

(3) Equipment for the agricultural extension service

Equipment for the agricultural extension service is shown in Table 5.1.4.

5.10 Proposed Project Facilities

(1) Zone I

- |    |  |                |
|----|--|----------------|
| a) | Drainage improvement works   |                |
| 1) | Improvement of Balili river  | 425 m          |
| 2) | Improvement of Bolo creek and Bayabas creek<br>(Regulation gate : 1 place)                                       | 1,400 m        |
| 3) | New flood canal of Bayabas   | 500 m          |
| 4) | Road crossing box culvert No.1 & No.2 at Bayabas   | 2 sites        |
| 5) | Construction of a consolidation dam (CL = 20 m)<br>and refuse inflow protection screen in front<br>of Dinog Cave | 1 set          |
| b) | Irrigation facilities works  |                |
| 1) | Improvement of Bayabas pond  | 1 site         |
| 2) | Construction of Puguis pond  | 1 site         |
| 3) | Construction of Buyagan pond   | 2 sites        |
| 4) | Construction Puguis (Gayadan) deepwell works<br>(Q = 0.6 m <sup>3</sup> /min)                                    | 1 site         |
|    | (Q = 0.3 m <sup>3</sup> /min)  | 1 site         |
| 5) | Construction of stock farm deepwell works<br>(Q = 0.3 m <sup>3</sup> /min)                                       | 1 site         |
| c) | Inland pollution protection works  |                |
| 1) | Construction of sewage canal   | 5,000 m        |
| 2) | Provision of refuse dumping truck  | 2 units        |
| d) | Rural community center works   | Total 2 houses |
|    | Puguis Barangay  | 1 house        |
|    | Pico Barangay  | 1 house        |

(2) Zone II

- |    |  |       |
|----|--|-------|
| a) | Irrigation facilities works  |       |
| 1) | Construction of distribution facilities at outlet<br>of Dinog Cave | 1 set |

- |     |  |                             |
|-----|--|-----------------------------|
| 2)  | Construction of ponds                                  | 8 sites                     |
|     | Bahong No.1                      Alapang No.2          |                             |
|     | Bahong No.2                      Alapang No.3          |                             |
|     | Bahong No.3                      Peril                 |                             |
|     | Alapang No.1                      Alno                 |                             |
| 3)  | Construction of intake facilities                      |                             |
|     | Bahong intake weir                                     | 3 sites                     |
|     | Alapang intake weir                                    | 1 site                      |
|     | Alno intake weir                                       | 2 sites                     |
| b)  | Drinking and domestic water supply system works        |                             |
|     | Bahong deepwell and pump works                         | 200 l/min x 4 pump stations |
|     | Alapang deepwell and pump works                        | 200 l/min x 1 pump station  |
|     | Alno deepwell and pump works                           | 200 l/min x 1 pump station  |
| c)  | Improvement of rural road                              |                             |
|     | Samuyao - Peril route (①-②)                            | 2.0 kms                     |
|     | Samuyao - Alapang route (①-③)                          | 1.1 kms                     |
|     | Camp Dangwa - Alno route (④-③-⑤-⑬)                     | 3.8 kms                     |
|     | Camp Dangwa - Sadag route (⑥-⑨-⑦)                      | 3.4 kms                     |
|     | Tomay - Bahong route (⑧-⑨)                             | 1.3 kms                     |
|     | Camp Dangwa - Mae Bahong route (⑩-⑪)                   | 0.7 kms                     |
|     | West Alno - East Alno route (⑫-⑤-⑭)                    | 1.6 kms                     |
| d)  | Construction of rural road (Farm to market road) works |                             |
|     | North Sadag - East Alno route (⑦-⑫)                    | 1.5 kms                     |
|     | Sadag - East Alno route (⑭-⑮)                          | 1.6 kms                     |
|     | North Bahong - Alapang route (③-⑯)                     | 0.9 kms                     |
|     | West Alno - Peril route (②-⑰)                          | 1.0 kms                     |
| e)  | Rural community center works                           | Total      3 houses         |
|     | Bahong Barangay  | 1 house                     |
|     | Alapang Barangay                                       | 1 house                     |
|     | Alno Barangay  | 1 house                     |
| (3) | Zone III   |                             |
| a)  | Rural road improvement works                           |                             |
|     | Capitol - Bineng - Japos (⑱-⑳-㉑)                       | 6.2 kms                     |
|     | Bineng - Boleweng (㉒-㉓)                                | 2.5 kms                     |

- b) Construction of rural road (Farm to market road) works  
Boleweng - Lower Bineng route (22-23) 2.8 kms
- c) Irrigation facilities works
  - 1) Bineng CIS improvement
    - Intake 1 site
    - Existing canal 3.8 kms
    - New canal 2.2 kms
    - Division box 6 sites
  - 2) New intake facilities works
    - Wangal intake 1 site
    - Bineng intake 1 site
  - 3) Regulating pond 1 site
- d) Drinking and domestic water supply system works
  - 1) Bineng deepwell and pump 200 l/min x 1 pump station
- e) Rural community center works
  - Bineng Barangay 1 house
  - Wangal Barangay 1 house
- f) Rural electrification works
  - Extension transmission line 6 kms
- (4) Equipments
  - 1) Agricultural-extension equipments Lump sum
  - 2) Agro-metrology equipment Lump sum
  - 3) Water-quality-test equipment Lump sum
  - 4) Office equipments Lump sum  
(vehicle, office machine, and so on)

Note : Location of ○-mark is shown in the Fig.5.4.1.

Table 5.1.1 Future Labor and Farm Inputs Requirement for Selected Crops

Crops	Unit Yield (tons)	Seed / Seedling (kg)	Labor		Animal Power (day)	Fertilizer			Chicken Manure (kg)	Insecticides #2		Fungicides #2	
			Family (M-D)	Hired (M-D)		Total (M-D)	N (kg)	P2O5 (kg)	K (kg)	Powder (kg)	Liquid (lit)	Powder (kg)	Liquid (lit)
Rice	2.5	60	181	9	190	5	50	0	0	0.0	1.5	0.0	1.5
C. Cabbage	20.0	1.12	222	87	309	0	210	30	50	1,000	0.0	4.0	2.0
Lettuce	14.0	0.95	190	93	283	0	180	0	40	2,000	0.0	8.0	11.0
Baguio beans	9.0	60	198	35	233	0	20	90	40	1,000	2.0	2.0	5.0
Garden peas	4.5	60	185	62	247	0	20	90	40	1,000	2.0	6.0	5.0
Green onion	11.5	250	136	87	223	0	90	210	210	1,000	0.0	1.0	4.0
Strawberry	14.0	80,000	611	204	815	0	170	170	190	1,000	0.0	5.0	12.0
Celery	24.0	1.50	215	32	247	0	180	0	40	2,000	0.0	3.0	4.0
Rose #1	39.0	60,000	535	275	810	0	140	140	180	2,000	2.0	5.0	20.0
Gladiolus #1	15.0	480	136	41	177	0	198	54	54	0	0.3	0.8	6.1

Remarks

#1 Production of roses and gladiolus are presented in 1,000 doz

#2 Insecticides : Powder Vegetox  
Liquid Tamaron, Thiodan, Hostation, Sumicidin  
Fungicides : Powder Manzate, Curzate, Elosal  
Liquid Dithane

Table 5.1.2 Production of Crops in the Project Area

ZONE Crops	Without Project			With Project		
	Area	Unit Yield	Prod'n	Area	Unit Yield	Prod'n
	(ha)	(t/ha)	(ton)	(ha)	(t/ha)	(ton)
<b>ZONE I</b>						
Strawberry	56	9.8	549	40	14.0	560
Vegetables #2	249	9.9	2,465	500	14.0	7,000
<b>ZONE II</b>						
Roses	60	25.0	1,500	59	39.0	2,301
Vegetables #2	283	9.9	2,802	266	14.0	3,724
Inter-crop #3	60			60		
-Vegetables	40	5.6	224	40	8.9	356
-Flower (Gradiolus)	20	7.4	148 #1	20	7.5	150 #1
<b>ZONE III</b>						
Rice	50	1.9	95	50	2.5	125
Vegetables #2	96	9.9	950	180	14.0	2,520
<b>Total Cropping Area</b>	854			1,155		
(Inter-cropping)	(60)			(60)		
<b>Total Production</b>						
Strawberry			549			560
Rose			1,500 #1			2,301 #1
Rice			95			125
Vegetables			6,441			13,600
Flower (Gradiolus)			148 #1			150 #1
#1 Unit : 1,000 doz #2 Vegetables include Lettuce, Chinese Cabbage, Green Onion, Baguio Bean, Garden Pea and Celery #3 Intercrops include Green Onion, Gladiolus and Celery Unit yield of intercrops was estimated at a half of the normal cropping						

Table 5.1.3

## Supply and Demand Projection of Vegetables in 2000

Region/Items	(Unit : ton/ha)			
	Leafy Vegetables	Fruit Vegetables	Leguminous Vegetables	Root, Bulbs Crops
<b>Demand in 1986 #1</b>				
Metro Manila	114,980	140,770	34,890	89,970
Ilocos Region	71,500	79,710	23,160	37,130
Central Luzon Region	68,850	100,530	22,500	54,090
Total Demand	255,328	321,010	80,550	181,190
<b>Supply and Demand in FY 2000</b>				
<b>Metro Manila</b>				
Demand in FY 2000	153,720	219,980	54,200	140,590
<b>Ilocos Region</b>				
Demand in FY 2000	84,450	110,190	31,820	51,330
Production (in 1986) #2	88,130	98,910	18,200	144,800
Surplus/Defisit	3,680	-11,280	-13,620	93,470
<b>Central Luzon Region</b>				
Demand in FY 2000	71,760	122,810	27,320	66,080
Production (in 1986) #2	5,960	54,580	17,100	71,000
Surplus/Defisit	-65,800	-68,230	-10,220	4,920
<b>Total</b>				
Demand in FY 2000	309,930	452,980	113,340	258,000
Production (in 1986)	94,090	153,490	35,300	215,800
Surplus/Defisit	-215,840	-299,490	-78,040	-42,200

Remarks : Leafy vegetables : Cabbage, Green Onion, Mustard, Pechay, and others  
 Fruit vegetables : Ampalaya, Calabasa, Chayote, Eggplant, Potala, Pepino  
 Pepper, Tomato, Upo, and other fruit vegetables  
 Leguminous : Habichuelas, Sitao, Mongo Bean, Soybeans, and others  
 Root, bulb crops : Onion, Garlic, Irish Potato, Camote and Cassava

#1 : See Table B.2.11

Demand of vegetables was estimated as below

Demand in FY 2000 = Demand in 1986 x ( Pg + Ie x Pi ) 14

Pg = Population growth rate #3 (%)

Metro Manila 2.80%

Ilocos 1.90%

C. Luzon 1.00%

Ie = Income elasticity #4

Leafy Vegetable -0.16

Fruit vegetables 0.10

Leguminous 0.09

Roots, bulbs. 0.10

Pi = Projected growth rate of annual per capita income (4.4 %) #5

Source : #2 Bureau of Agricultural Statistics

#3 NCSO

#4 Population Food Requirement 1984-2000, NEDA

#5 Medium-Term Philippine Development Plan 1987-1992

Table 5.1.4 Procurement Cost of O & M Equipment  
for Agricultural Extension Service

( Unit : 10<sup>3</sup> ₱ )

Equipment	Unit Price	Quantity	Amount
<b>Vehicles</b>			
— 4 wheel-drive jeep	300	1	300
— 4 wheel-drive pick-up	280	1	280
— Motorcycles	20	3	60
— Spare parts (10 % of above)			64
<b>Office Equipment</b>			
— Photo copier	15	1	15
— Micro computer / Word processor with accessories	90	1	90
— Audio visual aid	15	1	15
— Camera with accessories	12	1	12
— Furniture	20	Various	20
— Others	10	Various	10
<b>Agricultural Equipment *1</b>	<b>24</b>	<b>Various</b>	<b>24</b>
<b>Total</b>			<b>890</b>

**Remarks**

\*1 : Agricultural equipment include shovel, knopsack sprayers, hoe, etc..

Table 5.1.5 Annual O & M Cost for Extension Service

(Unit : peso)			
Item	Unit Cost	Quantity	Amount
<b>Salaries</b>			
Extension workers	16,000 /year	4	64,000
Information officer	16,000 /year	1	16,000
Drivers	12,000 /year	2	24,000
Living allowance	6,000 /year	7	42,000
Traveling expense	400 /month	7	33,600
Gasoline and oil for vehicles #1	4,000 /month		48,000
Repaire and regular maintenance for vehicles (5 % of procurement cost)	32,000 /year		32,000
Agricultural inputs #2	15,000 /year		15,000
Office supplies	1,000 /month		12,000
Sub-total			286,600
Contingency (5 % of above)			14,300
<b>TOTAL</b>			<b>300,900</b>

**Remarks**

#1 : Gasoline 600 lit / month x 6 pesos / lit = 3,600 pesos  
Oil 400 pesos

#2 : Provision of agricultural inputs for contact farmers  
(10,000 pesos / ha of production cost) x (0.1 ha / site) x (5 sites) x (3 times / year)



Table 5.1.6 Farm Family Budget under Without Project Condition

Item	Zone-I	Zone-II	Zone-III
Farm Size (Net Farm Area)	0.87 ha (0.70) ha	0.70 ha (0.46) ha	0.91 ha (0.65) ha
Net Planted Area	1.32 ha	1.02 ha	1.35 ha
Strawberry	0.23 ha		
Rose		0.18 ha	
Paddy			0.47 ha
Vegetables #1	1.09 ha	0.84 ha	0.88 ha
Intercropping		0.18 ha	
Livestock (pig)	1 head	1 head	1 head
<b>Total Net Income (A)</b>	<b>56,900</b>	<b>52,500</b>	<b>33,600</b>
Net Farm income	52,700	49,400	28,000
Strawberry	21,800		
Rose		22,600	
Paddy			2,700
Vegetables #1	28,900	22,300	23,300
Intercropping #2		2,500	
Livestock	2,000	2,000	2,000
Non-farm income	4,200	3,100	5,600
<b>Total Expenses (B) #3</b>	<b>50,200</b>	<b>45,900</b>	<b>32,600</b>
Living expences (Household size)	49,500 (5.8) persons	45,700 (6.0) persons	32,300 (5.6) persons
Food	27,100	24,800	17,900
Non-food	22,400	20,900	14,400
Land tax	700	200	300
<b>Net Reserve (A-B)</b>	<b>6,700</b>	<b>6,600</b>	<b>1,000</b>

#1 Vegetables : Lettuce, Garden pea, Green onion, Chinese Cabbage, Baguio bean, Celery

#2 Intercropping : Celery, G. onion, Gladiolus

Production value of intercropping was estimated half of the normal cropping.

#3 Expences was estimated as below :

Total Expences = Living Expences + Land tax

Living Expences = Total Net Income x A

Food Expences = Total Expences x B

Non-food Expences = Living Expences - Food Expences

Income class (pesos/year)	Average Income	Average Expences	A	Food Expences	B
	(C)	(D)	(D/C)	(E)	(E/D)
20,000-29,000	24,800	21,000	85%	12,800	61%
30,000-39,000	33,700	32,300	96%	17,800	55%
40,000-59,000	44,400	38,600	87%	20,800	54%
60,000-99,000	78,600	49,000	62%	21,600	44%
100,000 and over	144,000	86,100	60%	36,100	42%

Remarks : Average income and expenditure for rural areas in Region I with family size of five persons

Source : 1985 Family Income and Expenditures survey, NCSO

**Table 5.1.7** Farm Family Budget under With Project Condition

Item	Zone-I	Zone-II	Zone-III
Farm Size (Net Farm Area)	0.87 ha (0.70) ha	0.70 ha (0.46) ha	0.91 ha (0.65) ha
Net Planted Area	2.39 ha	0.99 ha	2.13 ha
Strawberry	0.18 ha		
Rose		0.18 ha	
Paddy			0.47 ha
Vegetables #1	2.21 ha	0.81 ha	1.66 ha
Intercropping		0.18 ha	
Livestock (pig)	1 head	1 head	1 head
<b>Total Net Income (A)</b>	<b>129,000</b>	<b>83,000</b>	<b>82,500</b>
Net Farm Income	124,800	79,900	76,900
Strawberry	27,300		
Rose		39,100	
Paddy			3,200
Vegetables #1	95,500	35,000	71,700
Intercropping #2		3,800	
Livestock	2,000	2,000	2,000
Non-farm income	4,200	3,100	5,600
<b>Total Expenses (B) #3</b>	<b>80,600</b>	<b>53,200</b>	<b>53,300</b>
Living expenses (Household size)	77,400 (5.8) persons	51,500 (6.0) persons	51,200 (5.6) persons
Food	32,500	22,700	22,500
Non-food	44,900	28,800	28,700
Land tax	700	200	300
Irrigation fee	2,500	1,500	1,800
<b>Net Reserve (A-B)</b>	<b>48,400</b>	<b>29,800</b>	<b>29,200</b>

#1 : Vegetables : Lettuce, Garden pea, Green onion, Chinese Cabbage, Baguio bean, Celery

#2 Intercropping : Celery, G. onion, Gladiolus

Production value of intercropping was estimated half of the normal cropping.

#3 Expenses was estimated as below :

Total Expenses = Living Expenses + Land tax + Irrigation fee

Living Expenses = Total Net Income x A

Food Expenses = Total Expenses x B

Non-food Expenses = Living Expenses - Food Expenses

Income class (pesos/year)	Average Income (C)	Average Expences (D)	A (D/C)	Food Expences (E)	B (E/D)
20,000-29,000	24,800	21,000	85%	12,800	61%
30,000-39,000	33,700	32,300	96%	17,800	55%
40,000-59,000	44,400	38,600	87%	20,800	54%
60,000-99,000	78,600	49,000	62%	21,600	44%
100,000 and over	144,000	86,100	60%	36,100	42%

Remarks : Average income and expenditure for rural areas in Region I with family size of five persons

Source : 1985 Family Income and Expenditures survey, NCSO

Table 5.2.1 Summary of Water Balance in Dry Season

Irrigation block	Net* beneficial farm land	Amount of water source	Present water use for irrigation			Water source availability with project			Irrigation water requirement with project			Supplement-		Remarks	
			Volume	Mean discharge	(cu.m / s)	Volume	Mean discharge	(cu.m / s)	Volume	Mean discharge	(cu.m / s)	Minimum discharge	tation by well		Total deficit
		(ha) ('000 cu.m)	('000 cu.m)	(cu.m / s)	(cu.m / s)	('000 cu.m)	(cu.m / s)	(cu.m / s)	(cu.m / s)	(cu.m / s)	(cu.m / s)	(cu.m / s)	('000 cu.m)	('000 cu.m)	
I - 1	43	** 376 (3,733)	115.5 (123.3)	0.0073	0.0210	331 (3,285)	0.0146	0.0079	0.0126	198.0 (218.9)	0.0171	-	8.1	4.9	Standard year : 1978
I - 2	42	** 260 (657)	112.9 (120.5)	0.0072	0.0146	229 (578)	0.0146	-	0.0123	193.4 (213.8)	0.0167	-	9.9	3.5	1978
I - 3	74	** 399 (4,134)	183.2 (183.2)	0.0116	-	-	-	-	0.0121	191.0 (193.1)	0.0164	193.1	-	-	1984
(I - 3 - 1)	(32)				0.0223	351 (3,638)	0.0079	-	0.0092	145.5 (147.1)	0.0125	-	13.3	5.7	
(I - 3 - 2)	(42)				-	-	-	-	0.0121	191.0 (193.1)	0.0164	193.1	-	-	
II - 1	13	63 (646)	36.8 (36.8)	0.0023	0.0035	55 (568)	0.0013	0.0013	0.0039	61.8 (62.6)	0.0063	26.5	3.7	2.9	1984
II - 2	19	112 (1,260)	55.2 (60.4)	0.0035	0.0063	99 (1,109)	0.0031	0.0031	0.0057	90.4 (101.8)	0.0091	25.7	6.2	5.5	1978
II - 3	21	215 (1,753)	59.7 (64.3)	0.0038	0.0120	189 (1,543)	0.0062	0.0062	0.0065	101.8 (111.5)	0.0101	-	5.3	5.0	1983
II - 4	49	305 (1,287)	149.4 (160.8)	0.0095	0.0170	268 (1,133)	0.0150	0.0150	0.0152	239.6 (265.6)	0.0236	-	33.7	18.9	1981
II - 5	8	77 (521)	23.4 (25.2)	0.0015	0.0043	68 (458)	0.0030	0.0030	0.0025	39.1 (43.3)	0.0038	-	1.9	1.9	1981
II - 6	20	161 (1,165)	59.5 (59.5)	0.0038	0.0090	142 (1,025)	0.0070	0.0070	0.0060	95.1 (96.2)	0.0098	-	5.3	3.4	1984
II - 7	15	77 (867)	43.6 (47.7)	0.0028	0.0043	68 (763)	0.0022	0.0022	0.0045	71.4 (80.4)	0.0073	26.6	3.4	3.1	1978
II - 8	7	58 (474)	19.9 (21.4)	0.0013	0.0032	51 (417)	0.0018	0.0018	0.0022	33.9 (37.2)	0.0034	-	4.9	3.8	1983
III - 1	70	1,282 (14,229)	296.5 (405.8)	0.0188	0.0715	1,128 (12,522)	0.0516	0.0516	0.0294	463.4 (581.8)	0.0500	-	-	-	1979

\* : These figures are excluded land acquisition such as proposed road and irrigation facilities from original net beneficial area.

\*\* : Besides these, Zone I has taken about 280,000 cu.m from the Balili river in the dry season.

Figures in the parenthesis are through a year.

Table 5.2.2 Proposed Irrigation Facilities

Irrigation block	Intake facilities	Diversion conduit m	Pond m <sup>3</sup>	Lateral conduit m	Division box nos.	Delivery conduit m	Water tank nos.	Others
I-1	deversoir	-	5,900	1,800 125	9	3,700 80	74	
I-2	-	-	4,000*1	1,400 125	9	3,600 80	72	
I-3-1	deversoir	-	8,000	900 125	7	2,750 80	55	
I-3-2	-	-	-	2,500 125	8	3,350 80	67	3 deep wells
II-1	20m width	400 200	3,800	550 125	4	1,100 80	22	(well*2) 200 m, $\phi$ 80
II-2	10m width	50 200	6,700	900 125	6	1,600 80	32	(well*2) 200 m, $\phi$ 80
II-3	30m width	300 200	5,900	1,600 125	6	1,750 80	35	
II-4	-	-	20,700*1	4,100 125	20	4,250 80	85	
II-5	} 30m width	200 200	1,500	600 125	3	700 80	14	
II-6		400 200	3,300	1,600 125	7	1,750 80	35	
II-7	10m width	150 200	4,000	2,600 125	10	1,250 80	25	(well*2) 200 m, $\phi$ 80
II-8	20m width	900 200	4,100	1,100 125	3	600 80	12	
III-1-1	20m width	-	-	1,200 125	3	850 80	17	
III-1-2	20m width	600 300	-	4,200 125	25	2,500 80	50	regulating pond (500m <sup>3</sup> ), rehabilitation of Bineng CIS canal (3500 m) with intake weir
Total		3,000	67,900	25,050	120	29,750	595	

\*1 : Dam type

\*2 : Joint use with drinking water supply

Table 5.5.1 Water Consumption

Area	Water supply	Mean daily water supply (cu.m/day)	Max. daily water supply (cu.m/day)
Area II-1	Drinking & Domestic	221	265.2
	Livestok	4.5	6.8
	Washing & Spraying	17.0	25.5
	Total	242.5	297.5
Area II-2	Drinking & Domestic	242.6	291.1
	Livestok	4.5	6.8
	Washing & Spraying	17.0	25.5
	Total	264.1	323.4
Area II-3	Drinking & Domestic	232.8	279.4
	Livestok	7.9	12.0
	Washing & Spraying	17.0	25.5
	Total	257.7	316.9
Area II-4	Drinking & Domestic	138.9	166.7
	Livestok	4.7	7.1
	Washing & Spraying	21.7	32.6
	Total	165.3	206.4
Area II-5	Drinking & Domestic	244.8	293.8
	Livestok	7.3	11.0
	Washing & Spraying	15.7	23.6
	Total	267.8	328.4
Area II-6	Drinking & Domestic	217.1	260.5
	Livestok	7.1	10.7
	Washing & Spraying	18.3	27.5
	Total	242.5	298.7
Area III-1	Drinking & Domestic	187.5	225.0
	Livestok	6.1	9.3
	Washing & Spraying	26.7	40.1
	Total	220.3	274.4
Total	Drinking & Domestic	1484.7	1518.4
	Livestok	42.1	63.7
	Washing & Spraying	133.4	200.3
	Total	1660.2	2045.7

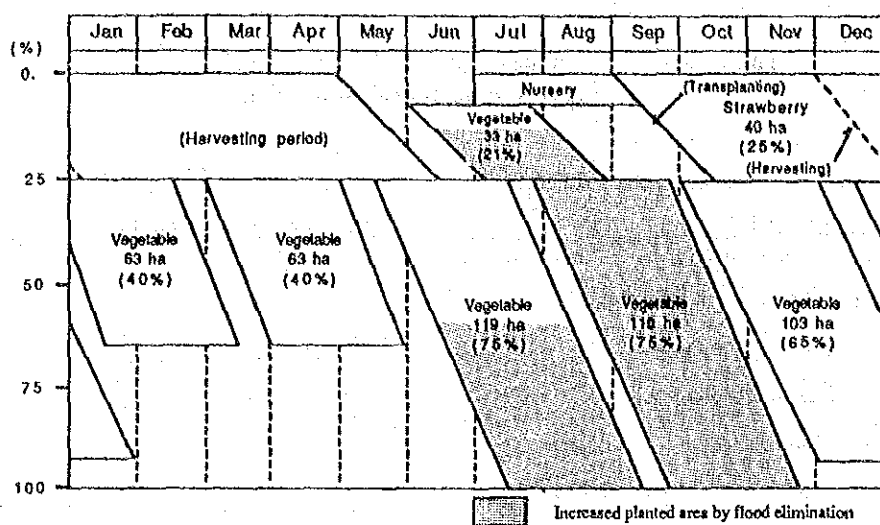
Table 5.9.1 Procurement Cost of Project Office Equipment  
for Implementation and O & M

( Unit : 10 <sup>3</sup> P )			
Equipment	Unit Price	Quantity	Amount
<b>Vehicles</b>			
— 4 wheel-drive jeep	300	2	600
— 4 wheel-drive pick-up	280	1	280
— Motorcycles	20	3	60
— Spare parts (10 % of above)			94
<b>Office Equipment</b>			
— Photo copier	15	1	15
— Micro computer / Word processor with accessories	90	1	90
— Type writer	30	2	60
— Audio visual aid	15	1	15
— Camera with accessories	12	1	12
— Furniture	24	Various	24
— Others	10	Various	10
<b>Observation Unit</b>			
Metorological observation equipment		Ls.	800
Water quality test equipment		Ls.	300
<b>Total</b>			<b>2,360</b>

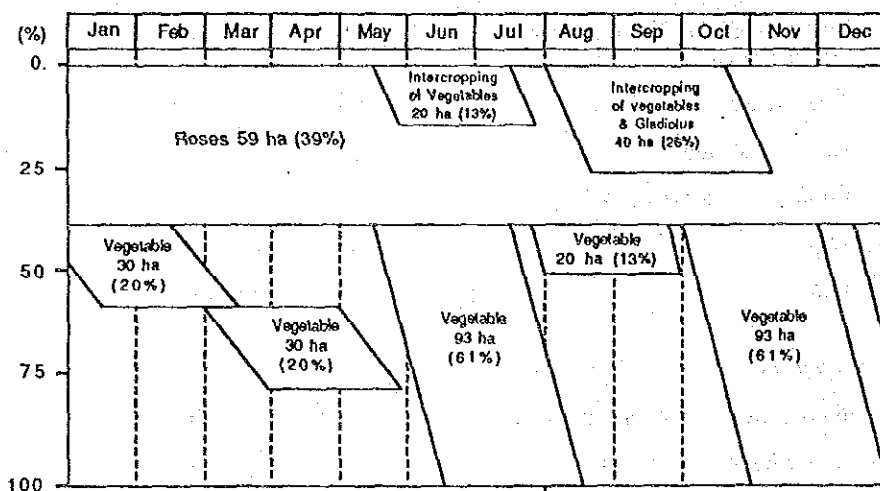
Table 5.9.2 Procurement Cost of O & M Equipment for Garbage Disposal

( Unit : 10 <sup>3</sup> P )			
Equipment	Unit Price	Quantity	Amount
Garbage truck	800	2	1,600
<b>Total</b>			<b>1,600</b>

### Zone-I (Net 159 ha)



### Zone-II (Net 152 ha)



### Zone-III (Net 70 ha)

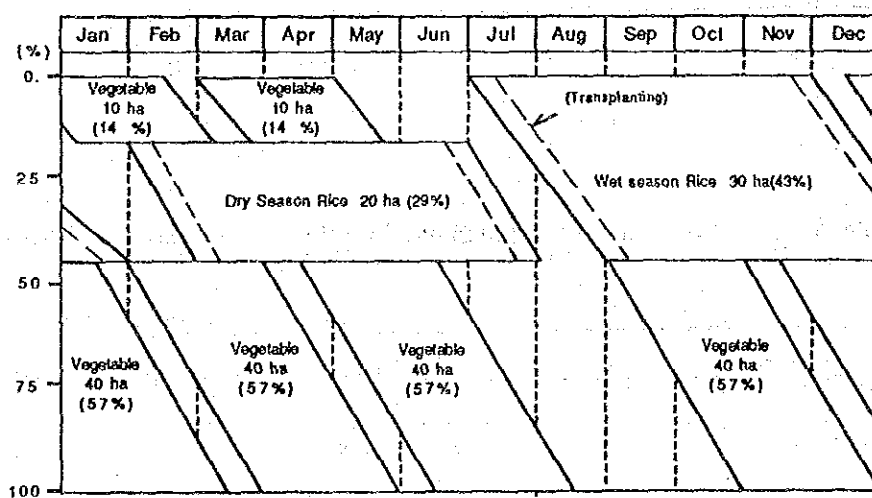


Fig. 5.1.1 Proposed Cropping Pattern





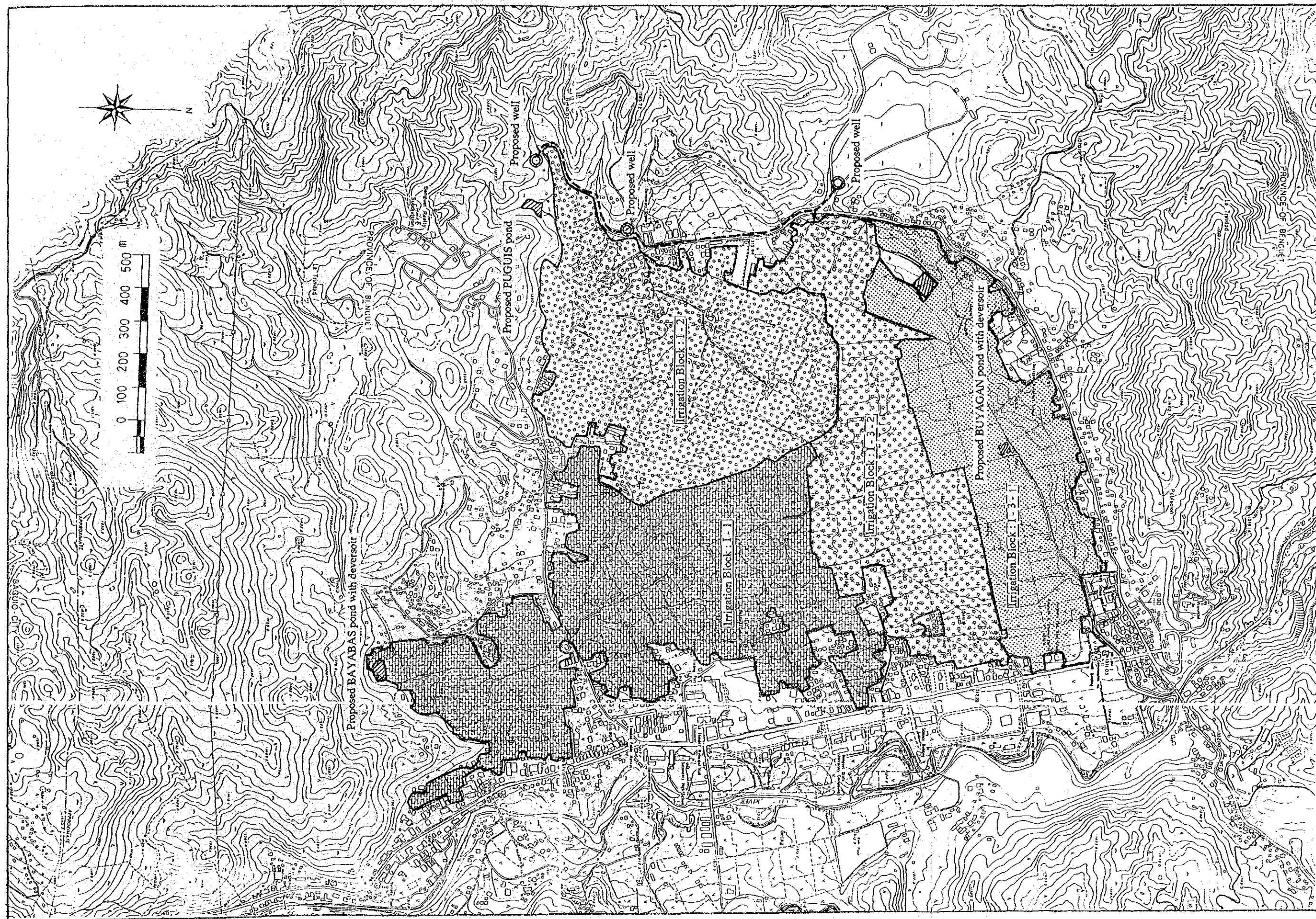


Fig. 5.2.1 Proposed Irrigation Block in Zone I

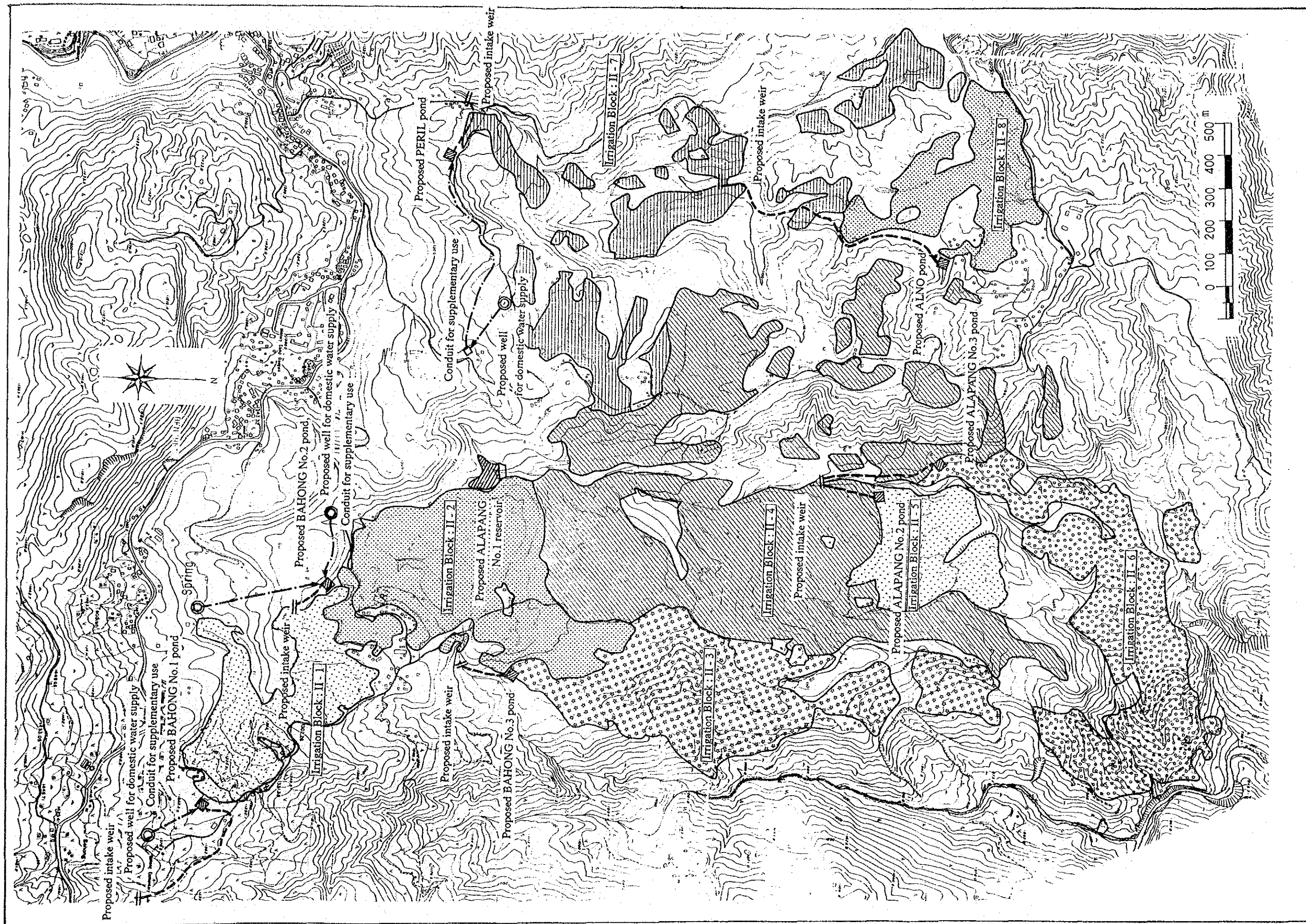


Fig. 5.2.2 Proposed Irrigation Block in Zone II



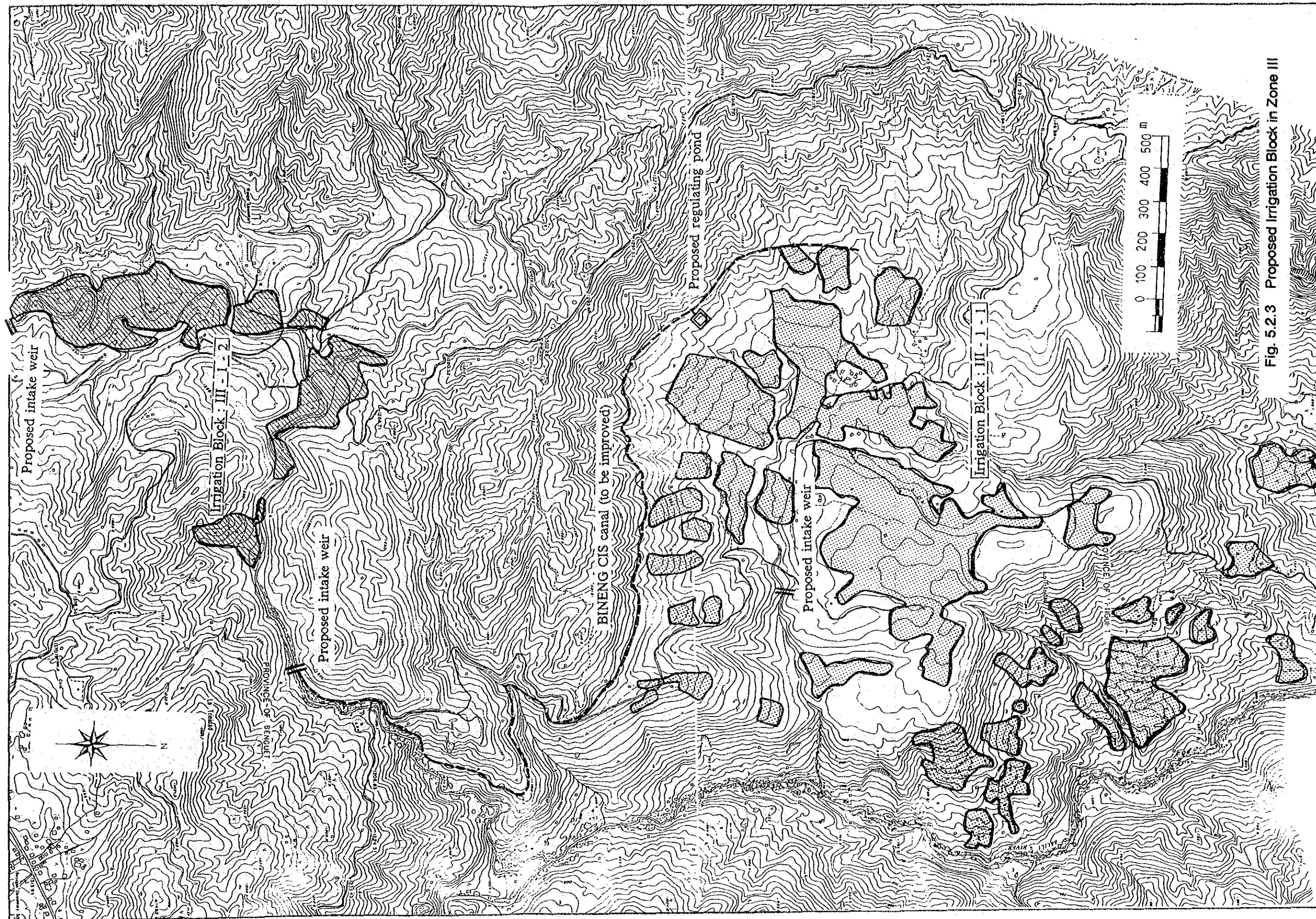


Fig. 5.2.3 Proposed Irrigation Block in Zone III



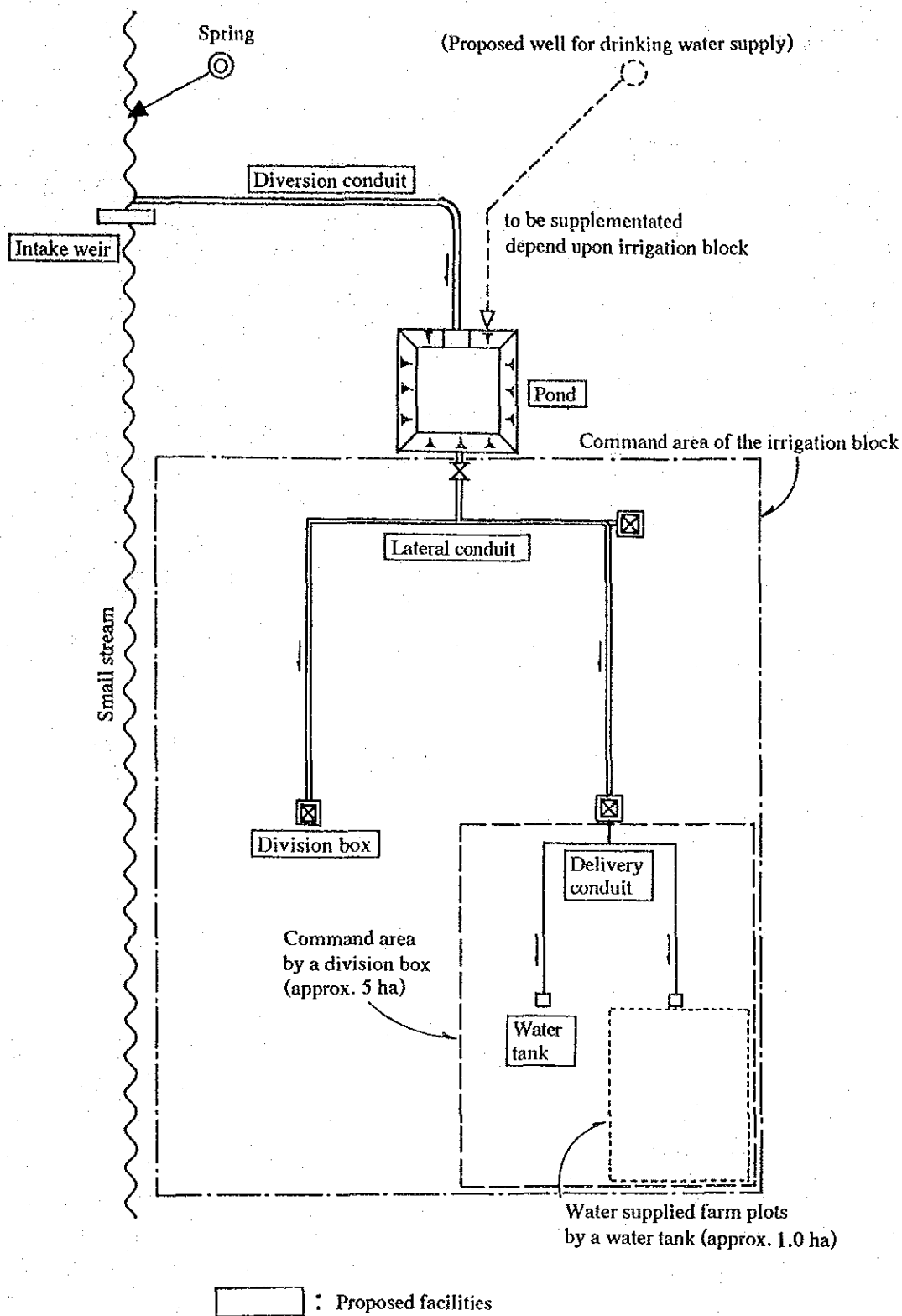


Fig. 5.2.4 Schematic Diagram of Proposed Irrigation System

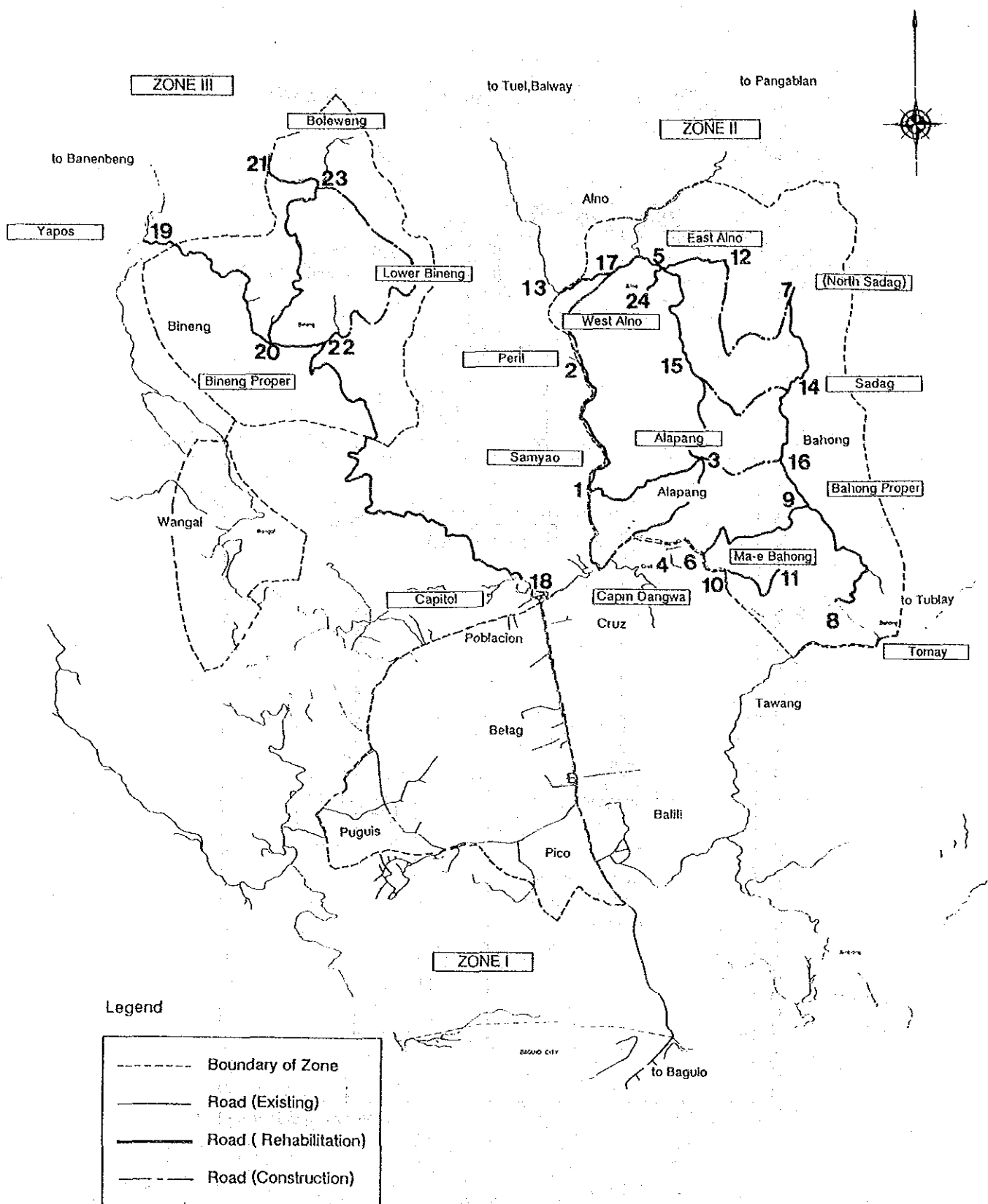


Fig. 5.4.1 Plan of Road Rehabilitation and Construction

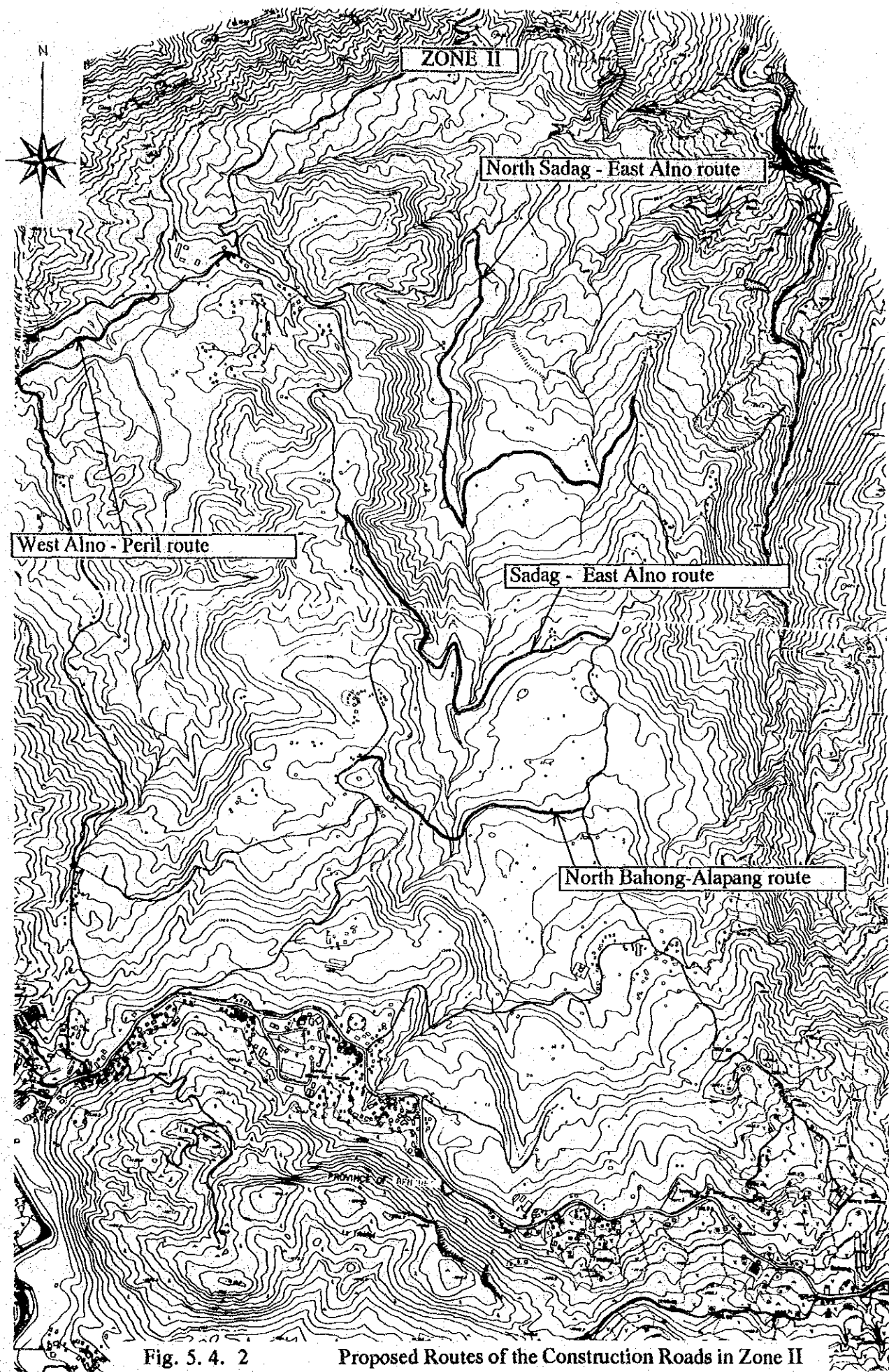
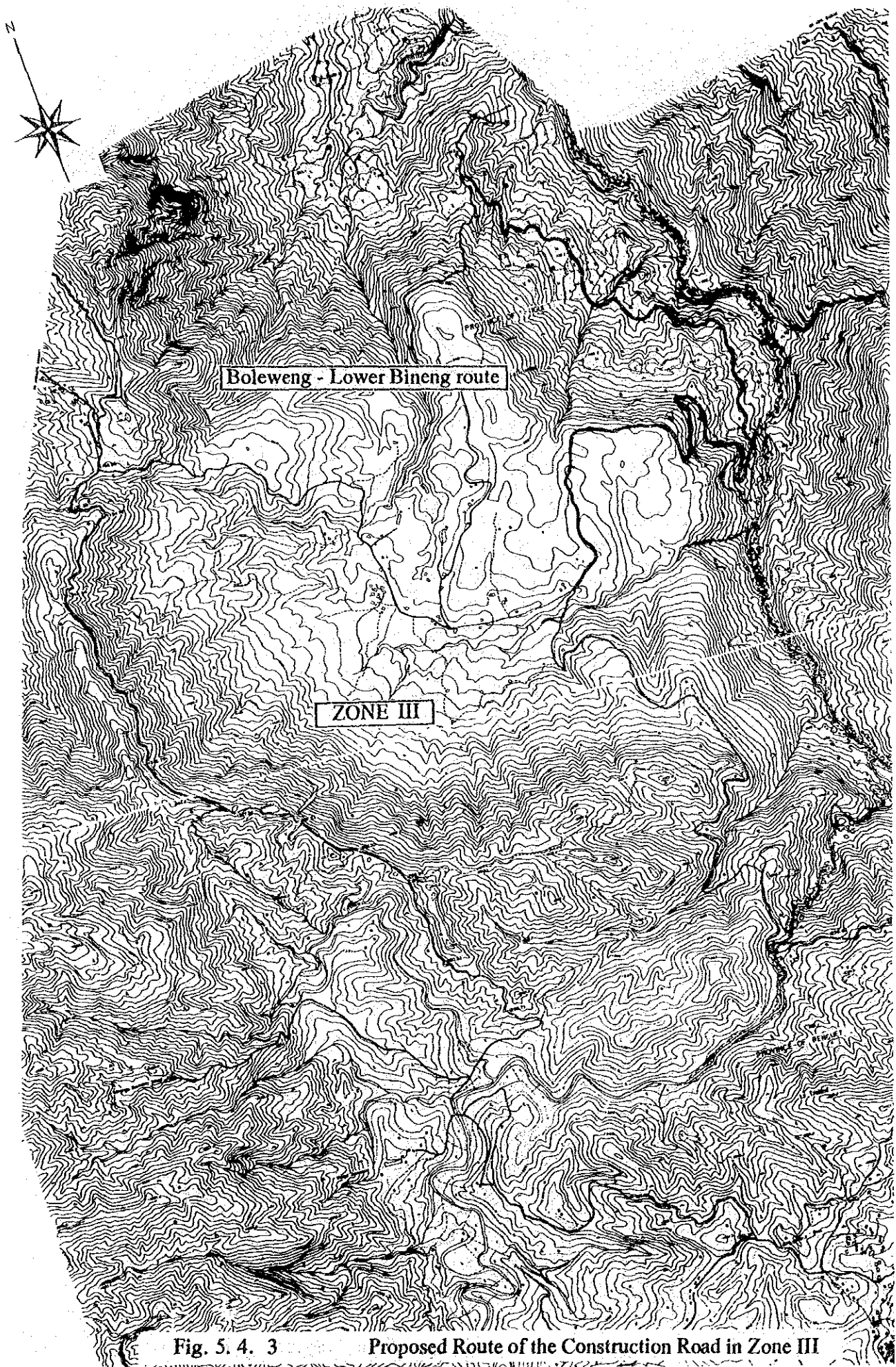


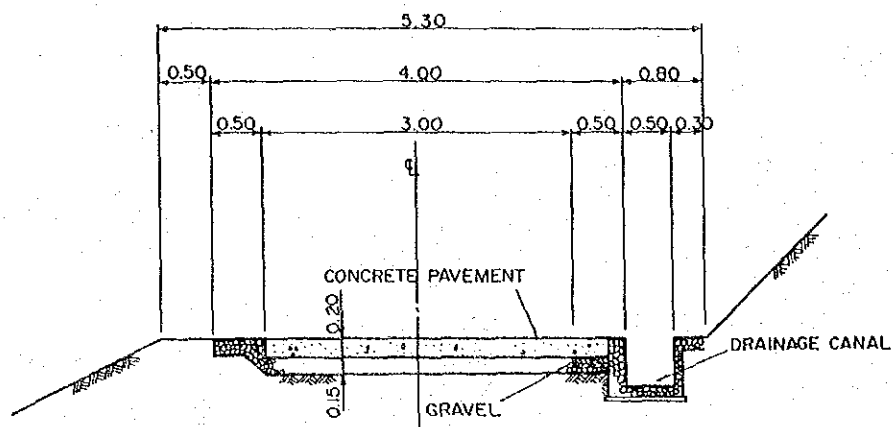
Fig. 5. 4. 2

Proposed Routes of the Construction Roads in Zone II

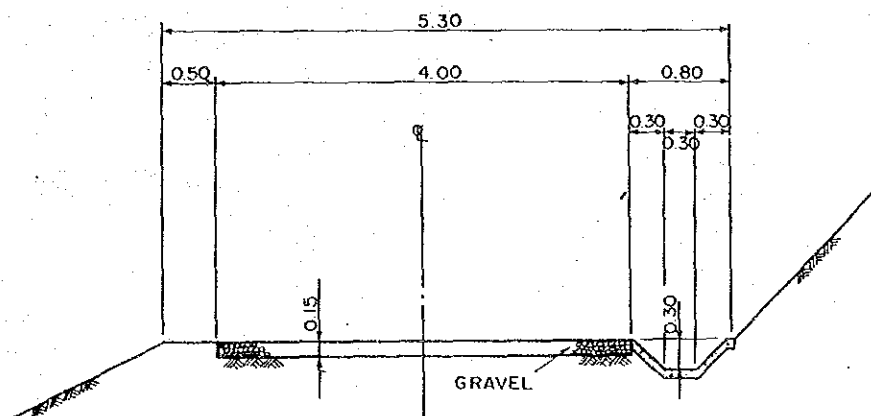




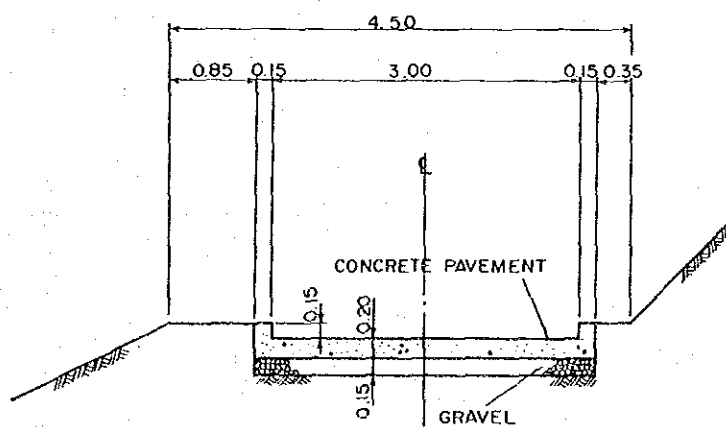




STANDARD SECTION



STANDARD SECTION  
NEW CONSTRUCTION ROAD  
SCALE 1 : 50



STANDARD SECTION  
WATERWAY ROAD

Fig. 5.4.4 Standard Section of the Road

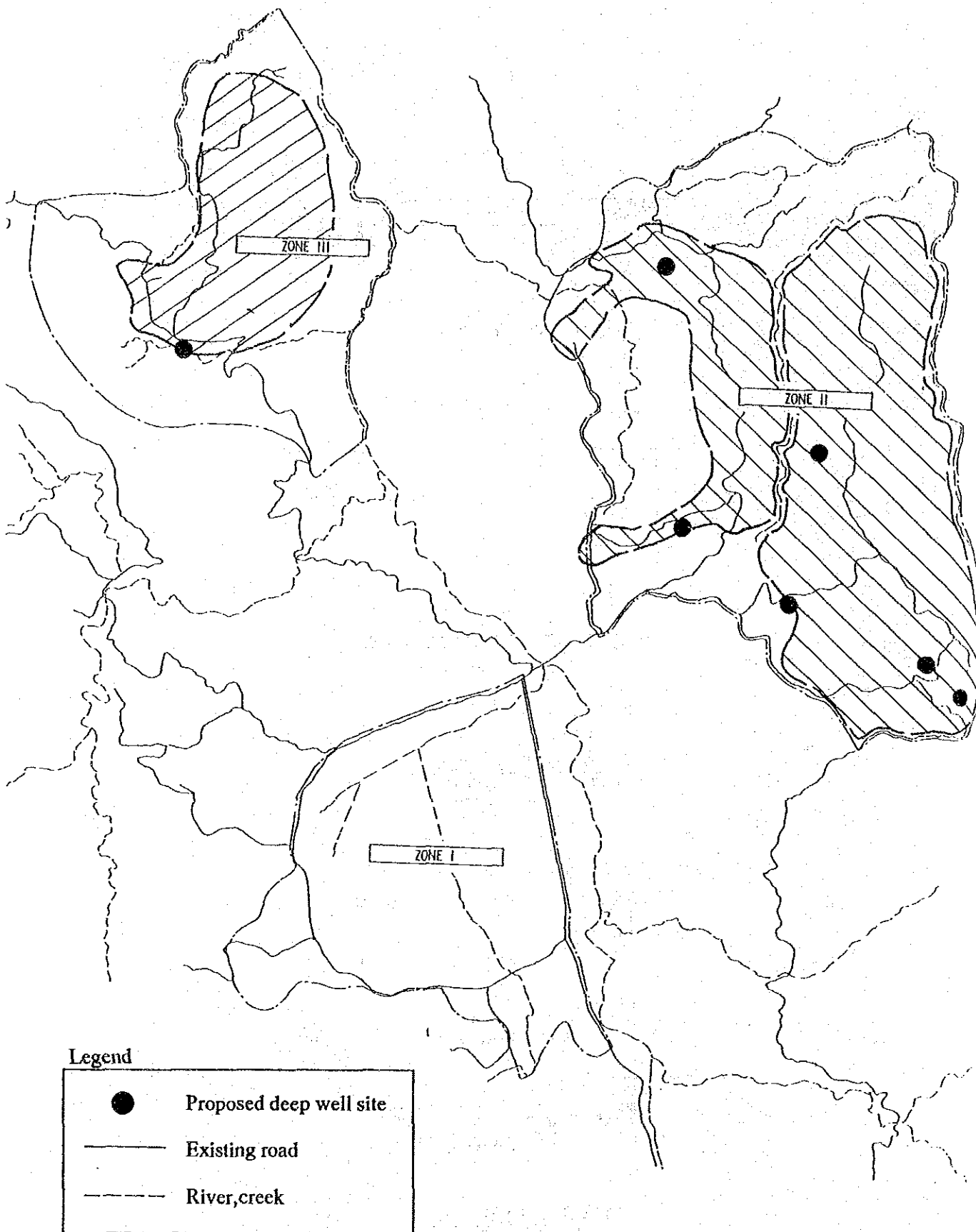


Fig.5.5.1 Water Supply Area

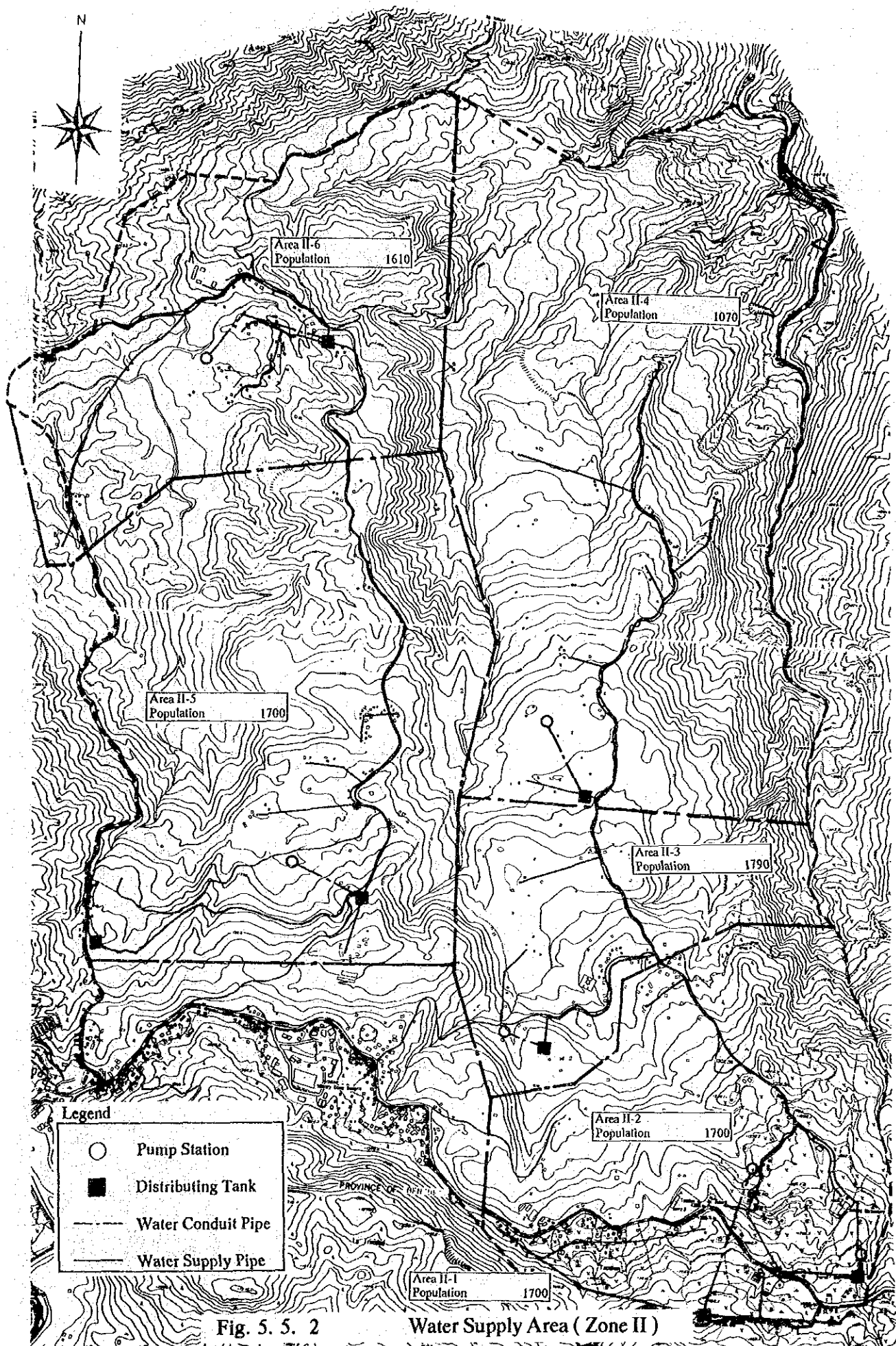
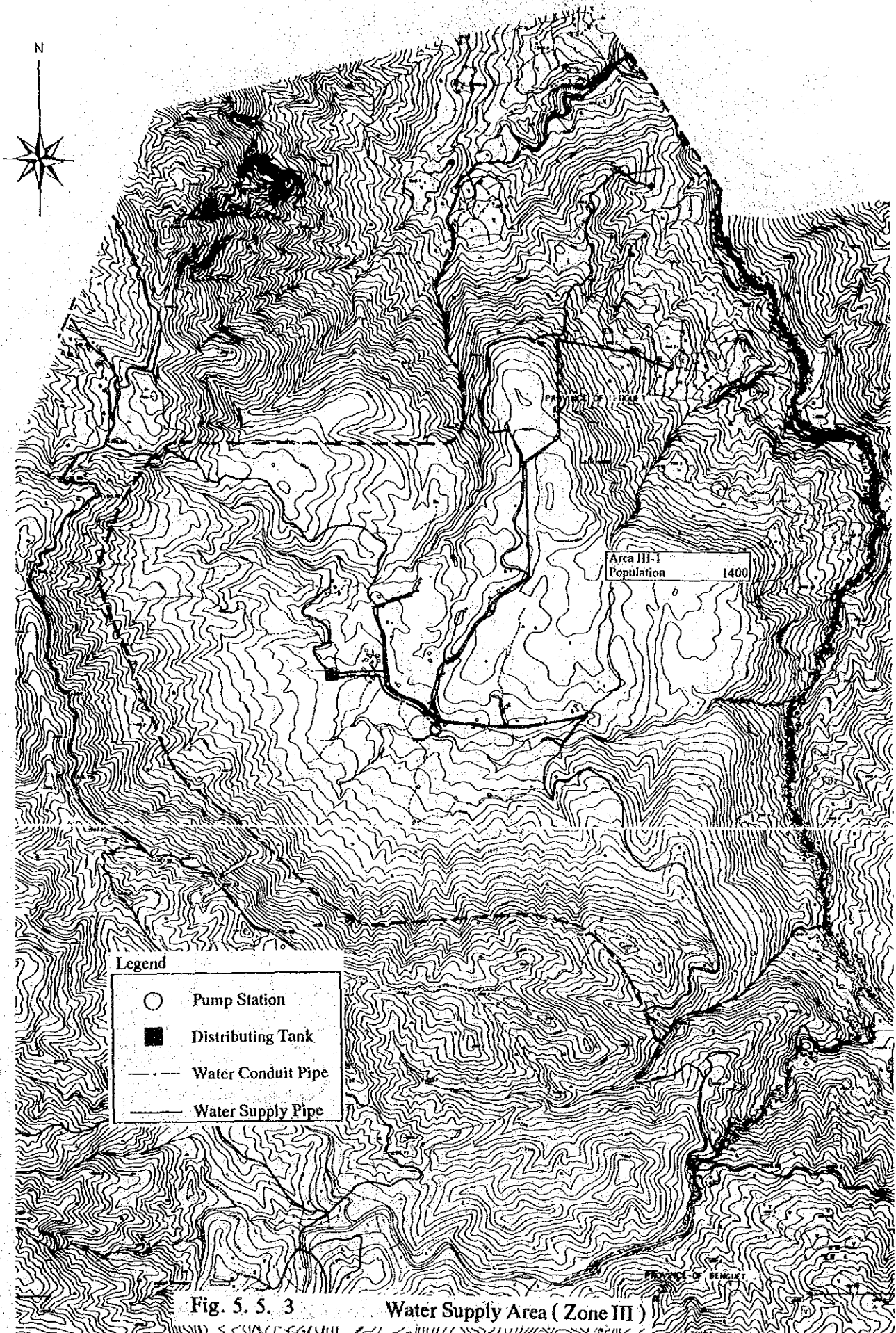


Fig. 5. 5. 2

Water Supply Area ( Zone II )



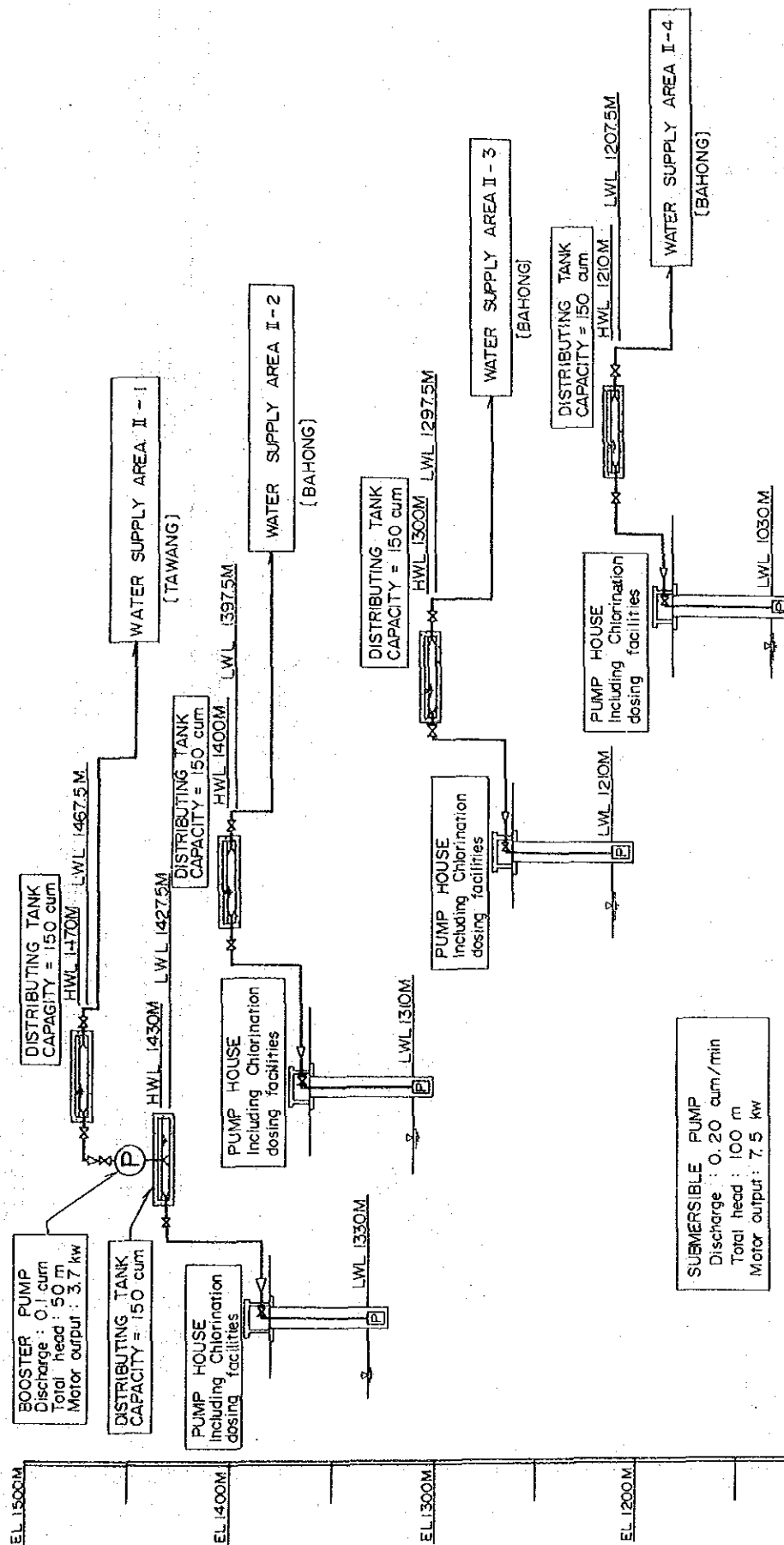


Fig. 5.5.4 Plan of Water Supply Facilities ( Zone II ) ( 1 / 2 )

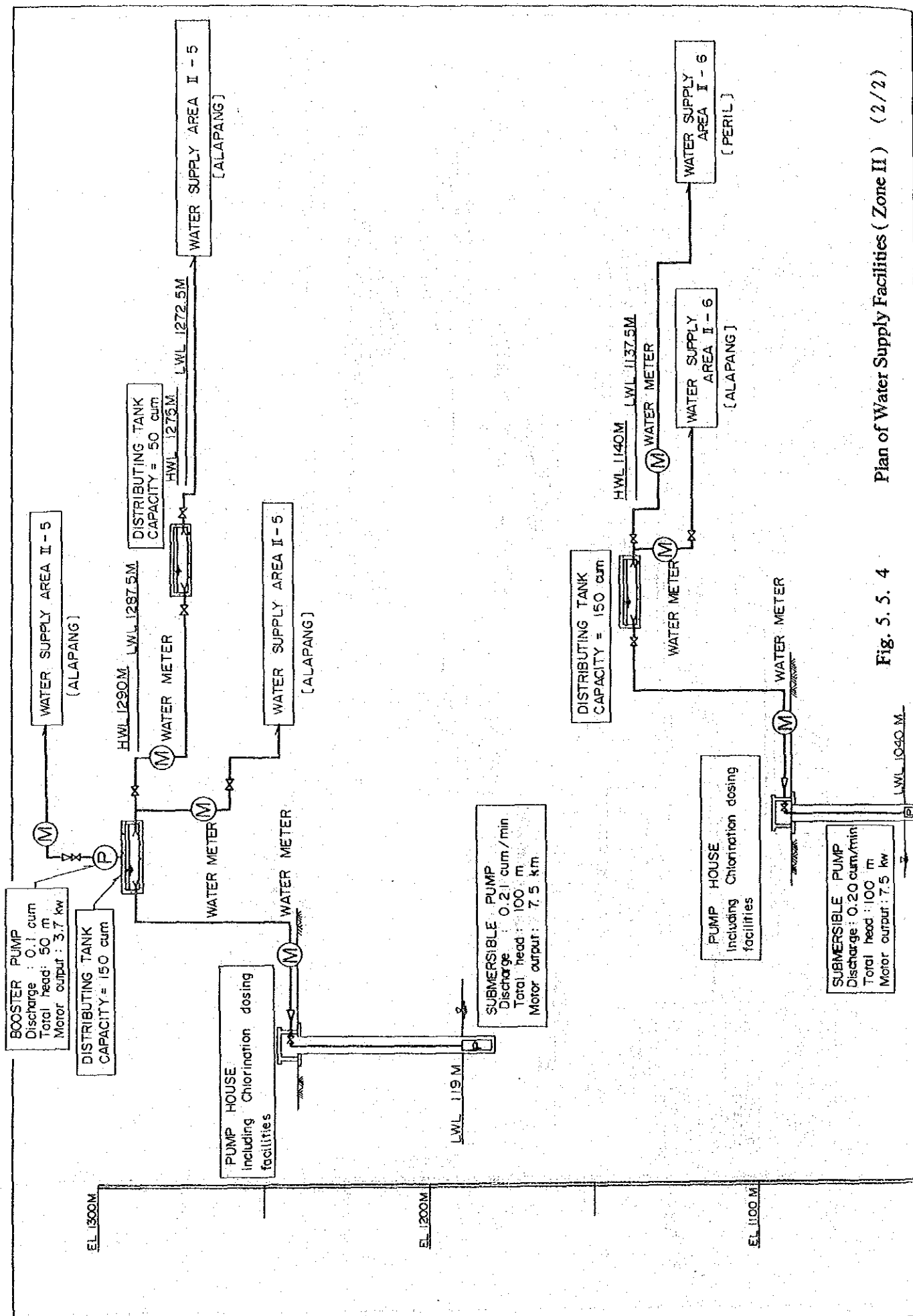


Fig. 5. 5. 4 Plan of Water Supply Facilities ( Zone II ) ( 2/2 )

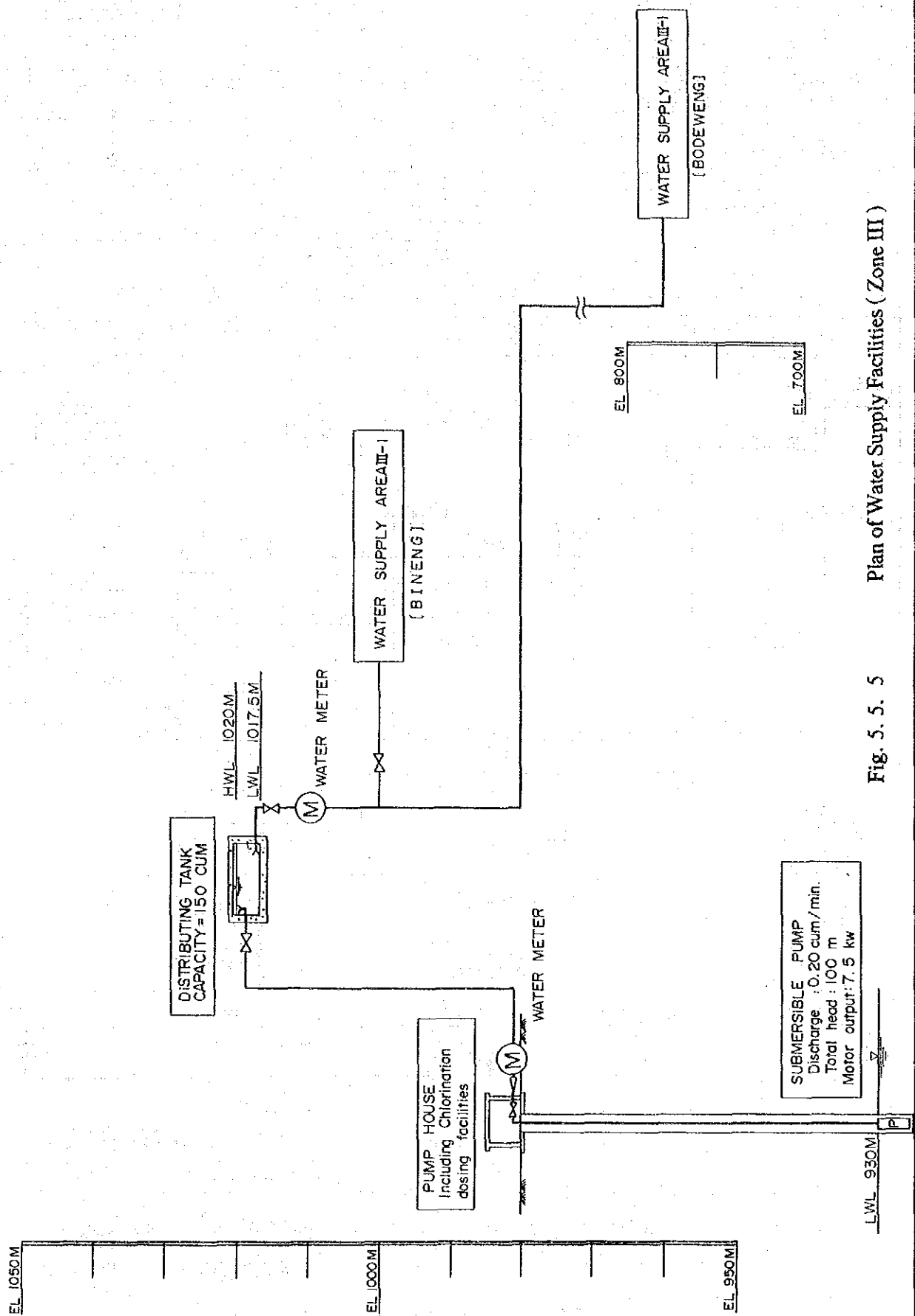


Fig. 5. 5. 5 Plan of Water Supply Facilities ( Zone III )

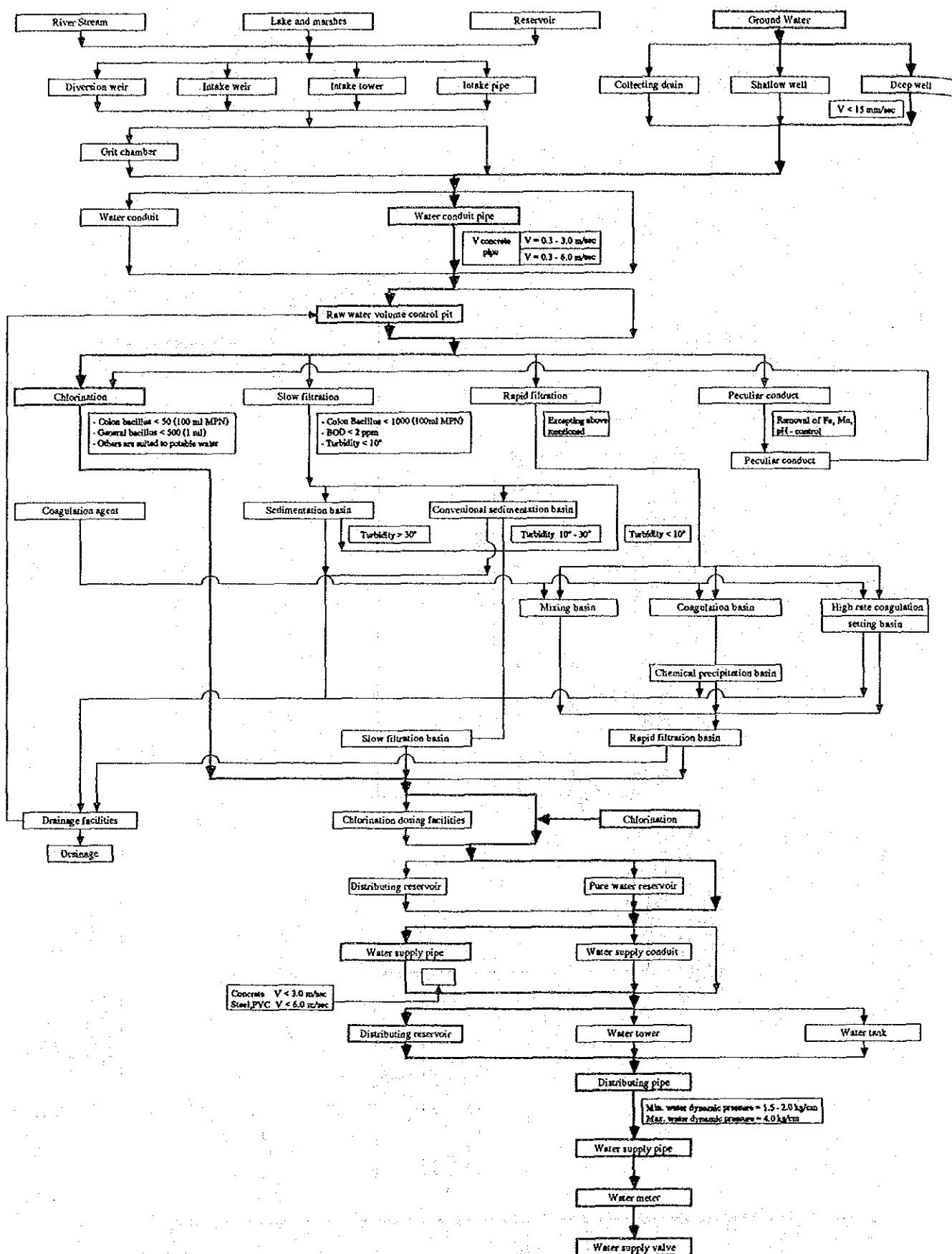


Fig. 5.5.6 Flow Sheet of Drinking Water Supply  
Water Source - Deep Well