Architect: Neelkanth Chhaya

· Assistant : Sachin Soni

Structural consultants: Himanshu ParikhElectrical consultants: Nandish Shah

Plumbing: Awindbhai Mewada

• Specialised building techniques- Hunnarshala foundation for building.

 Technology & innovation associates: Hunnarshala personal Client: Nehru foundation for development, Ahmedabad Year of completion: 2017

❖ SITE ANALYSIS

• Location: Kukma, Bhuj, Kutch

- Context: Khamir is located in the outskirts of the city 10 km away from Bhuj. The immediate context is open lands
- Topography: Gentle contours
- Climate: The average temperature during summer months can rise up-to 31 deg Celsius. In winters the temperature drops and average temperature in the months of winter is about 12 deg
- Site Area: 8093.71 Sq.m
- Landmark: Near BMCB campus kukma road.
- Footfall: 11000 visitors annually





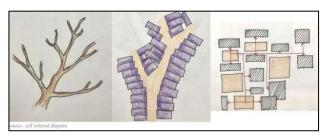
• Distance of 13.7 km from Main town creating a calm atmosphere in the building and the villages are around a proximity of 3 km from the building which helps the users for easy access to the building

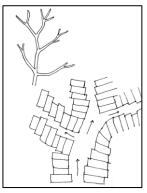
DESIGN CONCEPT

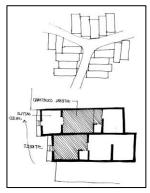
Khamir was designed to create 2500 sq m facility for the promotion of craft in Kutch. Concept of planning

this center is derived from the local streetscape and village pattern noted before earthquake.

- Distance of 13.7 km from Main town creating a calm atmosphere in the building and the villages are around a proximity of 3 km from the building which helps the users for easy access to the building
- Y shaped branching of streets forming interconnections at regular intervals. Chowks which further form village settlement.
- Every house had an internal courtyard which is either placed at the entrance forming an entrance courtyard which is open to the sky or an internal courtyard which is connected to other spaces



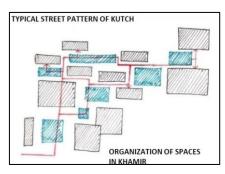


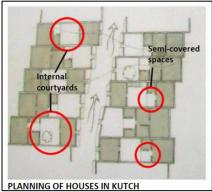


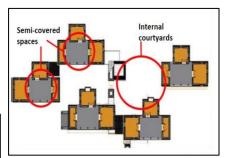
- It is a combination of similar style of masses. it together for a unit to whole concept.
- A geometry is seen in its arrangement in height and proportion. it is the idea of addition and subtraction of a form. Defined area of the building unit to whole.
- Single complex, all units are joined together. Reinforced by geometry and structure. Each individual unit have a relationship of repetitive to unique.

> TYPICAL STREET LAYOUT

- The planning of khamir is done in the same manner as of the village street layout forming chowks and courts.
- As an accelerator for community spaces throughout the campus. It establishes a kind of urban approach having integrity and involvement.

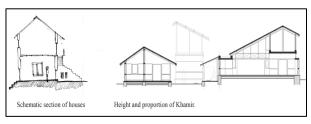






HEIGHT WIDHTH PROPPRTION OF COURTYARD

- It is a combination of similar style of masses. it together for a unit to whole concept.
- A geometry is seen in its arrangement in height and proportion. it is the idea of addition and subtraction of a form. Defined area of the building unit to whole.
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TYPICAL STREET LAYOUT

- The planning of khamir is done in the same manner as of the village street layout forming chowks and courts.
- As an accelerator for community spaces throughout the campus. It establishes a kind of urban approach having intergrity and involvement.

Mostly two storied structures interconnected by courtyard for light and ventilation.

It is a human scale structure which is connected to the ground. The height width proportions of the courtyards and streets provide shade for most of the day.

COURTYARDS AND CHOWKS

PROGRAM

- Khamir administration office
- Office space and studios labs for 7 seven craft focal point
- Service centre for documentation design.
- Facilities for regional, natural and chemical dying.
- Quality textile laboratory
- Value added tailoring unit
- Raw material depot.
- Collaborative space for demonstration and learning.
- Meeting and exhibition halls.
- Private residences and dormitories.
- Dining hall and canteen.
- In the satisfied 'cluster' administrative office and space for craft activities staggered along various levels compose the plan.
- Through internals, complex resonates with a sense of openness
- The path weaves through a series of progression and pauses narrow lane ways chase the lights into the courtyard and chowks.
- The materiality is contextualized within the discourse of this thought. It is a manisfesation of an idea of local availability.







DESIGN CONSIDERATION-

- Khamir craft resource center is located in an area which falls in Type V seismic zone and climate of the region is hot and arid. So the main consideration to be kept in mind would be-
- Making the space user family and suitable for artists.
- The structure should be climate responsive.
- The structure should be earthquake resistant.
- Prof. Neelkanth Chayya design it in a manner so that it portrays the environment that can be found in the village of Kutch.
- The construction was carried out by Hunnarshala foundation making is sustainable design along with earthquake resistant taking inference from the vernacular architecture of Kutch region.

CLIMATE CONSIDERATION-

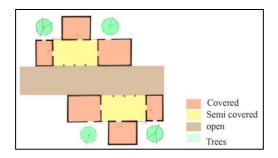
- · Hot and dry climate-
- Building must remain cool the extremely hot summer and warm in cold winter.
- Shade and insulate the house against the heat of the day and flush out any stored heat during the cooler nights.
- Capture and store solar energy in a solid material such as concrete floor or brick wall (thermal mass)
- The roof and wall are insulated with reflective foil and bulk insulation to reflect heat and retain warmth or coolness.



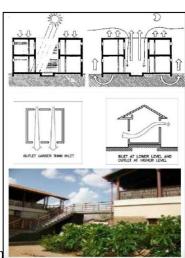
- Use light color for external and internal was surfaces .
- Different techniques of mud structure and used in different climatic condition.
- Puddle, Wattle and daub, Rammed earth
- Courtyard is provided by the water and plant, it acts as a cooling source.
- Internal courtyard provides natural ventilation and cross ventilation.
- Most opening are the internal courtyard rather than exterior surface.
- Outlets of higher level serve to vent hot air.
- Ventilators are preferred at higher level as they help in throwing out the hot air.
- Colors that absorbs less heat should be used to paint the external surface.
- Darker shades should be avoided for surfaces exposed to direct solar radiation.
- UsiNg material that take a longer time to heat up.
- Providing buffer space(lobby area etc) between the living areas and the outside.

ARCHITECTURAL ANALYSIS-





- Interrelation between closed, semi open and open spaces to create natural and fresh environment for people working there.
- Kattas (outdoor seating) are provided in courtyard.
- · Staggered arrangement of built form

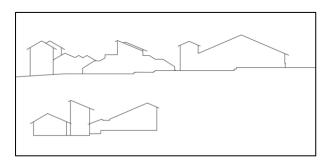


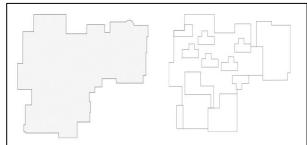
DESIGN CONSIDERATION-

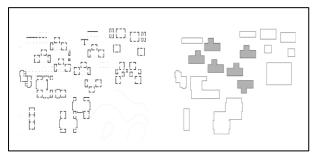
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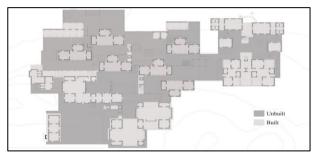
MASSING-

- It is a combination of similar style of masses. it together for a unit to whole concept. it is the idea of addition and subtraction of a form.
- Single complex, all units are joined together. Each individual unit have a relationship of repetitive to unique.
- It is a combination of columnar & planar structures columns & walls form the basic structureThe complex has a combination of mainly three forms. The workshop area, Administration and residential. All the forms are repetitive expect the toilets and part of administration.
- 70% of the total area consist of open areas which acts a s circulation area, workshop area. Most of the activities occur in these areas more than the built area
- The void organizes the Surrounding and is necessary to make it workable.
- Permits circulation among the path admit light and air

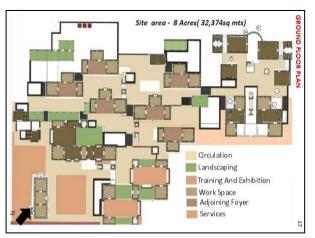




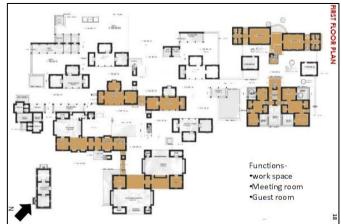




GROUND FLOOR PLAN-



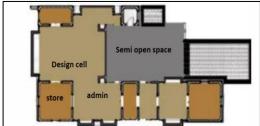
FIRST FLOOR PLAN-



ADMINISTRATION UNIT

Administration block is designed for 10 users.

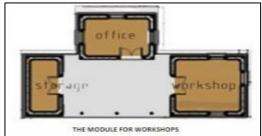




WORKSHOPS

- The workshop area made by making a module and repeating its six time creating lanes and chowks in between them.
- Module level- the module are created with covered interior space around a semi open space at the centre which act as an informal active varandah.
- Each module is arranged in a way, where they get their own individual space for workshop.



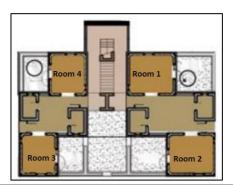




- The training area is a club of 3 blocks which are repeated and placed on the site contour forming an informal and interactive space .
- The training area is play of such module where block are mirrored and placed.

ACCOMODATION

 Accommodation are mirror of one block connected with a staircase and courtyard.

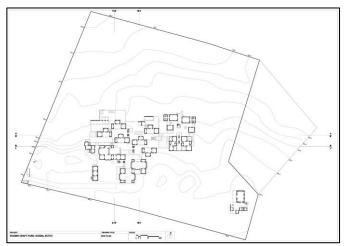






> SITE PLAN-

CLUSTER PLAN-

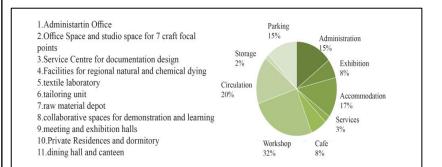




> SITE SECTION-



FUNCTIONAL ANALYSIS-



AREA STATEMENT-

SPACES	AREA (IN SQ M)	NO OF USERS	INTENDED USE OF SPACE
Reception and exhibition	130	50	Outlet of products made at khamir
Museum office	150	20	Collection and display of products
Administration	50	10	Managing the center
Bell workshop	60	6	Workshop, office and storag
Pottery workshop	160	15	Workshop, office and storag
Block printing	160	15	Workshop, office and storag
Weaving workshop	60	6	Workshop, office and storag
Training area	130	35	Conference and teaching
Leather/ lacquer	60	30	Workshop, office and storag
Tie and dye	275	25	Workshop, office and storag
Guest-house	608	20	Accommodation facilities for guests
Cafe	36	12	
Store	100		Storage of finished product for selling
Toilets	100		
Total area	2135		

FOUNDATION

- Deep rubble stone foundation hold up the ground floor up till the plinth level of all the buildings using stone available nearby.
- 2mt. Deep strip foundation are made with CC base.

