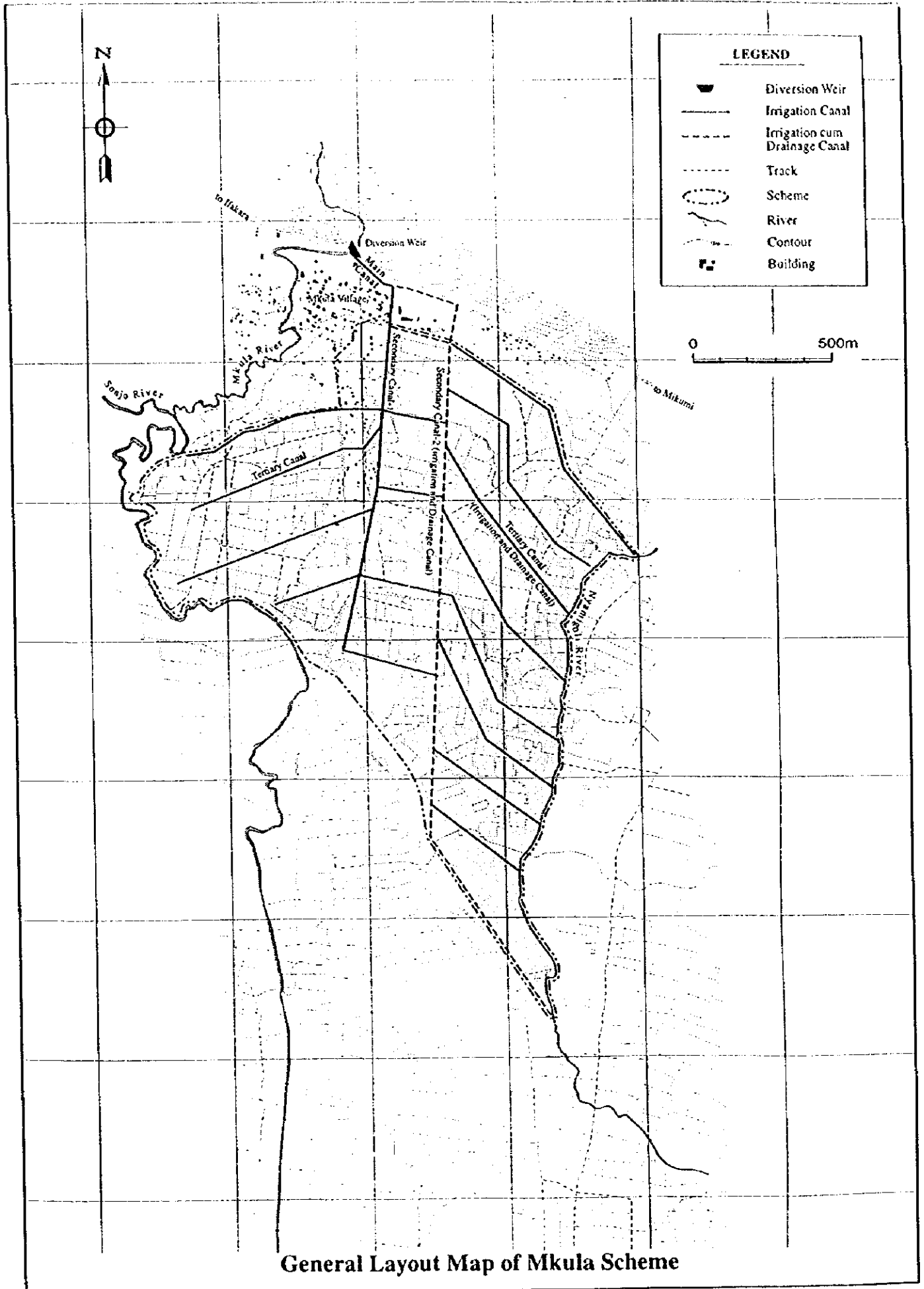










DIVISION-4

**THE STUDY
ON
THE SMALLHOLDER IRRIGATION PROJECTS
IN
CENTRAL WAMI RIVER BASIN**

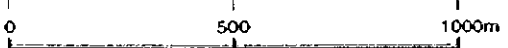
