



ACADEMIC WORK
STUDENT WORK OF
M. ARCH.
ARCHITECTURAL CONSERVATION

Syllabus- 2015 pattern

ACADEMIC YEAR 2018-19

SEMESTER-I to IV

STUDENT ACADEMIC WORK





Semester I- Conservation Studio I

Topic – Introduction

Studio Project – Comprehensive Conservation Proposal for Aga Khan Palace precinct, Pune

SHEET TITLE 01/16

Who was Sir Sultan Muhammad Shah Aga Khan III ?

1. Early Life

- He was born in Karachi, in British India (now Pakistan), to Aga Khan II and his third wife, Nawab A'liya Shamsul-Muluk, who was a granddaughter of Fath Ali Shah of Persia (Gajar dynasty).
- Under the care of his mother, he received both the religious and eastern education which his position as the spiritual leader of the Ismailis made indispensable and a sound European training.
- The latter had been denied to his father and his paternal grandfather.
- This blending of the two systems of education proved to be very appropriate, as he led his community through times of change, including the end of British rule in India and the establishment of the state of Pakistan as a Muslim homeland. He also attended Eton and Cambridge university.

- He was one of the founders and the first president of the All-India Muslim League, and served as President of the League of Nations from 1937-38.
- He is considered to be a founding father of Pakistan. Stressing the need for a progressive interpretation of Islam, he stressed its compassion, respect for human dignity and tolerance and did much to situate his community within the Muslim mainstream.
- His sons and grandson have continued a tradition of service to the international community through involvement in the United Nations, through diplomacy and through initiatives funded by the Imamate. His own life bridged the colonial period and the post-colonial period in India, where he spent much of his life.
- He successfully led his community during both eras, helping it adapt to changing circumstances. On the one hand, he was considered to be a celebrity.
- Owning racing horses, he moved comfortably in the company of royalty and the wealthy.
- On the other hand, he was respected for his knowledge of Islam, for his philanthropy and for his commitment to human dignity.

Race Horse Owner

He was an owner of thoroughbred racing horses, including a record equalling five winners of the Epsom Derby, and a total of sixteen winners of British Classic Races. He was British flat racing Champion Owner thirteen times.



Glimpses of some events in life of Aga Khan III

Why Aga Khan Palace Was Built ?

- Aga Khan Palace was built in 1892 by Sir Sultan Muhammad Shah Aga Khan III.
- It was constructed intended to be a source of employment for the famine-struck villagers in the surrounding areas.
- It took about 5 years to complete the work and one thousand people were employed and they were given full-hearted wages for their livelihood and 12 lakhs was the cost.
- In the year 1969 Prince Karim El Husseini Aga Khan IV came to India and donated this palace with surrounding land to the government of India Gandhi Smarak Nidhi, New Delhi.



Before Independence



Today- Aga Khan Palace

SOME MILESTONES IN NAHATMALI'S LIFE AT THE AGAKHAN PALACE

- 10 AUGUST 1942 GANDHI AND HIS COLLEAGUES WERE BRIBED HERE FROM BOMBAY
- 16 AUGUST 1942 SHRI MAHARAJENDRA DESAI DIED OF HEART ATTACK
- 18 MARCH 1943 GANDHI BAGGED BROTHERHOOD OF ALL PEOPLES GANDHIAN LAST FETTER
- 28 JANUARY 1943 GANDHI MET THE CONGRESS LEADERS AT THESE FRIENDS
- 25 JANUARY 1944 GANDHI HOSTED THE CONGRESS LEADERS AT THESE PREMISES
- 22 FEBRUARY 1944 MAHARAJENDRA GADGADJI DESAI BELIEVED FOR PROSECUTION UNDER
- 1 MAY 1944 GANDHI AND HIS COLLEAGUES WERE RELEASED FROM NARAYAN PALACE

The sprawling palace complex is located on Ahmednagar road and is a spectacular building with vast open space in the front. It was built in the Italian style – with arches and spacious lawns – though it was also influenced by Islamic architecture.



Aga Khan Palace And Surrounding Today

While the majestic building and the palace grounds attract a lot of visitors every day, the Aga Khan Palace seems to have been overshadowed by new developments occurring on Nagar road, one of the most happening places in Pune. Several office towers, residential colonies, shopping malls, star hotels and other new buildings have come up along the road.

Architectural Style And Characteristics

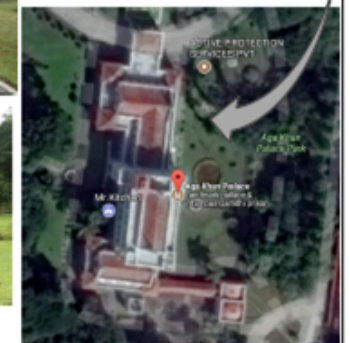
- Aga Khan Palace Has Italian Arches And Spacious Lawns.
- The Building Comprises Five Halls. It Covers An Area Of 19 Acres (77,000 M²), Out Of Which 7 Acres (28,000 M²) Is The Built Up Area.
- The Palace Captivates The Eye Of A Spectator With Its Magnificence And Picturesque Architecture.
- The Area Of The Ground Floor Is 1756 M², That Of The First Floor Is 1080 M², Whereas The Second Floor Has A Construction Of 446 M².
- The Specialty Of This Structure Is Its Corridor Of 2.5 Meters Around The Entire Building.

Aga Khan Palace Today-

- Today, The Palace Serves As The Headquarters Of The Gandhi National Memorial Society And Features Several Exhibits, Including The Personal Belongings Of The Mahatma.
- The Aga Khan Palace, Which Is Also A Museum, Archives Several Photographs And Portraits Relating To Gandhi And Major Leaders Of The Freedom Movement. Some Of The Rooms, Especially Those Occupied By Gandhi, Are Out Of Bound For Visitors, Who Can, However, See It From Outside.
- Though Gandhi Was Detained At The Palace For Less Than Two Years, It Had A Major Role During The Crucial Period Leading To Independence. In Fact, When The Late Filmmaker Richard Attenborough Decided To Make His Film Gandhi, He Shot Large Portions Of It At The Aga Khan Palace.



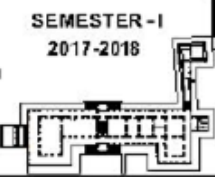
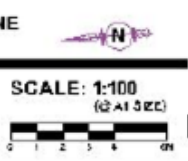
Nagar road, which was formerly a narrow, two-lane road, has now been widened and localities along the artery – including Kalyani Nagar and Viman Nagar – have become posh areas.



Reference and credit to:
 • N. Somasekharam/1964/The Memoirs of Aga Khan (Historical Photographs)
 • http://www.pune.gov.pl/s/kry/1218367/aga_khan.html
 • http://www.wikipedia.org/wiki/Aga_Khan_Palace
 • http://www.pune.gov.pl/s/kry/1218367/aga_khan.html
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INTRODUCTION ABOUT AGA KHAN PALACE PUNE
 COMPREHENSIVE CONSERVATION PROPOSAL FOR
 AGA KHAN PALACE PRECINCT, PUNE



SEMESTER - I 2017-2018		SINHGAD COLLEGE OF ARCHITECTURE		SIGN/STAMP
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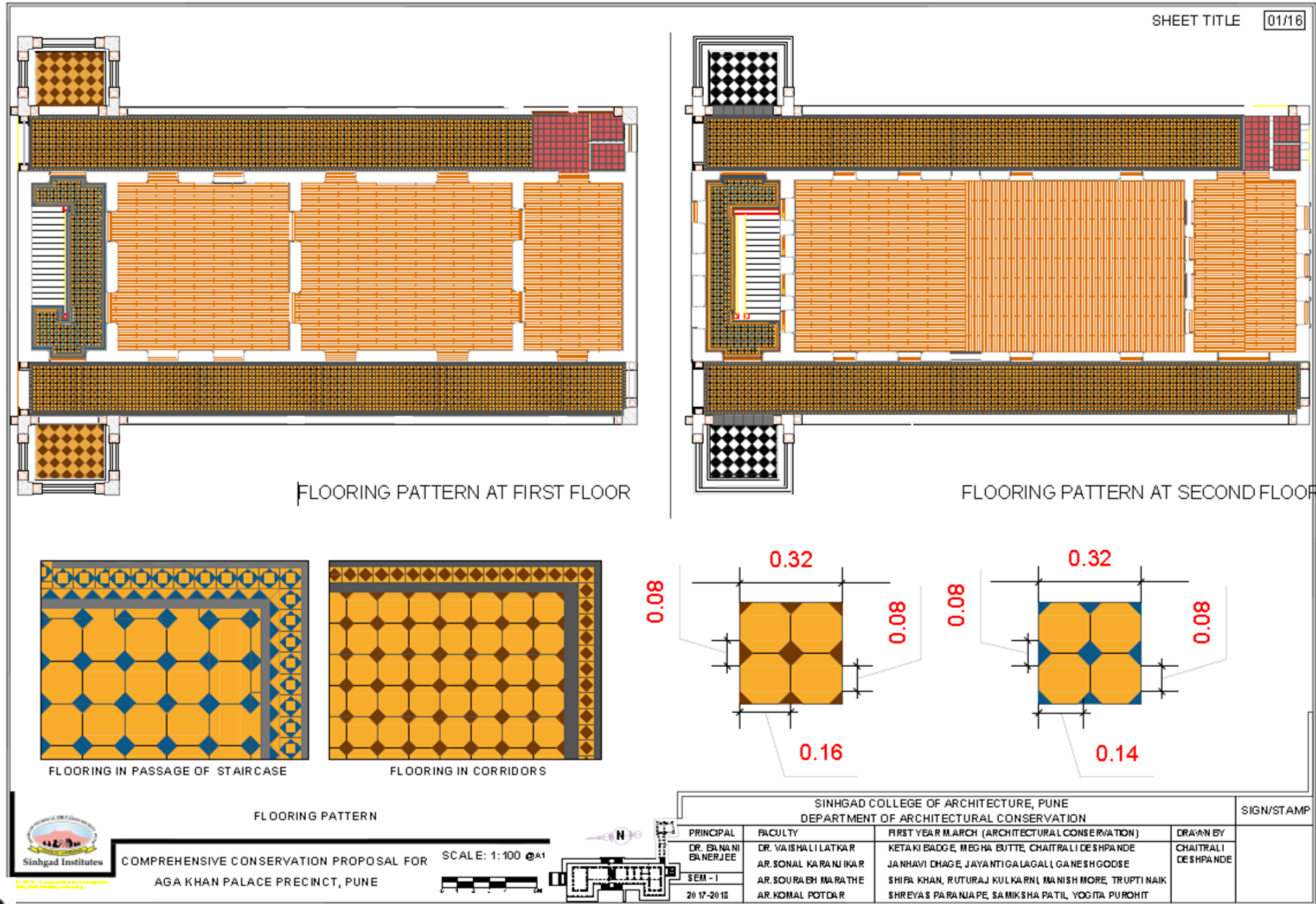
2018-19





Semester I- Conservation Studio I

Studio Project – Comprehensive Conservation Proposal for Aga Khan Palace precinct, Pune



