



SINHGAD TECHNICAL EDUCATION SOCIETY'S

SINHGAD COLLEGE OF ARCHITECTURE PUNE

STUDY TOUR REPORT 2019-2020

(B. Arch. I to IV Years)



Architectural Study tours: Every year study tours are conducted for all students of First year to Fourth Year

B. Arch. These study tours are linked with Architectural Design Projects, as students design in context progressively from smaller settlements in First year to high order urban areas in fourth year. All study tours are divided into four parts:

1. Pre-study of the area and context.

2. Survey and study during visit,

3. Post study tour report & documentation,

4. Architectural Design project with context. Study Tour of 2019-20 schedule:

SINHGAD COLLEGE OF ARCHITECTURE.

44/1 VADGAON (BK.)

PUNE 411041

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CONTENTS

Year & Division	Date	Places to visit	Faculty coordinators					
	FIRST YEAR B. ARCH. STUDY TOURS							
I A	2 nd to 7 th January 2020	Veti Murbad, Doyapada	Ar. Manasi Khope, Ar. Avani Topkar, Ar. Shreyas Paranjpe, Ar. Smita Patil					
IΒ	26 th to 28 th December 2019	Amba (near Kolhapur)	Ar. Pallavi Patil, Ar. Namrata Dandgal					
I C	2 nd to 7 th January 2020	Veti Murbad, Palsunda	Ar. Ketaki Badge, Ar. Dhanashree Raju, Ar. Rutuja Suryawanshi					
ID	26 th to 28 th December 2019	Amba (near Kolhapur)	Ar. Akshaya Kudale, Ar. Anjali Agarwal					
	SECOND YEAR B. ARCH. STUDY TOURS							
II A	28 th Nov to 5 th Dec 2019	Madhya Pradesh	Ar. Mugdha Kulkarni, Ar. Vikram Shah					
II B	28 th Nov to 3 rd Dec 2019	Pondicherry	Ar. Leena Jain, Prof. Manjusha Gokhale, Ar. Akshay Gandhi					
II C	18 th to 24 th November 2019	Ahmedabad	Ar. Manjusha Zalte, Ar. Dhanashree Raju					
II D	21st to 29th November 2019	Rajasthan	Ar. Kirti Bajare, Ar. Swati Oka					
	-	THIRD YEAR B. ARC	H. STUDY TOURS					
III A	28th Nov to 5th Dec 2019	Madhya Pradesh	Prof. Kalpana Hadap, Ar. Namrata Khatod					
III B	28th Nov to 2nd Dec 2019	Pondicherry	Ar. Niketa Patil, Ar.Pushkaraj Bankapure					
III C	9 th to 13 th December 2019	Kochi	Ar. Kavita Patil, Ar. Sunit Thakare					
III D	5 th to 10 th December 2019	Hyderabad	Ar. Akshar Mendhe, Ar. Nikita Mahajani					
		FOURTH YEAR B. ARCH. STU	UDY TOURS / SITE VISITS					
IV A	18 th December 2019	Karad	Ar. Pranoti Lad, Ar.Manasi Khope, Ar.Rohit Labhshetwar					
IV B	18th December 2019	Katraj, Pune	Ar. Swarna Hiwarkar, Ar. Lily Roy					
IV C	2nd December 2019	Khopoli	Ar. Nidhi Shand.,Ar. Saurabh Agashe					
IV D	6 th & 7 th December 2019	Navi Mumbai	Ar. Priyanka Chavan, Ar. Gayatri Bankapure ,Ar. Sejal Desarda					

SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE, PUNE

STUDY TOUR REPORT

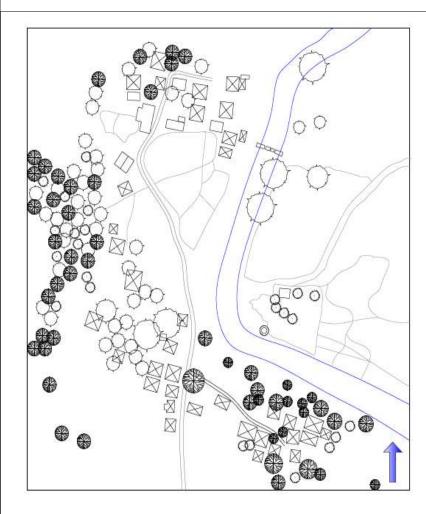
DOYAPADA

First Year B. Arch.

Division A

2nd to 4th January 2020

DOYAPAD MAP



Nearest Village- Vithalnagar, Vikramgadh

Thane- 120 km Mumbai- 142 km Pune- 276 km

Program

DAY 01: 2 January 2020:

PUNE - MURBAD - DOYAPADA (275 KMS / 06 HRS)

04.00 am - Students will gather at SCOA, Pune

04.30 am -Departure for Veti Murbad, Dahanu

12:00 pm - The batch of 60 will arrive in Veti Murbad, Dahanu a tribal village in Palghar district of Maharashtra.

2:30 pm: Introductory session for all 60 students together.

5:00 pm - The group splits into Group A (Division C) and Group

B (Division A)

5:00 PM - LEAVES FOR DOYAPADA IN VIKRAMGAD.

7:30 pm - Reach village and village walk.

8:30 pm - Dinner

DAY 02: 3rd January 2020:

Settlement study

8.00am: Breakfast

8.30 am: Students divided into respective groups and stared with a survey of village. Each group had cluster allotted to work in detail.

1.30pm:Lunch

2.30 pm: Resumed work of individual cluster.

6.30 pm: work stopped on site. Students worked indoors on the survey part.

7.30 pm: Discussion with faculty on the work done for whole day. Inputs given by faculty for next days study.

9.00 pm: Dinner

DAY 03: 4th January 2020:

8.00am: Breakfast

8.30 am: Students divided into respective groups and stared with remaining work as instructed by faculty.

1.30 pm : Lunch

2.30 pm : Overview of work done and completion of the same.

5.30 pm: Left Doyapada for BTM workshop at Murbad.



GROUP PHOTO

Name of students

Group -I

- 1. Anjali Angadi
- 2. Abhishek S Kumar
- 3. Nikhil Borude
- 4. Anvaya Desle
- 5. Prajalika Bhalerao
- 6. Prtiksha Bagal
- 7. Aniket Bole

Group -II

- 1. Aditi Bhalekar
- 2. Abhishek V Kumar
- 3. Shweta Belapurkar
- 4. Rahul Bandgar
- 5. Dakshayani Chhana
- 6. Janhvi Chavan
- 7. Pranjal Baravkar

Group –III

- 1. Armaan Irani
- 2. Amisha Ganvir
- 3. Sakshi Gaikwad
- 4. Harshal Hagawane 4.Ritika Ghogare
- 5. Ankit Sharma
- 6. Apoorva Sathe

Group -IV

- 1.Arihant Lodha
- 2. Aishwarya Mane
- 3. Anushka Rahude
- 5. Ashish Bhalerao
- 6.Kuldeep Gaikwad

Faculty: **Design:**

Ar.Manasi Khope Ar. Avani Topkar

Ar.Piyush Chorbele

Mr.Pramod Riswadkar

BTM:

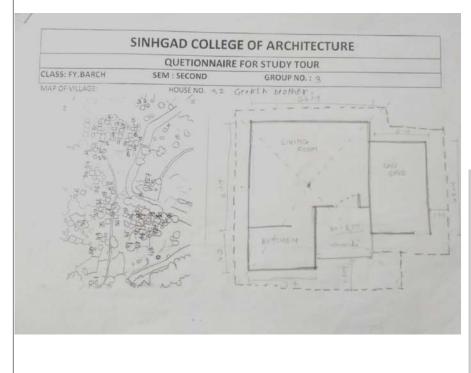
Ar.Shreyas Paranjape Ar.Smita Patil

Pre study tour work:

A survey questionnaire was designed to collect the data regarding the village. The aspects

covered were:

Building typology
Detailed plan of house
Socio political data
Structural details of house.

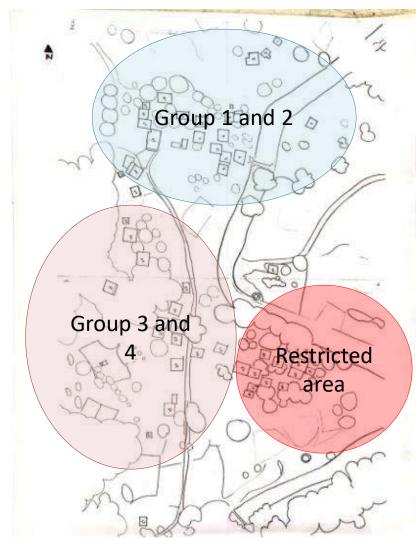


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Work divided into clusters:

Each group was given a cluster to work in detail.





Students taking measurements on site

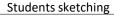


Students taking measurements on site



Review at end of day, inputs given by design faculty.



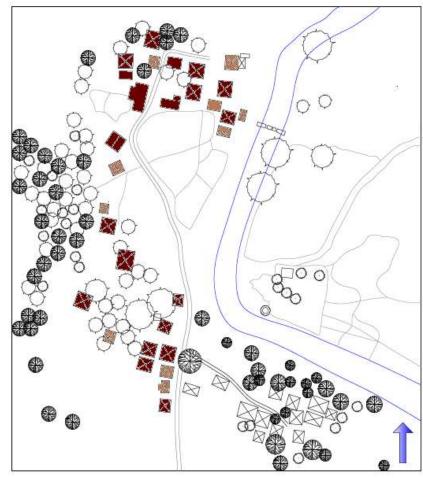




Students discussing with faculty

Land use map

Building typology: constructions techniques map



Map showing land use of Village: major structures were residential, with only one school, one Anganwadi and one agricultural processing unit.

residential

Semi public

recreation

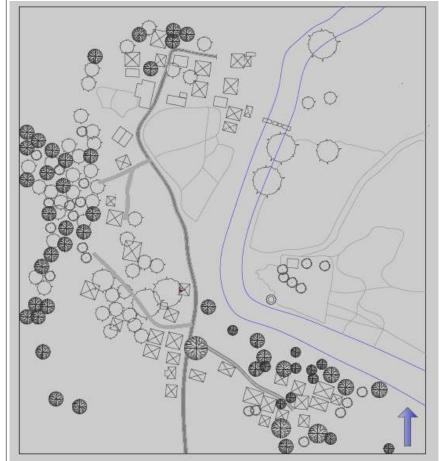
Industrial

Map showing typology of houses on building construction techniques.

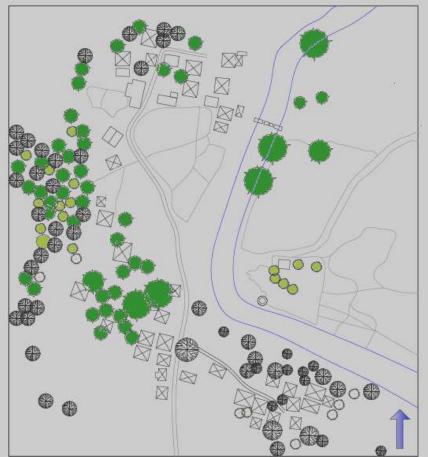
Brick construction

Wattle and dob construction

Road hierarchy map



Vegetation map



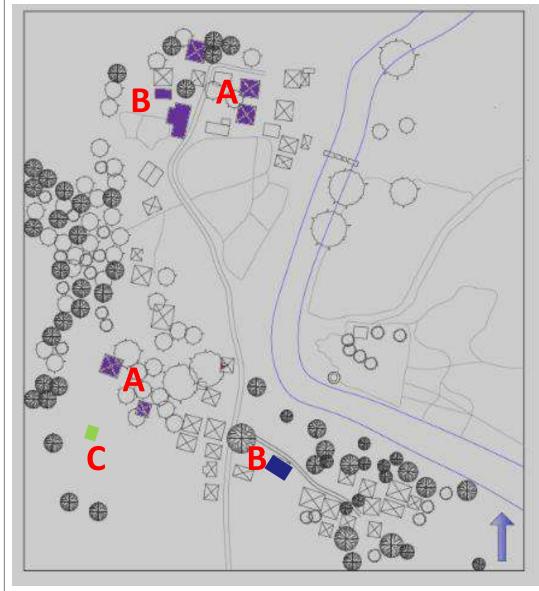
Map showing hierarchy of roads: the main road connecting Murbad to Doyapada was 4.5 mts constructed in Tar.

Internal roads connecting the clusters were 2.5mts wide constructed in cement.

Minor roads connecting houses within clusters were kuccha roads.

Map showing types of vegetation: Mango, sapota, are grown on large scale. Rice, chick pea, pigeon pea, chilli, okra, brinjal, finger millet, cashew, proso millet are cultivated in forest areas of Doyapada.

Map showing selected buildings for detail study.



Measured drawings for houses.

House no: 26 A House no: 14 House no: 12

School building: No 13

Anganwadi: No 35

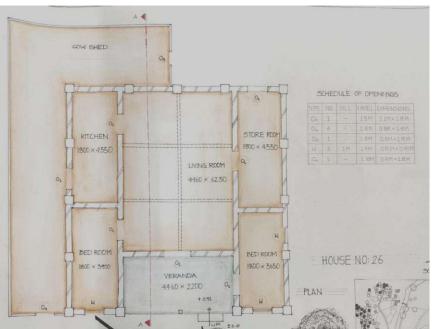
Agricultural processing center: No 19

Tukaram Temple: No 50

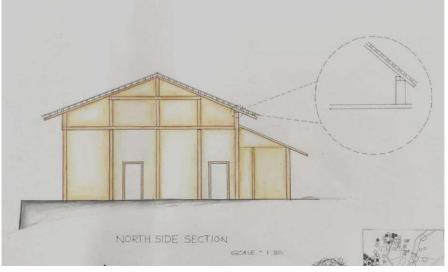
- A.The residences were chosen on the basis of the construction technology and the scale of the house, so as to cover all the aspects of the typical tribal house.
- B. Public Amenities available were documented.
- C.The Tukaram temple being important was chosen for documentation.

Measured drawing for House no: 26



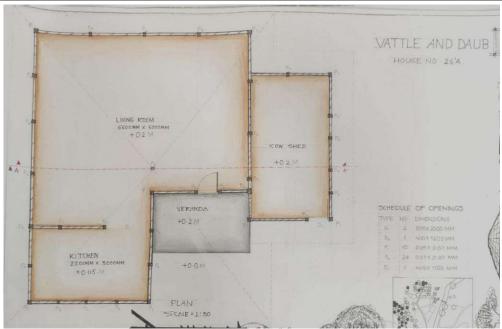






Measured drawing for House no: 26 A



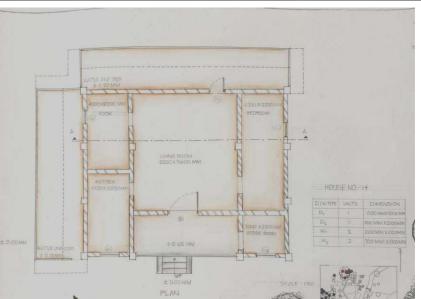






Measured drawing for House no: 14



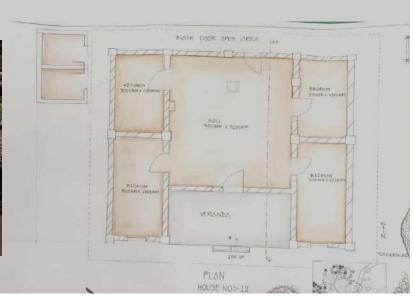






Measured drawing for House no: 12



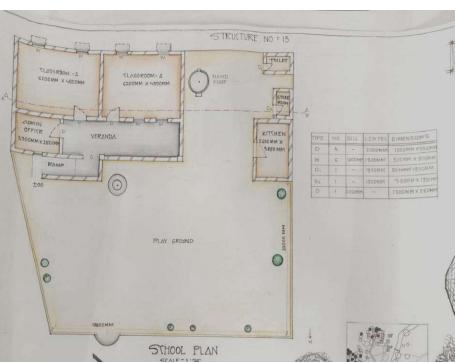




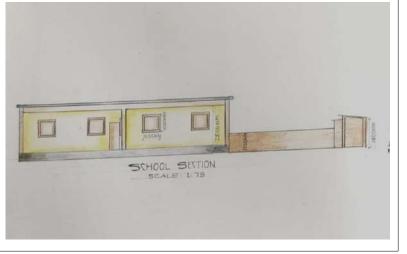


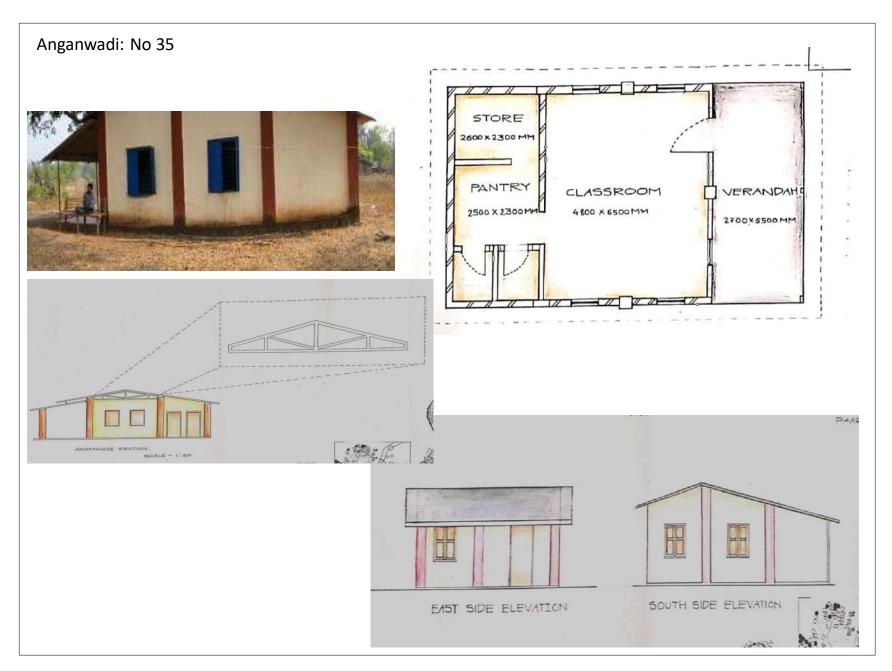
School building: No 13



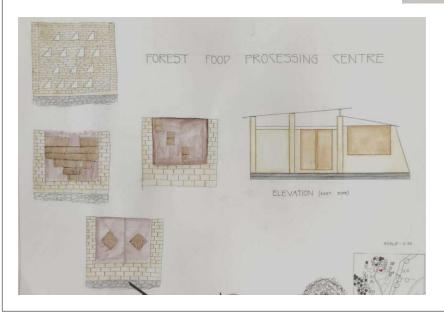


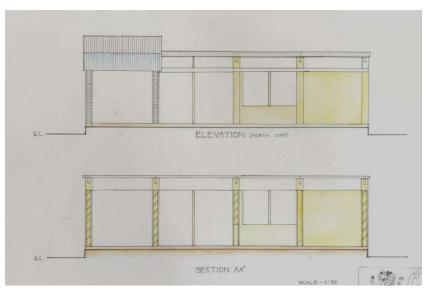












FOOD PROCESSING CENTRE

Tukaram Temple : No 50



Festivals celebrated through out the year:

Different festivals are celebrated in Doyapada.

Diwali- It is celebrated with great pomp.

Waghoba – This is the festival celebrate by villagers, it is there *kuldevat* festival. It is the manin festival of the village. It is celebrated onset of spring.

Ganesh festival – It is celebrated in the whole village with one common pandal.

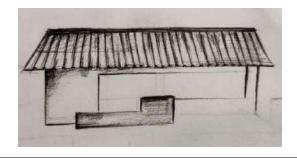
Food festival- This festival is celebrated during Diwali. The different types of vegetables grown by villagers are kept for visitors to taste and enjoy the food of authentic tribe culture.

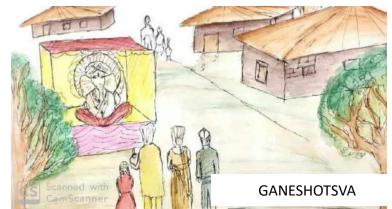
Daily schedule of the villagers

Daily routine of people in doyapada is:
They get up early in the morning,
Men go for farming at 9.00 am
Women do there household work after that.
The women in house go for cattle grazing once the household work I done.

LIVE SKETCHING









AMENITIES



SCHOOL



FOOD PROSSESING CENTERE





ANGANWADI



TEMPLE

Building construction techniques:

- 1] English Bond was widely used for Brick Structures.
- 2] BINDING MATERIAL MORTAR- lime, cement and mud mortar were used ROOFING PATTERNS observed in Doyapada mainly was Hip Roof, secondary was Gable and then lastly was Thatch.
- 3] The material used for ROOFING was Corrugated Sheets, Mangalore Tiles.
- 4]Structures were mainly divide into Brick structure, Wattle & Dob structure and Temporary structure.
- 5] A total 15 and 32 of Wattle and Dob structures and Brick Structure were present respectively.
- 6] INTERIOR LAYOUT

of all houses were similar, ie Hall being larger than rooms considered as main past of the house.

7]Room being smaller, kitchen placed inside the house, while bathroom/washroom outside next to house or away from houses. Another important factor being, less of furniture present.

















SERVICES

❖ WATER

- 1. Majority of the water used for irrigation is gathered from open wells and river.
- 2. Also they have their private small water storage tanks.
- 3. For daily use and drinking water they have their own vessels.

❖ DRAINAGE

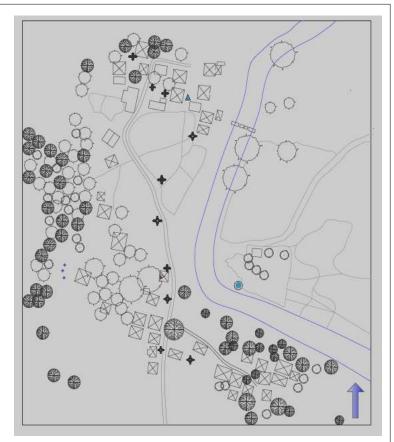
1. There is not proper services to dump waste.

COMMUNICATION

- 1. For communication villagers have their own mobile phones.
- 2. But only 2 or 3 families have mobile phones.
- 3. Except this no other services for communication like internet, Fax.

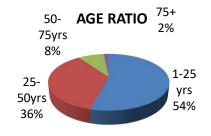
❖ <u>ELECTRICITY</u>

- 1. By MSEB
- 2. SOLAR



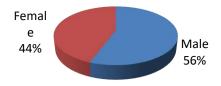
LEGEND	
STREET LIGHT	→
WELL	0
WATER PUMP	
WATER STORAGE TANK	♦

Analysis of data obtained from questionnaire:



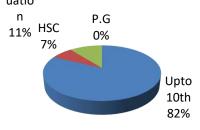
AGE	%		
1-25 yrs	54.09		
25-50yrs	36.06		
50-75yrs	8.19		
75+	1.63		

SEX RATIO



SEX	%
Male	55.7
Female	44.26

Grad uatio EDUCATION RATIO



EDUACATION	%
Upto 10th	82.14
HSC	7.14
Graduation	10.71
P.G	0

Doyapada is not a densely populated village.

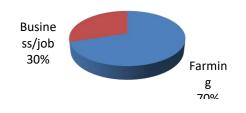
Education facilities are not good.

Main occupation of villagers is farming.

Villagers go out of village in search of temporary jobs.

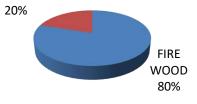
Cooking is done mainly using fire woods on *Chulha*, some houses have LPG but not widely preferred by the women in the house.

OCCUPATION RATIO



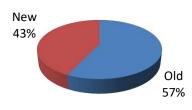
5
70
30

STOVE COOKING RATIO



COOKING	%
FIRE wood	80
STOVE	20

STRUCTURE RATIO



STUCTURE	%
Old	57.14
New	42.88

Conclusion:

- The village is a very rustic and untouched in terms of its structures and connectivity, infrastructure.
- The streets were lit by lamps powered by solar cells.
- The lifestyle of people was very rudimentary and in sync with nature.
- The population was very concise.
- The main occupation is of agriculture and forest products.
- The primary school catered to the small population.
- VAYAM institute its supporting the villagers to maintain their forest.
- Basic amenities like vegetable market, grocery stores, secondary school, community spaces is lacking in the village.
- Services : water supply ,drainage, waste management, built toilets and bathrooms were absent.
- As agriculture is the only source of income, people don't have permanent job they go in search of temporary jobs daily.(daily wages)

There is a dire need for the basic amenities and an additional source of income to support their families.

The design program has been aimed to cater the needs of the villagers by proposing:

Grampanchayat office, Bachat gat, extension to forest food processing unit and a multipurpose hall for community interaction.

Site for Design project



Site area approximately: 930 sq.mts

Site selection criteria:

Ste is located at the center of village, accessible from the main road joing Doyapada and Murbad.

It is adjacent to the current agriculture processing unit. the site location is apt for proposed Bachat gat and forest processing unit as it is adjacent to the existing units. Gram sabha proposed office will be placed centrally convenient for all the villagers.

Brief of design program settlement study

			architectu	re	
		rst year 201 emester 2: I			
	Design Program 2: S			n vikas kene	dra
Sr.no	Use	Number	Area (sq.mts)	Total area (sq.mts)	Remark
1	Agricultural processing unit: existing unit not used due to insufficient space.				
a	Oil extracting space	2	10	20	
b	Seeds dryng area	2	10	20	
c	Storage space existing structure.			0	
				0	
2	Gramsabha office	1	15	15	
	Toilets			7	As per std.requirement
	Library	1			
3	Mahila bachat gat				·
a	Space for bamboo articles	1	15	15	Semi open space to be provided as per design
b	Space for food products; pickels, papad etc	2	15	30	open space for drying
4	Multipurpose Hall	1	60	60	Semi open space to be provided as per design
5	Grocery shop	1	15	15	
6	Toilet block: Male, Female	2	7	14	
		Total are	a in sq.mts	196	









SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE, PUNE

STUDY TOUR REPORT

Amba village: Bhosale wadi

by First Year B. Arch. Division B

26rd to 28th December 2019



FACULTIES

- AR.PALLAVI PATIL
- 2. AR.NAMRATA **DANDGAL**

STUDENTS

- ANAND BORA
- 2. ISHA BORA
- 3. ANKITA GHAWATE

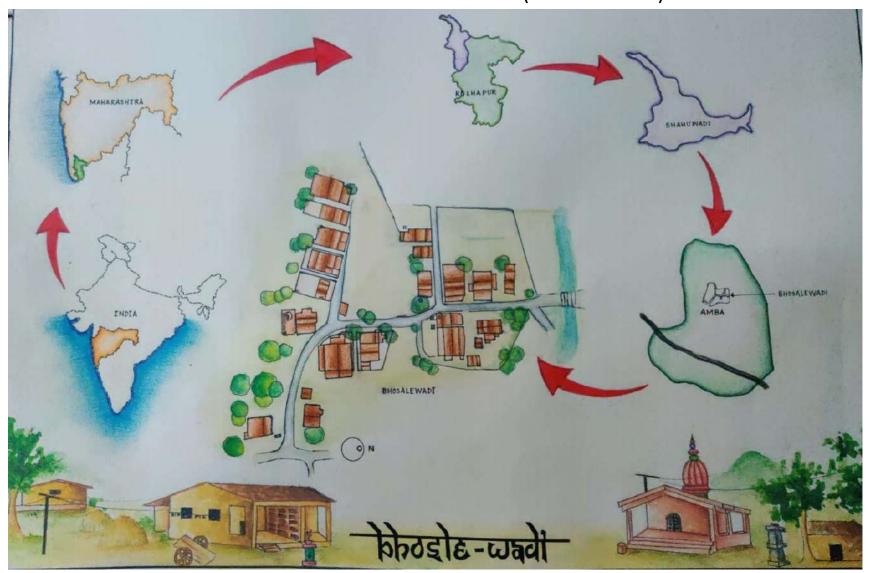
- **KANCHAN GORE**
- SAKSHI HOLKAR
- BHAKTI HOSAKHANDE 15. RUCHA KASAR
- 7. SAHIL INGALE
- SHREYAS JADHAV
- 9. PRATHMESH JAGTAP
- 10. SHWETA JAGTAP
- 11. SAMEER KALASKAR
- 12. RUTUJA KARDILE

- 13. NIKHIL KARE
- 14. RASHMI KARHADE
- 16. NUPUTR KHOTE
- 17. KUNAL PATNI
- 18. AKANSHA LONKAR
- 19. BHARAT MAHAJAN
- 20. BHUSHAN MAHAJAN
- 21. KSHITIJA MAHALE

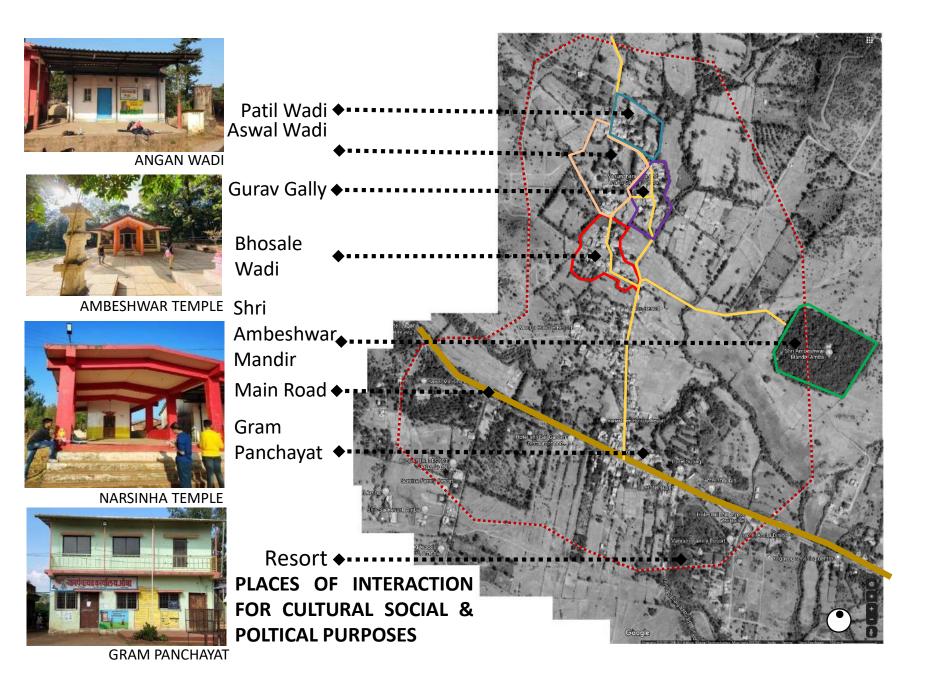
- 22. MAYURI DESHMUKH
- 23. DIPTI MORE
- 24. AISHWARYA PATIL
- 25. PRERNA CHAUDHARY
- 26. KHUSHI SHRISHRIMAL
- 27. OM WANJALE
- 28. OMKAR MATHPATI

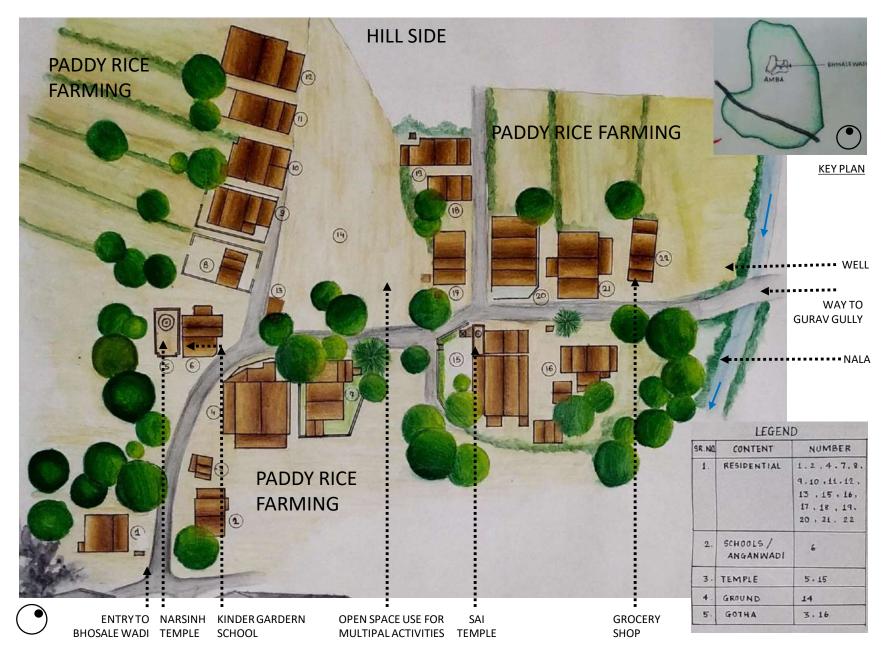
GROUP PHOTO

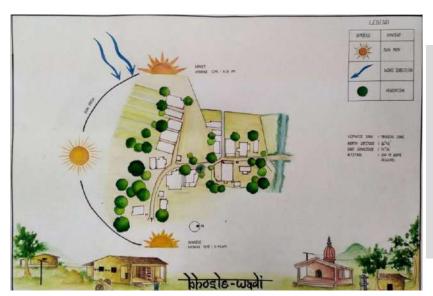
LOCATION OF BHOSLE WADI (SETTLEMENT)



THANE **SURROUNDING TOURIST PLACES CONTEXT & CONECTIVITY** ALTBAUGH KHOPOLI PUNE. DIVE AGAR PANYEL RATNAGIRI PRATAPGAD AMBA RATNAGIRI RATNAGIRI PAVAS KARAD O SHA HUVADI KOLHAPUR VISHALGAD KUDAL







NATURAL ENVIRONMENT

CLIMATE:

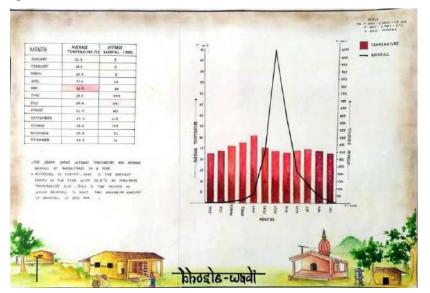
It Lies In The Tropical Zone and 650 M. Above The Sea Level.

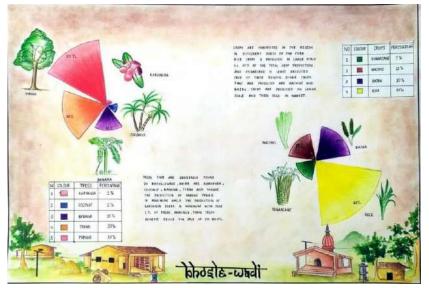
ANNUAL TEMPERATURE VARIATION:

The Region Remains Hottest In The Month Of May And Records The Highest Rainfall In The Month Of July VEGETATION:

Rice Is Cultivated Most Followed By Bajra And Mango Trees Are Mostly Found In The Region

CLIMATE



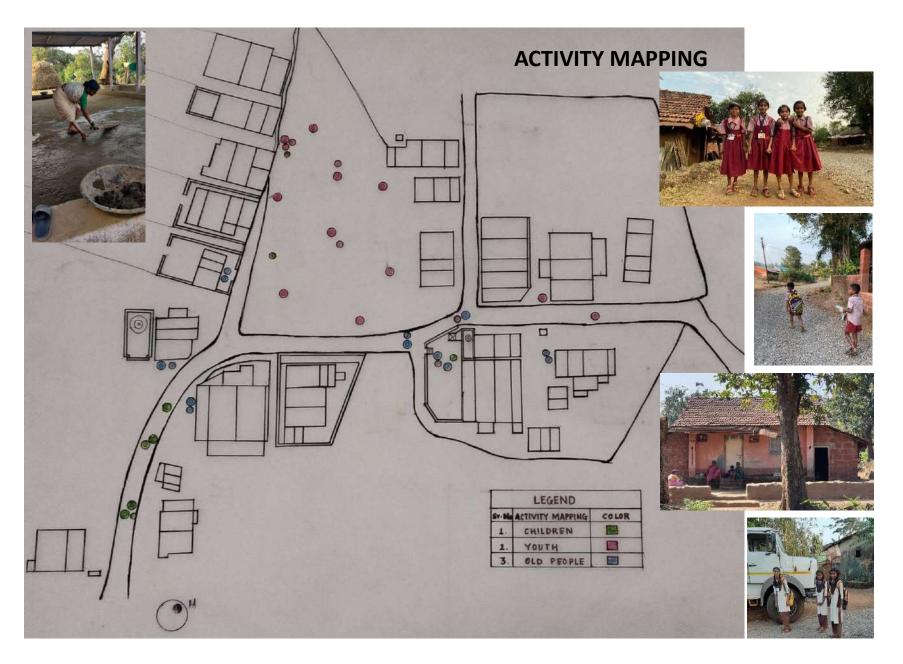


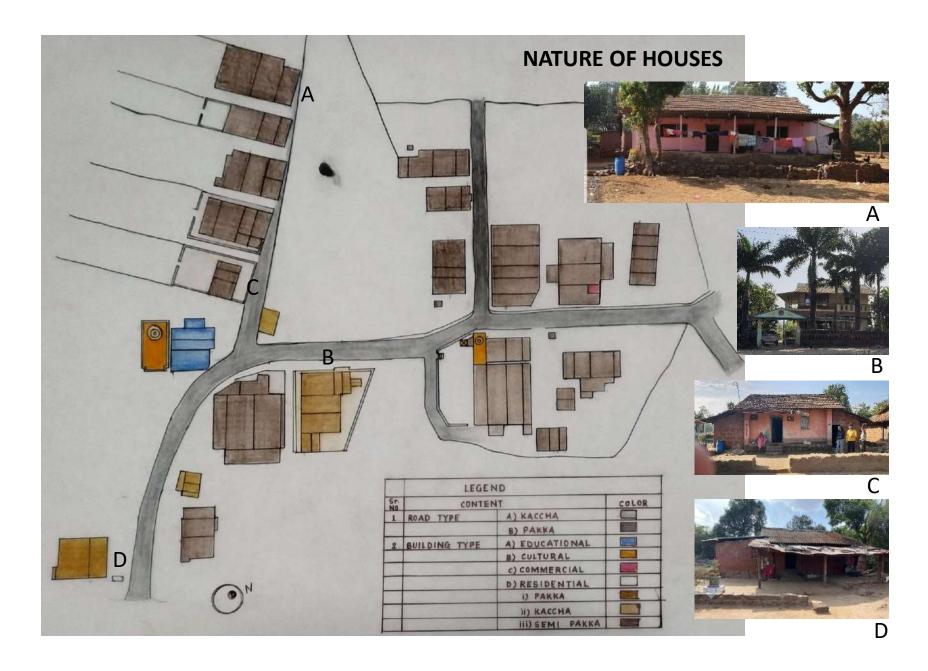
ANNUAL TEMPERATURE VARIATION

VEGETATION

ROUTINE LIFE







INTERACTION WITH LOCALITES बी मेहरवानी होती. लेकाचे नाते आहे,

Interaction With One Of Female Resident Of Bhosale Wadi

Interaction With Retired Postman Of Amba





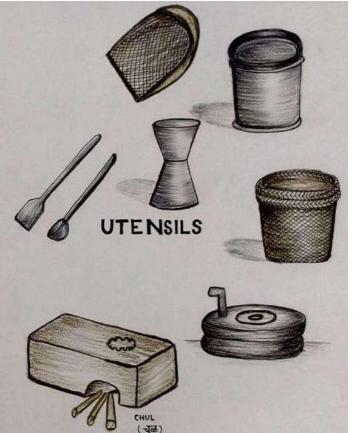
COMMOMH FEATURE- TULSI VRINDAVAN



UTENSILS USED BY LOCALITES OF THE SETTLEMENT



- . VARIOUS TOOLS ARE USED FOR FARMING.
- FARMING IS ONE OF THE MAIN OCCUPATIONS, MEN AND WOMEN PERFORM FARMING ACTIVITIES FOR CROP PLANTATION.
- THEY REQUIRE TOOLS SUCH
 AS PICK-AXE, HOE, SICKLE, AXE,
 SPADE AND OTHERS.
 - UTENSILS USED FOR HOUSEHOLD CHORES ARE DRAWN .
 - DIFFERENT TYPES OF UTENSILS ARE USED FOR COOKING AND STORAGE AND OTHER PURPOSES.
 - 'CHUL' (पूळ) IS THE OLDEST FORM
 OF STOVES USED IN HOUSES
 BEFORE GAS CYLINDERS WERE
 PROVIDED.
 - FUEL AND WOOD LOGS ARE REQUIRED FOR LIGHTING STOVES .
 - . NOW ALSO, IN SOME HOUSES THESE CHULS ARE USED FOR COOKING.







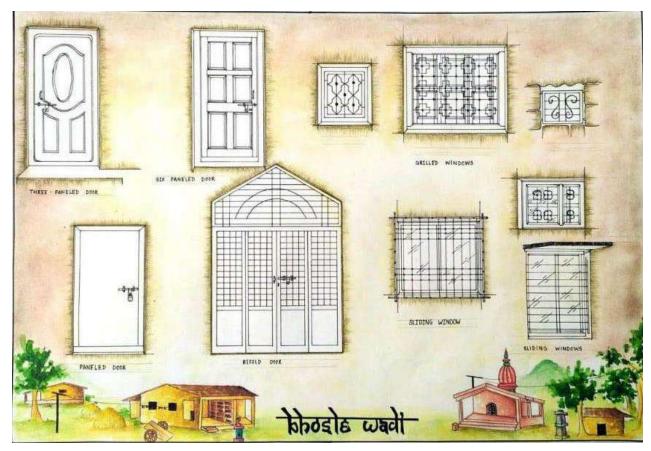




P. Sterr Cr. Bas

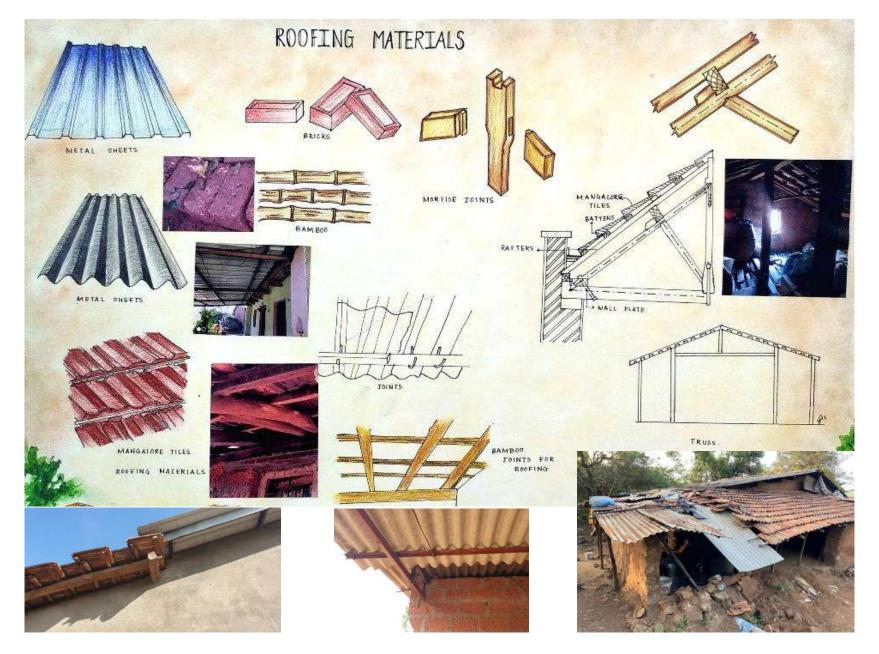
GATES AND WINDOWS



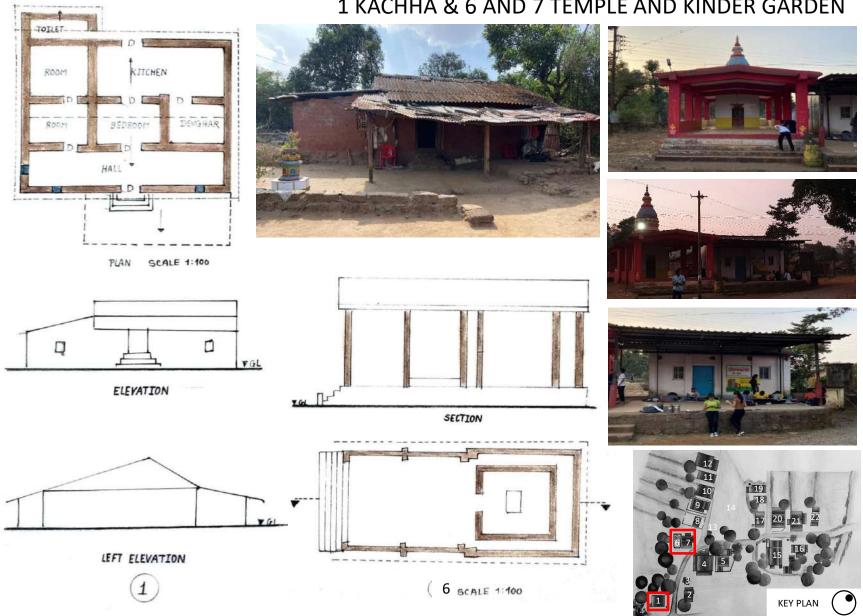


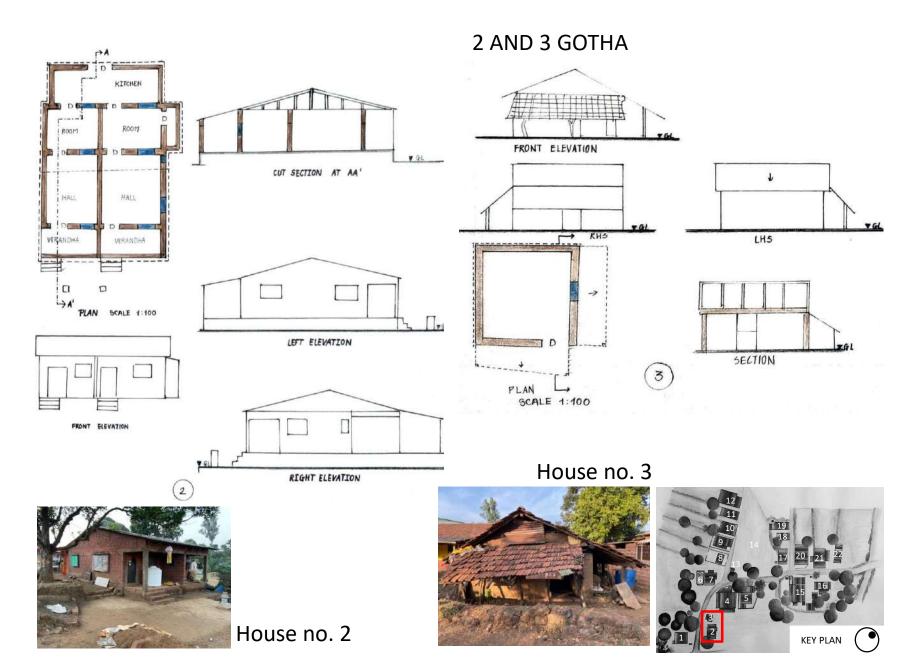


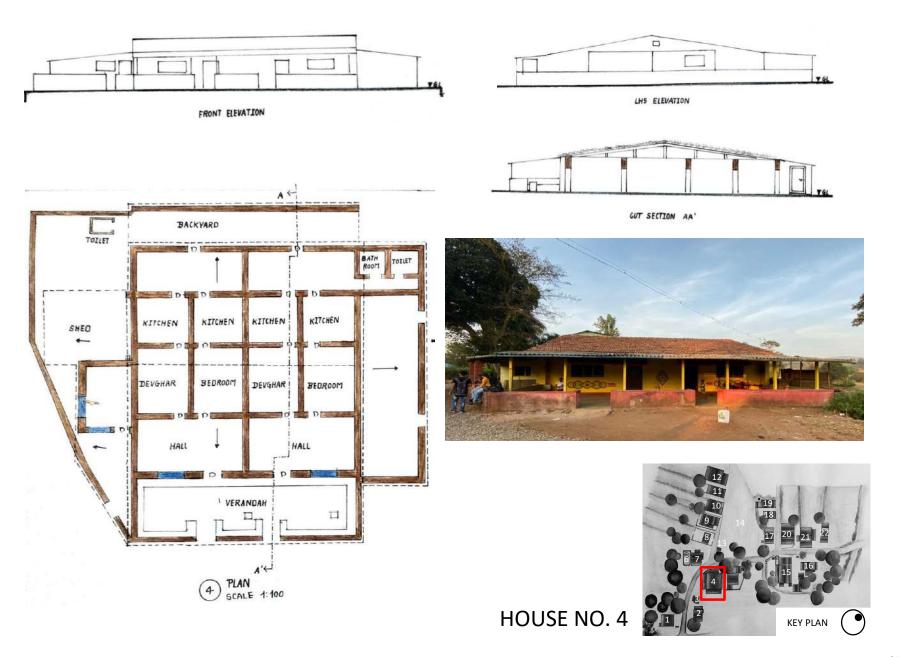




1 KACHHA & 6 AND 7 TEMPLE AND KINDER GARDEN

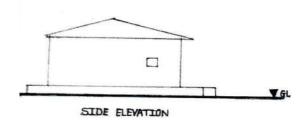


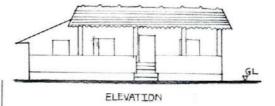




HOUSE NO. 8

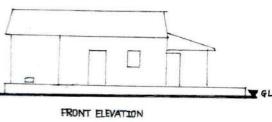
HOUSE NO. 9

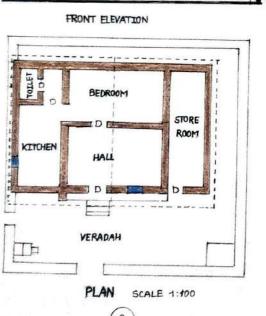


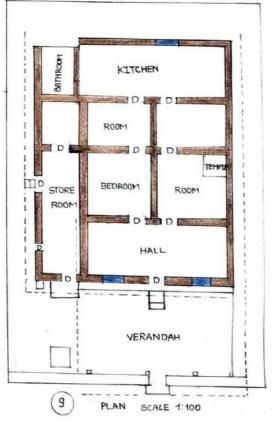




8

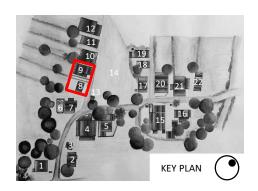








9

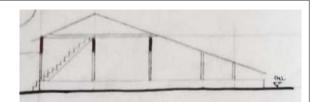




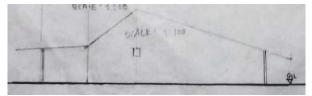
SECTION BB



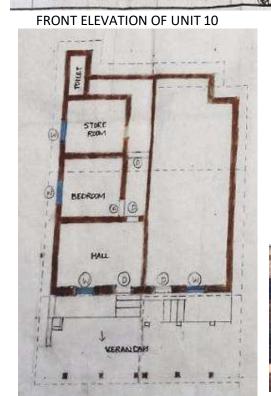
HOUSE NO. 10



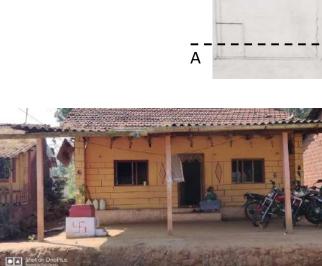
SECTION AA



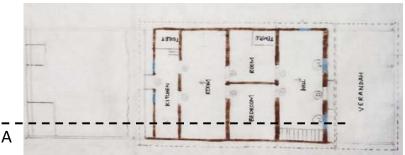
SIDE ELEVATION OF UNIT 11



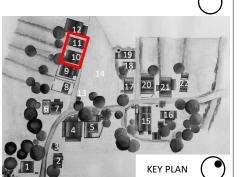
PLAN OF UNIT 10

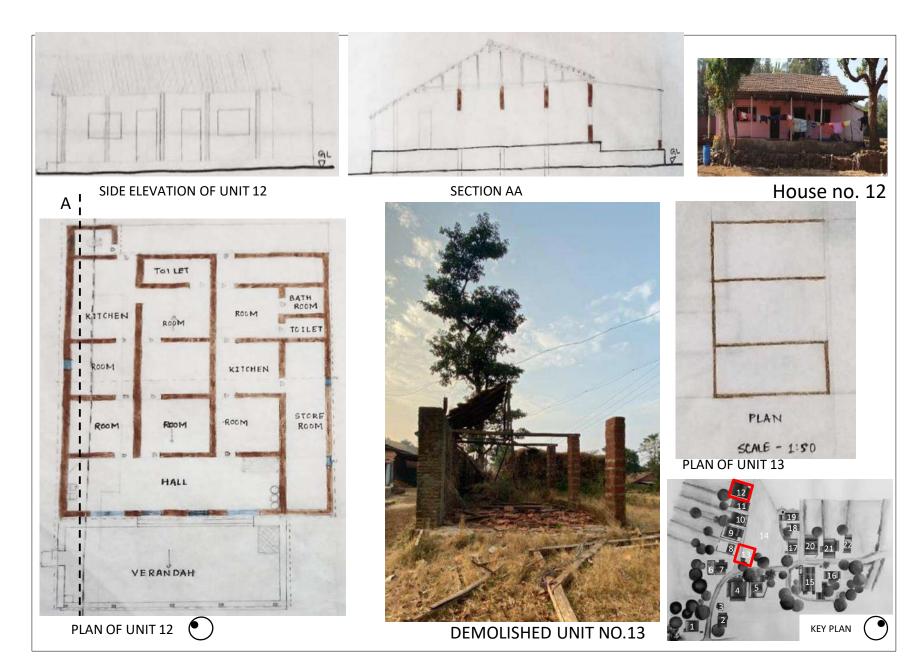


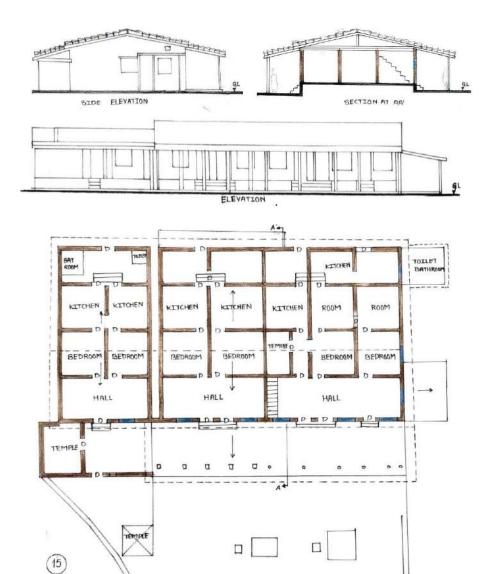
HOUSE NO. 11



PLAN OF UNIT 11



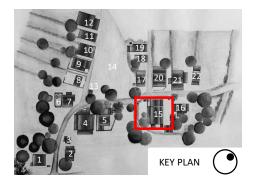




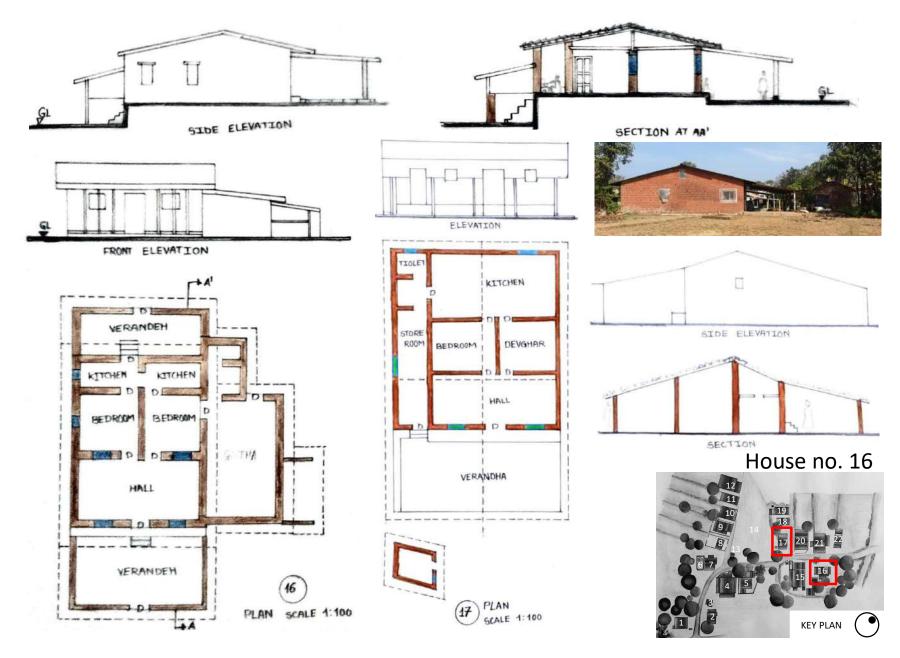
PLAN SCALE 1:100







House no. 15







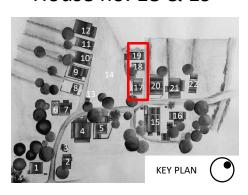


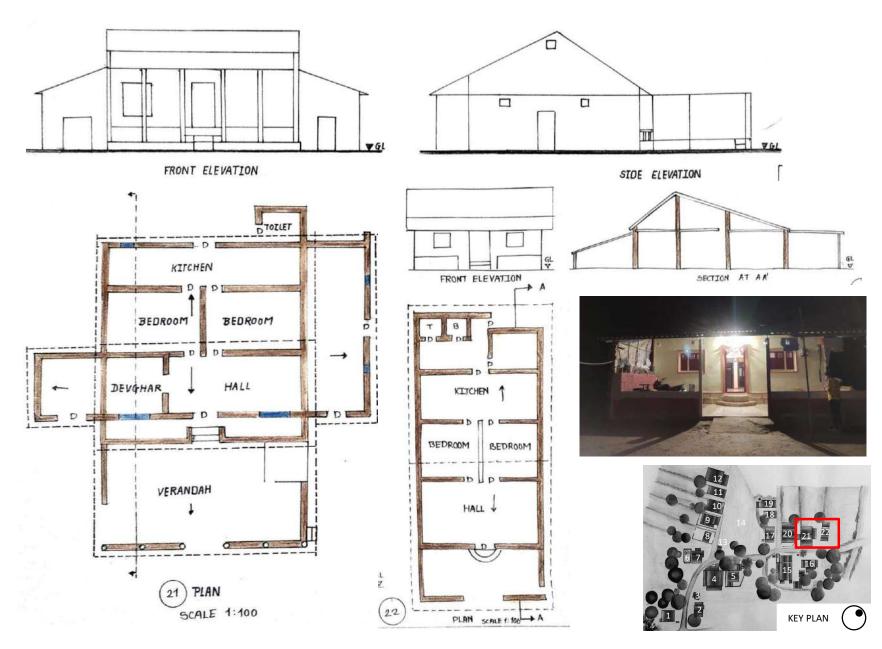






House no. 18 & 19









Way To Ambeshwar Temple



Back Side Of Ambeshwar Temple From Entrance





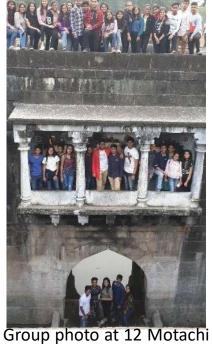




Panoramic view of Shiv Temple At Sangam Mahuli, Satara



Panoramic view of Krishna & Venna river At Sangam Mahuli, Satara



Group photo at 12 Motachi vihir (well)

Sangam Mahuli, Satara

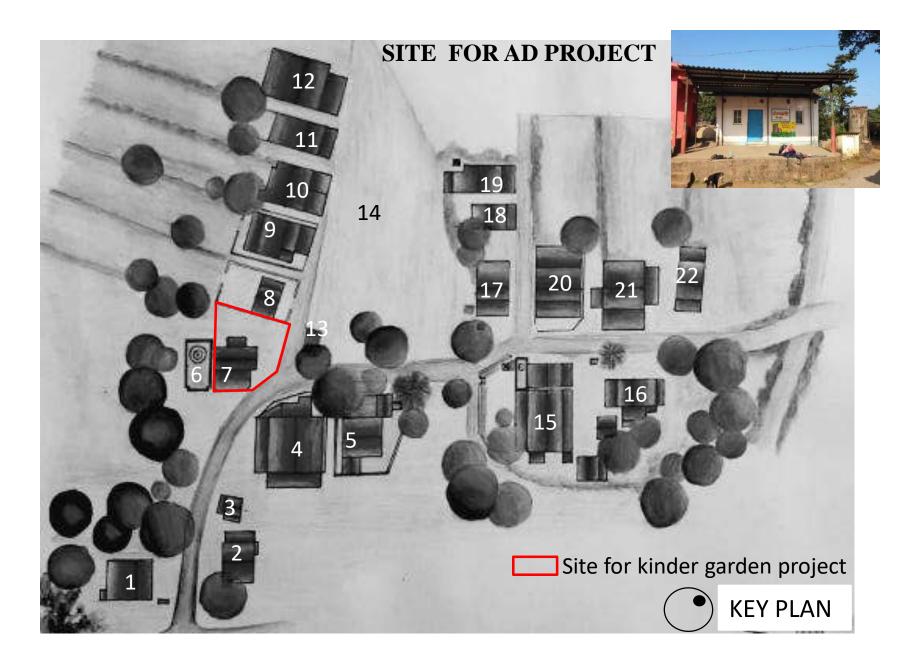


Tomb of Chatrapati Shahu Maharaj





12 Motachi vihir (well)



SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE, PUNE

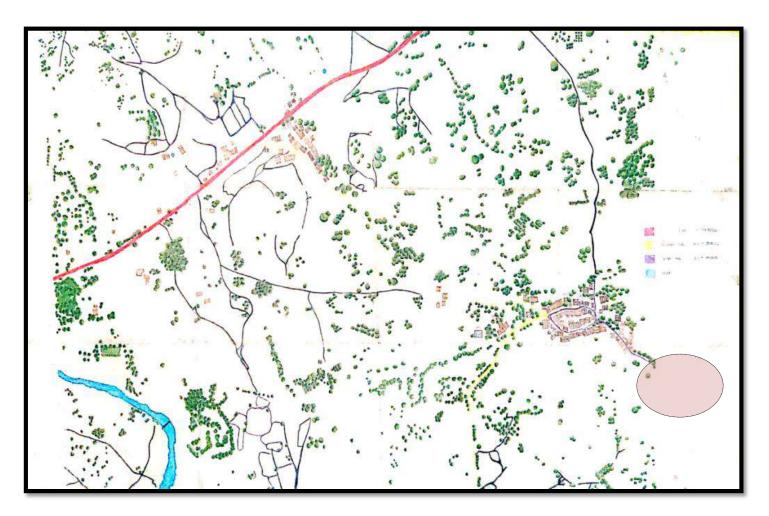
STUDY TOUR REPORT

PALSUNDA

by FIRST YEAR B. ARCH. DIVISION C

02rd to 07th December 2020

LOCATION MAP



LOCATION OF PALSUNDA VILLAGE



NAME OF STUDENTS & FACULTY

FACULTY NAME
AR.PRITI DHANWAT
AR.KETAKI BADGE
AR.RUTUJA PAWALE
AR.VISHAKHA GHULE

GROUP-1

RAJSHREE SINGH AKANKSHA DEORE OMKAR GODSE ROHIT BOBADE NEERAJ DHANGAT PRANJAL HINGWE

GROUP-2

PURUSHOTTAM MUSMADE TANYA JAIN RAHUL JAIN DIPALI KSHIRSAGAR KIRAN MALI

GROUP-3

KARTIK PAWALE PRACHIT PARGAONKAR SHRINIVAS PATIL RASHMI PATIL NISHAD NIMBALE

GROUP-4

MAHESH RAKH SHRADDHA POTDAR ANUP RATHOD VAIBHAVI PAWAR RUSHIKESH RAJPURE

GROUP-5

SALONI SAWANT MRUNAL REWATKAR POOJA WAGH SAKSHI TAKAWALE TULSHIRAM RAUT ABHISHEK RAYKAR

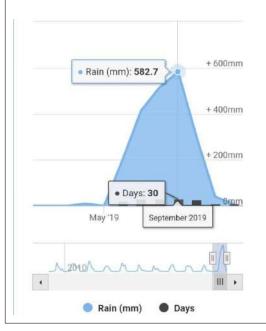
Natural environment

HILLY REGION



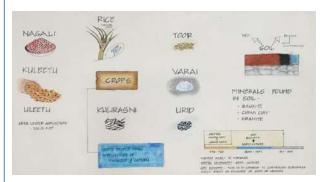
THE VILLAGE IS SURROUNDED BY SAHYADRI RANGES ON SOUTH DIRECTION AT A SEA LEVEL-518M

