



HINDU ARCHITECTURAL FEATURES, RELIGIOUS- CULTURAL HERITAGES AND MEDIEVAL SETTLEMENT, NATURAL CAVES IN VINDHYAN TRACT OF HISTORICAL STRATEGIC CHANDERI HILL FORT, CENTRAL INDIA

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ABSTRACT

The Chanderi Hill Fort of Central India was built by Hindu Pratihar King Kirti Pal in 11th Century AD. It is also known as Kirti Fort in his name. The present Chanderi Township of Ashok Nagar district, M.P. was the capital of his reign. Earlier to Vedic period, the Chanderi region was ruled by King Shishupal, mentioned in Hindu Epic Mahabharata. It had been located strategically on the border of Malwa and Bundelkhand and connected Ancient Trade Route (ATR) from Central India to sea ports of Gujarat via Malwa, Mewar, Deccan. The aim of study is multidisciplinary to elaborate the scientific interpretation of physical domain, terrain and landscape characteristics, correlation with the Histo-Archaeological, Architectural features of Hindu Arts and Cultural Heritages of Chanderi region and its tourism prospects. Under methodology, the Satellite Remote Sensing Imagery Data (2020-2021) have been utilized for demarcation of natural features and manmade physical structures, geomorphic, geologic units, settlement etc. and correlated with existing literatures records of the region. The study indicates that the Medieval Urban Settlement layout Plan of Chanderi Township evolved Ancient Hindu Vastushastra representing Vashtu Purusha Mandla with main axis orientation in stone walled fortified Ander Shahar (Inner Township). The Architectural Characteristics reveals the artistic carvings and decoration on Facades, Palaces, Havelis, Religious Hindu Temples, Monuments shows mature Architectural style and Cultural Heritages of Medieval Rajputana period. The monuments including Kirti Fort, Havelis, Palace Badal Mahal, Gateways Mata Jageshwari Temple, religious places, Caves, reservoir of Rajghat dam etc. are major attractions for tourist and pilgrimages. Some effective protective measures are required under caretaking of professional environmentalist, archeologist, architects, historians with the help of NGO's and public- participation of Chanderi Community. It will rise the Tourism Prospects of ancient cultural, religious heritage and Traditional Silk Trade Centre of Malwa region.

KEY WORDS- KIRTI FORT, PRATIHAR KING, RANA SANGA, MEDIEVAL CENTRAL INDIA, BUNDELA ARCHITECTURE, CHANDERI SILK, MATA JAGESHWARI TEMPLE, VINDHYAN SANDSTONE, ANCIENT TOWN, TOURISM, MONUMENT, CAVE, BETWA RIVER, CONSERVATION, HERITAGES.

A. INTRODUCTION

The historical town Chanderi and Kirti Fort lies in the North Malwa region of Central India. During Medieval period in the Central and Western India many Hindu Rajputana States had emergeout as a Centre of power and Kingdoms particularly in Aravallis and Vindhyan tracts. Chanderi is situated in the Ashok Nagar district of M.P. State and still retain its medieval splendour on a indiscrenable in meandering, cobbled, narrow streets interspread with Architectural Edifices (2,20). King Kurmadeva, the descendant of King Chandra Vasu was shifted his capital from ancient old town Boodi Chanderi (9 km. distance) to present Chanderi town and built the Kurmeshwar Tal (Pond) which is known, at present, as Parmeshwar Tal (3,10). Epigraphic evidences establishes earlier Imperial rule was that of Gurjara- Pratihars in the earlies 10th Century AD (3,20). The walled city and Kirti Fort was built by King Kirti Pal in 11th Century (9,23). During 11th Century AD, Chanderi Town was a prominent Trade Centre. Every powerful Dynasty desired to capture the Chanderi. The Art of traditional Silk handlooms arises Weaving Culture Heritage (W C H) of Chanderi and it enriches the Commercial Values. (16,17). The weaving Culture was emerged between 2nd and 7th Century AD in old Boodi Chanderi City. The socio-economic conditions of Chanderi was changed many times in ancient periods. The old walled inner city retaining traditions of Status and honour associated with habitat, whereas the space segregation arises due to structural constraints based on Caste and Class distinctions in outer open City of Chanderi. (3,30). The historical Monuments, Fort, Palaces, Temples are major Heritage structures and tourists, pilgrimages arrived during festivals of April month every year (30,32). The Pancham Nagar Palace of Chanderi has now Submerged in the reservoir of Rajghat Dam of Betwa river (1,18,31). the Stone Monuments has suffered deterioration and decay due to growth of Algae, Lichens, Mostly affected by the Biodegradation and Chemical Weathering (11,12,14). The regular cleanness is required in conservation of Monuments. Most of the Havelis in Walled City and Fort premises sections get ruined and in a dilapidated conditions. It needs proper maintenance and preservation.

B. STUDY AREA- LOCATION AND ACCESSIBILITY-

The Chanderi Fort is located in the geographical co-ordinates latitude 24⁰43'12" N and Longitude 78⁰07'48" E, in the Ashok Nagar district, Madhya Pradesh, India. It is accessible from Lalitpur (U.P.) at distance of 37 Kms. and 127 Kms. from Shivpuri of M.P. (Fig. I). the Chanderi Fort Inner City, Palaces, Temples, Fort structures had been built on a hill known as Chandragiri Mountain of Vindhychal Ranges. The Fort and Inner City Township Settlement lies above the height of about 71 metres from the outer city settlement which lies on the Western Plains.

C. METHODOLOGY-

Under methodology, the physical domain of terrain around Chanderi region has been interpreted and demarcated utilizing the Satellite Remote Sensing Imagery Data Various land forms, Units and features, Rock groups, constructed structures of Fort, settlement, drainages have been identified and marked. The existing literatures, historical events have been correlated and presented in form of Table and Maps. The concept plan and special Area Development Authority Plans 2001, 2010 of Govt. of M.P. have been consulted for Town Development and Tourism prospects of Chanderi region.

D. LANDSCAPE, CLIMATE AND DRAINAGE-

The Chanderi region is included in the Northern part of Malwa Plateau and Bundelkhand Plateaus. Physiographically, The area is represented by elevated terrain, with maximum height of ground attains 456 m. AMSL. The region is covered with plentiful feeder- Fodder, Forest, Lakes, Streams, Water reservoirs tanks-ponds and low lying undulating plains of agricultural fields and settlements. The district Ashok Nagar lies in the Yamuna Drainage catchment. The major rivers are Sindh, Betwa, Ketan and Orr. River Betwa form eastern boundary of the district. The general direction of all river drainages towrds North with low gradient ground surface (1,10). On surroundings of the Chanderi town, the hillocks are represented by Vindhyan's Mountain Belt ridges whereas the Betwa River flows on the eastern part of the district. The Betwa river and Urvashi rivers are about 13 Km. and 24Kms. distance from Chanderi. The Subtropical

climatic conditions prevailing in the region. The average rainfall is 1220mm annually and maximum temperature rises in the month of May is 41.5°C whereas minimum temperature falls during month of January is 7.7°C. The relative humidity is less than 27% in the month of April which is the driest month of the year. The max. wind velocity recorded in the district is 14.3Km/hr during month of June and minimum wind velocity reaches to 8.1Km/hr in the month of November.

E. GEOMORPHIC CONDITION AND LITHOLOGY-

(a) GEOMORPHIC UNITS-

The major geomorphic Units of the region includes Alluvial Plain (AP), Intermountain Valley (IV), Residual Hills (RH), Denudational Hills (DH), Linear Structural Ridges (LSR), Flat Topped Plateaus (FTP), Pediment (P), Buried Pediment (BP) Valley Fills (VF), delineated from the satellite Imagery. (Fig III(a),VII(a),VII(b)-VII(e))

(b) LITHOLOGY AND ROCK TYPES-

Geologically, the study area is occupied by Proterozoic Sedimentary rocks of Vindhyan Super Group consisting of Upper Rewa Sand stone, Ganugarh Shale, Bhander Limestone and Sand stone. It is covered with Deccan Trap Lava flows on Western part of the district while Bundelkhand Granite is exposed in eastern part of Chanderi district in Betwa river Valley. The Kirti Fort region and Chanderi Town is surrounded by Hilly Tract of Vindhyan Plateaus and Hillocks. Also the Vindhyan rocks are intruded by dolerite dykes in some places (1) The alluvial Soil and Alluvium Sands are confined to river Channel flood plains and stream courses, whereas the Laterite capping are common on Residual Hills and Plateau Top Levels. The weaker zones Lineament, joint and fractures are oriented in NW-SE directions. The local stone blocks had been utilized as a building stone for Havelis and Fortification of Kirti Fort, precincts Walls, Monuments, Palaces and other structures (30)

F. FORTIFICATION-

The Kirti Fort, being a Hill Fort, on Chandragiri Rock- Hill Terrain, the strong Fortification had been made with narrow passage towards SW as Natural Bastions and stone protected Rocky Area. The Armies, Forces of Defence (AFD). Trade Petrolling Units (TPU) were Garrisoned in Kirti Fort, Chanderi. Also the conquering Armies mostly from South and West States assembled and rest there in Military Camp of Chanderi. Apart from this the commercial activities made constant movement of Traders/regents of States due to three folds- 1. Commercial economic zone 2. Military Outpost 3. Strategic location. The Chanderi Town proper had been divided by a fortification Wall in to 1. Inner Town 2. Outer Town. The inner town enclosed within the fortification wall of the Chanderi Fort. (Kirti Durga). It had conjectured to inhabited by the nobility. It includes Havelis and Grand Bazar of Merchants. The town gradually advanced into a thriving centre of Trade and Commerce apart from the frontier Outpost of Malwa. The architectural patronage extended by Malwa nobility. The construction utilized the local variety of sandstone, quarried from Vindhyan Hills. During British Rulings in India, the British Residents and Surveyors had compiled the chronicle in formation and documented the matters. It contains the Art and Architectural details of the surveyed areas, particularly carried out in central India during Mid Nineteenth Century AD. The archaeotectonic and Decoration Description had been recorded about Chanderi region (2,24,32). The Lt. Fredrick Charles Maisey work has been elaborated by Scholar illustrations of Chanderi Architectural Edifices and structural Monuments, a town of historical importance before establishment of ASI. He stated " It is a town still retain its medieval splendour as a indiscreable in its meandering, Cobbled streets interspread with Architectural Edifices (Ref. 24)

F. HISTORY

(a) HISTORICAL EVENTS & EARLY HISTORY-

The Ancient old town of Chanderi is known as Boodi Chanderi, which is located about 9 Kms. distance from the present Chanderi Town. It is considered as legendry that the King Chandra Vasu founded the Town named as Chandra Giri or Chanderi i.e. the Boodi Chanderi during the contemporary ages of Lord Krishna Reign in Dwarika, Western India and Central India. King Kurmadeva, the descendent don't of King Chandra Vasu, was suffered from some diseases and he was felt cured by water bath of spring water near Chanderi, the present town. As a good result of healings he built his capital at present location of Chanderi and renovated the spring i.e. Kurmeshwar Tal which is at present known as Parmeshwar Tal (Pond) situated in the W part (30). The Documentary History began from 10th Century AD, when it was expanded and built the stone precincts of Township and fortification by Hindu Pratihar Kings. It was the most important site due to Ancient Trade Route (ATR) and Strategic Military Outpost (SMO) between North and south Regions of Indian Subcontinent, since it is located in the border of Bundelkhand and Great Malwa Region, Territories (GMRT) Also it had a way to reach the Ancient parts of Gujarat. The terrestrial regions Malwa, Central India, Deccan were communicated through this Trade Centre and became the Centre of Power.

(b) CHRONOLOGICAL LATE HISTORY-

The Chanderi Fort was constructed by Hindu Pratihar King Kirti Pal I in the 11th Century AD. He also built the Urban Settlement Chanderi in the Western plains of Hill Fort. During 13th Century to 16th Century early it was captured by Non Hindu Invaders. In 1520 AD, Hindu King Rana Sanga of Mewar again captured the region and he gave the Chanderi Fort and Town to Hindu Minister of Malwa Pratihar King Medini Rao or Rai. But he lost the reign in 1528 AD when Non Hindu Invaders attacked the Chanderi. He was a weak ruler. After 46 years span of time in 1574 AD the Bundela Rajput of Central India captured the Chanderi and it was controlled by Ram Sab, a son of Raja Madhukar of Orchha Dynasty. In 1860, Raja Devi Singh Bundela controlled the Chanderi as a Governor & Controller. He and his descendant of family continued the control of Chanderi up to 1811AD. It was annexed by British East India Company during British Governor Filore (1811-1844 AD) i.e. for 33 Yrs for the Maratha Ruler Daulat Rao Scindia of Gwalior. Ultimately, the State was transferred to British in 1844 AD. The British lost the Control of Fort in 1857 revolt for a small duration of time, But again recaptured by Huge Rose on Feb. 14th 1858. The State was transferred back to the Scindia of Gwalior in 1861 AD and included in the District Ishagarh of Gwalior State. After Independence off India in 1947, the Gwalior State became part of New State of Madhya Bharat, which was merged in to Madhya Pradesh on Nov. 1st, 1956 AD.