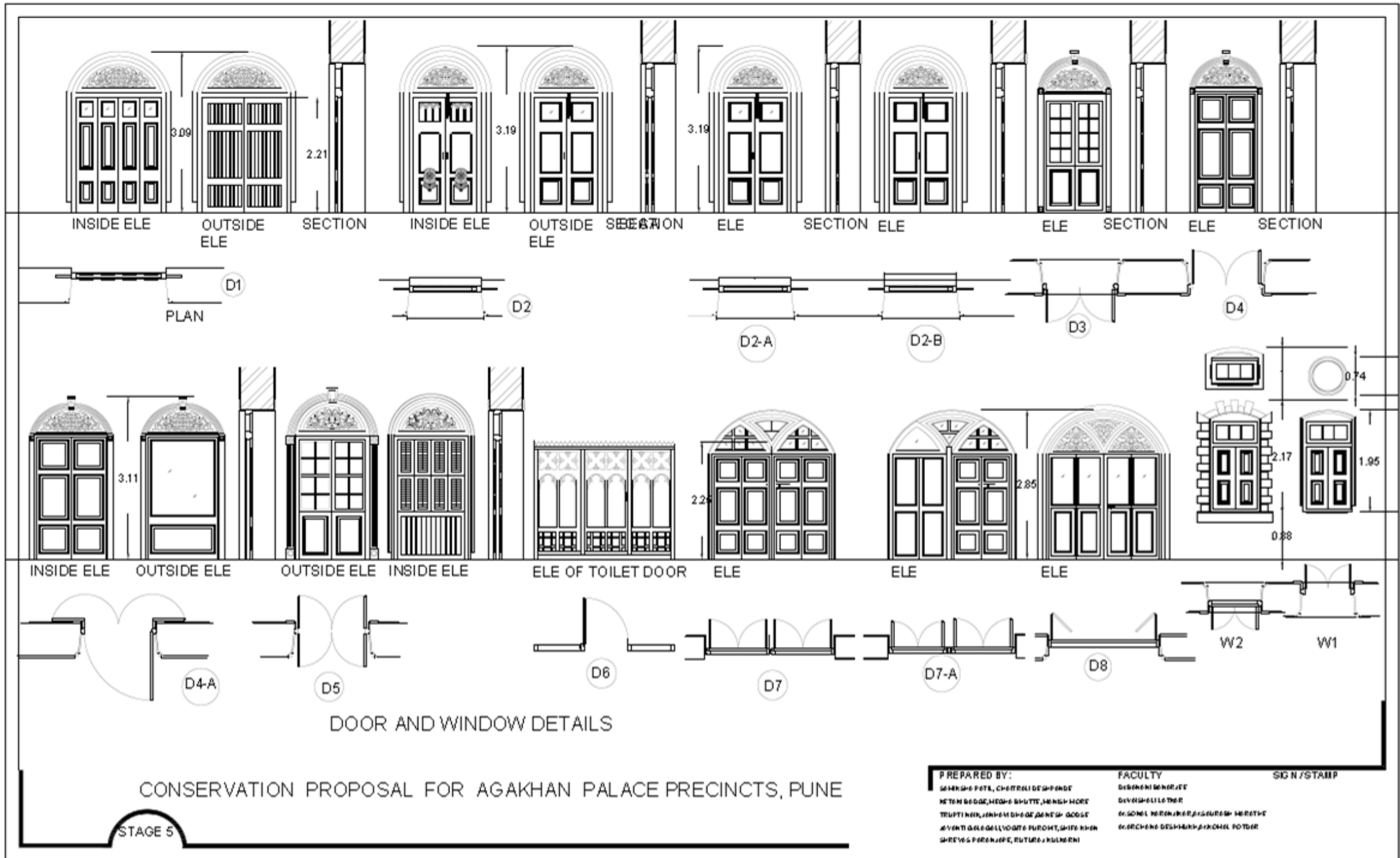
STUDENT ACADEMIC WORK





Semester I- Conservation Studio I

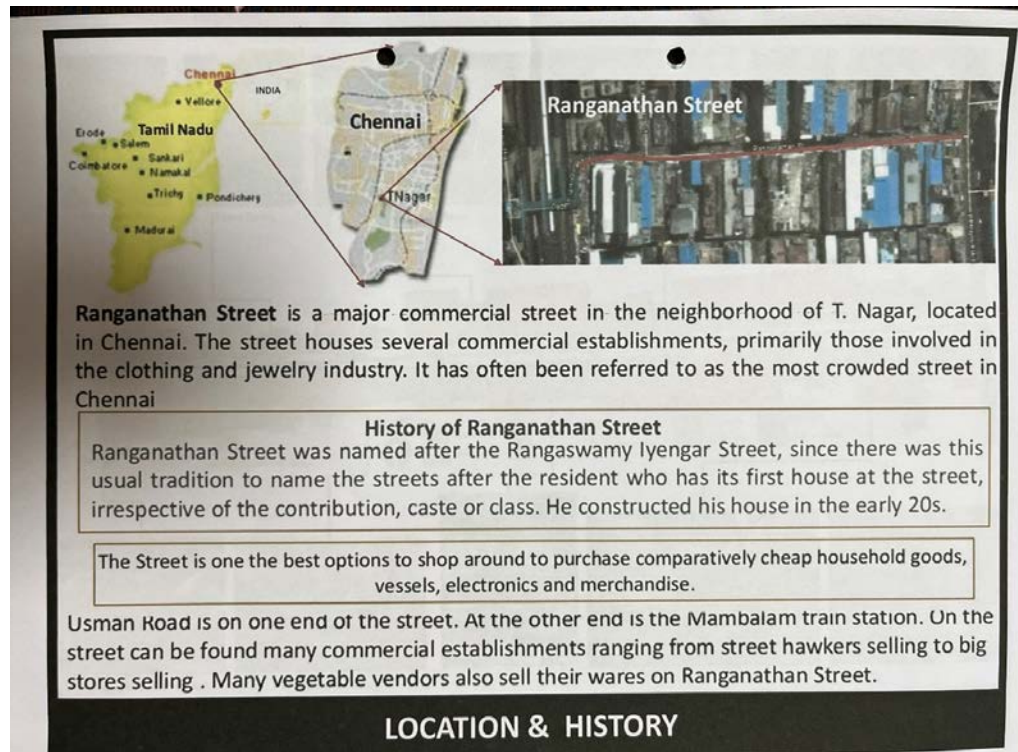
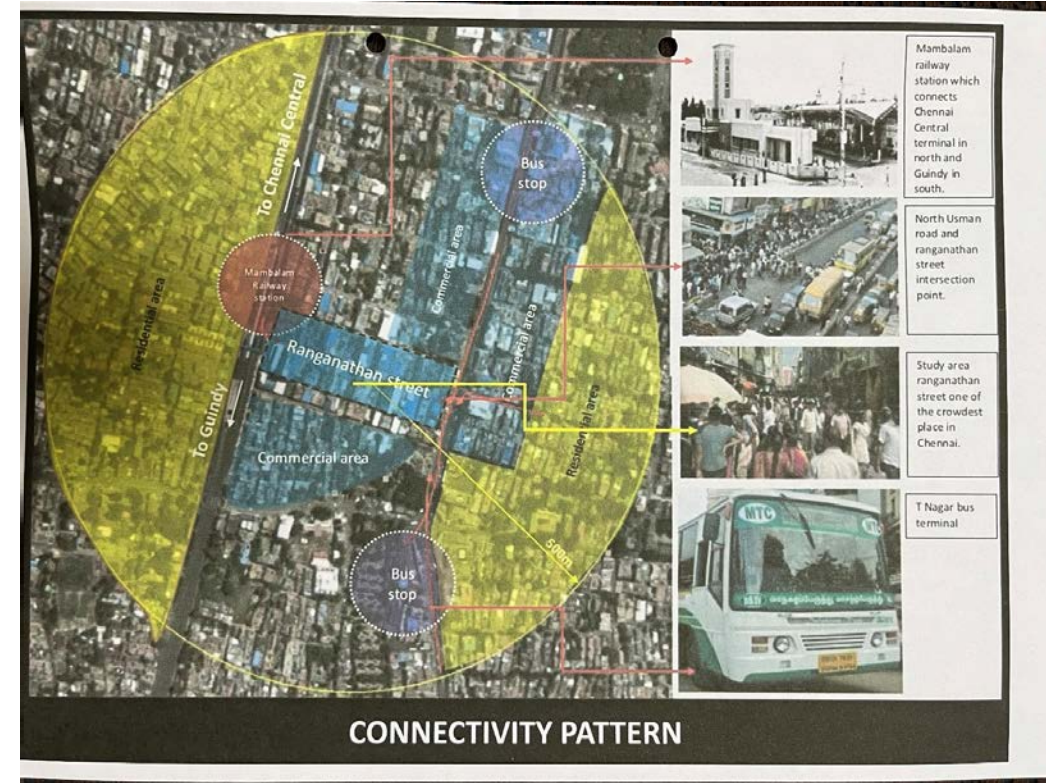
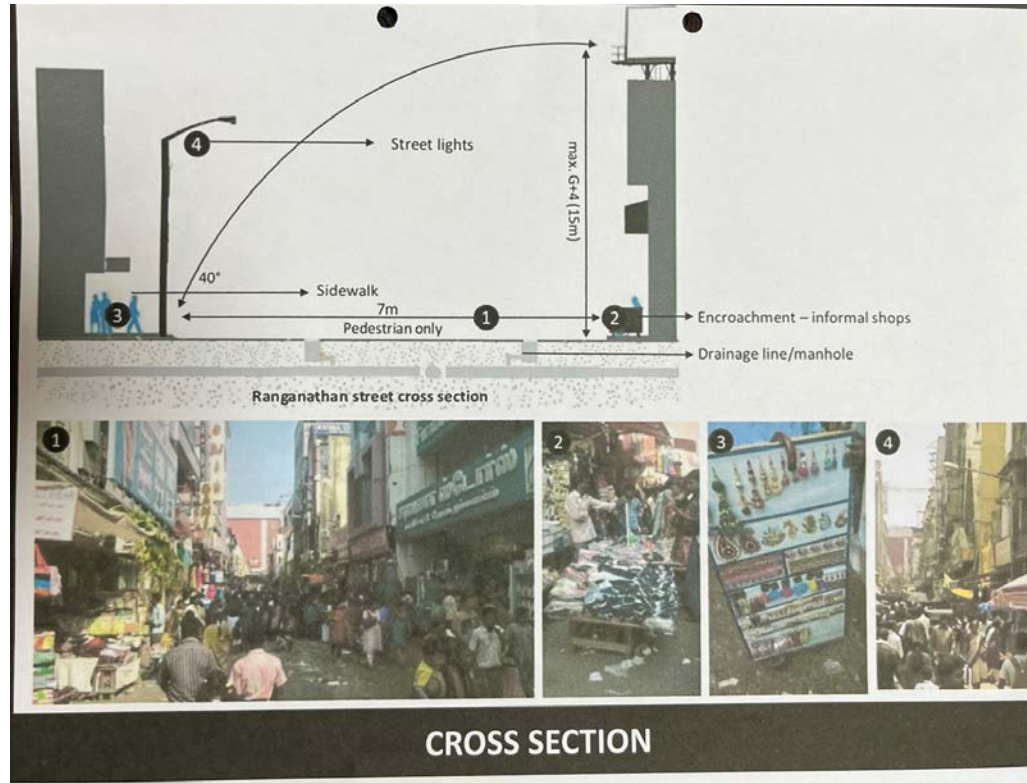
Studio Project – Comprehensive Conservation Proposal for Aga Khan Palace precinct, Pune



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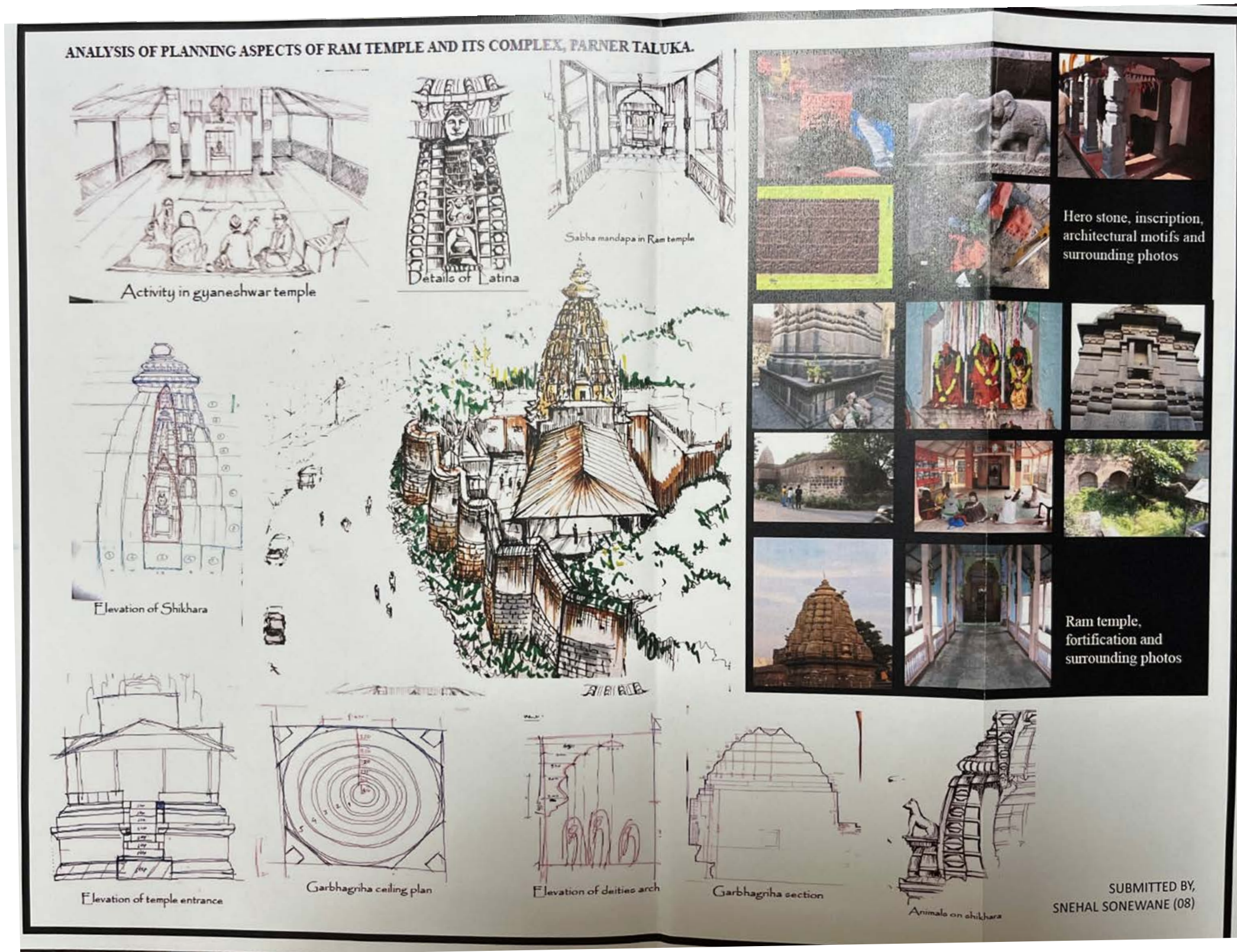


