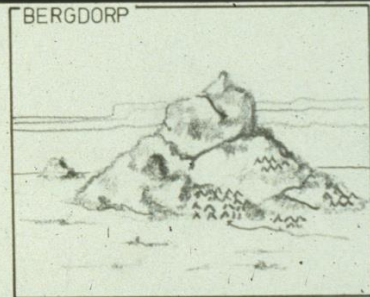
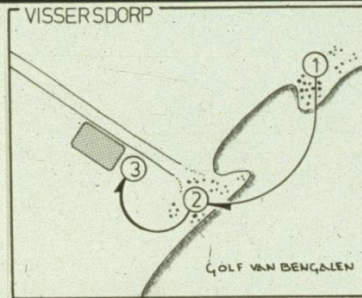
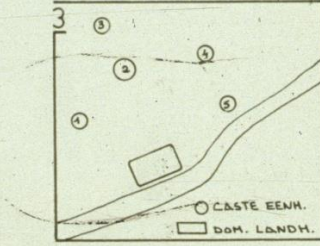
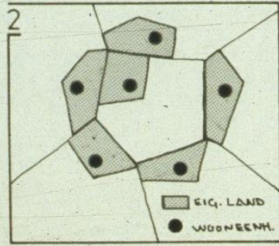
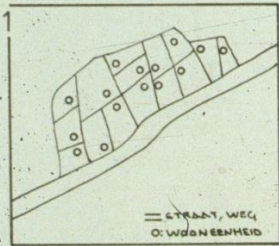




Village Reconstruction Organisation India

Cyclone & Reconstruction: the demise of India's Hindu architecture as socio-cultural meaning













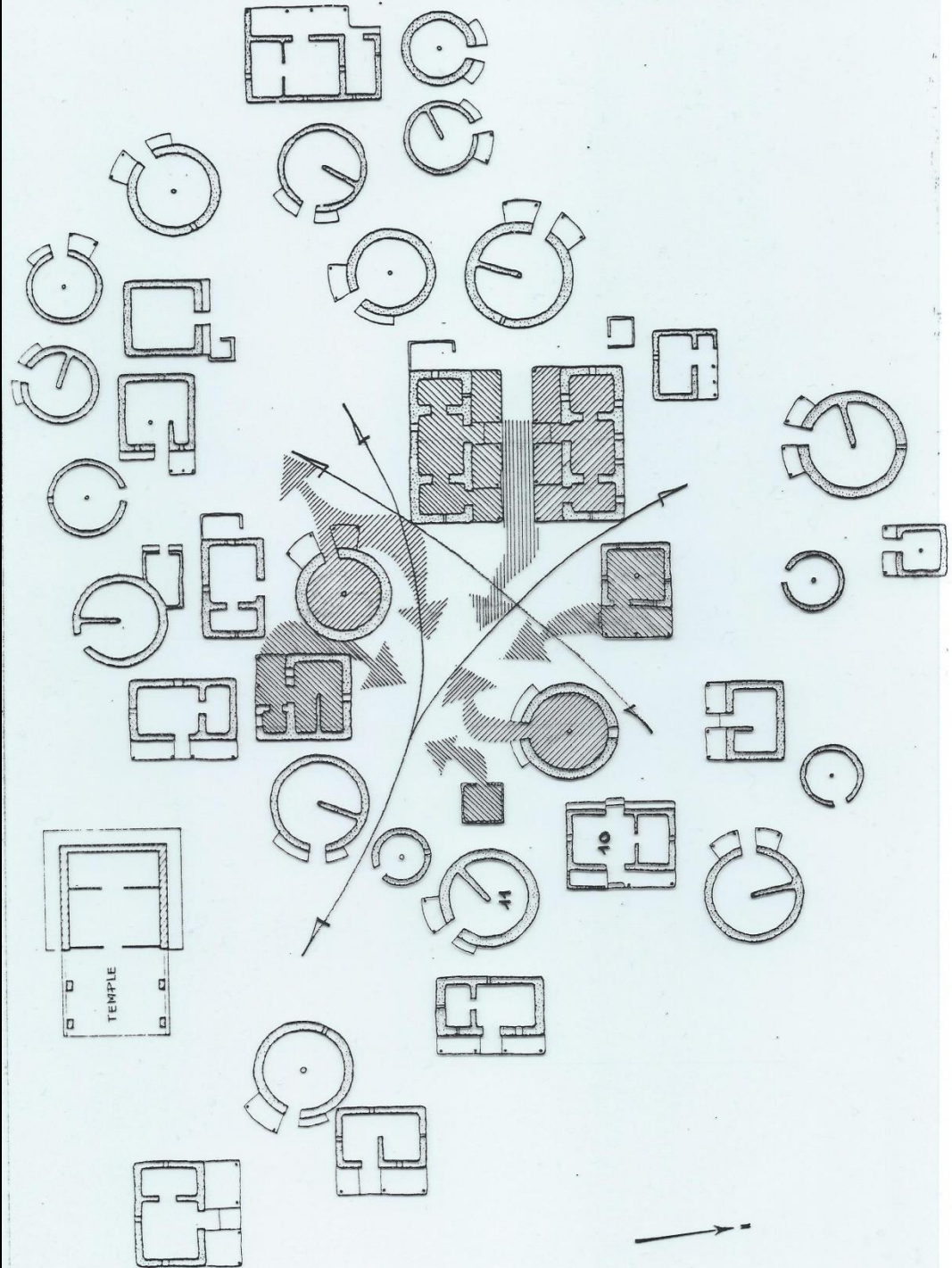




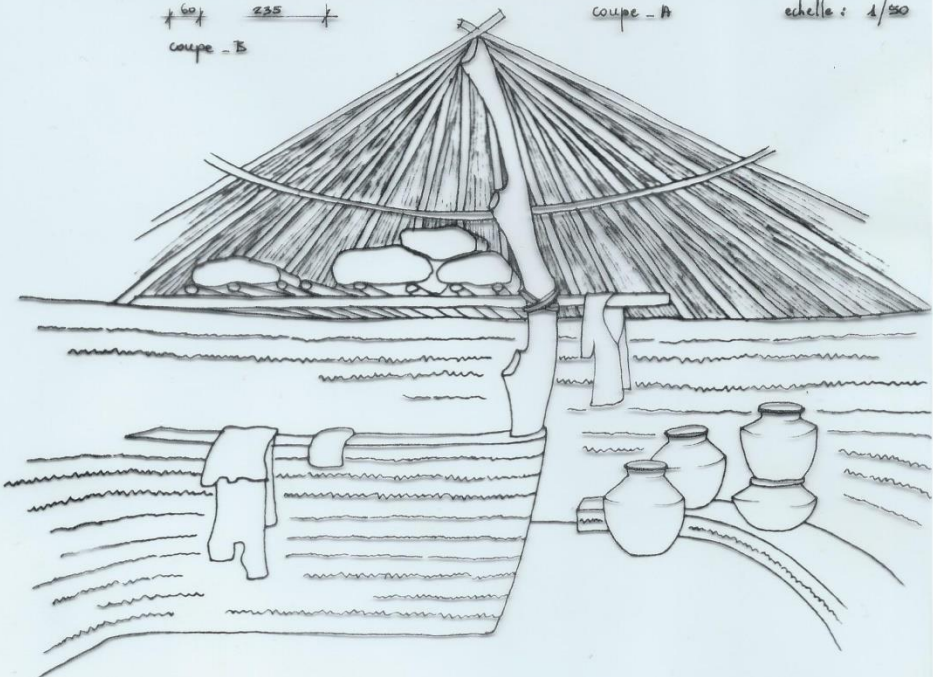
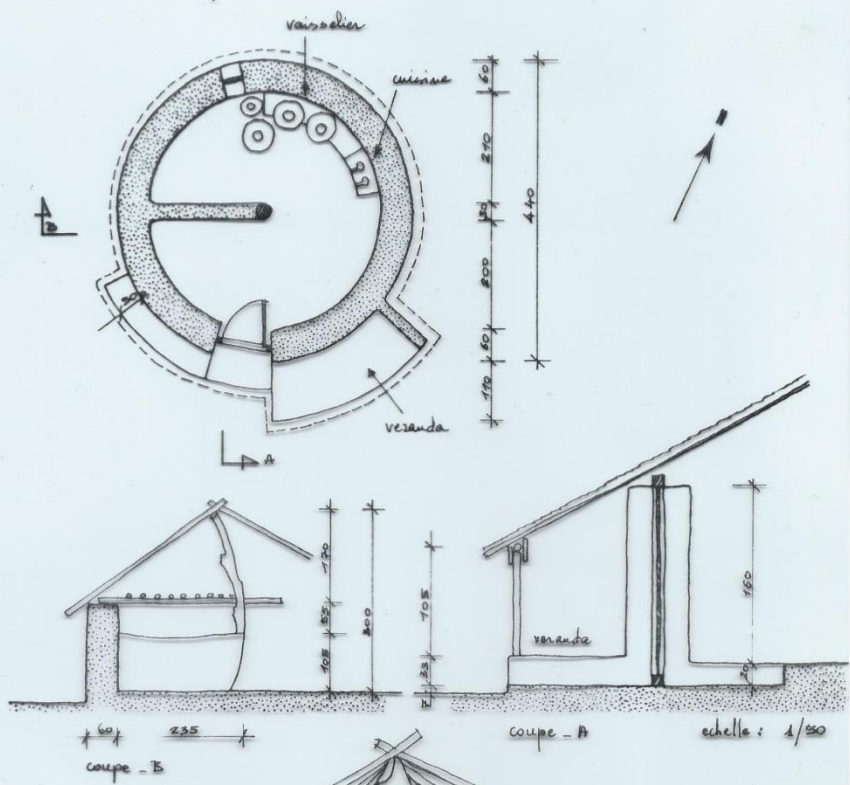


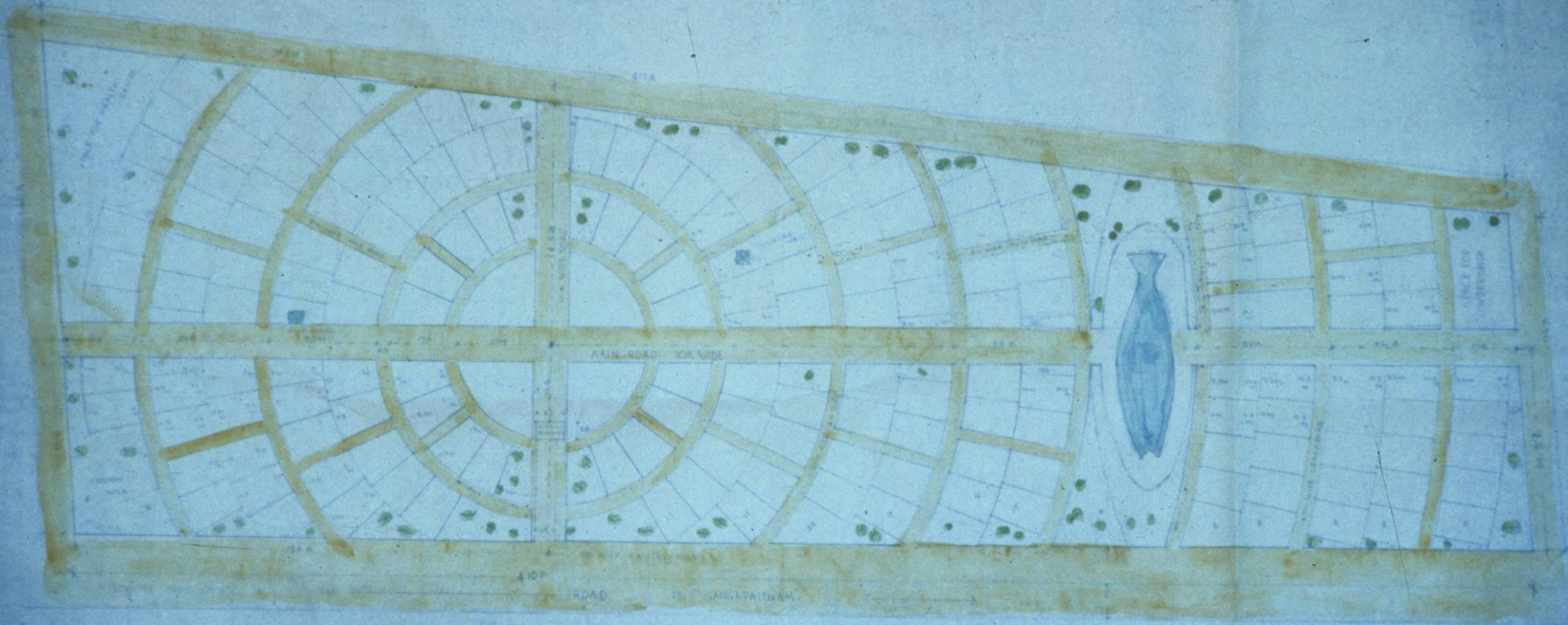












Dwg V/02/dt/2
Date 13.08.78

SCALE
1:500

Area 12 Ac



Project Proposed Village layout

Village PALLEPALEM

To NELLORE

On NELLORE

Designed by MA. WINDEY
drawn by ramesh

VRO





















































HOUSE NO.
7























SHARING





వృక్షసాగరం



సంగమేశ్వరం



A group of people, including men and women, are gathered in the courtyard. Some are standing and talking, while others are sitting on the ground. The scene appears to be a public event or a community gathering.





VRO















శిబిరం

పచ్చిదా
8. సుబ్బయ్య
అక్కయ్య
యన్న
అంజయ్య
అంజయ్య
అంజయ్య
అంజయ్య



పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల
పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల
పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల
పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల
పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల
పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల
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పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల
పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల	పాఠశాల

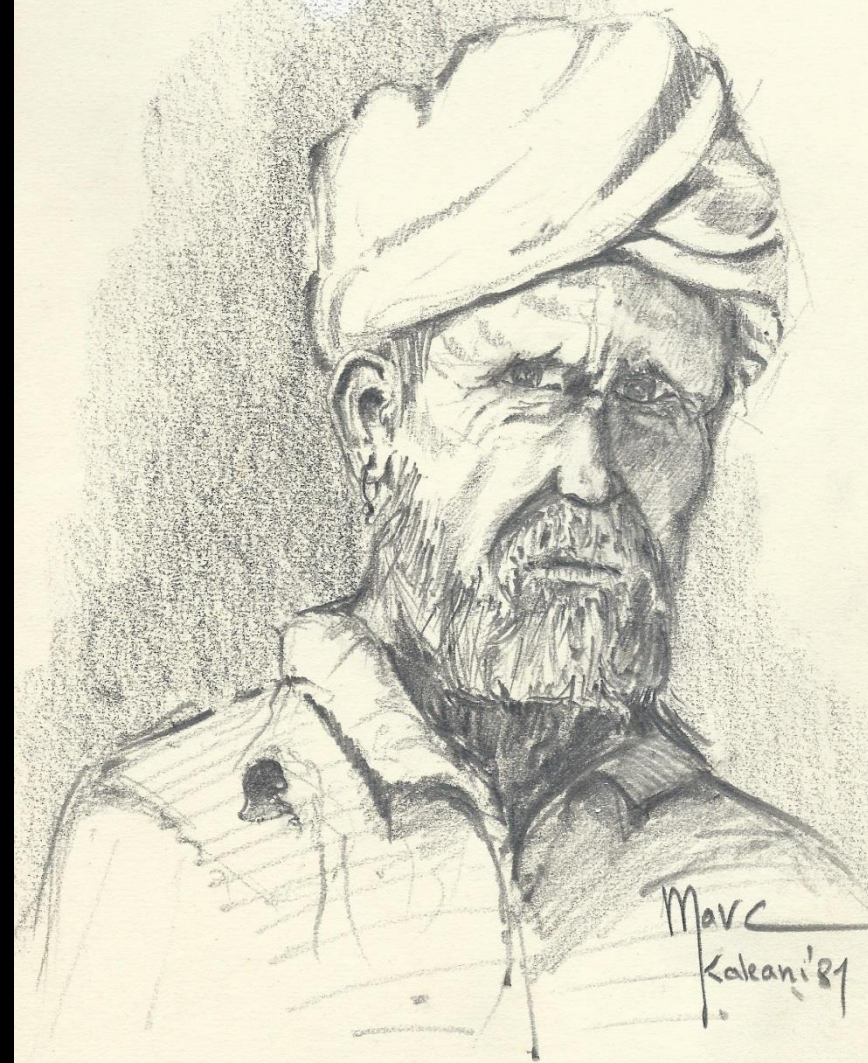








Marc
Kakan'89























...T SHARING MY DOOR
...ARE WE FOR
...VE OUR HOUSE.
...A STRONG FENCE.
...UR FRIENDS.
...ATIVES YET.
...E TOGETHER.

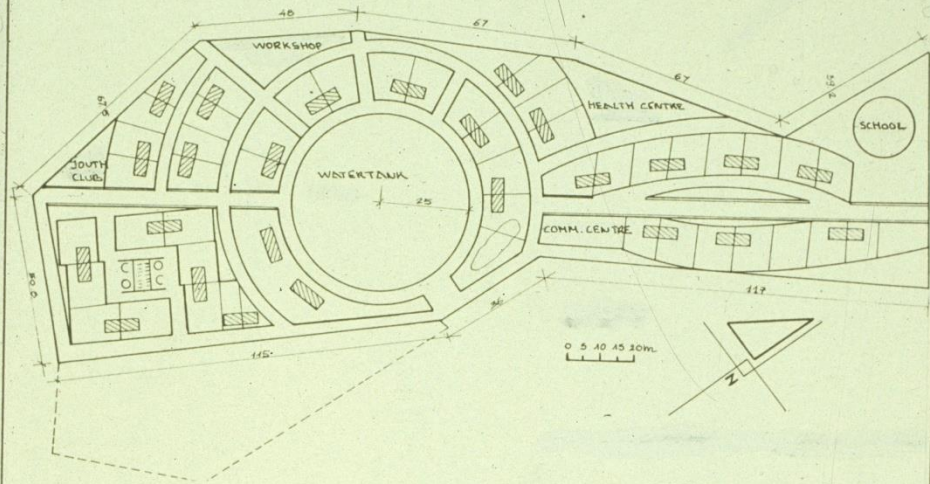
...WE DON'T
...WE ON

...POOL OUR SAVINGS.
...PUPILS IN OUR SCHOOL
...KEEP OUR VILLAGE CLEAN
...THE SELFISH MAN ALONE.
...A COMMON FUND

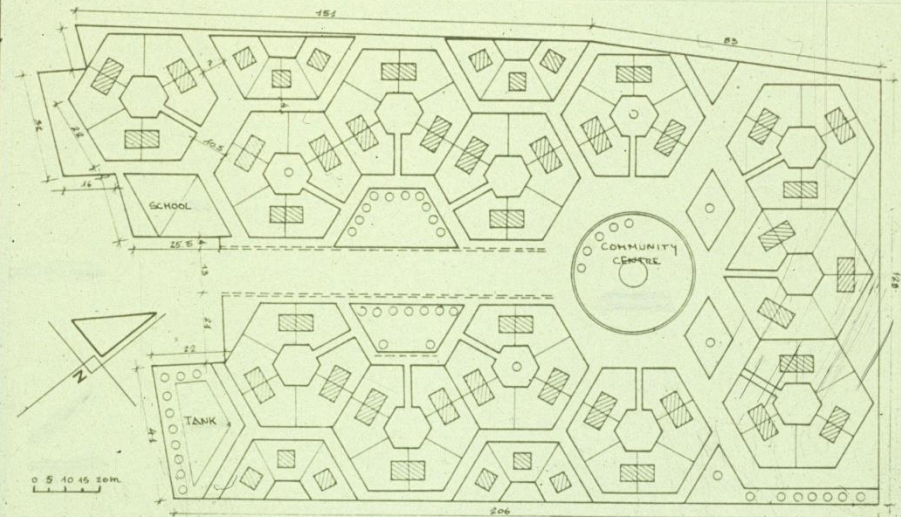




VRO - INPLANTINGSMODELLEN

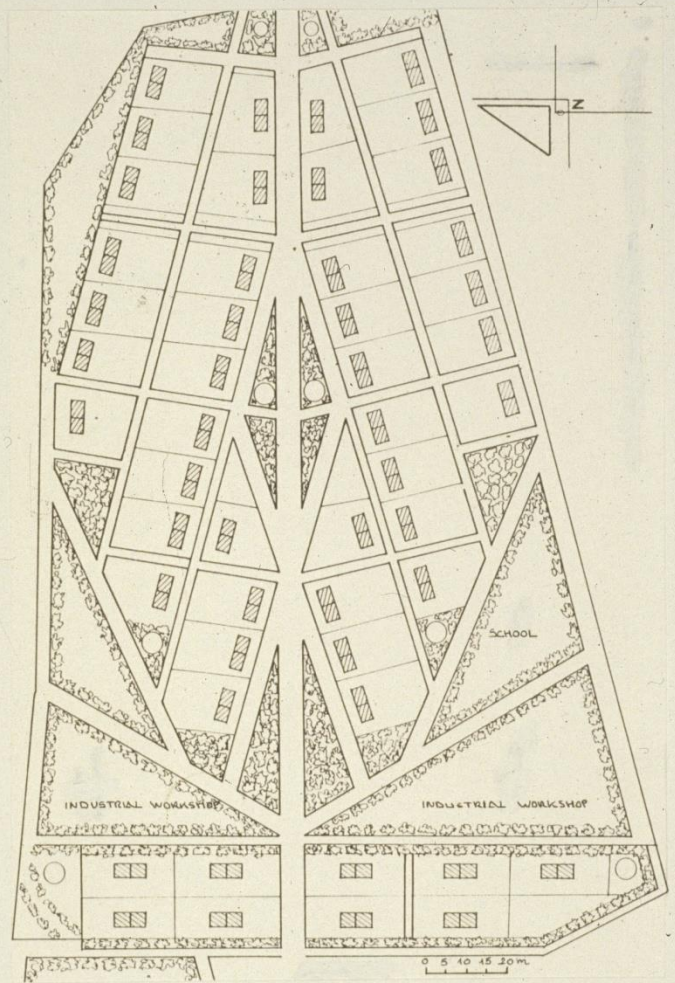


KANAKADRINAGAR

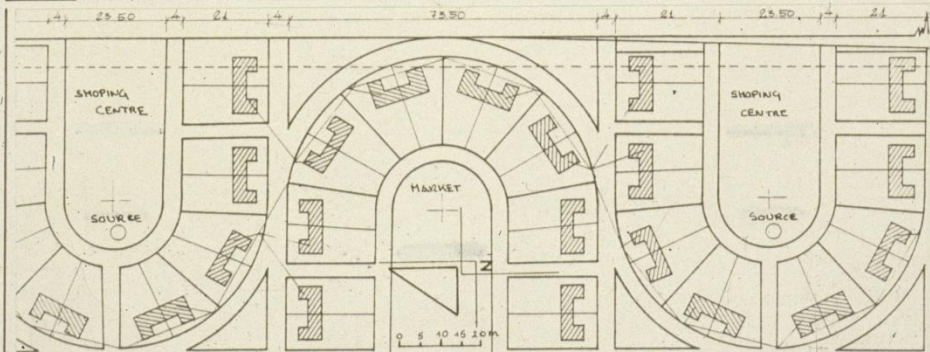


TAI AGADADIVI

VRO - INPLANTINGSMODELLEN



AIKYANAGAR



GANDHINAGAR

















NO ONE TOGETHER WITH CHAINS THAT CANNOT BE BROKEN
BIND US WITH LOVE
SHOURYAPURI
(KUKKALAVARIPALEM)
BUILT AFTER THE 1977 CYCLONE BY THE
JOINT EFFORT OF THE COMMUNITY AND
ASSISTANCE RECEIVED FROM HONGKONG
INAUGURATED BY
HONOURABLE Y. VENKAT RAO
MINISTER FOR AGRICULTURE
ON FRIDAY, 10TH APRIL, 1980.

























జనాభా పరిశోధన



జనాభా విభజన



వ్యాధి నిరోధకములు



కుటుంబ సంక్షేమము



చికిత్సా యుద్ధం



పరిశుభ్రత



పోషకాహారము



మాతా శిశు సంరక్షణ



వికలాంగుల జీవనోపాధి



జనాభా భీమా



Tirupal

గ్రామాభివృద్ధి కి మూలము

మనం ఏమి ఉత్పత్తి చేయగలము?



మనం ఏమి నేర...

మన ప్ర...

మన ప్ర...















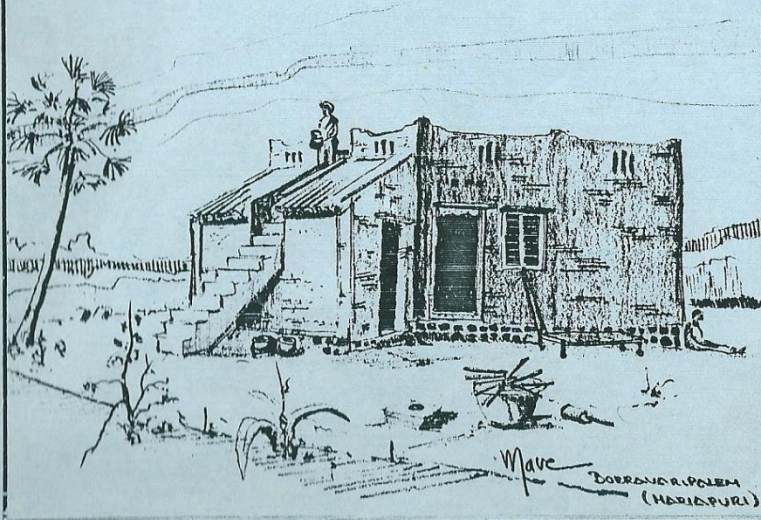






POST GRADUATE CENTRE HUMAN SETTLEMENTS
DEPARTMENT OF ARCHITECTURE
Leuven, Belgium

CASE STUDY DOCUMENTATION



COUNTRY : INDIA
LOCALITY : ANDHRA PRADESH - Guntur Dt. - Bapatla Tk.
PROJECT : Borravaripalem village (reconstructed by V.R.O.)
AUTHOR : Dujardin Marc

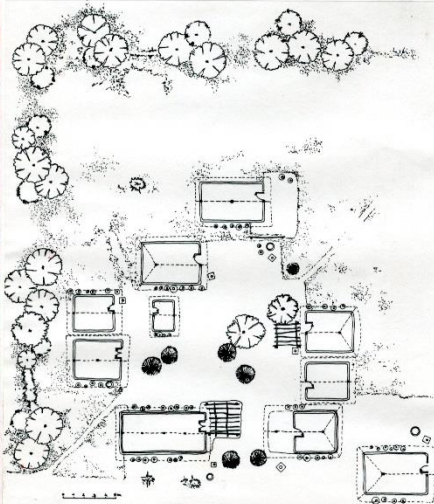
<p>CONCEPT OF ORIENTATION AND COSMIC ORDER</p> <p>RELATED TO</p> <p>THE CONCEPT OF THE HINDU WORLDVIEW WITHIN THE SHAPE OF THE COSMIC BODY</p>		<p>"HIGH STANDARDS"</p> <p>HEAD: TO BE PROTECTED</p> <p>RIGHT: IMPORTANT ACTS</p> <p>RIGHT: ORIENTATION HERE</p> <p>INNER: COSM, CERAM, DATE</p> <p>"LOW STANDARDS"</p> <p>LEFT: INSULT/IMPURE</p> <p>OUTER: POLLUTION</p> <p>LEFT: IMPURE ACTS</p> <p>BACK: INSULTING</p>	<p>WEDDING: TO FACE EAST</p> <p>LOOK AT RIGHT SIDE OF THE BRIDE</p> <p>DIRT/IMPURE RITUALS</p>	<p>SCULPTURE: ORDER OF SPACE/TIME</p>
<p>CONCEPT OF PURITY PERFORMED BY THE 3 GUNAS (VITAL LABORS) AND THE 4 VARNAS (CASTE-SYST)</p>	<p>PURITY OF BODY // SOUL</p> <p>3 GUNAS: RIGHA, TAHA, SATTVA</p> <p>TECHNIQUES OF SPIRITUAL CONSTITUTION AND GROWTH</p> <p>4 SATTVA - PURE -</p> <p>2 RAJAS -</p> <p>8 TAMAHS -</p>	<p>TANUAS</p> <p>FOOD - CAUTIONALITY - TOUGH</p> <p>HOUSING - ENDOGAMY - HIGH ASHYM</p> <p>ASCETISM - BIRTH -</p> <p>BORN SEPARATION</p> <p>1 WHITE</p> <p>2 RED</p> <p>3 BLACK</p>	<p>"TO TURN THE BODY TO THE SOUL'S ESSENCE"</p> <p>BODY - WATER</p> <p>MIND - TEETH</p> <p>SOUL - KNOWLEDGE</p> <p>WISDOM - WISDOM</p> <p>RITES OF SPIRITUALIZATION, PURIFICATION, SACRALIZATION</p>	<p>TEMPLE ARCH (PRABHALI)</p> <p>RELATION-DESIGNS</p> <p>SCULPTURE, ARCHITECTURE, THEATRE DIFFER ACCORDING CACTES.</p>
<p>CONCEPT OF MERGER OF "THE HUMAN BODY" AND "THE COSMIC BODY" WITHIN THE IDEAL SHAPE OF THE SQUARE AND CUBE (MANDALA)</p>	<p>UNIVERSE SEEN AS BODY OF PURUSH SUKTA</p> <p>BODY AS A WHOLE AND OF BODYROOTS</p> <p>HEAD: BRAHMA</p> <p>ARMS: DEVAS</p> <p>HEAVEN: VASU</p> <p>LAND: MANU</p> <p>FEET: SURAS</p>	<p>URBAN RITUALISM: RASTIC EXPERIENCES</p>	<p>CEREMONIAL CONSTITUTION OF THE SACRED SQUARE</p> <p>WIND TOWER</p> <p>THEATRE</p> <p>MANAGEMENT: HOUSES</p> <p>INSTALLING: TEMPLES</p> <p>TRANSITION RITUALS</p>	<p>LAYOUT OF THE SPACE OF SHIVA FOR WORSHIP</p> <p>1: ISHANA</p> <p>UPWARD</p> <p>RELIGIOUS</p> <p>SCULPTURE</p>
<p>HINDU CONCEPTS RELATED TO CULTURAL BODY SYMBOLISM</p>	<p>PHYSICAL BODYLINESS</p>	<p>SOCIAL BODYLINESS</p>	<p>SPECIALIZED RITUALS</p>	<p>HINDU ART</p>

<p>CONCEPT OF ORIENTATION AND "COSMIC ORDER"</p> <p>RELATED TO</p> <p>THE CONCEPT OF THE HINDU WORLDVIEW WITHIN THE SHAPE OF THE "COSMIC BODY"</p>	<p>ACCORDING TO CULT THEMES</p>	<p>THIS CONCEPT IS NOT SO CLEAR ON CLUSTER LEVEL AS IT USED TO BE IN "DAGON-CONTEXT" (LAWRENCE)</p>	<p>PATTERNS OF ORIENTATION RELATED TO THE COMMANDABLE AND THE SPIRIT OF THE BUILT ENVIRONMENT</p>	<p>ORIENTATION - COMMANDABLE BEHAVIOUR: ARTICULATES THE PLAN OF FOUNDATIONARY TIME SIGNATURE</p>
<p>CONCEPT OF PURITY PERFORMED BY THE 3 GUNAS (VITAL LABORS) AND THE 4 VARNAS (CASTE-SYST)</p>	<p>MEASUREMENTS OF THE PLANTS</p> <p>ACCORDING TO LOCAL REGULATIONS</p> <p>BRAMHINS: 20 22 22</p> <p>VAISHYAS: 20 22 22</p> <p>VAISHYAS: 20 22 22</p> <p>SUDRAS: 20 22 22</p> <p>(LAWRENCE: 1974)</p> <p>ANTHROPOMETRIC MEASURES</p> <p>4 ANGULI: WITH FINGER</p> <p>QUANTITY OF SACRIFICES</p> <p>MANTRA: 24000</p>	<p>DIVERSE QUADRANTS FOR THE ALLEGES</p>	<p>LAYOUT OF THE IDEAL CITY (SQUARE)</p>	<p>FOUR ELEMENTS OF THE BODY - WATER</p> <p>WIND</p> <p>RELATIONSHIP BETWEEN THE BODY AND THE ENVIRONMENT</p>
<p>CONCEPT OF MERGER OF "THE HUMAN BODY" AND "THE COSMIC BODY" WITHIN THE IDEAL SHAPE OF THE SQUARE AND CUBE (MANDALA)</p>	<p>LAYOUT ACCORDING TO THE UNIFORMITY BODY OF OBJECT</p>	<p>LAYOUT OF PLAZAS IN THE SHAPE OF SQUARES WHICH BEHINDS THE CASUAL BODY</p>	<p>ANTHROPOMETRIC INTER-RELATIONSHIP OF THE SETTLEMENT (SUCHHIN DEBBA)</p>	<p>PRESPECIFICATION OF THE TEMPLE LAYOUT</p> <p>HEAVEN: IN - ONLY UP - SOUL</p> <p>DOWN: LIGHT</p> <p>OPEN - CLOSED</p> <p>ONE - MANY</p>
<p>HINDU CONCEPTS RELATED TO CULT-BODY SYMBOLISM</p>	<p>HOUSE LEVEL</p>	<p>NEIGHBOURHOOD LEVEL</p>	<p>SETTLEMENT/TOWN LEVEL</p>	<p>RITUAL SPACE</p>

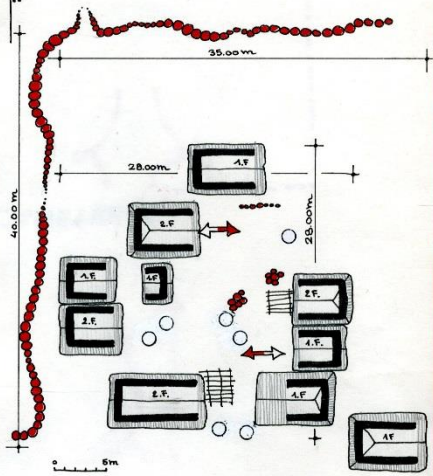
CULTURAL PHENOMENAL ISOLATED PATTERNS IN HINDU CONTEXT

CONTEXT

MORPHOLOG. LAYOUT

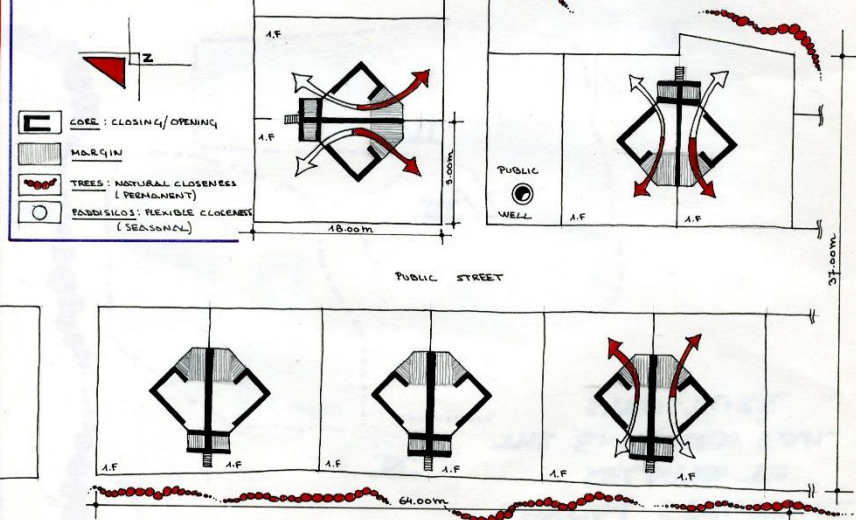


SPATIAL STRUCTURE



ORIENTATION-STRUCT.

