

CHAPTER - III

WORK DONE BY SHIVSADAN SOCIETY

3.1. PREFABRICATED HOUSE CONSTRUCTION :

The housing problem is becoming acute day by day because of the various laws relating to the availability of land and the high price of land. In addition to this, most of the people face problems like the need of shelter for the growing population, availability of long term loan at low rate of interest for construction of houses and the ever increasing prices of the building construction material. As a result, there is an increasing gap between the number of houses needed and the actual number of houses constructed. This gap has created many problems like growth of slum area in cities, health problems etc.

Shivsadan Society, in its own way, has tried to tackle a part of this problem by supplying prefabricated houses called "Vasant Gharkul", to the people in rural and urban area of Sangli and other districts.

The prefabricated house construction system consists of preparing different parts of house in factory, carry them to the site and erect there the house by completing it in the minimum time (about one month). It is possible to maintain a high standard of construction work, complete construction in 30 days and at comparatively less cost.

Sketch and details of construction cost of "Vasant Gharkul" are given in Appendix to this chapter.

BENEFITS OF PRE-FABRICATED HOUSE CONSTRUCTION :

Prefabricated house construction has the following important advantages:

1. Comparatively less cost than for traditional construction.
2. Saving in time. Prefabricated house can be completed within a month.
3. An individual going for a pre-fabricated house knows in advance the total expenditure he is required to incur. Normally there are no cost escalations.
4. Efficient use of building material and labour.

WORK DONE BY SHIVSADAN SOCIETY :

Shivsadan Society's work in respect of construction of Prefabricated houses from its inception upto 1988-89 can be seen from the table given below :

Table-3.1 : Work done by Shivsadan Society :
Prefabricated Houses.

Year	No. of Prefabricated House Built	No.	Price charged per sq.foot Rs.
1969-70	3		
1970-71	14		
1971-72	39		25
1972-73	36		
1973-74	38		
1974-75	-		
1975-76	32		
1976-77	394		
1977-78	374		
1978-79	52		
1979-80	94		
1980-81	136		
1981-82	259		
1982-83	275		
1983-84	266		
1984-85	2		12
1985-86	12		
1986-87	7		
1987-88	59		
1988-89	24		85
1989-90	11		
	<u>Total</u>	<u>2127</u>	

Source : Compiled from the Annual Reports of Shivsadan Society

The above Table shows that over a period of 21 years, Shivsadan Society has erected for various customers 2127 prefabricated houses to the rural and urban population mainly

in Sangli District and also in other districts like Kolhapur, Satara, Pune, Ratnagiri, and Belgaum. The society would not do any work in respect of prefabricated housing in the year 1974-75 mainly because of shortage of cement and the government restrictions. The activity could again be started in the year 1975-76 and in the years 1976-77 and 1977-78, 394 and 374 prefabricated houses were erected respectively and given possession of to the customers. Incidentally, the number of houses erected in 1976-77 has been the highest for the individuals for the entire period of 21 years. The activity again picked up momentum in the first four years in the 80's. The number of houses constructed in the year 1980-81 was 136 which rose to 259 in the year 1981-82, further to 275 in the year 1982-83 and fell marginally to 266 in the year 1983-84. Later on, however, the level of activity in this respect has declined considerably with the range of minimum of 2 houses in the year 1984-85 and the maximum of 59 houses in 1987-88.

In the initial years (i.e. from the year 1969-70 to 1973-74), the price charged by Shivsadan Society was Rs.25/- per square foot of house erected. Roof used for these houses was made up of R.C.C. The year 1974-75 was the beginning of the second phase in the life of Shivsadan Society. The society discontinued using RCC roof and instead started using roof made up of asbestos sheets in the year 1974-75. This

was because of the pressure from the individual and organisational customers to reduce the price of pre-fabricated house of the Society. The price per square foot came down to Rs.12/- and this price prevailed for a long period of 12 years (i.e. from 1975-76 to 1986-87, both years inclusive). Shivsadan Society has done the major work in respect of prefabricated houses during this very period of 12 years. The price charged for square foot of house construction was raised to Rs.85/- in the year 1987-88 and this was the prevailing price in the year 1989-90.