Semester I- Elective I



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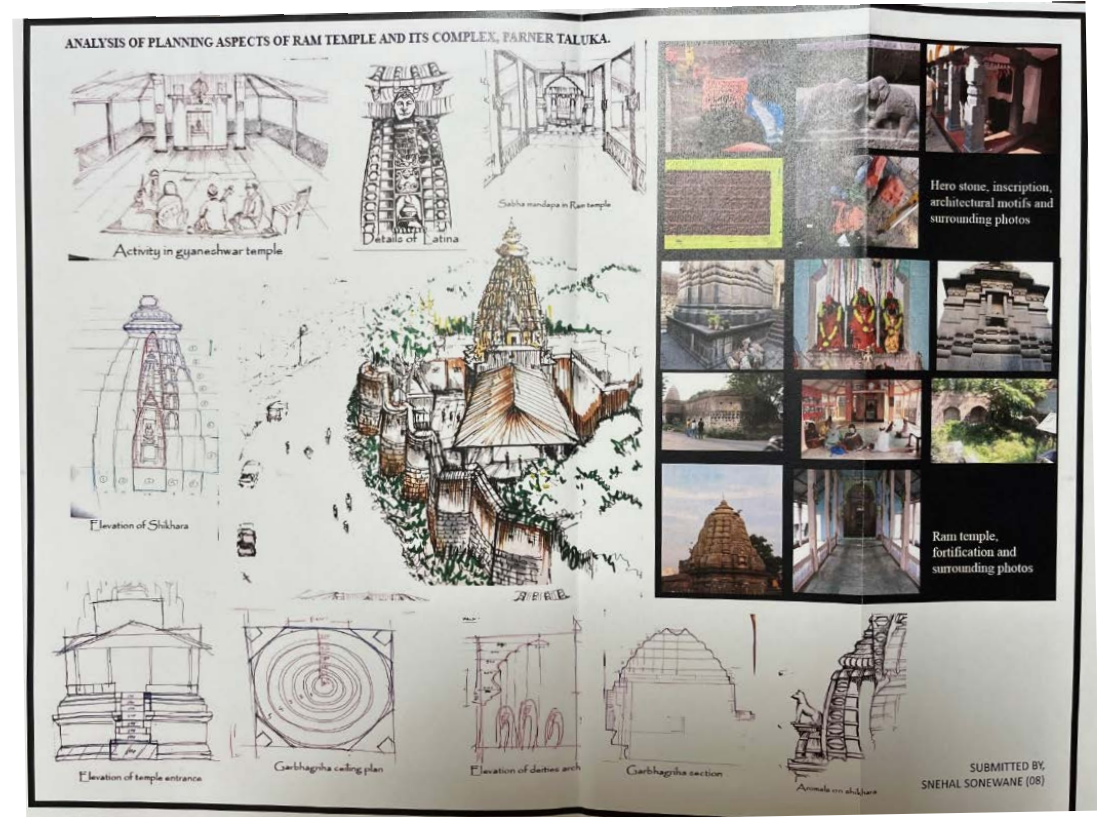
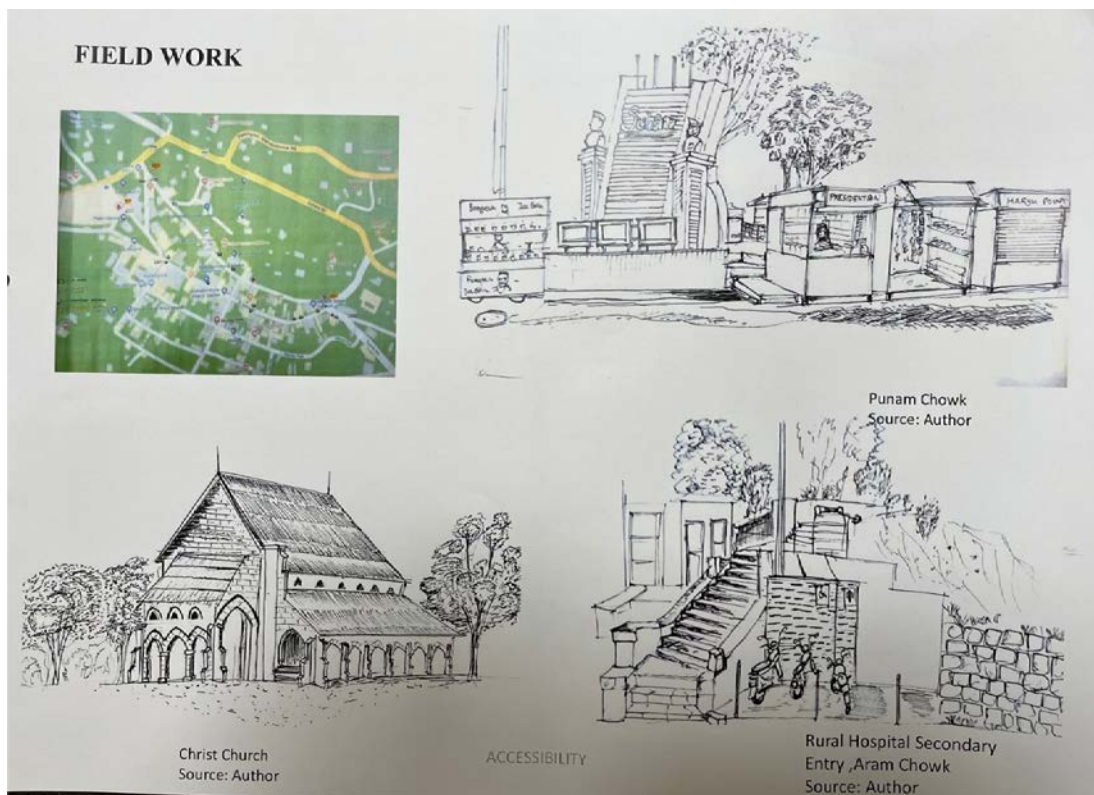
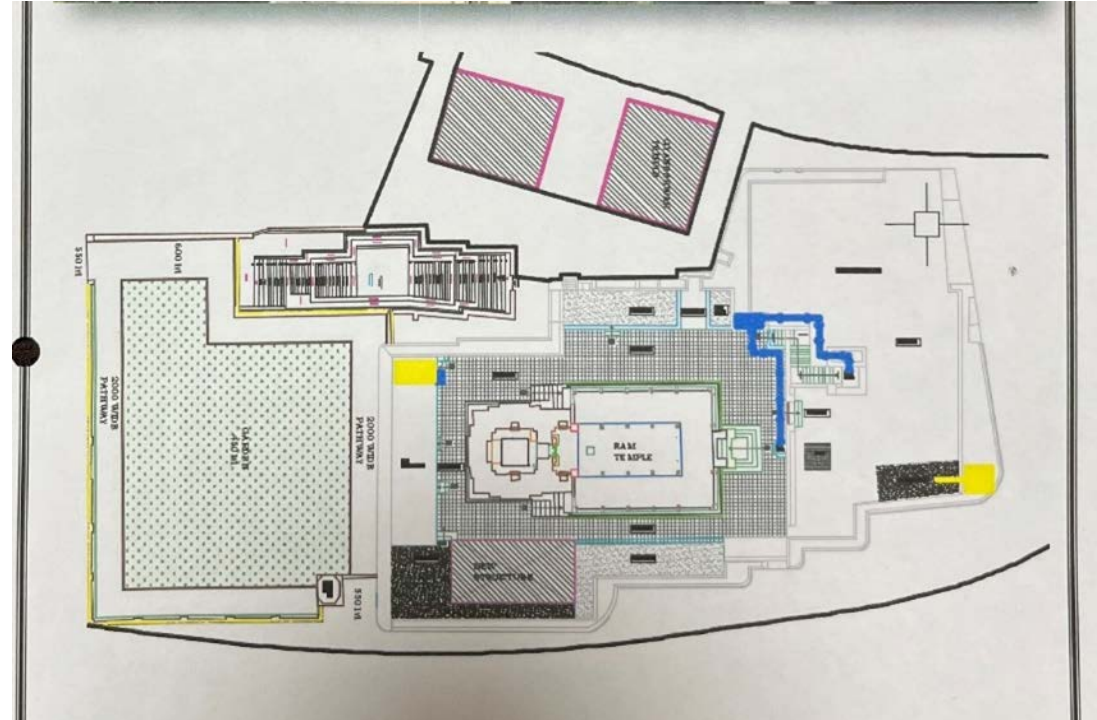
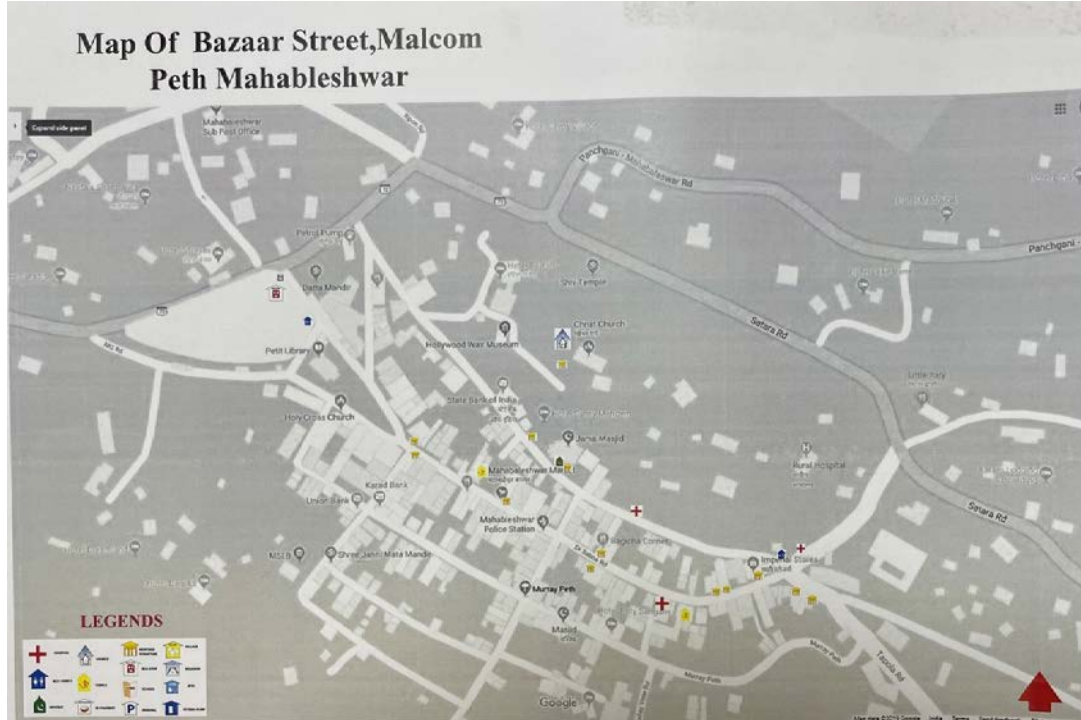
Semester I- Structural Conservation I



STUDENT ACADEMIC WORK

Semester II- ELECTIVE II

Semester II- STRUCTURAL CONSERVATION II



STUDENT ACADEMIC WORK



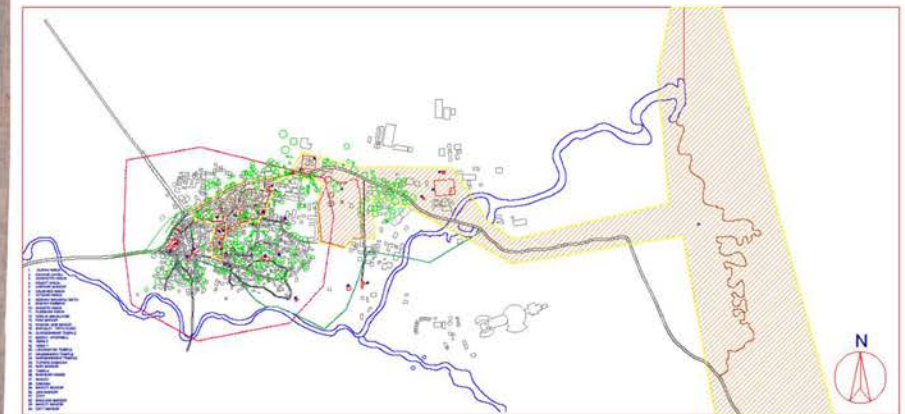
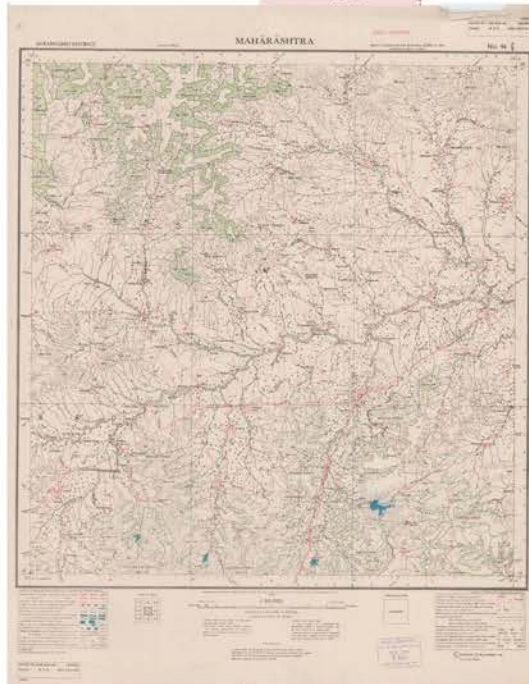
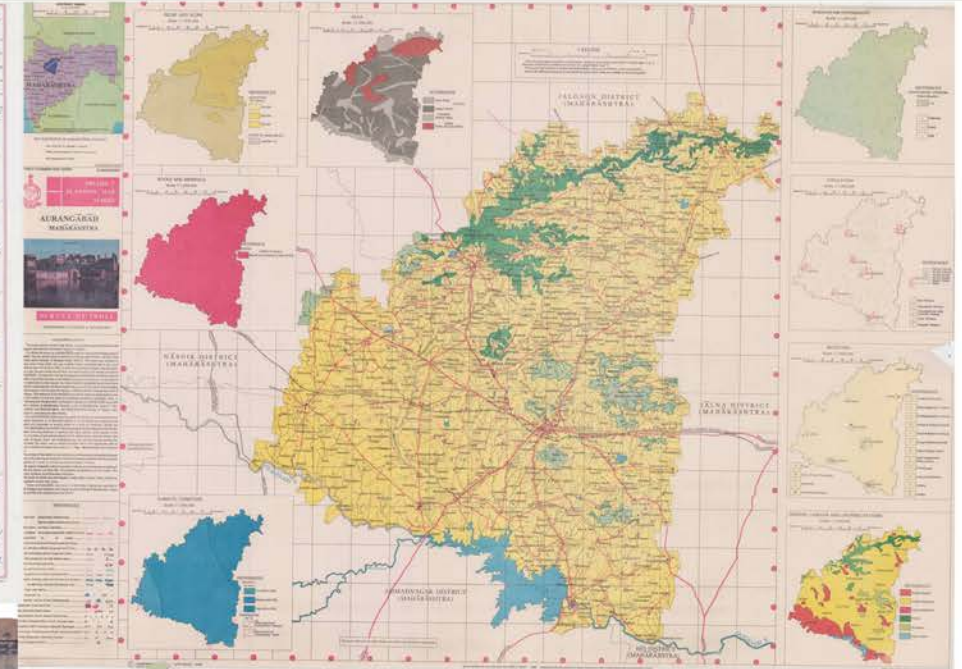
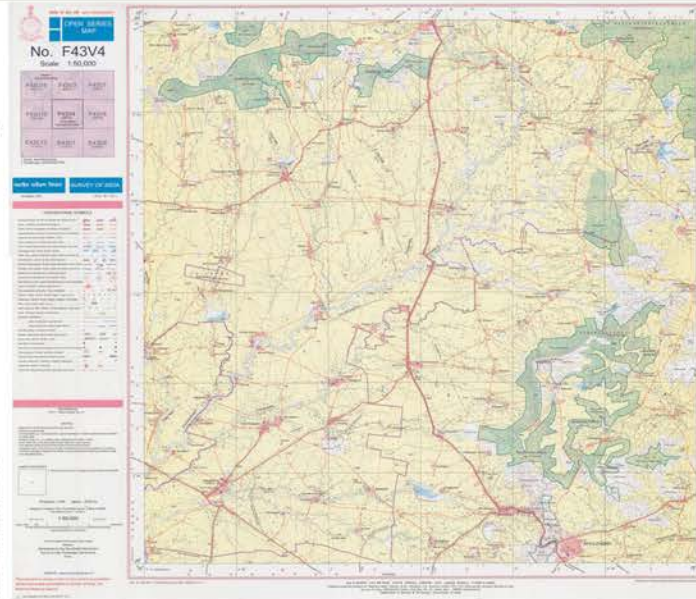
Semester II- STUDIO II

Studio Project – Comprehensive conservation policy for historical settlement of Verul

Settlement of Verul

METHODOLOGY:

- Detailed field measurements and surveys were undertaken to document the urban character & architectural heritage of the precinct. Interaction and dialogue with the local population and stakeholders were used to document the social and cultural activities and character of the precinct.
- The documentation is further supplemented by the Condition Assessment undertaken in depth on site at various scales from urban form to individual structures.