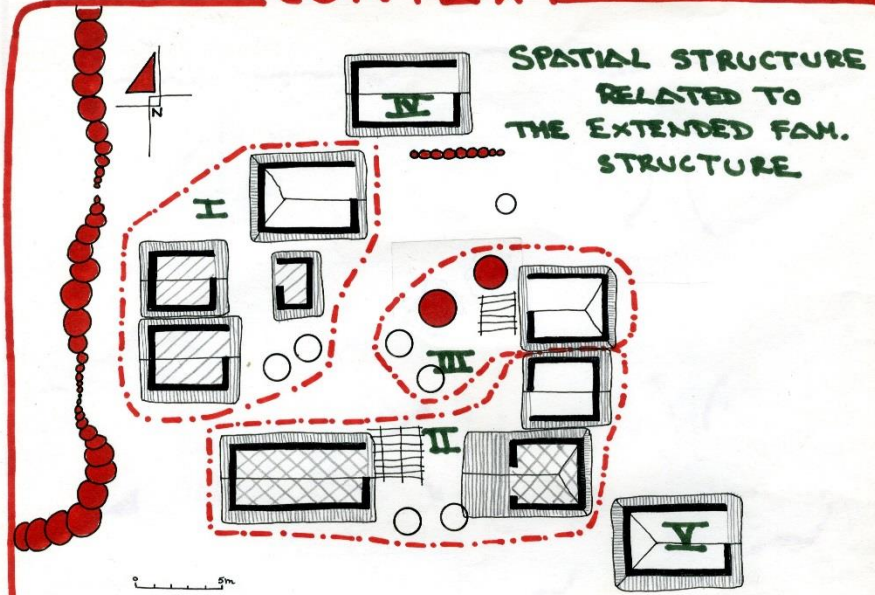
SUB-URBAN LAYOUT IN RURAL CONTEXT



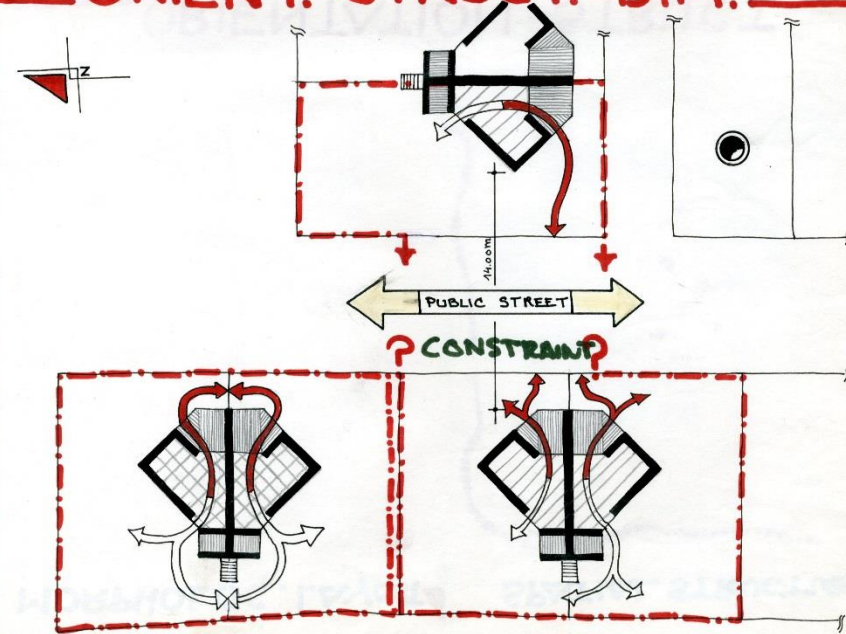
V.R.O.-PROJECT

CONTEXT

SPATIAL STRUCTURE RELATED TO THE EXTENDED FAM. STRUCTURE

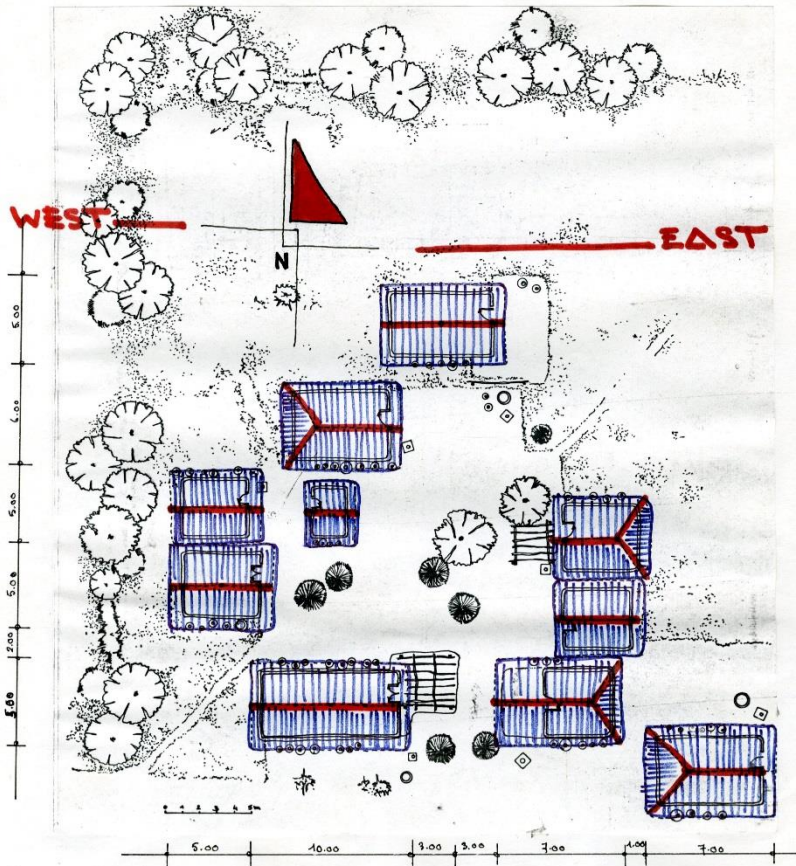


ORIENT.-STRUCT.-DIM.



V.R.O.-PROJECT

CONTEXT

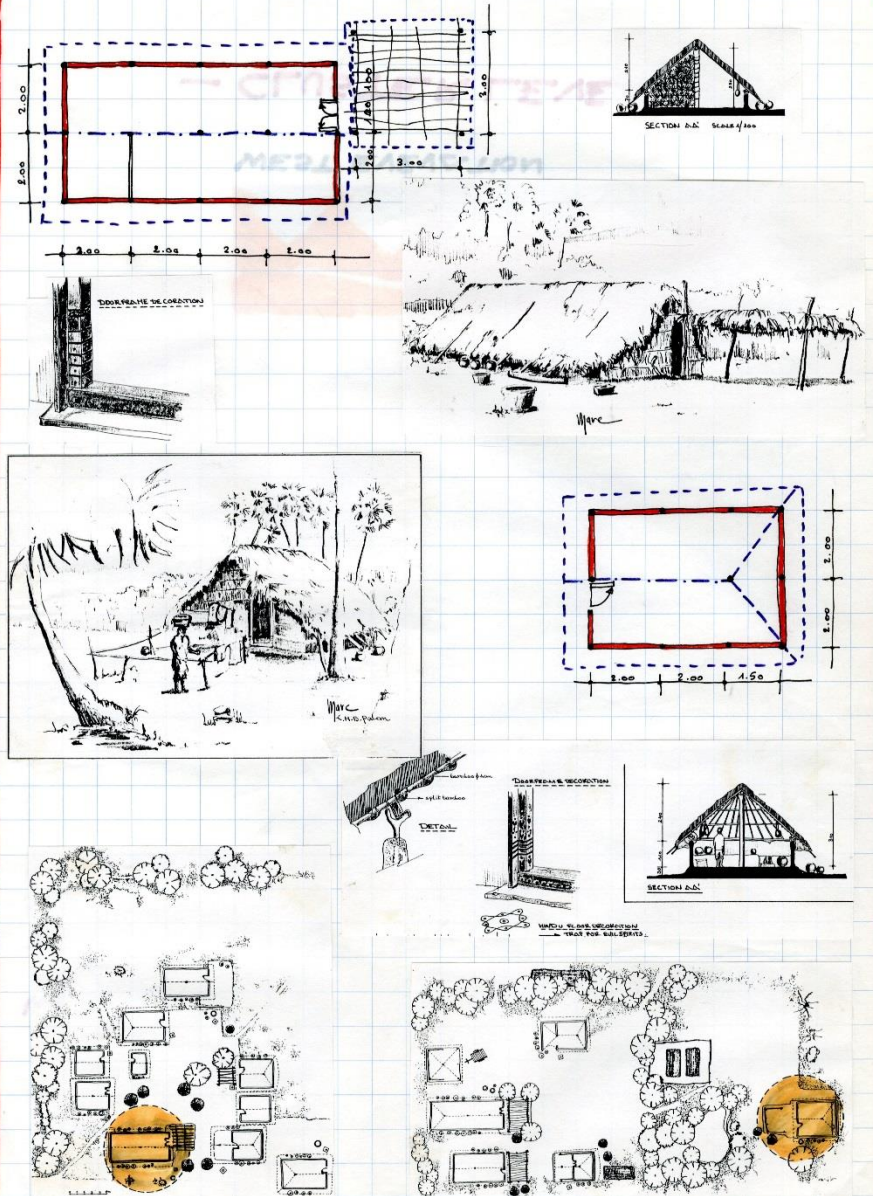


WEST ELEVATION

— CLUSTER LEVEL —

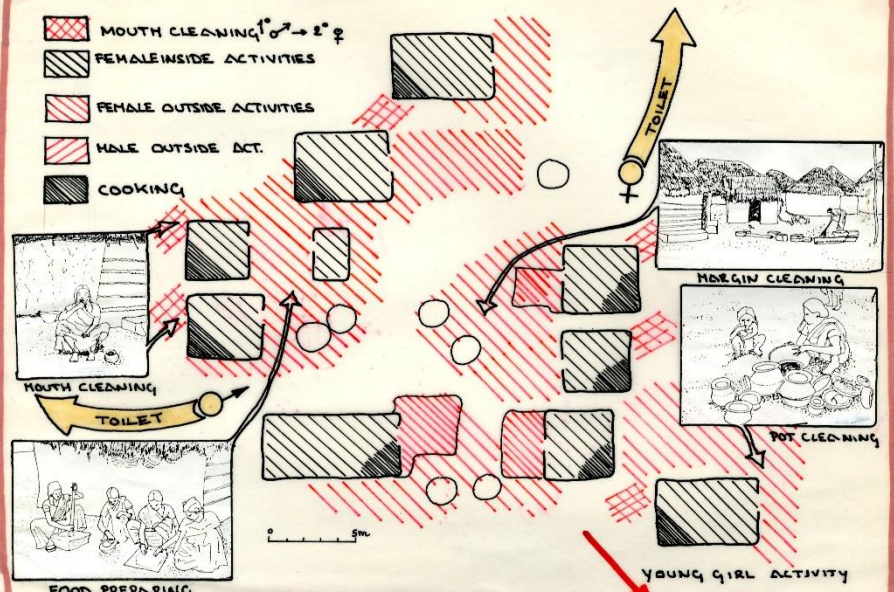
TYOLOGY-MODULAR SYST

CONTEXT



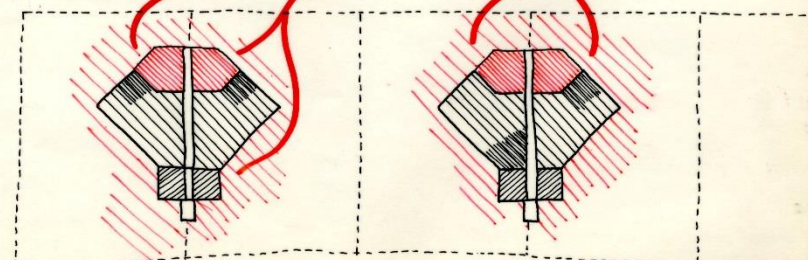
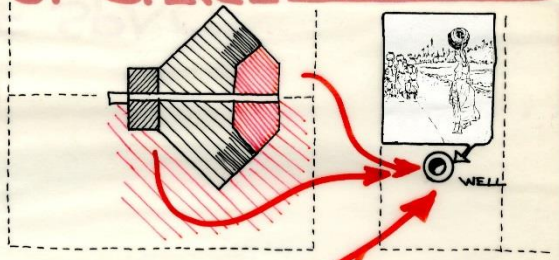
TYOLOGY-MODULAR SYST

CONTEXT



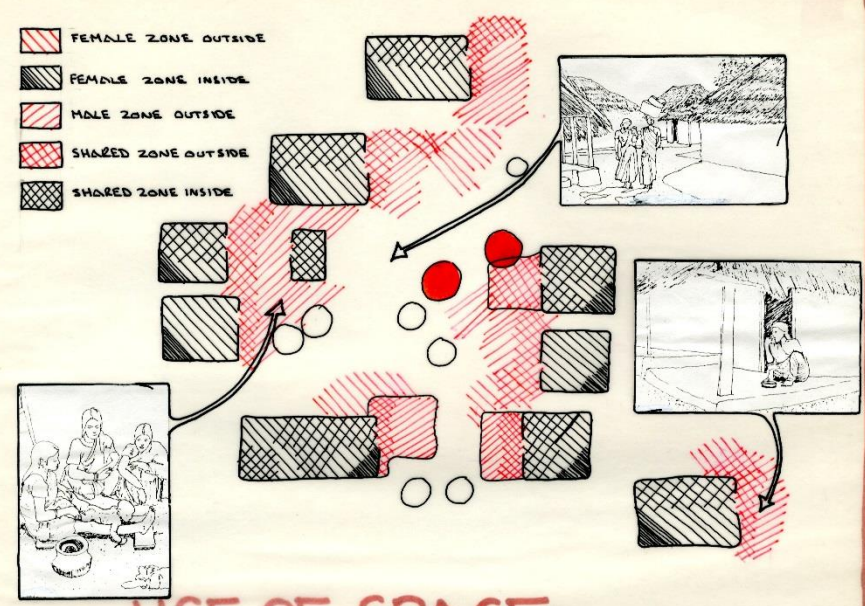
USE OF SPACE

MORNING		
	FEMALE	MALE
6AM	SUNRISE	
	- BED RANKING - POT CLEANING - MARGIN CLEANING - TOILET - MOUTH CLEANING - FOOD PREPARING - COOKING	- TOILET IN THE BUSHES - MOUTH CLEANING - GO TO THE MARKET - AGRICULTURE - HERDSMEN
12H.	NOON TIME	
	- LUNCH - REST	- LUNCH - REST
2PM	FEMALE OCT. - FIREWOOD COL.	- FIREWOOD COLLECTING



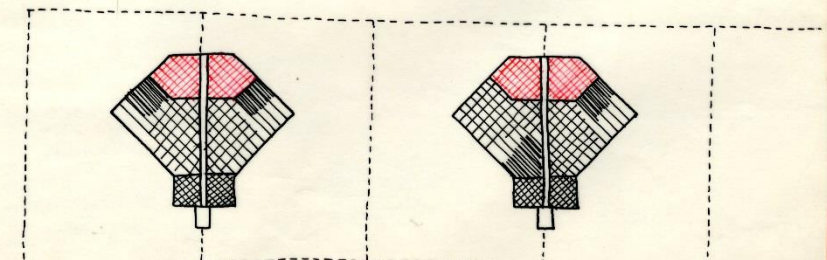
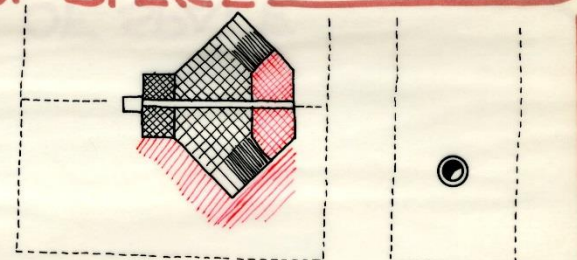
V.R.O.-PROJECT

CONTEXT



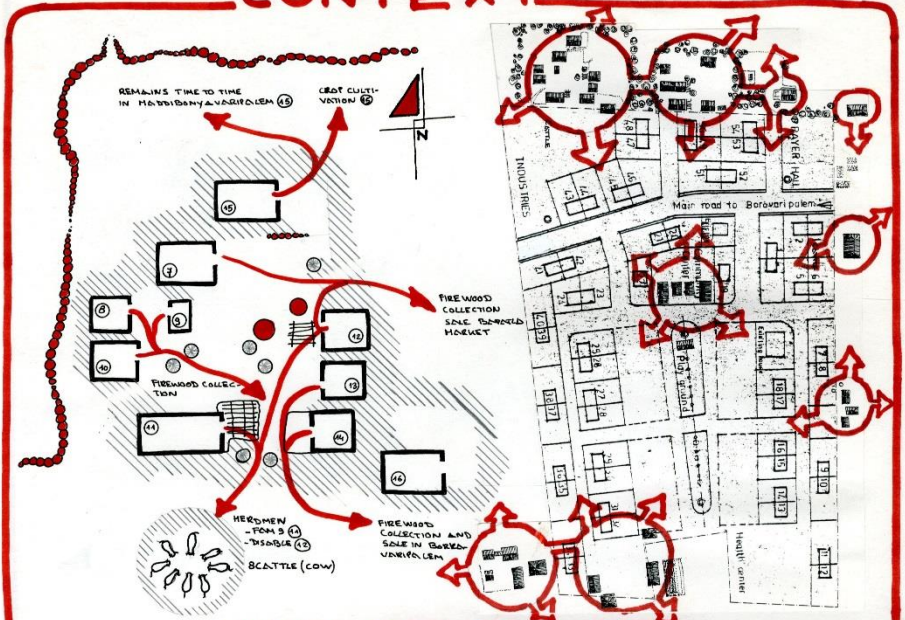
USE OF SPACE

EVENING		
	FEMALE	MALE
	SUNSET	
6PM	- COOKING - CHILD CARE - BATHING - EATING	- GATHERING - BATHING - EATING - CLOTHING
9PM	NIGHT	
	- BED RANKING (INSIDE/OUTSIDE) - SLEEP	- GATHERING - SLEEP

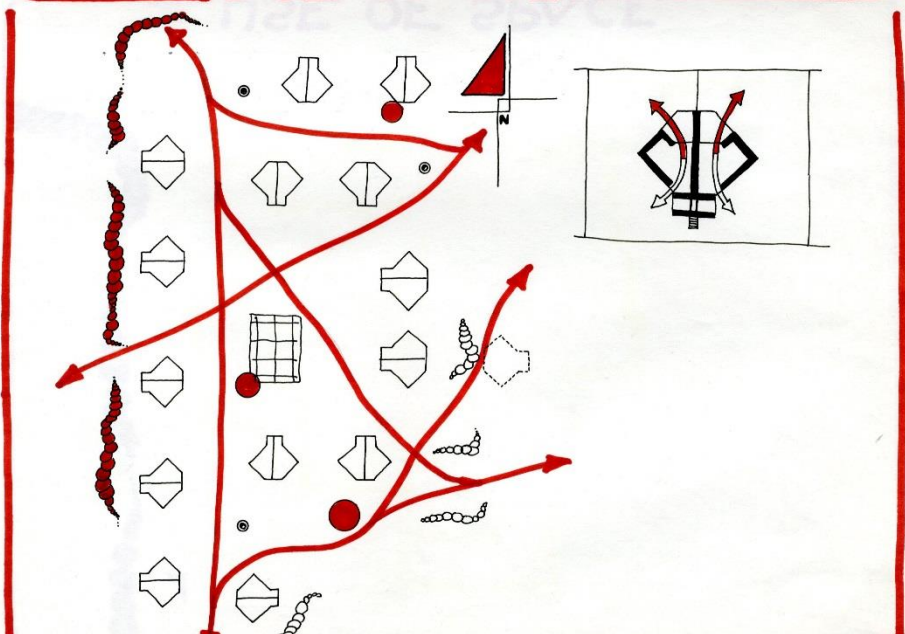


V.R.O.-PROJECT

CONTEXT

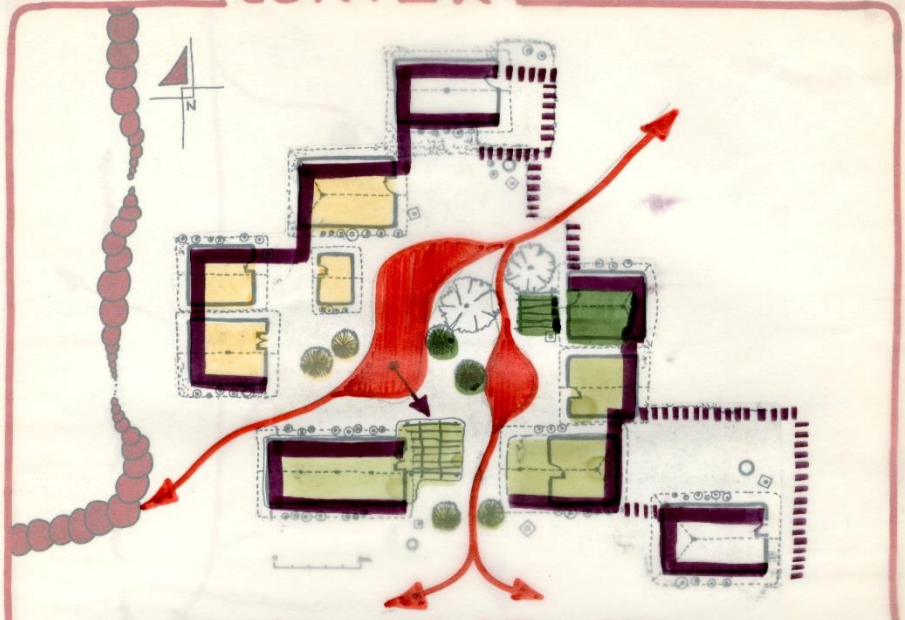


USE OF SPACE

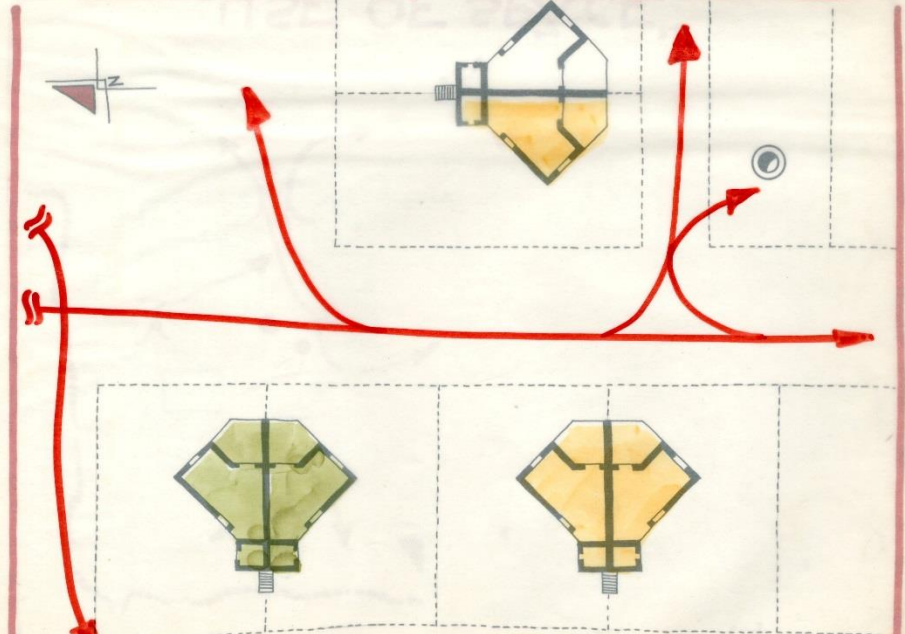


V.R.O.-PROJECT

CONTEXT

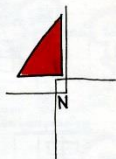


USE OF SPACE

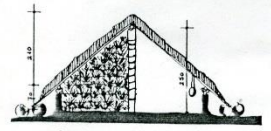


V.R.O.-PROJECT

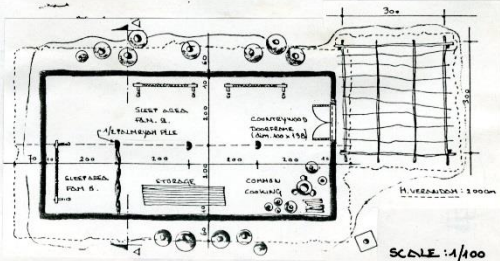
CONTEXT



Wave



SECTION A-A SCALE: 1/100



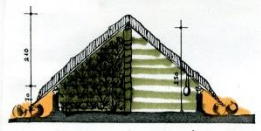
SCALE: 1/100

USE OF SPACE

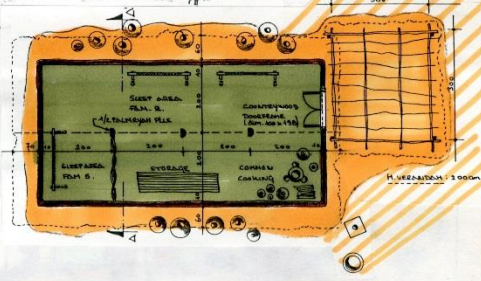
CONTEXT



Wave

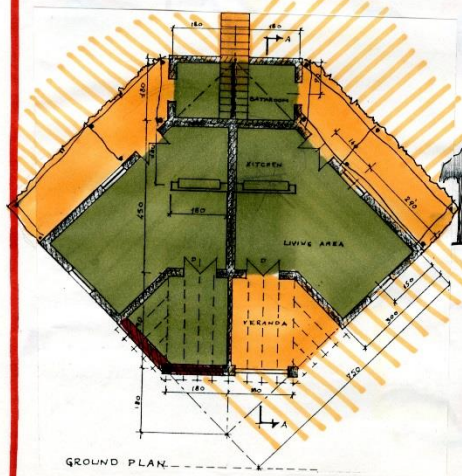


SECTION A-A SCALE: 1/100

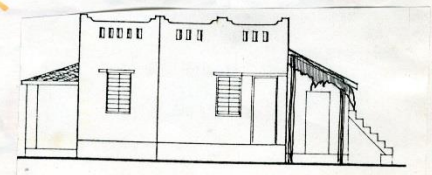
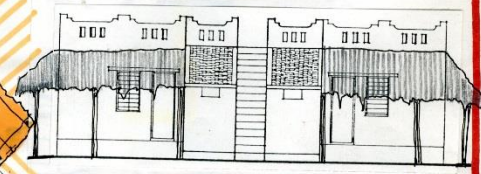


PRIVACY-REGULATION

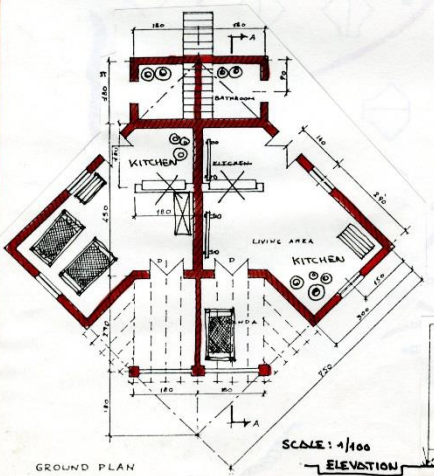
- PRIVATE SPACE
- SEMI-PRIVATE SPACE
- V.O. CONSTRUCTED WALL
- OPTIONAL CONSTRUCTION BY THE DWELLERS



GROUND PLAN



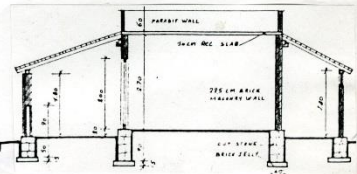
V.R.O.-PROJECT



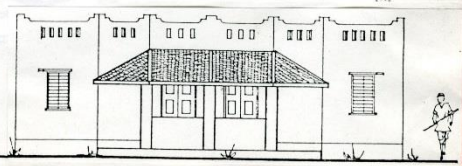
GROUND PLAN

SCALE: 1/100

ELEVATION

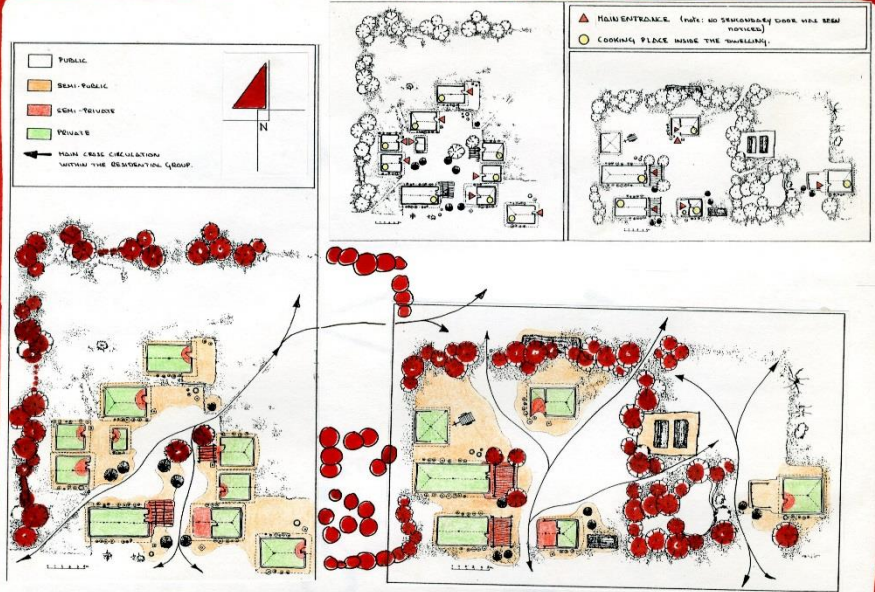


SECTION

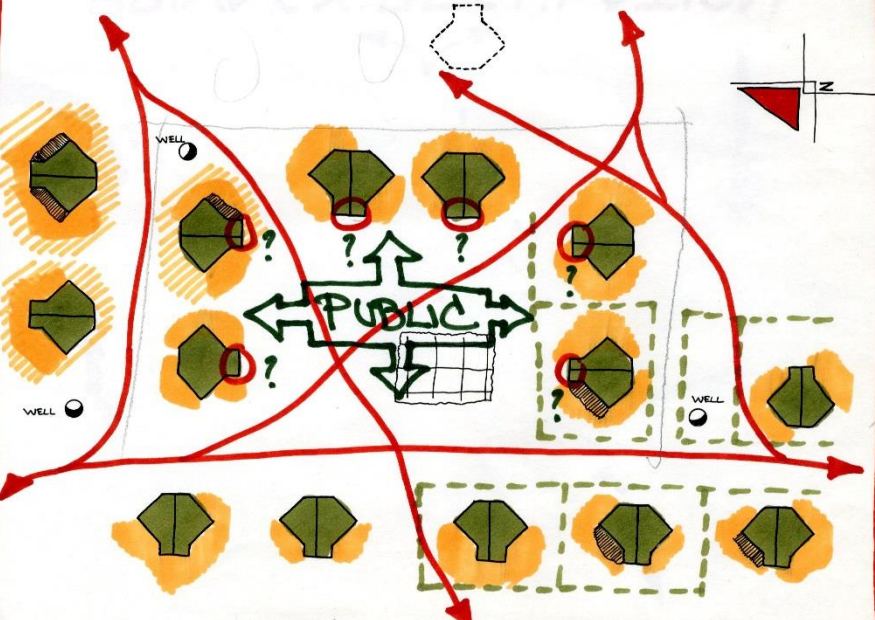


V.R.O.-PROJECT

CONTEXT

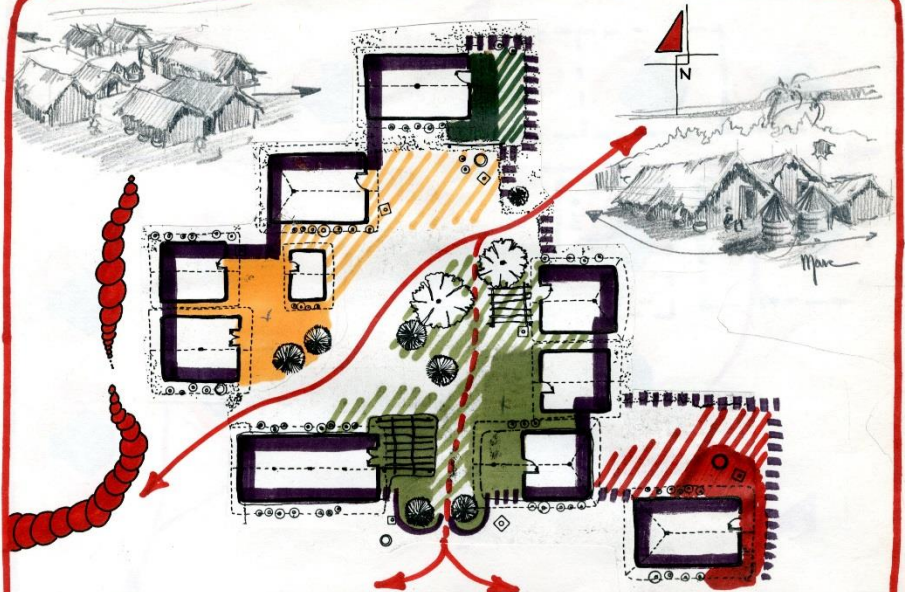


PRIVACY REGULATION

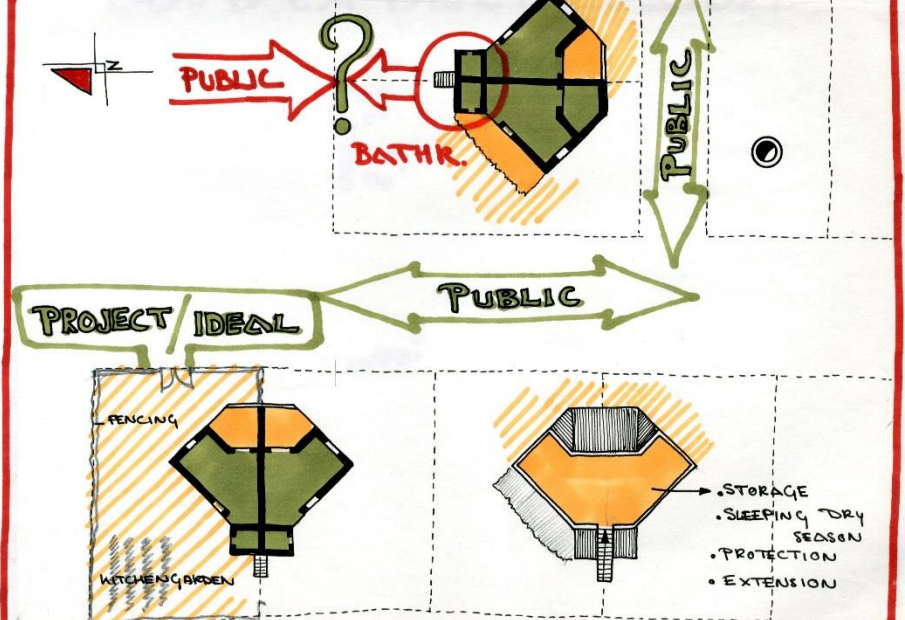


V.R.O.-PROJECT

CONTEXT



PRIVACY REGULATION



V.R.O.-PROJECT

INTRODUCTION

CONTENTS

INTRODUCTION

Pages
1.

CONTEXT

Land use	2-3.
Availability and costs of resources	4.
Environmental issues	5.
Socio-economic issues	6.
Settlement typology	7-1-

PROJECT

Introduction	(Forms)	8.
Project development	(Forms)	9.
Organization of space	(Resources)	10-14.
Building techniques	(Institutions)	15-17.
Project management	(Institutions)	18-20.
Standards and Regulations	(Institutions)	21.
Financial implications	(Institutions)	22.

POST-PROJECT

Appropriation of space	(Forms)	23-25.
Building techniques	(Resources)	26.
Post-project management	(Institutions)	27-28.

ANNEX

Pictorial Representations	29.
---------------------------	-----

EQUIVALENTS

CURRENCY : UNIT = RUPEE (Rs.)

5.2 Bp = 1 RUPEE

0.402 US. \$ = 1 RUPEE

MEASURES : LINEAR MEASURES :

- 1 inch = 2.54 cm.
- 1 foot = 30.48 cm.
- 1 yard = 0.91 m.
- 1 mile = 1.61 km.

AREA :

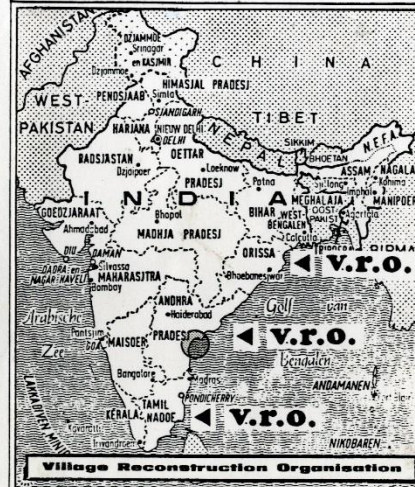
- 1 acre = 0.4047 H.A.
- 1 Hect. = 10,000 m²
- = 2.4710 acres

OTHERS

OLD MEASURES :

- 1 angula = width of the middle finger.
- 1 vivasti = 12 angula's
- 1 hasa = 2 vivasti's
- 1 danda = 4 hasa's

COUNTRY OR REGION



SOURCES OF INFORMATION

- VILLAGE RECONSTRUCTION ORGANISATION - INDIA

Head Office :
By-pass Road,
Peda Kakani-522 509
Guntur District (A.P.)
Tel: 21454, 23293, 23946

Area Offices :
5, Prof Thomas Street
Race Course
Tiruchirappalli-620 020
Tamil Nadu Tel: 26023
Barabatti Stadium
Cuttack-750 005 Orissa
Tel: 24629

Liaison Office :
3-6-238, Ridge House
Himayatnagar
Hyderabad-500 029
Tel: 34141

Field Offices :
1. Subedarpet
Nellore-524 002 (A.P.)
Tel: 1901
2. Challapalli
Police Station Road
Krishna District (A.P.)
Tel:

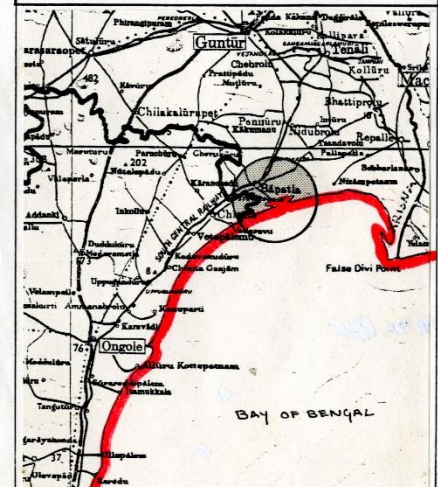
- INDIAN SOCIAL INSTITUTE - NEW DELHI

- HIGH SCHOOL OF ARCHITECTURE & FINE ARTS
- HYDERABAD

- STATE GOVT. : DISTRICT & TALUK LEVEL

- FIELDWORK BY ARCH. YARKONI MANA
- PERS. FIELDWORK AS V.R.O. VOLUNTEER

SITE LOCATION



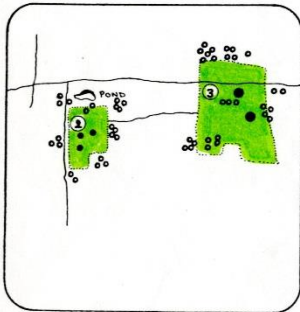
LAND USE

PROJECT SITE ENVIRONMENT

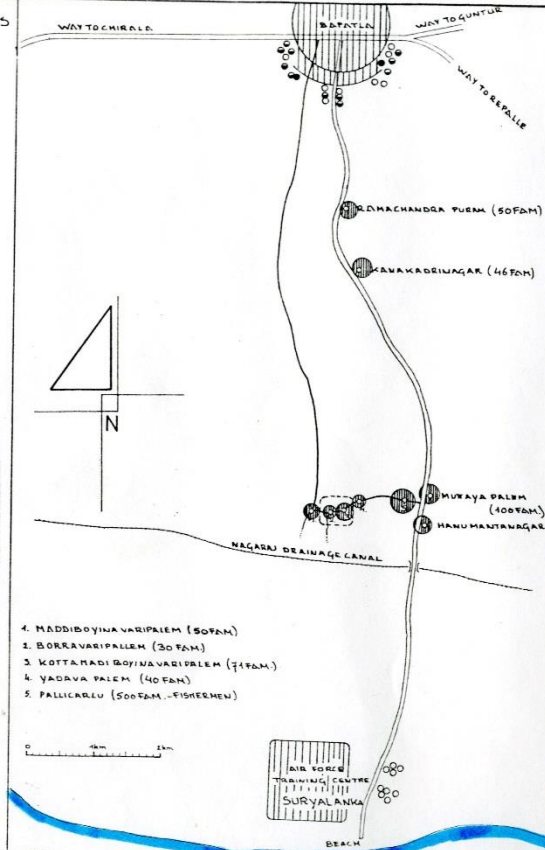
FORMS

RESIDENTIAL AREAS

Identify various settlement types the project area on plan.