WALLS -

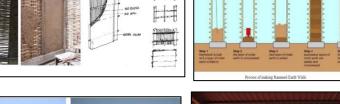
Walls of khamir are combination of three types

- Rammed earth walls
- Stabilized concrete block
- Wattle and daub
- POP structure walls





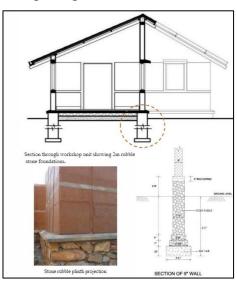






STRUCTURE SYSTEM

- Khamir structure system involves three main elements
- Foundation
- Wall
- Roofing
- It is built by hunnarshala foundation, an organization especially conceived to learn, use and promote sustainable practices in construction, khamir employs unique strategies of making in this earthquake prone area







POP SCULPTED WALL







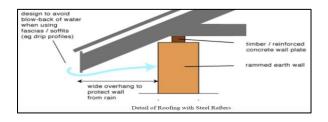
DOORS AND WINDOWS -

Locally carved shutter make windows and doors are made exactly in the vernacular manner.

ROOFING-

Above the ground floor steel frame takeover and support the roof. The roof are made with corrugated sheeting covered with country tiling, using a naturally available compound, purlite as an insulating and binding agent.

Mainly there were two types of roof. One was supported with metal truss and metal sheet above it. Concrete was laid on it for thermal insulation. Another roof was supported with wooden truss. Bamboo strips were laid on it with country tiles above it. Decorative facia were used Gutter were provided which were further connected to recharge pit through metal pipes.

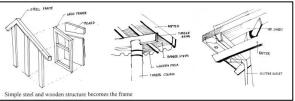


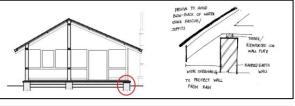
CONSTRUCTION DETAILS-

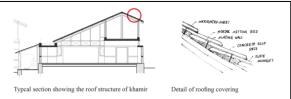
Khamir campus is a manifestation of the idea of sustainability. it is built by Hunnershala foundation known for sustainable practices in construction. Khamir employs some unique strategies of making it earthquake resistant, earth architecture and vernacular architecture of Kutch region.

NO	DESCRIPTION	ANALYSIS
1	Structure	Load bearing
2	Material	Rammed earth, wattle and daub paneling on 1st floor
3	Wall finish	Cement slurry and plaster finish/ paint/ exposed
4	Roof	Sloping roof with Spanish tiles
5	Height of rammed earth walls	3m
6	Wall thickness	300mm
7	Flooring	IPS
8	Plinth+ DPC	PCC and rubble soling with lime plaster
9	Foundation	Rubble stone
10	No of storey	2
11	Type of ramming	Manual









INFERENCES

- The locally available materials rammed earth, rubble stone, wattle and daub, light weight metal lath plaster and panelling are used effective.
- Designed in response with the climate, openings are made small in such a way without letting sand and dust enter inside and filter the light coming.
- The movement through the verandas of the workshop buildings across a series of shaded courtyards recreates the winding patterns of the village, from courtyard to courtyard, from one house to another.
- The residential buildings are more humble in comparison with the others. They are carefully positioned in the relatively private and calm diagonal extreme of the campus.
- Manifestation of the idea of local availability and sustainability.
- Disaster resilient techniques.
- Clubbing of courtyards and activities.
- New techniques like POP sculptures wall.
- The site selection criteria should be based on the location of the users.

LITERATURE STUDY

LIVING AND LEARNING DESIGN CENTRE, KUTCH

❖ INTRODUCTION-

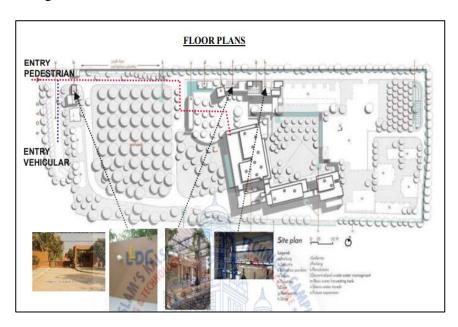
- The Living and Learning Design Centre (LLDC) is a pioneering effort of the Shrujan Trust to preserve, revitalize, and promote the glorious craft heritage of Kutch.
- The sprawling LLDC complex, located in Ajrakhpur, Kutch, houses an international-standard crafts museum that has received wide appreciation from visitors all over the world.
- The Living Embroideries of Kutch, an on-going show at the museum, celebrates the rich and diverse embroideries of Kutch.





❖ PROJECT DETAIL-

- Client :Living & Learning Design Center- LLDC Ajrakhpur Kutch
- Location : Ajrakhpur, Dist Kutch, Gujarat
- Architects: Uday Andhare & Mausami Andhare
- Design Team: Mitesh Panchal, Sayali Andhare, Tejas Jasani, Shweta Rathod, Surendran Aalone
- Consultants: Prof. R.J.Shah & Mehul Shah, Ami Engineers, Ahmedabad
- Site Area: 8 acres
- Building Area: 1.2 lac sq.ft
- Completion Year :2015
- Civil Engineers :Shrujan Team
- Client: Living & Learning Design Center- LLDC Ajrakhpur Kutch
- Context: Khamir is located in the outskirts of the city 10 km away from Bhuj.
- Climate: The average temperature during summer months can rise up-to 31 deg Celsius. In winters it is about 12 deg Celsius.

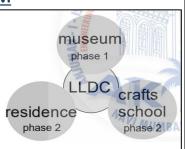


❖ NEIGHBORHOOD CONTEXT

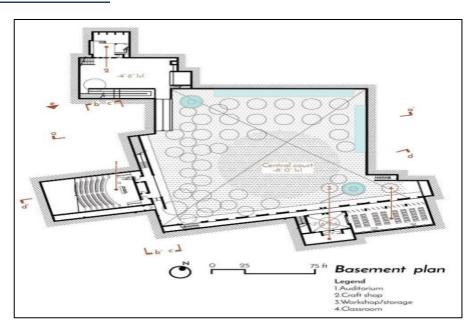


❖ SPACE PROGRAM

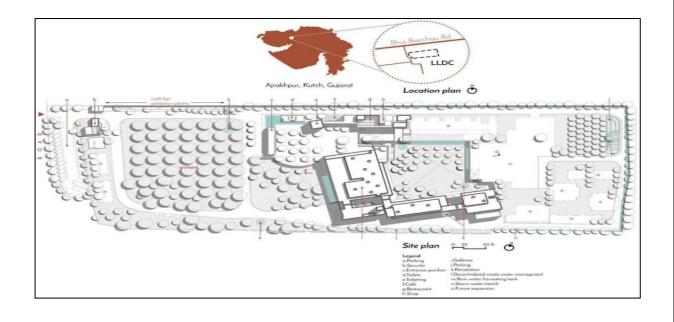
- Admin office
- Library
- Craft shop
- Study area
- Auditorium for 120
- Gallery
- Parking
- Toilet
- Handson gallery



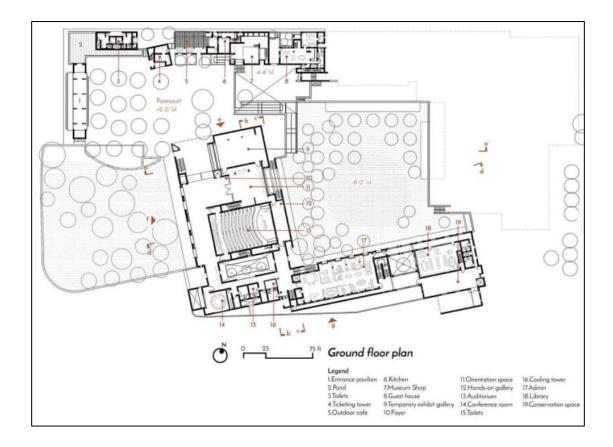
SASEMENT PLAN



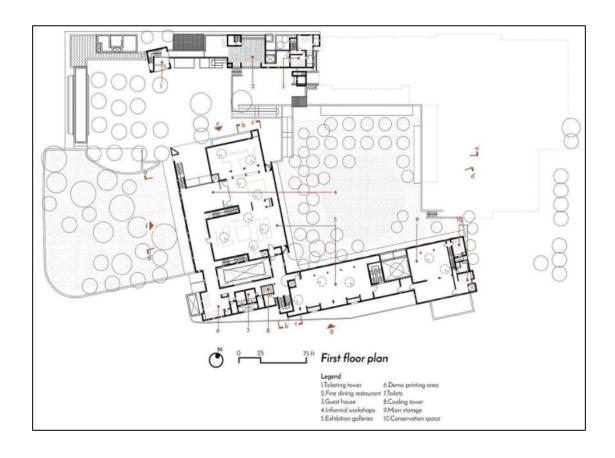
❖ SITE PLAN



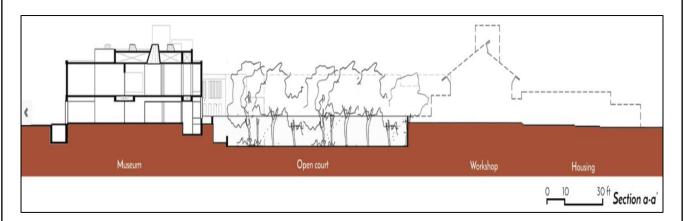
GROUND FLOOR PLAN

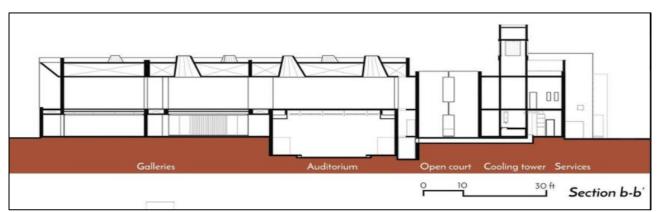


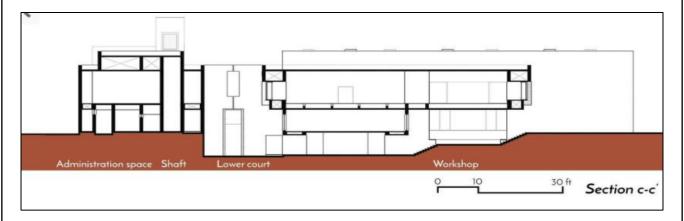
FIRST FLOOR PLAN



❖ <u>SECTIONS</u>



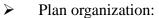






ARCHITECTURAL ANALYSIS

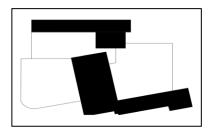
- Built to unbuilt relationship: both built and unbuilt is given equal importance and related to each other
- Geometry: complex has a main rectangular geometry
- Structure: Columnar and planar structure, Regular, structure defines the space.
- Symmetry and balance
- Stored rainwater cools the structure:
- Rainwater harvesting tanks, integrated in the design collects, 500,000 liters of rain annually for drinking.
- Use of radiant cooling pipes circulate the same stored water below the floor on terraces and other slabs, draining the heat continuously to maintain the mean radiant temperature of the structure between 30 and 34deg c. ensuring that very little energy is used to cool the air and maintain the desired humidity using low energy humidity control.

