

SITE STUDY AND SITE ANALYSIS

The Synthesis & Design-Focused Approach



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SUBMITTED BY: BARCH: 2ND YEAR
BATCH: 2024-29

**GATEWAY COLLEGE OF ARCHITECTURE
AND DESIGN**

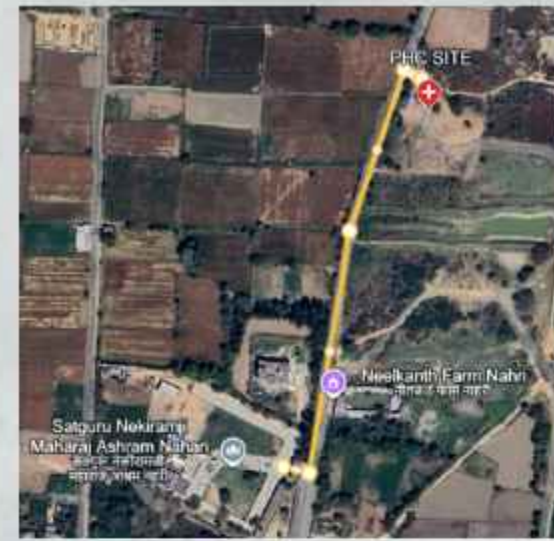




INDIA

NEAR SITE PLACES

- Neelkanth farm Nahari-295.81 m away for the site
- Sahyad Baba Darbar- 1 km away from the site
- Satguru Nekiramji Maharaj Ashram Nahari - 366 m away from the site



Neelkanth farm,
Satguru Nekiramji Maharaj
Ashram Nahari

INTRODUCTION

- Nahari is a large village in Rai Tehsil, Sonipat district, Haryana, near the Delhi border.
- The area has limited facilities but is expected to develop significantly.

*District: Sonipat

*State: Haryana

*Division: Rohtak

*Languages spoken: Hindi, Punjabi, and Urdu

*Well connected to nearby towns and accessible by road.



HOW TO REACH?

NAHARI VILLAGE

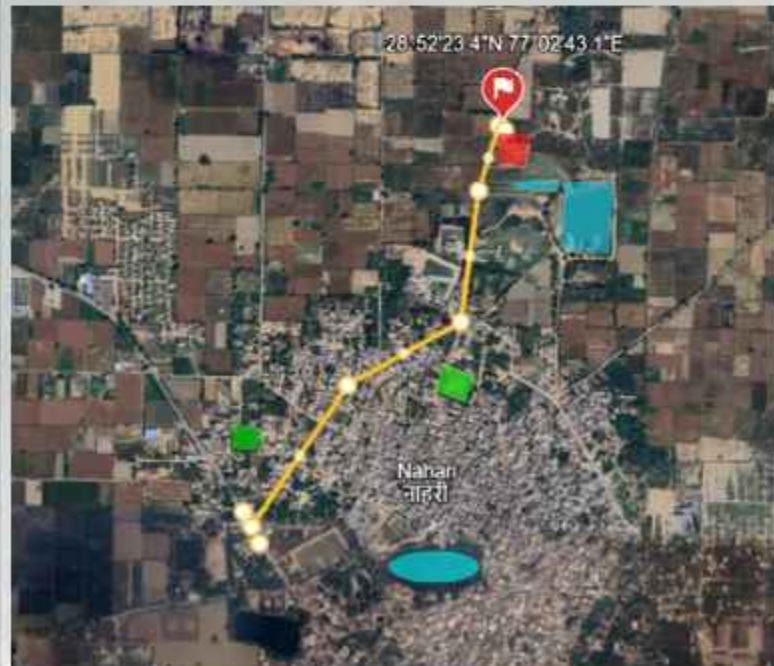
SONIPAT

LOCATION

VILLAGE: NAHARI
SONIPAT (131001)
HARYANA, INDIA

COORDINATES:

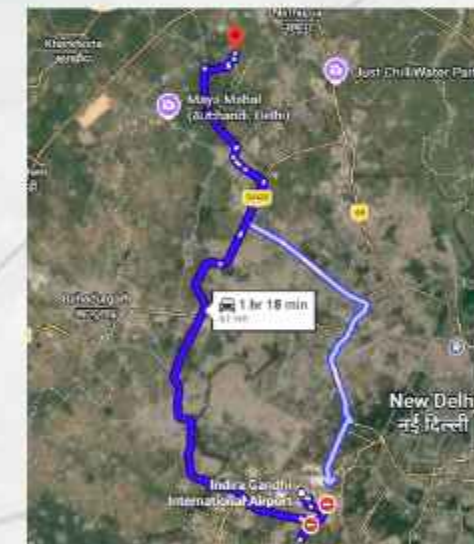
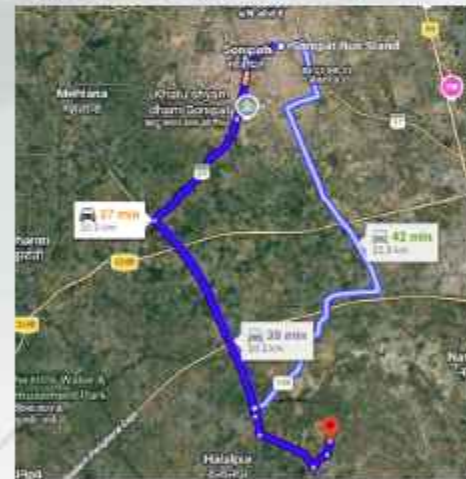
28°52'21"N 77°02'43"E



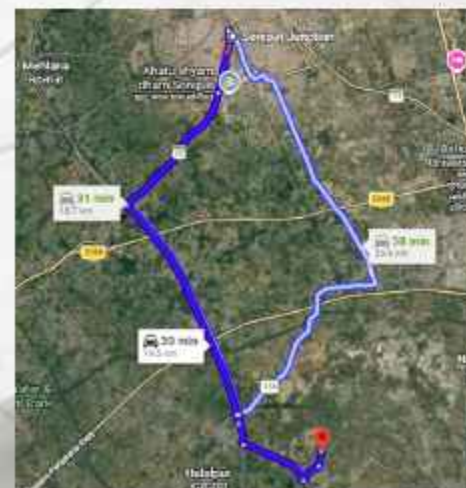
- **MAIN SITE**
- **OPEN GREEN SPACE**
- **WATER BODIES**

NEAREST BUS STAND

20 KM



NEAREST AIRPORT
61 KM



NEAREST RAILWAY STATION
18 KM

CONNECTIVITY



NEAREST BUS STAND
20 KM

NEAREST RAILWAY STATION
17 KM

NEAREST AIRPORT
59 KM



SITE AMENITIES

STRETCH
STARTING POINT



SITE

NAHRI SIKHAN
COMMUNITY HALL



SATGURU NEKIRAMJI
MAHARAJ AASHRAM



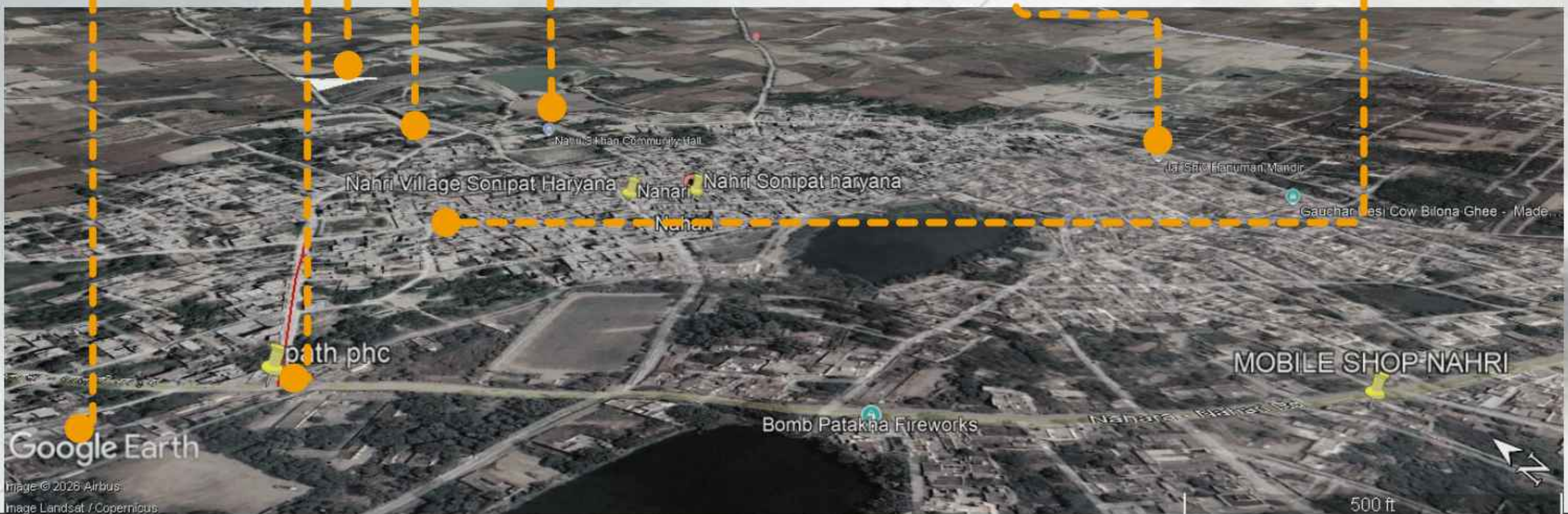
JAI SHIV
HANUMAN MANDIR



SANTOSH DEVI
BADMINTON ACADEMY



GOVT.
RATION SHOP



Google Earth

Image © 2026 Airbus
Image Landsat / Copernicus

500 ft



TIMELINE OF NAHARI

To understand its origin, cultural identity, settlement pattern, and architectural character so that future planning and development respect the village's traditions and support sustainable growth.

1. ANCIENT & MYTHOLOGICAL ERA

Nahari village lies in the historic region of the Kuru Kingdom mentioned in the Mahabharata.

- The region around Nahari lies in the fertile plains of the Yamuna basin, which supported human settlement since ancient times.
- Early inhabitants depended on agriculture, animal husbandry, and nearby water sources.



2. MEDIEVAL & SPIRITUAL GROWTH

- 8TH – 12TH CENTURY
- REGION WAS INFLUENCED BY RAJPUT AND EARLY NORTH INDIAN KINGDOMS.
- 13TH – 16TH CENTURY
- AREA CAME UNDER THE DELHI SULTANATE.
- DEVELOPMENT OF LAND REVENUE SYSTEMS AND AGRICULTURAL EXPANSION.
- LATE 18TH CENTURY
- DECLINE OF MUGHAL CONTROL AND RISE OF LOCAL RULERS AND REGIONAL POWERS.
- SPIRITUAL BELIEFS INFLUENCED BY MAHABHARATA TRADITIONS AND LOCAL FOLK DEITIES.
- WORSHIP OFTEN CENTRED AROUND SACRED TREES, PONDS, AND VILLAGE SHRINES.



- Culture & Religion: Temples and fairs shape village life.
- Traditions: Farming and crafts influence lifestyle.
- Sports: Athletes like Ravi Dahiya inspire youth.

3. MODERN ERA (20TH CENTURY – PRESENT)

- Sports & Infrastructure Development:

Traditional Akharas: Nahri has a long-standing tradition of wrestling. While not a "structure" in the architectural sense, these training grounds became the foundation for the village's fame.

1960s–1970s (The Olympic Roots): Infrastructure began to shift toward sports with the rise of local wrestlers like Bishamber Singh (1964 Tokyo Olympics).

21st Century Achievements:

Modern Wrestling Facilities: Following the success of Ravi Dahiya (Silver Medalist, Tokyo 2020), the village has seen significant government and private investment in wrestling halls and training equipment.

Educational Institutions: The establishment of schools like the Shambhu Dayal School (located near or on the grounds of historical sites) transformed the village into an educational hub for the surrounding region.

2020s Refinement:

Temple Renovations: The Dada Shambhu Mandir underwent further modernization and aesthetic enhancements to accommodate thousands of pilgrims who visit during the bi-annual fairs (Phagun Navami and Asadh Saptami).



MORPHOLOGY



2011

Agriculture was the main livelihood. Basic infrastructure (roads, electricity) helped small trade and services.

PERIMETER :- 2954.5m



2017

Farming remained primary. Some youth started working in Sonipat and nearby industrial areas.

PERIMETER :- 3891.43m



2023

Growth in private jobs, small businesses, and rising land prices. Urban influence increasing.

PERIMETER :- 4346.46m

2014

Mainly agriculture-based (wheat, rice). Income depended mostly on farming.

PERIMETER :- 3601.43m



2020

COVID-19 disrupted jobs and small businesses. Agriculture became main support again. Government relief aided villagers.

PERIMETER :- 4588.9m



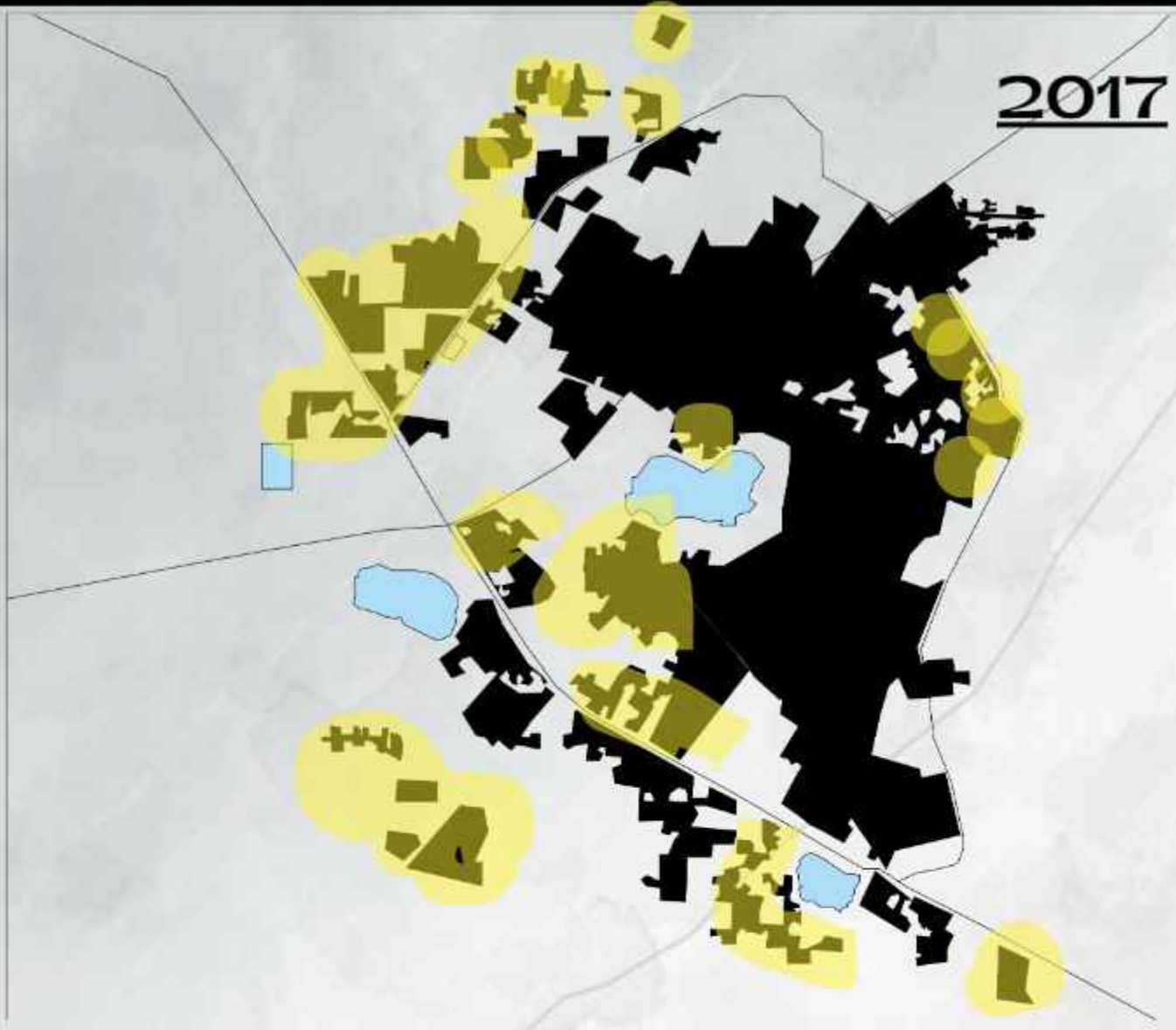
2025


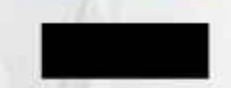
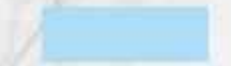
Semi-diversified economy: farming, private jobs, and real estate activity. Urban expansion pressures reflected in enforcement actions against illegal construction.

PERIMETER :- 4346.46m







 changes in 7 year
 Built-up area
 water bodies

2025 – Stadium Approval (Nahari)

- July 2025: MLA Krishna Gahlawat announced approval of a sports stadium in Olympian Ravi Dahiya's village, Nahari
- ₹3.30 crore sanctioned for sub-health centers
- Beneficiary villages: Pabsra, Kumas Pur, Dipalpur, Khatkar, Nangal Kalan
- Focus: rural sports infrastructure + healthcare strengthening

2025 – Kharkhoda Rally Projects

- Dec 2025: CM Nayab Singh Saini launched urban-rural projects
- Roads, sanitation plants (₹8.37 cr), parks (₹8 cr)
- Stadium renovation (₹3.5 cr)
- Drinking water project (₹26.46 cr, target Dec 2026)
- Indirect regional benefits for Nahari



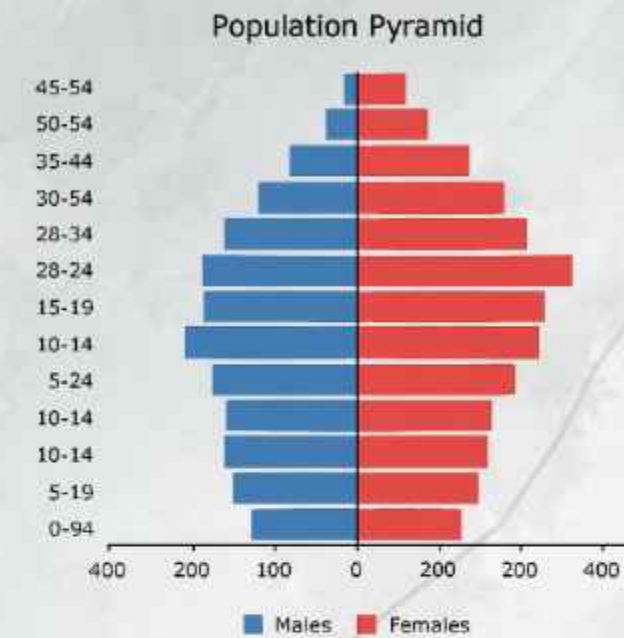
सोनीपत। राई की विधायक कृष्णा गहलावत ने कहा कि ओलंपियन रवि दहिया के गांव नाहरी में खेल स्टेडियम मंजूर करवाया गया है। साथ ही विभिन्न गांवों में उप स्वास्थ्य केंद्रों के भवन बनाए जाएंगे। इनके लिए 3.30 करोड़ रुपये स्वीकृत हुए हैं।

Haryana CM Saini lays stone of 2 health centres at Kharkhoda, announces Rs 5-cr grant

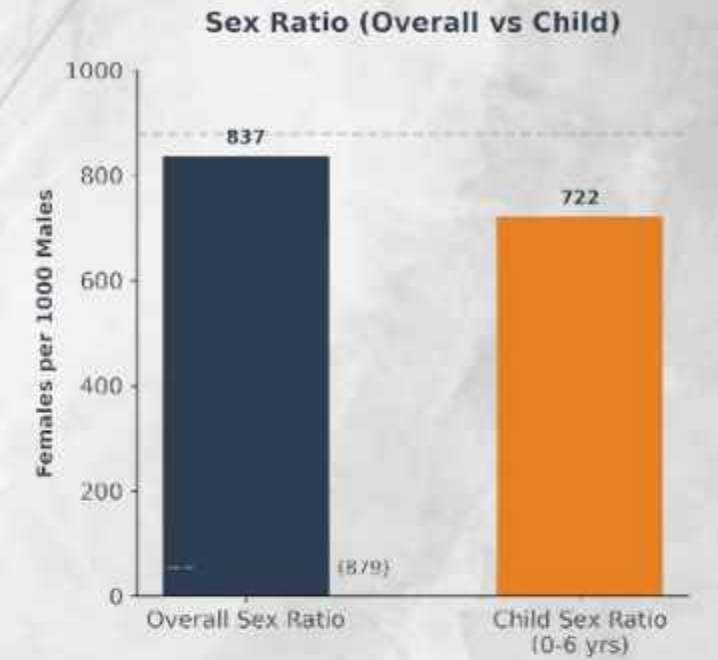
DEMOGRAPHIC AND USER DATA

DEMOGRAPHIC DATA NAHARI (CENSUS 2011)

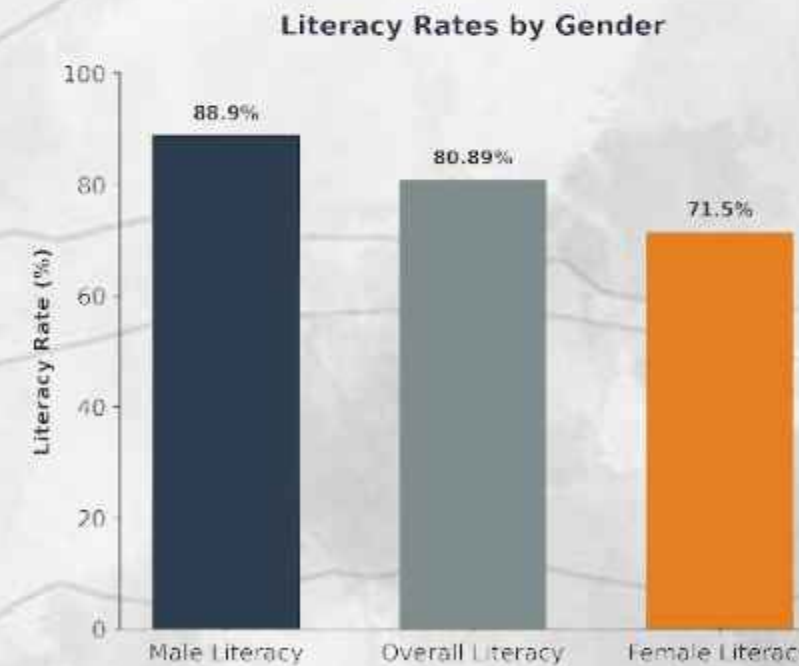
ATTRIBUTES	DATA
Total families	891
Total population	4650
Males	2531
Females	2119
Sex ratio	837 (lower than Haryana average of 879)
Children(0-6 yrs)	527 (11.33% of population)
Child sex ratio(0-6 yrs)	722 (lower than Haryana average of 834)
Literacy rate(overall)	80.89% (higher than Haryana average of 75.55%)
Male literacy	88.90%
Female literacy	71.50%



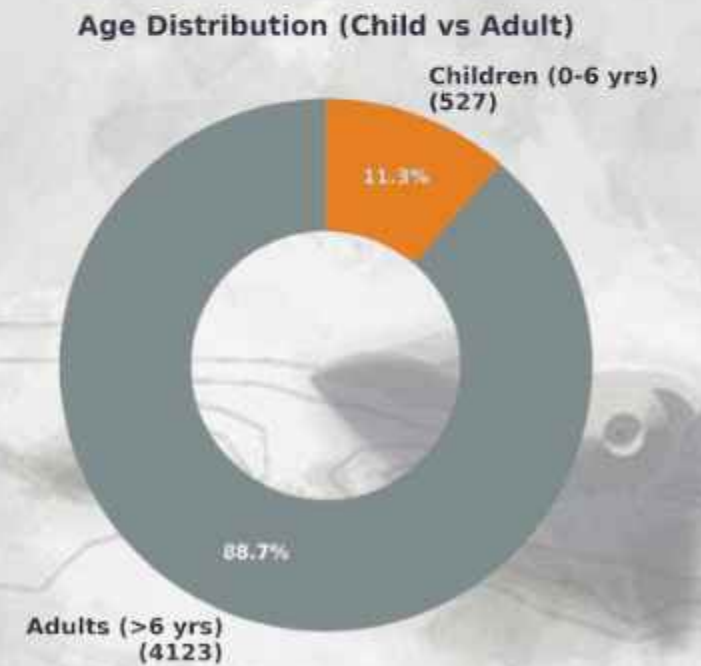
POPULATION PYRAMID FOR NAHARI VILLAGE BASED ON CENSUS 2011 DATA



SEX RATIO (OVERALL VS CHILD)



LITERACY RATE BY GENDER

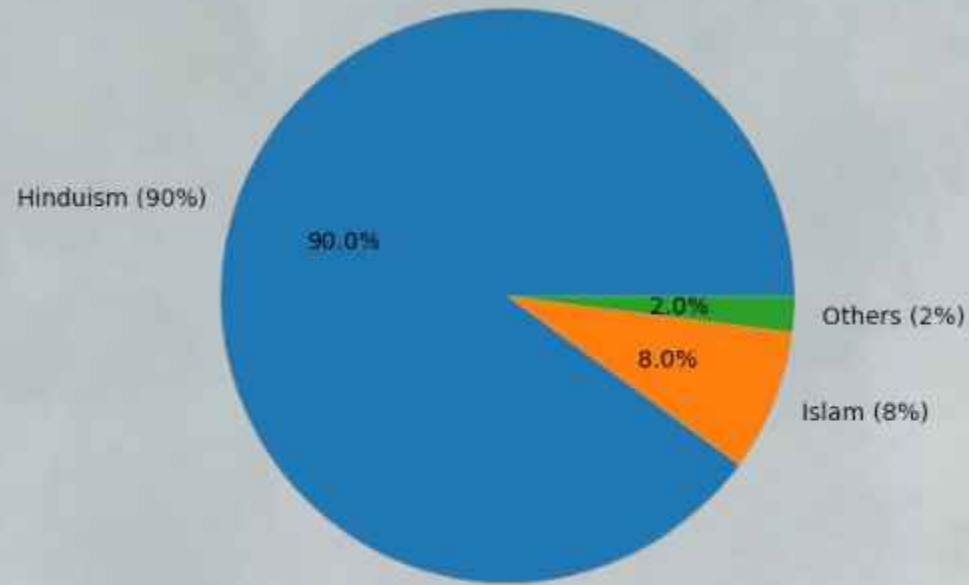


AGE DISTRIBUTION

DEMOGRAPHY

Nahri Village, Sonipat - Demographic Analysis (Census 2011)

Approximate Religious Composition of Nahri Village (Sonipat)



1. Hinduism (Major Religion)

The majority of the population practices Hinduism.