(c) BATTLE OF CHANDERI-

The Battle of Chanderi was fought in 1528 AD between Hindu Rajputs and Non Hindu Invaders. The Battle was caused due to defeat of Rajput alliance under Rana Sanga of Mewar in Khanwa Battle, which was fought against NHI. The King Medini Rai of Chanderi was the supporter of King Rana Sanga of Mewar. Afterwards Medini Rai became an inevitable enemy for NHI. They want to capture the strategic important Fort Chanderi. Ultimately they siege the Fort and fought in 1528 AD. Deep Trenches were dig out known as Kaattighati King Medini Rai was killed in the Battle of Chanderi by Non Hindu Invaders. (NHI). Since he remain loyal to Rana Sanga and decided to fight against NHI attacks (1528 AD). The royal woman get immortalized Sati. Also half of the Hindu population were massacred by the Non Hindu Invaders and innocent citizen lost their life by cruelty the act of NHI. The fort had been demolished and damaged by NHI they never utilized the Fort. It is evident from the events that the battle of Chanderi was not a battle it was only the mass killing of Hindu civilians of Chanderi. The NHI had not fought as real worrier but the madness act performed with cruelty and murder of innocent Hindu Civilians after defeat of King Medini Roy in Chanderi (1528 AD). It decline the settlement and Trade pride of Town Chanderi for a long duration of time. Similar situations faced by Hindu Civilians many times in Medieval period eg. Chittaurgarh Fort Rajasthan (Diwan,etal 2020)(38)

G. ARCHITECTURE-

(A) HINDU RAJPUJT- ARCHITECTURE- STYLE

The Rajput Architecture style is well known for its Forts and Palaces of Rulers of Medieval periods. It represents various kinds of Buildings both secular and religious, including Temples, Forts, Garden, Palaces, Bawli, Step Wells, Reservoirs etc. The Forts were built for Defence and Military purposes whereas Palaces expressed their wealth and Power. The Rajput Architecture continued till the 20th and 21st Century by Ruler of princely states of British rulings. Mostly Walled City and Havelis were built in Urban Settlements. The Chhatti & Memorials were commonly constructed in the Forts. The Pritihar Rajput style utilized by the Rulers in five Kiradu Temples during 11th and 12th Century AD, first time. On exteriors, this Rajput style is well recognized as different from other North Indian Hindu Temple styles of contemporaneous periods. (.....4). Also, in Gwalior Fort the finest Rajput Architecture considered as early as the beginning of 6th Century AD (2,30,32)

(i) Main Architectural Feature and elements of Temples-

- a) The external Walls of Temples- Structured with increasing number of projections.
- b) The Recesses accommodates sharply curved statues in Niches.
- c) The Projections and Niches are Superimposed above the Lower Bands of Moldings.
- d) The Niches displays- The Horse Rides, Elephants, Kirti Mukhas, Ornamentals.
- e) The main Shikhars, Tower has Urashringa and subsidiary spirelets on it is common.
- f) Two smaller side entrance with Porches in large Temples.

(ii) COMMON ARCHITECTURAL FEATURES OF STRUCTURES

The Palaces, Religeous Monuments and Havelis shows the Medieval Hindu Architectures. The Artistic carvings and decoration of facades reveals the mature Architectural style of Chanderis Hindu Palaces, Religeous monuments. The Architectural Cultural Heritages influences the social structure and standard of Town Habitats. The Monument represents a mature Architectural style, in Chanderi, with structural attractions of ornamentation, deeply rooted with carving facades, decoration ridge/furrow, geometrical design, natural leaves, flower, plants vegetation objects were common in residential building, palaces and houses. About 30 Hindu monuments survive and exists in good condition.

- (a) HAVELIS - The Havelis built by the Merchants and Rich Royal persons of Rulers. It was built in Traditional Rajputana Style(TRS) and in spatial pattern.
- (b) WATER BODIES – The Ponds and Reservoirs & Water Tanks Constructed as a permanent source of water,preferably Bawli or Step Well & Ponds,linked as Water Reservoir Tank(WRT) or storage system.
- (c) GATE – Gateways – Towards S-W part of the Fort a Gateway known as Khatti Ghatti had been made through hill side slope, a rigid Gateway,the main Darwaza, Gateway located in the NW and Southern part of Fort precincts, constructed with Shilpa Shastra's Vastu Mandal principles.
- (d) RELIGIOUS MONUMENTS – Religious Monuments – Hindu Temples, scatterd throughout the Town and around the region with some spiritual and mythological importance. The Jain
- (e) MOHALLA KATRA – Mohalla Katra – clusters of housing units in outer Town with narrow streets.

(B) PROVINCIAL ARCHITECTURE STYLE-

The articulation of provincial Architecture style involved complex liaisons with native artisans who inevitably included indigenous architectural form in Structures that were hitherto unknown to them and not familiar with the standard artistic patterns. The ancient Shilpa Shastra in Hindu monuments had been adopted in common practice, even present days Temple Sculptures followed Agni Puran illustrations about Idols and Temple dimension & plans. It is based on Architectural Treatises mentioned in various kinds of constructions in continuation of religious and Secular edifices. The Temples of Central India, were mostly built during preceding era of Pratihara and Kachhapaghatas rules. The serpentine struts, decorative feature (a libiquitoces feature) ornamental, Arches of medieval. Indian Temple Gateway impart a degree of Grace and elegance to the edifices of Chanderi. Arches both true and ornamental exist. They have an emphatic ogee curve and Lotus rosette spandrels. The intrado of some of them are embellished with spearhead merlons. Many small buildings in the Fort of Chanderi depicting a Pillar and two styles of Base. Various kinds of Niches employed in decoration of Gateways. The Volute edged corbels extending outwards, niches adorning the abutments of each turret is common.

I. CONSERVATION AND PROTECTIVE MEASURES-

The Conservation and Protective Measures of Forts, Palaces, Temples and other Monuments, Sculptures of Archaeological importance is necessary to save these heritage structures from physical and chemical and biological deteriorations. The monuments including main Fort site Kirti Fort, Badal Mahal Gate, Bathesee Bawli, Singhpur Palace, Ram Nagar Palace, Katti Ghati, Trench had been ASI protected Monuments and Archeological Museum in Palaces. The Havelis within the Walled City gets ruined in condition due to non-maintenance by owners, The stabilization of structure and rehabilitation is needed. The Havelis monuments and houses had been constructed in Buff coloured Sand stones of Vindhyan Super group rocks Rocks.

A) MAJOR MONUMENTS- NEEDS CONSERVATION-

Most of the Hindu Monuments in dilapidated conditions, disappeared with ruins and erode out, but at present more than 3 dozens monuments exists in good condition. It needs preservation and protective measures eg.

- | | |
|-------------------------|---|
| a) Parmeshwar Temple | - A temple Complex of 6th Century AD |
| b) Kirti Fort | - Partially dilapidated- 11th Century AD
(Protected by ASI) |
| c) Caves of Khandgiri | - Six Caves Jain Statues-13 Century AD
(Natural Caves- Discovered) |
| d) Koshak Mahal | - Originally 7 Storied but 5 stories exits |
| e) Badal Mahal Gate | - On Back side in ruins- 15th Century AD
(Protected by ASI) |
| f) Singhanpur Palace | - Built in 1713 AD, Archeological Museum with Ponds- needs conservation |
| g) Ramnagar Palace | - Built in 1713 AD, Archeological Museum with Ponds- needs conservation |
| h) Pancham Nagar Palace | - Submerged in Rajghat Reservoir- Under Water exist |

B) LOST MONUMENT- PANCHAM NAGAR PALACE

The Pancham Nagar Palace of Chanderi has submerged in the reservoir of Rajghat Dam, built in 1980AD, in the Betwa River Valley (BRV). On 27th June 2016, the recession of Water level of Reservoir reaches below the monument structure, the Palace had been visible first time after the construction of Dam. It had been found that Glory of Palace remains in good condition even it had been submerged under Water of reservoir for a long duration, about 36 years. Since the Rajghat Dam was constructed in Betwa River, water level declined and reaches at 354 m.AMSL.

C) DECAY AND EROSION OF STONE MONUMENTS-

Under Biodegradation of Stone Monuments, the role of Lichens, a composite organism formed by the symbiotic association of both Algae and Fungi acts as a major weathering agent in decomposition of monuments. Many Studies carried out in past on occurrences and growth of Lichens on historical Monuments (Singh et al 1999, Chatterjee 1995, Saxena et al 2004). Recently the monuments of Chanderi Fort, Kila Kothi, Katti Ghati, Jageshwari Mata Mandir, Graryal, Thukhal villages the historical temples, monuments, built with sandstone, limestone have been studied with reference to rock porosity parameters and lichen growth of various species responsible for decomposition & degradation (Upadhyay et al 2016). Micro environmental and micro climatic conditions leads prolific growth of Lichens. It has important strategic factor in planning for conservation and protective measure practices. The dangerous species for Limestone- Endocarpon rosettum & varieties and for sand stone Endocarpon nanum & Phymisum indium species.

(11,12)

D) COMMERCIAL CENTRE- MARKET ZONE-

The Vindhyaal habitats have a wide range of traditions in culture. The weaving culture of Chanderi reflects the History and Art of Traditional Handlooms and ancient fabric manufacturing practice (16,17). the weaving culture emerged between 2nd and 7th Century AD, since it lies in amidst buffer zone of two Hindu cultural Reign Malwa and Bundelkhand (2). The Chanderi Saree Tradings began in 13th Century AD when Kothi weavers of Jhansi State migrated to Chanderi and settled (23). The finest clothes particularly Sarees are known for their Gold and Silver brocade or Zari & embroidery (Opalant). The themes and motifs of typical Chanderi pattern includes Traditional pure Silk for Royal families. The design includes Coin, Floral Art, Peacocks, Geometric designs has been woven in Chanderi Silk, Silk and cotton and even pure cotton clothes.

J. ANCIENT TOWN PLANNING- SETTLEMENT-**(i) PLANNING OF TOWNSHIP-**

The Medieval Settlement Planning in India had followed the ancient Indian Vastu Shastra's principles of Plan and design of Township (8). It differs in pattern and arrangements of Urban housing practices of other periods, particularly in remote, unaccessible and isolated locations like Chanderi of hilly terrains, in the Vicinity of the Hill Forts. The Chanderi is an early Medieval town famous for its historical monuments, architectural features and traditional form of Town Planning (10). It is located on a hilly tract surrounded by the Vindhyan Range on three sides, in the intermountain Valley. At present it is well known as a Manufacturing Centre of Silk and Cotton Clothes, Sarees for urban Upper Middle and Middle class woman, The Planning of Ancient Chanderi Town settlement had never been a Kasba or Village. It had always recognized as Urban settlement. The old Town (Ander Shahar) had been encircled by thick and high massive masonry precincts/ peripheries Walls (3). It provide security to inside Residents/ Settlement (Inner Shahar), Palaces, Kothi, Structure of the Fort. The purpose was both dual- 1. Residential 2. Military Garrison and Arsenal Depot (30). The Fort was constructed for multi utilization purposes, secured inhabitates with Military Force Troops, Garrisoned and Arsenal Depot, The Palaces for Royal Families and Havelis for Merchants and Noble classes of state resident. The Fort has many gates used for different utilization works.

(ii) SOCIAL STRATIFICATION IN URBAN SETTLEMENT-

Town Planning and housing can be defined as a component of Architectural Structure within a total system, which comprises various variables related to settlement.(25) The pattern, space and connectivity of Dwelling Units, cluster of houses through roads, streets are important determinant for safety and sustainability of built environment. (3)The Ancient Township Chanderi lies in the Vindhyan Mountain Terrain. It had a prominent Trade Centre in historic periods and Ancient Trade Route (ATR) which was strategically located at the entrance of Malwa Region, through Bundelkhand. The Urban Settlement built in 11th Century AD with precincts walls. In more than one thousand years of history, the Chanderi expressed both the Tangible and intangible Elements, including the Physical Architectural Structures, Cultural Segments and Social Stratification in Traders, Noble Royals, Artesians, Religious and Hindu Castisms. The Planned City with the groups and clusters of habitats according to their Caste, workings status and community. Chanderi became a Unique conjunction of the ideal and actual social worlds in the enactment of Socio-Cultural activities (Sharma 3,32). Ideology of peoples inhabitants are indicative and reflects space segregation and social distances. (28)The geographic space remain commensurate with social space in some extent, in this old Town.