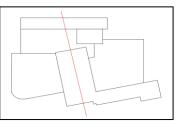


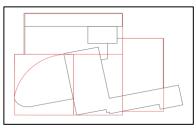
- Segregation of service functions, on the heat gain sides, layering of spaces with circulation and ancillary functions ensured a stable and protected core.
- A solid facade and porous layered inner spaces ensure breathability allowing for breezes to tunnel across during the night and day ensuring comfort..
- ➤ Light and its modulation:
- The quality and quantum of light in the galleries is guided through carefully crafted concrete truncated conical skylights, which orient to the sun allowing for a diffused play of light.
- A special IR/UV film over the glass covering the oculus cuts off the harmfulUV and keeps the heat out.

Vegetation:

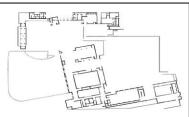
- Local low water consumptive, dense canopy, tree species planted to augment existing trees in the orchard.
- Tree shaded enclosures ensure appropriate use of outdoor spaces for people in the intense summers.

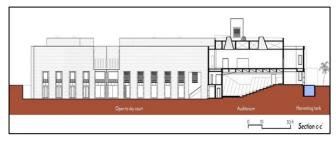


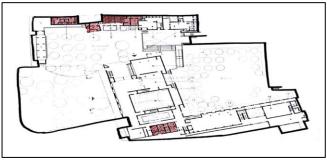


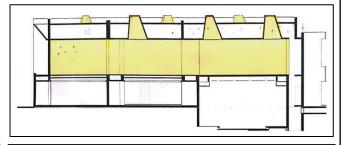


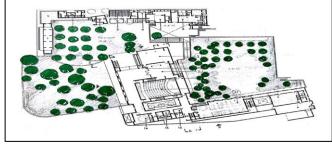






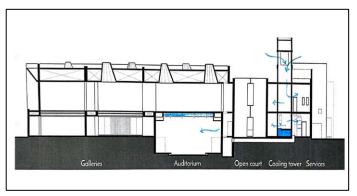




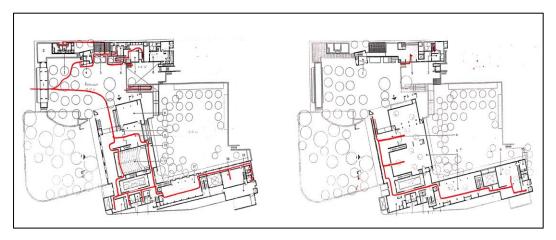


Grey water usage:

- Decentralized wastewater treatment system (DEWATS) is designed to handle all the wastewater from the site including the process effluents from the workshops and toilets.
- Water from the site is managed within the site through a series of percolation wells and trenches that hold water along the perimeter of the compound wall section.

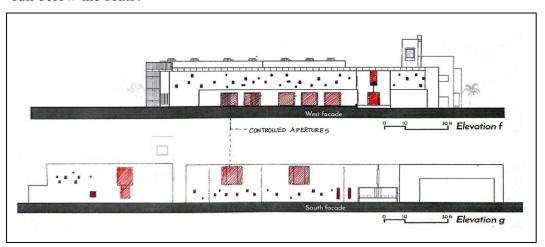


Circulation



> Fenestrations:

- windows and cutouts on the west and south allow the winter sun to warm the interiors while keeping out the summer sun.
- Controlled apertures, calibrated to the sun angle ensure its working and becomes a simple strategy to effect ventilation without increasing thermal gain.
- The space within the vertical shaft of the overhead water tank is designed to act as a cooling tower.
- **Nighttime** cool air is passed over of packaged thermal created stored bottles drinking mass bv water stacked in crates almost three floors high. air is guided to the auditorium area through ducts that run below the seats.



FUNCTIONAL ANALYSIS

SPACES	AREA	NO OF	■ café
	(IN SQ M)	USERS	■ Kitchen
Cafe	36	20	■ Museum shop
Kitchen	30		■ Guest house
Museum shop	20	10	■ Exhibition gallery
Guest house	60	6	■ Temporary exhibition
0.0001.0000		_	■ Handson gallery ■ Auditorium
Exhibition gallery	210	100	Auditorium Conference room
Temporary exhibition	130	60	■ Library
Hands on gallery	33	5	Restaurant
Auditorium	322	150	Demo printing area
Conference room	36	20	■ Informal workshops
			■ Storage
Library	84	31	■ Classroom
Restaurant	80	50	■ Craft shop ■ Toilet
Demo printing area	49	6	Storage for exhibition
Informal workshops	155	30	Orientation space
	40		Administration
Storage	40		
Classroom	128	80	Area of spaces
Craft shop	72	10	The auditorium, gallery and the exhibition areas
Toilet	64		occupies the largest area
Storage for exhibition	165		
Orientation space	90	20	
Administration	200	60	

CONSTRUCTION DETAILS

• LLDC is a manifestation of the idea of sustainability. The design responds, to the local climate, program, economic realities and the need to create a thermally stable environment for the exhibits

NO	DESCRIPTION	ANALYSIS					
1	Structure	Load bearing					
2	Material	Exposed concrete, stone, Fly ash bricks					
3	Wall finish	natural dolomite lime plaster					
4	Roof	Flat roof finished with broke china mosaic					
5	Height of walls	6m					
6	Wall thickness	450mm					
7	Flooring	Yellow polished khavda sand stone, kotah stone,					
9	Foundation	Rubble stone					
10	No of storey	2 + 1 Basement					

❖ INFERENCES

- Manifestation of the idea of local availability and sustainability
- Use of vernacular architecture in a modern way
- Disaster resilient techniques
- Clubbing of courtyards and activities
- Incorporation of light to galleries through truncated pyramids
- The site selection criteria should be based on the location of the users
- Use of water treatment plant

OPEN AREA AND SEMI OPEN AREA



MERIT

- Innovation in construction technology
- The structure is designed in such a way that is caters to the harsh climate of kutch.
- The structure stand out and is known to people

DEMERIT

- The structure lacks parking
- The structure lacks signages.

MODEL









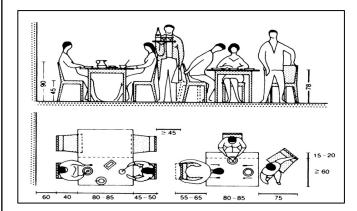
STANDARDS

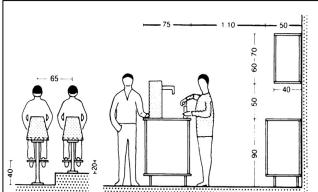
MUSEUM AND EXHIBITION AREA:-

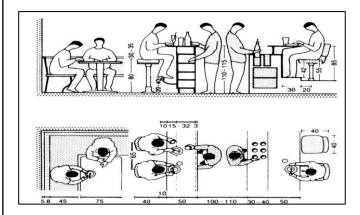
- Purpose:-
- It is an inviting self study centre for research scholars and casual visitors. It is to create interest of individual to know more.
- · Circulation:-
- It should be logical and understandable to visitors. Flexible planning allows adaptation while preserving general framework.
- Vision:-
- Normal human angle of vision starts 27* up from eye level.
- Lighting:-
- The size and color of objects determines the amount of light required.

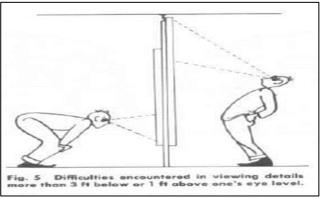
FOOD PLAZA

- Purpose:-
- Snacks and beverages during meals. During the day as well as before and after the shows.
- · Circulation:-
- Easily accessible from the academic zone.
- Counter having a length of 10m can serve 60-70 people in 10 minutes.
- Area:-
- 1.4-1.7 sqm per person with long service counter and good circulation.







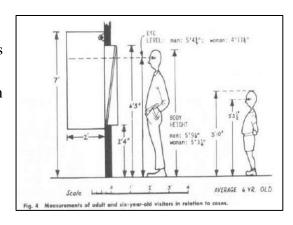


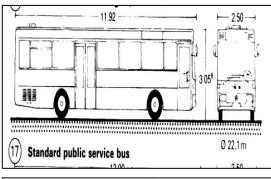
DISPLAY AND GALLERY

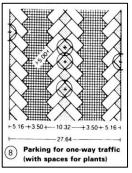
- Measurements of adult and six year Old visitor's relation to display
- Difficulties encountered in viewing gallery more than 3 ft below or 1 ft above eye level

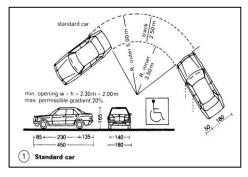
> STANDARD AREAS FOR PARKING:-

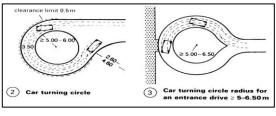
Buses :- 27.8 sqm/bus Cars :- 20.0 sqm/car Scooter/bike :- 3.3 sqm/bike

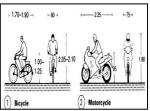








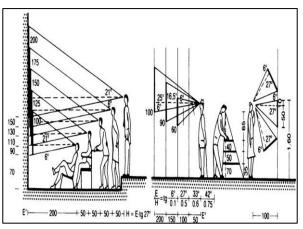


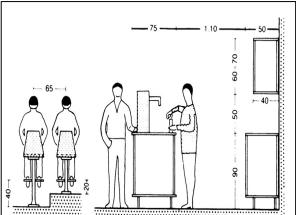


With the help of litreture study and wikipedia we have got the parking standards as well as the standards for exhibition areas.

EXHIBITION GALLERY

CAFETERIA





LOOMS STANDARD SIZE:-

POWERLOOM



POWER LOOM
WIDTH- 1800MM
LENGTH- 1800MM
HEIGHT- 1600MM
MINIMUM DISTANCE
BETWEEN TWO POWER
LOOMS- 800MM

EMBROIDERY MACHINE



> RAPIER LOOM



RAPIER LOOM

WIDTH- 1800MM

LENGTH- 3600MM

MINIMUM DISTANCE

BETWEEN TWO RAPIER

LOOMS- 600MM

PATTERN MAKING LAB

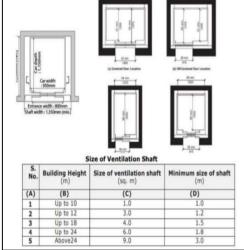


LIFT PROVISION:-

> STAIRCASE REQUIREMENT:-

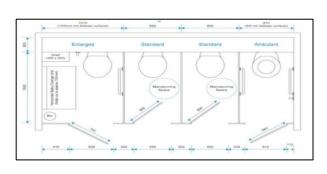
S. No.	Type of Building	Minimum width for each stairway (m)		
(A)	(B)	(c)		
1	Residential Non High Rise Buildings	1.00		
2	Other Residential Buildings e.g. Apartments, Hostels, Group Housing, Guest Houses, etc.	1.25		
3	Educational Buildings like Schools, Colleges	1.50		
4	All other buildings including Hotels, Nursing Homes etc.	1.50		
5	Institutional Buildings like Hospitals etc.	2.00		
6	Assembly Buildings like Auditoria, Theatres and Cinemas	2.00		
6		2.00		

S. No.	Type of Building	Minimum width (m)	
(A)	(B)	(C)	
1	Individual Residential buildings	1.00	
2	Other Residential buildings, e.g. Hostels, Group Housing etc.	1.25	
3	All Other Buildings including Hotels	1.50	
4	Assembly Buildings like Auditoria, Theatres and Cinemas	2.00	
5	Hospital, Nursing Homes, etc.	2.40	