There are several temples in the village, including the famous Dada Shambhunath

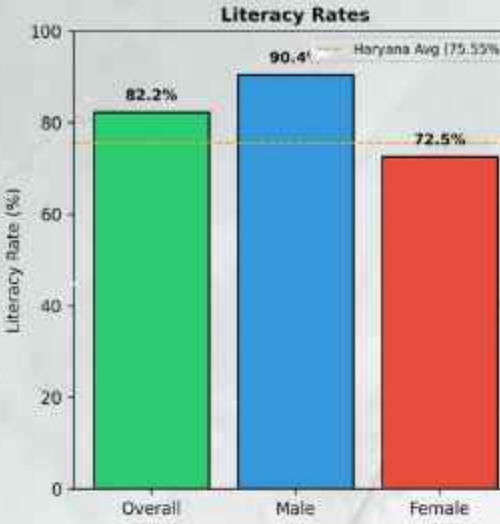
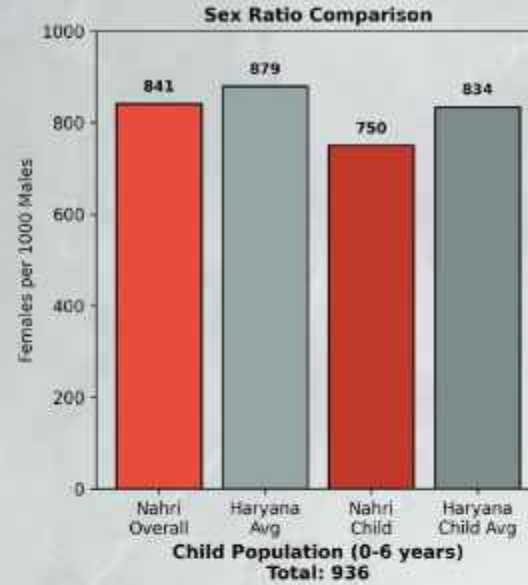
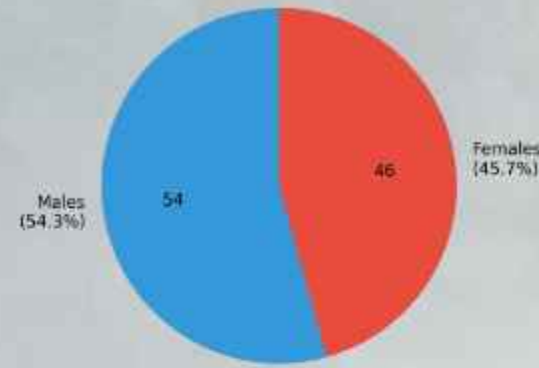
2. Islam (Minority Community)

A small section of the population follows Islam.

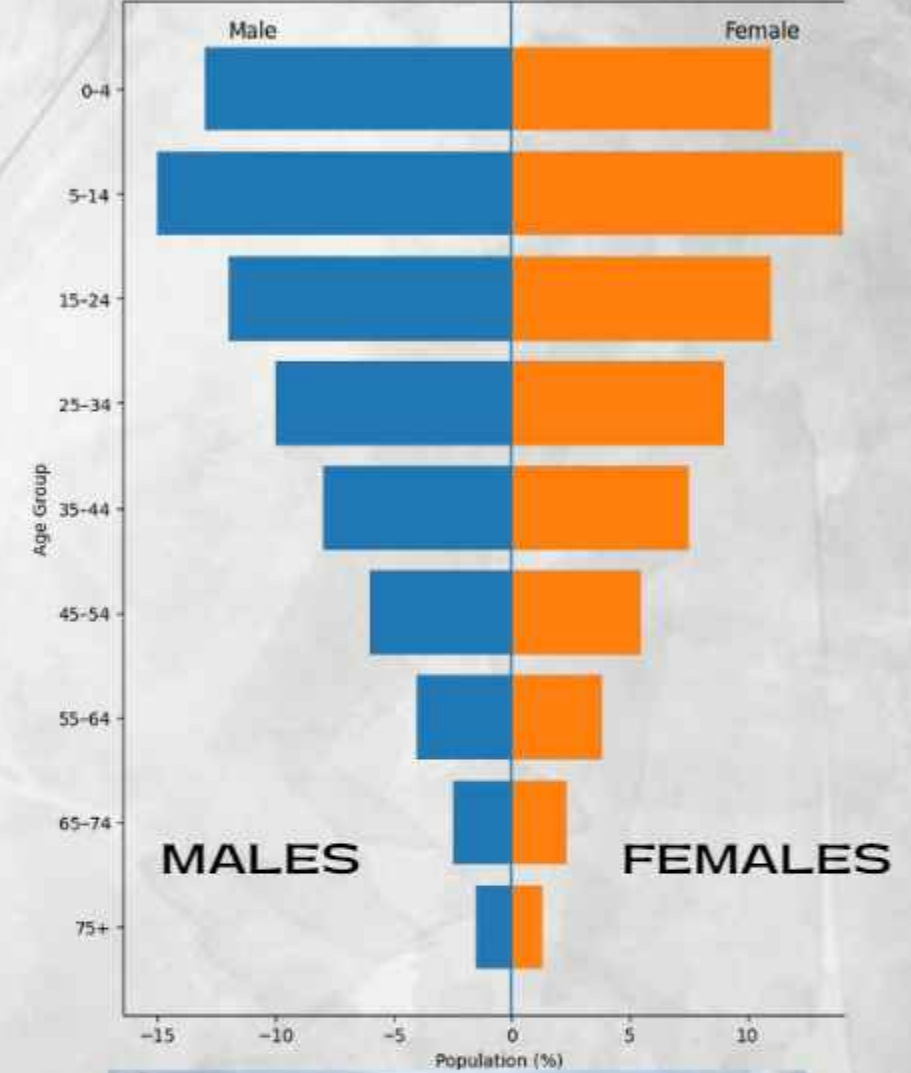
3. Other Religions

Very small numbers may follow Sikhism or other religions, as seen in many Haryana villages.

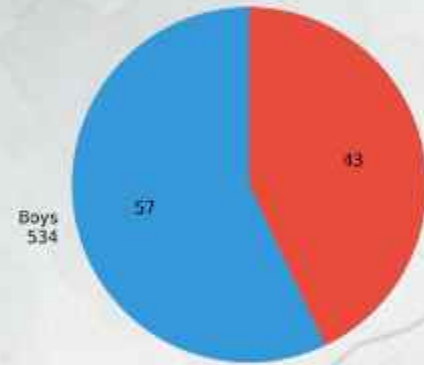
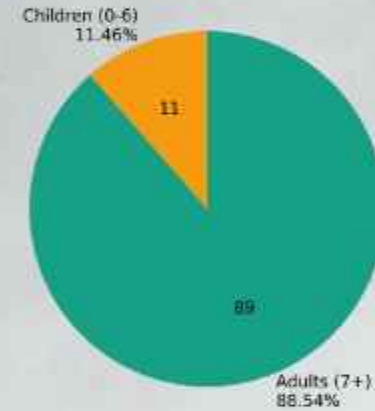
Population by Gender
Total: 8,170



Population Pyramid - Nahari Village



Age Distribution



KEY STATISTICS

Total Population: 8,170
Total Families: 1,572
Gender Distribution:
• Males: 4,439 (54.3%)
• Females: 3,731 (45.7%)
Sex Ratio: 841 ♀/1000 ♂
Child Sex Ratio: 750 ♀/1000 ♂
Literacy: 82.20%
• Male: 90.42%
• Female: 72.55%
Children (0-6): 936 (11.46%)
Location: Rai Block
District: Sonipat, Haryana
PIN: 131103

Jat (Major Community)

The dominant caste in the village. Mostly involved in agriculture and land ownership. Strong social and political influence.

Brahmin

Traditionally associated with religious and priestly work.

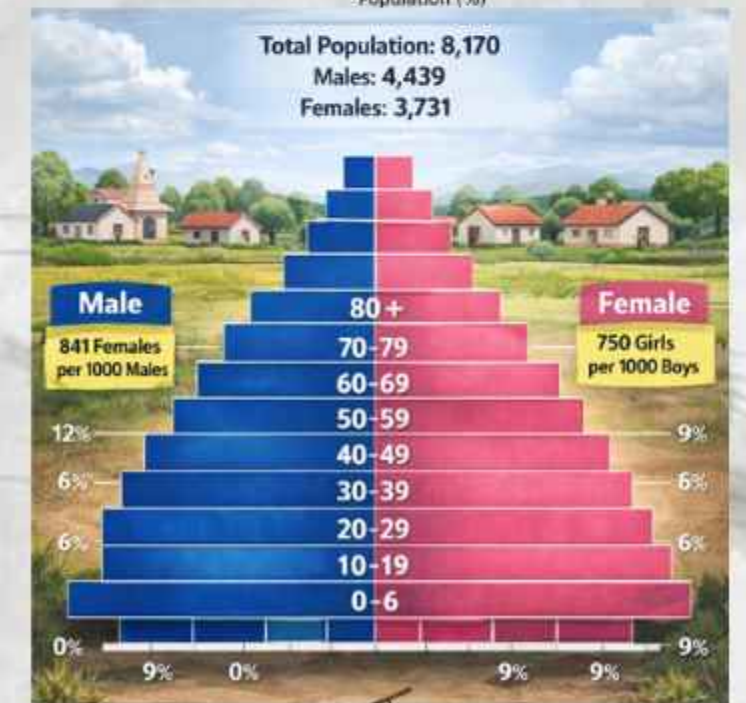
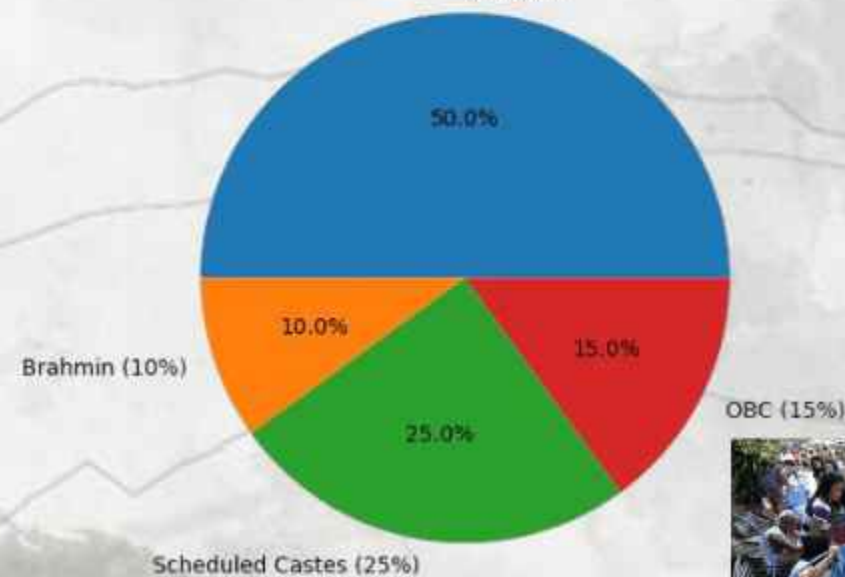
Scheduled Castes (SC Communities)

Include communities traditionally engaged in various service and labour occupations.

Other Backward Classes (OBC)

Such as Saini, Yadav, and artisan communities like Lohar (blacksmith), Kumhar (potter), etc

Approximate Caste Distribution of Nahri Village (Sonipat)





CULTURAL

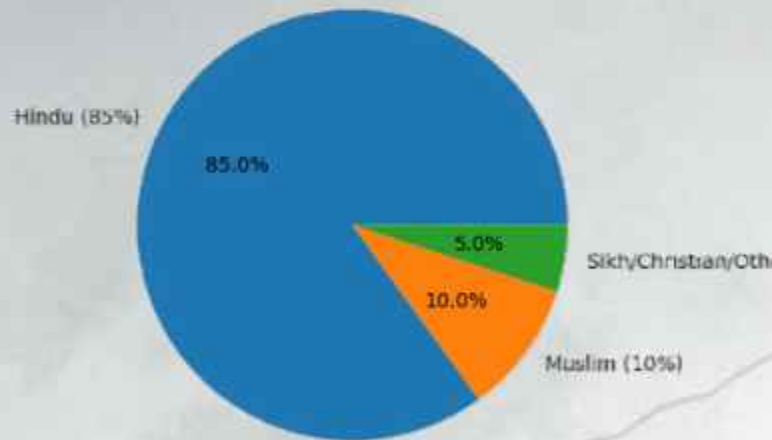
- Nahari is a traditional village in Sonipat district, Haryana.
- The culture reflects typical Haryanvi rural lifestyle, traditions, and agriculture-based living.

Occupation & Lifestyle

- Main occupation: Agriculture and dairy farming
- Crops: Wheat, rice, mustard



Estimated Festival Participation by Community
Nahari Village (Sonipat, Haryana)



Estimated Community Breakdown for Nahari Village

- Hindu majority (~85-90%) – including Jat, Brahmin, OBC, SC
- Muslim minority (~8-12%)
- Sikh / Christian / Others (small numbers ~1-3%)



Dress & Traditions

- Men: Kurta-pyjama, dhoti
- Women: Salwar suit, ghagra

Festival Celebration by communities

- HINDU COMMUNITY - 85-90%
- Celebrate Diwali, Holi, Teej, Navratri, Janmashtami, Makar Sankranti.
- MUSLIM COMMUNITY - 8-12%
- Celebrate Eid-ul-Fitr and Eid-ul-Adha.
- SIKH / CHRISTIAN / OTHERS - 1-3%
- Celebrate Gurburab, Christmas (in small numbers).

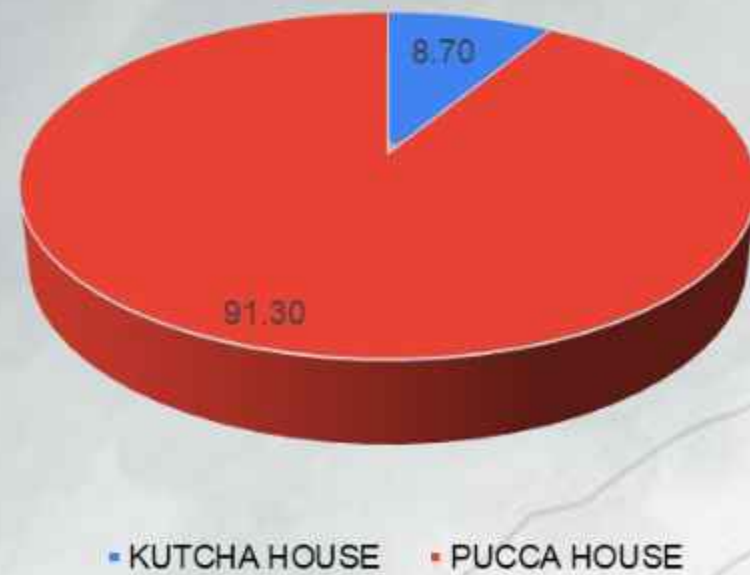
SURVEY FORM INFERENCE

OWNERSHIP STATUS OF HOUSE



This indicates predominant home ownership in the surveyed population.

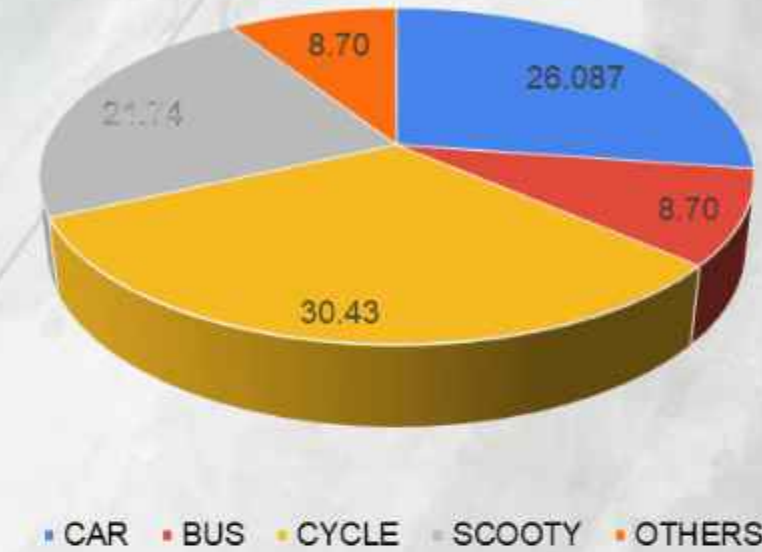
CONSTRUCTION MATERIAL OF HOUSE



The vast majority of houses are pucca, with only a very small proportion being kutcha.

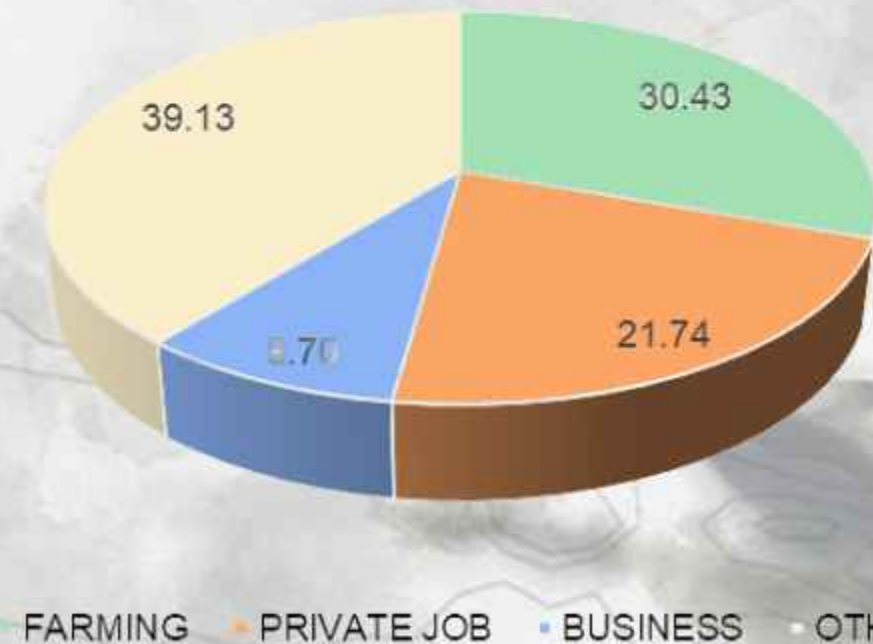


VEHICLES



Bikes are the most commonly owned vehicles, followed by cars and scooties.

OCCUPATION



The largest proportion of people work in other occupations, followed by farming and private jobs, with business being the least common occupation.

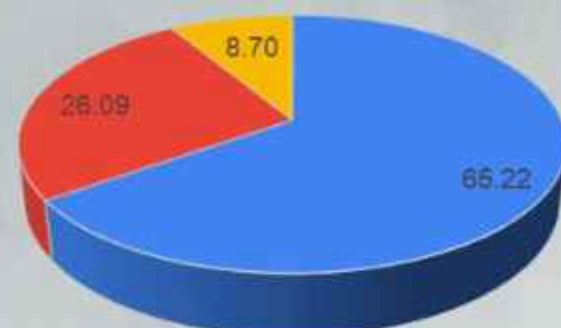
SURVEY RELATED TO FACILITIES

REQUIREMENT OF MEDICAL FACILITY IN A MONTH



10-15 times 2-4 times 5-10 times

DISTANCE OF HEALTH FACILITY FROM HOUSE



1-2 KM 2-5 KM 5-10 KM

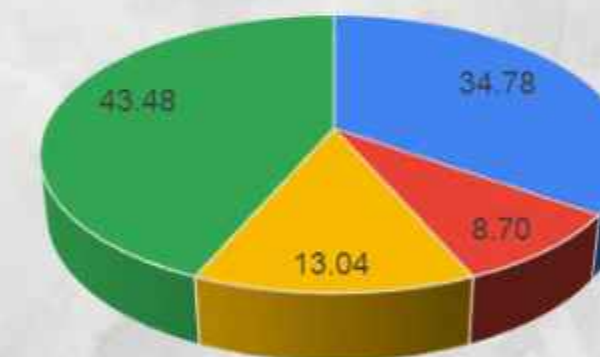
Medical demand in Nahari is consistent and recurring. A significant number of people require monthly healthcare. Though accessibility is moderate, a portion of population still travels long distances. This justifies properly located PHC near central junction with good road connectivity, emergency vehicle access and adequate waiting and treatment capacity.



According to the survey conducted in Nahari village, we spoke with the residents and found that there is a private clinic available, which provides basic medical facilities.

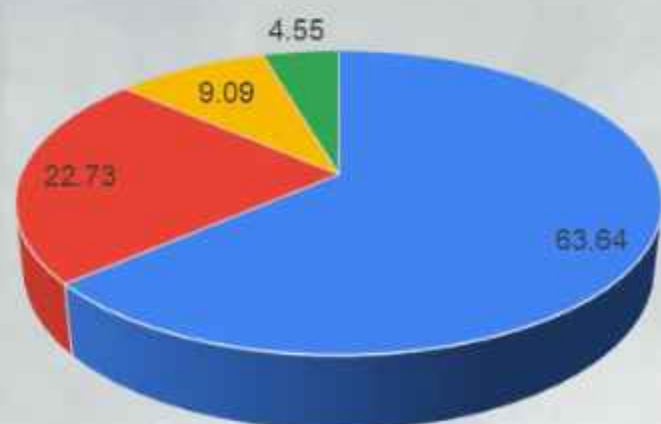
However, they mentioned that more facilities such as medicines and medical equipment should be added to improve healthcare services.