Methodology

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Comprehensive Conservation Policy for Historical Settlement of Verul, Khuldabad & Kagzipurna in the Daulatabad Region

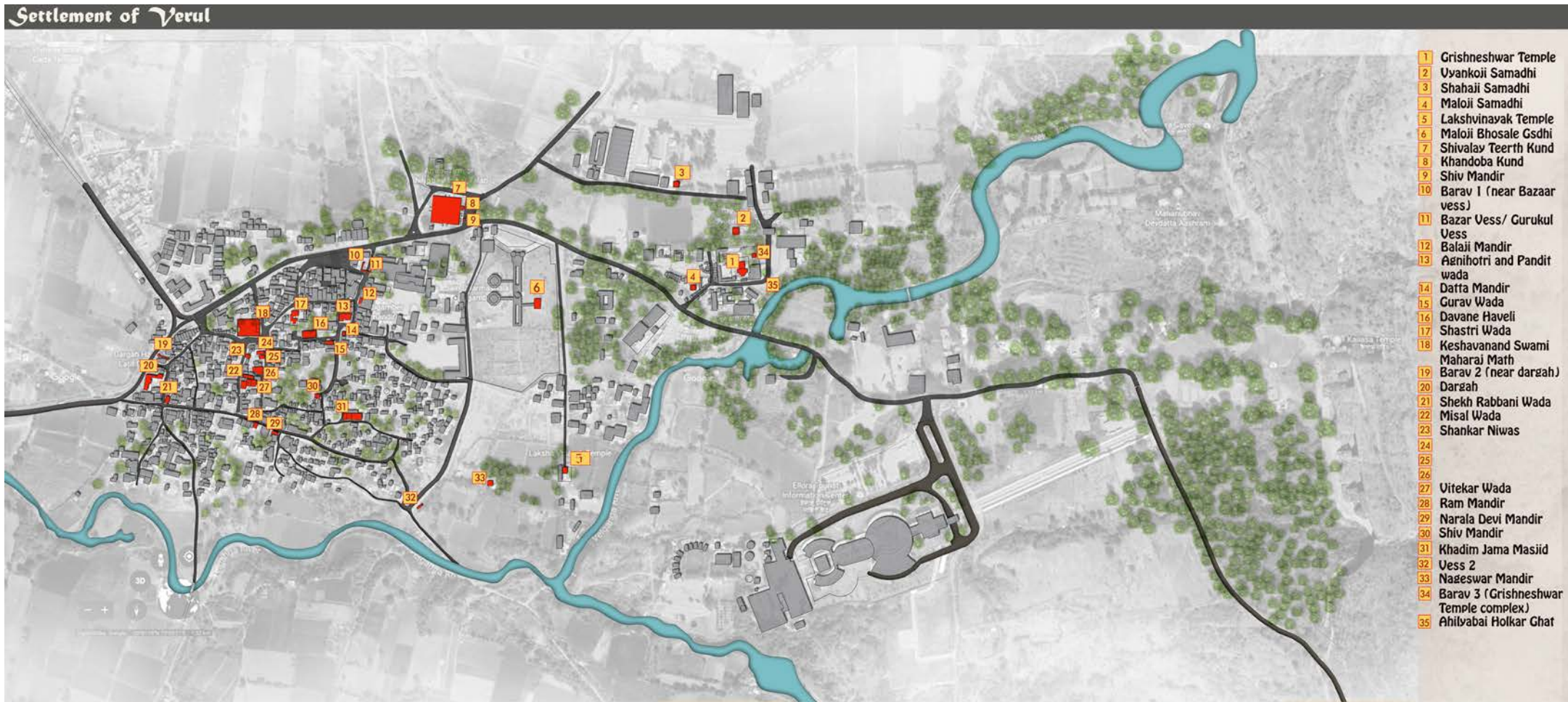
STUDENT ACADEMIC WORK





Semester II- STUDIO II

Studio Project – Comprehensive conservation policy for historical settlement of Verul

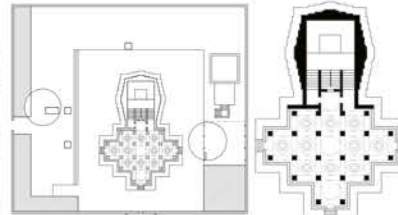


- 1 Grishneshwar Temple
- 2 Vyankoi Samadhi
- 3 Shahaji Samadhi
- 4 Maloji Samadhi
- 5 Lakshminayak Temple
- 6 Maloji Bhosale Gsdhi
- 7 Shivalay Teerth Kund
- 8 Khandoba Kund
- 9 Shiv Mandir
- 10 Barav 1 (near Bazaar vess)
- 11 Bazar Vess/ Gurukul Vess
- 12 Balaji Mandir
- 13 Aenihotri and Pandit wada
- 14 Datta Mandir
- 15 Gurav Wada
- 16 Davane Haveli
- 17 Shastri Wada
- 18 Keshavanand Swami Maharaj Math
- 19 Barav 2 (near dargah) Dargah
- 20 Shekh Rabbani Wada
- 21 Misal Wada
- 22 Shankar Niwas
- 23
- 24
- 25
- 26
- 27 Vitekar Wada
- 28 Ram Mandir
- 29 Narala Devi Mandir
- 30 Shiv Mandir
- 31 Khadim Jama Masiid
- 32 Vess 2
- 33 Nageswar Mandir
- 34 Barav 3 (Grishneshwar Temple complex)
- 35 Ahilyabai Holkar Ghat

Grishneshwar Temple

Grishneshwar is an important Brahmanical religious center as it is believed to be one among the twelve jyotirlingas of the Indian sub-continent. The word Ghrneshwar means "lord of compassion". The temple is an important pilgrimage site in Shaivism tradition of Hinduism, which considers it as the last or twelfth Jyotirlinga (linga of light).

The temple was existed during Yelraja Period (aashtrakuta Period). This temple was destroyed by the Delhi Sultanate during the Hindu-Muslim wars of 13th and 14th-century. The temple was re-constructed by Maloji Bhosale of Verul, (grandfather of Shivaji) in the 16th century. The temple went through several rounds of rebuilding followed by re-destruction during the Mughal-Maratha conflict. It was rebuilt in the current form in the 18th century (between 1765-1795) under the sponsorship of a Hindu queen Rani Ahalyabai Holkar of Indore, after the fall of the Mughal Empire.



Planning of temple

Temple oriented North-South. Temple has 2.5m ht compound wall to all four sides. We Entre into the temple through the Nagarkhana.

Temple constructed in Bhumija Temple Architecture. On plan temple consist of Sabhmandapa (pillared hall), Antaral and Garbhagriha.

Sabhmandapa- There are three entrances. Constructed in a grid pattern. A stutue of Nandi is placed at the center of the Sabhmandapa.

Combination of dome and coffored roofing system used. Red Basalt stone with lime mortar used for construction.

A Ganesh deity situated on north-west side of Sabhmandapa.

Antaral- Antaral is a space between Garbhagriha and Sabhmandapa.

Dome used for roofing system used.

Garbhagriha- Beautiful carving of Rudraksha on the entrance of the Garbhagriha.

Deity Shiva situated at the center of the Garbhagriha. It is 1.8m down from Sabhmandapa level. Constructed with combination of black and red basalt stone.



Shikhara

The most striking feature of this temple is the five tiered shikhara rising in diminishing height. The height of the shikara is enhanced by the high wall portion of the sanctum. Shikhara represent the Latin-naagara of Temple aaarchitecture. Shikhara is constructed in Red Basalt stone and covered with a mixture of lime red sand. A thick layer of lime and sand mixture applied on the Shikhara to protect the main shikhara structure from naturaland carved a beatiful motifs on it. The shikara is crowned by a couchant bull at each corner along with a monkey behind it. The shikara is beautifully decorated with geometric motifs and also images of Brahmanical deities including Siva and Parvati.



Sinhgad College of Architecture, Pune Department of Architectural Conservation		Stamp	Sign
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Comprehensive Conservation Policy for Historical Settlement of Verul, Khuldabad & Nagzipura in the Daulatabad Region

STUDENT ACADEMIC WORK



Semester II- STUDIO II

Studio Project – Comprehensive conservation policy for historical settlement of Verul

Settlement of Verul

RELIGIOUS SETTLEMENT AND COMMUNITIES

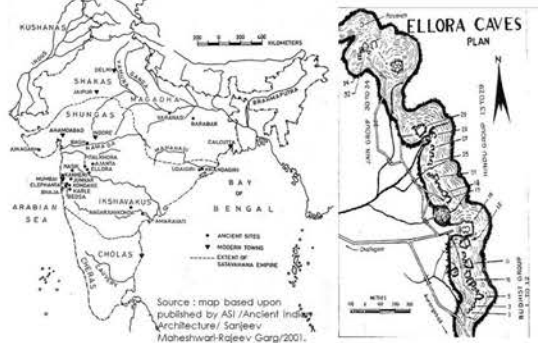
•The result of modern research has clearly shown, that from a remote antiquity, successive waves of Vedic Aryans poured into India through the passes of the north west; and prior even to their invasions, several Turanian races surmounted the Himalayas or entered by the valley of the Brahmaputra.

•The traditions of the Nagas, point to the Existence of an ancient Kolarian empire in the Dakhan, having its capital at Nagpur, and it is probable that its rulers exercised an imperial sway over India.

•The Kolarians strongly opposed the immigrations of the Vedic Aryans, but by alternate wars and alliances, the latter drove them from the open country into the hills And jungles. The Dravidians, also of Turanian affinities, entered by the lower Indus, and were gradually forced into the Dakhan and Southern India by the succeeding Aryans.

•They had some skill in music, and the Puranas state that when Havana held universal sway, he gave the great forest of Dandukaranya, extending from the Narbada to Cape Comorin, To the musicians. Ferista also mentions, that music and the science of music were originally introduced into Hindostan, from the Dravidian kingdom of Telingana.

Source : Gazetteer of Aurangabad 1884.



HINDUISM AND BUDDHISM IN ELLORA

•History of Marathwada and Aurangabad region gives the evidences from Maurya period.

•Rise of Buddhism was the main phase of this period. Monolithic pillars, city planning, rock cut caves, stupas, sculptures of animal figures –were the elements which represented the architectural development of Buddhism.

SHUNGA SATVAHANAS (1st and 2nd cent.)

•This was the first dynasty in the Deccan (Pushyamitra Shunga). They settled in the land between Godavari and Krishna.

•Gautamiputra Satkarni was the prominent King who extended his empire upto Konkarn, Saurashtra, Malwa, Berar.

•He defeated Sakas and began Shalivahna shaka era.

•Paintings of Ajanta and Amaravati are from this period.

•The Satvahanas were followers of Hindu Religion but they also supported Buddhism by giving donations as that time it was for trades and charity.

•Some of their inscriptions give the result that the origin of Satvahanas was in the Brahmin cast.

•That's why we found Hindu caves older than Buddhist and Jain caves in Ellora.

•After Satvahanas, Gupta was the dominant dynasty in India, but the evidences after Satvahana period we get it from Rashtrakutas, the dynasty after Guptas and Chalukyas.

•Buddhist and Jain caves of the Ellora are from Rashtrakuta Period.

•Rashtrakuta rule was tolerant to multiple popular religions, Jainism, Hinduism and Buddhism too.

Source : Gazetteer of Aurangabad 1884.



Source: map based upon published by ASI /Ancient Indian Architecture/ Sarjeev Maheshwari-Rajeev Garg/2001.

JAINISM IN ELLORA

•This region was under the control of Kalyani Chalukyas and Yadavas of Deogiri (Daulatabad) during this period. The patronage towards Jainism under the Yadavas is also known by the findings of several sculptures of Jain faith from Daulatabad.

•Next to Buddhist and Brahmanical caves of Ellora, cluster of five Jain caves we find right at the northern end of the hill range- numbered 30 to 34.

•These caves, excavated in the 9th century CE, signify the last major phase of religious and artistic activity at Ellora, celebrating the ascetic character of the Jain religion.

•These are monolithic structures, following the style if Hindu caves. They are having well finished interior and unfinished exterior but showing the icons and architectural characteristics.



Most of these caves are architecturally very fine with decorative pillars, ceilings, doorways and facade. These are covered with icons of the Jinas and yaksa-yakshi, and some of these carry a number of paintings on ceilings as well as sidewalls. Of these, the upper storey of Indra Sabha is the largest and grandest, though the lower storey is left unfinished with only the shrine icon finished.

Source : www.sahapedia.org



MUGHALS IN ELLORA

•Decline of Yadavas around 12th cent. And Sufi movement happened in the nearby regions of Ellora (Khuldabad) was the main reason of rising the Mughal or Islamic culture in Ellora.

•But there are no dominant evidences of Islamic architecture.

•In the village there is only one Dargah and Jami Masjid, the Dargah is more than 400 years old.



MARATHAS (HINDU) IN ELLORA

•After the Mughals, Marathas took over this region, especially Bhosales.

•The Marathas encouraged to build Hindu temples, sacred water bodies in Ellora.

•Their examples are Ghrihsheshwar Temple and Amrut Teerth Kunda.



•Except these places, there are another temples and Mathas in the village, where people gather for religious events.

•Various activities are conducted in these spaces which follow Hindu Traditions.

•Today – most of the people are following Hindu religion in Ellora.



•Above picture shows the devotees taking holy bath at Amrut Teerth Kunda during Mahashivratri.

•Following Picture shows the weekly Bhajan singing (praying) activity of Hindu women in Ellora village.

•They celebrate various festivals together and sing the Bhajans according to Hindu Festivals.

Analysis-

As observing from Satvahana period to today, Ellora gives the evidences of various religions with respect to the dynasties.

But Now now it can be identified as a Hindu settlement. In village there are also the people following other religions like- Muslim, Jain, Buddhist and also there are tribes around the village.