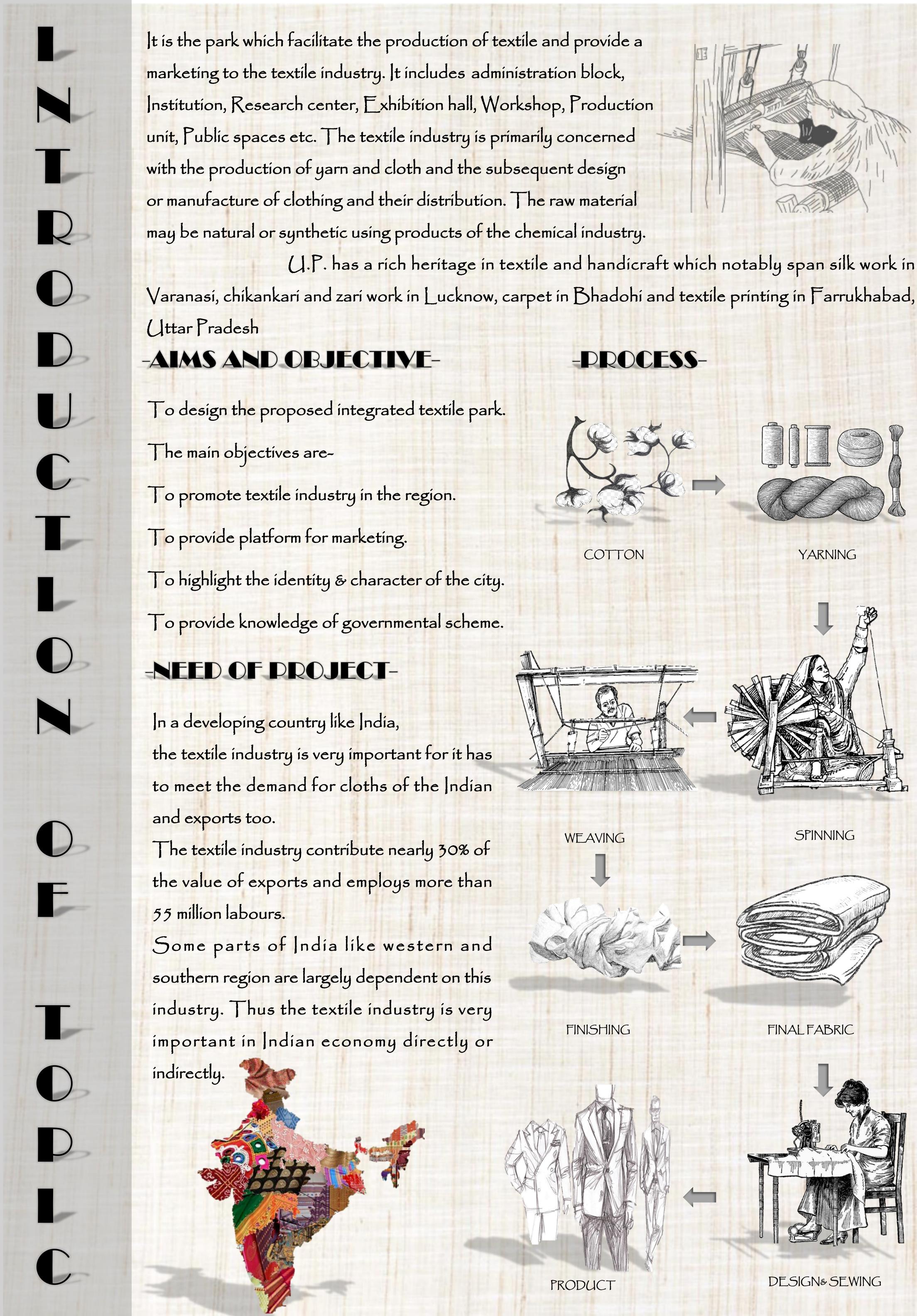
TOILETS:-

Sl.No.	FITMENTS	FOR MALE PUBLIC	FOR FEMALE PUBLIC
1.	Water closets	1 per 200 persons upto 400 persons. For over 400 persons, add at the rate of 1 per 250 persons.	1 per 100 persons upto 200 persons. For over 200 persons, add at the rate of 1 per 159 persons.
2.	Ablution taps	ı in each water closet	1 in each water closet
3.	Urinals	1 for 50 persons	-
4-	Water basins	1 for every 200 persons	1 for every 200 persons
5.	Drinking water fountain	1 for every 100 persons	1 for every 100 persons



BIBLIOGRAPHY

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- https://issuu.com/sriraksha/docs/sriraksha_p_thesis_2021-2022_compressed_1



-LOCATION-

Mohammadabad is at district

Farrukhabad and it is one of the most famous city of zardozi embroidery, zari and royal embroidery in India.

Tradition zardozi fashion is famous for all variety of hand embroidery since 12th century..

It is the large manufacturing market field of zari embroidery.

-SITE-

Site is located at state highway-29 in district Farrukhabad. The state highway connect to Aligarh-Kanpur national highway-34. It is about 2km from the main city of Mohammadabad.

SITE AREA-

34301.9(8 Acres)

-BUILDING BYE-LAWS-

Maximum ground coverage ~ 40% F.A.R. 2

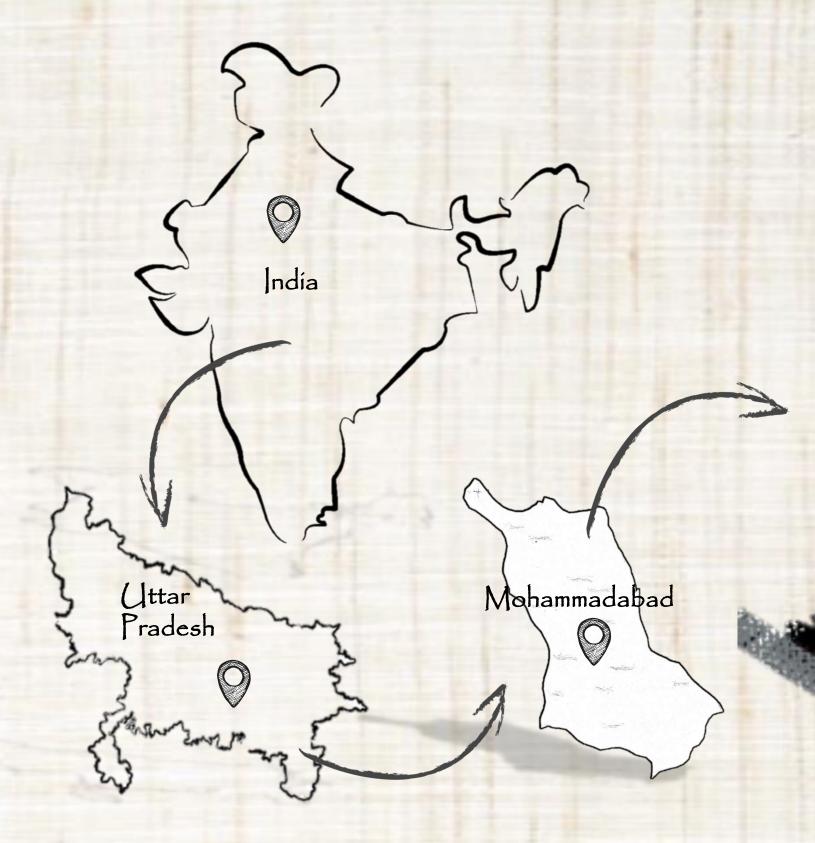
Set back-

Front-15mt.

Side & back 9 mts

-TOPOLOGY-

Flat site with a slight slope. The highest point is a North-East and the slight slope toward the South-West.



-LAND USE

The surrounding land use comprises mostly industrial and barren land. The surroundings are largely vacant and covered in vegetation

-SOIL TYPE-

Alluvial soil
Bearing capacity-5-7.5 tonnes/m2

-ELECTRICITY-

There is a sub-station present for the supply of electricity on the opp. side of the site

-DRAINAGE-

Channel is underground along the road.

N-W SUMMER WIND

-ORIENTATION

Sun path at low angle South to East-West axis.

Sun path at high angle North to East-West axis.

-ACCESSIBILITY-

The site is accessible through state highway-29. You can reach to the site from Farrukhabad barrelly rd. from chibramau Mohammadabad rd.



Mohammadabad Bus Station 2 kms



Nibkarori Railway Station 5.7 kms



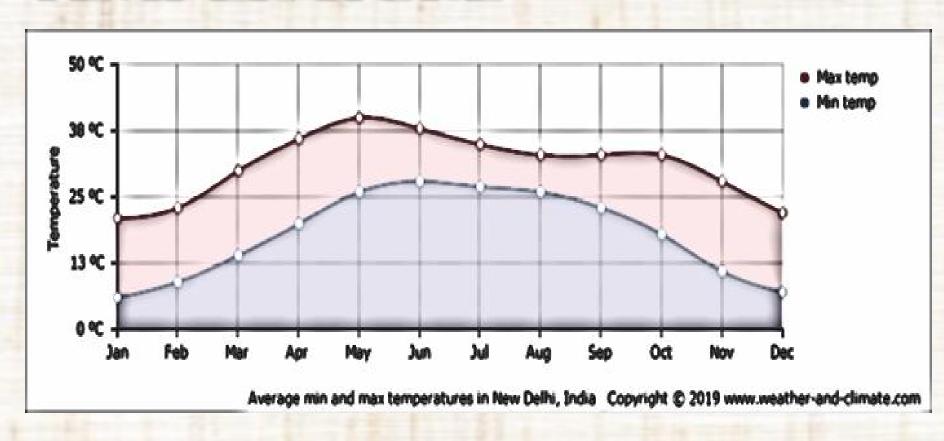
S-E WINTER WIND

Lucknow Airport 204 kms

-CLIMATE-

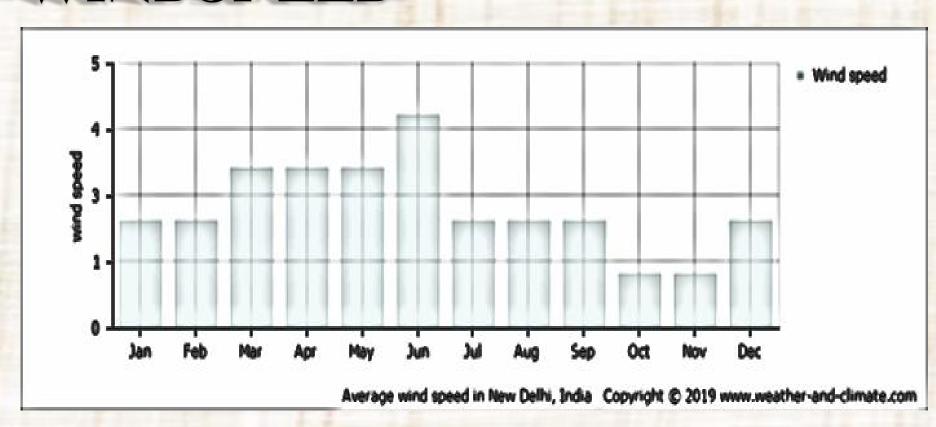
Climate of the site is Composite climate. In summer-Day time temperature is 32-45°C. In Night time 27-32°C. In winter-Day time temperature is 10-25°C. In Night time 4-10°C. Receives strong monsoon winds from Southeast & north-east.