DETAIL: SCALE 1/1000



- 4. MADDIBOYINA VARIPALEM (50FAM)
- 1. BORRAVARIPALEM (30FAM)
- 3. KOTTAMADI BOYINAVARIPALEM (71FAM)
- 2. YADAVA PALEM (40FAM)
- 5. PALLICARLU (500FAM - FISHERMEN)

population

BORRAVARIPALEM: ②
20FAM // 104 PVS.

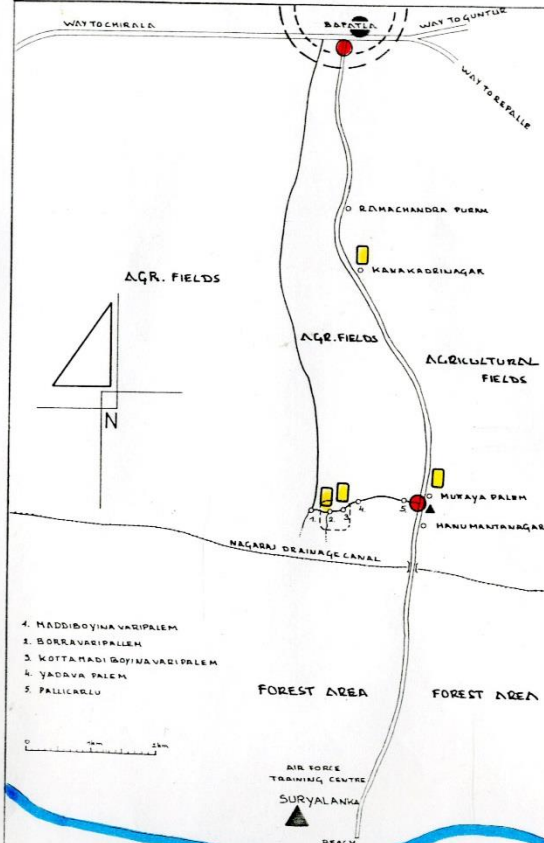
K.M.O. PALEM: ③
71 FAM // 225 PVS.

density

BAPATLA TALUK : 245 to 370 PVS./km²

NOTE: IF WE CONSIDER THE DENSITY PER VILLAGE (PVS./M² PATTI HOUSESITE), THE NUMBER INCREASES, DUE TO DENS CONCENTRATION HUTS.

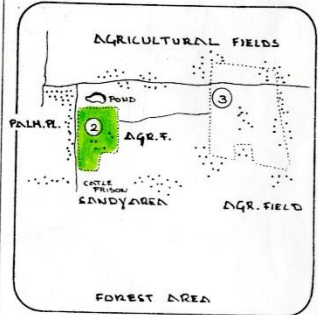
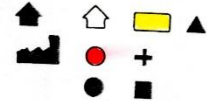
COMMERCIAL, INDUSTRIAL & SOCIAL FACILITIES



- 4. MADDIBOYINA VARIPALEM
- 1. BORRAVARIPALEM
- 3. KOTTAMADI BOYINAVARIPALEM
- 2. YADAVA PALEM
- 5. PALLICARLU

BAPATLA-TOWN

CONCENTRATED FACILITIES:



DETAIL: SCALE 1/1000

INDUSTRIAL FACILITIES

- workshop
- factory

AGRICULTURAL AREAS

- forest area

COMMERCIAL FACILITIES

- shophouses
- market
- commercial centre

EDUCATIONAL FACILITIES

HEALTH FACILITIES

COMMUNITY FACILITIES

SECURITY FACILITIES



PROJECT SITE

LAND USE

PROJECT SITE ENVIRONMENT

FORMS

PHYSICAL INFRASTRUCTURE

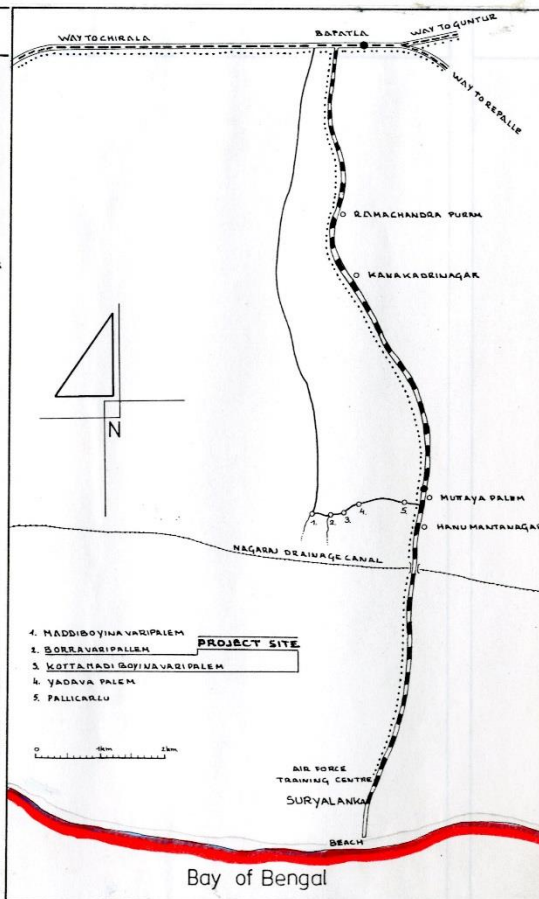
BORRAVARI PALEM - COMMUNITY (See map p# 2)

- 1° LANDVIEW: - VERY SMALL VILLAGE (20 FAM.)
 - 20 HUTS, REBUILT AFTER CYCLONE '77.
 - SUBHAMLET OF VILLAGE N° 1
 - SURROUNDINGS OF VILLAGE FULL OF PALMEIRA TREES.
 - N, W, E SIDE : AGRICULTURAL FIELDS
 - S. SIDE : CATTLE PRISON
 - NAGARAJ DRAINAGE CANAL

- 2° ROAD ACCESS: - LOCATION 4 MILES FROM BAPATLA
 - BUSLINE: BAPATLA - A.R.T.C. of SURYA LANKA
 → A.T.C. BUS at 7.00 A.M. + 5.00 P.M.
 - RIKKHA: BAPATLA - MUTAYA PALEM
 - BY WALK OR BY JEEP: BAPATLA - VILLOGE N° 1
 → EARTH/SANDY HUTCHA PISTE

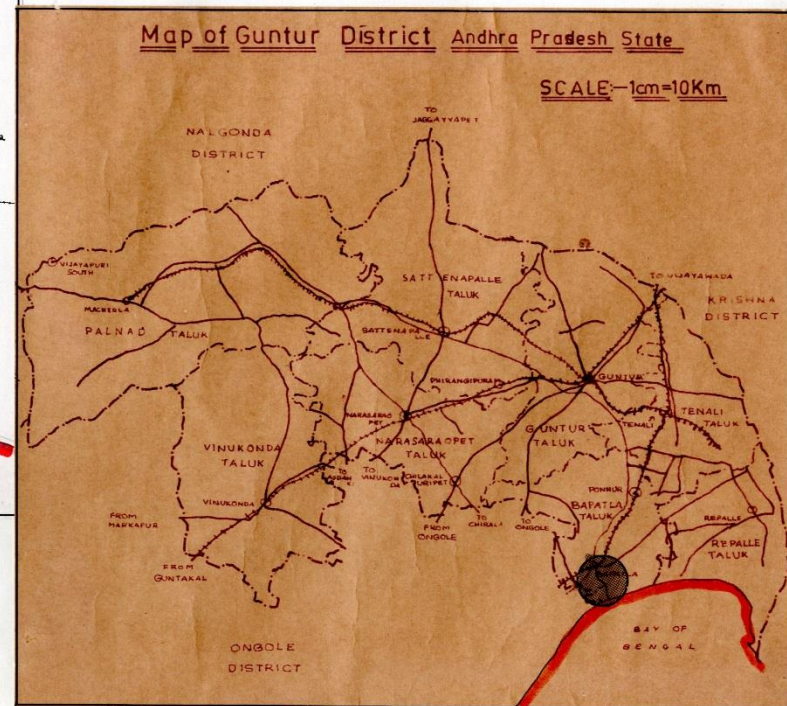
3° NEIGHBOURHOOD VILLAGES:

- EAST: - K.M.B. PALEM (7 FAM.) - 1 FURLONG DIST.
 - YADAVA PALEM (40 FAM.) - 2 FURLONG " "
 - PALLICARLU (500 FAM.) - 4 FURLONG " "
 - MUTAYA PALEM (100 FAM.) - 6 FURLONG " "
WEST: - M.B. PALEM (N° 1) (60 FAM.) - 1 FURLONG " "
 - PALARYA PLANTATION + CASURINDA
 - M.P.L. PALEM - at 1.5 mile distance.
NORTH: - VAST STRETCH OF AGRICULTURAL FIELDS
 - 1 POND IN FRONT OF THE VILLOGE
SOUTH: - DRAINAGE CANAL - 2 FURLONG.
 - BAY OF BENGAL - 2 MILES.



Map of Guntur District Andhra Pradesh State

SCALE: 1cm=10Km



ROAD INFRASTRUCTURE	main roads		WATER SUPPLY	
	second roads		SEWERAGE/DRAINAGE	
TRANSPORT FACILITIES	busline		ENERGY SUPPLY	electricity
	railroad			gas
				others
			LOCATED IN BAPATLA TOWN	
			PROJECT SITE	

CONTEXT RESOURCES

AVAILABILITY AND COSTS OF RESOURCES

MATERIAL RESOURCES <small>NOTE: CONCERNING FOR DURABLE CONSTRUCTIONS (PUCCL) SOURCE: V.R.O. CONSTRUCTION SECTOR - 1980-</small>						
DESCRIPTION	MATERIALS	QUANTITY	RATE Rs.	LABOUR	QUANTITY	RATE Rs.
1. EARTHWORK/FOUNDATION						
1.1. EARTHWORK EXCAVATION						
				- HEAD MASON	1/2 No	15./day
				- MAZDOORS	2 No	4./day
				- Boy	1/2 No	4./day
CONSIDER 10CUM: $L = 17.50 + 5\% \text{ OVERHEAD CHARGES} + 10\% \text{ PROFIT} = 20.23 \text{ Rs/10cum}$						
1.2. SANDFILLING IN PLINTH (consolidating & chassing)						
LOCAL INCLUDING CARRIAGE	10 cum	5.50/cum		- HEAD MASON	1/6 No	15./day
				- MAZDOORS	2 No	4./day
				- Boy	1 No	4./day
CONSIDER 10CUM: $M + L + 5\% O + 10\% P = 78.92 \text{ Rs/10cum}$						
1.3. BRICK JELLY CONCRETE (for foundation - 11c)						
- BRICK BALK	1 cum	20.00/cum				
- SAND	0.50 "	10.00/cum				
- CEMENT	2.33 bag	30.00/bag				
CONSIDER 1CUM: $M + L = 100.00 \text{ Rs/Cum.}$						
1.4. CUTSTONE MASONRY IN C.M. (for found. - 11c)						
- CUT STONE	1 cum	300.00/cum				
- SAND	0.25 "	10.00/cum				
- CEMENT	1.20 bag	30.00/bag				
CONSIDER 1CUM: $M + L = 440.00 \text{ Rs/cum.}$						
2. SUPER STRUCTURE						
2.1. BRICK WORK IN C.M. (size 18x8x9 cm)						
- BRICK	500 No	180./1000		- MASON	3 No	15./day
- CEMENT	12 bags	30./bag		- MALE COOLIE	3 No	7./day
- SAND	2.40 cum	10./cum		- FEMALE COOLIE	3 No	6./day
- SUNDRIES		1./10cum		- GHISTIE	3/2 No	8./day
				- SCAFFOLDING	LUMP	10.-Rs
				- SUNDRIES		4.-Rs
CONSIDER 10CUM: $M + L + 5\% O + 10\% P = 1614.00 \text{ Rs/10cum} = 162.00 \text{ Rs/cum}$						
2.2. R.C.C. LINTEL (proportion - 1:2:4)						
- COARSE AGGREG.	0.900 cum	100./cum				
- SAND	0.450 cum	10./cum				
- CEMENT	8 bags	30./bag				
- STEEL	0.771 sqm	400./sqm				
CONSIDER 1CUM: $M + L + 5\% O + 10\% P = 677.00 \text{ Rs/cum}$						
2.3. R.C.C. BEAM						
- COARSE AGGREG.	0.60 cum	60./cum		- PLACING + CURING C.	1 cum	40./cum
KARACHI GRIT	0.30 cum	60./cum		- BENDING + BUILDING		
- FINE SAND	0.45 cum	10./cum		+ PLACING REINFORC.	1.10 quin	16./quin
- CEMENT	7 bags	30./bag		- L+M CENTERING	LUMP	20.-Rs
- STEEL BARS	1.40 quin	170./quin		- HIRING MIXER	-	5.-Rs
- SUNDRIES		3.50./Rs		- SCAFFOLDING	LUMP	11.-Rs
				- SUNDRIES		1.6./Rs
CONSIDER 1CUM: $M + L + 5\% O + 10\% P = 677.00 \text{ Rs/cum}$						
3. ROOFING						
3.1. R.C.C. ROOF SLAB (H=10cm - 1:2:4)						
- COARSE AGGREG.	0.72 cum	60./cum		- PLACING + CURING C.	1.20 cum	40./cum
KARACHI GRIT	0.36 cum	60./cum		- BENDING + BUILDING		
- FINE SAND	0.54 cum	10./cum		+ PLACING REINFORC.	0.85 quin	16./quin
				- L+M CENTERING	10.00 sqm	150./sqm

DESCRIPTION	MATERIALS	QUANTITY	RATE Rs	LABOUR	QUANTITY	RATE Rs
LABOUR	- CEMENT	8 bags	30./bag	- HIRING MIXER	-	5.-/Rs
	- REINF. STEEL	0.85 quin	170./quin	- SCAFFOLDING	LUMP	11.-/Rs
	- SUNDRIES	-	5.30./Rs	- SUNDRIES	LUMP	7.40./Rs
	CONSIDER 1CUM: $M + L + 5\% O + 10\% P = 622.00 \text{ Rs/cum}$					
3.2. ROOFING MANGAL. TILES (over country wood Rafters)						
- TILES (Mangalore)	160 Nos	650./1000		- CARPENTER	1 No	15./Rs/day
- RIDGE TILES	10 Nos	3./No		- TILE LAYER	1 No	10./day
- REEPERS (C.W)	30 m	1.20./m		- MALE COOLIES	1 No	7./day
- NAILS	2.50 kg	4.50./kg		- FEMALE COOLIES	2 No	6./day
- SUNDRIES		0.25./Rs		- SUNDRIES	-	1.-/Rs
CONSIDER 10SQM: $M + L + 10\% P = 242.00 \text{ Rs/10sqm}$						
3.3. ROOFING COUNTRY TILES (including reepers-2"x12")						
- TILES	3000 Nos					
- REEPERS						
CONSIDER 10SQM: $M + L + 10\% P = 400.00 \text{ Rs/10sqm}$						
4. FLOORING						
4.1. FLOORING NAPA SLAB (pointed with C.M.-1:3)						
- SLABS						
- SAND FILLING 4"						
- CEMENT POINTING						
CONSIDER 10SQM: $M + L + 10\% P = 180.00 \text{ Rs/10sqm}$						
5. PLASTERING						
CONSIDER 10SQM: $M + L + 10\% P = 52.00 \text{ Rs/10sqm}$						
6. COUNTRY WOOD DOORS						
CONSIDER 1SQM: $M + L + 10\% P = 100.00 \text{ Rs/sqm}$						
7. COUNTRY WOOD WINDOWS						
CONSIDER 1SQM: $M + L + 10\% P = 180.00 \text{ Rs/sqm}$						
8. PAINTING D & W (2 coats)						
CONSIDER 10SQM: $M + L + 10\% P = 60.00 \text{ Rs/10sqm}$						

LAND TENURE

Type of land tenure, availability & cost of land

BORRUVARI PALEM (30 FAM.)

HOUSE SITE PATTAS: 1 & 2 FAM (north of plot)
OTHERS OCCUPIED LAND
WITHOUT PATTAS

AGRICULTURE LAND: NONE OF THE FAM.
POSSESS LAND IN OR
AROUND THE VILLAGE.

KOTTAMADDIBOINAVARIPALEM (71 FAM)

HOUSE SITE PATTAS: ± 100 YEARS OLD COMMON
PATTAS FROM GOVT.
→ ± 5 ACRES

AGRICULTURE LAND: 30.15 ACRES
 $L = \pm 10\%$ of Village
income
4 DIRECTIONAL EXTENSION
POSSIBLE AT 6,000.-Rs/acre

NOTE: POSSIBILITY TO PURCHASE 20 ACRES
OF BAY LAND FOR JOINT FARMING &
IRRIGATION FACILITIES

ENVIRONMENTAL ISSUES

SITE CONDITIONS

Topographical situation, soil conditions, pollution, natural disasters (flooding, earthquakes...), etc. Illustrate comments on map of project site environment

- SURFACE : 33 mil. km² ≈ 107 x BELGIUM
≈ 3% WORLD SURFACE

- GEOGRAPHIC LIMITS:

1. HIMALAYA MOUNTAIN CHAIN:

- 3 parallel chains of length: 2400km.
depth: 240 & 320km.
High: ≈ 8000m.

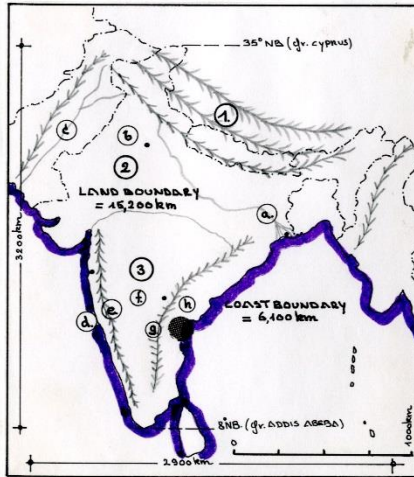
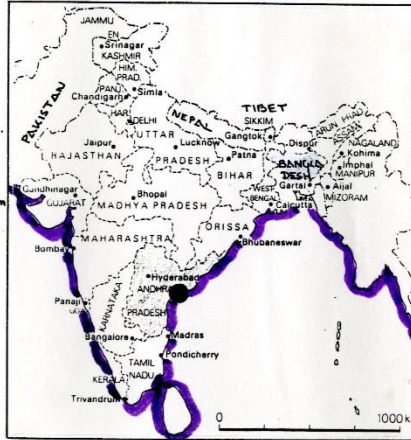
2. INDUS-GANGES PLDIN:

- SURFACE ≈ 1,000,000 km² / length: 2400km
/ depth: 320km

- a. Ganges-Delta
- b. Punjab area (cornloft of India!)
- c. Indus area (Pakistan)

3. DECAN TABLE-LAND

- d. KERALA (small coaststrip)
- e. WEST-GHATS (chain H=4000m)
- f. TABLE-LAND
- g. EAST-GHATS (chain H=500m)
- h. BROAD COAST PLAIN.



- SOIL CONDITION OF BARAPATA SURVEY AREA

- COASTSIDE : - SANDY SOIL
- BARAPATA : - SANDY/LOAM SOIL
- GRAVELY SOIL
- GRANITO HILLS
 - Stone crushing
 - Stones for superstructure flooring basement.
- BLACK COTTON SOIL
 - Lime kalkars
- RED CHALKA SOIL

→ INFLUENCE ON FOUNDATION TYPE

- 1° BLACK COTTON SOIL:
 - SUFFICIENTLY DEEP
 - SANDLEVELING (± 15 cm)
 - CONCRETE STRIP (even for light comba.)
- 2° SANDY/LOAM & GRAVELY SOIL:
 - DEPTH FOUNDATION (± 100 cm)
 - BELEM JELLY FOUNDATION (in Lime mortar 1:2 / in C.Mortar 1:6)

CLIMATE

Mois	Pression moyenne au niveau de la mer (mb)		Température moyenne °C		Humidité relative %		Nébulosité		Pluie		Vent (à 0500)		Vent (à 1700)										
	Maximum journalier	Minimum journalier	Maximum du mois	Minimum du mois	1700	0500	Ocas	1700	0500	Nombre de jours	Vitesse moyenne	Pourcentage de observations	Vitesse moyenne	Pourcentage de observations									
Janvier.....	1 015	27	19	25	63	69	2	2	7	1	1,13	5	2	1,10	25	9	10						
Février.....	1 013	28	21	32	68	72	2	1	15	1	2	6	14	5	3	22	27	7	13				
Mars.....	1 011	31	23	34	70	75	2	2	9	1	2	2	2	2	2	2	2	2	2	2			
Avril.....	1 002	32	26	35	75	76	3	4	13	1	4	1	2	1	4	6	7	19	2	2			
Mai.....	1 004	33	28	37	73	76	5	5	53	3	5	6	3	1	2	6	6	7	15	2	4		
Juin.....	1 000	33	27	39	76	73	6	7	88	6	5	1	1	1	1	4	6	3	22	3	3		
Juillet.....	1 001	32	26	36	79	72	7	7	99	7	4	1	1	1	2	6	0	7	15	2	4		
Août.....	1 002	32	26	36	79	72	7	7	125	8	5	0	1	1	2	6	0	7	15	2	4		
Septembre.....	1 004	31	26	34	81	77	6	6	167	9	3	3	3	2	3	39	23	8	13	4	1	6	
Octobre.....	1 009	31	24	33	78	75	5	5	261	9	3	10	30	3	1	1	7	21	8	9	5	2	5
Novembre.....	1 013	29	22	31	69	65	3	3	90	3	3	19	49	4	1	3	7	7	9	4	1	3	
Décembre.....	1 015	27	19	29	64	64	2	2	17	1	2	17	48	5	1	0	1	9	13	6	4	1	
Moyenne.....	1 008	31	24	31	76	72	4	4	4	3	6	15	3	1	2	40	20	6	7	5	1	10	
TOTAL.....									964														
Extrême.....																							

(1) Moyenne des températures les plus hautes (Basse) chaque année.
(2) Moyenne des températures les plus basses (Basse) chaque année.
(3) Nombre de jours : Force supérieure à 3.
(4) Nombre de jours : visibilité inférieure à 3.
*r. moins de 1/2 jour.

Source : Bay of Bengal Pilot.

METEOROLOGICAL STATION : VISHAY-HA-PTU-NUM (14°42'N-85°38'E)
(BETWEEN MADRAS & CALCUTTA)

ENVIRONMENTAL ISSUES

SITE CONDITIONS

INDIA: MONSOON CLIMATE : ELEMENTS & RHYTHM :
 - SUMMER: CARRY ON TROPICAL, HUMID AIR FROM OCEAN.
 - WINTER: CARRY OFF COLD, DRY CONTINENTAL AIR.

PERIODICAL / SEASONS

- OCTOBER - MARCH : COOL SEASON

- WIND DIRECTIONAL MOVE: →
 N.W → S.O → S.W.
 ↳ (from Iran, Afghanistan)

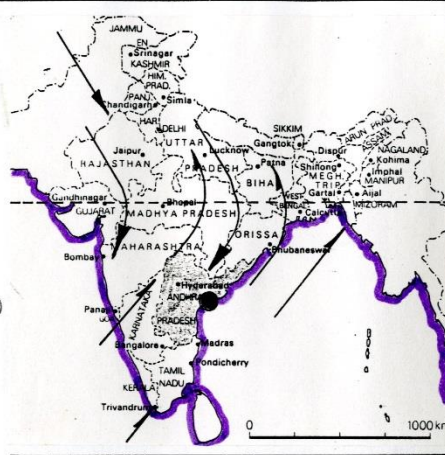
- RESULT/CONDITION:
 CLOUDLESS SKY; WESTERN SUMMER TEMP.

- MARCH - JUNE : HOT SEASON

- WIND MOVE →
 - TEMP. INCREASES FROM S. → N.
 ↳ (day temp. Rajasthan: 43°C in shade)
 ↳ (People use to sleep outside)
 - PRE-MONSOON PERIOD IN GOLF OF BENGAL.

- JUNE - OCTOBER : RAIN SEASON

- S.W. MONSOON
 - WIND DIRECTIONAL MOVE: →
 S.W → N.W → GANGES-INDUS RAIN.
 ↳ IND. OCEAN ↳ TROPIC OF CANCER



SITE CONDITIONS AND HEAT.

- HUMIDITY/RAINFALL:

- RAINFALL: 25-100CM.
 - CLIMATE: TROPICAL ≠ AFRICA
 ≈ MIDDLE EAST

- VEGETATION:

- SAVANNA TYPE DUE TO LARGE SCALE DEForestation;
 SHIFTING CULTIVATION; AGRICULTURE.
 - THORNY BUSHES (ACACIAS)
 - COAST AREA (PALMYRA'S)

SITE ACTIVITIES/CLIMATE

- BRICK MAKING

- FROM JANUARY UPTO MAY (DRY SEASON)
 → FIELD HOVES OR CLAMPS.

- AGRICULTURE

- WET AGRIC.: RICE (PADDY); BARLEY; VEG. OILSEED; JUTE
 → (june-october or by irrigation)
 - DRY AGRIC.: SORGHUM; PEANUTS; SEEDS; COTTON
 → (january-april)
 - IRRIG. AGRIC.: - TRADITIONAL: WELL, PERSIAN WHEEL; DRAINAGE CANALS; TANKS;
 - MODERN: BARRAGES (INDUS RIVER)

SCALE 1/25000 or 1/10000

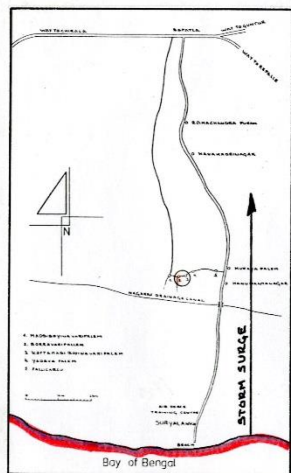
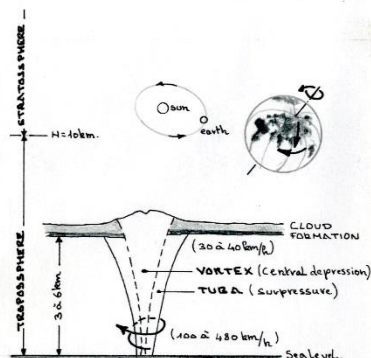
CLIMATE - "CRISIS" - phenomenon - "CYCLONE"



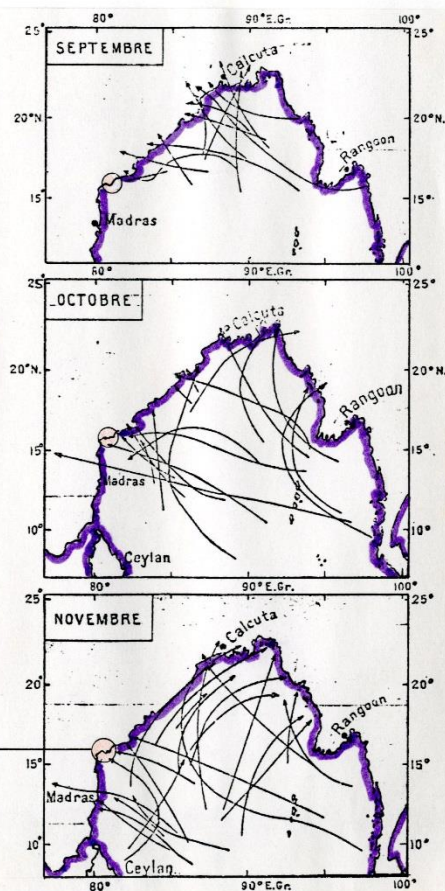
ENVIRONMENTAL ISSUES

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SCALE 1/25000 or 1/10000



CLIMATE "CRISIS" - phenomenon "CYCLONE"

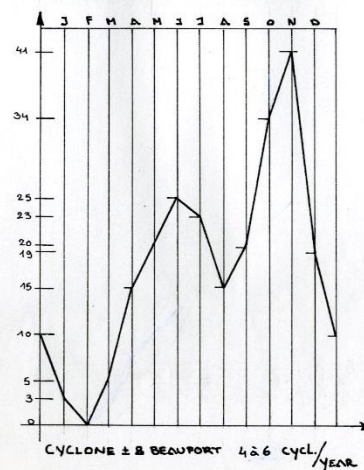
Temperature, humidity, sunshine, rain, wind...

CYCLONE : ORIGIN & GENERAL ASPECTS

- **STORM EXTENSION:** DUE TO THE GEOGRAPHICAL POSITION INDIA (Funnel shaped Gulf of Bengal)
 - PROPULSIVE WATER MASS CAN'T BE STOPPED.
 - CYCLONE + TIDAL WAVE = FLOOD
- **ORIGIN & FORMATION:**
 - SEA OF ANDAMAN (Nicobar islands)
 - USUAL DURING TRANSITION PERIODS
 - SOME ARE COMING FROM THE CHINESE SEA, BURMAH AND THE INDOANESIAN PENINSULA

PERIOD: 1850-1950

GRAPHIC: NUMBER OF CYCLONES

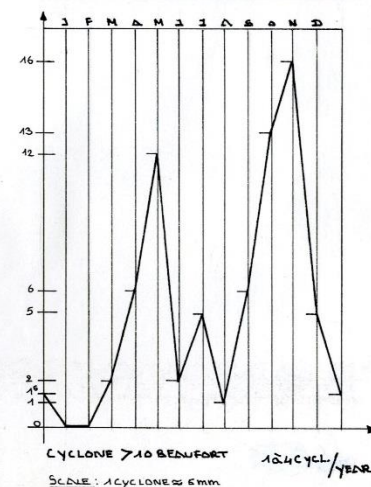


CYCLONE : ANDHRA '77

- **TIMING:** 19 Nov. 1977
- **STORM SURGE:** HEIGHT: 2.75 - 6.00m
LATITUDE: 80km COASTL.
DEPTH: 24 km.
- **FLOODING:** \pm 570km²
- **DEATH TOLL:** 40 FORTY THOUSAND (within minutes)
- **DAMAGE:** 720 VILLAGES ENTIRELY DISAPPEARED.
 \pm 2,302 VILLAGES AFFECTED
→ 1 MILLION HOUSES COLLAPSED
→ BRIDGES; RAILWAY; IRRIGATION CANALS, ... DAMAGED.
- **LIFESTOCK:** † CATTLE: 250,000
‡ OTHER: 750,000

PERIOD: 1851-1936

GRAPHIC: STRONG CYCLONES



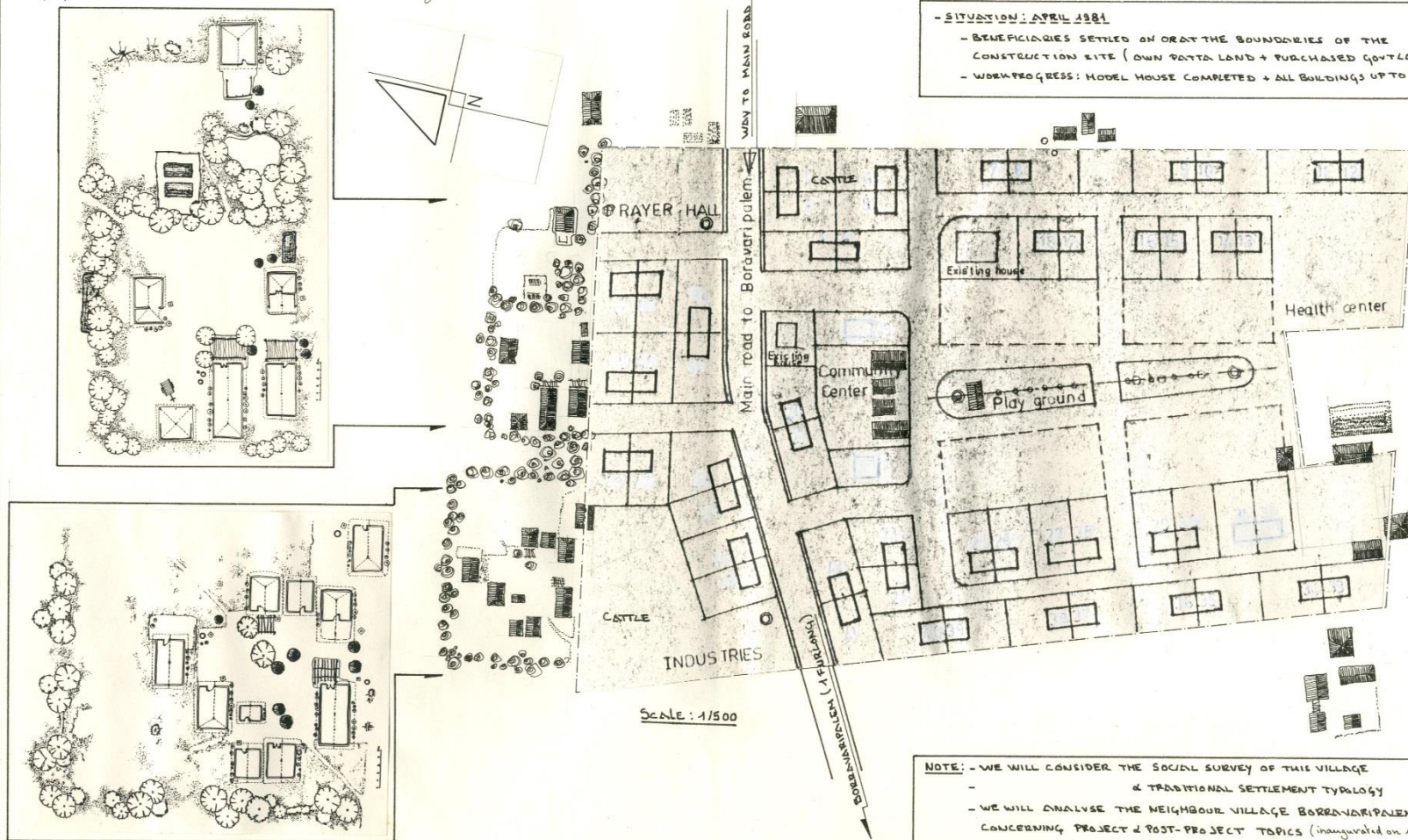
SOCIO-ECONOMIC ISSUES

BASIC SOCIO-ECONOMIC INDICATORS related to project site environment

Population, population growth, migration, family size, age-distribution, social groups, ethnic groups, religion...
 Employment, income distribution & evolution, living costs...

SOCIAL SURVEY K.M.B.-PALEM (n°3)

- SITUATION: APRIL 1981
- BENEFICIARIES SETTLED ON OR AT THE BOUNDARIES OF THE CONSTRUCTION SITE (OWN PATTI LAND + PURCHASED GOVT LAND)
- WORK PROGRESS: MODEL HOUSE COMPLETED + ALL BUILDINGS UP TO BASEMENT



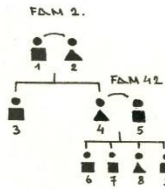
NOTE: - WE WILL CONSIDER THE SOCIAL SURVEY OF THIS VILLAGE & TRADITIONAL SETTLEMENT TYPOLOGY
 - WE WILL ANALYSE THE NEIGHBOUR VILLAGE BORAVARI-PALEM (n°2) CONCERNING PROJECT & POST-PROJECT TOPICS (inaugurated on 12.02.1981)

SOCIO-ECONOMIC ISSUES

BASIC SOCIO-ECONOMIC INDICATORS related to project site environment

Population, population growth, migration, family size, age-distribution, social groups, ethnic groups, religion...
 Employment, income distribution & evolution, living costs...