Customers for prefabricated houses of Shivsadan Society can be grouped in two categories as follows :

1. Individual and
2. Organisations.

Organisations include mostly cooperative sugar factories and Zilla Parishads in Sangli, Satara, and other adjoining districts.

Details of the work done by Shivsadan Society in respect of prefabricated houses for the recent six years are given in the following tables. Tables giving district-wise details contain information about the houses constructed for individuals and not for organisations. Details of houses erected for the organisations could not be found and, therefore, not given.

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9688

Table-3.1.(A) : Statement Showing Prefabricated Houses Erected by Shivsadan Society.

Year	For Individuals (Number)	For Organisations (Number)	Total (Number)
1984-85	-	2	2
1985-86	4	8	12
1986-87	4	4	8
1987-88	16	43	59
1988-89	9	15	24
1989-90	11	-	11
	<u>44</u>	<u>72</u>	<u>116</u>

Source : Office Records of Shivsadan Society

Table-3.1.2. : Statement showing Prefabricated Houses Erected by Shivsadan Society in Sangli District.

Year	Taluka					Total
	Miraj	Tasgaon	Jath	Walwa	Atapadi	
1984-85	-	-	-	-	-	-
1985-86	1	2	1	-	-	4
1986-87	2	-	-	-	-	2
1987-88	8	1	-	1	-	10
1988-89	9	-	-	-	-	9
1989-90	5	-	1	-	1	7
Total	25	3	2	1	1	32

Source : Compiled from Shivsadan Society's Office Records.

Table-3.1.3. : Statement Showing Prefabricated Houses Erected by Shivsadan Society in Other Districts.

Year	Districts				Total
	Satara	Kolhapur	Pune	Ratnagiri	
1984-85	-	-	-	-	-
1985-86	-	-	-	-	-
1986-87	1	1	-	-	2
1987-88	1	3	1	1	6
1988-89	-	-	-	-	-
1989-90	1	2	-	1	4
Total	3	6	1	2	12

Source : Compiled from Shivsadan Society's Office records.

3.2. BIO-GAS PLANT :

Another important activity in which Shivsadan Society has been engaged from the year 1975 is biogas plants. The Society has to turn to this activity under unavoidable circumstances. The government policy in 1975 was to use cement (which was a scarce commodity then) on priority basis for agricultural needs. Shivsadan Society, therefore, had to shift emphasis from prefabricated houses to biogas plants. The famous 20-Point Programme was also launched by that time, i.e. around the year 1975, and one of the 20 Points was construction of houses for economically and socially weak sections.

Shivsadan Society followed the K.V.I.C. model of biogas plant in the initial stage. Janata model was introduced by

the Society in the year, 1979-80. The latest Krishna Model was introduced by Shivsadan Society in the year 1988. Because of the pressure from the customers, however, Shivsadan Society has renamed Krishna Model as Janata Model. Sketches of these three Models are given in the Appendix to this Chapter.

WORK DONE - BIOGAS PLANTS :

Table No. 2.2 (given in Chapter-II) gives yearwise details of the plants constructed by Shivsadan Society for its customers. As stated earlier, the society was forced to diversify in favour of this activity in the year 1974-75. During the first year of this activity, Shivsadan Society constructed 25 biogas plants for its customers. The number of biogas plants increased to 78 in the next year and further to 114 in the year 1976-77. Except in the years 1979-80 and 1981-82, this number never fell below one hundred. In the year 1982-83, the number rose to 236 and shot up to 706 in the year 1983-84.

During the next four years the number of biogas plants was 1565 (year 1984-85) 968 (year 85-86) 1405 (year 1986-87) and 1248 (year 1987-88). During the last two years of its operations the number has declined and come down below 1000 mark i.e. 957 for 1988-89 and 707 for the year 89-90. The total biogas plants constructed by Shivsadan Society numbered 9512 by the end of the year 1989-90.