(a) OUTER TOWN- BAHAR SHAHAR- GROUP HOUSING-
(Configuration and Morphology)

The Township Housing or Urban Habitat can be defined as an architectural unit for accommodation in order to protect occupants/ inhabitat from the forces of nature. (27)It provide Shelter and correlated / associated with the process of socio- economic development. The layout of Ancient Urban Settlement of Chanderi preferred the interconnected Galis or streets for quick and strong communication and controls. The habitat community based on social strata and professions of works in the outer city (Bahar Shahar). The outer city had been Planned for Artesians and migrants settled for the commercial and artesian works. The cultural and social levels of the community segments were always maintained as it grouped as classes of Caste and their Mohalla or Katra or Chhal (13). Also the clusters of housing dwelling units in Group Housing of 7 to 8 community planned with courtyards. (5)

(b) INNER TOWN- FORTIFIED- WALLED-PRECINCTS-
(Configuration and Morphology)

According to WHO (1961) World Health organization the Term housing denotes as a provision of any physical structure, used for Shelter, which includes facilities, equipments, Services and devices needed for healthy living. It largely influenced by the micro environment of housing structure clusters affected mainly social, economical, cultural and physical domain/ dimension.(26)The inner town of Chanderi was planned for the Royal community. The Haveli and Big Houses built for the merchants and ohdedars. The Internal or Ander Shahar were construction with high security for Noble class of Chanderi state. It followed the Ancient Hindu Vastu Shatra principles representing the main axis of orientation in NW -SE direction and posses through one Gateway aligned in the outer peripheries, whereas the Fortification were made for strategically Military purposes on Kila Site and Residual Palace site in NW extension of Hilly Tract. (10)

K. DEVELOPMENT SCHEMES-

(a) RAJGHAT DAM/ RESERVOIR- ITS IMPACTS-

The Socio-economic conditions of Chanderi region changed many time in Ancient periods and after independence of India. Various projects have been implemented to raise the socio-economic conditions. the construction of Hydel Power Project (315MW) and Reservoirs impounded the Dam on Betwa River known as Rajghat Reservoir enriches the prosperity of the region. The Dam height (43.8m) and length 11200m width impounded Betwa River. The reservoir Water submerged 56,800 Acre area, and has capacity 7.0 lakh Acre irrigation fields through canals. Agricultural lands on hilly plateau areas needs lift canals. The Rajghat Dam has been constructed for stop the silting in Mata Tila Dam and it acts as supporting Dam. Due to submerged area of reservoir about 8000 population were affected and about 2/3 of them were shifted to the Chanderi Town. It is a interstate Project of UP state and MP state, at a distance of about 14 Kms. from Chanderi. (18)

(b) NEW PLANNING CONCEPT OF CHANDERI-

The (Ander) inner Fort Settlement lies in the eastern part whereas Civilian Settlement lies on Western part (Bahar Shahar). In the proposed plans the zone of NE portion just above the Fort precincts have been considered for further growth of Urban Settlement and a Elongated patch on NW portion has been spaced for environmental conservation zone, it lies just above the Dense Housing Area of Old Civilian City. The plantation and conservation of Natural Forests in Hill Fort Region (HFR) is recommended by the Govt. T.&C Authority (Fig.VI). The major planning Schemes of Chanderi includes.(5,9)

1. Interstate project-Rajghat Dam and Reservoir in Betwa River (1980AD)
2. Special Area Development - 17 Yrs Plan (1995) Authority (SADA)
3. Town and Country Planning - MASTER PLAN (2017-2031) Office MP
4. EPCO-INTAC- Conservation Plan

(c) NEW DESIGN PLAN OF TOWNSHIP SETTLEMENT-

(i) Transport and Communication-

The Chanderi Town is developed within the Walls precincts. The narrow streets of Walled City were developed according to defence requirements of Sovereign Kings and utilized by Pedestrians only. It faces severe problem of Transportation. It can be solved by Patric Geddes Theory of Conservative Surgery i.e. Bring the Traffic to a point

of agglomeration and resurging the rest of the area for pedestrian use. The main road at the bordering of Parkota is the Single Tarred Road dividing the Ander Shahar and Bahar Shahar.(3,10) For market and Business centre & commercial activity no planned development in earlier history. It has developed in pattern of Ribbon development. New Centres of Commercial activity is required to decongests the Sadar Road of Chanderi Town.

(ii) CAUSES OF GLORY AND FACTORS FOR RISE-

1. The Ancient Trade Route (ATR) through Carvans. It increased Trade and Commerce in past.
 2. The climatic conditions favors for weaving centre of Royal fabrics.
 3. The demand of Royal fabrics was high during Kingdoms and Reigns.
 4. The Pilgrimages of Jain community promoted the Trade and Commerce- as Native place, constructed Temples, pilgrimage Centres, Complexes.
- It was pride to capture this picturesque Town by Rulers.

(iii) SOCIO- ECONOMIC STATUS-

1. Predominantly Weaving Profession- including Bamboo Weaving, Carpet Weaving, Rope Weaving.
2. Occupation- Bamboo weaving, Agriculture stone Cutting, Dressing, Mining Building Stones Sand Stone and Granite Quarries about 10,000 cubicft. Stone daily dig out, mainly low cost quarrying.
3. Use of Herbs, Cultivation of Medicinal Plants, Replanting Bamboo and munjh grasses in Forest zones. (5,8)

(iv) WATER SUPPLY-

The Chanderi has Cultural system of Water Storage About 250 Bawlis with in the Town and surrounding area. Some of these still used in Walled City. but not for potable use. The Orr River, a tributary of Betwa river supplies 3,37,000 liters considering 40 liters/capita consumption. (5)The intake well is in Fatehabad, utilizing 3 pumps and filter plants. It conveyed up to 9 Kms under gravity and rest of the distance the power pumped uplift is required. Also the Handpumps, Bore wells and deepening, desilting of Bawlis are required to improve the quality of water.

(v) CAUSES OF DECAY & FALL OF URBAN CENTRE-

1. Power loss of Rulers, political Interferences, after independence in 1947, Rulers lost wealth & status.
2. Decrease in Demand of handloom with increase in Cost effective Power looms.
3. Inaccessibility of the region.
4. Unskilled persons and villages surroundings, hinterlands.
5. Migration of residents to nearby Industrial City eg. Guna City. (30)

(vi) RISE AND STABILITY OF URBAN CENTRE-

During Planning of City the circumstances and economic stability is necessary to consider Morphological Frame work of City.

1. The handloom was the permanent feature of Town. handloom Trade has been inherited Economic and Cultural Feature of Town. It requires upgradation with Technical Development, to accelerate the Trade
2. Plan for Integrated Development of City. It requires Railway, Highway routes to connect major Cities. the inaccessibility of Chanderi is basic cause of Decline.(3,5)
3. The Chanderi Town established as Buffer state between north and south regions of India. Base station connectivity depended on Rulers interest, Military Troops and Artilleries of the state.
1. Town was developed as Garrison to Military Troops providing security and Guarding the Trade Routes from North to south India.
2. Strategic location- surrounding Hills creating Natural Bastions of the precincts. The Town utilized as Military outpost for both North and South states.
3. Socio- economic fluctuations arises with the invasion and migration of population.
4. infra structural development and degree of accountability and political crises.

L. CULTURAL & RELIGIOUS HERITAGES AND TOURISM PROSPECTS

(a) CULTURAL HERITAGES- The Art of Traditional Handlooms arises the weaving culture Heritage of Chanderi for Royal Families eg. Silk Clothes and Chanderi Sarees. At present it enriches the commercial Trade Values and demanded by upper middle class throughout India. The manufacturing with Power looms and weaver societies its trade is prosperous for Regional development and also leads Tourism prospects through planning for Tourist Circles.

(b) RELIGIOUS AND CULTURAL HERITAGES-

The Temples of Jageshwari Mata, Lord Shiva, and Khondgiri Caves are main Hindu religious heritage Monuments exists in Chanderi. The river fountain, Lakes, Bawli (step well), Forest, Hills, Ponds, Provides the existential physical domain and archeological evidences. Also the Badal Mahal, Koshak Mahal historical structures are important cultural wealth of earlier periods and power dynamics in later period. The Badal Mahal, a medieval aged Palace utilized as insignia on Chanderi Sarees, it make harmony between economy and culture. (6)

(c) SOCIO- CULTURAL HERITAGES-

Various schemes/ Plans have been proposed for the improvement of Socio-economic conditions of residents of Chanderi Town. The schemes have been taken up to develop road connectivity of region and construction of Roads, Bridges and culvertset. within the Chanderi Town the Cultural Space is inherent social space is sui generis, both under socio- cultural comprises, Heritages. The natural endowment like Hills, Rocks, Rivers, Streams, Forests, Springs, Waterfalls are natural heritages of Chanderi whereas the Historical monuments objects, Building Structures, manufacturing of Fine Silk Clothes, Fabrics became the socio- cultural Heritages of Chanderi. Trading of Silk clothes and Sarees is still carried out to a large degree in a Traditional Format. The Gullis, Mohalla etc. retain traditional Caste/ community pattern. During decade (1981-91) the population growth was raised up to 64.63% (Sharma 3,10, 32).

(d) HISTO- ARCHAEOLOGIC HERITAGES-

Since the Ancient Chanderi was situated on a Trade route between north and south India. In medieval period its importance lies with the Histo-Archeology and culture. The Boodhi (Old) Chanderi's ruins of Jain Temples on the bank of Urvashi River reflects its glorious past. It is architecturally very significant due to its Features. During Pre-Vedic period the Chanderi was named as Chandra Puram after wards it was known as Chedi in the Mahabharat Epic period. Also in ancient period it was called Chandragiri or Chadras in the name of Hillocks of Vindhayachal Ranges. The ruins of Fort structures, Temples, Palaces indicates the important cultural and Political status during Medieval period. In many Literatures of History, the important structure Kirti Durg Fort and Kings Kirti Singh, Rana Sanga, Medini Rai, Scindia have been illustrated in the context of Chanderi Town. (22,24)

(e) CO- EXISTENCE OF SOCIO-CULTURAL HERITAGE AND MODERNIZATION OF CHANDERI SETTLEMENT-

The natural and physical worlds are transformed or likely to change into the social world by way of social space and status. The recognition of space status nexus in a small Town Chanderi indicate that the social space is constructed on the basis of differentiations and orderly Rank arrangement of peoples in Form of Mohalla, Gallis, Streets, narrow streets.(10,20) In Chanderi the geographical space is indicative of space of social activities. the Geographic distance became the social spaces since. The geographic features Gallis Mohalla, Streets, are a stable characteristics in social spaces and status of Chanderi. (9,30)The co- existence of Old and New stratification adopted without damaging the Tradition and without dismantling the boundary of social divisions. The habitats pride in the past and hope for future resist co-existence of cultural and social heritages and Town modernization (3,6,10).

(f) TOURISM PROSPECTS -

The Ancient town Chanderi has Immense prospects for Tourism Development and Tourism Circuit. Plans and policies required to bring the Tourist, by providing the basic infrastructure, facilities, Tourism Centres, Tour and Travelling agencies, Advertisement, Commercial Transports, Lodging, Private Hotel etc. The Jain pilgrimage Dharamsala, Guest houses already exists for promotion of Tourists (7,5). The Silk weaving Handlooms are commercially costlier and luxurious item for Royal purposes (6,16,17). The communication through Motor Roadways provide connectivity with neighbour Cities no railway communication in the region, it became isolated segment for Tourist centre. The Co-operative Handloom Training Centre and Power looms manufacturing raises the production and quality, Restoration of Ram Nagar Palace, Singhpur Palace, is necessary. the Panoram Nagar Palace is already submerged under Water of Rajgarh Reservoir (18).

DISCUSSION AND CONCLUSION-

The Chanderi urban Township Settlement dates back to 11th Century AD Segregated in form of Inner and Outer Town. The initial Town Planning followed the Ancient Vastu Shastras "Purush Mandal" Concept of Morphology consisting two axes between two Gateways of the precincts of Fort walls in Inner Town. The fortification is characterized by both the Tangible and Intangible Elements exhibited by Utility, Cultural Identity and Architectural style of Monuments, Temples, Palaces, Havelis, Arsenal Depot, Water Tanks etc. The study indicates that the Ancient Kirti Fort of Chanderi (AKFC) had been built in intact and firm plateau Hill Top of Vindhyan Mountains consisting of quartzitic sandstone whereas the settlement had been developed in undulating plains of Intermountain zones. The evolution of natural Caves in Chandragiri Hills is mainly due to presence of joints, fractures and lineaments, structural features in Litho units and erosion processes prevailing in geologic past. The major Hindu monuments are found in dilapidated condition and eroded. Mostly destroyed by Non Hindu Invaders (NHI) during attacks. About 3 dozens monuments exist in good conditions needs preservation and protective measures e.g. Parmashwar Temple complex of 6th Century Temple and Ram Nagar Palace needs protective measures and preservation. The ancient Kirti Durg Fort and Town Chanderi has immense prospects for Tourism Development and Tourist Circuit. The proposed plan for integrated development and economic growth through tourism sector have been discussed.

TABLE I**CHANDERI REGION- GEOLOGICAL SUCCESSION (Generalized)**

AGE	GP/fm	LITHOLOGY (Rock Types)	
Quaternary	Recent	Alluvial sand, Black Cotton	
	To	soil (Regur)	
	Subrecent	Ferruginous Laterites	
-UNCONFORMITY-			
Eocene To Upper Cretaceous	Deccan Trap	Basalt, Lava Flows	
-UNCONFORMITY-			
Proterozoic	Upper Vindhayans	Sandstone, Shale Limestone	
-UNCONFORMITY-			
ARCHAEAN	BASEMENT ROCK	BUNDELKHAND GRANITE MASSIF	GREY AND PINK GRANITE

TABLE II

CHRONOLOGICAL POSSESSION OF CHANDERI FORT AND TOWN

S. No.	Ruler/King/ Dynasty	Period/ Year (Time Span)	Description
I.	Ancient India King Shishupal	Epic Age and pre Vedic Contemporaneous to Lord Krishna	Mentioned in Epic Mahabharata, Chanderi as Capital of King Shishupal, Old Chanderi - i.e. Boodi, Chanderi (9 Km)
II.	Hindu Pratihar King Kirtipal	1000 AD 10th Century	Fort is known as Kirti Fort. He built Fort and Town as New capital of his state, came from Boodi Chanderi (9 Km. distance)
III.	Attack and Captured by Non Hindu Invaders (NHI)	1251-1252 (1 Yr)	Invaders Attack and Captured by Non Hindu Invaders (NHI)
IV.	Chandela Kingdom	1252-1320 AD (68Yrs)	CHANDELA HINDU KING
V.	Again Captured by Non Hindu Invaders	1320-1438 AD 1438- 1519 AD	Captured by NHI(Non Hindu Invaders) Malwa Dynasty- in 1519 Rana Sanga Captured Chanderi
VI.	Rana Sanga of Mewar (Ruled by Medini Rai)	1519-1528 AD (8 Yrs)	Chanderi State was given to King Medini Rai (Minister of Malwa and a Pratihara King) but he was killed in Chanderi battle by NHI in 1528 AD
VII.	Again Captured by Non Hindu Invaders after Battle of Chanderi	1528-1586 AD (56 Yrs)	NHI defeated the Hindu King Medini Rai in Battle of Chanderi (1528AD)
VIII.	Alloted to Bundela King Ram Sab and His successors	1586-1680 AD (94 Yrs)	Chanderi was ruled by Bundela King Ram Sab, son of Raja Madhukar of Orchha and his successors contd.
IX.	Devi Singh Bundela Maharaja Bhim Singh	1680-1811 AD (131 Yrs)	The successors of Devi Singh Bundela contd. the Rulings of Chanderi
X.	Annexed by British Jem Baspti Filore for Maratha Empire	1811-1844 AD (33Yrs)	Annexed by Jem Baspti Filore in favour of Maratha Empire
XI.	British Rulers East India Co.	1844-1857 AD (13 Yrs)	Transferred to British Rulers East India Co.
XII.	Revolt 1 st Indian Freedom War	1857 AD	Due to Revolution of Independent India the Chanderi was held by freedom Fighters of 1857 Revolution for some period

XIII.	British Rulers	14th Feb. 1857 AD to 1861 (3 Yrs)	Reoccupied by huge Rose, British Rulings.
XIV.	Scindia of Gwalior	1861-1947 AD	Transferred to Scindia of Gwalior
XV.	Sovereign state of Scindia	1947-1948 AD	Sovereign state of Scindia
XVI.	Madhya Bharat India, Govt. of India	1948-1956 AD	Madhya Bharat Province (Independent India) In 1956, New state established M.P.