RAINFALL



THE VILLAGE HAS A
VERY HEAVY
RAINFALL BUT DUE
TO THIN TOP SOIL
THE WATER
DOESN'T STAY
THERE AND FLOW
DOWN HENCE
CREATING WATER
SCARCITY
THROUGHOUT THE
YEAR
MAXIMUM-

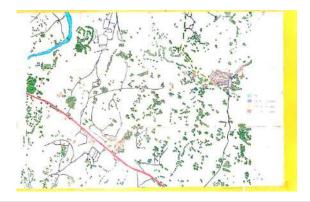
CROPS

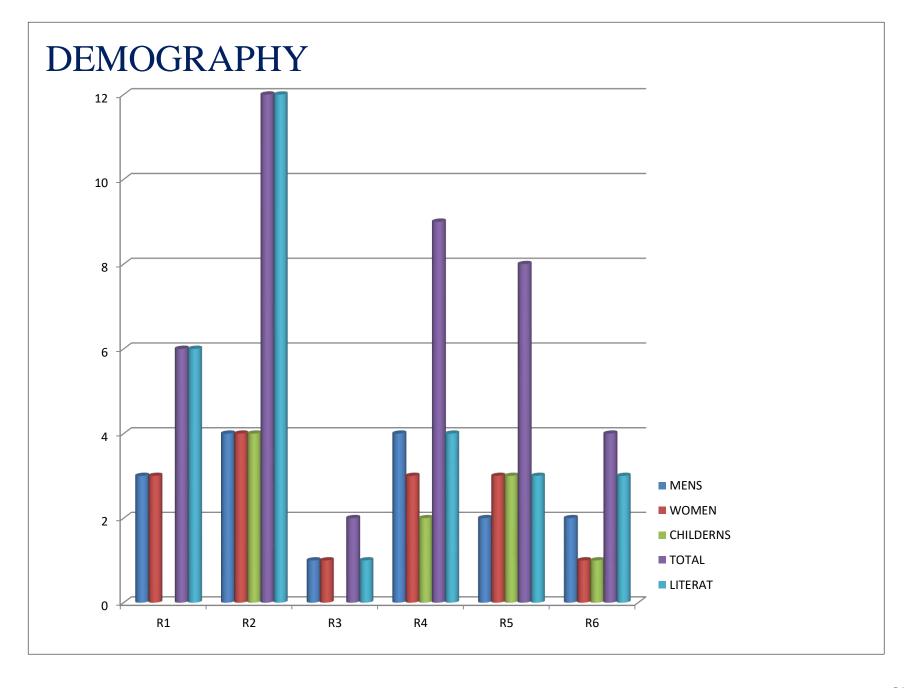


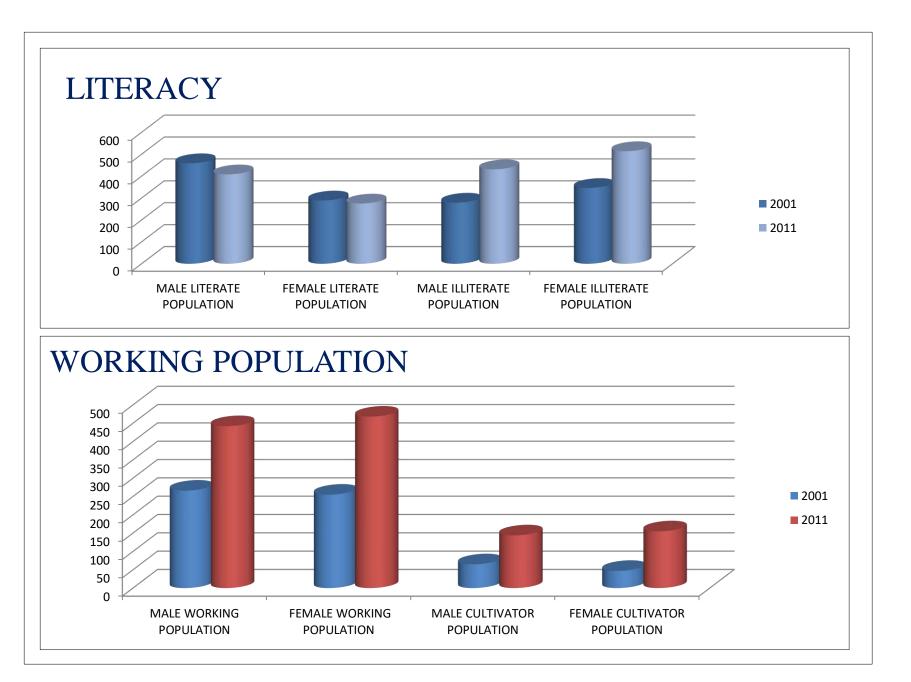
MAJOR CROP:

RICE OTHERS CROPS TOOR,VARAI,TOOR,URID,NAGALI FROM JUNE TO SEPT

FOREST COVER







CULTURE











TYPES OF HOUSES

CLASSIFICATION ON BASIS OF -

- PLANING
- ROOF TYPES
- STRUCTURAL SYSTEM
- MATERIAL

RESIDENCE NO. 4







RESIDENC NO.-1

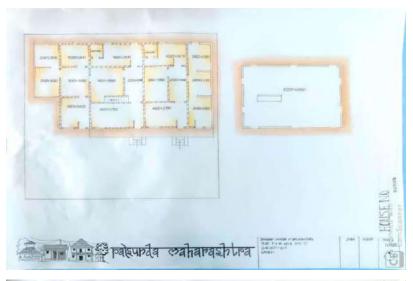




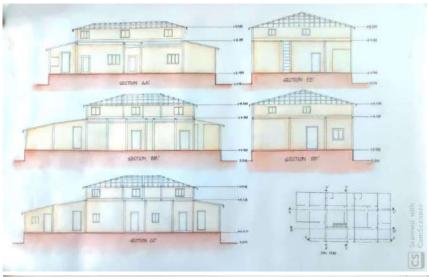


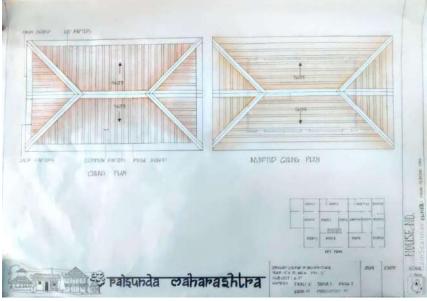


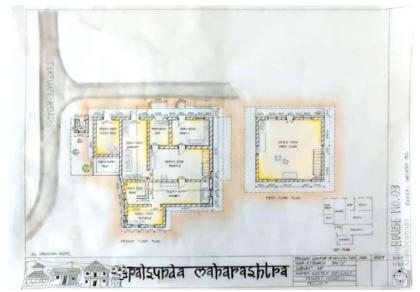




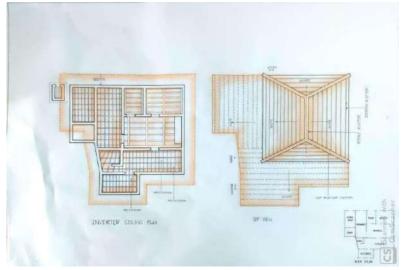


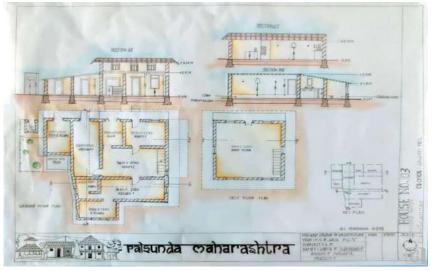








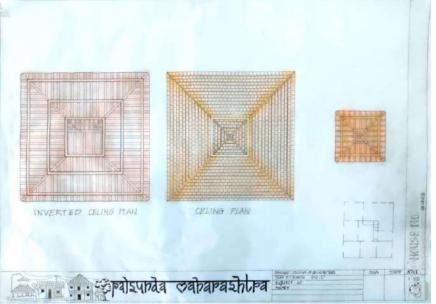








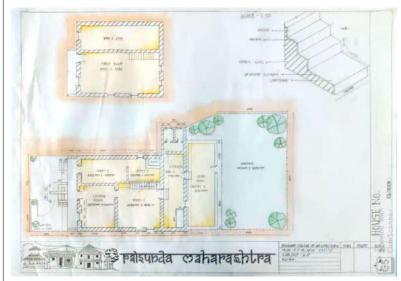




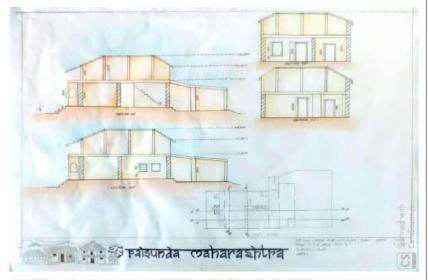












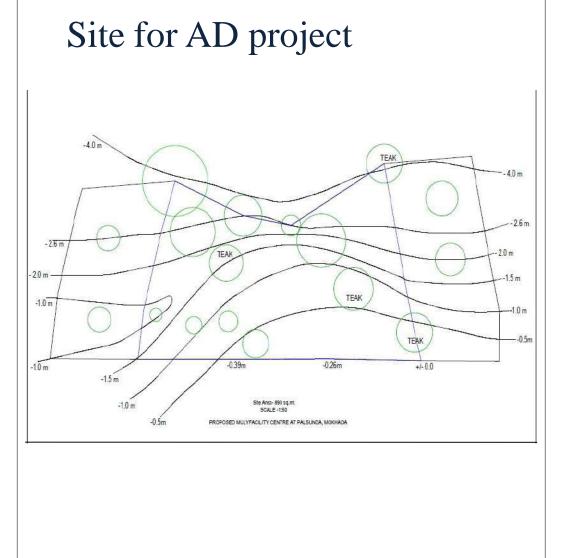












MOTIVE -

TO PROVIDE MULTIFACILITY CENTER AT PALASUNDA MOKHADA DAHANU MAHARASHTRA.

- THE SITE HAS VARIOUS TOPOGRAPHY
- CONTOURS RANGING FROM 0 TO 4M
- •USE OF TRIANGULATION METHOD TO DOCUMENT SITE .
- •AREA IS 890M.
- •DIFFERENT SPECIES OF TREES, HERBS AND SHRUBS.
- REMOVAL OF TREE IS INHIBITED













BRIEF ABOUT DESIGN JATRA FIRM

- PRATIK DHANMER, SHARDUL PATIL, ARE CO-ORDINATORS OF THE FIRM.
- STUDIO WAS STARTED IN YEAR 2013.
- DESIGN JATRA FIRM WORKS ON PRINCIPLES OF SUSTAINBLE AND ENVIRONMENT FRIENDLY ARCHITECTURE.
- THIS FIRM IS VOLUNTEERY
 CO-WORKING FOR
 UPLIFTMENT OF TRIBAL
 SETTLEMENT IN PALGHAR
 DISTRICT AND AROUND
 MUMBAI REGION. LEARNING
 THEIR TRADITIONAL
 METHODS SUSTAINANCE.











BAMBOO WORKSHOP

- HANDLING BAMBOO
- DIFFERENTS TYPES BAMBOOS AND THERE USES IN OBJETS
- DIFFERENT TYPES OF TOOLS WHICH USE IN BAMBOO WORKSHOP
- MAKING COB WALL WITH SUPPORT OF BAMBOO JALI.
- BAMBOO CUTTING TECHNIQUES
- BAMBOO JOINERIES
- OVERLAPING OF BAMBOO
- WALLS OF BAMBOO
- MOULDING TECHNIQUES
- ARCHTITECTURE OBJECTS
 MADE FORM BAMBOO











MUD ARCHITECTURE WORKSHOP

- COB WALLS
- MIXING PROCESS
- PROPOGATION OF SOIL,SAND,LIME AND WATER
- •PLASTERING TECHNIQUES
- •LEVEING OF WALLS
- •WALLS CONSTRUCTIONS TECHNIQUES
- •UISNG NATURE RESOURSES WHILE MAKING MUD CONSTRUCTIONS
- •TESTING SOIL FOR CONSTRUCTION WALL
- USES OF MASONRY TOOLS

STUDY TOUR

Gift ECOHOMY HELPING OTHERS HHITTY BAMBOO JOURNERY POOFING TYPES BEST OUT OF WASTE CONTOUR MEASURING WITH TRIANGULAR METHOP TRADITIONAL METHOD OF EAPTHQUAKE PESISTANCE MOODEH JOIHERY HOUSE DOCUMENTATION 43E OF TECHNICAL INSTRUMENTS LIKE GPS , DISTOMETER , ETC . SCALING FALTOP 45E OF WASTE MATERIALS SENSITIVE AFCHITECT VILLAGE HISTORY HUMAHITY BAMBOO PRODUCTS DATLY POLITIME OF TRIBAL PEOPLE

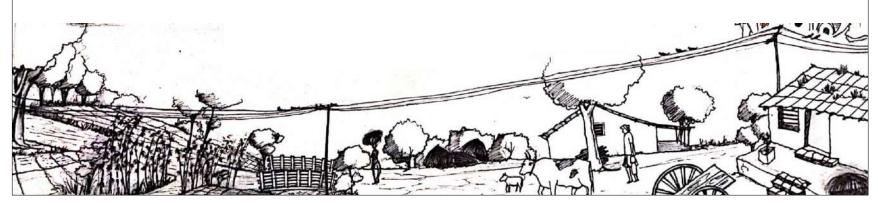
- · Andrews
- · Village tour
- · Jungle tour
- · Intresting games
- · local feetively
- · Jellote art and
- · Rollfing technique
- · Water Management
- · Kind behavious with arimale
- High literacy
- · lift earning
- · Free noture
- · Harticutture
- · Arimal Husbandey
- · Earthquake esstatance house
- · Self dependency
- · How to protect Enveronment
- · Every member knows how to content howe.

- · Sustainable the of Bamboo
- . Adjustment according to situat
- " Use of needs
- · experience of using cot walls
- " Uses of Bamboo
- . Communication thell
- · Mud construction
- · Socialism
- . Gift economy
- · Self Manufacturing
- · Warly Painting
- · History of Jungle Torana
- · Information about Socied place of Jungle
- . How to create unique theye
- · Strickettertural Knowledge from

SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE, PUNE

STUDY TOUR REPORT

Guravgalli, Amba (Dist.- Kolhapur)
by
First Year B. Arch. Division D
2019-20





THANK YOU FOR YOUR ENCOURAGEMENT AND CO-OPERATION!

DR. BANANI BANARJEE MA'AM DR.PRIYAMWADA CHITALE MA'AM

AR.ANJALI AGRAWAL MA'AM AR.GAYATRI MANGORE MA'AM AR.TEJASWINI JANGALE MA'AM AR.SEJAL DESARDA MA'AM

AR.ANJALI AGRAWAL MA'AM AR.AKSHAYA KUDALE MA'AM



List of student's

- 1. Chandekar Soniya Someshwar
- 2. Kundu Tanushri Samir
- 3. Patil Apurva Sunil
- 4. Patil Jayesh Arun
- 5. Patil Shivam Kailas
- 6. Salunke Rushikesh Rajendra
- 7. Shinde Nirantari Shashikant
- 8. Shirke Mrunal Bharat
- 9.Shirsat Abhishek Sanjaykumar
- 10. Shirse Pooja Mohanrao
- 11. Shivade Pranav Bhaidas
- 12.Shivansh Agrawal
- 13.Shruti Pandey
- 14.Siddhant Jaiswal
- 15. Somani Netal Rahul
- 16. Sontakke Akshay Anand
- 17. Surate Prajakta Rajendra
- 18. Sutar Aniket Mahadev
- 19. Tanvade Sourabh Mallinath
- 20. Topale Manaswi Rahul
- 21. Ubale Sanjana Rameshwar
- 22. Varat Soham Tukaram
- 23.kchaure Tanishka Satish
- 24. Wakode Shivam Mahadev
- 25. Wankar Pratiksha Premchand
- 26. Yerawar Janhavi Umesh

STUDY TOUR: FIRST YEAR B.ARCH. DIV D
DEC-2019

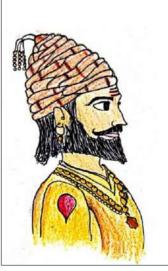
INTRODUCTION

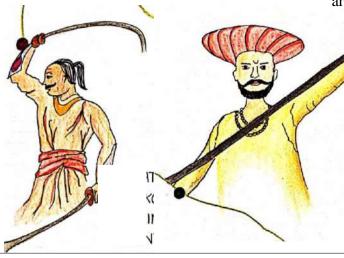


THE SHIVAJI MAHARAJ STATUE IN GURAV GALLI



THE AMBESHWAR TEMPLE





AMBA

A mountain pass on Ratnagiri-Kolhapur road in Maharashtra. This ghat lies in the Sahyadri mountain ranges and has picturesque mountain-scapes and pleasant climate.

Amba village is situated on plateau which is surrounded by farms and pastures.

Having a population of 1195 (census 2011), the main occupation of the settlement is forestry, farming, animal husbandry and tourism.

Services provided here are in close knit community and its intervening streets present recognizable linear pattern . It is dominated by community feeling.

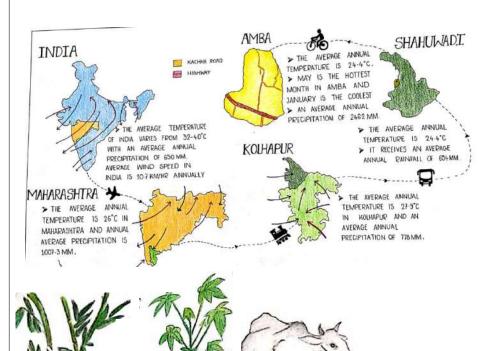
HISTORY

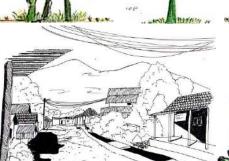
The history dates back to the time period of the great Maratha King 'Shivaji Maharaja'.

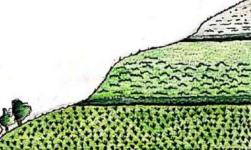
His fort Vishalgad and the iconic Pawankhind are located very close to Amba.



GEOGRAPHY







LOCATION AND FEATURES:

- •Amba ghat is a mountain pass on the Ratnagiri-Kolhapur road (NH-204) in Maharashtra, at a height of 2000 feet above sea level.
- •This ghat lies in the Sahyadri mountain ranges that is the 'Western Ghats'.
- •Amba ghat is surrounded by rainforests and bison wildlife sanctuary.

CLIMATIC CONDITIONS:

- •The average annual temperature is 24° C.
- •May is the hottest month and January is the coolest month in Amba Ghat.
- •An average annual precipitation of 2462 mm occurs in the Ghat.

FLORA:

- •Mostly bamboo and jackfruit trees were found in the settlement.
- •Majority of the houses had a 'Tulsi Vrindavan' in front of their houses.
- •There were also a few papaya, hibiscus, marigold plants found.

FAUNA:

- •Cows and buffaloes are mostly found in the homes. Also there were a lot of chickens there.
- •This was seen as many of them practice animal husbandry.

TOPOGRAPHY:

•The terrain was mostly sloping throughout the settlement and also influenced the agriculture and farming patterns there.

DEC-2019 80



FESTIVALS:

- •Almost all the Hindu festivities are celebrated in Guravgalli.
- •The festivals like Ganpati , Shiv Jayanti and Navaratri are celebrated near the and Ambeshwar temples which are the main worshipping places in Amba.

CULTURE:

- •The majority of the population consists of Hindus and so is their culture related to it.
- •The men mostly wore shirts and pants and were farmers, factory workers or daily wage workers.
- •The women of the village wore traditional 'Sadi' and the elderly women wore 'Kashta'. The women were mostly housewives and did their daily chores.
- •Their everyday meal included nachani and rice 'Bhakari' which was grown by them, green vegetables, daal and rice.



FESTIVALS



THEIR DAILY ATTIRE

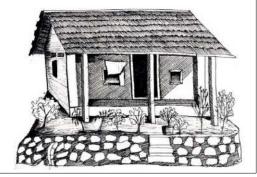
STUDY TOUR: FIRST YEAR B.ARCH. DIV D
DEC-2019

STREET HIERARCHY VANIVISANA RESORT AMBESHWAR TEMPLE IN DE X TAR ROAD SOIL ROAD STREET HIERARCHY

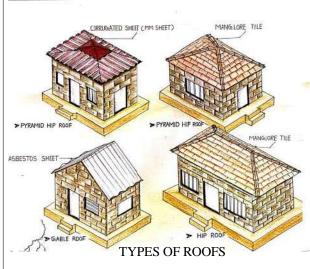


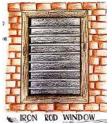
GURAV GALLI:

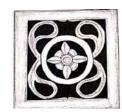
- •The galli is along the street and it consist of around 20-22 houses.
- •The houses are located closely to each other, the road has a width of 3 meters.
- •When seen in plan, Guravgalli appears to be a cluster of houses having mostly Mangalore tile roofing.
- •Zoning of the house plan is done on the basis of private, semi private and public spaces.
- •Most of the houses are single storied and are built with laterite stone and mud.
- •In small houses there were only 2-3 rooms which consisted of living ,kitchen and bedroom.
- •In most of the houses the kitchen and living room was utilized as sleeping area.
- •Very few number of houses had more than 1 bedroom.
- •For disposal of the waste water, there was drainage provided on the one side of the road.



BUILDING CONSTRUCTION







TYPES OF WINDOWS





ARCHITECTURAL FEATURES:

ROOF:

- •Mostly sloping roofs with Mangalore tiles as covering material is found in Guravgalli.
- •The types of roofs found here were hip roof, gable roof and pyramidal hip roof.
- •The roofing material found here is mostly Mangalore tiles and asbestos cement sheets

WALLS:

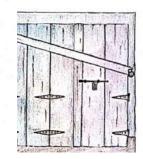
- •The walls found were mostly made up of laterite stone as it was a locally available material.
- •The masonry observed was coursed rubble masonry and random rubble masonry.

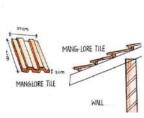
WINDOWS:

•Frames were typically made up of timber and concrete. Few had iron grills and wooden shutters.

DOORS:

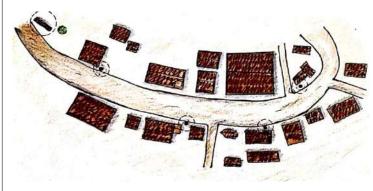
There were panel doors mostly made up of timber.



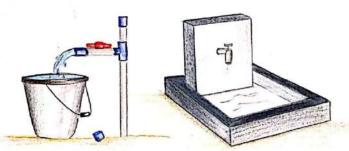




SERVICES



MAP INDICATING ELECTRIC POLES



WATER SOURCES





HOUSEHOLD STORAGE

ELECTRICITY:

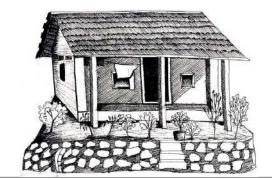
- •There is electricity supply for 24 hours in the village. But , during heavy rainfall they sometimes face a power cut.
- •Street lights are not properly provided . There are only 4 electric poles in the village. Therefore there are many dark areas in between these poles.

DRAINAGE:

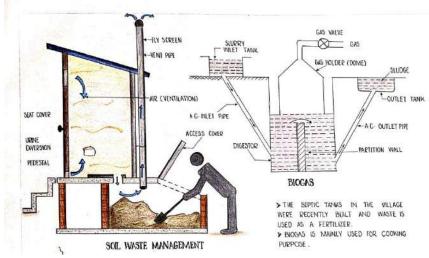
- •Drainage system was not properly maintained in the village.
- •Open drainages are found and that is very unhygienic for the people.

WATER SUPPLY:

- •The village receives regularly water supply from 7 a.m. to 8 a.m.
- •People store this water in the morning and utilize it for the day.



WASTE MANAGEMENT:









SEPTIC TANK:

- •Septic tanks work by allowing the waste to separate in 3 layers that is solid, effluent and scum.
- •The solids settle at the bottom where the microorganisms decompose them.
- •The effluent travels through the underground, perforated pipes.
- •The waste once dried is removed and used as fertilizers in the farms.

BIOGAS PLANT:

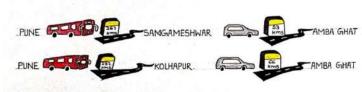
- •Biogas is the type of bio fuel that is naturally produced from the decomposition of organic waste.
- •They release a blend of gases, primarily methane and carbon dioxide. The villagers use this energy released from biogas in the form of fuel for cooking, boiling bathing water etc.



BACKYARD SMALL BIOGAS UNIT

SERVICES:

> BY ROAD

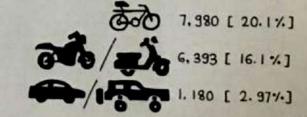




ROADWAY TO AMBA



RAILWAY TO AMBA



TRANSPORTATION:

Only 20% of the villagers own their private vehicles.

The transportation facilities are very poor.

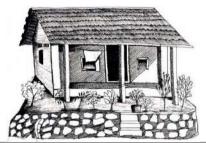
People need to walk a long distance in order to reach the nearest bus stop hat is in Amba.

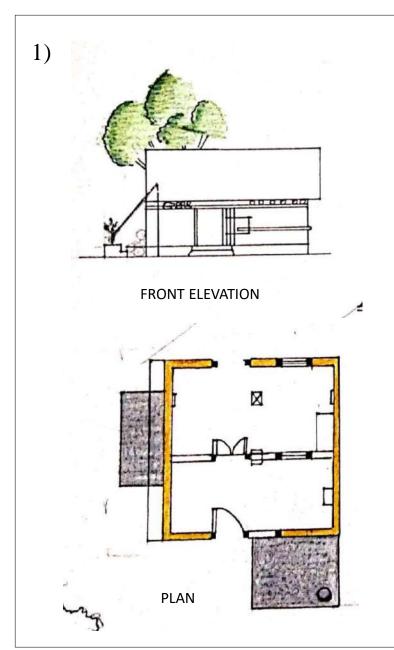
- •The nearest railway station is located in Sangameshwar.
- •From Sangameshwar people have to either opt for rental or private vehicles in order to reach Amba.

HEALTH CARE SERVICES:

- •There is only one government hospital in the village which is far and not easily accessible from the galli.
- •Even doctors are not available regularly.
- •For the cattle , there was a veterinary clinic near the village

NUMBER OF POPULATION THAT OWNS PRIVATE VEHICLE.







MATERIALS:

WALLS- walls were made up of a mixture of soil, cow dung and water with small proportions of cement.

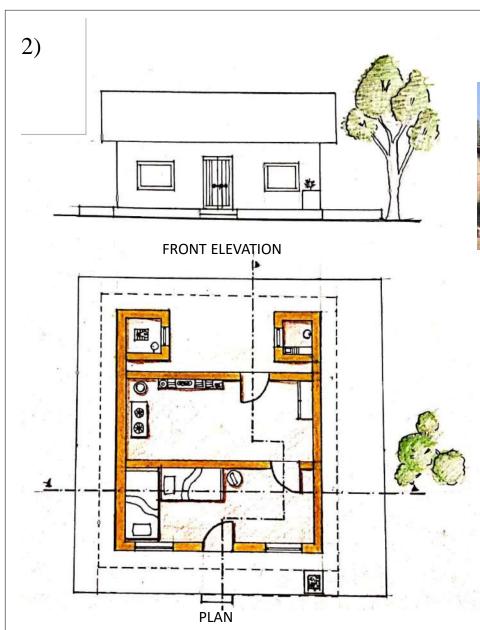
FLOORING-flooring was done with soil and cow dung.

ROOFING-roofing was made up of Mangalore tiles.

BATHROOM- it was totally covered with pp cement bags.

DOORS- they were made up of wood.

WINDOW- metal and cement frame with metal grills.





MATERIALS:

WALLS- walls were made up of mixture of soil, cow dung and water with small proportions.

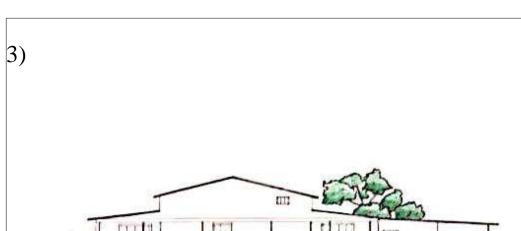
FLOORING- flooring was done with soil and cow dung.

ROOFING- roofing was majorly done by Mangalore tiles.

BATHROOM- bathroom was completely covered by polypropylene tape fabric.

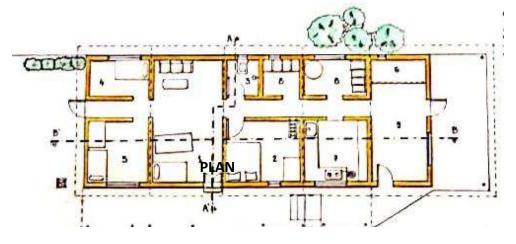
DOORS- doors were made up of locally available wood.

WINDOWS- metal and cement frames were used for windows



ELEVATION





MATERIALS:

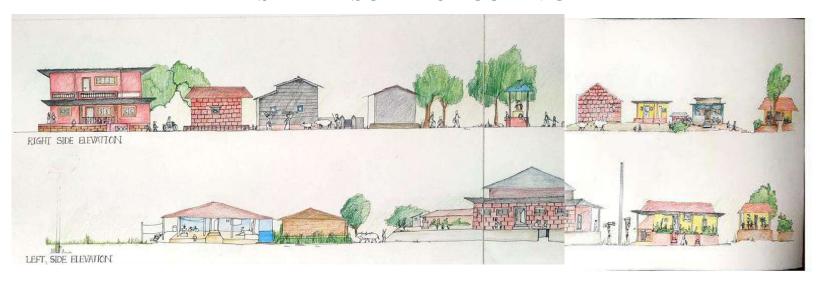
WALLS- walls were made up of laterite stone, **FLOORING**- the flooring was done with soil and cow dung.

ROOFING – the roofing was done by asbestos cement sheets.

BATHROOM- the bathroom wall masonry with chira and cement.

DOORS AND WINDOWS – wooden frame for door and windows with wooden panels and steel grills.

STREET SCAPE OF GURAVGALLI



There were some peculiar features when the streets of Guravgalli was taken into consideration. Throughout the length of the street we can find laterite and mud houses with traditional cow dung flooring. However, many of them have recently plastered their houses and modified it for convenience. Around 2-3 houses in Guravgalli have been recently built and are concrete structures. Also the most common feature that can be seen is the front yard with flowers in front of the houses. There was a drainage line along one side of the road that was not covered and was the main reason for unhygienic surrounding.. The entire street consisted of only 4 electrical poles and 1 solar lamp. This amount of street light was not enough for the length of the road and thus there were a few dark patches in between two poles. Various local trees were also found along the road. One of the most important landmarks here is the Shivaji Maharaj statue, which is like a small gathering place for the residents of Guravgalli. Small functions and evening meetings are done here.

SANGAM MAHULI:

Sangam Mahuli and Kshetra Mahuli are two sacred villages situated at the confluence of Krishna and Veena rivers in Satara district. These villages were earlier the part of Aundh princely state. Shri Kashi Vishweshwar temple is situated in Sangam Mahuli and is dedicated to lord Shiva.

BARA MOTICHI VIHIR:

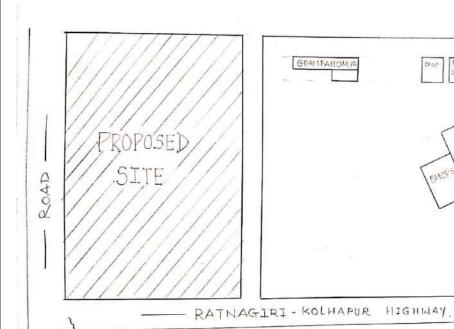
Baramotichi Vihir is a stepwell in Limb, Satara. It was constructed between 1641 and 1664. It is 110 feet deep and 50 feet in diameter. The well is octagonal shaped and looks like a dug-out Shivalinga. It was meant to be a water source for tall the farms around with its 12 moats. From the top, visitors can see few tiny walls and water channels. In this we;; we can also find old statues, historical structures and intricately designed columns and arches.

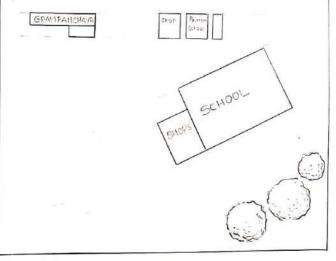












PROPOSED PROJECT FOR DESIGN:

1)VETERINARY CLINIC 2)CLINIC 3)WOMEN WELFARE **CENTRE**

1) VETERINARY CLINIC:

There was a large number of cattle present in the vicinity of the galli .Even then, there was only one veterinary doctor present there. The doctor was assigned with numerous small villages around Amba so wasn't able to attend at the needed time. So the urgent need of a clinic for the cattle is felt here. This will ensure regular care for them and even in time of emergencies . This will also contribute to the economy as animal husbandry is one of the major income source there

2)CLINIC:

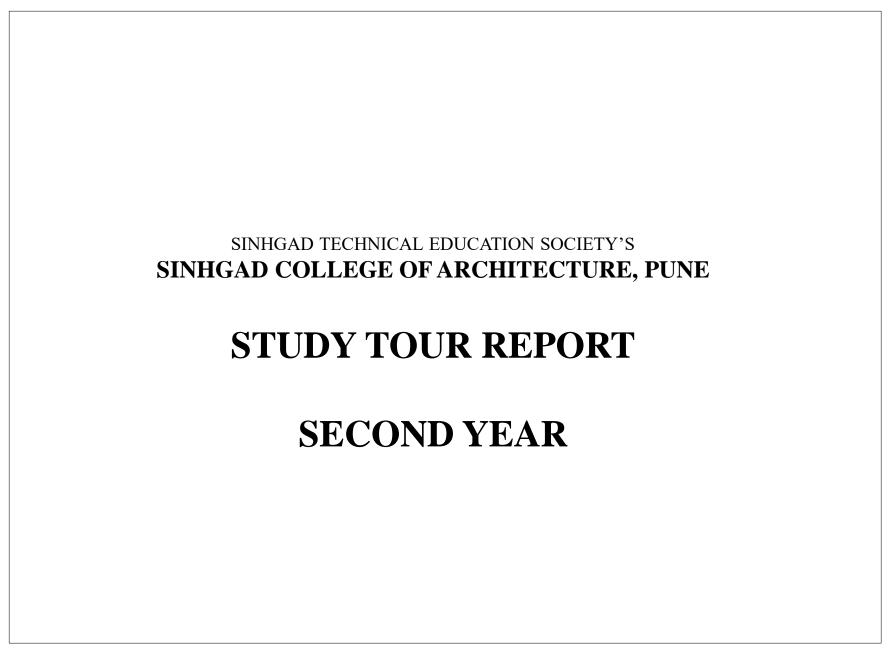
As Amba is a major tourist destination in the western ghats, and has tourists every year. For the tourist as well as the villagers there is need of a general physician. There is no proper clinic in the village and the only government clinic is miles away.

3)WOMEN WELFARE **CENTRE:**

The women of the village wish to earn and support their families. But there are no such facilities available to them nearby. To empower women and help them and their families financially ,this empowerment centre will be of great help.

GLIMPSES OF GURAV GALLI



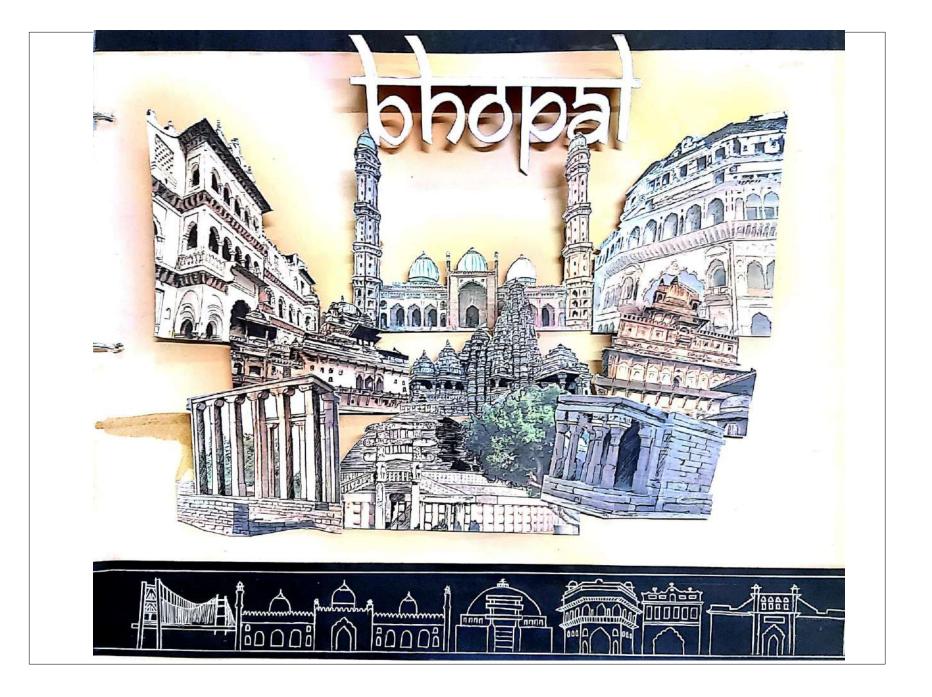


SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE, PUNE

STUDY TOUR REPORT

MADHYA PRADESH: BHOPAL, SANCHI, KHAJURAHO, ORCHHA, DATIA by Second Year B. Arch. Division A

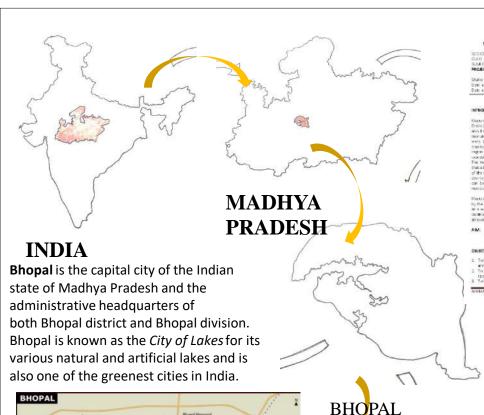
28th November 2019 to 5th December 2019



GUIDED BY:- Ar. Kalpana Hadap Ar. Vikram Shah. Ar. Mugdha Kulkarni. Ar. Namrata Khatod.



1	AGRAWAL SANSKRUTI ANIL
2	ALANGI RAKSHA RAVI
3	BAFNA HARSH SACHIN
4	BAHETI YASH MAHESH
5	BELDAR MANSI HARISHCHANDRA
6	BHAGWAT PARTH PRASHANT
7	BHANUSHALI HENIL AMIT
8	BHOSALE VIVEK VITTHAL
9	BHAVE AMEY
10	CHAPHEKAR UTKARSHA AJEY
11	CHAUHAN PUNIT RAJESH
12	CHAUKHANDE AKSHADA SUBHASH
13	CHEDE VAIBHAV VASANT
14	CHOTHAVE SARTHAK RAJESH
15	CHOUGULE APEKSHA PRAVIN
16	DAHALE ABHISHEK SHRIKANT
17	DEOKAR MRUNALI VASANT
18	DEOKAR SAURABHI JAYESH
19	DESHMUKH NINAD CHANDRABHAN
20	DESHMUKH SHIVANI VINAYAK
21	DESHPANDE SUYOG SUNIL
22	DEO MAYURI CHANDRAKANT
23	DHAIGUDE SHWETA RAVINDRA
24	DHAMDHERE JANHAVI KISHOR
25	DHOPE SHOURYA SAMBHAJI
26	GADHAVE DIVYA TANAJI
27	GAIKWAD ANIKET RAJENDRA
28	GAIKWAD KSHITEEJA DAYANAND
29	GAIKWAD VAISHNAVI RAMAKANT
30	GANDHI MUSTAFA SABBIRBHAI
31	GARUD KRUNAL HANUMANT
32	HANDE PRASANNA POPAT
33	UPASE SHUBHAM ANIL
34	VERMA SEJAL RAJESH
35	WANI PRANAV MOHANRAO
36	YEDEKAR SOHAM RAJARAM



BHOPAL CITY

SINHSAD COLLEGE OF ARCHITECTURE . PUNE 411041 PHONE: 435 5584, 3527, D465, D468, 5541, 2723 not 729 FAX: 4553527 not 729

SECURE SECONDE

1 13th DEC 2019 As per schedule TICTAL MARKS: 1.250

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Maxima, by our its architectural image from a display of the legist of an exponential properties reached for the widthest of a perfectle thresh sententinds the group of the post benefits being about a service betting reconstruction of UNIXOS OPERAGE from a fine till one of the pooler bound. destination for various group of people including artists a chitects archeois gets are from to be & all countries world.

To design a field good Central in the present of lithigulating group of temples to literal to expensive contential codign.

CHIECTIVES

DISTRICT.

- 1. To be able to zone the acceltors, reeping in mind the religious and hydronial exportance of the are autempedithentional space.

 To be able to discover appropriate production or multi-uncoding othering place, by planning
- spaces accordingly.

 3. To be able to understand the means and meno-dimension the site and respond to it.

SHIHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE . PUNE 411041 PHONE : 485 5884, 3527, 0465, 8466, 8541, 2723 ext. 729 FAX : 4359527 ext. 729

BUSECT : ARCHTECTURAL BEDGY II
PROJECT : AD-MAMAT KHAJURANC ERJURNING THE GOLDEN BRA.

Europieem - Ac Mughe Euleem, Actimitatival, Ac Mirem Swith Ac Santagee Panel.

Date of Indianation 12° DEC 2019 TOTA, 349AS 2200

Date of Submissions 1 Ac per schedule. Date of Submissions

- Aceping in mind the vertexular building traditions.
- Commission of each invariant process of activation and activation and each in.
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Beddiller face studies: To unimitate the organization of religions in regulationing to increase solved, special & consequences, Definite expensition planers, subtail arrangements, relationship to the own representation of the Design photography of existency, registered attaining follows, response to effects, significance of the air represents are the expension.

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SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE , PUNE 411041 PHONE: 435 5884, 3527, 0465, 0468, 0541, 2723 ext 729 FAX: 4353527 ext 729

Date of introduction : 13" DEC 2019 TOTAL NARKS : 250

DESIGN PROGRAMME

	DESIGN IV - TERM II - 2019-20				
	ASHRAM AT KHAJURAHO - Enlivening the Golden Era				
SR.NO.	SPACE	UNIT/NO.	AREA (Sq.M)		
1	ENTRANCE		_		
	a) Entrance Lobiay + Reception	1	21		
2	VISITORS CENTRE	1	2		
3	ADMINISTRATION AREA	1	31		
4	MEDITATION HALL	1	166		
	a) Scripture reading/chanting space	1	5		
5	YDGA HALL	1	10		
6	TRADITIONAL MUSIC SPACE	2	15		
7	TRADITIONAL DANCE SPACE	1	. 10		
8	TEMPLE BUILDING & SCULPTING SPACE	2	15		
9	LIBRARY	1	16		
10	DINING AREA	1	10		
	a) Kitchen area	1			
	b) Store & loading/ unloading spaces.				
11	CAPE	1	3		
12	SOLVENIR SHOP	1	2		
13	AMPHITHEATRE				
	PARKING SPACE:				
	29-cycles, 19-four wheelers, 30-two wheelers, 2-bus	-	-		
	(Toberos to seignes a per injurement)	_			
	25% circulation	_			
	25 % built up area	-	. 15		
	TOTALAREA	1	130		

CLASS: II B. ARCH DIV: SUBJECT : ARCHITECTURAL DESIGN III PROJECT : ASHRAM AT KHAJURAHO: ENLIVENING THE GOLDEN ERA

	DESIGN IV - TERM II - 2019-20				
	ASHRAM AT KHAJURAHO - Enlivening the Golden Era				
SR.NO.	SPACE	UNIT/NO.	AREA (Sq.M)		
1	ENTRANCE				
	a) Entrance Lobby + Reception	1	2:		
2	VISITORS CENTRE	1	2		
3	ADMINISTRATION AREA	1	3		
4	MEDITATION HALL	1	16		
	a) Scripture reading/chanting space	1	5		
5	YOGA HALL	1	10		
6	TRADITIONAL MUSIC SPACE	2	15		
7	TRADITIONAL DANCE SPACE	1	. 10		
8	TEMPLE BUILDING & SOLUPTING SPACE	2	15		
9	LIBRARY	1	16		
10	DINING AREA	1	10		
	a) iCtchen area	1	3		
	b) Store & leading/ unleading spaces.				
11	CAFE	1	3		
12.	SOLVENIR SHOP	1	2		
13	AMPHITHEATRE				
	PARKING SPACE:				
	29-cycles, 19-four wheelers, 30-two wheelers, 2-bus	-			
	(Trakers) to designation per sequinements.				
	15 % circulation				
	15 % built up area		15		
	TOTAL AREA	1	130		

ASHRAM AT KHARURAHD; ENLIVENING THE GOLDEN BRA

EVOLUTION OF BHOPAL

1010-1130



UPPER LAKE CREATED USING EARTHEN DAM BY RAJA BHOJA.

1715-1800



1715 AD MUGHAL ARMY COMMANDER DOST MOHAMMED KHAN ATTCKED BHOPAL.

1801-1837



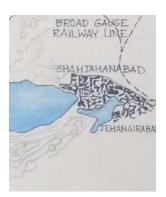
QUDSIA BEGUM BUILT THE 1ST PALACE GOHUR MAHAL AND JAMA MASJID

1838-1868



CONSTRUCTION OF MOTI MASJID AND SHAUKAT MAHAL

1869-1890

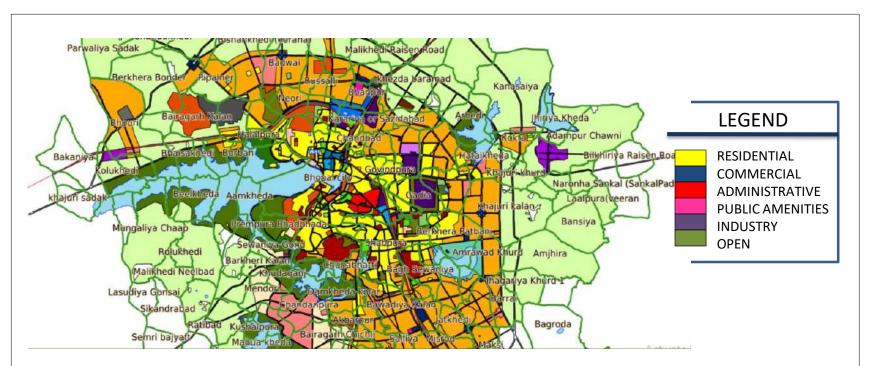


FORMATION OF JEHANGIRBAD AND SHAHJAHANABAD

1891-1947



THE KHIRNIWALA MAIDAN COLONNADE WITH 2 GATES IS DEMOLISHED.



CITY DEVELOPMENT PLAN

UPPER LAKE

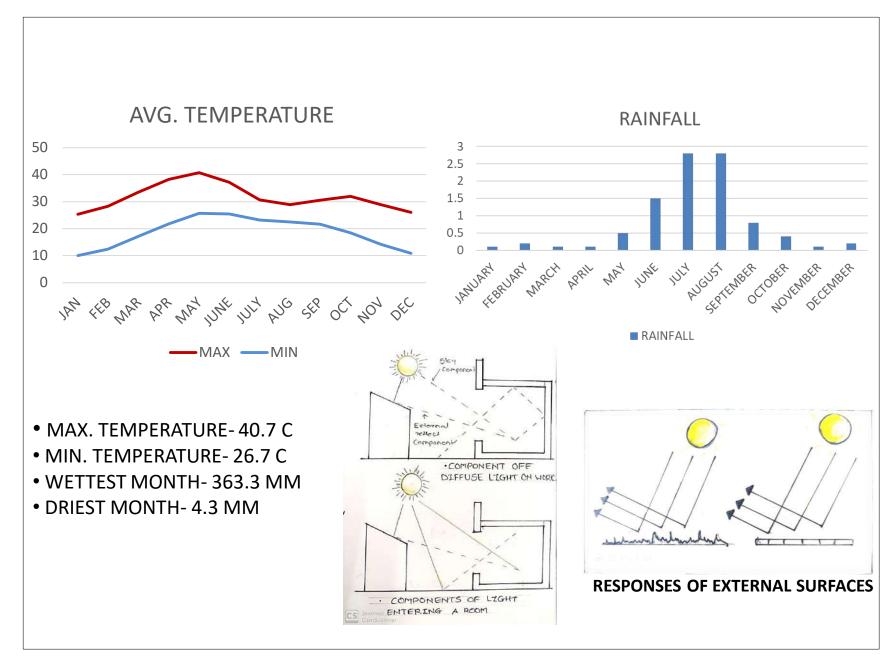
- UPPER LAKE IS THE MAJOR SOURCE OF DRINKING WATER FOR 40%.
- LARGEST ARTIFICIAL LAKE IN ASIA.

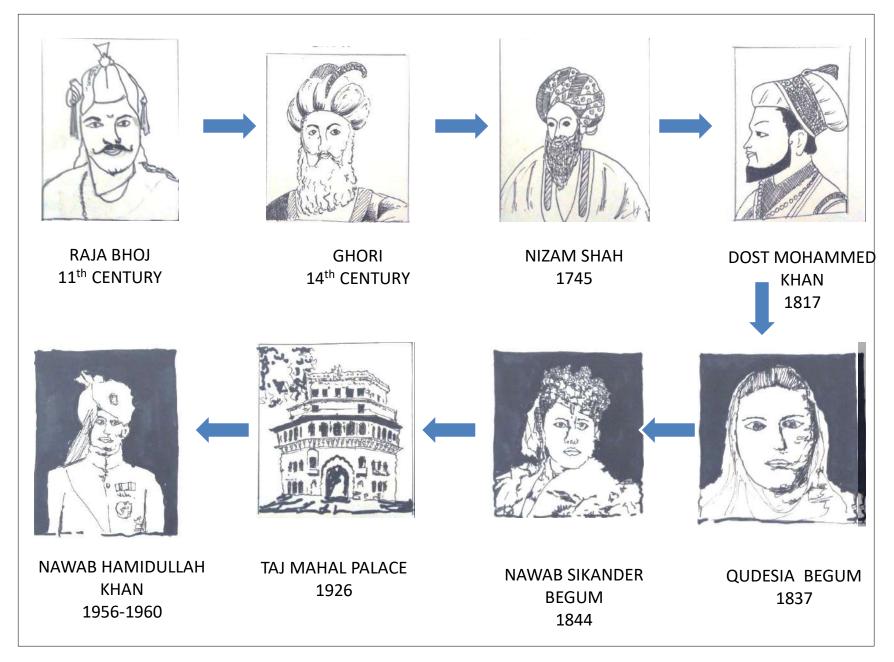
LOWER LAKE

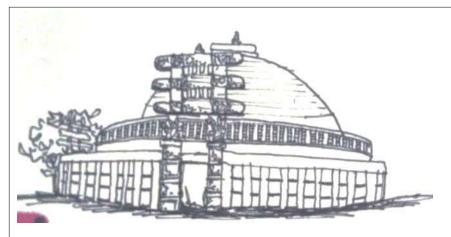
- BUILT BY- CHOTE KHAN.
- BUILT BY MERGING EALIER WELLS IN THIS.
- •DOES NOT HAVE ANY FRESH WATER SOURCE'



LAND USE

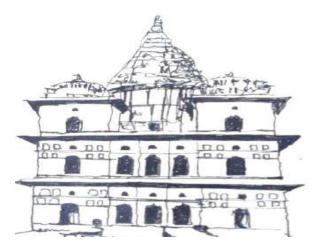






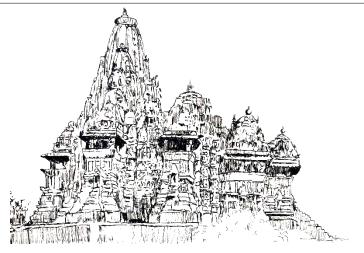
SANCHI STUPA

- BUILT IN 273-236 BC
- CONSTRUCTED BY MAURYAN EMPEROR ASHOKA
 - BUDDHIST ARCHITECTURE



ORCHHA PALACE

- BUILT IN 17th CENTURY BY RAJA BIR SINGH DEO
 - MUGHAL & RAJPUT ARCHITECTURE



KHAJURAHO GROUP OF MONUMENTS

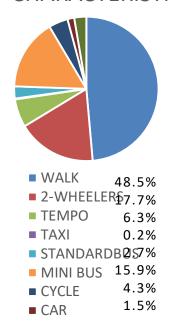
- BUILT BY CHANDELA DYNASTY
- BETWEEN 950 -1050 AD
- NAGARA ARCHITECTURE



DATIA PALACE

- BUILT IN 1620 BY RAJA BIR SINGH DEO
- MUGHAL & RAJPUT ARCHITECTURE

TRAFFIC AND TRAVEL CHARACTERISTICS



TRANSPORTATION

- NATIONAL HIGHWAY NO.
 12-86 AND STATE
 HIGHWAY NO. 18-23
 PASSES THROUGH THE
 CITIES
- CITY IS ALSO WELL CONNECTED TO OTHER MAJOR CITIES BY MEANS OF AIR AND RAIL.
- TOTAL TRIPS- 1.0 LAKHS PER DAY
- EXISTING SYSYTEM OF PUBLIC TRANSPORT DOMINATED BY MINI BUSES AND TEMPOS.

WATER SUPPLY

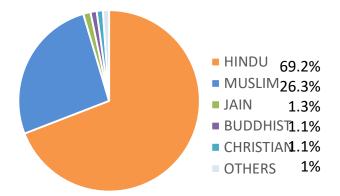
■ HANDPUMP	58%
■ COVERED WELLS	1%
■ TAP WATER	4.7%
UNCOVERED WELLS	5.3%
■ TAP WATER- TREATED SOURCES	6.8%
OTHERS	24.7%

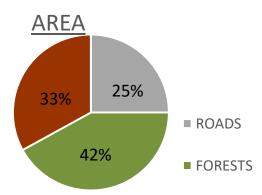
BHOPAL'S WATER SUPPLY

F00/

- •UPPER LAKE AND KOLAR RESERVIOR 35-40% OF POPULATION OF BHOPAL USES IT'S OWN BOREWELLS TO MEET IT'S DAILY WATER NEEDS.
- •THERE ARE 35,000
 PRIVATE BOREWELLS
 WITHIN MUNICIPALS
 LIMITS.

RELIGION WISE POPULATION



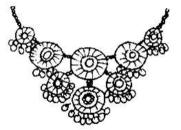


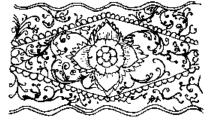
FESTIVALS

ART AND CRAFT





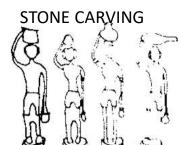




LOKRANG

BHARAT BHAVAN FESTIVAL

ORNAMENTS



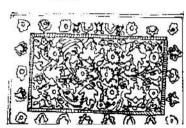




IJTEMA







BAMBOO WORK



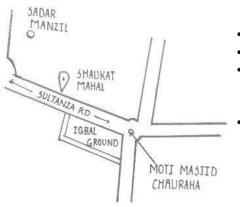
RASHTRIYA SAMAROH

DRUPAD FESTIVAL

CARPET WORK

WOOD CARVING

SHAUKAT MAHAL



- BUILT IN- 1830
- 200 YEARS OLD STRUCTURE.
- WEDDING GIFT FOR SIKANDER JAHAN BEGUM (1ST FEMALE RULER OF BHOPAL).
- IT IS SURROUNDED BY BUSY ROAD, LEADING TO OLD BHOPAL CITY, ENTRANCE OF CHOWK AREA.

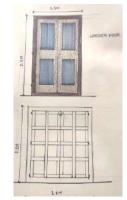


ARCHES DETAILS



KEY PLAN

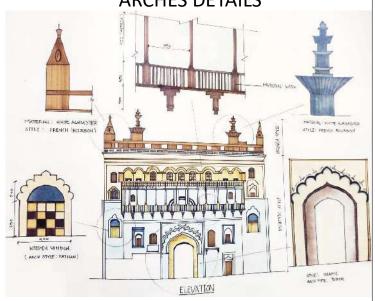
FRONT ELEVATION



WOODEN DOOR USED

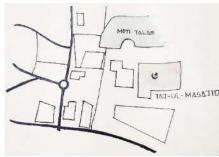


- RED SAND STONE.
- METHI POWDER, URAD DAL, JAGGERY, JUTE, GUGGAR, LIME POWDER, SURKHI (RED SOIL)



ELEVATION AND DOOR WINDOW DETAILS

TAJ- UL- MASJID



KEY PLAN

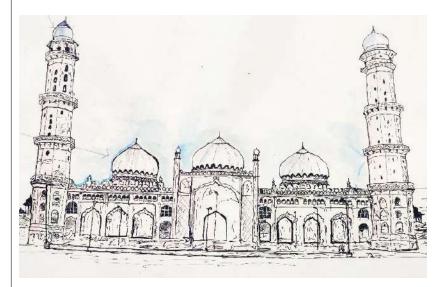
BUILT IN- 1901 BUILT BY- NAWAB SHAHA JAHAN BEGUM.

FEATURES

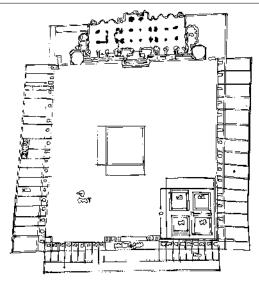
DOMES HAVE THREE SUPPORTING BASEMENTS AND A BASEMENT FLOOR.

EACH ONE IS SQUARE IN PLAN. NUMBER OF MINARATES- 2 MINAR A OF TOTAL STEPS- 276 MINAR B OF TOTAL STEPS- 252

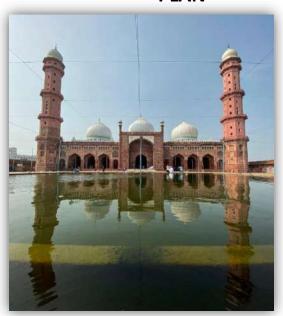
DOMES-DIAMETER 11.30M DOME PEDISTAL- 65 X 65 FT.



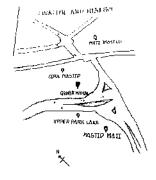
VIEW

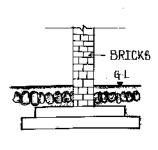


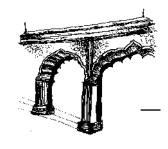
PLAN

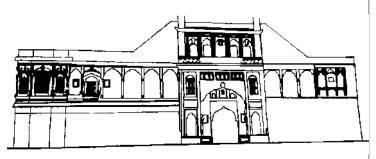


GAUHAR MAHAL









KEY PLAN

SECTION OF WALL MULTIPOINTED ARCH

ELEVATION

BUILT IN- 1820

BUILT BY- QUDESIA BEGUM

FEATURES

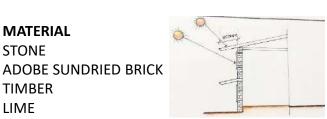
MATERIAL STONE

TIMBER

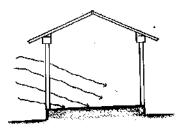
SURKHI

LIME

SOLAR PASSIVE DESIGN THERMAL MASS PROPER VENTILATION WIMDOWS PLACEMENTS MICRO CLIMATE



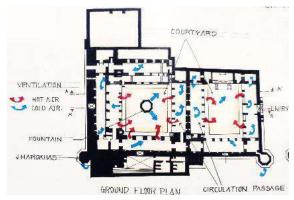
SHADING DEVICES



HEAT STORAGE







JHAROKA DETAIL

PLAN

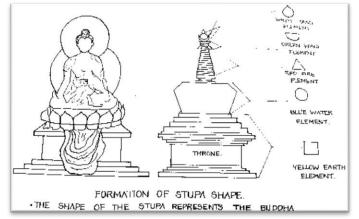
SANCHI STUPA



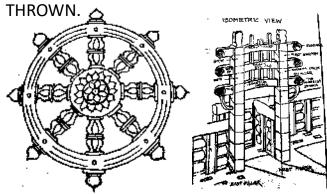
KEY PLAN

LOCATION- BUDDHIST MONUMENT OF SANCHI, BHOPAL, M.P. ARCHITECTURAL STYLE-**BUDHIST** BUILT IN- 236-273 B.C. **OLDEST STONE** STRURCTUE IN INDIA **BUILT IN MAURYA PERIOD** CONSTUCTED BY THE MAURYAN EMPIRE-**ASHOKA** IT HAS 4 GATEWAYS AT 4 SIDES WHICH WERE BUILT BUDDHAS THREEFOLD

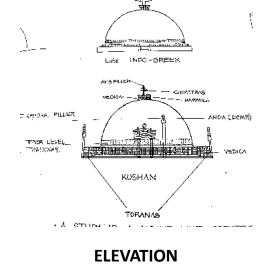
IN 1ST CENTURY BCE.