On an average, Shivsadan Society has constructed a little less than 600 biogas plants per annum for the last 16 years.

Details of cost of K.V.I.C. model and Janata Model (including Krishna Model) are given in Chapter-II. The customer is required to pay the price on the basis of distance between his site of biogas plant and the Shivsadan Society's factory. For example, a K.V.I.C. model plant of 4 cu.m. is priced at Rs.8,900/- if the distance is upto 50 kms. Rs.9400/- if the distance is between 51 to 200 kms. and Rs.10,600'- for a distance between 201 to 250 kms. Janata Model Plant of the same size and for the same distances is priced at Rs.7,600/-, Rs.8,000/-, and Rs.9,500/-. Thus because of less cost and the structural changes made in Janata Model, it became popular with the people. Janata model was found to be so popular that Shivsadan Society had to rename Krishna Model, introduced in 1988, as Janata Model after noticing the customer reluctance to accept Krishna Model.

Districtwise details of work done by Shivsadan Society in respect of the biogas plants during the recent 6 years are given in the following Tables.

Table-3.2. : Statement Showing Biogas Plants Constructed by Shivsadan Society.

Dist- ripts- /Year	84-85	85-86	86-87	87-88	88-89	89-90	Total	Per- cen- tage- to total
Sangli	581	405	414	282	41	170	1893	28.4
Satara	752	214	843	793	424	409	3435	51.5
Solapur	77	158	99	65	6	25	430	6.4
Kolhapur	136	169	127	95	147	63	737	11.0
Pune	14	6	1	1	13	12	47	0.7
Belgaum	5	14	20	12	51	28	130	2.0
Total	1565	966	1504	1248	682	707	6672	100.0

Source : Compiled from Annual Reports of Shivsadan Society.

From the above Table it is clear that about 51% of the biogas plants constructed by Shivsadan Society during the six years ending 30th June 1990 were in Satara Districts. Sangli Districts ranks second with 28%. Followed by Kolhapur District with 11% of the total biogas plants.

Details of biogas constructed by Shivsadan Society in Sangli District are given in Table 3.2.1.

Table-3.2.1. : Statement Showing Biogas Plants Constructed by Shivsadan Society in Sangli District.

Year/ Taluka	84-85	85-86	86-87	87-88	88-89	89-90	Total
Tasgaon	154	75	125	42	12	118	526
Walwa	143	42	104	36	13	34	372
Khanapur	131	76	41	29	5	3	285
Kavathe Mahankal	65	48	8	5	-	-	126
Miraj	53	15	52	59	11	4	194
Jath	26	70	30	8	-	1	135
Shirala	5	-	1	3	-	1	10
Atpadi	4	79	53	100	-	9	245
Total	581	405	414	282	41	170	1893

Source : Compiled from Office Records of Shivsadan Society

Tasgaon and Walwa have been the talukas getting maximum benefits from this activity of Shivsadan Society.

Following Table shows the details of biogas plants constructed by Shivsadan society in Satara District during the six years ending 30.6.90.

Table-3.2.2. : Statement Showing Biogas Plants Constructed by Shivsadan Society in Satara District.

Year/ Taluka	84-85	85-86	86-87	87-88	88-89	89-90	Total
Karad	364	41	48	93	45	62	653
Patan	152	102	365	243	216	206	1284
Jaoli	137	51	237	233	31	50	739
Satara	48	2	54	62	21	8	195
Khatav	28	-	10	6	2	2	48
Mahabaleshwar	12	16	87	80	62	46	303
Koregaon	8	1	12	6	14	2	43
Wai	2	-	16	26	4	32	80
Man	1	-	-	-	-	1	2
Khandala	-	-	14	44	29	-	87
Phaltan	-	1	-	-	-	-	1
Total	752	214	843	793	424	409	3435

Source : Compiled from Office Records of Shivsadan Society.