TABLE III

ANCIENT CHANDERI TOWN: TOURISM PROSPECTS

S.NO.	TOURIST- ATTARACTION PEATURES	LOCATION	DESCRIPTION
A	ARCHAEOLOGICAL		
1.	Ancient Site- Monuments	Vindhayan Hilllocks- NE	30 Monuments Recognized spread in 3 Hectare Area
2.	Sculptures (Bundela Architecture)	Temple, Fort, old Town Precincts	Religeous Structures
B	HISTORICAL- CULTURAL -ARCHITECTURAL		
1.	Fort Structure (Precincts-Walls)	Hilltop	Vindhayan Hills-
2.	Water Tanks/Bawlis/ steppe Wells	Hill & Plains	80 inbuilt water Tanks in 3 Hectare Area
3.	Palaces	Slope & Plain	Ramnagar Palace Singhpur Palace
C	ANCIENT SETTLEMENT		
1.	Haveli	Merchants	In Prime locations and inner city
2.	Katra Mohalla	Local InHabitats	Dense Habitation
3.	Spacious Houses	Jamindars- Peasant	Settled from Nearby Revenue landlords
4.	Humble Houses Chall, Rooms Courtyards	weavers/manpower	In narrow & meandering streets

D	NATURAL & RELIGIOUS		
1.	Caves	Khandagiri Cave	On Hill scarp/slope zone fracture & lineament origin
2.	Temples- Hindu	Mata Jageshwari Temple	Near Fort Hill
3.	Temples- Jain	In old Boodi Town & Cave	Hillocks and forested regions Thubuij, Devgarh
4.	Water Fall Perennial, Source of Water	Hillocks	Below Hills scarps
E	TRADITIONAL/ FAIRS/ SOCIAL ACTIVITIES		
1.	Economic Zone- Handloom Weaving/Trading	Bahar Shahar Outer Town	50% of Population engaged in weaving the clothes
2.	Jain Pilgrimage Fairs Annual	Haudkhas maidan Gan Gaur mela	20000-30000 pilgrimage visited every year in mid April/ Viman Yatra
F	PROSPECTS OF TOURISM CIRCUIT	Ramnagar Palace & Singhpur Palace whereas the Panchannagar Palace submerged in Reservoir Tourist place for Natural Scene, Hill, Forest, Pictureque Scene, Pilgrimage for Religious Temples, Historian for, Ancient Fort and Heritage, Traders for Commercial-economic Trading	

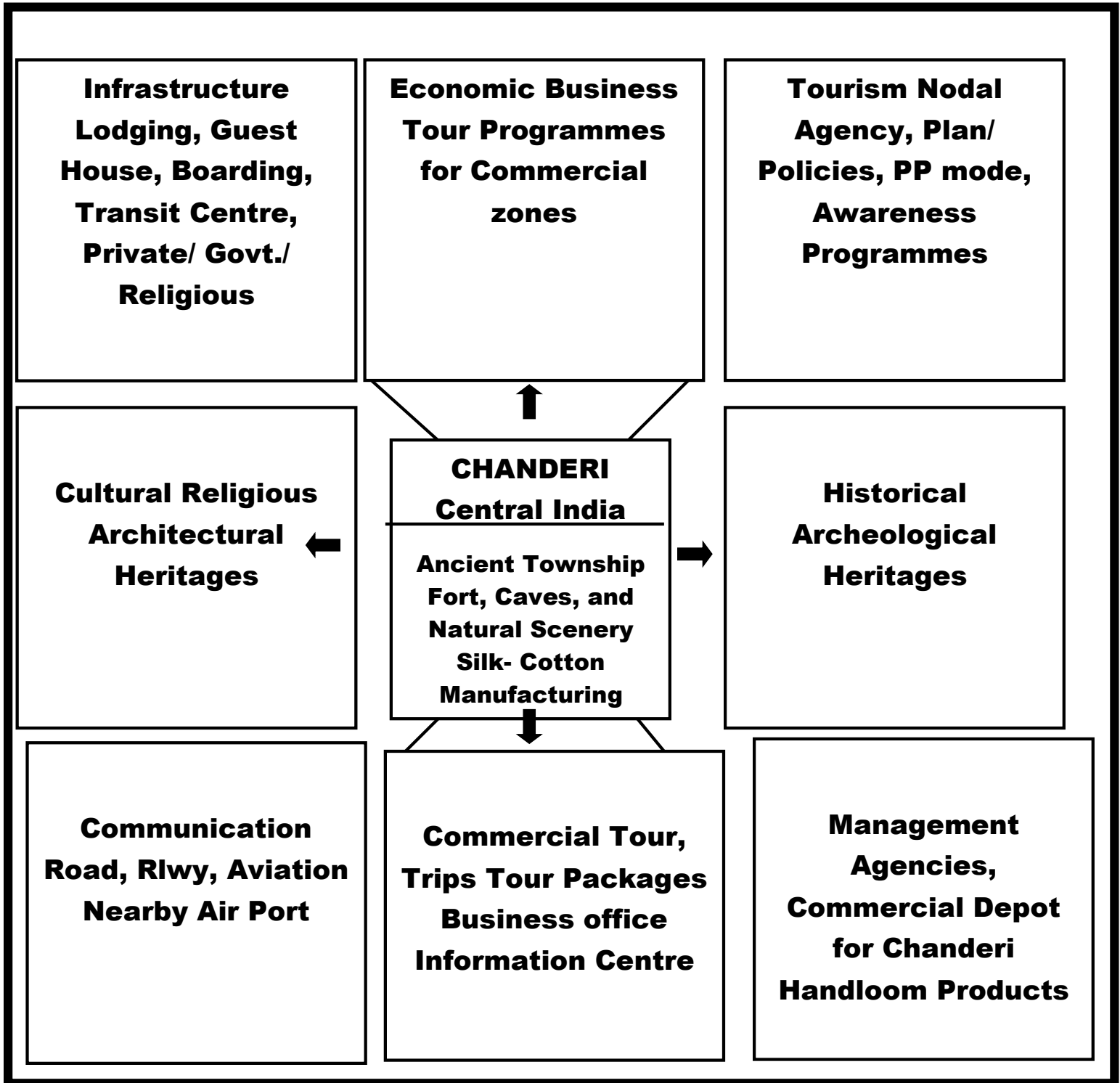
Source- (Based on various sources)

TABLE IV
PLAN FOR TOURIST CIRCUIT
(CHANDERI OF M.P.)

S. NO.	MAJOR TOURIST ATTRACTION SITES/ OBJECTS
I.	Ancient Sculptures, Native Site, Boodi Chanderi
II.	Archaeological Site of 6th Century AD
III.	30 Hindu Monuments of Archaeological Importance
IV.	About 80 In built Water Tanks (bawli) Stepwell in 3 Hectare Area zone
V.	Natural Geo heritages- Natural water bodies, springs, on slopes of Hillocks of Vindhyachal Range
VI.	Divine Spiritual Environment- Hindu Temples
VII.	Huge Decorated Havelis, Spacious Houses
VIII.	Katras- Narrow meandering Streets (Unity construction of Buff coloured homes)
IX.	Commercial Production of Traditional Chanderi Silk, Cotton Sarees, Clothes

TABLE V (Flow Chart)

DEVELOPMENT OF CHANDERI (PROPOSED)



Integrated Development and Economic Growth through Tourism sector (Proposed)

(Diwan et.al, 2021)

