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Rurbanisation - A Case Study on Chikhodara Village, Gujarat

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Abstract – *Rurbanisation is combined process of preserving the "soul of villages" by providing all the civic and infrastructure facilities available in urban areas to reduce migration rate of people from rural to urban areas. The government of Gujarat has launched the project entitled with "Vishwakarma Yojna - an approach towards Rurbanisation", which has been undertaken by Gujarat technological university. The Yojana has the aim to convert rural to Rurban means to Rurbanisation. In the present study, Rurbanisation of Chikhodara village of the Vadodara district is carried out with Techno-economic Survey and Gap Analysis. As per UDPIF guidelines we proposed some of the new infrastructural facility as well as repair and maintenance of existing facilities as per the needs of village. Selection of infrastructural facilities has been made based on the most urgent needs of people as well as environmental protection and modernization.*

Keywords- *Rurbanisation, Techno-economic survey, Gap Analysis, urban infrastructure facility in rural area*

I. INTRODUCTION

Agriculture is the backbone of Indian economy. As per 2018, Agriculture employed 50% of the Indian work force and contributed 17-18% to country's GDP. 70% of rural households depend primarily on agriculture for their livelihood, with 82% of farmers being small and marginal. Now a day peoples are migrating from rural to urban area because of lack of infrastructure facility and employment opportunity in village. Hence Rurbanisation, which is concerned with economic and social growth, improvement in the living standard of the rural people by providing adequate and quality social services and minimum basic needs, becomes essential.

Vishwakarma Yojana would provide "Design to Delivery" solution for development of villages. The developmental work in villages that could undertake as per the need of the village in particular includes Physical infrastructure facilities (Water, Drainage, Road, Electricity, Solid waste Management, Storm Water Network, and Telecommunication & Other), Social infrastructure facilities (Education, Health, Community Hall, Library, Recreation Facilities & other) and renewable energy (Rain water harvesting, Biogas plant, Solar Street lights & Other) for Sustainable development.

"India lives in its villages" –Mahatma Gandhi.

III. METHODOLOGY

A. Objective of study

- To collect the basic data of village.
- To understand the current scenario of infrastructure through techno-economic survey
- Upgrade the basic utilities as per urban standards.
- Provide sustainable civil designs for the village.
- Redesign existing facility as per requirement.

III. STUDY AREA DETAILS

Village	Chikhodara
Tehsil	Vadodara
District	Vadodara
State	Gujarat
Pin code	391760
Post Office	Chikhodara
Area	590.98 ha.
Population	1747

Households	380
Nearest Town	Vadodara
Village code	519861

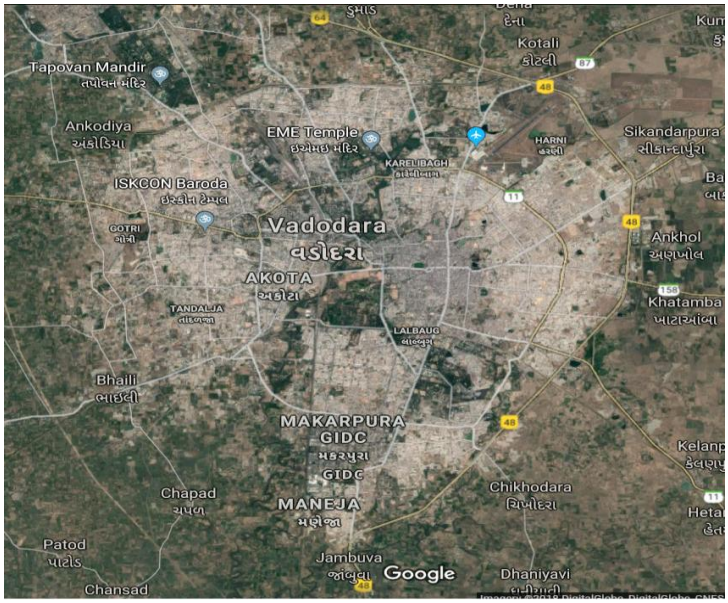

Fig: Study Area Chikhodara Village

About Chikhodara:
Chikhodara village is located in Vadodara tehsil of Vadodara district, Gujarat. It is 12km away from Vadodara district head quarter towards south-east and 2 km from NH48. Chikhodara is 143 km away from state capital Gandhinagar. Surrounding villages of chikhodara are Dhanyavi and Bhaliyapura. As per census 2011 Village code or location code of Chikhodara is 519861. Pin-code of chikhodara is 391760. Chikhodara village is administrated by gram panchayat.