WATER FACILITY FULFILMENT

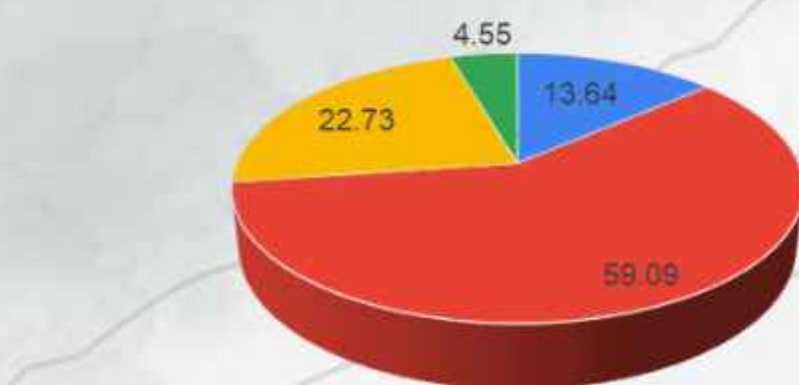


OTHERS FROM WELL FROM POND FROM SUBMERSIBLE

AVERAGE DURATION OF A POWER CUT NO. OF TIMES POWER CUTS OCCUR IN A WEEK



1-2 hour 3-5 hour 5-7 hour Never



15-20 times 2-4 times 5-10 times never

Nahari village faces frequent and moderate-duration power cuts, with electricity reliability is inconsistent.

Thus, for planning a PHC or public building:

- Generator backup is essential.
- Solar power integration is recommended.
- Critical areas (OT, lab, vaccine storage) need uninterrupted power supply (UPS).
- Emergency lighting must be installed.

Nahari village mainly depends on groundwater through submersible pumps, with minimal use of wells and ponds. Proper water management and sustainable supply systems are essential for future development and healthcare infrastructure.

CLIMATOLOGY

Seasonal Wind Patterns

Summer (Pre-Monsoon)

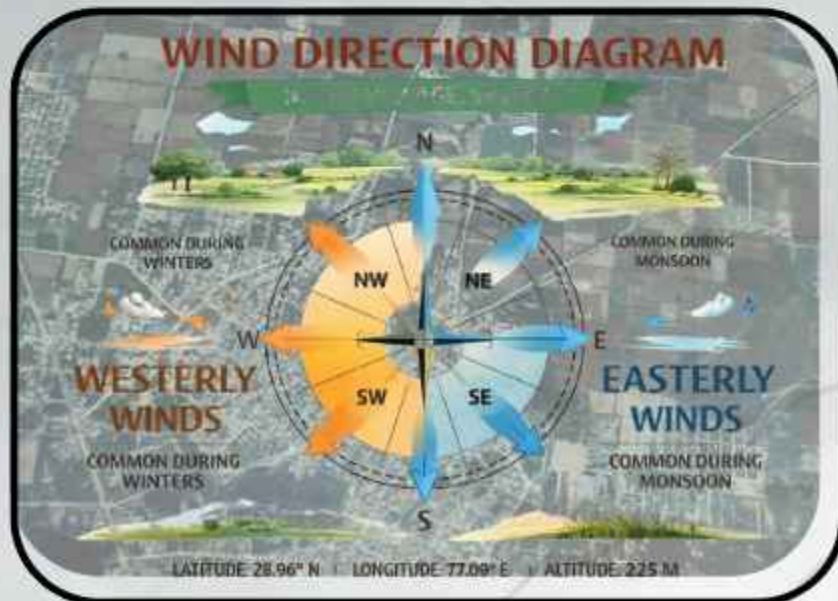
Predominant wind currents originate from the West/North-West. These are known locally as the "Loo" winds, which are typically hot and dusty.

Monsoon

During the rainy season, the prevailing wind direction shifts significantly, originating from the South-East.

Winter

Typically see a return to North-Westerly or Northerly flows as the monsoon recedes.



Solar Orientation & Fenestration

Strategy

Solar Path & Sunlight

- High sun angle in summer → strong heat gain.
- Low sun angle in winter → useful sunlight.

Solar Exposure:

- High insolation occurs from the Southern and Western quadrants.
- Building Alignment: Primary mass should follow an East-West longitudinal axis for passive thermal regulation.
- Southern Elevation: Use deep horizontal overhangs (Chajjas) to block high-angle summer sun.
- Western Facade: Implement vertical solar fins or brise-soleil to attenuate low-angle afternoon heat gain.
- **Landscape & Biophilic Integration**



Climate Variable	Details
Rainfall (Monsoon)	
Average Annual	450–650 mm
Rainy Season	July – September
Temperature	
Summer (April – June)	
Maximum Temperature	42–46°C
Minimum Temperature	28–32°C
Winter (December –	
Maximum Temperature	18–22°C
Minimum Temperature	4–7°C
Humidity	
Summer	Low humidity (20–
Monsoon	High humidity (60–

Landscape & Biophilic Integration

Indigenous Species Preservation: Mature *Azadirachta indica* (Neem) and *Ficus religiosa* (Peepal) specimens must be preserved.

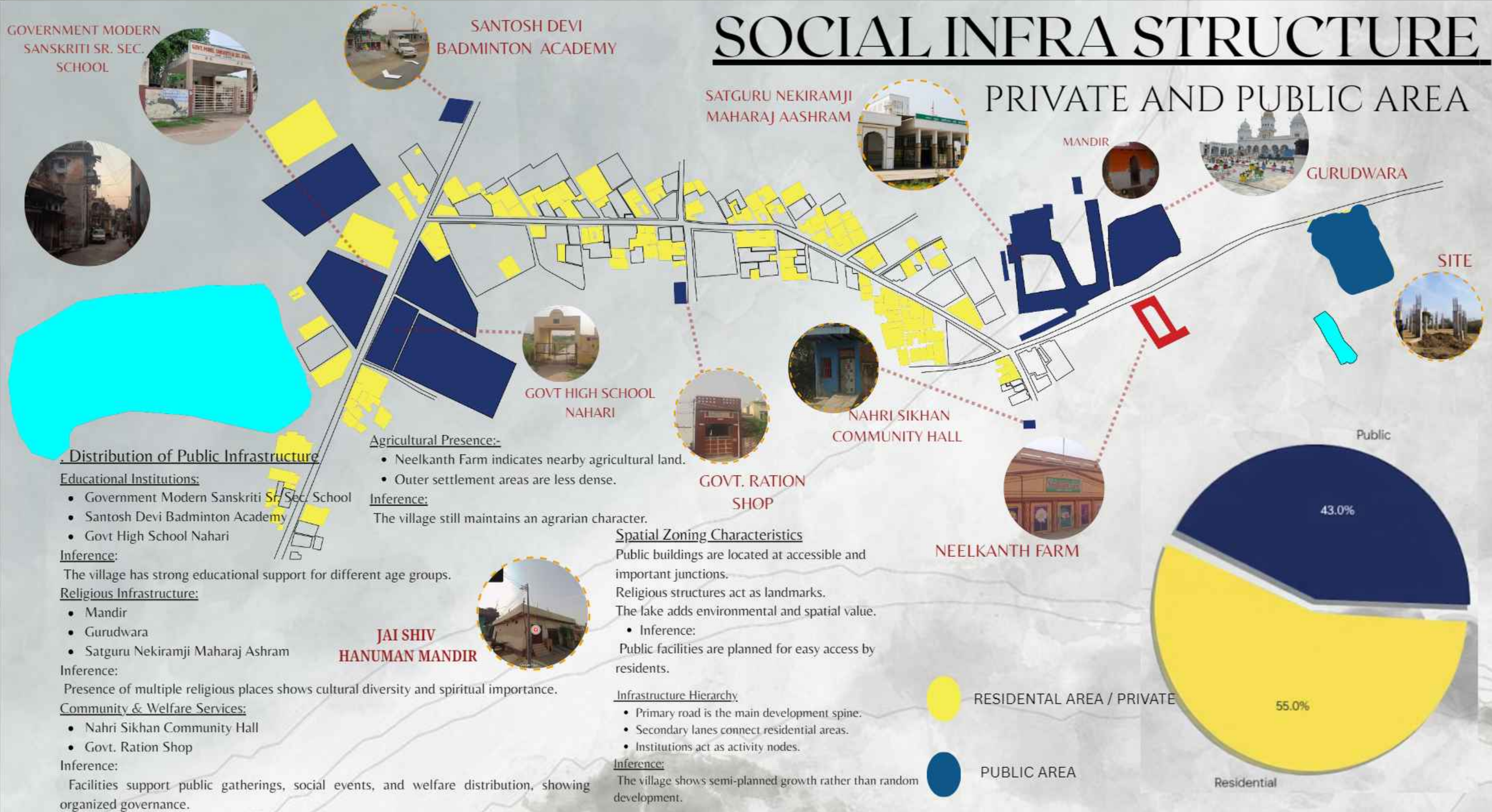
Environmental Benefits: These trees act as natural particulate filters and provide microclimatic cooling for the building envelope.

Design Concept: Implementation of a Biophilic "Healing Garden" to provide therapeutic visual relief.

Sustainability: Selection of xerophytic flora to minimize irrigation demands and ensure water efficiency.

SOCIAL INFRA STRUCTURE

PRIVATE AND PUBLIC AREA



Distribution of Public Infrastructure

Educational Institutions:

- Government Modern Sanskriti Sr/Sec. School
- Santosh Devi Badminton Academy
- Govt High School Nahari

Inference:

The village has strong educational support for different age groups.

Religious Infrastructure:

- Mandir
- Gurudwara
- Satguru Nekiramji Maharaj Ashram

Inference:

Presence of multiple religious places shows cultural diversity and spiritual importance.

Community & Welfare Services:

- Nahri Sikhan Community Hall
- Govt. Ration Shop

Inference:

Facilities support public gatherings, social events, and welfare distribution, showing organized governance.

Agricultural Presence:-

- Neelkanth Farm indicates nearby agricultural land.
- Outer settlement areas are less dense.

Inference:

The village still maintains an agrarian character.

Spatial Zoning Characteristics

Public buildings are located at accessible and important junctions.

Religious structures act as landmarks.

The lake adds environmental and spatial value.

Inference:

Public facilities are planned for easy access by residents.

Infrastructure Hierarchy:

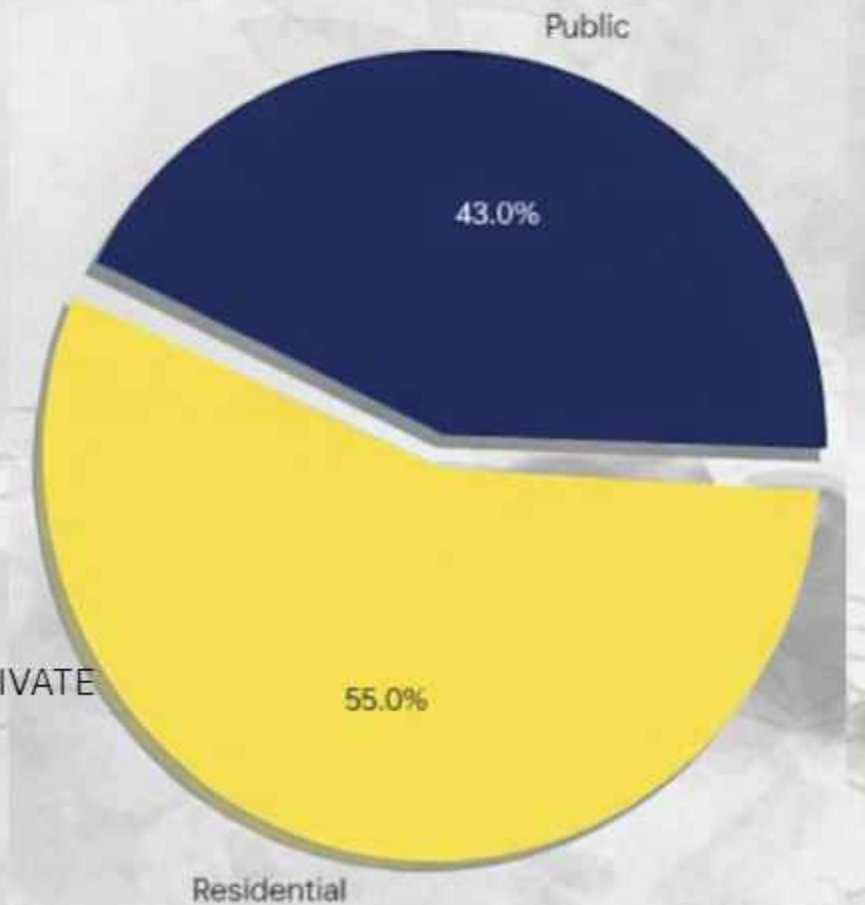
- Primary road is the main development spine.
- Secondary lanes connect residential areas.
- Institutions act as activity nodes.

Inference:

The village shows semi-planned growth rather than random development.

RESIDENTIAL AREA / PRIVATE

PUBLIC AREA



LAND USE

- VILLAGE: NAHARI
- SONIPAT (131001)
- HARYANA, INDIA

Building Typology

From the illustrations shown:

- G+1 and G+2 residential structures dominate.
- Mixed-use buildings (commercial at ground floor, residential above) exist along the main road.
- Public buildings are larger in footprint and more centrally positioned.

Add this heading:

- Built Form Characteristics
- Low-rise development
- Mixed-use along main road
- Institutional blocks with larger plots



G+2ND FLOOR WITH
GROUND FLOOR (RED) COMMERCIAL
1ST AND 2ND FLOOR WITH (YELLOW) RESIDENTIAL



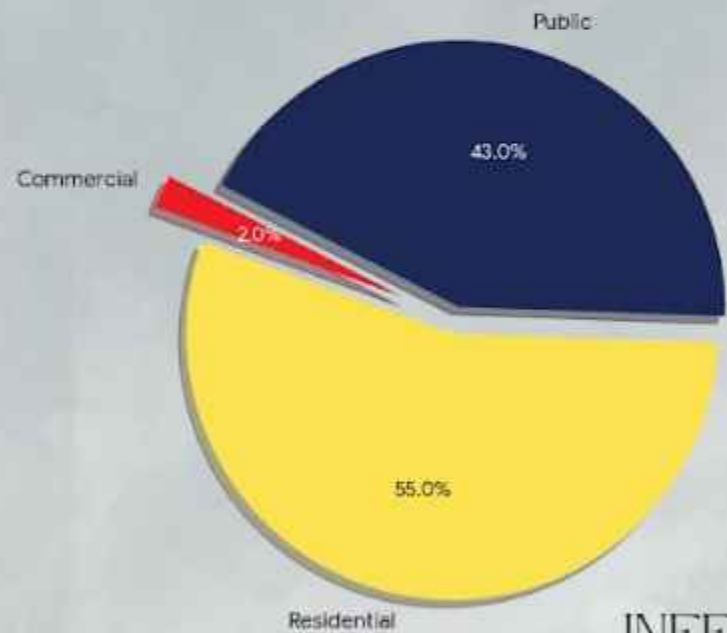
G+1 FLOOR WITH GROUND FLOOR
1ST FLOOR WITH (YELLOW) RESIDENTIAL



G+1 FLOOR WITH GROUND FLOOR
1ST FLOOR WITH (BLUE) PUBLIC BUILDING

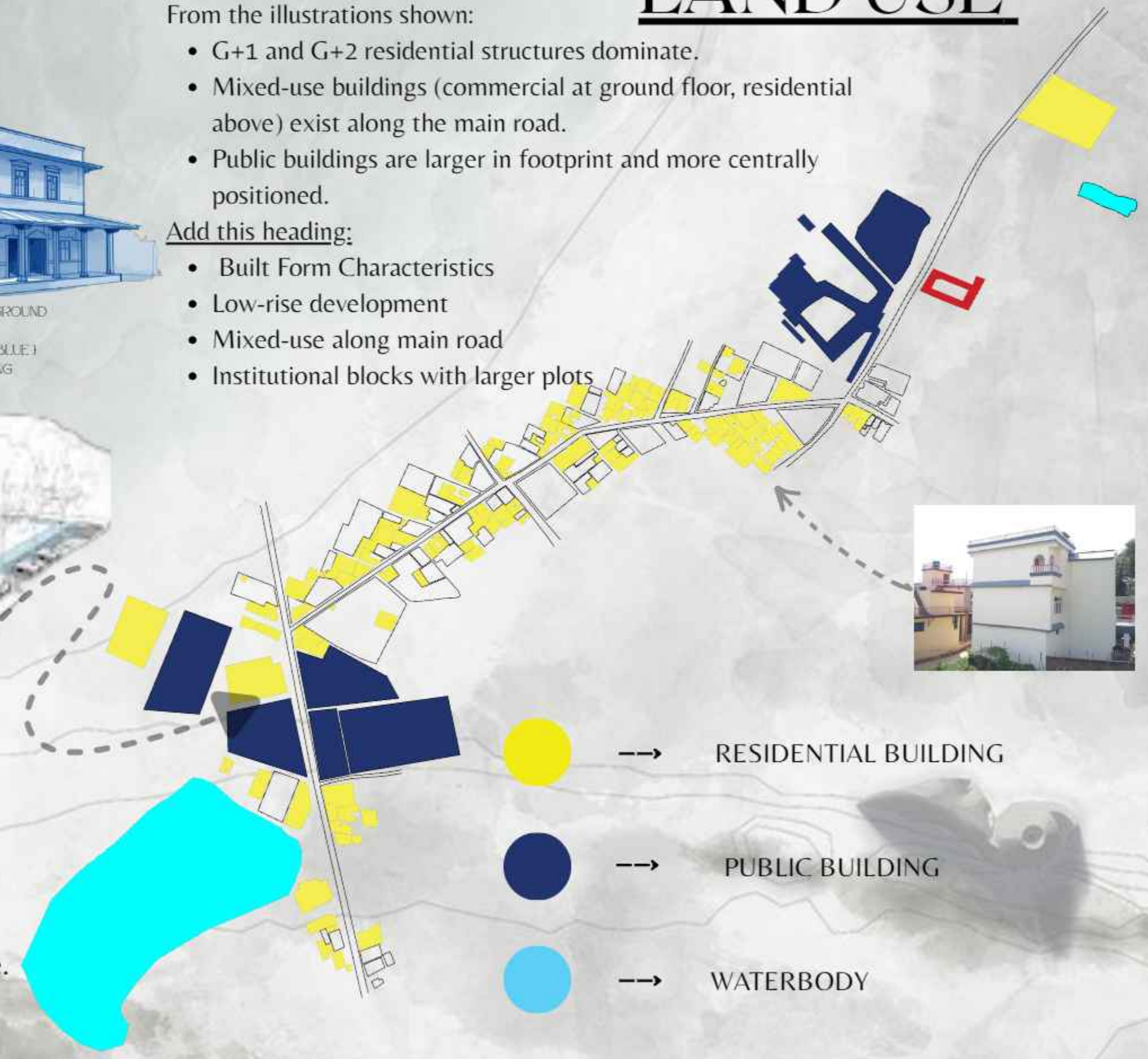


Nahri Village Land Use Distribution



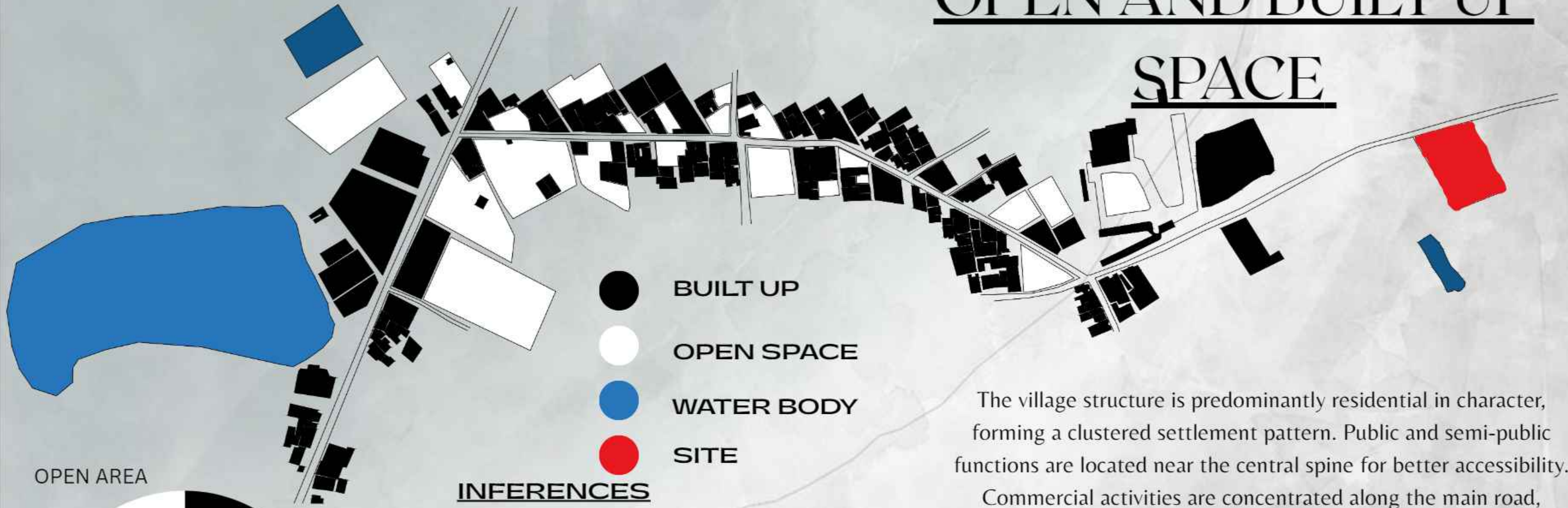
INFERENCES

The land use plan of Nahri Village shows three zones — residential (yellow), public (blue), and commercial (red). Residential area is the largest, showing it is mainly a settlement-based village. Public areas are centrally located for easy access. Commercial areas are along main road

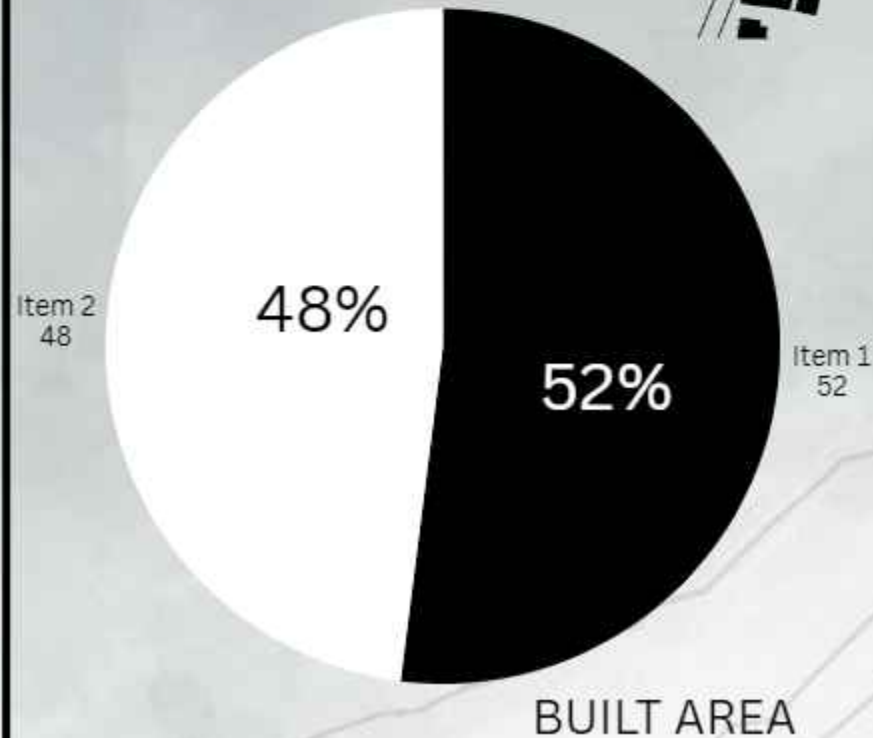


OPEN AND BUILT UP

SPACE



OPEN AREA



BUILT AREA

INFERENCES

The settlement pattern of Nahari Village reflects a linear rural morphology, primarily developed along the main connecting road. The built-up area constitutes approximately 50–52% of the total land parcel, indicating a moderately dense village core.

