

VISHWAKARAMA YOJANA - AN APPROACH TOWARDS URBANIZATION OF KOLAT VILLAGE

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ABSTRACT

The Poor economic conditions and lack of basic amenities in the village are the main push factor that drift the rural population to the urban areas. Vishwakarma Yojana is one of the initiatives by Government of Gujarat which is undertaken as a project scheme by Gujarat Technological University to urbanize rural areas of the country along with preserving rural soul. Kolat Village was selected for this purpose. After doing techno-economic survey and analysing present scenario of the village designs were proposed. These designs include library and design of Common Service Center. The aim of this study is to urbanize Indian villages, whatever is there in city must be in the village too so that villagers can't face difficulties and migration of villagers can be eliminated.

Keywords: - Urbanization, Infrastructure, Techno-economic survey, Social-economic

1. INTRODUCTION

"Rural areas" can be termed as the area having low population density and large amount of undeveloped land. According to Census of India 2011, the definition of rural area can be described as:

- A region of up to 400 per sq.km population density.
- Villages with simple borders, but no municipal board.
- A minimum of 75% of male workers which are involved in agricultural activities.
- In general, a geographical area that is located outside the cities is called as rural area.

The rural economy is an important aspect of India's total economy.ⁱ Because the majority of the poor live in rural areas, the primary goal of rural development is to improve the quality of life of rural residents by reducing poverty through self-employment and wage employment programs, providing community infrastructure such as drinking water, electricity, road connectivity, health facilities, rural housing, and education, and promoting rural tourism.ⁱⁱ

In rural areas, the quantity and quality of infrastructural facilities are significantly lower than in urban areas. The extension of basic infrastructure amenities in rural areas is hampered by a relatively low population density, low household incomes, and the lack of scale economiesⁱⁱⁱ. The method of improving the quality of life and financial well-being of a person who specifically lives in populated and remote areas is typically linked to rural growth.^{iv}

The ultimate goal of Vishwakarma Yojana is to remove difference between rural and urban area, by providing all the basic amenities to the villagers.^v With all the smart amenities that a city has, our goal is to

grow our village too. This will help to grow the village in a sustainable way by reducing villagers' migration and avoiding urban pressure from the cities.^{vi} The future scenery for urbanization can be sustainable by improving Rural India.

1.1 Objectives of Study

- This study aims to convert rural to urban means to satisfy all the basic facilities in village without disturbing the soul of village.
- The analysis will concentrate of development pattern, the village growth intensity and identify issues related to infrastructure.
- To provide all the basic facilities to the villagers, in order to minimize the migration of people from rural to urban areas.
- To study the existing infrastructures facilities and to proposed the proper solution for maintaining and developing the infrastructure.

2. METHODOLOGY

We began by studying numerous topics linked to village growth, objectives, and needs, and we chose Punsari as our ideal village.^{vii} Following that, we did a techno-economic survey of Kolat village to learn more about the village's current situation. Interacting with villagers and panchayat members provided social, socioeconomic, and physical information of the entire village. From the Techno-economic survey.



Figure 1: Study Area Details

3. LITERATURE REVIEW

After Visiting the village and studying the area of village, we got more information about the village in terms of geographical area, population and more.

3.1 About Village

Village: Kolat

Pin code: 382210

Taluka: Sanand**Geographical Area:** 1009.33 hectares**District:** Ahmedabad**Population:** 4327**State:** Gujarat**Houses:** 813

Kolat is situated in the Ahmadabad district of Sanand Tehsil in Gujarat, India. It is located 5 km from the Sanand sub-district headquarters and 22 km from the Ahmedabad district headquarters. Having population of 4327 and geographical area of 1009.33 hectares.

Kolat Village fall under the parliamentary constituency of Sanand Assembly and Gandhinagar as per 2019 statics. Sanand is Kolat's nearest town, which is about 5 km away. It was found that no sewage control service was available and cleanliness was not maintained throughout the village. Lack of Medical facilities and advance infrastructure was one of the major concern for villagers.