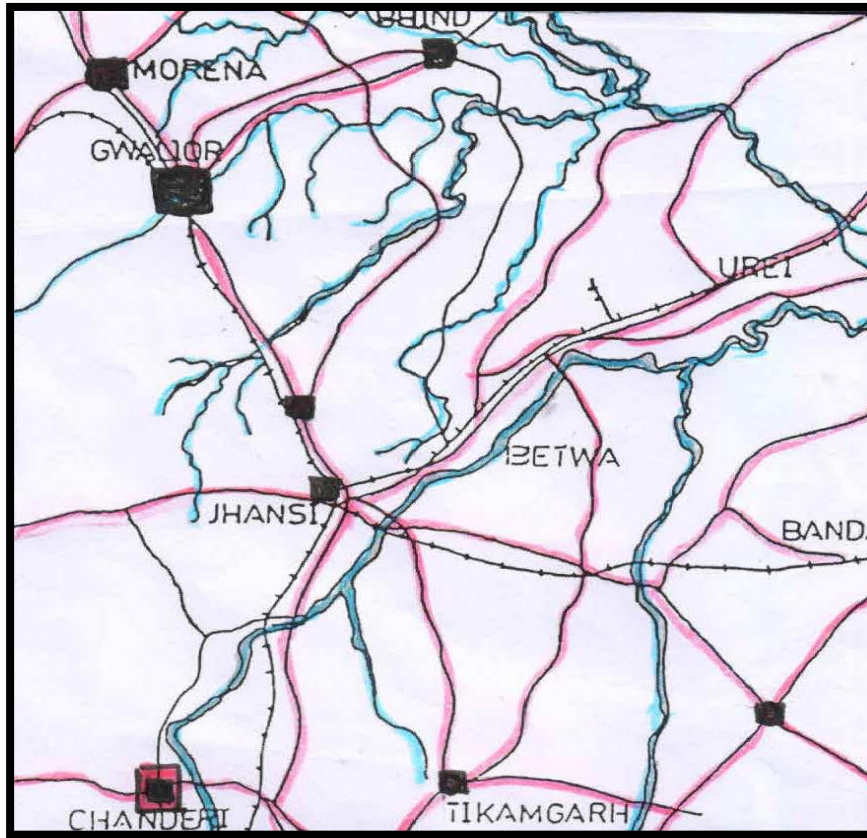


FIG.I (a) LOCATION MAP

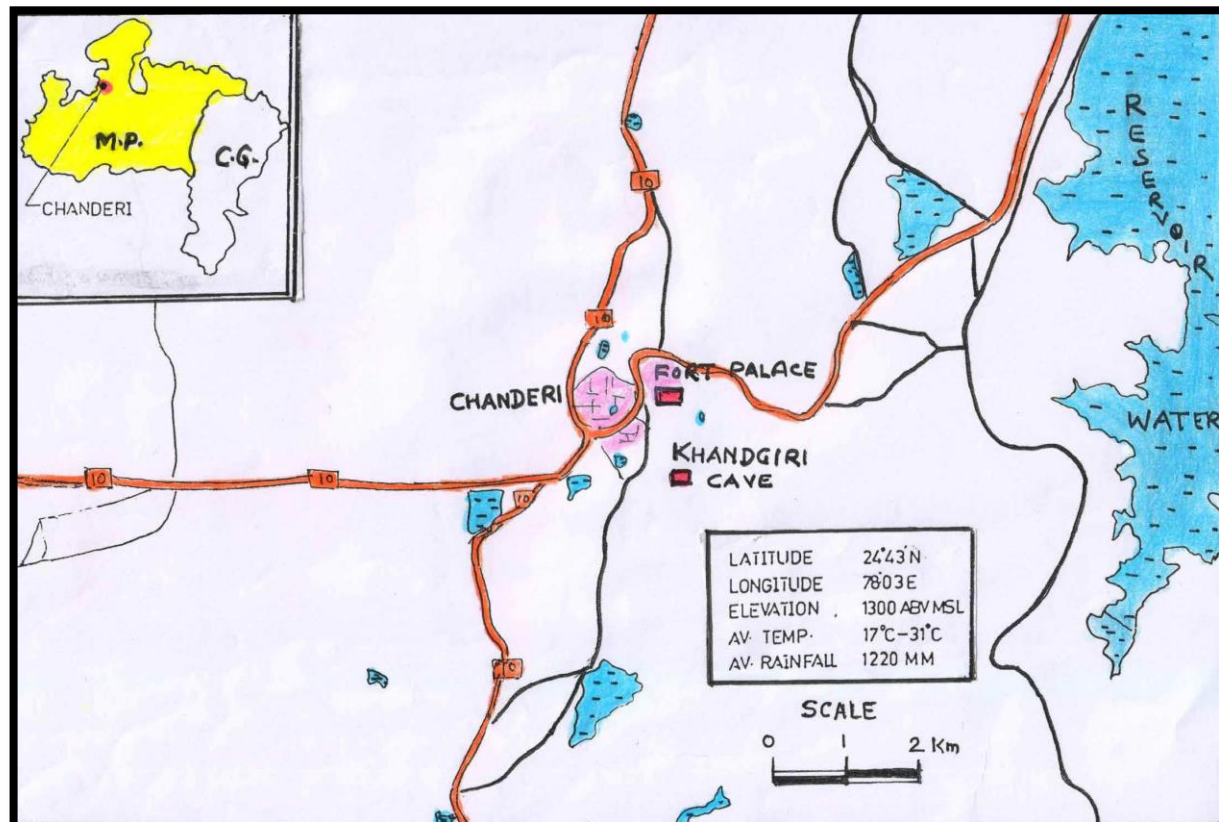


FIG.I (b) CHANDERI FORT:- PALACE, CAVE, WATER, RESERVOIR

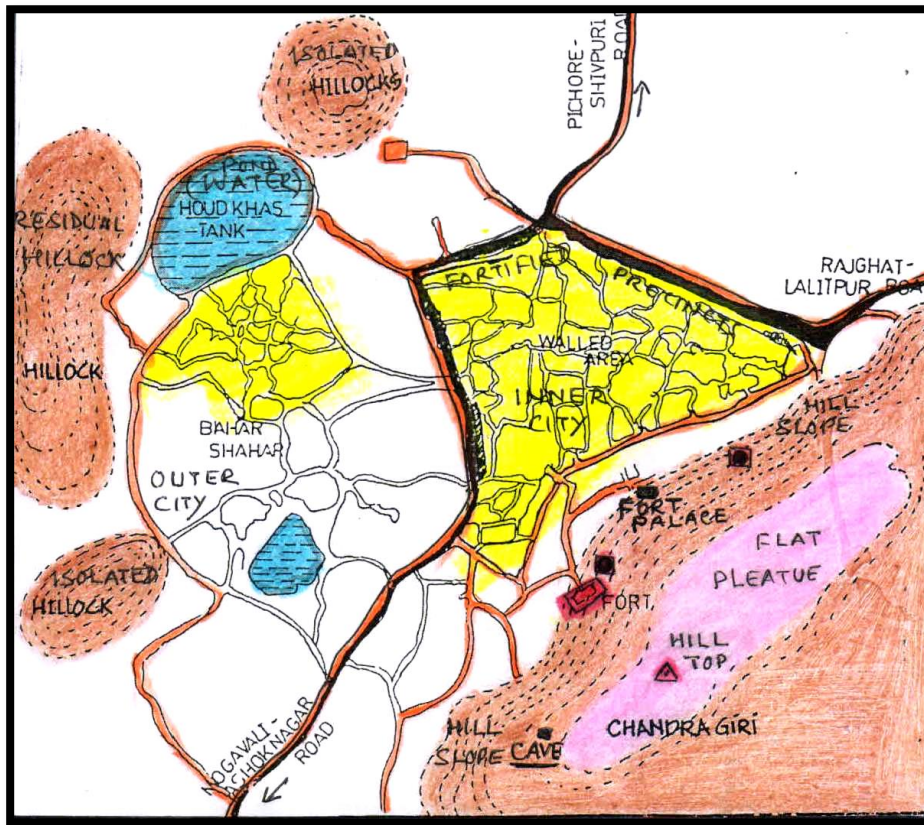


FIG.I (c) CHANDERI FORT:- HISTORICAL SETTLEMENTS (OUTER AND INNER) (SCHEMATIC)

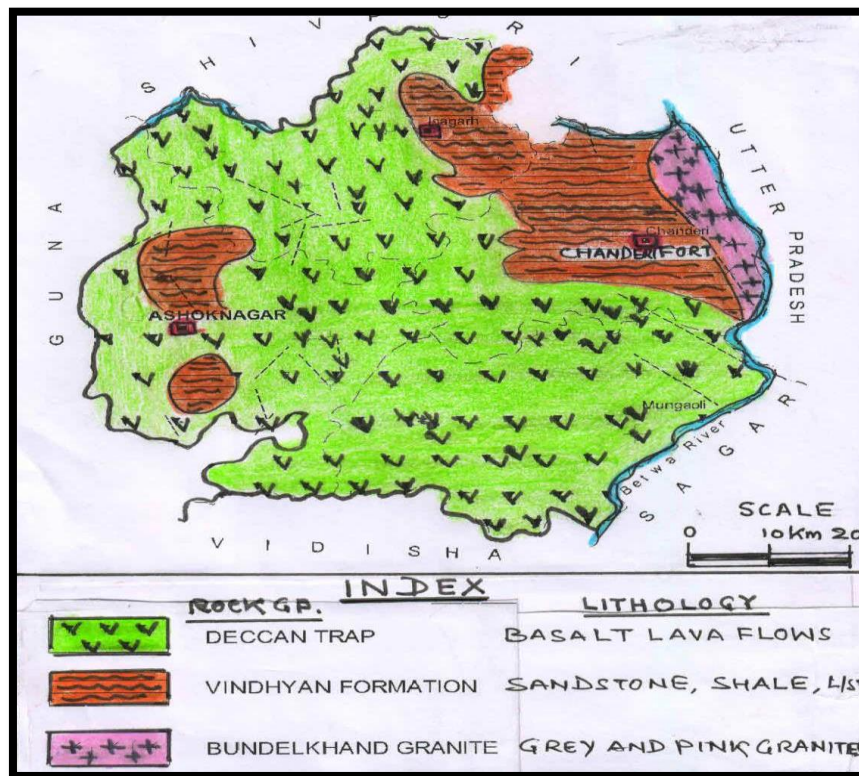
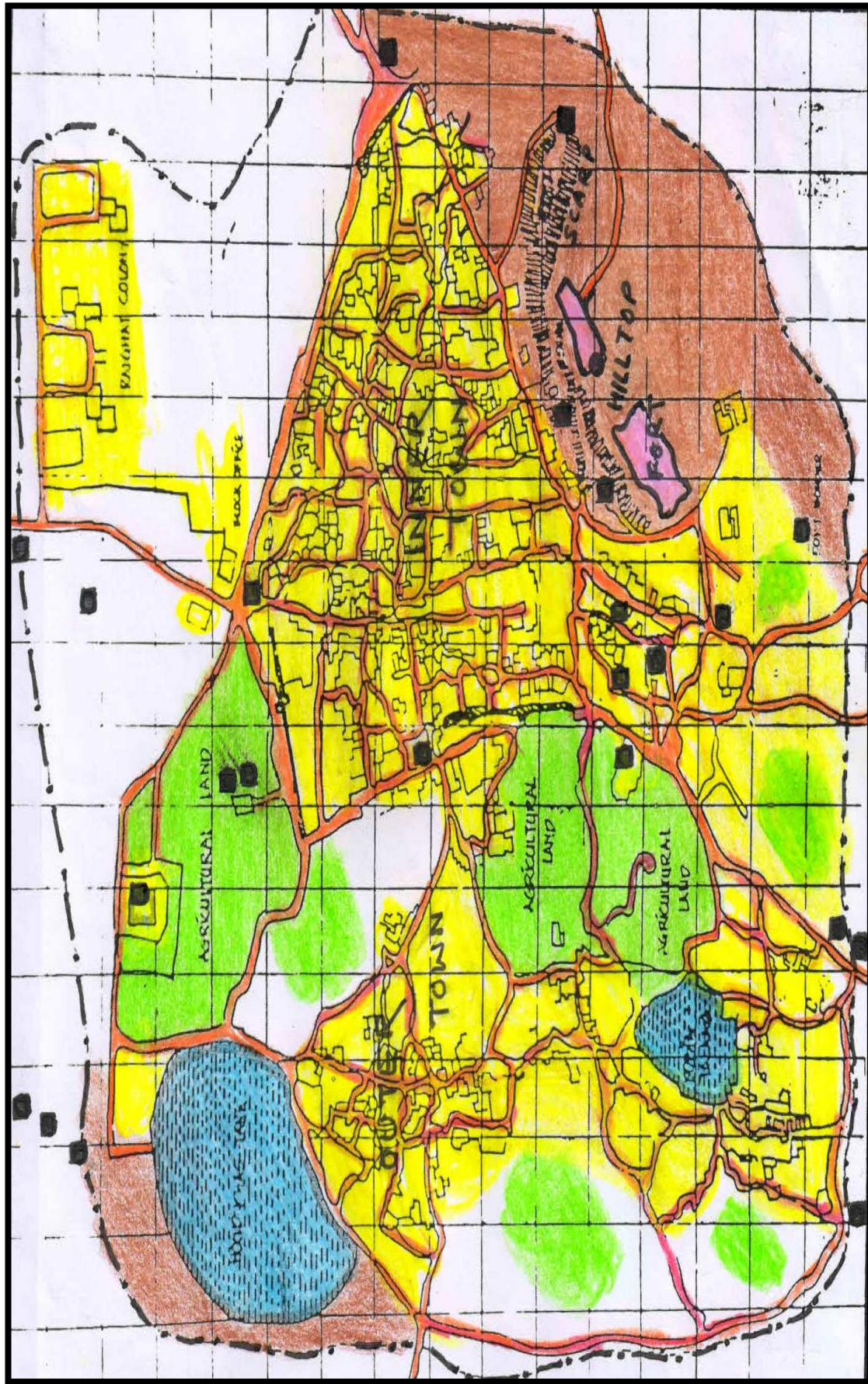


FIG.II CHANDERI FORT:- LITHOLOGY-ROCK TYPES. (SOURCE-C.GWB, 2013)



**FIG.III (a) CHANDERI FORT AND SETTLEMENT
(SATELLITE IMAGERY DATA) SCENE, 2020AD**



**FIG.III (b) CHANDERI FORT AND SETTLEMENT (PLAN VIEW)
(INTERNAL)© DR. N. MEHRAOTRA, 2021**



**FIG.1 (c) CHANDERI FORT-INTERNAL STRUCTURES (KIRTI DURG, PALACE, KOTHI, BLDG, WALL BASTIONS, DOOR,)
©DR. H.D.DIWAN, 2020(SATELITE SCENCE, 2020 AD)**

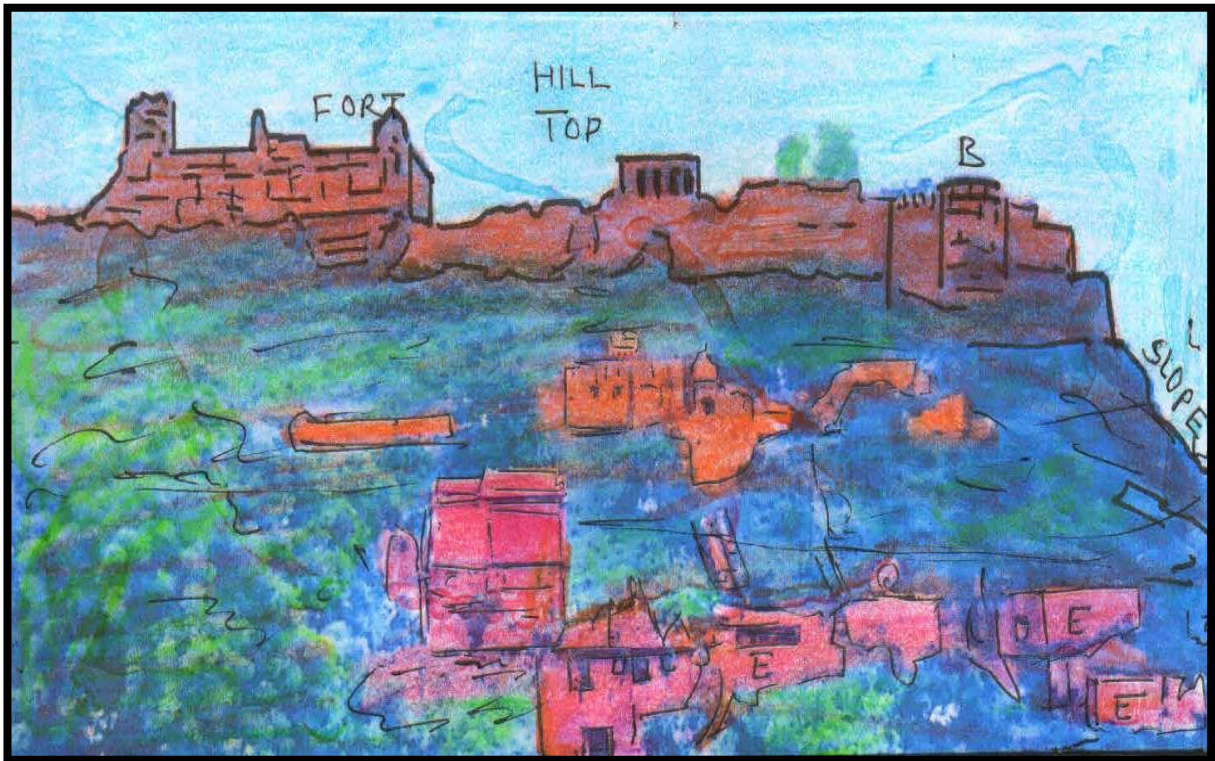


FIG. IV (a) CHANDERI FORT HILLTOP FORT (VIEW)



