DETAIL PROJECT REPORT

VISHWAKARMA YOJNA: VIII

AN APPROACH TOWARDS RURBANISATION

Ampad Village

Vadodara District

PREPARED BY

STUDENT NAME	BRANCH NAME	ENROLLMENT NO
Pandya Vimal	Civil Engineering	170503106025
Pandey Rishabh	Civil Engineering	180503106017

SIGMA INSTITUTE OF ENGINEERING

NODAL OFFICER:
ASST. PROF. VIKRANT PRAJAPATI

YEAR: 2020-21

GUJARAT TECHNOLOGICAL UNIVERSITY
Chandkheda, Ahmedabad– 382424 Gujarat

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CERTIFICATE

This is to certify that the following students of Degree Engineering successfully submitted

Detail Project Report for

Ampad Village, Vadodara District

Under

Vishwakarma Yojana: Phase-VIII

In partial fulfillment of the project offered by

GUJARAT TECHNOLOGICAL UNIVERSITY, CHANDKHEDA

During the academic year 2020-21.

This project work has been carried out by them under our supervision and guidance.

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Date of Report Submission

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SIGMA INSTITUTE OF ENGINEERING

ABSTRACT

The government of Gujarat has launch Vishwakarma yojana (scheme) for development of villages by identifying requirements of villages. Under this scheme villages are surveyed, and this project was identified and selected for implementation.

Ampad is a medium size village located in Vadodara Taluka of Vadodara district, Gujarat Pin code: 391101 with total 296 families residing. The Ampad village has population of 1610 of which 827 are males while 783 are females as per Population Census 2011. Mahapura, Raypura, Sindhrot, Jaspur, Sevasi are the nearby Localities to Ampad.

Ampad is a beautiful village, road, structural look of village, primary education facility, internal cooperation between villagers is very good, management of village doing their job very peacefully and patiently

In Ampad village we are going to implement design of Lake beautification, Panchayat office, Public toilet, Public garden and Health center.

After the implementation of proposed design aesthetic view of village will be beautiful and designs also helpful to the village dwellers.

Key Words: Rural development, village condition, village condition

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We express our sincere thanks to **Commissionerate of Technical Education, Gujarat State** for appreciating and acknowledging our work.

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CONTENT

Chapter 1: Ideal village visit from District of Gujarat State

1.1 Background & Study Area Location

- A gathering of houses and related structures, bigger than a village and littler than a town, arranged in country territory is named as town. Dharmaj is the town, which is arranged in Borsad taluka, Anand area.
- The historical backdrop of the settlement of Dharmaj is old. Individuals state it was settled by Dharma Rabari in 1130 AD. He used to take his dairy animals there for touching. He had discovered a Shiva Ling while delving in the remote territory of wilderness. Along these lines, perceived as the author of this locale, the town of Dharmaj was named after Dharma Rabari.
- The Dharmaj town is between 22' North longitudes to 25' North longitudes and 72' east scopes to 78' east scopes. It is at the heighted of just about 84' Foot from the ocean Average downpour fall is 27" to 32"inches.

1.2 Concept: Ideal Village, Normal Village

- A town is shaped, represented and kept up by its locals. The People of a perfect town ought to be straightforward and per severing.
- They ought to have characteristics like resilience to each confidence and religion, fraternity and solidarity.
- They should live like an enormous family and help one another in the hour of need. They ought to have a feeling of order and a soul of administration previously self.
- They should keep themselves side by side of the happenings of the town as well as of the nation and the world all in all. They should dependably be dynamic and lively. Basic living also, high reasoning ought to be their proverb throughout everyday life.

1.2.1 Objectives

- To provide global means to local needs
- To use the potential of IT to maximize the benefits for the rural community.
- Improving the literacy rate of the villages by reducing the dropout rate.

1.2.2 Case Study of Ideal village of India/Gujarat

There is a village in the Country India, State Gujarat, District -Anand, Taluka - Petlad situated on the Tarapur-Borsad road by the name "DHARMAJ". Is" PARIS‖ of the Charotar.

Civil Case Study of any other state Ideal Village Piplantri, Rajasthan

For the last several years, the Piplantri village panchayat has been saving girl children and increasing the green cover in and around it at the same time. Here, villagers' plant 111 trees every time a girl is born, and the community ensures these trees survive, attaining fruition as the girls grow up. They also set up a fixed deposit for the girls and make their parents sign an affidavit that ensures their education. Over the last nine years, people here have managed to plant over a quarter million trees on the village‘s grazing commons. To prevent these trees from being infested with termite, the residents planted

over 2.5 million aloevera plants around them. Now, these trees, especially the aloevera, are a source of livelihood for several residents.

Civil Case Study of any other Outside Countries of Village/city

Smart housing in Hamburg

Hamburg is home to the "first building in the world to have a bioreactor facade". In a fantastic piece of innovation, the cladding of the house provides aesthetic insulation and protection from the elements whilst cultivating algae that can be turned into huge levels of biogas.

Biogas can be used as a fuel or for heating purposes such as for cooking. It can also be stored in a gas engine that converts it into electricity and heat, amongst many other uses. Light, water and C02 are provided and the algae get to work photosynthesizing (a process you can watch from your balcony) and therefore helping to eventually create five times the amount of biogas that can be derived from soil-based plants. The light that the algae do not use is captured by solar panels and converted into heat which is either used or stored for use by the properties.

1.2.3 The various exposure of amodel

Various infrastructures are stands in village,

1)Panchayat Building

2) Swatchh Bharat Abhiyan

3) High school

4) C. J. Municipal park

5) Pond

6) Poultry Farm

Fig no 1

1.2.4 Ancient History Civil concept about Indian Village/other countries perspective about village and its new development

- **WALKABILITY**

→ Community is not designed around cars.
→ No wide roads for cars are within the village.
→ Safer for children and everyone.
→ Villagers can access (rent or borrow) cars at the perimeter.
→ Access to what villager's need is within walking distance.
→ Electric personal vehicles or carts are available for those with limited mobility.

- **SELF-GOVERNANCE**

→ There is a self-governing process that includes input from all residents.
→ A proven model for solving problems is practiced and implemented.

- **FOOD**

→ Food for villagers is grown or produced within the village with the intention of exploring ways to become food self-sufficient.
→ The village aims to grow more food than the village requires, selling or sharing with neighboring communities.
→ The need for food transport is removed or reduced.
→ New technologies for food production are used.
→ Agriculture includes all season indoor & vertical gardening, permaculture, aquaponics.

- **ENERGY**

→ The village generates its own electricity, heating & cooling, and water sources Solar, wind, geothermal, water movement and other innovative renewable energy sources are used.
→ Insulation and conservation are emphasized.

- **PERIMETER**

→ Land is owned by the community.
→ Has a geographic boundary.
→ Has a calculated capacity.
→ Everyone in the village is looked after.

- **WORK (ECONOMICSYSTEM)**

→ Local investment is used to fund business development

→ Workers 'Self Directed Enterprises (WSDE's) are created by villagers to serve the village and the surrounding community.

→ Village businesses generate income for villagers and for village maintenance and improvement.

→ The use of money for exchange within the village eventually becomes unnecessary.

Resources available in Ideal Village

All type of required resources is available for the development of rural areas from Govt. which are as grant for road development, grant for school, grant for salary of panchayat staff etc.

1.3 Detail study (socio economic, physical, demographic and infrastructure details) of ideal village

- ### Physical & Demographical Growth

Dharmaj is a large village located in Petlad of Anand district, Gujarat with total 2232 families residing. The Dharmaj village has population of 10429 of which 5380 are males while 5049 are females as per Population Census2011.

- ### Economic profile

Dharmaj village has more than 10000 populations. Economic condition of village is good as compare to other villages of India. The income of panchayat of last three tears is about more than 2carores. Major occupation in village is from farming, poultry farm, and factory works.

- ### Social scenario/profile

In Dharmaj village population of children with age 0-6 is 1001 which makes up 9.60 % of total population of village. Average Sex Ratio of Dharmaj village is 938 which is higher than Gujarat state average of 919. Child Sex Ratio for the Dharmaj as per census is 797, lower than Gujarat average of 890. Dharmaj village has higher literacy rate compared to Gujarat. In 2011, literacy rate of Dharmaj village was 87.43 % compared to 78.03 % of Gujarat. In Dharmaj Male literacy stands at 91.96 % while female literacy rate was 82.69%

- ### Infrastructures facilities (All Types)

There are many types of infrastructural facilities available in Dharmaj, which are shown as under.

Table no 1.1

Health facilities	Education facilities

– Jalaram eye hospital – Jalaram dental hospital – Shardaprasuti ghruh – Urmila ortho hospital – C.H.C hospital – C.J. fijiwala T.B.hospital – S.S. cancer hospital – Dental hospital	– Anganwadi-20 – Primary and secondaryschools-5 – Higher secondary schools- – ITI college – Engineeringcollage-1(IIET)
Socio-culture facilities	**Other facilities**
– Community hall withouttv-1 – Public library-2 – Public garden – Village pond – Assembly polling station – Birth and death registration office	– Post-office – STD booth – Panchayat building – Medical shop – Bank & ATM-14 – Milk Co-operative society – Small scaleindustries-28 – Internet cafe

Initiatives in village development by local self-government

The development of the village depends on its people and the gram panchayat office. If the person residing in the village has the affection for the village that this is my village some success is also the success of village then there is no doubt & no limit in the development of the village. The village's development is seen in front of as by the working ability and the vision of the gram panchayat, which is seen by the dharmaj panchayat

1.4 SWOT analysis of ideal village

Table no 1.2

Strenght	**Weakness**
•Lower Taxes •Industrial Land for Growth •Service from Police and Fire •Undeveloped Land •Education system •Swachh Bharat Mission •Rural Living	•Poor tax base •Industrial Land for Growth •Too Much Regulation •Not adopting new schemes. •Using old technologies for crop •Lack of employment opportunities

Opportunity	Threats
•Connect village by Rail and Bus •Conserve build heritage •Increase Agriculture •Co-ordinate needs with available •Consumers live in rural India •Protect the Natural Environment	•Village not Aggressive in attracting new •Poor Media relations affect business •Staff recruitment •Expansion •Lack of Communication in surrounding communities. •Environment development •Social development

1.5 Future prospects of Development of the Ideal Village

- Adopting some new technologies for various activities of Agriculture purposes.
- Renewable Energy use like solar energy and Biomass energy for Energy Efficient Electricity.
- Adopting new system for Solar Street lightning and roof top solar generation.
- New design of parks.
- Increasing in Swatchh bharat mission- clean village clean India.

1.6 Benefits of the visits of Ideal Village

- Got proper information of various data from Gram Panchayat.
- Communicate with the Village people, know the details about existing facilities.
- Physical, economic and social profile of current scenario of village.

1.7 Civil aspect required in Ideal Village

There is main three things are required for living life is food, cloth, and house. These things must be adequate in village, there are 5 nos. of water tanks each capacity of more than 50000lit. and underground of 50000lit. are available for 10000 people in village.

A village road must be well developed as urban road for good transportation and better appearance, and a linkage to any urban area is also needed for goods supply and for business purposes. Electricity is the main requirement of any person or any living things. A 24*7 hours electricity supplied to the village by MGVCL.

Sanitation is a very serious matter in India or any other country, an individual toilet block is required for now days, in dharmaj all houses were have their own toilet blocks and three public blocks. Renewable energy source is natural gift of village, go bar gas plant is also situated in dharmaj.

Civil Benefit available in the Ideal Village

- In villages the environment is peaceful. Villagers live a simple life.
- Villagers get abundant opportunity to enjoy the beautiful gifts of nature.
- People living in villages breathe pure air.
- There are many opportunities for business development.
- People living in villages are healthier, active, and simpler in habits than the people living in towns.
- The quiet and peace of village life give opportunities for thought, study, and mental development, which are impossible in town life.
- The abundance on pine air, and the healthier conditions of life, also establishes physical health and strength as town life can never do.

Chapter 2: Maniram Phalidara Literature Review

2.1. Introduction: Real Urban & Rural Village concept

Urban:
An urban area is a region surrounding a city. Most inhabitants of urban areas have nonagricultural works. Urban areas are very developed, meaning there is a density of human Structures such as houses, commercial roads, bridges, railway.

Table no.2.1

City	State	Population
Mumbai	Maharashtra	**12,442,373**
Delhi	Delhi	**11,034,555**
Bangalore	Karnataka	**8,443,675**
Hyderabad	Andhra Pradesh	**6,731,790**
Ahmedabad	**Gujarat**	**5,577,940**

Rural:
Rural area is located outside of towns and cities. Rural areas have low population density and small settlements. Agricultural areas are commonly rural areas. More than 50 % People of rural area are depending on agricultural activities. According to national portal of India, the rural sector means any place which meets the following criteria,
− A population less than 5000. Density of population less than 400 per sq. km and more than 25% of the male working population is engaged in agricultural pursuits.

2.2 Importance of the rural development

The aim objectives composed by the government in the sixth five-year plan for rural development are.

- To improve productivity and the wages of rural people.
- To guarantee increased and quick employment possibilities.
- To demolish unemployment and a notable decline in underemployment.
- To guarantee to increase the standard of living of the underprivileged population.
- To provide the basic needs – e.g., elementary education, health care, clean drinking water, and, rural roads, etc.

2.3 Ancient Villages / Different Definition of: Rural Urban Villages.

Village is a clustered human settlement or community, larger than a hamlet but smaller than a town, with a population ranging from a few hundred to a few thousand. Through villages are often located in rural areas, the term urban villages are also applied to certain urban neighborhoods. Sparsely populated area outside of a city or town or a designated commercial, industrial or residential center. Rural area characterized by farms, vegetation, and open spaces. Rural community is an area which is under development and not civilized as urban area. Rural area is sparsely populated because many

people leave rural areas and settles in the urban areas for more facilities. RBI defines rural areas with a population of less than 49000 (tier -3 to tier-6 cities). It is generally said that the rural areas house up to 70% of India ‘s population.

Guidelines for identifying rural and urban areas according to RBI

→ **Rural:** population less than 10,000,
→ **Semi-urban:** 10,000 and above and less than 1 lakh.
→ **Urban:** 1 lakh and above and less than 10 lakhs.

2.4& 2.5Scenario: Rural / Urban India & Gujarat as per Census 2011 and latest population Growth.

Table no. 2.2

	2001	2011	Difference
India	102.9	121.0	**18.1**
Rural	74.3	83.3	**9.0**
Urban	**28.6**	**37.7**	**9.1**

For the first time since Independence, the absolute increase in population is more in urban areas that in rural areas.

→ Rural – Urban distribution: 68.84% &31.16%.
→ Level of urbanization increased from 27.81% in 2001 Census to 31.16% in 2011Census.
→ The proportion of rural population declined from 72.19% to68.84.

2.6Rural Development Issues- Concerns- Measures

2.6.1Various Measures for Rural Development.

Rural development is the process of improving the quality of life and economic wellbeing of people living in rural areas. Measures are:

Improving the competitiveness of agricultural and forestry sector, Improving the environment and the countryside, Quality of life in rural areas and diversification of the rural economy, The leader axis.

Various schemes by government are:

→ Integrated rural development programme.
→ Training Rural Youth for Self-Employment.
→ Development of Women and Children in Rural Areas.
→ Prime Minister‘s Rozgar Yojana
→ National Rural Employment Programme.
→ Rural Landless Employment Guarantee Programme.
→ Jawahar Rozgar Yojana.
→ Employment Assurance Scheme.
→ Million Well Scheme.

2.6.2 Crime Free / Dispute free.

Crimes such as homicide, rape, and assault are more likely to occur among acquaintances than is true in urban areas. Crimes unique to the rural environment include agricultural crimes (e.g., thefts of crop and timber) and wildlife crimes (e.g., poaching). Many issues relevant to rural policing, such as gang activity, do not neatly fit these categories, or are emerging issues that have not been explored in the

professional literature. What follows is a sampling of these topics, often based on reports in the popular press. Because many of these discussions are based on anecdotal evidence, the information should be interpreted with caution. However, these are areas that merit further research and may be of increasing concern to rural police.

2.6.3 Resources.

The structural changes in the distribution of the country ‘s population, from rural to urban have implications for both locations. On the one hand increasing level of urbanization particularly of the main cities and larger towns will result in rural depopulation and socio-economic decline of our traditional countryside. It is increasingly obvious however that with economic growth there are serious negative effects on the environment on which much of the rural economy depends such effects are urban expansion, particularly urban generated housing, increasing leisure and recreation pressures, water and soil pollution etc.

2.6.4 Health / Hygiene.

There is a widely prevalent myth that people in rural areas have small health problems that can be addressed by a minimally staffed and equipped health center. Despite the substantial differences between developing and developed countries, the key themes in rural health are the same around the world.

Access is the major rural health issue. Even in countries where the majority of the population lives in rural areas, the resources are concentrated in the cities. All countries have difficulties with transport and communication, and they all face the challenge of shortages of doctors and other health professionals in rural and remote areas.

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2.6.5. Women Empowerment.

Women empowerment is to motivate and develops women by promoting their participation in all areas and sectors, to build stronger economies, improve their quality of life and bring gender equality with equal number of opportunities. It is to help them to take their own decisions by breaking all their personal rules that the society and their family has created for them. It is to make them independent in all aspects from thought, mind, decision, and wealth and to bring quality in society empowering women is the main motto of the development department because an empowered mother with child makes the bright future of any nation. Seven Indian government schemes for women empowerment are:

- **Mahila Ehaat**
- **Betibachao Betipadhao**
- **One stop center scheme**
- **Working women hostels**
- **Swadhargreh, Step**
- **Nari shakti purushkars**

2.6.6. Any Other.

Domestic violence

Rates of domestic and family violence are higher in regional, rural and remote areas. Geographical and social structures in these communities, as well as unique social values and norms, result in specific experiences of domestic and family violence. These issues also affect responses to domestic and family violence in non-urban communities, and women's ability to seek help and access services. Poor understanding of domestic and family violence by health, social and legal services in regional, rural and remote communities has been identified as a significant issue for survivors of domestic and family violence. Women in regional, rural and remote areas are more likely than women in urban areas to experience domestic and family violence. Women living in regional, rural and remote areas who experience domestic and family violence face specific issues related to their geographical location and the cultural and social characteristics of living in small communities. Fear of stigma, shame, community gossip, and a lack of perpetrator accountability deter women from seeking help.

2.7 Various infrastructure guidelines/Norms for Villages for the provisions of different infrastructure facilities.

The Eleventh Plan is being launched at a time when the country is undergoing of major economic and technological changes based on the policy of liberalization, globalization and privatization while ensuring the development of rural and backward classes**.** In the changed scenario, the educated human resource, equipped with latest knowledge and skills will be in greater demand for participation in the social and economic development of the country. This, in turn, will build up pressure on universities and colleges for providing trained human resource while ensuring the quality and relevance of education. In this, information technology is contributing to this change in a big way and will have a major impact on the structure, management and mode of delivery of the education system.