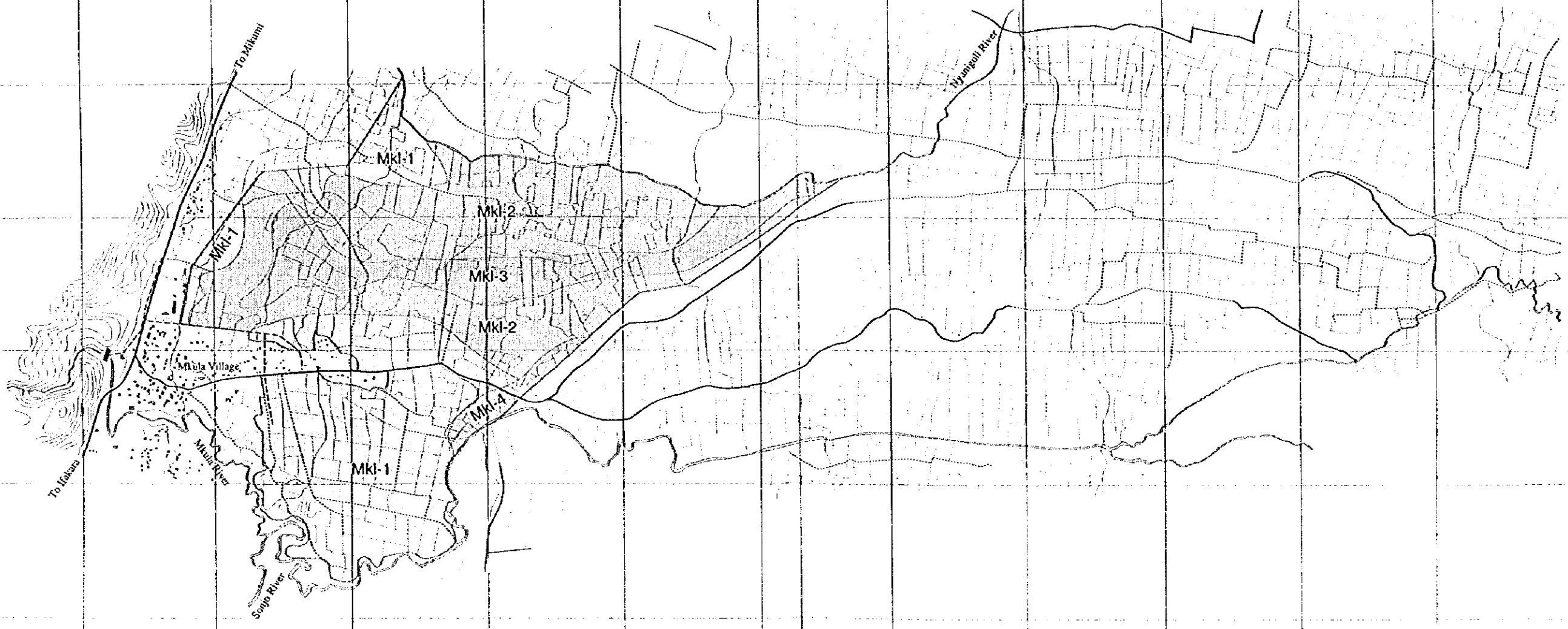
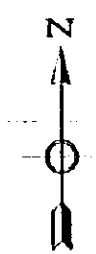
**FEASIBILITY STUDY
ON
MKULA SCHEME**



LEGEND

-  Intake
-  Canal
-  Track
-  Road
-  River
-  Farm Land
-  Contour
-  House/Building