FIG. IV (a) CHANDERI FORT – GATEWAY AND BASTIONS

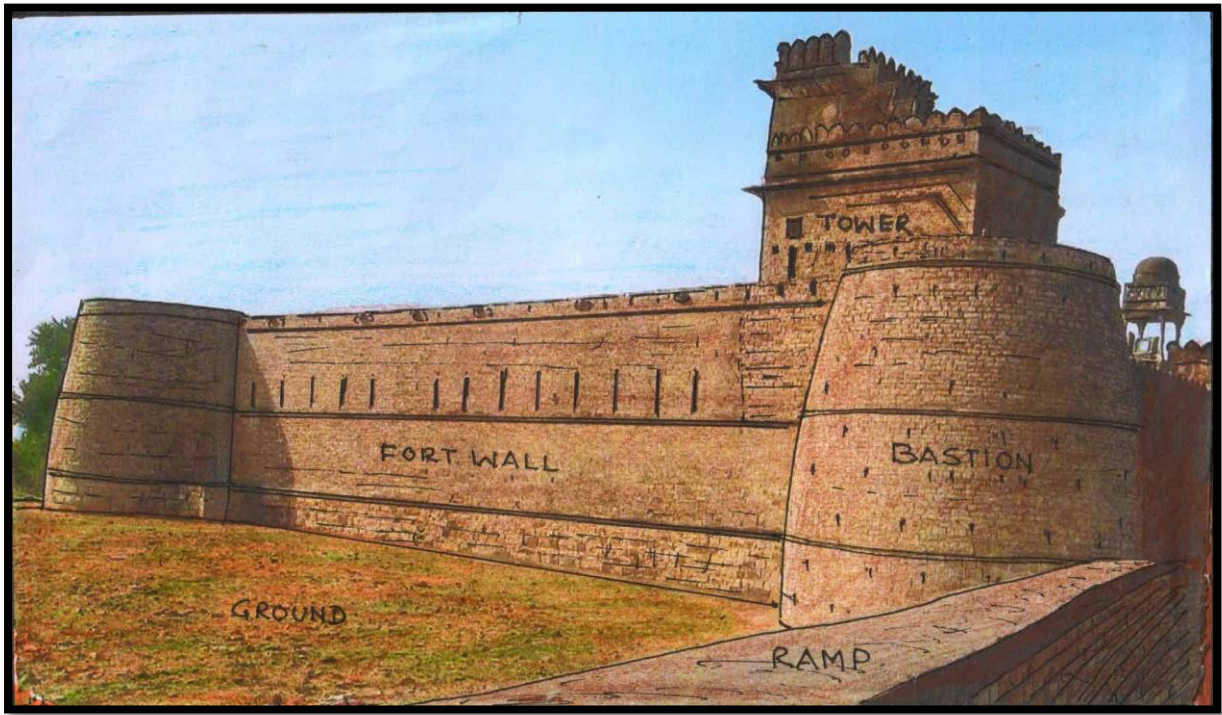


FIG.IV (c) CHANDERI FORT- RAMP, BASTIONS, TOWER, STON E WALL

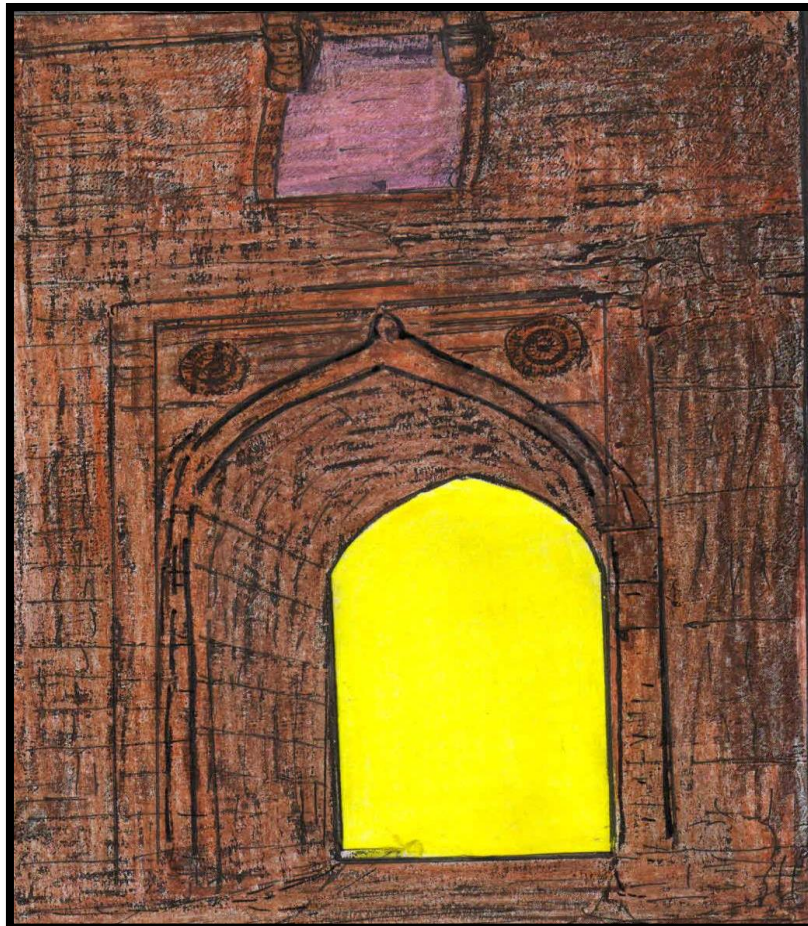


FIG.IV (d) CHANDERI FORT- ENTRANCE GATE (STONE BLOCKS)

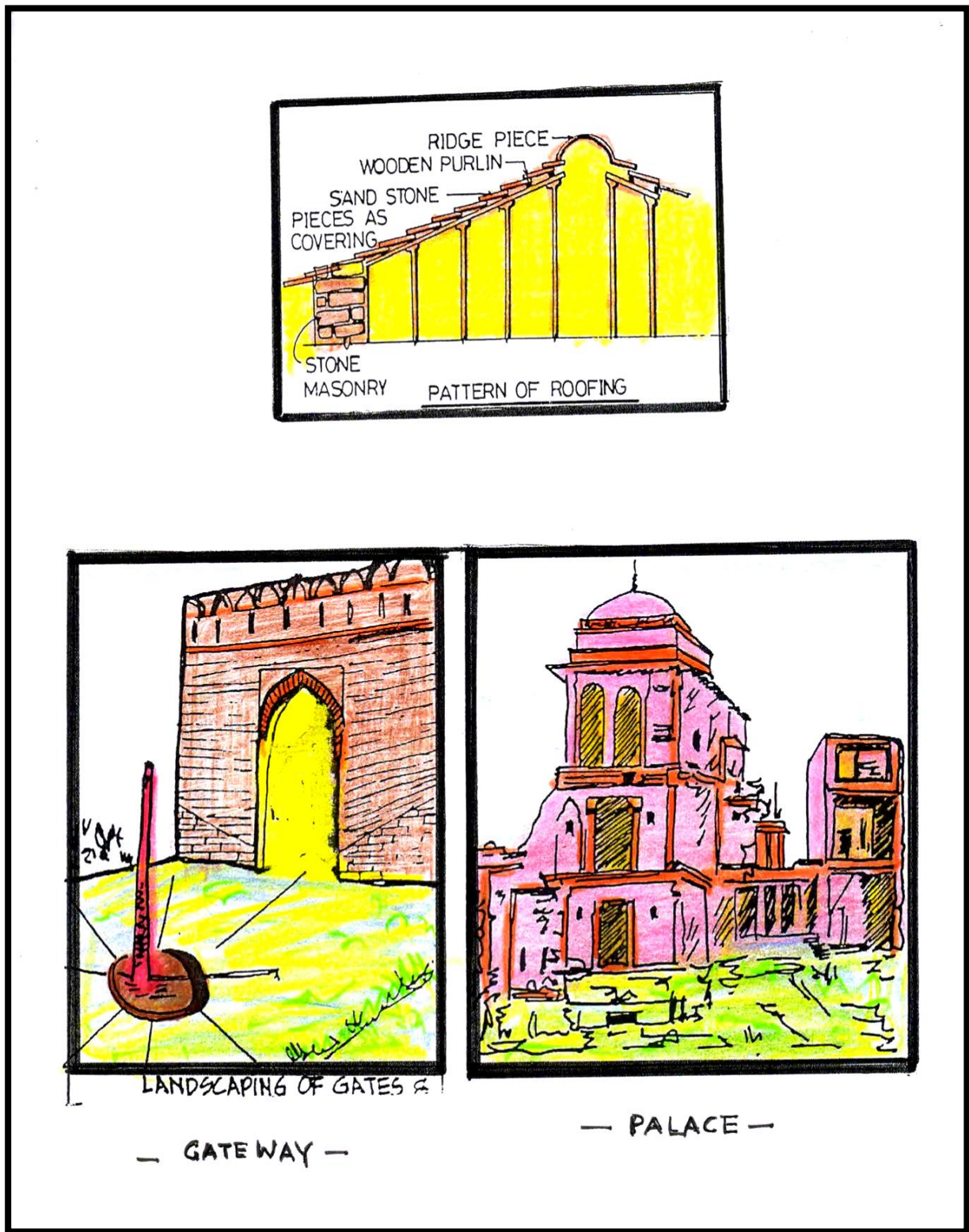
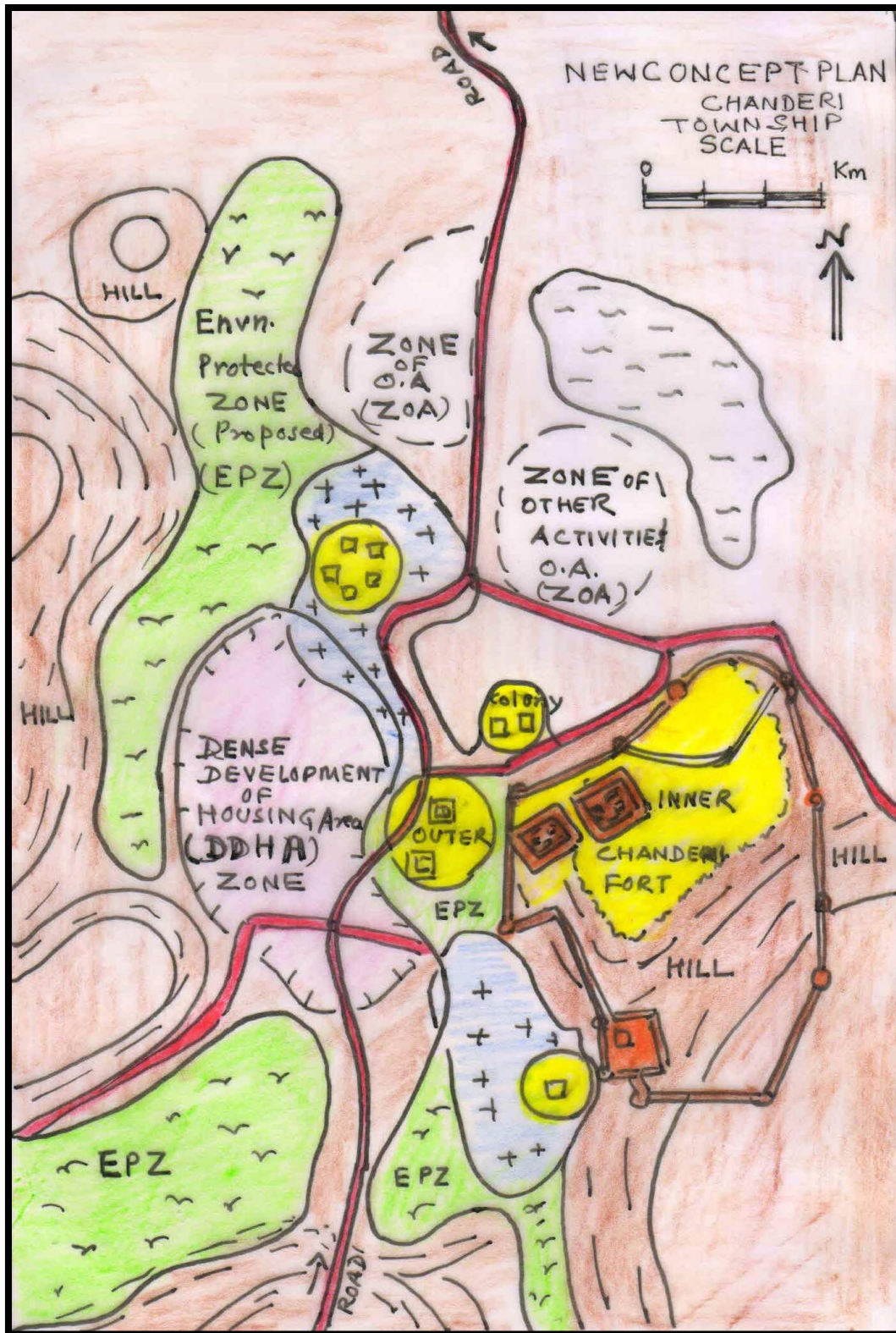