In the XI Plan, greater emphasis has been placed on reduction of disparities between urban/rural and developed / underdeveloped areas by enhancing support to universities located in backward and rural areas. However, this support must be supplemented by the proper utilization of available resources in a planned manner and by maximizing the co-operative use of resources by introducing new departments in accordance with the societal needs of the area where the University is situated. There is also a need to increase the access and equity for marginalized groups like women, Scheduled Castes, Scheduled Tribes, OBC (non-creamy layer), minorities groups in order to make higher education inclusive.

Majority of universities, although facing serious problems in their development, have neither a reliable information base nor a mechanism for analysis. Many universities lack information for planning a decision-making process. It is therefore, warranted that universities must attach greater importance to setting up of management information system (MIS) in more meaningful manner to ensure efficient and effective academic, administrative and financial management which is relevant to the needs of the students and the country for its development.

OBJECTIVES

The objective of Development Assistance Scheme is to improve the infrastructure and basic facilities in Universities to help them achieve at least the threshold level and promote enhancement of quality.

ELIGIBILITY/ TARGET

The UGC provides general development assistance to all eligible Central Universities, identified Deemed Universities, and State Universities which are included under Section 2(f) and 12 (B) of the UGC Act, within the framework of norms and broad outlays specified by the UGC.

2.9 Other Projects / Schemes of Gujarat / Indian government

ILO-PMGSY Rural Road Project

For building rural roads, the implementation of Pradhan Mantri Gram Sadak Yojana (PMGSY) launched since December 2000 has revolutionized the system of planning of road network for each District in due consultation with the Panchayati Raj Institutions (PRIs), Members of Legislative Assembly (MLAs) and Members of Parliament (MPs) and creating well engineered assets. The states are following similar standards for their won non-PMGSY rural roads. However, maintenance of these roads on a timely and regular basis continues to be an area of concern. of rural roads maintenance to the Panchayati Raj Institutions (PRIs). To quote "steadily move towards devolving maintenance responsibility of rural roads to PRIs along with funds and functionaries together with the needed technical support. Start on this with undertaking pilots for routine maintenance of non-core rural roads with the joint effort of the PIU of the road agency and the relevant block/gram panchayat The Guidance Note on Maintenance Policy for Rural Roads circulated to the states by the Ministry of Rural Development (MORD) has also advocated that one of the policy actions to be adopted by the state governments should be entrustment".

Chapter 3: Smart (Cities &Village) Concept idea and its visit

3.1. Introduction: Concepts, Definitions and practices

3.1.1 Concepts

Smart cities use data and technology to create efficiencies, improve sustainability, create economic development, and enhance quality of life factors for people living and working in the city. It also means that the city has a smarter energy infrastructure.

3.1.2 Definitions

A smart city is a designation given to a city that incorporates information and communication technologies (ICT) to enhance the quality and performance of urban services such as energy, transportation and utilities in order to reduce resource consumption, wastages and overall costs.

Table no-3.1

S	Social, Skilled and Simple	Zero Tolerance for Caste and Creed or better no caste & creed and no discrimination on Gender and Religion Everyone is Literate and skilled Simple living and high thinking
M	Moral, Methodical and Modern	Moral values of Gandhi, Swami Vivekananda etc. Methodical using Total Literacy and latest techniques Modern like cities
A	Aware, Adaptive and Adjusting	Highest level of awareness on global social & economic issues Adaptive and adjusting to fast changing environments
R	Responsive and Ready	Responsive to collective wisdom, cooperative movement & larger social issues Ready to generate own resources for self-sufficiency and self-reliance
T	Techno-Savvy and Transparent	Techno-savvy for IT and Mobile usage Transparent in harmonic relations and delivery of services

3.1.3. Practices (Civil)

Geographical area: the name of the area where the project takes place.

Demonstration area: size of the area affected by the high-efficient interventions. When the interventions concern only buildings, this area corresponds to the sum of the newly constructed and/or renovated buildings. In the case of a city-level intervention, the demonstration area refers to the total

estimated area affected, which includes the area of the buildings plus the area served by the mobility interventions.

Population in the area: Population that is directly affected by the project actions. As before, when the actions concern only buildings, this number corresponds to the occupants of newly constructed and/or renovated buildings. In the case of a city-level action, the population in the area refers to the total estimated inhabitants affected by the energy, mobility and transport.

3.1.4. Practices (Any Other)

Final energy savings: The yearly reduction of the delivered energy to end users in order to provide desired services (e.g., number of travels or comfort levels within a building) after the interventions carried out within the project. The savings take into consideration the energy consumption from the reference situation (according to the normative or to business as usual). These savings are calculated as an addition of the thermal (heating or cooling) energy and electricity in the whole demo site (lighting and appliances, e-mobility) to consider all savings.

Primary energy savings: Primary energy is, raw energy before any conversion, which is saved thanks to the interventions carried out within the whole project. It is calculated according to the primary energy factors either reported by the project or given by the relevant literature.

CO2 reduction: this KPI indicates the tones of CO2 that are saved yearly thanks to the interventions carried out within the project. It is calculated according to the CO2 factors either reported by the project or given by the relevant literature.

3.2 Vision- Goals, Standards and Performance Measurement Indicators

3.2.1 Vision

- Urban Automation
- Connected Vehicles
- Intelligent, Sensor-Based Infrastructure
- Urban Analytics
- User-Focused Mobility Services and Choices
- Urban Delivery and Logistics Strategic Business Models and Partnering Opportunities
- Smart Grid, Roadway Electrification, and Electric Vehicles
- Connected, Involved Citizens
- Architecture and Standards
- Low-Cost, Efficient, Secure, and Resilient Information and Communications Technology

Goals

- Determine which technologies, strategies, applications, and institutional arrangements demonstrate the most potential to address and mitigate, if not solve, transportation challenges identified within a city.
- Support and encourage cities to take the evolutionary and revolutionary steps to integrate advanced technologies – including connected and automated vehicle technologies – into the management and operations of the city
- Demonstrate, quantify, and evaluate the impact of these advanced technologies, strategies, and applications towards improved safety, efficiency, and sustainable movement of people and goods.
- Examine the technical, policy, and institutional mechanisms needed for realizing the potential of these strategies and applications – including identifying technical and policy gaps and issues – and work with partners to address them.

3.2.2 Standards

→ Effective governance and efficient delivery of services,

→ International and Local targets, benchmarking and planning,

→ Informed decision making and policy formulation,

→ Leverage for funding and recognition in international entities,

→ Transparency and open data for investment attractiveness,

→ Building core knowledge for city decision-making and enable comparative insight. There are also some standards regarding smart city development that preferred during designing of smart city,

- → Economy
- → Education
- → Environment
- → Energy
- → Finance
- → Fire and Emergency Responses
- → Governance
- → Health
- → Safety
- → Solid Waste
- → Telecommunication and innovation
- → Transportation
- → Urban Planning
- → Wastewater
- → Water and Sanitation
- → Shelter
- → Recreation

3.2.3. Smart Cities Performance Measurement Indicators

The CITY keys performance measurement framework enables project and city level assessments. The framework is structured according to the categories of People, Planet, Prosperity, Governance and Propagation. It contains both concrete output indicators (e.g., number of open data sets) that enable measuring the progress on short term and impact indicators (e.g., reduced energy consumption) that can be either estimated in the beginning of a project through simulation or monitored on a longer time scale (after the implementation of the project).

3.3 Technological Options

- Smart energy
- Smart mobility
- Smart infrastructure
- Smart public services
- Smart care

3.4 Road Map & Safeguard

Smart Maps capture abroad range of detailed data, such as roads (with details including lanes, speed limits, and turn restrictions), shops, (types, user ratings), and other information (bike and transit routes, building shapes, etc.) Smart Maps are designed so that users can quickly and intuitively interact with them despite having virtually no training, ensuring that information reaches the widest possible audience. Smart Maps are built to update quickly and correctly as cities change and evolve.

For example, Lusail City in Qatar, Masdar City in the UAE, and Songdo in South Korea are all making digital technology, networks, and the central part of how they operate and interact with citizens. By contrast, existing or brownfield metropolitan areas face clear challenges in moving up the ICT

Maturity ladder, as they need to modernize their existing infrastructure with embedded sensors and control systems and retrofit old buildings a complicated and expensive process.

3.5 Issues & Challenges

India has seen massive growth in its urban population in the recent decades. Government and policy makers are facing challenges such as increase in urban population from rural areas and huge gaps in infrastructure. Smart city would be a city with facilities like smart people, smart technology, smart energy, smart transportation, smart IT and communication and above all smart governance.

3.6 Smart Infrastructure

Smart infrastructure provides the foundation for all of the key themes related to a smart city, including smart people, smart mobility, smart economy, smart living, smart governance and smart environment. The core characteristic that underlies most of these components is that they are connected and that they generate data, which may be used intelligently to ensure the optimal use of resources and improve performance. This section introduces some key components of smart city infrastructure and concludes by highlighting the need for an integrated approach in dealing with such infrastructure. Cities will be able to plan better with a smart city's ability to analyze large amounts of data. This will allow for pro-active maintenance and better planning for future demand. Being able to test for lead content in water in real time when the data shows a problem is emerging could prevent public health issues. Having a smart infrastructure means that a city can move forward with other technologies and use the data collected to make meaningful changes in future city plans.

3.7 Cyber Security

Smart IoT devices

One of the key components that tie everything together in a smart city is IoT devices. As cities move from millions to billions and then trillions of devices transmitting usable and potentially unusable information, bandwidth efficiency and capacity could be challenged. Short range notification that a user-selected need can be fulfilled nearby, whether it is the location of a subway station or a service, provides convenience without tying up some of the bandwidth of the carrier data networks. Perhaps this will have the side benefit of a reduction in the number of signs and therefore the visual clutter that they cause on our city streets.

3.8 Retrofitting – redevelopment -Greenfield Development district cooling

In view of the enormous social and environmental changes at the global level, more and more cities worldwide have directed their development strategies towards smart policies aimed at sustainable mobility, energy upgrading of the building stock, increase of energy production from renewable sources, improvement of waste management and implementation of ICT infrastructures. The goal is to turn into Smart Cities, able to improve the quality of life of their inhabitants by offering a lasting opportunity for cultural, economic and social growth within a healthy, safe, stimulating and dynamic environment. After an overview of the role of cities in climate changes and environmental pollution worldwide, the article provides an up-to-date definition of Smart City and of its main expected features, focusing on technology innovation, smart governance and main financing and support programs. An analysis of the most interesting initiatives at the international level pursued by cities investigating the three main areas of Green Buildings, Smart Grid-Smart lighting, and Smart mobility is given, with the objective to offer a broad reference for the identification of development sustainable plans and programs at the urban level within the current legislative framework

Cooling

District cooling (with the focus on demand issues) covers the generation and distribution of thermal energy in district networks. Smart district cooling grids aim to improve the management of energy demand. Such networks are optimized through the use of new technologies, including heat meters and heat substations (heat exchangers). New energy control functions of substations include monitoring and control via the internet or digital radio. At the consumer end, in hot water and radiator systems, new devices such as variable-speed radiator pumps may be required. These systems, supplying predominantly residential buildings and districts, are able to de-couple fluctuations in the heat demand of buildings from the network conditions – in other words, they smooth demand peaks – without perceptible changes in comfort. This allows the network's heat demand to be stabilized, energy efficiency to be improved, and heat (or cooling) losses in the supply network to be reduced. The first smart district heating grids equipped with these smart heats. exchangers and smart meters have already been implemented in Sweden, Denmark and Germany, predominantly in the residential sector. Further potential could be expected in the future during the continuous refurbishment process of the building stock and appending infrastructure. Smart district heating and cooling grid deployment is integrated with urban planning.

3.9 Strategic options for fast Development

Retrofitting will introduce planning in an existing built-up area to achieve smart city objectives, along with other objectives, to make the existing area more efficient and livable. In retrofitting, an area

consisting of more than 500 acres will be identified by the city in consultation with citizens. Depending on the existing level of infrastructure services in the identified area and the vision of the residents, the cities will prepare a strategy to become smart. Since existing structures are largely to remain intact in this model, it is expected that more intensive infrastructure service levels and a large number of smart applications will be packed into the retrofitted smart city. This strategy may also be completed in a shorter time frame, leading to its replication in another part of the city. more intensive infrastructure service levels and a large number of smart applications will be packed into the retrofitted smart city. This strategy may also be completed in a shorter time frame, leading to its replication in another part of the city.

3.10 India's Urban Water and Sanitation Challenges and roles of Indigenous Technologies

3.10.1 Urban Water and Sanitation Challenges

Water and sanitation are concurrent issues and influence each other in more ways than one. Nevertheless, they're marked with huge deficit both in terms of supply and management. Consequently, they pose one of the major challenges urban and peri-urban areas of India are faced with. Large-scale migration to cities is converting the erstwhile villages into disorganized urban sprawls which often remain outside the purview of urban planning or administration for a long time.

3.10.2 Role of Indigenous Technologies

Suggesting that India has to consider a development vision that is completely unique, a fanzine cited the absence of the mayoral system as the biggest drawback to local governance.
Speaking of the competitiveness among cities like London, Copenhagen, New York, Berlin and others in reducing their carbon footprint, he ascribed their success to "jumping over a generation of technologies".

3.11 Initiatives in village development by Local self-government

Gram Panchayat/ Taluka Panchayat/ Zilla Panchayat are gross root level institutions, basically these PRIs monitors and plans schemes, there is a well-developed strong network. Adequate and specific budget provisions need to be created under the provisions of the KPR Act, 2003 for various energy conservation initiatives, PRIs can make their own byelaws also. Capacity Development Programs are required on energy conservations for these PRIs GPs are licensing authorities for rural area they can impose/insist energy conservation requirements based on the local needs. GPs pay huge electricity bills to DISCOMs, these bills are mostly related to streetlights and water supply bills, 40% of energy can be saved in this area. There is an immediate need to replace the streetlights with efficient LED systems. There is a need to replace the old water pumps and motors with efficient systems.

3.12 Smart Initiatives by District Municipal Corporation

Smart Utilization of City's Potential for enhancing Quality of life for the citizens of Providing Equal Access to Best Quality Physical Infrastructure, Social Infrastructure and Mobility through leveraging state of the art technology; thus, making city a Futuristic Global city with focus on enhancing economy, protecting the ecology and preserving the identity & culture of the city".

3.13 Any Projects contributed working by Government / NGO / Other Digital Country concept

1. Digi Locker

The service was launched as an important facility to store crucial documents like Voter ID Card, Pan Card, BPL Card, Driving License, education certificates, etc. in the cloud.

Fig Digi Locker

2. E-Sign Framework

This initiative would enable users to digitally sign a document online using Aadhaar authentication

Fig E-Sign Framework

Fig Swatch Bharat Mission Mobile App

3. Swatch Bharat Mission Mobile App

The app will enable organizations and citizens to access information regarding the cleanliness drive and achieve the goals of the mission.

3.14 How to implement other Countries smart villages projects in Indian village context (Regarding Environment, Employment

1. Promoting mixed land use in area-based developments

   Planning for 'unplanned areas' containing a range of compatible activities and land uses close to one another in order to make land use more efficient. The states will enable some flexibility in land use and building byelaws to adapt to change.

2. Housing and inclusiveness

   Expand housing opportunities for all.

3. Creating walkable localities

   Reduce congestion, air pollution and resource depletion, boost local economy, promote interactions and ensure security. The road network is created or refurbished not only for vehicles and public transport, but also for pedestrians and cyclists, and necessary administrative services are offered within walking or cycling distance.

4. Preserving and developing open spaces

   Parks, playgrounds, and recreational spaces in order to enhance the quality of life of citizens, reduce the urban heat effects in areas and generally promote eco-balance.

5. Promoting a variety of transport options

   Transit oriented development (TOD), public transport and last mile para-transport connectivity.

Chapter 4: About Ampad

4.1. Introduction

4.1.1. About Ampad Village

Ampad village is located in Vadodara Tehsil of Vadodara district in Gujarat, India. It is situated 10km away from Vadodara, which is both district & sub-district headquarter of Ampad village. As per 2009 stats, Ampad village is also a gram panchayat. The total geographical area of village is 458.93 hectares. Ampad has a total population of 1,610 peoples (2011). There are about 296 houses in Ampad village. Padra is nearest town to Ampad which is approximately 7km away and Vadodara railway station near by 32km.

4.1.2. Justification/ need of the study

The rural economy is an example of an agrarian economy. Although farming and agriculture are one of the most important primary activities, the problem lies in the fact that the share in GDP of agriculture sector is on a constant decline. At the same time, about two-thirds of India‘s population depends on agriculture. As a result, the productivity is not up to the mark, with conditions only getting worse. Moreover, public investment declined since 1991 coupled with lack of adequate infrastructure, credit, transport, employment etc. Henceforth the agricultural output has grown at only 3.2% during 2007-2011. All these factors have been denting the process of development. Therefore, there is a need to focus on rural development and not just urban development. The primary area to improve should be providing employment in rural areas and improving the productivity of the agricultural sector.

4.1.3. Study Area (Broadly define).

A study area is geography for which data is analyzed in a report and/or map. Business Decision offers two ways to define study areas:

- → **Site-based study area:** A site-based report studies information the area around a site or point on the map. There are four methods available to study the area around a site.
- → **Overlapping rings:** information for up to three concentric rings around the site can be constructed at distances in miles that you select. Each concentric ring includes data from any inner ring.
- → **Donut rings:** information for up to three concentric circles around the site can be constructed at distances in miles that you select. Each donut ring does NOT include the data of any inner ring.
- → **Drive times:** information for up to three areas defined by the time it takes to drive from your site measured in minutes. This is a good tool for measuring distance by time and for judging how long it takes for customers to get your store.
- → **Hand-drawn shapes:** information for the area defined by a shape you draw on the map. This is a good tool for defining unique sales territories and service areas.
- → **Geographic unit-based Study:** A geographic-unit based report studies information in a defined area. Defined areas are Direct Market Area (DMA), Core Based Statistical Area (CBSA), county, place (city or census designated place), ZIP Code, Congressional District, County sub area, & census tract. You can choose up to three areas in one project to obtain side by side comparisons of each area. For example, you can select ZIP Codes 00001, 00002, and 00003. The reports will show a column for each ZIP Code and a single Standard Map with each the ZIP Code Alternatively, you can select an unlimited number of geographical units and combine them into one area and compare up to three of these areas. For example, you can combine data from four ZIP Codes into one set (ZIP Codes 00001, 00002, 00003, and 00004) and compare it to another multi-ZIP Code set (ZIP Codes 00005, 00006, and 00007 combined as a second area). The reports will show a column for

each combined ZIP Code area allowing for a side-by-side analysis. Two Standard Maps will need to be prepared, each showing the ZIP Codes that make up its area.

4.1.4. Objectives of the study

Often villages in our countries are not in sync with the urban areas because of bad connectivity. Eventually, this leads to segregation and a social divide between urban and rural areas. In essence, the infrastructure of rural areas should drastically improve. Even after so many years of Independence, stigmas like caste system still have a grip on rural people. Quality education can help in achieving the goal of eradication of such social evils. The dwindling literacy rates in rural India, especially for females, are a major matter of concern. There is a need for land and technical reforms. Modern technologies like organic farming should be incorporated to improve outputs and profits. Lastly, people should be given access to easy credit and loans by improving the banking system in rural areas. It can be easily concluded, that for the development of an economy in both rural and urban areas need to be focused upon. Rural areas need drastic changes in areas like infrastructure, credit availability, literacy, poverty eradication etc. The schemes that are already in place with the aim of rural development need a new outlook and proper updating. Accordingly, the government needs to act for the upliftment of rural India.