Mapping Unit	Area (ha)	Soil unit	Land Form	Drainability	Soil Texture
Mki-1	70	CMe	Fan	Mod. well	Cl/L-CL
Mki-2	75	FLe	Fan	Imperfect	Cl/SiCl-CL
Mki-3	27	GLe	Fan	Poor	Cl/SCL
Mki-4	3	FLe	Natural levee	Excessive	Sl/S
Total	175				

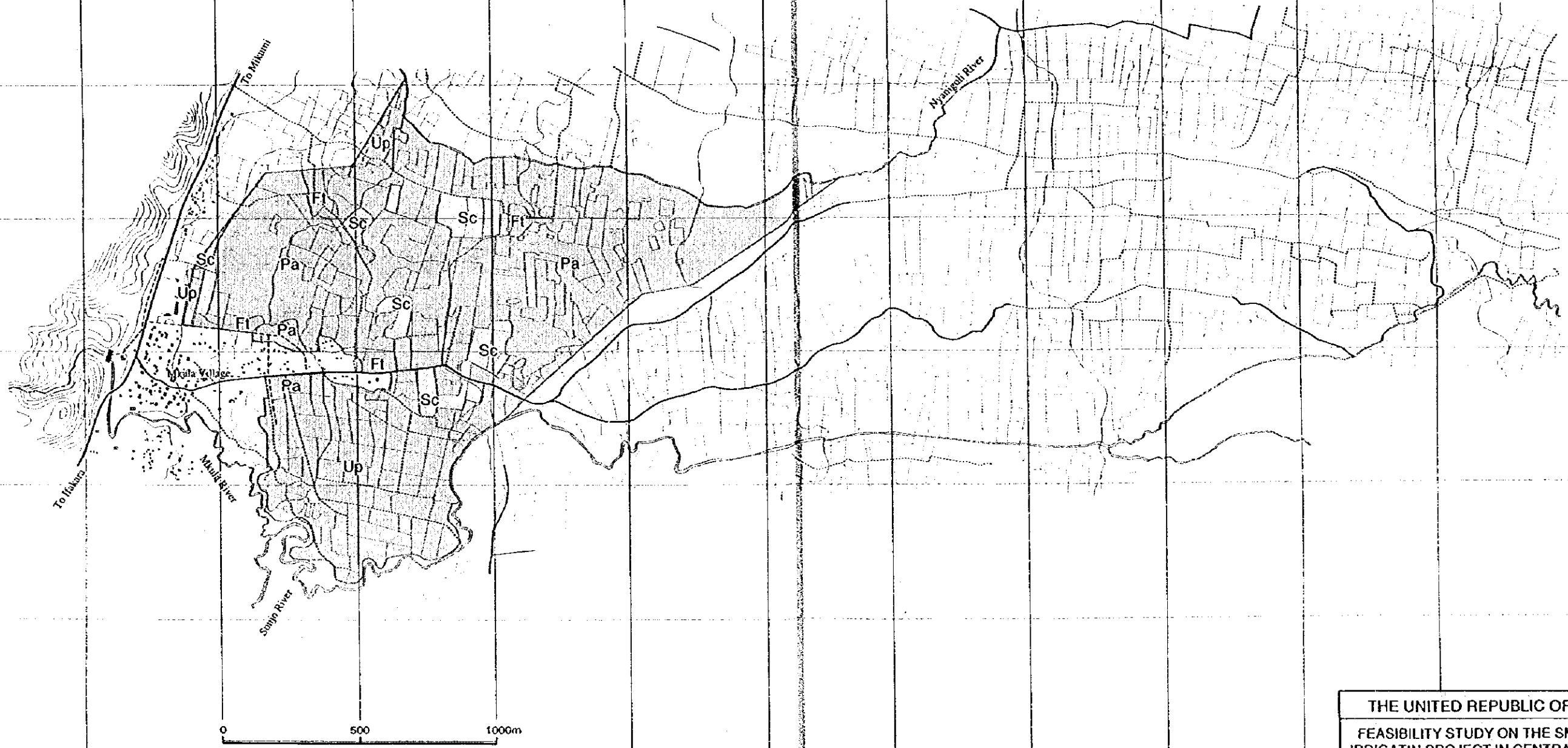


THE UNITED REPUBLIC OF TANZANIA			
FEASIBILITY STUDY ON THE SMALLHOLDER IRRIGATION PROJECT IN CENTRAL WAMI RIVER BASIN, MOROGORO			
TITLE OF DRAWING		MKULA SCHEME	
SOIL MAP			
Date		Drawing No.	401
JAPAN INTERNATIONAL COOPERATION AGENCY			

LEGEND









	Intake
	Canal