FIG. V(a) CHANDERI FORT-DECORATION
© DR.N. MEHROTRA, 2021



**FIG.VI CHANDERI FORT- TOWNSHIP CONCEPT PLAN
(PROPOSED BY AUTHORITY)**

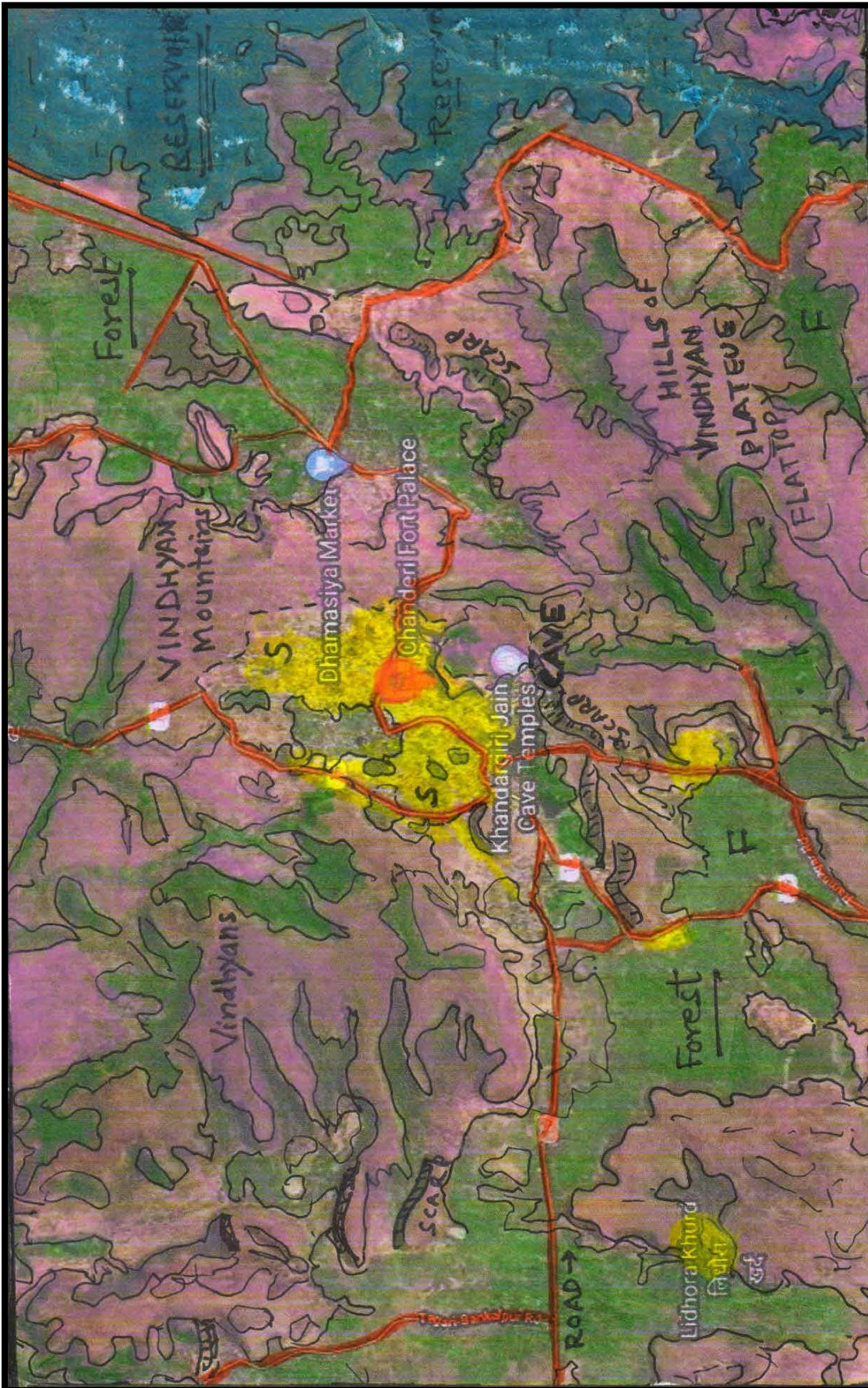
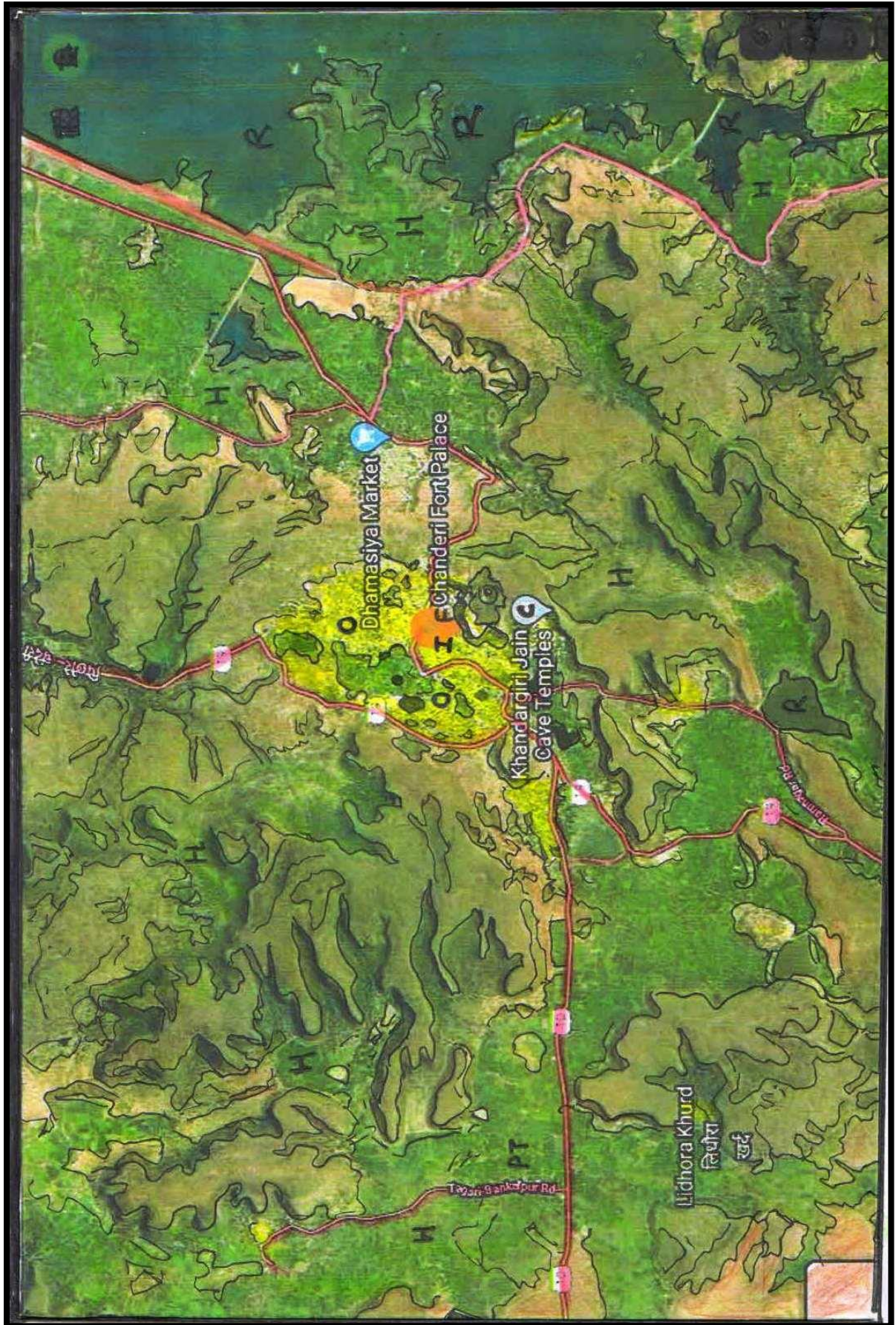


FIG. VII CHANDERI LANDSCAPE- A Pictureque Scene of Environs- in Lofty Vindhyan Mts.
(Intermountain Valley) (Tourism Prospects) (Satellite Scene.2021)

FIG VII (b) CHANDERI FORT- LANDSCAPE, TERRAIN CONDITION
(Fort (F), Outer City (O), Inner City (I), Cave (C), Hillocks (H) Plateau (PT) Reservoir (R))
(c) Dr. H.D. Diwan (2021)





**FIG VII (c) CHANDERI FORT-HILLOCK (H), ISOLATED HILL (IH), HILLSLOPE (HS), Intermountain Valley Plains (VP) (Geomorphic units)
(c) Dr. H.D. Diwan (2021)**

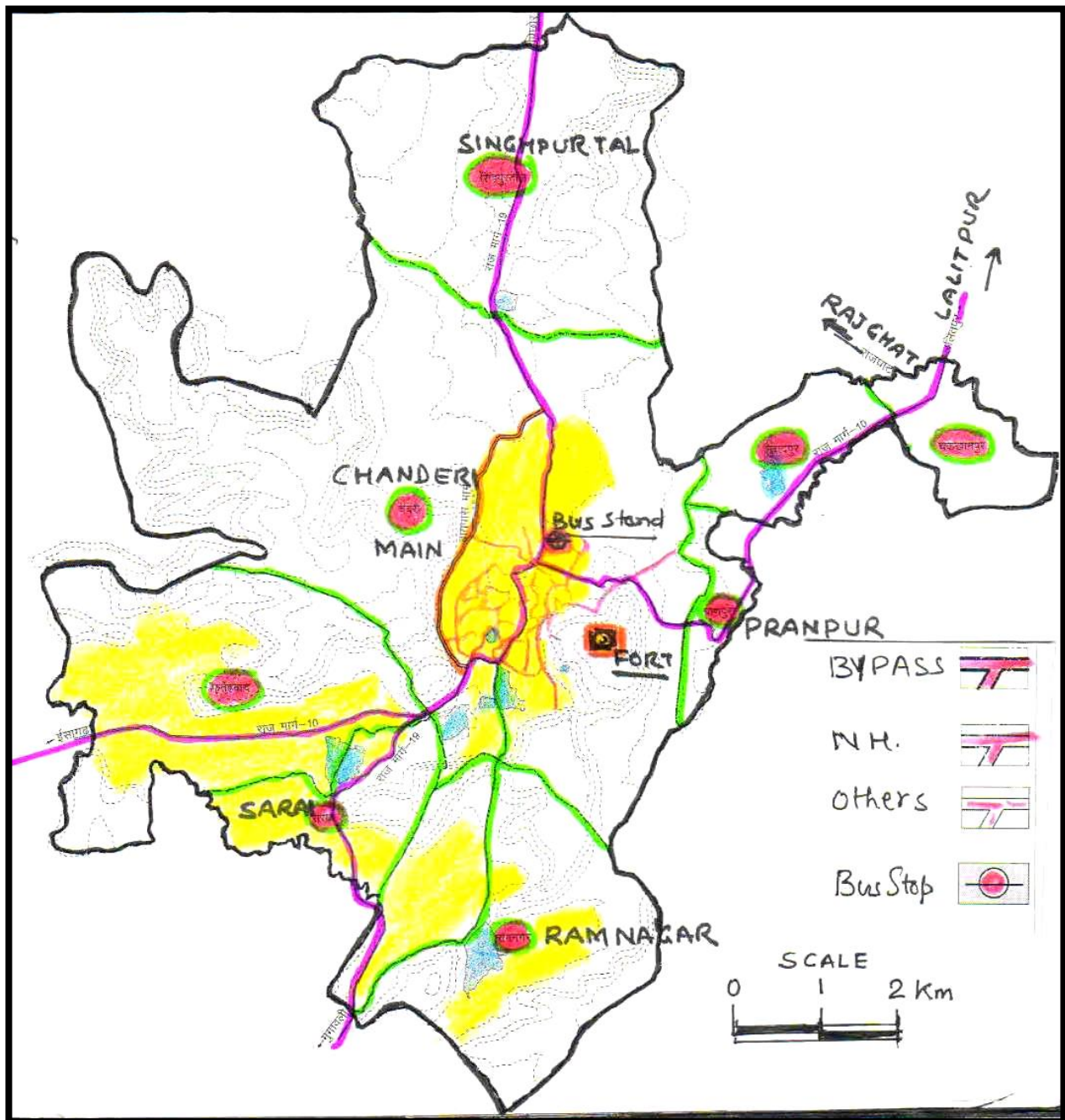
CHANDERI FORT- CHANDRAGIRI HILLS

(Shri Jageshwari Mata Temple (JT), Kila Kothi (K), Fort (F), Palace (p), Natural Cave (C), Water Bodies (WB), Fort Wall (FW) Gateway (D) Based on Satellite Data (c) Dr. H.D. Diwan (2021)