The Ghrihsheshwar Temple and Amrut Teerth Kund has given the identity of Hindu settlement to Ellora village

Analysis: Religious Settlement & Communities

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Sign



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Comprehensive Conservation Policy for Historical Settlement of Verul, Khuldabad & Nagzipura in the Daulatabad Region



Semester II- STUDIO II

Studio Project – Comprehensive conservation policy for historical settlement of Verul

Settlement of Verul							
Typology	Building Name	Planning & Features	Drawings	Photos	Construction Technique & Material	Analysis	Inferences
Temple Complex	Grishneshwar Temple	<p>Temple oriented North-South. Temple has 2.5m ht compound wall to all four sides. We Enter into the temple through the Nagarkhana.</p> <p>Temple constructed in Bhumiya Temple Architecture.</p> <p>Temple consist of Sabhamandapa (pillared hall), Antaral and Garbhagriha.</p> <p>Sabhamandapa- There are three entrances. Constructed in a grid pattern. A statue of Nandi is placed at the center of the Sabhamandapa. A Ganesh deity situated on north-west side of Sabhamandapa.</p> <p>Antaral- Antaral is a space between Garbhagriha and Sabhamandapa. Dome used for roofing system used. Beautiful carving of Rudraksha on the entrance of the Garbhagriha.</p> <p>Garbhagriha- Deity Shiva situated at the center of the Garbhagriha. It is 1.8m down from Sabhamandapa level.</p>			<p>Sabhamandapa- Combination of dome and coffered roofing system used. Red Basalt stone with lime mortar used for construction.</p> <p>Antaral- Dome used for roofing system used.</p> <p>The most striking feature of this temple is the five tiered shikhara rising in diminishing height. The height of the shikhara is enhanced by the high wall portion of the sanctum.</p> <p>Shikhara is constructed in Red Basalt stone and covered with a mixture of lime red sand. A thick layer of lime and sand mixture applied on the Shikhara to protect the main shikhara structure from natural land carved a beautiful motifs on it.</p>	<p>There are trustee offices, shades were provided in the temple complex which are not in temple context.</p> <p>Change in stone colour due to the milk.</p> <p>Later additions disturbing the its architectural and aesthetic value.</p> <p>Encroachment outside compound wall which ducturbng the view from outside.</p>	
	Lakshvinayak Temple	<p>North-south orientation.</p> <p>Origionally temple consist only with Antaral and Garbhagriha.</p> <p>Temple is square in plan.</p> <p>The front portion of temple is an extension.</p> <p>Temple is enclosed with a compound wall.</p> <p>A domical style shikhara on top of the Garbhagriha. Lotus motifs on Shikhara.</p>			<p>Temple constructed in red basalt stone with interlocking system.</p> <p>Front extension constructed in Bricks and cement and covered with a GI sheet.</p>	<p>Front extended prtion is not in context of temple which disturbing the ascthetic and architectural value of the temple.</p>	<p>Extension observed, which creates a structural issue with the original temple.</p> <p>Reduces aesthetic and architectural value of temple.</p> <p>Temples in the settlement are totaly neglacted from tourist point of view.</p>
	Nageshwar Temple	<p>East-west orientation.</p> <p>3 small shrines and a Nageshwar temple situated on a private land enclosed with a compound wall.</p> <p>Temple complex involved a four deities are Shiva, Ganpati, Kuber and Maruti.</p> <p>Temple constructed in bricks.</p> <p>Square in plan.</p> <p>Main temple consist only a Garbhagriha.</p> <p>A domical style shikhara on top of the Garbhagriha.</p>			<p>Temple constructed in Bricks and lime mortar.</p> <p>Fencing around Temples.</p> <p>Well constructed in black basalt stone.</p>	<p>Temple is well maintained and coloured.</p>	
Temple with Compound wall	Gundeshwar Temple	<p>A temple consist with Garbhagriha.</p> <p>Garbhagriha is square in plan.</p> <p>Domical style shikhara on top of the garbhagriha with lotus motifs.</p> <p>Brick ornamentation on temple facad.</p> <p>Stone compound wall around the temple.</p> <p>Compound wall have a small gateway with ornamentation.</p>			<p>Temple constructed in Bricks and lime mortar.</p> <p>Compound wall constructed in Black basalt stone with lime mortar.</p>	<p>Temple is not maintained proerly.</p> <p>Compound wall started collapsng.</p> <p>A brick motifs observed are similar to motives observed in residences.</p>	
	Shiva Temple (near Masjid)	<p>Origionally temple consist only with the Garbhagriha.</p> <p>Front portion of temple is an extension with Columns and slabs.</p>			<p>Temple constructed in Bricks and lime mortar.</p> <p>Compound wall constructed in Black basalt stone with lime mortar.</p>	<p>RCC extension to the main temple with a flat slab which disturbing the view of the temple.</p> <p>loss of archaeological values.</p>	

STUDENT ACADEMIC WORK

Analysis: Building Typologies



Sinhgad College of Architecture, Pune
Department of Architectural Conservation

Stamp

Sign



Principal
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Drawn By
Janhavi Dhae



Semester III- CULTURAL LANDSCAPE
 Studio Project – Cultural Landscape at Junnar



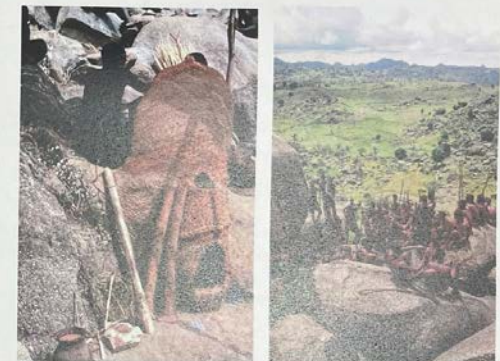
SUKUR CULTURAL LANDSCAPE



CHAITRALI DESHPANDE _CULTURAL LANDSCAPE _S.Y. M.ARCH. _03_SCOA

Traditional Iron Smelting Technique

- As we follow the building of the furnace and bellows.
- Then charcoal and bellows skins are prepared, and the iron master demonstrates how ore is gathered and cleaned.
- The second sequence follows the long day of the smelt, as the furnace is charged with ore and charcoal, sacrifice made, and, after frenzied working of the bellows accompanied by music and song, a bloom mass is removed from the shaft.
- The third sequence takes place in the forge and shows the fining of the metal produced and its forging into a traditional hoe.



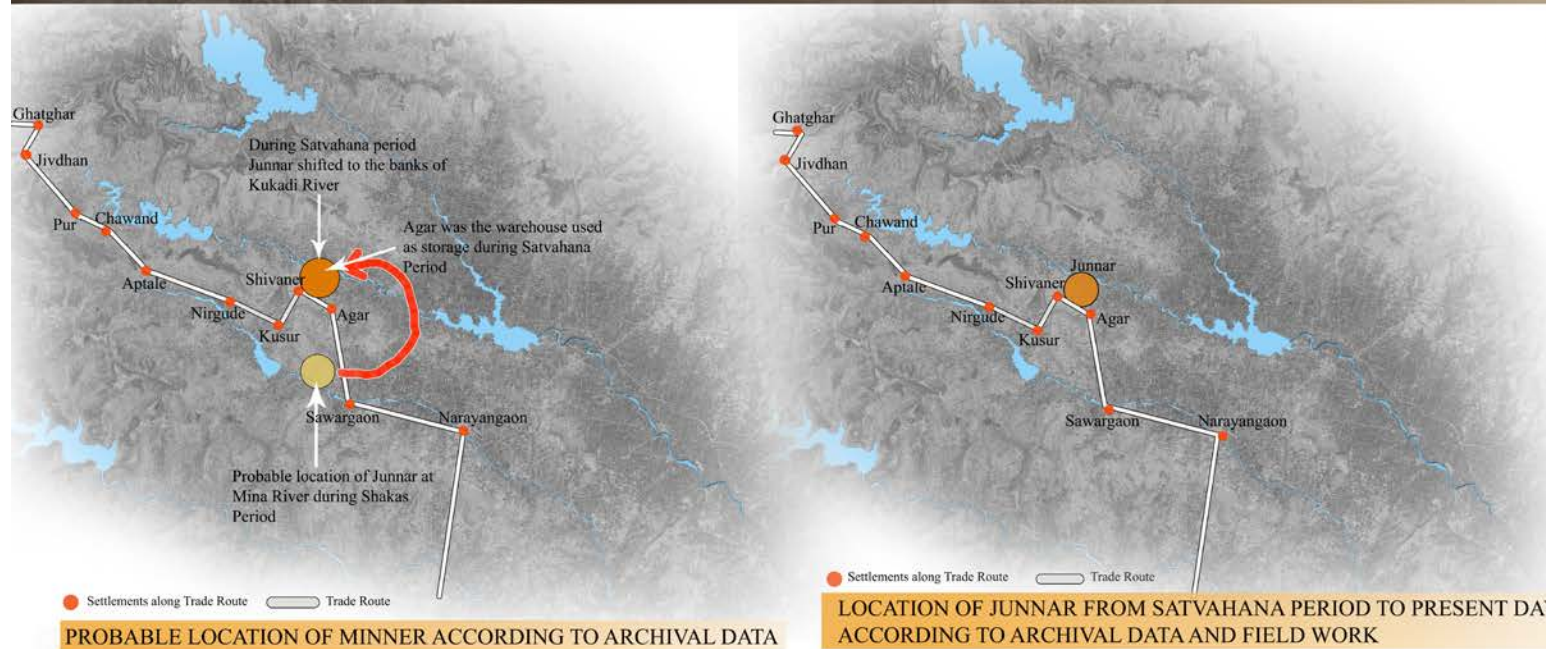
Source: <http://people.ucalgary.ca/~ndavid/Homepage/video.html>

STUDENT ACADEMIC WORK

Semester III- STUDIO III Studio Project – Cultural Landscape at Junnar

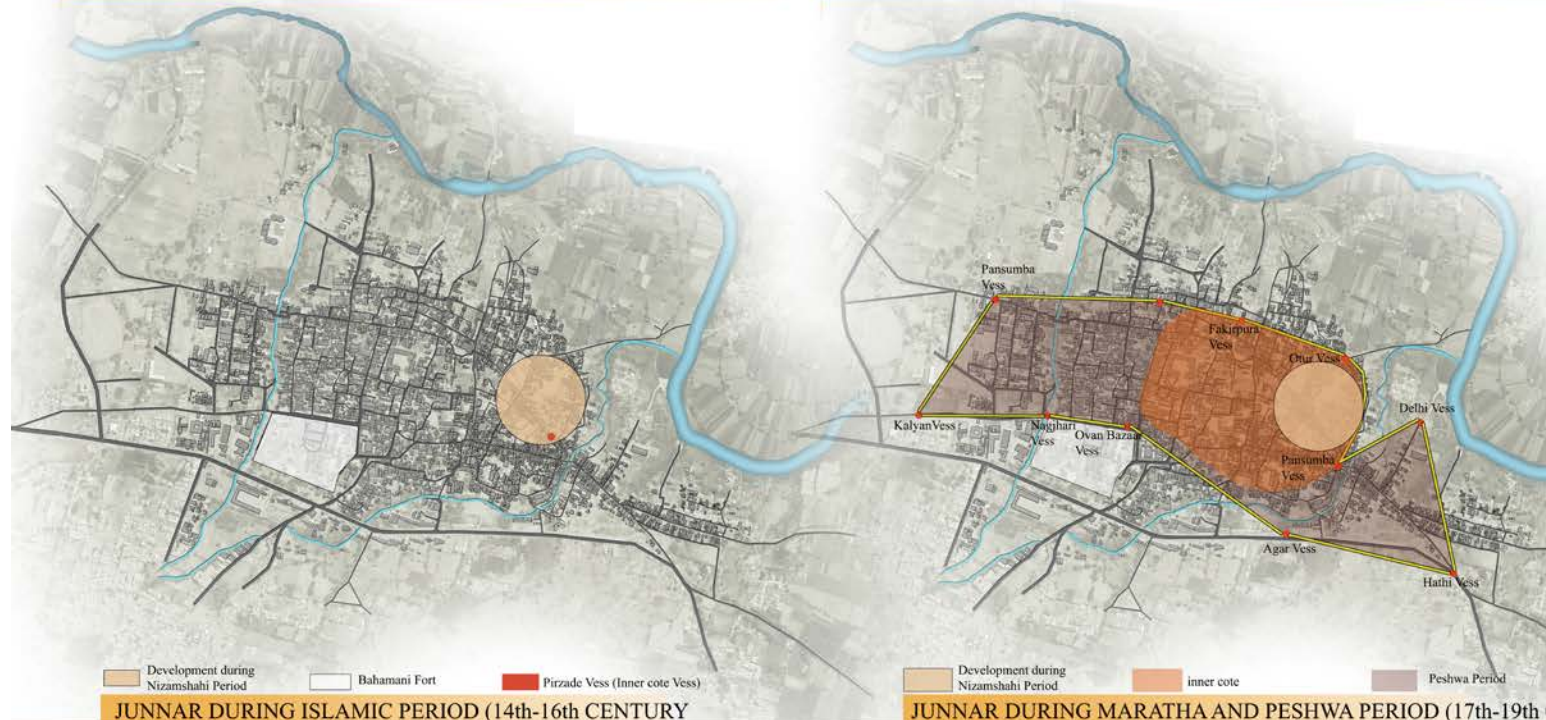
Sheet Title - Evolution of Junnar Settlement

Sheet No.



TIMELINE

Dynasty	Period	Kings/rulers	Evolution of Junnar
Yavanas	Mid-3 rd Century BC	-	-
Indo Scythians	2 nd Century BC-4 th Century AD	-	Minner- located near Mina River
Satvahanas	2 nd Century AD	Gautamiputra Shree Satkarni	Agar- located near Shivaneri, Junnar on the banks of Kukadi river
Shak-Kshatraps	3 rd Century AD	Nahapana (conquered Junnar)	Junnar
Rashtrakuta	9 th Century AD	Second Dutudurga	-
Sindh	10 th Century AD	-	-
Shilahar	10 th Century AD	Jating II	Junnar
Yadavas	Early 13 th Century AD	Singhan II (1200-1247)	Shivaneri fort, Junnar
Khilji Dynasty	Later 13 th Century	Alauddin Khilji	Junnar
Bahamani Dynasty	14 th -15 th Century	-	Junnar (Bahamani land-fort)
Nizamshahi	15 th Century (1490)	Ahmed malik Malik Ambar	Junnar- Suphi Kankha developed within the fortified town, Junnar, became Capital of Nizamshahi. Designed the Siphon System
Maratha Period	17 th Century	Chatrapati Shivaji Maharaj	Shivaneri, Junnar
Peshwa Period	18 th Century-early 19 th Century	Peshwa Bajirao, Peshwa Bajirao II and Chimaji Appa	Junnar, development of Bazar pethas
Colonial Period	19 th Century-20 th Century	Major Eldrim	Infrastructural ment in Junnar



INTRODUCTION OF JUNNAR

Junnar, north latitude 19° 12' and east longitude 73° 56', lies in a broad flat valley about 2000 feet above the sea, on the south or right bank of the Kukdi, fifty-six miles north of Poona, and about six-teen miles east of the crest of the Sahyadris.