3.2 Physical and Demographic Growth

Physical growth

Sr no.	Census	Population	Male	Female	Houses
1.	2001	3356	-	-	-
2.	2011	4327	2215	2112	813

Demographic growth

Sr.no	Description	Information/ Detail
1.	Area of village	1009 hectares (approx.)
2.	Agriculture land	886 hectares (approx.)
3.	Residential area	118 hectares (approx.)
4.	Waste land	5.2 hectares (approx.)

4. DATA COLLECTION

4.1 Primary data collection

By visiting the designated village, primary data collection is carried out, taking an overview of the entire village. By analyzing the map of the village, the village topography, the village population. Interacting with the Sarpanch & Talati to ask them about the rural problems faced by the villagers.

4.2 Secondary data collection

Secondary collection includes techno economic survey. Questions are put to the sarpanch, panchayat representatives, school principal, and villagers in techno economic survey. We have been able to recognize the issues related to the drinking water supply system, drainage sewage system, and sanitation facilities and lack of certain infrastructure like PHC, Library, Community hall, Post office through the techno economic survey & visit of kolat village.

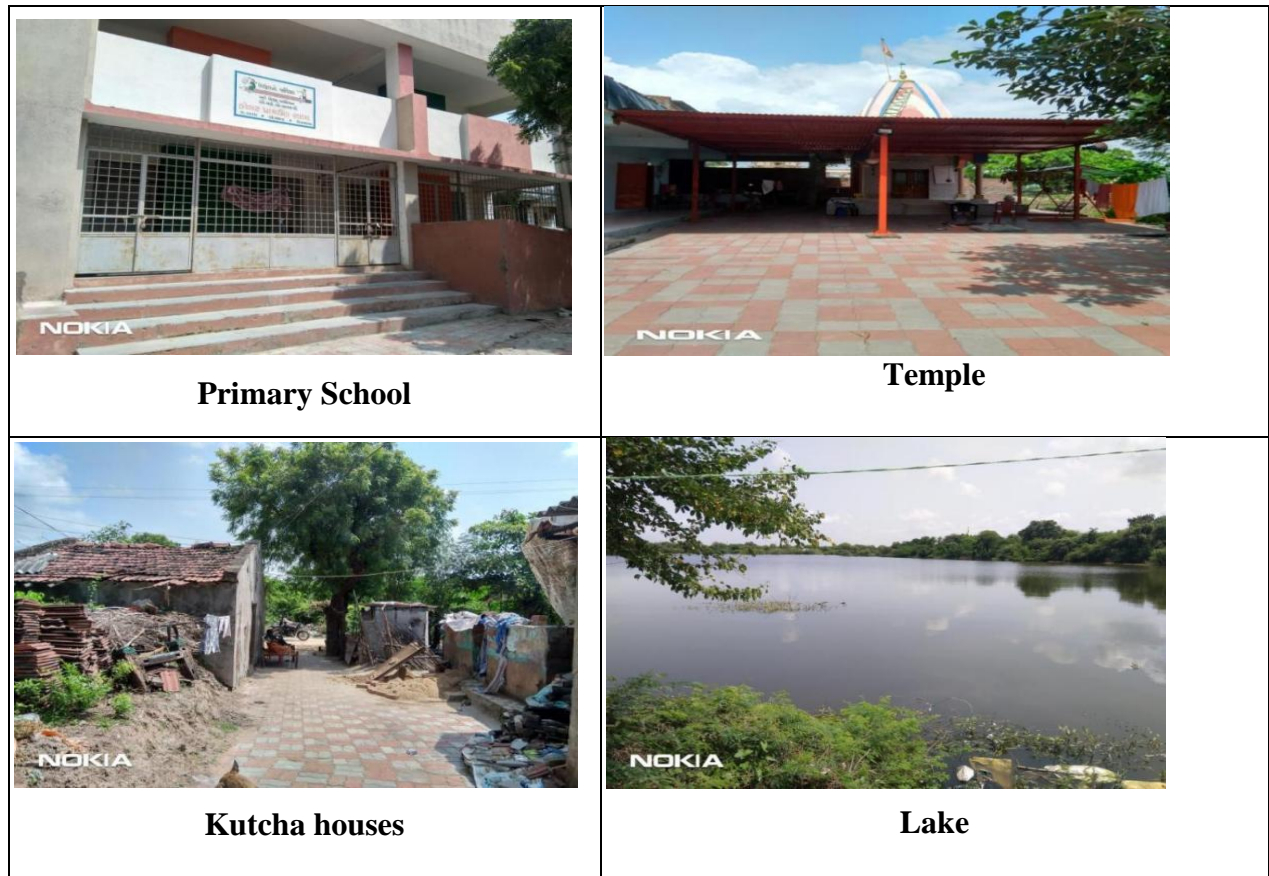


Figure 2: Photographs of Kolat Village

5. DESIGN PROPOSAL

We have suggested different designs after visiting the village and after analyzing the village extensively, which will help the villagers, improve their lifestyle. From visiting the villages and providing proper design, we have tried to build sustainable & economic design according to our knowledge & hard work.

In reference to the ideal village, our own goal is to grow the allotted village. Based on our survey, knowledge & gap analysis, we have proposed few designs for its development.

We get to know that the village has a Primary School, but there was no facilities like Library.in the school. As we know that Library is an important source of knowledge to young minds, for the welfare of students we proposed design of it.

Common Service Center (CSC) is an access point for information and communication technology (ICT) built by Indian government National e-Governance project. By providing CSC in our allotted village it will furnish to gain some knowledge of new technologies in the younger minds of the villagers.

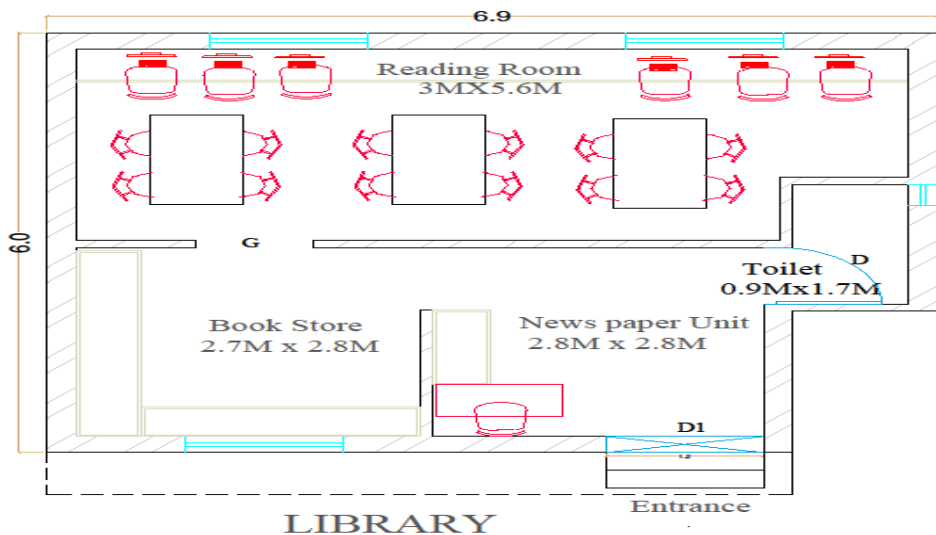


Figure 3: LIBRARY (Plan, Elevation and Side view)