-TEMPERATURE-



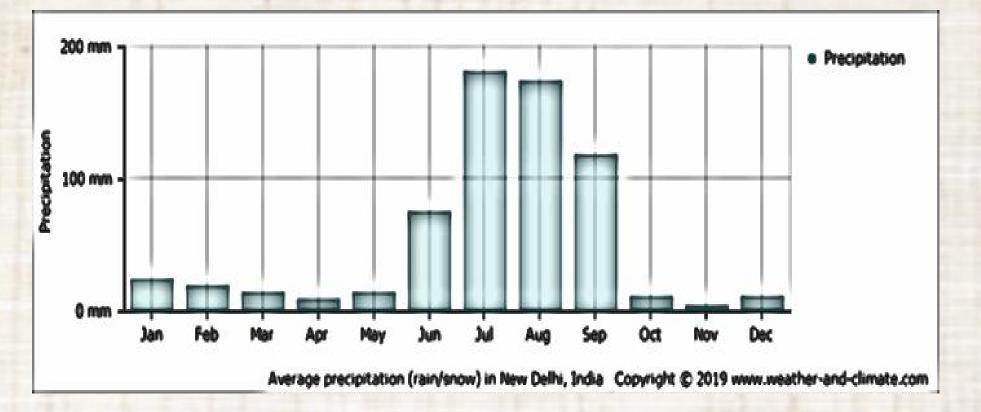
- -Temperature of the area varies from 14.10°c to 46.0°c
- -Mean temperature varied from 25.6°c to 3 5.2°c Rainfall

-WINDSDEED-



- -The wind speed was in the range of 0.1 m/s to 12.9 m/s.
- -The average wind speed varied from 0.6 m/s to 3.8 m/s

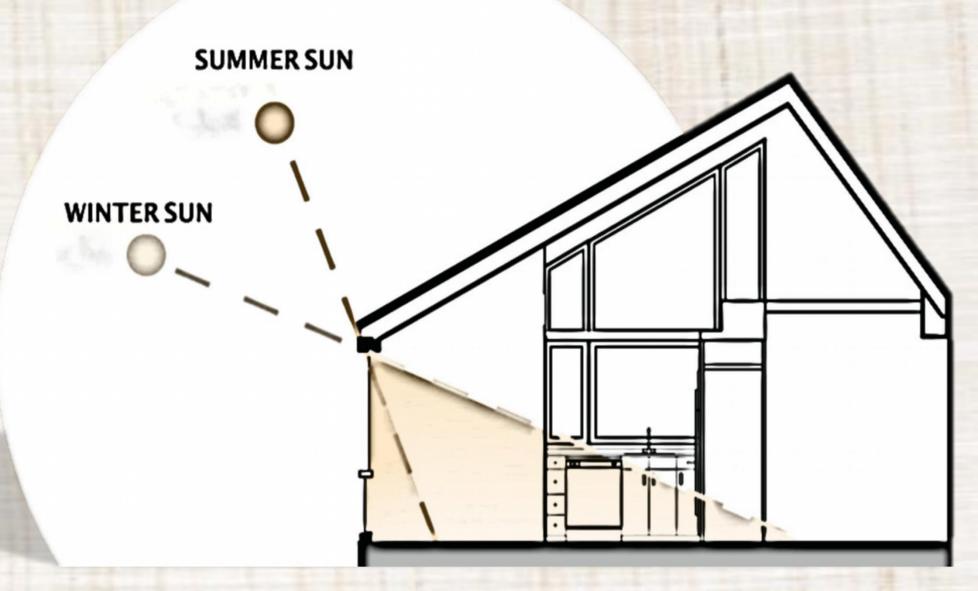
-RAINFALL-



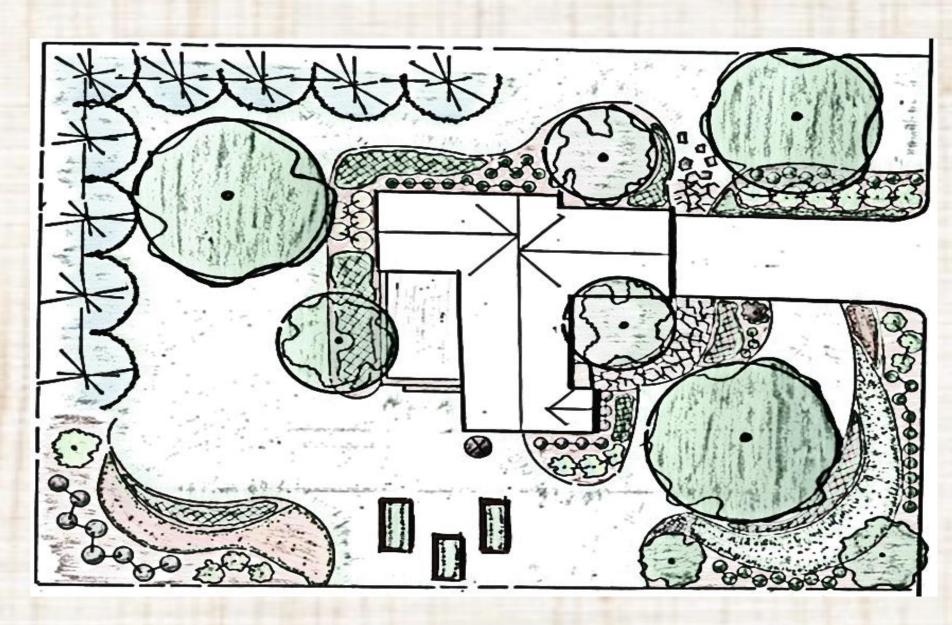
- -The max. Rainfall is recorded in july (upto 195 mm) in 2019
- -Max. Time of the year remains dry, july, august and september are the wettest month and are considered as monsoon season

-SUN ANGLE-

This diagram is representing the sessional sun angle during cold winter sun and hot summer sun

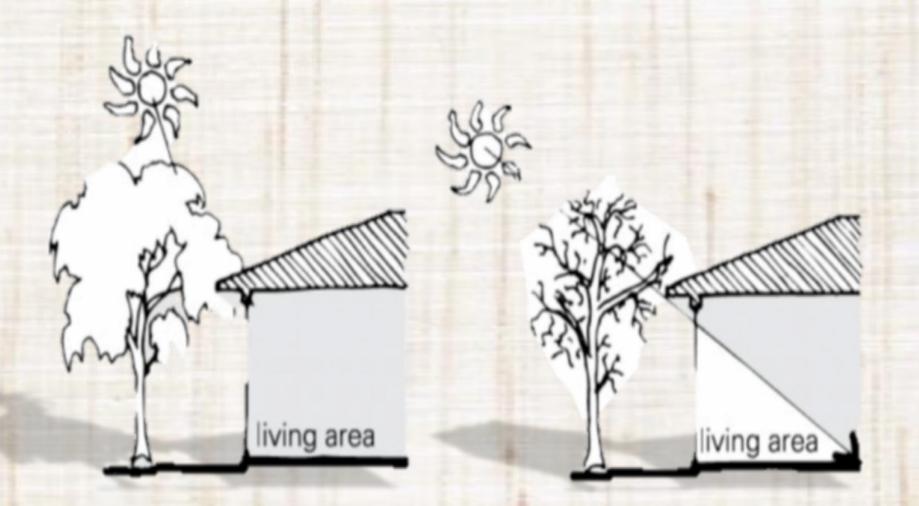


-VEGETATION-



Vegetation properly placed can deflect unwanted airflow.

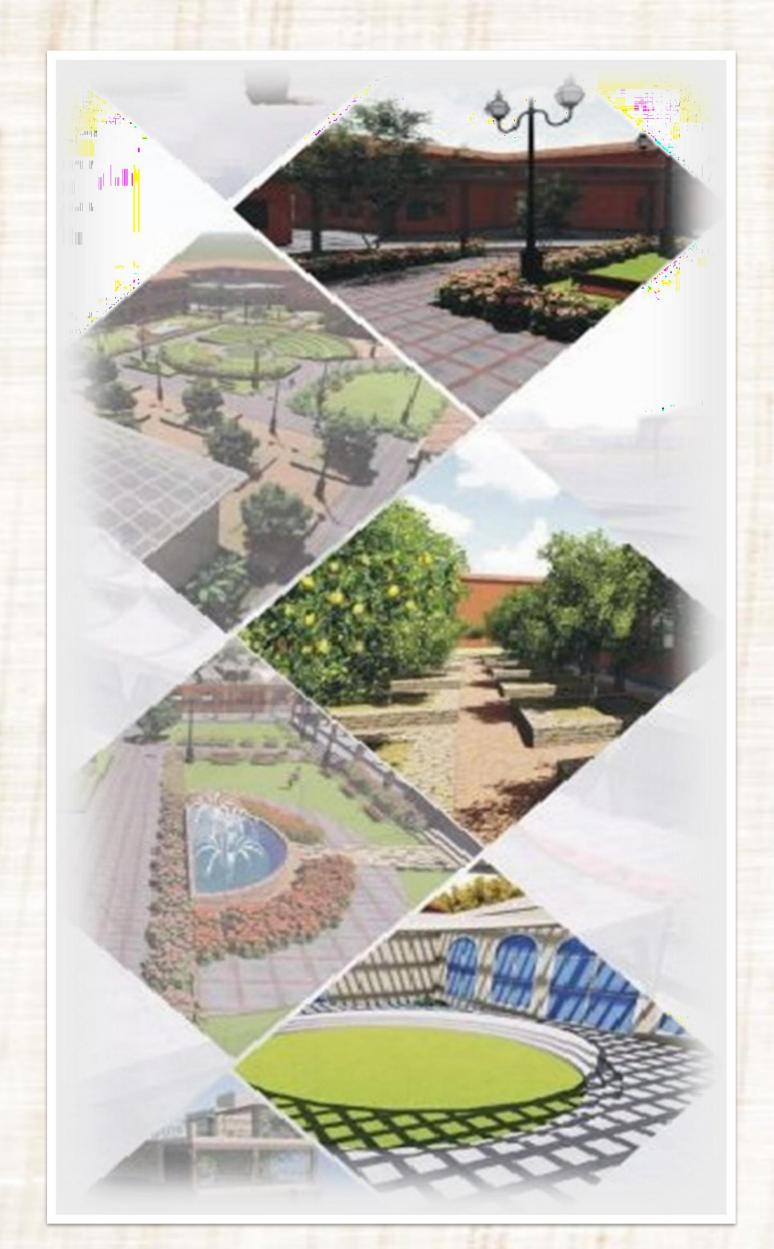
Decidious tree can be used for summer sun shading of the dwelling and yet allow winter sun penetration through their branches for solar colour.