ETEMOLOGY OF JUNNAR

- Omenagar near Mina river (Geographer Tominy maintained during 2nd Century)
- Jimanagar (963 AD)
- Junir (russian traveler Afnasiyas 1470 a.D)
- Jineh-(Dr.Jon Frayer ,Traveler who was travelling in 1672 to 1681 stayed in junnar for some time)
- omenagar
- Meen -According to sir Ramkrushna Bhandarkar junnar and was capital of kshatrap Nahapan.
- Meener -Junnar is near meena river that's why it was also nown as.
- kukadner -Due to Kukadi river which flows toward north of junnar so it was also known as.
- Junagadh, June Nagar:Muhammad Kasim Farshat(Persian historian)
- Jirna nagar (1965 king mahasamant Adityawarman)



Stage - History & Evolution

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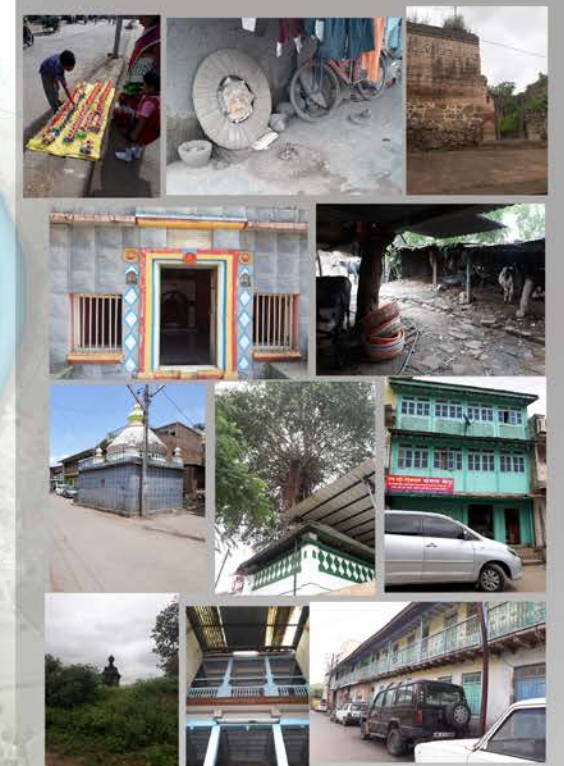
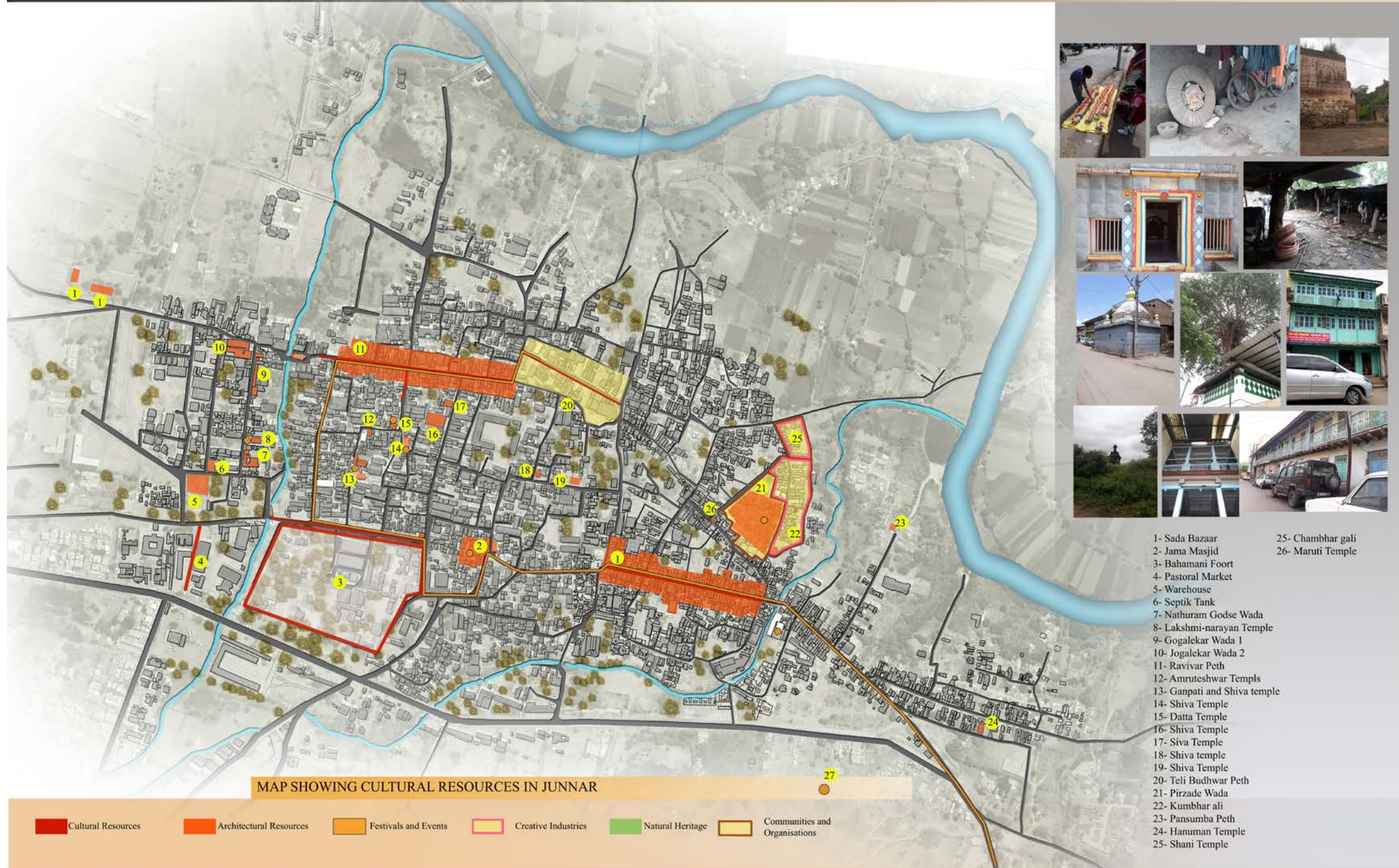
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Safeguarding the Cultural Landscape of Junnar Region

Semester III- STUDIO III Studio Project – Cultural Landscape at Junnar

Sheet Title - Cultural Resources in Junnar

Sheet No.



STUDENT ACADEMIC WORK

Stage Identification of Cultural Resources in Junnar

STES'S Sinhgad College of Architecture, Pune, Department of Masters in Architectural Conservation



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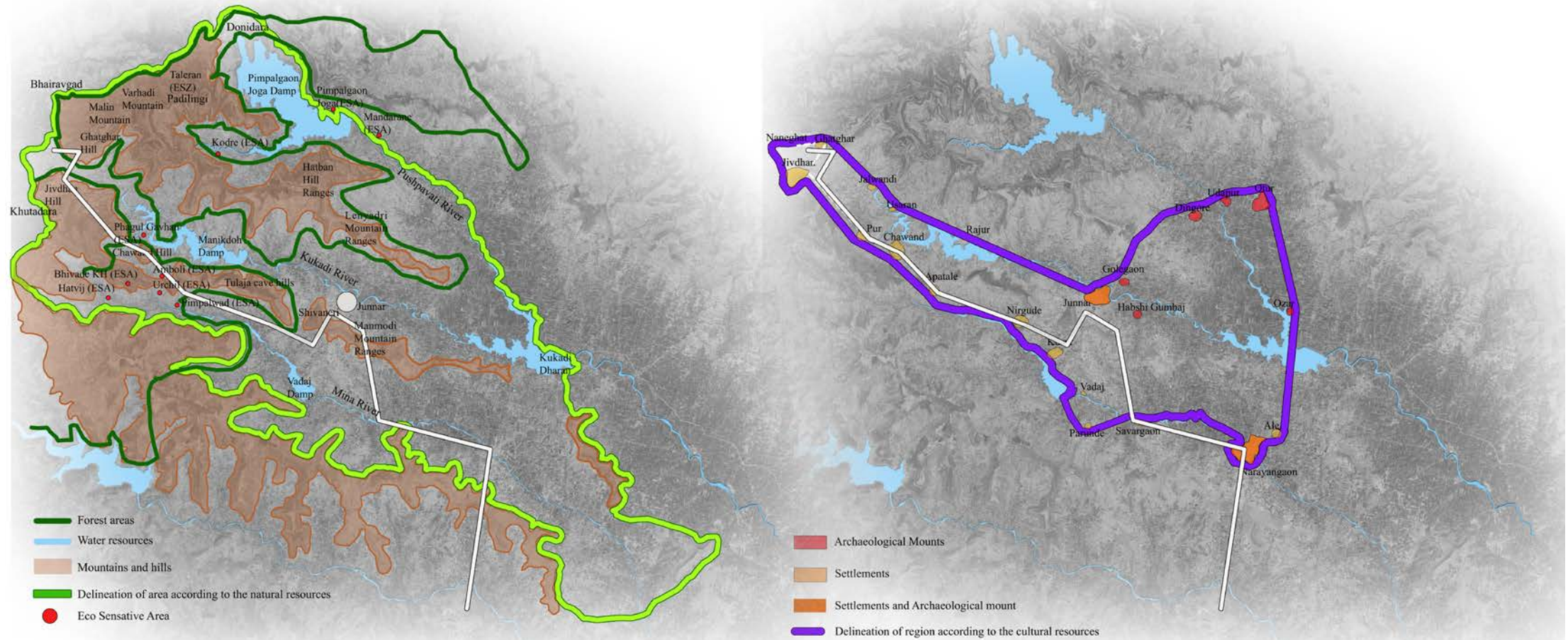
Safeguarding the Cultural Landscape of Junnar Region



Semester III- STUDIO III Studio Project – Cultural Landscape at Junnar

Sheet Title - Delineation of Cultural Region according to the Natural and Cultural Resources

Sheet No.



MAP SHOWING DELINEATION OF CULTURAL REGION ACCORDING TO THE NATURAL RESOURCES

The natural resources of this region for delineation encompass major hill ranges and rivers which run parallel with the trade route which is the spine of this region. The geological formations here are such that it causes natural mountain passes and bridges which are to be traversed for access through this region. This region also has major protected forest areas under it which signifies it in ecological heritage as well. This region is apparently famous for Teak forests, a special type of flower species which is seasonal, its richness in wild life and rock formations.



Geographical Terrain

MAP SHOWING DELINEATION OF CULTURAL REGION ACCORDING TO THE CULTURAL RESOURCES

This region is rich with numerous cultural resources like Archaeological findings, indigenous settlements and cultural diversity. Archaeological excavations have been carried out along the entire trade route and the rivers which gives us an understanding of the ancient trade culture and lifestyle of the people along with an understanding of the material culture used along with the commodities imported internationally. By tracing these present excavated mounds, this area delineation occurs.



Stage Delineation of Cultural Landscape Region

STES's Sinhgad College of Architecture, Pune, Department of Masters in Architectural Conservation



Principal	Faculty	Second Year M.Arch (Architectural Conservation)	Prepared By	Stamp & Sign
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Safeguarding the Cultural Landscape of Junnar Region



Semester IV- CONSERVATION PROJECT

SHEET NO. 03

AIM

Aim is to safeguard the tangible and intangible heritage of Miraj by studying the specific zones of the town and applying policies for the same so that the current condition of selected zone will improve and can be protected under specific governmental or non-governmental organizations.

OBJECTIVE

Objective of this project is to identify the cultural resources of historic area in historic town

To focus on the historic monuments which are neglected and to be protected

To protect the heritage of the Miraj town as an important settlement in the history of Maharashtra.

To safeguard the craft of sitar making as an intangible heritage of the town.

To apply the rules and regulations to the culture of the town by studying the streetscape and skyline of the town..

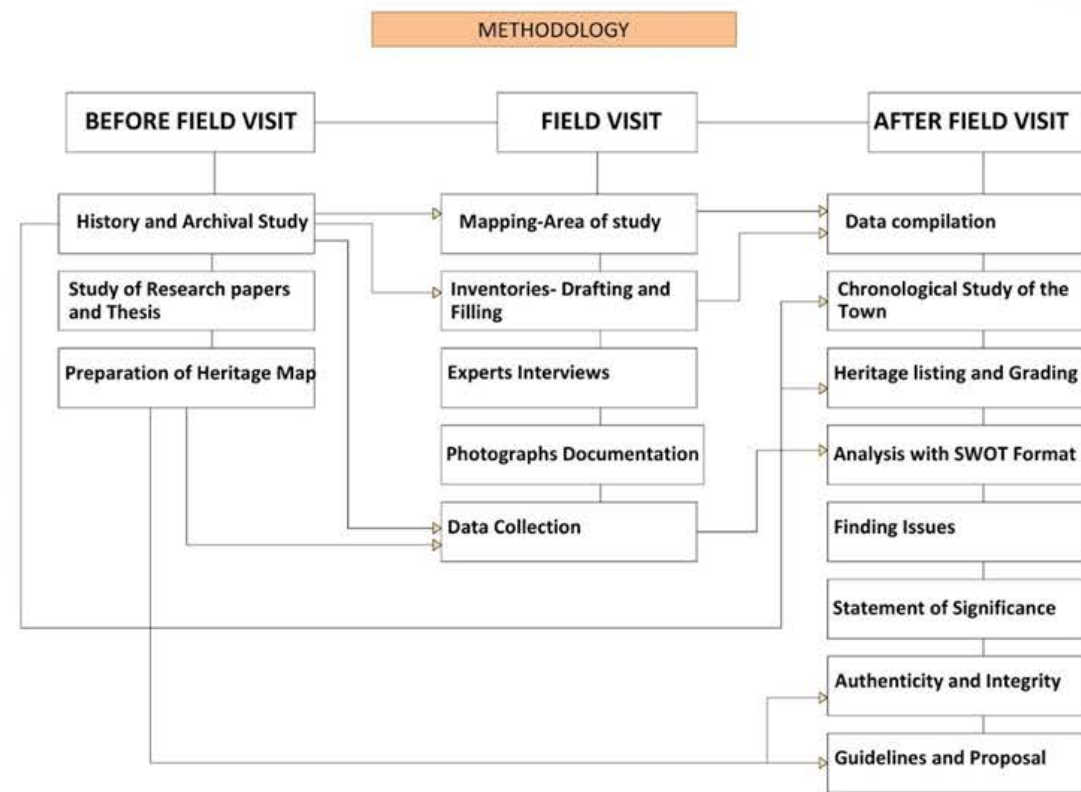
SCOPE AND LIMITS

Miraj is the settlement flourished in Bahamani period, when it was an army post and fortress. And also Saint Meerasahib dargah has given the identity of Sufi Shrine to Miraj. It was formed as an army post, then it became a princely state during British period.