4.1.5. Scope of the Study.

Rural development is a dynamic process, which is mainly concerned with the rural areas. These include agricultural growth, putting up of economic and social infrastructure, fair wages as also housing and house sites for the landless, village planning, public health, education and functional literacy, communication etc. About three fourth of India ‘s population live in rural areas; thus, this study is needed to develop nation as whole. Nearly half of the country ‘s national income is derived from agriculture, which is major occupation of rural India.

- → Around seventy percent of Indian population gets employment through agriculture
- → Bulk of raw materials for industries comes from agriculture and rural sector
- → Increase in industrial population can be justified only in rural population motivation and increasing the purchasing power to buy industrial goods
- → Growing disparity between the urban elite and the rural poor can lead to political instability
- → The main objective of the study is to raise the economic and social level of the rural people
- → Development by Sustainable and Economical Planning and Designing
- → Development of resources for farmers
- → Development of different renewable sources for taking maximum advantage of energy sources like sun, wind, water etc
- → Construction of infrastructures
- → For maintenance of structures
- → For map preparation of village

4.1.6. Methodology Framework for development of village

- → Ideal village survey at Dharmaj village in borsad.
- → Data collection.
- → Gap analysis for facilities available as per ideal village norms & requirement.
- → Smart village visit, i.e Punsari.
- → Techno-economic survey of allotted village Ampad.

→ Meeting with Villagers, Sarpanch, Talati, TDO &DDO.
→ Consulting with all related to village and analyze problem faced by Ampad village.
→ Gap analysis of Ampad village.
→ SWOT analysis of Ampad village.
→ Finding best, economical & sustainable solution for problems as per UDPFI Guidelines.
→ Best Proposal Design for solving problem.
→ Detail progress report and detail design done in final project report.

4.1.7. Available Methodology for development of related to civil

More production, more employment more equitable distribution of income and emphasis on the rural poor. Local-level planning is then a tool to translate these objectives into concrete programme in a local area. The efficacy of local-level planning for rural development will depend on the extent of decentralization of decision-making, planning, administration and budgeting to the local level. A substantial measure of decentralization to the local levels in a country would necessarily involve the reinforcing of local level government and other development institutions. The adjustments needed, would vary significantly from country to country. Unless the functional aspects of rural development projects are completely delegated to the lower levels of government, problems would arise with regard to overlapping functions of central and local government departments. Almost unanimous on the need for strong planning and executive machinery for rural development at die local level. Local level planning has its great merit, when it is carried out within–manageable unit areas‖, as it would enable the identification of the basic inter-relations between the different components of rural development and help in evolving the most appropriate strategy suited to each area. At the same time, local-level management would provide the flexibility needed to modify programme, as conditions become better understood or as circumstances changes. Other advantages of local level planning for rural development are,

→ Ensure local participation and evoke local enthusiasm
→ Make local distribution of resources possible
→ Establish closer correspondence between the resource's endowment and potentials of an area and the contents and magnitude of development programme taken up there in
→ Establish greater complementarities between inter-dependent programme falling within the sphere of different departments
→ Obtain feed-back in terms of field level experiences for making the planning process at the other hierarchic levels more realistic and effective

4.2 Ampad Study Area Profile

4.2.1. Study Area Location. With brief history land use details

4.2.1.1 Study Area Location

Ampad village is located in Vadodara Tehsil of Vadodara district in Gujarat, India. It is situated 10km away from Vadodara.

Table no 4.1

Ampad village Location	
Latitude	**22° 00' 30.471''**

	N
Longitude	**73° 54' 09.067'' E**
District	**vadodara**
State	**Gujarat**
Zip code	**391101**
Taluko	**Vadodara**
Related sub office	**vadodaraS.O**
Related head office	**vadodaraH.O**

4.2.1.2 Land use details

Land use details:

In ampad, maximum percentage of area is covered by Agricultural area. So there is small amount of area for agricultural and residential. The Google map of the village is as shown below:

Table no- 4.1 Geographical area ofAmpad.

Sr. no	Description	Information/detail Land use in Hector
1	Area of village(Approx.) 	4.30
2	Forest area 	2.12
3	Agricultural area 	2.18
4	Residential area 	1.00

5	Other area 	1.12

4.2.2. Base Location map, Land Map, Gram Tal Map.

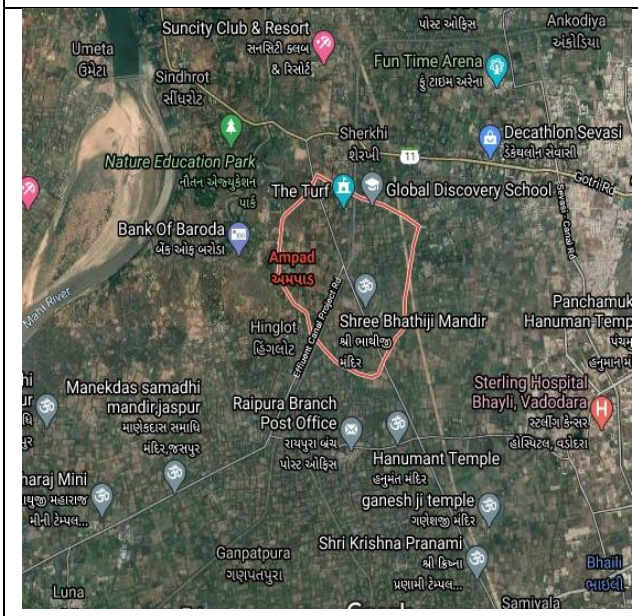
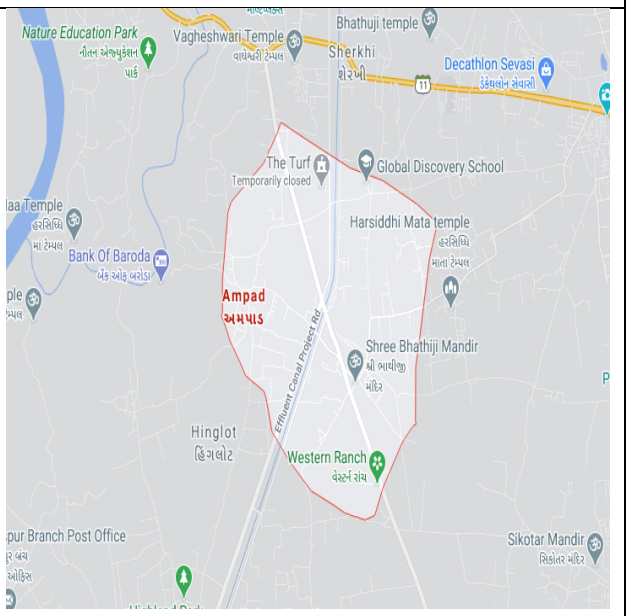
Land map detail	Base location map
	

Fig no- 4

4.2.3 Physical & Demographical Growth

Table no. 4.2.1

Sr.no	Census	Population	Male	Female
(i)	2001	1223	640	583
(ii)	2011	1610	821	783

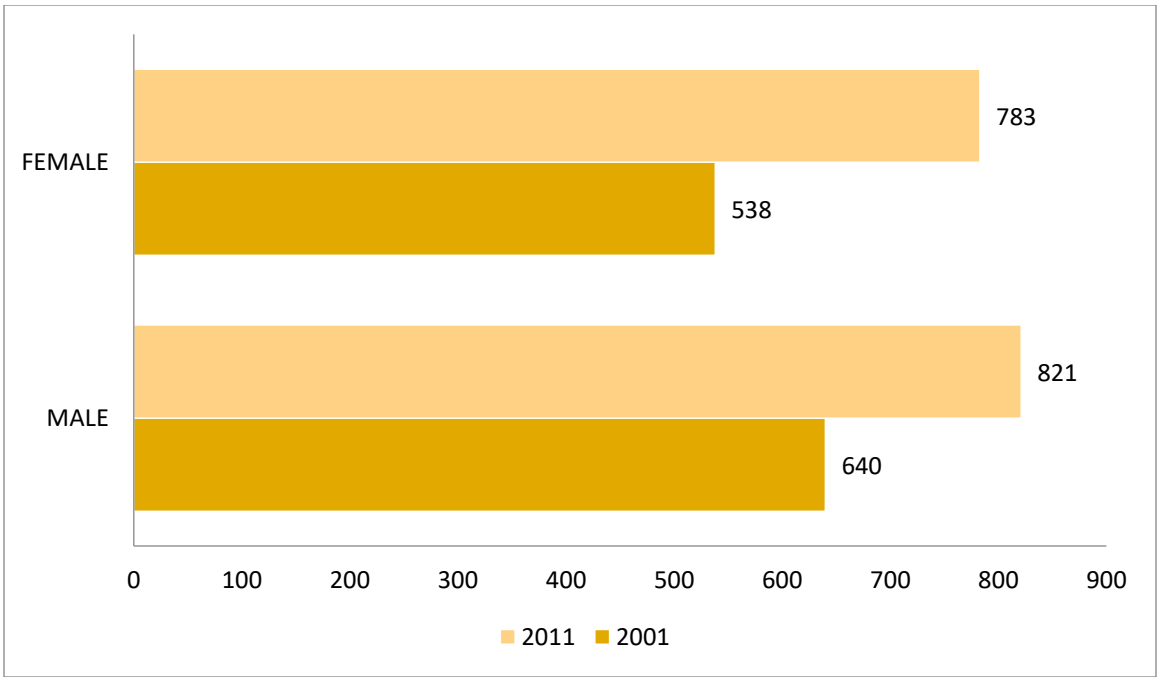


Fig no- 6

4.2.4. Economic generation profile / Banks

Ampad village population has more than 2 thousand population. The main occupation of the people in this village is farming. Majority of people live their life fully dependent on the farming. Some of the people are occupied as a labour in the village that is doing work in farms and some of are occupied in ONGC. In this village maximum amount of people are Lower Income groups (LIG).

4.2.5 Actual Problem faced by Villagers and smart solution

Ampad village, no facility of animal excreta due to this night urinal the foul gases and dirtiness are created in the road of village. during rainy season these excreta are flow through the village and create a various decease. for that problem we conclude a solution of bio gas plant and small-scale natural fertilizer storage. village also faced a drinking water problem, village have good drinking water distribution system but village have only 60000-liter water tank which are not enough for current population, according to techno survey and interaction with village people we know to the water are not sufficient for village.

4.2.6 Social scenario- Preservation of traditions, Festivals, Cuisine

People in the village live in Parmar, Patidar, solanki, Carpenter, Bania,, Potters, Rabari etc. The main occupation is farming. And supplementary occupation is pastoralism (pashupalan). And some of are occupied in private jobs. Education is not good in village. village basic crop are grown are cotton, Wheat and Pulses. people are also connected with another village and stay connected with culture. people are belonging to Hindu religion and celebrate all Hindu festival with good spirit like Diwali, Navratri, new year etc. Navratri festival is celebrated with a durga pooja. This 10-day celebration, people do Durga Pooja, and enjoy with music and play dandiya and Garba. Festival like Diwali, bhaiduj, vasant panchami, Holi, kevadi etc. all festival is celebrating in full spirit of god. this village

are concerned with fully Hindu religion people. People also celebrate a nation festival like Freedom Day, Gandhi Jayanti, etc. are celebrated.

4.2.7Migration Reasons / Trends

Following reason of people are migrant in urban area

1. Employment – Lack of Employment Leads to Migration of villages people
2. Marriage – Marriage Leads to movement of Family to cities for Living Standards And facilities
3. Education
4. Hospitals other Public Facilities

4.3 Data Collection of Ampad (Photograph/Graphs/Charts/Table)

4.3.1. Describe Methods for data collection.

Method used for data collection is one to one conversation with Sarpanch and village dwellers and some of the data are not accurate as because of village profile sheet is not available for that time and photos were taken with guidance of village dwellers.

4.3.2. Primary details of survey

Ampad is a village positioned in Block vadodara district in Gujarat. Located in rural area of vadodara district of Gujarat, it is one of the 30 villages of Vadodara Block of Anand district. As per the government records, the village has 70houses.

4.3.3 Average size of the House -Geo-Tagging of House

- **Average size of the House**

  Houses in village were mostly single stories and a part of were kutchha.


Fig no- 7

- **Geo-Tagging of House**
  Location of Ampad village is on Latitude: 22°3181733 N
  Longitude: 72°9107636 E

4.3.4 No of Human being in One House

The average no. of human being in one house is 4nos.

4.3.5. Material available locally in the village and material outsourced by the villagers

- In Ampad village most of the houses are made of cement concrete.
- Outsourced material used in village are paved blocks, stones used for gate.

4.3.6 Geographical Detail

- Table no 4.3

Sr. No.	Description	Information/Detail
1.	Area of Village (Approx.) (In Hector)Coordinates for Location:	**1683 ha.**
2.	Forest Area (In hect.)	**117 ha**
3.	Agricultural Land Area (In hect.)	**1093 ha**
4.	Residential Area (In hect.)	**420ha**
5.	**Other Area (In hect.)**	**53 ha(L.S.)**

4.3.7Demographical Detail

Sr No	Census	Population	Male (In Nos)	Female(In Nos)	Total No of house Holds
1	2011	1595	840	755	298

4.3.8Occupational Detail

Name of the Major Occupation Groups in Villages are Agriculture,Service Work, PrivateBusiness&Laborers.

4.3.9 Agricultural Details

Name of the Major Crop Grown in the Village are Wheat, CottonSeed, Pulses.

4.3.10Physical Infrastructure Facilities - Manufacturing HUB / Ware Houses

Area of nearby village is surrounded by various small as well as big manufacturing industries like

4.3.11Tourism development available in the village for attracting the tourist

No tourism in this village

4.4 Infrastructure Details (With Exiting Village Photograph)

4.4.1 Drinking Water / Water Management Facilities

For drinking Purpose one Over Head water tank and Sump is available. Some people also use hand pump for water purpose. But condition is, only 60000 lit elevated water tank available and current need is not fulfilled by that and there is also Lack of hand Pump. While Interacting Villagers we get to know they are getting water once in 2 to 3 days.

Fig no 7

4.4.2 Drainage Network / Sanitation Facilities

Village is having closed Drainage Lines and The condition of Drainage is medium. The village is not having any Facilities for Solid Waste management. Villagers used plastic containers to collect waste and dumped them in vicinity.

4.4.3 Transportation & Road Network

All the roads in the village are in Ok condition. There is good approach road available. Currently the widening of approach Road is going on in Ampad village. The Village is connected with Highway Road i.e. State Highway which is located in less then 5 km from village.

4.4.4 Housing condition

The Houses in Ampad Village are made of Brick, Sand, Cement, Concrete. The number of

Pucca houses are more than the Kutchcha houses. Most of houses are in good conditions. Some houses are even Double storey and well-constructed.

4.4.5 Social Infrastructure Facilities, Health , Education , Community Hall , Library

Health Facilities: There is one PHC Centre available in Ampad village.

Education system: There is 2 Aanganwadi in the and 1 primary school. For the higher study like collage, engineering collage are available near the village, it is Approximately 9 km away from this village.

Fig no 9

4.4.6 Existing Condition of Public Buildings & Maintenance of existing Public Infrastructures

In village existing public building like school, PHC are in good condition and they don't required maintenance. Anganwadi required maintenance as well as Post Office branch and panchayat required maintenance

Fig no 10

4.4.7 Technology Mobile/ WIFI / Internet Usage Details

In village 60 to 65 % use smart phone, among which 20 to 25% use a normal phone and rest of people are still having less knowledge of phone. Youth of Village have knowledge of internet and its usages.

4.4.8 Sports Activity as Gram Panchayat

No activity of sports is conducted by gram panchayat but School Conduct Sport Activities.

4.4.9 Socio-Cultural Facilities, Public Garden /Park/Playground /Pond/ Other Recreation Facilities

- Public Library: There is no Public Library in the village.
- Public Garden: There is no Public Garden in the village.
- Village Pond: There is two pond or lake in the village.
- Community Hall: There is one community Hall in the village.
- Irrigation Canal : Water Canal is Available for Agricultural Purpose
- Temples: In village at Present 3 temples are available and construction of one temple is in-progress.

4.4.10&4.4.11 Other Facilities(e.g. like foot path development-Smart toilets-Coin operated entry, self-cleansing, waterless, public building)

- There is one Panchayat Building in the village.
- There is no Bank in the village.
- There is one Milk Co-operative Society in the village.
- There is no any medical shop in the village.

4.6 Existing Institution like - Village Administration – Detail Profile

Rural Social Institutions, Social institution is the structure and machinery through which a human society organizes, directs and executes the multifarious activities required to satisfy human needs. When man relates himself with others he creates what have been described as forms or structures in order to enable him meet his needs and function in other ways of life. These forms constitute the framework, channels or means through which he functions in society. Thus, the man is creator of forms in society, the formulator of rules, regulations, procedures, and forms or behavior, is governed and controlled by them, in order to function effectively in fulfillment of needs. Social institutions have been created by man form social relationships in society to meet basic needs such as stability, law and order, clearly defined roles or authority and decision making.There are five major institutions in rural society. These institutions are present in all societies so there are called as a basic institutions.

→ **Family:** As an institution provides for care, protection and nature of children.
→ **Educational:** Institutional imparts knowledge, skills and society acceptable attitudes.
→ **Political:** Government Institution provide for law orders, settlement of disputes, administration affairs.
→ **Religious:** Institution prescribes prayers and worship as a part of relation with God.

→ **Economic (Occupation):** Institution provides basic physiological needs of the body- food, shelter and clothing. For this society provides farming and industry.

4.6.1. BachatMandali.

It is one type of bank which gives all the functions like bank, which store money from villagers or grant loan to the villagers.

4.6.2. DudhMandali.

There is a group of people in rural area which collect the milk and store it until the dairy van come for collect, dudhmandali does not only store milk it stores revenue of milk and other products which is given from dairy.

4.6.3. Mahila forum.

The Forum entrusts key responsibilities of the organization and its administration to poor women, by selecting and training internal cadres from neighborhood communities.

4.6.4 Plantation for the Air Pollution

In a village every year plantation program is arranged by many industrial group and panchayat.

4.6.5 Rain Water Harvesting - Waste Water Recycling

No facility of rain water harvesting in avillage.

4.6.6 Agricultural Development

The agriculture activities are supported by Canal irrigation.

Chapter 5: Technical Options with Case Studies

Case Study of Statue of unity

The **Statue of Unity** is a colossal statue of Indian statesman and independence activist Sardar Vallabhbhai Patel (1875– 1950) who was the first Home minister of independent India and the chief adherent of Mahatma Gandhi during the non-violent Indian Independence movement; highly respected for his leadership in uniting the 562 princely states of India to form the single Union of India. It is located in the state of Gujarat, India. It is the world's tallest statue with a height of 182 meters. It is located on a river island facing the Sardar Sarovar Dam on river Narmada in Kevadiya colony, 100 kilometers (62 mi) southeast of the city of Vadodara.