	Track
	Road
	River
	Farm Land
	Contour
	House/Building

Symbol	Land Use	Area (ha)
Pa	Paddy Land	108
Up	Upland Crops	42
Sc	Sugarcane	11
Fl	Forest and Tree Crops	10
	Settlement/Right of Ways	4
	Total	175



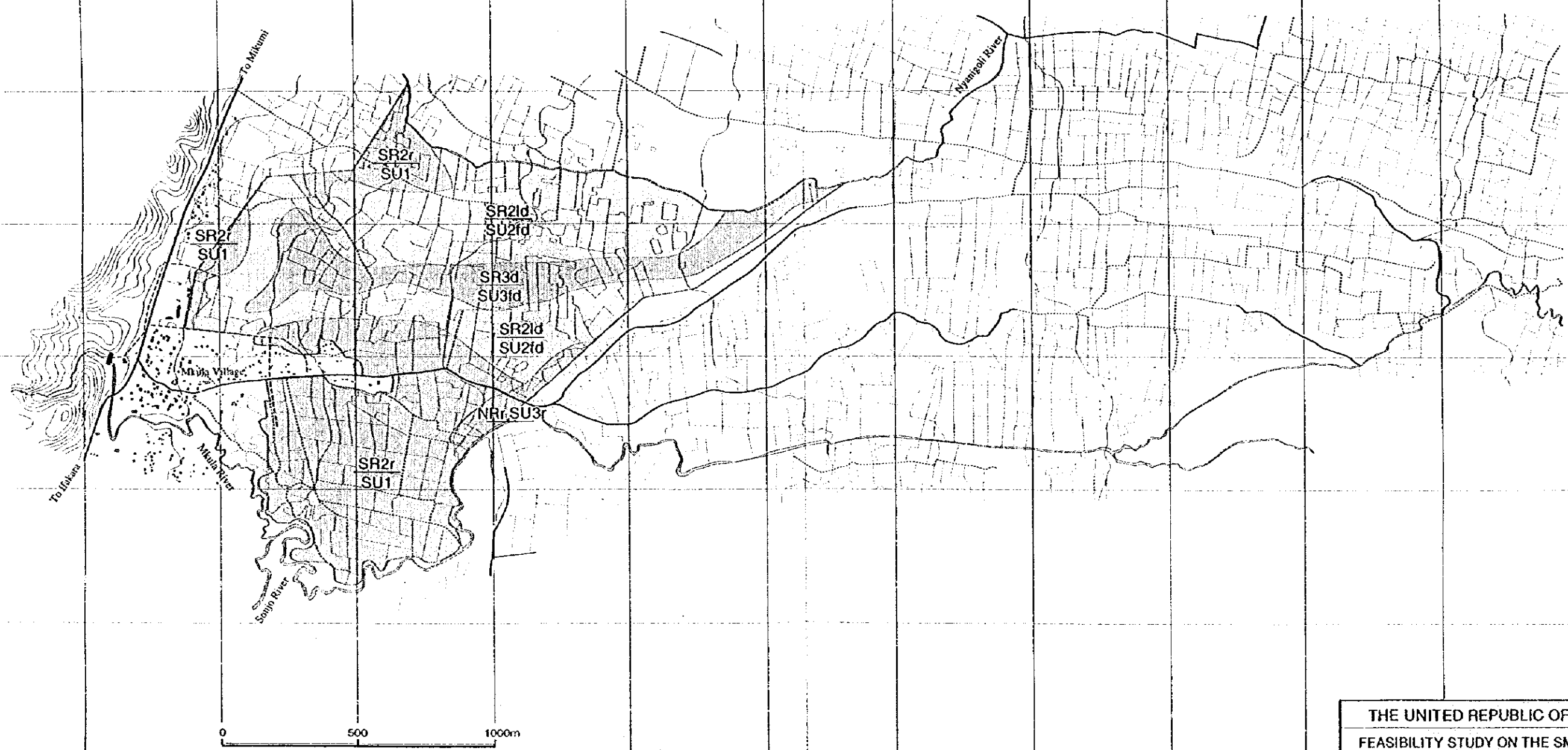
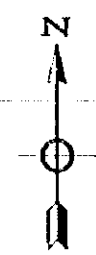
THE UNITED REPUBLIC OF TANZANIA			
FEASIBILITY STUDY ON THE SMALLHOLDER IRRIGATION PROJECT IN CENTRAL WAMI RIVER BASIN, MOROGORO			
TITLE OF DRAWING		MKULA SCHEME	
PRESENT LAND USE MAP			
Date		Drawing No.	402
JAPAN INTERNATIONAL COOPERATION AGENCY			