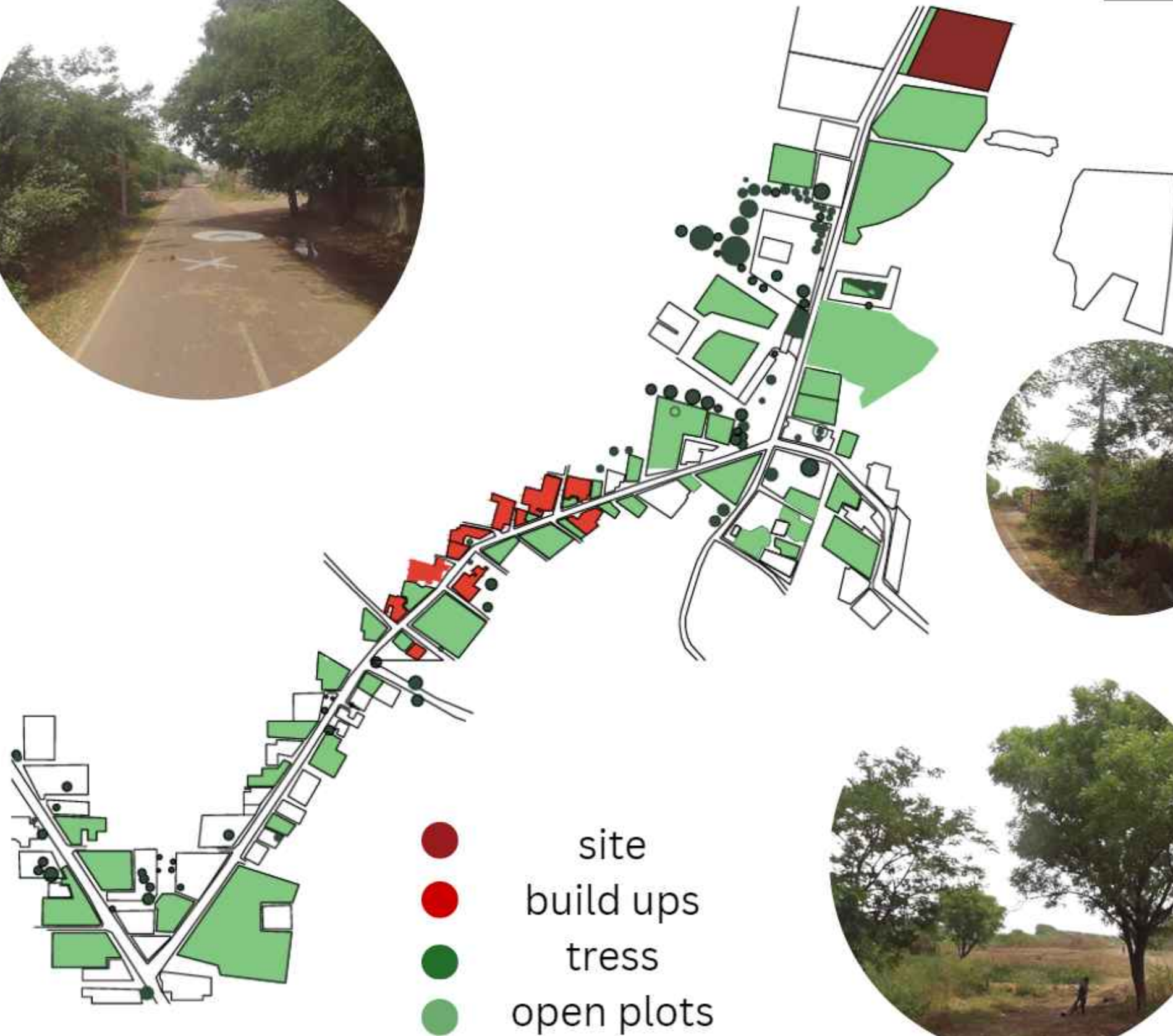
Open spaces, including internal roads, vacant plots, agricultural edges, and community spaces, account for nearly 45–48% of the total area. The road network plays a crucial role in defining the spatial organization of the settlement and is considered part of the open area.

The village structure is predominantly residential in character, forming a clustered settlement pattern. Public and semi-public functions are located near the central spine for better accessibility. Commercial activities are concentrated along the main road, supporting local movement and interaction.

The presence of a water body enhances environmental quality and supports rural livelihood activities.

Overall, Nahari Village demonstrates a road-oriented rural settlement structure with balanced built and open spaces, characteristic of traditional village planning.

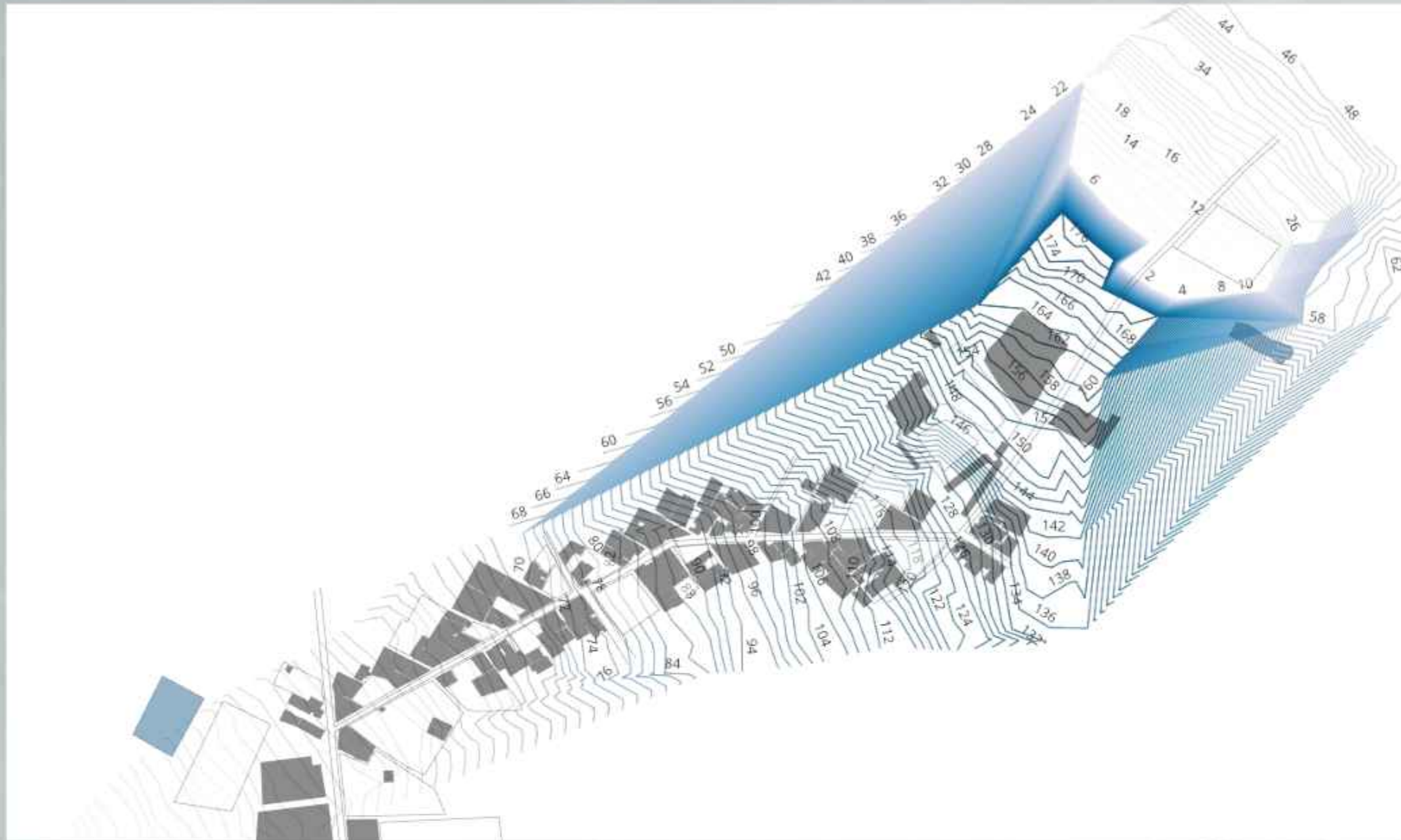
VEGETATION MAPPING



Vegetation of Nahri Village

- Agricultural crops like wheat, rice, and mustard are the main vegetation due to fertile land.
- Common trees such as neem, peepal, banyan, and eucalyptus grow along roads and fields.
- Natural vegetation includes grasses and plants, such as sarkanda.

CONTOUR



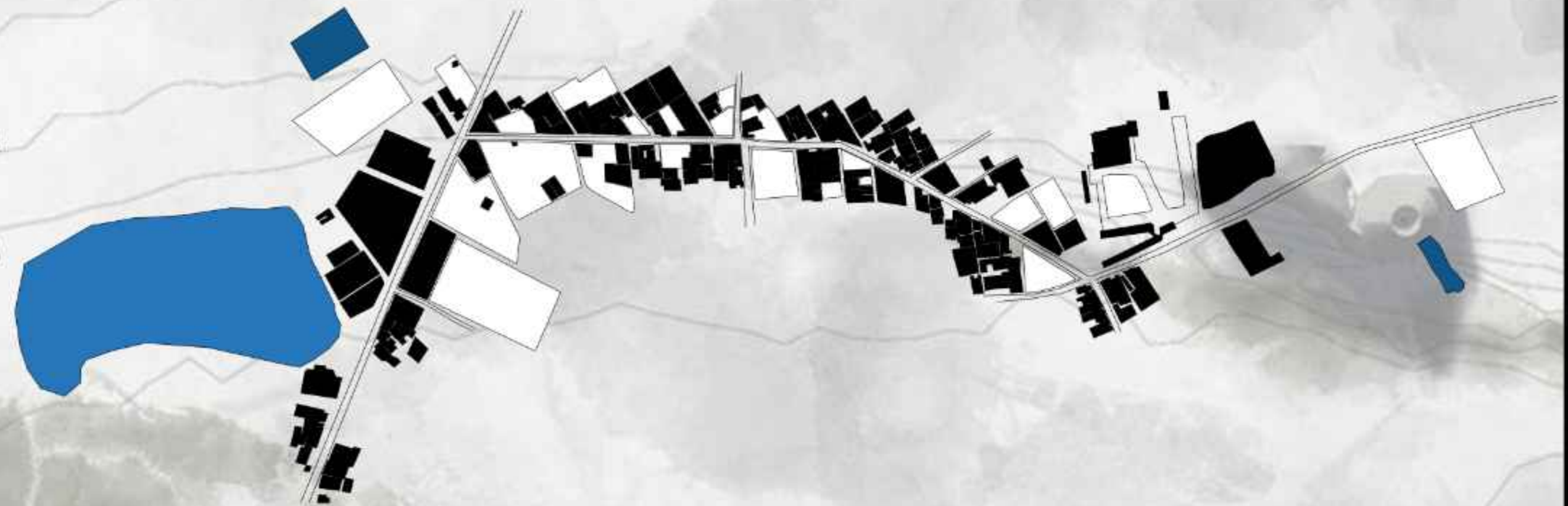
INFERENCES

Shows slope variation from low to high levels.

Water flows from higher to lower contours (natural drainage).

Higher areas suitable for settlement.

Gentle slopes suitable for agriculture.



PHYSICAL INFRASTRUCTURE

DRAINAGE



INFERENCES

Nahri has an open drainage system along the streets.

Wastewater flows through side drains to a main outlet.

It works on natural slope and gravity flow.

It faces issues like clogging and overflow in rains.



BLUE COLOUR SHOWS DRAINAGE SYSTEM

ELECTRIC POLES



**RED COLOUR DOTE SHOWS
POLES AND RED COLOUR
LINES SHOWS WIRING**

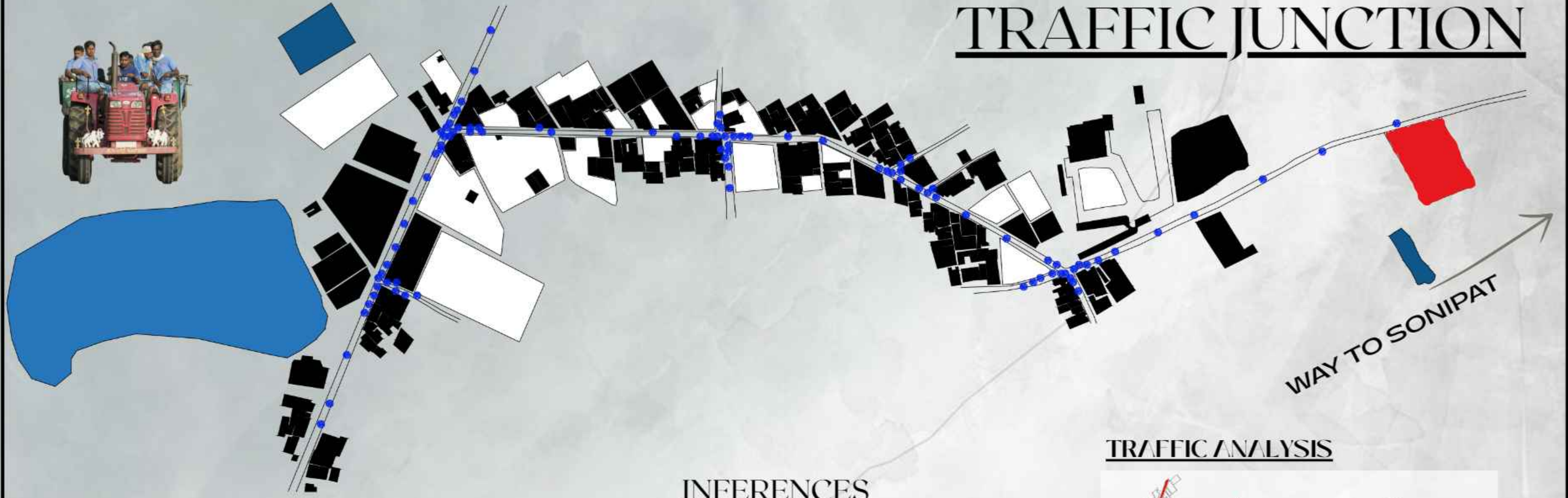
INFERENCES

Poles are placed along the main village road, showing a linear settlement pattern.

Closer spacing in central area indicates dense residential zone. Network extends to village edges, showing infrastructure growth.

Continuous alignment ensures efficient electricity supply to houses.

TRAFFIC JUNCTION



Since Nahari is a village settlement:
Typical Rural Traffic (Peak Hour Estimate)

- Low activity area → 40-80 cars/hour
- Near market/school/tea point → 100-180 cars/hour
- Near highway connection → 150-250 cars/hour

Location	Estimated Cars per Hour
Lake side junction	50-70
Central village junction	120-150
Market tea point	150-200
Highway side junction	180-220

INFERENCES

The central and market T-junctions show the highest vehicular concentration due to commercial and social activities (tea points, shops, gathering spaces).

Traffic reduces towards the peripheral lake and agricultural edges.

This helps in:

- Deciding PHC access point
- Planning parking
- Emergency vehicle movement
- Pedestrian safety

TRAFFIC ANALYSIS



TRAFFIC MOVES:
 BLUE MAIN ROAD → RED MAIN SPINE → VILLAGE CORE → SITE APPROACH

- COMPARED TO THE SECOND PLOT, THE FIRST PLOT IS DIRECTLY CONNECTED TO THE MAIN ROAD/HIGHWAY, WHICH RESULTS IN SIGNIFICANTLY HIGHER TRAFFIC VOLUME AND GREATER VEHICULAR MOVEMENT, MAKING IT A MORE ACCESSIBLE AND VISIBLE LOCATION.

DEMERITS OF SITE

POOR ACCESSIBILITY: Limited public transport and distance from major roads make patient and emergency access difficult.

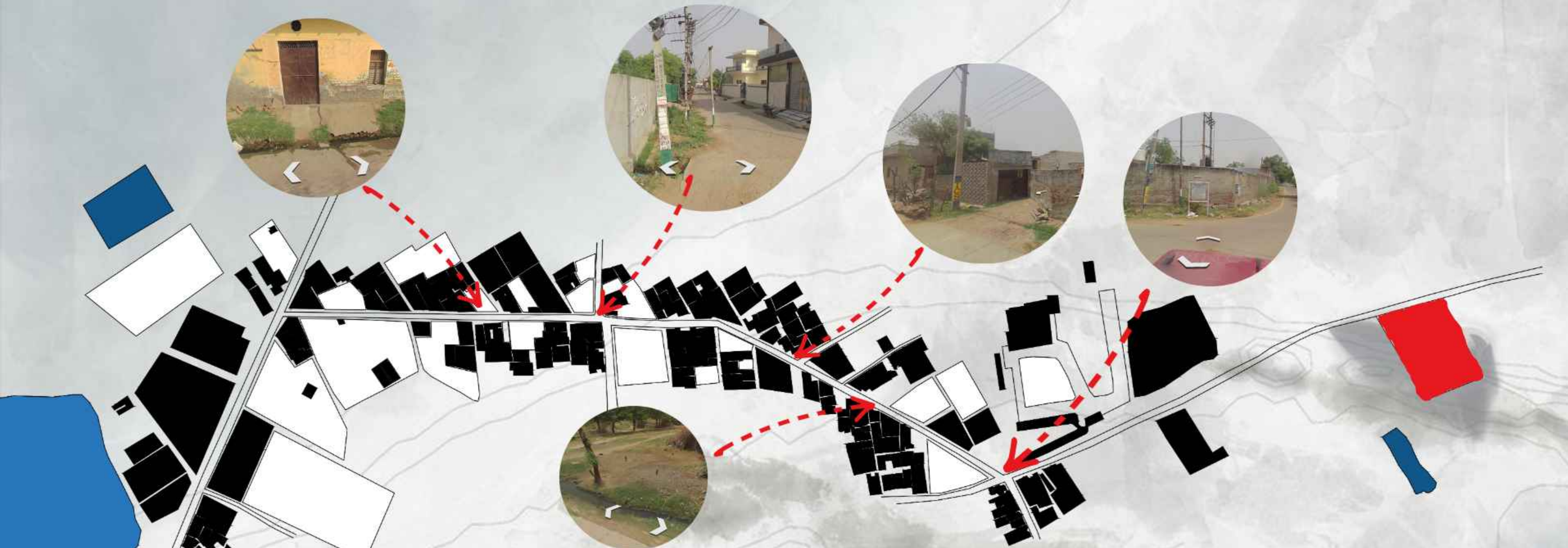
WEAK INFRASTRUCTURE: Few nearby facilities (pharmacies, labs, housing) reduce efficiency and staff retention.

DRAINAGE AND TERRAIN ISSUES: Flat land prone to waterlogging during monsoon, increasing construction and maintenance challenges.

ENVIRONMENTAL DRAWBACKS: Dust, crop-burning smoke, and lack of tree cover affect comfort and sustainability.

UTILITY LIMITATIONS: Inconsistent electricity, water, and sanitation services require extra investment.

SOCIO CULTURAL CONSTRAINTS Remote setting may discourage skilled staff and limit patient inflow compared to urban hospitals



MERITS OF SITE

LOW LAND COST & AVAILABILITY

Being a rural setting, land acquisition is easier and more affordable compared to urban areas. Ample open space allows for flexible planning, expansion, and integration of community facilities.

QUIET & HEALTHY ENVIRONMENT

Away from urban congestion, the site offers a peaceful atmosphere conducive to healing. Reduced noise pollution supports patient recovery and staff well-being.

COMMUNITY-CENTERED LOCATION

Directly serves the local rural population who otherwise travel long distances for healthcare. Strengthens trust and accessibility by placing healthcare within the village itself.

CLIMATE-RESPONSIVE POTENTIAL

Open land allows for landscaping, shading, and sustainable interventions (rainwater harvesting, solar lighting).

Natural ventilation and passive cooling strategies can be easily integrated.

CULTURAL & SOCIAL INTEGRATION

Scope to design spaces like shaded pavilions, chopals, and resting areas that align with local traditions.

Encourages community participation and ownership of the PHC.

FUTURE DEVELOPMENT OPPORTUNITIES

The site can act as a nucleus for further rural development – schools, sanitation facilities, and green zones.

Potential to become a model for sustainable village redevelopment.



NAHARI VILLAGE (STRETCH)

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- BUILT UP
- OPEN SPACE
- WATER BODY
- SITE





STRENGTHS (Why this stretch supports a PHC)

Direct Road Connectivity

- The stretch connects internal village fabric to the main approach road.
 - Easy access for:
 - Ambulances
 - Two-wheelers
 - Pedestrian villagers
- Important for emergency access.

Linear Village Spine

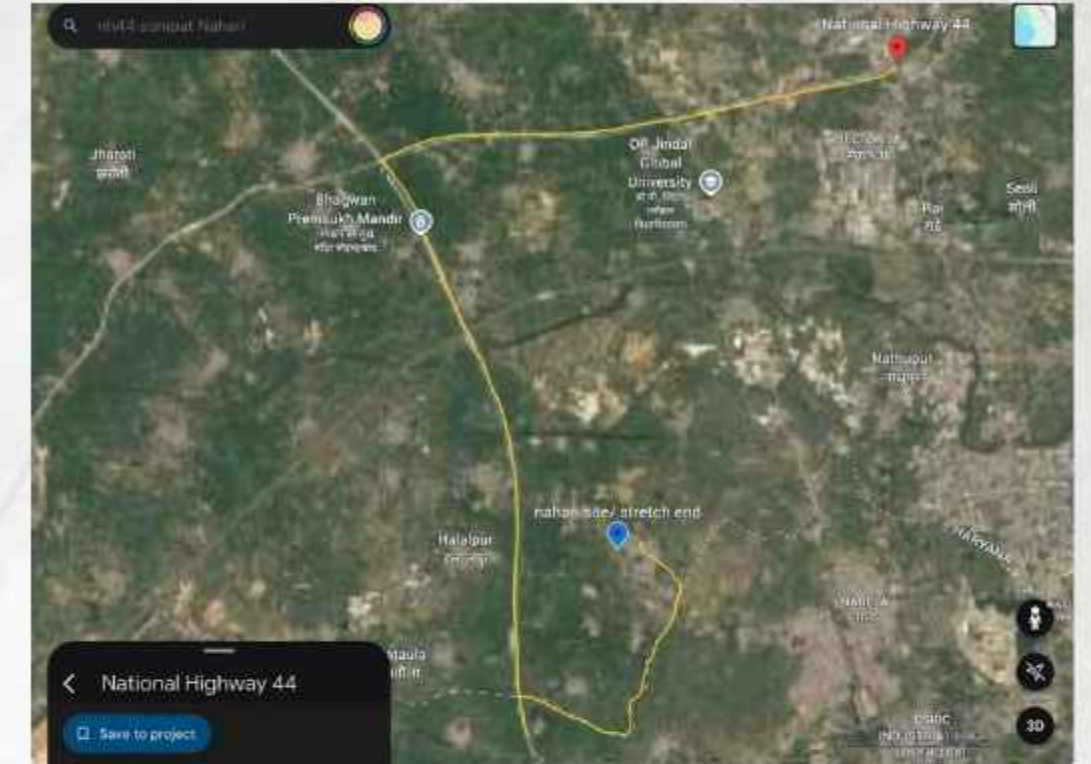
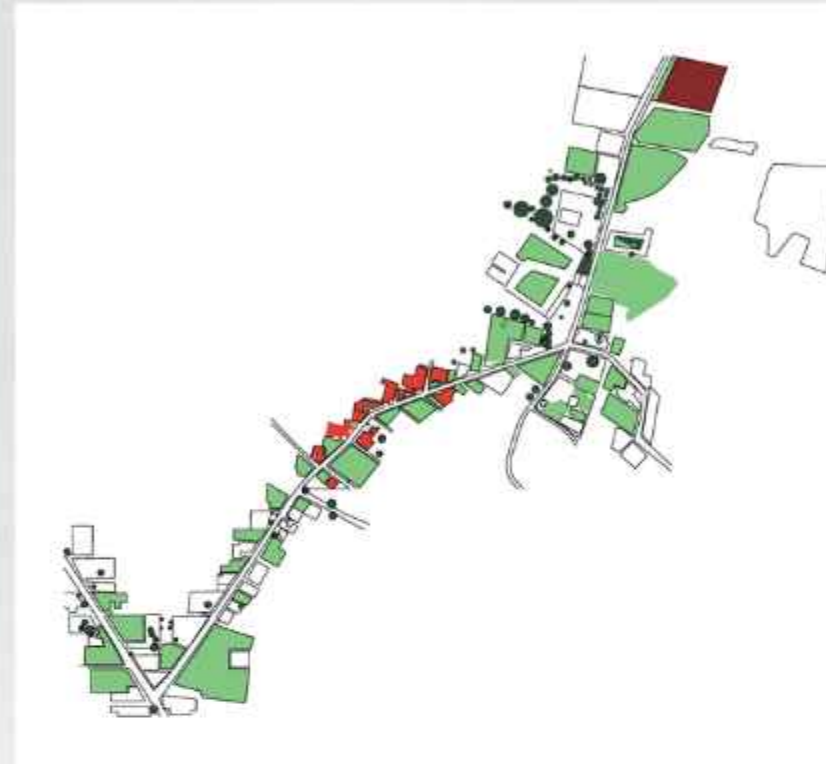
- Settlement growth along road edge.
 - Houses directly open onto the stretch.
- Ensures high visibility for PHC → easy wayfinding.