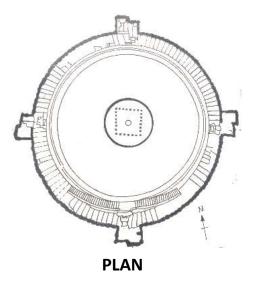
THE SHAPE OF THE STUPA REPRESNTS THE **BUDDHA CROWNED AND SITTING IN** MEDITATION POSTURE ON A LION



TRAINING



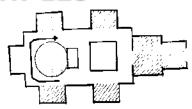
8 500



ISOMETRIC VIEW

KHAJURAHO TEMPLES

BUILT IN- 250 YEARS SPAN. **BUILT BY- RULER OF CHANDINA** DYNASTY, KING YASHOVARMAN AND DHANGA. KHAJURAHO IS DERIVED FROM SANSKRIT WORD 'KHAJUR' MEANING DATES.



KEY PLAN

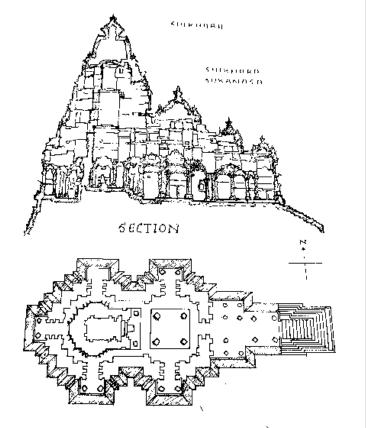
MAHAMANDAPA

MANDAPA

ARDHA MANDAPA ANTARRLA

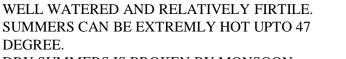
GRABH GRIHA PRADAKSHINA





PLAN

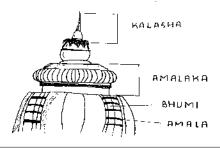
SHIKHARA WITH **EROTIC CARVINGS ON WALLS**



DRY SUMMERS IS BROKEN BY MONSOON SHOWERS.

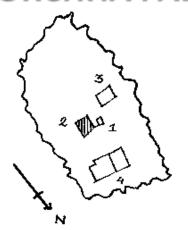
DEGREE.

BETWEEN WINTER AND SPRING CLIMATE IS PLEASANT.





ORCHHA PALACE



- 1. SHEESH MAHAL
- 2. JAHANGIR MAHAL
- 3. RAJA MAHAL
- 4. RAI PRAVEEN MAHAL

SHEESH MAHAL

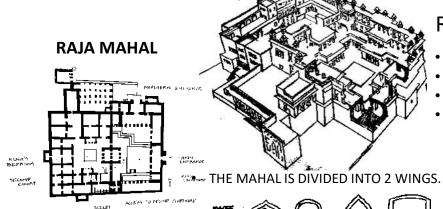


- SHEESH MAHAL IS ON EITHER SIDE OF THE RAJA MAHAL AND JAHANGIR MAHAL .
- INITALLY IT WAS A ROYAL ACCOMMODATION FOR KING UDAIT SINGH BUT IT IS NOW CONVERTED TO A HOTEL

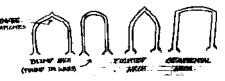
RAI PRAVEEN MAHAL

- BUILT IN- 1672-1676
- · TWO STOREY BUILDING.
- BRICK STRUCTURE

THERE ARE CARVED NICHES WHICH ALLOW LIGHT ENTERING INTO MAHAL.



PLAN
PLAN REVOLVES AROUND 2
COURTYARDS SURROUNDED BY
CHAMBERS OF ALL THE SIDES.

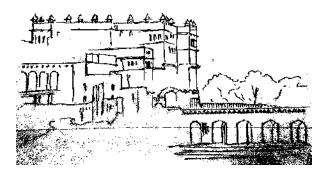


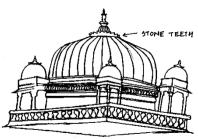
TYPES OF ARCHES USED

വിവ മാവവേക വ

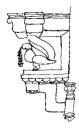
JEHANGIR MAHAL

- BUILT IN- 17TH CENTURY
- BY- RAJA BIR SINGH DEO
- RULERS- BUNDELA RULERS

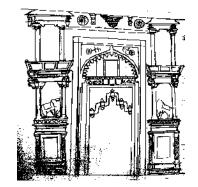




RIBBED DOMES- AT CORNER SHIKHARAS OF VESARA STYLE TEMPLES.

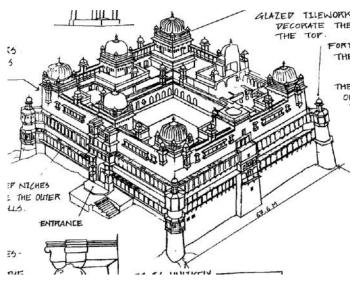


THE MAIN DOOR ON BOTH SIDES HAVE GARLAND STYLE BRACKETS.
THESE BRACKETS ENCLOSE PEACOCKS ON EITHER SIDE SNAKE BY IT'S BEAK.



ENTRANCE GATEWAY
THE IMPRESSIVE ENTRANCE
GATEWAY FLANKED BY STONE
ELEPHANTS, LEAD UP TO THE
CENTRAL COURTYAD.

ON THE 4 SIDES OF 3RD FLOOR, THERE ARE FOUR COURTYARD WITH KIOSK.



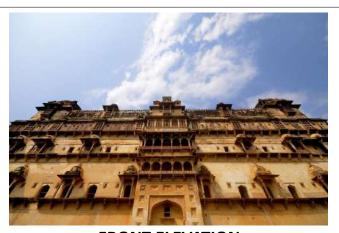
ON THE
GROUND FLOOR
THERE ARE
SOME BALCONY
OPENINGS OVE
R 'V' SHAPED
PROJECTION
TERMINATED IN
LOTUS BUD
PENDENTIVES

DATIA PALACE



LOCATION OF DATIA IN MP

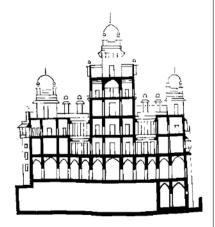
- NAMED AFTER KING 'DANTAVAKRA'
- BUILT BY- RAJA BIR SINGH DEO
- YEAR- 1620
- COST- 35 LAKHS



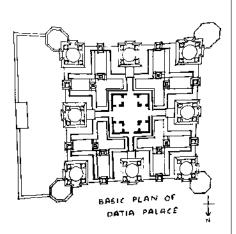
FRONT ELEVATION



ROOM OF KING



SECTION OF DATIA



PLAN OF DATIA



PROPOSED SITE

CONCLUSION:

A VISIT TO BHOPAL, KHAJURAHO GAVE US A CLEAR IMAGE OF HINDUISM, BUDDHISM, TEMPLE ARCHITECTURE INDO-ISLAMIC ARCHITECTURAL FEATURES ETC. WE WERE ABLE TO SEE HOW THESE MONUMENTS EXHIBIT THE GLORY OF OUR INDIAN CULTURE AND TRADITION.

TAKING INTO CONSIDERATION THE EXPERIENCE WE HAD, WE HAVE CHOSEN OUR SITE IN KHAJURAHO AND WE HAVE DECIDED TO DESIGN A ASHRAM, WHERE WE CAN GET HANDS ON EXPERIENCES.

DESIGN PROJECT:

ASHRAM AT KHAJURAHO:-ENLIVENING THE GOLDEN ERA

SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE, PUNE

STUDY TOUR REPORT

Auroville, Township in Tamil Nadu

by **Second Year B. Arch. Division B**

27th November – 3rd December 2019-20



Faculty names:

Prof. Manjusha Gokhale

Ar. Leena M Jain

Ar. Akshay Gandhi

Students names:

Gandhi Tanvi

Gawande Aishwarya

Gawari Onkar Ghaisas Ketaki

Gharge Divya

Ghuge Aditya

Gore Srushti

Gulhane Aastha

Gupta Aarti

Gupta Kaushal

Hole Asmita

Havaldar Sajveen

Hole Rutuja Jain Atul

Jain Alui

Jain Jagruti

Jain Pranav

Jain Vivek

Jawalkar Vaishnavi

Kanase Sayali

Kate Gaurav Kawadkar Rutik

Kedar Akash

Keshav Suthar

Khedkar Trupti

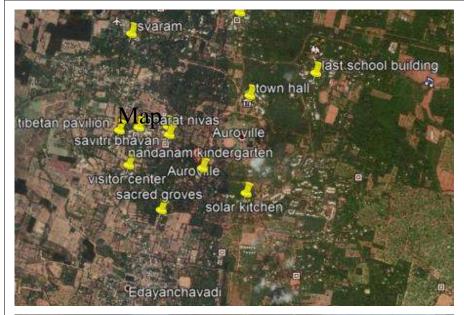
Khengare Laukik

Kondhalkar Shivani

Korade Shryeyash

Patil Purva

Doshi Keval





AUROVILLE MODEL AT TOWN HALL

ITINERARY: DAY –2

DAY - 1 (29/11/2019) (30/11/2019)
VISITORS CENTRE BHARAT NIWAS

SAVITRI BHAVAN NEW LAST SCHOOL

UNITY PAVILLION EARTH INSTITUTE

SOLAR KITCHEN NANDANAM

SACRED GROOVES KINDERGARTEN

SADHNA FOREST TOWN HALL

CONCEPT OF AUROVILLE:

AN IDEAL TOWNSHIP DEVOTED TO AN EXPERIMENT IN HUMAN UNITY, SUSTAINABLE LIVING, CONSERVATION AND GREEN ARCHITECTURE.

LOCATION:

AUROVILE IS MOSTLY IN THE STATE OF TAMIL NADU A FEW KILOMETERS FROM INLAND FROM COROMANDEL COAST. APPROX 150 KM FROM SOUTH OF CHENNAI AND 10 KM FROM PUDUCHERRY.

CLIMATE: WARM AND HUMID

VISITORS CENTER

The state of the s

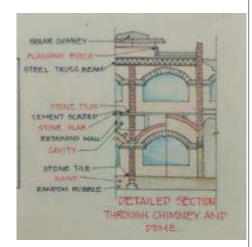
CIRCULATION IN VISITORS CENTER

VISITORS CENTER

SUSTAINABLE CONSTRUCTION AND DESIGN TECHNOLOGY IS USED:

WASTE WATER RECYCLING
WATERSHED MANAGEMENT
RENEWABLE ENERGY
SUSTAINABLE BUILDING
MATERIAL
LANDSCAPING WITH
INDIGENEOUS PLANTS.

SITUATED IN **INTERNATIONAL ZONE**.



DETAILED SECTION



GROUND FLOOR PLAN

NOTE:

THE CONCEPT HAS BEEN INTITALLY DESIGNED BY **SUHASINI IYER**.

OCCUPANCY FOR NORMAL DAY IS 2000 VISITORS AND 10,000 VISITORS ON HOLIDAYS.

AWARD WON – HASAN FATHY AWARD (1991)

NOMINATION – AGA KHAN AWARD (1992)

SAVITRI BHAVAN



SANGAM HALL

SANGAM HALL IS AN AUDITORIUM. RAMPS ARE PROVIDED FOR EASY ACCESS FOR HANDICAPPED.

WASTE WOODEN SCRAP ARE USED AS A FILLER MATERIAL IN STEPS.

WIDE WINDOW ON THE EAST DIRECTION PROVIDE LIGHT AMBINENCE TO IT.

SAVITRI BHAVAN

IT IS AN IMPORATANT RESEARCH AND EDUCATIONAL CENTER NEAR BHARAT NIVAS.

IT HAS ALL THE MATERIALS AND **ACTIVITY RELATING TO SRI** AUROBINDO'S TEACHING. LOCATED IN INTERNATIONAL ZONE.



PLAN OF SAVITRI BHAVAN

98 SOILS SAMPLES FROM 27 COUNTRIES ARE RAMMED IN THE WALL ON THE OCCASION OF THE 50th ANNIVERSARY.



MULTI PURPOSE HALL



UNIVERSAL EARTHEN WALL



ART GALLERY

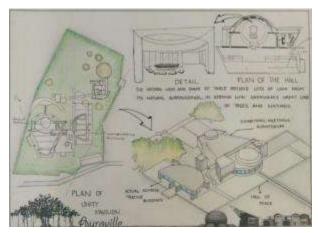
ART GALLERY HAVE SLOPING ROOF WITH SKYLIGHT BOTH SIDE.

LOWER VENTS ARE PROVIEDED IN THE WALLS FOR VENTILATION.

NO ARTIFICAL LIGHTINGS ARE PROVIDED.

UNITY PAVILION

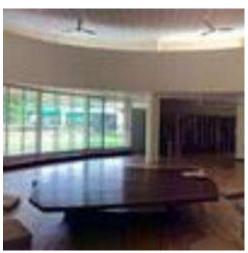




PLAN OF UNITY PAVILION

UNITY PAVILION

UNITY PAVILION IS LOCATED NEXT TO SAVITRI BHAVAN .
IT IS TRANSITIONAL SPACE AND GROUND FOR EMERGENCE OF INDIVIDUAL CULTURAL PAVILION OF VARIOUS NATIONS .
UNITY PAVILLION IS IN INTERNATIONAL ZONE.

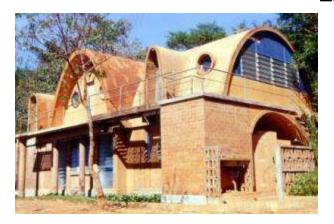


PEACE TABLE

A MULTI-PURPOSE HALL FOR EXHIBITIONS, LECTURES, WORKSHOPS AND OTHER EVENTS AND ACTIVITIES RELATED TO PEACE, HUMAN UNITY AND UNITY IN DIVERSITY.

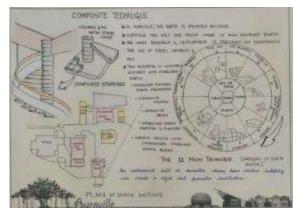
THE HALL OF PEACE, HOME TO THE PEACE TABLE FOR ASIA, WHICH WAS GIFTED TO AUROVILLE BY THE NAKASHIMA **PEACE FOUNDATION** IN 1996.

EARTH INSTITUTE



EARTH INSTITUE

THE AUROVILLE EARTH
INSTITUTE (AVEI) IS A NONPROFIT ORGANIZATION
SPECIALIZING IN THE
RESEARCH, DEVELOPMENT,
PROMOTION AND TRANSFER
OF EARTH-BASED BUILDING
TECHNOLOGIES, AMONG THE
MOST COST EFFECTIVE, LOW
CARBON, LOW EMBODIED
ENERGY SOLUTIONS FOR
SUSTAINABLE DEVELOPMENT.



COMPOSITE TECHNIQUE



SEMICIRCULAR VAULT, 6 M SPAN BUILT FREE SPANNING IN 6 WEEKS



COMPOSITE BEAM AND INTERLOCKING BLOCKS



FERROCEMENT CHANNEL



CIRCULAR STAIRCASE CONSTRUCTION SAMPLE



Half CSEB 240 (24 x 24 x 9 cm)



Wire cut fired brick (22 x 10.5 x 7.2 cm)



Country fired brick (± 22 x 10.5 x 6.5 cm)

BHARAT NIVAS



SRI AUROBINDO AUDITORIUM

SRI AUROBINDO AUDITORIUM IS ONE OF THE ACTIVITY CENTERS OF BHARAT NIVAS, THE PAVILION OF INDIA. IT STRIVES TO REFLECT INDIAN CULTURE IN THE LIGHT OF SRI AUROBINDO.

BHARAT NIVAS

IT HAS BEEN SERVING THE PHYSICAL AND CULTURE NECESSETIES OF THE COMMUNITY OF AUROVILLE AS A WHOLE.

BHARAT NIVAS IS THE CENTER OF ACTIVITIES OF AUROVILLE.

BHARAT NIVAS IS IN THE INDUSTRIAL ZONE.
OTHER PARTS OF BHARAT NIVAS -

SRI AUROBINDO WORLD CENTRE FOR HUMAN UNITY

CENTRE OF INDIAN STUDIES

CENTRE FOR RESEARCH IN INDIAN CULTURE

TAMIL HERITAGE CENTRE

ATITHI GRIHA

SWAGATAM



CONFRENCE HALL IS THE BASEMENT FOR PRIVACY AND IT IS CONNECTED TO AUDITORIUM.

DESIGNED BY : AR. ROGER ANGER

TIBETIAN PAVILION



TIBETIAN PAVILION



COURTYARD WITH FOUNTAIN

COURTYARD SPACE CREATES COMMUNICATION BETWEEN EVERY CLASS ON THE CLASSROOM .

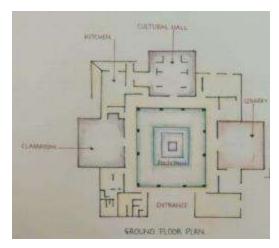
HIS HOLINESS THE DALAI LAMA, THE PATRON OF TH PAVILION, WHO HAD LAID THE FOUNDATION STONE IN DECEMBER 1993.

DESIGNED BY : AR. ANDRE HABABOU

THE PAVILION HOSTS MANY ACTIVITIES, SUCH AS LECTURES, WORKSHOPS, ART, EXHIBHITION, CULTURAL EVENTS, FESTIVALS, STUDENT EXCHANGES, VOCATIONAL TRAINING AND TIBETIAN MEDICIAN CONSLUTATIONS, AS WELL AS ANNUAL MANDALA ON NEW YEAR.



CAVITY WALL WITHSTOREAGE ROOM
THICK RETANING WALLS ARE USED
TO SUPPORT SUPERSTRUCTURE



GROUND FLOOR PLAN

NANDANAM KINDERGARTEN

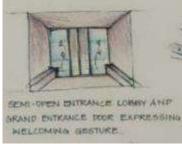


CHOCKED FILDER PLANT

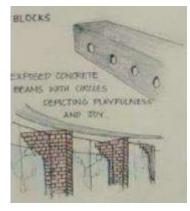
WELL PLANNED SCHOOL WITH PROPER CIRCULATION FACILITIES WITH PLEASANT AND FLEXIBLE MIND. THROUGH COURTYARD **CLASSROOM GETS SUNLIGHT AND IT COOLS** DOWN THE TEMPREATURE MAKES INTERACTIVE ENVIRONMENT.

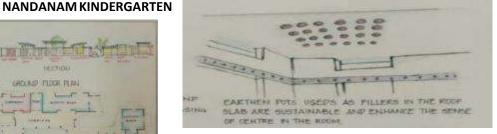


SECTION THROGH CLASSROOM

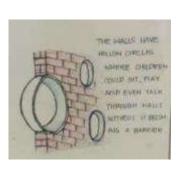


SEMI OPEN ENTRANCE





COFFER ROOFING





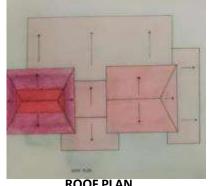
DESIGNED BY: AR. SHAILEJA BHATI AR.POONAM MULCHANDI

GROUND FLOOR PLAN



SCARED GROOVES





VILLA ELEVATION

ROOF PLAN

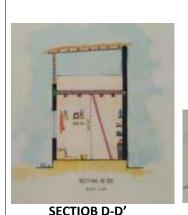


THE MAIN MOTIVE OF THE **SCARED GROOVES** PROVIDE TO SHELTER TO EACH AND EVERY INDIVIDUAL WITH LESS EXPENSES.

DESIGNED BY: AR.

MANU GOPAL

PROCES OF MAKING LIME





SECTION A-A'





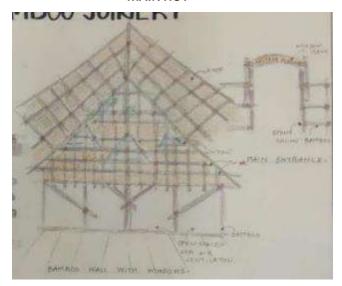


SECTION C-C'

SADHANA FOREST



MAIN HUT



SECTION OF MAIN HUT

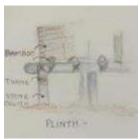
SADHANA FOREST IS A COMMUNITY OF INDIVIDUAL COMING ALL OVER THE WORLD.

MAIN AIM IS AFFORESTATION IN 70 ACRE. ERRODED LAND APART FROM AFFORESTATION THEY ALSO WORK ON WATER CONSERVATION AND SOIL MANAGEMENT.

THE AIM IS TO TEACH PEOPLE ABOUT SUSTAINABLE LIFESTYLE AND USE OF ORGANIC MATERIALS IN A LIFE. THE IDEA OF CREATING MANUARE USING HUMAN DEFECATION IS AN INNOVATIVE AND INTGRESTING TOPIC TO LEARN.

MAIN CONSTRUTION MATERIALS ARE TIMBER, BAMBOO AND JUTE.

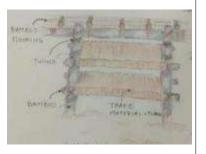
THEY DON'T DOMESTICATE ANIMALS AND THEIR PRODUCTS.



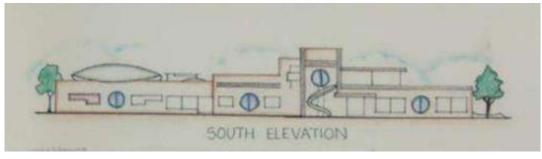
PLINTH



TOILET ENTRANCE

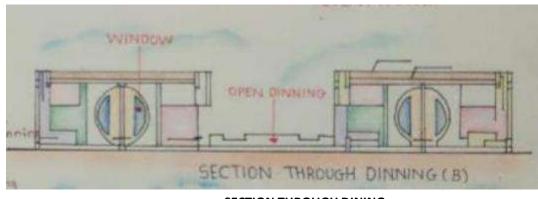


SOLAR KITCHEN



SOLAR KITCHEN





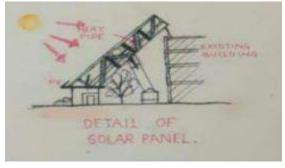
IT DERIVES ITS NAME FROM THE SUPER BIG SOLAR BOWL ON ITS ROOF, WHICH PROVIDES PART OF THE STEAM FOR COOKING ON ALL THE SUNNY DAYS OF THE YEAR .THE OTHER PART OF THE STEAM NEEDED, IS PROVIDED BY DIESEAL FIRED BOILER.



SECTION THROUGH DINING



SOLAR BOWL CONCENTRATOR



DEATAIL OF SOLAR PANEL

DESIGNED BY: SUHASINI IYER

THE NEW LAST SCHOOL

PROVIDES FREE EDUCATION
SUBJECTS LIKE HUMANITIES, LANGUAGES, ART AND SCULPTURE
CLASSROOMS ARE ORIENTED TO THE OUTSIDE SO THAT THE
STUDENTS GET GALLERY SPACE FOR DISPLAYING THEIR ART

WORK ON THE WALLS.

IT IS BUILT ON THE CONCEPT OF FLOATING STRUCTURES.

DUE TO WHICH THE STRUCTURE APPEARS FLOATING ON WATER.



ENTRANCE



OPEN DINING



ART ROOM



NORTH SIDE VIEW



DESIGNED BY: AR. DAVID



FLOATING ROOF



SCULPTURE ROOM



GALLERY

TOWNHALL



ENTRANCE OF OFFICE

TOWNHALL

THE BUILDING HAS A COVERED SURFACE OF 1300 SQ. M PLUS 350 SQ. M OF VERANDAS DISTRIBUTED OVER 3 FLOORS.

DESIGNED BY: ANUPAM KUNDOO

TOWNHALL WAS ESTABLISHED TO DEMONSTRATE THE LANGAUGE OF THE INTERCONNECTING ELEMENTS THE BUILDINGS.

IT IS PROJECTED AS A SUSTAINABLE BUILDING, RAINWATER IS HARVESTED FROM THE ROOF AND IS TREATED FOR DRINKING AND IS SUPPLIED TO CAFETERIA 100% OF THE WASTE WATER FROM TOILETS IS TREATED AND REUSED FOR IRRIGATION.

THE WHOLE TOWNHALL PLAN
IS NOT CONSTRUTED AT ONCE,
IT IS CONSTRUTED IN PARTS.
RAMPS ARE USED AS
CONNECTIVITY BETWEEN BUILDING.



AUROVILLE MODEL

THE SUB BEAMS ARE DESIGNED IN SUCH A WAY THAT THEY TRANSFER THE LOAD OF CANTILEVER SLAB TO THE MAIN BEAM.



MAP OF CHOSEN SITE

SITE: OPPOSITE TO AUROVILLE LANGUAGE

AREA: 140 M x 85 M (11900 SQ. M)

REQUIREMENTS OF MAJOR PROJECT:

ADMIN OFFICE

AV ROOM

LIBRARY

CLASSROOM

COMPUTER LABV

WORKSHOPS

CONSTRUCTION YARD

RESEARCH LAB

MATERIAL LAB

TESTING AREA

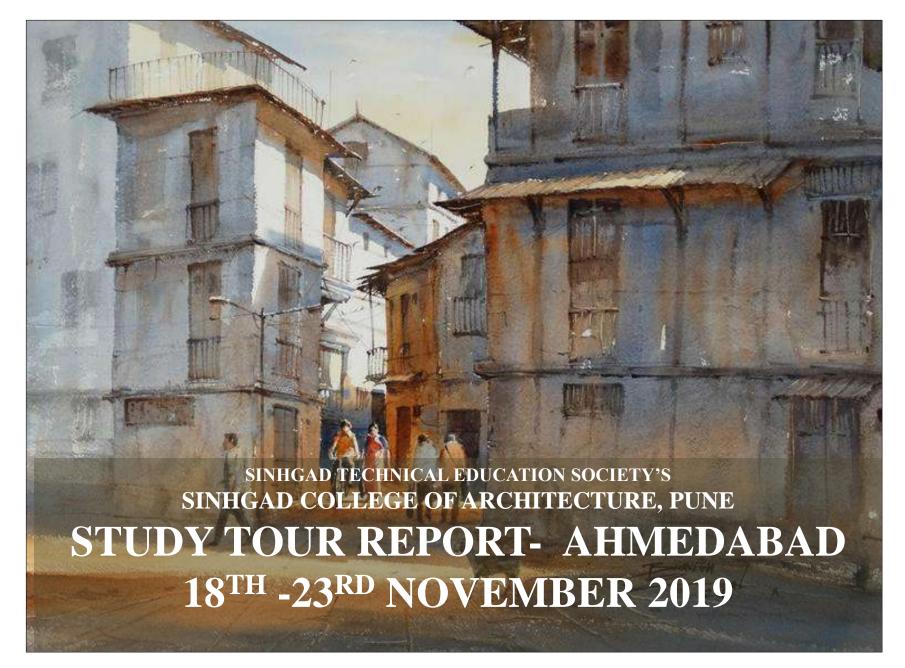
AMPHITHEATRE

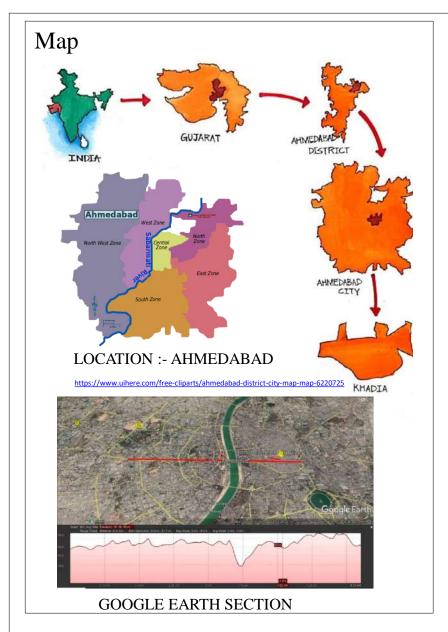
BUNGALOW

HOSTEL

CAFETERIA

OUR MINOR PROJECT IS MUSEUM.





PROGRAM

Aim: To Study An Urban Settlement With Respect To It's Historical And Contemporary Architectural Context.

Objectives:

- To Analyze A Settlement Through Responses To Physical, Climatic, Visual And Cultural Conditions .
- To Comprehend The Local Technology, Construction, Building Materials, Structure, Etc.
- To Evaluate The Analysis And Documentation With Respect To The Lifestyle, Topographical Response,
 Built And Open Spaces And Every Associated
 Architectural Character.

Expected Outcome : To Formulate A Relevant Design Project As Per The Analysis And Documentation Done Of The Urban Settlement Of Ahmadabad, Gujarat .



NAME OF STUDENTS & FACULTY

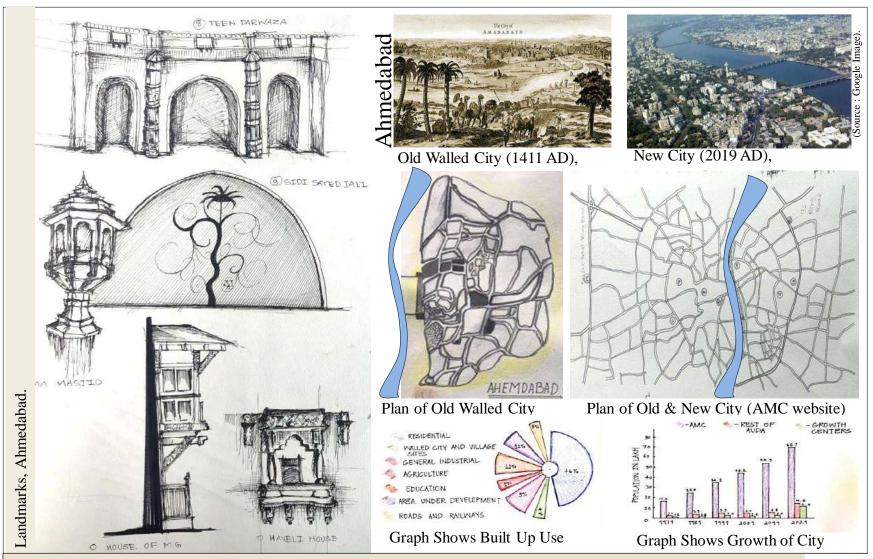
Faculty names:-

- 1. Ar. Manjusha Zalte
- 2. Ar. Dhanashree Raju

Students names:-

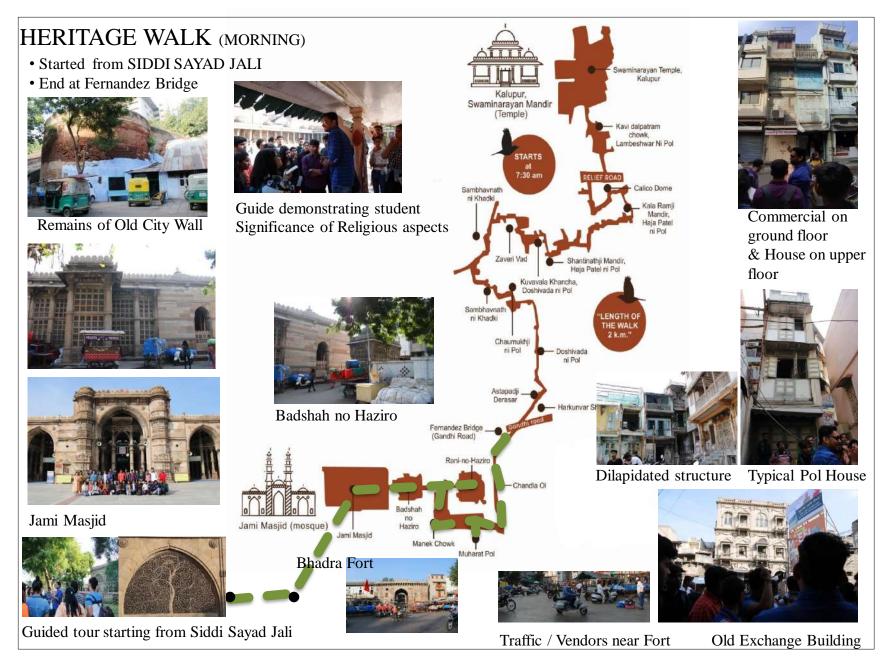
- 1. Pratik Chaudhari
- 2. Rohit Karpe
- 3. Sakshi Kothari
- 4. Savri Kulkarni
- 5. Gauri Kumbhakarna
- 6. Vaishnavi Kunapali
- 7. Kunal Malkhede
- 8. Prajwal Mandhare
- 9. Rutuja Mankar
- 10. Sudhanshu Mate
- 11. Nisha Murarka
- 12. Sourabh Nagare
- 13. Sumakar Nikalje
- 14. Vedita Paknikar
- 15. Vamshi Pampana
- 16. Arpit Panwar
- 17. Swati Parande
- 18. Avishkar Patil
- 19. Prabhat Patil
- 20. Aniket Mundada

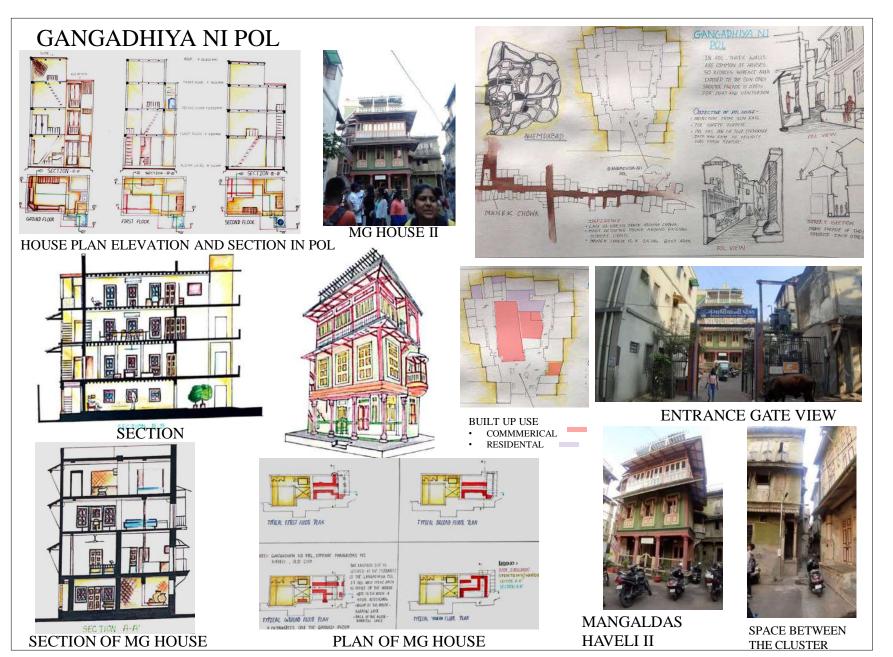
- 21.Simran Patil
- 22.Mayur Pawne
- 23.Jahnavi Pawar
- 24.Saloni Pawar
- 25.Amruta Pisal
- 26.Amruta Potdar
- 27.Rasika Uke
- 28. Vaishnavi Nirgude
- 29.Pratik Mhaske
- 30.Aniket Mote

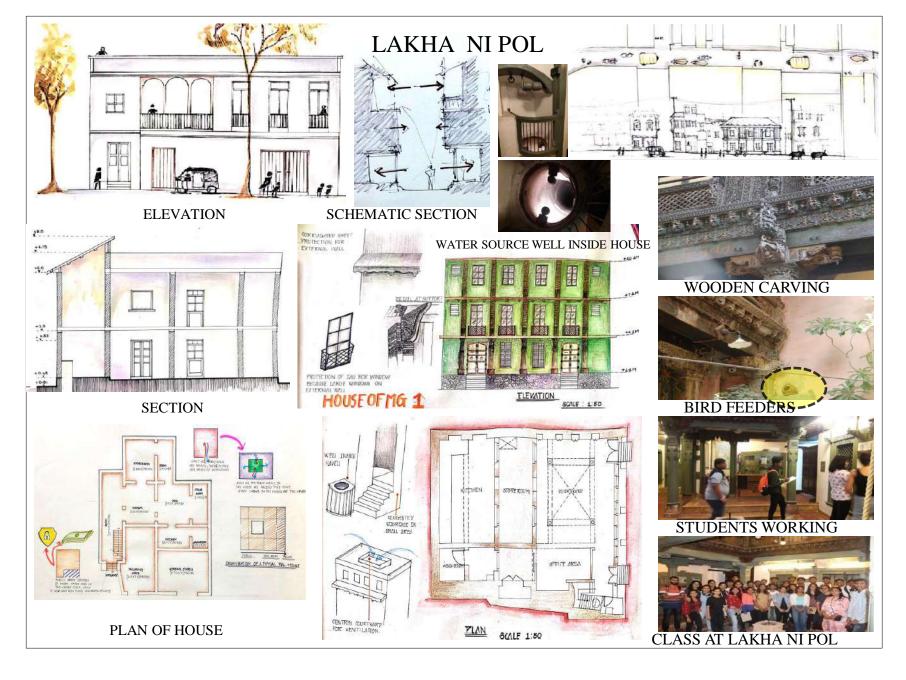


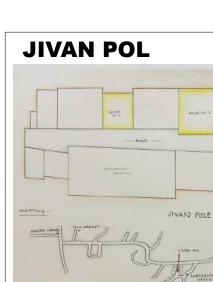
Ahmedabad is the largest city in the state of Gujarat. It is located in western India on the banks of the River Sabarmati. The city served as political as well as economical capital of the region since its establishment. The present city was founded on 26 February 1411 and announced as the capital on 4 March 1411 by Ahmed Shah I of Gujarat Sultanate as a new capital Remains of old walled city & Pol Houses gives AHMEDABAD the status of 'UNESCO WORLD HERITAGE CITY

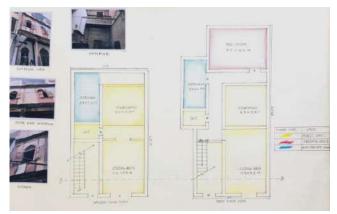








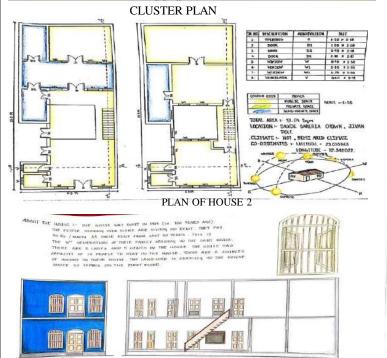






PLAN OF HOUSE 1

STUDENTS WORKING



SECTION OF HOUSE 2

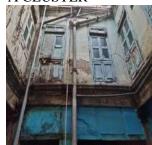
EXCHANGE

MANA PIL .
MANA PIL .
MANAPISHERI),
MANER (HOWE .
MD AUMEDARAD

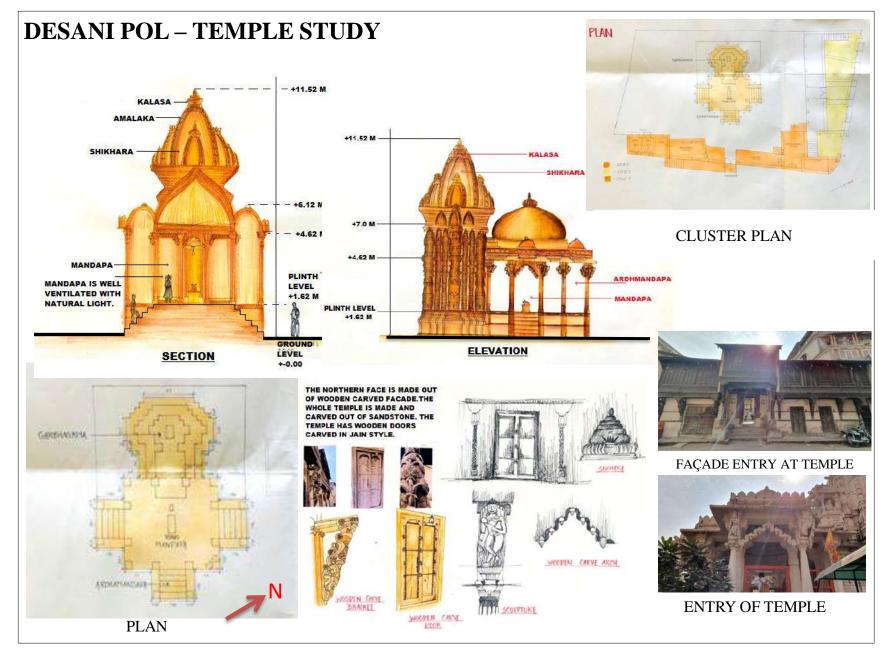




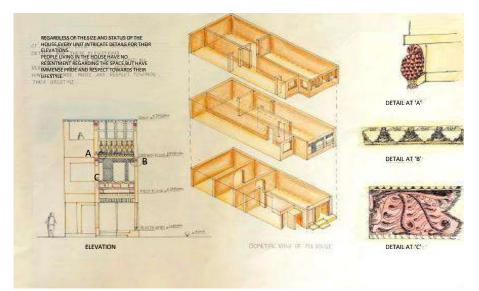
SKETCH PLAN OF A CLUSTER

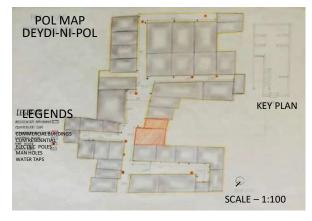


INTERNAL VIEW OF HOUSE 1 SHOWING SERVICE LINES



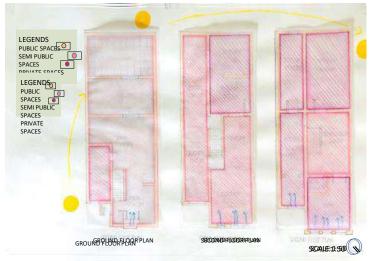
DEYDI-NI-POL





LOCATION: DEYDI-NI-POL









POL HOUSE

View

VISIT TO HCP

[ARCHITECT'S OFFICE]

>PRESENTATION ON THE FAMOUS BUILDINGS OF HCP

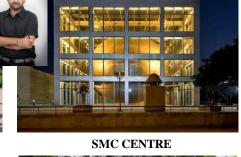




HCP OFFICE



AGA KHAN ACADEMY





>MODELS AT HCP



>GROUP PICTURE AT HCP

Ganesh Ahire Urban Planner > PRESENTATION ONURBAN PLANNING Normal water lvl.+41.46 **BYE LAWS**



BHAKTIBEN RESIDENCE River bed lvl. variable lic Demarcation of Boundary

ISMET – BIMAL RESIDENCE





Pioneering Multibenefit Project With Significant **Urban Transformation Potential**

•The Riverfront Development Is Already Turning The Sabermati Into A Major Asset

≻Legend Park & Garden **Sports Facilities Open Spaces** Street **River Promenade**





IIM AHMEDABAD

• We Visited IIM And Seen The whole Campus.

ARCHITECT Combined Indian Traditional And Vernacular Architecture And Modern Architecture Skillfully





ARCH PASSAGE

SABARMATI ASHRAM





SANSKAR KENDRA



NID

VISITED PLACE'S



Visit to Shodhan VILLA

Visit to IDOLOGY



Visit to SANGATH [Architect's Office]





Design For Light And Ventilation





Visit To HUSSAIN GUFA

Visit to KANORIA ART GALLERY

CEPT UNIVERSITY KASTURBHAI LALBHAI CAMPUS

CEPT UNIVERSITY

- •AT VISIT TO CEPT THERE WAS EXIBITION WAS GOING ON.
- •SO THESE ARE SOME PHOTOS OF STUDENT WORKS.











CAMPUS LIBRARY BY STUDENT DESIGN

MODHERA SUN TEMPLE

RELIGION: HINDUISM

DIETY: SURYA

ARCHITECTURAL TYPE: MARU-

GURJARA (CHALUKYA)

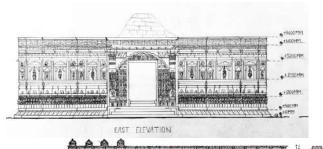
CREATOR: BHIMA 1

COMPLETED : AFTER 1026-27CE

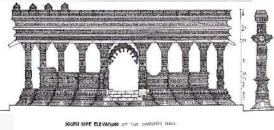
SOUTH ELEVATION

DIRECTION OF FAÇADE : EAST

FACING

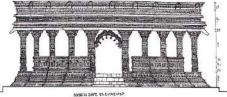




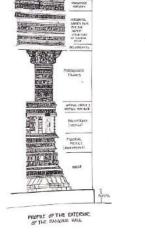


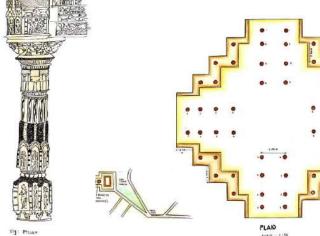






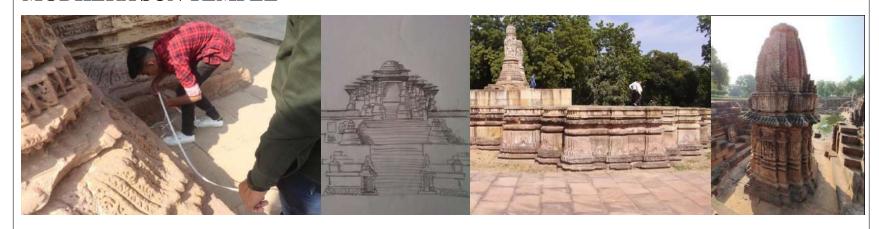








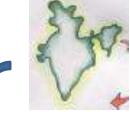
MODHERA SUN TEMPLE



RANI KI VAV

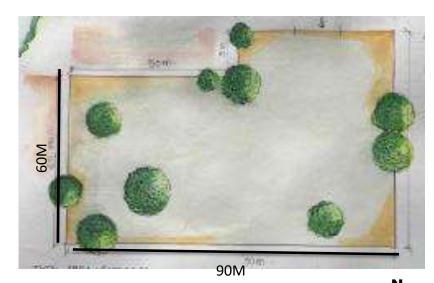


SITE-1 NEAR ASHRAM: MAPPING & ANALYSIS.





LOCATION: LATITUDE- 23.0225° N LONGIUDE- 72.5714° E



SITE PLAN

OWNER'S NAME :- MR. PATEL.

OCCUPATION :-CONSTRUCTION

AREA: - 6000 sq.M

SIZE:- 100 X 60 M

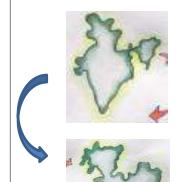
ALL THE FACILITES OF WATER SUPPLY AND ELECTRICITY IS AVAILABLE.



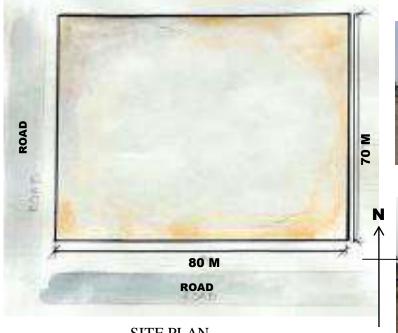




SITE-2 NEAR TAGORE HALL: MAPPING & ANALYSIS



LOCATION: LATITUDE- 23.0225° N **LONGIUDE-** 72.5714° E











INTERPRETATION CENTRE

Weaving Heritage into the urban fabric

AIM: To design an Interpretation Centre on the banks of Sabarmati river which is at the interface between the old and new town.

WHAT IS AN INTERPRETATION CENTRE?

Interpretation centres use different means of communication to enhance the understanding of heritage. To aid and stimulate the discovery process and the visitor's intellectual and emotional connection to the heritage. An interpretation centre can be a viable solution for effective communication of heritage information among the people living in the city and can be an important factor for tourism development.

OBJECTIVE –

To work to educate and raise awareness about the heritage to enhance community interaction & participation

To achieve articulation and translation of tangible
(riverfront, walled city, monument, pol houses & existing contemporary architecture) and intangible heritage(art & craft, cuisines, traditions) of city of Ahmedabad into
Architecture

To promote tourism and culture.

SCALE OF PROJECT - Built up area - 1000-1200sq.m, Form Live case Study – Check with Floor Space Index (FSI) & Basic by- laws pertaining to that area, the setbacks etc.

Space requirements

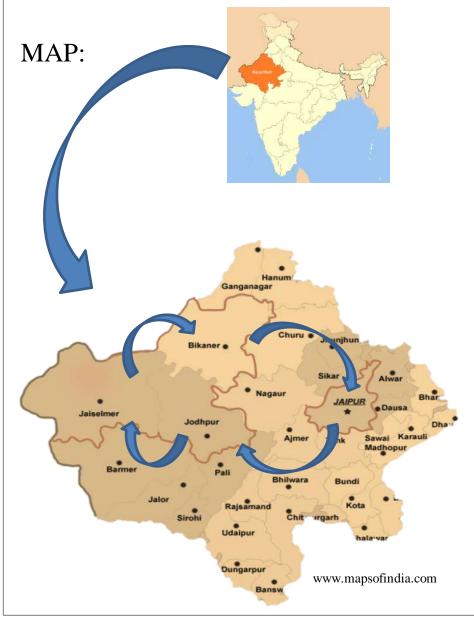
	Space requirements				
Sr.N	Space	Area (Sq. m) (Min.)			
0.					
1	Entrance Lobby/ Foyer, Ticket counter	As Per Design Requirement 50 -			
	Information centre (Inquiry area) &	60			
	Waiting, Security Check with cloak room				
2	Admin Office (Director's, Curator's,	(8 People)60			
	Logistics & Operational office, Small				
	conference Hall, Pantry, Toilets etc.)				
3	Office (INTACH, Ahmedabad Tourism,	120			
	AMC & AUDA, ASI)				
4	Auditorium with suitable pre-function area	330 (200+60)			
5	Souvenir shops	40			
6	A.V Room	50			
7	Permanent Exhibition Area	300			
	(Musaum)				
	(Museum)				
	Historical Legacy Gallery				
	Cultural Heritage Gallery –(Culture,				
	Cuisine, Performing Art (Textile &				
	Craft, Literature, Manuscript)				
	Contemporary Architectural & City				
	Future Gallery				
8	Library cum research & development labs	100			
	area with small coffee shop				
9	Conference/ Seminar Room	50			
10	Studio for Holding Workshops & Lectures				
	(practical based knowledge & hand on				
44	exercises),	20			
11	Conservation lab	30 50			
12	Staff Room(4 People) Food Court	100			
14	ATM	15			
16	Toilet Block / store & Maintenance room	AS PER REQUIREMENT			
10	Temporary Exhibition area, Amphitheatre,	Not counted in Built -up			
	circulation spaces/ semi open passages,	110t counted in Built -up			
	transition spaces				
	transition spaces				

SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE, PUNE

STUDY TOUR REPORT

Rajasthan: Jaipur, Jodhpur, Jaisalmer, 21st to 29th November 2019

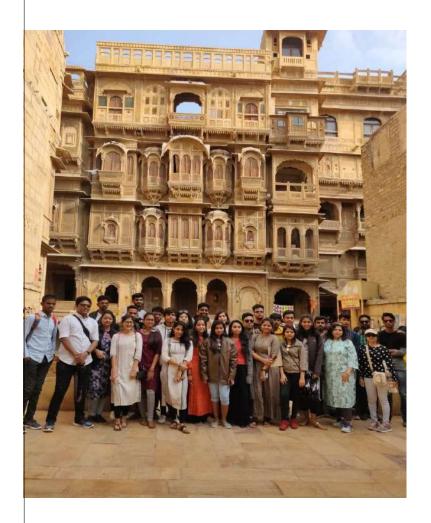
by Second Year B. Arch. Division D 2019-20



PROGRAM:

DAYS	DESTINATION
DAY 01 21 NOV THU	PUNE – JAIPUR - JODHPUR
DAY 02 23 NOV FRI	JODHPUR - JAISLMER
DAY 03 24 NOV SAT	JAISLMER
DAY 04 25 NOV SUN	JAISLMER - BIKANER
DAY 05 26 NOV MON	BIKANER - JAIPUR
DAY 06 27 NOV TUEDAY	JAIPUR
DAY 07 28 NOV WED	JAIPUR – MUMBAI
DAY 08 29 NOV THUR	MUMBAI – PUNE

GROUP PHOTO



ACCOMPANYING FACULTIES:

AR. KIRTI BAJARE AR. SWATI OKA

PARTICIPATING STUDENTS:

ARYAN SHARMA
KARANJWANE SAURABH
KUMBHAR VAISHANVI
PAWAR DHANASHREE
DESHPANDE SHIVANI
RISHIKA MAHANTA
SATHE SHARMISHTHA
SHARMA ANKIT
SHINDE PRADNYA
SOMANI ONKAR
SUPEKAR GAUTAMI
TEKALE SHWETA
THORAT PRATHMESH
WANKHEDE APEKSHA
VASANTGADKAR APURVA

RAYKAR VEDANT
TUPE ONKAR
WAGH SHUBHAM
RANE RAVISH
RENAKE MAYUR
SAHO NIKHIL
SHAIKH YASMEEN
SHEJWAL TEJAS
SINGH SATYAM
SONAWANE YASH
TANDALE ANKIT
TEMBALE OMKAR
UDBATTE SIDDHI

153

DAY 1: JODHPUR: THE BLUE CITY



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AERIAL VIEW OF JODHPUR FROM MEHERANGARH FORT

- JODHPUR IS KNOWN AS SUN CITY AND BLUE CITY.
- IT IS KNOWN AS SUN CITY BECAUSE, IT IS HOTTEST IN INDIA, AND BLUE BECAUSE THE BUILDINGS WERE BUILT BY USING MATERIALS LIKE LIMESTONE MIXED WITH INDIGO.
- INDIGO GAVE BLUE COLOUR WHICH REFLECTS MORE SUNLIGHT MAKING THE BUILDING COOL..
- INDIGO ALSO PROTECTS
 THE BUILDING FROM
 MOSQUITOES AND
 KEEPING THE BUILDING
 HYGIENIC.

UMMAID BHAVAN PALACE, JODHPUR

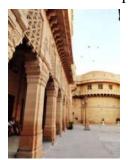


PERSPECTIVE PHOTO

ARCHES & COLUMNS



PALACE VIEW



PHOTOS CLICKED BY STUDENTS

INTERIOR VIEW

- RESIDENCE FOR THE ROYAL FAMILIES OF JODHPUR.
- USED FOR STAY TILL DATE.PART OF THE PALACE IS CONVERTED INTO 5 STAR HOTEL.
- THRONE CHAMBER, A PRIVATE MEETING HALL, A DURBAR HALL
- VAULTED BANQUET HALL, PRIVATE DINING HALLS, A BALLROOM
- THE INNER **VAULTED DOME** IS A MAJOR ATTRACTION
- **BLACK** AND **PINK MARBLE** IS USED FOR FLOORING.

MEHRANGARH FORT, JODHPUR



PERSPECTIVE PHOTO



PALACE VIEW



PERSPECTIVE PHOTO



ARCHES & COLUMN DETAILS



EXTERIOR PHOTO

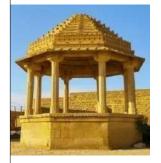
- BUILT IN 1459.
- KNOWN FOR ITS **7 VICTORY GATES** CALLED AS '**POLS**'.
- FAMOUS FOR INTRICATE
 CARVINGS AND EXPANSIVE
 COURTYARDS.
- CANNONBALLS ON THE BURJS ON THE FORTIFIED WALL.
- INSPIRED FROM MUGHAL, VICTORIAN, MUGHAL, PERSIAN STYLE OF ARCHITECTURE.
- ARCHITECTS FROM **FRANCE**, **ITALY** ARRIVED HERE TO BUILD PARTS OF THE FORT.

PHOTOS CLICKED BY STUDENTS

DAY 2 : JAISALMER : THE GOLDEN CITY



SAM DESERT



HAVELIS

CHHATRIS



GADISAR LAKE

STREETS

PHOTOS CLICKED BY STUDENTS



- •JAISALMER CITY IS ALSO KNOWN AS GOLDEN CITY.
- •IT IS LOCATED 575 KM WEST OF THE STATE CAPITAL JAISALMER.
- •THE TOWN STANDS ON A RIDGE OF YELLOWISH SANDSTONE.
- •THIS FORT CONTAINS A ROYAL PALACE AND SEVERAL ORNATE JAIN TEMPLES.
- •THE TOWN LIES IN THE HEART OF THE THAR DESERT.

DAY 2: VYAS CHHATRI

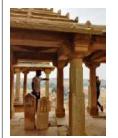


FRONT VIEW



CHHATRI DETAILS

INFORMATION BY LOCAL GUIDE



JOINERY DETAILS

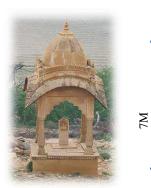


CHAJJA DETAILS



COLUMN DETAILS

- CREMATORIAL SPACES OF ROYAL FAMILIES.
- BUILT BY EVERY GRANDSON FOR HIS GRANDFATHER ON HIS SAMADHI ONCE HE IS CROWNED AS THE MAHARAJA
- SHOWS MUGHAL, HINDU STYLE OF ARCHITECTURE THAT HAS EVOLVED WITH TIME.
- INTERLOCKING STONE AND MORTAR JOINTS ARE TYPES OF **CONSTRUCTION USED**







SOFFIT DETAILS

PHOTOS CLICKED BY STUDENTS

DAY 2 : JAISALMER FORT



VIEW OF JAISALMER FORT





KINGS PALACE





JAIN TEMPLE

ORNAMENTATION ON WOODEN CEILINGS

PHOTOS CLICKED BY STUDENTS

- RECOGNISED AS THE ONLY LIVING FORT IN INDIA.
- KNOWN AS GOLDEN FORT DUE TO THE EXTENSIVE USE OF LOCALLY AVAILABLE NATURAL GOLDEN SANDSTONE.
- THE WHOLE FORT CONSISTS OF JAIN TEMPLES, MERCHANT HAVELIS, LOCAL HOUSES, SHOPS, COMMEMORATIVE BUILDINGS, ROYAL RESIDENCES, ETC.

SAILENT FEATURES OF JAISALMER FORT:-

- * INDIGENOUS DRAINAGE SYSTEM 'GHUT NALI'
- * INTRICATE CARVINGS,
- * INTENSIVE JALI WORK
- * EMPHASIZED CHAJJAS
- * BEAUTIFUL ELEVATIONS,
- * STONE MASONRY

ARE THE FEATURES

DAY 3: JAISALMER FORT - PATWA HAVELI



INTERNAL COURTYARDS

IVIERIVAL COOKT TAKES

CEILINGS WITH STORAGES



PHOTOS CLICKED BY STUDENTS



PATWA HAVELI, JAISALMER

- RESIDENCES OF THE RICH JEWELLERY MERCHANTS OF JAISALMER.
- INSPIRED FROM MUGHAL, RAJPUTI AND VICTORIAN ARCHITECTURE
- INTRICATE CARVINGS ON SOFFITS, CHAJJAS, JALIS, EAVES, PARAPETS, RAILINGS.
- INTENSIVE GOLD AND COLOURFUL WORK IN THE INTERIOR.

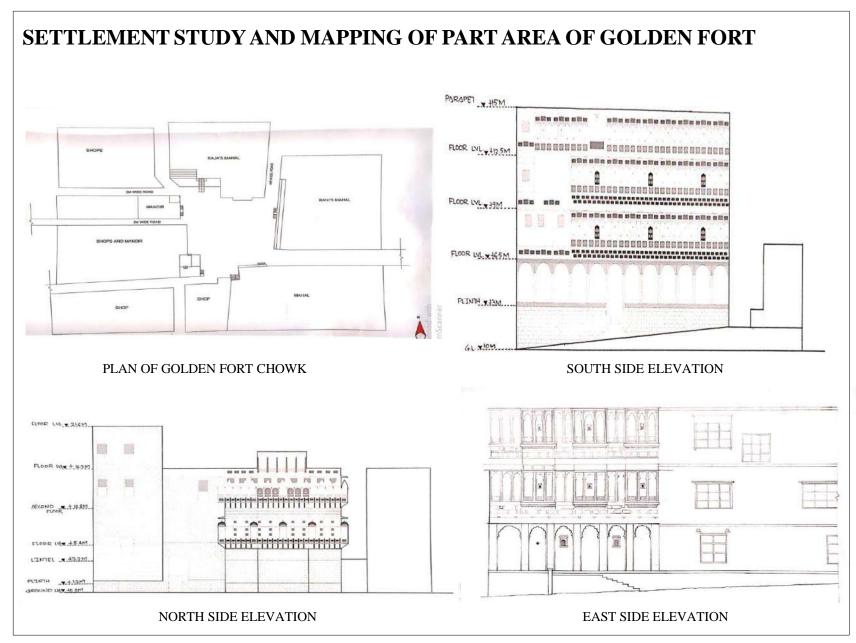








INTERNAL FEATURES OF PATWA HAVELI



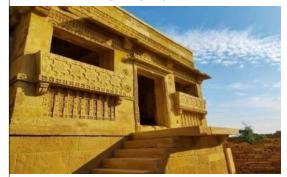
DAY 4. : KULDHARA VILLAGE: THE HAUNTED VILLAGE OF INDIA



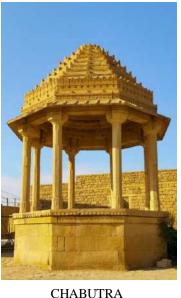
TYPICAL HOUSE

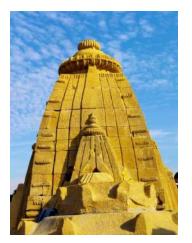


VILLAGE RUINS



PHOTOS CLICKED BY STUDENTS





TEMPLE

- KNOWN AS THE HAUNTED VILLAGE OF INDIA.
- **ABANDONED** BY THE EARLY 19TH **CENTURY**
- SETTLED BY EARLY BRAHMINS.
- SETTLED ALONG RIVER KALI.
- THIS CIVILISATION IS KNOWN FOR USING LINTELS AT AN EARLY PERIOD.