LEGEND

-  Intake
-  Canal
-  Track
-  Road
-  River
-  Farm Land
-  Contour
-  House/Building

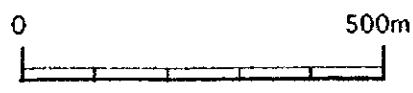
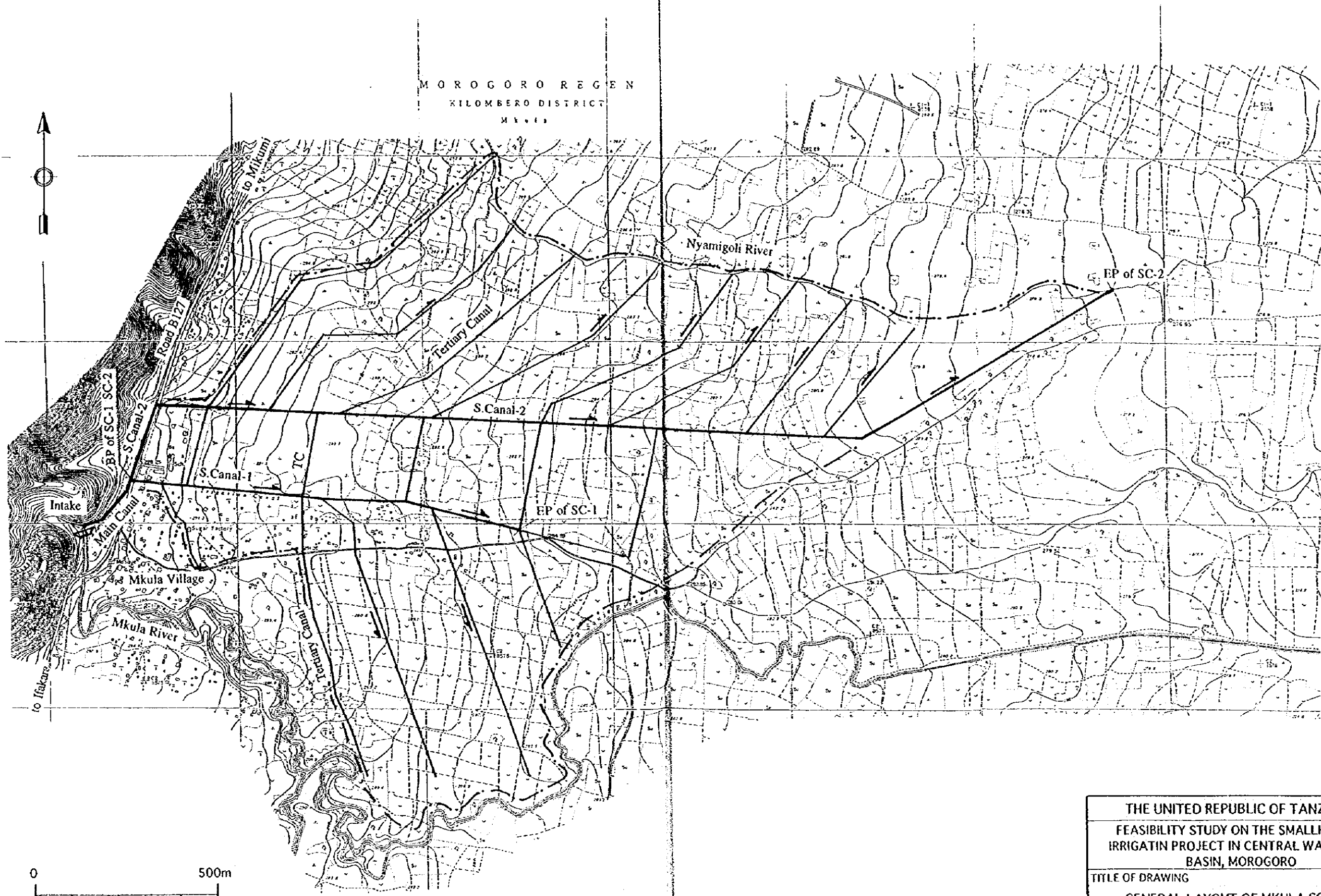
Land Suitability