ABSTRACT SHEET					
NO.	ITEMS	UNIT	QTY.	RATE	AMOUNT
1	EXCAVATION IN FOUNDATION	CU.M.	26.568	150.00	3985.20
2	P.C.C. IN FOUNDATION (1:4:8)	CU.M.	6.642	3900.00	25903.80
3	MASONRY WORK IN FOUNDATION	CU.M.	11.97	4900.00	58653.00
4	EARTH BACK FILLING	CU.M.	7.956	120.00	954.72
5	5MM THICK DPC	SQ.M.	14.22	4700.00	66834.00
6	MASONRY WORK IN SUPER STRUCTURE	CU.M.	18.516	4900.00	90728.40
7	SMOOTH INSIDE PLASTER	SQ.M.	129.018	260.00	33544.68
8	OUT SIDE ROUGH PLASTER	SQ.M.	69.684	310.00	21602.04
9	R.C.C. SLAB	CU.M.	6.21	8800.00	54648.00
10	R.C.C. CHAJJA AND LINTEL	CU.M.	8.811	8000.00	70488.00
11	2' X 2' FLOORING	CU.M.	45.45	635.00	28860.75
12	DOORS IN WOOD	SQ.M.	6.3	1600.00	10080.00
13	WINDOOW IN WOOD	SQ.M.	6.912	1550.00	10713.60
14	VENTILATION IN ALUMINIUM	SQ.M.	0.18	1550.00	279.00
15	WHITE WASH(IN SIDE)	CU.M.	198.702	18.00	3576.64
					480851.83
ADD 5% CONTINGENCY					24042.59
ALL ABOVE RATE FILLED MAY VARY DUE TO MARKET INFLATION				TOTAL	504894.42

COMMON SERVICE CENTRE (CSC)

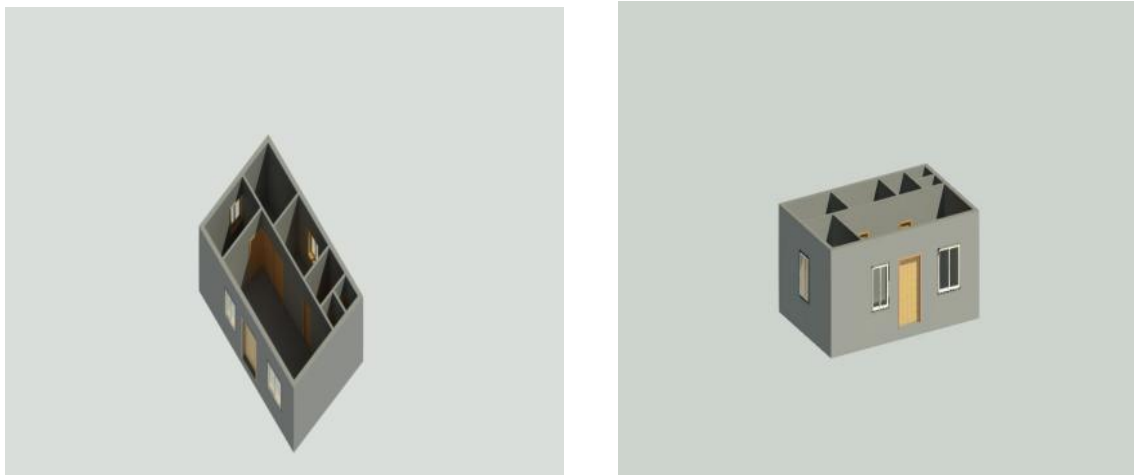
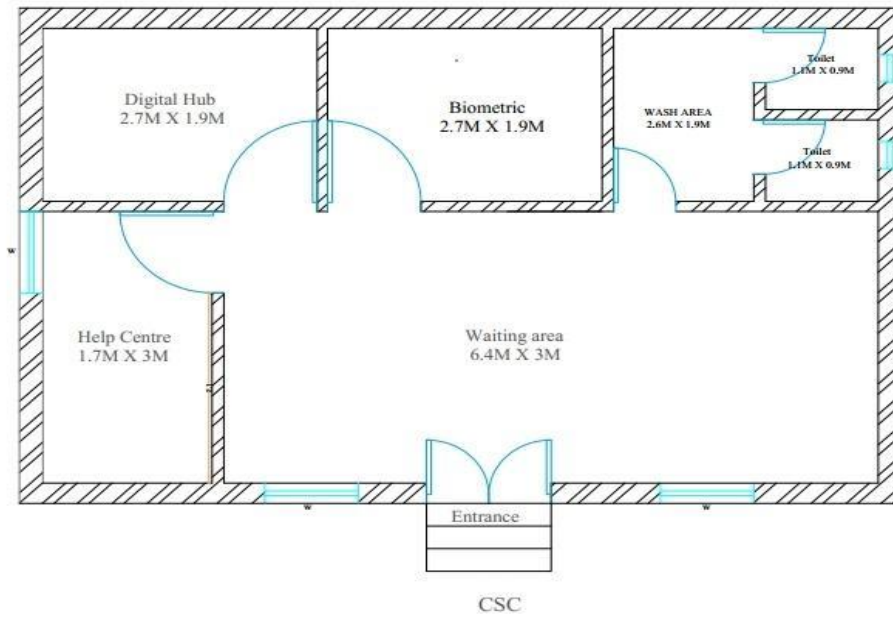