HISTORY BEHIND TRAGEDY

DAY 5. BIKANER: JUNAGARH FORT



VAULTED DOME



EXTERIOR VIEW



JAALIWORK

PHOTOS CLICKED BY STUDENTS

- CENTRALLY LOCATED FORT IN THE CITY.
- HAS NUMEROUS VICTORY GATES AND PALACES.
- HUGE ARCHES SPANNING OVER 10 METERS.
- RED SANDSTONE AND MARBLE EXTENSIVE USE.
- BEAUTIFUL BALCONIES, KIOSKS, POOLS, GARDENS.



MAIN ENTRANCE



INTERNAL COURT



CARVED COLUMN

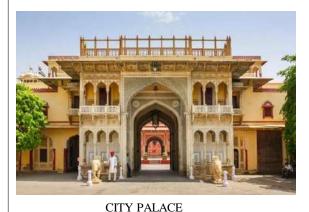
DAY 5: JAIPUR CITY



AMER FORT



HAWA MAHAL



PHOTOS CLICKED BY STUDENTS



WWW.MAPSOFINDIA.COM

- KNOWN AS THE PINK CITY OF INDIA DUE TO USE OF PINK SANSTONE
- THE MOST SENIOR OF ALL RAJAS, THE SAWAI, RESIDED IN JAIPUR.
- PLANNED WITH VASTRU SHASTRA IN NORTH SOUTH DIRECTION.

DAY 5 : CITY PALACE, JAIPUR

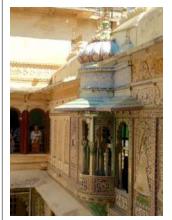




COURTYARDS



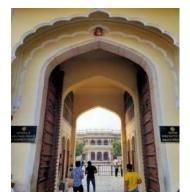
MAHARAJA'S PALACE



DOMES INSIDE MAHAL



INTERIOR OF RAJA'S PLACE



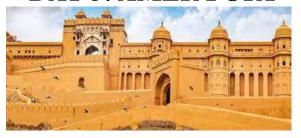
MAHAL'S ENTRANCE

- ADMINISTRATIVE AND CEREMONIAL SEAT OF MAHARAJA SAWAI JAISING II TILL 1949.
- DIWAN-E-KHAAS AND DIWAN-E-AAM ARE THE MAJOR ATTRACTIONS HERE.
- SABHA NIWAS (DIWAN- E -AAM) IS A HALL OF THE PUNLIC AUDIENCE. IT HAS MULTIPLE CUXPED ARCHES SUPPORTED NY MARBLE COLUMNS AND BEAUTIFULLY PAINTED PLASTER
- SARVATO BHADRA (DIWAN E KHAS) IS UNIQUE ARCHITECTURAL FEATURES.



INTERNAL ENTRANCE TO RAJWADA

DAY 5: AMER FORT





CEILINGS

• BUILT BY THE MEENAS IN 18TH CENTURY, IT IS CONSTRUCTED USING RED SANDSTONE AND MARBLE

RESIDENCE OF RAJPUT MAHARAJSAS

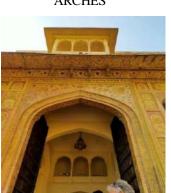


• THIS PALACE IS ALONGE WITH JAIGRAH FORT, IS LOCATED IMMEDIATELY ABOVE ON THE VHEEL KA TEELA(HILL OF EAGLES) OF THE SAME ARAVALLI RANGE HILLS.

FORT



ARCHES



RANI'S MAHAL



MAIN ENTRANCE INSIDE FORT ENTRANCE



ARTIFICIAL KESAR GARDEN

PHOTOS CLICKED BY STUDENTS

JANTAR MANTAR



LANDSCAPE

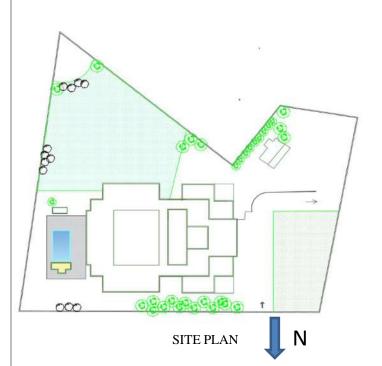


SUNDIAL

JANTAR MANTAR, JAWAHAR KALA KENDRA

- THE JANTAR MANTAR IS A COLLECTION OF NINETEEN ARCHITECTURAL ASTRONOMICAL INSTRUMENTS BUILT BY THE KACHWAHA RAJPUT KING SAWAI JAI SINGH II, THE FOUNDER OF JAIPUR, RAJASTHAN.
- THE MONUMENT WAS COMPLETED IN 1734. IT FEATURES THE WORLD'S LARGEST STONE SUNDIAL, AND IS A UNESCO WORLD HERITAGE SITE. IT IS LOCATED NEAR CITY PALACE AND HAWA MAHAL.
- THE INSTRUMENTS ALLOW THE OBSERVATION OF ASTRONOMICAL POSITIONS WITH THE NAKED EYE.THE OBSERVATORY IS AN EXAMPLE OF THE PTOLEMAIC POSITIONAL ASTRONOMY WHICH WAS SHARED BY MANY CIVILIZATIONS.

LIVE CASE STUDY: DESERT PALACE RESORT, JAISALMER





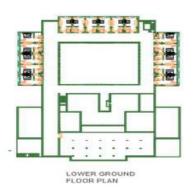


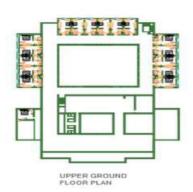


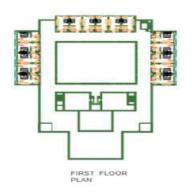




GLIMPSES OF RESORT





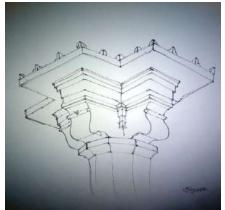


WORK DONE BY STUDENTS:



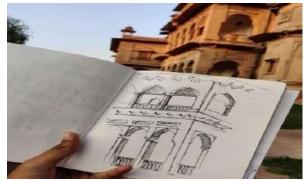








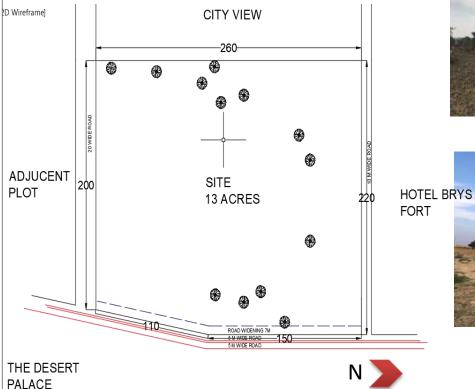








DESIGN PROGRAM AND LIVE SITE SELECTION





TOTAL AREA: 48500 M²

LOCATION: NEAR JAISALMER FORT



SITE SURVEY





SITE SURROUNDINGS



SATELLITE VIEW OF SITE

DESIGN PROGRAM FOR PROPOSED RESORT

Introduction

In practical terms, design of a resort includes basic functional issues like providing comfortable accommodation spaces and amenities to the customers through sensible and functional organization of various zones and activities, circulation pattern, choosing appropriate materials & form for protection against elements, etc.

There is also a need for social interaction and recreational facilities and designing spaces for such activities in and around the accommodation while simultaneously there is a need for privacy& security – these conflicting requirements must be addressed by the designer.

But the most important factor is the context – the reference within which all this operates. It is the physical context of Jaisalmer, climatic context of the region and the thematic context of the historical places around Jaisalmer and its rapidly increasing tourist footfall in the present time and place that calls for such public interface of international standards in this region which currently this zone falls short of.

Goal

To design a tourist resort in the outskirts of the developing Jaisalmer town and its evolving tourist destination context, resolving the functional and thematic issues in the design.

Objective

To understand the contextual issues in design in terms of:

Understanding of the correlation of visual aesthetics, study of basic design exercises with architectural building forms and spaces.

Application of climatic design parameter with reference to human comfort and energy conservation.

Understanding of context for design proposal.

Introduction and application of planning approaches for site planning and layout of multi-building campus on level and sloping site.

Application of design parameters for earthquake resistant structures of load bearing building construction systems.

To understand space requirement and zoning for various activities and overall circulation pattern.

To understand basic structural systems and selection of appropriate materials for protection against elements and safety.

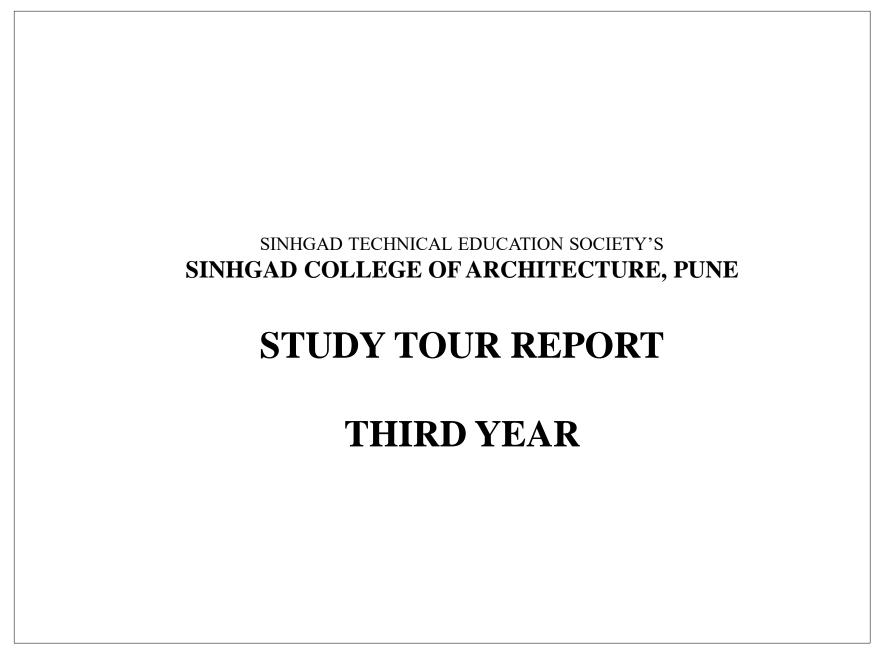
Generating working drawings for their design proposal – smaller unit.

Detailing the provision of basic services (water supply and drainage) for their design proposal.

Project Brief

A tourist resort is to be designed for a thriving tourist destination in Rajasthan, which is of world heritage importance. The proposed site is on the outskirts of historic town of Jaisalmer. The site marks an ideal location with ample area for a resort even considering its future expansion. The plot size is about 12 acres and as a part of this academic exercise requirements covers $1/8^{th}$ of the site area to cope up with the required built up allowing the students to creatively deal with resort planning and its horizontal expanses.

The owner is devoted to ecological cause, and would be willing to experiment in terms of form, materials and structural systems if they are based on principles of green architecture.



SINHGAD TECHNICAL EDUCATION SOCIETY'S

SINHGAD COLLEGE OF ARCHITECTURE, PUNE

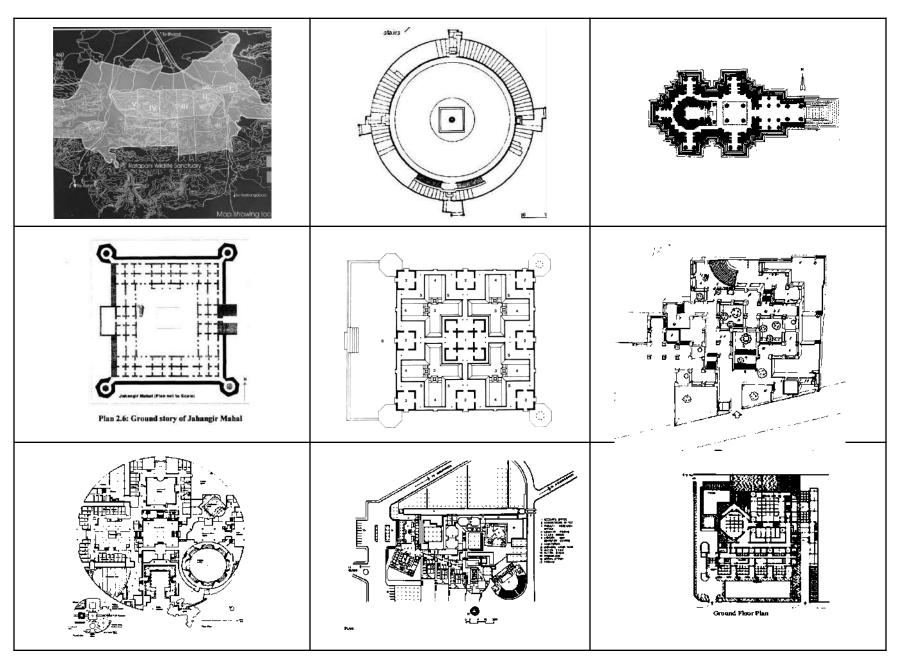
STUDY TOUR REPORT

Madhya Pradesh: Bhopal, Khajuraho, Orchha and Datia

by

Third Year B. Arch. Division A

28th November to 5th December 2019



STUDY TOUR: THIRD YEAR B.ARCH. DIV A NOV-DEC 2019



BHOPAL-KHAJURAHO-ORCHHA STUDY TOUR (2019-20)

		TOUR ITIENRARY
Day	Date	Detail Itinerary
Day 01 Thu	28 th Nov 19	Reporting Pune Railway Station
		Proceed to Bhopal by Jhelum Express (11077)
	29 th Nov 19	Proceed to <u>Vidhan</u> Sabha
Day 02 Fri		Visit IIFM
		Tribal Museum & Bharat <u>Bhavan</u>
		Bhopal Heritage Walk
Day 03	30 th Nov 19	<u>Sanchi</u> Stupa
Sat		<u>Udaygiri</u> caves
		Lakeside & city
Day 04	1 st Dec19	Bhimbetka caves
Sun		Visit <u>Habibganj</u> Railway station
Day 05	2 nd Dec	Visit <u>Khajuraho</u> temples
Mon	19	Light and Sound show in temple complex
Day 06	03 rd Dec	Visit <u>Khajuraho</u> temples for Sunrise
Tue	19	Visit <u>Khajuraho</u> temples
		Visit <u>Orcha</u> Palace
Day 07 Tue	04 th Dec 19	Visit <u>Datiya</u> Palace
140		Proceed to Pune by Jhelum Express (12780)



Editorial students

Aher Ashwini, Ambole Preeti, Bakare Sourabh, Bandewar Shruti, Barolyia Shantanu Kumar, Bharatkar Supria, Bhokare Sneha, Bhosale Rohit, Bidkar Shreesha, Chachane Lakhan, Chavan Sonal, Chipade Anushka, Dabir Srushti, Dandwate Omkar, Dangore Vaidehi, Daripkar Saloni, Darode Sharva, Deshmukh Shantanu

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Vaidehi Darode Sharva Chajalane Akshata

Sneha Dandwate Omkar Dangore

Study tour Faculty Ar. Kalpana Hadap Ar. Namrata Khatod







Tourist circuit map

Tourism circuits



Uiiain

Maheshwa

omkareshwa

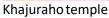


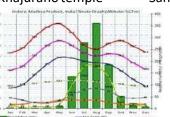




- Sanchi Bhopal bhojpur Bhimbetka
- Jabalpur
 bhedaghat
 mandla
 kanha
 bandhauga
- ShivpuriKhajurahoOrchha











bhimbetka

Introduction

- ☐ Madhya Pradesh is second large state in central India, retains landmarks from eras throughout Indian history.
- ☐ Bhopal is the capital of Madhya Pradesh
- ☐ Madhya pradesh is second largest state in india by area and sixth largest state by population having 50 districts.
- Begun in the 10th century, its Hindu and Jain temples at Khajuraho are renowned for their carvings of erotic scenes, most prominently Kandariya Mahadeva, a temple with more than 800 sculptures.

Climate

- ☐ Madhya Pradesh has a subtropical climate with a hot dry summer (April—June), followed by monsoon rains (July—September) and a cool and relatively dry winter.
- ☐ Temperature in summer is 35-40 Celsius.
- ☐ Temperature in winter is 10-15 Celsius.
- ☐ Rainfall is 76-150 cm (july-sept).

Topography

- The state straddles Narmada river which runs east and west between the Vindya and Satpura range.
- ☐ These ranges and Narmada are traditional boundries between north and south india.
- lacktriangledown Highest point of Madhya Pradesh is Dhupgarh (1350 m).

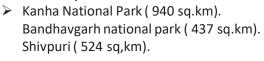


Babul (5.2 m)



■ National parks :

Vegetation



☐ Around 1/3 rd of the state area is

occupied with Tropical forests

☐ At east of chambal, we will find the

and Godavari in south.

lying with the river Chambal in north

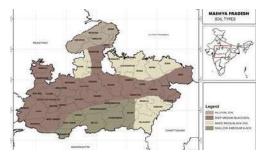
area having rocky surface and thick forest.

☐ Main trees:

- > Teak, bamboo and teak etc.
- ☐ Other trees:
- Babul , Khair, Bael, Neem
- and Jamun etc.

☐ Shrubs:

- Akol , Adusa etc.
- ☐ Climbers:
- > Keoti, Mahul etc.





Adusa (1.5m)

Soil type

- ☐ Black soil-47.6% of land of MP
 - > Areas: Bhopal, Jabalpur, Barwani, Sagar, Guna, Indor, Ujjain, Jhabua
- ☐ Red soil: 36.5% of land of MP
 - Mandala, balaghat, Shahdol, Sindhi, Katni, Umaria
- ☐ Alluvial soil: found in north and western side of MP
- > Areas: Gwalior, Shivpuri, Bhind, Morena
 - ☐ Loamy soil:
 - > Areas: found in pain and river belt



Mahul (10.3m)

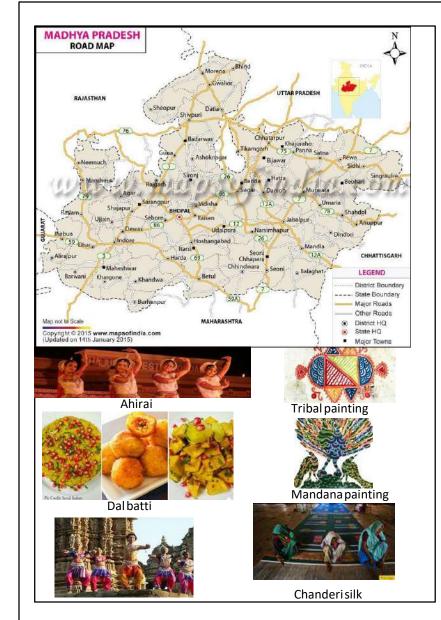
☐ Rivers:

Narmada (1312 km). Chambal (965 km). Son river (785 km). Sindh river (470 km).

■ Lakes and Dams :

- ➤ 1 upper lake. 2 Lower lake. 3 Tawa reservoirs.
- > Indira Sagar Dam (Khandwa). 2 Gandhi Sagar Dam (Neemuch). 3 Halali Dam (Bhopal).





Tourist Places From Bhopal

- ➤ Lower lake-(4.3km)
- ➤ Bhimbetka caves-(44.5km)
- State tribal hall

Culture

- This state of central India is rich in culture.
- The amalgamation of the varied tradition of the different groups has made the culture of the state vibrant and multi-dimensional.

- Orcha fort_ (335.6km)
- Khajuraho temple (376.23km)
- Gwalior fort-(418.3km)

Art and Craft

- Mandana art (meena tribe)
- > Tribal paintings
- Bagh painting
- Durrie painting These are some arts of tribes from MP

Culture related to architecture

Jali work, corridors

Double vault structure

Tribal and folk tradition of MP are reflected in the vernacular architecture

Population

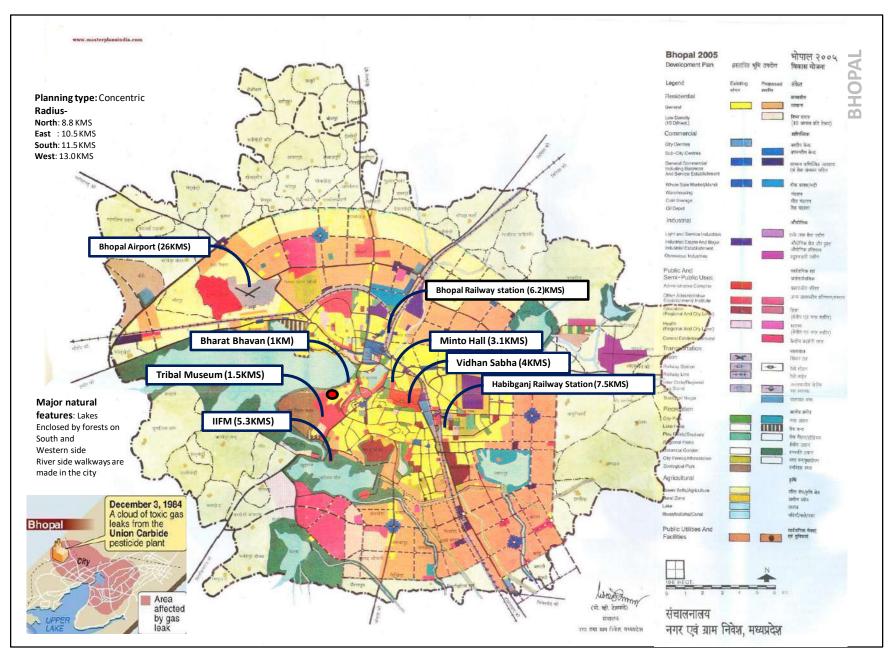
- Madhya Pradesh is sixth largest state by population in india.
 According to 2011 census, population of the Madhya Pradesh is
 7crore 33 lakes.
- Religion wise population of Madhya Pradesh is: Hindu - 90.9 % Muslim - 6.6 % Jain - 0.8 % Other -1.7 %

Urban and ruler areas

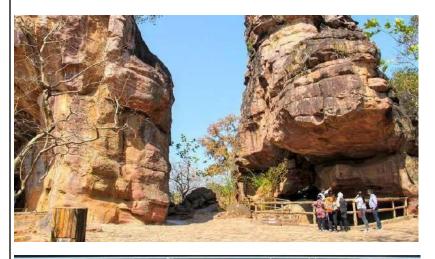
> 72.37% and 27.63% population of MP lives in ruler and urban areas resp

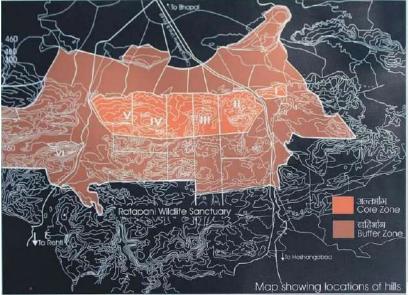
Literacy rate

Literacy rate of Madhya Pradesh is 70.6 %.



BHIMBETKA CAVES

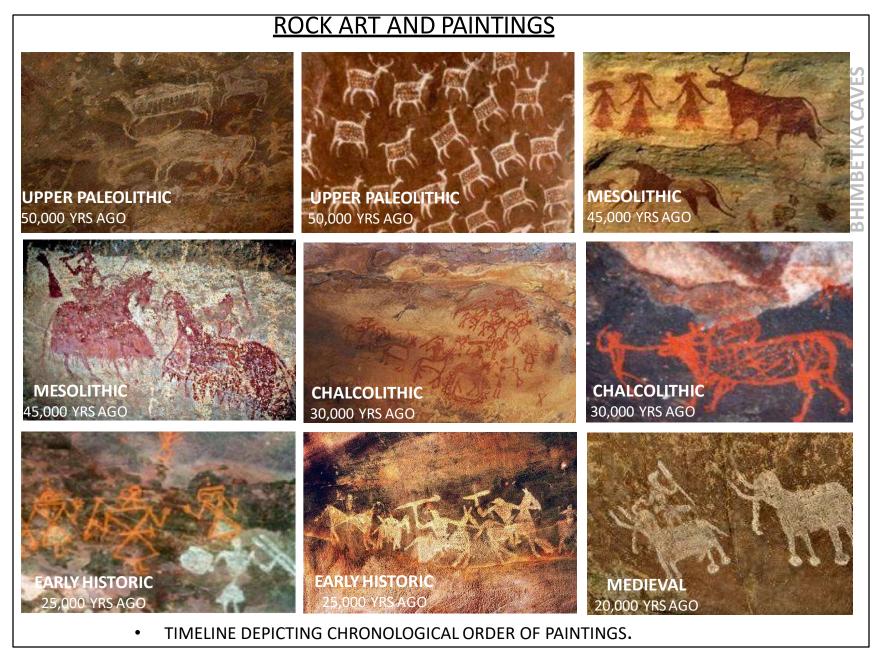




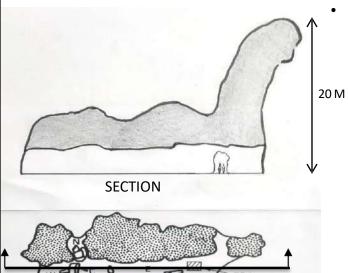
Location: Raisen district, 45km from Bhopal. Madhya Pradesh.

Area: 1893 hectares.

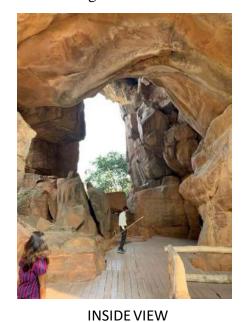
- Bhimbetka rock shelters feature pre-historic cave paintings and oldest are about 10,000 years old.
- There are three rock shelters in the world and one of them is situated in Bhopal, India.
- It exhibits the earliest traces of human life on Indian sub continent and evidence of stone age.
- Due to the sedimentation of these rocks over the years the caves are naturally formed.
- The Bhimbetka caves are an archaeological site that spans the Paleolithic and Mesolithic period.
- These caves are the oldest one among the UNESCO World Heritages Sites.
- It consists of 7 hills and over 750 rock shelters.
- Out of these only 15 caves are open for tourists.
- The site contains world's oldest walls and floors.



AUDITORIUM CAVE

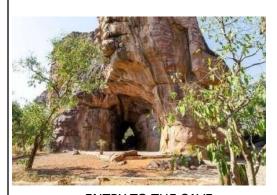


• The Auditorium cave is one of the most significant feature of the site and is the largest shelter at Bhimbetka.



OUTSIDE VIEW

AUDITORIUM CAVE PLAN



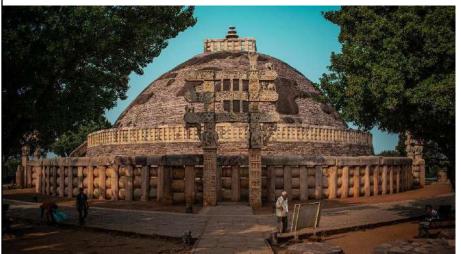
ENTRY TO THE CAVE



MIDDLE PORTION



ARCHWAY



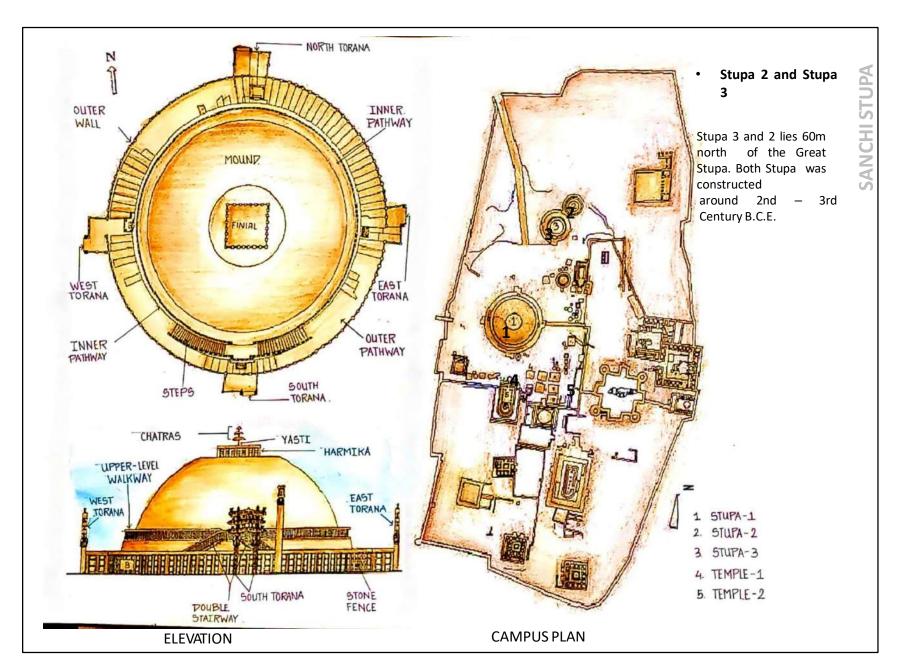
Balustraded staircase:- steps lead up to path away at upper level that encircles the mound.

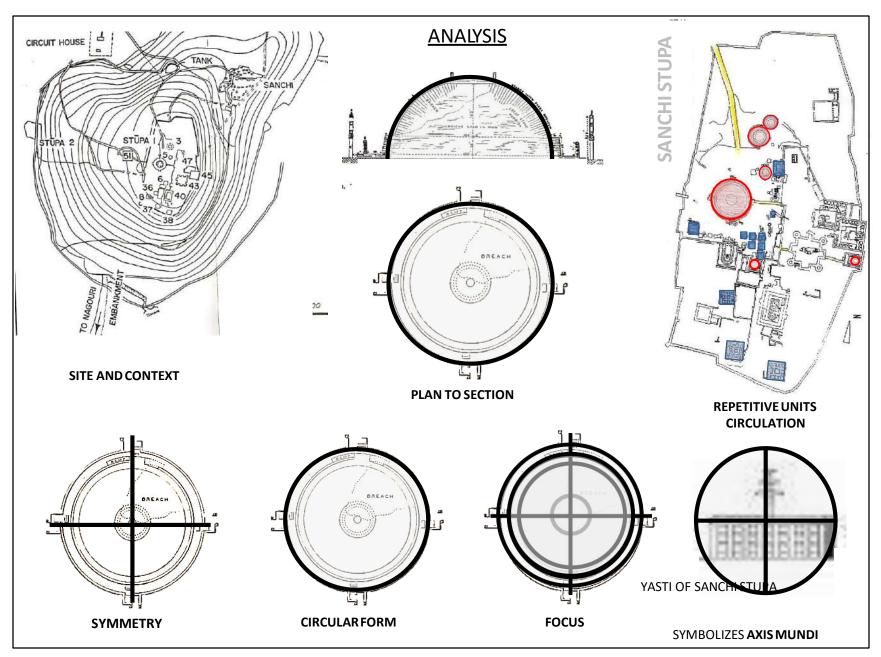
A stone-paved processional path at the ground level is enclosed by a balustrade is accessed through the four tornas



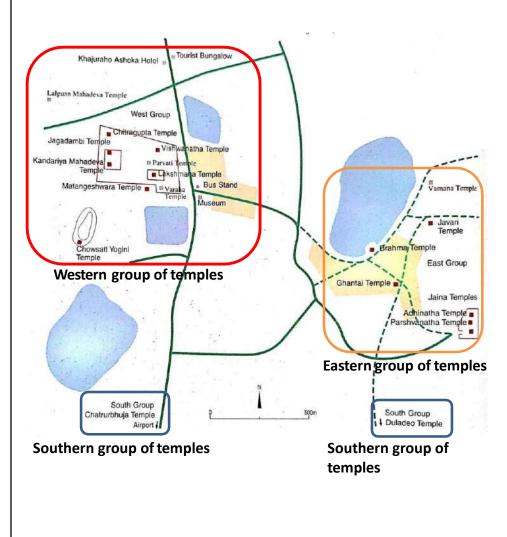
SANCHI MADHYA PRADESH (2 century B.C.)

- Sanchi stupa is **Buddhist complex**, and surrounding buildings architectural **style is Buddhist**.
- **Height16.46 m of dome**(54.0 ft) , **diameter 36.5 m** (120 ft).
- The total **height of torna** is about **10.36M** with a width of **3M**.
- The stupa at Sanchi is one of the most perfect examples extant in Indian architecture as a model of the cosmos. Its very form **symbolizes Mount Meru**, the sacred mountain.
- The central wooden post buried within the **masonry is yupa**, the **axis mundi**, i.e., the column that passes through the center of the universe.
- A stupa is a dome-shaped mound that mimics the funerary mounds used to mark the graves of great kings. The three layer stone umbrella visible at a the top of the stupa shows the royal status/symbol. Relics of buddha is placed into the center of stupa
- Four gateways represent courage, love, peace and trust.
- Sculptures on the gateways or every **symbol in the structure denotes** meaning or a story from **Buddha's life or stories** from Jataka tales.
- Buddha was represented in symbolic forms like Lotus, Wheel
 or Throne under a Pipal tree. Horizontal panels ending in
 tight spirals are believed to represent partly-unrolled picture
 scrolls.





KHAJURAHO

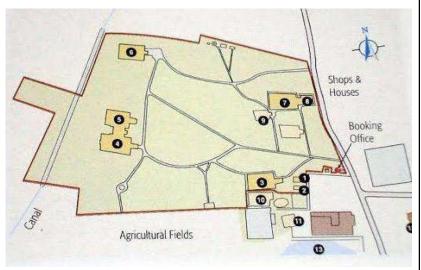


City map of Khajuraho

- The discovery of great temples Khajuraho made an indelible impact on the architecture history of India.
- The temples of Khajuraho and its architecture is witness to the flourishing Chandela Dynasty of the region.
- These temples were built by the Chandela ruler between AD 900 -1130 and we can see the style of Nagara temple architecture.
- ➤ It is known that originally there were over 80 temples in Khajuraho however only 22 remain till date.
- Most of the temples at Khajuraho where built using **sandstone** but four also used granite in construction.



Map of Western Group of Temples



1)	Laxmi temple	(900)
~ \		1000

2) Varaha temple (900 - 925)

3) Lakshman temple (930 - 950)

4) Kandariya temple (1025 -1050)

5) Jagadambi temple (1000 - 1025)

6) Chitragupta temple (1000 - 1025)

7) Vishvnatha temple (1059)

B) Nandi temple (1059)

9) Parvati temple (1059)

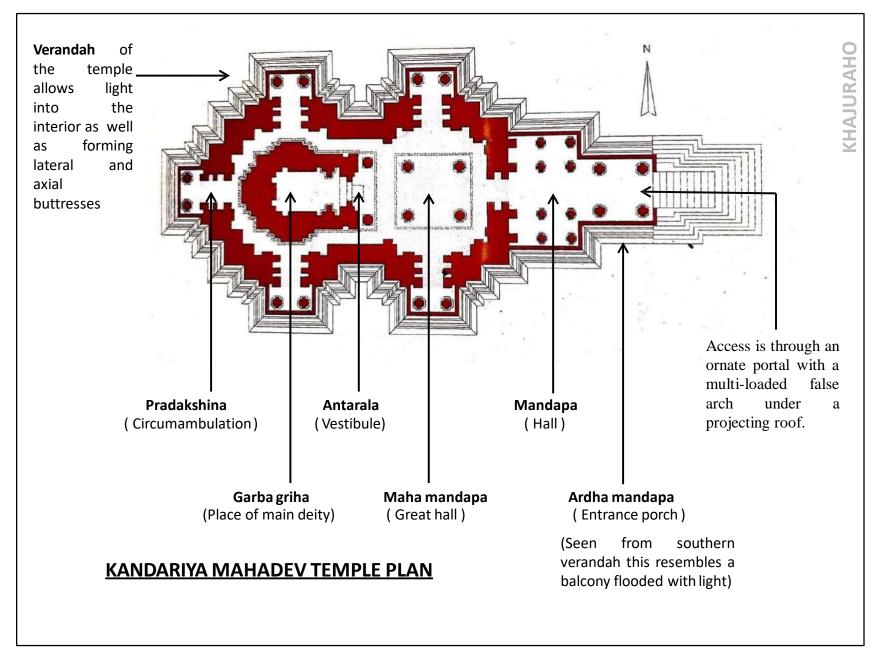
10) Matangeshvara temple (1002)

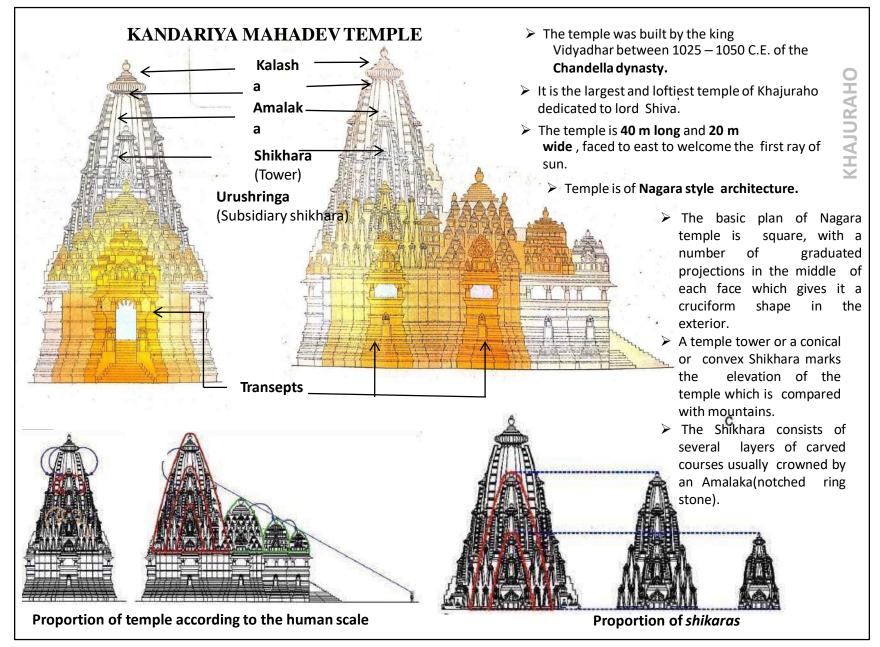
WESTERN GROUP OF TEMPLES

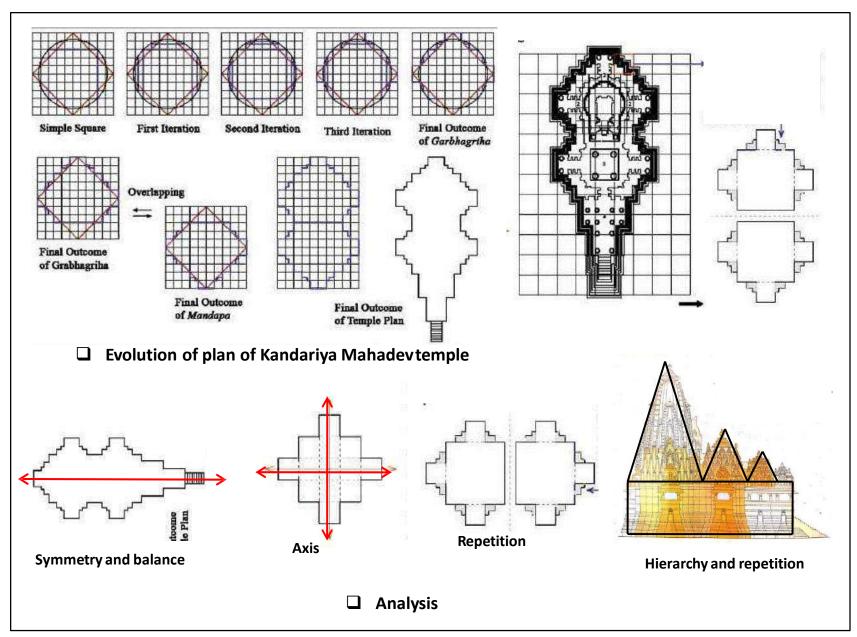
- ➤ The western complex of the Khajuraho group of temples houses the most important temples in Khajuraho.
- ➤ A boundry wall surrounds and protects the temples within this large rectangular complex and there is only one entry point .
- ➤ **Kandariya temple** is without any doubt the largest and most magnificient temple in Khajuraho among the western group.
- The design of the temples echo the **Hindu mandala** design principle of square and circles and laid out in a pentagon formed by convergence of three triangles, reciprocating the concept of '**Panchbhut**' or five elements and '**Trilokin**' or three realms.
- ➤ The principle of 'Vastu-Purusha-Mandala' is followed in the design of the temples.

EASTERN GROUP OF TEMPLES

- ➤ The eastern group of temple of Khajuraho can be divided into two parts, the temples dedicated to the **Jain** pantheon and the temples dedicate to **Hindu** gods.
- > The Jain temples ;Parsvnath , Adinath , Gantai temple .
- ➤ The Hindu temples : The Brahma, The Vamana, Hanuman temple .
- ➤ Jain temples don't have balconies on the surface wall so the outer look is not spectacular .
- ➤ The **Tirthankara statues** in various places that tell us this is a jain temple .
- ➤ The only difference is that the back of the temple has niche that has been carved and a statue of God has been installed there.









KANDARIYA TEMPLE



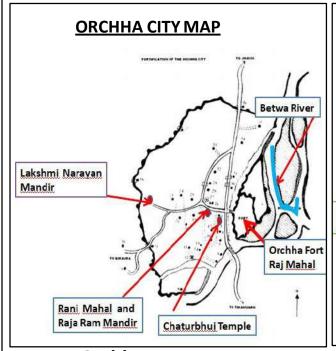
The sculpture on the facades of the temple are in angular form .

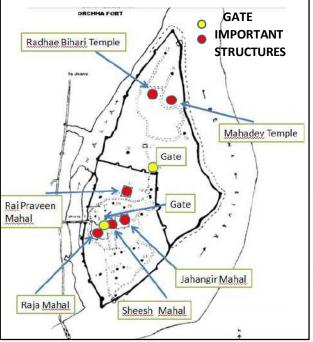


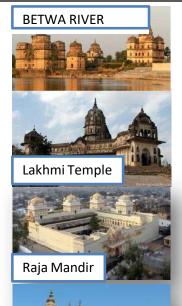
The temple has carved idol of God



The sculpture depicts day to day life



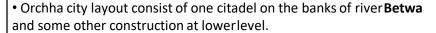






Map of Inside FORT

JHANSI RAILWAY 14 km STATION ORCHHA 120 km **≪** KHAJURAHO AIRPORT



- Orchha fort consist of RAJA MAHAL, SHEESH MAHAL, JEHANGIR MAHAL, RAI PRAVEEN MAHAL, RADHEY BIHARI TEMPLE and MAHADEV TEMPLE.
- •Lower construction- LAXMI NARAYNA TEMPLE, RANI MAHAL.

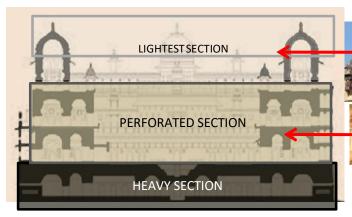






Chaturbhuj











Sculpture elephant

Chhatri





Hemispherical dome Jali corridor





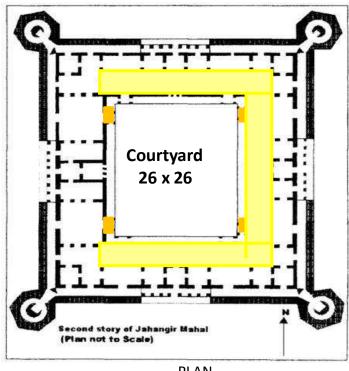
Multifoil arch Intricate brackets



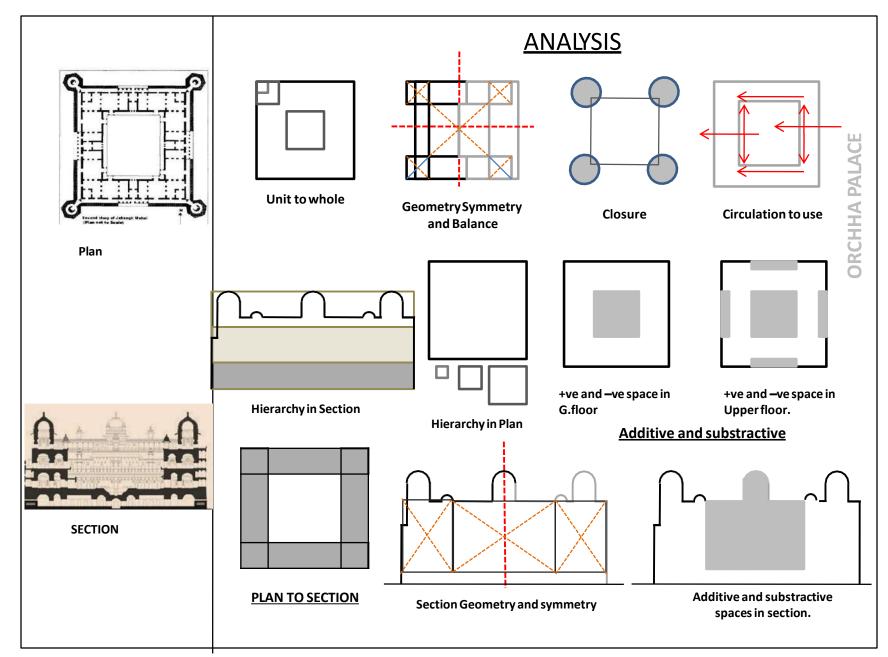
Double Arch

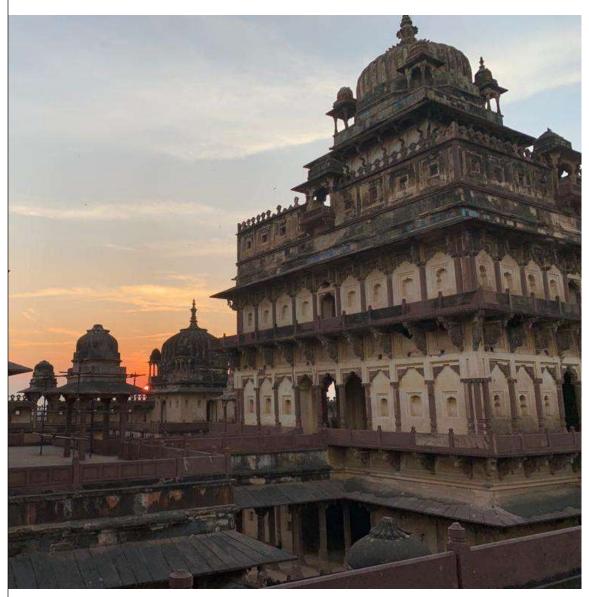
JEHANGIR MAHAL

- 1. Area- 200 sq.m
- 2. Built in - 1605-0626 initiated by Rudra pratap singh and Bir singh bundela.
- **Purpose** To Resemble good relationship of bundelas and Mughals.
- Structure- Sq. shaped with rectangular mass with 8 domes.
- Features:
 - Hemispherical ribbed Dome
 - Hanging corridor
 - Steep staircase
 - Screened corridor
 - Double storied kiosk



PLAN

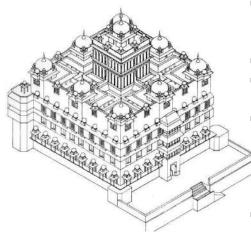


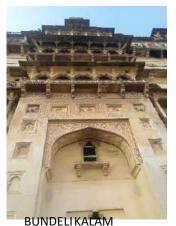


<u>DATIA PALACE</u> BIR SINGH DEV PALACE

- "GOVIND MAHAL" by local people
- Location : Datia , Madhya Pradesh
- 75 km from Gwalior city in Madhya Pradesh
- Altitude: 260m
- Situated on isolated rock on western side of Datia.
- Building started in 1614
- 9 years to complete.
- Total construction cost : 35 lakh rupees
- Built for overnight stay for Jahangir.
- Only made out of stone and bricks, no usage of wood or iron.
- Finest example of BUNDELA ARCHITECTURE (late 16th – early 17th)
- CHANDELI ARCHITECTURE (in local vernacular)



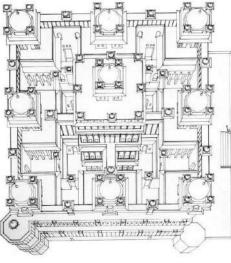




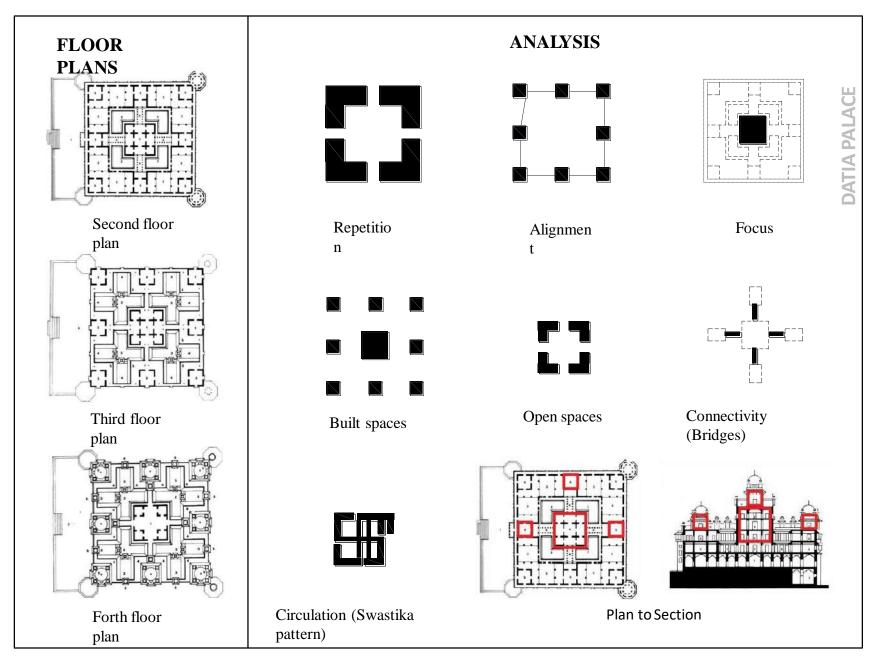


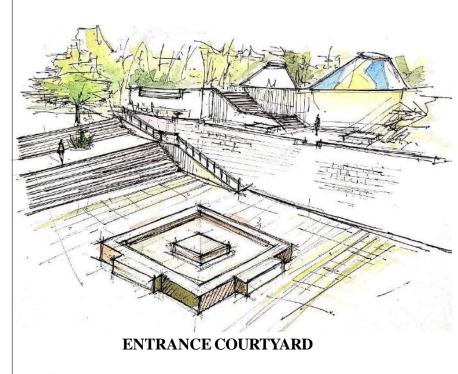


CARPET DESIGN OF PERSIA



- Indo-Islamic Architecture
 - Incredible paintings (Bundeli Kalam)
 - on walls with organic colours
- String courses of Stone-Lattice work
- Many of the ceilings resemble rare carpet designs of Persia
- Architectural syntax of Islam (the domes, the colonnades, the structural clarity) to reinforce the classic mandala plan of Hindu mythology.
- It is done with great inventiveness and exuberance – a masterful interaction of rooms an cascading terraces forming a kaledoscopic of voids and solids
 - Flying bridges to central structure
 - Domed tower at each corner
 - Central dome height: 35m
 - Total 7 floors, 2 in basement
 - Facades decorated with bracketed balconies (intricately carved)
 - 80m long and 40m high with 12 courtyards 440 rooms
 - Main entrance from east
 - Adjacent to Karna sagar lake





BHARAT BHAVAN

(India House)

Architect: Charles Correa

Location: Shamala hills, Bhopal

Built in: 1982

Total Area: 1035 sq.m

It was inaugurated by the former Prime minister of India Late Mrs. Indira Gandhi on 13th Feb 1982.

 It is a multi art center set up for create Interactive Proximity between the verbal, visual arts and performing arts.

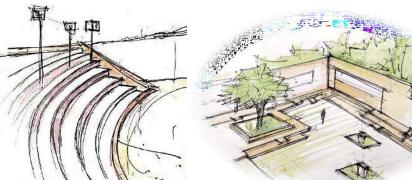
It is built into a hillside which slopes down towards a lake, a **series of terraces and courtyards** comprises the complex.

Invisible Architecture because of the level play on the sloping site.

It has a good integration of Indoor and Outdoor spaces

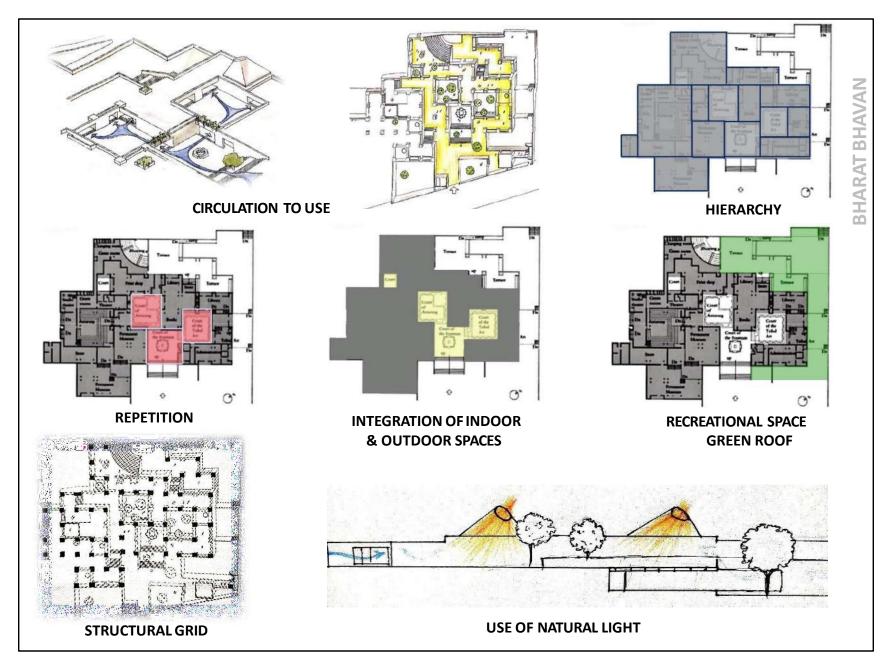
Experience of **Cool and Soft Breeze** because of the presence of lake .

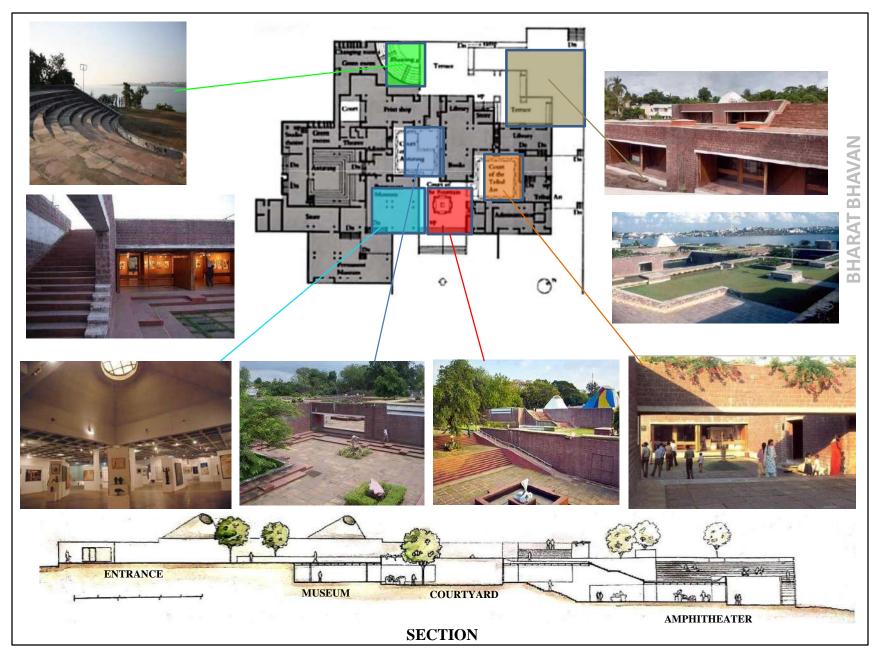
The Green Roof helps to keep the interior of the structure cool.

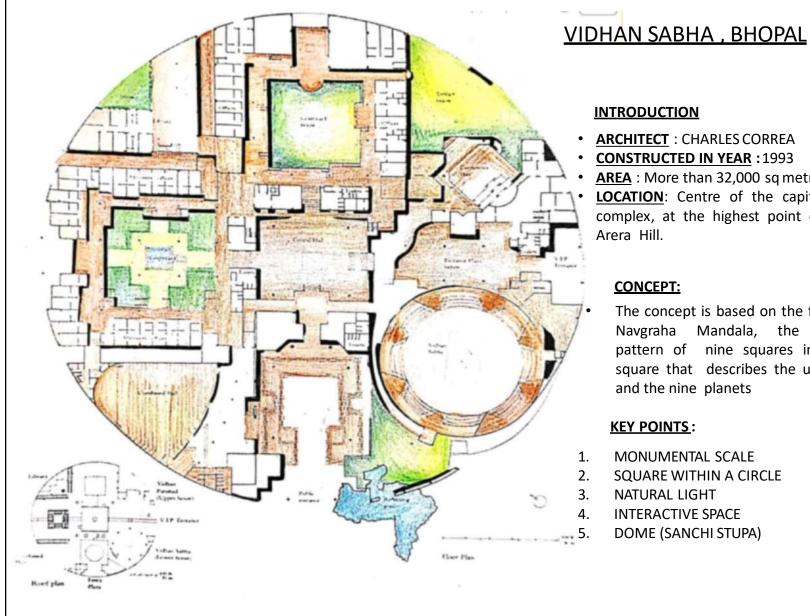


AMPHITHEATRE

MAIN COURTYARD







INTRODUCTION

- **ARCHITECT**: CHARLES CORREA
- **CONSTRUCTED IN YEAR**:1993
- AREA: More than 32,000 sq metres.
- **LOCATION**: Centre of the capital complex, at the highest point on Arera Hill.

CONCEPT:

The concept is based on the form of Navgraha Mandala, the Hindu pattern of nine squares inside a square that describes the universe and the nine planets

KEY POINTS:

- MONUMENTAL SCALE
- **SQUARE WITHIN A CIRCLE**
- NATURAL LIGHT
 - **INTERACTIVE SPACE** DOME (SANCHI STUPA)

ANALYSIS: VIDHAN SABHA V.I.P. Entrance Legislators' Entrance Солониев Нап Combined Public Entrance **CIRCULATION GEOMETRY SYMMETRY AND AXIS** V.I.P. Entrance Legislators' Entrance 00 100 Vidhan Sabha Combined Hall Prone Enhance **Fublic Entrance REPETITION TO UNIQUE PLAN TO SECTION FOCUS**



STUDY TOUR: THIRD YEAR B.ARCH. DIV A NOV-DEC 2019

Architectural Design site

Average Annual Rainfall: 1127 mm

Existing trees: Neem Soil type: Rammed soil Min Temp: January: 18.2 Max

Temp: May: 33.6

Pros:

- 1. Lake front site
- 2. Negligible slope
- 3. No vegetation in building area
- 4. Conveniently accessible
- 5. Road access on 2 sides of the plot

Cons:

- 1. Presence of existing hotels in the vicinity
- 2. Possible disturbance due to traffic noises



View of site

Micro climate:

- Site temperature is 2°C to 3°C lesser than city temperature.
- Cool breezes blow form the North i.e. from the lake side

Existing vegetation (on site):

Neem, Teak Wood, Jamun, Gulmohor.

Adjacent roads:

Jehanuma Palace road on the South (9M Wide) 6M Wide road on the East

Adjacent buildings:

- · Hotel Lake View Ashok
- Hotel Ranjit Lakeview
- Shiv Temple
- · Doordarshan Kendra
- Backward Class State Government Office

Reason to select site:

- Less no. of luxurious hotels in the vicinity.
- Location is surrounded by all the important buildings in Bhopal.