Open Agricultural Edges

- Low built density around parts of the stretch.
- Good scope for:
 - Natural ventilation
 - Daylight
 - Future expansion of PHC

Community-Centric Location

- Central to daily movement routes.
- Suitable for preventive healthcare awareness activities.



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WEAKNESSES (Existing Problems on Stretch)

Incomplete Drainage

- Waterlogging during monsoon.
 - Mosquito breeding risk.
 - Poor hygiene conditions.
- Directly affects healthcare environment.

Irregular Street Width

- Some segments narrow.
- Ambulance turning radius questionable.
- Encroachment by parked vehicles.

Poor Lighting at Night

- Safety concern, especially for women and elderly patients.

No Pedestrian Segregation

Shared movement of:

- Cattle
- Motorbikes
- Children
- Unsafe for patients.



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OPPORTUNITIES (Design Potential)

Scope for Road Improvement

- Proper drainage channels
- Tree-lined shaded walkway

Health Awareness Spine

Stretch can become:

- Vaccination awareness corridor
- Community health outreach zone
- Wall murals promoting sanitation

Climate-Responsive Design

- Open edges allow:
- Courtyard planning
- Cross ventilation
- Heat reduction strategies

Buffer Creation

Opportunity to:

- Create setback
- Add landscape buffer from road dust
- Design shaded waiting spill-out areas

1 Scope for Road Improvement



2 Health Awareness Spine



3 Climate-Responsive Design



4 Buffer Creation



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THREATS (Risks)

Seasonal Waterlogging

- Can block emergency access.
- Can damage foundation.

Future Unplanned Construction

- Encroachments may reduce road width.
- Visual blockage of PHC entry.

Noise & Dust from Road

- Affects patient comfort.
- Impacts recovery spaces.

Lack of Waste Management

- Open dumping nearby may affect hygiene standards.

1 Seasonal Waterlogging



2 Future Unplanned Construction



3 Noise & Dust from Road



4 Lack of Waste Management



CONCLUSION OF THE STRETCH

Road Widening Problems

- * Encroachment on pedestrian space and green edges
- * Demolition of existing structures affecting urban fabric
- * Loss of trees and natural drainage channels
- * Induced traffic demand (more width → more vehicles)

Vehicular Movement & Junction Congestion

- * Poorly designed intersections causing bottlenecks
- * Mixed traffic (cars, bikes, cycles, pedestrians) without segregation
- * Lack of turning radii planning → conflict points increase
- * No traffic calming measures

Water Logging Issues

- * Road level raised without upgrading drainage
- * Absence of proper storm water slope
- * Blocked/open drains leading to overflow
- * Impervious surfaces increasing surface runoff

Variations in Pole Distance

- * Irregular spacing of electric/utility poles
- * Obstruction to carriageway and footpath
- * Safety hazard during night driving
- * Poor visual order in streetscape

Lack of Segregation

- * No separate lanes for pedestrians and cyclists
- * Informal parking on road edges
- * Street vendors reducing effective road width

Open Drainage & Absence of Lighting

- * Open drains pose health and safety risks
- * Odour and mosquito breeding
- * No street lighting → increased accident risk
- * Poor visibility at junctions and narrow stretches



STRETCH 1



PROPOSAL

STRETCH 1

PUBLIC TOILETS

- Location: Every 10–15 km along major rural roads.
- Design: Gender-segregated, accessible for differently abled persons.
- Features:
 - Solar-powered lighting and ventilation.
 - Water-efficient fixtures.
 - Bio-digester or septic tank systems for waste management.
 - Rainwater harvesting for flushing and cleaning.



LANDSCAPING

- Green Zones: Native trees and shrubs planted around facilities.
- Shade & Rest Areas: Benches under shaded structures for travelers.
- Low-Maintenance Plants: Drought-resistant species to reduce upkeep.
- Beautification: Murals or local art to reflect cultural identity.



SYSTEMATIC LANDSCAPING

- To enhance rural road aesthetics and safety through systematic landscaping.
- To provide shade, reduce dust, and improve environmental quality.
- To ensure safe mobility at night with adequate lighting.



- Provide comfortable, shaded resting spaces for villagers, travelers, and community gatherings.
- Reduce heat stress and improve usability of public spaces during summer months.
- Enhance aesthetics and environmental sustainability through green cover and eco-friendly structures.

STRUCTURAL SHADING

- Pavilions & Pergolas: Simple bamboo/wooden structures with creepers (Bougainvillea, Ivy) for natural shade.
- Canopies: Metal or tensile fabric canopies near public toilets, bus stops, and chopals.
- Benches & Platforms: Seating under shaded roofs for rest and social interaction.



SUSTAINABILITY MEASURES

- Rainwater harvesting for irrigation.
- Use of recycled materials (wood, bamboo, stone) for structures.
- Community participation for upkeep and monitoring.



STREET LIGHTING

- Solar-Powered Lights: Energy-efficient LED lamps powered by solar panels.
- Placement:
 - At 30–40 m intervals along roads.
 - Near intersections, bus stops, and chopals for safety.



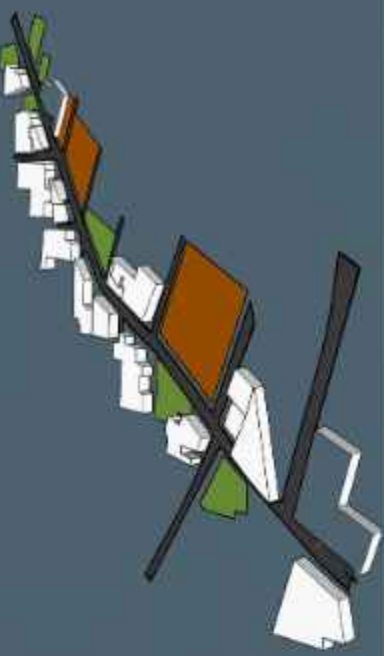
SANITATION AND HYGIENE

- Waste Management: Segregated bins, composting, and awareness campaigns.
- Drainage Systems: Proper stormwater management to prevent waterlogging.



STRETCH 2





The road revival proposes a 10.5m wide street with wide footpaths, wooden benches, green planting buffers, flush manhole covers, and solar-powered street lights — creating a safe, green, and dignified street for Nihari Village.



Bench Placement

- Benches must be placed within the green buffer strip or just behind the footpath edge — never blocking walking path
- Maintain minimum 1.2 m clear footpath width even after placing bench
- Face benches towards the road or green strip, not towards walls
- Recommended bench spacing: every 80 metres on a village road
- Each bench should have a litter bin within 5 metres of it



Footpath Width & Standards

- Minimum footpath width (village road) : 1.5 metres
- Comfortable footpath width (recommended) : 2.0 metres
- Footpath near public spaces : 2.5 to 3.0 metres
- Green/planting buffer strip (between road and footpath) : 1.0 metre



ELEVATION AT A

Manhole / Drainage Cover Information

- Manhole cover must be flush with the road/footpath surface — not raised or sunken
- Never place a manhole in the centre of the carriageway — always on the edge or footpath side
- Maintain minimum 0.5 m distance from the kerb edge
- Each manhole must have a locking cover to prevent accidental opening
- Paint or mark manholes with yellow reflective strips for night visibility and safety
- In the footpath zone, manhole covers should be slip-resistant textured surface



The road section reveals a fully integrated underground utility corridor with separate pipes for stormwater drainage, sewage, drinking water supply, and electrical conduits — ensuring a clean, safe, and future-ready infrastructure beneath the revived village street.

Dustbin Placement & Distance

- Ideally at road junctions, corners, and near entry points of public spaces
- Should be 0.3 m away from the wall or boundary so they don't block pedestrian movement
- Use dual dustbins — one for dry waste, one for wet waste (Swachh Bharat norm)
- Height of dustbin: 80 to 90 cm for comfortable use by adults
- Near market / entry point (Plot 1) :- every 50 metre
- Along the main spine road :- every 100 metres
- Near residential clusters :- every 75 metres

Solar Street Lighting Installation

To improve safety and usability of the connecting road, solar-powered street lights are proposed at regular intervals. These lights will ensure proper visibility during night hours, reduce dependence on grid electricity, and provide a sustainable and low-maintenance lighting solution for the village. Well-lit streets will encourage safe pedestrian movement and improve the overall sense of security.

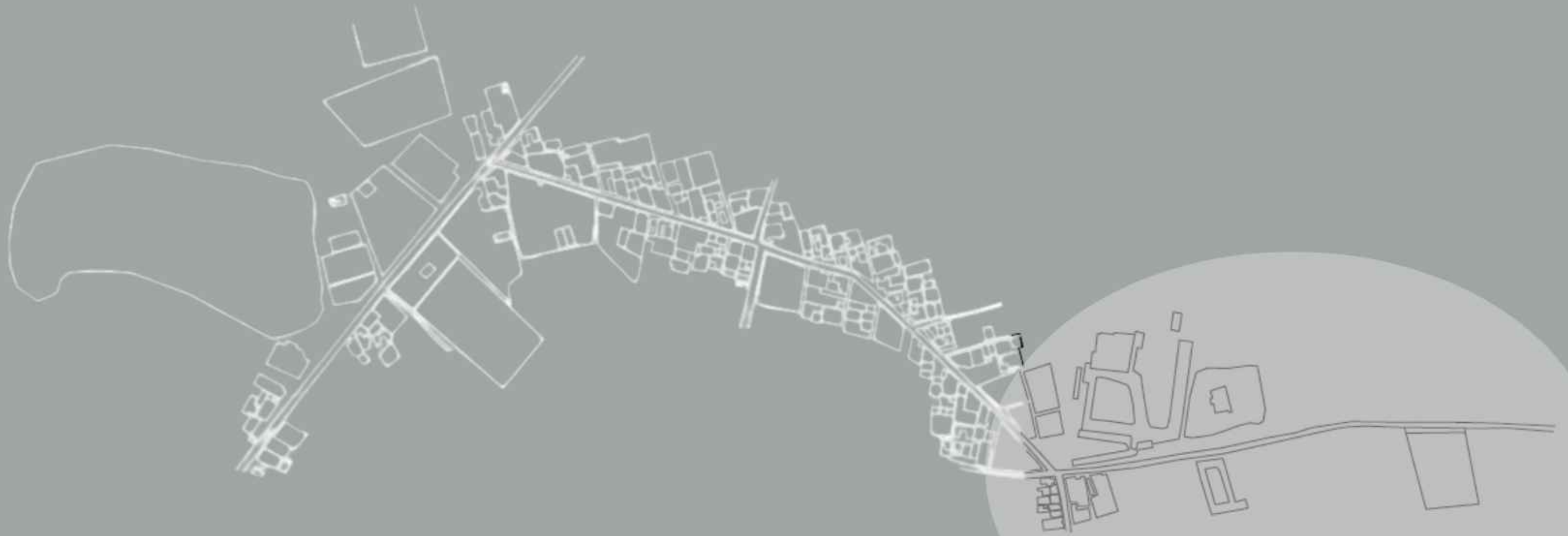


Village Wall Art and Identity Elements

Blank compound walls along the connecting road can be used for murals and awareness paintings created by local residents and students. These artworks can reflect village culture, agricultural life, and health awareness themes.



STRETCH 3

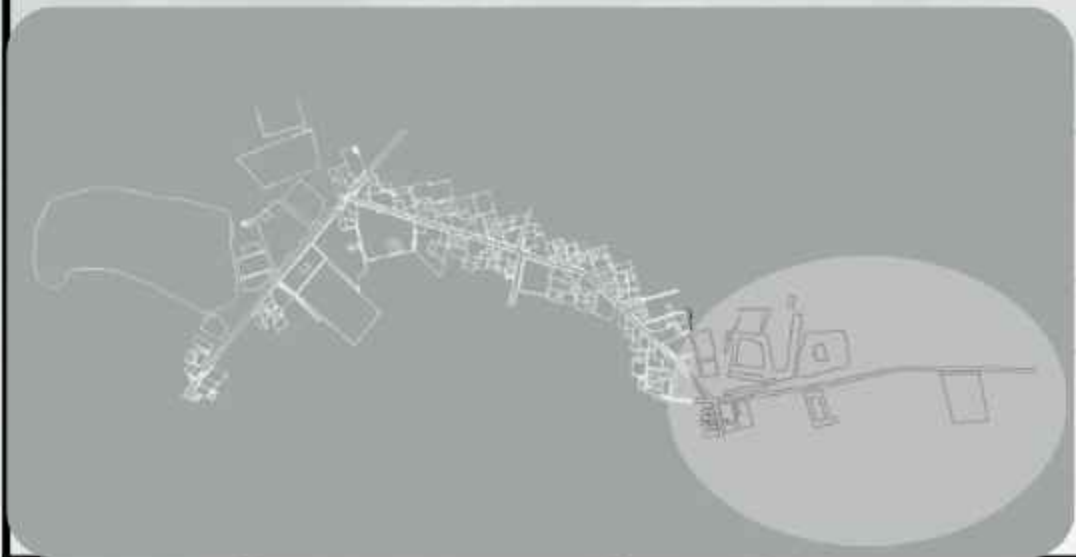


EXISTING FEATURES

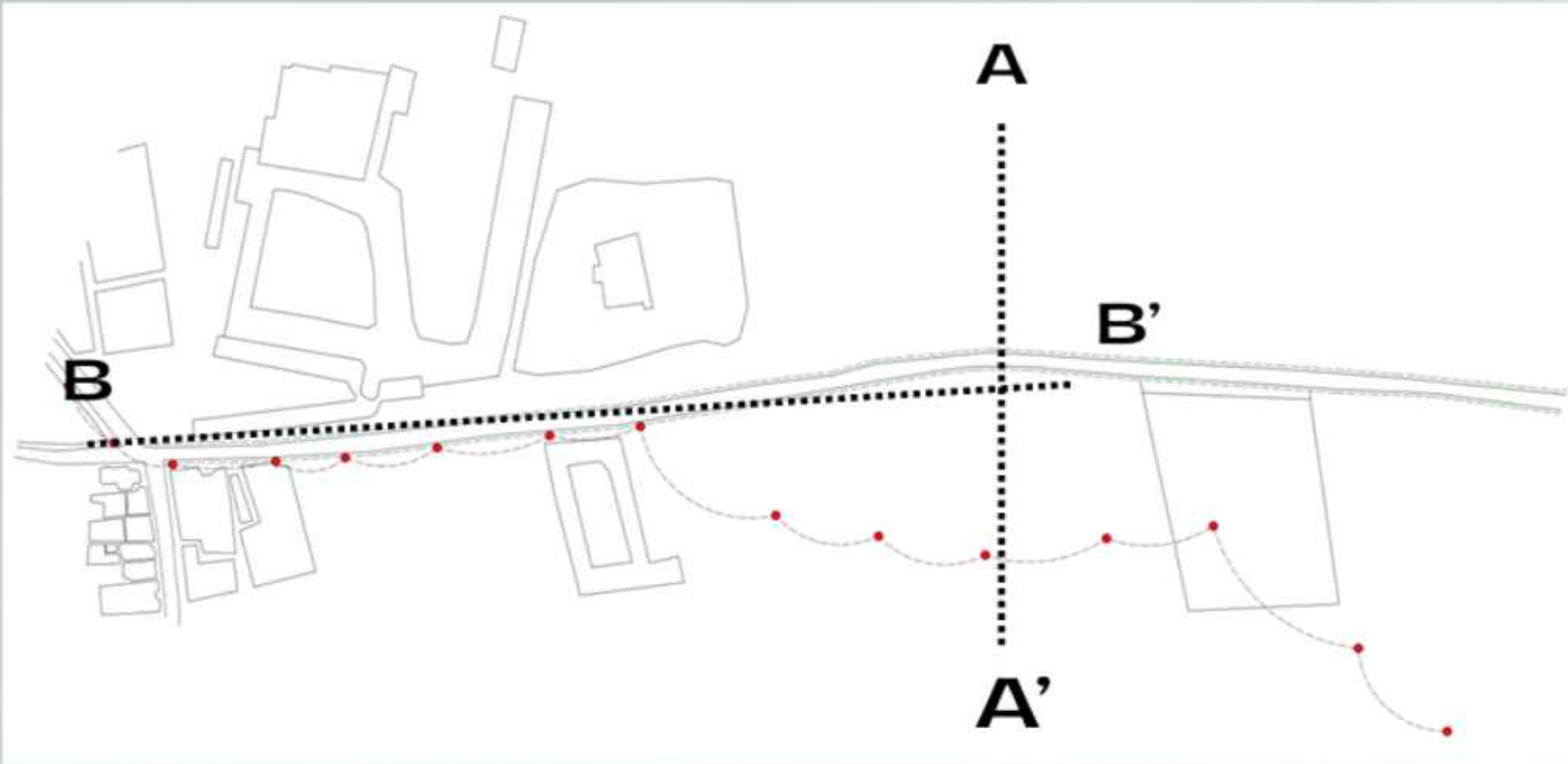


ROAD WIDTH 5.6m

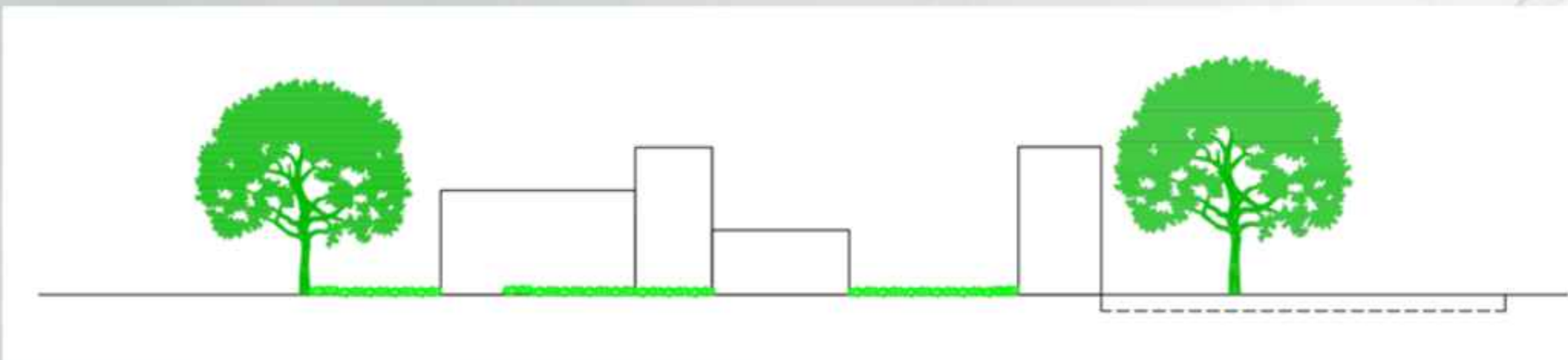
- **THERE IS 0.9m GAP ON THE BOTH SIDE OF THE ROAD.**
- **ALONG WITH THAT THE DISTANCE BETWEEN POLES IS NOT SAME.**
- **THE DRAINAGE PIPE IS PROVIDED $\frac{1}{3}$ PART OF THE STRETCH.**
- **THE VEGETATION OF THE STRETCH INCLUDED TREES LIKE NEEM , PEEPAL ,ETC.**



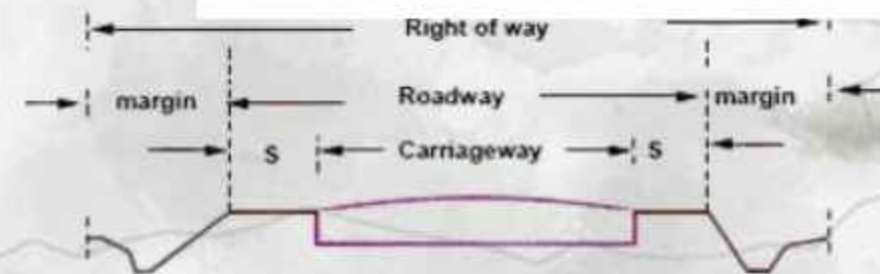
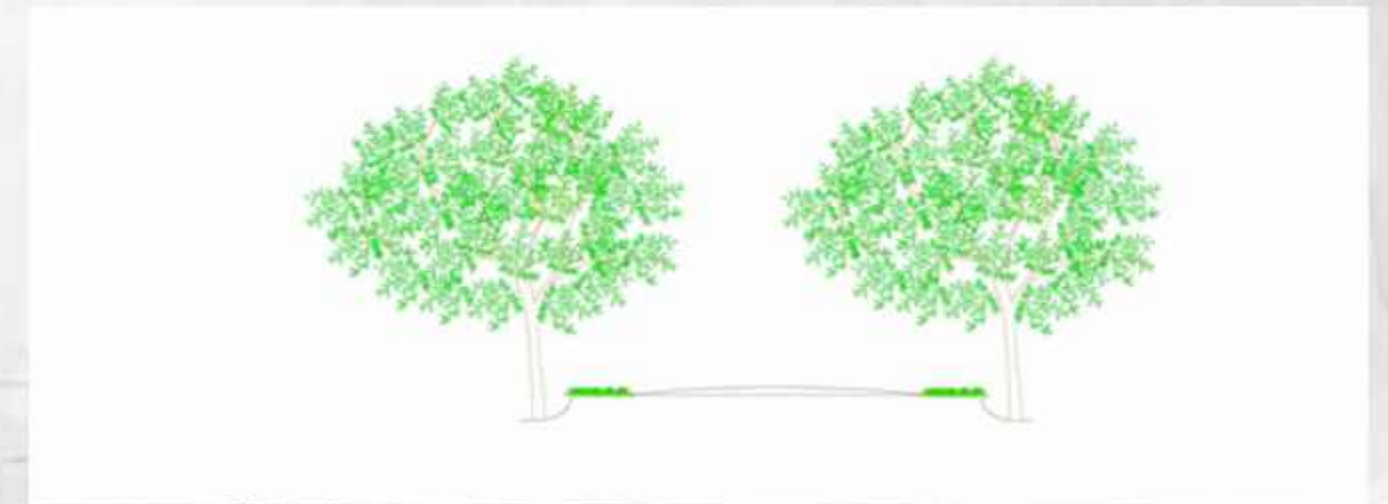
SECTION AND ELEVATION



ELEVATION B TO B'



SECTION A TO A'