Physical & Demographical Growth:
As per census 2011 data Chikhodara is a medium size village with 380 households and Population of village is 1747 where 881 male and 866 females. In village, child population of age between 0-6 is 236. Average sex ratio of village is 983 which is higher then Gujarat state average 919. Child sex ratio of village is 983 which is also higher then Gujarat state average 890.

IV. DATA COLLECTION

Data collection is generally carried out in 2 phases:-
A. Primary data collection
B. Secondary data collection

A. Primary data Collection

The primary survey was conducted to identify the various basic and general problems of village dwellers by communicate and interacting with villagers, Sarpanch, talati and enquire about their basic needs, facilities required for this village, their problems and issues of the Chikhodara village which they seen in daily life. They were asked to suggest the possible and desirable solutions for these problems as well as other infrastructural facilities they would like to have in their village.

Fig – Gram Panchayat

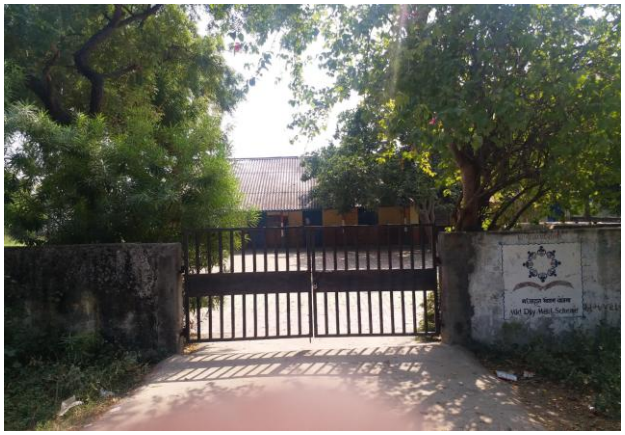

Fig- Primary School

Fig- Road Condition

Fig – Community hall

B. Secondary Data Collection.

Secondary data collection includes techno-economic survey. In this survey, we have filled survey forms which were to be filled by the students who select the Yojana as per the information provided by the Sarpanch, Talati, village dwellers, Anganwadi workers, school principle and panchayat workers of the village. In this survey, we have collected information regarding to geographical data, demographical data and condition of existing facilities in village like, water supply facilities, irrigation facilities, health centre facilities, sanitation facilities, electricity, transportation facilities, etc.

V. GAP ANALYSIS

VILLAGE GAP Analysis					
Village Facilities	**Planning Commission/UDPFI Norms**	**Village Name:**	chikhodara		
		Population: 1747			
		Existing	**Required as per Norms**	**Smart Village / 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	0	0		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	0		0
Skill Development Center	Per 100000 Population	0	0		0
Health Facility					
Govt/Panchayat Dispensary or Sub PHC or Health Centre	Each Village	0	1		1
Primary Health & Child Health Center	Per 20,000 population	0	0		0
Child Welfare and Maternity Home	Per 10,000 population	0	0		0
Multispecialty Hospital	Per 100000 Population	0	0		0
Public Latrines	1 for 50 families (if toilet is not there in home, especially for slum pockets & kutcha house)	0	1		1
		Physical Infrastructure Facilities			
Transportation		**Adequate / Inadequate**			
Pucca Village Approach Road	Each village	Adequate			
Bus/Auto Stand provision	All Villages connected by PT (ST	Inadequate	1		1

	Bus or Auto)				
Drinking Water (Minimum 70 lpcd)		**Adequate / Inadequate**			
Over Head Tank	1/3 of Total Demand	Adequate	1		0
U/G Sump	2/3 of Total Demand	Adequate	1		0
Drainage Network - Open		Inadequate			
Drainage Network - Cover		Adequate			
Waste Management System		Inadequate			
Socio- Cultural Infrastructure Facilities					
Community Hall	Per 10000 Population	1	0		0
community hall and Public Library	Per 15000 Population	0	0		0
Cremation Ground	Per 20,000 population	0	0		0
Post Office	Per 10,000 population	1	0		0
Gram Panchayat Building	Each individual/group panchayat	1	1		0
APMC	Per 100000 Population	0	0		0
Fire Station	Per 100000 Population	0	0		0
Public Garden	Per village	0	1		1
Police post	Per 40,000Population	0	0		0
Shopping Mall					
Any Smart Village Facility					
Technology					
		ESR cap	0		
		Sump cap	0		
		Lat	0		

VI. DESIGN PROPOSALS

After performing the Techno-economic survey and gap analysis based on UDPFI norms following new infrastructure facilities have been proposed as the primary requirements of the village which needs to be implemented. Apart from these design and estimate for maintenance of primary school was also provided.