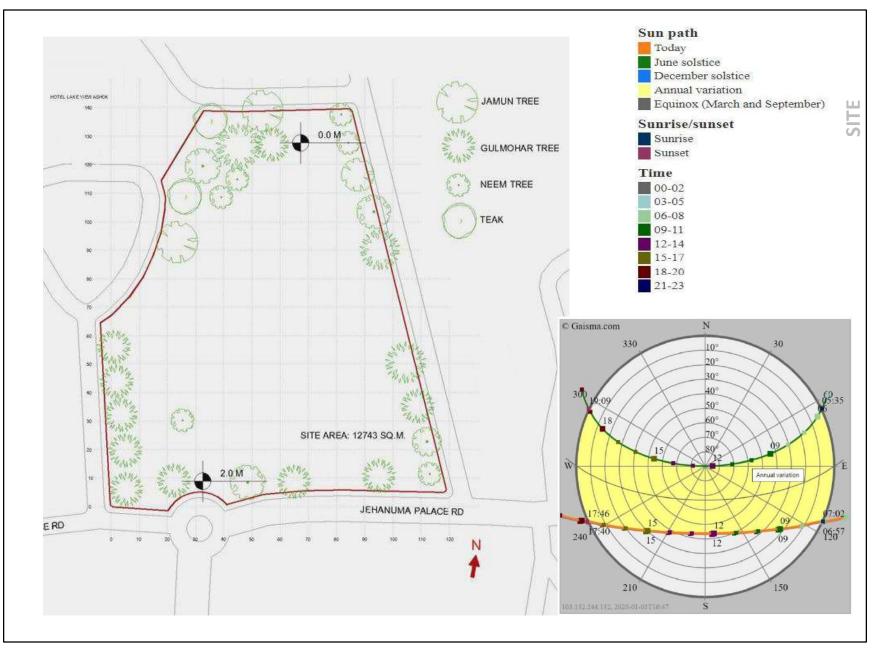


View of adjacent lane





View of adjacent square



SINHGAD TECHNICAL EDUCATION SOCIETY'S SINWGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE , PUNE 411041 SINHGAD COLLEGE OF ARCHITECTURE , PUNE 411841 PHONE: 435 5884, 3527, 0468, 0468, 0541, 2722 cm 729 EAX: 4353527 cm 729 PHONE: 435 5884, 3527, 6465, 6468, 6541, 2723 cm; 729 FAX: 4353527 cm 729 SESSION : 2019 - 2020 CLASS : III B. ARCH SESSION : 2019 - 2020 CLASS: III B. ARCH TERM II : DEC TO MARCH TERM II : DEC TO MARCH DIV: A DIV: A SUBJECT : ARCHITECTURAL DESIGN W SUBJECT : ARCHITECTURAL DESIGN VI PROJECT HOTEL, BHOPAL PROJECT : HOTEL, BHOPAL U Studio Team : Prof. Kalipana Hadap : Ar Arkoor Patili Date of Introduction : 17th DEC 2019 Studio Team : Prof. Kalpana Hadap , Ar Ankoor Patti Date of Introduction : 17th DEC 2019 TOTAL MARKS : 600 TOTAL MARKS : 600 Date of Submissions Date of Submissions as per achedule as per schedule THE SITE: BUILDING REQUIREMENT AREA OF EACH TOTAL AREA NO. Bhopai, the capital of Madhya Pradesh, holds an important position politically and culturally. The increase in daily visitors demands a growing need for more hotels in this city. A Walting Area The site is located at Bhopal at a prime area, near VIP Road, Minto Hall, Vidhan Sabha, Bharat Bhavan , Museum of Drop off with (ramp and steps)
 Security check Man and the proximity of the Upper Lake with its garden promenade. The site is flat with a forested area and lake on the north, another hotel located on the west. There is a major access road on the south and a minor road on the east. 3 Fover Area of the site is approximately 12,700 sq.m. Setbacks of 10 m minimum on all four sides. 4 Waiting /reception/Loung e 5 Public Lift labby As per design As per requriment The importance of climate, levels interrelation of functions, local materials, structure, 6 Public Staircase As per design As per requriment construction detailing and design aesthetics and open space plays an important part in the overall 7 Restrooms (L,G,physically disabled) 8 Cloak/Locker As per requriment THE PROCESS: 9 Small back office for reception staff 30 Exercise 1 - Project Linderstanding Study 210 Sqmts To understand existing hotels of similar nature a book case studies is required to be studied in detail. BUILDING NO. AREA OF EACH TOTAL AREA The study is essentially analytical rather than descriptive and must be documented in terms REQUIREMENT of drawings at 1:200 scale only under the major headings of 1. Relationship with the surrounding and architechtural character of the resort B Administration Area 2. Zonling and circulation, 1 Restaurant manager 3. Total area and area distribution of the following areas in the form of a pie chart Front office manager 4. Structural and design grid (if any) Executive chef 5. Accommodation - number, types, size and character of rooms 6. Dining, kitchen and ailled services 4 Maintanance in charge 5 Store manager 15 15 7. Administration - reception, front office and back office 8. House keeping and maintenance 6 Administration office 7 Record room 9. Entertainment area - Indoor and outdoor, shops etc 10. Services - Transformer, Panel room, Generator, Boller room, stores 8 Restrooms (L,G,physically disabled) As per requriment 11. Parking 170 Samts Examples Cidade de Goa, Goa BUILDING Triton Hotel, Sri Lanka REQUIREMENT Exercise 2 - Live Case Study Understanding C Residential Area Visit to Holiday Inn Hinjewadi along with faculty was arranged to understand. Back end Services. 1 Deluxe 2 Executive 2000 .50 Exercise 3 - Site Study
1.5ase drawings for site - plan and sections 1:200
2. Site Model 1:200 Suites 900 10 4 Pantry Each floor Linen Store Each floor 3. Site analysis 6 House Keeping Each floor 10 -Site and surrounding study -reasons for selection of site 4900 Sqmts -slope analysis -visual study of site.- photographs BUILDING AREA OF EACH TOTAL AREA REQUIREMENT DESIGN PROGRAMME: PAGE 1 PAGE 2 PROPOSED HOTEL AT BHOPAL PROPOSED HOTEL AT BHOPAL

SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE , PUNE 411041 PHONE: 435 5884, 3527, 0465, 0468, 0541, 2723 ext 729 FAX: 4353527 ext 729 SESSION: 2019 - 2020 TERM II: DEC TO MARCH CLASS: III B. ARCH DIV: A SUBJECT : ARCHITECTURAL DESIGN VI PROJECT : HOTEL, BHOPAL Studio Team : Prof..Kalpana Hadap , Ar.Ankoor Patil : 17th DEC 2019 Date of Introduction TOTAL MARKS : 600 Date of Submissions

JI Suu	Submissions . as per surequie				
_	1				
D	Dining Area				
1	Resturant	2	150	300	
2	24 Hours cafe	1	100	100	
3	Bar	1	60	60	
4	Restrooms (L,G,physically disabled)	3	As per requriment		

	BUILDING REQUIREMENT	NO.	AREA OF EACH	TOTAL AREA
Е	Formal Area			
1	Banquet Hall	2	200	400
2	Conference Room	2	60	120
	Banquet Hall Pantry	1/2 as per design	30	60
	Storage/Luggage	2	30	60
	Restrooms (L,G,physically disabled)	3	As per requriment	
				640 Sqmts

	BUILDING REQUIREMENT	NO.	AREA OF EACH	TOTAL AREA
F	Kitchen Area			
1	Kitchen (Veg. non-veg areas)	1	250	250
2	Bakery	1	20	20
3	Dry food storage	1	30	30
4	Cold storage veg	1	15	15
5	Cold storage non-veg	1	15	15
6	Bevrage storage	1	15	15
7	Crockery and china store	1	15	15
8	Dishwashing	1	20	20
				400 Sqmts

	BUILDING REQUIREMENT	NO.	AREA OF EACH	TOTAL AREA
G	Service Area			
1	Loading unloading deck/platform	1	as per design	
2	Main Stores	5	20	100
3	Garbage colection	1	20	20
4	Time office / security	1	10	10
5	Uniform Issue	1	20	20
6	Locker and restrooms (L,G)	2	15	30

PROPOSED HOTEL AT BHOPAL PAGE 3 SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE , PUNE 411041 PHONE: 435 5884, 3527, 0465, 0468, 0541, 2723 ext 729 FAX: 4353527 ext 729

SESSION: 2019 - 2020 TERM II: DEC TO MARCH CLASS: III B. ARCH DIV: A

SUBJECT : ARCHITECTURAL DESIGN VI PROJECT : HOTEL, BHOPAL

Studio Team : Prof.,Kalpana Hadap , Ar,Ankoor Patil Date of Introduction : 17th DEC 2019 TOTAL MARKS : 600 Date of Submissions : as per schedule

7	Employee kitchen	1	20	20
	Employee cafetaria	1	20	20
8	Engineering dept (carpentry, plumbing, electrical,painting, etc)	1	50	50
				270 Sqmts

	BUILDING REQUIREMENT	NO.	AREA OF EACH	TOTAL AREA
Н	Service Area			
1	Pump room	1	20	20
2	Boller room	1	80	80
3	Electric panel room	1	20	20
4	Transformer room	1	80	80
5	Generator room	1	20	20
6	Fire fighting room	1	20	20
7	Restrooms (L,G,physically disabled)	3	As per requriment	
8	Chiller plant outdoor	1	70	
_				240 Sqmts

Area = A+B+C+D+E+F+G+H = 7290 sq. m.30% of Area = 2187 sq.m.

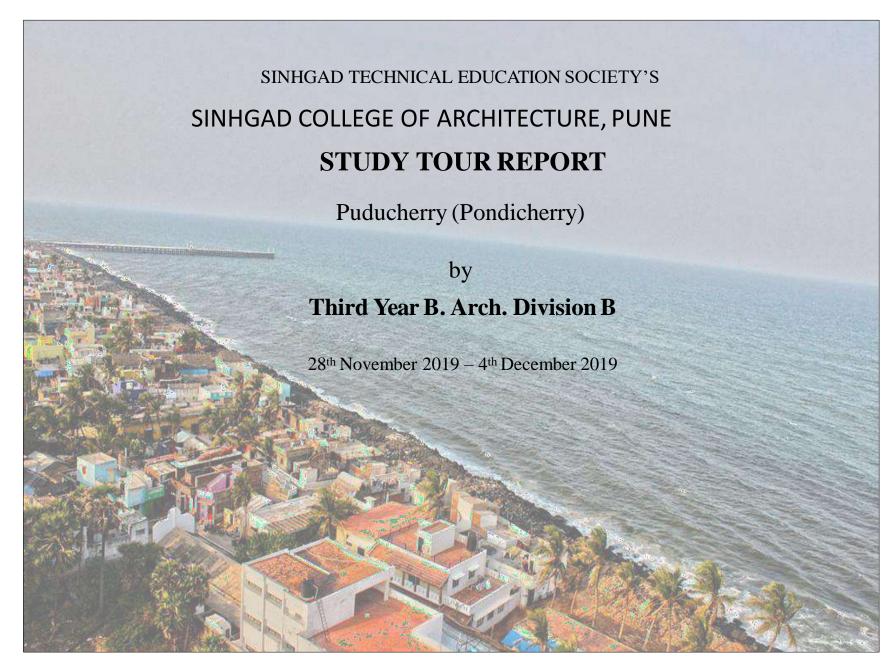
Total Area =9477 ~9500 Sqmts

Footprint of built form should not exceed 50% of the site area . Parking 100 cars of which 1/3° of cars to be parked in the basement area. Two wheelers 100 nos.

PROPOSED HOTEL AT BHOPAL

PAGE 4

OGRAM





Faculty: Ar. Niketa Patil, Ar. Pushkaraj Bankapure

Students: 24

Dubal Samruddhi Ekande Sushrut Gaikwad Sakshi Gawle Pranav Ghogare Ameya Ghule Manas

Gupta Shruti

Jadhav Abhishek Jadhav Rushikesh Jagtap Omkar Jaikhedkar Tejal Jain Aditi Jain Saloni Honrao Aditya Ingale Ranjeet Kashyap Chinmay Kasle Jagruti Kasture Chaitanya Kate Utkarsha Joshi Mihir Kachare Saurabh Kale Tejas Kambale Amar Kambale Vishal Jangid Suraj



French consulate

• It is the only diplomatic mission in town. This colonial building has changed over thr years, and yet managed to retain some of it'soriginal 18th centurey charm.



Raj nivas

• The government house raj nivas is a harmonious blend of french and indian architecture . it was once the location of hotel de la compagnie.

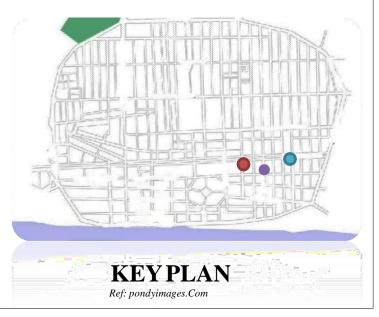


Sir. Aurobindo ashram

The ashram is where sir aurobindo and the mother worked for many years. The samadhi is located in this ashram

INTRODUCTION

- Puducherry Is The Capital City Of The Union Territory Of Puducherry And Is One Of The Most Popular Tourist Destinations In South India.
- A French Colony Until 1954, This Coastal
 Town Retains A Number Of Colonial
 Buildings, Churches, Statues, And Systematic
 Town Planning, As Well As Urban
 Architecture Of The Local Tamil Style.
- As Such The Town Has Been Dubbed "The Europe Of India".





Bharti park

The park is the most appreciated public area in the town. The area is dotted with ancient sculpture and not so ancient statues. Historical monument aayi mandapam is stationed at the center of the park..



Mahatma gandhi statue

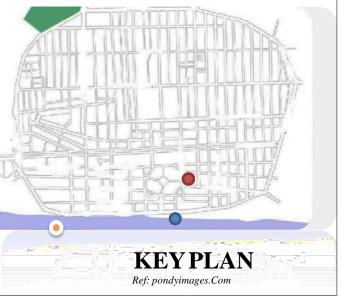
This 4mtr square statute, the biggest mahatma gandhi statute in Asia, is surrounded by eight magnificent granite pillars which were brought from gingee, a fort nearly 70kms from puducherry



Paradise beach

If you are looking for paradise look no further. This is an isolated beach, and to reach here, you have to take ferry across the backwater. The pristine private beach is meticulously taken care of and offers ahost of entertainment.





Topography

- The topography of Puducherry is the same as that of coastal Tamilnadu. Puducherry's average elevation is at sea level, and a number of sea inlets, referred to as "backwaters" can be found.
- Puducherry experiences coastal erosion. The city is protected against the sea by a 1.25 mile (2-km) long seawall, first completed by the french in 1735, which reaches a height of 27 feet above sea level.

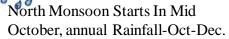


Hot And Humid Climate.



Stormy Winds In Evening

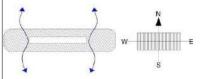
Mainly Winds Blow From Coastal (Sea) Side That Is East-west. **Moderate Rainfall.**



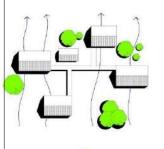
- Avg. Annual Rainfall-1,240mm
- Avg. Humidity- 84%

- Puducherry Climate Is Same Of Coastal Areas Of Tamil Nadu.
- Temperature-28 Deg C

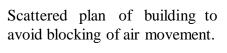
Climatic considerations in designing

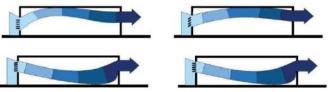


Orientation along East-West axis. Maximize natural ventilation and Minimize sun radiation impact.



Open elongated plan shapes, with single row of rooms accessible from verandas allowing for cross ventilation. Door and windows should be as large as possible to allow for air passage.

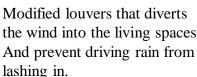




Louvers is a common fenestration detail in this climate but care should be taken in the way it is positioned as it may drive the wind up towards the ceilings and away from the living zone.



Normal louvers diverts the wind up. Driving rain also lashes inside.



Layout of French town

~77~7~7~

Residential buildings

- French town originally developed along the coastline around the government square
- In the French quarter the buildings are of two main categories Public and residential

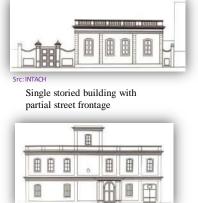
Streetscape of French town

- The streets are usually characterized by wall to wall construction
- These street facades are usually plain and austere, enhancing the effect of the straight and perpendicular grid of the town





Typology

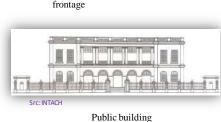


Double storied building with full street frontage





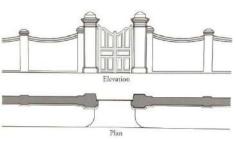








Compound walls



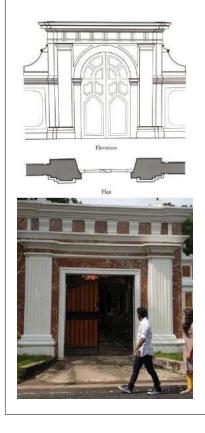


Compound wall with semi circular arched portal and pot balusters



Compound wall of public building with a sturdy gate and iron fence

Entrance gate



Doors



Segmental arched door with casework



Semi circular arched door

Windows

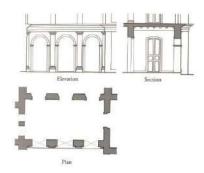


Wide flat arched window



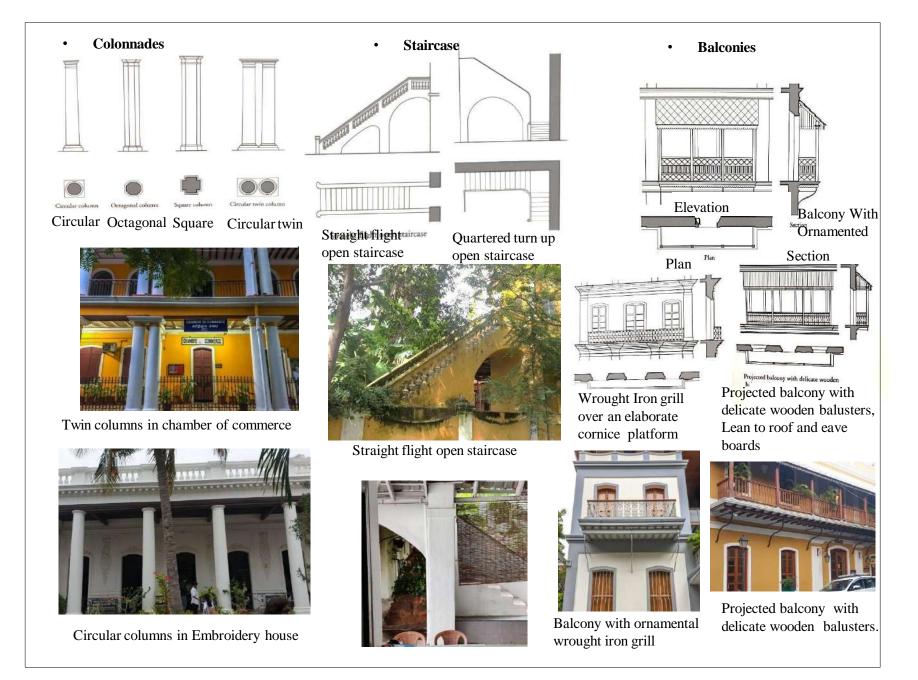
Wide semi-circular arched window

Arcades



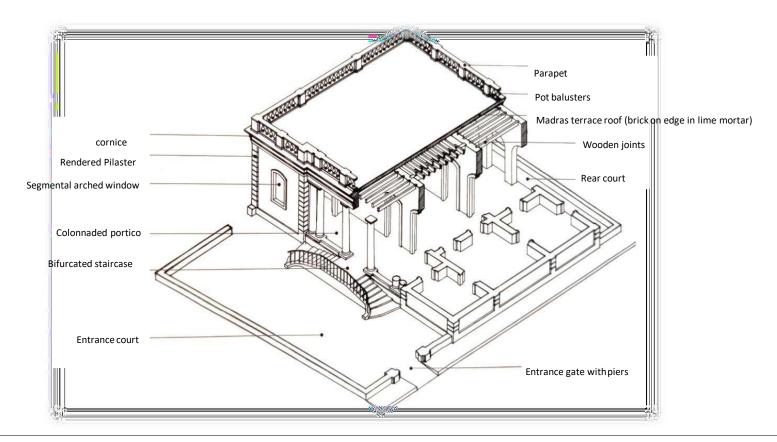


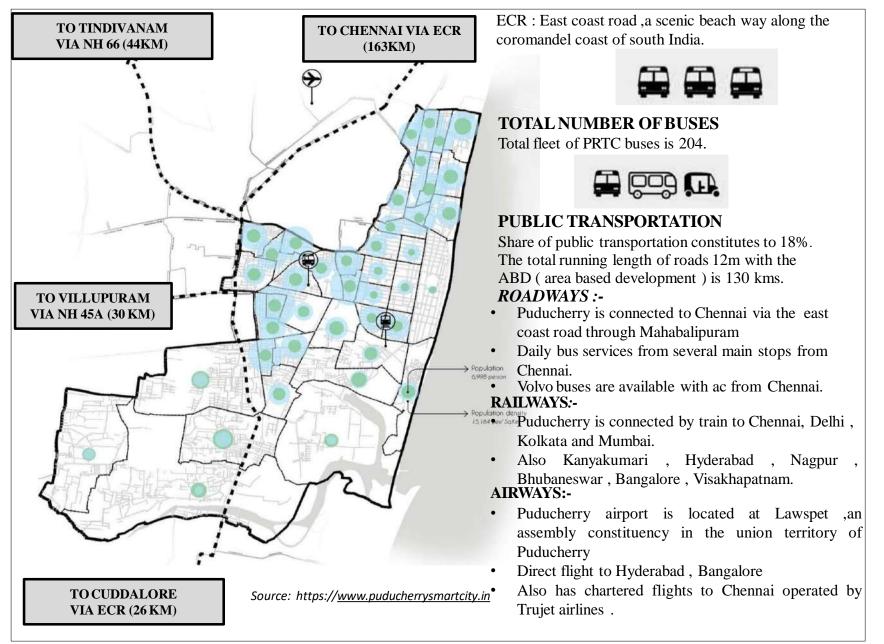
Interior arcade of a hotel

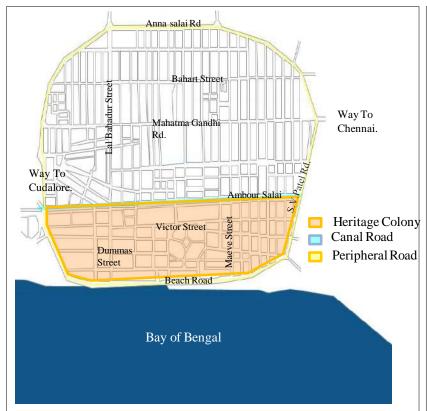


• Structural system (French Colony)

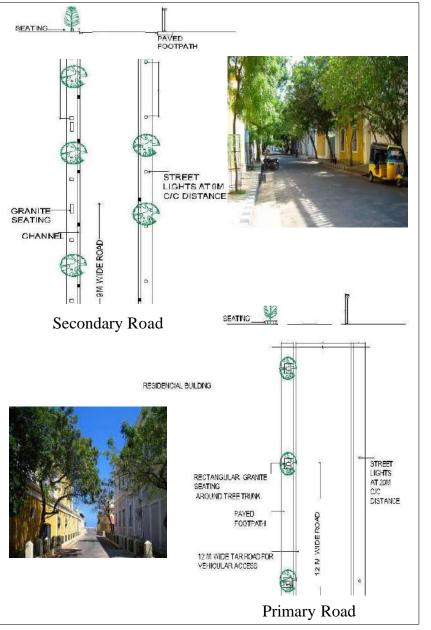
- Load bearing walls (2 feet wide and 14 feet high)
- Brick walls packed with an infill of mud and brickbats
- First floor walls are lesser in width than ground floor
- Columns and arches of brick masonry supporting heavy timber or steel beams
- Water-proofing with local lime terracing technique
- Cornice platforms
- Mangalore tiled lean-to-roofs with wooden rafters and edge beams that rest on capitals over square columns
- Brick corbelling is used for cornices, copings and decorative bands

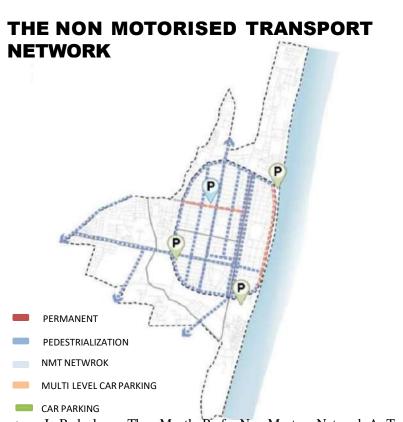






- There are five major roads.
- The oval shaped city is enclosed by a curved peripheral road known as the promenade- which encloses the Tamil town on three sides.
- The fifth major road is the canal road.
- Streets are arranged in orthogonal manner in both parts.
- French town has roads running perpendicular to the shore and lead towards the beach road.
- Tamil part has roads which run parallel to the canal, and open into residential streets and sometimes, major commercial roads.





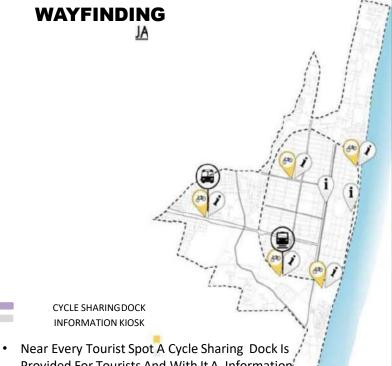
• In Puducherry They Mostly Prefer Non Mortary Network As To Reduce More Use Of Vehicle And Reduce Pollution Too

The Strategically Located Parking Spaces Act As The Backbone Of The Proposed Nmt Corridors Which Aims To Decongest The City

NMT CORRIDOR re

Existing 1.4km NMT corridor at Beach Promenade (6 PM to 7 AM)

 Specific timing ar given in the respective areas for the NMT corridor

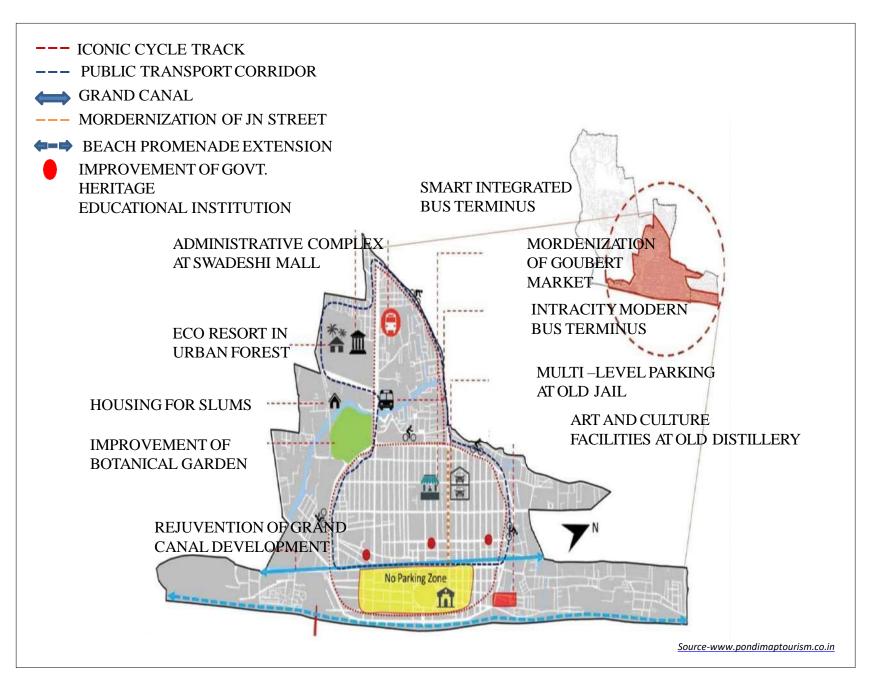


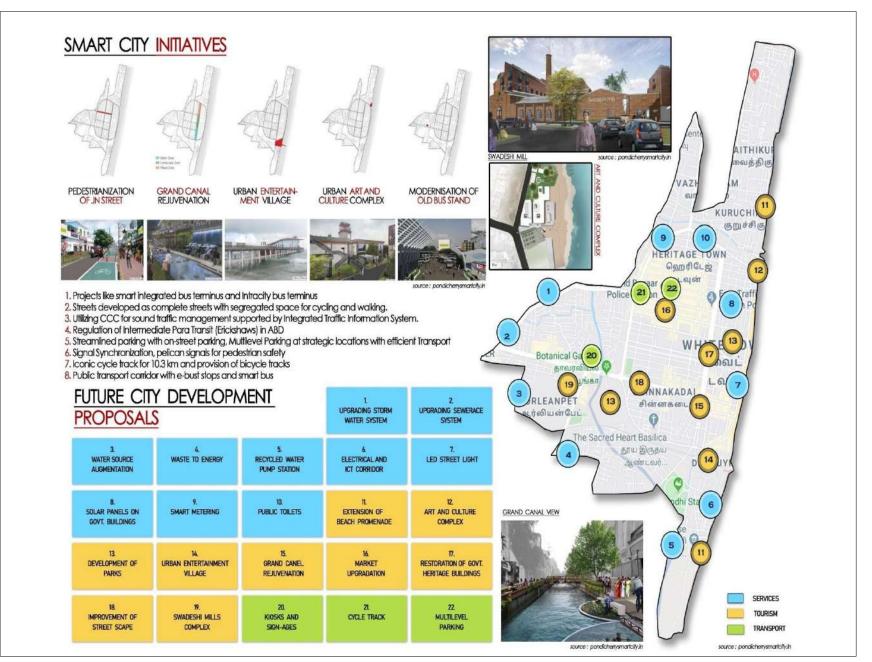
Near Every Tourist Spot A Cycle Sharing Dock Is Provided For Tourists And With It A Information Desk Is Too Provided To Share Information About Inter City Maps And Other Nearer Tourist Attraction Spots



A Idea Of Providing
Charging Point At Every
Places For Electrical
Bicycles
For Further Smart City
Initiatives

Source-www.pondimaptourism.co.in

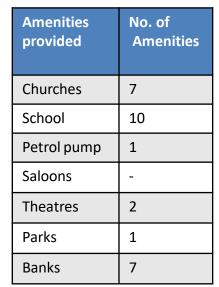








Amenities provided at Puducherry are as follows:











Waste Disposal System:





Bharsh Park Was Set La Compagned FTDC (Towns motival) The Compagned The Compa

INDICATIONOF GARBAGE BINS

Large bins at canal road and beach road

Circulation of trolley

Small dustbins at particular distances`

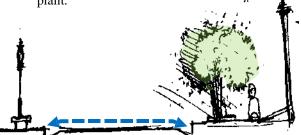
Circulation of truck`

Source-On Site photos clicked by PRANAV GAWLE

சாரம் MUSEUM ராஜேஷ்வரி பாரதிகாசன் அருங்காட்சியுக Balaii Theatre பாலாஜி 🕕 Sri Aurobindo Asi diaminmonth National Heritage Trust (Patrimoine De., @ AIMS Water Management- Sewage... TE TOWN Botanical Garden வைட் தாவரவியல் 🚱 டவன புங்கா ucherry Court புதுச்சேரி 😡 The Sacred Heart Basilica நீகியணம் | தாய இருதய AFT Ground Promenade Seach Front Puducherry (Pondicherry) பகுச்சேரி DUPPUYPET VANARAPET வானரபேட் Sri Desa VAMB. உப்பளம் Muthumariamman... பகீரபாளயம் Expo Ground Ezhai mariamman Koil BALAMURUGAN Sewage Treatment Place Tremant plant NAGAR sewage water plant பாலமுருகன்

STORM WATER AND SEWAGE WATER TREATMENT

- As there is heavy rainfall in Puducherry, the storm water management is done in such a way that-
- They have provided grooves at the edges of the road through which water flows down directly to the canal.
- The water which flows through canal gets treated with the treatment plant.





Legends

storm Water Sewage

Water White town

Heritage Town

Provided gutters (Grooves at corner) for storm water flow

WATER SUPPLY SYSTEM

- There are two overhead water tanks near Heritage town and White town.One is near Canal Rd(Bharathipuram
- One is near Canal Rd(Bharathipuram Rd), Puducherry at a distance of 1.9 km from White town.
- and an other is situated in old puducherry near Saram Rd,
 Puducherry at a distance of 2.8 km from White town.

WATER PUMPING SYSTEM

- One of the pumping station is situated at Thengaithittu, Puducherry at a distance of 3.9 km from White town.
 - Other one is situated in Jayaram Nagar, Puducherry at distance of 3.4 km from White town.







SEWAGE TREATMENT PLANT



The whole campus of sewage water treatment plant including 17 MLD sewage treatment, sewage water, sewage treatment plants





FIRE DEPARTMENT:

- There are four fire station in puducherry.
- Two are located at north west side of puducherry at 1.7 km distance.
- At white town other two fire station are located at 4.2 km distance from puducherry.

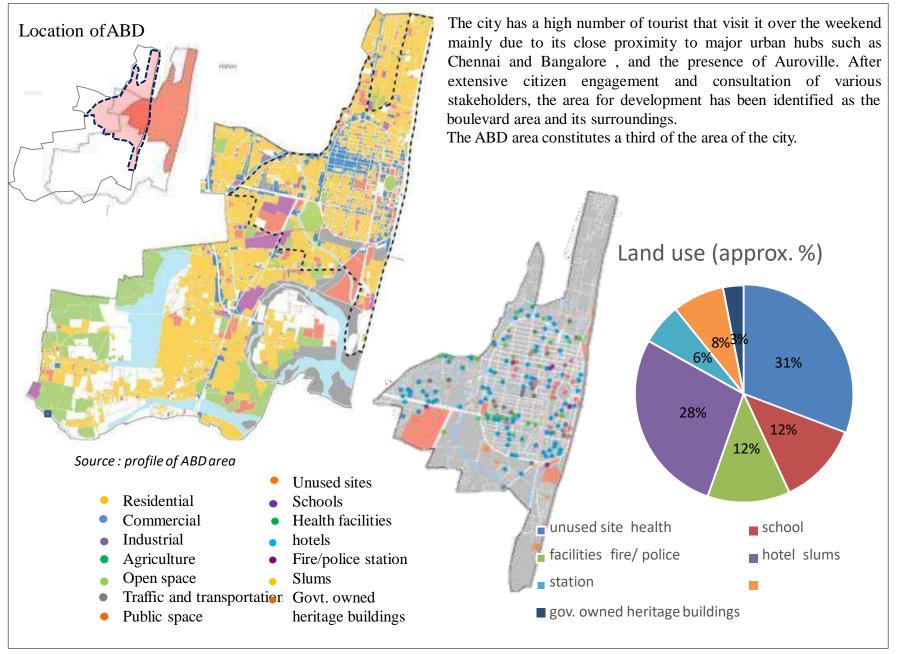
ELECTRIC DEPARTMENT:

- There are three electricity department in the puducherry.
 - Two are located at white town and one is located at heritage town as shown in the map.
 - The puducherry power corporation was incorporated with the objective of generating 32.5 km of electricity at karaikal which is one of the outline region of puducherry.



ELECTRICITY DEPARTMENT

Source-On Site photos clicked by AMEYA GHOGARE



STRENGTH

- -PUDUCHERRY IS WELL KNOWN HERITAGE DESTINATION — FRENCH COLONY, CULTURAL HERITAGE, BEACH, BACKWATER
- -GOOD CONNECTIVITY BY RAILWAYS AND ROADWAYS TO MAJOR CITIES
- GRANITE STONE IS LOCAL MATERIAL AVAILABLE

WEAKNESS

- LACK OF AIR CONNECTIVITY
- -LACK OF QUALITATIVE ACCOMODATION FOR TOURISTS
- -IMPROPER ROADSIDE STORM WATER DRAINAGE SYSTEM

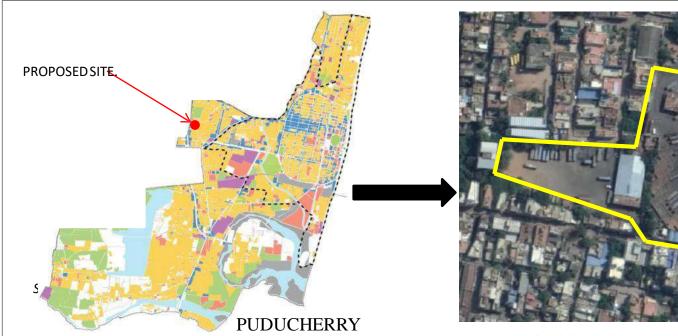
SWOT

OPPORTUNITIES

- -PUDUCHERRY IS ADAPTING SMART CITY PROPOSALS AND GREEN CITY INITIATIVES
- -THERE IS A SCOPE TO BUILD INTEGRATED BUS TERMINUS TO ENHANCE TRANSPORT FACILITY
- -TOURISM CAN BE MAJOR INCOME SOURCE FOR THE LOCAL PEOPLE LIVING AROUND CITY IN ADDITION LOCAL BUISNESS AND ALLIED ACTIVITIES

THREATS

- -LACK OF INTENSIVE MARKETING AND PROMOTIONS OF THE TOURISM DESTINATIONS
- -POOR CONNECTIVITY AND INFRASTRUCTURE FACILITIES TO THE TOURISM DESTINATION
- LIMITED SEASON FOR TOURIST TO VISIT
- NATURAL CALAMITIES CAN HAPPEN LIKE TSUNAMI



Proposed smart integrated bus terminal with accommodation facility at Puducherry.

An interstate/city bus terminal is a landmark in the city and nonetheless" the gateway of the city ".This can be considered as an indicator of development of any town/city. Unfortunately, the current structure of bus terminal has been highly neglected up till so far in terms of social focal point or the architectural features. Also , it lacks basic facility of accommodation for the commuters within the bus terminal .

So a smart integrated inter state, inter city bus terminal with accommodation facility at Puducherry for future where space will become precious commodity which will satisfy all the needs of the commuters along with the accommodation facility . henceforth, bus terminal should be designed in a way , that it will give Puducherry a missing landmark.







SCOA

ACADEMIC YEAR -2019-2020







SINHGAD TECHNICAL EDUCATION SOCIETY'S

SINHGAD COLLEGE OF ARCHITECTURE, PUNE STUDY TOUR REPORT KOCHI, KERALA

by Third Year B. Arch. Division C

GROUP 1

- 1. RUTOOJA KHAMKAR
- 2. AMISHA KHONDHAPURE
- 3. ABHIJEET KHOT
- 4. MANTHAN KIRDAT
- 5. SRUSHTI KSHIRSAGAR
- 6. AMANDEEP KUMAR
- 7. AKASH LABADE
- 8. POOJA LALE
- 9. RUTWIK LOHOKARE
- 10. RUTUJA LOKHANDE

GROUP 2

- RUGVEDA MAGAR
- 2. PRADNYA MAHAJAN
- 3. KHUSHI MANDOT
- 4. SAYALI MHATRE
- 5. SHIVANGI MOHARIR
- 6. SURAJ MOHOD
- 7. SANSKRUTI MORE
- 8. SIDDHANT MORE
- 9. PRAGATI MUSALE
- 10. PAVITRA NAYAK



- 1. VENKATESH NEVASE
- 2. SHAILI NIMJE
- 3. SHRUTIKA NINGUNE
- 4. VINAYA PAIGUDE
- 5. ANURAG PANDA
- 6. SAUNDARYA PANDE
- 7. PRARTHANA PARATE
- . INAKIHANATAKA
- 8. SAURABH PARMAR
- 9. ROZIYA PATHAN
- 10. AKSHATA PATIL

GROUP 4

- 1. KRISHNA PATIL
- PIYUSH PATIL
 SNEHAL PATIL
- 4. ADITYA KHAIRE
- T. ADITIA KIIAIKE
- JAYESH PADMALKAR
- 6. RUSHABH MEHTA7. PIYUSH KHADKE
-
- 8. AVANI PAWAR
- 9. RUSHIKESH NACHANE



- 1. AR.KAVITA PATIL
- 2. AR. SUNIT THAKARE
- 3. AR. NARENDRA SARDESHPANDE

4. AR. JHANAVI DHAGE





CONTENT	SCHEDULE -	STUDY TOUR KERELA
INTRODUCTION	DAY 1	 VISIT TO C.S.I. CHURCH SITE SELECTION FOR MINOR PROJECT AT MUNNAR
AIMS AND OBJECTIVES		 PROJECT PROPOSALS ,DEBATE,ANALYSIS AND SELECTION FOR MINOR PROJECT
HISTORY AND CULTURE	DAY 2	PROCEEDED TO KOCHI
STUDY ARERA 1)FORT KOCHI	DAY 3	 STREET MAPPING AT FORT KOCHI AND JEWS TOWN VISIT TO MATTENCHERRY PALACE
STUDY AREA 2)JEWS TOWN		STUDY AT ST. FRANCIS CHURCH
GUEST LECTURE -SAROVAR	DAY 4	 VISIT TO MATTENCHERRY AGAIN VISITED NAVAL MUSEUM
SITE SELECTION FOR MINOR PROJECT		VISITED PARADASI SYNAGOGUESITE VISIT FOR MAJOR PROJECT
SITE SELECTION FOR MAJOR PROJECT		• 10 MINUTES STREET WALK NEAR SITE
BRIEF	DAY 5	VISIT TO HILL PALACE MUSEUMBACK TO PUNE
		$\bigwedge \downarrow \bigwedge$

STUDY TOUR REPORT-KOCHI

INTRODUCTION

AIM: INTRODUCTION TO VARIOUS CONCERNS OF BUILDING DESING IN A NATIVE CONCTEXT, AND HENCE IMPLIMENTING THE SIMILAR TRADITIONAL BACKGROUNDS IN THE GIVEN BRIEFS FOR RESPECTIVE SITE LOCATIONS IN KERELA.

OBJECTIVES: TO STUDY KERELA (KOCHI AND MUNNAR), AND ITS ARCHITECTURE, CULTURAL ASPECTS AND SOCIO-GEOGRAPHIC.

OUTPUT: THE OUTPUT EXPECTED IT TO STUDY WITH RESPECT TO THE GIVEN AIM AND OBJECTIVE.

PROJECT: THE RESPECTIVE
PROJECT WERE SHORTLISTED THROUGH
CONCERNS FOR THE GIVEN AIM AND
OBJECTIVE.

THE SHOTLISTED PROJECTS FOR MINOR AND MAJOR ASSIGNMENTS WERE;

- 1) A WOMEN EMPOWEMENT CENTRE AT **MUNNAR**;
- 2) MULTI-PURPOSE HIGH RISE BUILDING AT **KOCHI**; RESPECTIVELY.

LOCATION

- Location: Kochi or Cochin is a major port located on the south-west coast of India bordering the Laccadive Sea. It is the part of the district of Ernakulam in the state of Kerala.
- Geographical features: Kochi lies at the northern end of a narrow neck of land, about 19 km long and less than 1.6 km wide in many places, and is separated from the mainland by inlets from the Arabian sea and by the estuaries of rivers draining from the Western Ghats. As a result, Kochi is a natural harbour





CLIMATE

- Climate: Tropical Monsoon climate.
- (hot and humid).
- From June to September, the south-west monsoon brings in heavy rains as Kochi lies on the windward side of the western Ghats.
- From October to December, Kochi receives lighter rain from the northeast monsoon, as it lies on the leeward side.
- Average annual rainfall is 2978 mm with an annual average of 125 rainy days.
- Warmest month : April (33°C).
- Coldest month: January (22.6°C).
- Wettest month : June (705.8mm, 24 days).

CITY LOCATION	SCHEDULED ACTIVITIES	OUTPUT
KOCHI 1)FORT KOCHI 2)JEWS TOWN	A)ROSE STREET, B)PRINCESS STREET, C)QUINROS STREET, D)BASTION ROAD & BURGER STREET, ST. FRANCIS CHURCH A)PARADASI SYNAGOGUE, B)JEWS TOWN ENTRANCE, C)MATTENCHERRY LANE, D)MATTENCHERRY PALACE. 3)SITE SELECTION AND MAPPING	STUDIED THE STREETS WITH RESPECT TO THE ACTIVITIES, CULTURE AND ARCHITECTURA L BACKGROUND. SITE SELECTION
MUNNAR	1)SITE SELECTION 2)C.S.I.	

STUDY TOUR REPORT-KOCHI

HISTORY OF KOCHI

- Kochi located at the tip of the Indian peninsula is one of the busy shipping ports in India and a major Centre for trade
- Only after the decline of the Kulashekhara kingdom Kochi started gaining its importance. The king of Kochi always remained only as the title head for it was always under the colonisation of foreign invaders.
- The Portuguese and the Raja of Kochi was overthrown by the Dutch and then followed by the English rule .Slowly Kochi develop into a major commercial and industrial centre.









HISTORY OF MUNNAR

Morden day Munnar was carved out after a sequence of historic events.

It is said that the Mutthuvan tribal community were the earliest residents of modern day Munnar.

The area was left untouched and unexplored in the latter part of the 19th centuray when a flurry









CULTURE OF KERELA

- Kochi is a multi culture city, the most important festivals in the city are Onam and Vishu There are various cultural programmes and sports activities. <u>Kochi</u> <u>carnival</u> is the biggest and most loved carnival in the city, it is mark of continuing Portuguese tradition.
- On New Years day <u>elephant parade</u> is organised. Apart from religion, literature also plays important part in reflecting the culture and tradition.
- Kochi also hosts <u>Cochin International Film</u>
 <u>Festival</u>. Kochi cuisine includes abundant
 <u>spices</u> and <u>coconut</u>. Kochi was also a centre
 <u>of the world</u> spice trade for many centuries.













FORT KOCHI

Street name - Rose street.

History - It is one the main streets of Fort Kochi Area. The street lies on the backside of famous Saint Fransis CSI Church.

Characteristics - It starts from Jawaharlal Nehru park and ends at Bishops house. There is a corporation Water Tank along the street. This street also goes along the Parade ground in Fort Kochi. The street also has a Post Office and a lot of bungalows. Most of these bungalows have been converted in hotels and cafes.

Observation - It wider than other (It is 9m wide). The street has a lot of art cafes, hotels antique shops. It is one of the posh areas of fort Kochi. Because of this there were many foreigners along the street. Also the number of 2 wheelers or 4 wheelers was very less and most of the people were walking.

TIMELINE SHOWING HISTORY OF FORT KOCHI CHERAS KINGDOM BREAKS UP AND KOCHI KINGDOM TAKEN ST. FRANCIS XAVIER KOCHI STATEIS OVER BY PORTUGUESE. STARTS CHRISTIAN TRAVELLER NICOLLOVISITS KOCHI FORMED ▲ MISSION AD 1341 D1663 AD 150 KODUNGALION PORT AD1503 DUTCH D 1102 **AD 1440** AD1530 DESTROYED IN FLOOD OVERTHROW PORTUG .PROMINANCE AT KOCHI AS UESE RULE. PORTUGUESE ADMIRAL TRADING PORT INCREASES LANDS ATKOCHI DREDGING OF PORT MYSORE KING AND FORMATION OF **STATEOFKERALAIS** HAIDERALI **FORMED** WILLINGTON ISLAND DESCENDS ON KOCHI AD AD 1814 1947 1967 AD AD AD 1773 1956 1920 ANGLO-DUTCH INDIA GAINED KOCHI CORPORATION TREATY PASSES INDEPENDENCEAND COMES TO EXISTENCE CITY TOUK KOCHI JOINS INDIAN

SYNAGOGUE STREET

Street name- Synagogue lane **Characteristics**-This street is basically the exit of Synagogue. There are a lot of shops

exit of Synagogue. There are a lot of shops along the street. It is not a planned and built street, but it is a lane that has gradually developed. Hence the width of the street is not constant and is quite less (about 2.5 M) at some places, it is a pedestrian street only. There are a lot of Muslim Communities at this place, and many shops are Cashmere and antique shops. Most of these are houses with shops in front and houses at . Since it is located near Synagougue there were a lot of foreigners there. There were also many café and hotels.





RESIDENCE











STUDY TOUR REPORT-KOCHI

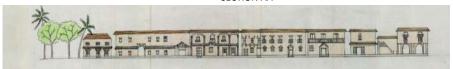
1)FORT KOCHI - A)ROSE STREET



PLAN



SECTION AA



ELEVATION



ELEVATION

- THE ARCHITECTURAL ELEMENTS WERE AN AMALGAMATION OF PORTUGAL AND FRENCH ARCHITECTURE THAT WAS SEEN THROUGH WINDOWS, DOORS AND ROOF DETAILING.
- NEW BUILDINGS WERE ALSO BUILD WITH TRADITIONAL FEATURES.

STUDY TOUR REPORT-KOCHI

T.Y B.ARCH DIV-C (2019-20)

STREET SKETCHES AND VIEWS



NORTH LIGHT WINDOW



FAÇADE TREATEMENT



SKETCH OF A WINDOW



WINDOW WITH CANOPY



COMPOUND WALL



EAVES DESIGN





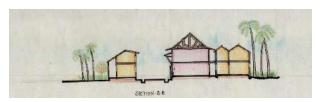
1)FORT KOCHI- B)QUINROS STREET



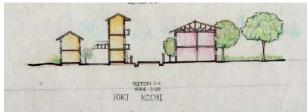
PLAN & ELEVATION

- THERE WERE MORE RESIDENTIAL BUILDING AND BUNGALOWS.
- THE STREET WAS MORE MONOCHROMATIC.
- ROOF VARIATIONS WERE SEEN.

STUDY TOUR REPORT-KOCHI



SECTION B-B



SECTION A-A



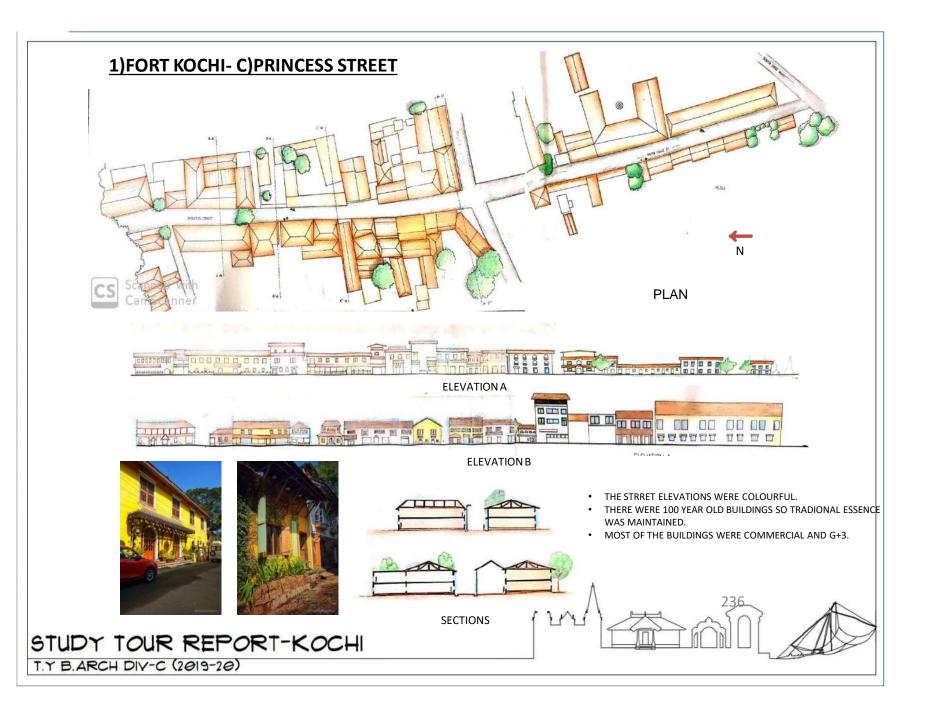






STREET VIEWS





1)FORT KOCHI- D)BURGER STREET



STREET SKETCHES AND VIEWS







CHHAJJA





STREET VIEW



STREET VIEW

STRUCTURE ON THE FIRST FLOOR





ELEVATION



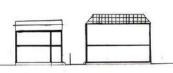
ELEVATION



ELEVATION



SECTION



SECTION











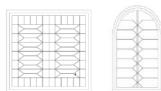
STREET SKETCHES AND VIEWS



FACADE



STREET VIEW



WINDOW DETAIL





- ELEMENTS USED IN THE CAFES WERE OF PORTUGAL STYLE.
- MOST OF THE RESIDENTIAL SPACES WERE IN TIBETIAN STYLE.

STUDY TOUR REPORT-KOCHI

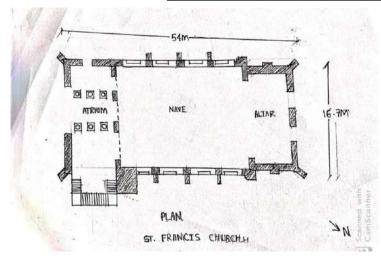


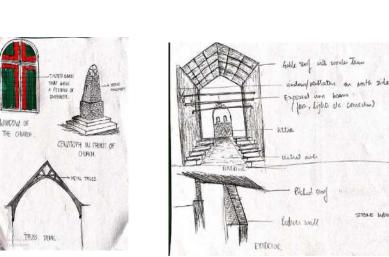


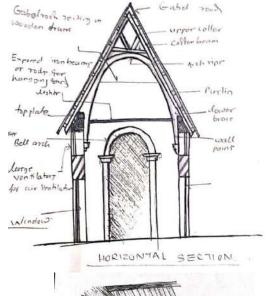


ST FRANCIS CHURCH FORT KOCHI

STONE IMPOUNDS











2) JEWS TOWN, KOCHI





In 1341, a disastrous flood silted up the port of Cranganore, and trade shifted to a port at Cochin.

The Portuguese Empire established a trading

beachhead in 1500, and

until 1663 remained the

dominant power.

The oldest known gravestone Protestant Dutch killed the of a Cochin Jew is written in Portuguese, plus sixteen Hebrew and dates to 1269 CE Portuguese, plus sixteen hundred Indians in 1662.

A year later, the second Dutch siege was successful and, after slaughtering the Portuguese, they demolished most Catholic churches or turned them into protestant churches (not sparing the one where Vasco da Gama had been buried). They were more tolerant of Jews, having granted asylum claims in the Netherlands

India became independent

from British occupation in 1947

and Israel established itself as a

In 1524, the Muslims, backed by the ruler. Attacked the wealthy Jews of Cranganore because of their primacy in the lucrative pepper trade. The Jews fled south to the Kingdom of Cochin, seeking the protection of the Cochin Royal Family.

Protestant Dutch killed the raja of Cochin, allied of the Portuguese, plus sixteen hundred Indians in 1662.

nation in 1948. With the heightened emphasis on the Partition of India into a secular Republic of India and a semitheocratic Pakistan, most of the Cochin Jews emigrated from India. Generally they went to Israel



The Paradesi Jews, also called "White Jews", settled in the Cochin region in the 16th century and later, following the expulsion from Iberia due to forced conversion and religious persecution in Spain and then Portugal.



In the early 20th century, Abraham Barak Salem (1882–1967), a young lawyer who became known as a "Jewish Gandhi", worked to end the discrimination against meshuchrarim Jews.









TIMELINE OF JEWS TOWN

STUDY TOUR REPORT-KOCHI

T.Y B.ARCH DIV-C (2019-20)

Indian rulers granted the

Jewish leader Joseph Rabban

the rank of prince over the

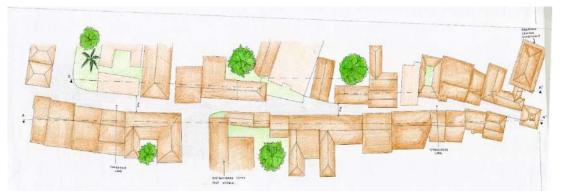
Jews of Cochin, 1069 CE



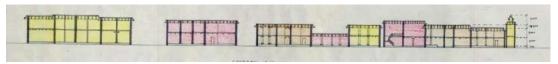
STREET VIEWS OF JEWS TOWN



A)SYNAGOGUE STREET



PLAN



SECTION AA



SECTION BB



ELEVATION



ELEVATION

STUDY TOUR REPORT-KOCHI



CAFÉ WINDOW DETAIL



PASSAGE

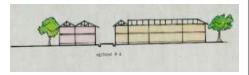


CANOPY

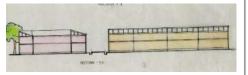


B)STREETSCAPE: JEWS TOWN

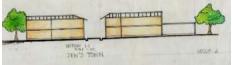




SECTION 1-1



SECTION 2-2



SECTION 3-3





STREET VIEWS



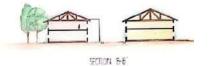




STUDY TOUR REPORT-KOCHI

















MATTENCHERRY PALACE VIEWS

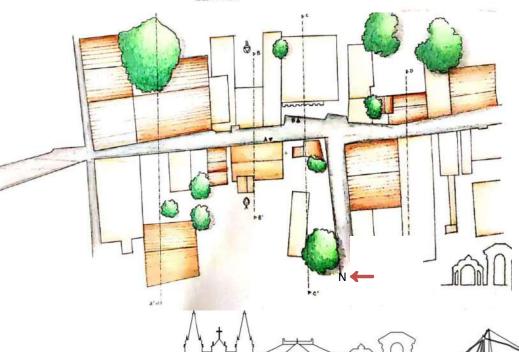
STUDY TOUR REPORT-KOCHI



ELEVATION B



ELEVATION A



D)MATTANCHERRY PALACE

LOCTAION









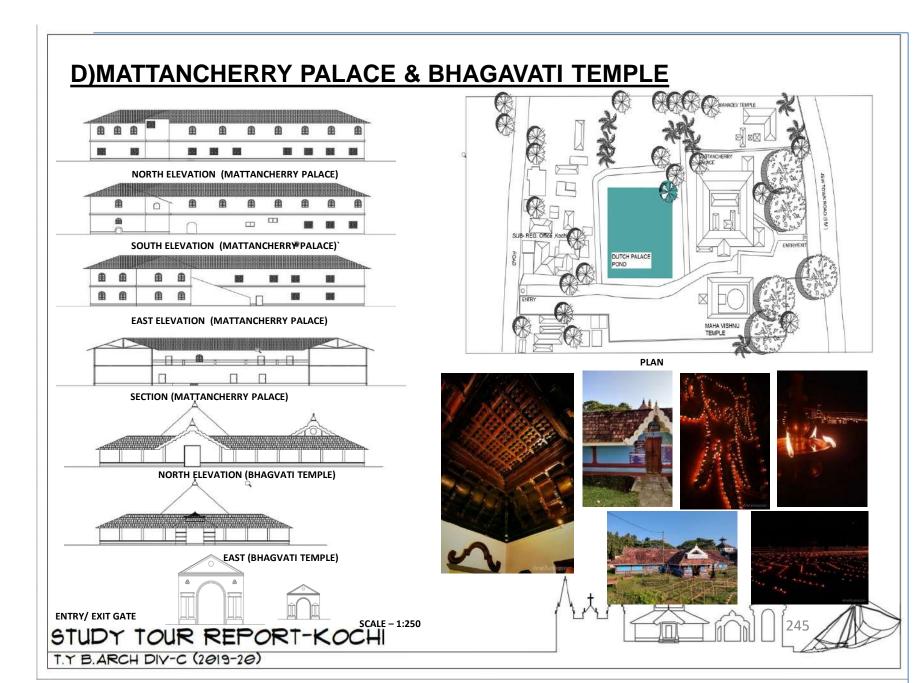
PLAN (MATTANCHERRY PALACE & BHAGAVATI TEMPLE)

Mattancherry palace is one of the oldest examples of the Portuguese architecture with oriental influence and is unique from the historical and architectural point of view.

- The palace was built around 1545 AD by the Portuguese and presented to Veera Kerala Varma in order to pacify him and to compensate for having plundered a temple in the vicinity of the place.
- Major repairs at the hands of Dutch and hence the palace is also known as "Dutch palace.
- The palace represents the blending of the European and indigenous styles of architecture.

STUDY TOUR REPORT-KOCHI





"HIS PHILOSOPHY SAYS, "HE BELIEVES THAT AN ARCHITECT'S ROLE IS NOT TO JUST PROVIDE STRUCTURES THAT ARE COST EFFECTIVE, ECOFRIENDLY AND CLIMATICALLY RESPONSIVE BUT ALSO BEAUTIFUL AND APPEALLING"

SAROUARAID

MEET AND GREET WITH ARCHITECT JAIGOPAL GOVIND RAO

- LOCATION SAROVARAM, KOCHI
- PURPOSE OF THE MEET WAS INTERACTION BETWEEN FAMOUS LOCAL ARCHITECT JAIGOPAL GOVIND RAO AND THE STUDENTS.
- IT WAS AN INTERACTIVE SESSION WHERE HE EXPLAINED THE ARCHITECTURAL STYLE HE USED FOR HIS VARIOUS PROJECTS.
- THE ARCHITECT JAIGOPAL GOVINDRAO IS INSPIRED BY THE DESIGN PHILOSOPHIES OF LAURIE BAKER.
- HE USED ARCHITECTURAL FEATURES SUCH AS FILLER SLABS, BRICK MASONRY, LOAD BEARING STRUCTURES, ARCHES, AND OPENINGS.
- HE HAS USED SUSTAINABLE TECHNIQUES OF CONSTRUCTION, LIKE USE OF BAMBOOS GROWN IN THE CAMPUS OF THE PROJECT ITSELF.





PICTURES OF THE HOTEL

 HE TRIES TO RESUSE THE MATERIALS OBTAINED FROM THE SITE DURING CONSTRUCTION PROCESS AND REUSES THEM IN CONSTRUCTION THE STRUCTURES.



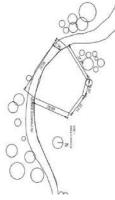




SITE SELECTION



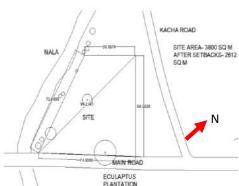




SITE 01- MUNNAR

SITE 02- MUNNAR

SITE 03- MUNNAR





SITE SELECTED FOR THE DESIGN PROCESS

SITE PHOTOS

SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE, PUNE

THIRD YEAR B.ARCH

DIVISION C

TEM II

Design team: Ar. Kavita Patil, Ar. Narendra Sardeshpande, Ar. Sunit Thakare, Ar. Janhavi Dhage

Women Tea Worker Empowerment Centre, Munnar

Design Brief

Munnar is a part of Western Ghat Mountain ranges in Kerala State. It comprises hills with tea plantation which was established in 19th Century by Britishers. In India the four main tea producing industries are Assam, West Bengal, Kerala and Tamil Nadu. Tea industry comprising mainly of schedule class, tribes and ethnic minorities. Women constitute more than 50 % of the total workforce of Munnar. It is found that the tea workers living in homes with leaking roofs and terrible sanitation. These areas also suffered with a monsoon flood and they required a safe area for living. According to health Survey, tea growing areas are recorded child marriages, inexistent maternal healthcare, less span of time between the next children, maternal deaths, patient doctor ratio is very low, anaemic, hypertension, substandard food habits are some critical issues that need an eye to look at. The Plantation Labour Act 1951, regulates the wages of permanent tea workers, duty hours and stipulates the garden management has to provide some basic amenities of healthcare, education, drinking water, housing, child care facilities, maternal care and accident cover. But these basic needs are unavailable locally.

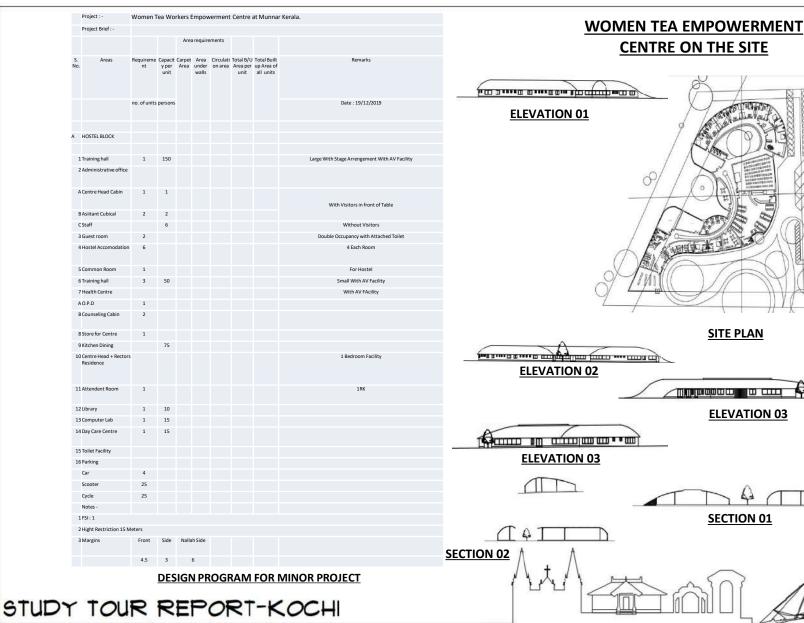
Women Tea-worker Empowerment Centre will help to rise the status of women tea workers through education, raising awareness, literacy, training and health awareness.