-INCLUSIVE DESIGN-

Inclusive design is a design process in which a product, service or environmental is designed to be usable for as many people as possible, particularly groups who are traditionally excluded from being able to use an interface or navigate an environment. Its focus is on fulfilling as many user needs as possible, not just as many users as possible

-NATURAL INCLUSIVE DESIGN



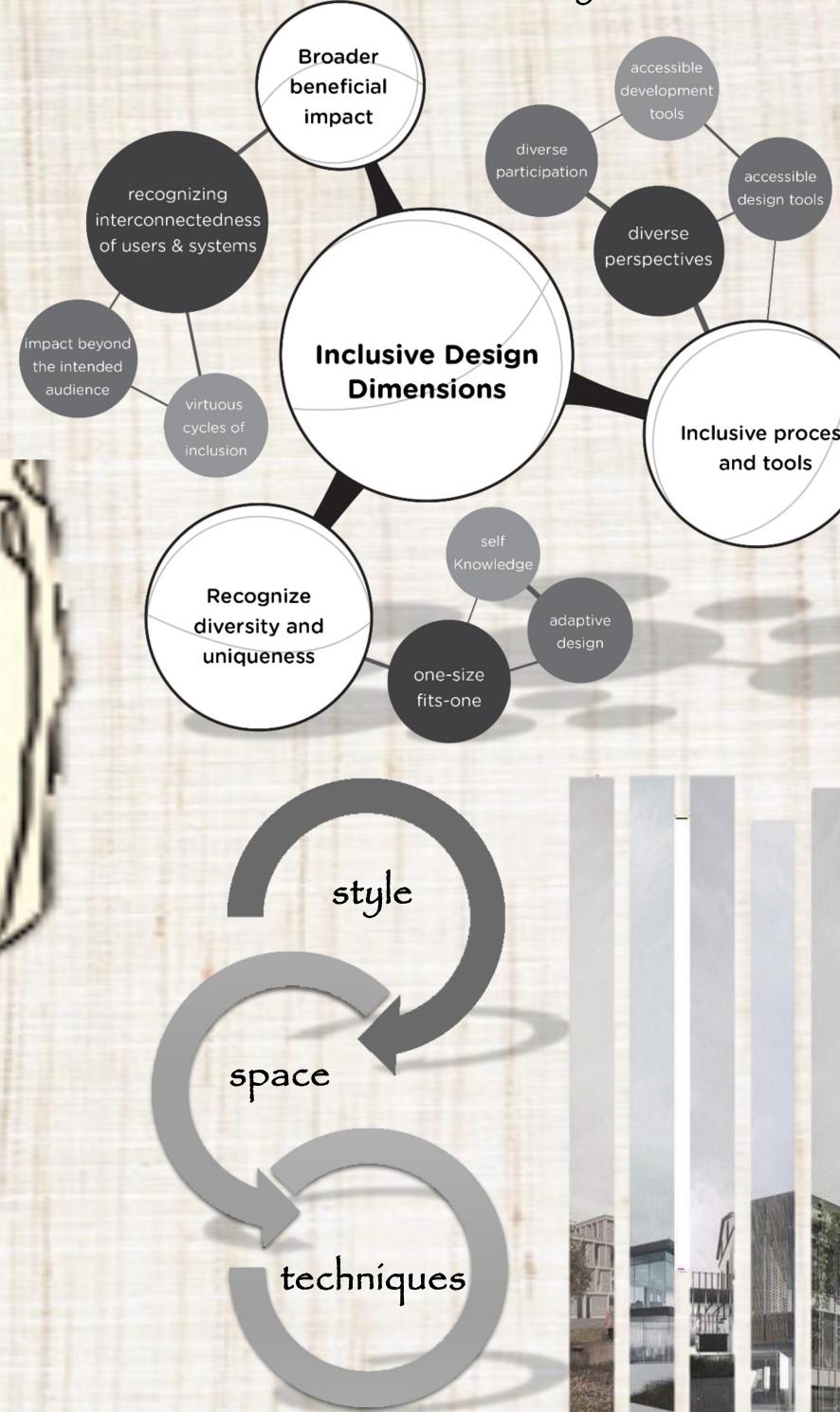
-PHILOSPHICAL CONCEPT-

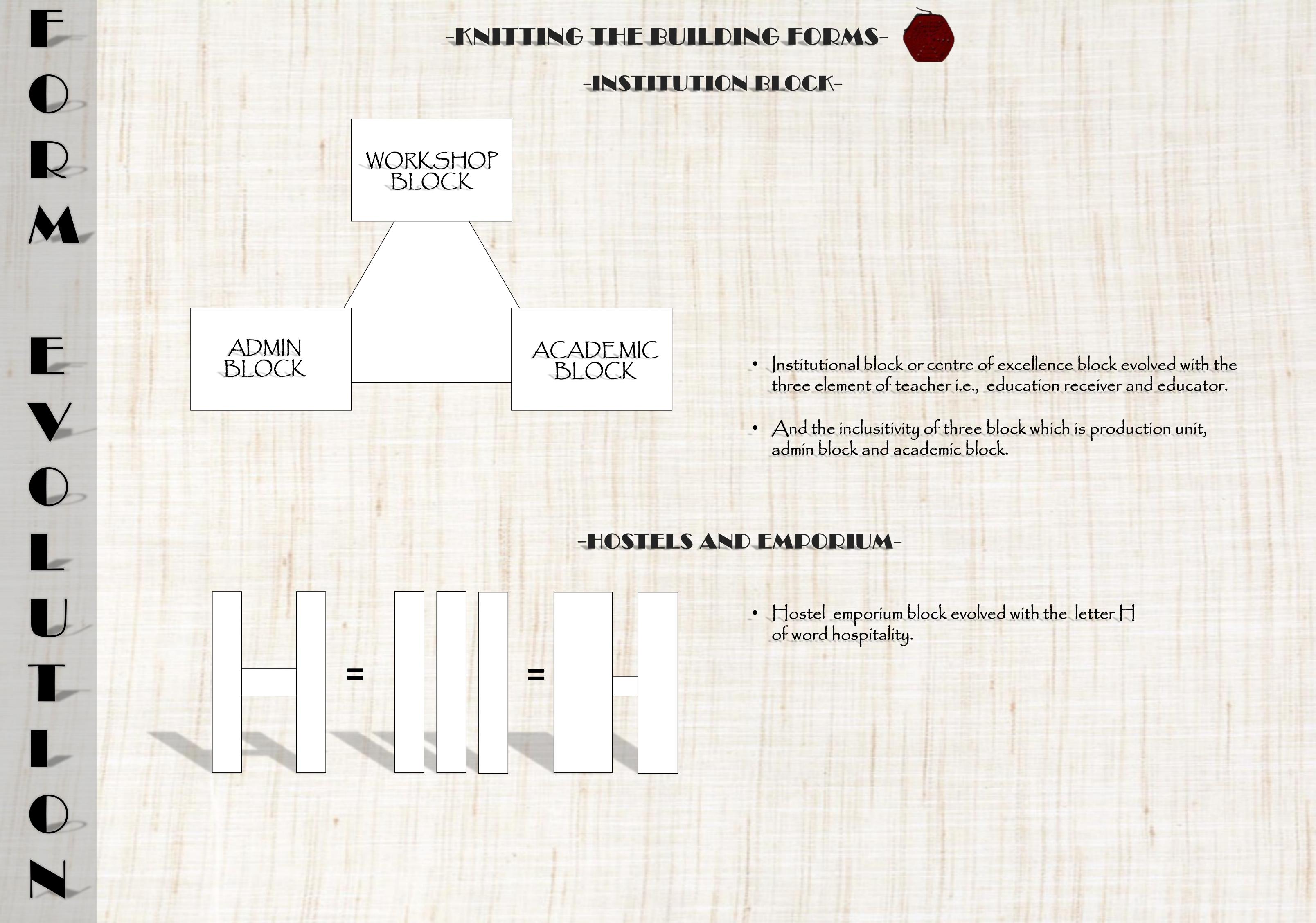
Inclusive design keeps the diversity and uniqueness of each individual in mind. As individuals spread out from the hypothetical average, the needs of individuals at the margins become ever more diverse.

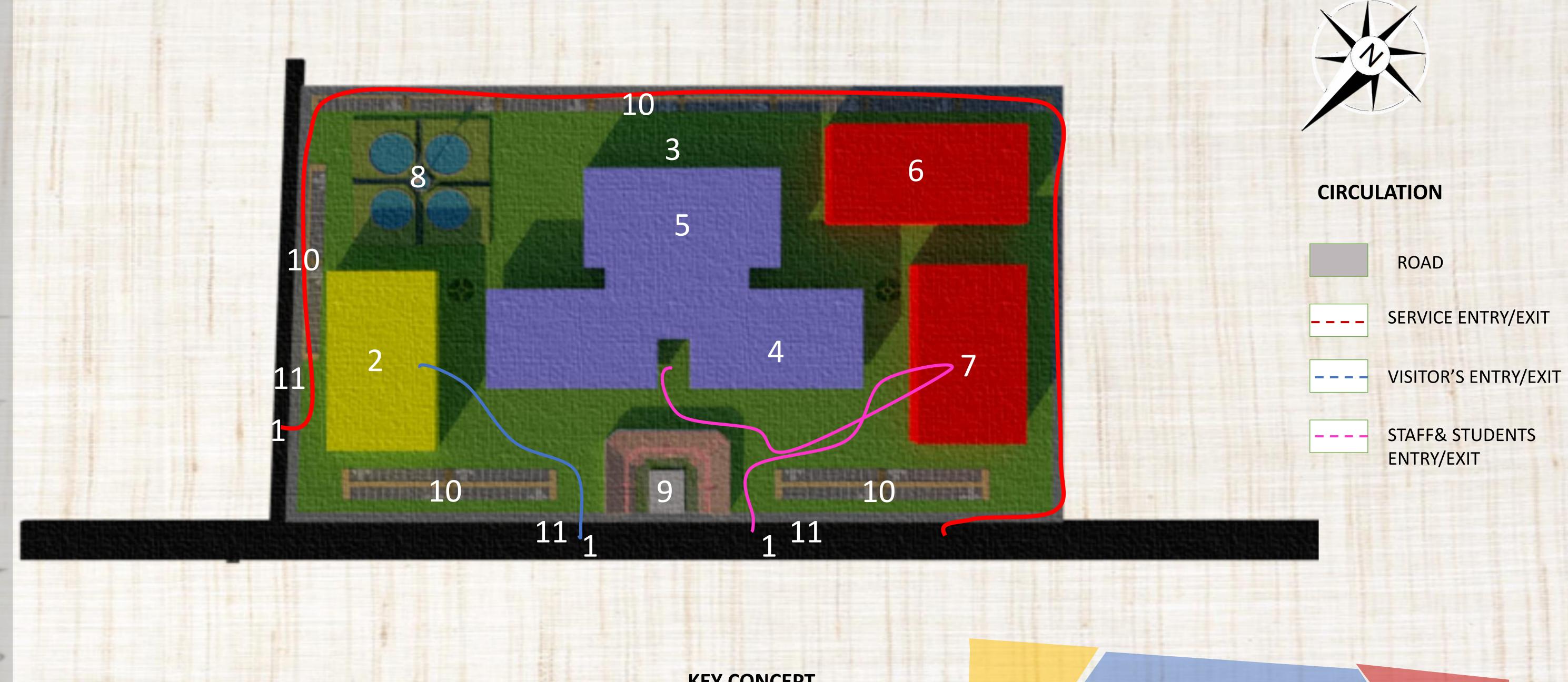
The process of design and the tools used in design need to be inclusive. Inclusive design teams should be as diverse as possible and should include and be guided by the individuals that have difficulty or are excluded from the existing designs.