Patan, Karad, Jaoli, Mahabaleshwar etc are the Taluka's getting maximum benefits from this activity of Shivsadan Society.

Following Table shows the details of biogas plants constructed by Shivsadan Society in Kolhapur District.

Table-3.2.3. : Statement Showing Biogas Plants Constructed by Shivsadan Society in Kolhapur District.

Year/ Taluka	84-85	85-86	86-87	87-88	88-89	89-90	Total
Shirol	103	91	65	40	82	20	401
Hatkangale	14	21	19	34	39	11	138
Ajara	-	-	4	-	10	4	18
Gadhinglaj	4	39	27	15	8	27	120
Bhudargad	-	7	3	-	7	-	13
Panhala	8	8	7	1	1	-	25
Karveer	1	1	-	3	-	1	6
Chandgad	5	2	1	-	-	-	8
Radhanagari	1	-	-	-	-	-	1
Kagal	-	-	1	-	-	-	1
Shuhuwadi	-	-	-	2	-	-	2
Total	136	169	127	95	147	63	737

Source : Compiled from Office Records of Shivsadan Society

Shirol, Hatkangale and Gadhingalaj are the Taluka's getting maximum benefits from this activity of Shivsadan Society.

Following Table shows the details of biogas plants constructed by Shivsadan Society in Pune Districts during the six years ending 30.6.90.

Table-3.2.4. : Statement Showing Biogas Plants Constructed by Shivsadan Society in Pune Districts.

Year/ Taluka	84-85	85-86	86-87	87-88	88-89	89-90	Total
Baramati	14	6	-	-	3	8	31
Shirur	-	-	1	-	-	-	1
Bhor	-	-	-	1	-	-	1
Welhe	-	-	-	-	10	4	14
Total	14	6	1	1	13	12	47

Source : Compiled from Office Records of Shivsadan Society.

Baramati and Welhe are the Taluka's getting maximum benefits from this activity of Shivsadan Society.

Following Table shows the details of biogas plants constructed by Shivsadan Society in Solapur District.

Table-3.2.5. : Statement Showing Biogas Plants Constructed by Shivsadan Society in Solapur District.

Year/ Taluka	84-85	85-86	86-87	87-88	88-89	89-90	Total
Sangola	52	5	5	6	3	-	71
Mangalwedha	25	153	57	42	1	1	279
Pandharpur	-	-	37	6	-	13	56
Malshiras	-	-	-	11	2	9	22
N.Solapur	-	-	-	-	-	2	2
Total	77	158	99	65	6	35	430

Source : Compiled from Office Records of Shivsadan Society.

Mangalwedha, Pandharpur and Malshiras are the Talukas

getting maximum benefits from this activity of Shivsadan Society.

Following Table shows the details of Biogas Plants constructed by Shivsadan Society in Belgaum District.

Table-3.2.6. : Statement Showing Biogas Plants Constructed by Shivsadan Society in Belgaum District.

Year/ Taluka	84-85	85-86	86-87	87-88	88-89	89-90	Total
Belgaum	5	-	-	1	-	-	6
Chikodi	-	8	-	1	31	16	56
Athani	-	5	17	6	14	6	48
Hukkeri	-	1	3	2	4	-	10
Mysore	-	-	-	2	-	-	2
Raibag	-	-	-	-	1	2	3
Jamkhindi	-	-	-	-	1	1	2
Ramdurg	-	-	-	-	-	3	3
Total	5	14	20	12	51	28	130

Source : Compiled from Office Records of Shivsadan Society.

Chikodi and Athani are the talukas getting maximum benefits from the activity of Shivsadan Society.

Other Activities :

Shivasadan Society has also undertaken other activities like (i) readymade latrines and (ii) RRC pipes. Work done by Shivasadan Society in this respect is shown in the following Table.