Aim To making women tea worker educate, literate, independent and healthy. Site Selection

To be Locate in a proximity of tea gardens. Connected with a Munnar-Cochin road.

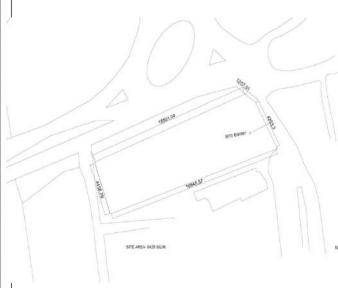






SITE FOR MAJOR PROJECT

- LOCATION- NEAR MANGALVAM BIRD SANCTUARY
- SITE AREA- 8425 SQ.M







SITE PHOTOS







STUDY TOUR REPORT-KOCHI

NORTH



	Project : -	Commercial Complex at Koch	in						
	Project Brief: -								
					Are a requirement	s			
	Areas	Requirement	Capacity per unit	Carpet Area	Area under walls	Circulation area	Total B/U Area per unit	Total Built up Area of all units	Remarks
S. No.									
		no. of units	persons	+					Date : 29/01/2020
		-							
	Ground Floor								
A	Ground From								
	has the second						300		
1	Jwellery Showroom						300		
	Ladies Toilet								
b	Gents Toilet								
2	Resataurant						200		
a	Kitchen								
b	Ladies Toilet								
с	Gents Toilet								
3	Bank	1					200		
a	Strong Room	1							
b	Ladies Toilet	1							
c	Gents Toilet	1	+	 	1				
d	Electrical room	1		1	 				
e	E-lobby (ATM)	1		+	 				
e f	Branch manager Cabin	1		1	-				
	Cashier	2	+	-					
g	Clerks on Counter	2 2	-	1					
h			1	1					
- i	Officers	3							
	First Floor								
4	Shops	20					30 to 35		
В	Second Floor								
5	Offices	12					50 to 55		
В	Third Floor								
	Bank Head Office						Entire Floor		
6									
a	Vice Precident Cabin	1							
	Director Cabin	2		+					
c	Conference	1		1					
	Reception + Waiting	1							
d	Staff Workstation	1	50	-					
e	Sever Room	1							
g	Power Back up room	1							
h	Electrical room	1							
i	Pantry + Dining	1	20						
j	Meeting Room	1	8						
	Store room	1							
1	Ladies Toilet	1							
m	Gents Toilet	1			İ				
В	Fourth Floor								
7	Gym						300.00		
	Ladies Toilet + Shower	1							
a	Gents Toilet + Shower	1		1					
b		1	+	+	-		-		
с	Changing room Steam bath	1	1	1	-				
d	Pantawa M		60						
	Restaurant	1							
	Banquet	1	100						
b	Ladies Toilet	1							
c	Gents Toilet	1							
d	Kitchen								
	Open Seating						250.00		
e		+	1	1					
e									
	Parking Should be on Basement Floor.		1						
a b	Parking Should be on Basement Floor. Common Tollet as Required.				l.				

SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE, PUNE

STUDY TOUR REPORT

Hyderabad

by **Third Year B. Arch. Division D**

5th to 10th December 2019





STUDENT NAMES :

- 1. Harshali Pawar
- 2. Saurabh Pawar
- 3. Rohan Pote
- 4. Shweta Pote
- 5. RadheyShyam Sutar
- 6. Shanu Rathi
- 7. Vipul Rathod
- 8. Rahul Raut
- o. Ranar Raat
- 9. Tejas Rokade
- 10. Nachiket Salunke
- 11. Riya Sand
- 12. Vaibhay Sant
- 13. Vrushal Savla
- 14. Tanmay Sawant
- 15. Hiral Shaha
- 16. Omkar Shende
- 17. Shashank Shete

- 18. Phulwanti Shimpi
- 19. Manish Shinde
- 20. Madhura Shitole
- 21. Shreya Shukla
- 22. Shivani Sobale
- 23. Revati Sonawane
- 24. Sayali Tamhanekar
- 25. Ashwini Thokal
- _____
- 26. Yash Titre
- 27. Kalpesh Tomar
- 28. Digvijay Udmale
- 29. Sayali Undirwade
- 30. Thomas Varghese
- 31. Prachi Waghachoure
- 32. Harsh Somani
- 33. Rushikesh Shinde
- 34. Sarang Tetu

WE, THE STUDENTS OF THIRD YEAR DIVISION D ARE EXTREMELY GRATEFUL FOR ORGANIZATION OF A STUDY TOUR TO HYDERABAD AND PROVIDING THEIR EXPERTISE ON THE TOPIC TO OUR

DR. BANANI BANERJEE MA'AM

PRINCIPAL

DR. PRIYAMVADA CHITALE, MA'AM HEAD OF THE DEPARTMENT

WE ARE ALSO THANKFUL TO OUR DESIGN FACULTY FOR THEIR INPUTS AND FOR THEIR HELP IN UNDERSTANDING THE DESIGN BRIEF FOR THE SEMESTER,

AR. ANITA MA'AM AR. VIVEK SIR AR. MUKTA MA'AM AR. SEJAL MA'AM

LASTLY, WE WOULD LIKE TO EXPRESS OUR GRATITUDE FOR THEIR CONTINUCE GUINDANE WHILE WE WERE IN HYDERABAD

AR. NIKITA MA'AM AR. AKSHAR SIR

Walled city of Nizams Hyderabad - Secunderabad Pre-post Independence transition Pre-Globalization period Emergence of Hi-tech city Airport Current scenario

HYDERABAD

Hyderabad being a semi-arid city was a restricted to only Musi river's bank now has grown into a metropolitan city also being home to Cyberabad, one of the largest Cyber capital of our country.

We have studied a proper amalgamation of Vernacular Architecture of the Nizams as well as Contemporary Architecture. We got to study how globalization brought prosperity as advancement to the city but how the people of Hyderabad stuck to their roots with integrity.

We and inspiring interaction with the practising Architects of Hyderabad and Hi-Tech City and we learned how their approach to design contributed to Architecture community.









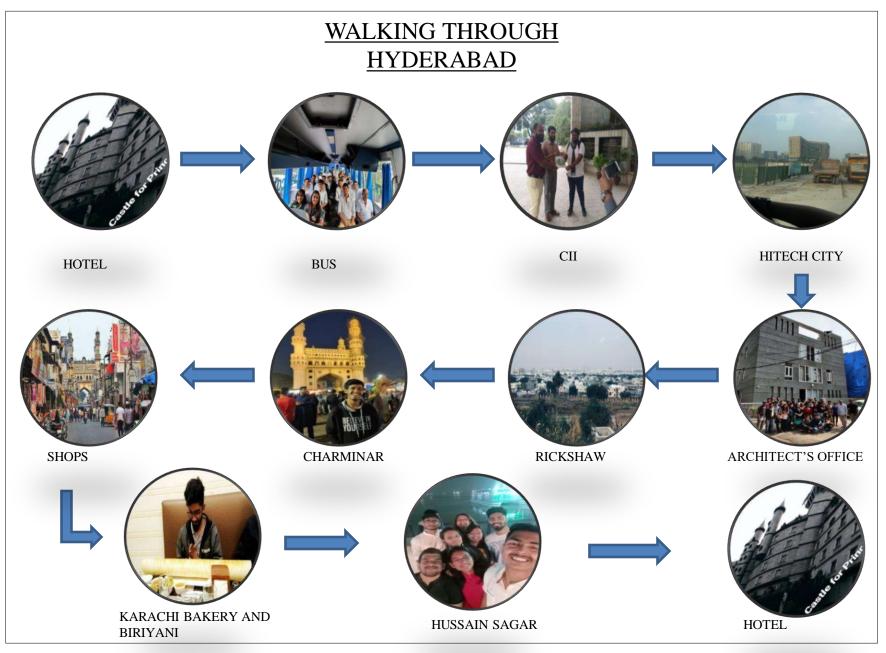








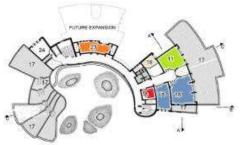


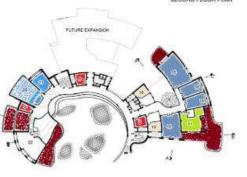


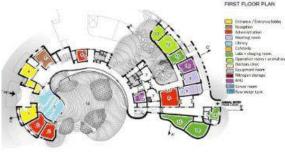




Site Plan







Zoning (Floor Wise)



<u>Laboratory For the Conservation Of</u> <u>Endangered Species</u> [LaCONES]

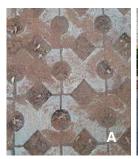
- LaCONES or Laboratory for the Conservation of Endangered Species, is a council of Scientific and Industrial Research lab established in 2007, located in Hyderabad.
- It is India's only research facility engaged in conservation and preservation of endangered species and natural resources using Biotechnological tools and techniques.
- This Research Centre is designed by AR. SHIRISH BERI
- Public and private sectors are clearly segregated ,which can be observed when one enters LaCONES. .

ZONING AND PLANNING:

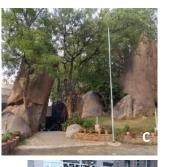
•The topography of the land has been used to segregate the zones of the structure.

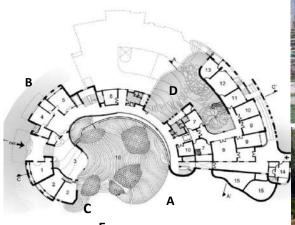
The existing contours have been put to use, segregating the workstation with the service core.

- •The architect's approach brings in the exterior landscape into the building.
- •Interactive spots, using the slope of the site.



















KEY FEATURES AND SURROUNDINGS :

A] Around the entire site, such type of paving stones can be seen where grass grows from in between the sections helping in maintaining micro climate.

B] Here, the natural slope has been utilized thoroughly, without cutting or filling as a landscaped garden, which blends with the structure.

C] The access to the structure through existing natural rocks on site gives a sense of retaining natural elements on site throughout construction.

D] Natural contours of the site being designed such that they can be used as an interactive open space.

E] Scale and proportion shown along the pathways of the roads in order to lay emphasis on the plants.

F, **G**] BUILDING MATERIAL:

- Use of existing boulders to create an effect of building emerging from the earth with an organic and contemporary style
- RCC frame structure with stone cladding at the outer façade
- The structure has been placed deep inside the lower portion of the site amidst the trees and rocks hidden from outside and where the slope gradient is low.

AND COMPANY. AN

B. Floor Wise Illuminance Of Natural Light

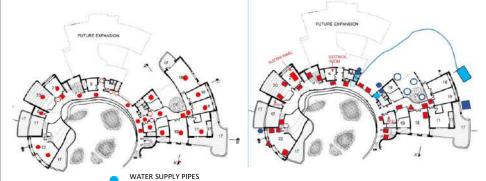






D. Services

C. Energy Efficiency



NATURAL LIGHT:

- Each individual space within the building was supplied with minimum standard requirements of illumination for various activities.
- The ground floor mostly had the dark areas as the natural light was blocked by the landscaping elements present in the courtyard for ex. Large rocks and trees.
- The first floor consisted of the enough visible light entering the building.
- The second floor was mostly lit because of light mostly entering onto this floor.

ENERGY EFFICIENCY:

- Use of polycarbonate glass provides protection from UV rays and absorbs excessive heat.
- Solar panels are installed for harnessing solar energy and catering the enery needs.
- Waste water treatment plant is used for treating and reusing the waste water.
- Natural slope of water is used for collection of rainwater for irrigation purpose

SERVICES:

- There was no fire exit staircase block given as such.
- The smoke detectors were in every room.
- There were fire extinguisher cylinders on every floor.
- There were no water sprinklers.

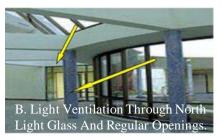
Zoning View Site Plan ETT-Natural Drainage Pattern Courtyards

CII-Sohrabji Godrej Green Building Centre

- CII- Sohrabji Godrej Green Business Centre established in the year 2004 Hyderabad, aims at offering world class advisory services on the conservation of natural resources.
- This Green Business Centre is housed in one the greenest buildings in the world and through Indian Green Building Council [IGBC] is spearheading the Green Building movement in the country.
- The services of this Centre include Energy Management, Green Buildings / Companies, Renewable Energy, Green Product Certification, Waste Management and Cleaner Production process.

PASSIVE COOLING TECHNIQUES IN STRUCTURES & LANDSCAPING:

- A] The rat-trap bond brick jail is used for screening as well as the rain water seeps in and waters the plant inside as shown in image.
- **B**] Natural drainage pattern utilized to harvest rainwater at the point of maximum accumulation.
- C] The courtyards act as light wells, illuminating the nearby work areas. Contributes to colour and is a visual delight.
- **D**] Green cover acts as a modifier of micro-climate.
- Natural vegetation has been retained, along with landscaped mounds with xeriscaping.
- **E**] A water filtration plant has been installed where about 58 species of plants have been used which filter water with their roots, stage by stage thus preventing water wastage.

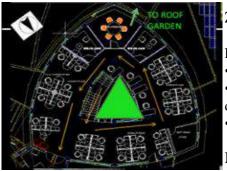




BUILDING MATERIAL:

- What derives itself from nature returns to it. The structure is in the form of segmented circles with lots of niches .
- Stone cladding has been used in the exterior facades where as the interior wall are finished in smooth paints.
- Located at the flattest lowest region of the site for maximum accumulation of water using existing site drainage pattern





ZONING:

Easy access from Main Road

- Centrally located on site
- Scope to create buffers surrounding the building for effective design according to site climate
- Less prone to pollution

NATURAL LIGHT:

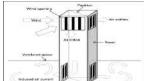






Natural light deflection systems can direct light deep into the rooms to insure better natural lighting provisions.

• Double glass reduces the heat transfer from one pane to another both by conduction and radiation .









ENERGY EFFICIENCY:

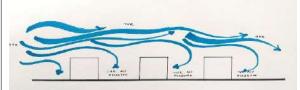
- North facades are glazed for effective diffused light
 - Two cooling tower are erected where air is cooled up to 8 Degree by sprinkling water.
- Solar photovoltaic cells on the roof terrace product Nearly 20% of the building electric consumption .
- Low heat transmission in double height for reduced heat intakes.
- A central courtyard and colonnaded corridors Ensure That the hot air cools before entering the interiors



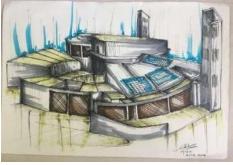
SMOKE DETECTORS EXTINGUISHER FIRE ALARMS Fire services











SERVICES:

- As it was a G+1 storey building there was no fire staircase block.
- There were smoke detector in every room.
- There were fire extinguisher cylinders in work space and office and Canteen

ADDITIONAL MEASURES TAKEN TO MAKE THE STRUCTURE GREEN:

- 77% of the building material used is recycled in the form of FLY ASH, BROKEN TILES & BROKEN GLASSES.
- Reuse of Construction stone to make Paved Gardens.
- Furniture in the canteen with local Tandoor stone flooring.
- In between the structures the negative space caught the wind flowing thus boosting the natural ventilation.
- Waste management plan ensured that 96% of the construction materials were recycled. Thus making CII Sorabjee a Zero waste site.
- A Student of our class, Nachiket Salunke did an on the spot sketch of the building and presented it to the authority as a token of gratitude for their time and guidance. The people at CII Sorabjee were impressed by the gesture and framed the sketch for their office premises.















RAMOJI RAO FILM CITY

- At Ramoji film city we got to learn about landScape architecture in depth, about how different the use of different species of plant can affect ones mood and how to use errains in multiple ways.
- ZONING: The site is largely a public area except for the shooting area and major headquarters where the latter is completely private
- VEGETATION: The vegetation is largely exotic as there is a varying need of plants according to different scenes.

• JAPANESE GARDEN

elements: water symbolises renewal , calm , wonder and serenity and circulates fresh air. stones are laid out in accordance with their sizes. as male and female rock .

Bridges are built of wood ain harmony with the surrounding

Plants are associatd with moving thoughts the terrain is undulated and located on a slope

BONSAI GARDEN

elements: consist of various bonsai styled plantskept on top of hedges like adenium, teak, mahagony etc. and these are shaped to the exact form needed for the symbolic or graphic effect required, the terrain is undulated

CHARISMA GARDEN

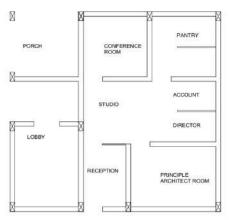
elements: being a typical reflection of an English garden ,main emphasis is given to elements such as water fountain and pavilions . soft flowering shrubs and lawns. the terrain is flat

MUGHAL GARDEN

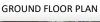
elements: designed on a stepped terrace in a grid pattern with flowering and fruit bearing trees along with fountains to create a romantic mood.

LEG GARDEN

elements: consist of the famous statue made of white marble and lawns



















AR.SRINIVAS CHUNDURI

NEVER DESIGN FOR FREE, AND STICK TO YOUR PRINCIPLES



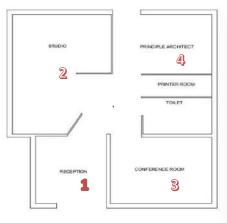
"Even a simple structure can be an extraordinary in its own way"



- STYLE Grid planning
- PLANNING The overall planning of office is done by grid planning
- STRUCTURE The office is constructed on a grid of 3m by 3m
- The ground floor of the structure is utilised for the office area which connects to the open yard, leading towards the porch and lobby.

INFERENCES ABOUT INTERIOR DESIGN

- The combination of minimalist furniture, and white walls made the space look grand, thus bringing 'less is more' into reality.
- Following the concept of Navagraha to the core, the centre square, instead of being open to sky, was a double heighted duct.
- Pastel hues complimented the white hues of the interior, thus making the furniture stand out.











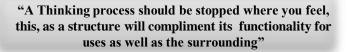






AR.ABHAY AND ASSOCIATES

BRING AUTHENTICITY WITH FUNCTIONALITY TO YOUR DESIGN



- STYLE Element of light concrete and glass
- CONCEPT Inspired from Tadao ando this office is designed as enclosed spaces of thick concrete walls with minimal use of partition walls to create a homely environment between working spaces.
- Here artificial light was an important controlling factor
- Simplified modular furniture
- STRUCTURE Overall structure is much simplified rectilinear forms

INFERENCES ABOUT INTERIOR DESIGN

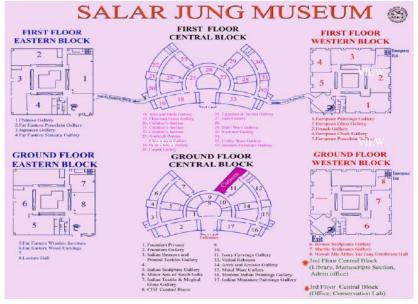
- There was an unenclosed book shelf in is conference room. Used as library by colleagues.
- The idea was to create rustic and raw atmosphere in office.
- Wooden furniture made the place aesthetically appealing and complimented the raw interior.
- Partitions used were transparent,















SALAR JUNG MUSEUM

The Salar Jung Museum is an art museum located at Dar-ul-Shifa, on the southern bank of the Musi River in the city of Hyderabad, Telangana, India. It is one of the three National Museums of India.

PLACEMENT OF BUILDING WITH RESPECT TO SITE:

The structures occupies more than 50 % of the site and is symmetrically placed on site facing the Musi River on the north. The Musi river used to act as a main source of drainage of waste for the museum.

MATERIAL AND NATURE OF THE BUILDING:

This RCC frame structure is built in a royal fashion with elements such as domes and Corinthian style pillars and the grandeur can be felt due to the spread of the building

PLANNING AND CIRCULATION:

The planning and circulation is highly radial with open courtyards and atriums acting as pause stops. The radial planning helps in exposing spaces to the viewers eye. The main radial block is further connected to two blocks (the eastern and the western block) through a bridge. The site also consist of the Dharush Shifa Jamia Masjid.

Aerial View Of Golconda Fort



Stone Masonry Joined With

Gachchi'

















GOLCONDA FORT

Golconda Fort, also known as Golconda "round hill" is a fortified citadel and an early capital city of the *Qutb* Shahi dynasty (c.1512–1687), located in Hyderabad, Telangana, India. The fort is the prime tourist spot and hence a flagship light show is organised by the tourism ministry in evening time for the local and foreign visitors.

STYLE:

- It was built by the rulers of KAKATIYA DYNASTY.
- It shows influence of INDO-SARSANIC and MUGHAL ARCHITECTURE.

MATERIAL:

- In response to hot and dry climate of Hyderabad the material used is STONE MASONARY.
- The excavated MUD and STONE were used in construction.

ARCHITECTURAL FEATURES:

- 1. Extensive use of ARCHES with huge height to demonstrate grandeur, an additional element to boost the natural ventilation.
- 2. MINARETS present at the top level acted as wind towers.
- 3. LANDSCAPE GARDEN ensured the regulation of temperatures.
- 4. The diamond design generates the ECHO of the sound beneath the structure.
- 5. The SMALL JALI WINDOWS and OPEINGS at higher levels ensured proper ventilation and privacy.



















CHOWMAHALLA PALACE

Chowmahalla Palace or Chowmahallat is the palace of the Nizams of Hyderabad State in Hyderabad, Telangana, India.

PLANNING:

The palace has a watch tower ,four palaces Afzal Mahal, Mahtab Mahal, Tahniyat Mahal and Aftab Mahal and rooms now used as admin office, council hall and photo studio, divided into two courtyard, and also 2 small water bodies running in the lengths of 2 courtyards.

CIRCULATION:

The circulation pattern follows the grid of rectangle.

STYLE:

It was built in the neo-classical style.

NATURE OF BUILDING:

Adaptive reuse has been done by converting the palace area into a museum. It is build in a grid pattern.

MATERIALS:

Stone walls and lime plaster were used for construction .

ARCHITECTURAL FEATURE:

Granite arches, decorative work in lime plaster, and terracotta balusters etc.





Plan

View



STREET SCAPE :- CHARMINAR

NATURE OF AREA: Commercial (shops)

PLANNING:

- i. All the shops are placed adjacent to each other.
- ii. All the shops are planned parallel to the road.
- iii. All the built shops were placed on the streets running perpendicular to Charminar
- iv. The non built or temporary shops were placed around the circular road that surrounded Charminar
- v. The placement of temporary shops was done in such a manner that it segregated customer according to the type of commodity they wanted to buy.

MARKET:

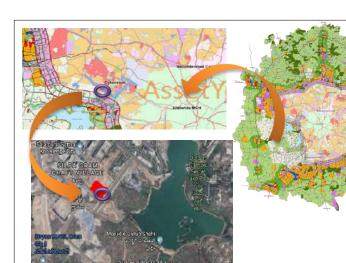
- i. The market was planned in a way that the customers were segregated according to the type of commodity they wanted to buy.
- ii. Different streets sold different commodities .i.e. one street sold jewellery, other street sold fabric materials or bangles etc famously known as Begam bazzar, Moti bazzar, Laad bazzar etc
- iii. The road surrounding Charminar had food stalls, small vendors selling cosmatics and some female jewellery , perfumes and some small decorative plants.

CHARMINAR:-

- i. It is a beautifully created structure made of sandstone with intricate carving on minarets and arches.
- ii. It has 2 small spiral staircase running through the minarets for circulation.
- iii. There is masjid at the top floor of Charminar.
- v. From first floor you can have a good view of the market area.



... ...





REQUIREMENTS FOR HESH BEST BUILDINGS (x) High Riss Buildings / Complexes

- (i) High Rise Buildings J Complexes shall be permissible only in areas other than those given in Amescare 1 & II.
- (ii) The minimum size of pict for High Rise building shall be 2000ep m (iii) In respect of sites proposed for high rise buildings and affected in your widering where there is a shortful of the net pick size, up to 10% of south shortful in net price area would be considered with the preposed beight and corresponding minimum all cound setbacks.

- Very application to construct or reconstruct a High Bise building or alternation: to existing High, Bise building shall be made in the prescribed from and accompanied by detailed pairs, foot plans of all floats along with complete set of structural crawings and detailed specifications: duty certified by a qualified licensed structural
- For any High Rise Building located in the vicinity of airports as given in the Neckord building Code, the maximum insight of such building shall be decided in consultation with the Amport Authority and shall be regulated by their rules / requirements.
- (vi) Prior No Objection Cartificate (NCC) from the Aridhia Fracesh State Disasters Response & Fire Services Department: For all High Rise Buildings prior No objection Certificate (NOC) from the Andres Pradesh State Dissature Response & Fine Services
- (vii) In every litigh rise habiling title, an organized open spece chall be utilized as generary, but let or self-inchesping, etc., shell be provided over and above the manazour setactors, to be let in and around the building. This space shell be at least 10% of bods she even at ground self-organized self-organized in an invitation of 3m. This may be in one or indee gockets with minimum series of 50cm, an experience.
- (viii) In addition to the above, a minimum of 2m wide green planting strip in the periphery on all sides within the setbacks are required to be developed and methalised.
- ellings abstrate major mad of 30m and above width shall be unified only after providing black-topped service reads of similarum 17s width with misiman 2 Lame carriageway with in the strend right of way. It will be the responsibility of the developed, labor 1 power to provide the above service root of the salameter/ab builder / owner to provide the above service rood of the aborder's fixed by the Sanctianing Authority at his own cost. The Sanctianing Authority may consider cardioning building permission if the developer / builder / owner deposits the full cast for laying such service road to the Sanctioning Authority. The amount so levide and

- High Rice Buildings / Complexes:
 (i) High Res Rubbings / Complexes shall be permissible only in area other than those given in American 1.1 ft.
- he minimum aim of plot for Mah Rise building shall be 2000ep.m

- y emplopism to construct or removatured or High filter building station to country High Rose building shall be made in contend form and accompanion by contained place, four place of a slong with complete said of structural drawings and data ficunisies only certified by a quadred scenario structure.
- In regionate up and Finder / Fraker / F

igh Rice Buildinger is addition to the above the following and thens shall also be complied with

- In addition to the required statistance; and lifts, there shall be at least one fire escape statistate and lift. These statistates and lifts shall be got certified from the menufacturer's authorized service technical personnel from time to time.
- Provision for power generator shall be made.
- National Building Code of India (NBC) 2005 / Anchro Fradesh Fire Services Act, 1994
- emplicate shall mention that the norms have been followed in the easign and conclustion of buildings for making the buildings epistant to earthquake, compliance with structural safety and fire

H. M. D. A Guidelines and By – Laws

Our site falls into the Commercial zone according to the Development plan of Hyderabad 2031, drafted by Hyderabad Municipal Development Authority. And in taking account to the H.M.D.A guidelines and by-laws we plan to design a near to perfect high rise commercial building.

GENERAL HIGH- RISE BUILDING NORMS

- Minimum plot size for a high rise building shall be 2,000 sq. m
- In a High Rise building an organised open space shall be utilized as green, tot lot or landscaping. This area should be open to sky and should have a minimum width of 3 m.
- 2 m wide green planting strip in the periphery on all sides within the setback and should be maintained.

SERVICE ROADS AND ACCESS WAYS

Building abutting major road of 30m or above shall be permitted only after providing black toped service road of min. 7m width with min. of 2 lane carriage way with the define right of way. It should be constructed and developed by the owner itself.

PARKING NORMS

Parking area to be provided as 40% of total built up area.

FIRE FIGHTING NORMS

In average min. floor height in commercial building should be 4m. In all 1 refuge floor at height of 30m shall be provided with max. of 2.5m floor height.

RAIN WATER HARVESTING

- The paved surfaces around surfaces shall have percolating pits or trenches or combination of both in such a way that total volume is of such shall not be less than 6 cu. m for each 100 sq. m of rooftop area.
- The terrace shall be connected to a sump or well through a filtering tank by a pvc pipes. A valve system shall be incorporated to enable the first part of the rainwater collected to discharge out to the ground if it is dirty.

INFERENCES

- The architect's approach showcased how to build around the given topography of the site. Making use of the existing contours, he segregated the structure into zones. Another thing to be noted was that how to approach the perfect balance and intervention between landscape and the structure.
- How by being sensitive towards the existing site conditions, efficiency can be achieved. Making use of the traditional passive cooling measures and modern materials, they have achieved energy efficiency, which is the need of the hour.
- On the same stretch of land, with the same bylaws, how planning affects and adds to the efficiency of the structure, whose requirements may vary with that of the client.
- The planning of the fort caters to the requirements of visual transparency, barriers where needed, and connectivity, showcasing
 the structure works, even now.
- How the royal residence of the nizams, through the concept of adaptive reuse, has been converted into a well functioning museum.
- How the structure caters to the floating population..







IMPLEMENTATIONS

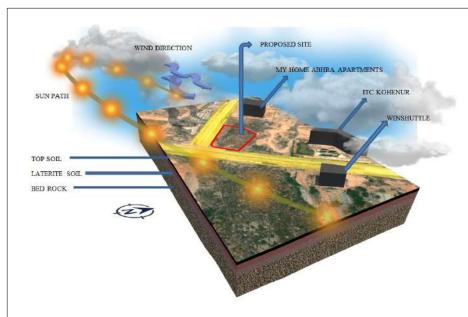
- How to execute well functioning glass façades, dealing with glare, existing surroundings.
- With a given brief and requirements, an holistic approach can make a building both energy efficient and green.
- Barriers may not necessarily be traditional in approach, flexibility can be achieved at a whole, with zoning.
- How the existing features of the site and its surroundings, can add to the efficiency of the building, yet to be constructed.
- Thinking ten steps ahead, how the structure will be used by the occupants should impact decisions when it comes to the selection of the materials for the construction.
- Core placement of the services extends to the flexibility in design and planning.
- Maintaining homogeneity, the functionality of the building adds to creating visual barriers in terms of segregation.











3d View Of Site Surrounding



Site And Site Surrounding

SITE ANALYSIS

LOCATION: Hi-tech City, Junction Between Hi-tech City And Kohinoor Road, Near Inorbit Mall.

STRENGTH:

- The topography of the site is flat
- The site is located near an artificial lake called durgam cheravu which will cater to the drainage and water supply needs of the structure
- The site also provides a great view point towards the hillock and the lake
- There are two access roads leading to the site.

WEAKNESS:

- The site is a large area open to the sun and is located at hi-tech city where the urban heat island is high.
- No natural tree coverage
- Due to presence of sheath rock excavation might prove to be difficult

OPPORTUNITY:

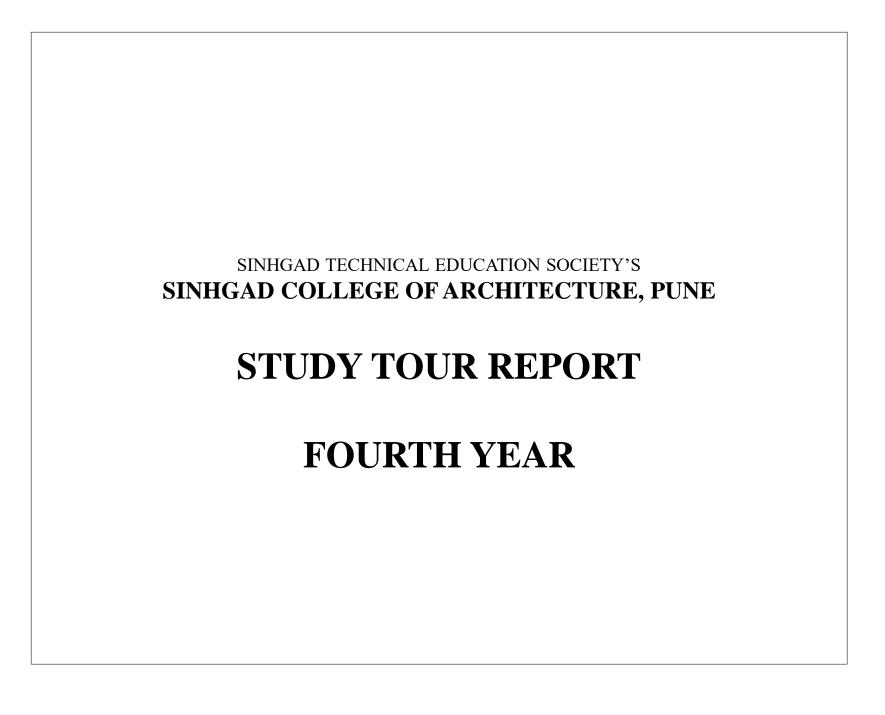
• the site comes under the general development promotion zone

THREAT:

- Since the site is located in a developing area near a lake with no proper drainage system, the site is prone to water logging.
- The site being near a junction make cause unwanted traffic in the area.

DESIGN PROJECT

To design a multi-tenant office building at the Hi-Tech City in Hyderabad, focusing on the service core of the building and to instill reconcepts of contemporary Architecture. The brief demands for a single Tenant double floor office along with four floors for multi tenant offices.



SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE, PUNE

SITE VISIT REPORT URBAN DESIGN

KARAD

by **Fourth Year B. Arch. Division A**

Under guidance of Ar. Pranoti Lad, Ar. Shreyas Paranjape, Ar. T. B. Shinde, Ar. Lily Roy

18th December 2019





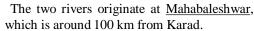


INTRODUCTION TO KARAD

- **Karad** is a city in Satara district in the southern part of Indian state of Maharashtra and it is 320 km (180.19 miles) from Mumbai and 159 km from Pune.
- It is situated on confluence of krishna and koyana river.
- According to 2001 census there are 221 villages in the karad taluka.
- Karad has municipal council of grade B.

10 20 30 40Kr





They diverge at their origin, and travel for about the same distance to meet again in Karad.



- It covers an are about 405.8 sg.Km which is 10.2 percent of satara district.
- North to south length of karad taluka is 55km, and east to west length is 36 km.
- It has historical political and cultural importance.
- The karad is borderd by satara ande koregaon taluka on the whole northern side.

STUDY TOUR 18TH December 2019



- KARAD, the second largest city and industrial hub of Satara District in Maharashtra State.
- Karad is also an emerging real estate destination with a number of new industries making it as their base hence real estate market is getting all the benefit.
- Karad is situated on the banks of Krishna-Koyana rivers, around 160 km away from Pune and 350 Kms away from Mumbai on NH-4 Highway. However, it has been considerably successful in replacing that image with a more cosmopolitan look with the help of improved transportation facilities and better infrastructure. A part of the "Golden Triangle", with Mumbai, Pune & Kolhapur.
- Karad is attracting a lot of new investments from reputed industries. Karad is on central location on the western ghats. Karad has good connectivity and availability of cheap labour has encouraged significant number of industries to setup shop in the city.

□Karad on Fast Track

- Mumbai- Bangalore six laning of the existing NH-4 highway.
- Most popular Panchgani & Mahabaleshwar is very close Select as one of the urban growth centers by the state and central government.

lFac

- Karad city witnessed at 65% growth from 2001 to
- The population in 2011 census was 3,35,000 the population of the city has been growing at a CAGR of 7%
- The average literacy rate of Karad is close to 75% SEC A & B are at 27% of total urban population 0.3 mn people have income in excess of Rs 2 lacks per annum.

Area: District - 10484 Sq. Km.

FOURTH YEAR B.ARCH. (A)



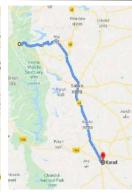
HISTORY OF KARAD

- It was originally known as "Karhatak", meaning "Elephant Market". Karad is also a city of historical importance.
- According to Mahabharata, Sahadeva one of the Pandavas lived in the city also known to be pious as Lord Rama stepped his feet on this land. Located to • the south west of Karad is Karad Caves.
- Also a Major event in history is witnessed by the Krishna River Banks, His Highness Chhatrapati Shivaji Maharaj once washed his weapon which is • known as Waghnakhya and Bichhwa in the River Krishna's waters

TRANSPORTATION:

Road network is well developed The pune-miraj-londa railway corridor passes through karad Pune-bangalore broad gauge





Pune to Karad 160KM

Mahabaleshwar to karad 120KM

HISTORICAL PLACES IN KARAD

Karad Buddhist Caves





- The Karad Caves form a group of 66 Buddhist caves
- They are composed of:

Pritisangam

- **Agashiv Caves**
- **Bhairay Caves**
- **Dongrai Caves**





Karad airpot constructed in the 1955 •

by the public works department to

facilitate the koyna dam project.

Now it used for pilot training.

Location of Historical Places

- Pritisangam is a place where Krishna river and Kovna river meet each other.
- This sangam is very rare in world. Pritisangam meaning Confluence of Love.

Airport



300KM **Railway station**

Mumbai to Karad

Karad railway station 4km from the city and is on route from mumbai to miraj ,sangli, kolhapur etc

Nakati Rawal well



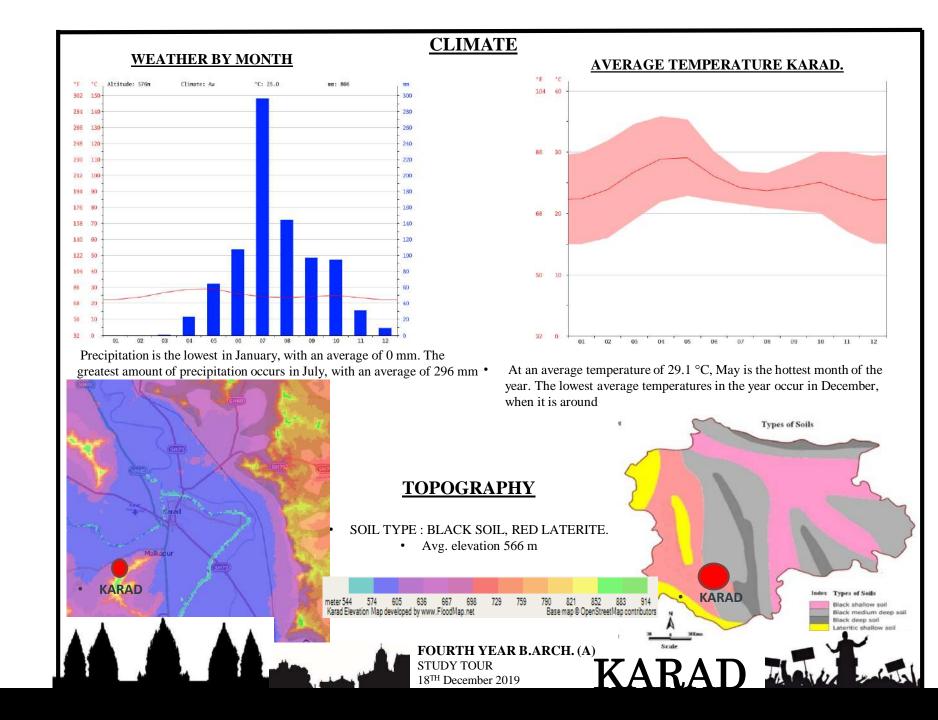
- Built in the 12th century about fifty-five feet above the Coyne Plate.
- The length of the well is 120 by 90 feet.
- There are a total of 82 steps.

STUDY TOUR

18TH December 2019







AREA OF STUDIES IN KARAD



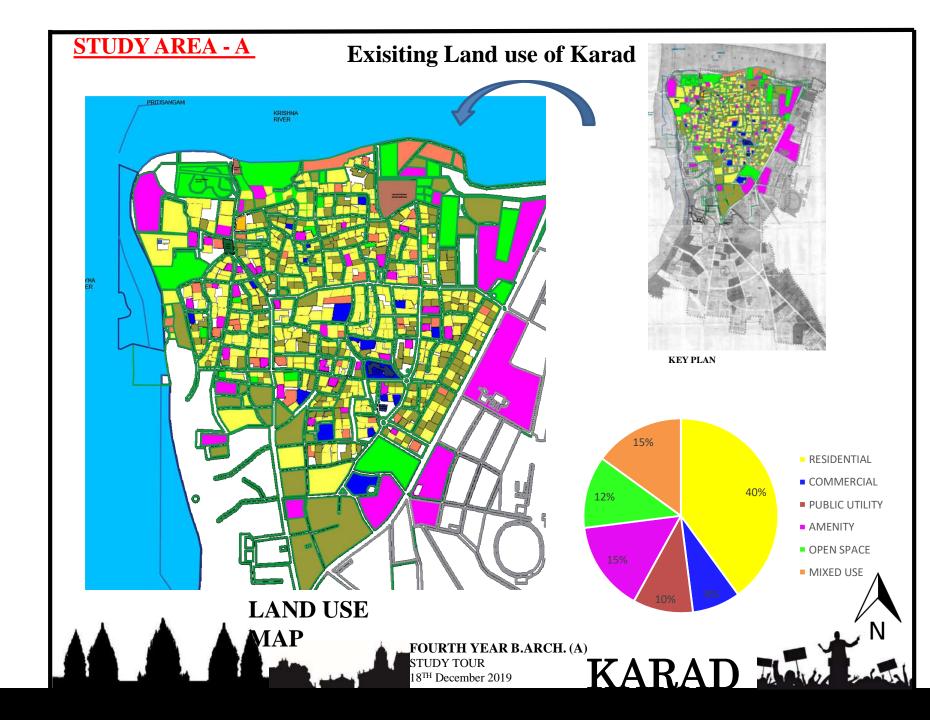


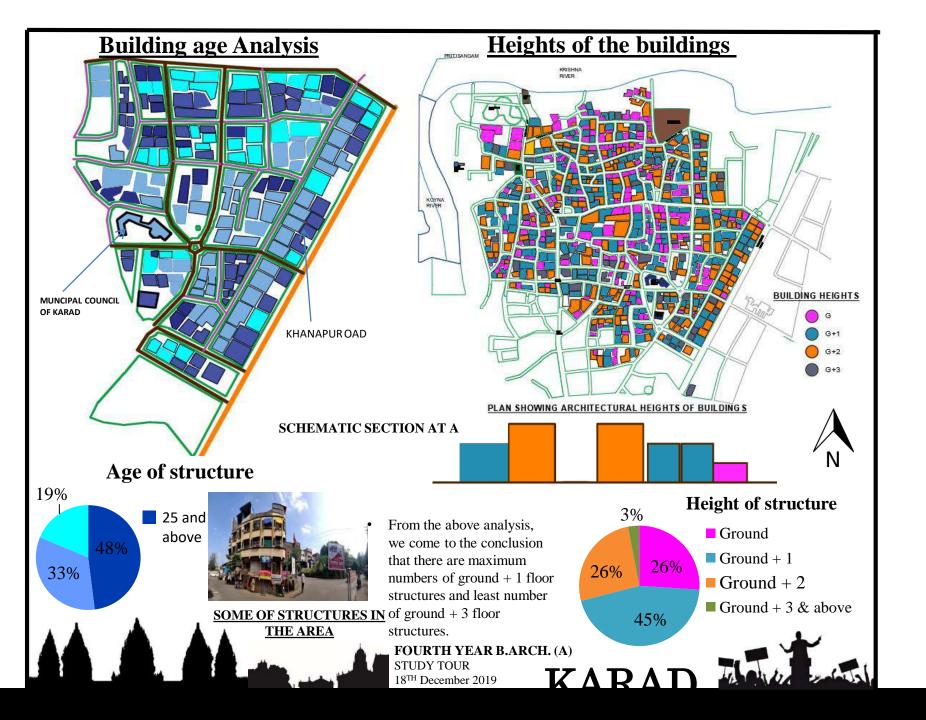


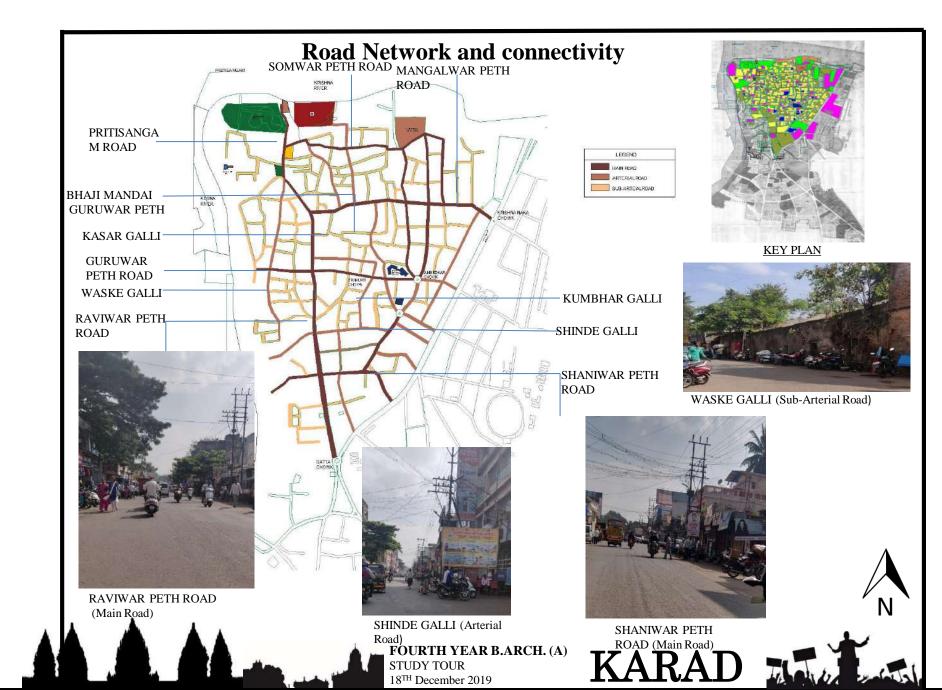
FOURTH YEAR B.ARCH. (A)
STUDY TOUR
18TH December 2019

KARAD

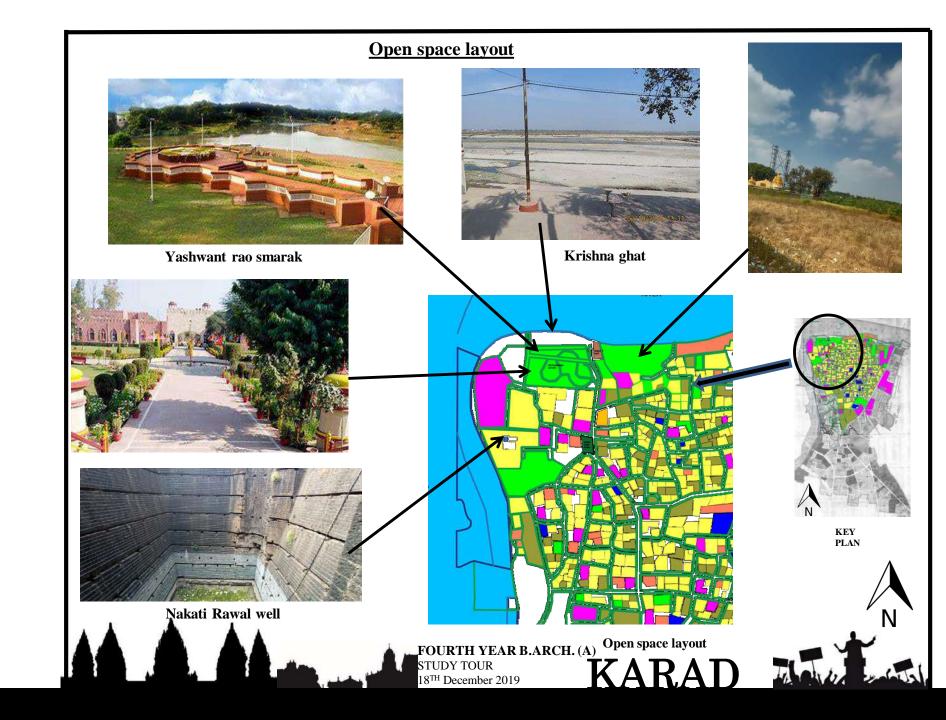












Traffic and Vehicular Movement Analysis Study Area A

Vehicular Analysis

Road Name – Mangalwar Peth Road

Road Type – Main Road

Road Width- 10 m

Connectivity – This road connects the Highway to Chowdi Chowk which is located in the core

Karad

Characteritics- The Road Tapers down from 15m to 6m in the span of 700m length



Junction of Raviwar peth Road and Mnagalwar peth road at Chowdi Chowk





KEY PLAN



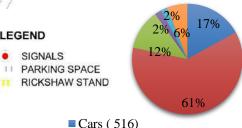
MANGALWAR PETH ROAD

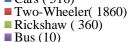
Movement at 2 pm

Movement at 4 pm



Chowdi Chowk





■ Trucks (20) Cycles (180)





Trucks



■ Two-Wheeler

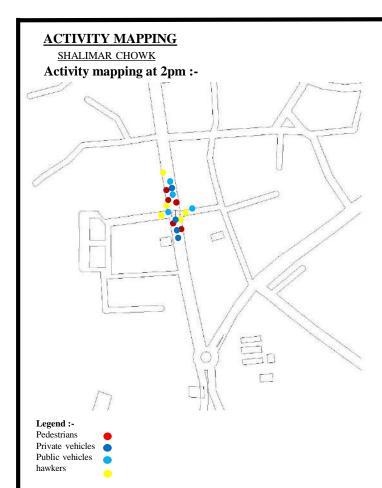
Bus



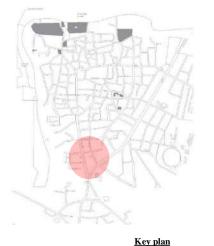


STUDY TOUR 18TH December 2019











Activities Rikshaw Stand 10% Vegetables 45% Tea Stall 30% Fruits Flowers

		Pedestrians	Two Wheelers	Four Wheelers	Rikshaws	Bicycles
Ī	Total Per 60 Min Lapse	340	540	200	75	65
	Max. Nos Per Min	5	9	4	2	1

340	540	20	00		
				75	65
Pedestrians	Pedestrians Two Wheelers Four Wheelers		Rikshaws	Bicycles	



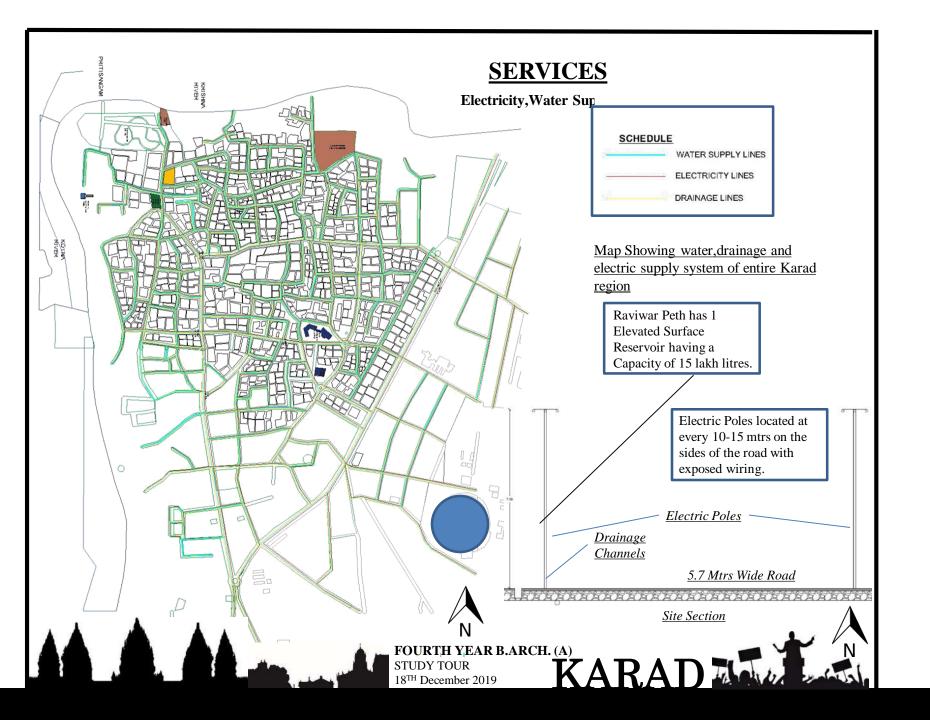


FOURTH YEAR B.ARCH. (A) KARAD

STUDY TOUR

18TH December 2019

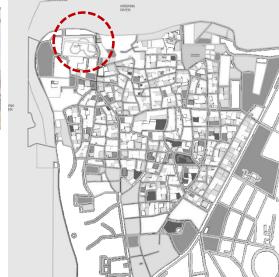


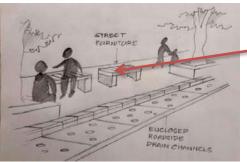


DESIGN PROPOSAL AT URBAN LEVEL

- 1. Proposing small recreational space at Krushna Ghat for hawkers and area for seating.
- 2. Plantation of trees with sitting space along the road.
- 3. Proposing street furniture.
- 4. Proposing proper parking spaces near Pritisangam Udyan(Yashwantrao Chavan Samadhi Sthal).
- 5. Proposing divider near Krushna Ghat area and its beautification.
- 6. Proposing street lights and footpaths on main roads.
- 7. Proposing enclosed drain channels along the roads.



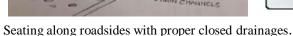


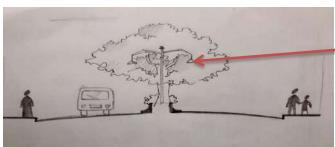


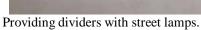




Street lamps for roads









Name: Gulmohar Height: 5-12m Foliage: 3.5-5m



Name: Neem tree Height: 15-25m Foliage: 5-10m



Trees options to provide along roadside. Properly managed hawkers space with seatings.



FOURTH YEAR B.ARCH. (A)
STUDY TOUR
18TH December 2019

KARAD

DESIGN BRIEF

4TH YEAR DIV A, 2019-2020 GROUP: 1

PROPOSED MAHARASHTRA INTELLIGENCE ACADEMY IN KARAD

DISTRICT SATARA.

Preamble:

Karad is a city in Satara district in the southern part of Indian state of Maharashtra and it is 320 km (180.19 miles) from Mumbai and 159 km from Pune. It lies at the confluence of Koyna River and the Krishna River. The two rivers originate at Mahabaleshwar, which is around 100 km from Karad. They diverge at their origin, and travel for about the same distance to meet again in Karad.

Why Karad?

KARAD, the second largest city and industrial hub of Satara District in Maharashtra State. Karad also has number of schools and institutes around, which is known 2nd largest education hub after Pune. Karad city witnessed at 65% growth from 2001 to 2011. The population in 2011 census was 3,35,000 the population of the city has been growing at a CAGR of 7%. As karad has all types of institutes with it like engineering, pharmacy, agriculture etc. Maharashtra Intelligence Academy is to be proposed as there are no training schools, academies or institute as such.

AIM: To design Maharashtra Intelligence Academy as an urban design proposal.

OBJECTIVE:

- Proposing a Maharashtra Intelligence Academy (200 TRANIES) will help in benefit of contributing capital to karad city and government.
- It will help the city to get a badge of recognization for having a certified police training institute.
- Proposing Maharashtra Intelligence Academy can help giving supplementary services to other cities like Sangli, Pune, Nashik, and other near cities.
- 4. This MIA institute in Karad will act as sub-branch of MIA located in Pune.

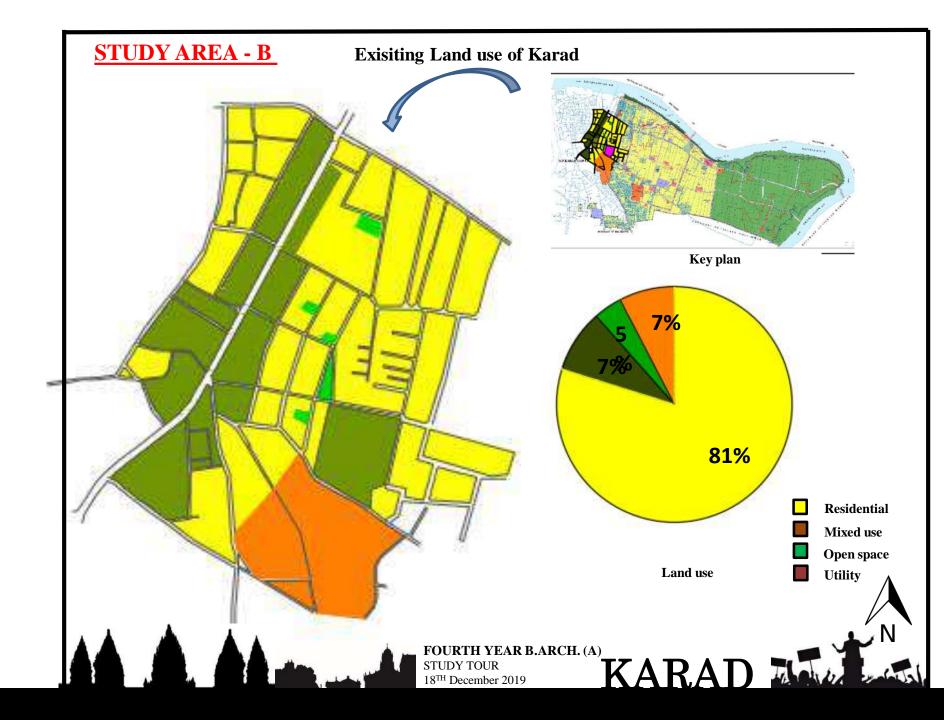


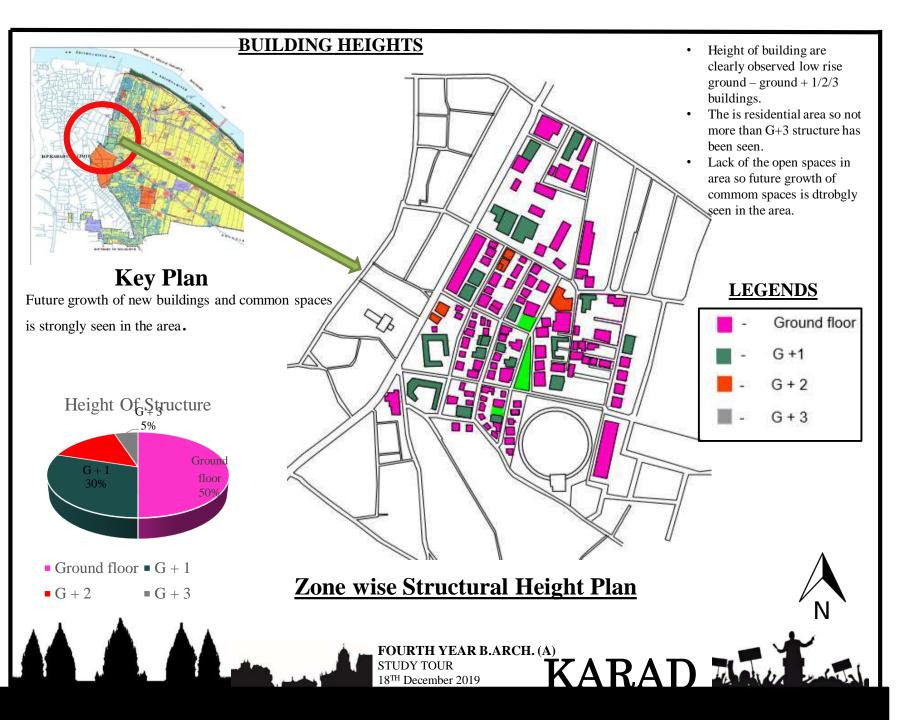




FOURTH YEAR B.ARCH. (A) STUDY TOUR

18TH December 2019





PUBLIC PARKING Parking in front of commercial complex Parking on road infront of bunglow Rikshaw stand in chowk Parking, Rikshaw Stand and Signal Shown in Map

Parking Near Stadium



Parking on both side of Garden

LEGENDS

- 1. Parking in front of commercial complex
- 2. Parking in front of schools
- 3. Parking near Shivaji garden
- 4. Parking for stadium
 - Main Road 16m wide
 - Arterial Road 8m wide
 - Sub Arterial Road 6m wide
 - Signal
 - Rikshaw Stand
- ###### Road Side Parking





STUDY TOUR 18TH December 2019









SHWANTRAO MHAVAN MEMORIA SHIR SHIVAJI CLOTH MARKET

SUB. DISTRIC HOSPITAL

RAM MANDIR





JANTA SAHAKARI BANK



L.I.C. BUILDING



SHRI SHIVAJI VIDHALAYA.





Land mark of Karad VITHAMATA GIRLS SCHOOL & COLLEGE





- 2. Shivaji high school
- 3. Janta sahakari bank
- 4. Shri Shivaji Cloth Market
- 5. LIC building
- 6. Sub district hospital
- 7. Ram mandir
- 8. Shri Shivaji Park
- 9. Chatrapati Shivaji stadium
- 10. Water Tank
- 11. Khwaja Masjid
- 12. Yashwantrao Mhavhan Memorial
- 13. Vijaya Bank
- 14. Bus Stop



FOURTH YEAR B.ARCI STUDY TOUR 18TH December 2019



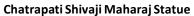
CHATRAPATI SHIVAJI SATIDUM

STREET FURNITURE



- समता सार्वजनिक वाचनालय
 - Samta savrajanik vachnalay

- Different type of sitting provided for people, statues, public news paper stand.
- Sitting spaces provided below the tree (Par).
 These are provided besides the road.
- Rickshaw stand sign boards and segregation of pedestrians and vehicles.





Red Seating

PLAN



Green Seating Samata Vachanalay



Rikshaw Stand



Panchashit Rikshawget



FOURTH YEAR B.ARCH. (A) STUDY TOUR

18TH December 2019



TRAFFIC AND VEHICULAR **MOVEMENT ANALYSIS**

- Rikshaw Stand

Road Side Parking - Light pole

- STUDY AND VEHICULAR ANALYSIS OF DATTA CHOWK TO KARAD VITA BRIDGE.
- **ROAD NAME-** TOWN HALL ROAD
- THIS IS MAJOR CONNECTING ROAD OF **KARAD**
- MAJOR CHOWKS-DATTA CHOWK AND VEER VIJAYDEV CHOWK
- ROAD MAJORLY USED TO CONNECT VEHICULAR ACCESS OF EASTERN AND WESTERN KARAD.
- CPU COUNT TAKEN AT THESE CHOWKS



VEER VIJAYDEV CHOWK AT 11 AM

Movement at 2 pm

- 4 wheelers 2 wheelers Rikshaws
- Buses



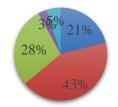


DATTA CHOWK AT 5 PM

FOURTH YEAR B.ARCH. (A)

STUDY TOUR 18TH December 2019

Movement at 11 am



- 4 wheelers 2 wheelers Rikshaws
- Buses Cycles



DATTA CHOWK AT 2 PM Movement at 5 pm



- 4 wheelers 2 wheelers
- Rikshaws Buses
- Cycles



ACTIVITY MAPPING ACTIVITY MAPPING AT BUDHVAR PETH ROAD2:30 PM KAYPLAN LEGEND: PEDISTRIAN PRIVATE VEHICAL PUBLIC VEHICAL **HAWKERS** 10% ■ Vehicular movement ■ Pedistrian movement 20%_ 840 1000 Vendors 720 800 42Dfood stalls 600 400 180 200 12 14

■ Total Per 60 Min Lapse

MAJOR ACTIVITIES:



Vendors on footpath

Major vehicular movement



Food stalls and seating

	Pedestrians	Two Wheelers	Four Wheelers	Rikshaws	Bicycles
Total Per 60 Min Lapse	480	720	840	420	60
Max. Nos Per Min	8	12	14	7	1

FOURTH YEAR B.ARCH. (A) STUDY TOUR

18TH December 2019

■ Max.Nos Per Min





SERVICES

RUKMINI NAGAS

WATER SUPPLY

There are majorly four water tanks providing water to the area.