-INCLUSIVE DESIGN PRINCIPLES-

- Seek out points of exclusion
- Identify situational challenges
- Recognize personal biases
- Offer different ways to engage
- Provide equivalent experiences
- □ Extend the solution to everyone

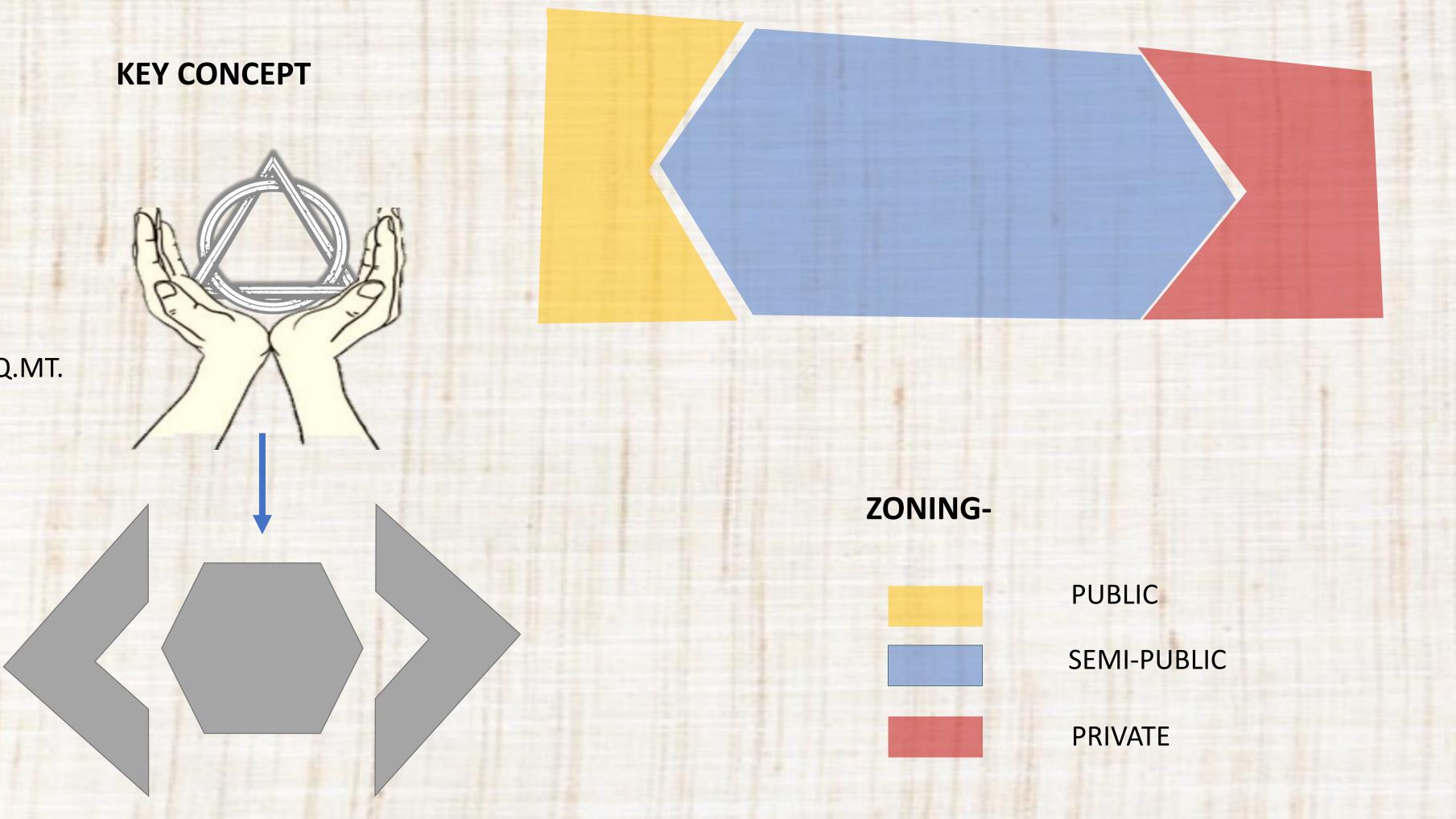


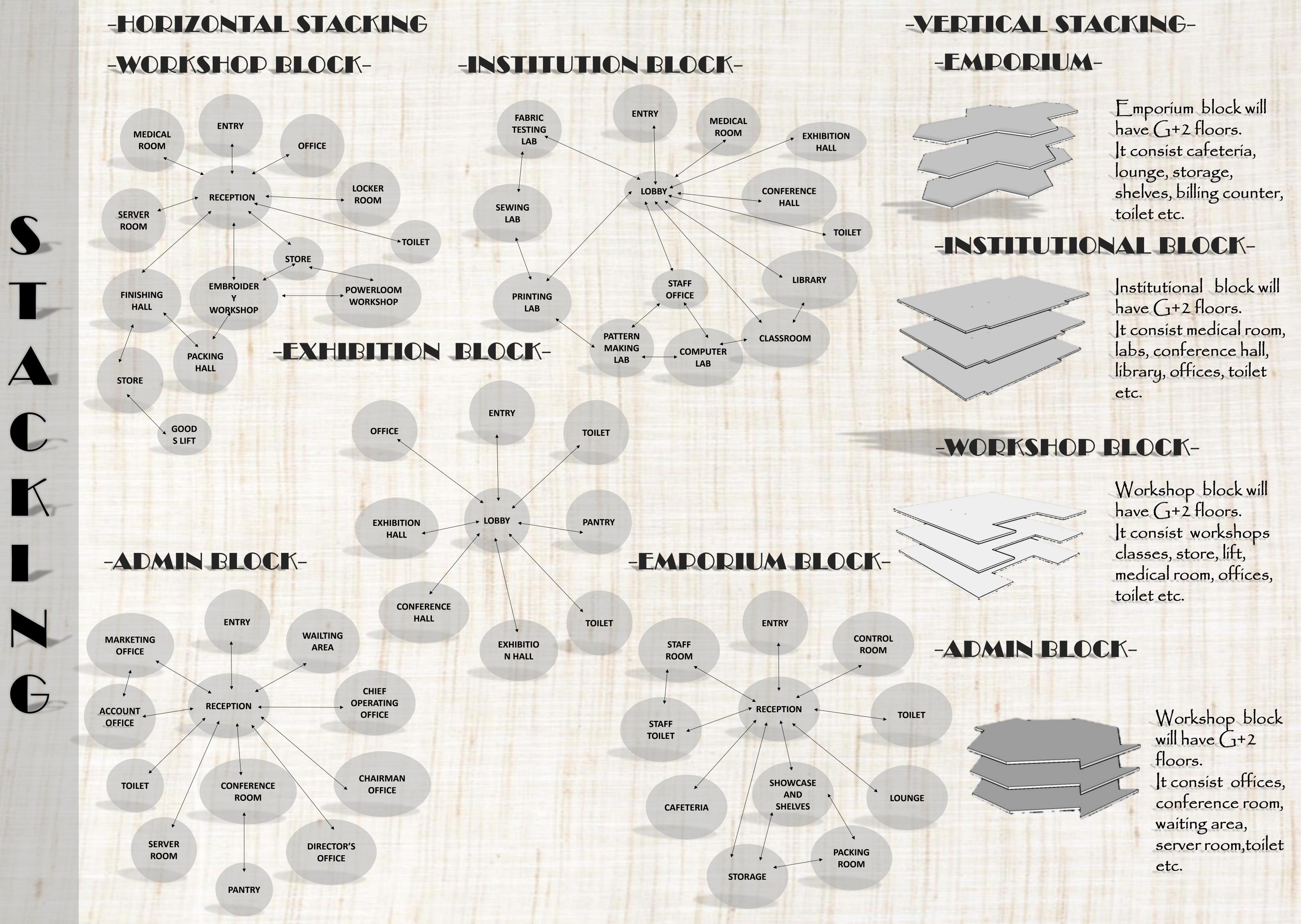




LEGEND

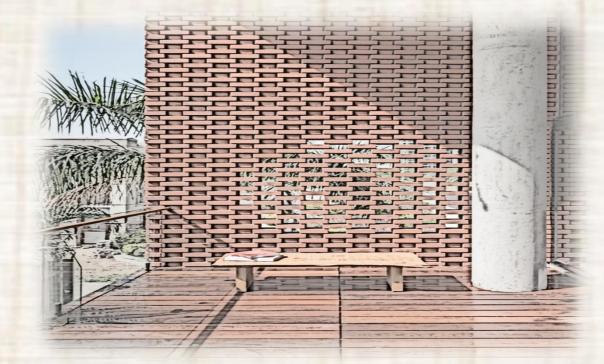
- 1. ENTRY/EXIT
- 2. EMPORIUM(G+2) GROUND COVERAGE 615 SQ.MT.
- 3. SERVICE AREA
- 4. ACADEMIC BLOCK(G+2) GROUND COVERAGE 1344 SQ.MT...
- 5. WORKSHOP+PRODUCTION UNIT (G+2) GROUND COVERAGE 1457 SQ.MT.
- 6. GIRLS HOSTEL (G+1) GROUND COVERAGE 658 SQ.MT.
- 7. BOYS HOSTEL (G+2) GROUND COVERAGE 658 SQ.MT.
- 8. WATER BODY
- 9. O.A.T.
- 10. PARKING
- 11. SECURITY ROOM 15 SQ.MT

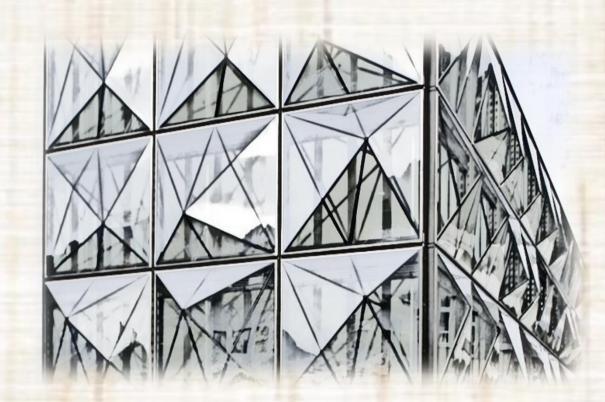




- FACADE-









Hexagonal facade

We can use hexagonal shapes, made of metal frames, and semipermeable concrete screen.

· Brick work

Brick wall can use as a jali work for proper ventilation and light.

· Curtain wall façade

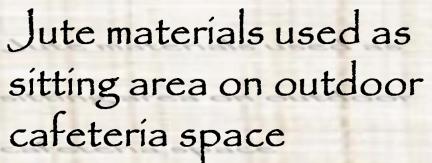
Curtain walling is the generic name given to metallic lightweight cladding or glazed cladding systems that are directly supported by a structural frame.

· ACP

Aluminum Composite Panel Cladding (ACP) is a widely-used term, describing flat panels that consist of thermoplastic core bonds between two aluminum sheets. ACPs are frequently used for external cladding of buildings (building facades). The main advantage of ACP is that it is very rigid and strong, despite its lightweight.

-SITTING







Water proof fabric used as semi covered area.

- PERGOLAS-







· Hexagonal roof shade and pergola

Hexagonal frame made with wood and it is covered with polycarbonate sheet.

- ENTERANCE ARENA-



Metal fr

• Brickwork, textured paint and cladding can be used on entrance arena.

- BALCONY-





• Metal frames hexagonal shape & glass balconies can be used on stay facilities area & institution building.

Nature plays a great role in reducing stress.

- 1. Provide positive distraction from illness and concerns. Reduce stress blood pressure.
- 2. Will create environmental for outdoor work and interaction.
- 3. Normalize the environment.
- 4. Improve mood function and socialization.