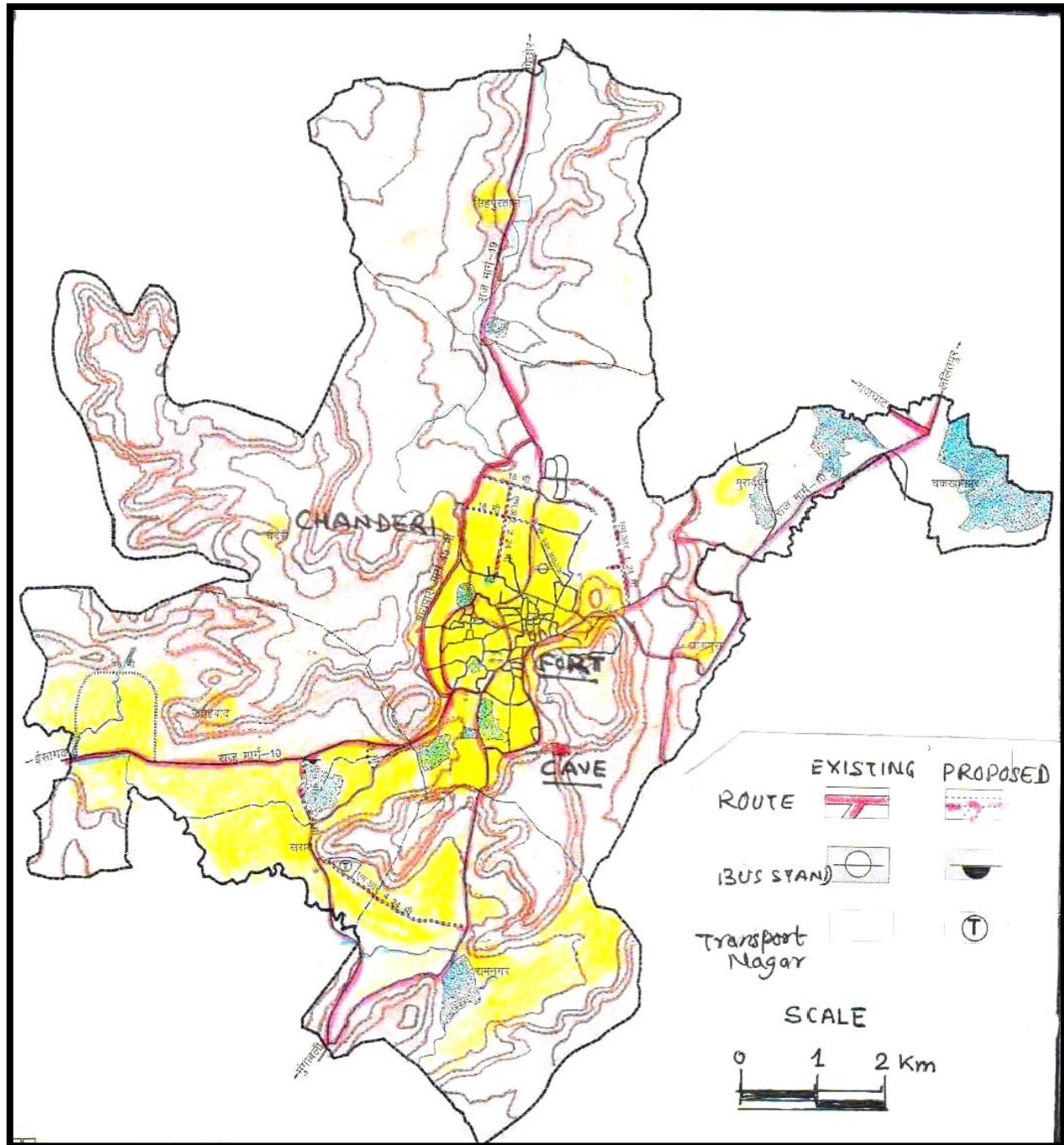
CHANDERI TOWNSHIP- Present Road Route

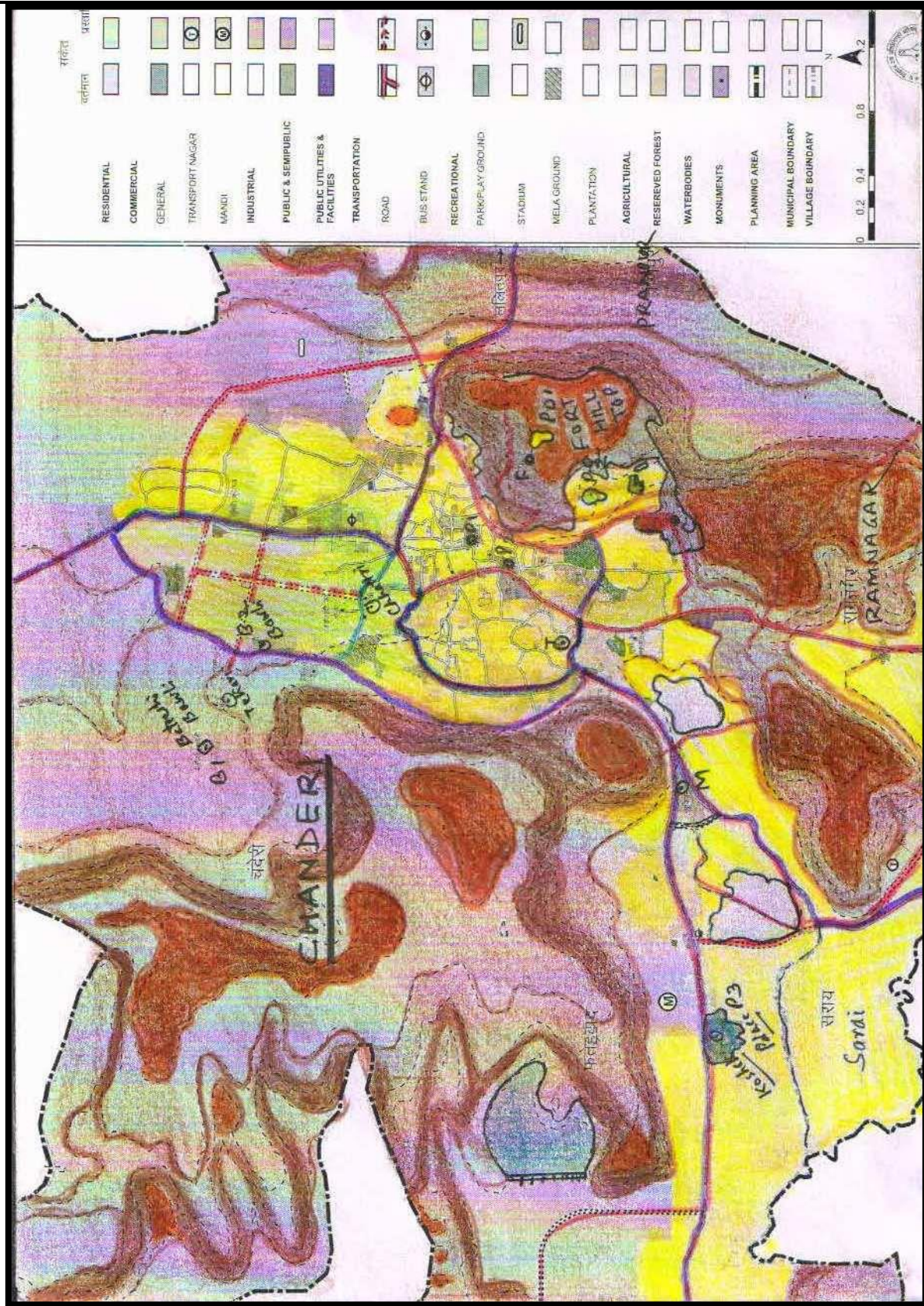
Source- T&C Planning M.P. (2020)



CHANDERI TOWN- Road Route (Proposed)

Source- T&C Planning M.P. (2020)





CHANDERI TOWN- Development Plan
PO₁ PO₂ Ponds on Hillock (Draft- 203/AD) Chandragiri
F- Fort, C- Cave Temple Source- T&C Planning M.P. (2020)
P₁ Chanderi Palace,
P₂ Bodal Mahal, P₃ Koshak Palace, M- Museum

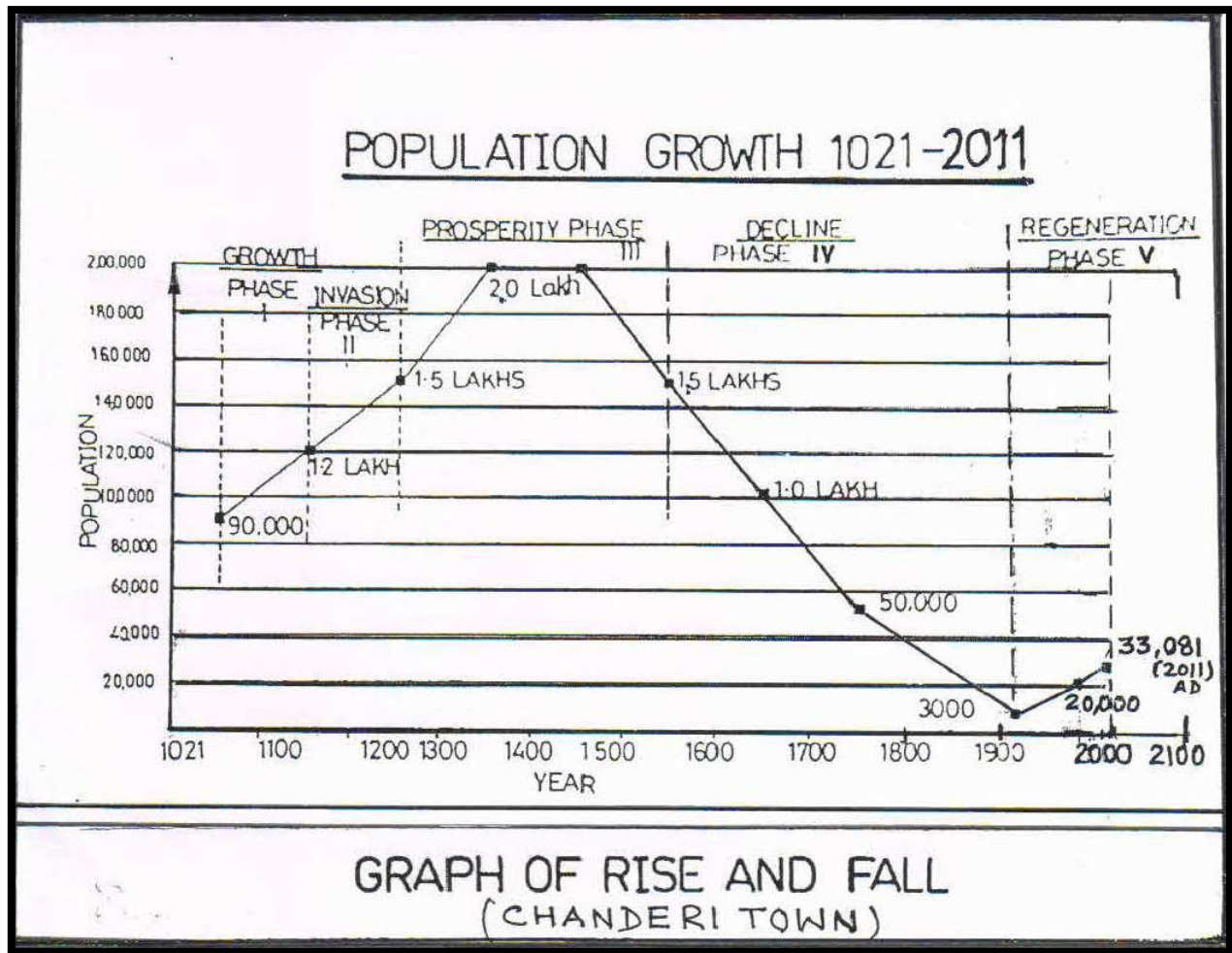
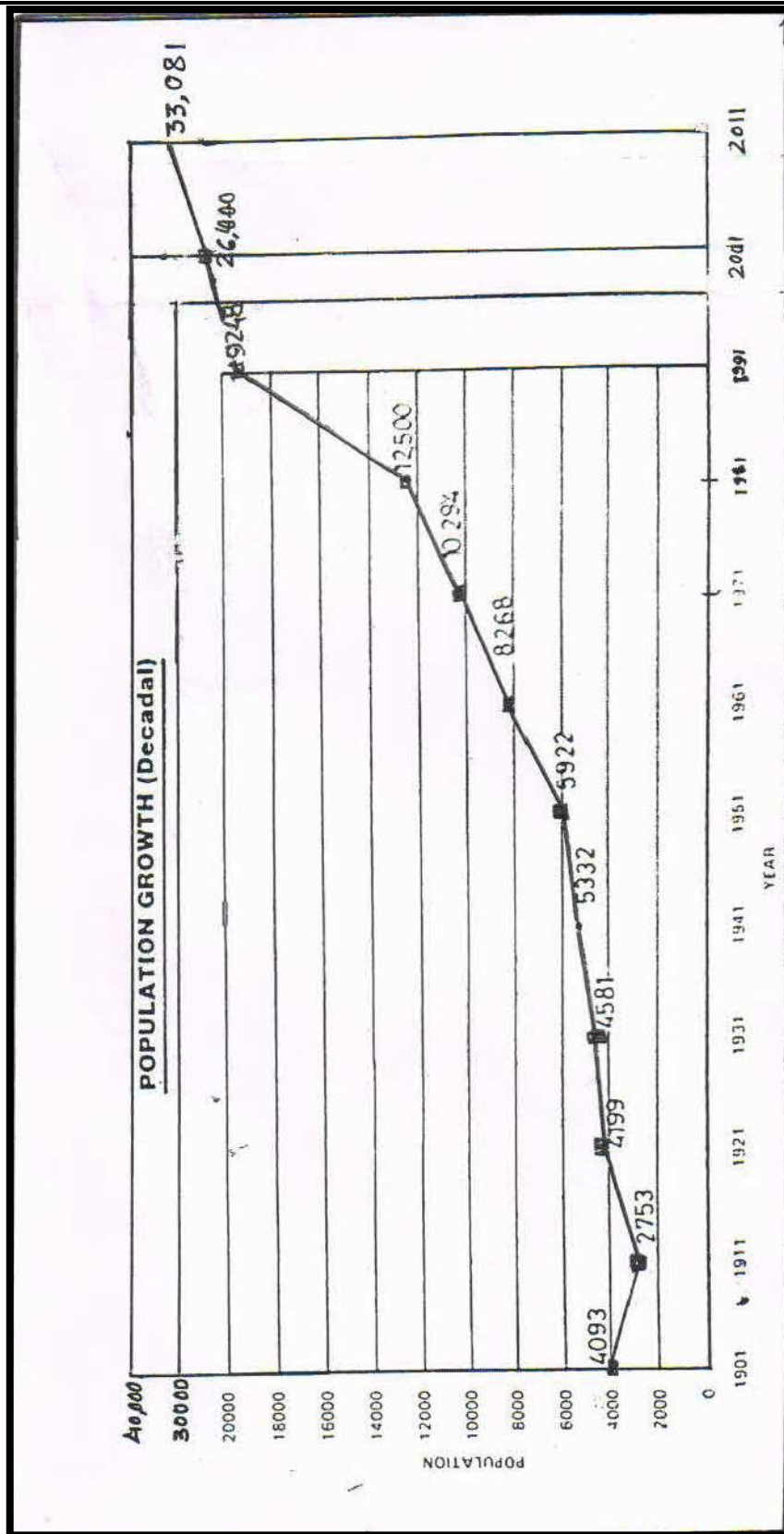


Fig. VIII(d) Population Growth –Chanderi (Trend)

Fig.VIII(e) CHANDERI POPULATION GROWTH(Decadal)
(Area-10.7 Sq. k.m.) (Elevation - 456 m- AMSC)



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