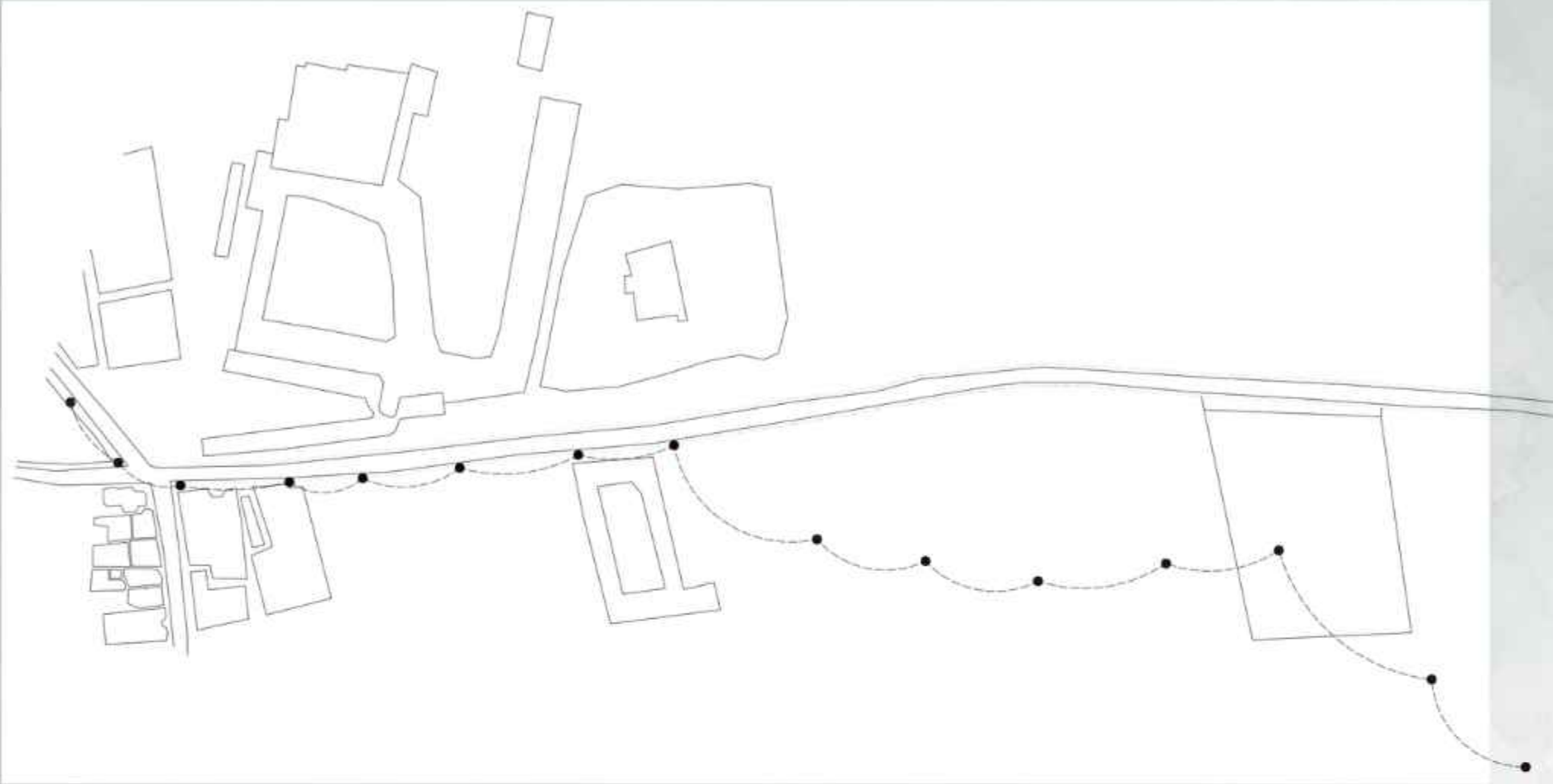
S- shoulder

A typical section of Right of way (ROW)



STREET POLES & LIGHT

- WE GAVE STREET LIGHT POLES TO VANISH DARKNESS
- WE USE SOLAR POWER STREET LIGHTS WHICH CHARGES IN DAY AND AUTOMATICALLY ON DURING DARK AND ILLUMINATES THE STREET
- THE CENTRE TO CENTRE DISTANCE BETWEEN THE POLE ARE SAME (GENRALLY 15-20M)



EXISTING POLES

- DISTANCE BETWEEN EXISTIING POLES ARE NOT SAME
- OPEN AND LOOSE WIRING ARE DONE THAT DECREASE SAFTEY OF LIVING BEING
- IT DECREASE THE SAFTEY AT EARLY MORNING AND LATE EVENING



- THEY ARE PLACES RANDOMLY ANY WHERE
- ON JUNCTION THERE WAS MESS OF WIRES WHICH INCREASE RISK OF FIRE
- THERE WAS NO STREET LIGHT PRESENT



- WE TAKE DISTANCE BETWEEN THE POLES SAME
- WE USE JUNCTION TO REDUCE CUTS AND POWER LOSSES WHICH REDUCE RISK OF SHORT CIRCUIT

DRAINAGE SYSTEM

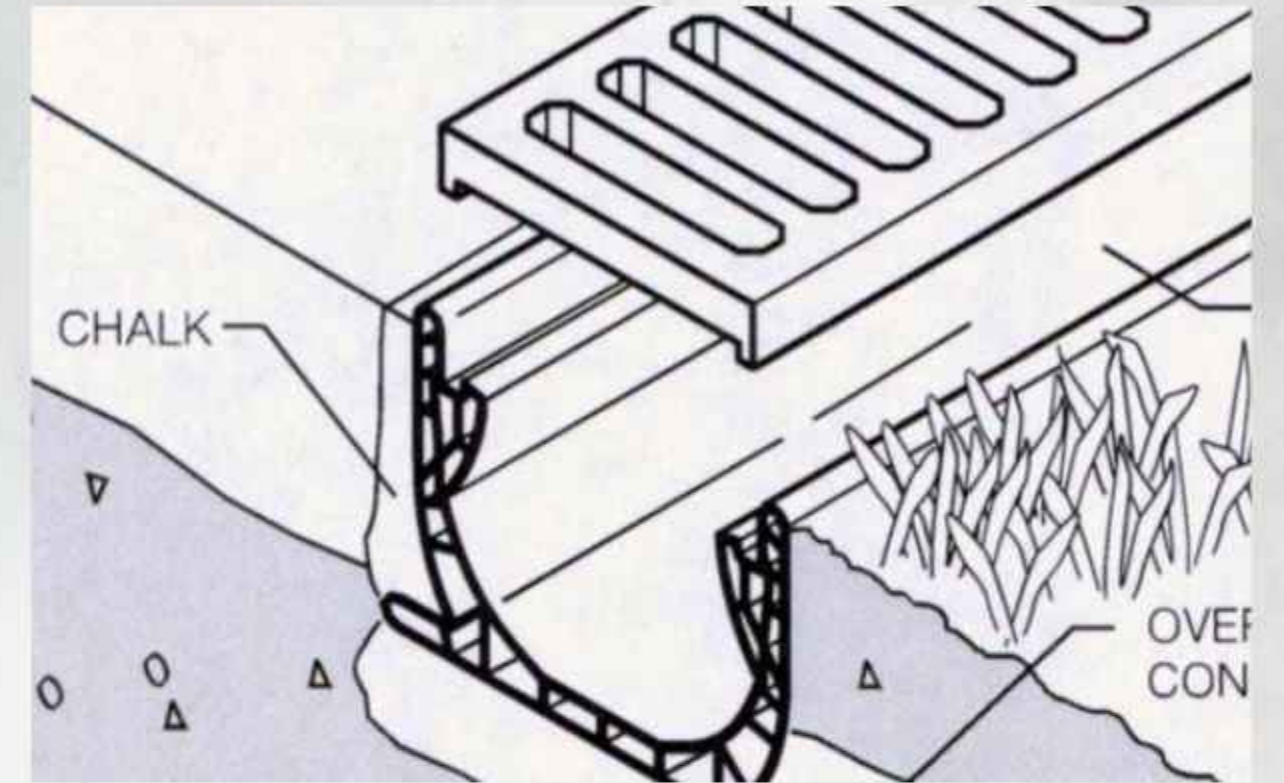


Earlier Condition:

The village had an open drainage (nali) system where rainwater and household wastewater flowed together through open roadside drains using natural slope.

Disadvantages:

- Water stagnation during heavy rain
- Bad smell and mosquito breeding
- Garbage blockage
- Unsafe for pedestrians
- Poor hygiene and maintenance issues

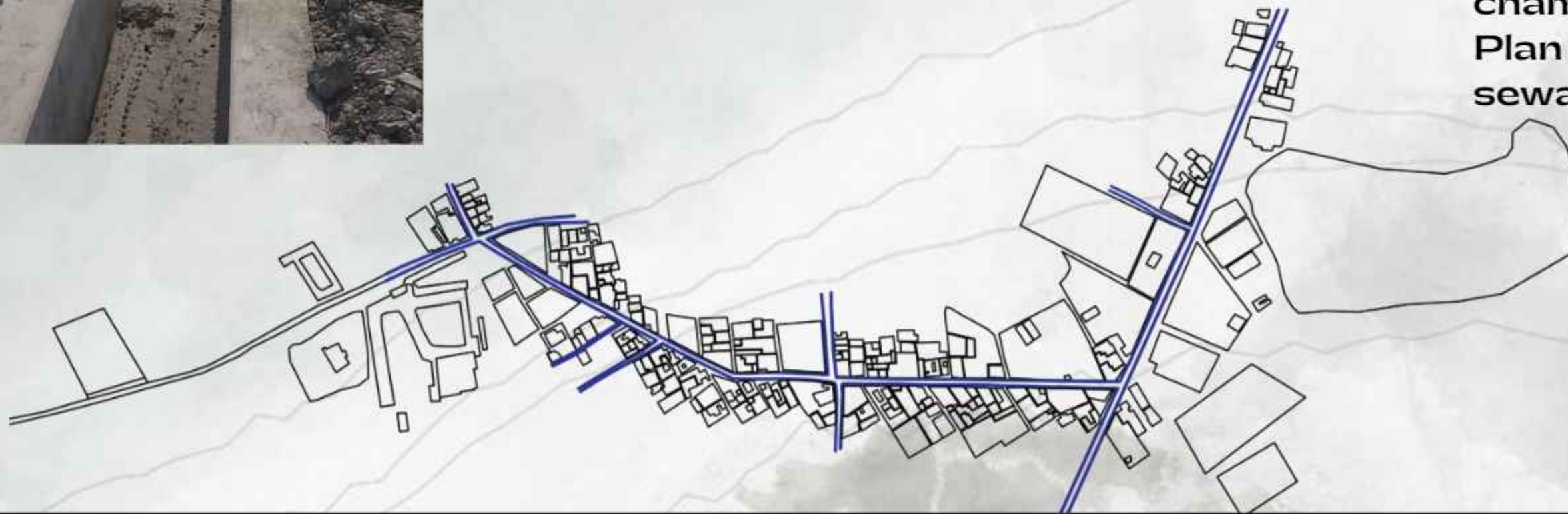


Improvements Needed:

- Convert open drains into covered RCC drains
- Provide proper slope and cleaning chambers
- Plan for separate stormwater and sewage lines (future scope)

Proposal:

Construct a footpath over covered drainage lines to improve safety, hygiene, space utilization, and overall street appearance.



FOOTHPATH



EXISTING CONDITIONS

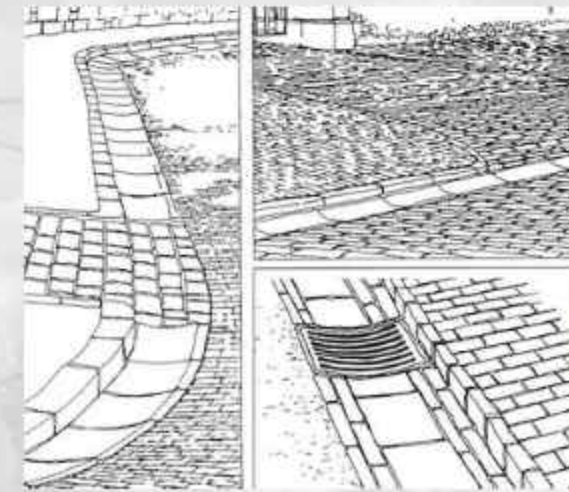
- -The existing road is operational but does not have a designated pedestrian footpath, forcing pedestrians to walk on the carriageway.
- -A 3 ft (0.9 m) wide strip is available on both sides of the road, currently unused and unpaved.
- The side strips contain minor shrubs, loose soil, and uneven ground levels, with no proper compaction or finishing.
- There is no organized underground drainage system; rainwater flows irregularly along the edges, causing water stagnation during rainfall.
- The roadside appearance is unplanned and lacks proper infrastructure development.

NEED OF FOOTPATH

- To provide a safe and dedicated walking space for pedestrians, reducing conflict with vehicular traffic.
- To improve overall road safety, especially for children, elderly persons, and daily commuters.
- To utilize the unused roadside strip effectively for organized infrastructure development.
- To integrate a proper drainage system for controlled stormwater disposal.



- The available 3 ft width on both sides is adequate for constructing a minimum standard pedestrian footpath.
- The underground drainage system can be accommodated below the footpath without reducing carriageway width.
- The proposal does not require additional land acquisition or major structural modification.
- Existing shrubs and loose soil can be cleared easily for base preparation and construction.



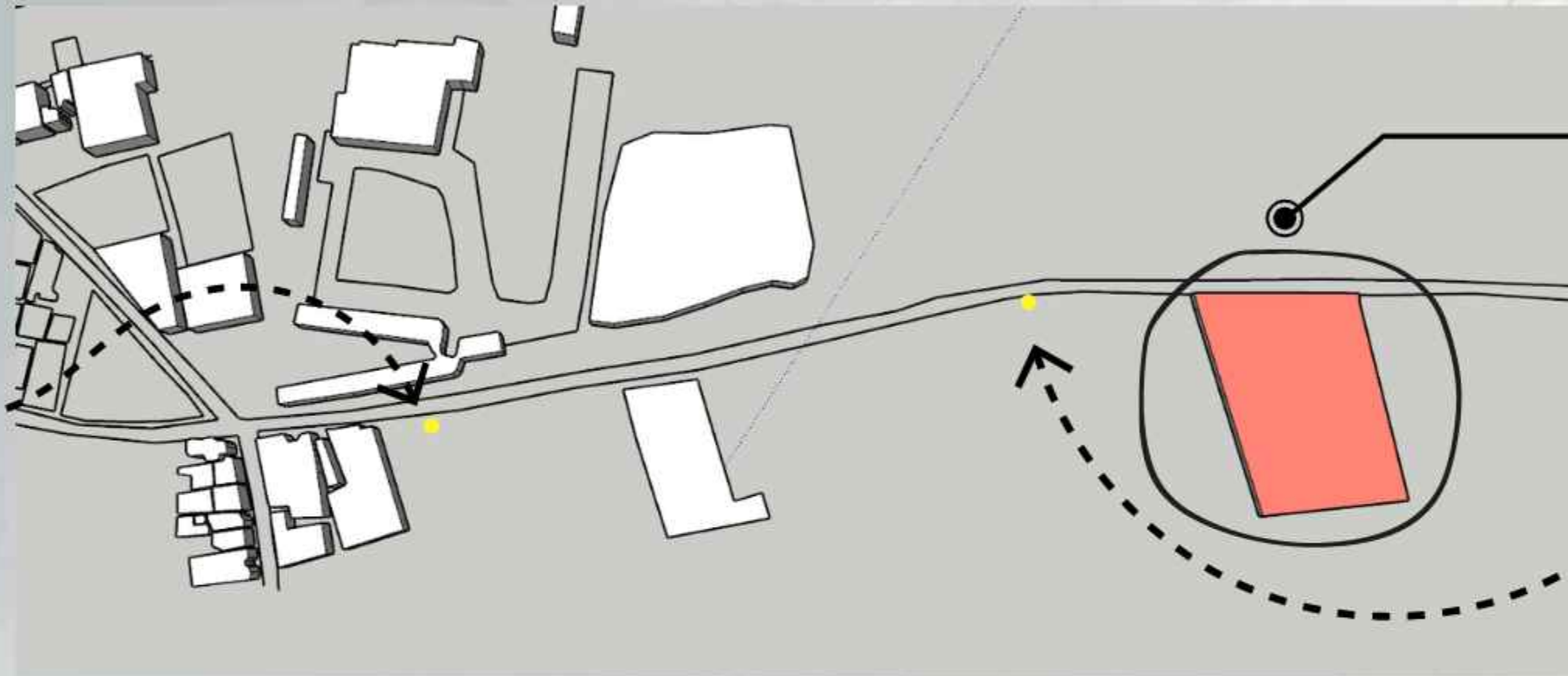
SHADING DEVICES

There are several innovative shading devices that can be proposed for roads, ranging from simple structures for waiting areas to advanced materials that cool the road surface itself. These options cater to different needs, such as protecting pedestrians and cyclists at intersections or improving overall road safety and comfort.



Green Roof Bus Shelters

Bus shelters with a rooftop layer of plants (sedum) to provide shade, reduce stormwater runoff, and support biodiversity.



PHC SITE



Smart Shade Structures

Automated shades that unfurl based on temperature ($>15^{\circ}\text{C}$) and retract in high winds; often include seating.

Solar-Powered Active Road Studs

Solar-powered LED studs that provide up to 900m of visibility (10x more than reflective studs), improving night-time and wet-road safety.



Reflective Pavement Coatings

Cool pavement coatings with "Invisible Shade" technology that reflect sunlight, reducing surface temperatures by $4-8^{\circ}\text{C}$.



Recreation Shade Structures

Large, artistic structures using HDPE mesh cloth (UPF 50+ protection) or perforated aluminum panels.

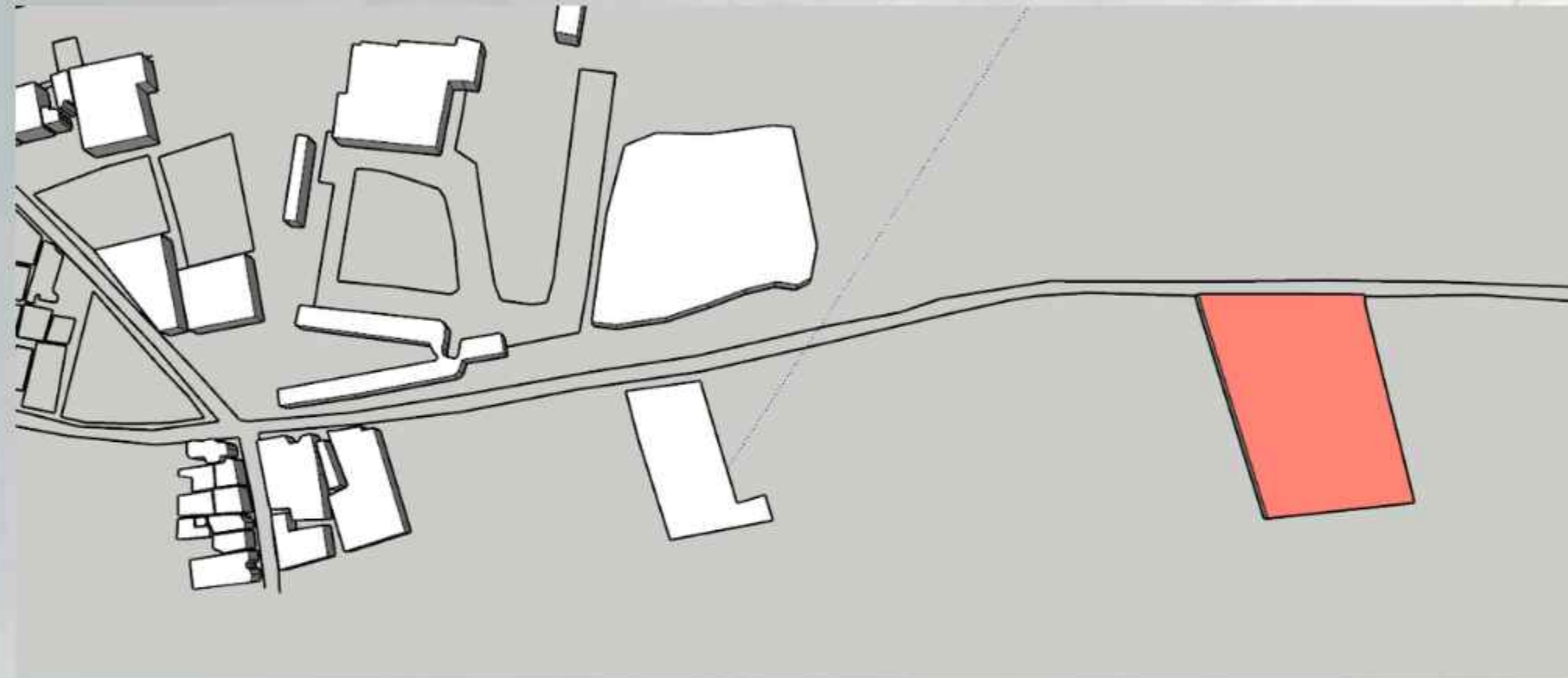


LANDSCAPE

- The design integrates architecture with the rural landscape of Nahari by preserving existing green spaces and incorporating natural elements to maintain the ecological and visual character of the village.
- It proposes community-oriented outdoor spaces while maintaining a low-rise building scale that respects the traditional village context and human-scale environment

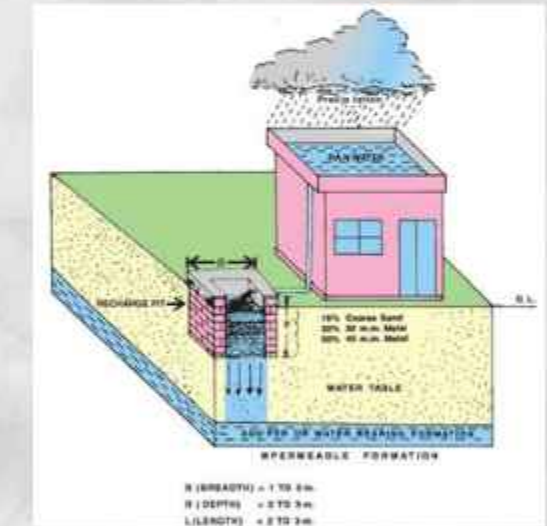
1. Green Landscape Integration

- Preserve open spaces.
- Plant native trees such as neem and peepal.
- Develop shaded landscape zones.



4. Sustainable Water and Landscape Planning

- Rainwater harvesting
- Permeable landscape surfaces
- Small water bodies or recharge pits.



2. Community-Oriented Spaces

Since villages rely heavily on social interaction

Proposal:

- Public courtyard
- Small community plaza
- Seating spaces under trees.



3. Contextual Building Design

Design should reflect rural architecture:

- Low-rise buildings (G+1 or G+2)
- Brick or local materials
- Sloped roofs or shaded verandahs.