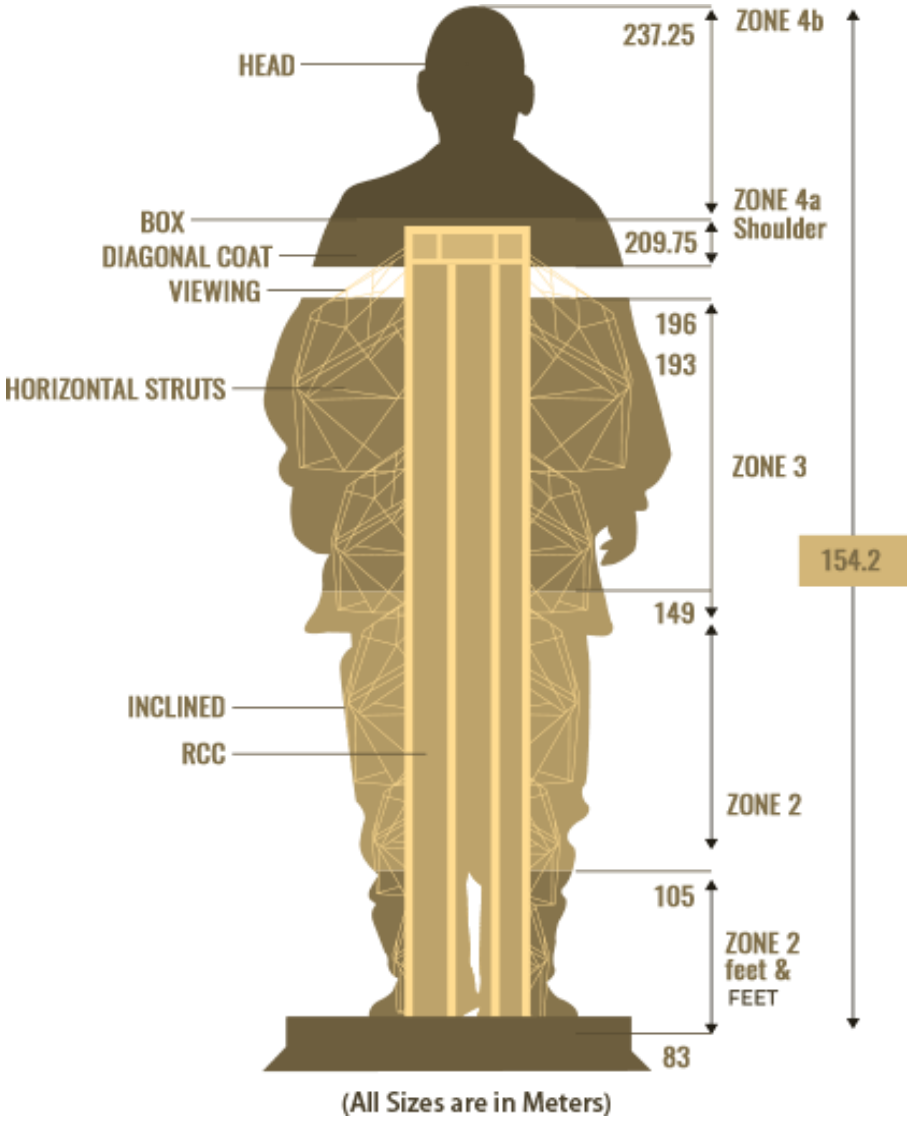


Fig no 11

Coordinates	21.8380°N 73.7191°E
Location	Kevadiya colony, Narmada district, Gujarat, India
Designer	Ram V. Sutar
Type	Statue
Material	Steel framing, reinforced by concrete and brasscoating, bronze cladding
Height	Statue: 182 metres (597 ft) Including base: 240 metres (790 ft)
Beginning date	31 October 2013
Completion date	30 October 2018
Opening date	31 October 2018
Dedicated to	Sardar Vallabhbhai Patel
Website	statueofunity.in

The project was first announced in 2010 and the construction of statue started in October 2013 by Larsen & Toubro, who received the contract for $2,989 crore (US$420 million) from Government of Gujarat. More than 92% of statue's cost is borne by state government of Gujarat. It was designed by Indian sculptor Ram V. Sutar, and was inaugurated by Indian Prime Minister Narendra Modi on 31 October 2018, the 143rd anniversary of Patel's birth.

History

Narendra Modi first announced the project to commemorate **Sardar Vallabhbhai** Patel on 7 October 2013 at a press conference to mark the beginning of his 10th year as The Chief minister of Gujarat. At the time, the project was dubbed, "Gujarat's tribute to the nation". A separate Society named Sardar Vallabhbhai Patel Rashtriya Ekta Trust (SVPRET) has been formed under the Chairmanship of Chief Minister, Government of Gujarat, to ensure seamless execution of the entire project. An outreach drive named the Statue of Unity Movement was started to support the construction of the statue. It helped collect the iron needed for the statue by asking farmers to donate their used farming instruments. By 2016, total 135 metric 46tili of scrap iron had been collected and about 109 tonnes of it was used to make the foundation of the statue after

processing. A marathon entitled Run For Unity was held on 15 December 2013 in Surat and in Vadodara in support of theproject.

Design and construction

Vallabhbhai Patel was one of the most prominent leaders of the Indian independence movement and responsible for the unification of 554 princely states to form the modern political boundary of India.

Design

Design and construction Vallabhbhai Patel was one of the most prominent leaders of the Indian independence movement and responsible for the unification of 554 princely states to form the modern political boundary of India. The statue depicts (VallabhbhaiPatel), prominent leaders of the Indian independence movement, the first Deputy Prime Minister of India, and responsible for the integration of hundreds of princely states into the modern Republic of India. After studying numerous statues of Patel across the country, a team of historians, artists, and academics chose to proceed with a design submitted by the Indian sculptor, Ram V. Sutar. The Statue of Unity is a much larger replica of a statue of the leader installed at Ahmedabad International Airport. Commenting on the design, Ram Sutar's son, Anil Sutar explains that "the expression, posture and pose justify the dignity, confidence, iron will as well as kindness that his personal exudes. The head is up, a shawl flung from shoulders and hands are on the side as if he is set to walk". Three models of the design measuring 3 feet (0.91 m), 18 feet (5.5 m), and 30 feet (9.1m) were initially created. Once the design of the largest model was approved, a detailed 3D-scan was produced which formed the basis for the bronze cladding cast in a foundry in China. Patel's dhoti-clad legs and the use of sandals for footwear rendered the design thinner at the base than at the top thereby affecting its stability. This was addressed by maintaining a slenderness ratio of 16:19 rather than the customary 8:14 ratio of other tall buildings. The statue is built to withstand winds of up to 180 kilometres per hour (110 mph) and earthquakes measuring 6.5 on the Richter scale which are at a depth of 10 km and within a radius of 12 km of the statue. This is aided by the use of two 250-tonne tuned mass dampers which ensure maximum stability. The total height of the structure is 240 m (790 ft), with a base of 58 m (190 ft) and statue of 182 m (597 ft). The height of 182 was specifically chosen to match the number of seats in the Gujarat Legislative Assembly.

Funding

The statue was built by Public Private Partnership model, with most of the money raised by the Government of Gujarat. The Gujarat state government had allotted $600 crore (equivalent to$677 crore or US$98 million in 2018) for the project in the budget from 2012 to 2015. In the 2014– 15 Union Budget, $200 crore (equivalent to $239 crore or US$35 million in 2018) were allocated for the construction of the statue. Funds were also contributed by Public Sector Undertakings under Corporate Social Responsibility scheme.

Construction

The statue under construction in January 2018 Approximate heights of various notable statues:

1. **Statue of Unity** 240 m (incl. 58 m base)
2. Spring Temple Buddha 153 m (incl. 25 m pedestal and 20 m throne)
3. Statue of Liberty 93 m (incl. 47 m pedestal)
4. The Motherland Calls 87 m (incl. 2 m pedestal)
5. 5 Christ the Redeemer 38 m (incl 8 m pedestal)

A consortium comprising Turner Construction, Michael Graves and Associates and the Meinhardt Group supervised the project. It took 56 months to complete – 15 months for planning, 40 months for construction and two months for handing over by the consortium. The total cost of the project was estimated to be about 2,063 croreby the government. The tender bids for the 5. Christ the Redeemer 38 m (incl. 8 m pedestal) 6. Michelangelo's David 5.17 m (excl. 2.5m plinth) first phase were invited in October 2013 and were closed in November 2013. Narendra Modi, then serving as Chief Minister of Gujarat, laid the statue's foundation stone on 31 October 2013, the 138th anniversary of Patel's birth. Indian infrastructure company Larsen & Toubro won the contract on 27 October 2014 for its lowest bid of $2,989 crore (equivalent to $36 billion or US$520 million in 2018) for the design, construction and maintenance. They commenced the construction on 31 October 2014. In the first phase of the project, $1,347 crore were for the main statue, $235 crore for the exhibition hall and convention centre, $83 crore for the bridge connecting the memorial to the mainland and $657 crore for the maintenance of the structure for 15 years after its completion. The Sadhu Bet hillock was flattened from 70 to 55 metres to lay the foundation. L&T employed over 3000 workers and 250 engineers in the statue's construction. The core of the statue 48 tilized 210,000 cubic metres (7,400,000 cu ft) of cement concrete, 6500 tonnes of structural steel, and 18500 tonnes of reinforced steel. The outer façade is made up of 1700 tonnes of bronze plates and 1850 tonnes of bronze cladding which in turn comprise 565 macro and 6000 micro panels. The bronze panels were cast in Jiangxi Tongqing Metal Handicrafts Co. Ltd (the TQ Art foundry) in China as suitable facilities were unavailable in India. The bronze panels were transported over sea and then by road to the workshop near the construction site where they were assembled. Local tribals belonging to the Tadvi tribe opposed land acquisition for the development of tourism infrastructure around the statue. They have been offered cash and land compensation, and have been provided jobs. People of Kevadia, Kothi, Waghodia, Limbdi, Navagam, and Gora villages opposed the construction of the statue and demanded the restitution of the land rights over 375 hectares (927 acres) of land acquired earlier for the dam as well as the formation of new Garudeshwar subdistrict. They also opposed the formation of Kevadia Area Development Authority (KADA) and the construction of Garudeshwar weir-cum-causeway project.

The government of Gujarat accepted their demands. Construction of the monument was completed in mid-October 2018; and the inaugural ceremony was held on 31 October 2018, presided over by Prime Minister Narendra Modi. The statue has been described as a tribute to Indian engineering skills. Features Prime Minister Narendra Modi in the museum within the complex. The Statue of Unity is the

world's tallest statue at 182metres (597 ft).It rises 54 metres (177 ft) higher than the previous record holder, the Spring Temple Buddha in China's Henan province. The previous tallest statue in India was the 41 m (135 ft) statue of Hanuman at the Paritala Anjaneya Temple near Vijayawada in the state of Andhra Pradesh. The statue can be seen within a 7 km (4.3 mi) radius. The monument is constructed on a river island named Sadhu Bet, 3.2 km (2.0 mi) away from and facing the Narmada Dam downstream. The statue and its surroundings occupy more than 2 hectares (4.9 acres), and are surrounded by a 12 km (7.5 mi) long artificial lake formed by the Garudeshwar weir downstream on the Narmada river. The statue is divided into five zones of which only three are accessible to the public. From its base to the level of Patel's shins is the first zone which has three levels and includes an exhibition area, mezzanine and roof. Zone 1 contains a memorial garden and a museum. The second zone reaches up to Patel's thighs, while the third extends up to the viewing gallery at 153 metres. Zone 4 is the maintenance area while the final zone comprises the head and shoulders of the statue. The museum in zone 1 catalogues the life of Sardar Patel and his contributions. An adjoining audio-visual gallery provides a 15 minute presentation on Patel and also describes the tribal culture of the state. The concrete towers which form the statue's legs contain two elevators each. Each lift can carry 26 people at a time to the viewing gallery in just over 30 seconds. The gallery is located at a height of 153 metres (502 ft) and can hold up to 200 people.

Chapter 6:Swatchh Bharat Abhiyan (Clean India)

6.1 Swatchhta needed in allocated village –Existing Situation with photograph

In a village a need of swatchhta is more because unavailability of solid waste management like collection of waste collection dustbin and management of that waste. Due to this village people throw all waste around the village border**.** This is real issue of villagers the disposal of waste.
fig **no 12**

6.2 Guidelines - Implementation in allocated village with Photograph

"A clean India would be the best tribute India could pay to Mahatma Gandhi on his 150 birth anniversary in 2019," said Shri Narendra Modi as he launched the Swachh Bharat Mission at Rajpath in New Delhi. On 2nd October 2014, Swachh Bharat Mission was launched throughout length and breadth of the country as a national movement. While leading the mass movement for cleanliness, the Prime Minister exhorted people to fulfill Mahatma Gandhi's dream of a clean and hygienic India. Shri Narendra Modi himself initiated the cleanliness drive at Mandir Marg Police Station. Picking up the broom to clean the dirt, making Swachh Bharat Abhiyan a mass movement across the nation, the Prime Minister said people should neither litter, nor let others litter. He gave the mantra of 'Na gandagikarenge, Na karnedenge.' Shri Narendra Modi also invited nine people to join the cleanliness drive and requested each of them to draw nine more into the initiative. By inviting people to participate in the drive, the Swachhta Abhiyan has turned intoa National Movement.

A sense of responsibility has been evoked among the people through the Clean India Movement. With citizens now becoming active participants in cleanliness activities across the nation, the dream of a 'Clean India' once seen by Mahatma Gandhi has begun to get a shape.

Guidelines for swatch village by government*:*

Table no 6.1 Guidelines For Swatch Bharat Abhiyan

ENSURE	❖ Identification of households without toilets for corrective action ❖ Toilet use and maintenance. ❖ Facilities for solid and liquid waste management. ❖ Water-use efficiency by rationalizing water use. ❖ Inclusion of water and sanitation issues in Gram Panchayat Development Plan (GPDP). ❖ Compliance with environmental safeguards for all GPD Pactivities.
PROMOTE	❖ Hygiene education. ❖ Toilets for all households and institutions. ❖ Modern agriculture and water-use technologies to conserve water. ❖ Water-use rationalization by selecting appropriate cropping patterns.
ESTABLISH	❖ Local environmental safeguard measures. ❖ Surveillance of waterbodies. ❖ Safeguards for waterbodies.
PLAN AND IMPLEMENT	❖ Environmental management framework. ❖ Water supply schemes.
FACILITATE	❖ Appropriate irrigation methods ❖ Regulation of water extraction based on demand yield match. ❖ Participation of local communities in improving water and sanitation management.

Village have following thing implemented:-

- Use of toilets and Maintenance of it
- Inclusion of water and sanitation issues in Gram Panchayat Development Plan (GPDP).
- Hygiene education.
- Toilets for all households and institutions.

Village have Certain Draw Backs:

- Solid waste management
- Public toilet
- Surveillance of waterbodies
- Water supply scheme
- Environment management framework

6.3 Activities Done by Students for allocated village with Photograph

- We avoided throwing waste in open and always used dustbin.
- We interacted with village people and tried to spread awareness regarding Swatch bharata bhiyan
- We proposed Solid waste management design for the allocated village.
- We also planned to carry out awareness campaign but due to Covid-19 we didn't get permission still we will conduct campaign in future

Chapter 7: Village condition due to Covid-19

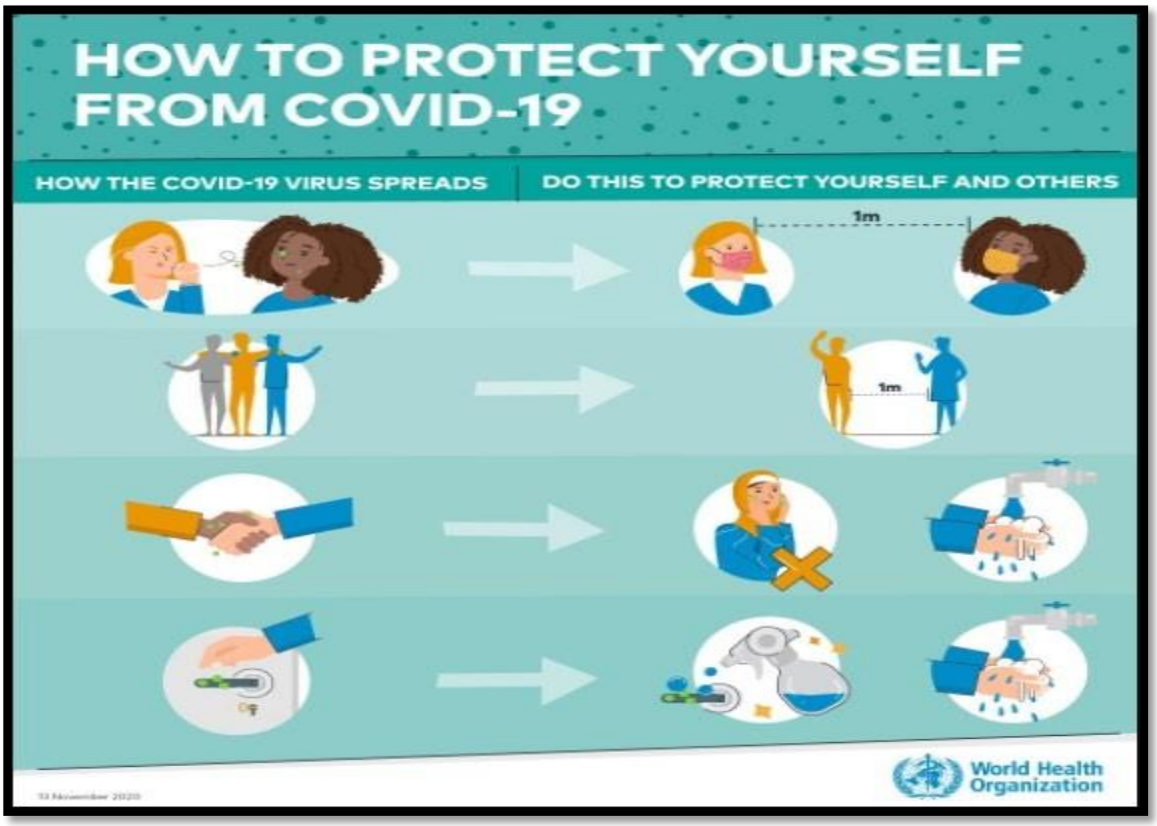
Coronavirus disease 2019 (**COVID-19**) is a contagious disease caused by acute respiratory(SARS-CoV-2). The first case was identified in Wuhan, China in December 2019.Common symptoms of COVID-19 include fever, cough, fatigue, breathing difficulties, and loss of smell and taste. Symptoms begin one to fourteen days after exposure to the virus. While most people have mild symptoms, some people develop distress syndrome(ARDS). ARDS can be precipitated by cytokine storms,[9] organ failure, septic shock, and blood clots. Longer-term damage to organs (in particular, the lungs and heart) has been observed. There is concern about a significant number of patients who have recovered from the acute phase of the disease but continue to experience a range of effects—known as long COVID—for months afterwards. These effects include severe fatigue, memory loss and other cognitive issues, low-grade fever, muscle weakness, and breathlessness.