While changing the character of the settlement, many things changed their outlook, function and also the identity too. Some things marked as a layer of history like the Craft of Sitar making, Sufism of Miraj and religious harmony formed through the Music in Miraj.

These are the scopes of the projects.

These aspects are limited for this settlement only and not for the region. Basically empires ruled over the all region but for this project I will focus on only the settlement. Because the craft of Sitar making flourished only in the settlement and not in the whole region.



Selection of the settlement for its uniqueness in tangible and intangible aspects of Heritage. Music is the spine of this settlement which is vanishing and the settlement is becoming more industrialize.

Identity of Miraj is the mine of music and many legends have touched Miraj in their career and its their privilege to perform in Miraj. This association is the main aspect of conservation of the particular area in Miraj

The town was found in Shilahar period but flourished in Maratha and Colonial period. Patwardhan princely state worked more for Miraj. It was their capital. But many architectural evidences show the peak period of Adilshahi as it was the Jagir of Adilshah of Bijapur

The all aspects are focused in one particular are of Miraj that is Sitarmaker Galli at the main road of Miraj. It has Maratha and colonial style of architecture, Adilshahi period community, and the craft was flourished in the peak period of Patwardhans when they encouraged Hindustani Classical Music

Identification, listing and grading of heritage in Miraj and safeguarding the craft of Sitar making and recommend the appropriate guidelines for the streetscape of Sitar makers galli, Miraj

ETEMOLOGY

The presently used word 'Miraj' has a long history and historians differ as to exactly how the word came into existence.

In ancient historical literature the word '**Marichip Ashram**' is often referred to. It was probably a part of the Dandakaranya Forest (mentioned in the Ramayana). Even today there exists a hill called Dandoba Hill on the outskirts of Miraj. This word has striking resemblance to the word 'Dandakaranya.'

'**Mirije**': This word first finds its mention in some stone and copper inscriptions of the Shilahara Period. A copper inscription ('Tamrapat') found in Miraj dates back to 1058 AD. It clearly mentions the word 'Mirinj Desh.' The same word is also mentioned in another historic inscription belonging to reign of the Shilahara King Gandharaditya Dev of Kolhapur. The language seems to be mix of Kannada and Sanskrit.

'**Miriji**': A corner stone belonging to the Shilahara Period, when King Mahamandaleshwara Vijayaditya ruled, mentions the word '**Mirije**.' It was recovered from a Shiva temple near Miraj.

'**Mubarakbad**': Historic records show that during the Bahamani regime, Miraj was known as Mubarakbad. King Hassan Gangu Bahamani conquered Miraj by defeating Queen Durgavati and renamed the city.

During the rule of Mohammad Adilshah (1650 AD) the city was called '**Mirz**.' In a book called '**Alinama**,' Miraj is referred to **Murtazabad**.

During the British rule many local names of the cities and towns were changed or anglicized for ease of pronunciation of the rulers, as it was difficult for them to correctly pronounce the original Indian names. In very old documents of early 19th Century, the word '**Meritch**' is mentioned. In the following years the word seems to have changed to **Meeruj** and then **Meeraj**. After 1900 however the presently used word '**Miraj**' seems to have been accepted for usage.

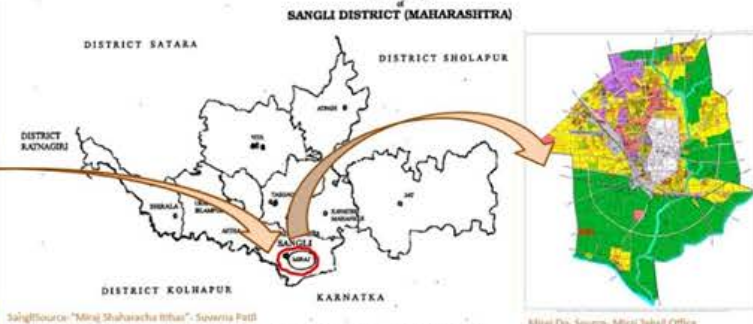
Source: "Miraj Shilahara Bhand", Saverna Path





Semester IV- CONSERVATION PROJECT

INTRODUCTION



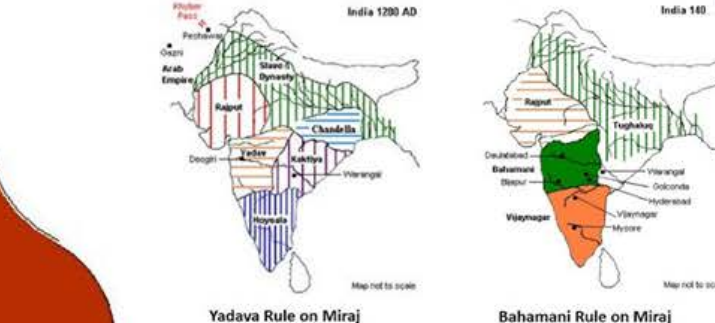
India Source: "Geo-Analysis of Landuse / Landcover Change in Miraj Tehsil of Sangli District Using Geoinformatics" By Pratik Saymore

♦ **Miraj** is a city in southern Maharashtra, India that was founded in the early 10th century. It was an important Jagir of the Adil Shahi Court of Bijapur.
 ♦ Chhatrapati Shivaji stayed in Miraj for two months during his South India Campaign. Because of its location, Miraj has been held as a strategic bastion. There were many remains of the fort but they have been demolished to construct the road. It was the capital of Miraj Senior and an important junction on the central railway network.
 ♦ The Patwardhan family were the hereditary rulers of Miraj until independence. Miraj City is part of the Sangli- Miraj Kupwad Municipal Corporation formed in 1999.
 ♦ The city is recognised for performance of Hindustani Classical Music, for its medical services and as a place of religious harmony. Ganesh festival is celebrated with great enthusiasm and The annual Ganesh Visarjan procession is an attraction which lasts for an average of twenty hours.
 ♦ Miraj is mainly recognized for medical where people from Karnataka and Arab countries do visit for medical treatment. **Even its is famous for string instruments where many of great artist choose miraj to buy musical instruments and mainly Sitar.**



The Heritage:
 While mentioning the Miraj, we have to take into account the three peculiar aspects of the township viz. The creation of stringed musical instruments, the important Jagir of the Adil Shahi Court of Bijapur and one of the important settlements in Sufism as the Sufi Saint Meera Sahib lived in Miraj before 700 Years. (Miraj is a holy land of holy tradition in which the great saints belong to Hindu - Muslim religion stayed here.) Miraj has its own and different culture. It is known as the mine or treasure of great musical personalities viz. Abdul Karim Khan, Pandit V.D. Paluskar, Balkrishnabuva Ichaikaranjkar, Vinayakbua Patwardhan etc. have contributed their level best to upgrade the status of Miraj in the Musical world. Miraj has also produced the great intellectuals, the historians and the literates, e.g. Ex - chief minister of the then Bombay Presidency Balasaheb Kher, the great historian Vasudeo Shastri Khare, Chintamanrao Kolhatkar, well-known literate Tatyasaheb Kelkar, the distinguished diplomat Annasaheb Latthe, etc. The noted music directors of the film industry Ram Kadam and Vasant Pawar also belong to Miraj.

About the rulers and empires of Miraj, one can classify the history of Miraj in five periods. First of all, the period long back from the year 3000 BC which is as old as the Ramayana and Mahabharata. Later on from 300 BC to 600 AD Satvahans, Vakatakas, Rashtrakutas, Shilahars, and Yadavas of Devgiri ruled Miraj. From the year 1347 to 1739 the Muslim ruler had their power over Miraj. And lastly from 1739 onwards, upto the merger of the state c. Miraj into independent India.
Source:- MAHARASHTRA STATE GAZETTEER SANGLI DISTRICT 1995-96, pp. 15,20, AND 40
 The King Satvahan (Paithan), Chalukya (Badami), Rashtrakut (Malkhed), and Shilahar (Kolhapur) have ruled over Miraj during their peak times. Patwardhans later on made this town as the capital of their state. Govind Hari, Gopalrao, Vamanrao Ganapatrao were the noble kings who kept Miraj as the central place in their everyday activity.



Going through the history of Miraj one comes across the fact that **Miraj was ruled by-**
 ♦ **Yadava 1196 to 1300**
 ♦ **Bahamani- 1347 to 1450 AD**
 ♦ **Adilshahi 1490 to 1640**
 ♦ **Maratha Empire- 1640 to 1820 AD**
 ♦ **Miraj Junior State 1820 to 1947 AD**
 Hence Miraj has experienced all kinds of rulers. In spite of all these influences it is notable that Miraj has maintained its own identity. Miraj is a small town. It doesn't possess high qualities of urban settlement, nor is it a backward village, but it is a confluence of ideal union of urban civilization on the one hand and the rural characteristics on the other. The Miraj town owes its origin to a rich past. It has got a prosperous history right from the ancient era. It has a glorious tradition and past in all the forms of its civilization like **music, drama, literature, politics and sports**. It is said that Miraj was known as one of the rich towns of the past. It was the capital town of the then king Patwardhan who ruled the Miraj state for about one hundred and eighty years. They have their awe in the whole of Maharashtra.



Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Average high °C (°F)	29.3 (84.7)	29.8 (85.6)	31.8 (89.2)	34.1 (93.4)	34.9 (94.8)	37.9 (100.2)	37.9 (100.2)	35.9 (96.6)	34.4 (93.9)	32.4 (90.3)	27.8 (82.0)	26.9 (80.4)	29.9 (85.8)
Average low °C (°F)	12.3 (54.1)	14.8 (58.6)	17.8 (64.0)	22.5 (72.5)	23.9 (75.0)	23.1 (73.6)	20.5 (68.9)	18.8 (65.8)	19.0 (66.2)	16.3 (61.3)	12.3 (54.1)	18.5 (65.3)	18.5 (65.3)
Average precipitation mm (inches)	4.1 (0.16)	0.5 (0.02)	3.0 (0.12)	32.0 (1.26)	56.4 (2.22)	70.4 (2.77)	110.0 (4.33)	110.7 (4.36)	106.2 (4.18)	66.8 (2.63)	41.1 (1.62)	5.1 (0.20)	626.1 (25.0)

Source: [1] Government of Maharashtra

WHY MIRAJ..?

♦ Miraj is about 554 meters above the sea level and has a temperate climate. Laying on 16°.49 North latitude and 74°. 41 East longitude, Miraj is located 9.65 kms east of Sangli, the district headquarters.
 ♦ Miraj is 48 kms away o the east of Kolhapur. Out of the nine taluka places of the district, Miraj is one of the important taluka places. Miraj is the taluka headquarter. The taluka is bounded by Tasgaon and Palus talukas on the North by Kavathe - Mahankal taluka on the north, east by Belgaum and Bijapur districts of Karnataka state on the south and south - east and by Kolhapur district on the West and South-West. The taluka sprawls across the Deccan Plateau in the rainshadow region of the Sahyadrian mountain ranges on the Southern - most tip of the state of Maharashtra. Towards west and south -west, being part of the river Krishna's basin, the area is more or less plain.

♦ Geographical formation in the taluka is of Deccan Trap and the soil is derived from basalt rocks. Black cotton soil is found in abundance on the west, the south - west and the east; and granular black soil is largely found in the north - east region.

While mentioning the Miraj, we have to take into account the three peculiar aspects of the township viz.

1. The creation of string musical instruments
2. The important Jagir of the Adil shahi court of bijapur
3. One of the important settlements in sufism as the sufi saint meera sahib lived in miraj before 700 years. (Miraj is a holy land of holy tradition in which the great saints belong to hindu - muslim religion stayed here.)

Miraj has its own and different culture. It is known as the mine or treasure of great musical personalities viz. Abdul Karim Khan, Pandit V.D. Paluskar, Balkrishnabuva Ichaikaranjkar, Vinayakbua Patwardhan etc. have contributed their level best to upgrade the status of Miraj in the Musical world. Miraj has also produced the great intellectuals, the historians and the literates, e.g. Ex - chief minister of the then Bombay Presidency Balasaheb Kher, the great historian Vasudeo Shastri Khare, Chintamanrao Kolhatkar, well-known literate Tatyasaheb Kelkar, the distinguished diplomat Annasaheb Latthe, etc. The noted music directors of the film industry Ram Kadam and Vasant Pawar also belong to Miraj.

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कर्मभूमी ही धन्वंतरीची
तपोभूमी ही गानकलेची,
संत, अवलिये, गुरु - संशोधक
वीर इये जन्मले :

In this respect the well-known Marathi poet Ram Gosavi wrote the following lines in appreciation of Miraj - (Daily Tarun Bharat: Kumathekar).
 It means, in a literal sense, it is the divine sphere of the Dhanwantari (Heavenly doctors), it is the divine land for the art of music, a saints-teachers and philosophers who were born in this township.