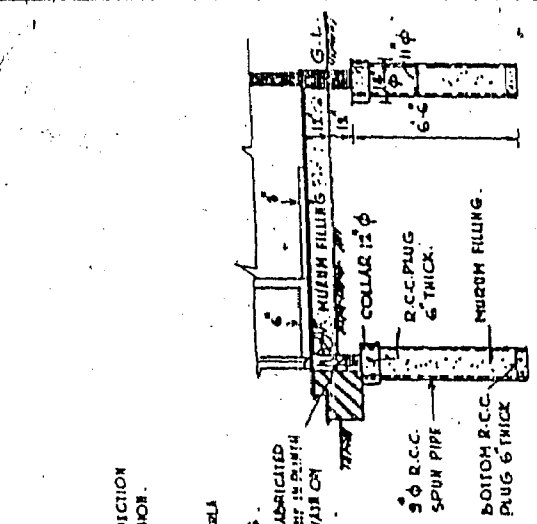
Table-3.3. : Table Showing Shivsadan Society's Work in respect of Readymade Latrines & RCC Pipes.

Year	Readymade Latrines (No.)	RCC Pipes (Running Feet)
1974-75	1	-
1975-76	42	-
1976-77	28	21,746
1977-78	79	84,827
1978-79	69	69,044
1979-80	49	35,000
1980-81	40	36,552
1981-82	97	34,810
1982-83	124	9,392
1983-84	120	9,144
1984-85	385	-
1985-86	249	-
1986-87	273	-
1987-88	420	-
1988-89	282	-
1989-90	177	-

Source : Compiled from Annual Reports and Other Office Records of Shivsadan Society.

Conclusion :

As far as operational aspects of Shivsadan Society is concerned one important observation has to be put on record as a conclusion. It is not understood as to the exact capacity of Shivsadan Society in respect of each and every activity it has undertaken.



SECTION ON A-A

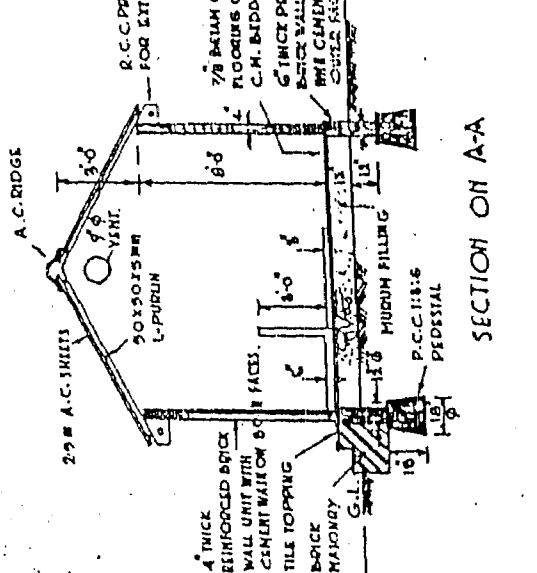
DETAILS OF FOUNDATIONS IN CASE OF DEEP B.C. SOIL.
SCALE - 1" = 4'-0"

SCHEDULE OF DOORS AND WINDOWS.