COVID-19 spreads via a number of means, primarily involving saliva and other bodily fluids and excretions. These fluids can form small droplets and aerosols, which can spread as an infected person breathes, coughs, sneezes, sings, or speaks. The virus may also spread by direct contact and it is unknown how often it spreads via fomites (contaminated surfaces).[14][15] The exact route of transmission is rarely proven conclusively,[16] but infection mainly happens when people are near each other for long enough, which is known as "close contact".[a] It can spread as early as two days before infected persons show symptoms (presymptomatic), and from asymptomatic individuals. People remain infectious for up to ten days in moderate cases, and two weeks in severe cases. The standard diagnosis method is by real-time reverse transcription polymerase chain reaction (rRT-PCR) from a nasopharyngeal swab.

Preventive measures include social distancing, quarantining, ventilation of indoor spaces, covering coughs and sneezes, hand washing, and keeping unwashed hands away from the face. The use of face masks or coverings has been recommended in public settings to 53inimize the risk of transmissions.


Protect yourself and others from getting sick
Wash your hands
• after coughing or sneezing
• when caring for the sick
• before, during and after you prepare food
• before eating
• after toilet use
• when hands are visibly dirty
• after handling animals or animal waste
World Health Organization


Protect others from getting sick
When coughing and sneezing cover mouth and nose with flexed elbow or tissue
Throw tissue into closed bin immediately after use
Clean hands with alcohol-based hand rub or soap and water after coughing or sneezing and when caring for the sick
World Health Organization


HOW TO PROTECT YOURSELF FROM COVID-19
HOW THE COVID-19 VIRUS SPREADS
DO THIS TO PROTECT YOURSELF AND OTHERS
1m
1m
World Health Organization

7.1 Taken steps in allocated village related to existing situation

- They Maintain social distance with people
- Use of nose mask and sanitizer
- Maintaining hygienic condition
- Avoided travelling
- Drinking immunity booster

7.2 Activities Done by Students for allocated village

- We organized Covid-19 awareness camp in Ampad village. We interacted with villagers and told them regarding the danger of corona virus. We also interacted with Sarpanch and distributed nose mask and sanitizer. Corona virus is one of the pandemic which has broken the economic leg of world's leading nation and lots of people have lost lives till date. In such situation it is very necessary to not underestimate the severity of this disease.
- Guidelines which WHO have given we tried to explain to villagers. Interaction with villagers and we explain them the severity of covid-19 & how dangerous it is. Villagers were not using mask and sanitizers so we distributed them sanitizers, mask and instructed them how to take precaution. Villagers still need to be made aware regarding pandemic situation and we get to know that in rural area people are still not taking this problem seriously. We told them though government has unlock the states and all activities are carried out in usual manners that doesn't mean the pandemic is over and we are virus free.

Chapter 8: Sustainable Design Planning Proposal (Prototype Design)- Part- I

8.1Design Proposals

There are some design proposals given from the sarpanch and talati:

- Panchayat office
- PublicToilet

8.1.1 Sustainable Design

As there is panchayat building is located in bad condition so Sarpanch suggest us to redevelop it. For irrigation to the farm, farmers use water of canal, bor hall, and tube well.

8.1.2 Physical design-Public toilet

A public toilet is a room or small building with toilets available for use by the general public. Public toilets are commonly separated into male and female facilities. Increase in the public toilets are now been made for disabled people also.
Some public toilets are free of charge and some charge fees. Public toilets are typically found in government schools, government offices, roadsides, etc. Concept of portable and Bio- toilets is increasing.

8.2Reason for Students Recommending this Design

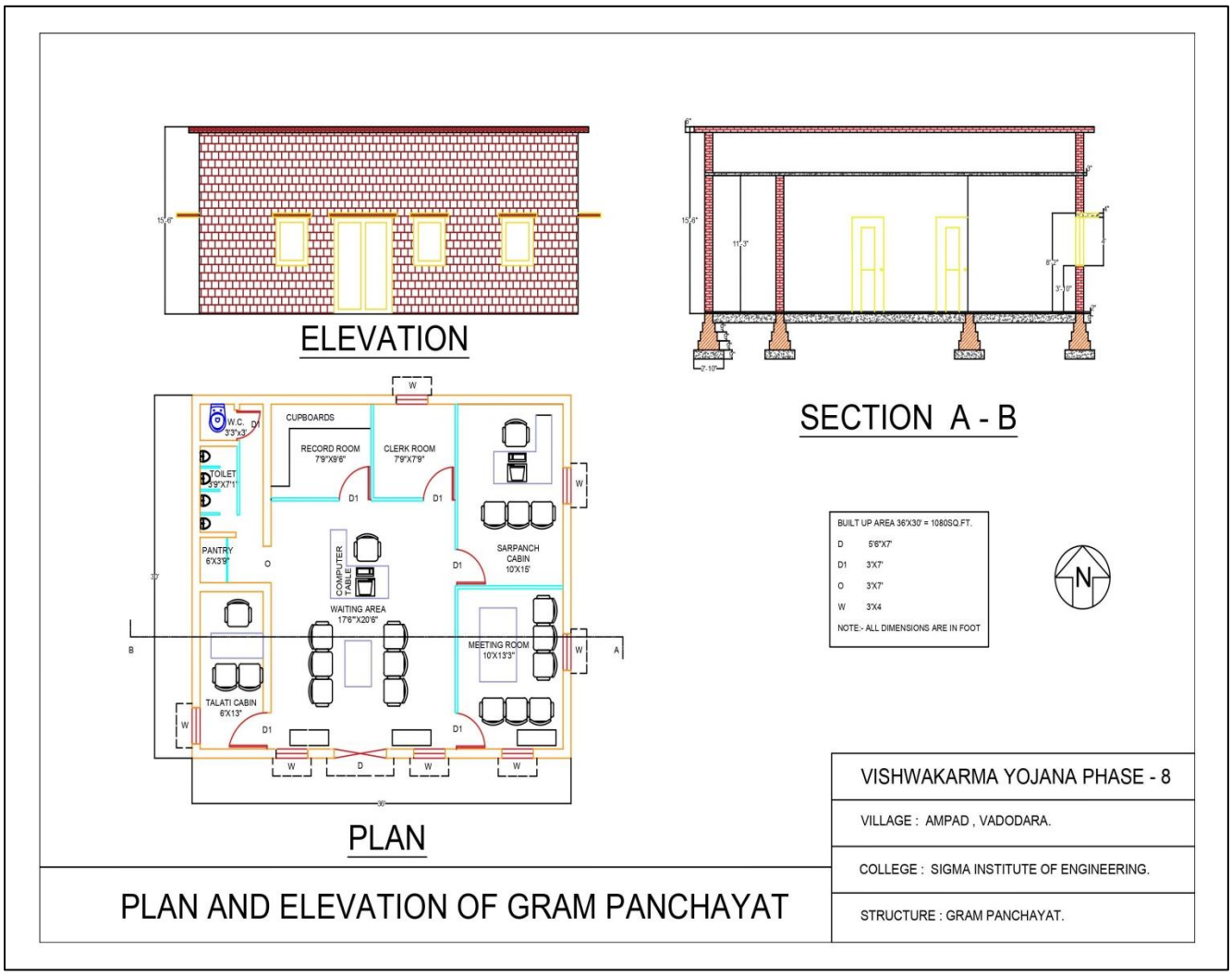
- Panchayat office – help to keep record of villagers , and office work
- Public Toilet – to increase sanitation

8.3About designs Suggestions / Benefit of the villagers

1. **Panchayat office:** Gram Panchayat is the lowest tier of governance in India where the elected representatives are most approachable & closest to the rural citizenry. Thus the Panchayat institution is a very important cog in the governance wheel and its efficient functioning has the potential to bring in transformative change. Panchayat have in general suffered from lack of funds despite the 73rd constitutional amendment mandating transfer of certain functions, funds & functionaries to the panchayat. As per the data shared by the government in the Lok Sabha, more than 52000 Panchayat (21%) do not have a building of their own. In the last 2 years, only 5000 odd new panchayat buildings were constructed.

2. **Public toilet:** Some of the houses in the village do not have attached toilets . As a result they end up using the roads and the farms. Thus introducing a public toilet will help in avoiding the use of open areas which will increase hygiene and cleanliness in the village.

Panchayat office

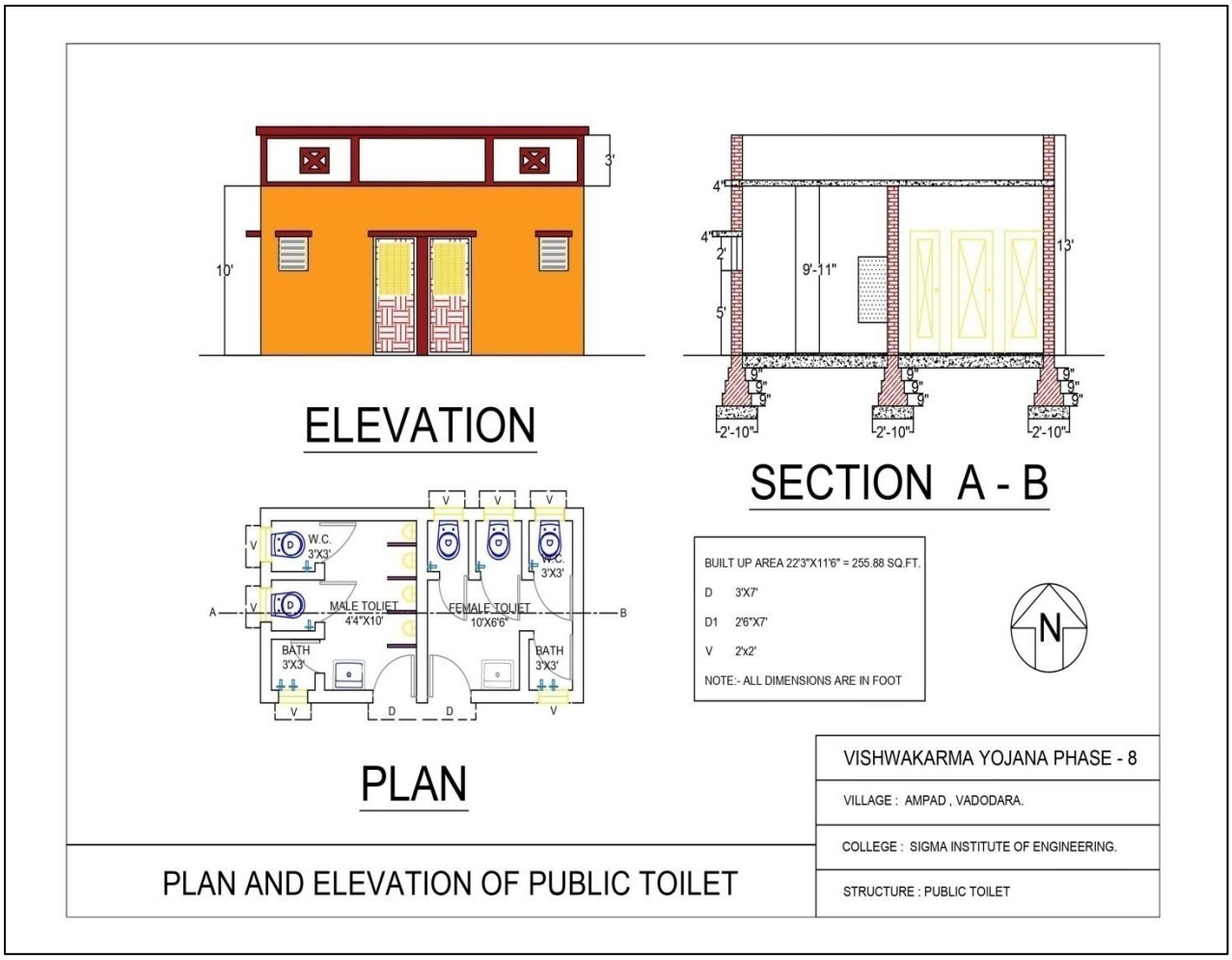


PANCHAYAT BUILDING

ABSTRACT

Sr. No	Item description	UNIT	Quantity	Rate per Unit	Amount Rs.
1	Earthwork in excavation including throwing excavated material leading.	M3	24.49	170.00	04163.00
2	Earthwork in filling in plinth and foundation.	M3	14.13	280.00	3956.00
3	Sand filling in plinth with compaction.	M3	7.8	150.90	1175.00
4	P.C.C in foundation (1:4:8) including compaction and curing.	M3	32.7	6000.1	22620.30
5	Brick bat cement concrete (1:4:8) including compaction and curing.	M3	43.9	1850	81215.00
6	Brick masonry in C.M. 1:6 in foundation and plinth including curing, etc.	M3	90.9	6500	59800.50
7	Brick masonry in C.M. 1:6 in superstructure including curing, etc.	M3	13.20	7200	95040.00
8	Cement plaster 15mm thick in C.M. 1:3, including scaffolding, racking of masonry joints, curing, etc.	M3	63.10	315.20	19876.50
9	R.C.C. work in slab 1:1.5:3 including reinforcement steel, centering, finishing, curing, etc.	M3	68.3	48000	327840
	Total				7,94560.8
				Add 10% Contractor Charge	79500.00
	Add 5% Water Charge				38750.50
				Total Construction Charge	8,063331.

PUBLIC TOILET



Public toilet

ABSTRACT

Sr. No	Item description	UNIT	Quantity	Rate per Unit	Amount Rs.
1	Earthwork in excavation including throwing excavated material leading.	M3	38.70	170.00	6550
2	Earthwork in filling in plinth and foundation.	M3	20.95	230.00	4820
3	Sand filling in plinth with compaction.	M3	15.30	150.90	2308.77
4	P.C.C in foundation (1:4:8) including compaction and curing.	M3	08.00	6000.1	48000.80
5	Brick bat cement concrete (1:4:8) including compaction and curing.	M3	09.75	1850	18037.50
6	Brick masonry in C.M. 1:6 in foundation and plinth including curing, etc.	M3	20.28	6500	131820.00
7	Brick masonry in C.M. 1:6 in superstructure including curing, etc.	M3	22.70	7200	163440.00
8	Cement plaster 15mm thick in C.M. 1:3, including scaffolding, racking of masonry joints, curing, etc.	M3	62.30	315.20	19700.00
9	R.C.C. work in slab 1:1.5:3 including reinforcement steel, centering, finishing, curing, etc.	M3	18.50	48000	88800.50
10	Latrine Blocks	No	5	400	2000.00
11	Urinal Blocks	No	4	280	1120.00
12	Wash Basing	No	2	350	700.00
	Total				4,87350.47
				Add 10% Contractor Charge	48,735.40
	Add 5% Water Charge				24367.535
				Total Construction Charge	**560,455.40**

Chapter 9:Proposing designs for Future Development of the Village for the PART-II Design

Following points should be considered for Ampad village in future prospects:

- Ampad village required a Lake beautification and clean entire area
- dispensary. Currently there are no maternity facilities present in the village. Hence provision of a Maternity home and dispensary in the village will prove to be useful in the time of emergency and also day to day basic treatment.To facilitate good health amenities through building Maternity Home and
- There is no Public garden in Ampad village, hence provision of public garden provide gathering and refreshing place to villagers.

Chapter 10. Conclusion of the Entire Village Activities of the Project

The motive of Vishwakarma Yojana phase-VIII is to uplift the life style of the rural areas to its certain extent up to the level of an ideal village situated at the nearby location of that particular jurisdiction. We have tried to develop sustainable and economic design as per our knowledge and hard work from visiting the villages and provide proper design. In this phase we have focused mainly on Data collection and done the survey of village.

It is an effective government scheme to develop the rural areas under economical cost with good workability and efficiency during its usage. The project tends to improve the physical, social as well as socio-cultural aspects of the village by implementing and improvising various infrastructures with regards to lesser or least hindrance to its rural authenticity.

These amenities designed under this project will be helpful for better development of village as physically as well as socially, which improves the overall lifestyle of people along with nation with preserving nature bit by bit.

“Where there is a will, there is a vision”. With this motto students who want to work towards preservation of rural soul of country can do many things for our own good and environment. By implanting given design proposals, we can say that all the missing amenities are provided will stop the migration of rural people towards the urban area. This can cause reduce the load on urban areas as well as pollution in both sector can be minimized gradually. These amenities designed under this project will be helpful for better development of village as physically as well as socially, which improves the overall lifestyle of people along with nation with preserving nature bit by bit.

We are proposing a design base on our survey, knowledge and Gap analysis to village for its development.