④ FAMILIES 2 x 42



- 2/1. VALLU (PEDA) VENKATESWARLU ♂ 45
 2. V. VENKAMMA ♀ 40
 3. V. SINGAIAH ♂ 25 (non married)
 4. V. SUBBAMMA ♀ 22 (see FAM 42)

- 42/5. PINNIBOYENA PICHAYYA ♂ 35
 4. P. SUBBAMMA ♀ 22
 6. P. ♂ 3
 7. P. ♂ 5
 8. P. ♀ 3
 9. P. ♂ 12

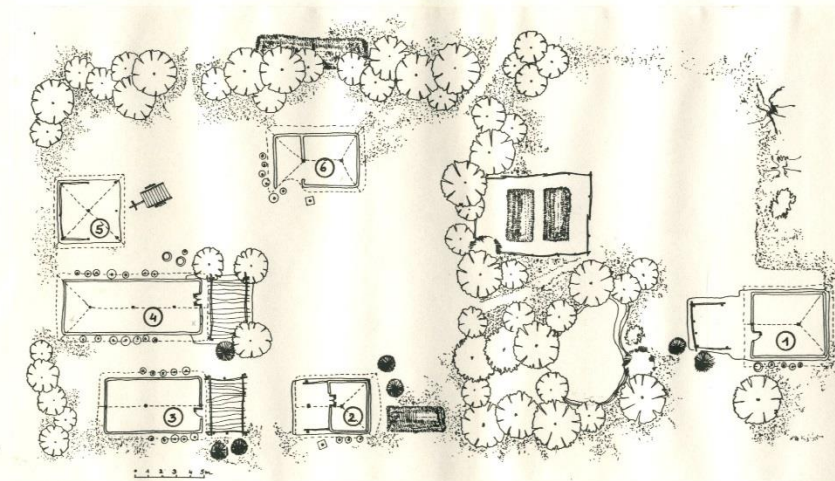
INCOME: - AGRICULTURAL COOLY:
 → LANDLORD 3 miles away
 - TIME USE: 6AM → 12: FIELD
 2PM → 5:30PM: FIELD
 - HERDSMEN: - 2 BULLS + 1 BULLACRET
 → See shed (5)
 - 2 GOATS.

CASTE: YADAVA (LOW SERVICE CASTE)

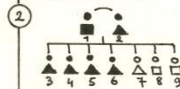
⑥ FAM. 43



- 43/1. PINNIBOYENA ACHAMMA ♀ 55 (WIDOW)
 2. P. VENKAIAH ♂ 38 (WIDOWER CYCLONE '77)
 → SEASONAL WORKER ON TRAVEL.
 3. P. KANDALU ♂ 20
 → SCHOOL BOY (graduation)
INCOME: - 43/1 AS DGR. COOLY.
CASTE: YADAVA.



③ FAM. 3



- 3/1. VALLU CHINA SAMAIAH ♂ 55
 2. V. BUDAMMA ♀ 45
 3. V. SAMBAJYAM ♀ 9
 → BALWADI SCHOOL
 4. V. YEDAVAMMA ♀ 41
 5. V. VENKAMMA ♀ 42
 6. V. SUBBARAVAMMA ♀ 45
 7. V. ♀ 23 (LIVES IN HUT #2)
 → NO INFORMATION ABOUT HUSBAND & CHILD (UNKIND)
 8. ♂ 21 } MARRIED/LIVING IN
 9. ♂ 25 } NEIGHBOUR VILLAGES

INCOME: - FIREWOOD COLLECTING
 → COALMAKING
 → SALE/BOYATLA
TIME USE: 7AM → MARKET BOYATLA
 2PM → FIREWOOD COLLECTING
 (FOREST NEAR D.F.T.C.)
 3PM → SLEEP.
 - PADDI SILO'S: FROM FRIEND WHO GAVE THEM A LOAN (RS.)
DWELLING: CONSTRUCTED BY THEMSELVES (1 & 2)
 NO MATERIAL IS BOUGHT.

① FAM. 47



4. MOTHER LIVES IN.

5. NO V.R.O. BENEFICIARY FAM
 6. FROM NEARBY VILLAGES
 7.

- 47/1. MOKKALA ANKASAMMA ♂ 26
 2. N. VENKAMMA ♀ 22
 3. N. YASODA ♀ 9

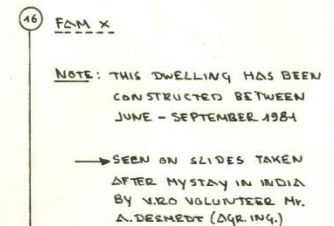
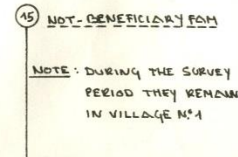
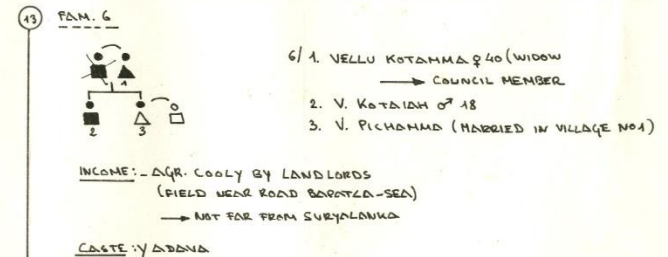
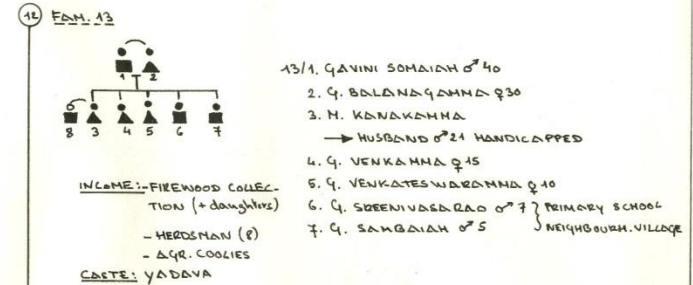
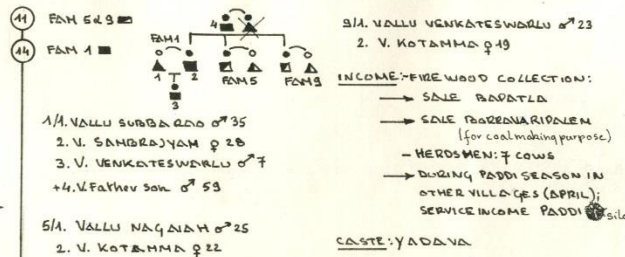
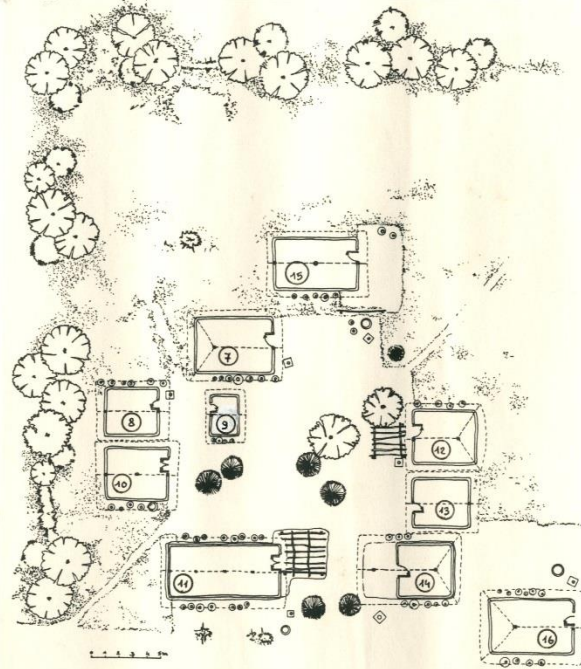
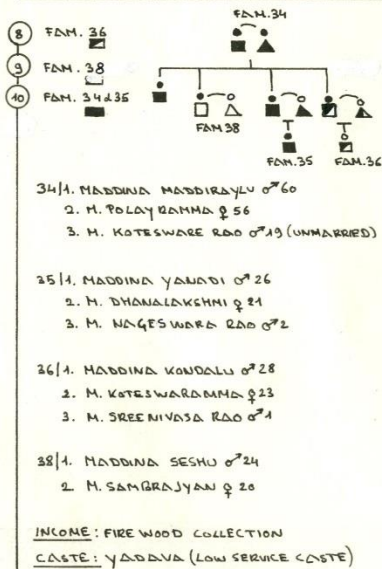
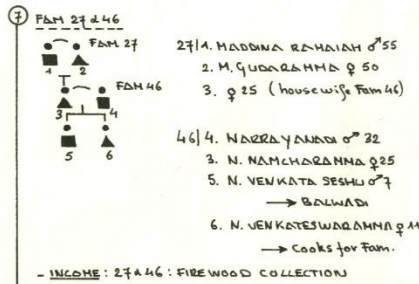
INCOME: - TENANT FARMER
 - 2 PADDI SILO'S

DWELLING: CONSTRUCTION AND COSTS
 SEE PAGE 7 SETTLEMENT TYPOLOGY

SOCIO-ECONOMIC ISSUES

BASIC SOCIO-ECONOMIC INDICATORS related to project site environment

Population, population growth, migration, family size, age-distribution, social groups, ethnic groups, religion...
Employment, income distribution & evolution, living costs...

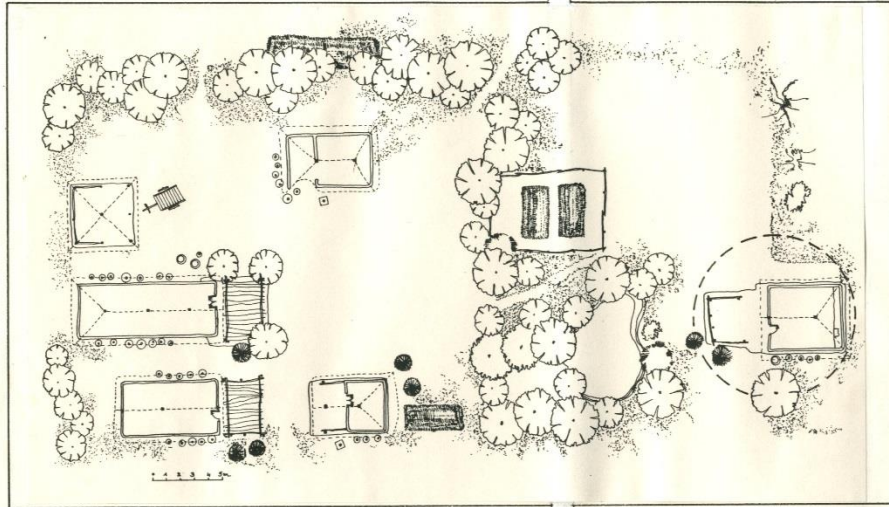


SETTLEMENT TYPOLOGY

PROJECT SITE ENVIRONMENT

FORMS

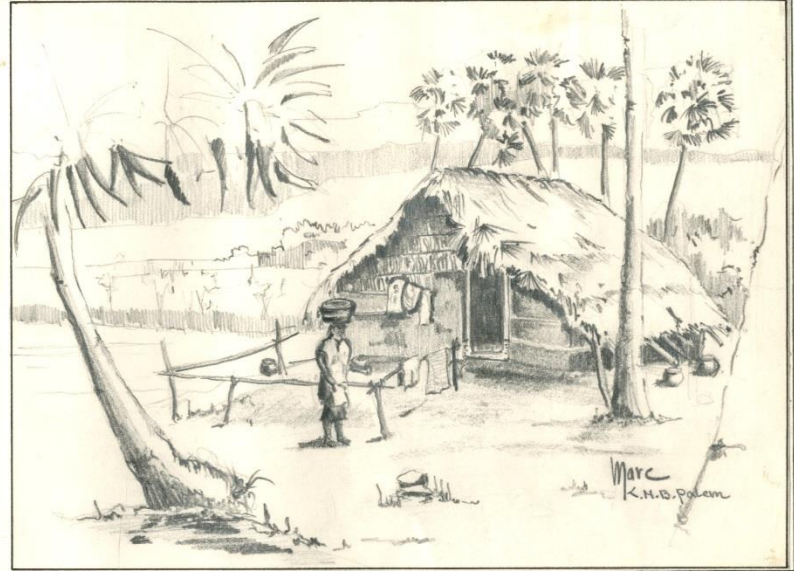
SETTLEMENT: SITE PLAN



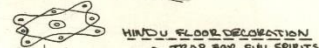
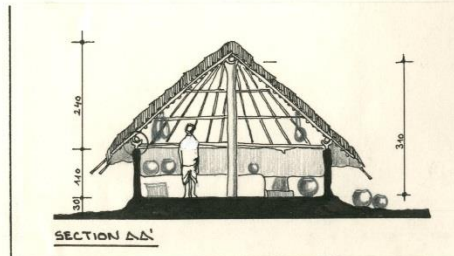
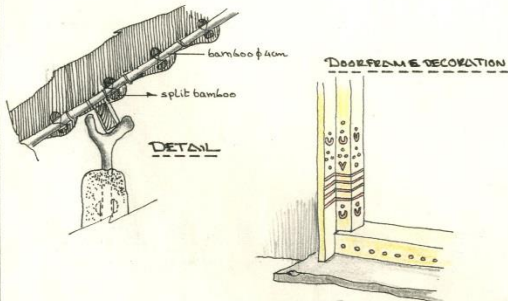
SCALE

DWELLING: PLAN CONSTRUCTION SYSTEM MATERIALS

HOUSE N°1 - FAM. N°47



Additional information: photos, sketches of dwellings, infrastructure etc.; density, population, land tenure



if needed add additional sheet of same size & format 7.2, 7.3

TIMING - CONSTRUCTION:

- WEEK
- SPENDING/day

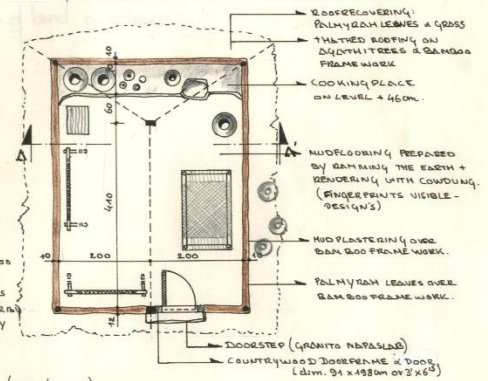
MATERIAL SUPPLY:

- MARKET:
 - BIG BAMBOO
 - SIDE BAMBOO
 - SUPPORTING BAMBOO
- LOCAL:
 - PALMYRAN LEAVES
 - WOOD FROM NEARBY FOREST (3mins) BY BULLACART.

COST MATERIAL: 500,-R\$

COST LABOUR: 350,-R\$ (1000/hrs; day)

TOTAL COST: 850,-R\$ EXCLUDING SOME MUTUAL ASSISTANCE



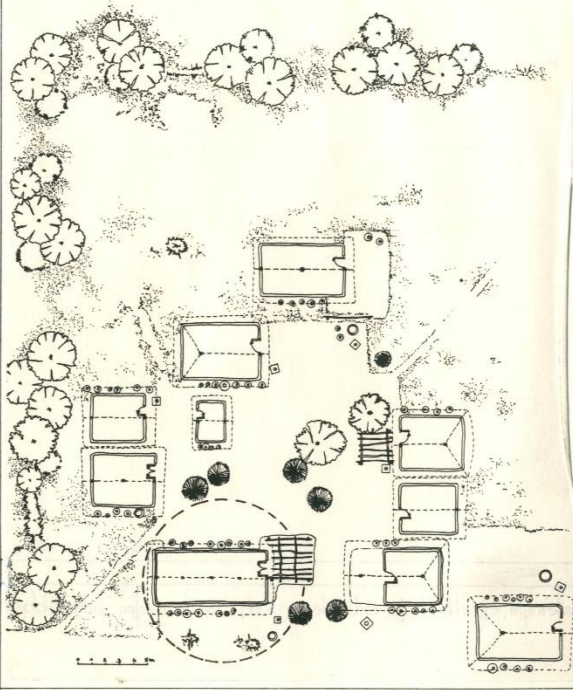
GROUNDPLAN SCALE 1/100

SETTLEMENT TYPOLOGY

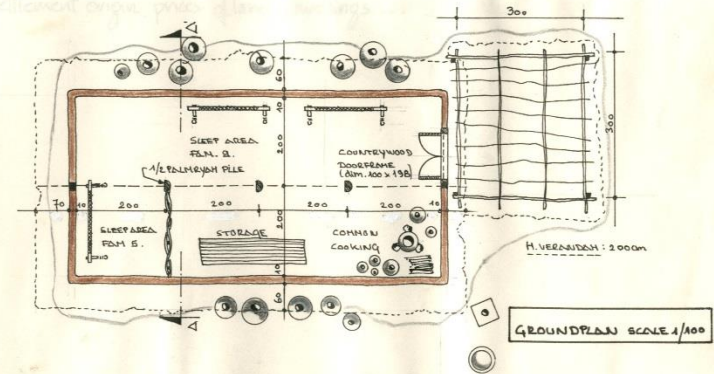
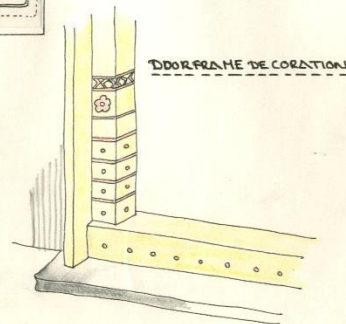
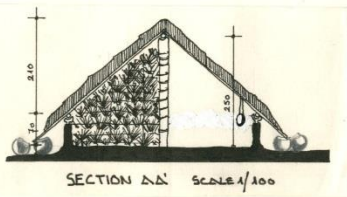
PROJECT SITE ENVIRONMENT

FORMS

SETTLEMENT: SITE PLAN



DWELLING: PLAN - CONSTRUCTION SYSTEM - MATERIALS



if needed add additional sheet of same size & format 7.3, 7.4 ...

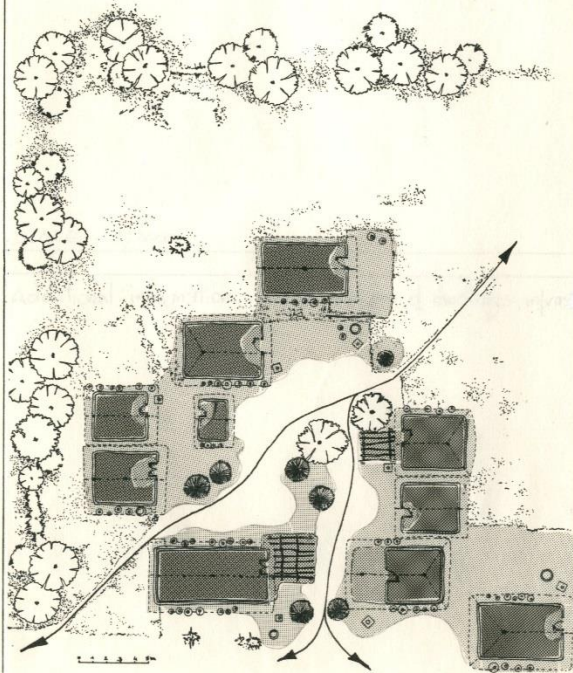
SETTLEMENT TYPOLOGY

PROJECT SITE ENVIRONMENT

FORMS

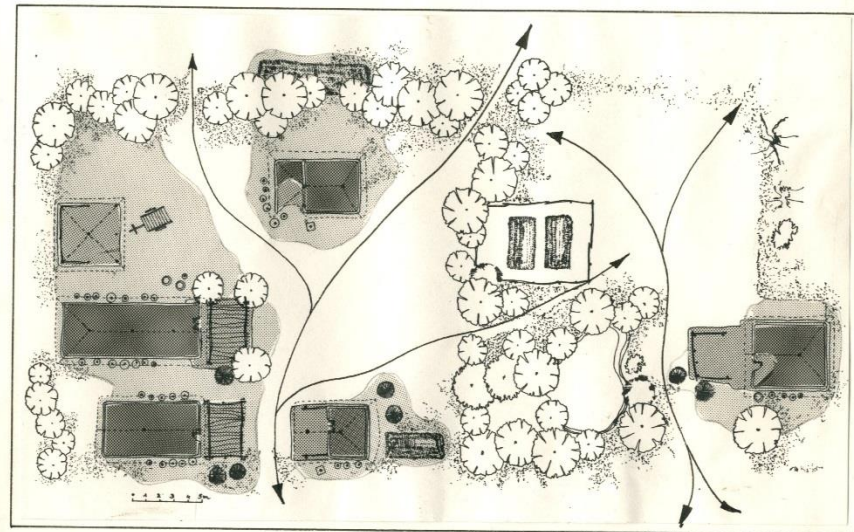
SETTLEMENT: SITE PLAN

- PUBLIC
- SEMI-PUBLIC
- SEMI-PRIVATE
- PRIVATE
- MAIN CROSS CIRCULATION WITHIN THE RESIDENTIAL GROUP.

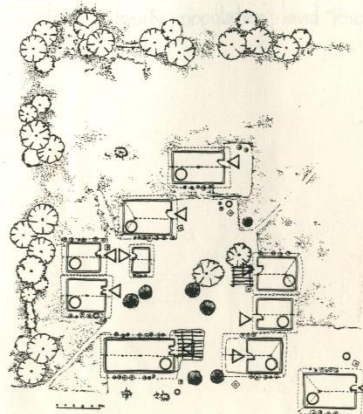


if needed add additional sheet of same size & format 7.2.

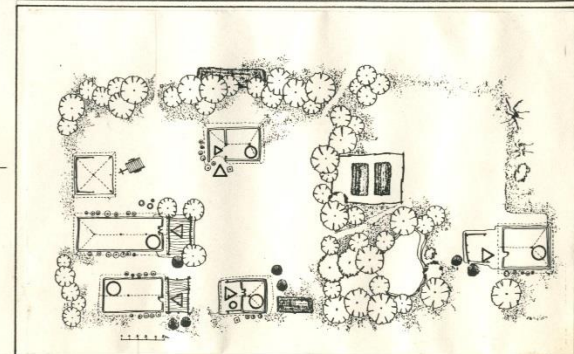
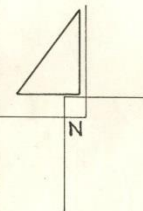
DWELLING: PRIVACY GRADIENT



SCALE



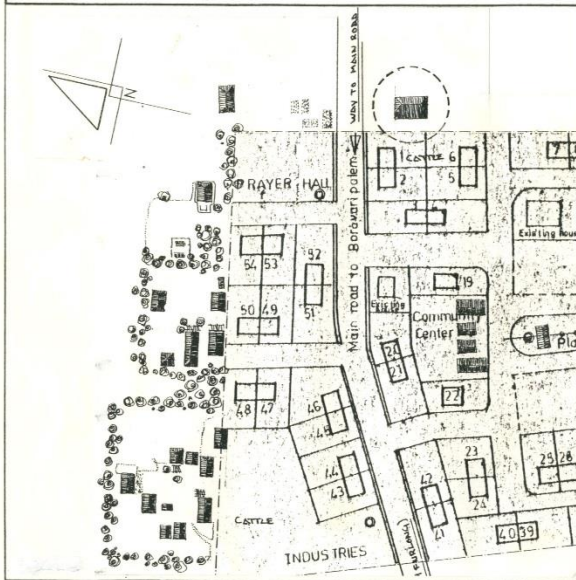
- MAIN ENTRANCE (note: NO SECONDARY DOOR HAS BEEN NOTICED)
- COOKING PLACE INSIDE THE DWELLING.



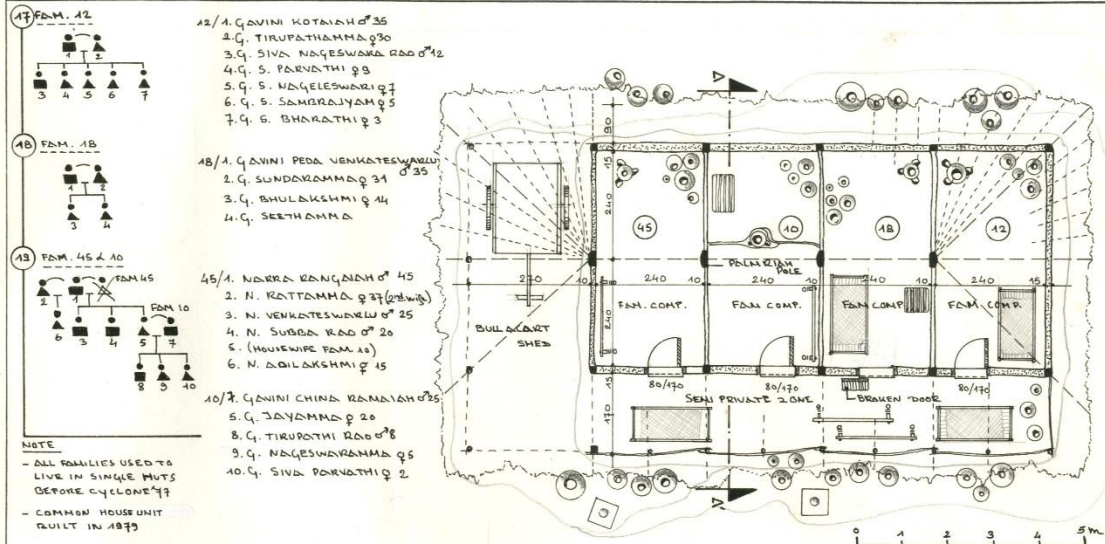
SETTLEMENT TYPOLOGY

PROJECT SITE ENVIRONMENT

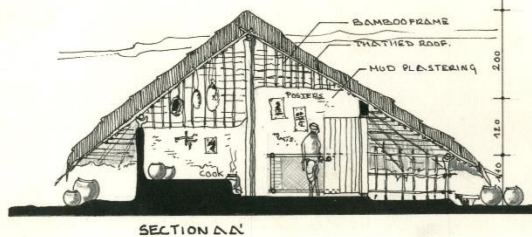
SETTLEMENT: SITE PLAN



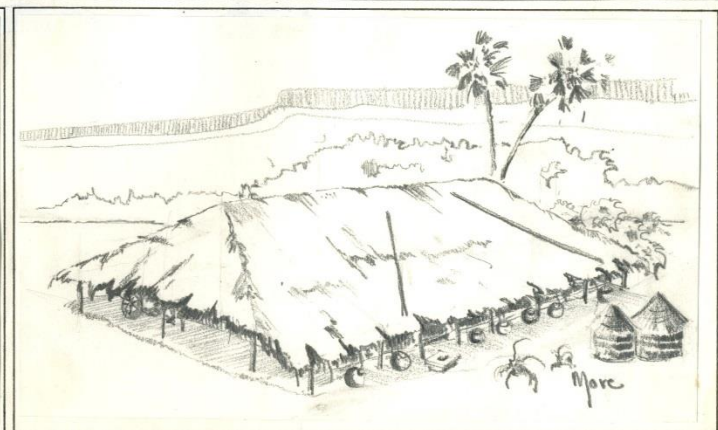
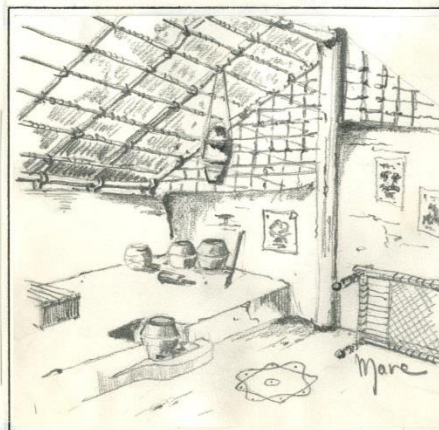
DWELLING: PLAN CONSTRUCTION SYSTEM MATERIALS



Additional information: photos, sketches of dwellings



if needed add additional sheet of same size & format



INTRODUCTION

PROJECT OBJECTIVES

I. GENERAL OBJECTIVES - V.R.O. INDIA - INTRODUCTION:

- VILLAGE RECONSTRUCTION ORGANISATION (V.R.O.) WAS FOUNDED ON JUNE 6TH, 1969 IN THE WAKE OF THE COASTAL CYCLONE (A.R.), BY ITS ACTUAL OPERATIONAL DIRECTOR PROF. N.A. WINDEY (BELGIUM)

- STARTING AS AN RELIEF ORGANISATION; IN THE LATER YEARS BECAME A DEVELOPMENT ORIENTED ORGANISATION.

- SOCIETIES REGISTRATION ACT XXI of 1860 - 6.10.1971-GUNTUR.

→ AREA OF OPERATION: ANDHRA PRADESH; TAMILNADU; ORISSA.

II. PHILOSOPHY:

- CLOSELY ALLIED TO THE GANDHIAN CONCEPT OF SARVODAYA AND THE CHRISTIAN SOCIAL PHILOSOPHY.

- THE VALUE & DIGNITY OF THE HUMAN INDIVIDUAL; AND HIS DEVELOPMENT WITHIN AND THROUGH A COMMUNITY; WITH A FOCUS ON PEACE, SOCIAL JUSTICE AND QUALITY OF LIFE.

III. AIMS AND OBJECTIVES:

1° - TO UNDERTAKE INTEGRATED VILLAGE COMMUNITY DEVELOPMENT WORK, AND TO HELP PROMOTE THE LIVING CONDITIONS OF THE RURAL POOR.

2° - TO INITIATE & PROMOTE COOPERATION AMONG THE INDIVIDUALS, ORGANISATIONS & GOVT. AGENCIES STRIVING TO HELP THE POOR AND THE SOCIALLY HANDICAPPED.

3° - TO AFFILIATE WITH OTHER ORGANISATIONS HAVING SIMILAR OBJECTIVES AND TO SHARE THE COMMON TASK.

4° - TO CONDUCT RESEARCH, COLLECT, EXCHANGE AND DISSEMINATE INFORMATION IN THE AREA OF DEVELOPMENT WORK.

5° - TO CONDUCT SEMINARS, WORKSHOPS, TRAINING CAMPS

IV. ACTIVITIES:

1° - LOW COST HOUSING: - BUILDING AS LEARNING EXPERIENCE AS PARTNERSHIP EXERCISE

→ DYNAMIC OF PROJECT IMPORTANT.

2° - AGRICULTURAL DEVELOPMENT:

3° - COMPREHENSIVE RURAL HEALTH SERVICES:

4° - FORMAL & NON-FORMAL EDUCATION:

5° - TRAINING FOR INDUSTRIAL EMPLOYMENT:

6° - RURAL SANITATION:

7° - LEADERSHIP TRAINING:

8° - COOPERATIVE & COMMUNITY FACILITIES:

9° - VILLAGE SURVEYS:

PROJECT HISTORY

Dates, phasing, chronology

VILLAGE HISTORY:

- SMALL VILLAGE (30FAM.)
- SUBVILLET OF HADDI-BOYINA-VARIPALEM
- BEGINNING VILLAGE; AS PER AN APPROXIMATION IT IS STARTED MORE THAN 300 YEARS A.G.O.

SOCIAL ASPECTS:

- RELIGION: CHRISTIANS & HINDUS
- OCCUPATION: LANDLESS LABOURERS & CHARCOALMAKERS.

CRISIS: ANDHRA CYCLONE - 19 NOV. 1977

- ENTIRE VILLAGE DESTROYED (ALL TRADITIONAL HOUSES COLLAPSED)
- DWELLERS SAVED BY TAKING SHELTER IN THE PUCCA HOUSE OF THE FOREST WATCHER.
- STORM SURGE WHICH INUNDATE THE VILLAGE & SURROUNDED AGRICULTURAL FIELDS WITH SALT WATER IS DUE TO THE BREACHING OF THE DRAINAGE CANAL POND.

INTRODUCTION TO V.R.O.:

- DURING POST-CYCLONE RELIEF ASSISTANCE (NOV. DEC. '77)
- PRELIMINARY COMMUNITY SURVEY (22-2-78)

PROJECT HISTORY:

- LAND PURCHASE } - APPROVAL + MATCHING GRANT
- DESIGN & ESTIMATION } (MARCH '78 - NOV. '78)

FINANCES: BUDGET: 2,60,000/-RS.

<u>RESOURCE ANALYSIS:</u>	H.I.N.O.S.	2,34,000/-RS
	PEOPLES' PART.	26,000/-RS
		<u>2,60,000/-RS</u>

→ EXPENDITURE: 2,59,042.48 RS

VILLAGE TEST: BRICK MAKING FOR THE 14 TWIN HOUSES. (Preliminary phase)CONSTRUCTION: 1 DECEMBER 1978 → 5 FEBRUARY 1981. (Phase No.1)

→ INAUGURATION ON 12TH FEBRUARY 1981

→ NEW VILLAGE NAME: "MADRIPURI"

TO BE PLANNED: - COMMUNITY CENTRE (Phase No.2)

- ADULT TRAINING

VILLAGE MANAGEMENT:

- VILLAGE COUNCIL: - VILLAGE ELDERS (30⁺ + 2 p)
- VILLAGE YOUTH (40⁺ + 4 q)

→ PRESIDENT ATTENDS EACH SATURDAY THE V.R.O. VILLAGE MANAGEMENT TRAINING AT THE HEAD OFFICE - PEDDOKAKANI.

NOTE: BORRAVARIPALEM HAS BEEN MORE THAN TWO YEARS UNDER CONSTRUCTION, CAUSE OF SHORTAGE OF CEMENT; CYCLONE '79 AND SOME INTERNAL VILLAGE PROBLEMS

ORGANIZATIONS INVOLVED

LIST OF THE ORGANISATIONS INSTITUTIONS WORKED IN THE ANDHRA CYCLONE WITH V.R.O.

1. Memorial Central Committee, Calcutta (M.C.C.)
2. M.P.N.C. - Jachuria
3. Memorial Central Committee, Madhya Pradesh
4. Christian Medical College & Hospital, Vallur
5. Rayalaseema Development Trust, Anantapur
6. St. Theresa Hospital, Hyderabad
7. Asian Institute of Technology, Bombay
8. Salvation Army Hospital, Ponnur
9. Nehru Nivak Kendra, Guntur
10. Kasturiba Gandhi National Memorial Trust, Rajahmundry
11. D. Mohal College, Pune
12. Vijaya Prefabs and Construction, Guntur
13. Voluntary Action Cell, New Delhi
14. OXFAM, Bangalore
15. Xavier Institute of Social Service, Ranchi
16. A.M.C.I.C., Vijayawada
17. Indian Institute of Education, Pune
18. Soha Sadan, Pune
19. Jawaharlal Nehru Technological University of HYDERABAD
20. Indian Leaf Tobacco Development, Guntur
21. St. Joseph's Hospital, Guntur
22. Save the Children Fund (SCF), Madras
23. Agricultural College, Bapatla
24. Andhra Christian College, Guntur
25. Hinds College, Guntur
26. Polytechnic College, Guntur
27. T.V.P.S. College, Guntur
28. J.K.C. College, Guntur
29. Dharmar Christian Hospital, Dhamra, Madhya Pradesh
30. Vithariba Relief Committee, Nagapur
31. Missions Cyclone Relief Committee, Divi, Krishna Dist., A.P.
32. Pankaj Hospital, Guntur
33. M.S.S. Volunteers from Nagarjuna University, Guntur
34. Gandhi Peace Foundation, New Dehli
35. Ritya Sabhasmatha Convent, Repalle, Guntur dist
36. BEANS, Bangalore
37. St. Anthony's Church, Trivandrum
38. St. Thomas Hospital and Leprosy Centre, Chettapatlu, T.Nadu
39. Voluntary Health Association of India, New Dehli
40. C.A.S.A. New Dehli
41. Churches of Social India, Bangalore
42. Service civil international, New Dehli,
43. Indian Red Cross
44. Andhra Police Association, Guntur
45. Government Departments like Health Housing, P.W. etc.
46. Ramakrishna Mission
47. Lions club, Guntur
48. Petrat Club, Guntur
49. ALGULI House, Madras
50. Youth Red Cross society
51. Andhra Evangelist Lutheran College, Guntur
52. Seva Sangh Samiti, W.Bengal
53. Yogananda Society, Bombay
54. M.C.C., Ranchi.