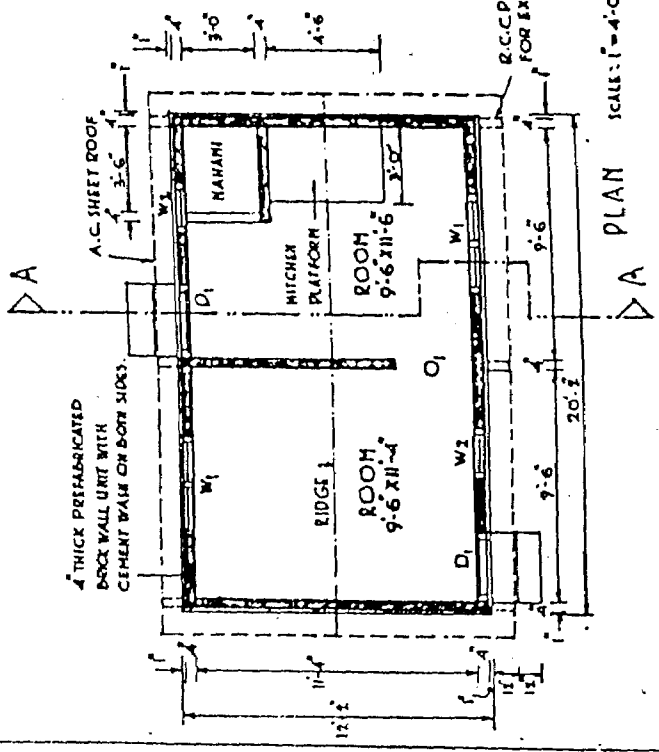
D ₁ DOOR	8'-0" x 6'-0" (OUTER DIMENSIONS) HIDDEN, HANA	2 NOS.
W ₁ WINDOW	8'-0" x 2'-4" (OR MALLAM WOOD OR MALLAM WOOD FRAME, BITE (OR OTHER DIMENSIONS) HIDDEN, HANA	2 NOS.
W ₂ WINDOW	2'-0" x 2'-4" (OR OTHER DIMENSIONS) DO	2 NOS.
O ₁ OPENING	5'-0" x 6'-0" (OR OTHER DIMENSIONS)	1 NOS.

AREA STATEMENT

PURTR AREA	245.5 SFT.
CEILING AREA	219.0 SFT.



ELEVATION



PLAN SCALE: 1" = 4'-0"

SHIVSADAN GRIHA NIRMAN S. S. LTD,
SANGLI (MAHARASHTRA)

VASANT GHARHUL TYPE PREFABRICATED HOUSE FOR LOW INCOME GROUP
(MODIFICATION OF DRG. NO. 0146 DATED 27-4-67)

DRG. NO. 0151

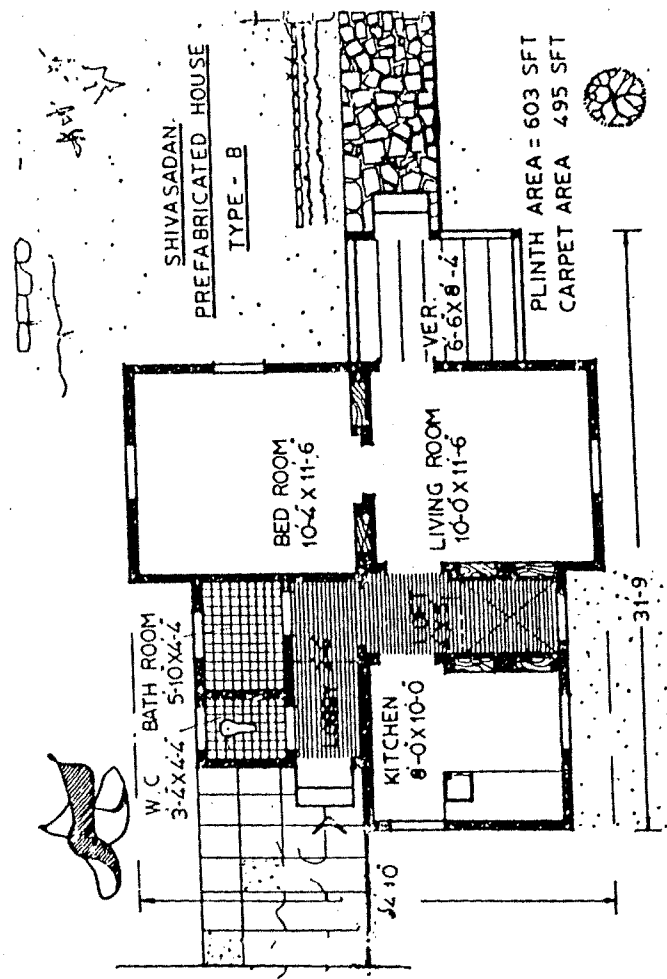
DATE: 1-12-67

PREPARED: *[Signature]*

APPROVED:

APPENDIX 3.2

Erection Sequence of "SHIVSADAN"
Proto Type House



Proto Type House - Layout Plan