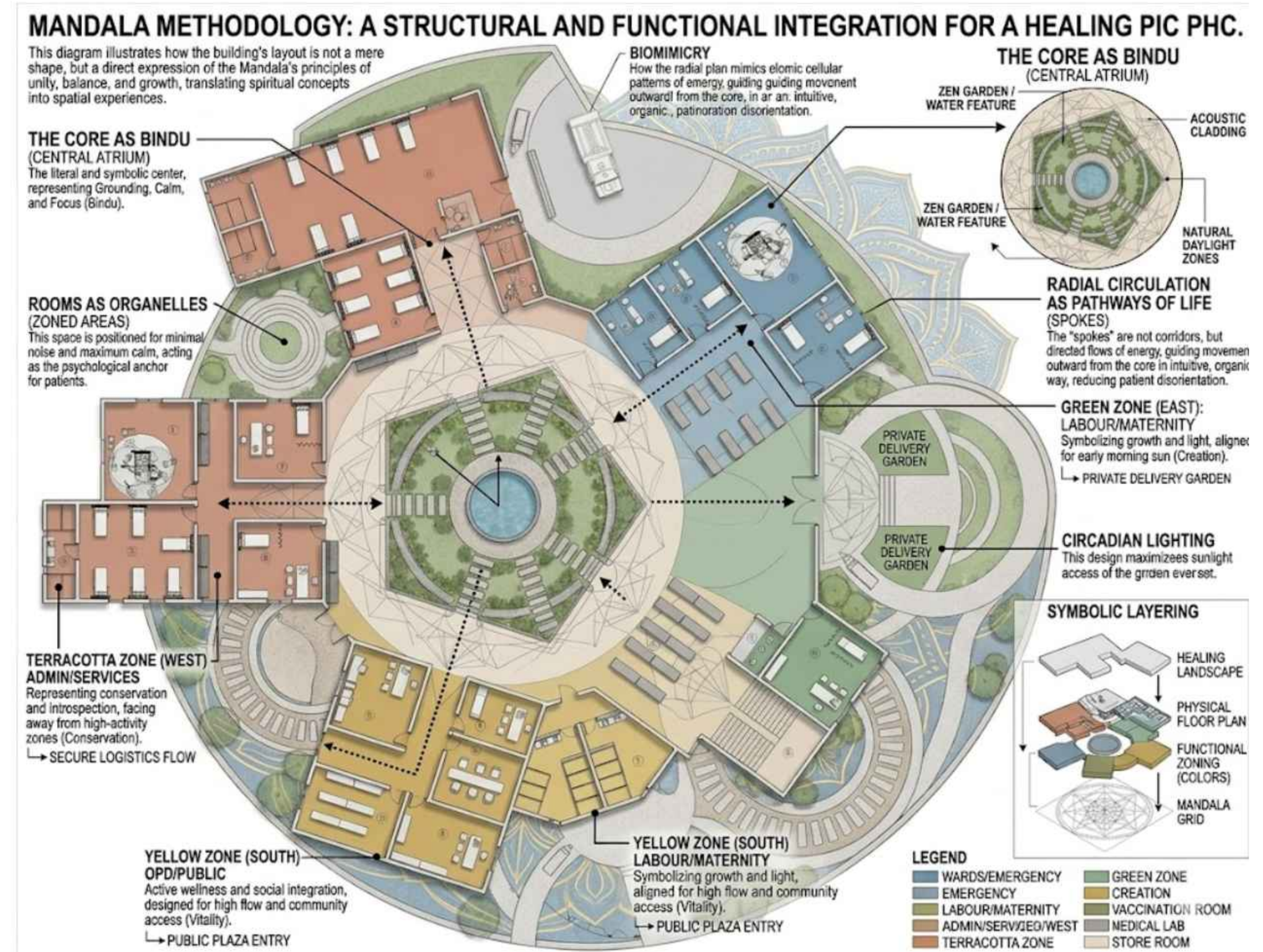
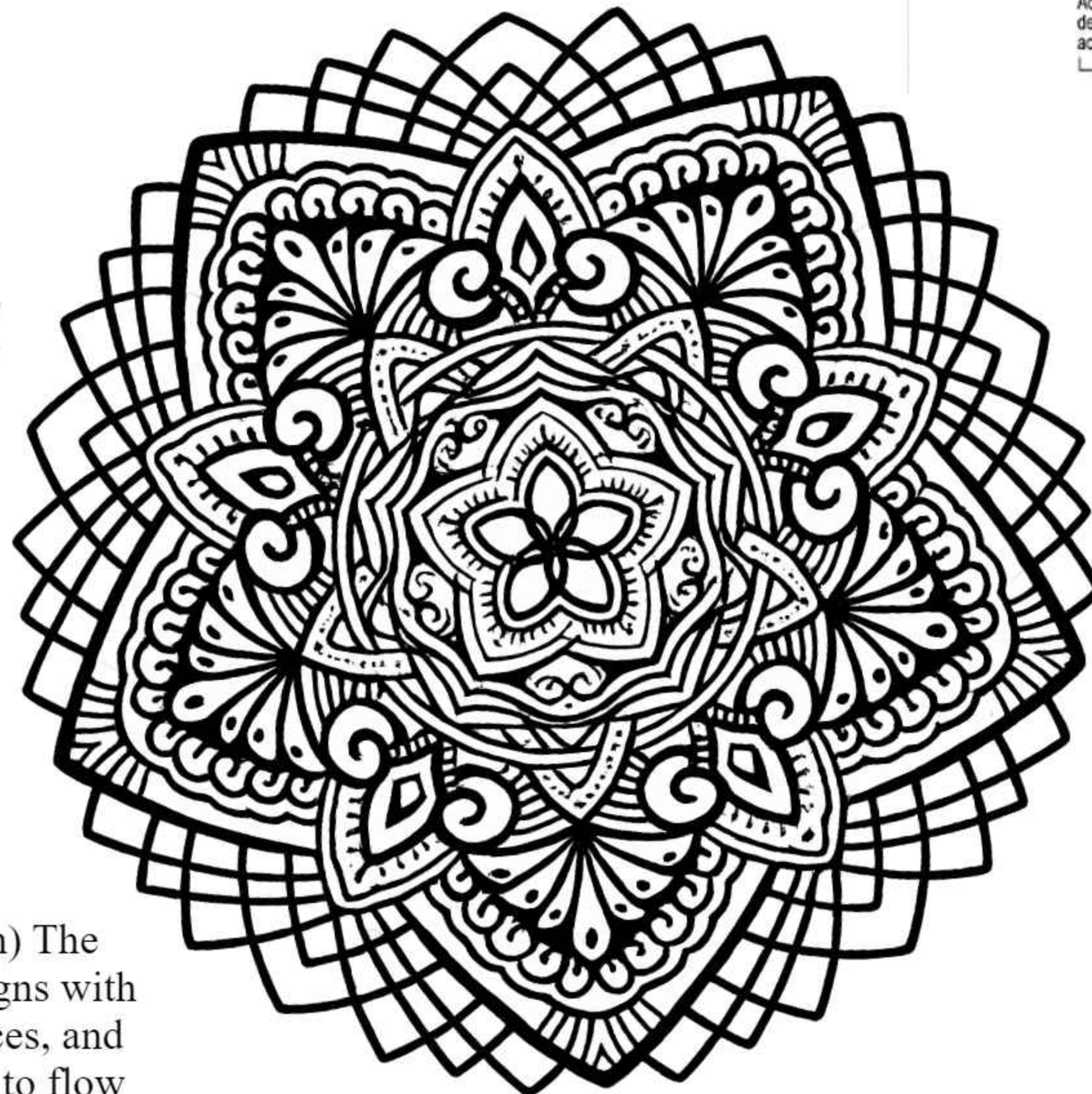
CONCEPT

THE HEALING MANDALA

The Meaning: In ancient traditions, a mandala represents the universe, wholeness, and the search for completeness and self-unity. In a healthcare setting, it symbolizes holistic healing—treating the entire person (mind, body, and spirit), not just isolated symptoms.

HOW DIFFERENT WINGS OF THE FACILITY CAN ALIGN WITH THE FOUR CARDINAL DIRECTIONS AND THE CENTRAL HUB, EACH REPRESENTING A DIFFERENT STAGE OF HEALING:

- The Center:** Core of Tranquility (Waiting & Reflection) The circular center represents grounding and spiritual balance. By placing the waiting area and a central garden or water feature here, patients can find peace before treatment, reducing anxiety.
- The East:** Creation & Growth (Maternity & Labour) Facing the rising sun, the East symbolizes new beginnings and life. This is the ideal area for the labour and maternity health rooms, connecting the birth of a child to the start of a new day.
- The North:** Stability & Foundation (Wards & Emergency) The North often symbolizes stability and security. This area is dedicated to emergency services and inpatient wards, providing a grounded, safe environment for critical care and secure recovery.
- The West:** Conservation & Preparation (Store & Cold Chain) The West is associated with conservation and introspection. This section houses the store rooms and cold chain management, representing preparation for the future and the careful conservation of resources.
- The South:** Active Vitality (OPD & Prevention) The South, associated with movement and energy, aligns with outpatient departments (OPDs), prevention services, and active health management. This zone is designed to flow efficiently to handle daily foot traffic and promote active wellness.



CONCEPTUAL LAYERING IN ARCHITECTURAL DESIGN :

- Symbolic Geometry (The Blueprint):** This is the underlying grid of lines and shapes that forms the mandala. In your design, the radial spokes, circular pathways, and centralized layout form this spiritual framework.
- Functional Space (Room Types):** This is how you organize the medical functions. Instead of placing departments linearly, we place them according to their deeper meaning within the mandala's directional energy (as explained above).
- Physical Structure (The Building Forms):** The final physical layer involves materials and aesthetics. For example, using skylights to filter light into the central hub, earthy textures for the foundation, and flowing, circular elements for the pathways.

GATEWAY COLLEGE OF ARCHITECTURE AND DESIGN

ARCHITECTURAL DESIGN - IV

PROJECT : PRIMARY HEALTH CENTER

SHEET TITLE : CONCEPT

SHEET NO : 01
DATE : 19-04-2026

NOTE : ALL DIM IN MM
GUIDED BY- AR.SUPRIYA SINHA
AR.GURDEEP SINGH BAGGA

NAME-AYUSH KUMAR
GCAD/24/107
24009006008

REMARKS :

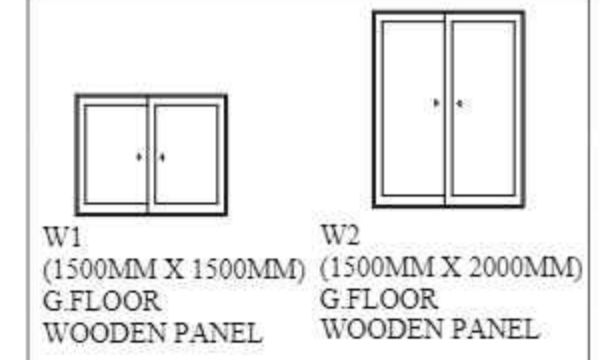
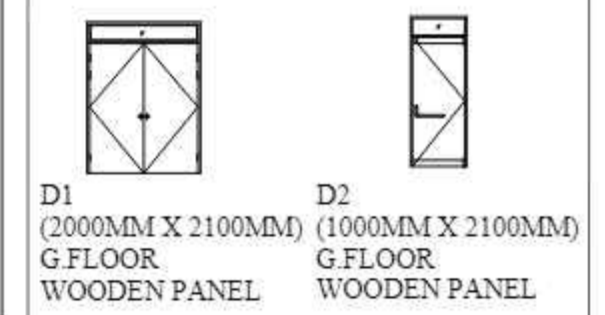
SCALE : 1:200





ANNOTATIONS	SPACES	DIMENSIONS (X * Y)
A	MINOR OT AND DRESSING ROOM	6600X5000
B	EMERGRNCY	7000X5600
C	AYUSH CLINIC	4000X4000
D	OPD 1 AND 2	4000X3000
E	WHEEL CHAIR TOILET	2600X2400
F	MALE WARD TOILET	4000X3000
G	MALE WARD	2500X2400
H	EMERGENCY TOILET	6300X2400
I	LABOUR ROOM	5500X4200
J	MINOR OT	5300X4500
K	MATERNAL HEALTH ROOM	5000X4500
L	FEMALE WARD	6700X5400
M	FEMALE WARD TOILET	5500X1700
N	MEDICAL LAB	5000X4500
O	STORE ROOM	5500X3900

ANNOTATIONS	SPACES	DIMENSIONS (X*Y)
P	MEDICAL OFFICER	4500X3900
Q	STAFF RESTROOM	4500X4000
R	COLD CHAIN	5800X3900
S	WAITING AREA	6500X3700
T	REGISTRATION	2700X2000
W	VACCINATION ROOM	5400X3900
X	STAIRS	5900X4500
Y	TOILET	6400X4200



GATEWAY COLLEGE OF ARCHITECTURE AND DESIGN

ARCHITECTURAL DESIGN - IV

PROJECT : PRIMARY HEALTH CENTER

SHEET TITLE : GROUND FLOOR PLAN

SHEET NO : 01
DATE : 19-04-2026

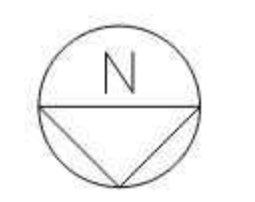
NOTE : ALL DIM IN MM

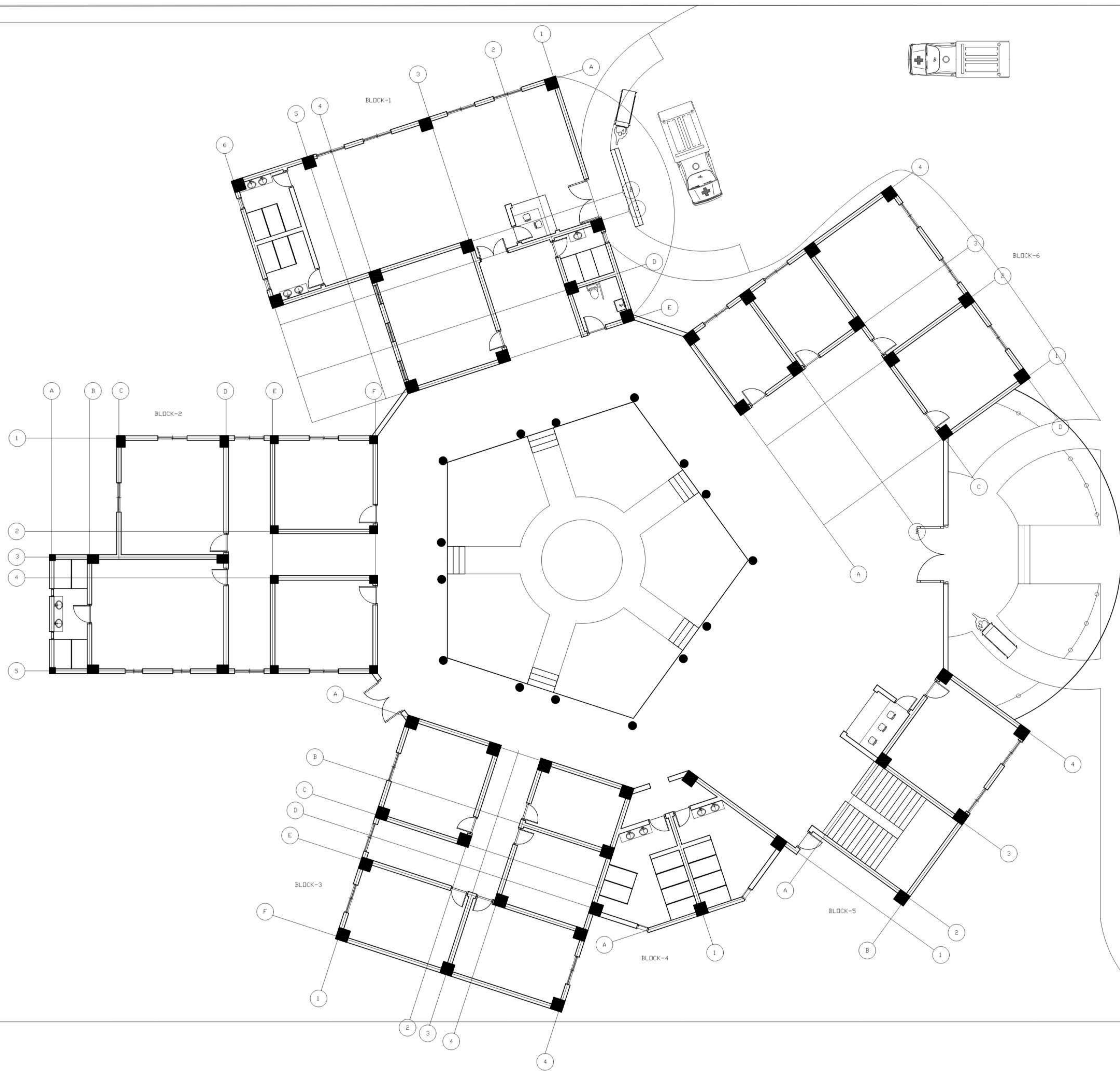
GUIDED BY- AR.SUPRIYA SINHA
AR.GURDEEP SINGH BAGGA

NAME- AYUSH KUMAR
GCAD/24/107
24009006008

REMARKS :

SCALE : 1:100





GATEWAY COLLEGE OF ARCHITECTURE AND DESIGN

ARCHITECTURAL DESIGN - IV

PROJECT : PRIMARY HEALTH CENTER

SHEET TITLE : GRID PLAN

SHEET NO : 01
DATE : 19-04-2026

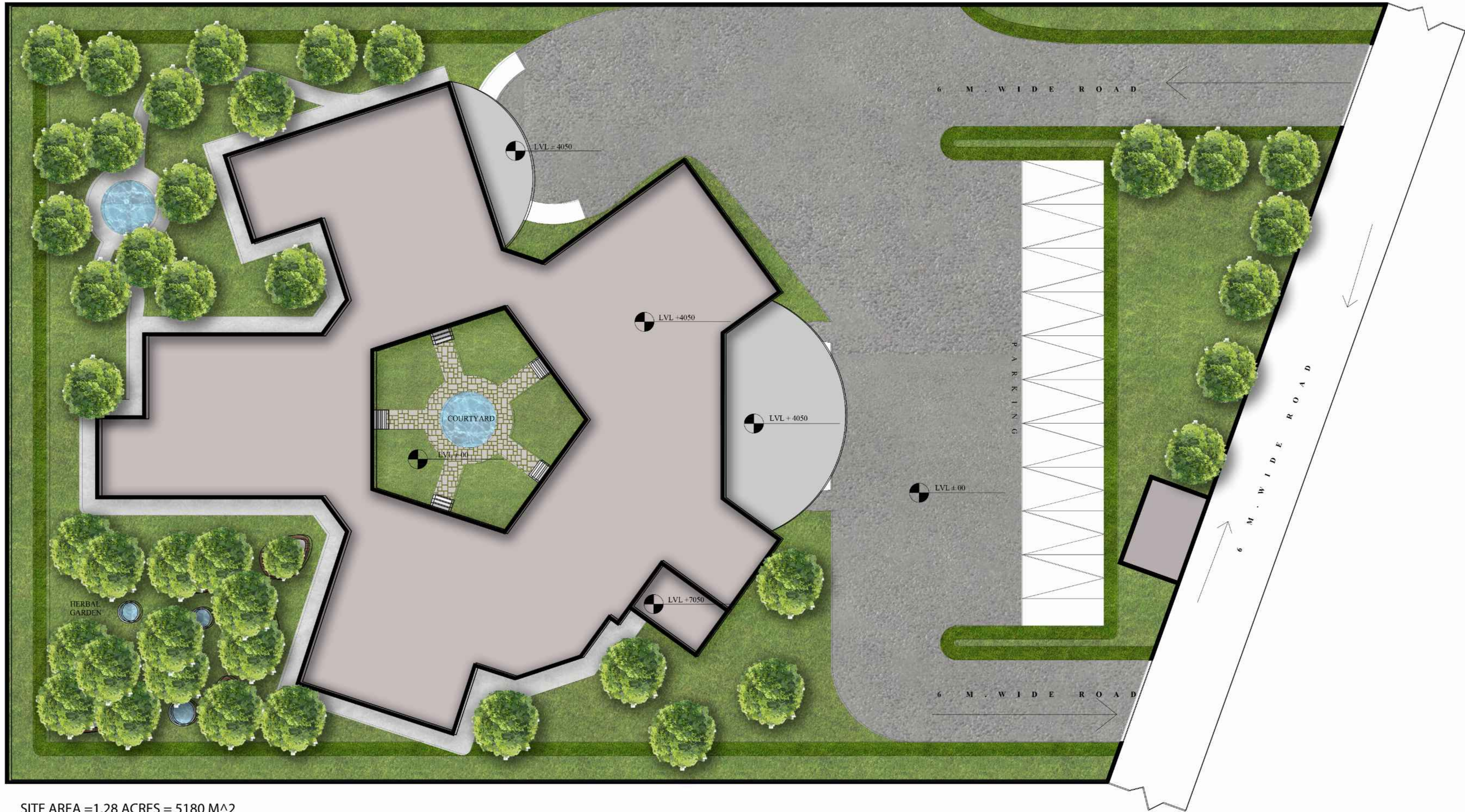
NOTE : ALL DIM IN MM
GUIDED BY- AR.SUPRIYA SINHA
AR.GURDEEP SINGH BAGGA

NAME- AYUSH KUMAR
GCAD/24/107
24009006008

REMARKS :

SCALE : 1:200





SITE AREA = 1.28 ACRES = 5180 M²
 FAR = 1.5
 GROUND COVERAGE = 35% = 1813SQM
 SET BACK : FRONT = 9M
 SIDE AND BACK = 6M
 ACHIEVED GROUND COVERAGE = 1061SQM
 BUILT UP AREA = 1061SQM
 PARKING AREA = 192SQM
 NO. OF CAR PARKING = 7 CARS + 3 AMBULANCE

GATEWAY COLLEGE OF ARCHITECTURE AND DESIGN

ARCHITECTURAL DESIGN - IV

PROJECT : PRIMARY HEALTH CENTER

SHEET TITLE : SITE PLAN

SHEET NO : 01
DATE : 19-04-2026

NOTE : ALL DIM IN MM

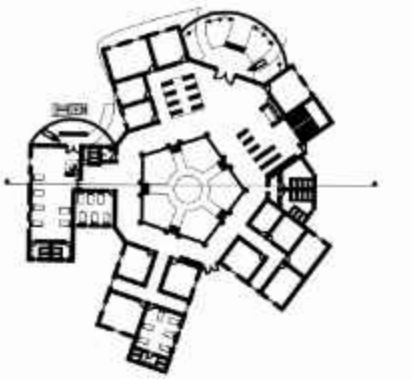
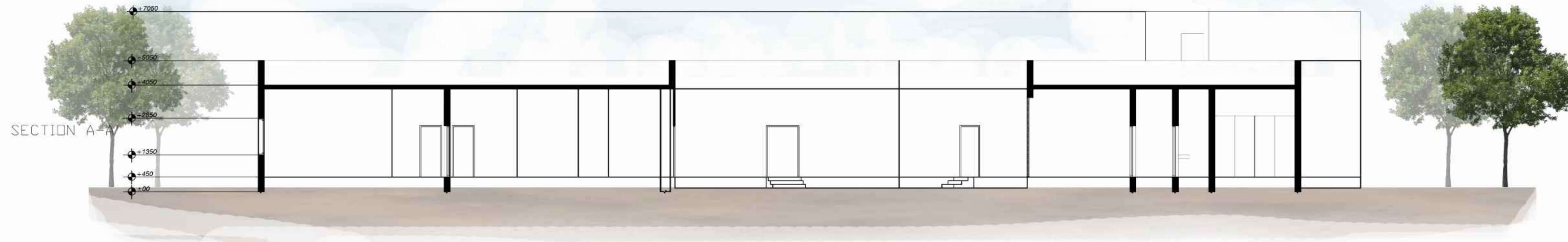
GUIDED BY- AR.SUPRIYA SINHA
AR.GURDEEP SINGH BAGGA

NAME- AYUSH KUMAR
GCAD/24/107
24009006008

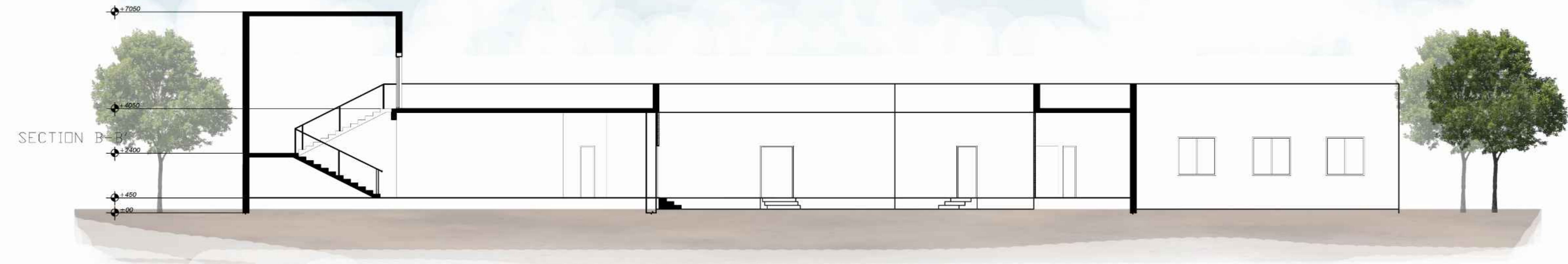
REMARKS :