Information only required for large-scale projects

PROJECT

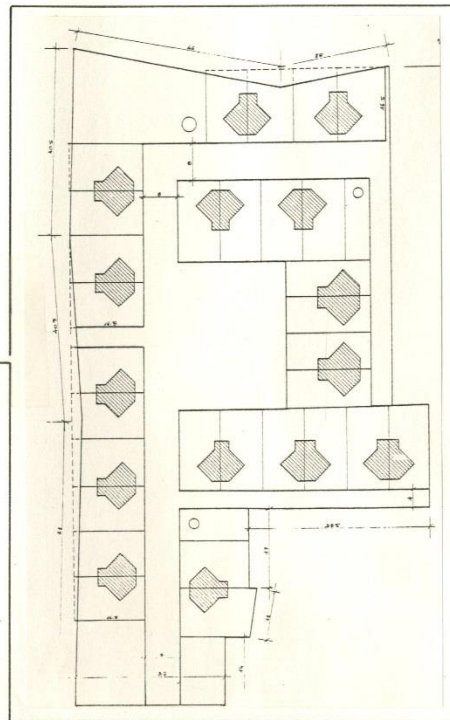
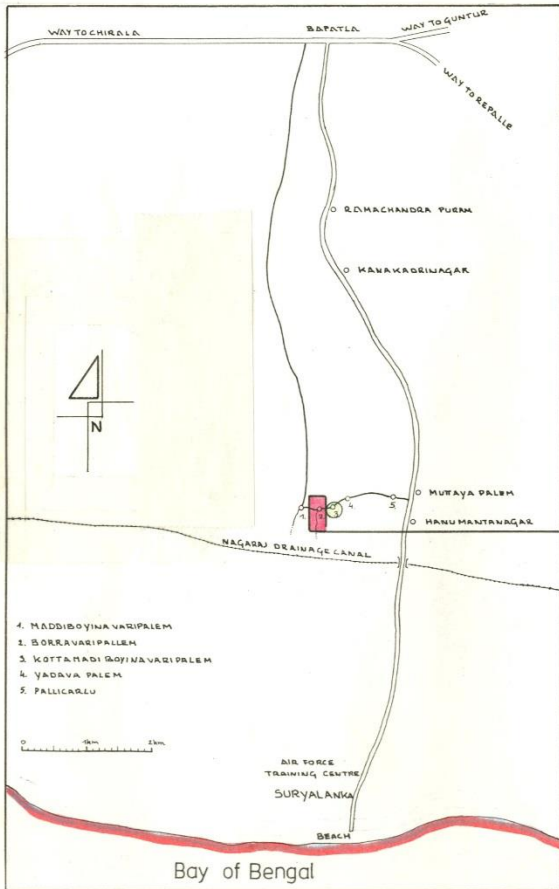
PROJECT DEVELOPMENT

PROJECT SITE


FORMS

MASTER PLAN (Indicate segment of project site, selected for in-depth study on the next pages)

COMMENTS



SCALE 1/10,000.

 segment of project site (selected for in-depth study)
PHYSICAL INFRASTRUCTURE / RESIDENTIAL AREAS / INDUSTRIAL, COMMERCIAL & SOCIAL FACILITIES *cf. legend on p 2*

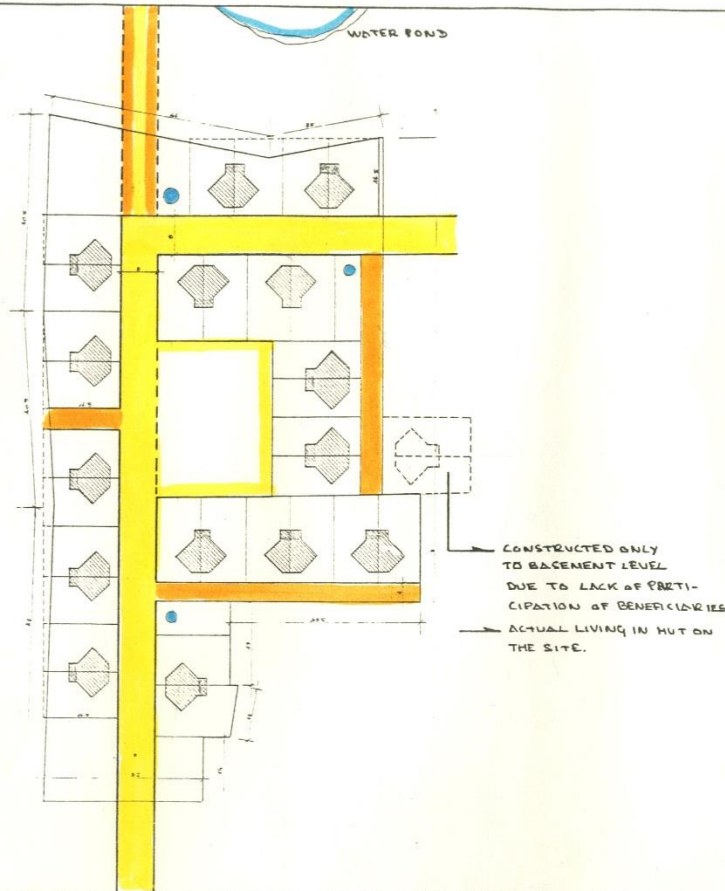
NOTE: INFORMATION REGARDING ENVIRONMENT, PHYSICAL INFRASTRUCTURE, ... SEE CONTEXT P.3
© K.M.B. PALEM : SITE OF THE SOCIAL SURVEY; SET-TYPE

ORGANIZATION OF SPACE

(SEGMENT OF) PROJECT SITE

FORMS

PHYSICAL INFRASTRUCTURE



SCALE 1/1000.

CIRCULATION LEVELS

- (e.g. main road)
- (e.g. secondary road)
- (e.g. footpath alley)
-

UTILITIES

- water
- sewerage (bathroom)
- drainage
- energy . gas
- . electricity
- OPEN WELL (BORE WELL)
- WATER POND

COMMENTS

Short description of utility system (water supply, sewage ...) focusing on access, use of materials, standards, ...

Description of circulation patterns, efficiency & meaning of various circulation levels, ...

IMPORTANT NOTE:

- THE CIRCULATION LEVELS AND PLOT BOUNDARIES ARE NOT PERCEIVED IN SUCH STRICT WAY.
- MATERIAL: MAIN ROAD SECOND. ROAD RESID. PLOTS | SAND.
- PLOTS & ROADS ARE ONLY DISTINGUISHED BY BOUNDARY STONES.

- CONCERNING ENERGY:

- NO'S OPTION: SOFT ENERGY (BIOGAS OR GEBAR GAS PLANT)
- NO ELECTRICITY PROVIDED

- CONCERNING SEWERAGE:

- NO W.C'S IN THE BATHROOM (TRADITIONAL & HYGIENIC REASON) (use of an area in nearby bush)

PROJECT FORMS

ORGANIZATION OF SPACE

(SEGMENT OF) PROJECT SITE

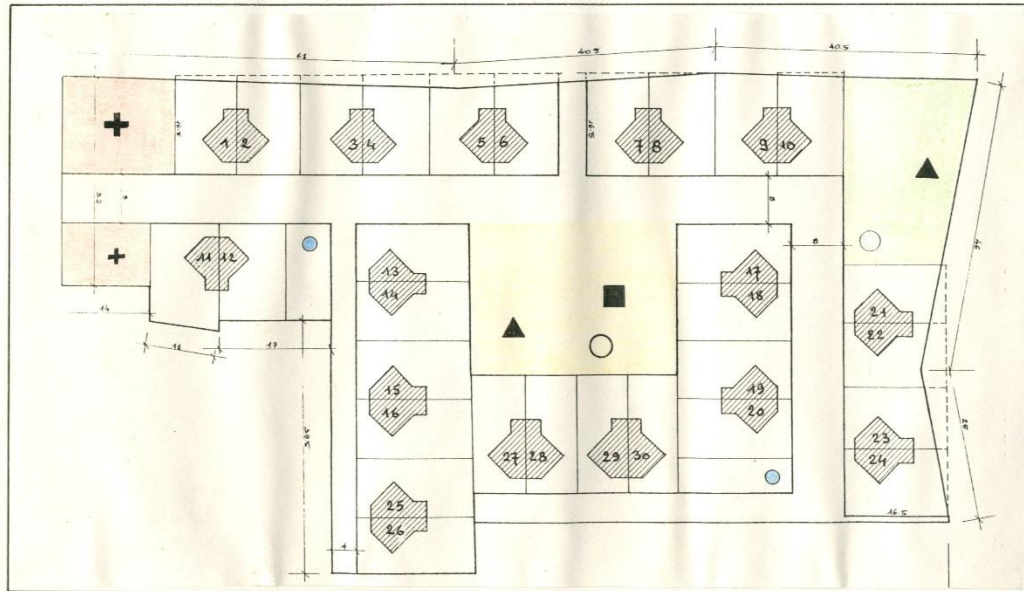
RESIDENTIAL AREAS - INDUSTRIAL, COMMERCIAL & SOCIAL FACILITIES

POPULATION - AGE GROUP													
CASTE	N° OF FAM.	0-14		15-25		26-35		36-45		46-55		75+	
		M	F	M	F	M	F	M	F	M	F	M	F
HALLA	30	24	24	10	11	6	11	5	3	1	3	3	3

PROFESSION - OCCUPATION													
CASTE	N° FAM.	AGR. COOL.		CODL M.		CARPENT.		FORESTW.		TEACHER		VRO VOLUNT.	
		M	F	M	F	M	F	M	F	M	F	M	F
HALLA	30	21	16	8	2	1	-	1	-	-	1	2	-

SEXWISE POPULATION							
CASTE	N° FAM	CHILD.		ADULT		GR. TOTAL	
		M	F	M	F	M	F
HALLA	30	23	21	44	27	33	60

EARNING	EARNERS				NON EARNERS				PATTERN			
	POPULATION	CHILD.	ADULT	TOTAL	CHILD	ADULT	TOTAL	GR. TOTAL				
HALLA	104	3	1	25	18	47	20	23	4	13	57	104



SCALE 1/1000

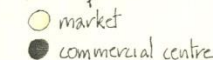
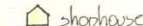
dwelling type

- (e.g. apartments)
- (e.g. rowhouse)
-
-
-
-

INDUSTRIAL FACILITIES

AGRICULTURAL AREAS

COMMERCIAL FACILITIES



EDUCATIONAL FACILITIES

HEALTH FACILITIES

COMMUNITY FACILITIES

(e.g. playground, ...)

SECURITY FACILITIES



COMMENTS

PROPERTY									
N° FAM.	AGR. L.	HOUSE SITEL.	TOTAL	BULL.	COW	COLF	HEN	TOTAL	
30	-	120	120	28	-	7	40	75	

INCOME									
AGR. COOLY	COOL. MAK.	GOVT. EMPLOY.	LIFE STOCK		TOTAL				
10 month	6 month	12 month	BULL.	HEN					
M	F	M	F	M	F	M	F	M	F
4RS/day pers.	8RS/day p.	250/m	400/m	28N	40N				
25,200	49,200	11,520	4,320	3,360	4,800	20,160	2,400	90,960	

EDUCATION PATTERN - LITERATES													
CONTINUED					DISCONTINUED					POPUL.			
1-5	6-Max.	NAME	TOTAL	1-5	6-Max.	NAME	TOTAL	GRAND	TOTAL				
M	F	M	F	M	F	M	F	M	F				
5	8	5	4	-	-	22	13	4	3	-	1	18	40

EDUCATION PATTERN - ILLITERATES									
CASTE	POPUL.	CHILDREN		TOTAL	ADULT		TOTAL	GRAND TOTAL	
MALE	104	M	F	11	11	23	40	64	

HEALTH PATTERN.											
CASTE	POPUL.	NORMAL				SICK				GRAND TOTAL	
		M	F	M	F	M	F	M	F		
MALE	104	23	21	44	33	104	-	-	-	-	104

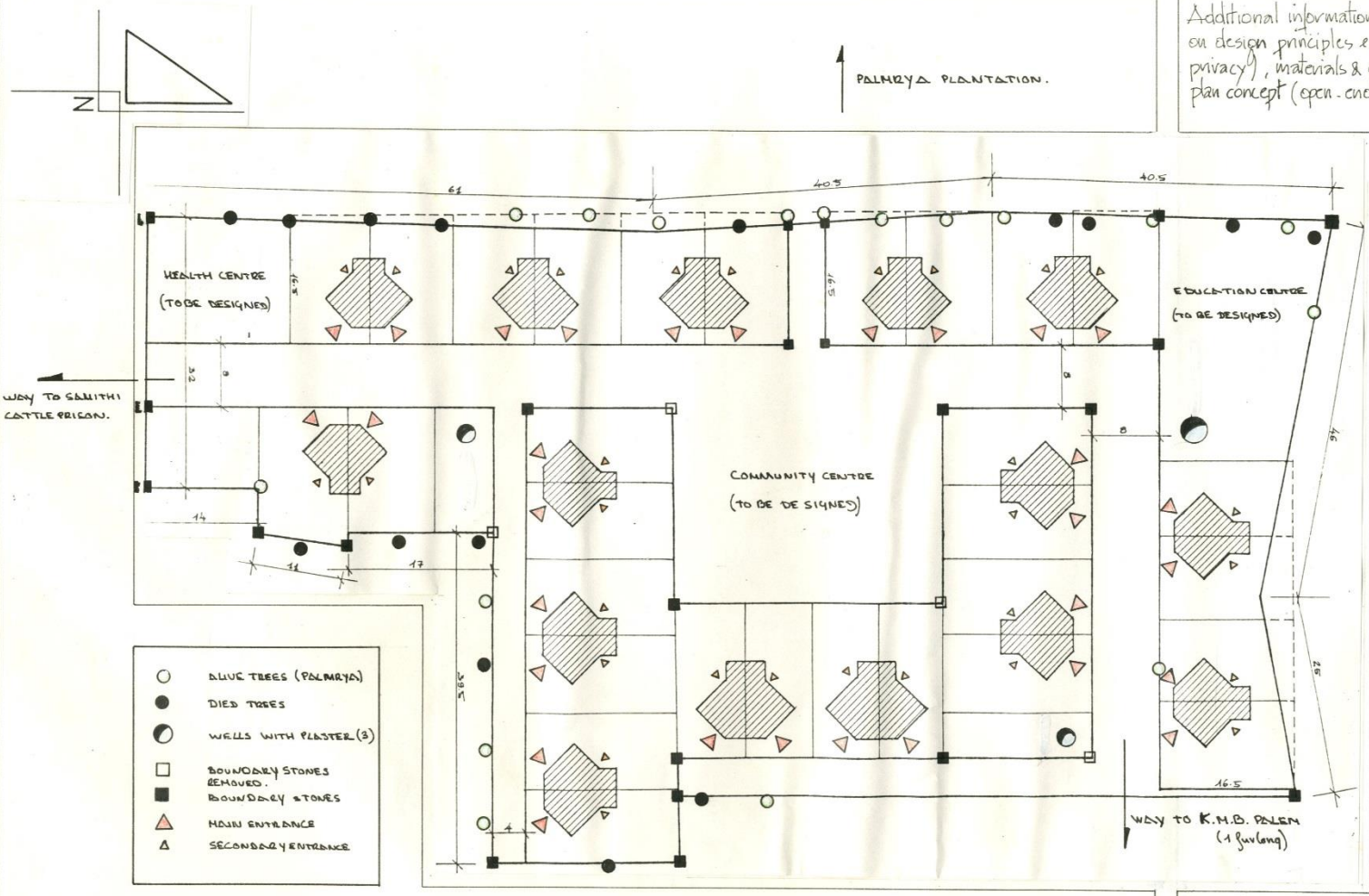
- **BORROWING: ADULT TRAINING (♂+♀)**
- SKILL, SANITATION, PREVENTIVE HEALTHCARE
- PARTICIPANTS FROM K.M.B. PALEM SHARE THIS ACTIVITIES
- **K.M.P. PALEM: YOUTH EDUCATION (BOALWOOD)**
- CHILDREN FROM BORROWING MOVE TO THE THIS BORROWING
- PURPOSE: MUTUAL INTERRELATIONSHIP

ORGANIZATION OF SPACE

DWELLING GROUP

DWELLING GROUP LAY-OUT

COMMENTS



Additional information and/or justification on design principles e.g. space use (functions & privacy), materials & construction techniques, plan concept (open-ended, ...), etc.

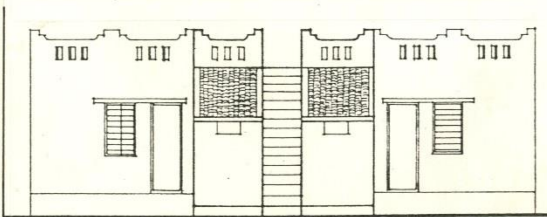
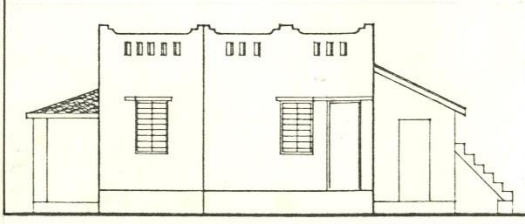
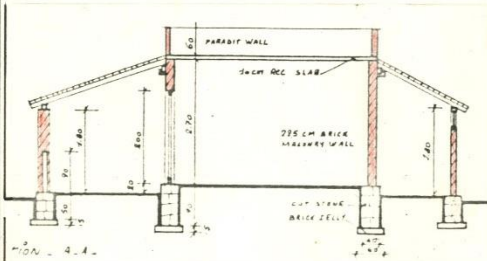
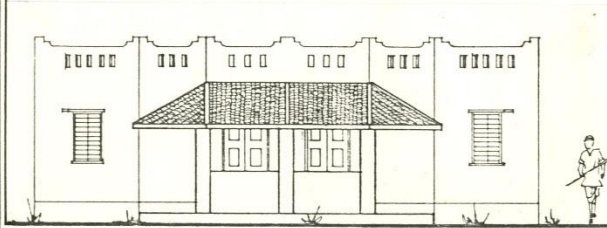
DYNAMISM OF THE V.R.O. PROJECT

- 1st PHASE:
 - BUILDING OF THE WELL'S AND HOUSE UNITS
- 2nd PHASE:
 - COMMUNITY FACILITIES WHICH ARE NEEDED
- 3rd PHASE:
 - VILLAGE MANAGEMENT.

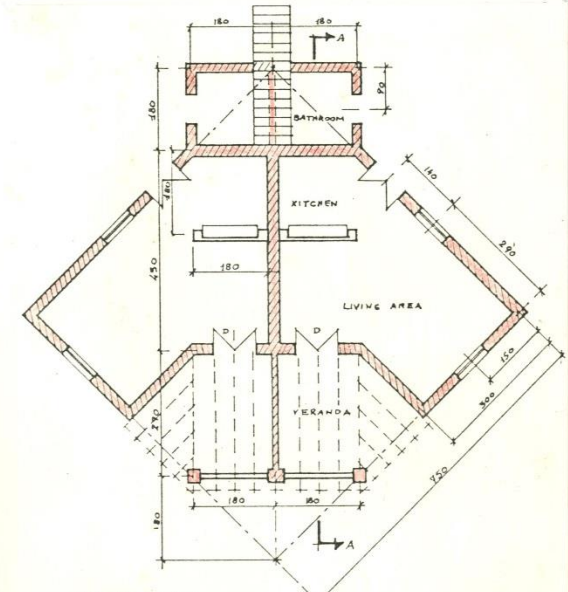
SCALE 1/500.

ADDITIONAL GRAPHICAL INFORMATION

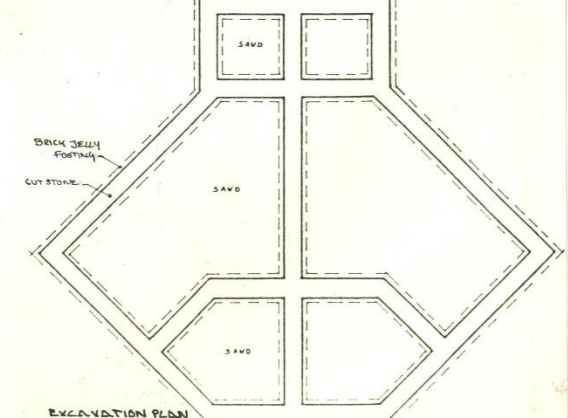
Sections, street elevations, axonometric drawings, sketches...



ELEVATIONS & SECTION : SCALE 1/100



GROUND PLAN



EXCAVATION PLAN

Name of work:

Proposed construction of House Type at Borravaripalem by Village Reconstruction Organisation, Guntur.

ABSTRACT OF ESTIMATE

18.00 cum	1. Earthwork excavation for foundation	36.00/10 cum	64/-
4.4	2. Brick jelly in C.M. for foundation	100.00/1	440/-
16.00	3. Cut stone masonry in C.M. for foundation and basement	120.00/1	1,920/-
19.3	4. Brickwork in C.M. for superstructure	140.00/1	2,702/-
0.24	5. R.C.C. lintels (1:2:4)	600.00/1	144/-
0.42	6. Country wood wrought & put up	1400.00/1	588/-
5.15	7. R.C.C. roof slab (1:2:4)	625.00/1	3,218/-
0.88	8. R.C.C. beams (1:2:4)	800.00/1	704/-
30	9. Roofing with country tiles over C.W. rafter over front verandah	400.00/108sqm	1,200/-
1.18	10. Country wood for doors	100.00/1	784/-
3.2	11. Country wood windows	180.00/1	576/-
3.0	12. Country wood almyrahs	100.00/1	300/-
248.00	13. Plastering with C.M. (1:1 1/2)"	45.00/10	1,116/-
63.70	14. Flooring with napa slabs pointed with C.M. (1:3)	120.00/10	764/-
248.00	15. White washing 2 coats	0.50/10	86/-
42.00	16. Painting doors and windows with any approved paint 2 coats	60.00/10	252/-
L.S	17. Add towards contingencies		308/-
Total :		Rs.	14,500/-

(Rupees fourteen thousand and five hundred only) (RATES UP TO DATE '78)

CONCEPT DWELLING: ARCH. RICHARD DAERQ (U.S.A)

EX.V.R.O. VOLUNTEER (SPONSORED BY M.C.C.)

PROJECT RESOURCES

BUILDING TECHNIQUES

USE OF BUILDING MATERIALS & COMPONENTS

(for dwelling and/or infrastructure)

Give information by means of plans, sections, axonometric drawings etc

COMMENTS

Further information concerning e.g. origin, availability, costs, standards of materials, justification of choice for availability of energy, know-how, costs, performance requirements etc

Name of work:									
Proposed construction of House Type at Borraravipalem by Village Reconstruction Organisation, Guntur.									
1. Earthwork excavation for foundations:									
Walls around living area	1	25.80	0.60	0.70	10.84	cum			
Cross walls	1	3.70	0.60	0.70	1.55	cum			
	2x1	1.60	0.60	0.70	1.34				
3 sides of bathrooms	1	6.50	0.60	0.45	1.73				
Cross walls	1	1.20	0.60	0.45	0.32				
Front verandah	1	6.60	0.60	0.45	1.78				
Cross wall	1	2.10	0.60	0.45	0.57				
					18.15	cum			
					18.15	cum			
					or 18.00	cum			
2. Brick jelly concrete in C.M. for foundations:									
Walls around living area	1	25.80	0.60	0.15	3.32	cum			
Cross wall	1	3.70	0.60	0.15	0.33				
	2x1	1.60	0.60	0.15	0.29				
3 sides of bath room	1	6.50	0.60	0.15	0.59				
Cross wall	1	1.20	0.60	0.15	0.11				
Front verandah	1	6.60	0.60	0.15	0.59				
Cross wall	1	2.10	0.60	0.15	0.19				
					4.4	cum			
					4.4	cum			
3. Cut stone masonry in C.M. for foundation & basement:									
Walls around living area	1	25.80	0.40	0.90	9.29	cum			
Cross wall	1	3.90	0.40	0.90	1.40				
	2x1	1.60	0.40	0.90	1.15				
3 sides of bath rooms	1	6.80	0.40	0.80	1.63				
Cross wall	1	1.40	0.40	0.60	0.34				
Front verandah	1	6.80	0.40	0.60	1.63				
Cross wall	1	2.30	0.40	0.60	0.55				
					15.99	cum			
					15.99	cum			
					or 16.00	cum			
4. Brick work in C.M. for superstructures:									
Walls around living area	1	25.80	0.20	2.70	13.93	cum			
Cross wall	1	4.10	0.20	2.70	2.21				
	2x1	1.70	0.20	2.70	1.84				
3 sides of bath rooms	1	7.00	0.20	2.70+1.80	3.15				
					2				
Cross wall	1	1.60	0.20	2.00	0.64				
Verandah pillars	3x1	0.35	0.35	1.80	0.66				
Guard walls	2x1	1.45	0.12	0.90	0.31				
	1	2.45	0.12	0.90	0.28				
					23	cum			
Deduct: Doors D	6x1	0.98	0.20	2.00	2.35	cum			
Windows W	4x1	0.80	0.20	1.00	0.64				
Almyrahs A	2x1	1.00	0.15	1.50	0.45				
Quantity of R.C.C. lintels as per item No. 5					0.24				
Total deductions:					3.68	cum			
Total less deductions: 23.00 (-) 3.68 = 19.32 or 19.3					19.3	cum			

5. R.C.C. lintels (1:2:4)									
Over doors D	6x1	1.13	0.20	0.10	0.14	cum			
Windows W	4x1	0.95	0.20	0.10	0.08				
Almyrahs A	2x1	1.15	0.20	0.10	0.02				
					0.24	cum			
					0.24	cum			
6. Wrought and put up									
Rafters	8x1	3.00	0.05	0.10	0.12	cum			
	2x1	10.00	0.05	0.10	0.1				
Walls plates	6x1	2.00	0.05	0.10	0.06				
	2x1	7.50	0.10	0.07	0.11				
	1	4.00	0.10	0.07	0.03				
					0.42	cum			
					0.42	cum			
7. R.C.C. roof slab (1:2:4)									
Over living area	1	3.80	4.50	0.10	1.71	cum			
	2x1	3.20	2.00	0.10	1.28				
	2x2	2.70	3.20	0.10	2.15				
					5.15	cum			
					5.15	cum			
8. R.C.C. beams (1:2:4)									
For living area	2x1	3.00	0.20	0.30	0.36	cum			
	2x1	4.30	0.20	0.30	0.52				
					0.88	cum			
					0.88	cum			
9. Roofing with country tiled over C.M. reeppers:									
Over front verandah	1	3.00	4.00		12	Sqm			
Over bath rooms	2x2	2.00	2.00		8				
	1	2.00	4.00		8	Sqm			
					30	Sqm			
					30	Sqm			
10. Country wood doors:									
Doors D	6x1	0.98	2.00		1.18	Sqm			
					1.18	Sqm			
11. Country wood windows with MS rods:									
Windows W	4x1	0.80	1.00		3.20	Sqm			
					3.20	Sqm			
12. Country wood almyrahs:									
Almyrahs A	2	1.00	1.50		3.0	Sqm			
					3.0	Sqm			

13. Plastering with C.M. (1:5) 2" thick:									
INSIDE									
Walls around living area	2x1	16.40	2.70		88.56	Sqm			
Cross walls	2x2	1.60	2.70		17.28				
Bath rooms	2x1	6.40	2.70+1.80		28.8				
					2				
Verandah pillars	3x1	1.40	1.80		7.56				
Guard walls	2x2	1.43	0.90		5.15				
Cross walls	2x1	2.43	0.90		4.37				
OUTSIDE									
Walls around	1	22.60	3.00		67.8				
Terraced portion except bathrooms:									
3 sides bathrooms	1	7.20	3.00+2.00		18				
					2				
Ceiling: living area	2x1	2.80	1.80		10.08				
	2x2	2.70	2.80		18.9				
	2x1	1.60	1.60		5.12				
	2x1	2.30	1.60		7.28				
					278.24	Sqm			
Deduct: Doors D	2x5	0.98	2.00		23.52	Sqm			
Windows W	2x4	0.80	1.00		6.4				
					29.92	Sqm			
Total deductions:					29.92	Sqm			
Total less deductions: 278.24 (-) 29.92 = 248.32 or 248.00					248.00	Sqm			
14. Flooring with napa slabs jointed with C.M. (1:3)									
Living area	2x1	2.80	1.80		10.08	Sqm			
	2x2	2.70	2.80		18.9				
	2x1	1.50	1.60		5.12				
	2x1	2.30	1.60		7.36				
Bath rooms	2x1	1.60	1.60		5.12				
Verandahs	2x1	1.80	2.50		9				
	2x2	1.80	1.80		8.1				
					63.68	Sqm			
					63.68	Sqm			
					or 63.70	Sqm			
15. White washing 2 coats									
Quantity same as plastering item No. 13					248.00	Sqm			
					248.00	Sqm			
16. Painting doors, windows etc. with any approved paint 2 coats over one plastered coat:									
Doors D	6x1	0.98	2 1/2	2.00	26.48	Sqm			
Windows W	4x1	0.80	2 1/2	1.00	8.8				
Almyrahs A	2x1	1.00	2 1/2	1.50	6.75				
					42.01	Sqm			
					42.01	Sqm			

SCALE 1/100 If needed add additional sheet of same size & format 15.2,...

BUILDING TECHNIQUES

PRODUCTION OF BUILDING MATERIALS & COMPONENTS

(for dwelling and/or infrastructure)

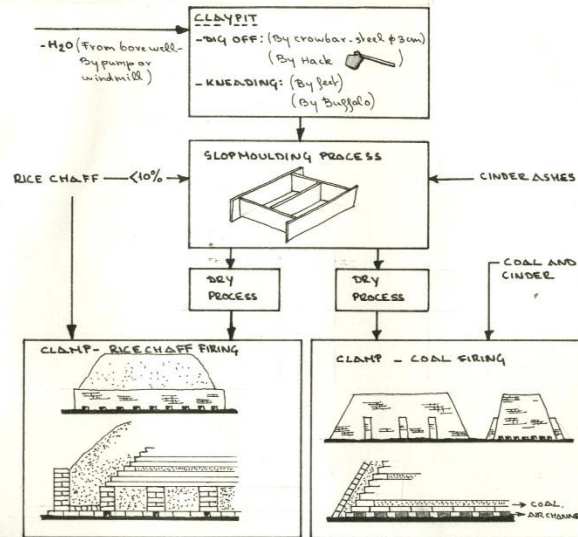


LABOUR - SLOPMOULDING SYSTEM: → 750 BRICKS / Head; day
 - HANDFORM SYSTEM: → 500 BRICKS / Head; day

FIRING MATERIAL SUPPLY: - RICE CHAFF CLAMP: 100,000 UNIT
 → 40 ton rice chaff ≈ 40 LORRIES.
 - COAL CLAMP: 100,000 UNIT
 → 16 ton COAL ≈ 3 LORRIES.

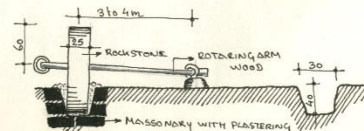


BRICK MAKING - SLOPMOULDING PROCESS - CLAMPS

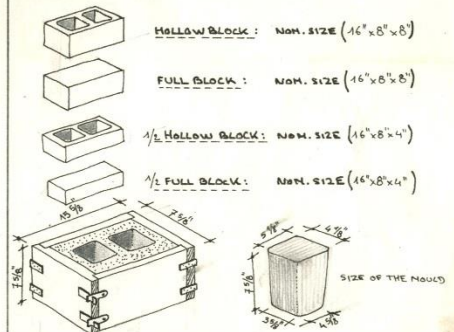


LIME MORTAR PRODUCTION

- LIME STONES:
 - DEATH LIME: BURST LIME (CANOE) WITHOUT OTHER MANIPULATION.
 - LIVING LIME: IMPROVED QUALITY BY DROPPING BURNT STONES IN A WATERTANK.
- LIME MORTARS: (as alternative for cement)
 - USUAL MIXTURES:
 - 1 cement / 10 lime / 30 river sand
 - 1 lime / 9 clay (for foundation purpose)
 - 1 lime / 1 sand / 1 sandy clay (superstructure)
 - 3 lime / 2 sand / 1 kras (when groundwater level ↑)
- LIME MIXING PROCESS:
 - MOVING BY BULLOCKS (± 160 ROUNDS)
 - + MORTAR TO BE USED WITHIN 1 WEEK.



COMMENTS CEMENT-BLOCKS MAKING ON SITE AS FORM OF PEOPLE'S PARTICIPATION



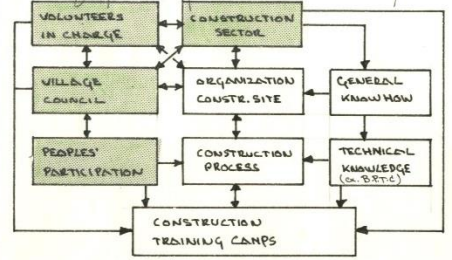
BUILDING TECHNIQUES

RESOURCES

ASSEMBLY OF BUILDING MATERIALS & COMPONENTS

(for dwelling and/or infrastructure)

Give graphical information on assembly methods, site organ



COMMENTS

Further information on & justification of the assembly process, ...



SKILLED LABOUR WEEKLY ATTENDANCE			
VILLAGE: UNK3908			
DATE: 22/7/77 TO 28/7/77			
SKILLS: DEMARICATIONS MASONRY ROO-BEING ERT CONCENTRY ROO-WINDING			
VILLAGE TRAINEES	ATTENDANCE	TRAINER	WORK ATTACHED
P.Babu	X	Salimadas	Roofing
P.Akbara rao	X	"	"
P.Yacobi	X	"	"
P.Babu (SIVAM)	X	"	"
M.Daniel	X	Masonry	"
P.Aseervadam	X	"	"
P.Lakshmaiah	X	Roofing	"
P.Yohan	X	"	"
P.Ramulu	X	M.Babu Masonry	"
P.Yesulu	X	"	"
P.Rosajah	X	"	"
P.Prakasarao	X	Masonry	"
P.Venkaiah	X	"	"
P.Sivamarao	X	SRESHU DEMARICATIONS	"
V.Venkatesu	X	"	"
R.Ramanaih	X	"	"
P.Venkatarao	X	"	"
R.Swamy	X	DEMARICATIONS	"
P.Banji	X	DEMARICATIONS	"
P.Joseph	X	Masonry	"
A.Seshaih	X	Roofing	"
K.Lokaih	X	Roofing	"
K.Yeliah	X	Roofing	"
PELESHA	X	Roofing	"
PAUL	X	Masonry	"

ORGANISATION BUILDING PROCESS

- **NRO-VILLAGE BUILDING OBJECTIVES:**
 - To unite people by a common work experience for a community purpose.
 - Learning process - new skills & concepts
 - Discipline - work routine and care for materials
 - Leadership - proven in work situations and ability to organize people.
 - Stability - security - permanent houses
- **ORGANISATION VILLAGE BUILDING:**
 - **VILLAGE WORKERS - AIMS:**
 - Areas
 - Responsibilities
 - Communication, Attendance,
 - **VILLAGE WORKERS - JOBS:**
 - Areas
 - Responsibilities
 - Communication, Attendance,

GENERAL KNOW HOW

- **RELATIONSHIP: VOLUNTEER IN CHARGE & NRO OFFICE**
 - At the office: construction meeting (4/month)
 - At the site: " " (weekly)
- **RELATIONSHIP: VOLUNTEER & VILLAGE**
 - know your village
 - diary/book
 - To know underlying accidental problems,

TECHNICAL KNOWLEDGE

- **AIMS & OBJECTIVES:**
 - TO IMPROVE THE ABILITY OF THE VOLUNTEERS IN CHARGE
 - CONSTRUCTION MANUALS.
 - TRAINING CAMPS.
 - WORKSHOPS
- **TOPICS:**
 - Traditional hut construction.
 - Demarcation
 - Leveling
 - Drainage system.
 - Roads & Bridges
 - Storage of material & maintenance.
 - Foundation
 - Superstructure (napping, partition, ...)
 - use of mortars & alternative
 - use of appropriate & available materialise
 - carpentry (doors & windows) tools
 - Roofing (tiles, RCC slab)
 - Verandah
 - Ventilation
 -

FEEDBACK & EVALUATION

- Progress reports: (daily, weekly, monthly)
- Village evaluation (By survey sector)
- communication office - Villagers

CONSTRUCTION PROCESS

- INTRODUCTION; ANIMATION; ORGANISATION
- CONSTRUCTION OF VOLUNTEERS SHELTER.
 - > fill the final touch of the model house.
 - > will serve as dwelling; office; storage
- SITE CLEARING
- SITE DEMARICATION (granite piles & stones)
- DRAINAGE & ACCESS
- DEMARICATION OF TWIN HOUSES.
- MATERIAL SUPPLY & PROPER STORAGE
- DIG OUT FOUNDATION GROOVES
- FOUNDATION (cob stone; RCC; cc; Brick jelly)
- BASEMENT (cutstone in cc) + sandfilling.
- MATERIAL SUPPLY (local or non local)
- SUPERSTRUCTURE
- CARPENTRY (doors & windows)
- ROOFING (R.C.C. slab + ceiling)
 - (country tiles, mangalore tiles, ..)
- VERANDAH.
- > **VILLAGE CONTRIBUTION**
 - FINANCIAL
 - LABOUR
 - GOODS & TOOLS
 - TREE PLANTING, ...

mat 17z, ...

PROJECT MANAGEMENT

PROJECT SITE

INSTITUTIONS

INSTITUTIONAL INVOLVEMENT : ACTORS & RESPONSIBILITIES														
ACTORS	ACTIVITIES													
	Underlying Policy (objectives, etc.)	Survey Feasibility Studies	Land Allocation	Housing Allocation	Management	Planning, Design	IMPLEMENTATION			FINANCING				
							Material Supply	Manpower Supply	Equipment Supply	Technical Assistance On-site Supervision	Initial Accumulation	Disbursement	Cost Recovery	Others
International Agencies e.g. World Bank, U.N., ...													○	→ GRANTS FROM - ABOS/PROJECT - VRO - EUROPE
National Organizations e.g. Ministry of Housing...	CENTRAL													
	STATE GOVT. LOCAL			●							○	●	50%	
Private Organizations e.g. Contractors, Firms, Banks, ...	CENTRAL													
	LOCAL						○		○		○			
Other Organizations e.g. University, Religious or Social org., ...	CENTRAL													
	V.R.O.-INDIA. LOCAL VOLUNTEER ORG.	●	●	●	●	●	●	○	●	●	●	○	35%	
Family Group		○	○	●	○	○	○	●	○		○	○	15%	
Nuclear Family								1 Rev. Form sent						
Individual		-	-	-	-	-	-	-	-	-	-	-	-	-
Others (please specify)														

COMMENTS
Specify some activities, actors, etc. Identify conflicts, problems, etc.

Indicate who or which organisation is involved in execution, decision-making, etc.