Following are all design we propose for villages are:

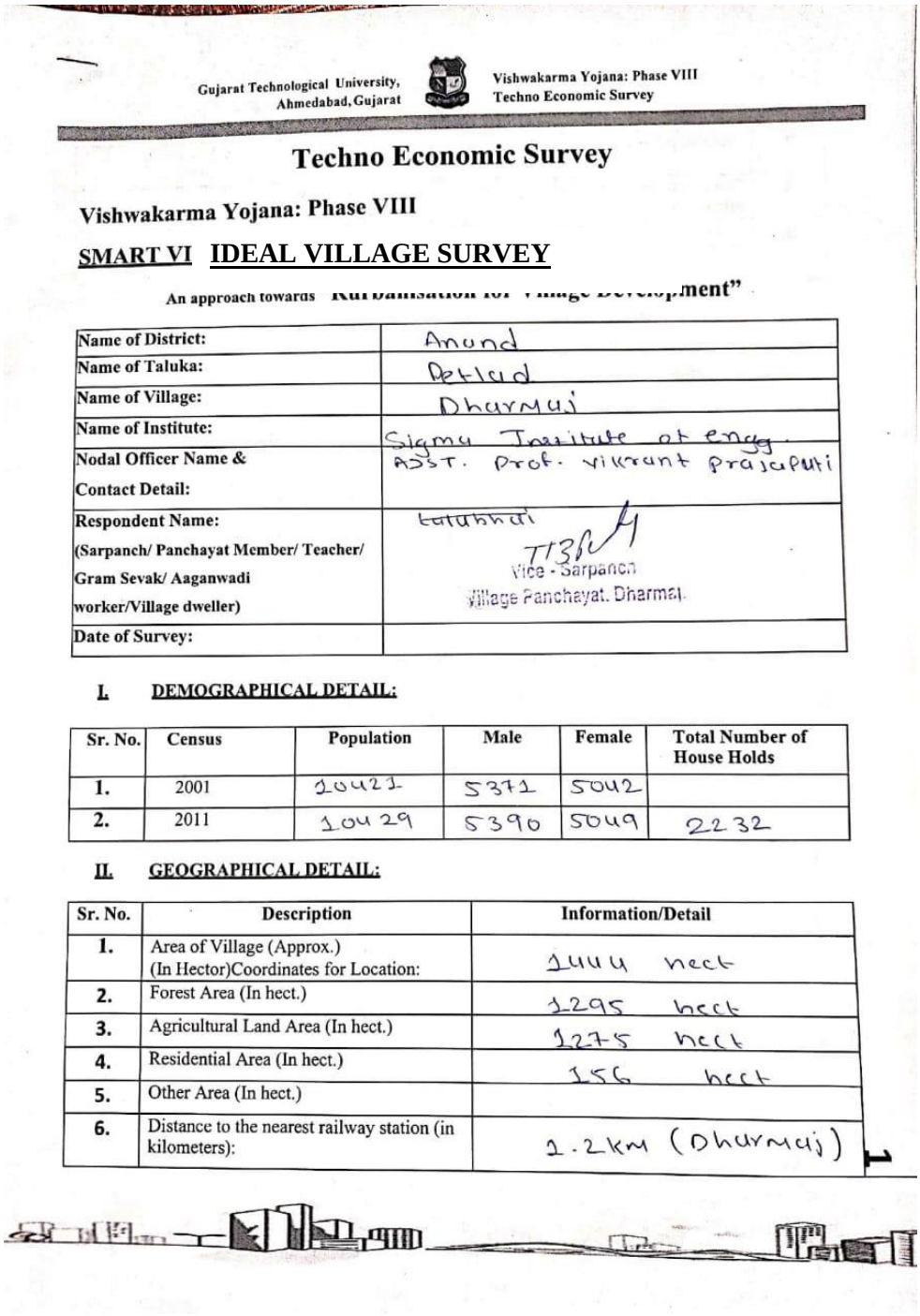
- Public Toilet
- Panchayat office
- Lake beautification
- Public garden
- Maternity Home

Chapter11. References refereed for this project

- www.onefivenine.com
- http://smartvillages.org/
- www.wikipedia.com
- https://en.wikipedia.org/wiki/Mode_of_transport
- https://www.journals.elsevier.com
- http://eeas.europa.eu/archives/delegations/fiji/press_corner/all_news/news/2015/20150420_01_en.pdf
- https://en.wikipedia.org/wiki/Sansad_Adarsh_Gram_Yojana
- https://earth.google.com/
- http://www.vyojana.gtu.ac.in/ (Vishwakarmaliteratures)

Chapter12. Annexure attachment

12.1 Survey form of Ideal Village **Scanned copy** attachment in the report for Part-I
Survey form of Ideal Village **Original copy** attachment in the report for Part-II



Gujarat Technological University, Ahmedabad, Gujarat

Vishwakarma Yojana: Phase VIII
Techno Economic Survey

Techno Economic Survey

Vishwakarma Yojana: Phase VIII

SMART VI IDEAL VILLAGE SURVEY

An approach towards "Rurbanisation for Village Development"

Name of District:	Anand
Name of Taluka:	Petlad
Name of Village:	Dharmaj
Name of Institute:	Sigma Institute of engg.
Nodal Officer Name & Contact Detail:	Asst. Prof. Vikrant Prajapati
Respondent Name: (Sarpanch/ Panchayat Member/ Teacher/ Gram Sevak/ Aaganwadi worker/Village dweller)	Vice - Sarpanch Village Panchayat, Dharmaj
Date of Survey:	

I. DEMOGRAPHICAL DETAIL:

Sr. No.	Census	Population	Male	Female	Total Number of House Holds
1.	2001	10421	5371	5042	
2.	2011	10429	5390	5049	2232

II. GEOGRAPHICAL DETAIL:

Sr. No.	Description	Information/Detail
1.	Area of Village (Approx.) (In Hector)Coordinates for Location:	1444 hect
2.	Forest Area (In hect.)	1295 hect
3.	Agricultural Land Area (In hect.)	1275 hect
4.	Residential Area (In hect.)	156 hect
5.	Other Area (In hect.)	
6.	Distance to the nearest railway station (in kilometers):	1.2km (Dharmaj)

7.	Name of Nearest Town with Distance:	petlad (11km)
8.	Distance to the nearest bus station (in kilometers):	1km
9.	Whether village is connected to all road for the any facility or town or City?	yes

III. OCCUPATIONAL DETAILS:

Name of Three Major Occupation groups in Village	1.	farming
	2.	cowsnel
	3.	factory coorks

Major crops grown in the village:	1.	Tobacco
	2.	Banana
	3.	Rice

IV. PHYSICAL INFRASTRUCTURE FACILITIES:

Sr. No.	Descriptions	Detail	Adequate	Inadequate	Remarks
A.	**Main Source of Drinking water**				
1.	**PIPED WATER**				
	Piped Into Dwelling		✓		
	Piped To Yard/Plot				
	Public Tap/Standpipe	3			419'9" 100 acre
	Tube Well Or Bore Well	2	✓		350' 75 acre
2.	**DUG WELL**				
	Protected Well				
	Un Protected Well				
3.	**WATER FROM SPRING**				
	Protected Spring				
	Unprotected Spring				
	Rainwater				
	Tanker Truck				
	Cart With Small Tank				
4.	**SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/**	canal			
	Irrigation Channel	200 hect			
	Bottled Water				
	Hand Pump	12			

2

Gujarat Technological University, Ahmedabad, Gujarat

Vishwakarma Yojana: Phase VIII
Techno Economic Survey

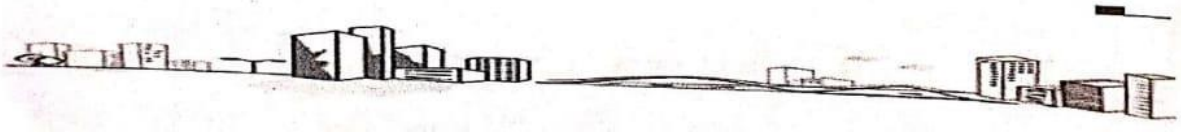
	Other(Specify)**Lake/ Pond**	1	✓		
Suggestions if any:					
B.	**Water Tank Facility**				
	Overhead Tank	Capacity:	✓		7000 Lakh (2no)
	Underground Sump	Capacity:	✓		5000 Lakh
Suggestions if any:					
C.	**The Type of Drainage Facility**				
	A. UNDERGROUND DRAINAGE 1		✓		water pumping Station (24 hrs working)
Suggestions if any:					
D.	**Road Network :All Weather/ Kutchha (Gravel)/ Black Topped pucca/ WBM**				
	Village approach road	Bituminous	✓		
	Main road	All weather	✓		
	Internal streets	All weather	✓		
	Nearest NH/SH/MDR/ODR Dist. in kms.	NH-8	✓		
Suggestions if any:					
E.	**Transport Facility**				
	Railway Station (Y/N) (If No than Nearest Rly Station---Kms)		✓		
	Bus station (Y/N) Condition: (If No than Nearest Bus Station---Kms)		✓		
	Local Transportation (Auto/ Jeep/Chhakda/ Private Vehicles/ Other)		✓		
Suggestions if any:					
F.	**Electricity Distribution**				
	(Y/N) Govt./ Private (Less than 6 hrs./ More Than 6 hrs)	Yes (Govt) 24 hrs	✓		

3

Gujarat Technological University, Ahmedabad, Gujarat

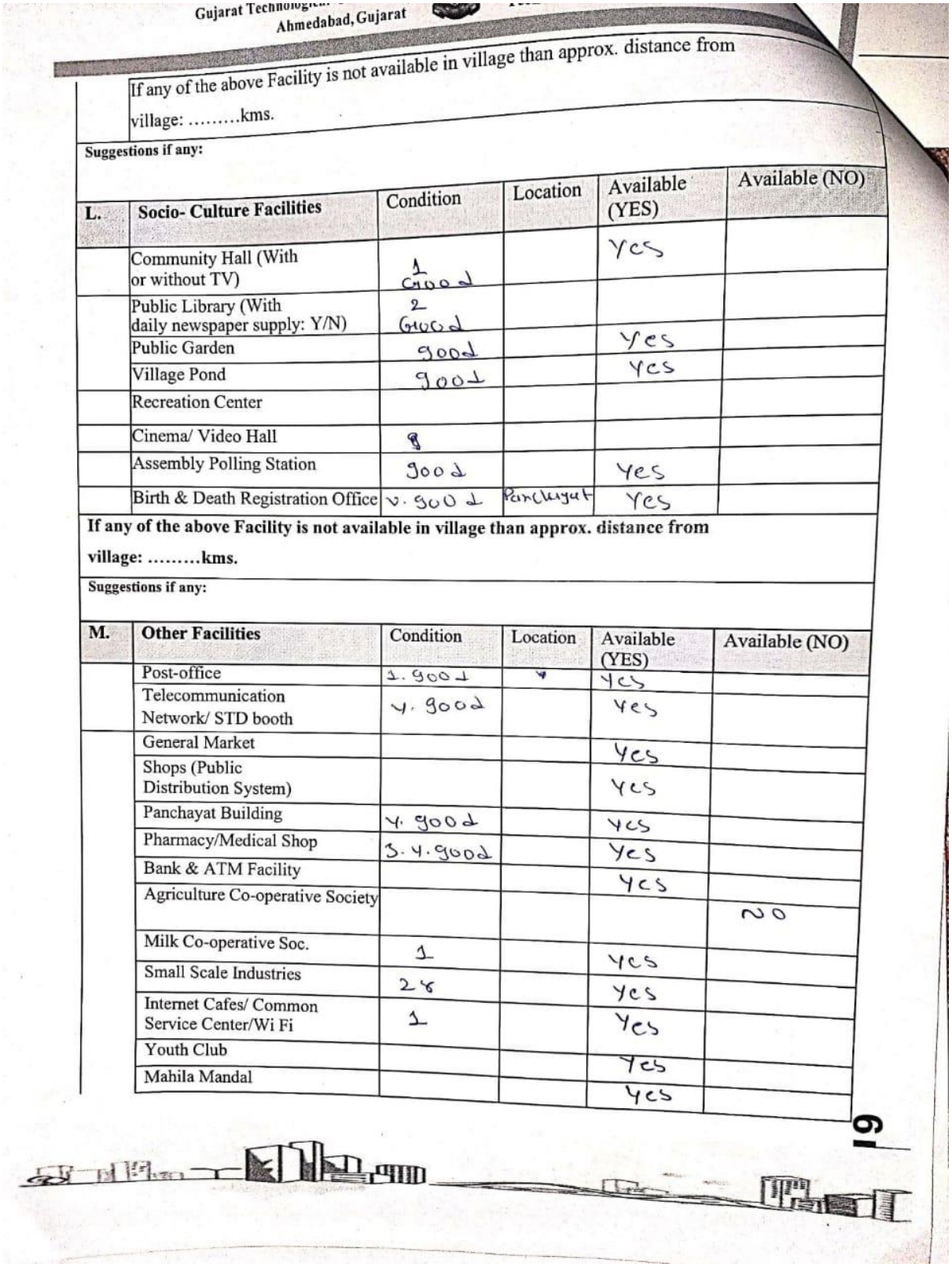
Vishwakarma Yojana: Phase VIII
Techno Economic Survey

	Power supply for Domestic Use	2650	✓		
	Power supply for Agricultural Use	1246	✓		
	Power supply for Commercial Use	55	✓		
	Road/ Street Lights	950 NOS	✓		
	Electrification in Government Buildings/ Schools/ Hospitals		✓		
	Renewable Energy Source Facilities (Y/ N)	Gobar Gas	✓		
	LED Facilities	NO	✓		
Suggestions if any:					
G.	**Sanitation Facility**				
	Public Latrine Blocks If available than Nos.	3	✓		
	Location Condition				
	Community Toilet (With bath/ without bath facilities)	NO			
	Solid & liquid waste Disposal system available		✓		
	Any facility for Waste collection from road		✓		
Suggestions if any:					
H.	**Main Source of Irrigation Facility:**				
	TANK/POND STREAM/RIVER CANAL WELL TUBE WELL. OTHER (SPECIFY)	200 hect 107 hect hand pump	✓ ✓		
Suggestions if any:		12 NOS			
I.	**Housing Condition:**				
	Kutchha/Pucca (Approx. ratio)	Pucca-Kutcha Row - 71.9%	1157 2966		



V. SOCIAL INFRASTRUCTURAL FACILITIES:

Sr. No.	Descriptions	Information/ Detail	Adequate	Inadequate	Remarks
J.	**Health Facilities:**				
	ICDS (Anganwadi) Sub-Centre PHC BLOCK PHC CHC/RH District/ Govt. Hospital Govt. Dispensary Private Clinic Private Hospital/ Nursing Home AYUSH Health Facility sonography /ultrasound facility	1 1 4	✓ ✓ ✓		→ Jalaram eye hospital → Jalaram Dental hosp. → Sarda Drasht gruh → Urmila other hospital → C.H.C hosp. → C.J. Fishwala T.B. hosp. → Dental hosp.
	If any of the above Facility is not available in village than approx. distance from village: .....kms.				
Suggestions if any:					
K.	**Education Facilities:**				
	Aaganwadi/ Play group	20	✓		
	Primary School		✓		
	Secondary school	5	✓		
	Higher sec. School	1	✓		
	ITI college/ vocational Training Center	1	✓		
	Art, Commerce& Science /Polytechnic/ Engineering/ Medical/ Management/ other college facilities	1	✓		



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If any of the above Facility is not available in village than approx. distance from village: .....kms.

Suggestions if any:

L.	Socio- Culture Facilities	Condition	Location	Available (YES)	Available (NO)
	Community Hall (With or without TV)	1 Good		Yes	
	Public Library (With daily newspaper supply: Y/N)	2 Good			
	Public Garden	Good		Yes	
	Village Pond	Good		Yes	
	Recreation Center				
	Cinema/ Video Hall				
	Assembly Polling Station	Good		Yes	
	Birth & Death Registration Office	v. Good	Panchayat	Yes	

If any of the above Facility is not available in village than approx. distance from village: .....kms.

Suggestions if any:

M.	Other Facilities	Condition	Location	Available (YES)	Available (NO)
	Post-office	1. Good		Yes	
	Telecommunication Network/ STD booth	4. Good		Yes	
	General Market			Yes	
	Shops (Public Distribution System)			Yes	
	Panchayat Building	4. Good		Yes	
	Pharmacy/Medical Shop	3. 4. Good		Yes	
	Bank & ATM Facility			Yes	
	Agriculture Co-operative Society				No
	Milk Co-operative Soc.	1		Yes	
	Small Scale Industries	28		Yes	
	Internet Cafes/ Common Service Center/Wi Fi	1		Yes	
	Youth Club			Yes	
	Mahila Mandal			Yes	

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Credit Cooperative Society Agricultural Cooperative Society Milk Cooperative Society Fishermen's Cooperative Society Computer Kiosk/ e-chaupal / Mills / Small Scale Industries	✓ Y. 9002 ✓	NO Yes Yes Yes		
Other Facility				

Suggestions if any:

N.	Other Facilities	Condition		Available (YES)	Available (NO)
	1. Have these programme implemented the village?				
	2. Are there any beneficiaries in the village from the following programme?				
	3. Janani Suraksha Yojana				
	4. Kishori Shakti Yojana				
	5. Balika Samriddhi Yojana				
	6. Mid-day Meal Programme				
	7. Intergrated Child Development Scheme (ICDS)				
	8. Mahila Mandal Protsahan Yojana (MMPY)				
	9. National Food for work Programme (NFFWP)				
	10. National Social Assistance Programme				
	11. Sanitation Programme (SP)				
	12. Rajiv Gandhi National Drinking Water Mission				
	13. Swarnjayanti Gram Swarozgar Yojana				
	14. Minimum Needs Programme (MNP)				
	15. National Rural Employment Programme				
	16. Employee Guarantee Scheme (EGS)				
	17. Prime Minister Rojgar Yojana (PMRY)				
	18. Jawahar Rozgar Yojana (JRY)				
	19. Indira Awas Yaojna (IAY)	✓			
	20. Samagra Awas Yojana (SAY)				
	21. Sanjay Gandhi Niradhar Yojana (SGNY)				
	22. Jawahar Gram Samridhi Yojana (JGSY)				
	23. Other (SPECIFY) Suv Jay	✓			

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VI. SUSTAINABLE /GREEN INFRASTRUCTURE FACILITIES:

Sr. No.	Descriptions	Information/ Details	Adequate	Inadequate	Remarks
1.	Adoption of Non-Conventional Energy Sources/ Renewable Energy Sources Gobar Gas plant (combined)	3 NOS	✓		
2.	Bio-Gas Plant Solar Street Lights Rain Water Harvesting System				
3.	Any Other				

VII. DATA COLLECTION FROM VILLAGE

Sr. No.	Descriptions	Information/ Details	Adequate	Inadequate	Remarks
1.	Village Base Map Available: Hard Copy/Soft Copy				
2.	Recent Projects going on for Development of Village		✓		Mahatma Swachhata Mission
3.	Any NGO working for village development		✓		Dharmaj 100 years (Celebration) Summitte
4.	Any natural calamity in the village during the last one year: EARTHQUAKES FLOODS CYCLONE DROUGHT LANDSLIDES AVALANCHE OTHER (SPECIFY)				

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VIII. ADDITIONAL INFORMATION/ REQUIREMENT:

Sr. No.	Descriptions	Information/ Detail	Remarks
1.	Repair & Maintenance of Existing Public Infrastructure facilities, School Building Health Center Panchayat Building Public Toilets & any other		
2.	Additional Information/ Requirement		
3.	During the last six months how many times CLEANING ..... FOGGING..... Drive was undertaken in the village?		

IX. Smart Village / Heritage Details

Sr. No.	Descriptions	Information/ Detail	Remarks
1.	IS THEIR ANY THING FOR THE VILLAGE ENHANCEMENT POSSIBLE ?	Dharmeshwar mahadev	

Note: Photographs/ Video/ Drawings of all existing Infrastructure facilities & conditions should be taken by students of respective villages for their record and information.

For Any Administration queries/ Difficulties:
Ms.Darshana Chauhan,Project Co-ordinator
Contact No – 079-23267588
Email ID: rurban@gtu.edu.in

Village Panchayat Dharmaj Ta. Padlad

Vice - Sarpanch
Village Panchayat, Dharmaj.