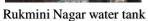
Rukmini Nagar water tank (20 lakh Lt.)

Town Hall water tank (15 lakh Lt.)

(15 lakh Lt.) Ravivar Peth water tank

Suryavanshi Mala water tank (15 lakh Lt.)







Water Treatment Plant



Town Hall water tank



FROM



WATER **PURIFICATI** ON PLANT



MARKET YARD WATER **TANK**



OTHER WATER **TANKS**

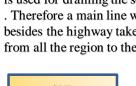


TO **INDIVIDUAL HOUSE**

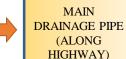


DRAINAGE

The drainage pattern of the region is well developed. The Krishna river is one of the third great rivers of southern India. It is used for draining the sewage of the city . Therefore a main line which is laid besides the highway takes the sewage from all the region to the Krishna river.

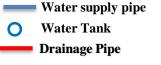








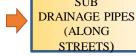
TO **KRISHNA RIVER**



WATER TANK

LEGEND-













STREET SKETCHES OF TOWN HALL ROAD



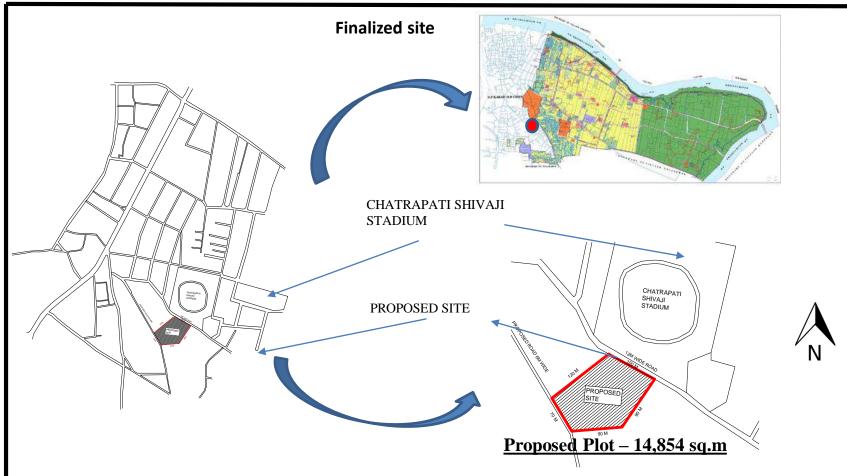
Importance given to Vendors and pedestrians is seen in sketches.











Selection of plot

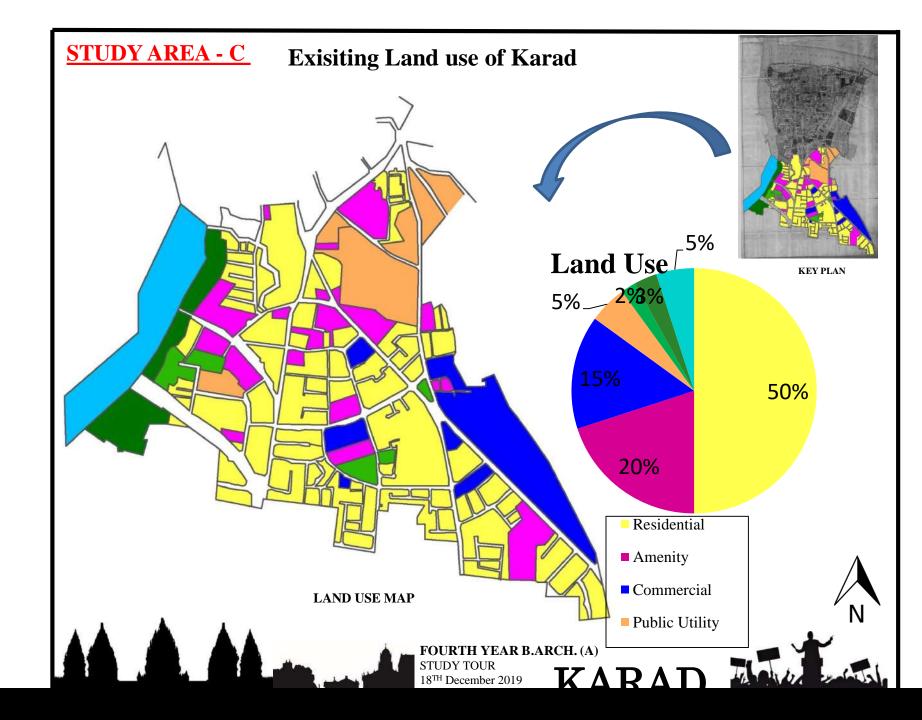
- Near from highway and main road
- Big open space for stadium or sports complex.
- Exactly in front of chatrapati shivaji stadium.
- Can propose big scale project like sports complex ,as it is in front of the stadium.

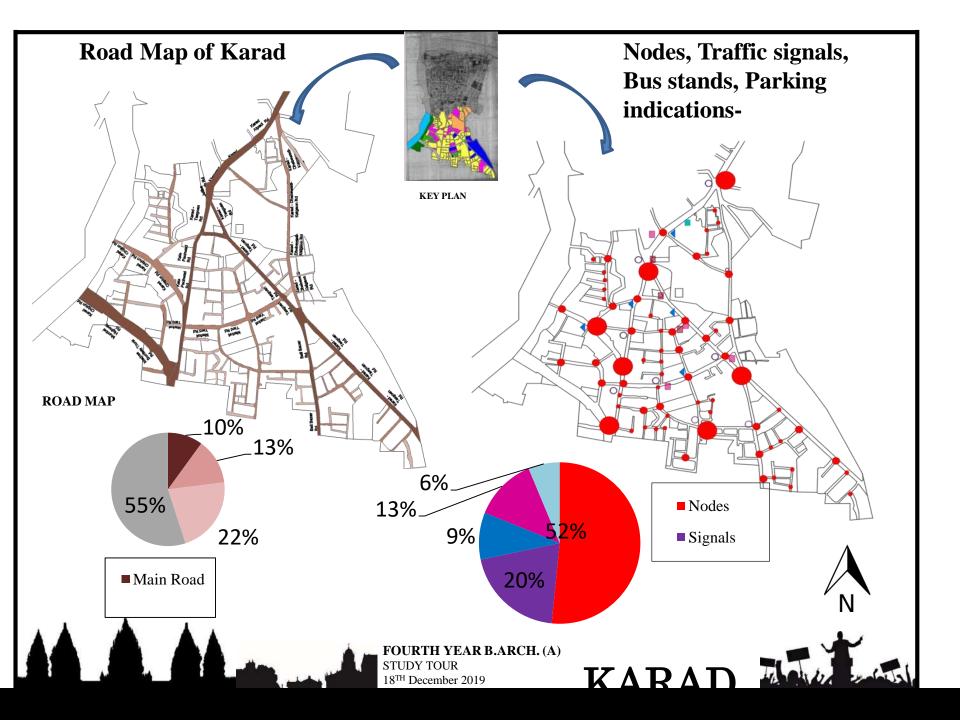
Site justification

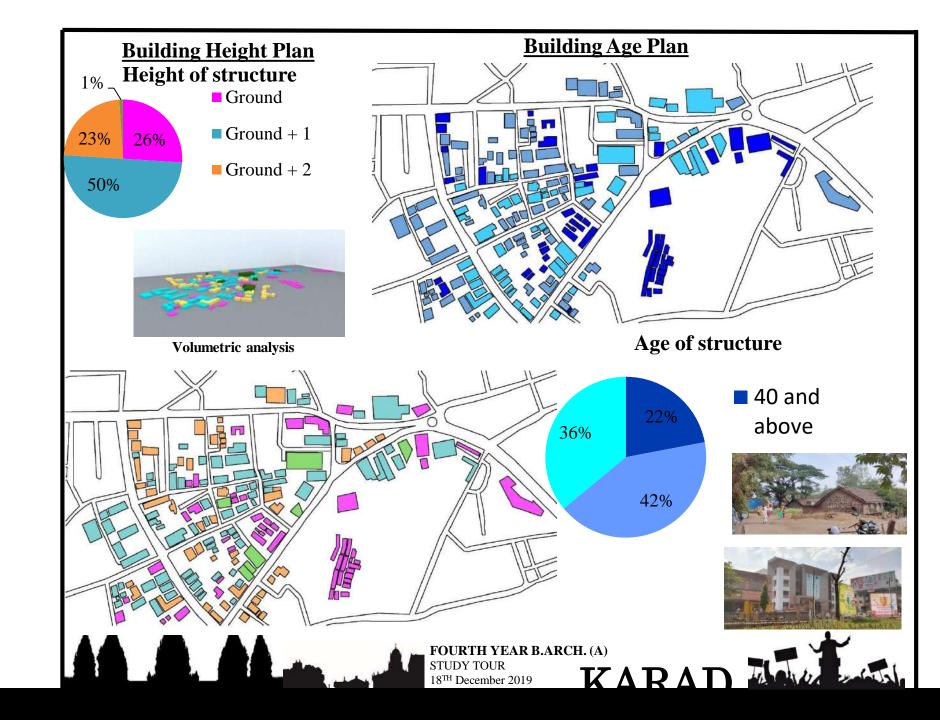
- As there is no banquet halls in near by area, we can provide banquet halls or marriage halls for functions because there is 81% of residential area.
- The area of plot is quite big for this proposals.
- Hence, we are proposing sports complex which would convey sports competitions on district levels and etc,it will also help for development in nearby areas.

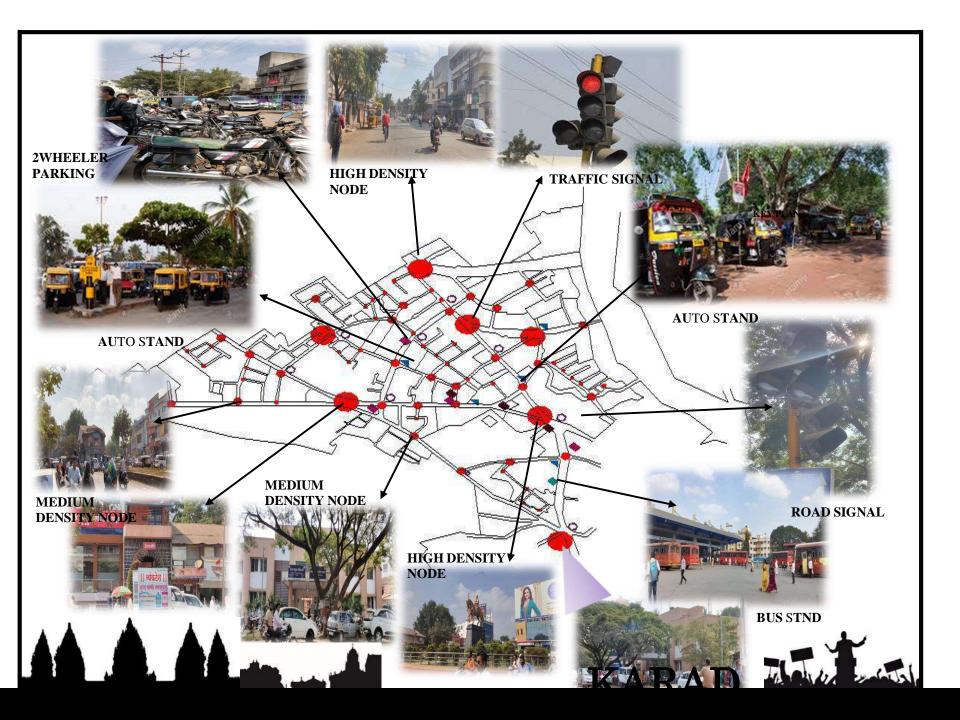
FOURTH YEAR B.ARCH. (A)
STUDY TOUR
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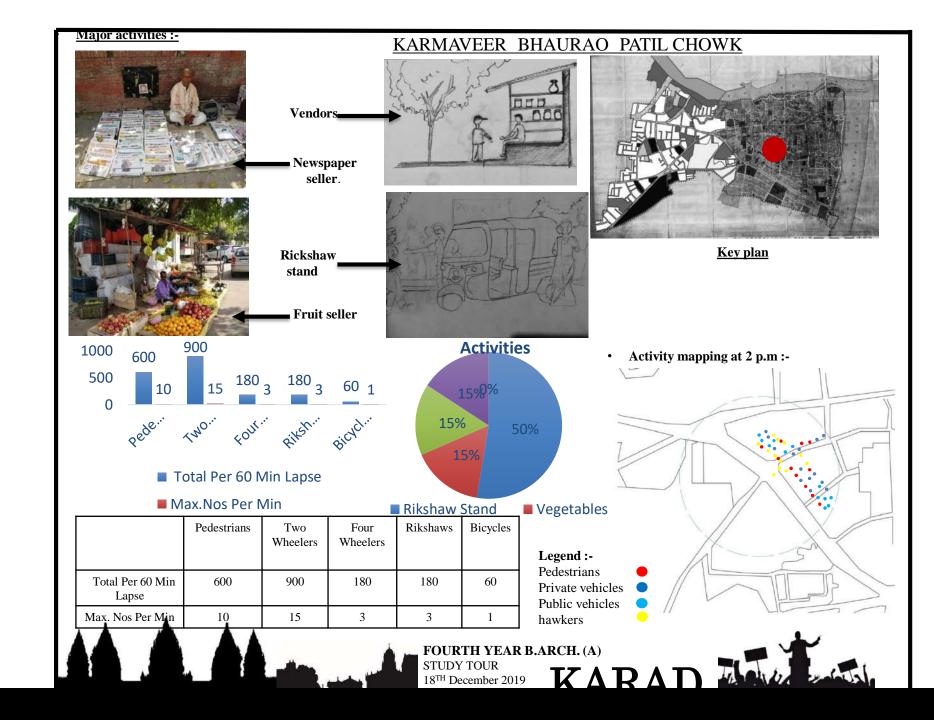


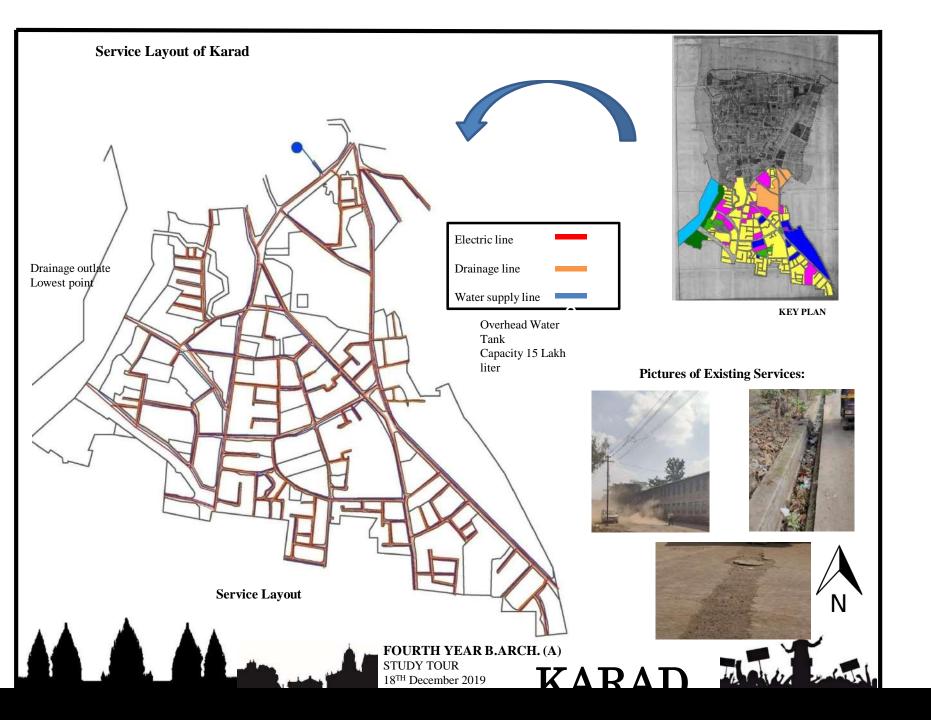


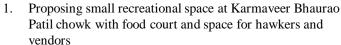












- Proposing street furniture
- Plantation of trees along with sitting space along the road adjacent to bus stop
- Proposing footpaths from Datta Chowk to Karmaveer Bhaurao Patil Chowk along the roads and providing street lights and bollards to avoid vehicular access
- Proposing beautification of divider on Datta Chowk

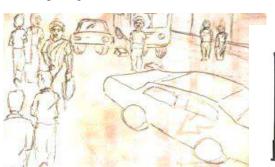


Name:Bakul Tree Height: 16 m Foilage: 8 m



DESIGN PROPOSAL AT URBAN LEVEL

Name: Karanja tree **Height:** 15-25m Trunk dia: 0.5m

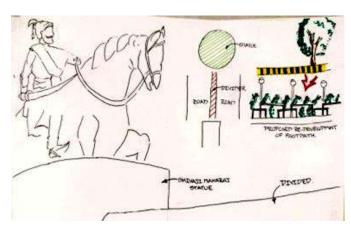


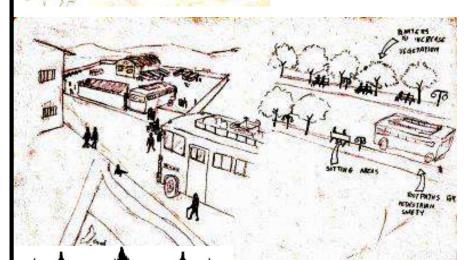




Name: Gulmohar **Height:** 5-12m Foliage: 3.5-5m







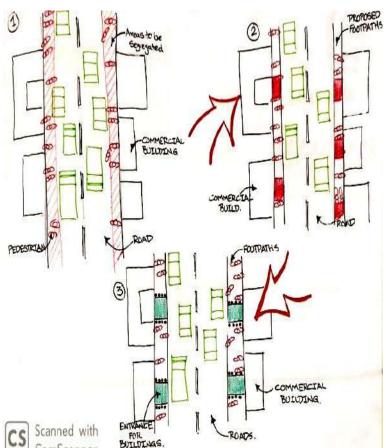
FOURTH YEAR B.ARCH. (A) STUDY TOUR

18TH December 2019

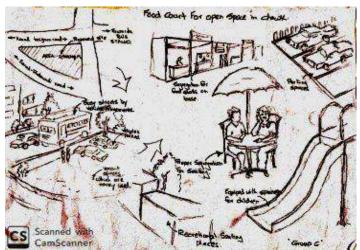


Proposing footpaths from Datta Chowk to Karmaveer lights and bollards to avoid vehicular access

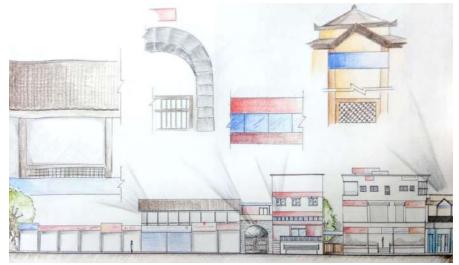
Bhaurao Patil Chowk along the roads and providing street PROPOSED



Proposing small recreational space at Karmaveer Bhaurao Patil chowk with food court and space for hawkers and vendors



Srtreetscape of Karad Tasgaon road.

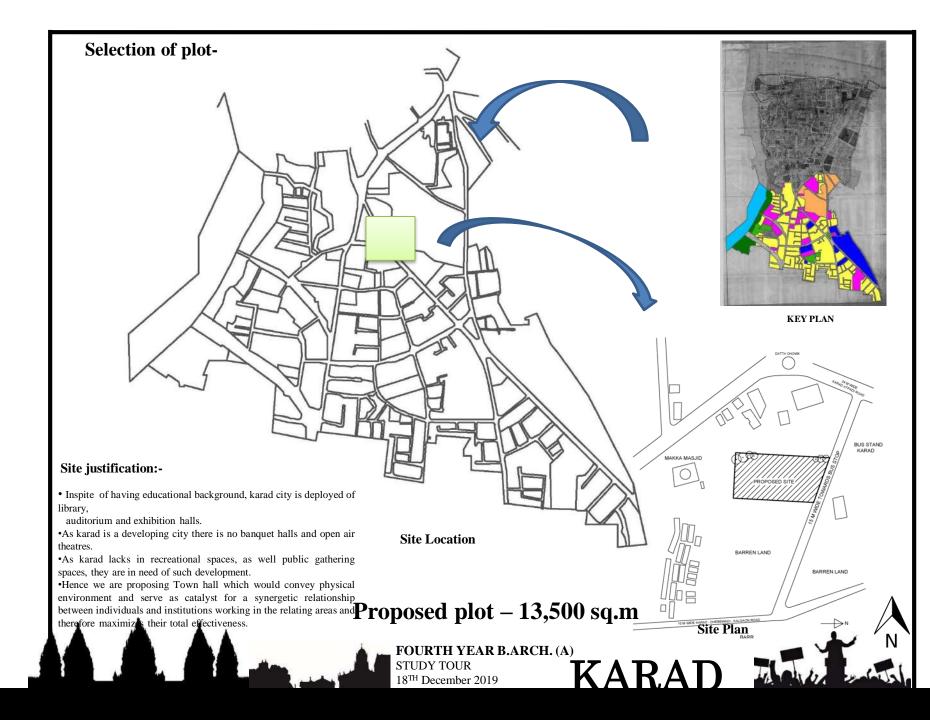




CamScanner

FOURTH YEAR B.ARCH. (A) STUDY TOUR 18TH December 2019





Worked by student of Div-A

- 1. Vivek Ajmire
- 2. Prathamesh Ambawane
- 3. Shubhankar Ambike
- 4. Manasi Ambure
- 5. Chaitali Andhare
- 6. Shrushti Babar
- 7. Sukesh Badjate
- 8. Purva Bahadure
- 9. Vivek Bang
- 10.Kalyani Bhalerao
- 11.Anup Bhatia
- 12. Ajinkya Bhavsar
- 13.Shruti Bhavsar
- 14.Kinjal Bhojani
- 15. Harshal Bhosale
- 16.Pranav Bhosale
- 17.Shraddh Bhosale
- 18.Akash Bora
- 19. Vaishnavi Bothara
- 20.Suyash Chandak

- 21. Renu Chincholikar
- 22. Harshal Choudhar
- 23. Nishank Chowatia
- 24. Adarsh Dashpute
- 25. Shubhangi Dave
- 26. Shrutika Deshmukh
- 27. Shardul Deshpande
- 28. Siddhi Deshpande
- 29. Swarali Deshpande
- 30. Vaishnavi Devale
- 31. Samruddhi
- Dharmadhikari
- 32. Pratiksha Dudhediya
- 33. Nayan Erande
- 34. Piyusha Gaikwad
- 35. Gurjas Gandhi
- 36. Aishwarya Nivsarkar
- 37. Sanket Bhosale
- 38. Pritesh Bothara
- 39. Mayuri Darekar
- 40. Rajesh Deokate





18TH December 2019





Karad Group Photos









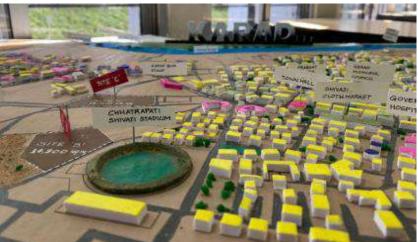


Karad Model Photos











FOURTH YEAR B.ARCH. (A) STUDY TOUR 18TH December 2019



STUDY OF A PERI-URBAN AREA WITHIN PUNE

(ANALYZING KATRAJ- SATARA ROAD AND KATRAJ-KONDHWA ROAD)











FOURTH YEAR, DIVISION-B

SINHGAD COLLEGE OF ARCHITECTURE URBAN DESIGN SITE STUDY_09/12/2019

List of Students (fourth Yr -Div B)

Gawade Gayatri	Hanchate Madhura	Jain Pallavi	Kakani Pranjal	Kirad Siddhi
Gawande Adarsh	Jadhav Abhinay	Jain Rashi	Kale Pranav	Kothari Vinay
Ghodnadikar Ajinkyaraj	Jadhav Hrishikesh	Jaju G Pooja	Rohan Dhuri	Kalantre Akanksha
Gholap Mayuri	Jadhav Pallavi	Jaju Pooja R	Kangane Vishal	Karan Katale
Goel Akshat Kumar	Jain Abhishek	Joshi Priyanka	Katre Charvi	Kathe Ankita
Gore Vaishnavi	Jain Mayank	Joshi Saurabh	Kawde Ritwa	Shrutika Jagtap
Gugale Pratik	Jain Muskan	Kabra Shruti	Kazi Masood	Pratik Gulhane
Gujarathi Trupti	Jain Nalin	Kadambari Jumle	Khaire Snehal	

Faculty coordinator:

Ar. Swarna H.

Ar. Namrata D

Ar. Chetan K

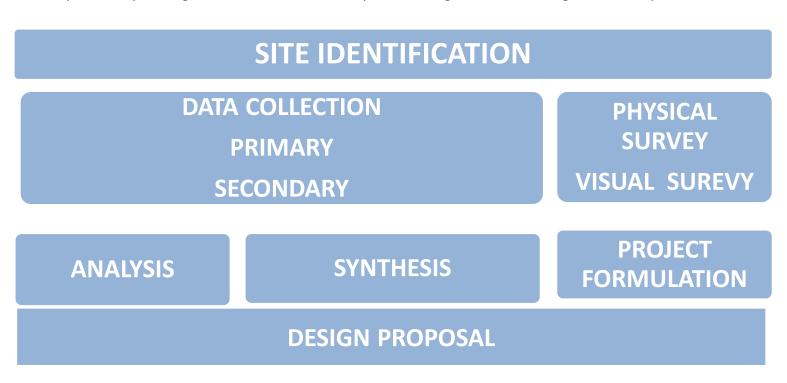
Aim: To study and analyse the urban setting of Katraj and its surrounding area.

Objective:

- To study the present infrastructure and public services of the area.
- To identify issues concerning public infrastructure and services that hinder the smooth functioning of the area.
- •To collect adequate data for analysis of issues through various methodologies.
- To analyse, infer and propose suitable solutions for the issues identified.

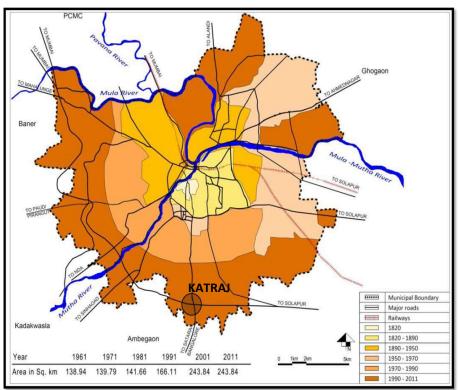
Methodology:

To study and analyse the given site area, various study methodologies were used to gather the required data.

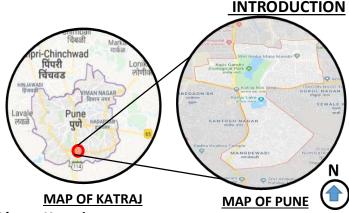


About Pune:

- Pune also called Poona, is the second largest city in the Indian state of Maharashtra, after Mumbai.
- It is the ninth most populous city in the country with an estimated population of 3.13 million.
- The old city part of Pune dates back to the 16th century. There is radial growth around the old city.
- Along with its extended city limits Pimpri Chinchwad and the three cantonment towns of Pune, Khadki and Dehu Road, Pune forms the urban core of the eponymous Pune.



CHRONOLOGICAL DEVELOPMENT OF PUNE FROM 1820-2011 (SOURCE TOWNPLANNING DEPARTMENT)



About Katraj:

 Katraj Is Suburb Of Pune In The Indian State Of Maharashtra.

And Within The Jurisdiction Pune Municipal Corporation.

- Katraj Is Famous For Its Peshwa era (18th Century)
 Lake
- Katraj has high amount of Public attraction due to Rajiv Gandhi zoological park, Bharti Vidyapeeth university, Katraj dairy and huge transit hub for many buses.
- Katraj is well connected to the southern cities of Maharashtra like Kolhapur, Satara and has good connectivity with southern states of India.

History of Katraj

- The Katraj aquaduct which was built in the 18th century supplied water to the maratha empire during that time.
- The Jain temple was built in late 20th century and one of the major Jain pilgrimage in Pune.
- Bharati Vidyapeeth a deemed university was established in 1964 is one of Indias top 10 private University located in Pune.
- Katraj Dhankawdi complex established in 1990 onwards.

REASON BEHIND THE STUDY



- No speed signs near exit points
- > Broken medians
- > Improperly planned dividers

THE WAY FORWARD

- ➤ Traffic police have recommended repairs to NHAI
- The highway authority will repair broken crash barriers and old bridges' railings, install crash barriers and paint medians and road markers

Buses & cabs waiting on both sides of the road cause traffic to slow down in many stretches of the Katraj-Dehu Road bypass

WORST-HIT SPOTS

- > Outside Indira College, Wakad
- > Wakad flyover
- > Chandni Chowk
- > Warje
- > Wonder City in Katraj



Police write to transport utility, claim ill-maintained buses are proving to be a traffic hazard for other motorists and pedestrians











Illegally parked private buses, cabs choke Katraj-Dehu Road bypass

Traffic cops want PMPML to shift Katraj bus stand

By Dheeral Bengrut, Pune Mirror i Updated: May 23, 2017, 02:30

Safety infrastructure hurdles haunt Katraj-Dehu Road bypass

Rigida Porekh (TNN) Updated: Aug 19, 2019; 12:27 IST

Project cost of Katraj-Swargate BRTS route escalates by Rs 30 crore as PMC misses third deadline

PIOC released the deadlines on May 31 and August 1, 2015, earlier because of human restic reasons along with a fellay in the process of level expandion

RAS (000/00 De 20.30 6 1551/5

- Katraj is the entry point of Pune from the Southern side.
 Thus it is the Image of Pune for people entering from the southern side. But this Image of Pune is not very Well Maintained.
- Major Chunk of this Area belongs to the Residential Zone. Thus the Commercial Sector is not as very well developed
- In the heavy rainfall of 2019, a canal wall was damaged as well as due to lack of proper storm water drainage, there was water logging inside houses.
- There are a number of factories and small scale furniture industries located in a radius of 10 to 15 km near Katraj intersection.
- Also the continuous development of the areas in the outskirts necessitatesthe import and export of materials and other items from the bypass, thus increasing the number of multi axle vehicles at the Katraj intersection. The intersection also has a main PMPML bus depot, thus making the intersection more congested.
- Though Katraj is a Transit hub, an intersection of National Highway 4 and State Highway, it is not well developed.
- Katraj is not Spread out evenly. Certain spaces are very crowded while others have scarce crowd.
- Heavy vehicles, private buses, public buses, two wheelers, four wheelers and rickshaws, all use the same road thus there is heavy traffic in this area throughout the day.
- The Katraj Lake which is a Tourist Attraction Point is not very well maintained.

Development Plan Of Katraj 1987

FRESURY OF STREET STREE

Development Plan Of Katraj 1997



EVOLUTION OF MAP

Development Plan Of Katraj 2014



- Most Mixed-Use buildings along the Primary Roads: Katraj-Kondhwa Road, 24M.
- All Development along Tertiary Road is Residential.
- Major Parking is done on road and not on personal premises.
- Two wheelers of visitors are parked on the road adjacent to the lake.



- There are less stand alone commercial buildings and most of them are mixeduse buildings.
- The reserved open spaces are not in use.
- Planned chowk has been constructed.
- More development is observed around the lake which resulted in its size reduction.
- Direction of roads has been changed as highway has been introduced from katraj chowk.

- Direction of roads has been changed as highway has been introduced from katraj chowk.
- All the Land is reserved for residential purpose.
- Some part of land is reserved for Mixed-Use along the Katraj-Satara Road.
- All the Forest Area is converted into residential area.
- The development of Katraj is done after 1990



TOPOGRAPHICAL MAP OF KATRAJ



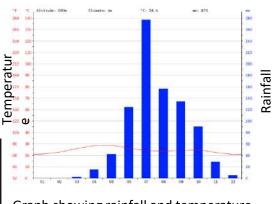
TOPOGRAPHY AND CLIMATE CLIMATE-

The Katraj lies on 660m above sea level This city has a tropical climate.

The average annual temperature in Katraj is $24.4\,^{\circ}$ C. In a year, the average rainfall is $873\,$ mm.

The temperatures are highest in may at around 28.9C and in December lowest at 20.8C

Least rainfall happens in January and the highest in July at 277mm

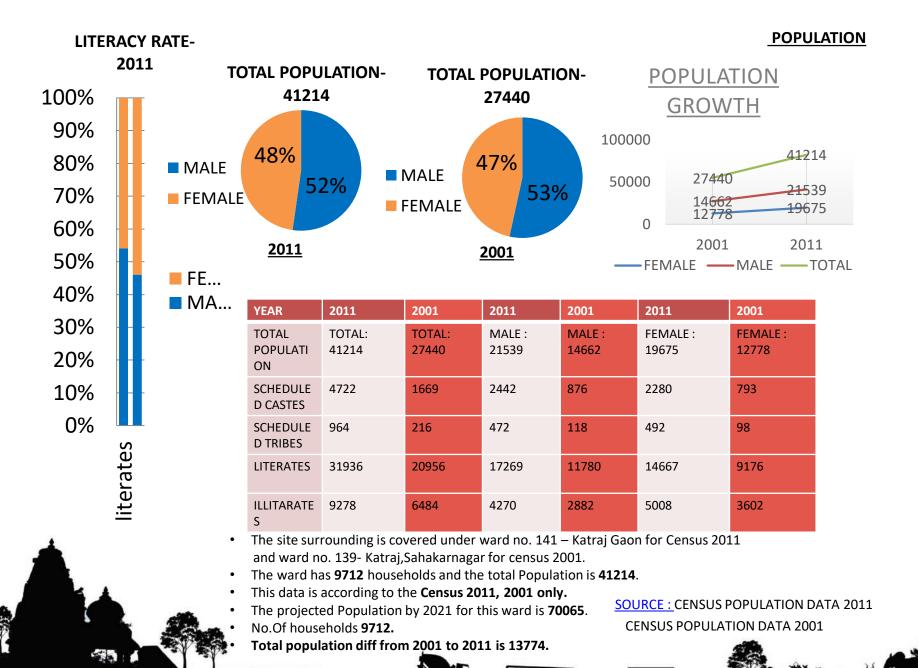


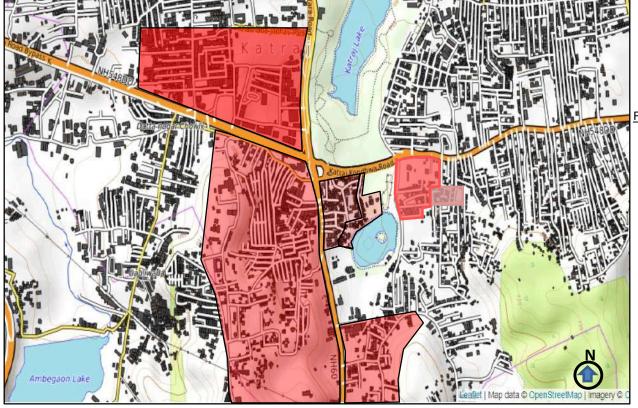
Graph showing rainfall and temperature of 12 months

SECTIONS AA'

ROAD

662M 652M 644M





MAP SHOWINH SOCIO ECONOMIC CONDITION OF THE RESIDENTS IN KATRAJ AREA

LIG 1(3-6 lakhs)

LIG 2 (6-9 lakhs)

LIG 2 & MIG 1(9-12 lakhs)

MIG 2 (12 lakhs+)



- ATTUR GOSH
- •5 FAMILY MEMBERS
- •1 EARNER
- •7TH PASS
- •LIG 1
- LAKSHMI NAIK
- 5 FAMILY MEMBERS
- •2 EARNERS
- 12TH PASS

.IG 2





Housing typology of LIG



- •2 EARNERS
- GRADUATION
- •MIG 1

SOCIO-ECONOMIC SURVEY





FLATHOLDERS IN THE UTKARSH SOCIETY





HOUSEHOLDERS NEAR LAKESIDE

- The Civic body of Pune is planning a demograpic, socio-economic and house survey of 11 villages merged in the city limits to draft the Development Plan for these area.
- The 11 villages were added to the city limits in 2017 after the high court told the state government to clarify its stand over the merger. The city limits have increased by 80.7sqm After the merger and about 3 lakhs population has been added to the city. A source said the population of •SUNITA SHRIVASTAV the 11 merged villages

•3FAMILY MEMBERS ministration's data because of growing real estate.

> Source:-Ministry of Housing and **Urban Poverty Alleviation**



SITE DELINEATION

SITE A

KATRAJ-SATARA

ROAD AND ITS

SURROUNDING

AREA – 29 HECTARE

SITE B

KATRAJ-KONDHWA

ROAD AND ITS

SURROUNDING

AREA- 24 HECTARE

SITE A:

The Study Area Includes:

- Katraj Chowk
- Mumbai Pune Bypass Road
- Swargate-Satara Road
- New Katraj Bus Depot
- Old Katraj Bus Deopot
- Vegetable Market
- Small Scale Industries to the Southern side of Katraj Lake

SITE B:

Study area includes:

- Katraj kondhwa highway
- Katraj lake
- Gokul nagar
- Utkarsh society.

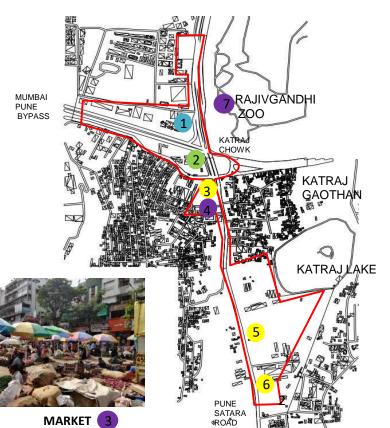
ICICI AND HDFC BUILDING 1



JSPM INSTITUTE BUILDING



KATRAJ BUS STOP



SITE A: KATRAJ –SATARA ROAD LOCATIONAL ANALYSIS

LEGEND

- EDUCATINAL INSTITUTES:
- PUBLIC SPACE:
- GOVERNMENT SERVICES:
- PRIVATE SERVICES:

Other amenities within 10 min of travelling distance from site :

- Bharati Vidyapeeth, Pune.
- Jain temple
- Wonder City
- Katraj police station.
- · Katraj post office.
- Bharati hospital.
- Also there are petrol pumps, libraries and bank atms nearby.



SANT TUKARAM SCHOOL 5



SPORTS GROUND 6



RAJIV GANDHI ZOOLOGICAL PARK

Primary roads:

The main junction comprises of:

NH 04: Mumbai-Banglore(W-E)

SH 65: Pune-Satara(N-S)

Pune – satara road reduced in width from 45m to 20m after main junction

Mumbai Banglore highway adds up with a flyover immediately To Mumbai after main junction

NH 4 incorporates BRTS corridor till Katraj Chawk

Secondary roads:

- There are mainly parallel roads to highway NH4 are secondary
- Selected area doesn't have many number of secondary traffic roads

Least and maximum traffic conditions at Katraj chowk respectively.



Morning at 06:00 am





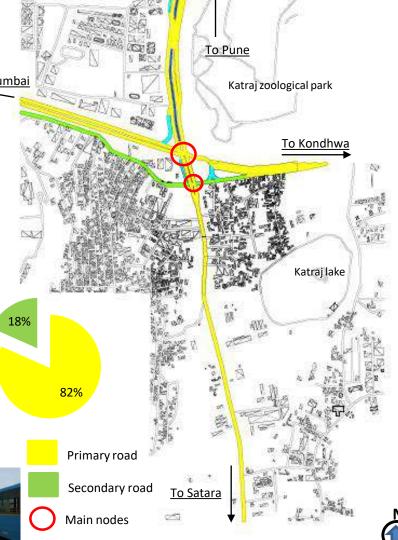
Night at 08:00 pm



Katraj pmt bus stop



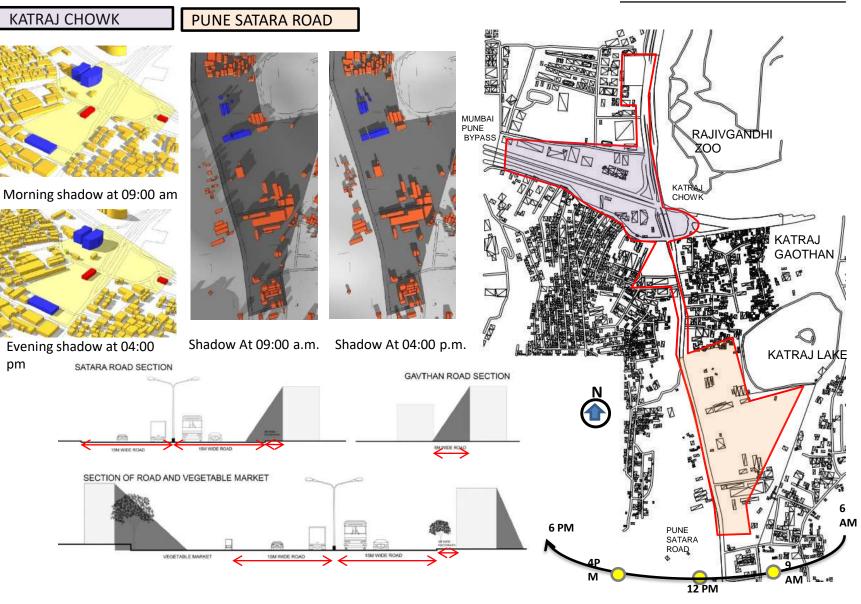
NH04

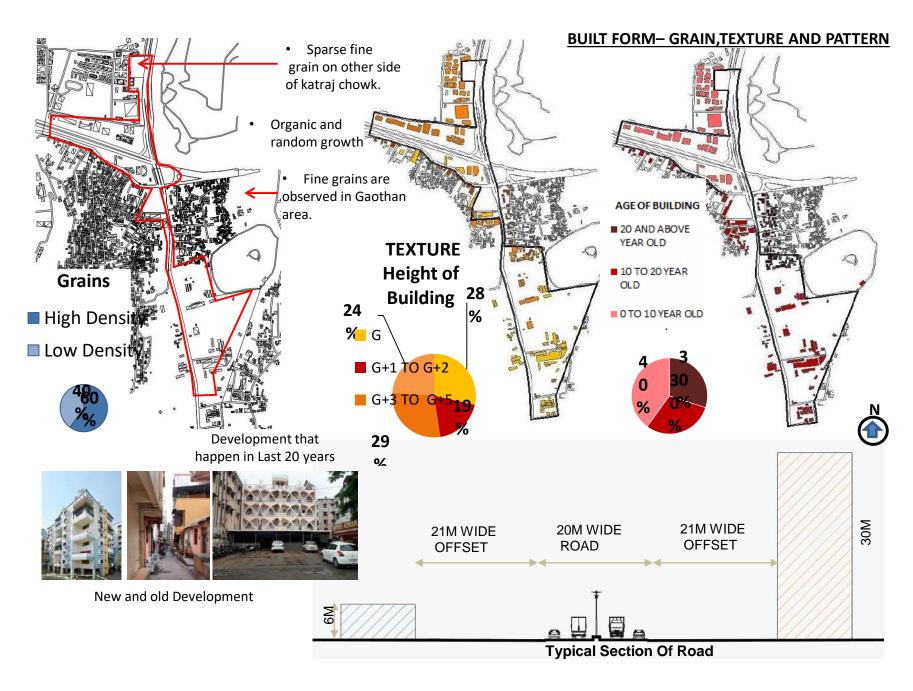


TRANSPORTATION - ROAD HIERARCHY

TRANSPORTATION – FOOTPATH ANALYSIS Footpath condition in selected area A) Footpath in good To Pune condition and in use by pedestrians B) Footpath Katraj zoological park present but To Mumbai not in use by pedestrians Katraj lake Footpath conditions in selected area C) Footpath not present 24% Footpath present 14% In use

BUILT FORM-SHADOW ANALYIS







NO.

1

2

3









Parking and food stalls ans shops on foothpath

ACTIVITY TYPE

CAR PARKIING, AUTO RIKSHAW PARKING, BIKE

BUS BOARDING POINT, BUS PARKING

PEDESTRIAN WALK, HAWKERS, STALLS

HAWKERS, SHOPPING, PARKING

VEGETABLE MARKET, HAWKERS

VEGETABLE MARKET, HAWKERS, PARKING

SEATING SPACE, FLOWER SHOP, PARKING

JUICE CENTRE, VENDORS, PEDESTRIAL WALK

JUICE CENTRE, VENDORS, PARKING

PARKING, HAWKERS, VENDORS

PEDESTRIAN WALK

PARKING, OPENSPACE

OPEN SPACE, PARKING

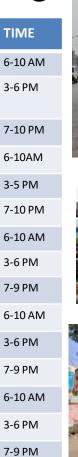
PARKING

OPEN SPACE,

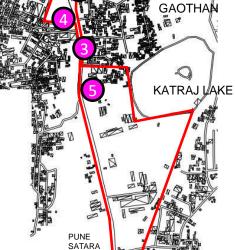
PARKING











ROAD









FLOWER SHOP AND JUICE CENTRE BELOW THE TREE



PARKING

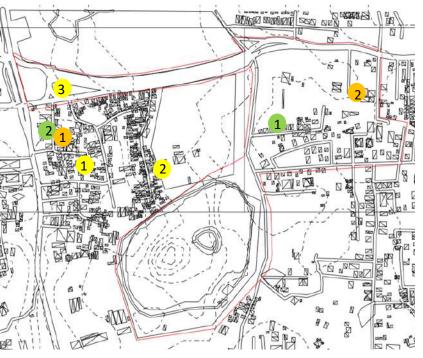
1. Synergy Preschool



K.Kaishnaji Balevantrao More Vidyalay



1. Sai Sneh Hospital



Plan showing Amenities



2. Morya Nursing Home



1. Talathi Office



2. Katraj Crematorium

SITE B :KATRAJ-KONDHWA ROAD LOCATIONAL ANALYSIS

LEGEND

- EDUCATINAL INSTITUTES:
- HEALTHCARE FACILITIES:
- GOVERNMENT SERVICES:
 Other amenities within 10 min of travelling distance from site:
 - Bharati Vidyapeeth, Pune.
 - Katraj police station.
 - Katraj post office.
 - Katraj bus stand.
 - Bharati hospital.
 - Rajiv Gandhi Zoologival Park.
 - ICICI bank , HDFC , Bank of Maharashtra, etc.
 - Trimurti garden, Aishvarya banquet hall, etc.
 - Also there are petrol pumps, libraries and bank atms nearby.



3. Katraj Old Bus Stand



Katraj Lake



2 Katraj Lake Park



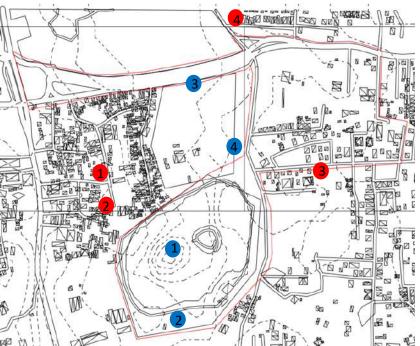
2 Open Gym At Katraj Lake Park



Vitthal Rukumai Temple



Shiv Temple



Plan showing Amenities



Shri Ganesh Temple



Panchmukhi Ganesh Temple

LOCATIONAL ANALYSIS



3 NANA NANI PARK



4 PUNYACHI PHULRANI

LEGEND

- **RELIGIOUS PLACES:**
- **RECREATIONAL SPACES:**

OBSERVATIONS:

- The amenities are also considered as major landmarks.
- Excluding the case of pollution in the katraj lake other public amneties are well maintained.
- There is no major commercial center near the site.

ROAD NETWORK AND HIERARCHY



1.Ekta chowk (Primary road)



2.Katraj Kondhwa road(Primary road)



3.Lane no.3 (Tertiary road)



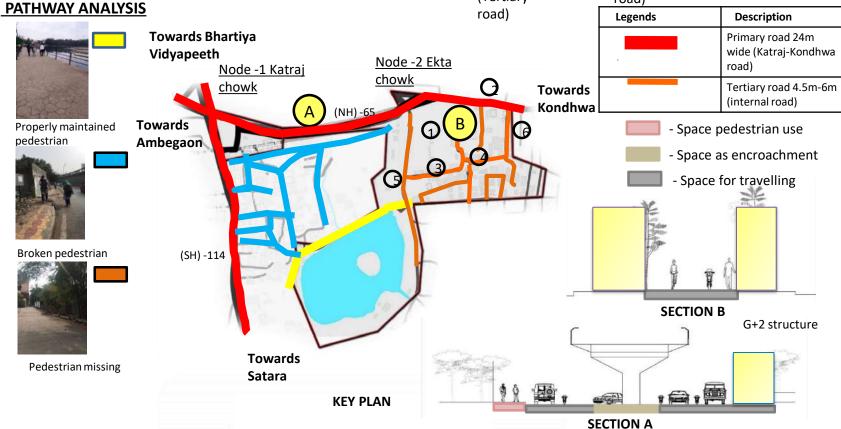
4.Utkarsha school road Content (Tertiary



5.Gujarwadi road(Primary road)



6.Lane no.7 (Tertiary road)



Towards Ambegaer Towards Ambegaer Towards Kondhwa Towards Node -1 Katraj

Node -2 Ekta chowk

chowk

1.Saint kheteshar chowk/katraj chowk



2.Ekta



2.Ekta chowk



1.Private owned road(medium permeability)



2.Rajas society chowk(high

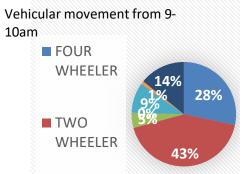


3.Internal road (low permeability)

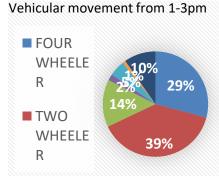
TRAFFIC AND VEHICULAR MOVEMENT

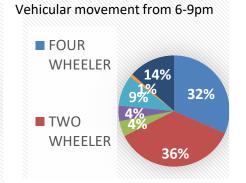
OBSERVATIONS

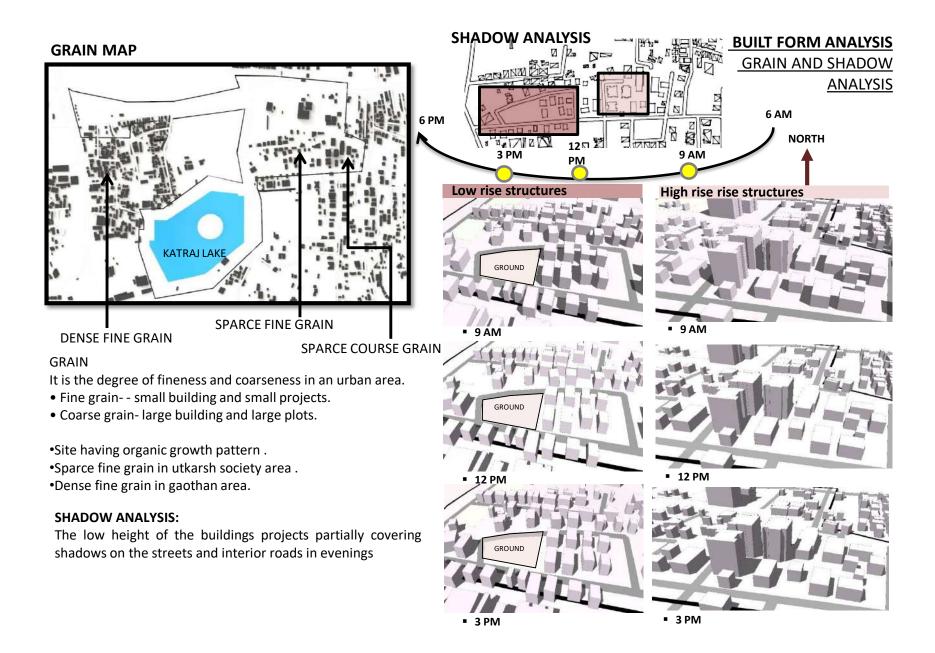
- The access to most of the bus stops is poorly maintained.
- It is difficult to cross main road.
- There is inadequate warning signage, barricading at ongoing construction projects.
- There are inadequate and unsafe pedestrian facilities along the length of the corridor.
- There is significant lack of enforcement on footpath/ cycle track encroachments and parking.
- Visible display route boards are needed.
- Vehicles are more than road capacity.



Ν





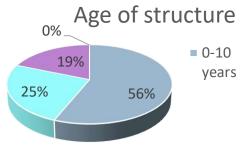


KEY PLAN

Age of buildings observed in this region is **sparsely populated** with majority of them being new construction (0 - 10 years). Some buildings having age of 10-30 years are also visible and buildings above 30+ years are very few.

Future growth of new buildings is strongly seen as the area has large amounts of open/ free space for construction

construction.



INDEX – Age of building		
Denotation Description		
		0-10 Years
		10-30 Years
		30+ Years

4% Building height 17% 23% Groun d structu re

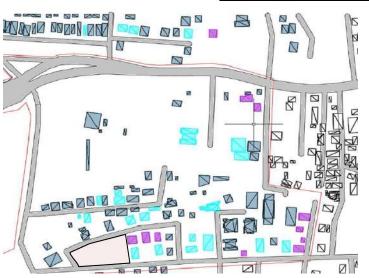
Height of buildings are clearly observed low rise ground – ground + 5 floors buildings. Highest percentage is of G+2 type followed by G type and then G+5 buildings.

Uniform texture seen in site

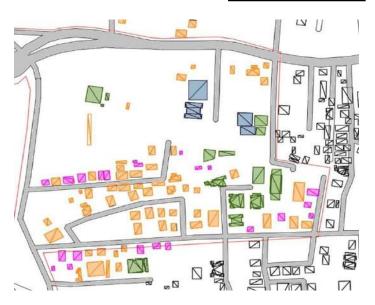
Construction of G+5 structures and above is strongly available in future at open spaces and plots that are unused till now

INIDI	TV Haial	م منامان ما کم عما	
וכועוו	INDFX – Height of building		
Den	otation	Description	
	Groun	d (G) d + 2 (G+2) d + 5 (G+5) d + 8 (G+8 abv)	

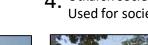
AGE OF STRUCTURES

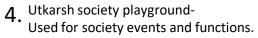


BUILDING HEIGHTS

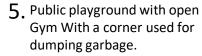


Space used for funfairs, marriage **3.** functions, events on rental basis.















6. Katraj lake









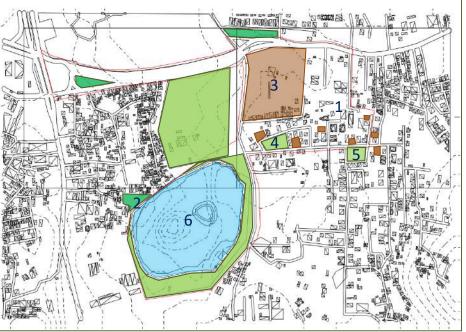


Open space around the 2. lake. Used as undefined parking.

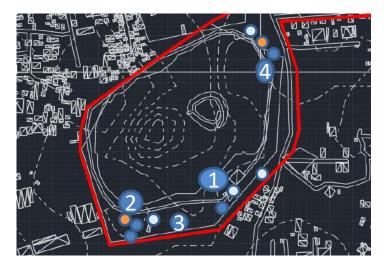


Private space in utkarsh society currently used as dumpyard





ACTIVITY MAPPING- KATRAJ LAKE



USER GROUP	ACTIVITY TYPE	TIME
0-18 YRS	JOGGING, CHILDREN PLAY AREA, SITTING, CHATTING	6-10 AM
	CHILDREN PLAY AREA, SITTING, CHATTING, SHOPPING	3-6 PM
	CHILDREN PLAY AREA, SITTING, CHATTING, SHOPPING, FOOD EATERY	7-10 PM
18-60 YRS	JOGGING, SITTING, CHATTING, TEMPLES	6-8 AM
	SITTING, CHATTING, SHOPPING, SELLING, TEMPLE	3-5 PM
	SITTING, CHATTING, SHOPPING, SELLING, TEMPLE, FOOD EATERY	7-10 PM
60 ABOVE	JOGGING, SITTING, CHATTING, TEMPLES	6-10 AM
	SITTING, CHATTING, SHOPPING, SELLING, TEMPLE	3-6 PM
	SITTING, CHATTING, SHOPPING, SELLING, TEMPLE, FOOD EATERY	7-9 PM



People visited in library to read books in afternoon and evening time



2 Amphitheatre



Besides the *Wada* is an open gym. An open gym where anyone above 10 years can go and exercise.



The Katraj Lake is bounded by jogging track of around 1 km.





Jogging track +Sitout area



Vendor sells and encroach in morning



ACTIVITY MAPPING- EKTA CHOWK AND UTKARSH SOCIETY

		
USER GROUP	ACTIVITY TYPE	TIME
0-18 YRS	CHILDREN PLAY AREA, SITTING, CHATTING	6 AM
	CHILDREN PLAY AREA, SITTING, CHATTING, SHOPPING	3 PM
	CHILDREN PLAY AREA, SITTING, CHATTING, SHOPPING, FOOD EATERY	7 PM
18-60 YRS	SITTING, CHATTING, TEMPLES	6 AM
	SITTING, CHATTING, SHOPPING, SELLING, TEMPLE	3 PM
	SITTING, CHATTING, SHOPPING, SELLING, TEMPLE, FOOD EATERY	7 PM
60 ABOVE	SITTING, CHATTING, TEMPLES	6 AM
	SITTING, CHATTING, SHOPPING, SELLING, TEMPLE	3PM
	SITTING, CHATTING, SHOPPING, SELLING, TEMPLE, FOOD EATERY	7 PM



1 Vendors outside the temple and a bench provided to sit , behind which people also park two wheelers



People Using this steps for sitting, chatting and for eating purpose



This place is use for events or for marriage purpose



Vendors Encroach across the road



Public toilet



People park vehicles under the bridge



People using this shed for sitting and chatting in afternoon time

ISSUES IDENTIFICATION: PARKING CHARACTERISTICS



1. Private vehicles to receive/sendoff visitors



2. Vehicles of mixed use and varying capacity were seen



moving towards katraj chowk



2.Rickshaws on either side of road 3.Temporary parkings of two wheelers seen outside playschools



4. Permenant parking of mixed type seen used only by residents



5. Trucks for loading/and Unloading for factory part

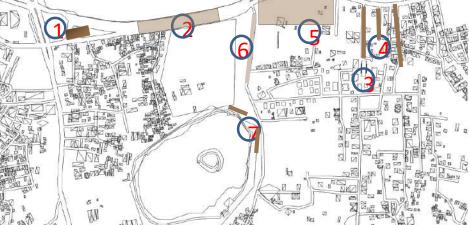




open plots



6. Trucks and other transport 7. Major parking consisted of two vehicles were seen parked in wheelers parked on roadside which was temporary yet consistent throughout the day



- Parking causing traffic congestion on roads



- Parking supporting the heavy vehicular movement



AREA ANALYSIS OF CANAL NEAR KATRAJ SITE- ISSUES

The space at nana-nani park is not used by a lot of public

There is a dumping point at that point which leads to foul smell

The public toilets is not visible from outside and is not in use.





The nala built in front of the lake is polluted with





The spaces such as Ghats are not in use as it was proposed during the development of lake point, also there is no maintenance of the space







MAP OF AREA UNDER CONSIDERATION





The canal near the lake is seen polluted and flooded during the rains due to improper management by the people living nearby.



No proper pedestrian safety for people waking on the walkway around the lake





There are a lot

of residential spaces just touching the nala these places have to deal with foul smell of the nala.





This road which travels above the canal sees a lot of congestion is seen flooded during the rainy





The built and unbuilt spaces near the lake • is being misused by the people living there.



The sewage that is present in the lake near the drainage pipeline

SWOT ANALYSIS

	STRENGTH	WEAKNESS	OPPORTUNITIES	THREATS
•	Katraj Chowk Act As A • Main Junction Of National Highway And Also Major Road	The Increasing Number Of Vehicles, Leading To Traffic Congestions.	 Katraj Is The Face Of City From The Southern Side Therefore Has Scope In Gaining Any Kind Of Space 	Along With Congestion There Are The Auto Rickshaws And The Truck Drivers That Drive
	Network That Is Pune- • satara Road.	The Road Width, At The Intersection, is has not been designed as per the	Identity.	Very Rough, Risking The Traffic As Well As Pedestrian Movement
•	Good Connectivity With Pune, Mumbai,	Increasing Traffic Demand and volume.	Pune Municipal Corporation (Pmc), Cummins India,	Around.
	Satara And Bengaluru. •	People Avoid Using	Swach, Waste Pickers And • Other Stakeholders To	Garbage In Open Generates Unhygienic
•	Surrounded By Major Landmarks Zoological Park, Katraj Dairy,	Facilities Like Pathways, Public Parking, Public Toilets Due To	Establish A Zero Garbage Ward In Katraj.	Conditions In Surrounding Areas.
	Katraj Bus Stop, Intercity Bus Stop Etc.	Encroachment, Damage Of Property And No Proper Maintenance.	 Road Development Can Boost The Growth In Transportation As Well As In 	Less Road Width Even At Critical And Emergency Points Such As In Front
•	Acquire All Daily Need Products, From Food •	There is a problem of	Commercial And Residential Sector.	Of Hospital Which May Create Any Critical
	To Clothing, Market Area And All Other Amenities Within The	Water logging in Rainy Season, due to the haphazard growth of the		Condition.
	Same Area.	Katraj Gaothan.		