- Primary responsibility
- Secondary responsibility

PROJECT MANAGEMENT

DWELLING

INSTITUTIONS

INSTITUTIONAL INVOLVEMENT : ACTORS & RESPONSABILITIES														
ACTORS	ACTIVITIES			IMPLEMENTATION					FINANCING					
	Underlying Policy (objectives, ...)	Survey Feasibility Studies	Land Allocation	Housing Allocation	Management	Planning, Design	Material Supply	Manpower Supply	Equipment Supply	Technical Assistance On Site Supervision	Initial Accumulation	Disbursement	Cost Recovery	Others?
International Agencies eg. World Bank, UN, ...														
National Organizations eg. Ministry of Housing	CENTRAL													
	STATE GOVT. LOCAL	●	●		●					○	●	50%		
Private Organizations eg. Contractors, Firms, Banks, ...	CENTRAL													
	LOCAL						○		○		○			
Other Organizations eg. University, Social Religious org., ...	CENTRAL													
	V.R. D. INDIA. LOCAL	●	●		●	●	●	○	●	●	●	35%		
Family Group		●	○		○	○	○	●	○					
Nuclear Family		○								○	○	15%		
Individual		-	-	-	-	-	-	-	-	-	-	-	-	-
Others (please specify)														

COMMENTS

Specify some activities, actors, ...
Identify conflicts, problems, ...

Indicate who or which organisation is involved in execution, decision-making

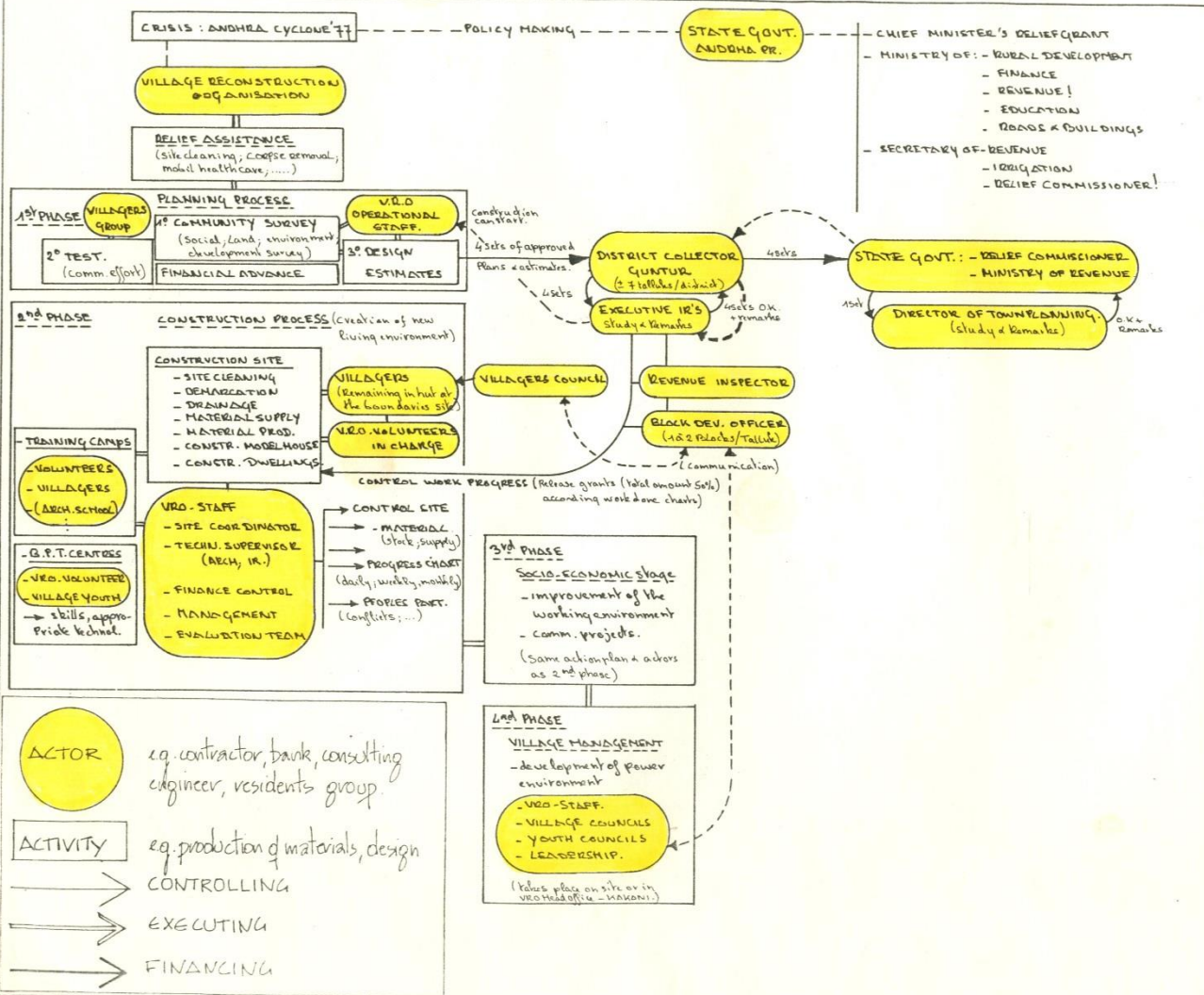
● Primary Responsibility
○ Secondary Responsibility

PROJECT MANAGEMENT

INSTITUTIONS

ORGANIZATION CHART: ACTORS INVOLVED - RESPONSIBILITIES & COORDINATION

COMMENTS



Who does what? Who decides on what?

STANDARDS AND REGULATIONS

PROJECT COMPONENT	CURRENT STANDARDS-REGULATIONS	MODIFIED STANDARDS-REGULATIONS	COMMENTS
<p>LAND USE eg zoning, fire protection,...</p> <p>UTILITIES eg land improvement, road infrastructure, water supply</p> <p>DWELLING eg built-up area, materials, elevation,...</p> <p>MISCELLANEOUS</p>	<p>List regulations, norms which are normally enforced within the context of similar projects in the region.</p> <ul style="list-style-type: none"> - <u>ZONING</u>: FAMILY OR COMMON PATTALONS <ul style="list-style-type: none"> - ACCORDING TO CASTE & GROUP DIFFERENTIATION <ul style="list-style-type: none"> → URBAN: - HIGHER CASTES (Brahmins, Kshatriyas, Vaisyas, Sudras) <ul style="list-style-type: none"> → directional space use - LOWER CASTES (squatters) → RURAL: - HOUSE SITE & AGRIC. SITES <ul style="list-style-type: none"> - GROUP QUARTERS - DENSE HOUSE SITE - MAIN ROAD: TO TOWNCENTERS: TOROAD - VILLAGE INFRASTRUCTURE: KUTCHA PISTE - OPEN POND & TIGWELL - NO INDIVIDUAL PLOT BOUNDARIES - NO PROPER IRRIGATION - THATCHED HOUSES (non-durable materials) - PULLA BUILDINGS (only for temples,...) - INDIVIDUAL COMMON DWELLINGS (relatives) - CONSTRUCTORS INVOLVED: - DWELLER ITSELF <ul style="list-style-type: none"> - MUTUAL AID. - TO BUILD A HOUSE 	<p>List new or modified regulations, norms introduced by the project-planners.</p> <ul style="list-style-type: none"> - <u>ZONING</u>: COMMON HOUSE SITE <ul style="list-style-type: none"> - BRACKING CASTE SYSTEM <ul style="list-style-type: none"> → (SELECT & written agreement) - HOUSE & PLOT SYSTEM (strong Boundaries) <ul style="list-style-type: none"> → No dense dwelling groups → change of privacy gradient - IMPROVED INFRASTRUCTURE: - PULLA ROAD <ul style="list-style-type: none"> - CINDER PATH - DIG & BOREWELL. - PLOT FENCING + TREE PLANTING. - IMPROVEMENT OF IRRIGATION. - CYCLONE PROOF HOUSES. (durable materials) - TWIN HOUSES (Symmetrical houseplans) - CONSTRUCTORS INVOLVED: <ul style="list-style-type: none"> - PEOPLES' PARTICIPATION - TO BUILD A COMMUNITY 	<p>Origin and use of existing standards. Reasons for rejection and modification of existing standards, the introduction of new standards.</p> <ul style="list-style-type: none"> → TO UNITE THE PEOPLE → NOT TO SOLVE PROBLEMS AS INDIVIDUALS → TO HAVE EXTENSION POSSIBLE → TO AMELIORATE ACCESS; COMMUNICATION; TRADE PURPOSE → AVAILABILITY OF SWEET WATER DURING DRY SEASON. → TO IMPROVE THE ENVIRONMENT AND MICRO-CLIMAT CONDITIONS. → TO SOLVE A PHYSICAL CRISIS IMPLICATES IN SOME WAY THE INSTORATION OF REST; VILLAGE LIFE IN HARMONY,... → ECONOMIC & STRENGTH PURPOSE → DO PAY ATTENTION ON THE DYNAMICAL FACTOR OF THE PROJECT → SEE UNDERLYING PHILOSOPHY.

Information only required for large scale projects

POST_PROJECT

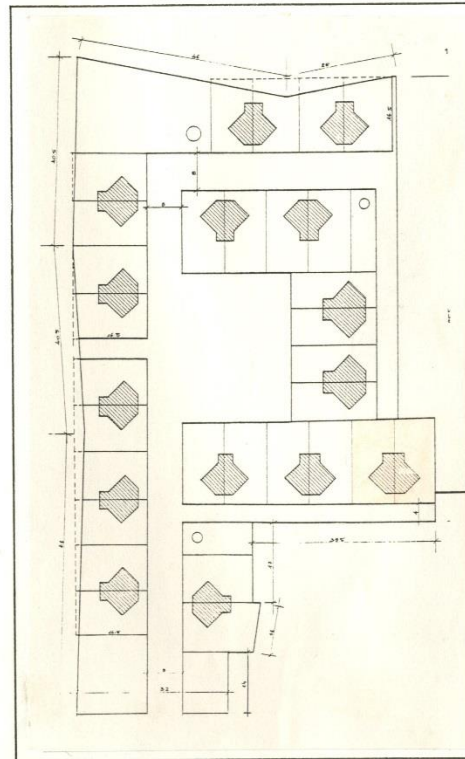
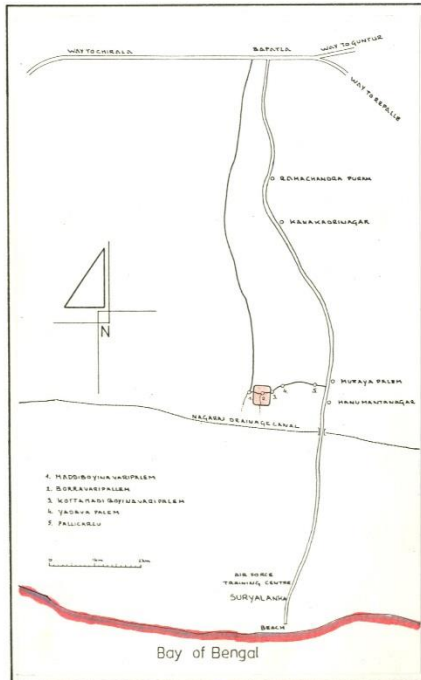
APPROPRIATION OF SPACE

PROJECT SITE

FORMS

MASTER PLAN (Indicate segment of project site, selected for in-depth study on following pages)

Space use as actually implemented (interpreted) by users



INTRODUCTION

Post-project evaluation is considered as an integral part of a full project cycle and has to provide the necessary feed-back for planners, policy-makers, residents...

Topics to be dealt with are e.g. appropriation of space, improvement & extension of infrastructure & dwelling, changes in organization, attitude or economic situation of the dwellers, disparities between planned and present-day situation, conflicts concerning maintenance & operation etc.

Indicate clearly, which viewpoint is expressed in this case-study document

1. inhabitant / user
2. planner (the designer of the project)
3. yourself (as outside evaluator)

Priority should be given to 1., unless the project-site is not inhabited yet.

COMMENTS

Pinpoint major changes and conflicts during and after the implementation period.

- HAS BEEN PLANNED - NOT CONSTRUCTED
- ➔ BENEFICIARY LIST: 28 FAMILIES
- ➔ 14 TWIN HOUSES

SCALE 1/10.000

PHYSICAL INFRASTRUCTURE / RESIDENTIAL AREAS / COMMERCIAL, INDUSTRIAL & SOCIAL FACILITIES of LEGEND p 2.

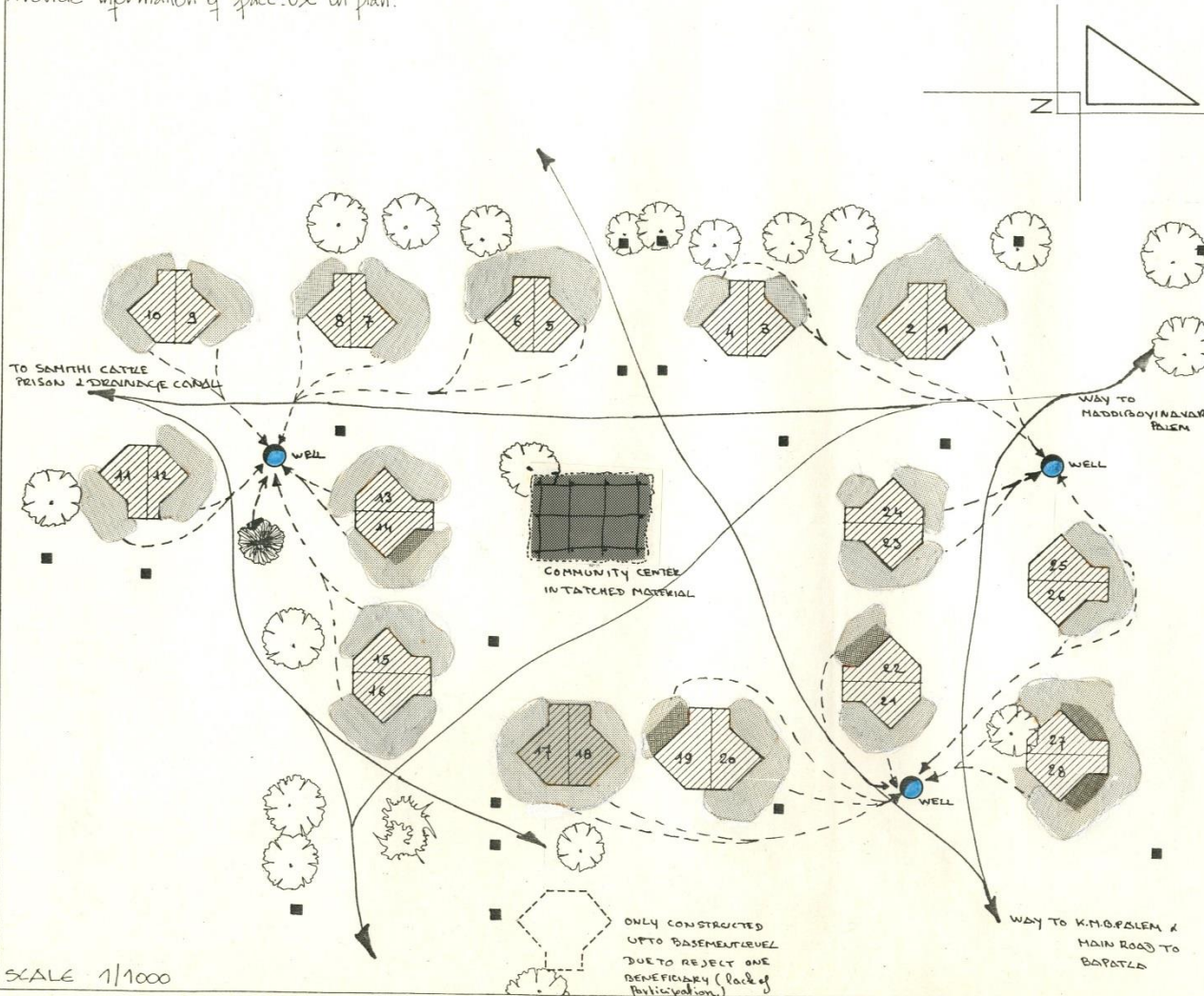
APPROPRIATION OF SPACE

(SEGMENT OF) PROJECT SITE

FORMS











PHYSICAL INFRASTRUCTURE - COMMERCIAL/INDUSTRIAL/SOCIAL ACTIVITIES - PRIVACY GRADIENT

Provide information of space-use on plan.



COMMENTS

Privacy problems, annexation or rejection of public space, circulation patterns, modification of settlement tissue, disparities between planning & appropriation of urban space etc...

-  COMMUNITY SHELTER (Yard, Materials) FOR THE TIME BEING. (PUBLIC)
-  EXTENSION SEMI-PRIVATE SPACE THROUGH THE ADDITIONAL VERANDAH IN THATCHED MATERIAL
-  SEMI-PUBLIC SPACE; USUAL USED PLACE TO PREPARE FOOD, REST; CHILD SANITATION
-  COMMON VILLAGE WELLS (PUBLIC)
-  DAILY GANYWAYS TO THE WELL
-  MAIN CIRCULATION AXES
-  EXISTING BOUNDARY STONES
-  THE PLOT DIVISION AS INDICATED ON THE PLAN AND DEMARCATED ON THE SITE, IS NO MORE VISIBLE AFTER 7 MONTHS INDUQUATION.
-  HUT OF THE DEJECTED BENEFICIARY
-  DUE TO LACK OF PARTICIPATION ONE FAM LEFT FOR ANOTHER VILLAGE.

APPROPRIATION OF SPACE

DWELLING GROUP

FORMS

EXTENSION & IMPROVEMENT - INHABITATION OF SPACE

Provide information by means of plans

COMMENTS:

- EXTENSIONS:

1° - CONSTRUCTION OF AN ADDITIONAL VERANDAH IN TRADITIONAL MATERIALS AT THE SIDE/BACK

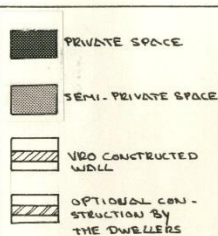
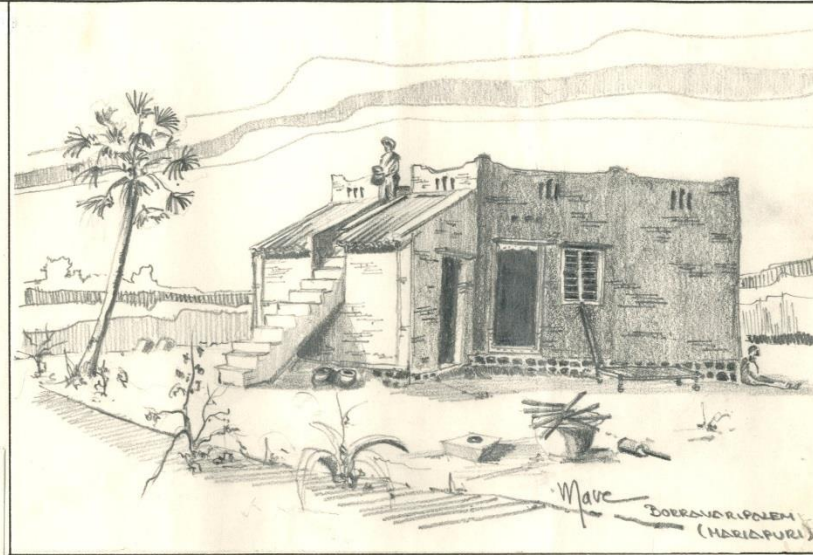
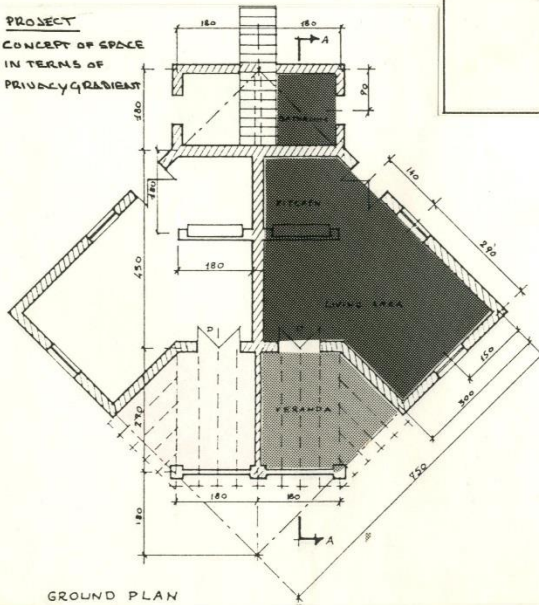
→ according to directional space use; dwellers can change the function of the entrance doors (main door - sec. door)

2° - DURING MY STAY ON THE SITE, SOME DWELLERS TOOK THE OPTION TO EXTEND THE CORE ROOM BY CLOSING THE FRONT VERANDAH. FOOD PREPARING, ... SHOULD TAKEN PLACE UNDER THE ADDITIONAL BUILT VERANDAH.

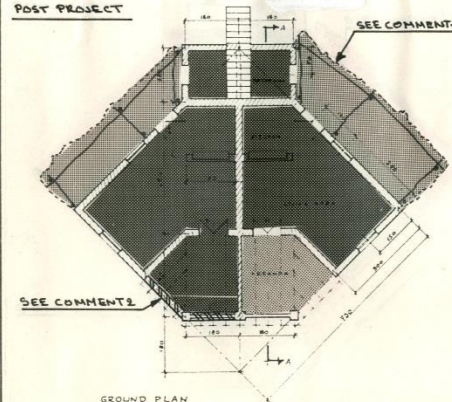
- USE OF SPACE (outer space)

- BEST AND OUTSIDE FOOD PREPARING (see sketch)
- COAL MAKING (5 to 6 gm hour/week)

PROJECT
CONCEPT OF SPACE
IN TERMS OF
PRIVATE/GRABITANT

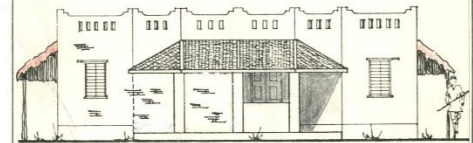


POST PROJECT

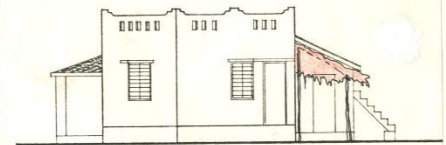


COMMENTS

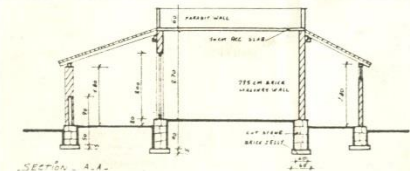
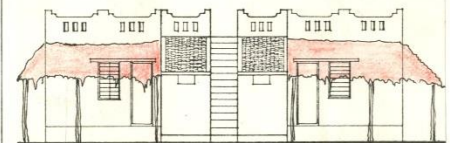
Attitude of inhabitants to their housing situation reasons for modification & change ... People's housing needs & expectations versus project results in terms of design, implementation, management etc.



FRONT ELEVATION



RIGHT ELEVATION



BUILDING TECHNIQUES

USE/PRODUCTION/ASSEMBLY OF BUILDING MATERIALS & COMPONENTS (for dwelling & infrastructure)

- Describe materials, production methods etc. used for the Finishing - Improvement - Extension of dwellings and/or infrastructure by means of plans, sections, axonometric drawings...
- Illustrate problems in the field of building techniques, e.g. building pathology

FLOORING

- TO REDUCE COST RECOVERY, THE VRS LET THE FLOORING AND PLASTERING WHITE WASHING UP TO THE DWELLERS THEMSELVES.

- 1° → SAME CONTINUED TO USE THE TRADITIONAL MUDFLOORING (prepared by ramming the earth & rendering with cow-dung)
- Finishing with fingerprints, circular designs...

PRODUCTION & CONSTRUCTION PROCESS

- RIVER SAND IS CONSOLIDATED AS AN 6" BASE COURSE OVER WHICH 3" x 4" OF STONE BALLAST (1/2 to 3/4" size); IS MIXED WITH CLAY AND RANMED.
- THEN FOLLOWS A PLASTER OF COWDUNG MIXED WITH FINE SAND, TO A THICKNESS OF 1/2".
- THE FLOORING IS THEN ALLOWED TO DRY.
- TWO COATS OF COWDUNG WASH ARE GIVEN FOR A FINAL FINISH.

2° → SLAB FLOORING:

- SLABSTONE FLOORING IS A COMMON FLOOR TYPE IN ANDHRA PRADESH.

→ A LOT OF NATURAL ROCK FORMATION (granite hills)

- CHIPPING AND SHAPING THE STONES PROVIDE CONSTRUCTION MATERIAL FOR FOUNDATION AND EVEN SUPERSTRUCTURE PURPOSES.

- NARROW CLASS SHAPED FOR FLOORING, CUN-DUNINGS, COOK SLABS, ... ARE AVAILABLE IN FOLLOWING SIZES:

- SIZES:
- 1' x 1' (30.48 x 30.48cm)
 - 1' x 2' (30.48 x 76.20cm)
 - 2' x 4' (60.96 x 121.92cm)
 - 2' x 6' (60.96 x 182.88cm)
 - 2' x 8' (60.96 x 243.84cm)
 - 2' x 10' (60.96 x 304.80cm)

THICKNESS: 2.5; 3; 4cm.

WEIGHT: 2' x 15' x 1" ≈ 20kg

TRADE RATE: Rs/99.

CONSTRUCTION:

- FLOORING OVER A SAND LEVELING BED AND PAINTED WITH CEMENT (1/3)



COMMENTS

Motivation for changes or alterations, justification of choice of technology
 Evaluation of building techniques (proposed by project planners) in terms of cultural, economic, climatological ... appropriateness of problems of maintenance, high costs, waste, inefficiency...

PLASTERING:

EXPOSED SURFACES:

- FOR PROTECTION AGAINST RAIN WATER; ANT; WHITE ANT MENACE AND SALINE ACTION IN COAST HILLSIDES.

INTERIOR SURFACES:

- FOR AESTHETIC PURPOSES & HYGIENIC REASONS

TRADITIONAL WAY:

- COWDUNG MIXED WITH CLAYLY SOIL
- FINISHED BY A GRAVEL WASH (Red color)

IMPROVED WAY:

- USING THE VERY FINE LIME REMAINING IN THE CIRCLE MOLDING CHANNEL.
- MIXING WITH FINE SAND & WATER IN A RECIPIENT OF 4' x 4' x 4'.

POST PROJECT MANAGEMENT

INSTITUTIONS

INSTITUTIONAL INVOLVEMENT: ACTORS & RESPONSIBILITIES		● Primary Responsibility ○ Secondary Responsibility											
LEVELS	ISSUES	MAINTENANCE & OPERATION					IMPROVEMENT & EXTENSION						
	ACTORS	ACTIVITIES	Control / Supervision	Manpower Supply	Material & Equipment Supply	Financing	Others (Please Specify)	Permission / Approval	Financing	Material Supply	Manpower Supply	Technical Assistance	Others (Please Specify)
SETTLEMENT	International Agencies	-	-	-	-								
	National Organizations ^{state} _{govt.}	-	-	-	-			○	●				
	Private Organizations	-	-	-	-								
	Other Organizations (N.R.O.)	-	-	-	-			●	●	●	○	●	
	Family Group		VILLAGE	COMMUNITY				○	○	●	●	●	
	Nuclear Family	-	-	-	-								
	Individual	-	-	-	-								
DWELLING	International Agencies	-	-	-	-			-	-	-	-	-	
	National Organizations	-	-	-	-			-	-	-	-	-	
	Private Organizations	-	-	-	-			-	-	-	-	-	
	Other Organizations (N.R.O.)	-	-	-	-			-	-	-	-	-	
	Family Group							○	○	○	○	○	→ depends on scale of improvement (ex. verandah in Tatcha as durable material?)
	Nuclear Family							○	○	○	○	○	→ little improvements (ex. extension verandah, plastering,....)
	Individual	-	-	-	-			-	-	-	-	-	

COMMENTS

Who does what, who decides on what?
Problems and conflicts...

POST-PROJECT INSTITUTIONS

POST-PROJECT MANAGEMENT

MAINTENANCE

Indicate various areas and respective responsible authorities on project site plan.

LEADERSHIP - CONTEXT

CHIEF LEADERS: (SAMITHI EXECUTIVES)

- 1°. SURPUNCH
- 2°. VICE SURPUNCH
- 3°. HUNSI
- 4°. KARANAM

SOCIAL LEADERS:

- 1°. FOREST WATCHER
- 2°. PRIMARY SCHOOL LABY TEACHER.

RELIGIOUS LEADER

- PREACHER COMING NOW AND THEN FROM BOPATLA

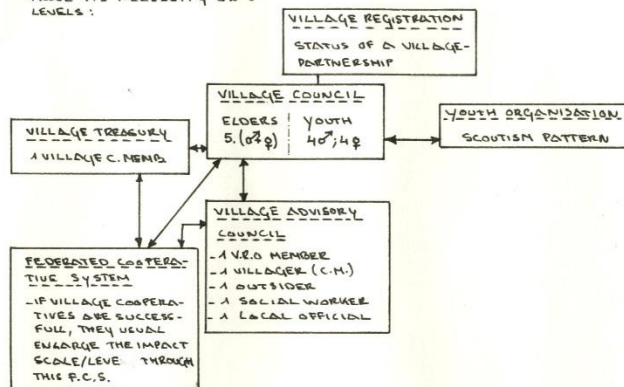
SOCIETIES - CONTEXT

MAHEELA MANDALI:

- FOUNDED IN MADDOBOYINAVARIPALEM. (1976)
- PRESIDENT INHABITANT MADAPURI
- OUTCOME: 1kg SUGAR/month; gm.

LEADERSHIP - PROJECT/POST-PROJECT

- STARTS FROM THE INITIAL PHASES:
- THE COUNCIL STRUCTURE HAS TO PROVE ITS NECESSITY ON 6 LEVELS:



MEANS FOR VILLAGE LEADERS TRAINING:

1. WEEKLY MEETINGS OF VILLAGE CONTACT PERSONS (C.Ms) OF SEVERAL V.R.O. VILLAGES TO DISCUSS PROBLEMS AND SEEK SOLUTIONS. (on Saturday at the V.R.O. Head office - Mahabul)
2. FORMATION OF AN ACTIVE VILLAGE COUNCIL IN EACH VILLAGE.
3. FORMATION OF WOMEN'S GROUPS AND YOUTH CLUBS.
4. VILLAGE LEADERS TRAINING CAMPS
5. VILLAGE PARTICIPATION AND RESPONSIBILITY IN ALL V.R.O. PROJECTS
6. INTER VILLAGE VISITS AND OUTSIDE EXCURSIONS

PROPOSED BUDGET 1981

A. RESOURCE ANALYSIS:

- PEOPLES' PART. 5,000/-
- DONOR AGENCY. 1,00,000/-
- 1,05,000/- Rs

B. REPARATION - SECTO 3

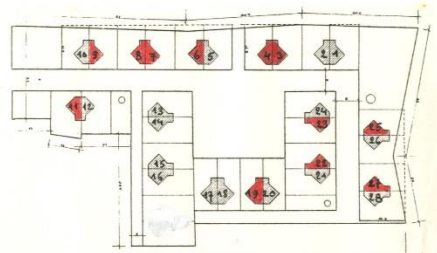
- PERSONAL 25,000/-
- MATERIAL 4,000/-
- TRANSPORT 50,000/-
- POSTAGE 3,000/-
- MESE 10,000/-
- MISCELLANEOUS 3,000/-
- 1,05,000/-

SCALE 1/1000.

area responsible authorities

	_____ (e.g. city council)
	_____ (e.g. dwelling resident)

COMMENTS



LOCATION OF VILLAGE COUNCIL MEMBERS ON THE SITE

DECISION PATTERN - BY J.F.C. TURNER.

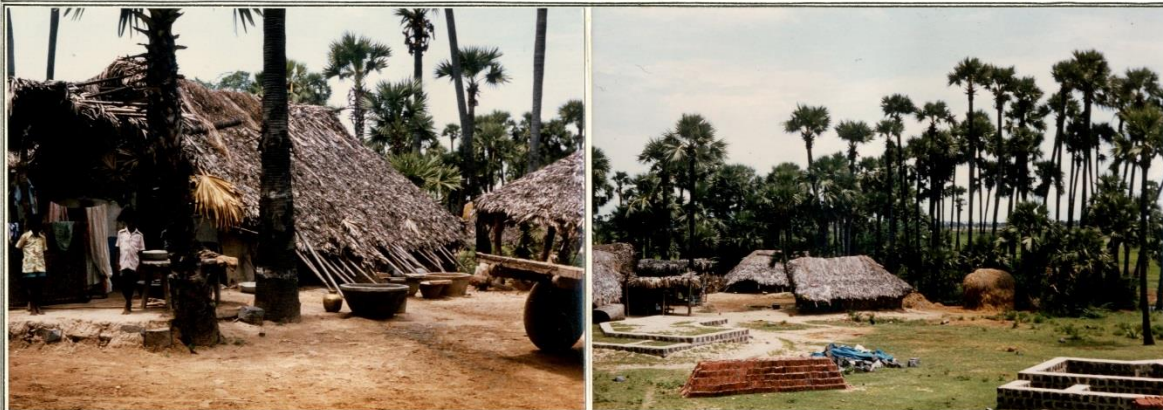
NOTE: FOLLOWING DECISION PATTERN HAS BEEN STRUCTURED DURING THE U.N. COURSE (82) SESSIONS BY Prof. J.F.C. TURNER.

	USERS	V.R.O.	STATE GOVT.
- CONCEPTION	(V)	V	
- SURVEY	V	V	
- DESIGN	(V)	V	
- CONSTRUCTION	(V)	V	
- MAINTENANCE	V	(V)	
ASSEMBLIES			
SERVICES/GOODS	(V)	(V)	(V)
RESOURCES	(V)		V

	U	V.R.O.	ST. GOVT.
D	○	○	○
S	○	○	○
R	○	○	○

PICTORIAL REPRESENTATIONS: INSTRUCTIONS

PROJECT SITE



CONTEXT: KOTTAMADI BOINAVARI PALEM



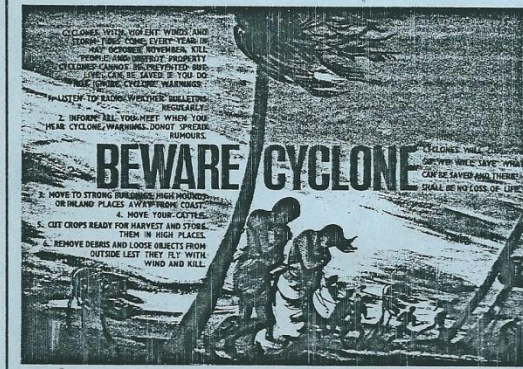
POST-PROJECT: BORRAVARI PALEM "MARIAPURI"

FILL IN SLIDE NUMBERS (max. 35)

CONTEXT	Site conditions	
	Physical infrastructure (roads, water ways...)	
	Commercial, industrial & social facilities	
	Settlement types	
	Others	
PROJECT SITE	Commercial & industrial facilities	
	Educational facilities (schools, training centres, ...)	
	Health facilities	
	Security facilities (police, fire station)	
	Community facilities (community centre, playground...)	
	Circulation system	
	Utilities (water, sewerage, drainage, energy...)	
DWELLING	Spatial organisation (settlement tissue) Appropriation of space (space use, privacy)	
	Others	
	Dwelling types	
	Appropriation of space in and around the dwelling (space use, furnishing, privacy gradient, extensions & modifications...)	
	Construction type & materials (incl. production & distribution)	
Others		

CYCLOON & DORPSHEROPBOUW : OF DE TEOLOGANG VAN INDIASE HINDU ARCHITECTUUR ALS SOCIO-CULTURELE BETEKENING

Een kritische studie van rurale dorpsheerpbouw en
onderzoek naar de congruerende relatie tussen
Hinduconcepten en de inrichting van de
gebouwde ruimte in Indiase context



Verhandeling aangeboden
tot het verkrijgen
van de graad van
Licentiaat in de
Architectuurwetenschappen

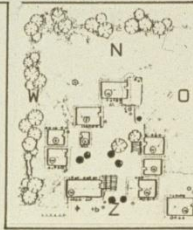
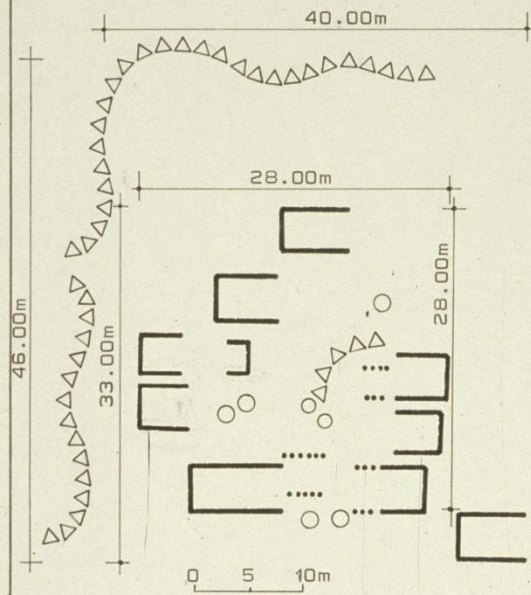
door Marc DUJARDIN

onder leiding van
Dr. H. Verschure





CONTEXT

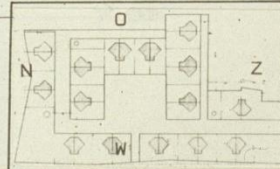
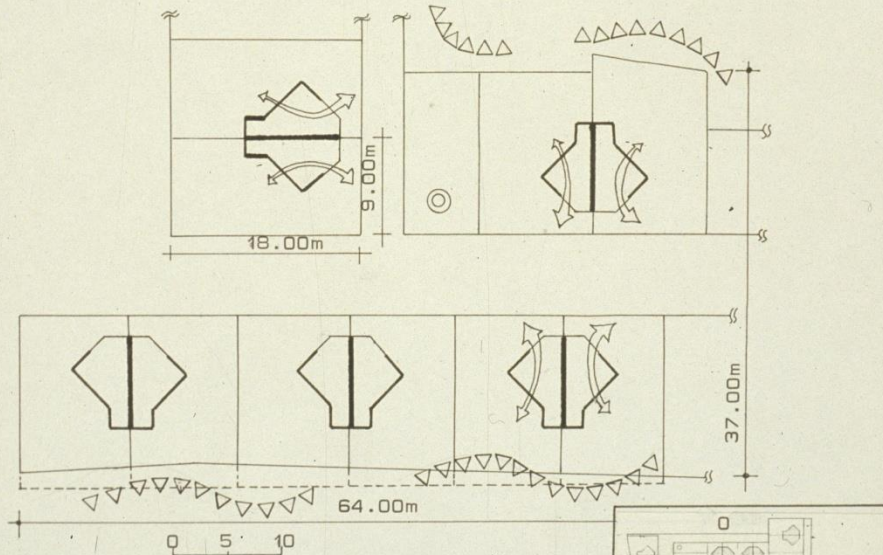


ABSTRACTIE VAN DE NEDERZETTINGSMORFOLOGIE

- △ NATUURLIJKE & PERMANENTE BUFFERSCHERM (groepjes palmbomen)
- SEIZOENGEBONDEN BUFFERs (rijst silo's)

ORIENTATIE & RUIMT. STRUCT.