1) Public Toilet
2) Sub-centre
3) Public Garden
4) Fair Price Shop
5) Lake Development

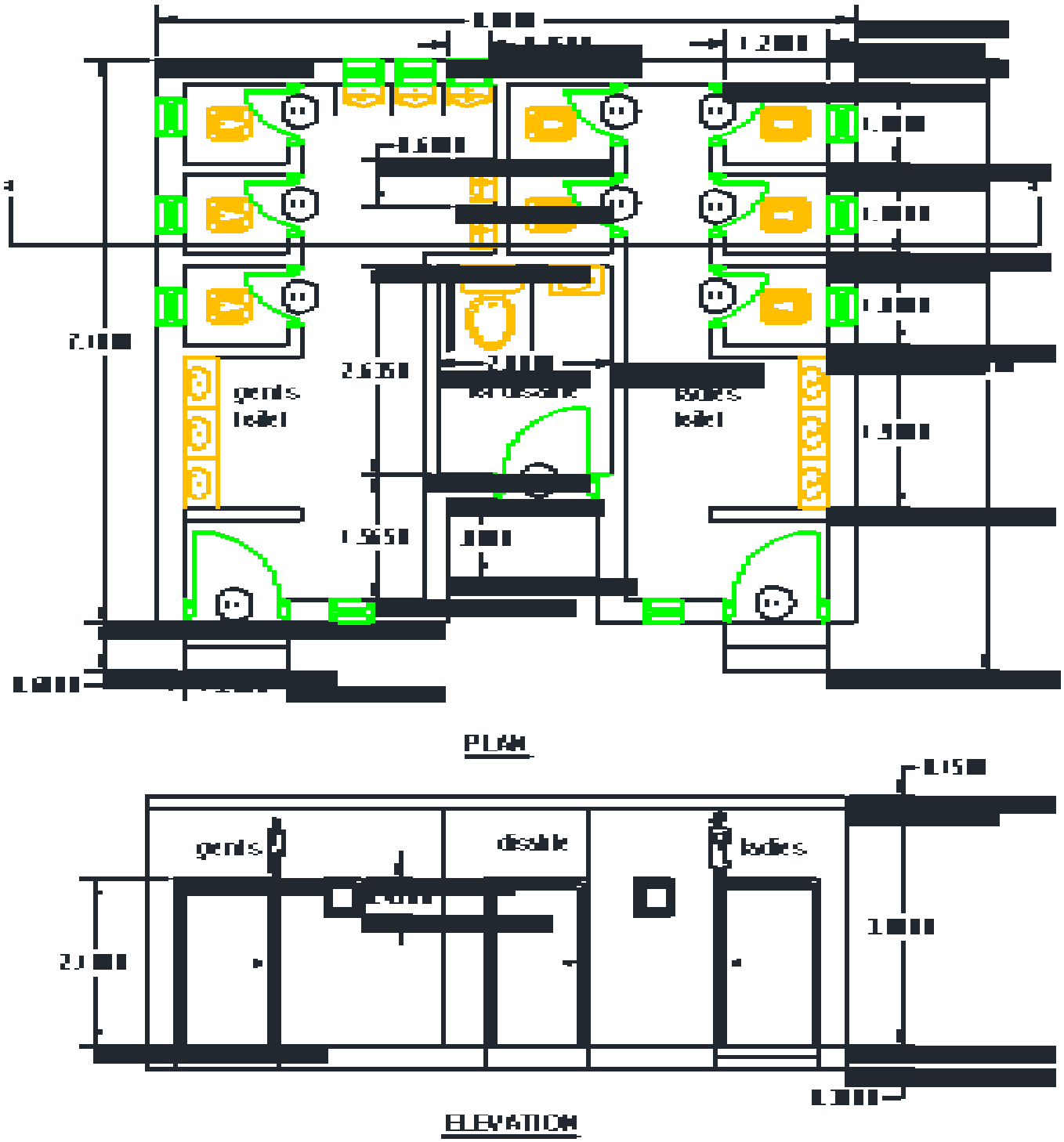

Fig- Public Toilet Design

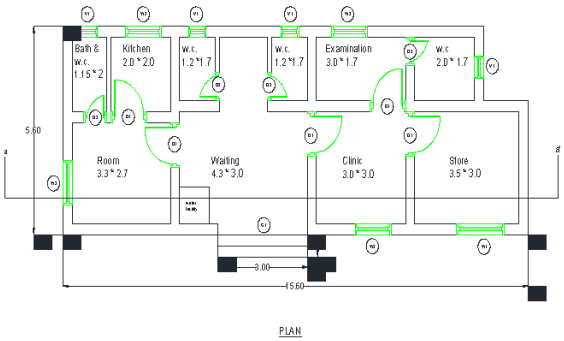

Fig – Sub-Centre Design

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