Figure 4: Common Service Centre (Plan & 3D View)

ABSTRACT SHEET					
NO.	ITEMS	UNIT	QTY.	RATE	AMOUNT
1	EXCAVATION IN FOUNDATION	CU.M.	29.81	150.00	4471.20
2	P.C.C. IN FOUNDATION (1:4:8)	CU.M.	7.45	3900.00	29062.80
3	MASONRY WORK IN FOUNDATION	CU.M.	13.57	4900.00	66502.80
4	EARTH BACK FILLING	CU.M.	8.78	120.00	1054.08
5	5MM THICK DPC	SQ.M.	14.22	4700.00	66834.00
6	MASONRY WORK IN SUPER STRUCTURE	CU.M.	20.85	4900.00	102150.30
7	SMOOTH INSIDE PLASTER	SQ.M.	153.84	260.00	39998.40
8	OUT SIDE ROUGH PLASTER	SQ.M.	82.38	310.00	25537.80
9	R.C.C. SLAB	CU.M.	7.22	8800.00	63571.20
10	R.C.C. CHAJJA AND LINTEL	CU.M.	0.55	8000.00	4428.00
11	2' X 2' FLOORING	CU.M.	41.21	635.00	26168.35
12	DOORS IN WOOD	SQ.M.	11.97	1600.00	19152.00
13	WINDOOW IN WOOD	SQ.M.	3.89	1550.00	6026.40
14	VENTILATION IN ALUMINIUM	SQ.M.	0.18	1550.00	279.00
15	WHITE WASH(IN SIDE)	CU.M.	236.22	18.00	4251.96
					459488.29
ADD 5% CONTINGENCY					22974.4145
ALL ABOVE RATE FILLED MAY VARY DUE TO MARKET INFLATION				TOTAL	482462.7

6. ACKNOWLEDGEMENT

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7. CONCLUSION

Vishwakarma Yojana is preparing for Gujarat's future, and students of engineering like us have an opportunity to take real work experience and improve rural areas at economic cost with good workability and productivity during use. The goal of Vishwakarma Yojana is to develop the villagers' living standard, the project tends to improve the villagers' physical, social and socio- cultural aspects by economically implementing and improving infrastructure facilities in the village.

We decided to propose design of PHC, community hall, septic tank, library, Common service center because as per survey & gap analysis we conclude that this basic infrastructure is important for increasing living standard & create a healthy atmosphere for the villagers. By developing the above mentioned amenities all the facilities will be available to the villagers & migration will reduce & villagers need can live a good lifestyle in the village itself.

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