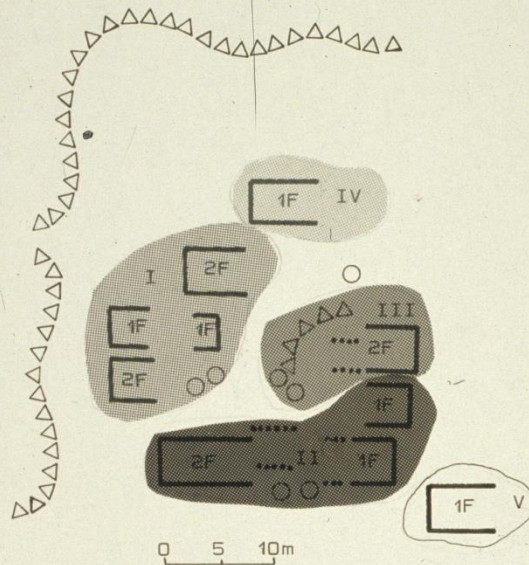
.GROEP



VRO-PROJECT



CONTEXT

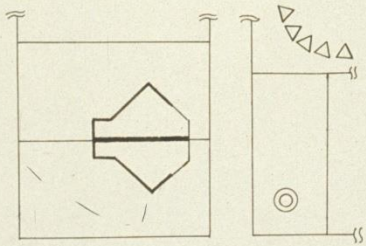


De groepsentiteit bestaat uit meerdere clusters van samenwonende families (1^o en 2^o graad)

Deze clusters samen, vormen een ruimtelijke eenheid met uitgesproken gesloten en introvert karakter; ingeplant binnen een ruimere zone, begrensd door de natuurlijke buffer.

ORIENTATIE & RUIMT. STRUCT.

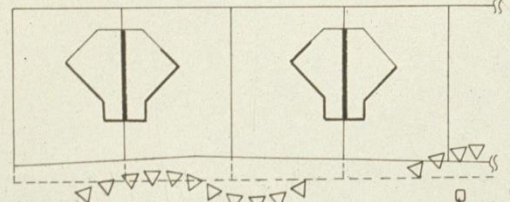
CLUSTER



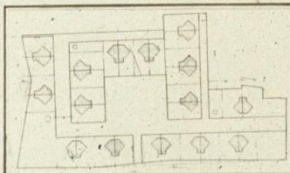
PUBLIEKE ZONE

Zelfs indien de verwante bewoners hun woning zouden mogen kiezen in elanders omgeving, blijkt én de afstand én het verkavelingspatroon dit traditioneel en mediërend nederzettingpatroon te doorbreken.

Dit zal ongetwijfeld een individualiseringsproces van het kerngezin met zich meebrengen.

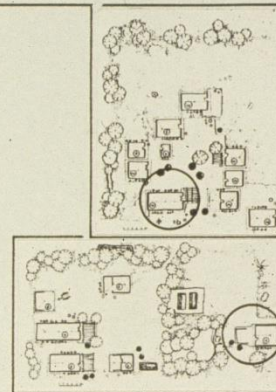
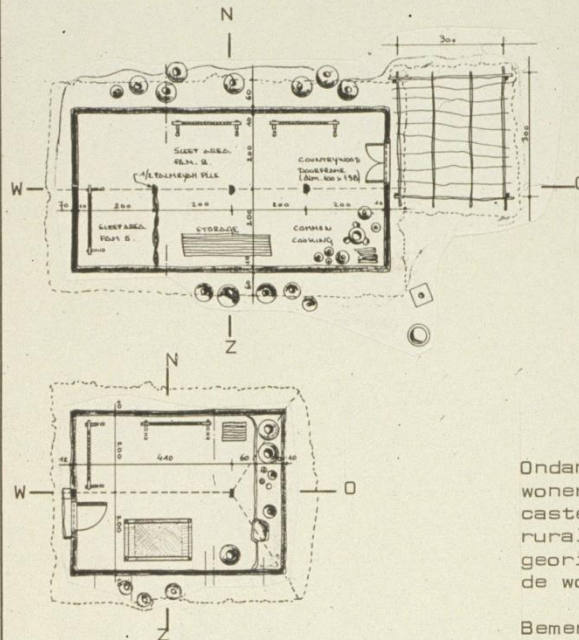


VRO-PROJECT





CONTEXT

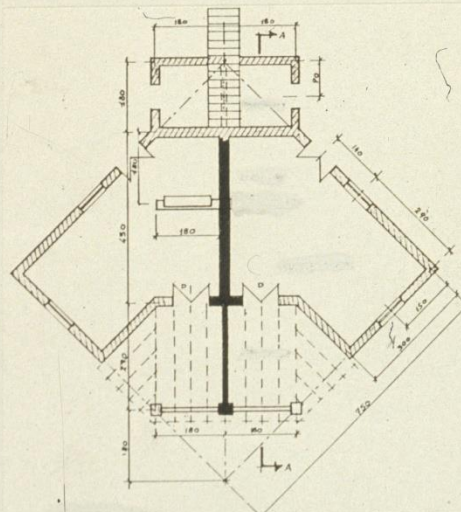


Ondanks het feit dat deze bewoners tot zeer achtergelegen casten behoren, merken we in rurale context evenzeer een georiënteerde inrichting van de woning in.

Bemerk de kookinrichting in het oosten & O-W richt. bed.

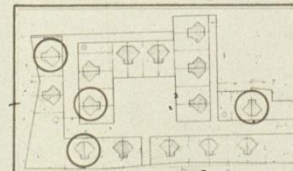
ORIENTATIE & RUIMT. STRUCT.

WONING



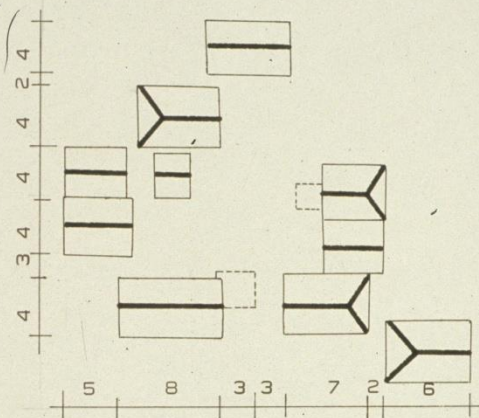
De VRO-woning wordt in verschillende richtingen op het terrein ingeplant, en leidt een dubbelzinnige inrichting van de woning.

De binnenmuur dat de ruimte verdeelde in een kookhoek en een multi-functionele plaats, werd niet uitgevoerd, hetgeen de actuele ruimte een eigenaardige vorm meegeeft en de inrichting ervan zeker niet vergemakkelijkt.





CONTEXT

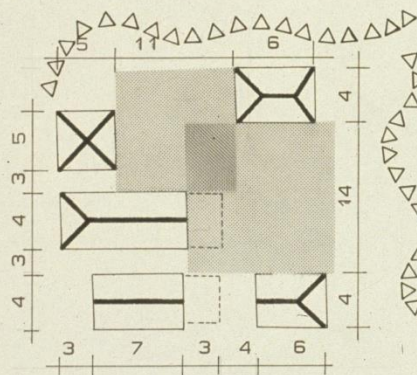


Het nederzetting patroon wordt gekenmerkt door een sterk doorgedreven lineariteit volgens de O-W as.

De sociale buitenruimte wordt volledig bepaald door de dense inplanting van de woningen.

TYPOLOGIE & MODULAIR SYST.

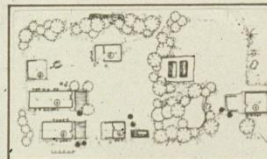
GROEP / CLUSTER



Met deze clustervorming binnen een ruimere groepsentiteit, benadrukken we de rol van natuurlijke buffers als mediërend gegeven voor een spatiale vormgeving.

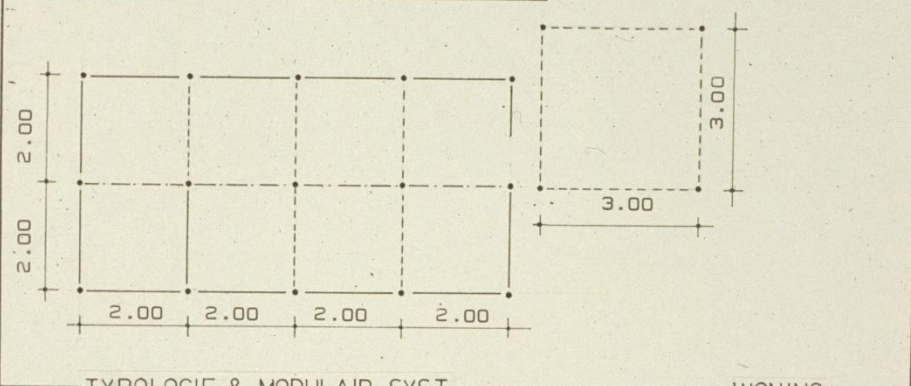
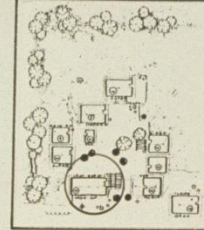


CONTEXT



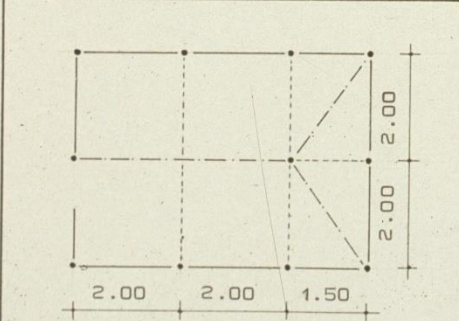


CONTEXT

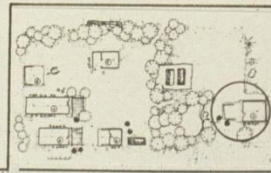


TYPLOGIE & MODULAIR SYST.

WONING



VRO-PROJECT



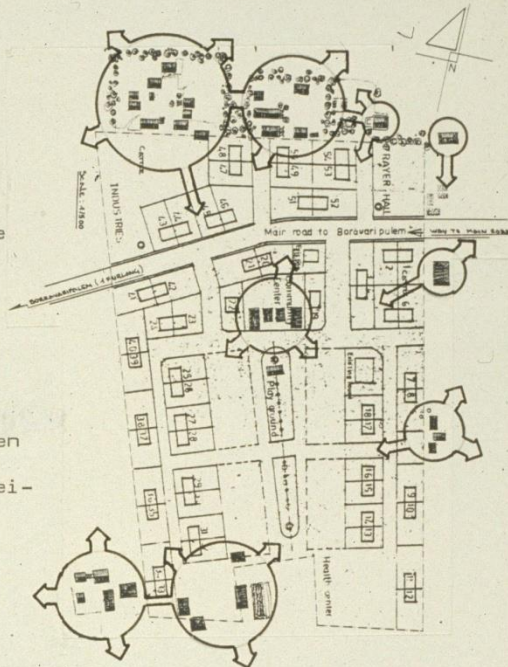


CONTEXT

De groeps entiteiten vormen afzonderlijke ruimtelijke eenheden die tussen landbouwvelden verspreid liggen.

Elk sociaal leven kent zijn begin en einde in deze eenheden.

De pijlen op de kaart duiden merkbare trajecten aan die het circulatiepatroon tussen de entiteiten onderling en andere dorpen bevormen.

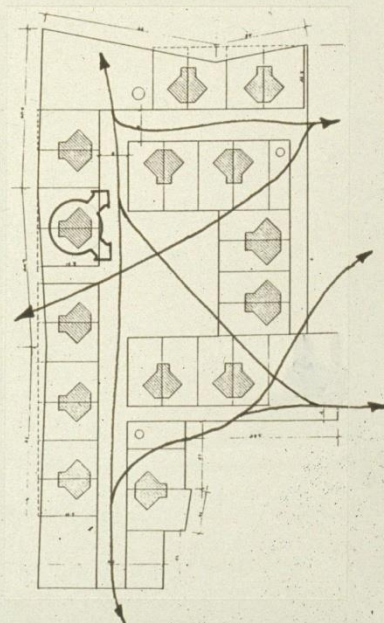


RUIMTEGEBRUIK

DORP

In de VRO-nederzetting wordt het nieuwe verkavelingspatroon weinig of niet gerespecteerd en blijven de oude circulatieassen grotendeels behouden.

Wanneer verwantengroepen verspreid op het terrein gealloceerd werden, merkt men dat de kleine familiale contacten eveneens gebeuren via de regel van de kortste afstand.



VRO-PROJECT

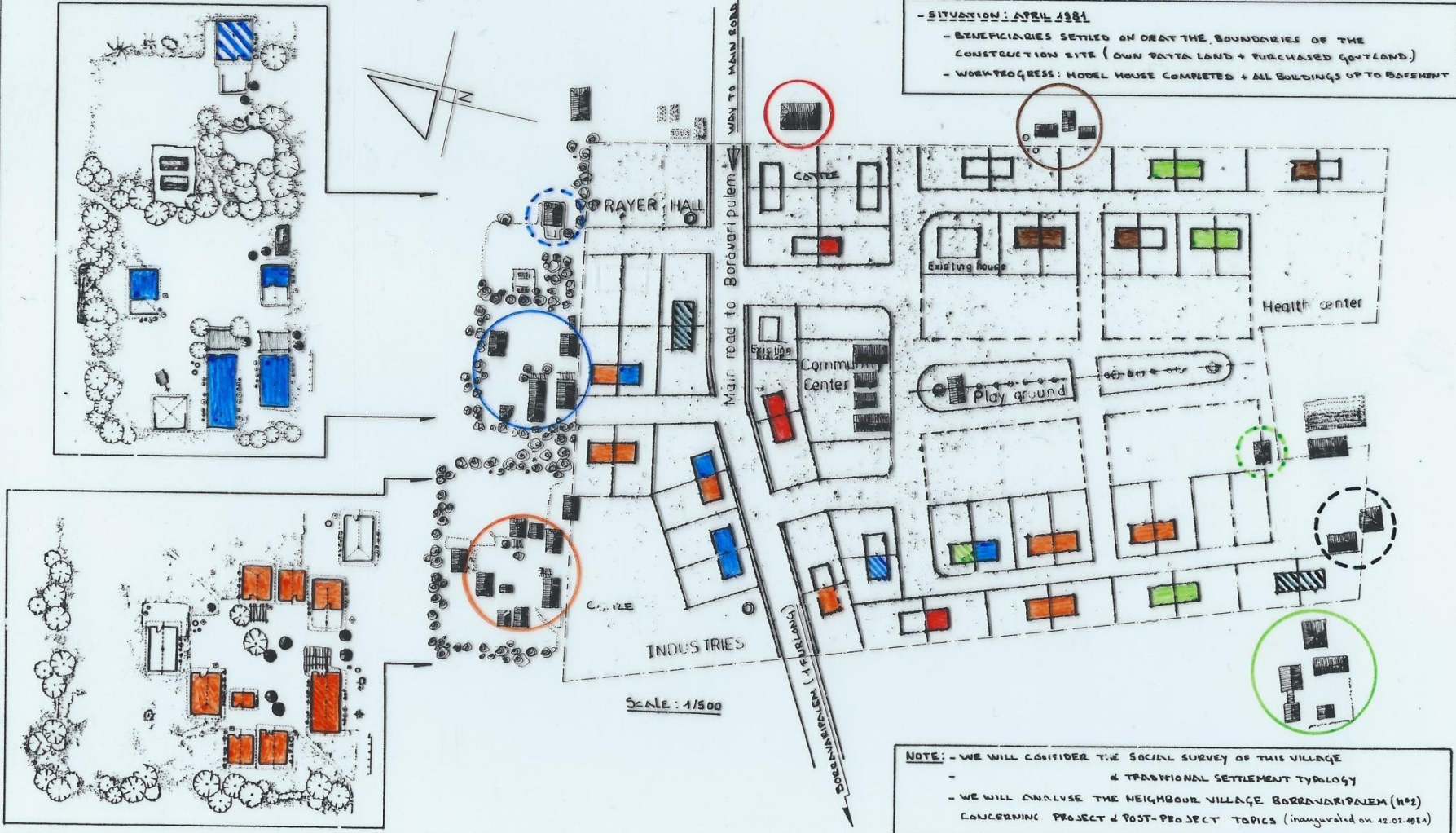
SOCIO-ECONOMIC ISSUES

BASIC SOCIO-ECONOMIC INDICATORS related to project site environment

Population, population growth, migration, family size, age distribution, social groups, ethnic groups, religion...
 Employment, income distribution & evolution, living costs...

SOCIAL SURVEY K.M.B.-PALEM (n°3)

- SITUATION: APRIL 1981
- BENEFICIARIES SETTLED ON OR AT THE BOUNDARIES OF THE CONSTRUCTION SITE (OWN PATTA LAND + PURCHASED GOVT LAND)
- WORK PROGRESS: MODEL HOUSE COMPLETED + ALL BUILDINGS UP TO BASEMENT



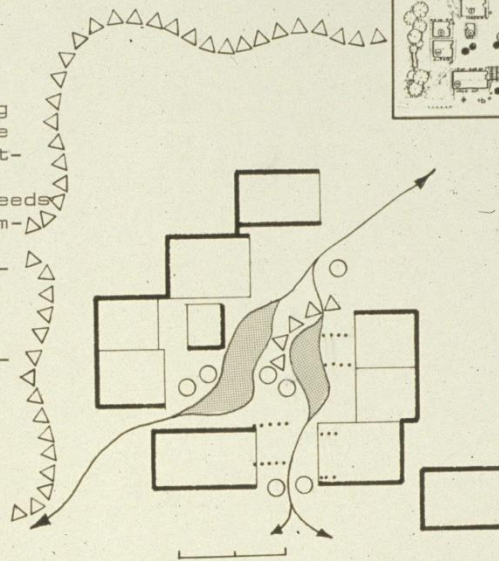
MARIAPURI
(BORRA VARIPALEM)



CONTEXT

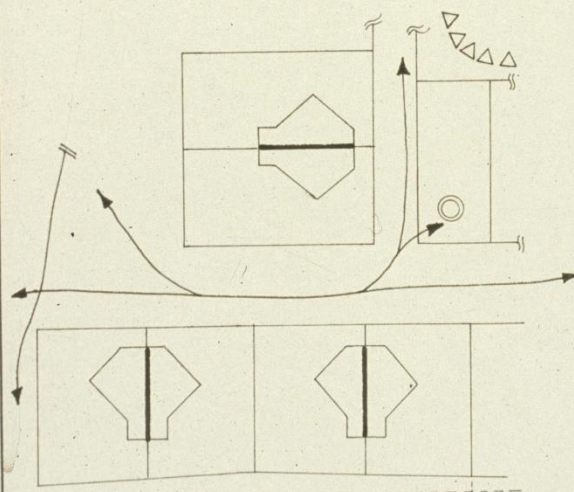
Bemerk de aanduiding van de verschillende clusters. De contactname met een van de clusters gebeurt steeds vanuit een open ruimte, gelegen op een belangrijke circulatieas.

Deze ruimte wordt visueel van de semi-private zones afgescheiden door o.a. rijstsilo's.



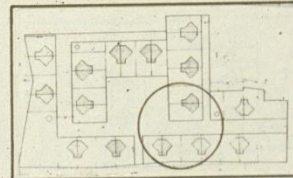
RUIMTEGEBRUIK

CLUSTER



De afstand tussen de woningen onderling bevordert een meer individueel ruimtegebruik.

De contactname met een familie als groep kan niet langer. hierbij verloopt de contactname niet meer over mediërende tussenzones.



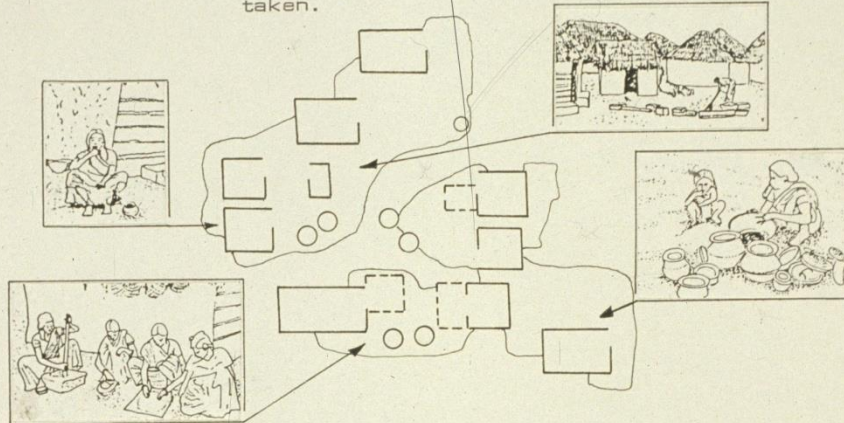
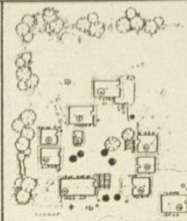
VRO-PROJECT



CONTEXT

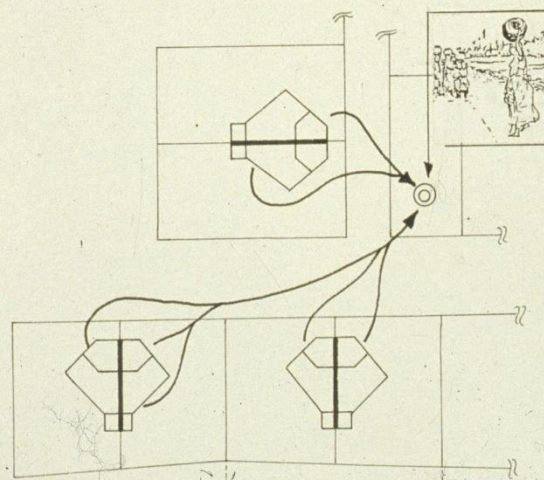
De socio-economische segregatie van de sexen vindt zijn veruitwendiging in een spatio-temporeel bepaald gebruik van de woning, cluster en buitenruimte.

RUIMTE: herschikken van de binnenruimte voor dagebruik en huishoudelijke taken.



RUIMTEGEBRUIK-AM.

CLUSTER



Het enige contactpunt bij uitstek is de waterput, waar de vrouwen en meisjes een vorm van sociaal en buurtleven kunnen ontwikkelen

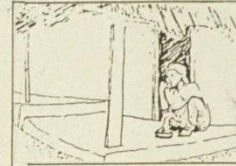
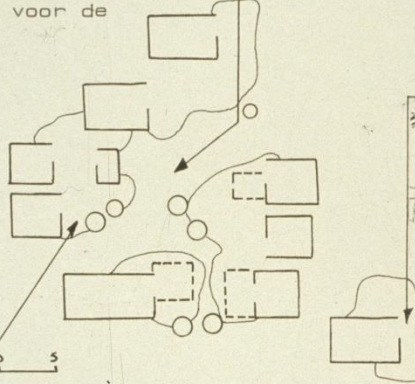
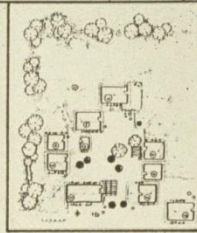
VRO-PROJECT



CONTEXT

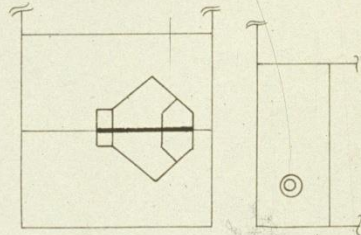
De activiteiten in de vooravond worden gedomineerd door de mannen.

De vrouwen houden zich op de achtergrond of de binnenruimte, waar zij het avondmaal opwarmen en de woning herschikken voor de nacht.

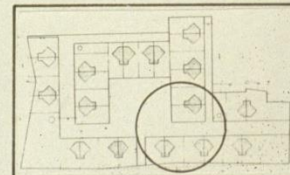
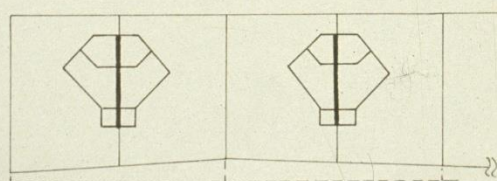


RUIMTEGEBRUIK- P.M.

CLUSTER



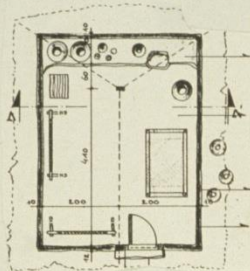
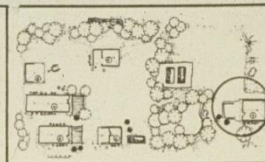
De contacten beperken zich meestal tussen verwante of niet-verwante gezinnen die een "Twin-House" delen.



VRO-PROJECT



CONTEXT



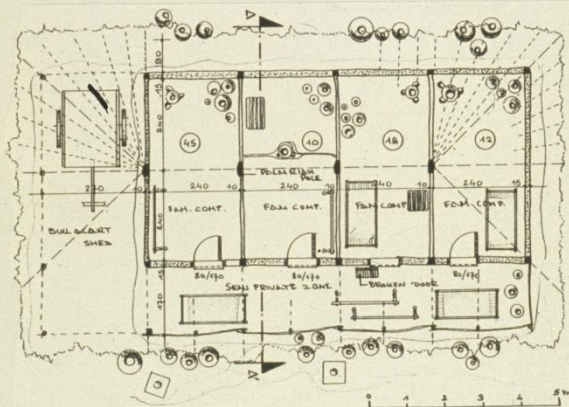
KOOKINRICHTING

In deze woningen bemerken we dat twee gezinnen hun kookinrichting in leem op een hoger niveau hebben gebouwd. Dit gegeven hebben we in veel ruimere mate waargenomen in typische vissersdorpen[o.l.a. Polattitippa]

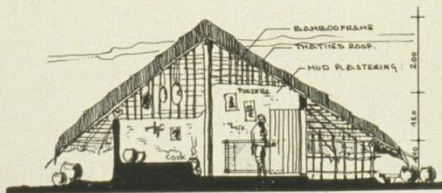


RUIMTEGEBRUIK

WONING



De sociale contacten vinden plaats in een gemeenschappelijke zone of gang onder hetzelfde dak.



CONTEXT

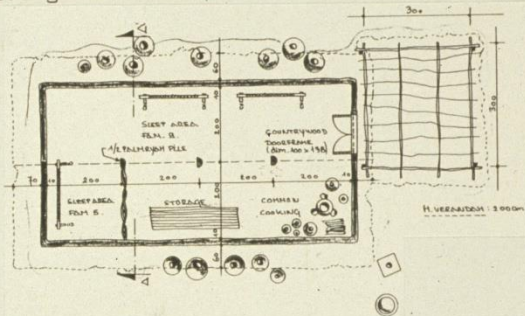
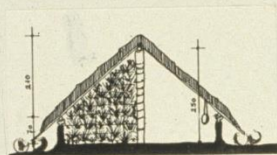
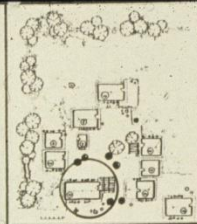




CONTEXT

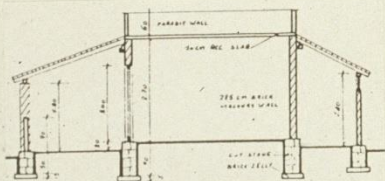
De binnenruimte doet gedurende de dag vrij leeg aan omdat de bedden of slaapmatten respect. ophun kant worden gezet of opgerold.

Er staan opvallend weinig meubelair in de woning. Dit vergemakkelijkt wel de dagelijkse uitveegactiviteiten.

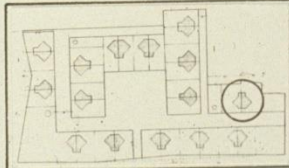
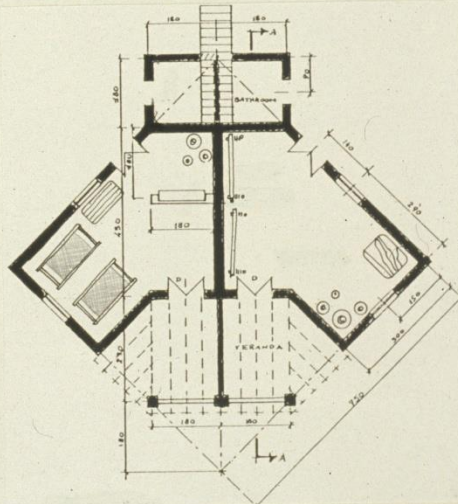


RUIMTEGEBRUIK

WONING



Vrij moeilijk in te richten voor het georiënteerd te slapen liggen van het ganse gezin. (hoofd naar het oosten)



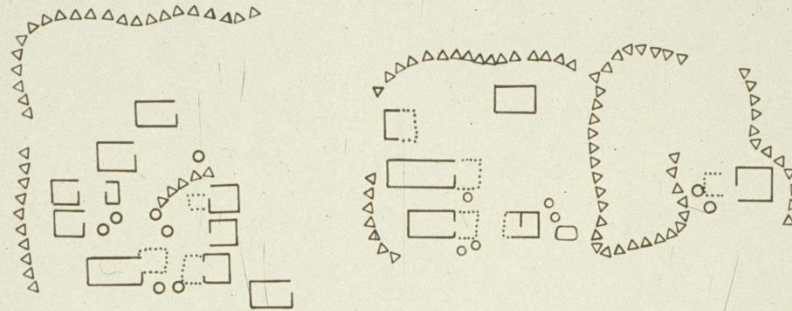
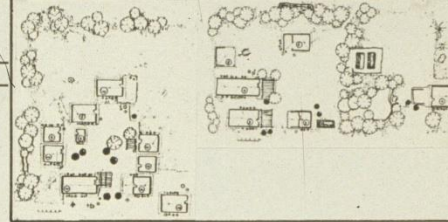
VRO-PROJECT



CONTEXT

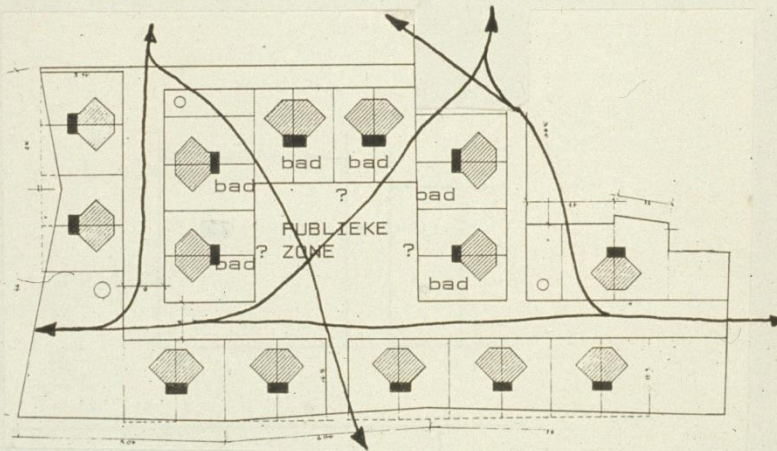
We onderscheiden de volgende niveau's van privacy regeling:

De zone begrensd door de palmbomen; de groepsentiteit; de familiecluster; de semi-private buitenzone van de woning en de binnenhuiselijke zone.

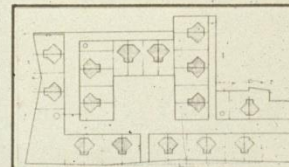


PRIVACY REGELING

GROEP / DORP



De woningen werden uitgerekend met hun badruimte naar de publieke centrale zone van het dorp gericht.



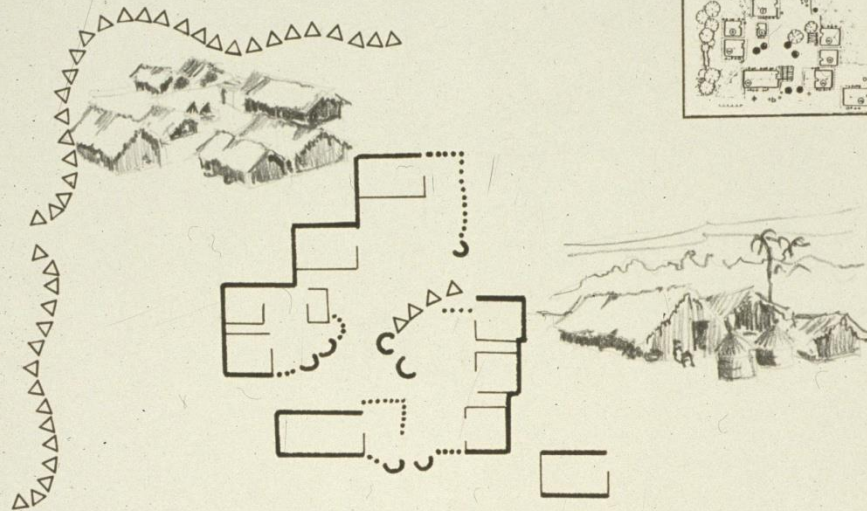
VRO-PROJECT



వయోజన విద్యా కేంద్రము
బాల్యవారి మెలకెం
గ్రామ పునర్నిర్మాణ సంస్థ

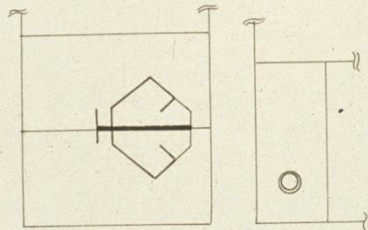
CONTEXT

ABSTRACTIE VAN DE RUIMTELIJKE
PRIVACY



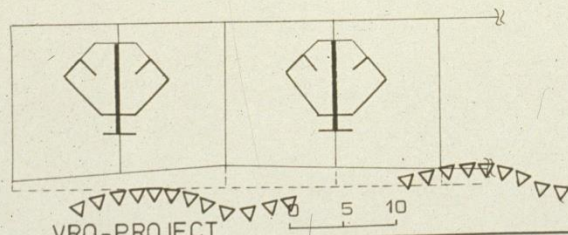
PRIVACY REGELING

CLUSTER

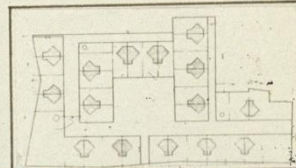


Bemerk het geïsoleerde karakter van de VRO-woning t.a.v. de omgeving.

Het binnen-buiten continuum wordt niet langer opgevuld met tussenzones. [margins]

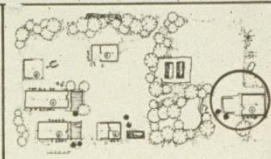


VRO-PROJECT



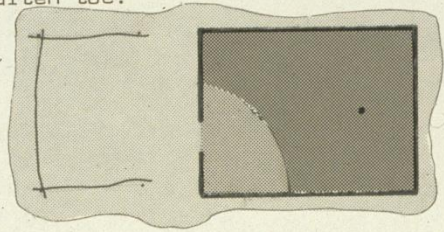


CONTEXT



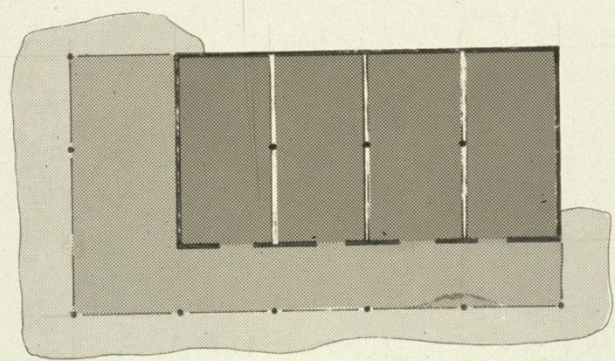
De traditionele woningen worden, afzonderlijk bekeken, getypeerd door een een ondubbelzinnige private kern, verwendigt in het gesloten karakter van deze binnenhuiselijke zone.

Zo zijn er buiten één deur geen verdere openingen naar buiten toe.