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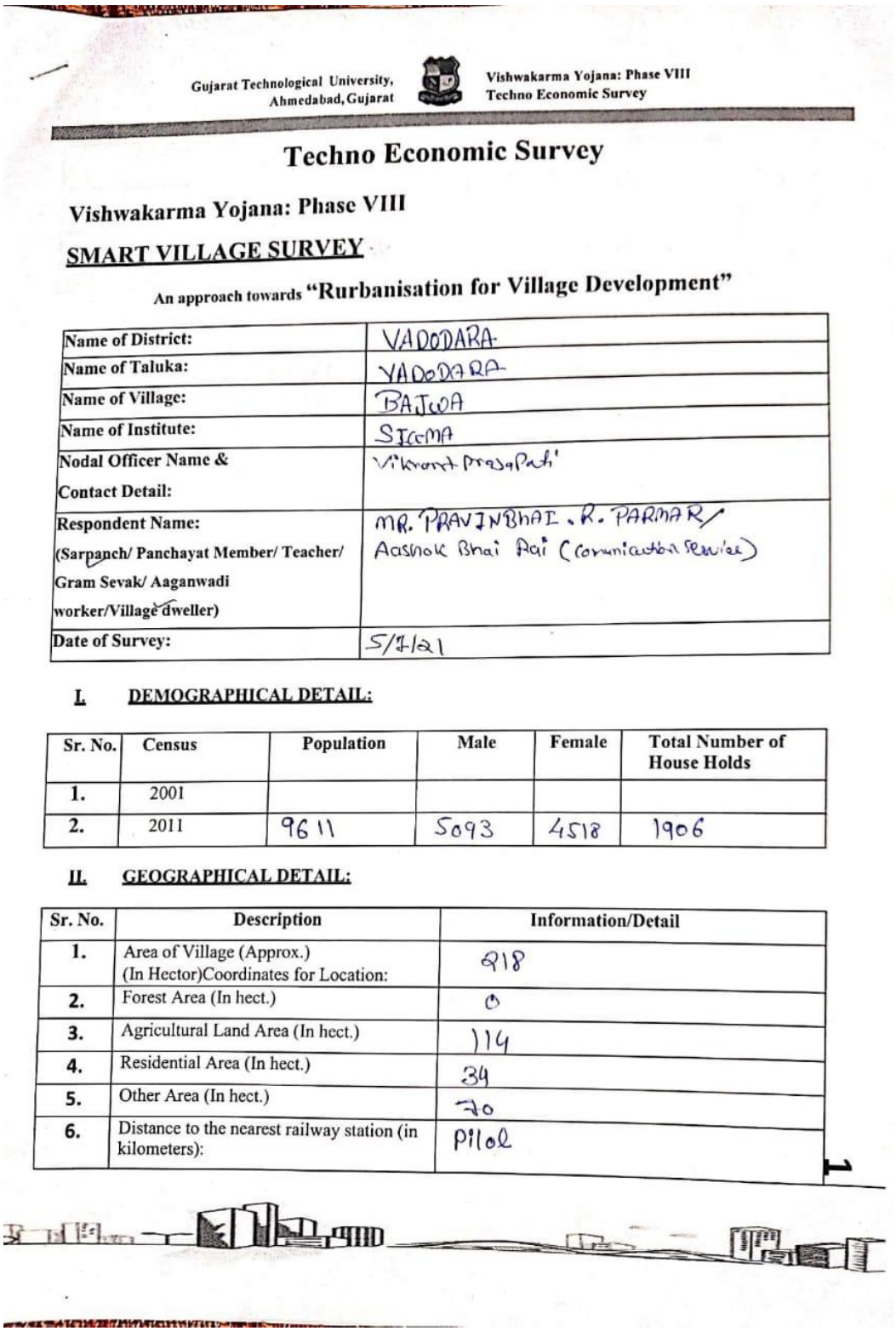
12.2 Survey form of Smart Village **Scanned copy** attachment in the report for Part-I
Survey form of Smart Village **Original copy** attachment in the report for Part-II



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Vishwakarma Yojana: Phase VIII

SMART VILLAGE SURVEY

An approach towards **"Rurbanisation for Village Development"**

Name of District:	VADODARA
Name of Taluka:	VADODARA
Name of Village:	BAJWA
Name of Institute:	SICOMA
Nodal Officer Name & Contact Detail:	Vikrant Prajapati
Respondent Name: (Sarpanch/ Panchayat Member/ Teacher/ Gram Sevak/ Aaganwadi worker/Village dweller)	MR. PRAVINBHAI . R. PARMAR / Ashok Bhai Rai (Communication Service)
Date of Survey:	5/7/21

I. DEMOGRAPHICAL DETAIL:

Sr. No.	Census	Population	Male	Female	Total Number of House Holds
1.	2001				
2.	2011	9611	5093	4518	1906

II. GEOGRAPHICAL DETAIL:

Sr. No.	Description	Information/Detail
1.	Area of Village (Approx.) (In Hector)Coordinates for Location:	918
2.	Forest Area (In hect.)	0
3.	Agricultural Land Area (In hect.)	114
4.	Residential Area (In hect.)	34
5.	Other Area (In hect.)	70
6.	Distance to the nearest railway station (in kilometers):	Pilol

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7.	Name of Nearest Town with Distance:	VADODARA
8.	Distance to the nearest bus station (in kilometers):	SAVLI (Vadodara)
9.	Whether village is connected to all road for the any facility or town or City?	YES

III. OCCUPATIONAL DETAILS:

Name of Three Major Occupation groups in Village	1. Private Jobs
	2. LABOURS
	3. Farmer

Major crops grown in the village:	1.
	2.
	3.

IV. PHYSICAL INFRASTRUCTURE FACILITIES:

Sr. No.	Descriptions	Detail	Adequate	Inadequate	Remarks
A.	**Main Source of Drinking water**				
1.	**PIPED WATER**				
	Piped Into Dwelling		✓		
	Piped To Yard/Plot				
	Public Tap/Standpipe				
	Tube Well Or Bore Well				
2.	**DUG WELL**	2 no	✓		
	Protected Well				
	Un Protected Well				
3.	**WATER FROM SPRING**				
	Protected Spring				
	Unprotected Spring				
	Rainwater				
	Tanker Truck				
	Cart With Small Tank				
4.	**SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/**				
	Irrigation Channel	YES	✓		
	Bottled Water				
	Hand Pump	3	✓		

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	Other(Specify)**Lake/ Pond**	Yes	✓		
Suggestions if any:					
B.	**Water Tank Facility**				
	Overhead Tank 3	Capacity: 2 Lakh, 1 Lakh, Sak filter			
	Underground Sump 3	Capacity: 1 Pucca, 1 Kachi, 50 Kiloliter			
Suggestions if any:					
C.	**The Type of Drainage Facility**				
	A. UNDERGROUND DRAINAGE 1	Not Adequates			
Suggestions if any:					
D.	**Road Network :All Weather/ Kutchha (Gravel)/ Black Topped pucca/ WBM**				
	Village approach road	BlackTop (Pucca)	✓		
	Main road	Yes	✓		R.C.C Road
	Internal streets	Yes	✓		
	Nearest NH/SH/MDR/ODR Dist. in kms.	SH - 2.Km NH 2.Km			S.H Dumad N.H Dashrath
Suggestions if any:					
E.	**Transport Facility**				
	Railway Station (Y/N) (If No than Nearest Rly Station---Kms)	No			Nearst (Pilol) (2.Km)
	Bus station (Y/N) Condition: (If No than Nearest Bus Station---Kms)	No			Savali - (2.0Km)
	Local Transportation (Auto/ Jeep/Chhakda/ Private Vehicles/ Other)		✓		
Suggestions if any:					
F.	**Electricity Distribution**				
	(Y/N) Govt./ Private (Less than 6 hrs./ More Than 6 hrs)	Yes 24 hour			(MGVCL)

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	Power supply for Domestic Use	2087			
	Power supply for Agricultural Use	40			
	Power supply for Commercial Use	0			
	Road/ Street Lights	Yes	✓		
	Electrification in Government Buildings/ Schools/ Hospitals	Yes	✓		
	Renewable Energy Source Facilities (Y/ N)	No			
	LED Facilities				
Suggestions if any:					
G.	**Sanitation Facility**				
	Public Latrine Blocks If available than Nos.	No			Every house is having individual facility
	Location Condition				
	Community Toilet (With bath/ without bath facilities)	No			Not - required
	Solid & liquid waste Disposal system available	Yes			
	Any facility for Waste collection from road	Yes			
Suggestions if any:					
H.	**Main Source of Irrigation Facility:**				
	TANK/POND STREAM/RIVER CANAL WELL TUBE WELL. OTHER (SPECIFY)	 Yes Yes			Drip irrigation System is there
Suggestions if any:					
I.	**Housing Condition:**				
	Kutchha/Pucca (Approx. ratio)	Pucca			

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V. SOCIAL INFRASTRUCTURAL FACILITIES:

Sr. No.	Descriptions	Information/ Detail	Adequate	Inadequate	Remarks
J.	**Health Facilities:**				
	ICDS (Anganwadi)				
	Sub-Centre	2 no			
	PHC	NO			Nearst Ranoli 5 Km
	BLOCK PHC				
	CHC/RH				
	District/ Govt. Hospital	Yes 1 nos			
	Govt. Dispensary				
	Private Clinic	Yes			
	Private Hospital/	NO			
	Nursing Home				
	AYUSH Health Facility				
	sonography /ultrasound facility				
	If any of the above Facility is not available in village than approx. distance from village: .....kms.				
Suggestions if any:					
K.	**Education Facilities:**				
	Aaganwadi/ Play group	Yes			
	Primary School	Yes: 3 no			
	Secondary school	Yes 1 no			
	Higher sec. School	No			10 Km
	ITI college/ vocational Training Center	NO			15 Km
	Art, Commerce& Science /Polytechnic/ Engineering/ Medical/ Management/ other college facilities	NO			

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Techno Economic Survey

If any of the above Facility is not available in village than approx. distance from village: ..12....kms.

Suggestions if any:

L.	Socio- Culture Facilities	Condition	Location	Available (YES)	Available (NO)
	Community Hall (With or without TV)	Adequate	Umlera (3km	Yes	
	Public Library (With daily newspaper supply: Y/N)	"	Kayali (3km)	Yes	
	Public Garden			Yes	
	Village Pond		BAJWA	Yes	
	Recreation Center				No
	Cinema/ Video Hall				No
	Assembly Polling Station			Yes	
	Birth & Death Registration Office		BAJWA	Yes	

If any of the above Facility is not available in village than approx. distance from village: ....2....kms.

Suggestions if any:

M.	Other Facilities	Condition	Location	Available (YES)	Available (NO)
	Post-office	Adequate	BAJWA	✓	
	Telecommunication Network/ STD booth			Yes	
	General Market			Yes	
	Shops (Public Distribution System)			Yes	
	Panchayat Building			Yes	
	Pharmacy/Medical Shop			Yes	
	Bank & ATM Facility			Yes	
	Agriculture Co-operative Society				No
	Milk Co-operative Soc.				
	Small Scale Industries			Yes	
	Internet Cafes/ Common Service Center/Wi Fi			Yes	
	Youth Club				
	Mahila Mandal	2 Nos		Yes	

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	Credit Cooperative Society Agricultural Cooperative Society Milk Cooperative Society Fishermen's Cooperative Society Computer Kiosk/ e-chaupal / Mills / Small Scale Industries				NO
	Other Facility	Gujarat pethrony		Yes	

Suggestions if any:

N.	Other Facilities	Condition		Available (YES)	Available (NO)
	1. Have these programme implemented the village?				
	2. Are there any beneficiaries in the village from the following programme?				
	3. Janani Suraksha Yojana				
	4. Kishori Shakti Yojana				
	5. Balika Samriddhi Yojana				
	6. Mid-day Meal Programme			Yes	
	7. Intergrated Child Development Scheme (ICDS)				
	8. Mahila Mandal Protsahan Yojana (MMPY)			Yes	
	9. National Food for work Programme (NFFWP)				
	10. National Social Assistance Programme				
	11. Sanitation Programme (SP)			Yes	
	12. Rajiv Gandhi National Drinking Water Mission				
	13. Swarnjayanti Gram Swarozgar Yojana				
	14. Minimum Needs Programme (MNP)				
	15. National Rural Employment Programme				
	16. Employee Guarantee Scheme (EGS)				
	17. Prime Minister Rojgar Yojana (PMRY)				
	18. Jawahar Rozgar Yojana (JRY)				
	19. Indira Awas Yaojna (IAY)			Yes	
	20. Samagra Awas Yojana (SAY)				
	21. Sanjay Gandhi Niradhar Yojana (SGNY)				
	22. Jawahar Gram Samridhi Yojana (JGSY)				
	23. Other (SPECIFY)				

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VI. SUSTAINABLE /GREEN INFRASTRUCTURE FACILITIES:

Sr. No.	Descriptions	Information/ Details	Adequate	Inadequate	Remarks
1.	Adoption of Non-Conventional Energy Sources/ Renewable Energy Sources	–			
2.	Bio-Gas Plant Solar Street Lights Rain Water Harvesting System	–			
3.	Any Other	–			

VII. DATA COLLECTION FROM VILLAGE

Sr. No.	Descriptions	Information/ Details	Adequate	Inadequate	Remarks
1.	Village Base Map Available: Hard Copy/Soft Copy	Soft Copy	✓		
2.	Recent Projects going on for Development of Village	–			
3.	Any NGO working for village development	–			
4.	Any natural calamity in the village during the last one year: EARTHQUAKES FLOODS CYCLONE DROUGHT LANDSLIDES AVALANCHE OTHER (SPECIFY)	NO			

VIII. ADDITIONAL INFORMATION/ REQUIREMENT:

Sr. No.	Descriptions	Information/ Detail	Remarks
1.	Repair & Maintenance of Existing Public Infrastructure facilities, School Building ✓ Health Center Panchayat Building Public Toilets & any other ✓		
2.	Additional Information/ Requirement	—	
3.	During the last six months how many times CLEANING …….. FOGGING…….. Drive was undertaken in the village?	—	

IX. Smart Village / Heritage Details

Sr. No.	Descriptions	Information/ Detail	Remarks
1.	IS THEIR ANY THING FOR THE VILLAGE ENHANCEMENT POSSIBLE ?	—	

Note: Photographs/ Video/ Drawings of all existing Infrastructure facilities & conditions should be taken by students of respective villages for their record and information.

For Any Administration queries/ Difficulties:
Ms.Darshana Chauhan,Project Co-ordinator
Contact No – 079-23267588
Email ID: rurban@gtu.edu.in

12.3 Survey form of Allocated Village **Scanned copy** attachment in the report for Part-I
Survey form of Allocated Village **Original copy** attachment in the report for Part-II

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Vishwakarma Yojana: Phase VIII

ALLOCATED VILLAGE SURVEY

An approach towards **"Rurbanisation for Village Development"**

Name of District:	Vadodara
Name of Taluka:	Vadodara
Name of Village:	Ampad
Name of Institute:	Sigma group of Institute
Nodal Officer Name & Contact Detail:	Vikrant Prajapati
Respondent Name: (Sarpanch/ Panchayat Member/ Teacher/ Gram Sevak/ Aaganwadi worker/Village dweller)	Hitendra Bhai Parmar
Date of Survey:	20/11/20

I. DEMOGRAPHICAL DETAIL:

Sr. No.	Census	Population	Male	Female	Total Number of House Holds
1.	2001	1233	640	583	358
2.	2011	1610	821	781	375

II. GEOGRAPHICAL DETAIL:

Sr. No.	Description	Information/Detail
1.	Area of Village (Approx.) (In Hector)Coordinates for Location:	4.30 He
2.	Forest Area (In hect.)	2.12 he
3.	Agricultural Land Area (In hect.)	1.00 he
4.	Residential Area (In hect.)	1.12 he
5.	Other Area (In hect.)	1.12 he
6.	Distance to the nearest railway station (in kilometers):	8.00 km (Bmw'y)

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7.	Name of Nearest Town with Distance:	8.0KM (Padra)
8.	Distance to the nearest bus station (in kilometers):	6.0KM (Bhaily)
9.	Whether village is connected to all road for the any facility or town or City?	Yes

III. OCCUPATIONAL DETAILS:

Name of Three Major Occupation groups in Village	1.	Farmer
	2.	Labour
	3.	Small scale bussiness

Major crops grown in the village:	1.	Cotton
	2.	Tuver Dal
	3.	Wheat

IV. PHYSICAL INFRASTRUCTURE FACILITIES:

Sr. No.	Descriptions	Detail	Adequate	Inadequate	Remarks
A.	**Main Source of Drinking water**				
1.	**PIPED WATER** Piped Into Dwelling Piped To Yard/Plot Public Tap/Standpipe Tube Well Or Bore Well	Tube well Bore well			3 Number Available
2.	**DUG WELL** Protected Well Un Protected Well	–	–	–	–
3.	**WATER FROM SPRING** Protected Spring Unprotected Spring Rainwater Tanker Truck Cart With Small Tank				
4.	**SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/** Irrigation Channel Bottled Water Hand Pump	NO - 6 NO - 1 No - 6	Hand pump		

	Other(Specify)**Lake/ Pond**	NO			
Suggestions if any:					
B.	**Water Tank Facility**				
	Overhead Tank	Capacity: →	2 no	18,000/25,000	
	Underground Sump	Capacity: →	1 no	50,000	
Suggestions if any:					
C.	**The Type of Drainage Facility**				
	A. UNDERGROUND DRAINAGE 1	NO			
Suggestions if any:					
D.	**Road Network :All Weather/ Kutchha (Gravel)/ Black Topped pucca/ WBM**				
	Village approach road	Available	adequate		Bitumen road
	Main road	11	11		
	Internal streets	11		maintenance required	
	Nearest NH/SH/MDR/ODR Dist. in kms.	less than		3 KM	
Suggestions if any:					
E.	**Transport Facility**				
	Railway Station (Y/N) (If No than Nearest Rly Station---Kms)	NO Railway Station			
	Bus station (Y/N) Condition: (If No than Nearest Bus Station---Kms)	Yes Bhayli			
	Local Transportation (Auto/ Jeep/Chhakda/ Private Vehicles/ Other)	Auto Private			
Suggestions if any:					
F.	**Electricity Distribution**				
	(Y/N) Govt./ Private (Less than 6 hrs./ More Than 6 hrs)	MGVCL 24 hrs			

	Power supply for Domestic Use	No			
	Power supply for Agricultural Use	No			
	Power supply for Commercial Use	Yes			
	Road/ Street Lights	Yes			
	Electrification in Government Buildings/ Schools/ Hospitals	Yes			
	Renewable Energy Source Facilities (Y/ N)	No			
	LED Facilities	Yes			

Suggestions if any:

G.	**Sanitation Facility**				
	Public Latrine Blocks If available than Nos.	No			
	Location Condition	No			
	Community Toilet (With bath/ without bath facilities)	No			
	Solid & liquid waste Disposal system available	No	Inadequate		
	Any facility for Waste collection from road	No	Inadequate		

Suggestions if any:

H.	**Main Source of Irrigation Facility:**				
	TANK/POND STREAM/RIVER CANAL WELL TUBE WELL. OTHER (SPECIFY)				

Suggestions if any:

I.	**Housing Condition:**				
	Kutchha/Pucca (Approx. ratio)	Kutchha 20%	Pucca 80%		

V. SOCIAL INFRASTRUCTURAL FACILITIES:

Sr. No.	Descriptions	Information/ Detail	Adequate	Inadequate	Remarks
J.	**Health Facilities:**				
	ICDS (Anganwadi) Sub-Centre PHC BLOCK PHC CHC/RH District/ Govt. Hospital Govt. Dispensary Private Clinic Private Hospital/ Nursing Home AYUSH Health Facility sonography /ultrasound facility	1 no			
	If any of the above Facility is not available in village than approx. distance from village: .....kms.				
Suggestions if any:					
K.	**Education Facilities:**				
	Aaganwadi/ Play group 2	Yes	✓		
	Primary School 2	Yes	✓		
	Secondary school 1	Yes	✓		
	Higher sec. School	No			
	ITI college/ vocational Training Center	No			
	Art, Commerce& Science /Polytechnic/ Engineering/ Medical/ Management/ other college facilities	No			

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If any of the above Facility is not available in village than approx. distance from village: .....kms.