-NATURAL GARDEN ELEMENT-

HARDPAVED







Sidewalk pavers

Brick pavers

Stone pavers

SEATING/STREET LIGHTS







Wooden seating

Stone seating

Street lights

WATER BODIES/PERGOLAS



G





Waterbody Waterbody

Pergola

CONSTRUCTED GARDEN ELEMENT-

TREES









Indian beech

Ashoka tree

Palm tree

Gulmohar tree

Trees provide shades as well as gives people a sense of strength and protection. Also prevent noise pollution. This trees are used in garden because of large foilage. This trees invites different birds and also an habitat for many faunas.

SHRUBSANDFLOWERS









Night blossom

Kamini

Din ka raja

Arabean jasmene











Rose

Lavender

Marigold

Primrose

Petunia

HERBS AND CREEPERS



Rangoon



Bover vine



Tulsi



Daisy



Balm mint



Shrubs, herbs, flowers & creepers enhance the sense of smell to relax & enhance the beauty of garden. Different texture & colour of the flowers give people different feeling & relaxation to the mind & body.

	JILDING OCKS	AREA PER PERSON	OCCUPAN CY	AREA	NO. OF SPACES	TOTAL AREA	DESCRIPTION	BUILDING BLOCKS	AREA SPACES	AREA PER PERSON	OCCUPANCY	AREA	NO. OF SPACES	TOTAL AREA
>	INSTITUTIO NAL BLOCK							> WORKSHOP BLOCK						
	Classroom	1.5 sq.mt.	30	150 sq.mt.	10	1500 sq.mt.	30 student/classx1.5 sq.mt./person+30 sqmt for locker space+30 stage+45 circulation		Supervision office			40 sq.mt.	1	40 sq.mt.
•	Staff room		25	75 sq.mt.	2	150 sq.mt.	2 sq.mt.x25 staff+ 25 circulation		Security office			48 sq.mt.	1	48 sq.mt.
•	Director cabin		1	25 sq.mt.	1	25 sq.mt.			Embroidery workshop	-	-	280 sq.mt.	3	840 sq.mt.
•	HOD Cabin		1	20 sq.mt.	1	20 sq.mt.	-		'					
•	Accounts room		4	30 sq.mt.	1	30 sq.mt.	-		Store room	-	-	150 sqmt.	3	450 sq.mt.
•	Staff Toilets		20	15 sq.mt.	3	45 sq.mt.	Ladies toilet 1wc1wb 1 wc 1 wb 2 ur.		Locker roomPower loom	<u>-</u>	<u>-</u>	24 sq.mt. 375 sq.mt.	6	72 sq.mt 2250 sq.mt.
•	Toilets		40	50 sq.mt.	6	300 sq.mt.	Ladies toilet 3wc3wb/		workshop			o / o oquiiisi		
							Gents toilet 4wc 4wb 4 urinal		Finishing hall	-	-	80 sq.mt.	3	240 sq.mt.
•	Design lab	3.5 sq.mt.	30	200 sq.mt.	1	200 sq.mt.	1 loom 3x4 mt., computers, desk, stage		Packing hall	-	-	50 sq.mt.	3	150 sq.mt.
•	Dying lab	4.5 sq.mt.	30	300 sq.mt.	1	300 sq.mt.	Hydro extractor, padding machine, dying and thermo		Medical room	-	-	24 sq.mt.	1	24 sq.mt.
							fixation, lab jiggers, soft		Electrical room	-	-	18 sq.mt.	1	18 sq.mt.
	Weaving lab	6 sq.mt.	30	500 sq.mt.	1	500 sq.mt.	overflow dyeing, desk, stage Handlooms, wrapping		• Toilets	-	-	30 sq.mt.	8	240 sq.mt.
		C 5 q					machine, winding machine, pedal loom, desk stage		• Services	-	-	-	-	5%
•	Textile lab	3 sq.mt.	30	200 sq.mt.	1	200 sq.mt.	Electronic single yarn tester,		Circulation	-	-	-	-	25%
		·		·		•	drape meter, hot air oven, crimp tester, hydraulic	• TOTAL						4372 SQ.MT.
							brusting tester, tearing	> EXHIBITION						
	CAD lab	1.5 sq.mt.	75	110 sq.mt.	1	110 sq.mt.	tester, desk, stage	CUM LIBRARY						
	CAD Iab	1.5 Sq.IIIC.	/5	110 54.1111.	1	110 5q.111	Computers, stage, desk, circulation	BLOCK	Entrance lobby	-	-	45 sq.mt.	1	45 sq.mt.
•	Chemistry lab	1.5 sq.mt	30	200 sq.mt.	1	200 sq.mt.	Sitting, demonstration desk, chemical equipments,		Waiting lounge	-	-	100	1	100 sq.mt.
							working station, desk, stage		Orientation	_	-	65 sq.mt.	2	130 sq.mt.
•	Printing room	-	-	300 sq.mt.	2	600 sq.mt.	Printer machines, help desk, storage, supervisor table		gallery			·		·
•	R&D		30	70 sq.mt.	1	70 sq.mt.	Stack area for books and		Exhibition gallery	-	-	300 sq.mt.	2	600 sq.mt.
>							research papers, seating area, computer station		Tally room	-	-	15 sq.mt.	2	30 sq.mt.
•	Electrical room			15 sq.mt.	1	15 sq.mt.	-		• Stores	-	-	20 sq.mt.	2	40 sq.mt.
									Staff room	-	-	15 sq.mt.	2	30 sq.mt.
•	Cafeteria		40	130 sq.mt.	1	130 sq.mt	Sitting area, kitchen, storage, delivery space, circulation		AHU room	-	-	18 sq.mt.	4	72 sq.mt.
•	Library		80	374 sq.mt.	1	374 sq.mt.	Reception 25sq.mt, stack		Record room	-	-	15 sq.mt.	1	15 sq.mt.
	Library		00	37 4 3q.mt.	1	37 4 34.111C.	area 100 sq.mt., reading		Librarian room	-	-	15 sq.mt.	1	15 sq.mt.
							area 50 sq.mt., E library 50 sq.mt., material library 50		Photocopy stall	-	-	15 sq.mt.	1	15 sq.mt.
							sq.mt., staorage 9 sq.mt., 30% circulation		Libraries	-	-	300 sq.mt.	2	600 sq.mt.
•	Security office	-	-	48 sq.mt.	1	48 sq.mt.	3070 Circulation		Orientation gallery	-	-	65 sq.mt.	2	130 sq.mt.
									Digital library	-	-	120 sq.mt.	1	120 sq.mt.
•	Services	-	-	-	-	-	5% of total area		• Toilets	-	-	30 sq.mt.	8	240 sq.mt.
•	Circulation TOTAL	-	-	-	-	- 4917 SO MT	25% of total area		• Services	-	-	-	-	5%
	IOIAL					4817 SQ.MT.			Circulation	-	-	-	-	25%
			1 1 1 1					• TOTAL						2182 SQ.MT.

A

1	BUILDING BLOCK		AREA PER PERSON	OCCUPANC Y	AREA	NO. OF		BUILD
	➢ BOYS HOSTEL							> E
		Three seater room		60	30 sq.mt.	18	540 sq.mt.	
		Single seater room		30	12 sq.mt.	30	360 sq.mt.	
		Dining area	1.25 sq.mt.	90	100 sq.mt.	1	125 sq.mt.	
		Common room	-	-	30 sq.mt.	1	30 sq.mt.	
		• Office	-	-	24 sq.mt.	1	24 sq.mt.	
		Warden room	-	-	30 sq.mt.	1	30 sq.mt.	
		• Toilets	-	-	60 sq.mt.	3	180 sq.mt.	
		• Service	-	-	-	-	3%	
		Circulation	-	-	-	-	30%	
	• TOTAL						1289 SQ.MT.	
	GIRLS HOSTEL							
		Three seater room		60	30 sq.mt.	18	540 sq.mt.	
		Single seater room		30	12 sq.mt.	30	360 sq.mt.	
		Dining area	1.25 sq.mt.	90	100 sq.mt.	1	125 sq.mt.	
		Common room	-	-	30 sq.mt.	1	30 sq.mt.	• TO
		Office	-	-	24 sq.mt.	1	24 sq.mt.	> AU
Ī		Warden room	-	-	30 sq.mt.	1	30 sq.mt.	> SEC
		• Toilets	-	-	60 sq.mt.	3	180 sq.mt.	- / SEC
		• Service	-	-	-	-	3%	> CI
		Circulation	-	-	-	-	25%	
	• TOTAL						1289 SQ.MT.	⊳ GI
	> STAFF HOSTEL							
		• 1BHK	-	20	45 sq.mt.	20	900 sq.mt.	•
		Service	-	-	-	-	3%	•
		Circulation	-	-	-	-	25%	•
•	• TOTAL						900 SQ.MT.	
	> CANTEEN							
		Sitting area	2.25 sq.mt.	100	250 sq.mt.	1	250 sq.mt.	
		• Kitchen	-	-	60 sq.mt.	1	60 sq.mt.	
		Circulation					25%	•
		• Services					5%	
		• Toilets	-	-	15 sq.mt.	2	15 sq.mt.	
,	• TOTAL						325 SQ.MT.	

BUILDING BLOCKS		AREA PER PERSON	OCCUPANCY	AREA	NO. OF SPACES	TOTAL AREA
> EMPORIUM						
	Entrance	-	-	100 sq.mt.	1	100 sq.mt.
	Reception	-	-	10 sq.mt.	1	10 sq.mt.
	Control room	-	4	15 sq.mt.	1	15 sq.mt.
	Staff resting area	-	25	90 sq.mt.	1	90 sq.mt.
	Staff toilet	-	25	40 sq.mt.	1	40 sq.mt.
	• Toilets	-	200	90 sq.mt.	1	90 sq.mt.
	• Lounge	-	50	200 sq.mt.	1	200 sq.mt.
	• AHU	-	-	30 sq.mt.	1	30 sq.mt.
	Billing counter	-	20	165 sq.mt.	1	165 sq.mt.
	Storage	-	-	100 sq.mt.	1	100 sq.mt.
	Showcase and shelves	-	-	200 sq.mt.	1	200 sq.mt.
	Retail unit tables & seatir	ng -	100	430 sq.mt.	1	430 sq.mt.
	Wholesale unit table & seating		50	280 sq.mt.	1	280 sq.mt.
	• Display	-	-	50 sq.mt.	1	50 sq.mt.
	Cafeteria	-	50	55 sq.mt.	1	55 sq.mt.
	• Services					5%
	Packing room	-	4	80 sq.mt.	1	80 sq.mt.
	Circulation					25%
• TOTAL						1845 SQ.MT
> AUDITORIUM	-	-	300	730 sq.mt.	1	730 SQ.MT.
> SECURITY	-	-	-	15 sq.mt.	3	15 SQ.MT.
> CIRCULATION	17764			25% of total		4441 SQ.MT.
> GRAND TOTAL	(4817+4372+2182+128 1289+900+325+1845+7 +15+4441)SQ.MT.	730				22205 SQ.M1

- TOTAL BUILT-UP AREA=22205 SQ.MT.
- SITE AREA= 32376 SQ.MT.(8ACRES)
- FAR=2
- GROUND COVERAGE AREA= 30%
 - = 9712 SQ.MT. 7457
- PARKING CIRCULATION-
- 1.8 ECS/100 SQ.MT.OF FLOOR AREA
- =(22205/100) X1.8=400 ECS
- AREA=400X13.7= 5504 SQ.MT.