PRIVACY REGELING




WONING

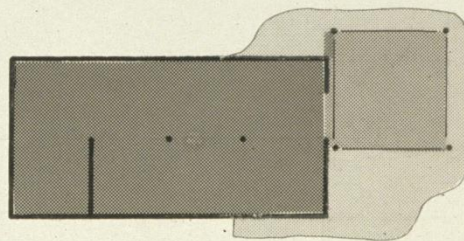
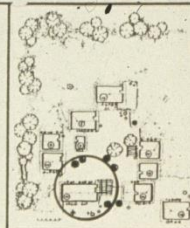


CONTEXT



CONTEXT

-  PRIVAAT
-  SEMI - PRIVAAT
-  SEMI - PUBLIEK



PRIVACY REGELING

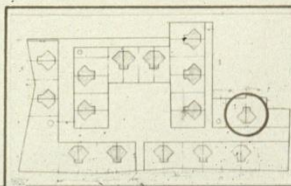
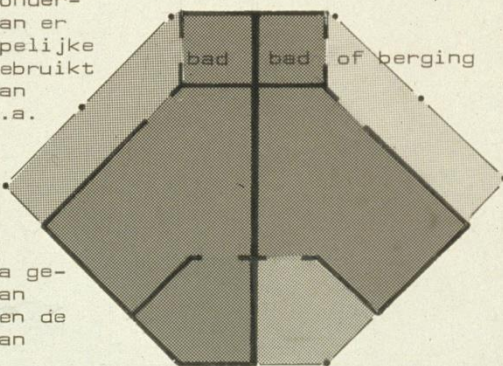
WONING

De geplande VRO-woning onderscheidt 4 ruimten waarvan er één uit het gemeenschappelijke dakterras, bestaat dat gebruikt wordt als droogplaats van gewassen, slaapruijnte, e.a.

De overige ruimten zijn de hoofdruimte, keuken, badruimte en veranda.

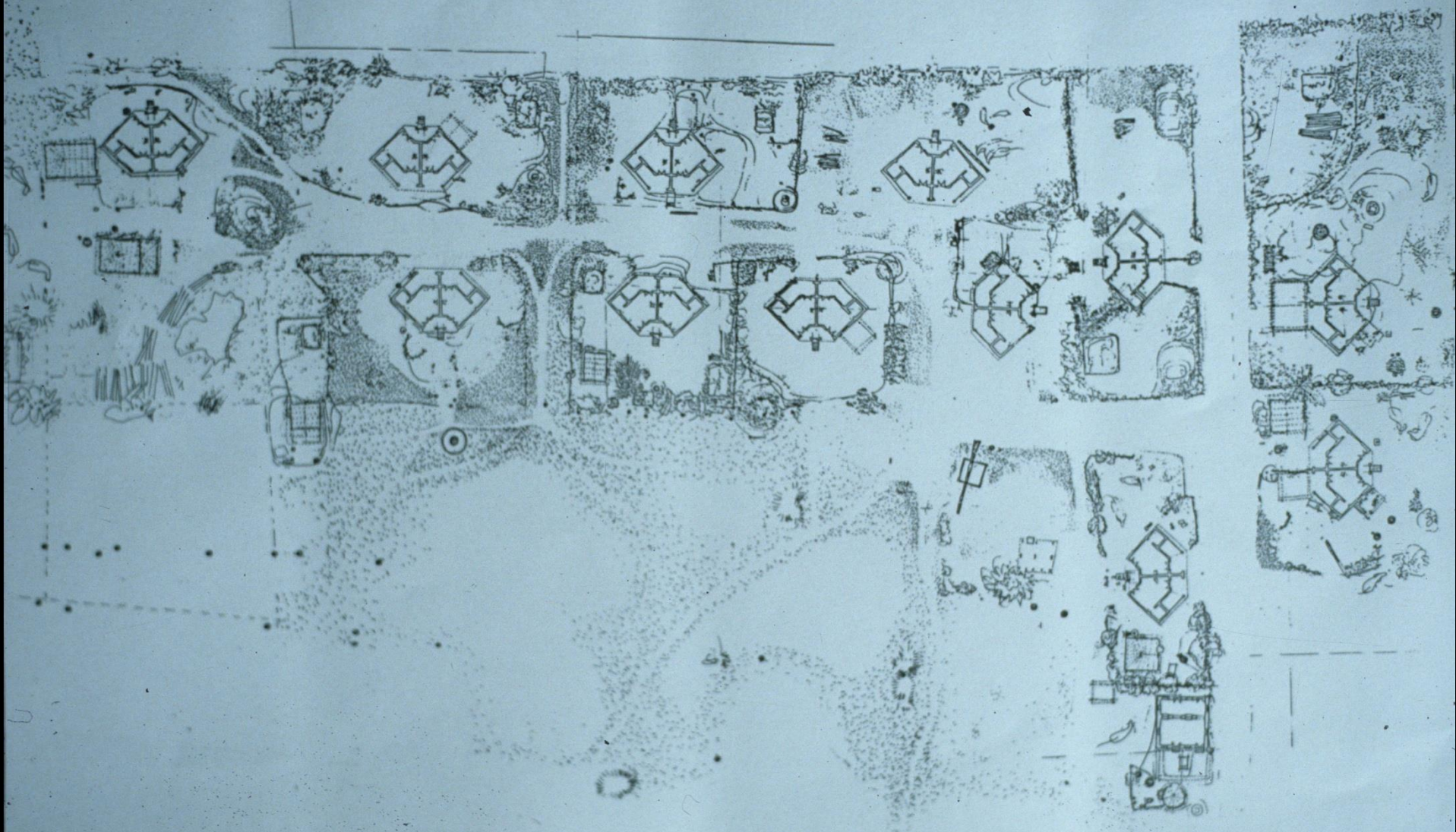
Sommige bewoners hebben reeds een tweede veranda gebouwd als schakelzone van de hoofdruimte (binnen) en de badruimte (te bereiken van buiten).

Een vergroting van de binnenhuiselijke zone geschiedt door het invullen van de geplande veranda.



VRO-PROJECT

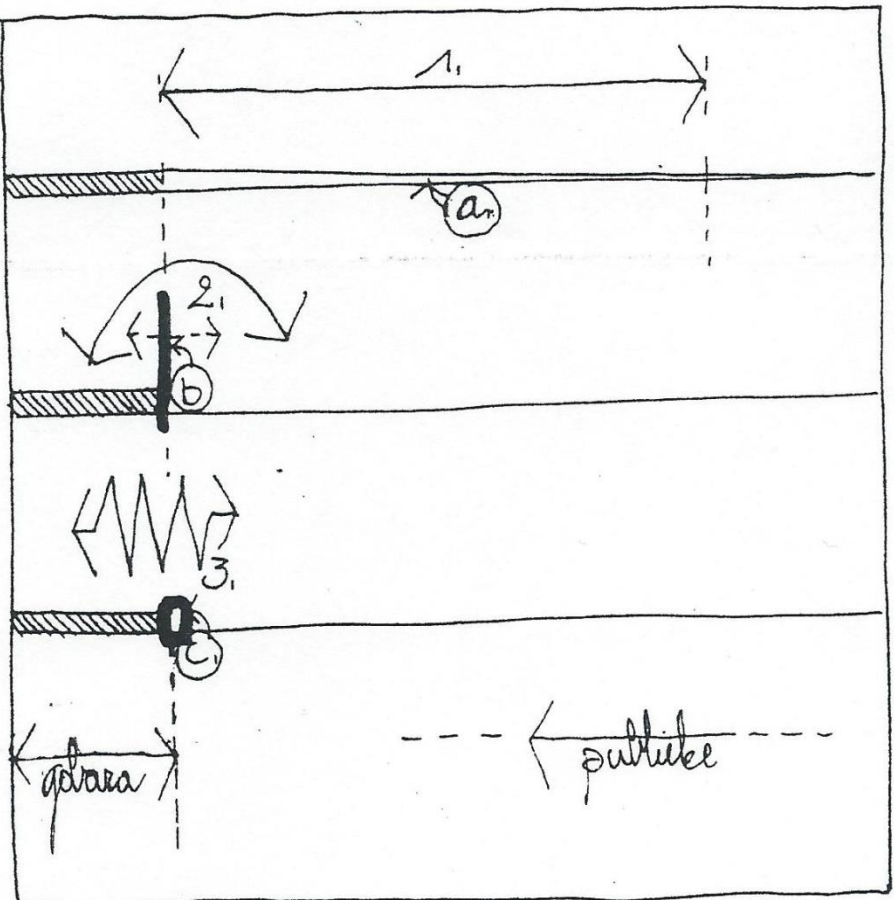
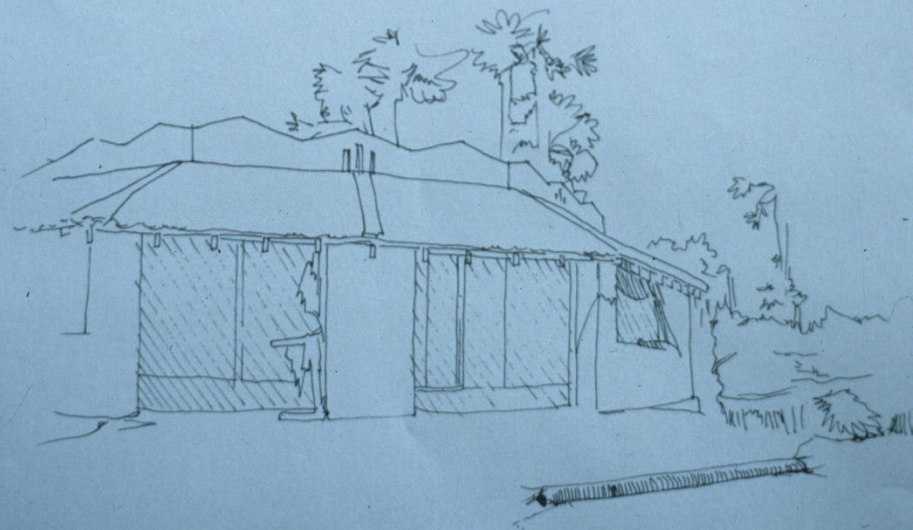
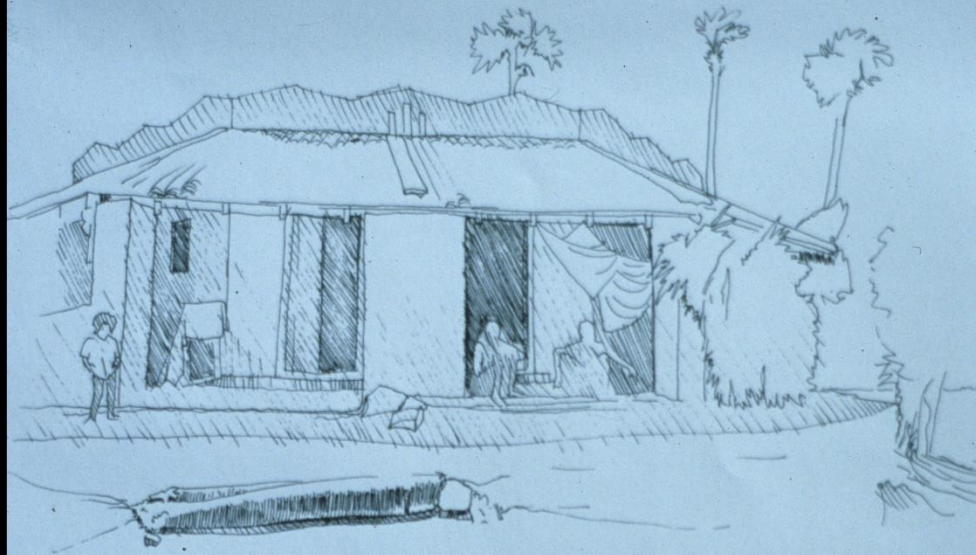


















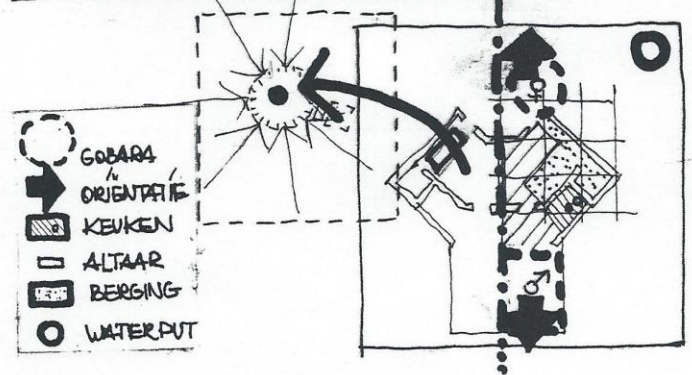
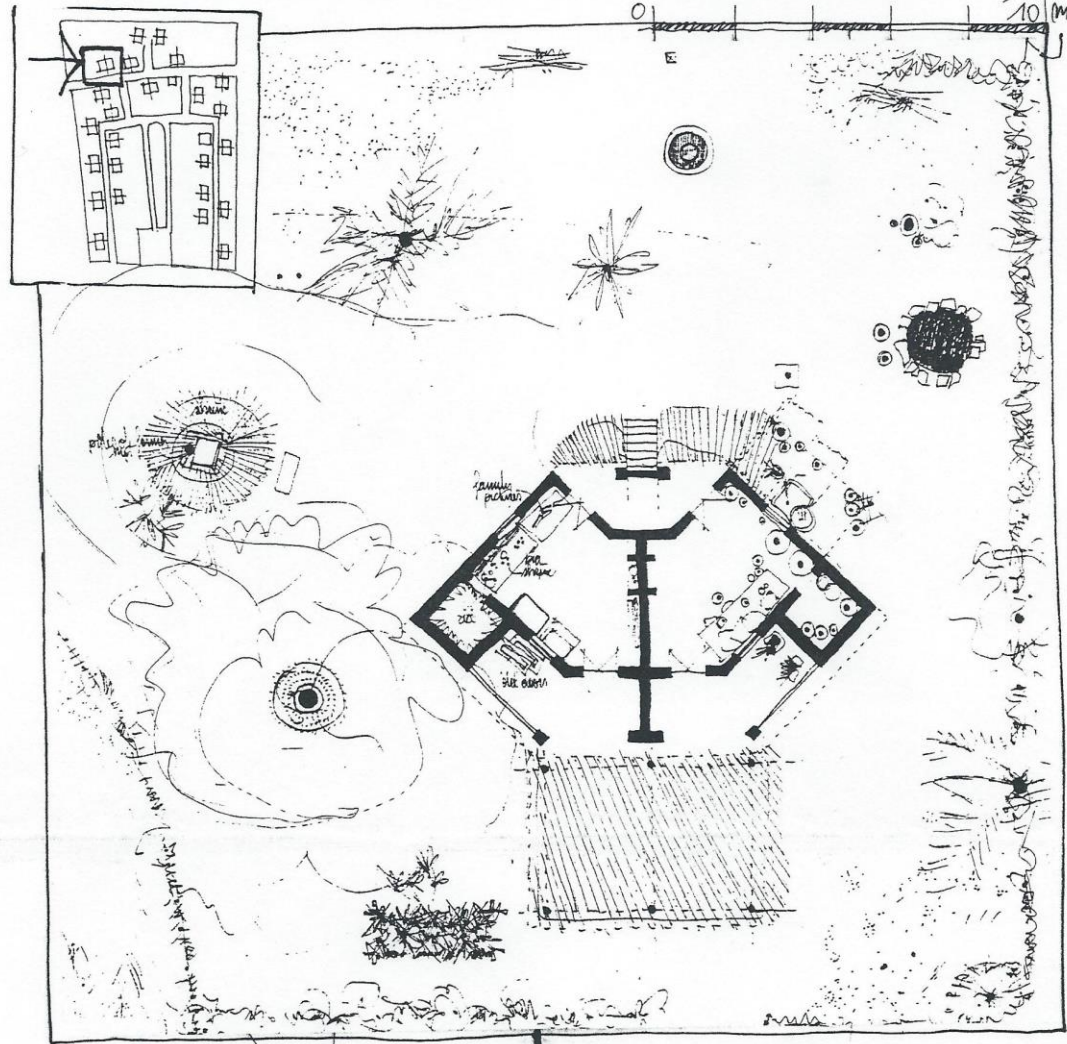
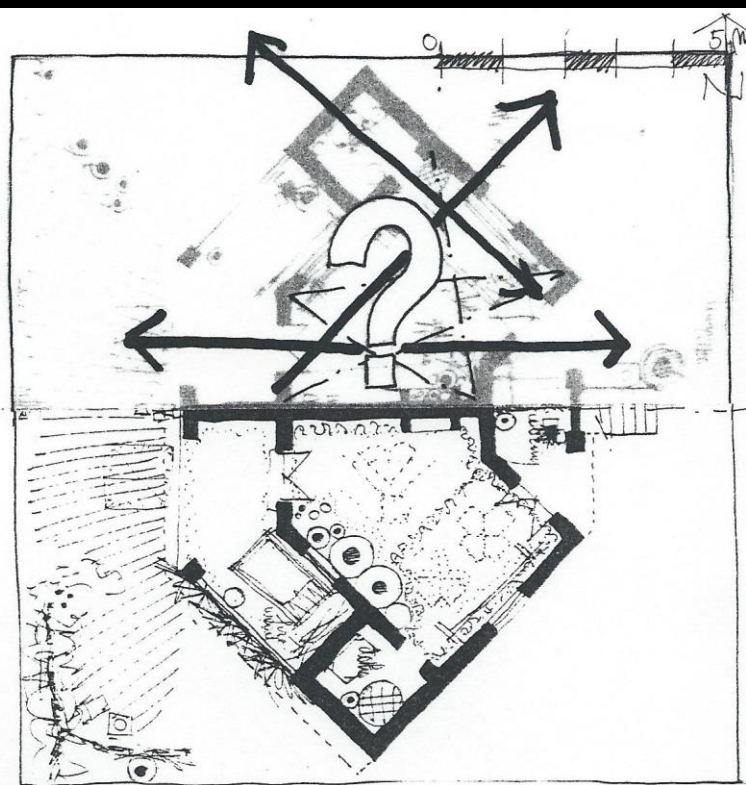
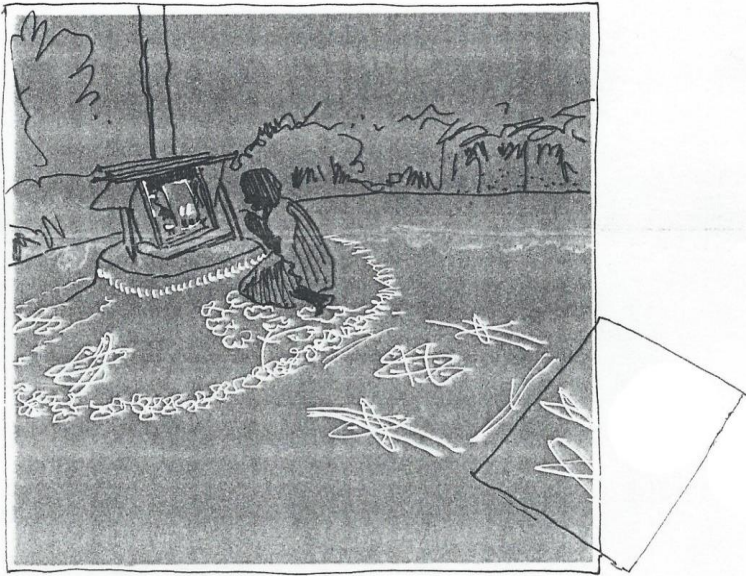
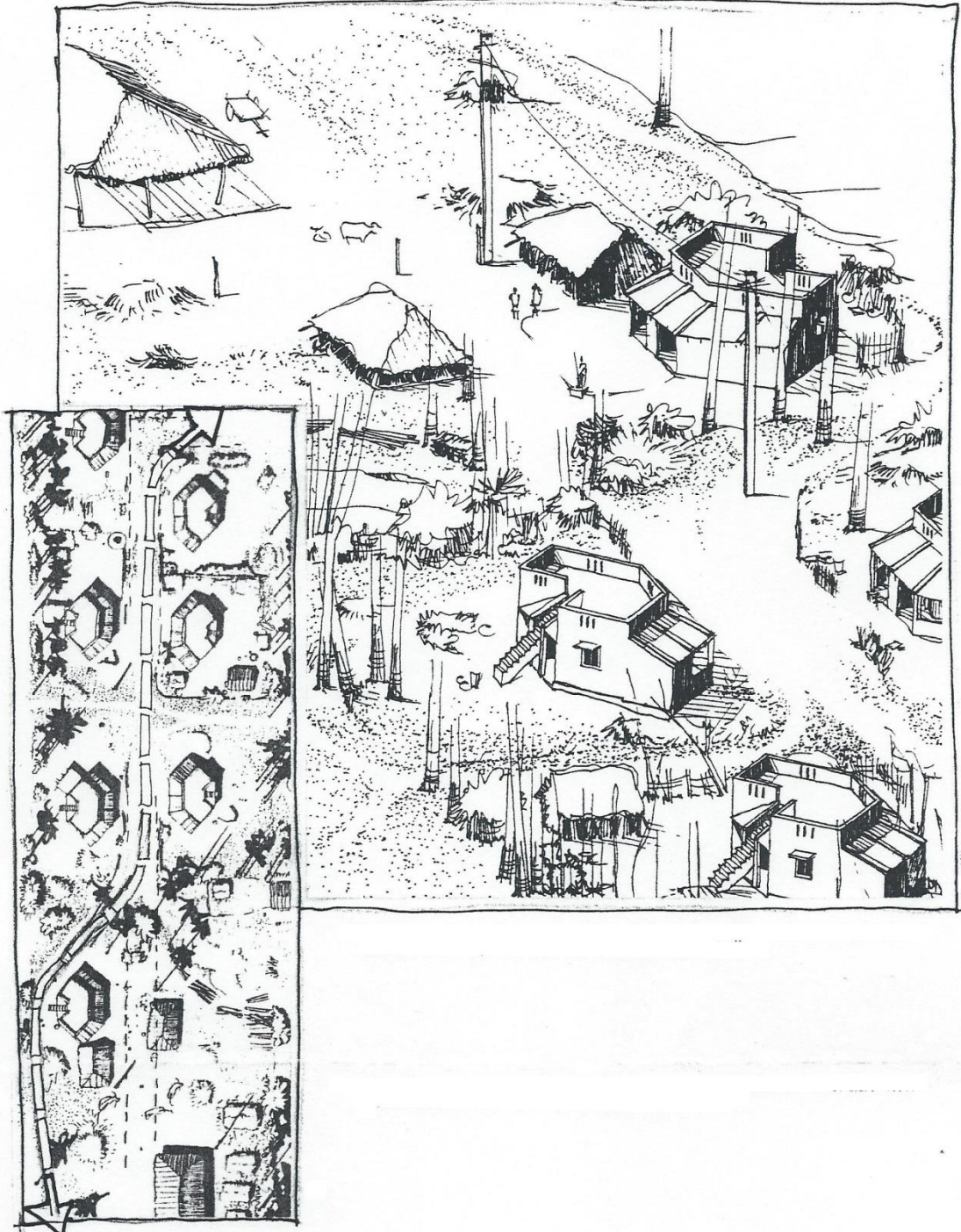


fig. 87.: de woning van
Mama Venkaiana

fig. 88.:
rechtse deel : vedisch
georiënteerd ruimtegebruik.
linkse deel : exuberante
huiskultuur buiten de
woning.







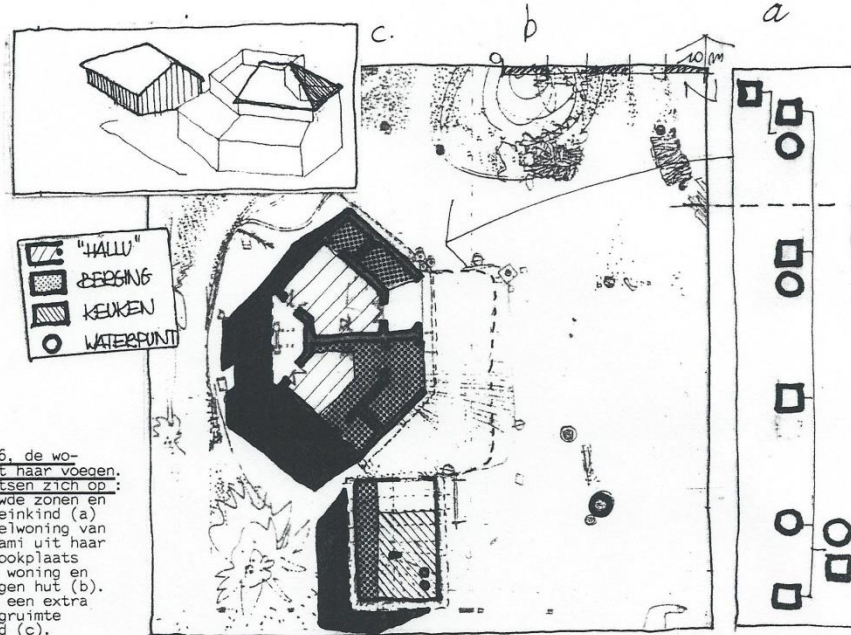


fig. 99.: mei '86, de woning barst uit haar voegen. Functies splitsen zich op: Met twee gehuwde zonen en een eerste kleinkind (a) barst de dubbelwoning van Gavini Ramaswami uit haar voegen. De kookplaats groeit uit de woning en krijgt een eigen hut (b). Bovenop wordt een extra slaap- en bergruimte geïmproviseerd (c).

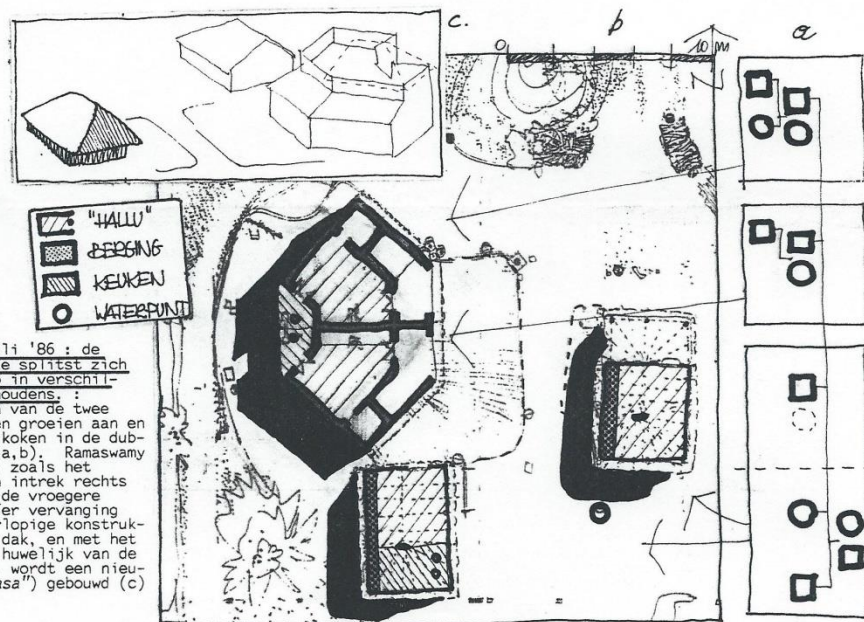


fig. 100.: juli '86: de basisfamilie splitst zich langzaam op in verschillende huishoudens. De gezinnen van de twee oudste zonen groeien aan en gaan apart koken in de dubbelwoning (a,b). Ramaswami zelf neemt, zoals het hoort, zijn intrek rechts van hen in de vroegere kookhut. Ter vervanging van de voorlopige constructie op het dak, en met het oog op het huwelijk van de derde zoon, wordt een nieuwe hut ("basa") gebouwd (c)

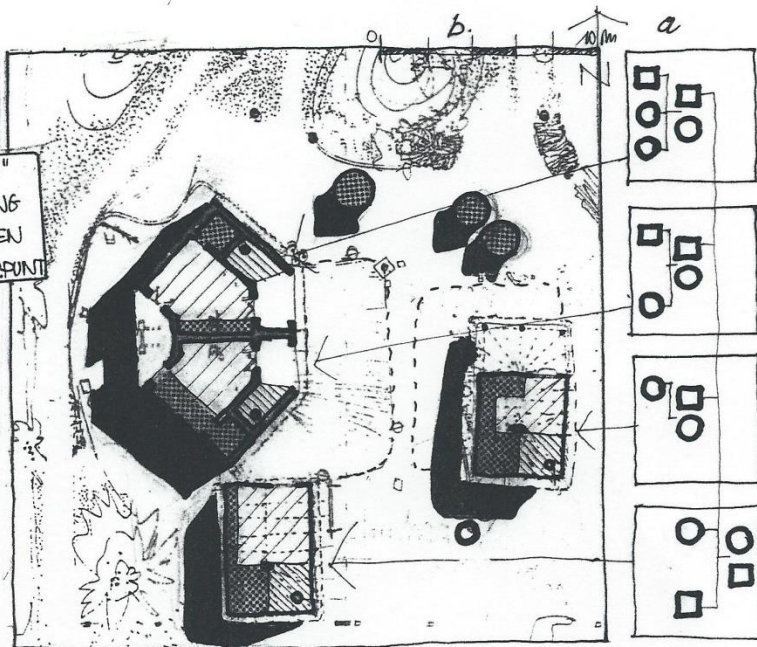


fig. 101.: maart '87 :
de huishoudens zijn netjes
uitgesplitst.
Het erf verdicht nog en
krijgt een extra artikula-
tie door tijdelijke rijst-
silo's (b).

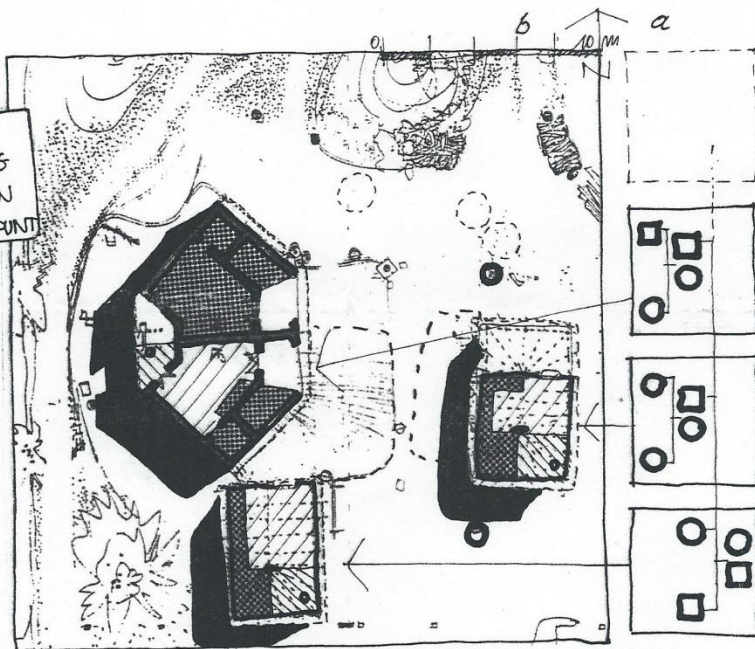
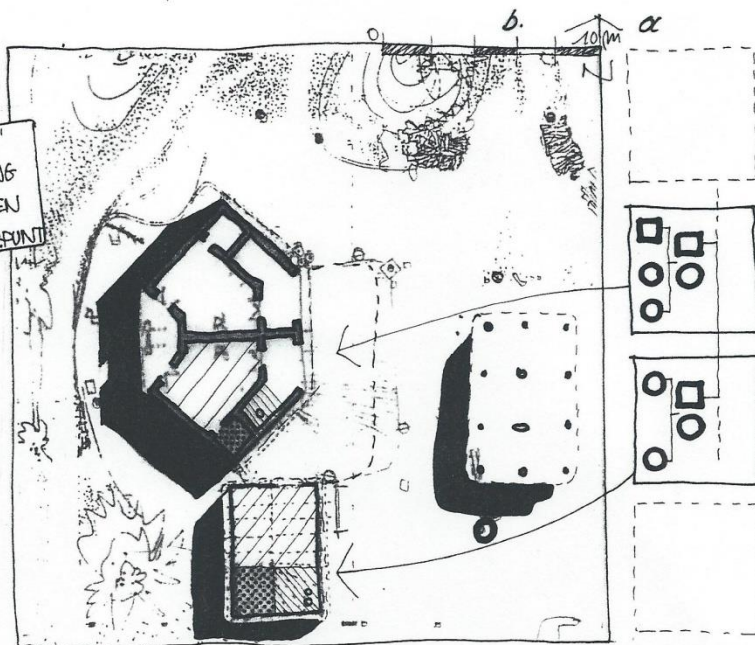


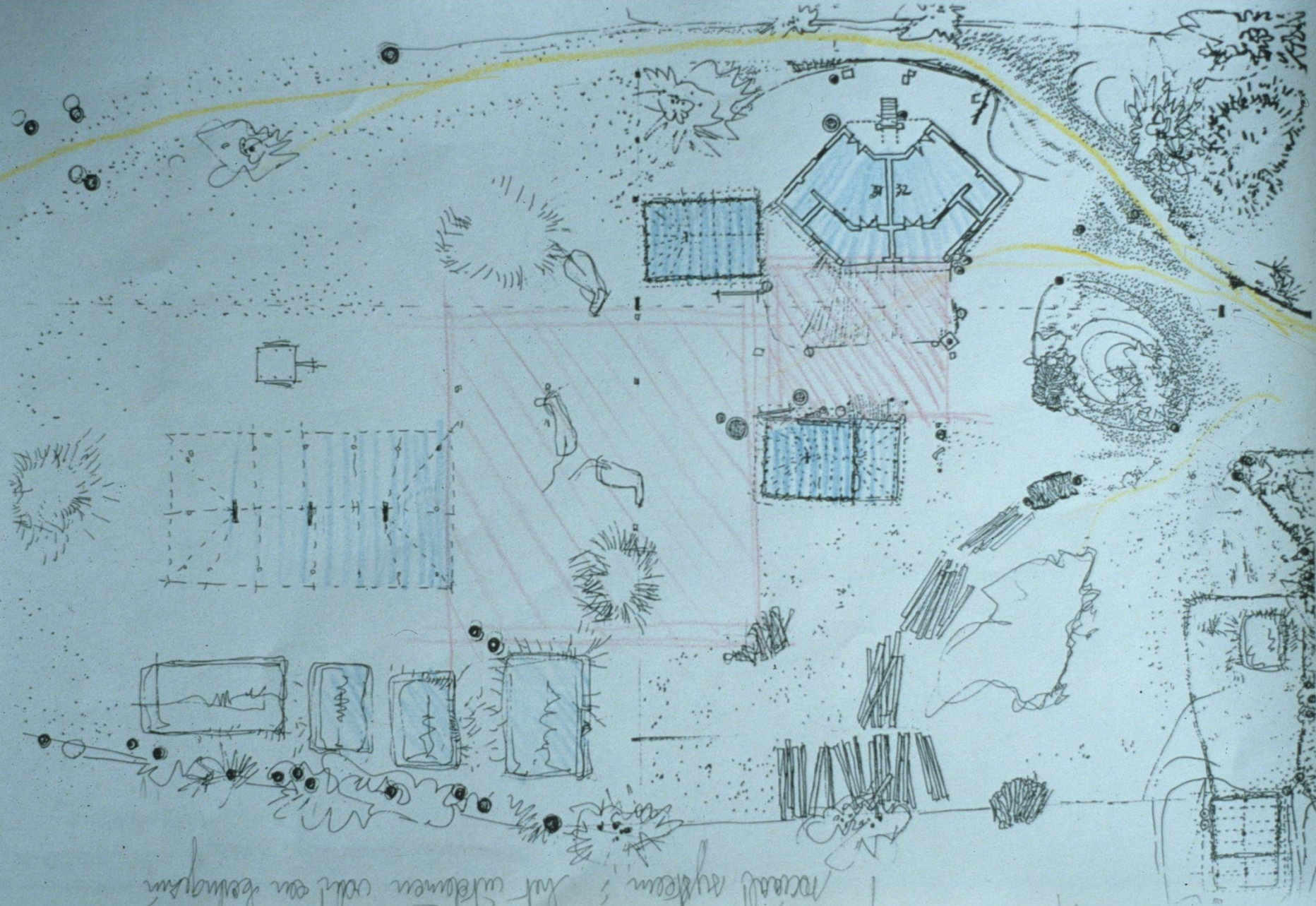
fig. 102.: januari '88.
het erf zwermt uit :
Nu wordt ook het vee en de
grond van Ramaswamy over de
zonen verdeeld. De oudste
zoon verhuist met dit alles
naar een nieuwe "basa" op
eigen grond, iets verderop.
De reden daarvan hangt vast
aan een konflikt met vader,
aan het bezetten van een
stuk grond ter bevestiging
van eigendomstitel en aan
de depreciatie van het
VRO-huis, dat "verkeerd
georiënteerd" (?) is en de
oorzaak zou geweest zijn
van de vele nachtmerries
en slapeloze nachten waar-
onder de verhuisde zoon
toen leed. Zijn vroeger
deel van de dubbelwoning
wordt als graanopslag inge-
lijfd.



fig. 103.: december '88 :
 het cluster loopt leeg :
 Het cluster lijkt definitief over zijn hoogtepunt heen. Na een (politiek) geschil met de Chendranagar bewoners verhuist nu ook Ramaswamy en bouwt zich, samen met zijn oudste zoon, een nieuw traditioneel "illu" (dikke lemen muren en grasdak) aan de rand van Muttaipalem. In het cluster blijven nog slechts twee gezinnen. Een "basa" wordt stalling terwijl de noordelijke helft van de dubbelwoning onbewoond en leeg blijft.



Handel van steen en zand
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Dear students, to conclude,

Thanks for choosing and attending my ELG2 course on Architectural Anthropology with dedication and engagement.

I do hope it enabled you to think architecture in its widest possible inter-cultural meaning.

With confidence I say that you identified unknown potentials and intrinsic qualities representing your design attitude and skills.

What can I wish those of you who will graduate in a few weeks and take up responsibilities as young professionals:

I whatever you will undertake, I wish all of you a strong sense and mix of

PASSION, PRAGMATISM, EMPATHY and RESILIENCE