SCALE : 1:200

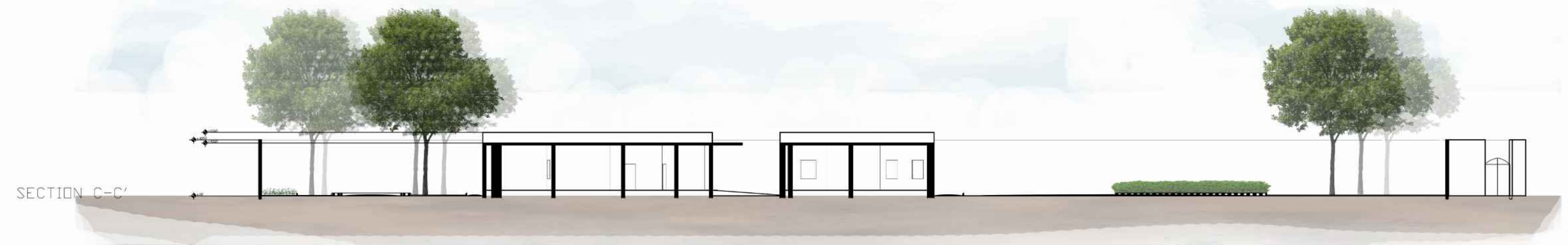




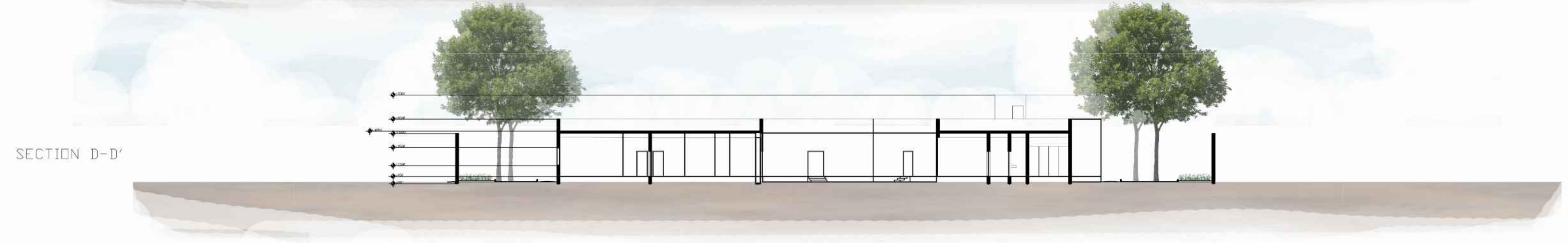
SECTION A-A'



SECTION B-B'



SECTION C-C'



SECTION D-D'

GATEWAY COLLEGE OF ARCHITECTURE AND DESIGN

ARCHITECTURAL DESIGN - IV

PROJECT : PRIMARY HEALTH CENTER

SHEET TITLE : SECTION

SHEET NO : 01
DATE : 19-04-2026

NOTE : ALL DIM IN MM

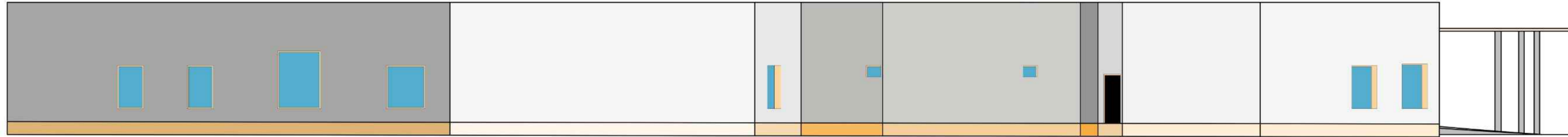
GUIDED BY- AR.SUPRIYA SINHA
AR.GURDEEP SINGH BAGGA

NAME- AYUSH KUMAR
GCAD/24/107
24009006008

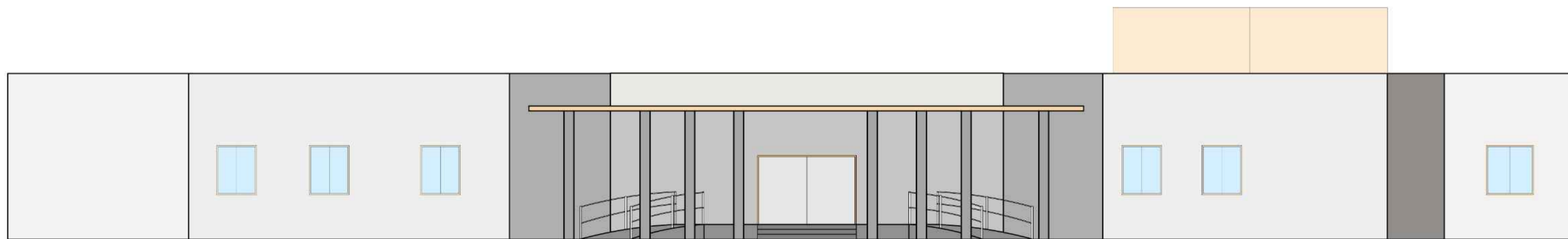
REMARKS :

SCALE : 1:100





SHEET TITLE : SIDE ELEVATION



SHEET TITLE : FRONT ELEVATION

GATEWAY COLLEGE OF
ARCHITECTURE AND DESIGN

ARCHITECTURAL DESIGN - IV

PROJECT : PRIMARY HEALTH
CENTER

SHEET TITLE : ELEVATION

SHEET NO : 01
DATE : 19-04-2026

NOTE : ALL DIM IN MM

GUIDED BY- AR.SUPRIYA
SINHA
AR.GURDEEP SINGH BAGGA

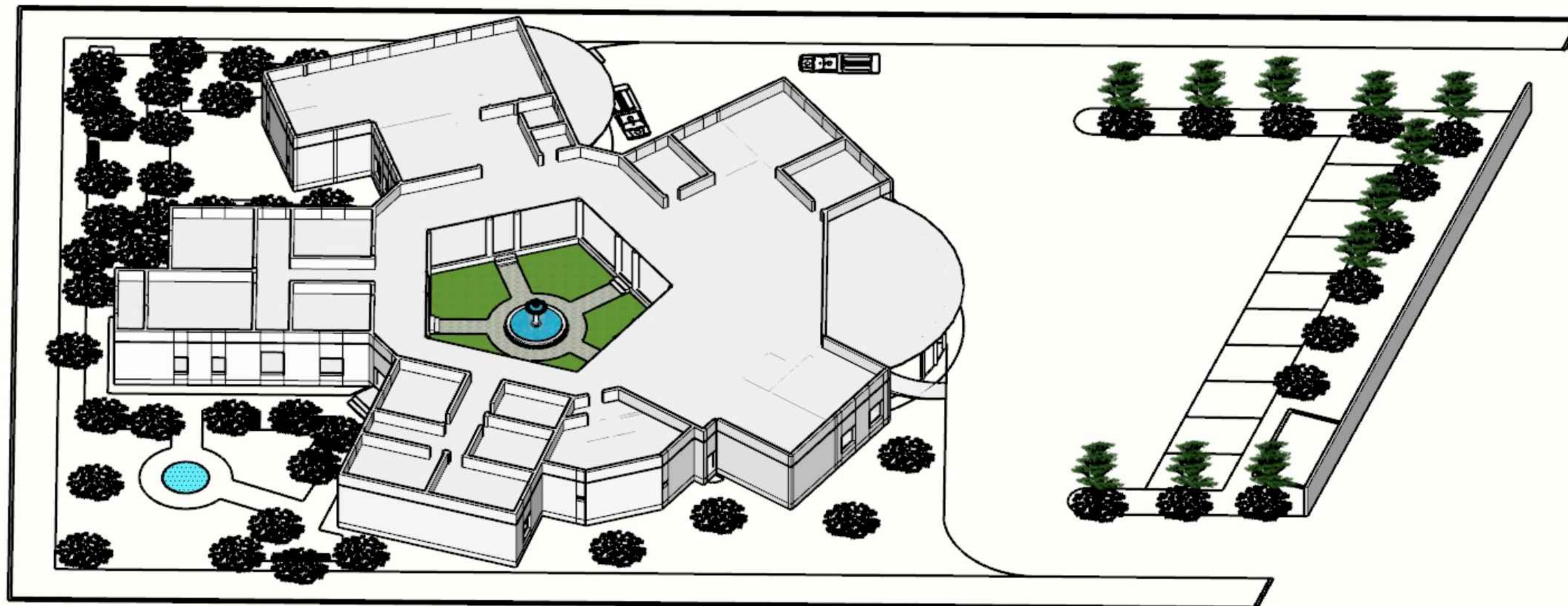
NAME- AYUSH KUMAR
GCAD/24/107
24009006008

REMARKS :

SCALE : 1:200



3D-VIEW



GATEWAY COLLEGE OF
ARCHITECTURE AND DESIGN

ARCHITECTURAL DESIGN - IV

PROJECT : PRIMARY HEALTH
CENTER

SHEET TITLE : 3D-VIEW

SHEET NO : 01
DATE : 19-04-2026

NOTE : ALL DIM IN MM
GUIDED BY- AR.SUPRIYA
SINHA
AR.GURDEEP SINGH BAGGA

NAME-AYUSH KUMAR
GCAD/24/107
24009006008

REMARKS :

SCALE :



ARCHITECTURAL DESIGN - IV

PRIMARY HEALTH CENTER



SPACE - SPACE MATRIX

Primary Health Center (PHC)

◆ DIRECT / STRONG RELATIONSHIP | ◆ INDIRECT / WEAK RELATIONSHIP

SPACE	RECEPTION	WAITING AREA	MEDICAL ROOM	ADMIN. OFFICE	GENERAL SPS	ROOM ST	EMERGENCY	LABOUR ROOM	PHARMACY	LABORATORY	MEDICAL STORE	STORE ROOM	TOILET	DUITY ROOM
RECEPTION	■	◆	◆	◆	◆		◆	◆	◆	◆				◆
WAITING AREA	◆	■	◆			◆	◆	◆	◆	◆				◆
MEDICAL ROOM	◆	◆	■		◆	◆	◆	◆	◆	◆	◆		◆	◆
ADMIN. OFFICE	◆			■								◆	◆	◆
GENERAL SPS	◆	◆	◆		■	◆	◆	◆	◆	◆			◆	◆
ROOM ST		◆	◆		◆	■	◆	◆	◆	◆	◆		◆	◆
EMERGENCY	◆	◆	◆		◆	◆	■	◆	◆	◆			◆	◆
LABOUR ROOM		◆	◆		◆	◆	◆	■	◆	◆		◆	◆	◆
PHARMACY	◆	◆	◆		◆	◆	◆	◆	■	◆	◆			
LABORATORY	◆	◆	◆		◆	◆	◆	◆	◆	■	◆			
MEDICAL STORE			◆			◆		◆	◆		■	◆		
STORE ROOM				◆				◆			◆	■		◆
TOILET	◆	◆	◆	◆	◆	◆	◆	◆					■	◆
DUITY ROOM			◆		◆	◆	◆	◆				◆	◆	■

◆ Direct - spaces that must be adjacent or closely linked | ◆ Indirect - spaces with functional but non-adjacent relationships
 ■ Black = same space (diagonal)

USER - SPACE MATRIX

Primary Health Center (PHC)

◊ DIRECT / PRIMARY ACCESS ◊ INDIRECT / SECONDARY ACCESS

SPACE \ USER	DOCTORS	PATIENTS	LAB TECHNICIANS	PHARMACIST	NURSES	VISITORS	OTHER STAFF
RECEPTION	◊	◊				◊	◊
WAITING AREA	◊	◊			◊	◊	◊
MEDICAL ROOM	◊	◊			◊		
ADMIN. OFFICE	◊					◊	◊
GENERAL OPD	◊	◊			◊		
HONOR RT	◊	◊			◊		
EMERGENCY	◊	◊			◊		
LABOUR ROOM	◊	◊			◊		
PHARMACY	◊	◊		◊	◊		
LABORATORY	◊	◊	◊		◊		
MEDICAL STORE				◊	◊		◊
STORE ROOM							◊
TOILET	◊	◊	◊	◊	◊	◊	◊
DUTY ROOM	◊		◊		◊		◊

◊ Direct = primary user of the space | ◊ Indirect = occasional/supporting access only

BUBBLE DIAGRAM

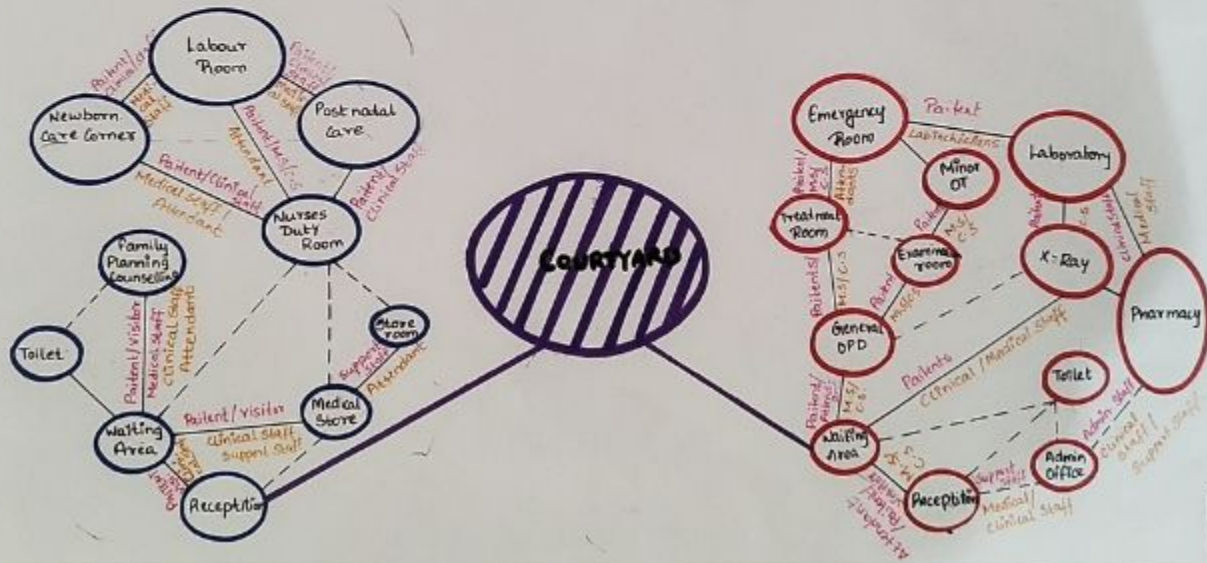
— DIRECT CONNECTION

◻ PRIMARY USER

- - - INDIRECT CONNECTION

◼ SECONDARY USER

◻ COMMON AREA / SHARED COURTYARD



Vgood

Similar
9/3/26

AAYUSHI
GCAD/24/102

CONCEPT YIN-YANG

AIM OF DESIGN

- TO DESIGN A FUNCTIONAL AND CLIMATE-RESPONSIVE PHC
- TO CREATE A HEALING ENVIRONMENT THROUGH SPATIAL PLANNING
- TO ENSURE EFFICIENT CIRCULATION
- TO INTEGRATE TRADITIONAL PHILOSOPHY MODERN HEALTHCARE

FORM

- CLEAR ZONING OF FUNCTIONS
- REDUCE CIRCULATION CONFLICTS
- PROVIDE ACCESSIBILITY FOR RURAL USERS
- ENSURE NATURAL LIGHT AND VENTILATION
- CREATE STRESS-FREE SPACES

FORM DEVELOPMENT

YIN-YANG SYMBOL



THE YIN-YANG SYMBOL COMES FROM ANCIENT CHINESE PHILOSOPHY AND REPRESENTS THE IDEA OF BALANCE BETWEEN OPPOSITE FORCES.

- YIN (BLACK SIDE) → CALM, PASSIVE, SOFT, FEMININE, HEALING
- YANG (WHITE SIDE) → ACTIVE, STRONG, ENERGETIC, MASCULINE



IN THE SYMBOL THE TWO CIRCLES PRESENTS BALANCE AND CONNECTION, SO SEPARATED THE TWO SIDES AND HAD A COMMON CONNECTION IN BETWEEN (COURTYARD)



INTEGRATED CURVILINEAR AND GEOMETRIC SHAPES INTO THE FINAL DESIGN



PROGRAMMING



CLIMATE STRATEGIES

- CLIMATE COMPOSITE
- CENTRAL COURTYARD FOR VENTILATION AND COOLING
- SHADING REDUCES DIRECT HEAT
- CIRCULATION TO MINIMIZE HEAT GAIN



DESIGN CONSIDERATIONS

- HYGIENE
- ACCESSIBILITY
- SAFETY
- PRIVACY
- NOISE CONTROL

GATEWAY COLLEGE OF ARCHITECTURE AND DESIGN

ARCHITECTURAL DESIGN - IV

PROJECT - PRIMARY HEALTH CENTRE

SHEET TITLE :- CONCEPT

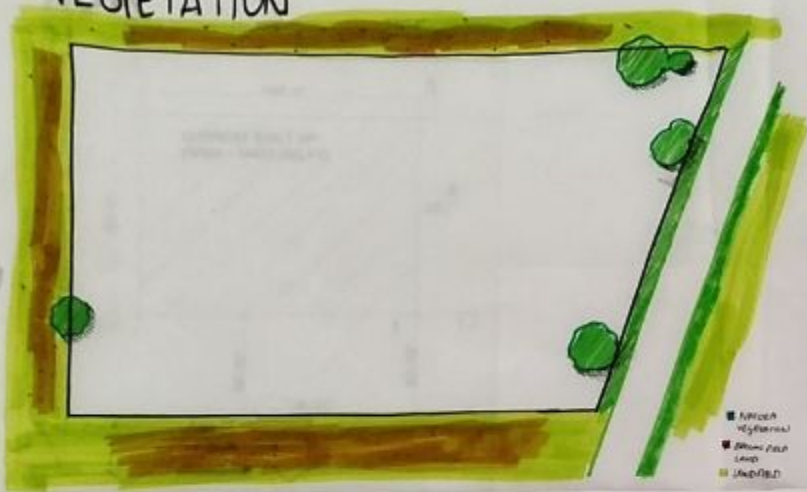
GUIDED BY:-

AR. SUPRIYA SIMHA AR. GURDEEP SINGH BAGG

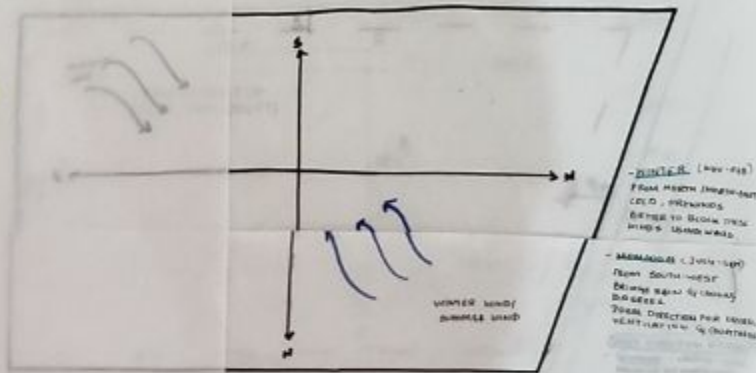
AAYUSHI ADAPALA GCAD/24/102

REMARKS

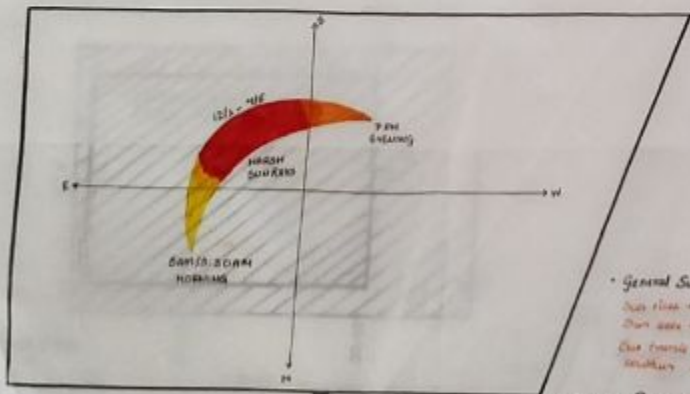
VEGETATION



WIND DIRECTION



SUNPATH DIAGRAM



General Sun Movement

Sun rises + sets
 Sun goes + sets
 One travels through the
 weather the throughout the year

Design Implication

Building Orientation: large facade facing north, south
 and large openings to allow + harvest + warm + cool
 use double doors.



SIT AREA - 1.28 ACRES
5182 SQ FT

PAR. 1.5

GROUND COVERAGE - 20% - 181.33 SQM

SC BACK - FRONT - RW

SIDE AND BACK - GR

ACHIEVED GROUND COVER RAGE - 850 SQM

PLANT AREA - 458 SQM

PARKING AREA - 118 SQM

NO OF CAR PARKING - 8 CARS + 14 BIKES AREA



LEGEND

1. MAIN ENTRY
2. ENTRY PORCH
3. CAR PARKING AREA
4. TEA STALL - SITTING
5. WATER BODY
6. MEDICAL STORE
7. EXIT - ENTRY FOR AMBULANCE ONLY



KEY PLAN

GATEWAY COLLEGE OF
ARCHITECTURE AND DESIGN

ARCHITECTURAL DESIGN - IV

PROJECT - PRIMARY HEALTH
CENTER

SHEET TITLE - SITE PLAN

SHEET NO. 01 / DATE

NOTE - ALL DIM IN MM

GUIDED BY:

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SINHA

AR. GURDEEP
DINH DAGGA

AAYUSHI ADAPALA

GCAD/24/132 24000000003

REMARKS :



SCALE 1:200



1. RECEPTION - WAITING
2. MAIN OFFICE (00041771)
3. GENERAL OFFICE (0004480)
4. TREATMENT ROOM (0004480)
5. TREATMENT ROOM (0004480)
6. EMERGENCY (0004480)
7. SMALL WARD ROOM (0004480)
8. LAB (0004480)
9. X-RAY (0004480)
10. WARD (0004480)
11. LAB (0004480)
12. LAB (0004480)
13. SPECIAL WARD ROOM (0004480)
14. NURSE STATION (0004480)
15. NURSE'S CARE ROOM (0004480)
16. DUTY ROOM (0004480)



KEY PLAN

GATEWAY COLLEGE OF
ARCHITECTURE AND DESIGN

ARCHITECTURAL DESIGN - IV

PROJECT - PRIMARY HEALTH
CENTER

SHEET TITLE - FLOOR PLAN

SHEET NO. : 02 DATE

NOTE - ALL DIM IN MM

GUIDED BY

AR. SUPRIYA
SINHA AR. GURDEEP
SINGH BAGGA

AAYUSHI ADAPALA

GDAD/24/102 24000000000

REMARKS :



WINDOWS	
W1	1800x1200 MM O.K.L. LV. 000000
W2	1800x1200 MM O.K.L. LV. 000000
W3	1800x1200 MM O.K.L. LV. 000000

DOORS	
D1	3000x2100 MM O.K.L. LV. 010000
D2	1800x1200 MM O.K.L. LV. 010000
D3	1800x1200 MM O.K.L. LV. 010000



SITE SECTION AT A-A'



SECTION AT X-X'



SECTION AT Y-Y'



FRONT ELEVATION



SIDE ELEVATION



KEY PLAN

GATEWAY COLLEGE OF ARCHITECTURE AND DESIGN

ARCHITECTURAL DESIGN - IV

PROJECT - PRIMARY HEALTH CENTER

CENTER

SHEET TITLE - SITE SECTION SECTION ELEVATION

SHEET NO. 03 DATE

NOTE - ALL DIM IN MM

GUIDED BY

AR. SUPRIYA SRINIA AR. GURDEEP SINGH BAGGA

AAYUSH ADAPALA

GCAD/24/132 24009000003

REMARKS :





GATEWAY COLLEGE OF
ARCHITECTURE AND DESIGN - 2017
PROJECT: PRIMAVERA HEALTH
CENTER

SHEET TITLE: 3D VIEWS

SHEET NO: 01
DATE:

NOTE: ALL DIMENSIONS
GIVEN BY ARCHITECTURAL
DRAWING SHALL BE OVERSEEN BY THE ARCHITECT

APPVEN: [Signature]

SEAL: [Signature]

REVISIONS: