

LAND USE

ITEM	AREA (ha)
1 CULTIVABLE COMMADED AREA	25.6
2 KATCHA(WATER COURSE)	1.2
3 DRAINAGE	0.8
4 KATCHA ROAD (FARM ROAD)	1.7
5 BUILDING LOT	3.7
6 GRAVE YARD	0.1
7 WASTE LAND	3.3
8 OTHERS	3.9
TOTAL	40.3

ON-FARM FACILITIES

1. MAJOR ON-FARM FACILITIES		Length & Nos	
	KATCHA(WATER COURSE)	m	5,200
	DRAINAGE	m	2,610
	KATCHA ROAD (FARM ROAD)	m	2,230
2. APPURTENANT STRUCTURE (KATCHA)			
	DROP STRUCTURE	Nos.	42
	CROSS CULVERT	Nos.	12
	TURNOUT (TYPE 1)	Nos.	29
	TURNOUT (TYPE 2)	Nos.	2
	NUCCA	Nos.	232
(DRAINAGE)			
	CROSS CULVERT	Nos.	3
	WATER WAY WORKS	Nos.	7

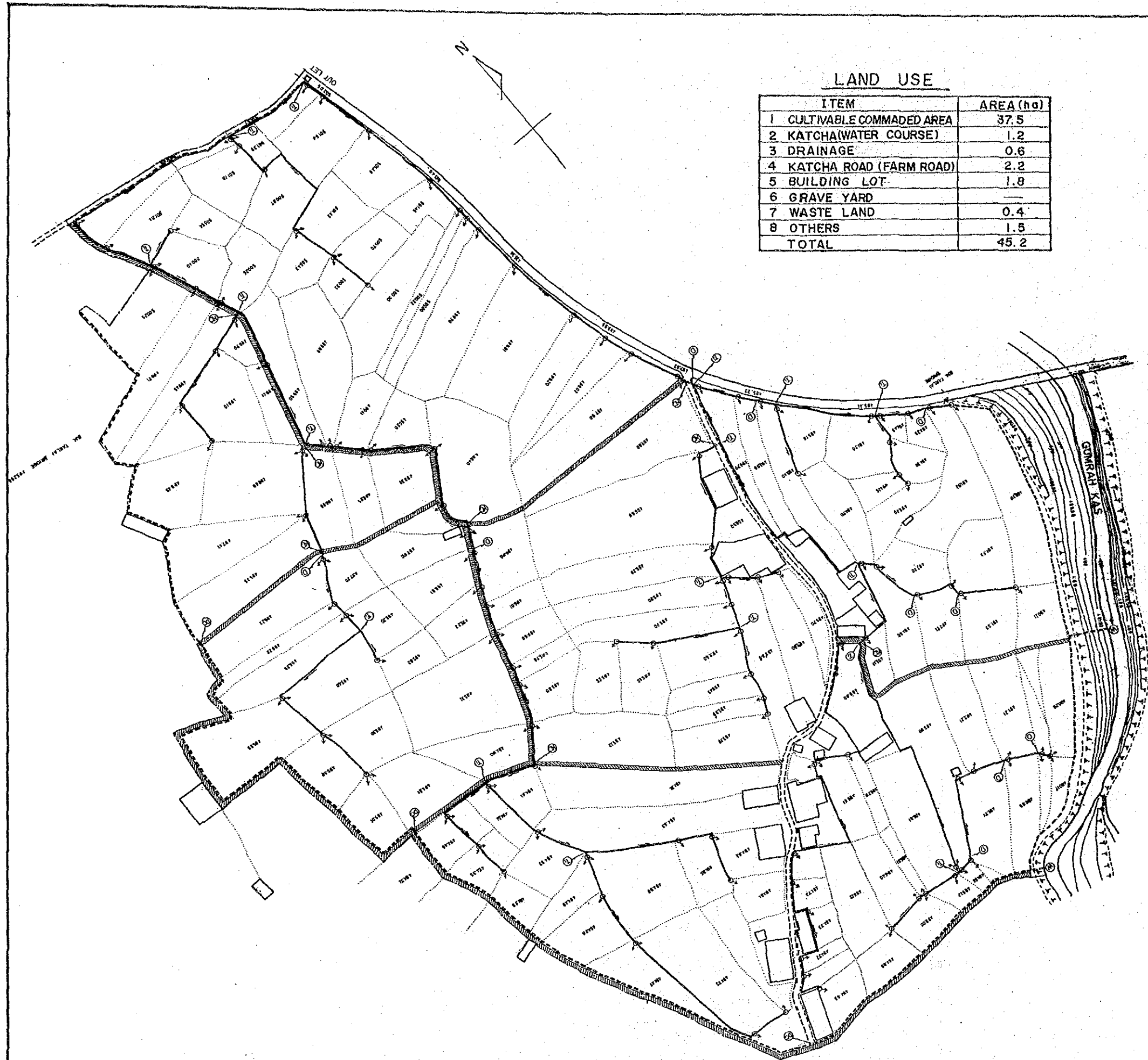
LEGEND

- ROAD (METALLED)
- ROAD (UNMETALLED)
- FOOT-PATH
- HOUSES
- ELECTRIC POWER LINE
- EROSION
- TREES
- LIMIT OF CULTIVATION
- GRAVEYARD

SCALE



FEASIBILITY STUDY
ON
UPPER KURANG RIVER IRRIGATION PROJECT
ON-FARM DEVELOPMENT
SAMPLE AREA - 1 (UPSTREAM AREA)
GENERAL PLAN
DRAWING No. O-1001
JAPAN INTERNATIONAL COOPERATION AGENCY



LAND USE

ITEM	AREA (ha)
1 CULTIVABLE COMMADED AREA	37.5
2 KATCHA(WATER COURSE)	1.2
3 DRAINAGE	0.6
4 KATCHA ROAD (FARM ROAD)	2.2
5 BUILDING LOT	1.8
6 GRAVE YARD	
7 WASTE LAND	0.4
8 OTHERS	1.5
TOTAL	45.2

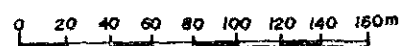
ON-FARM FACILITIES

1. MAJOR ON-FARM FACILITIES		Length & Nos
	KATCHA(WATER COURSE)	m 5,090
	DRAINAGE	m 1,910
	KATCHA ROAD (FARM ROAD)	m 2,850
2. APPURTENANT STRUCTURE (KATCHA)		
	DROP STRUCTURE	Nos. 10
	CROSS CULVERT	Nos. 8
	TURNOUT (TYPE 1)	Nos. 17
	TURNOUT (TYPE 2)	Nos. 0
	NUCCA	Nos. 150
(DRAINAGE)		
	CROSS CULVERT	Nos. 3
	WATER WAY WORKS	Nos. 2

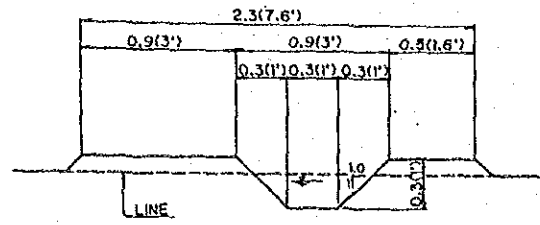
LEGEND

- ROAD (METALLED)
- ROAD (UNMETALLED)
- FOOT - PATH
- HOUSES
- ELECTRIC POWER LINE
- EROSION
- TREES
- LIMIT OF CULTIVATION
- GRAVE

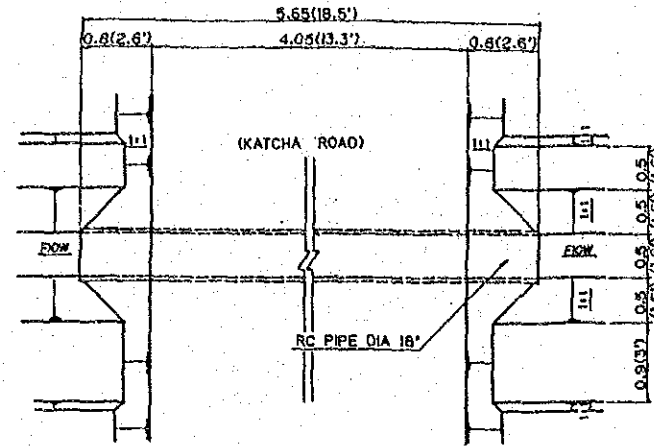
SCALE



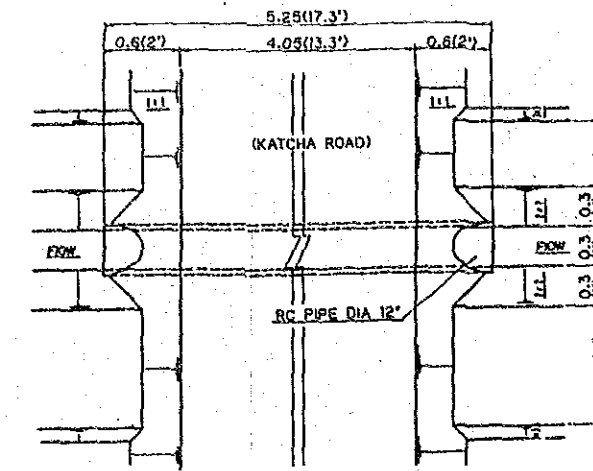
FEASIBILITY STUDY
ON
UPPER KURANG RIVER IRRIGATION PROJECT
ON-FARM DEVELOPMENT
SAMPLE AREA - 2 (DOWNSTREAM AREA)
GENERAL PLAN
DRAWING No. O - 1002
JAPAN INTERNATIONAL COOPERATION AGENCY



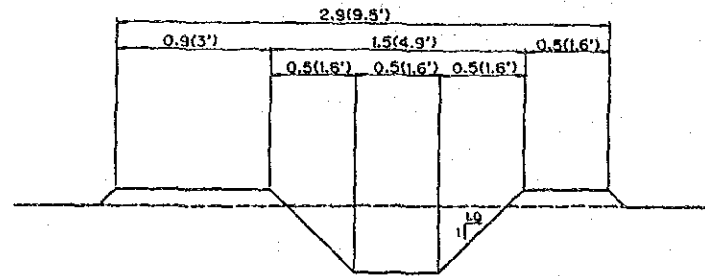
CROSS SECTION OF KATCHA



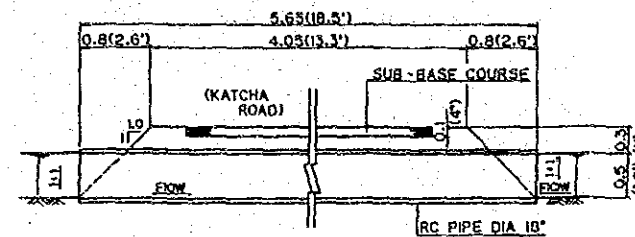
PLAN



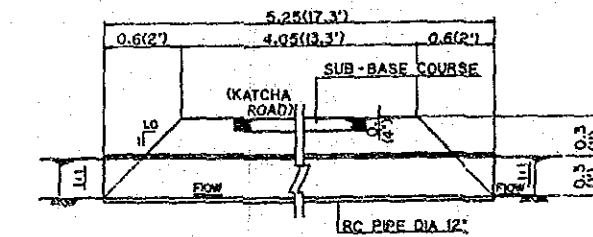
PLAN



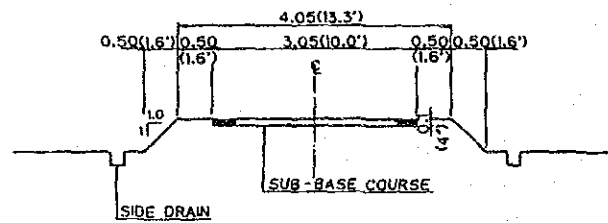
CROSS SECTION OF DRAINAGE



PROFILE



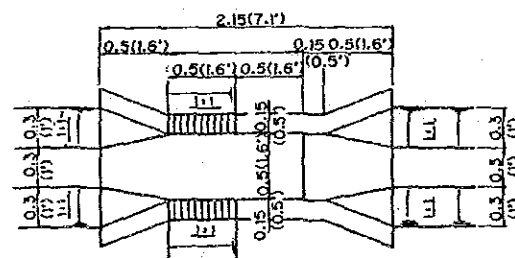
PROFILE



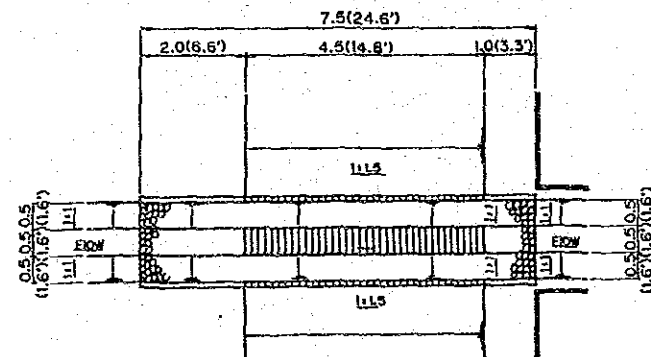
CROSS SECTION OF KATCHA ROAD

CROSS CULVERT STRUCTURE

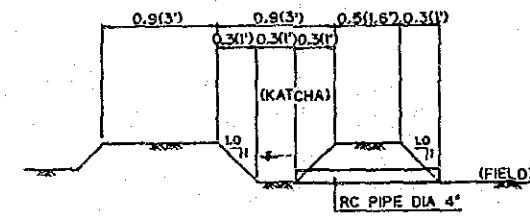
CROSS CULVERT STRUCTURE



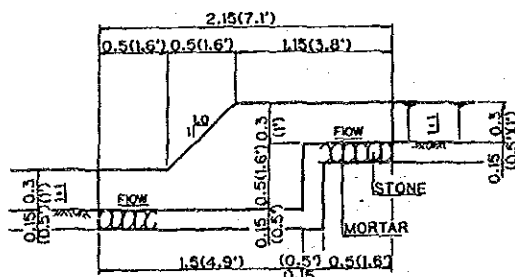
PLAN



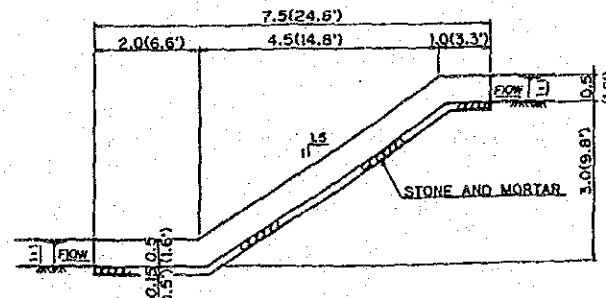
PLAN



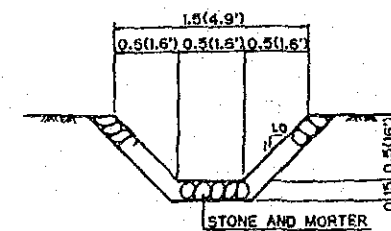
NUCCA (TYPE I)



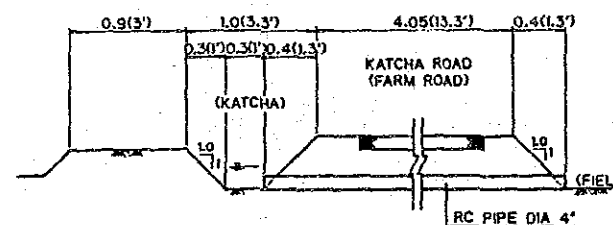
PROFILE
DROP STRUCTURE



PROFILE



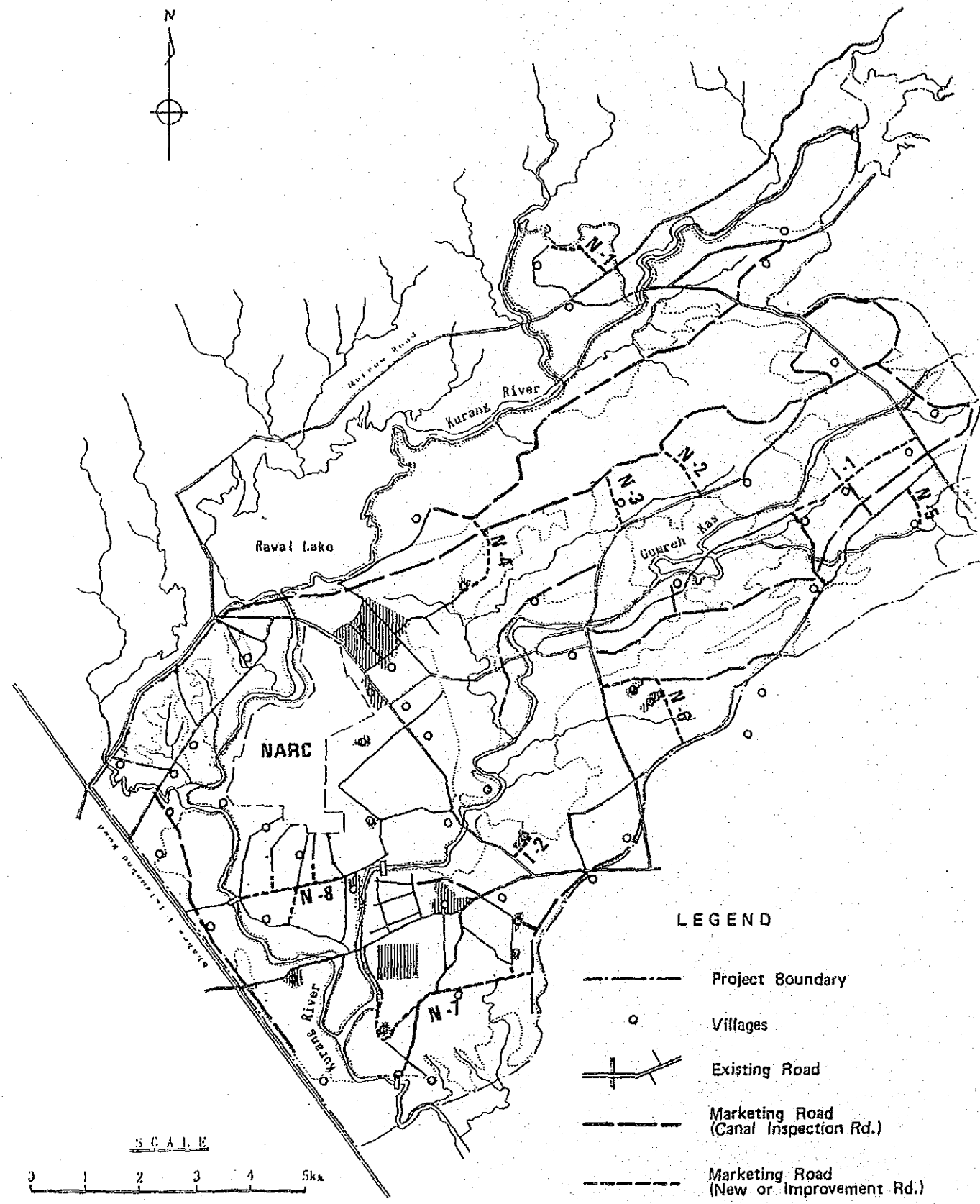
CROSS SECTION



NUCCA (TYPE II)

WATER WAY WORKS

FEASIBILITY STUDY
ON
UPPER KURANG RIVER IRRIGATION PROJECT
ON-FARM DEVELOPMENT
STRUCTURES
DRAWING No. O-1003
JAPAN INTERNATIONAL COOPERATION AGENCY



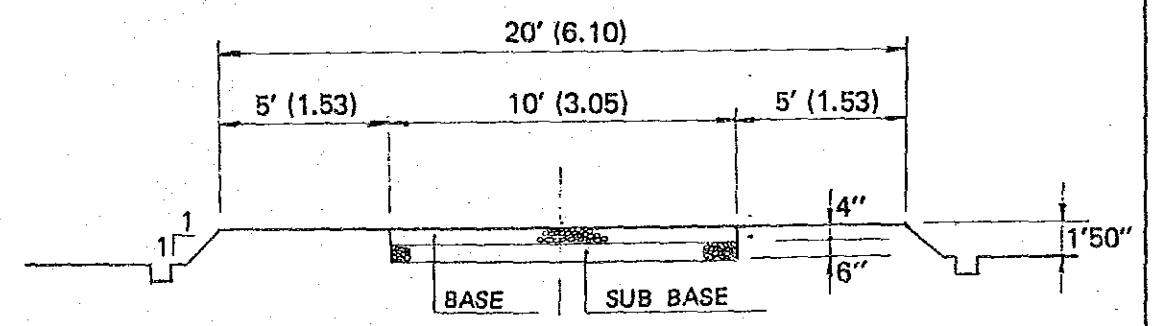
LEGEND

- Project Boundary
- o Villages
- Existing Road
- Marketing Road (Canal Inspection Rd.)
- Marketing Road (New or Improvement Rd.)

LENGTH OF MARKETING ROAD

ROAD	LENGTH (M)
NEW ROAD	
N-1	1,100
N-2	1,100
N-3	1,000
N-4	1,700
N-5	600
N-6	1,800
N-7	3,600
N-8	2,900
SUB-TOTAL	13,800
IMPROVEMENT ROAD	
I-1	4,200
I-2	600
SUB-TOTAL	4,800
TOTAL	18,600

TYPICAL CROSS SECTION



FEASIBILITY STUDY
ON
UPPER KURANG RIVER IRRIGATION PROJECT

MARKETING ROAD

DRAWING No. R - 1001

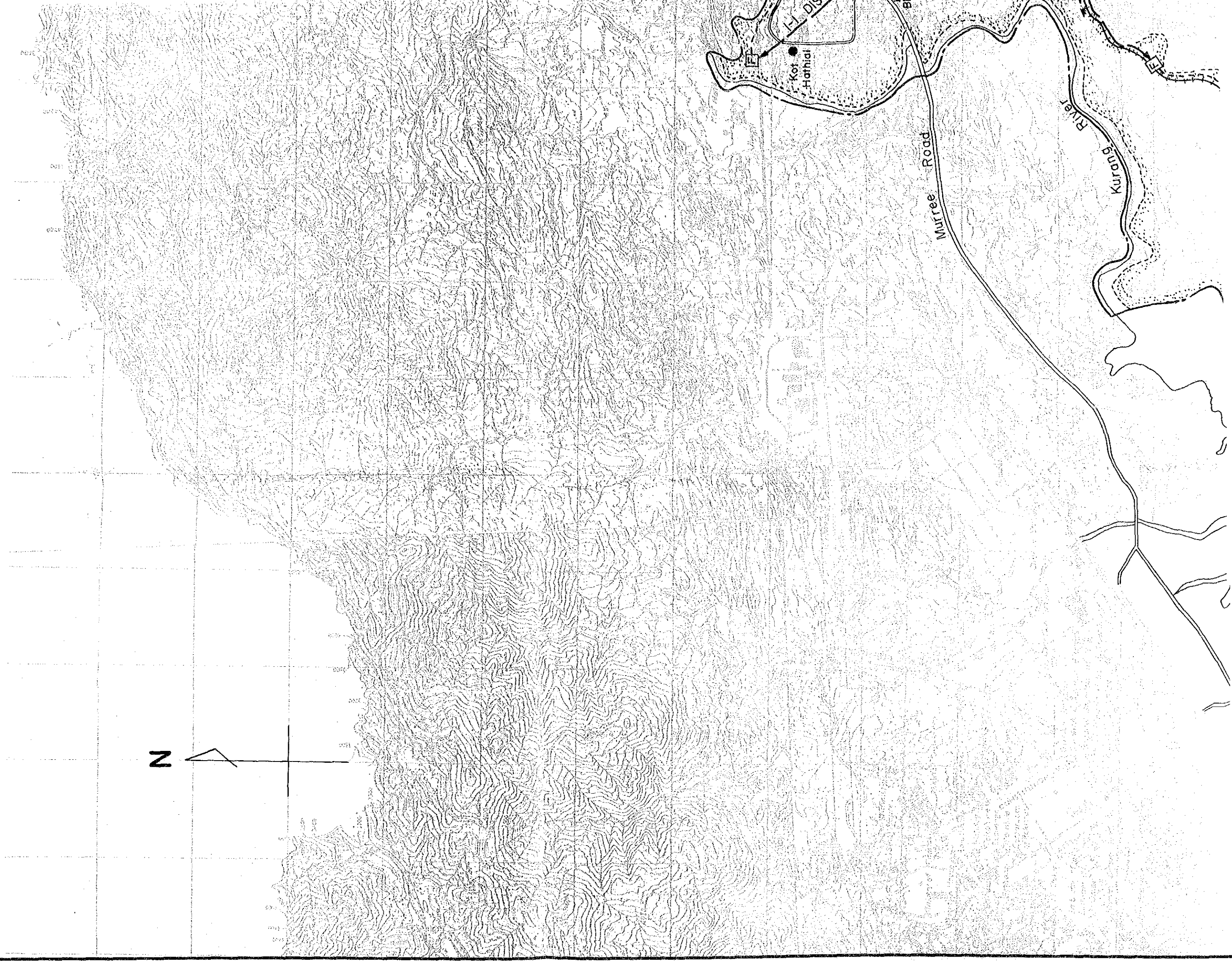
JAPAN INTERNATIONAL COOPERATION AGENCY

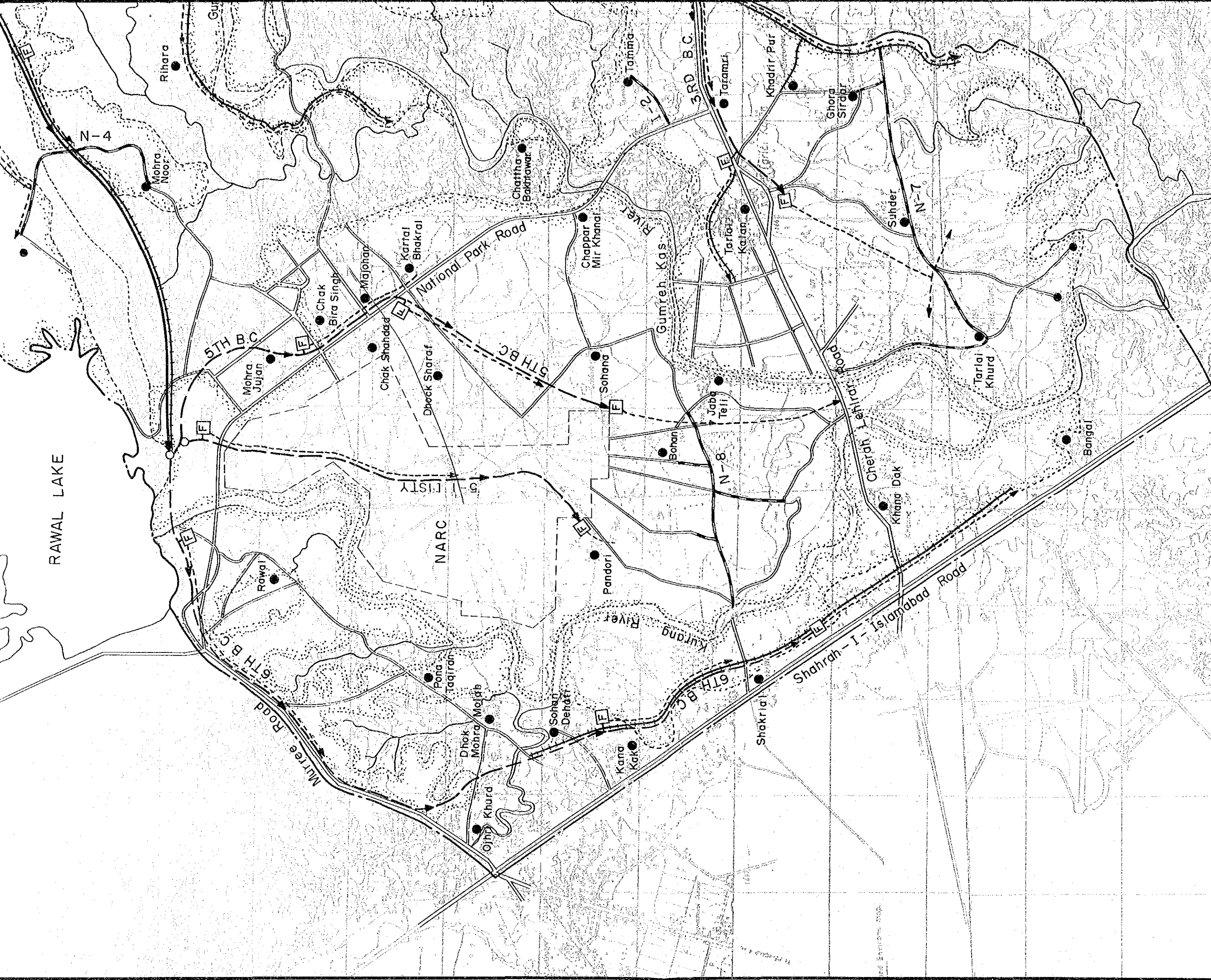
M A P

of

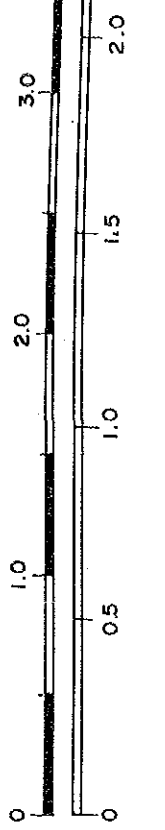
Upper Kurang River Irrigation Project

MAP OF UPPER KURANG IN THE ISLAMIC REPUB



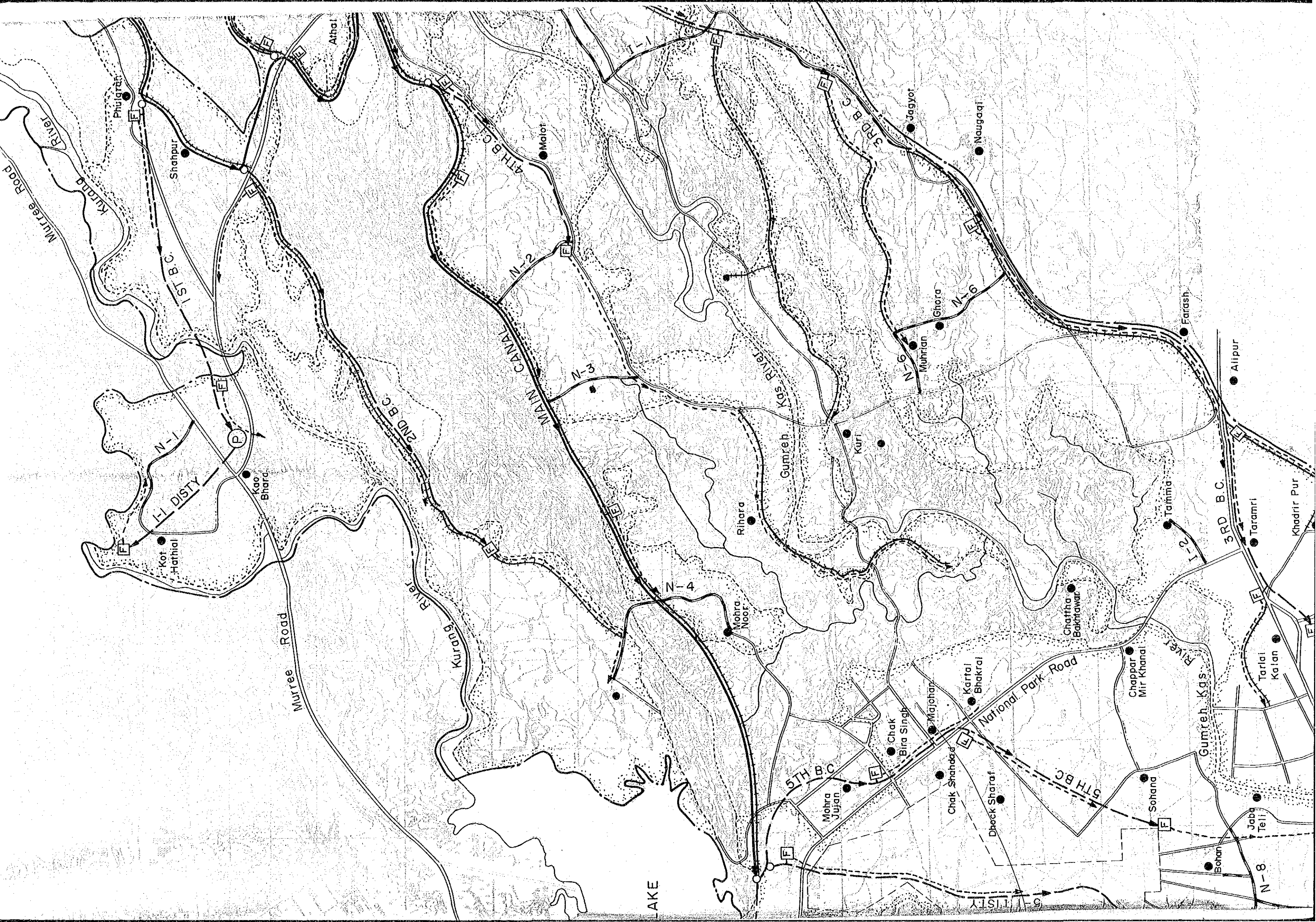


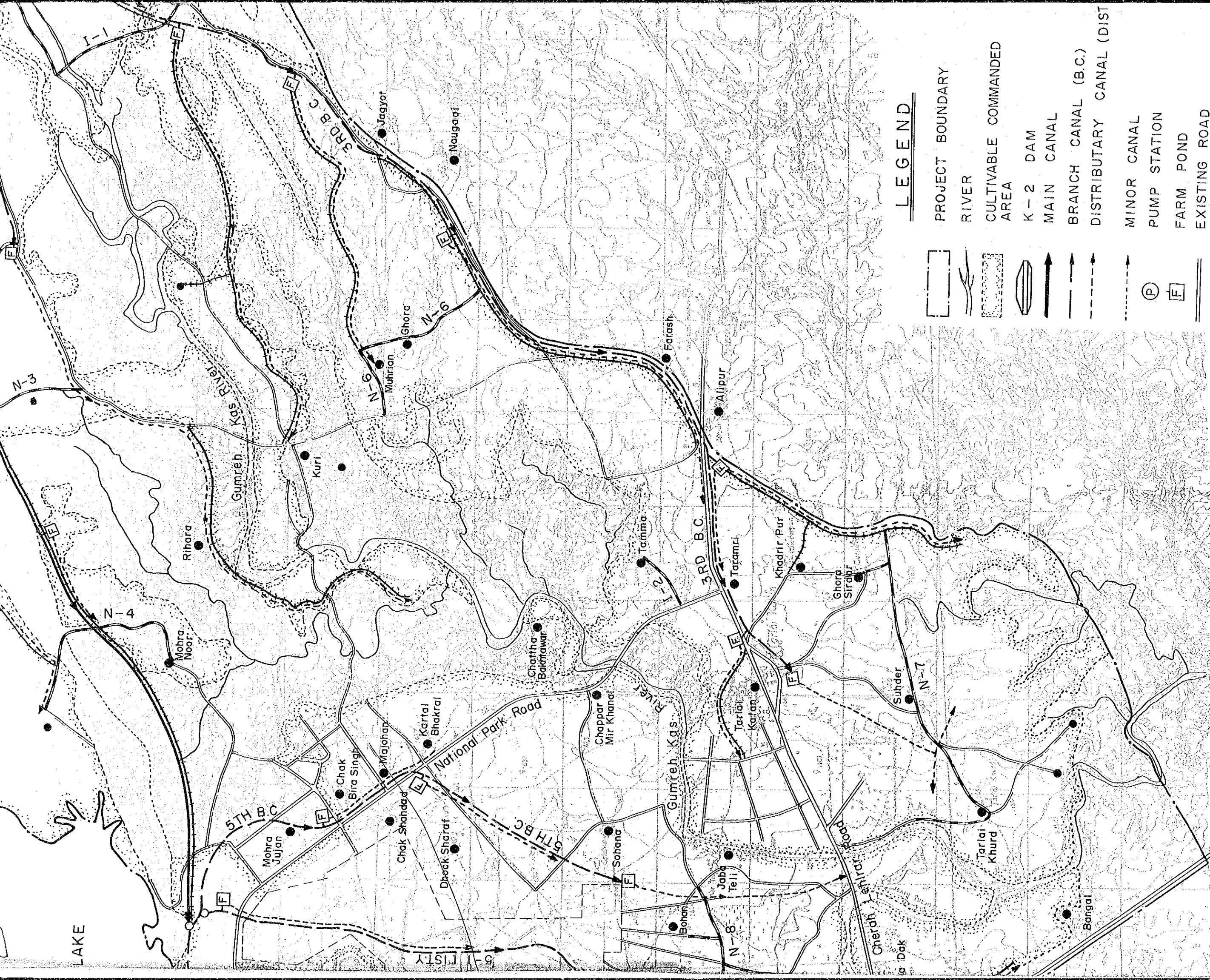
S C A L E



UPPER KURANG RIVER IRRIGATION PROJECT IN THE ISLAMIC REPUBLIC OF PAKISTAN

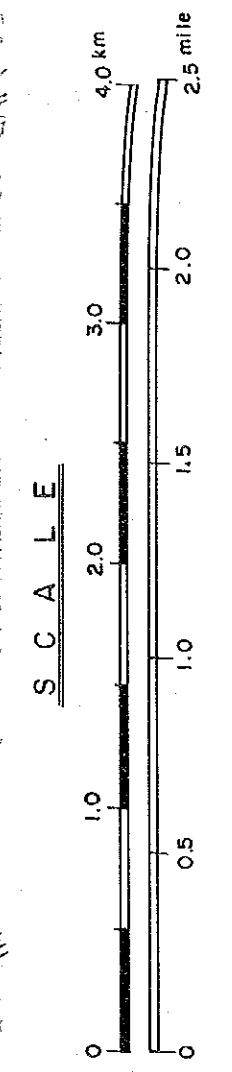




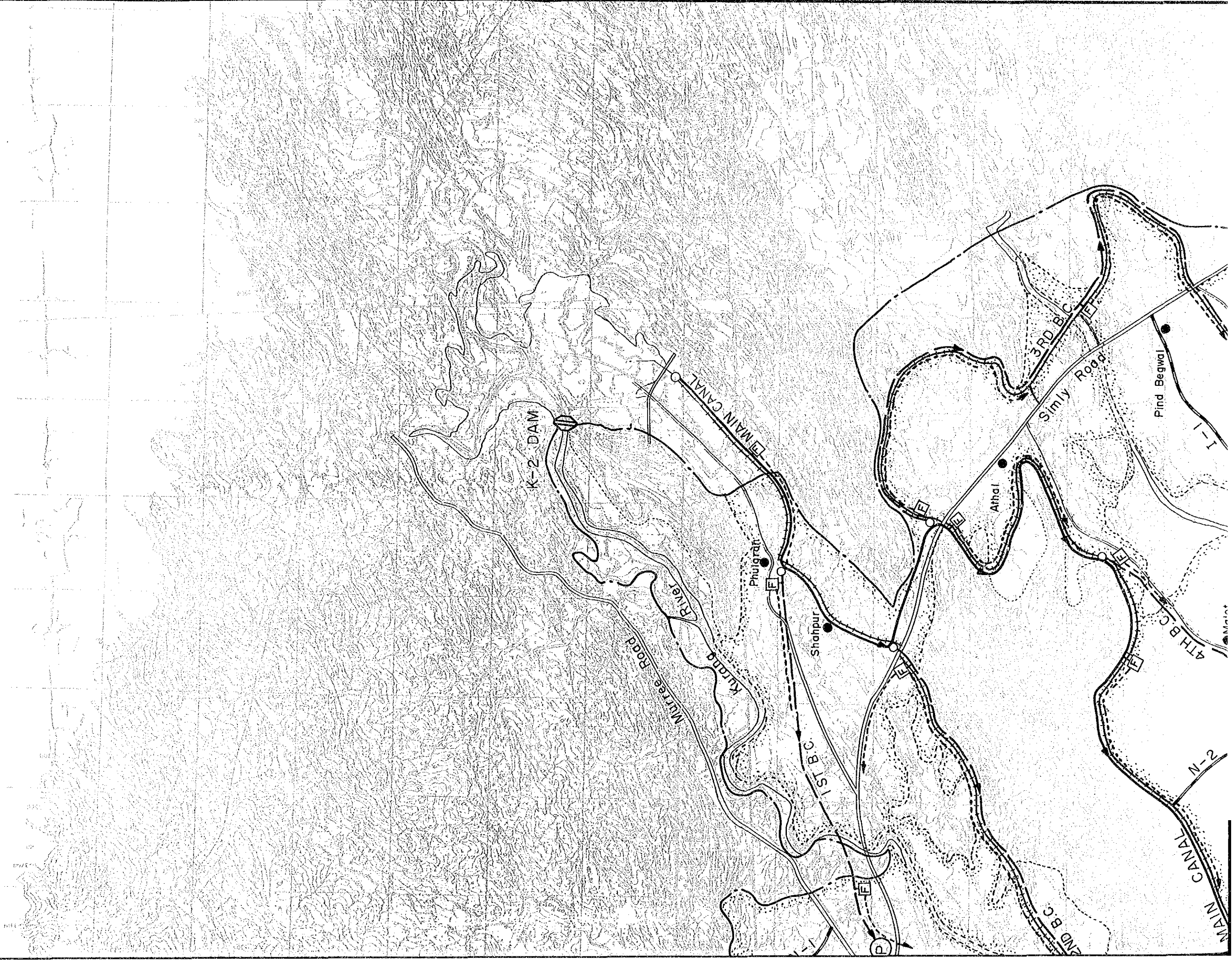


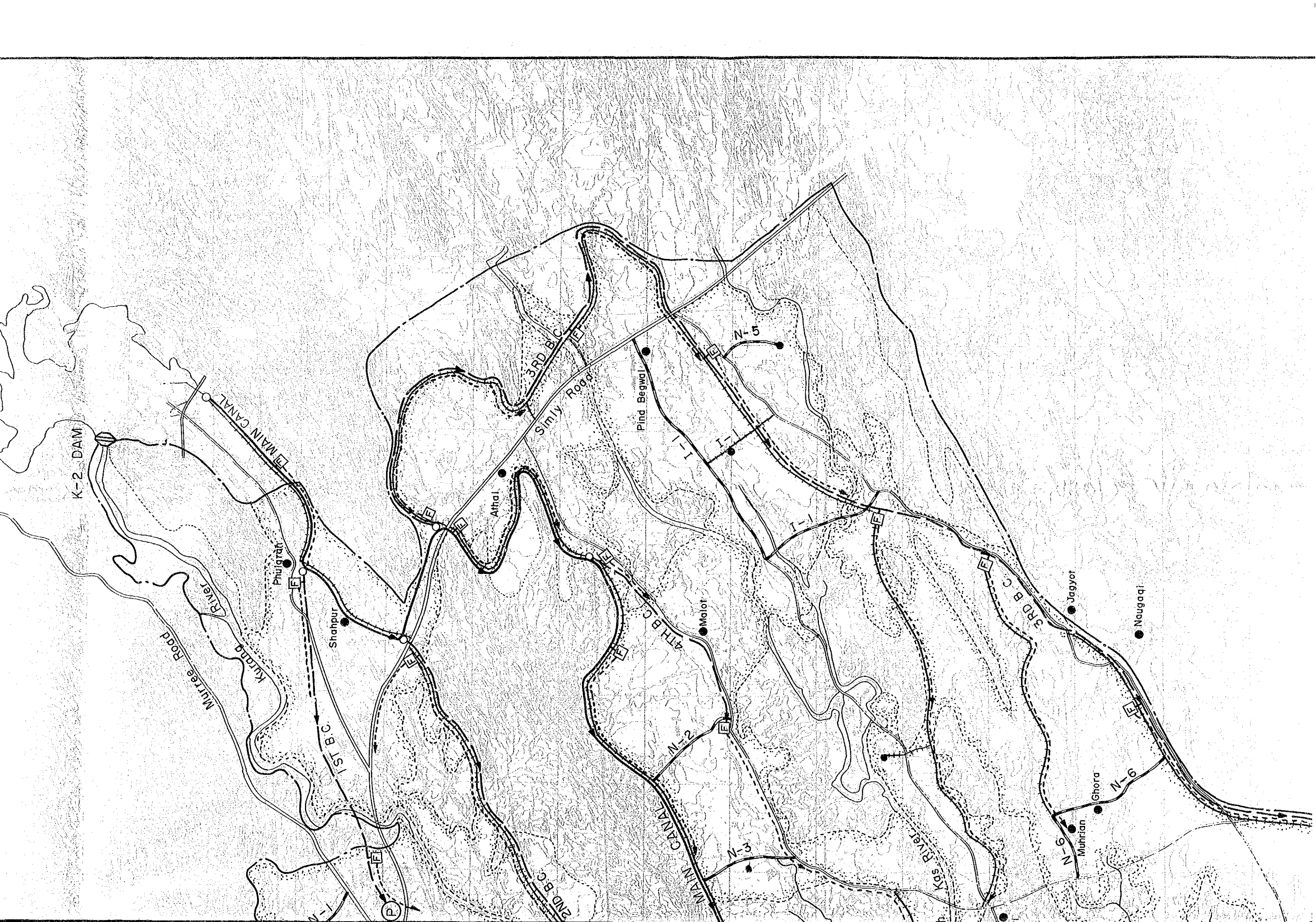
LEGEND

- PROJECT BOUNDARY
- RIVER
- CULTIVABLE COMMANDED AREA
- K - 2 DAM
- MAIN CANAL
- BRANCH CANAL (B.C.)
- DISTRIBUTARY CANAL (DIST)
- MINOR CANAL
- PUMP STATION
- FARM POND
- EXISTING ROAD
- INSPECTION ROAD
- MARKETING ROAD (NEW OR IMPROVEMENT)
- VILLAGE



INDUS RIVER IRRIGATION PROJECT SOUTHERN ZONE OF PAKISTAN





K-2 DAM

MAIN CANAL

Mutree Road

Kurand River

Phuigrath

Shahpur

Athal

Simly Road

Pind Begwal

Malot

Jagyot

Naugaqi

Ghora

Muhrian

1ST B.C.

2ND B.C.

3RD B.C.

4TH B.C.

5TH B.C.

3RD B.C.

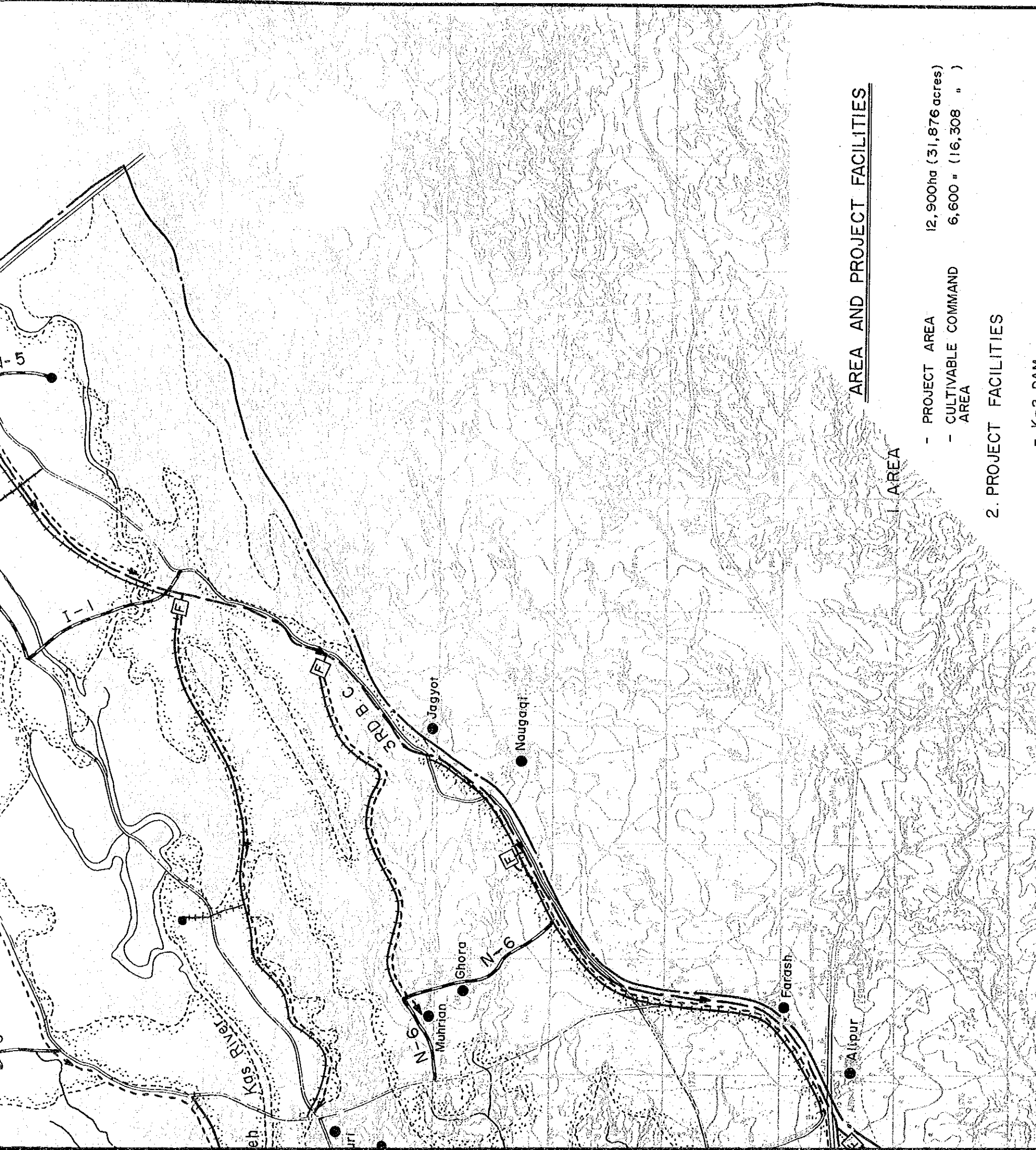
N-1

N-2

N-5

N-6

P



AREA AND PROJECT FACILITIES

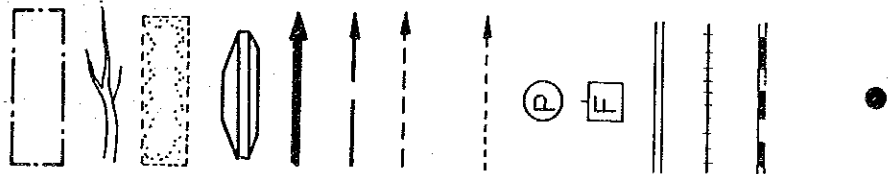
- PROJECT AREA 12,900ha (31,876 acres)
- CULTIVABLE COMMAND AREA 6,600 " (16,308 ")

2. PROJECT FACILITIES

- K-2 DAM
 - ° GROSS STORAGE CAPACITY 29.4MCM (23,830acre-ft)
 - ° LIVE STORAGE 18.5 " (15,000 ")
 - ° DAM TYPE ZONED EARTHFILL
- IRRIGATION FACILITIES
 - ° MAIN CANAL 17.7 km (11.0 mile)
 - ° BRANCH CANAL 42.2 " (26.2 ")
 - ° DISTRIBUTARY CANAL 70.1 " (43.6 ")
 - ° SUB-TOTAL 130.0 " (80.8 ")
 - ° FARM POND 28 PONDS
- ON-FARM DEVELOPMENT 6,600ha (16,308 acres)
- MARKETING ROAD (EXCLUDED INSPECTION ROAD)
 - ° NEW ROAD 13.8 km (8.6mile)
 - ° IMPROVEMENT ROAD 4.8 " (3.0 ")
 - ° SUB-TOTAL 18.6 " (11.6 ")
- AGRICULTURAL SUPPORTING FACILITIES
 - ° EXTENSION CENTER L.S.
 - ° FARM MACHINERY FOR DEMONSTRATION L.S.

LEGEND

- PROJECT BOUNDARY
- RIVER
- CULTIVABLE COMMANDED AREA
- K-2 DAM
- MAIN CANAL
- BRANCH CANAL (B.C.)
- DISTRIBUTARY CANAL (DISTY)
- MINOR CANAL
- PUMP STATION
- FARM POND
- EXISTING ROAD
- INSPECTION ROAD
- MARKETING ROAD (NEW OR IMPROVEMENT)
- VILLAGE



JICA