For Paddy Rice		For Upland Crops	
Land Class	Area (ha)	Land Class	Area (ha)
SR1	0	SU1	70
SR2	145	SU2	75
SR3	27	SU3	30
NR	3	Nu	0
Total	175	Total	175

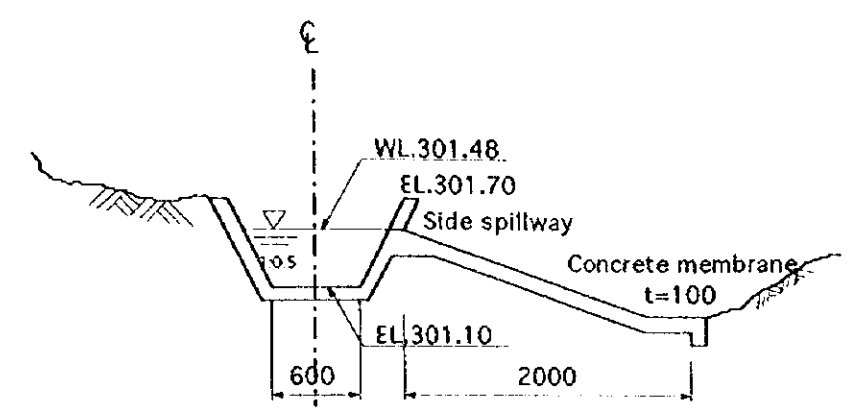
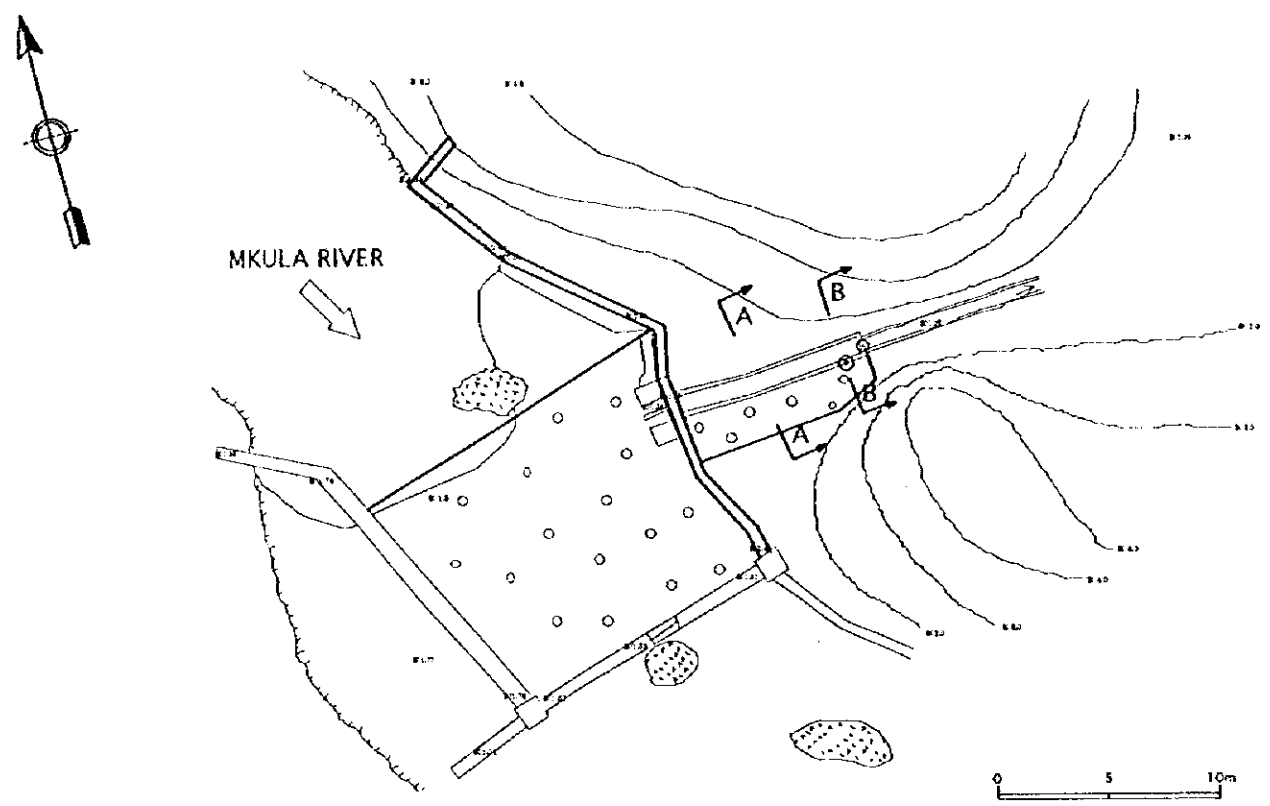


THE UNITED REPUBLIC OF TANZANIA			