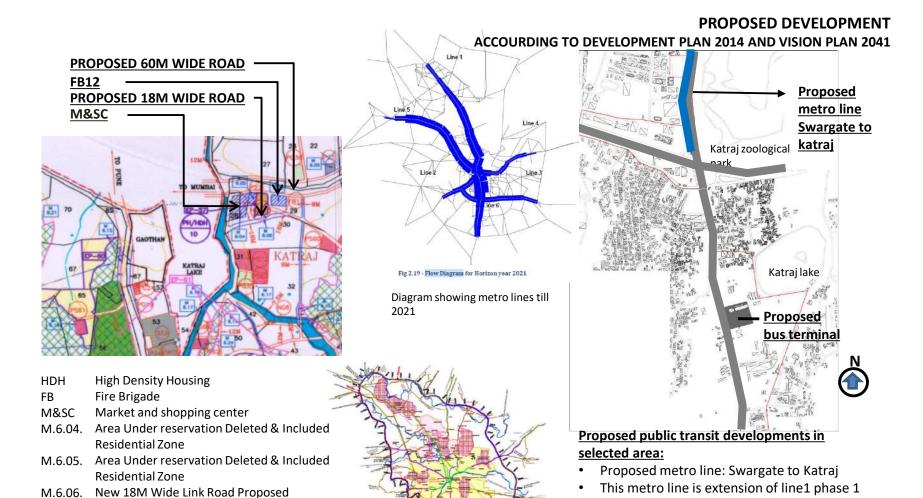


Diagram showing Proposed ring Proposed ring around Pune city eliminates• traffic travelling from core of city

M.6.19. New Reservation FB-12 Proposed

Proposed road widening along both NH04 and SH65: 60M road(proposed)

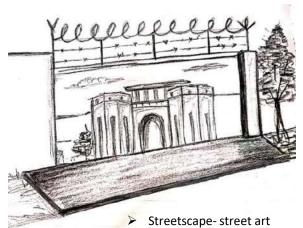
This covers the distance 7km elevated and 5km under ground on route agriculture

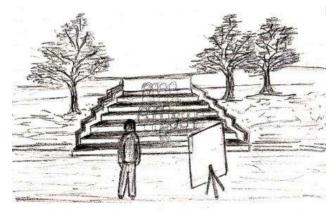
college to Swargate to Katraj via Shivaji road

metro

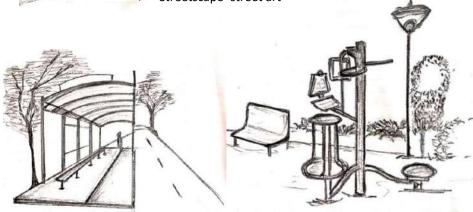
AREA LEVEL PROPOSALS

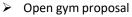
- 1. Redevelopment and development of identifiable activity nodes.
- 2. Development of transition zones which provides a distinct edge.
- 3. Strengthening the street intersections and other key strategic areas. (CORNER REINFORCEMENT)
- 4. Creating underground utilities, drains to be proposed underground.
- 5. Enhancing the pedestrian corridors with creation of view and vistas. (THROUGH STREETSCAPING)
- 6. Enhancing the public space for leisure and social activities. (KATRAJ LAKE)
- 7. Promoting the site on the guidelines of universal design. (BARRIER FREE)
- 8. More green and landscape elements needs to be injected in the area.

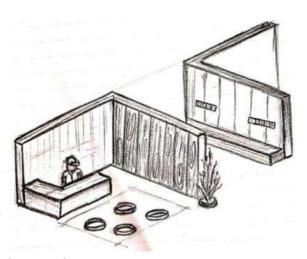




Night school for poor.







> Small food hub under bridge with a sitting space where one can also charge their appliances.

➤ Bus stop – aesthetic need & basic need

ZONE LEVEL PROPOSAL

1. Rehabilitation of Katraj Bus Terminus

2. Rehabilitation of vendors market

WHY BUS TERMINAL?

- Main problem faced at katraj and adjacent chowk is traffic.
- Improper bus, rikshaw and pedestrian movement are the main causes of traffic at chowk.
- As bus stop is located near to chowk, due to which other vehicular movement also get disturbed.
- Due to less capacity of that junction to withhold such major activities also results in congestion.
- Scope for proposal ,as Development Plan of 2014 proposed bus terminus on site

WHY VENDORS MARKET?

- Mandai was developed in a organic form near the chowk which itself creates chaotic condition on roads.
- Pedestrian movement was not in planned and safe manner which affects adjacent road traffic.
- As it is observed from analysis that Katraj and nearby area is commercially developing, which creates more scope proper market for better traffic conditions.
- Also by observing current condition there is need to relocate or rehabitat that Mandai from that place to make that junctions chaos free.
- Scope for proposal, as Development Plan of 2014 proposed Mandai and Market in Katraj

SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE, PUNE

STUDY TOUR REPORT KHOPOLI, MAHARAHTRA

by Fourth Year B. Arch. Division C

2nd January, 2020



DEVELOPMENT PLAN OF KEOPOS.I



Proposed Development plan

Program

- Selection Criteria:
- 1. The main objective was to identify the evolving urban center's on the main linkages from Pune to Urban cities having Municipal Corporation of B and C class
- 2. The linkages identified were:
- a) Pune- Mumbai.
- b) Pune-Kolhapur.
- c) Pune- Nagar.
- d) Pune- Nashik.
- 3. Based on these objectives 5 towns were identified.
- a) Karad.
- b) Shirur.
- c) Sinnar.
- d) Khopoli.
- e) Poladpur.
- 4. These towns were further studied based on the RCVP parameters:
 - R:-Resources.
 - C- Constraints.
 - V- Vulnerability.
 - P- Potential.
- 5. Parameters of study:
- a) Chronological evolution.
- b) Morphology and urban form.
- c) Ecology environment.
- d) Lynch map.

PARAMETERS	KHOPOLI	SINNAR	KARAD	SHIRUR
1.) LANDUSE		Preferred mostly for industrial township	Important educational hub in western maharashtra.	Educational and commercial hub
2.) SOCIAL:-			,	
CULTURE	Known for rich culture and traditions.	Known for rich historical culture	Known for sugar production and also as sugar bowl of Maharashtra.	Rich historical and cultural reference
LIFESTYLE		Mediocre lifestyle due to population from working class	Mediocre Lifestyle.	Simple lifestyle, working class people
FESTIVALS	Ganeshotsav	Gudhipadva ,chaitragaur,Ganeshostav, ramnavmi	Ganeshotsav	Ganeshotsav, ramnavmi, holi, etc.
SAFETY AND SECURITY	Loss or theft during festivals due to large crowds.	Theft of machine and selling them in blackmarket		
POPULATION	 71,141 21.3%growth. 13%under age 6. 	Total population -3,46,390 Males – 1,80,001 Females- 1,66,389 Age 0-6 -45,442	*20,476 • Male – 10,537 ; Female – 9.939 *12.23% under age 6	Totia population: 385,414 Sex ratio: 52:48
LITERACY	88%	71.84%	79.5%	80%
SEX RATIO	907 females per 1000 males	Urban- 885 Rural – 934	952 compared to 929 which is average of Maharashtra.	52:48
CITY LEVEL EVENTS	Performances of Dindi and Tamasha folk dances during Ganesh Chaturthi.	Performances during ganesh festival Music events and sula fest nearby	Performances during ganesh festival and Yashwantrao Chavan Agricultural, Industrial and Cattle show.	Celebration of mahashivratri, and mainly the ganesh chaturti, holy festival of aashadhi ekadashi.
3.) ECONOMY:-				
ECONOMIC BIFURCATION(PRIMARY, SECONDARY TERTIARY)		The city economy is driven mainly by engineering and manufacturing industry as well as advanced agricultural in surrounding city.	Taswade MIDC boasts many industries giving employment to people in the city.	Mainly the city economy is agriculture and its MIDC
TRADE AND COMMERCE		Igatpuri nashik sinnar investment region is an important node in the us dollar 90 billion delhi Mumbai industrial patch		
FARMING	Total 11 farms.	Abandunt farming of sunflower seeds , grapes and sugarcane		Agriculture is one of the primary economy in shirur. Crops include sugarcane, bajra groundnuts, and pomegranates.
SERVICE INDUSTRY	36%	80 %		78%
4.)ECOLOGY:-				
FLORA	Rare species along hilly paths.	Some rare medicinal species		Rare trees are observed
FAUNA	Rare species along hilly paths.	Taras, jackal, khokad , chowsingha, dukkar ud manjar, sambar, khar, mongoose, monkey, jalmanjar		
TERRAIN TYPOLOGY	Situated at the foothills of sahyadri ranges.	Vast stretches of flat land suitable for townships		Located in the rain shadow area of sahyadris.
NATURAL FEATURES	Bhor ghat, Rajmachi point, Tiger's leap. Zenith waterfalls, Kalote lake. (Picnic spots)	Gondeshwar lake Kumbhar lake Lake padali	Preeti Sangam. Naktya Raviyachi Vihir. Late Yashwantrao Chavan's Samadhi.	Potholes near nighoj,,
5.) ENVIRONMENT:-				
BUILT TO UNBUILT RELATIONSHIPS	Residential spaces with view.	Residential spaces to provide comfort for foreign people settled for work		Residential area is increasing due to migration.
NATURE TO MANMADE RESPONSE AND VICE VERSA	3BHK and 5BHK private villas with river view. Apartments with mountains view.	Industrail townships for major companies like BOSCH		Growth of MIDC and agriculture is simultaneous.
6.) INFRASTRUCTURE:-				
WATER	4.42% water supply from all over Raita district to Khopoli. (MLD) Supply from Patal Ganga river. Private water suppliers available.	Adequate water supply from MIDC Malegaon Consumption 1500 cubic metre per day		*Ghod river watr is supplied by nagarpalika filtration plant at hudco colony.
ELECTRICITY	Supply from MSEB Khopoli. No load shedding as such.	MSEB has 2 sub station in STICE area Another sub station in musalgaon	Supply from MSEB Karad.	The electric power house is located at pabal phata. Main line is from lonikand.
SANITATION FACILITIES				
ROADS, RAILWAYS	Mumbai – Pune Expressway. NH-4, NH-66 very good in terms of maintenance. State highways fairly maintained. Central Railway connecting Mumbai – Goa, Mumbai – Pune via Panvel. No direct connectivity to central railway.	Sinnar railway station (10 km) Lahawit railway station (near baghur) Nashik roa railway station (near nahik) By road-sinnar, baghur, sangamner, nashik have good road connectivity Near by airport – Gandhinagar (34km) Ozar(33 km)	NH-48 goes through the city. Railway station - 4 km from city. Near by station - Miraj 72 km Nearest Airport - Pune Airport.	*Kopargaon-shirdi-Ahmednagar-pune highway. *Beed-Ahmednagar-pune highway *Parner-pune highway. *Railway station is at kedgaon. *Bus stand facility is available *Road connectivity is good.
7.) INSTITUTIONAL:-				
EDUCATIONAL	Primary and secondary schools. Junior and degree colleges.	Primary and secondary schools. Junior and degree colleges.	Primary and secondary schools. Junior and degree colleges.	Primary and secondary schools. Junior and degree colleges.
FINANCIAL	Banks, loan agencies, financial consultants.	Banks, Ioan agencies, financial consultants, ATMs	Banks, loan agencies, financial consultants, insurance services.	Banks, Ioan agencies, financial consultants, ATMs
MEDICAL	Clinics, microsurgery centres, nursing homes and government and private hospital	Clinics, microsurgery centres, nursing homes and government and private hospital	Clinics, microsurgery centres, nursing homes and government and private hospitals.	Clinics, microsurgery centres, nursing homes and government and private hospital

Khopoli, Maharashtra, India

Location of Khopoli:





Location Map of 6 major cities from Khopoli

_ocation:

Khopoli is an industrial city in the Khalapur taluka of Raigad fistrict, in the Indian state of Maharashtra, at the base of the Sahyadri mountains.

It is situated at about 61 m above mean sea level

History:

Khopoli was called Campoolie dring he British Raj.

A colonial source describes Khopoli is follows:

"At the foothills of Bhor gha t stands he small and romantic village of Campolee, which has a noble tank ppertinent and a hindu temple, both uilt by Nana Furanvese (the 'eishwa's prime minister) at his idividual expense.

Khopoli is the site of the first Antely owned hydroelectric power ation India built by Talas



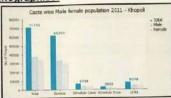
Bhor Ghat



· Governing body:

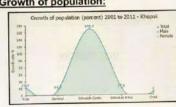
only municipal council located in Khalapur sub district of Raigarh district in the state Maharashtra in India.

Demographics:



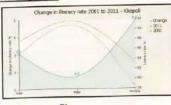
Male Female populations 2011 - Khopoli

· Growth of population:

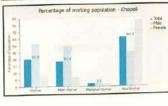


Growth of Population (percent) 2011 - Khopoli

· Literacy rate:

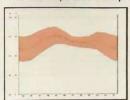


·Workers profile:



•Climatic conditions:

Khopoli Municipal Council, is Khalapur sub district's The climate is tropical in Khopoli. There is significant rainfall in most months of the year. The short dry season has little effect on the overall climate. The average annual temperature in Khopoli is 26.8 °C. The rainfall here averages 4187 mm.

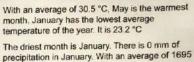


Khopoli Average Temperature

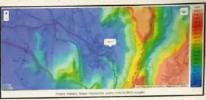
Connectivity:

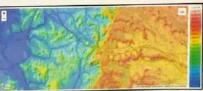
Khopoli Industrial Area is located on the Mumbai - Pune Express Highway. NH-4 Mumbai - Bangalore highway also passes through Khopoli. It has good connectivity by road and rail. The nearest Air Port is Mumbai and the nearest Port is JNPT.

Mumbai: 80 Kms. JNPT: 64 Mumbai Airport: 78 Kms. Pune: 83 Kms.



mm, the most precipitation falls in July.





Topography of and around Khopoli

- Khopoli Freehold Industrial Area situated near NH-4 The Government of Maharashtra has declared Khopoli - Pen Road, Khopoli - Patalganga Road and Khopoli - Pali Road in Industrial
- · Industrial infrastructural facilities like electricity, water, roads, Manpower & telecommunication
- •There is no water scarcity as the requirement of the industries is taken care by Morbe Dam, Pavana Dam & Patalganga River,
- •There is no CETP in Khopoli. Industries have installed their own ETP Plants for the treatment of
- Good residential accommodation is available for labours and managerial staff in Khopoli. Senior management and directors prefer to stay in Navi Mumbai or Mumbai.
- Electricity Infrastructure: Supply from MSEB Khopoli.
- Natural features: Bhor ghat, Rajmachi point, Tiger's leap. Zenith waterfalls, Kalote lake. (Picnic
- Farming: total 11 farms.
- City level events: Performances of Dindi and Tamasha folk dances during Ganesh Chaturthi.



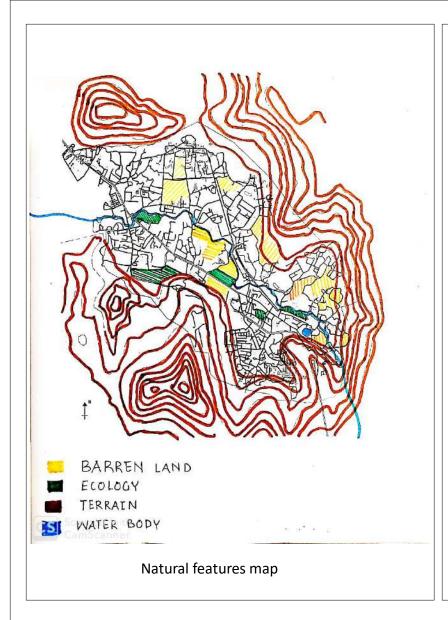


Name of students & faculty

- Faculty:
- 1. Ar. Anuja Inamdar.
- 2. Ar. T.B.Shinde.
- 3. Ar. Nidhi Shand.
- 4. Ar. Saurabh Agashe.
- 4th Yr. B.Arch. Div: C.

 K. Shounak. K. Kshitija K. Ravisha K. Sagarika K. Saurabh. L. Bhakti L. Shrenik L. Mahesh L. Mohammed L. Prajal L. Diva 	19. N. Ashish 20. N. Shashank 21. N.Aditya 22. N. Chinmay 23. P. Sujit 24. P. Siddhata 25. P. Shwetali 26. P. Mansi 27. P. Shriyash 28. P. Bonykumar 29. P. Akashy
	25. P. Shwetali
8. L. Mahesh	26. P. Mansi
9. L. Mohammed	27. P. Shriyash
10. L. Prajal	28. P. Bonykumar
11. L. Diva	29. P. Akashy
12. M. Pournima	30. P. Geetesh
13. M. Shrushti	31. P. Shreeya
14. M. Yash	32. P. Tejas
15. M. Nakul	33. P. Dipali
16. M. Sameera	34. P. Swarada
17. M. Shubhangi	35. P. Ajinkya
18. N. Saniya	

36. W. Shweta 37. O. Shivani 38. I. Madhura 39. M. Sulabh





- Climatic conditions and natural features:
- Khopoli lies 81 m above the sea level.
- Tropical type of climate.
- Average annual temperature: 26.8 deg. C / 80.3 deg F
- Average rainfall: 4187 mm per year.
- Sloped sheet roof coverings are used due to heavy rainfall.
- Natural Features:
- 1. Bhor Ghat.
- 2. Rajmachi point.
- 3. Tigers leap.
- 4. Zenith waterfall.
- 5. Kalote lake. (Picnic point)

• History:

- ➤ Khopoli was called Campoolie during the British raj.
- > Then a colonial source describes as follows:
- At the foot hills of Bhor ghat stands the small and romantic village of Campoolie, which has a noble tank and a hindu temple, both by Nana Furnuwees at his individual expense.
- Khopoli is the site of the first privately owned hydroelectric power station in India built by Tata's.

• Politics:

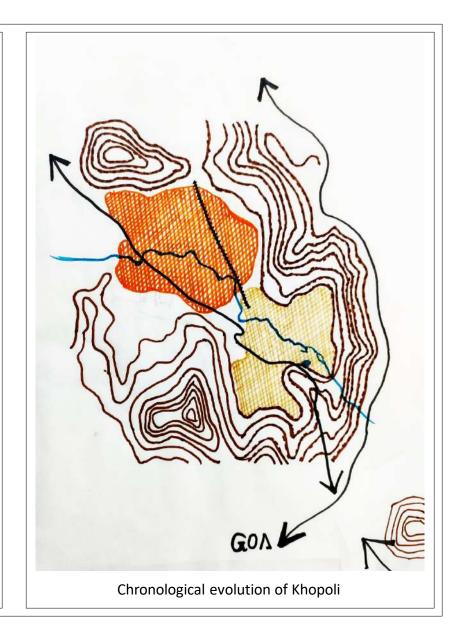
 Governing body: Khopoli municipal council, is Khalapurs Sub districts only municipal council located in Khalapur sub district of Raigad District in the state of Maharashtra.

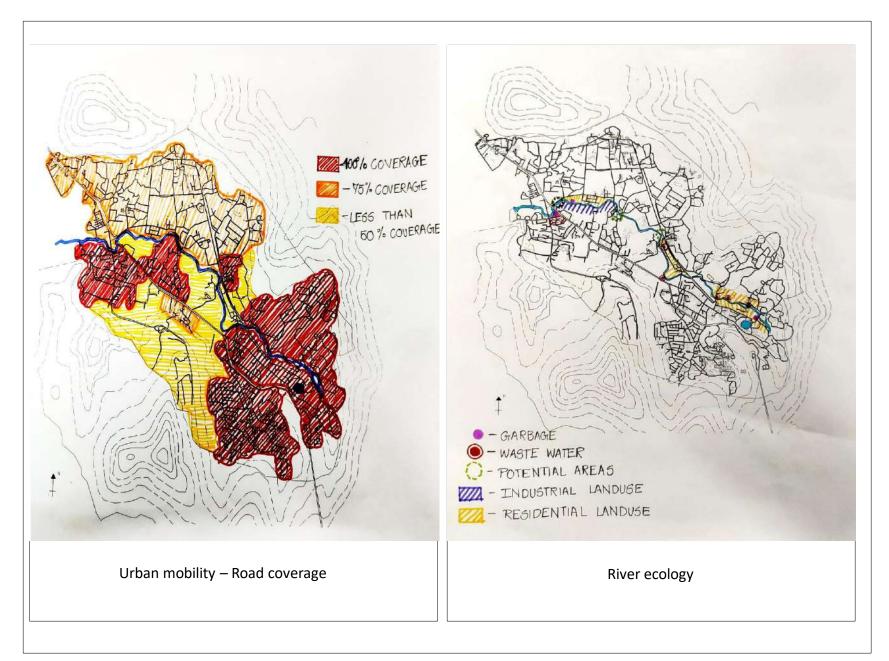
• City level events:

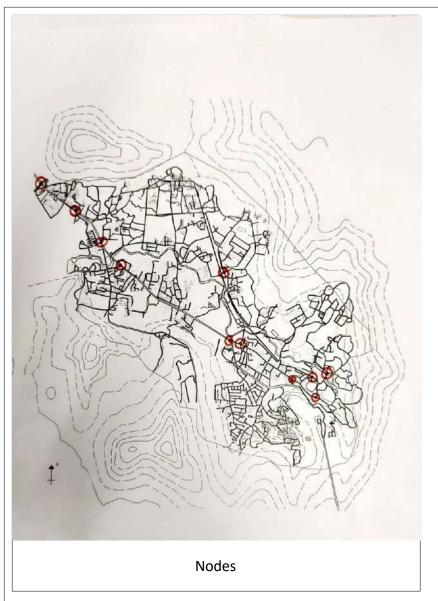
• Performance of Dindi and Tamasha folk dances during ganesh chaturti.

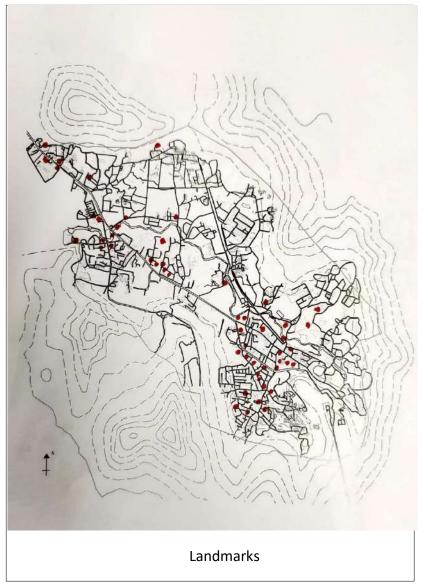
• City Connectivity:

- Khopoli industrial area is located on Mumbai-Pune express highway.
- NH4 Mumbai Bangalore highway also passes through Khopoli.
- Has good connectivity by road and rail.
- The nearest airport is Mumbai 78 km
- the nearest port is JNPT-64 km.
- Mumbai: 80 Km
- Pune- 83 km.

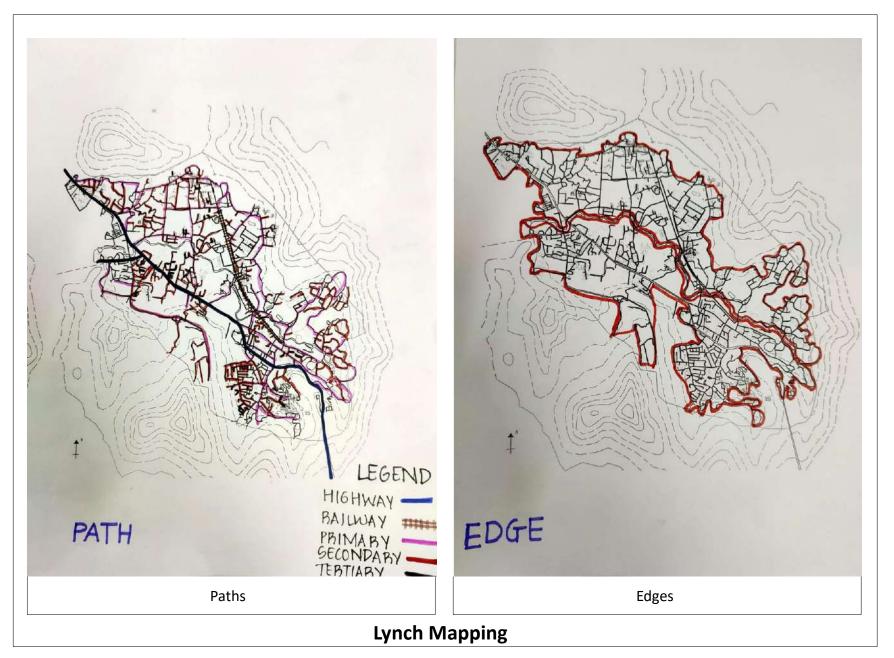


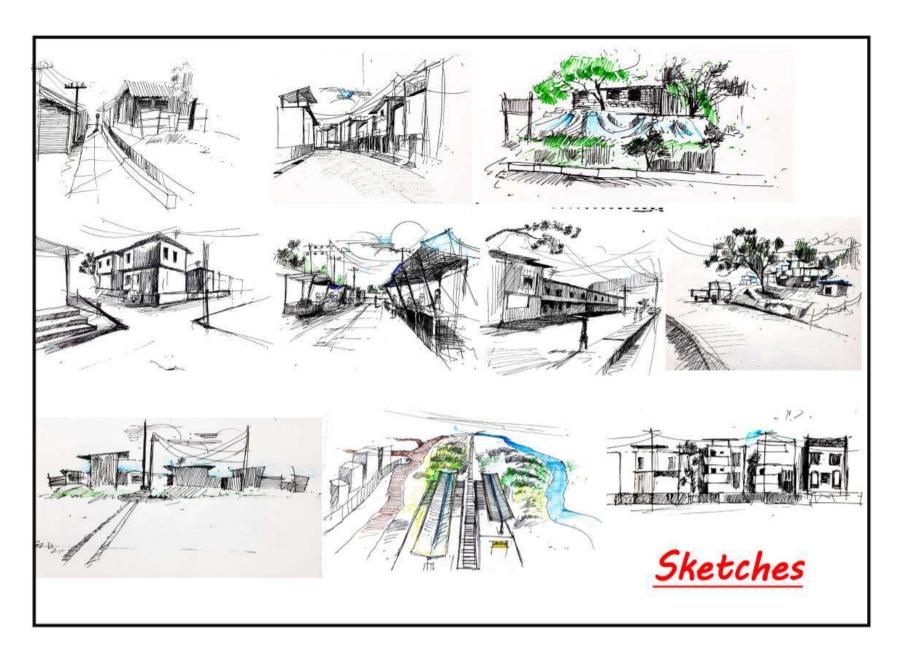


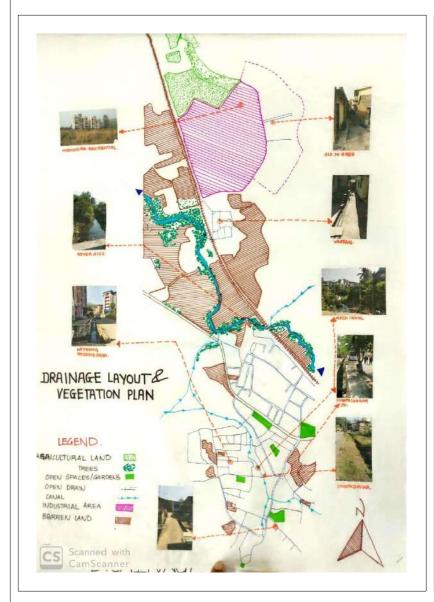


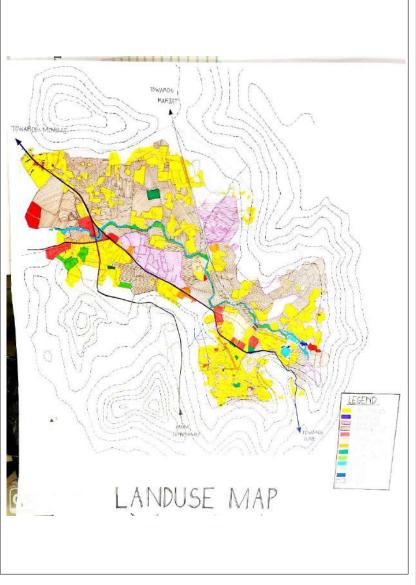


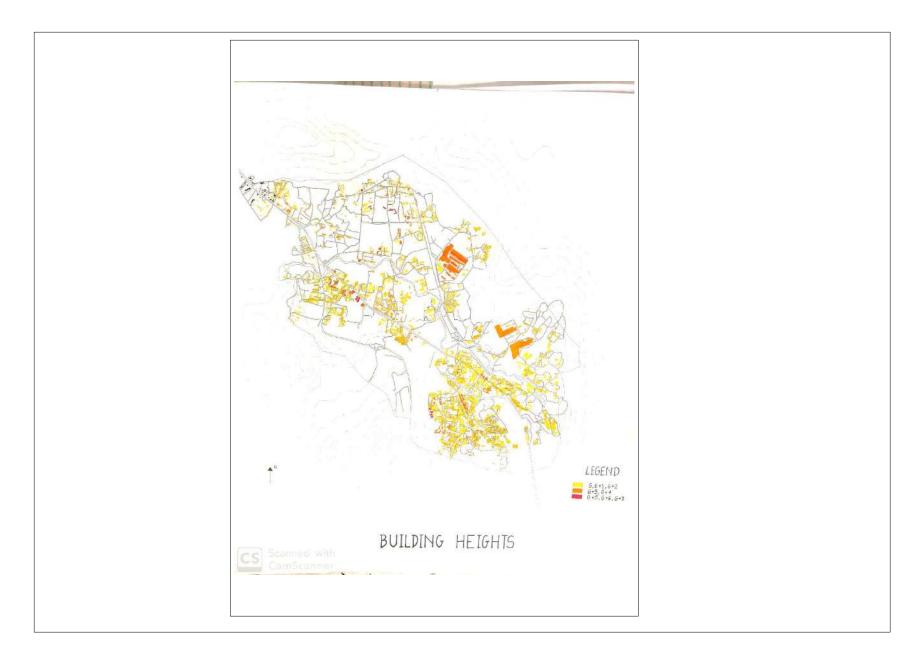
Lynch Mapping

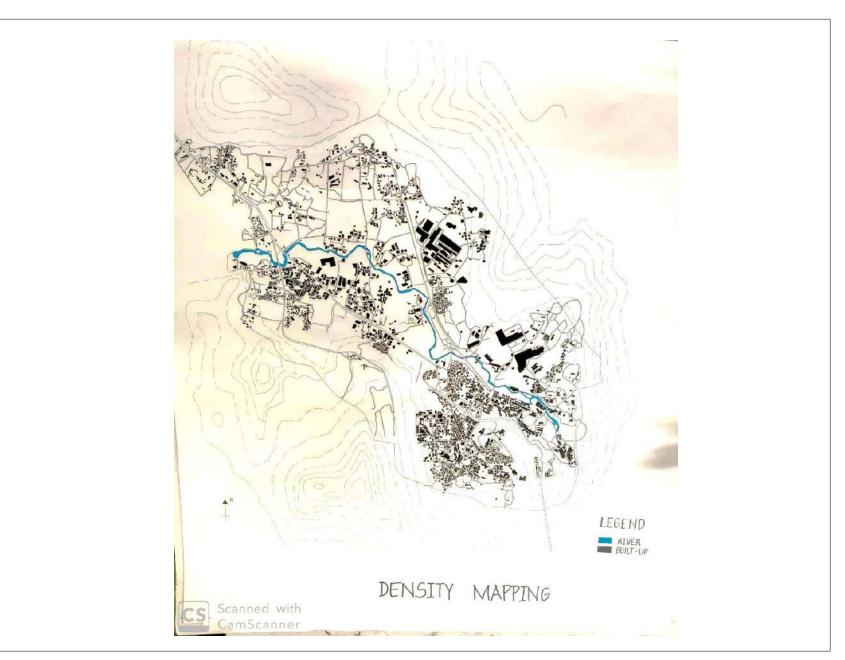


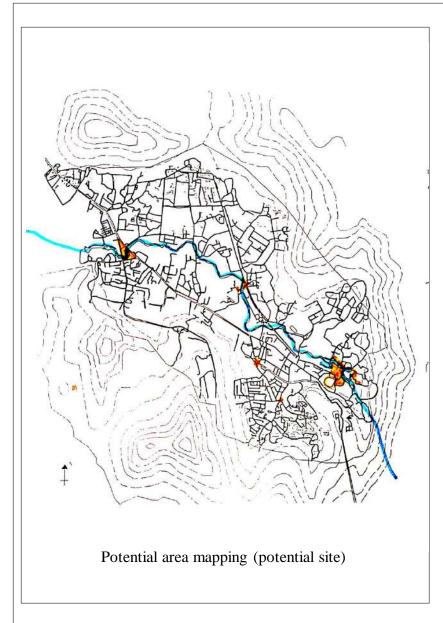








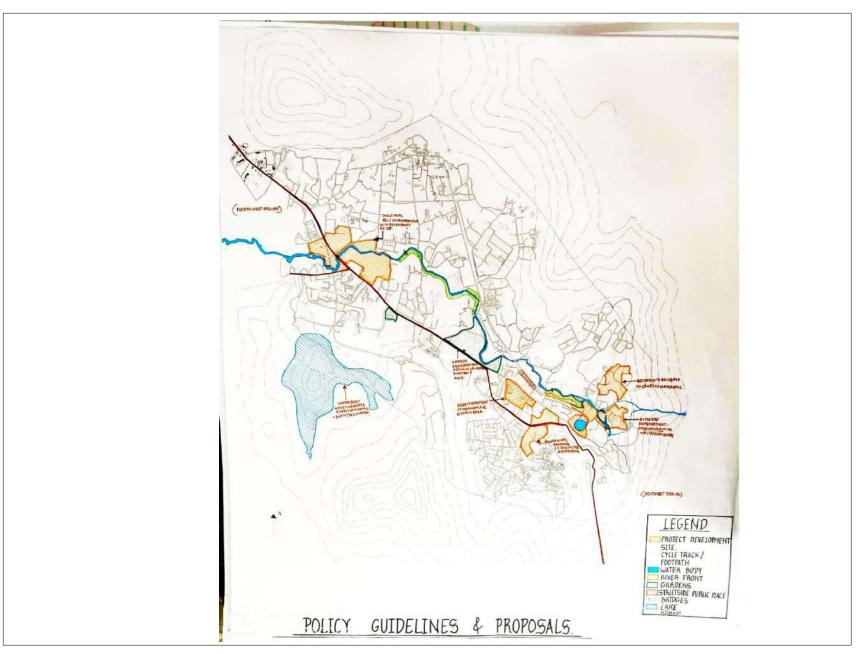




Site selection and project selection parameters;'

- R:-Resources.
- 2. C- Constraints.
- 3. V- Vulnerability.
- 4. P- Potential.
- **5. Lynch map:** edge, path, node, landmark, district.
- a) Mobility:
- Path.
- Node.
- Place making
- Junction design and node design.
- Street design interventions.
- b) Ecology:
- Edge.
- River
- Terrain
- Accessibility.
- Visual / physical connect.
- Activity.
- Human interface
- Abuse / celebration?
- c) District:

Potential area.



SINHGAD TECHNICAL EDUCATION SOCIETY'S SINHGAD COLLEGE OF ARCHITECTURE, PUNE

STUDY TOUR REPORT

Navi Mumbai by Fourth Year B. Arch. Division D

6^{th,7th} December 2019





WE, THE STUDENTS OF THIRD YEAR DIVISION D ARE EXTREMELY GRATEFUL FOR ORGANIZATION OF A STUDY TOUR TO HYDERABAD AND PROVIDING THEIR EXPERTISE ON THE TOPIC TO OUR

DR. BANANI BANERJEE MA'AM

PRINCIPAL

DR. PRIYAMVADA CHITALE, MA'AM HEAD OF THE DEPARTMENT

WE ARE ALSO THANKFUL TO OUR DESIGN FACULTY FOR THEIR INPUTS AND FOR THEIR HELP IN UNDERSTANDING THE DESIGN BRIEF FOR THE SEMESTER,

AR. NEHA ANWANE AR. PRIYANKA CHAVHAN AR. ALOK KOTHARI AR. ABHIJEET KONDHALKAR $_{\it DESIGNTEAM}$

LASTLY, WE WOULD LIKE TO EXPRESS OUR GRATITUDE FOR THEIR CONTINUOUS GUIDANCE WHILE WE WERE IN NAVI MUMBAI AR. PRIYANK A CHAVAN AR. GAYATRI BANKAPURE AR. SEJAL DESARDA ACCOMPANYING FACULTY

STUDENTS NAME

- 1. NAINWANI JATIN
- 2. RANDHIR ABOLI
- 3. RANE ARCHITA
- 4. RAO SHRUTI
- 5. RATHI OMKAR
- 6. SABOO YUKTI
- 7. SALUNKE RUCHIKA
- 8. SALUNKHE INDRANI
- 9. SALVI OMKAR
- 10. SANGAMWAR GAURI
- 11. SHAH KRISHA
- 12. SHELAR SAURABH
- 13. SHENDKAR ESHA
- 14. SHETH DARSHANA
- 15. SHEWALE RUTUJA
- 16. SHIKALGAR NAVED

- 17. SHINDE RACHITA
- 18. SHIVTARE NIKHIL
- 19. SOLANKE DINESH
- 20. SUBANH HIMANSHU
- 21. TAMHANE POONAM
- 22. TARE SHAUNAK
- 23. TENDULKAR HIMANI
- 24. TULSANI PRATEEK
- 25. URUNKAR ATHARVA
- 26. VAZE ANUSHRI
- 27. WAGHMARE RENUKA
- 28.YADAV MRUNMAYEE
- 29. ZILPE ADITI
- 30. THAVRE RUSHABH
- 31. RAJPOOT CHETAN
- 32. SHETE ANGAD
- 33. SHINDE SACHIN
- 34. SHIRSAAT SUNJEEJ KUMAR
- 35. SONAR ASHUTOSH
- 36. TAMBE SANKET
- 37.SHEWALE YASH
- 38. SHINDE HANASHREE
- 39.WADHANE SAURABH

MUMBAI AND NAVI MUMBAI:



- · Mumbai is the financial capital of India
- As Mumbai has grown over last few decades
- Every time the city got more overcrowded, the municipality just extended the city limits further northeward.
- Population of Navi Mumbai kept on increasing hence idea of a new area connecting Mumbai and turning its north south structure into polycentric structure came into existence
- In 1970 navi Mumbai was proposed.

NEED OF NAVI MUMBAI:

- To reduce the growth of population in mumbai city by creating attractive urban centre which will absorb the people who will otherwise go to mumbai
- Attract some of the mumbai's present population so that overall population of greater mumbai can be contained in manageable limit.
- To provide physical & social services, raising the living standard.

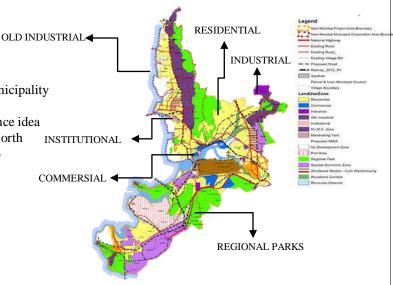
CHARLES CORREA:

- Charles Correa was an indian architect, urban planner and activist.
- He was well known for use of traditional methods and materials.
- Architecture is a three-legged stool : climate, technology and culture. together they generate the building CHARLES CORREA

INTRODUCTION PLANNING OF NAVI MUMBAI:

- The prominent authors of the twin city concept were Charles Correa, Pravina Mehta and Shirish Patel who presented to the government a proposal in 1964 for constructing new growth centers across Bombay harbor on the mainland.
- The site that was finally chosen was across the harbor from Bombay island.
- It is a narrow piece of land bounded by the Western Ghat mountain ranges on the north, south and east, and the Arabian Sea on the west.
- There were two key aspects to be dealt with:

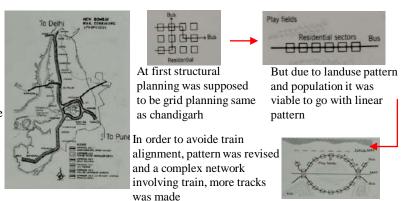
creating living space and setting up mass transport systems.

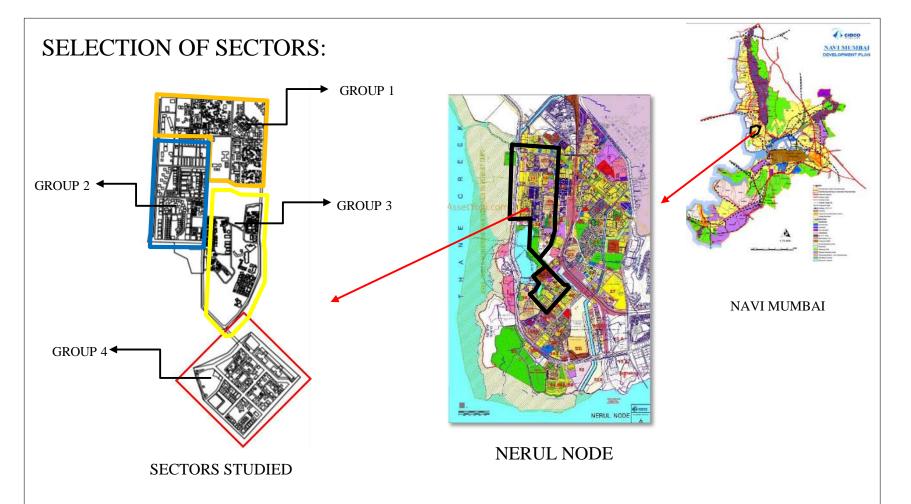


PLANNING OF NAVI MUMBAI:

- Navi mumbai covers area of 344sq km
- To avoid mumbai like situation caused **by monocentric development** they adopted **polycentric nodal pattern** of development.
- This avoids concentration of population at one area and there is proper distribution of residential areas, institutional areas, commercial zones, industrial areas, regional parks, etc.

STRUCTURAL PLAN:





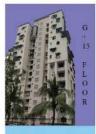
REASONS BEHIND SELETION THE SITE:

- 1. The site is situated around a residential and commercial zones.
- 2. SEAWOODS is the major commercial landmark it was the main attraction point in selection of the site
- 3. Jewel of navi Mumbai is situated near the site which is the major tourist attraction point

SITE AND SECTORS:

- 1. GROUP 1: sector 6 (sarsole village), sector 8, sector 10, sector 12
- 2. GROUP 2: sector 16, sector 18 (DRS), sector 18 A
- 3. GROUP 3: sector 20, sector 22, sector 28
- 4. GROUP 4: sector 40, sector 42, sector 42A, sector 38

BUILDING HEIGHT AGE AND OWNERSHIP STUDY





GFLOOR

GH FLOOR

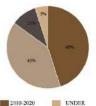
The area under study are 3 sectors of navi mumbai viz. sector 14,16 and 18A these sector have a small village in itself which is landmark for surrounding area.

The sectors have low income group population to high income group they are bounded and divided into sub areas through tertiary roads.

The settlement in this area started from 1990 and some areas of the area are still under construction.



The area started to grow as low income group with small housing societies within 30years tenure. Low income group settled at first place with housing societies growing up at the mid period and within last ten years the village is developed in the area. Also some of the new housing are still being constructed in the area.



2000-2010 CONSTRUCTION
1990-2000 GREEN SPACES



OWNERSHIP MAP N

OWNERSHIP PIE CHART

PRIVATE CENTRAL

LOCAL TRUST

STATE VACANT

Analysis of the area under ownership-

- Recreational parks and gardens falls under the local government authority which are breathing spaces between these private spaces, Other than these hospitals and schools are also a part of local government in the sector.
- State government plays a role only for school and a library which is in the sector.
- Girls hostel which is managed by a trust is the only area under trust management.
- This area is majorly in private residential use under lower income group to middle income group nd higher income to the western side of the area.



Analysis of the building heights of the sector

Maximum number of buildings have heights ranging from G+3 floors to G+4 floors

It has been noticed that high rise building construction is being proposed towards one part of the sector.

It has been noticed that most buildings are used by medium class owners.



Thakare udyan managed and Tmaintained by local government. The first recreational / green space of the area with a water body.

BUILDING AGE MAP





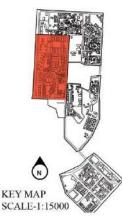
Local hospital near village which is maintained and managed by local government.

It was constructed at time of village development period.

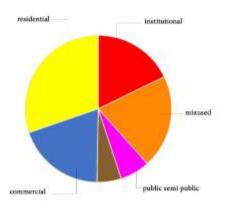


Library managed by private authority

PRIVATE









RONDONTSAL	
COMMERCIAL	
ENDUSTRIAL.	
DAYTTUTIONAL	
CIPION SPACE	
MEXED USE	
INFRA TERUCTURK	
PUBLIC-SEMI-PUBLIC	

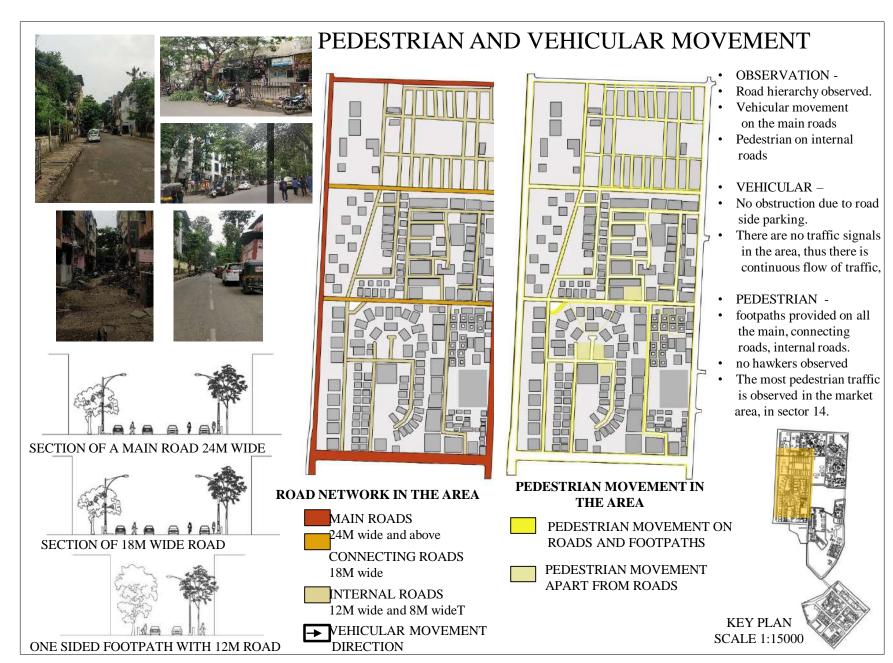
RESIDENTIAL	491463809
COMMERCIAL	567274227
INSTITUTIONAL	1809973557
MIXED USE	148683415
INFRA STRUCTURE	536794077
PUBLIC-SIMI-PUBLIC	854877705

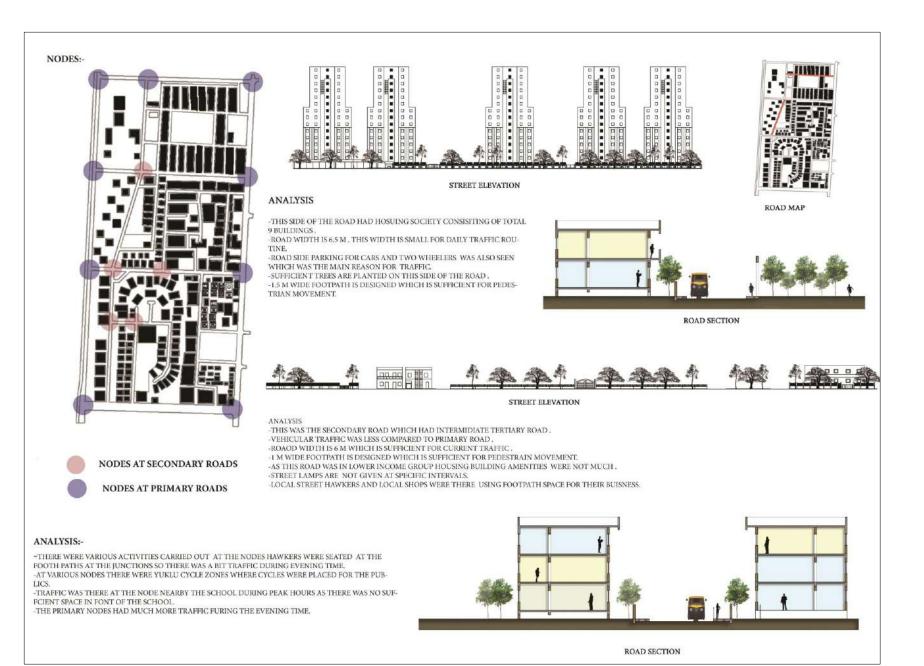






- Building adjacent and along the roads are mostly mixed use buildings
- Commercial buildings are located at the nodes
- Infra structure is developed near natural landscape elements .i.e. the pond
- There are more number of residential plots
- Mixed use areas are on one side of sector
- Two power stations
- school from pre primary to high school
- highrise structure are under construction





LANDMARKS:-







1.HOSPITAL GOVERNED BY LOCAL AUTHORITY



2.KID'S PLAYGROUND



3.TEMPLE



4.ARTIFICIAL WATERBODY



5.PRIVATE SCHOOL AND A GARDEN NEARBY



6.SUNSHINE HOSPITAL



7.LIBRARY



8.SCHOOL GOVERNED BY LOCAL GOVERNMENT

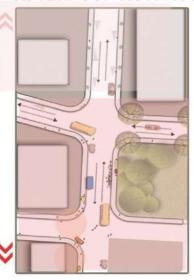
ANALYSIS:-

- -3 PLAYGROUNDS WERE THERE IN THE AREA WHICH ARE MOSTLY USED BY KIDS AND OLD AGE PEOPLE DURING MORNING AND THE EVENING TIME.
- -TEMPLE WAS USED AS A LANDMARK AT THE NEIGHBOURHOOD LEVEL.OLDER PEOPLE LIVING IN THE NEIGHBOURHOOD AREA GATHERED IN THE TEMPLE DURING THE MORNING AND EVENING HOURS
- -SCHOOLS WERE USED AS MAJOR LANDMARKS TO INDICATE ANY PLACE AROUND .
- -2 HOSPITALS- 1 GOVERNMENT AND 1 PRIVATE HOSPITAL WAS THERE IN THE AREA.
- SUNSHINE HOSPITAL WAS WELL-KNOWN ON CITY LEVEL AND WAS USED A MAJOR LANDMARK

MORNING ACTIVITY

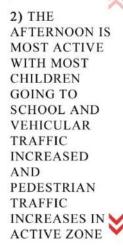


AFTERNOON ACTIVITY



ACTIVITY MAPPING

1)THE MORNING IS MODERATELY ACTIVE WITH VEGETABLE AND FLOWER KIOSK AS FOCAL POINTS



3)THE EVENING TIME IS THE PEAK TIME FOR PEDESTRIAN ACTIVITY WITH FOOD TRUCK OPENING AND FREQUENCY OF VEHICLES INCREASING.



EVENING ACTIVITY

















KEY PLAN

1. THE LEAST ACTIVE ZONE IS THE AREA WHERE HIG SOCIETIES ARE LOCATED AND THEIR INTERACTION WITH THE SURROUNDING IS LESS COMPARED TO THE ACTIVE ZONE WHERE MIG/LIG RESIDE.

2.ALSO PRESENCE OF SCHOOLS AFFECT THE TRAFFIC PATTERN BOTH VEHICULAR AND PEDESWTRIAN WITH PEDESTRIAN BEING DOMINATING.

ACTIVITY MAPPING – PUBLIC SPACE

road width =6m footpath width=1.2m vehicular flow = two way

Η

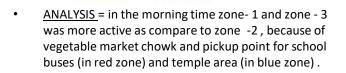
COMMERIAL WITH RESIDENTIAL

ZONE 1-----ZONE 2 ZONE 3

2) AFTERNOON ACTIVITY (3.30 PM)

1) MORNING ACTIVITY (11.59 AM



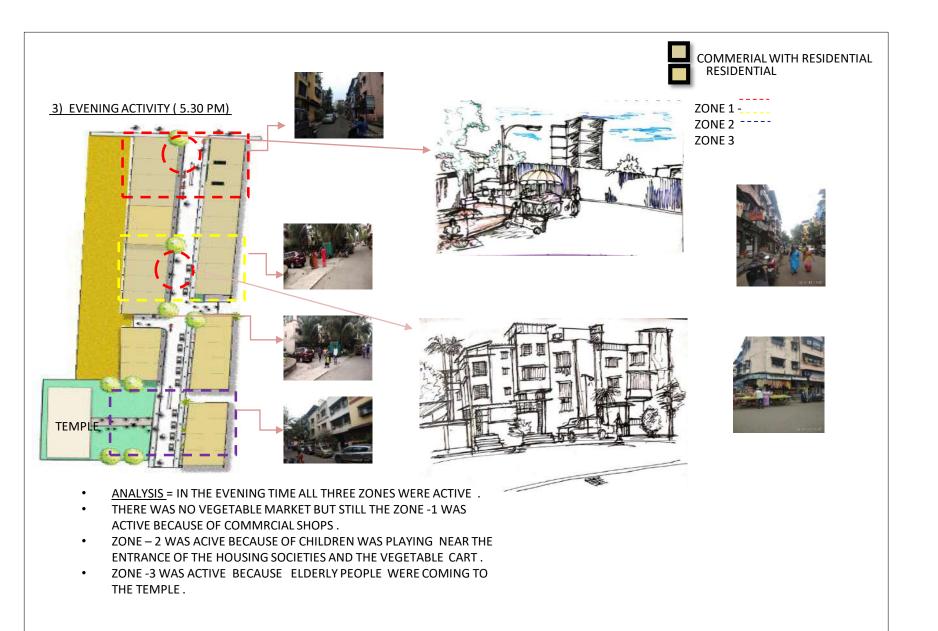


• on monday street is more crowded as compare to other days bacause of mahadev pooja .

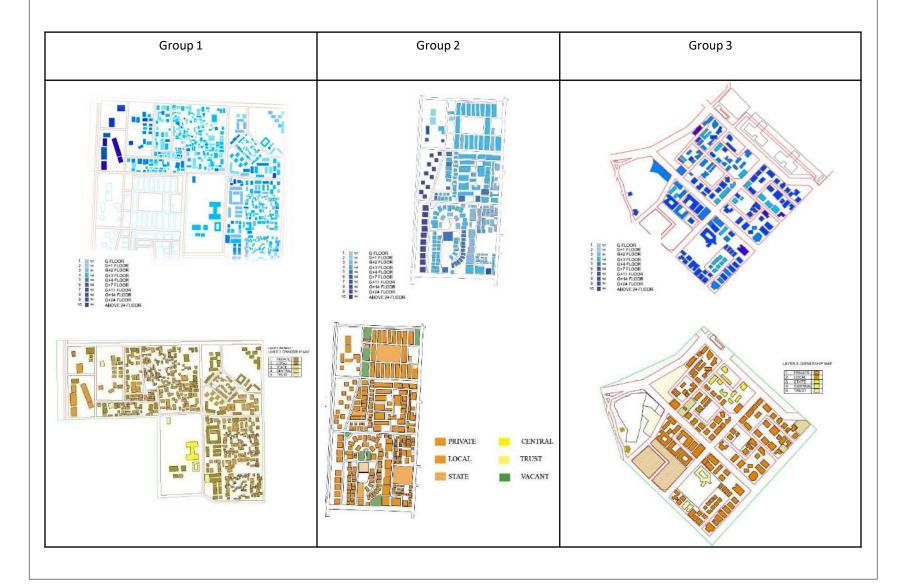


STUDY TOUR: FOURTH YEAR B.ARCH. DIV D
DECEMBER 2019

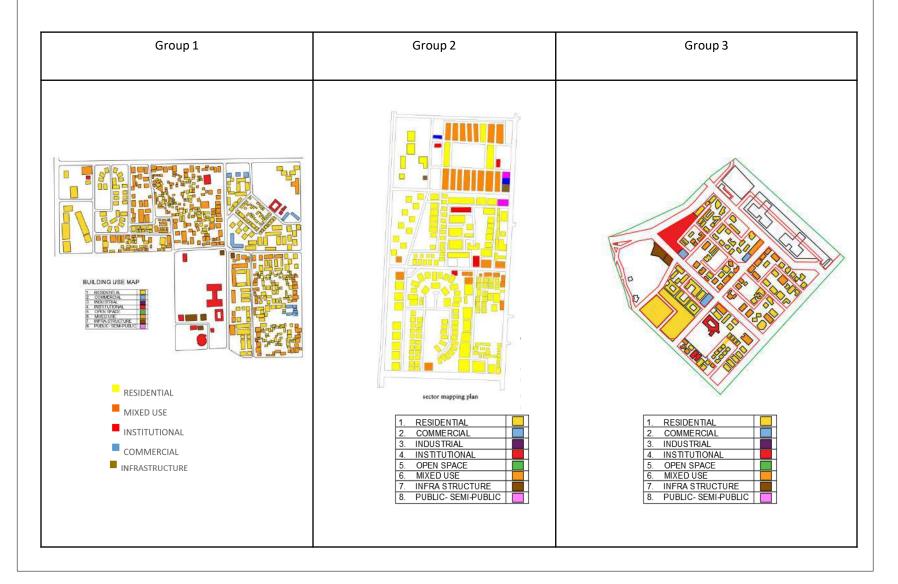
KEY PLAN



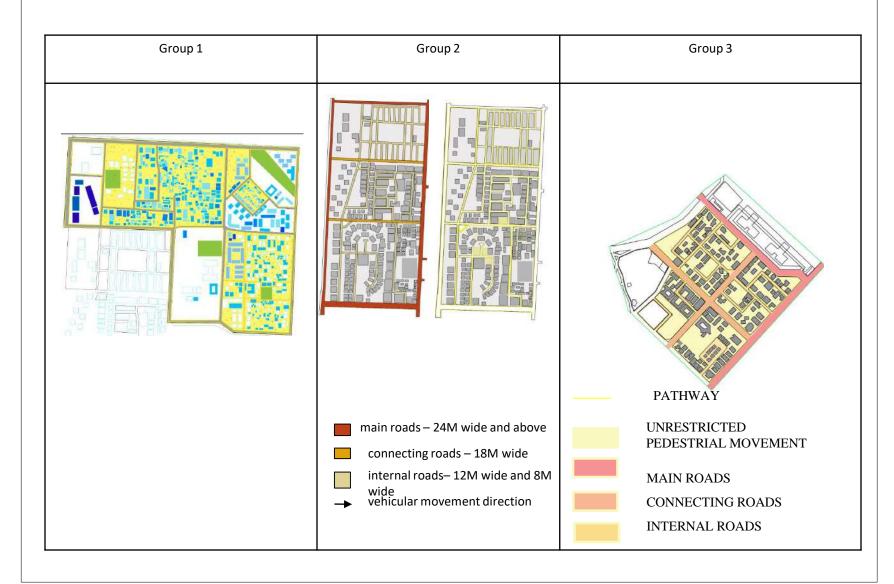
BUILDING HEIGHT AND BUILDING AGE



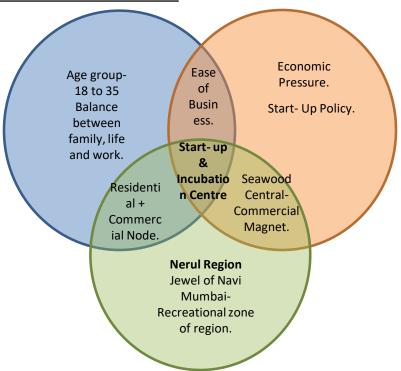
BUILDING USE



PEDESTRIAN AND ROAD NETWORK



STARTUP AND INCUBATION CENTER



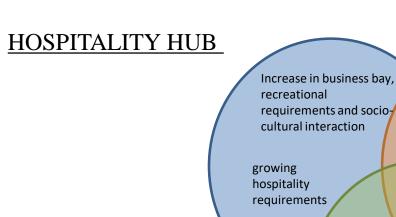
Area Calculation Plots

Gross Area of Plot:14133 sqm

Deduction for Amenity (15% =2119.95), Net Area of Plot: 12013.051 sqm

 $Deduction \ for \ Open \ space \ (10\% \ of \ 12013.051), \ Net \ Area = 11135-1201.30 \ sqm = 10811.75 \ Sqm$

Allowable (FSI – 1.5): 10811.75.5x1.5 = 16217.62 sqm



Navi Mumbai around 500 new & start-ups companies changing business atmosphere

Residentia ality

1+

Commerci

al Node.

Seawood Central-Commercial Magnet.

Nerul Region

Ease

of

Busin

ess.

Hospit

Jewel of Navi Mumbai-Recreational zone of region.

Area Calculation Plots

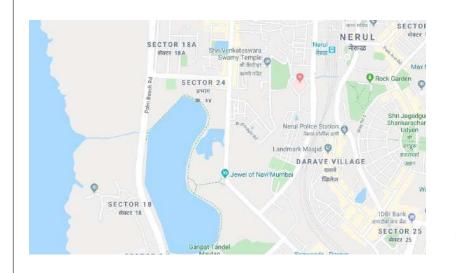
Gross Area of Plot:14133 sqm

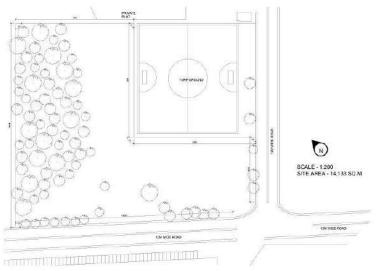
Deduction for Amenity (15% =2119.95), Net Area of Plot: 12013.051 sqm

Deduction for Open space (10% of 12013.051), Net Area=11135-1201.30 sqm=10811.75 Sqm

Allowable (FSI – 1.5): 10811.75.5x1.5 = 16217.62 sqm

SITE CONTEXT, SITE CONSTRAINTS





Site is surrounded with residential and commercial nodes.

Jewel of Navi Mumbai is very close by the site.

Site has a dense vegetation to one of its side.