Suggestions if any:

L.	Socio- Culture Facilities	Condition	Location	Available (YES)	Available (NO)
	Community Hall (With or without TV)	MEDIUM		YES	
	Public Library (With daily newspaper supply: Y/N)			NO	NO
	Public Garden				NO
	Village Pond	POOR		YES	
	Recreation Center				NO
	Cinema/ Video Hall				NO
	Assembly Polling Station				
	Birth & Death Registration Office				NO

If any of the above Facility is not available in village than approx. distance from village: .....kms.

Suggestions if any:

M.	Other Facilities	Condition	Location	Available (YES)	Available (NO)
	Post-office	VERY POOR		YES	
	Telecommunication Network/ STD booth				
	General Market				NO
	Shops (Public Distribution System)				NO
	Panchayat Building	POOR			YES
	Pharmacy/Medical Shop				NO
	Bank & ATM Facility				NO
	Agriculture Co-operative Society				NO
	Milk Co-operative Soc.				
	Small Scale Industries				NO
	Internet Cafes/ Common Service Center/Wi Fi				NO
	Youth Club			YES	
	Mahila Mandal			YES	

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Vishwakarma Yojana: Phase VIII
Techno Economic Survey

Credit Cooperative Society Agricultural Cooperative Society Milk Cooperative Society Fishermen's Cooperative Society Computer Kiosk/ e-chaupal / Mills / Small Scale Industries				
Other Facility				

Suggestions if any:

N.	Other Facilities	Condition		Available (YES)	Available (NO)
	1. Have these programme implemented the village?				
	2. Are there any beneficiaries in the village from the following programme?				
	3. Janani Suraksha Yojana				
	4. Kishori Shakti Yojana				
	5. Balika Samriddhi Yojana			YES	
	6. Mid-day Meal Programme				
	7. Intergrated Child Development Scheme (ICDS)			YES	
	8. Mahila Mandal Protsahan Yojana (MMPY)				
	9. National Food for work Programme (NFFWP)				
	10. National Social Assistance Programme			YES	
	11. Sanitation Programme (SP)				
	12. Rajiv Gandhi National Drinking Water Mission				
	13. Swarnjayanti Gram Swarozgar Yojana				
	14. Minimum Needs Programme (MNP)				
	15. National Rural Employment Programme				
	16. Employee Guarantee Scheme (EGS)				
	17. Prime Minister Rojgar Yojana (PMRY)				
	18. Jawahar Rozgar Yojana (JRY)				20
	19. Indira Awas Yaojna (IAY)				
	20. Samagra Awas Yojana (SAY)				
	21. Sanjay Gandhi Niradhar Yojana (SGNY)				
	22. Jawahar Gram Samridhi Yojana (JGSY)				
	23. Other (SPECIFY)				

VI. SUSTAINABLE /GREEN INFRASTRUCTURE FACILITIES:

Sr. No.	Descriptions	Information/ Details	Adequate	Inadequate	Remarks
1.	Adoption of Non-Conventional Energy Sources/ Renewable Energy Sources		✓		
2.	Bio-Gas Plant Solar Street Lights Rain Water Harvesting System	required Maintenance			
3.	Any Other				

VII. DATA COLLECTION FROM VILLAGE

Sr. No.	Descriptions	Information/ Details	Adequate	Inadequate	Remarks
1.	Village Base Map Available: Hard Copy/Soft Copy	Soft Copy			
2.	Recent Projects going on for Development of Village				
3.	Any NGO working for village development				
4.	Any natural calamity in the village during the last one year: EARTHQUAKES FLOODS CYCLONE DROUGHT LANDSLIDES AVALANCHE OTHER (SPECIFY)	No natural Calamity			

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VIII. ADDITIONAL INFORMATION/ REQUIREMENT:

Sr. No.	Descriptions	Information/ Detail	Remarks
1.	Repair & Maintenance of Existing Public Infrastructure facilities, School Building Health Center Panchayat Building Public Toilets & any other	maintenance of Panchayat building and Biogas plant.	
2.	Additional Information/ Requirement		
3.	During the last six months how many times CLEANING ..... FOGGING..... Drive was undertaken in the village?		

IX. Smart Village / Heritage Details

Sr. No.	Descriptions	Information/ Detail	Remarks
1.	IS THEIR ANY THING FOR THE VILLAGE ENHANCEMENT POSSIBLE?		

Note: Photographs/ Video/ Drawings of all existing Infrastructure facilities & conditions should be taken by students of respective villages for their record and information.

For Any Administration queries/ Difficulties:
Ms.Darshana Chauhan,Project Co-ordinator
Contact No – 079-23267588
Email ID: rurban@gtu.edu.in

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[illegible] પંચાયત
તા. જી. વડોદરા.

12.4 Gap analysis of allocatet village

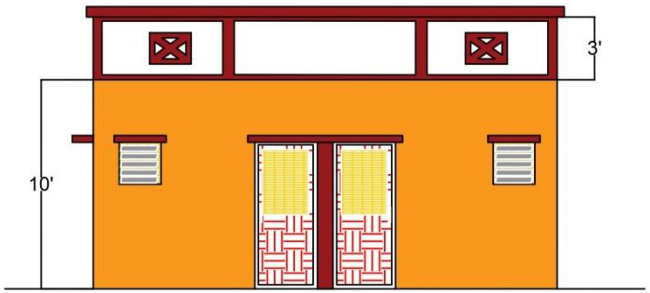
VILLAGE GAP Analysis

Village Facilities	Planning Commission/UDPFI Norms	Village Name: AMPAD, VADODARA Population: 1610 Existing	Required as per Norms	Smart Vilage / Cities / Heritage Future Projection Design	Gap
Social Infrastructure Facilities					
Education					
Anganwadi	Each or Per 2500 population	1	1	-	0
Primary School	Each Per 2500 population	1	1	-	0
Secondary School	Per 7,500 population	1	1	-	0
Higher Secondary School	Per 15,000 Population	0	0	-	0
College	Per 125,000 Population	0	0	-	0
Tech. Training Institute	Per 100000 Population	0	0	-	0
Agriculture Research Centre	Per 100000 Population	0	1	-	0
Skill Development Center	Per 100000 Population	0	0	-	0
Health Facility					
Govt/Panchyat Dispensary or Sub PHC or Health Centre	Each Village	1	1	-	0
Primary Health & Child Health Center	Per 20,000 population	1	0	-	0
Child Welfare and Maternity Home	Per 10,000 population	0	1	-	0
Multispeciality Hospital	Per 100000 Population	0	0	-	0
Public Latrines	1 for 50 families (if toilet is not there in home, specially for slum pockets & kutcha house)		1	-	-1
Physical Infrastructure Facilities					
Transportation		Adequate / Inadequate			
Pucca Village Approach Road	Each village	INADEQUATE			
Bus/Auto Stand provision	All Villages connected by PT (ST Bus or Auto)	INADEQUATE			
Drinking Water (Minimum 70 lpcd)		Adequate / Inadequate ✓			
Over Head Tank	1/3 of Total Demand	INADEQUATE	1	0	-1
U/G Sump	2/3 of Total Demand	Adequate	1	1	0
Drainage Network - Open		Adequate / Inadequate ✓			
Drainage Network - Cover		Adequate		Covered	
Waste Management System		Adequate / Inadequate ✓			
Socio- Cultural Infrastructure Facilities					
Community Hall	Per 10000 Population	1	1	-	0
community hall and Public Library	Per 15000 Population	0	0	-	0
Cremation Ground	Per 20,000 population	1	1	-	0
Post Office	Per 10,000 population	1	1	-	0
Gram Panchayat Building	Each individual/group panchayat	1	1	-	0
APMC	Per 100000 Population	0	0	-	
Fire Station	Per 100000 Population	0	1	-	-1
Public Garden	Per village	0	1	-	-1
Police post	Per 40,000Population	0	0	-	
Shopping Mall					
Electrical Design					
Electricity Network		Adequate ✓ Inadequate			
Any Smart Village Facility					
Technology					
		ESR cap	0		
		Sump cap	0		
		Lat	0		

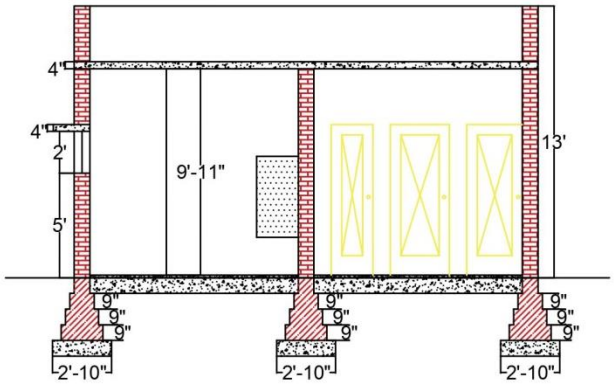
12.5 Summary Details of All the Villages Designs in Table form as Part-I and Part-II

SIGMA INSTITUTE OF ENG , VADODARA			
No.	Village Name	Part 1	Part2
	AMPAD	PANCHAYAT BUILDING	PUBLIC GARDEN
		PUBLIC TOILET	LAKE BEUTIFICATIOM
			MATERNITY HOME

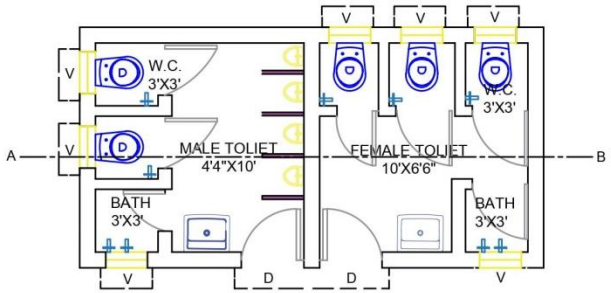
12.6 Drawings (If, required, A1, A2, A3 design is not visible then only)



ELEVATION



SECTION A - B



PLAN

BUILT UP AREA 22'3"X11'6" = 255.88 SQ.FT.

D 3'X7'

D1 2'6"X7'

V 2'x2'

NOTE:- ALL DIMENSIONS ARE IN FOOT

N

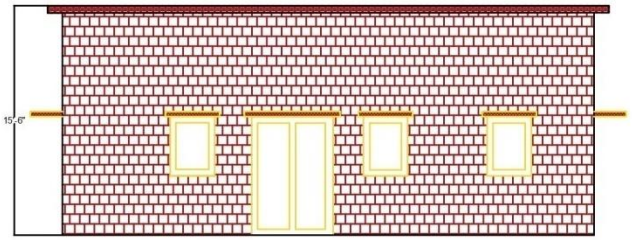
PLAN AND ELEVATION OF PUBLIC TOILET

VISHWAKARMA YOJANA PHASE - 8

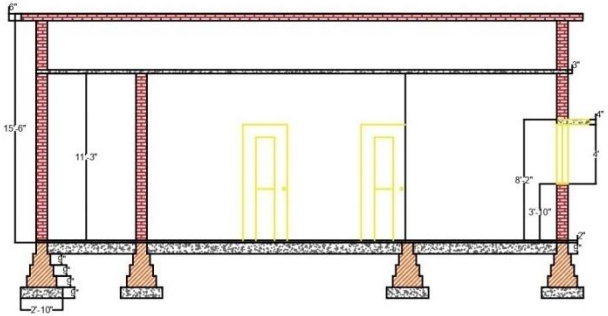
VILLAGE : AMPAD , VADODARA.

COLLEGE : SIGMA INSTITUTE OF ENGINEERING.

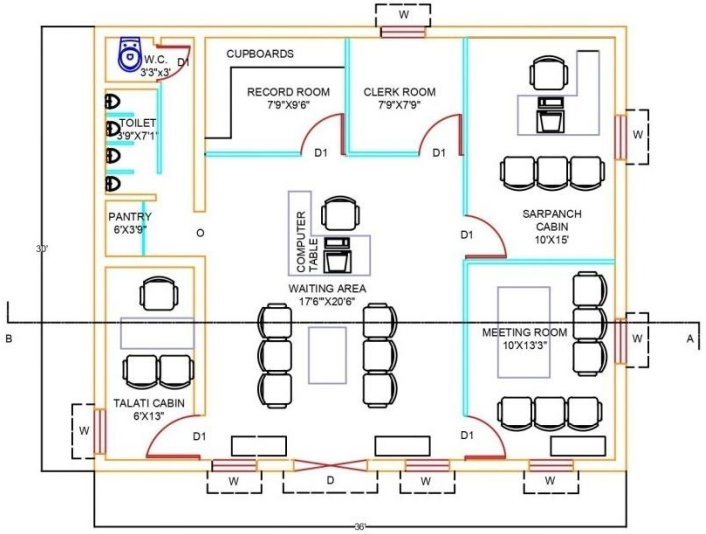
STRUCTURE : PUBLIC TOILET



ELEVATION



SECTION A - B



PLAN

BUILT UP AREA 36'X30' = 1080SQ.FT.

D	5'6"X7'
D1	3'X7'
O	3'X7'
W	3'X4

NOTE:- ALL DIMENSIONS ARE IN FOOT

N

PLAN AND ELEVATION OF GRAM PANCHAYAT

VISHWAKARMA YOJANA PHASE - 8

VILLAGE : AMPAD , VADODARA.

COLLEGE : SIGMA INSTITUTE OF ENGINEERING.

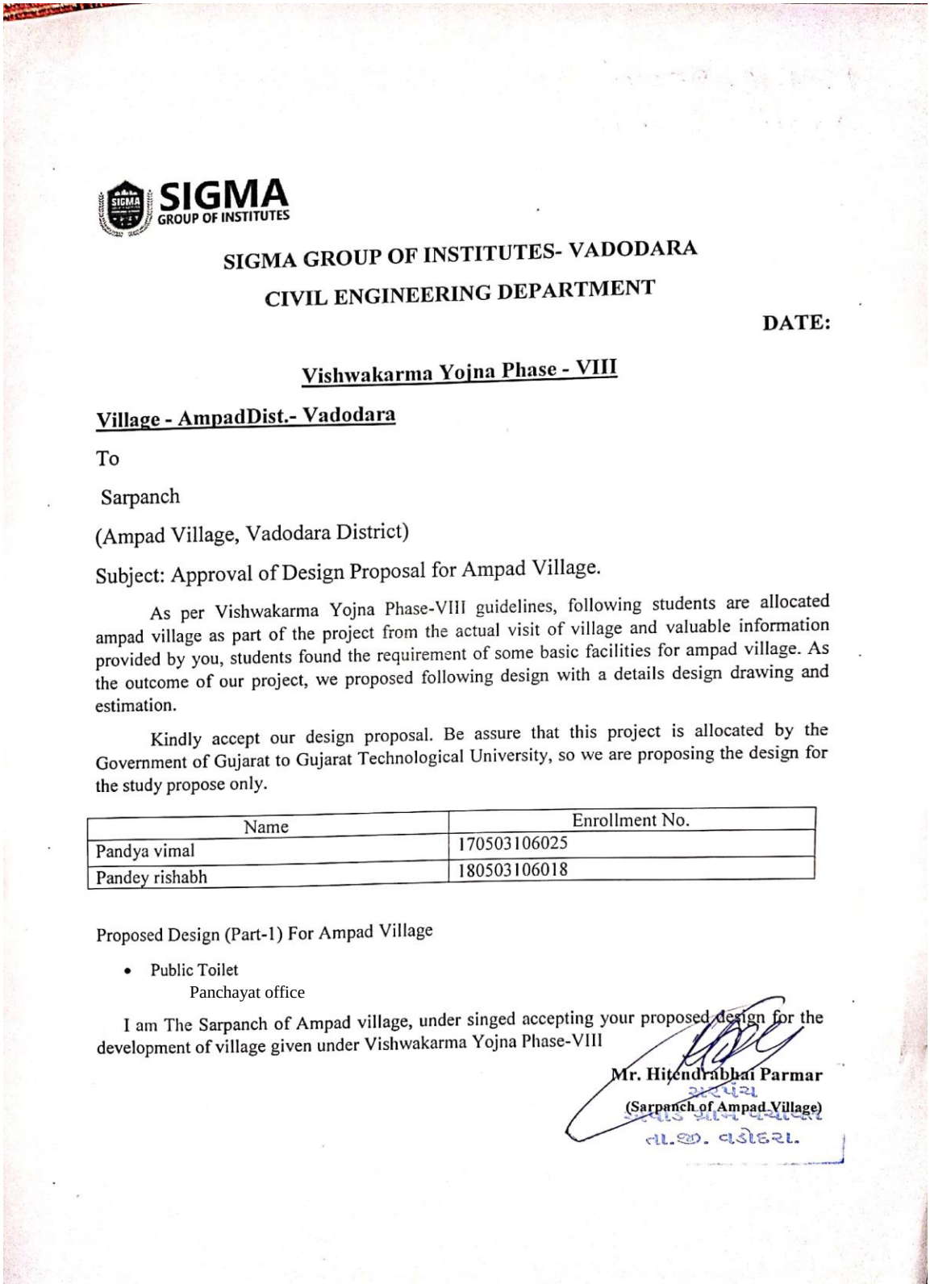
STRUCTURE : GRAM PANCHAYAT.

12.7 Summary of Good Photographs in Table Format (village visits, Ideal, Smart Village or any other)

<table>
<tr><td colspan="2">IDEAL VILLAGE (DHARMAJ)</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>  </td><td> 
</td></tr>
<tr><td colspan="2">SMART VILLAGE (BAJWA)</td></tr>
<tr><td>  </td><td>  </td></tr>
</table>

ALLOCATED VILLAGE (AMPAD)

12.9 Sarpanch Letter giving information about the village development



SIGMA GROUP OF INSTITUTES

SIGMA GROUP OF INSTITUTES- VADODARA

CIVIL ENGINEERING DEPARTMENT

DATE:

Vishwakarma Yojna Phase - VIII

Village - AmpadDist.- Vadodara

To

Sarpanch

(Ampad Village, Vadodara District)

Subject: Approval of Design Proposal for Ampad Village.

As per Vishwakarma Yojna Phase-VIII guidelines, following students are allocated ampad village as part of the project from the actual visit of village and valuable information provided by you, students found the requirement of some basic facilities for ampad village. As the outcome of our project, we proposed following design with a details design drawing and estimation.

Kindly accept our design proposal. Be assure that this project is allocated by the Government of Gujarat to Gujarat Technological University, so we are proposing the design for the study propose only.

Name	Enrollment No.
Pandya vimal	170503106025
Pandey rishabh	180503106018

Proposed Design (Part-1) For Ampad Village

- Public Toilet
  Panchayat office

I am The Sarpanch of Ampad village, under singed accepting your proposed design for the development of village given under Vishwakarma Yojna Phase-VIII

Mr. Hitendrabhai Parmar

(Sarpanch of Ampad Village)