*Source:- Maharashtra State Gazetteer Sangli District 1995-96, pp. 15,20, and 40





Semester IV- CONSERVATION PROJECT

HISTORY AND TIMELINE OF MIRAJ



BAHAMANI PERIOD



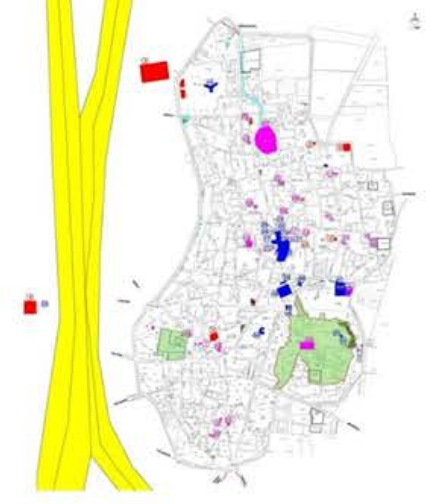
ADILSHAHI PERIOD



MARATHA PERIOD



MIRAJ JUNIOR STATE (BRITISH) PERIOD



MIRAJ

SHEET NO. 04

TIMELINE OF MIRAJ AND ITS ETYMOLOGY

ETYMOLOGY	DYNASTY	YEAR/ PERIOD	SOURCES
MIRINJI DESH	SHILAHAR KING - MARSINH	1058 A.D.	COPPERPLATE FOUND AT KOPESHWAR TEMPLE, KHIDRAPUR,
MAIRINJ/ MIRINJE	SHILAHAR KING- GONKA RULERS	1142 A.D.	COPPERPLATE FOUND AT BELGUM, KARNATAKA
MIRINJI	YADAVA KING- SINGHAN 2	1213 A.D.	STONE INSCRIPTION FOUND AT KOPESHWARAT TEMPLE , KHIDRAPUR
MUBARQAQABAD	HASAN GANGU BAHAMANI	1347 A.D.	TAZKIRAT-UL-MULQ BY RAFIZ-UD-DIN SHIRAZI
MIRZ	MOHAMMAD ADILSHAH	1650 A.D.	LETTERS AND DOCCUMENTS OF ADILSHAHI PERIOD
MURTAZABAD	BADSHAH ADILSHAH	1668 A.D.	ALINAMA BY MOHAMMAD NUSRAT
MIRAJ	MARATHA KING PESHWE	1703 A.D.	DOCCUMENTS OF PESHWAS

TIMELINE OF MIRAJ BEFORE BAHAMANI SULTANATE

SATVAHANA	1 B.C.E. TO 218-20 A.D.
VAKATAKA	220 TO 510 A.D.
BADAMI CHALUKYA-	510 TO 750 A.D.
RASHTRAKUTAS-	750 TO 973 A.D.
KALYANI CHALUKYA-	973 TO 1190 A.D.
RULERS OF MIRAJ UNDER SHILAHARAS	
GOKA-	1020 TO 1050
MARSINHA-	1050 TO 1075
GUHAL 2 -	1075 TO 1085
BHOJ 1-	1085 TO 1100
BALLAL-	1100 TO 1108
GANDARADITYA-	1108 TO 1138
VIJAYADITYA-	1138 TO 1175
VEER BHOJ-	1175 TO 1212



MIRAJ FORT



Source- Mansinh Kumathekar, Miraj



NRUSINHA MARUTI TEMPEL



KASHI-VISHVSHWAR TEMPLE

Source - Self Photography

Sangl[Source-"Miraj Shahanchia Itias"- Souvra Patil



IDENTIFICATION OF BUILT HERITAGE OF MIRAJ AND PROPOSING CONSERVATION GUIDELINES FOR SITARMAKERS LANE PRECINCT

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Stamp-
Sign-





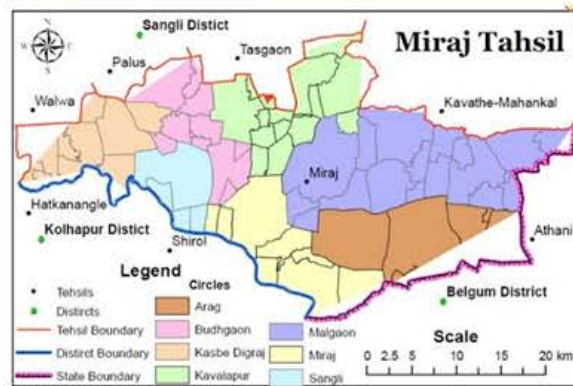
Semester IV- CONSERVATION PROJECT

GEOGRAPHY OF MIRAJ

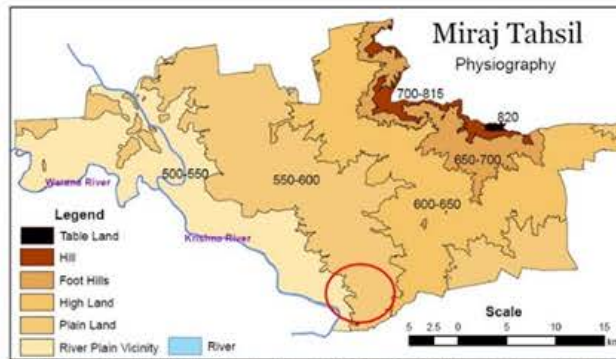


Miraj tahsil is the most urbanized tahsil of Sangli district. Sangli-Miraj-Kupwad Municipal Corporation is the biggest urban area of Sangli district, is located in Miraj tahsil. The proportion of urban population in the tahsil is increasing very fast, as a result the pressure on natural resources is increasing day by day. The agriculture in the western part of the tahsil is quite developed than eastern part. The irrigated and well fertile land of western part is converting into saline land whereas dry land of eastern part is being brought under cultivation through canal irrigation. The changing land use and land cover is compelling to comprehend the resources in Miraj tahsil. On the whole, Miraj tahsil is experiencing several changes, which require systematic study in this concern the understanding of geographical set-up of tahsil is very much essential. The assessment of physical and socio-economic condition helps to understand the present geographical setting and its potentialities for futuristic development.

Miraj Tahsil is situated in the river basins of Krishna River. It is bounded by Jath tahsil to the east, Kavathe-Mahankal, Tasgaon to the Chapter-II - 34 - north-east and north, Palus and Walwa tahsils to the north-west and west. Miraj tahsil is sharing its boundary with Kolhapur district (Shirol and Hatkanangle tahsil) and Belgaoon district (Athani tahsil) of Karnataka state.



Socio-Economic Review and District Statistical Abstract of Sangli district and Agricultural Department, Panchyat Samiti Miraj.



Physiography
Physiography plays an important role in the land use pattern. Barring Konkani entire Maharashtra is a plateau and Miraj tahsil as a whole is a part of the Deccan plateau. On the basis of altitude Miraj tahsil is categorized into six classes

Source: Based on contours of Survey of India toposheet

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Krishna River Warana River 500-550 550-600 600-650650-700 700-815 820 Legend River Table Land Hill Foot Hills High Land Plain Land River Plain Vicinity Miraj Tahsil Physiography 5 0 5 10 152.5 km Scale

1. River Plain Vicinity

This is the first category adjacent to river Krishna and Warana, within 500 to 550m altitude. This area is occupied about 153 sq km land on both sides of the Krishna River and north of the Warana River. The soil of this part is well fertile and irrigation systems developed on the river boosted the agricultural production in this area.

2. Plain Land

The area located adjacent to river plain vicinity is quite same as first category, but having some extra height. This part is of 550 to 600m Chapter-II - 37 - elevation and expanded in about 475 sq km area. This region is also good potentiality in agricultural production.

3. High Land

The area of 600 to 650m height is named as high land and covers about 225 sq km land. The area of eastern part of Miraj tahsil comes under this category. This area is considered as starting edge of drought prone region of Sangli district. Starting from this area towards east and north-east direction of Sangli districts is known as drought prone area.

4. Foot Hills

The north-eastern part of Miraj tahsil having 650 to 700m elevation is expressed as foot hills area. This is about 50 sq km area having various up-and-downs in the relief. The water scarcity is the main problem for the agriculture in this area.

5. Hill

About 22 sq km hilly portion of Miraj tahsil of 700 to 815m altitude is categorized into Hill category. This part is containing steep slope and possesses scanty natural vegetation. The only available and officially recorded natural vegetation patches of Miraj tahsil are located here.

6. Table Land

The tableland expanded in 1.2 sq km area on 820m height is the last physiographic division of Miraj tahsil. *Girling temple (Giri means mountain and ling is name of lord Shiva) is situated in this area. This area is having spiritual and historical background. Also the agriculture is practiced in this area.*

7. Climatic Condition

The climate of the study area is characterized by general dryness throughout the year except during the south-west monsoon season. From December to about the middle of February is a cold season and in hot season, May is the hottest month. The south monsoon season is

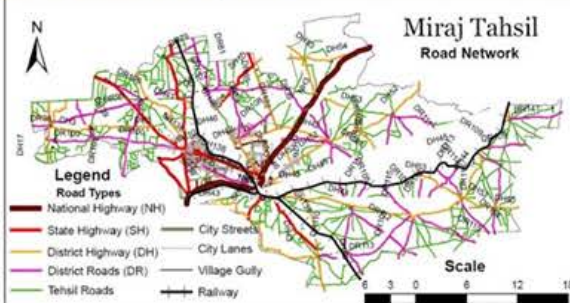
Distribution of Rainfall in Miraj

Sr. No.	Year	June	July	August	September	October	Total	Percentage
1	1971	123.10	48.10	91.40	111.10	116.80	490.50	99.70
2	1981	167.00	79.00	46.00	228.00	12.00	532.00	128.46
3	1991	156.00	158.00	57.00	93.00	113.00	577.00	198.58
4	1995	23.46	76.50	20.60	142.60	221.20	484.36	98.45
5	1996	45.50	124.00	198.10	23.30	172.50	563.40	114.51
6	1997	178.80	81.30	105.30	56.80	136.40	558.60	113.54
7	1998	71.70	125.50	57.40	68.40	216.10	539.10	109.57
8	1999	49.00	46.20	28.80	90.70	165.50	380.20	77.28
9	2000	41.50	65.50	119.60	278.40	61.50	566.50	115.14
10	2001	70.00	57.60	45.90	187.70	110.20	471.40	95.81
11	2002	124.10	23.90	167.50	30.20	130.20	475.90	96.73
12	2003	15.00	32.00	15.60	44.80	145.60	253.00	51.42
13	2004	179.20	51.00	93.40	194.30	48.50	566.40	115.12
14	2005	173.30	162.50	200.90	136.60	61.80	735.10	149.41
15	2006	161.70	165.20	165.70	145.30	21.00	658.90	133.92
16	2007	70.00	110.00	110.00	105.00	96.00	491.00	99.60
17	2008	54.10	32.70	98.60	98.80	70.10	354.30	72.01
18	2009	30.60	181.20	58.00	237.00	112.00	619.00	125.81

Temperature recorded in Miraj

Year	1971		1981		1991		2000	
	Maximum in °C	Minimum in °C	Max	Min	Max	Min	Max	Min
January	32.1	9.8	-	-	33.4	15.8	32.2	15.4
February	34.7	12.5	-	-	34.4	14.9	31.4	15.7
March	38.9	11.1	-	-	37.5	18.4	36.7	18.7
April	39.7	19.3	38.7	20.9	37.5	22.0	39.2	22.5
May	39.7	19.6	38.8	22.7	37.2	22.6	34.8	22.9
June	31.5	20.2	31.5	22.6	31.3	22.6	30.7	22.8
July	31.9	19.6	-	-	27.5	21.8	30.2	22.3
August	31.5	19.6	27.4	21.2	27.5	21.3	28.8	21.5
September	34.8	19.6	30.0	21.5	31.2	21.0	31.1	21.2
October	32.5	18.2	32.3	19.9	33.6	19.8	31.7	20.7
November	32.0	17.6	31.4	15.3	30.9	17.8	32.0	17.7
December	31.3	10.2	30.6	14.7	31.8	13.9	31.2	14.1

Road Network in Miraj Tehsil



Miraj Tahsil-Source: "Geo-Analysis of Landuse / Landcover Change in Miraj Tahsil of Sangli District Using Geoinformatics" By Pradyumn Saymore

Road Network The development of any country or region depends on the road network of that area. Similarly, the road network of Miraj tahsil has supported to the overall development. Miraj tahsil is having quite good road network if compared with other tahsils of Sangli district (Fig 2.9). Miraj tahsil comprises about 13 per cent of land under urban use therefore the total length of road is also quite more. The road condition within urban area is good, but in peripheral areas it is not up to the mark.

Road Category	Total Length (in km)	Metal	Stony	Murum
Major State Highway	29.1	29.1		
State Highway	101.12	85.12		16
Major District Road	207.56	166.8	27.4	13.36
Other District Road	329.68	71.41	90.57	167.7
Tahsil Roads (Rural)	504.24	87.06	109.5	307.68
Total Length in km	1171.7	439.49	227.47	504.74

Source: Public Welfare Department, Zilla Parishad Sangli, 2006.

SHEET NO. 02

Population of Miraj

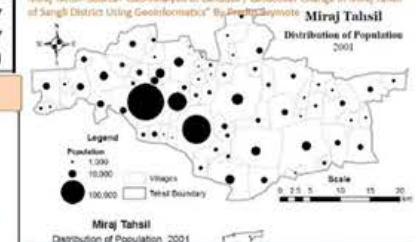
Growth of Population growth is the most fundamental demographic processes with which change in population during specific time is understood. Table elaborates the population growth and its decadal and annual variation for the period of 1971 to 2001.

	Period	Population	Actual Decadal Variation	Decadal Variation in %	Annual Variation in %
	1971	207207	-	-	-
Rural	1981	237332	30125	14.54	1.45
	1991	270888	33556	14.14	1.41
	2001	293546	22658	8.36	0.84
	1971	201597	-	-	-
Urban	1981	268988	67391	33.43	3.34
	1991	363751	94763	35.23	3.52
	2001	462502	98751	27.15	2.71
	1971	408904	-	-	-
Total	1981	506320	97516	23.85	2.39
	1991	634639	128319	25.34	2.53
	2001	756048	121409	19.13	1.91

Source: District Census Handbook of Sangli, 1971 - 2001

In 1971, the population of Miraj tahsil was 4,08,804 persons, by 1981 it was 5,06,320 with growth rate 23.85 per cent. In period of 10 years total 97,516 persons were added in which 30,125 persons from rural area and 67391 from urban. During 1991 population size of the tahsil was 6,34,639 persons, it rose to 7,56,048 in 2001 and the decadal growth rate was 25.34 per cent. The rural area is having average 1.2 per cent annual growth rate whereas in urban area it is 3.2 per cent, which is about three times more.

Miraj Tahsil-Source: "Geo-Analysis of Landuse / Landcover Change in Miraj Tahsil of Sangli District Using Geoinformatics" By Pradyumn Saymore



Conclusion

Miraj tahsil is situated in south-western part of state on the border of Maharashtra and Karnataka. This tahsil has influencing on adjacent areas because it is having various factors like railway junction, hospitals and medical facilities, famous market yard, district administrative headquarter, etc. Miraj tahsil is having dynamic nature by its physical and human resources. It possess diversity like dry as well as well irrigated agricultural land, it is having major rivers as well as drought prone area, there is mixture of soil pattern, etc. Also Miraj is the most urbanized tahsil in Sangli district. Considering its growth and expansion it is essential to make proper planning for utilization of physical and human resources.

Population Distribution

The relative relief of the study area is 300m and except north-eastern uplifted parts rest tahsil is having average height within 500 to 650 metre. River Krishna and Warana have played major role in the transformations occurred in the tahsil. The soil of this area varies from deep black (near river vicinity) to shallow rocky (towards eastern part) and its tone is varying from dark black to light brown. The increasing proportion of salt affected soil is major problem in the western part of tahsil. Only one per cent land is under forest and is decreasing day by day, which is another serious problem