FEASIBILITY STUDY ON THE SMALLHOLDER IRRIGATION PROJECT IN CENTRAL WAMI RIVER BASIN, MOROGORO			
TITLE OF DRAWING		MKULA SCHEME	
IRRIGATION SUITABILITY MAP			
Date		Drawing No.	403
JAPAN INTERNATIONAL COOPERATION AGENCY			

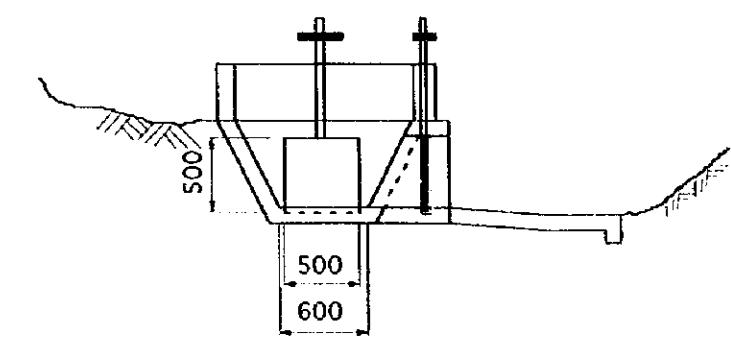
MOROGORO REGION
KILOMBERO DISTRICT
M 1:10,000



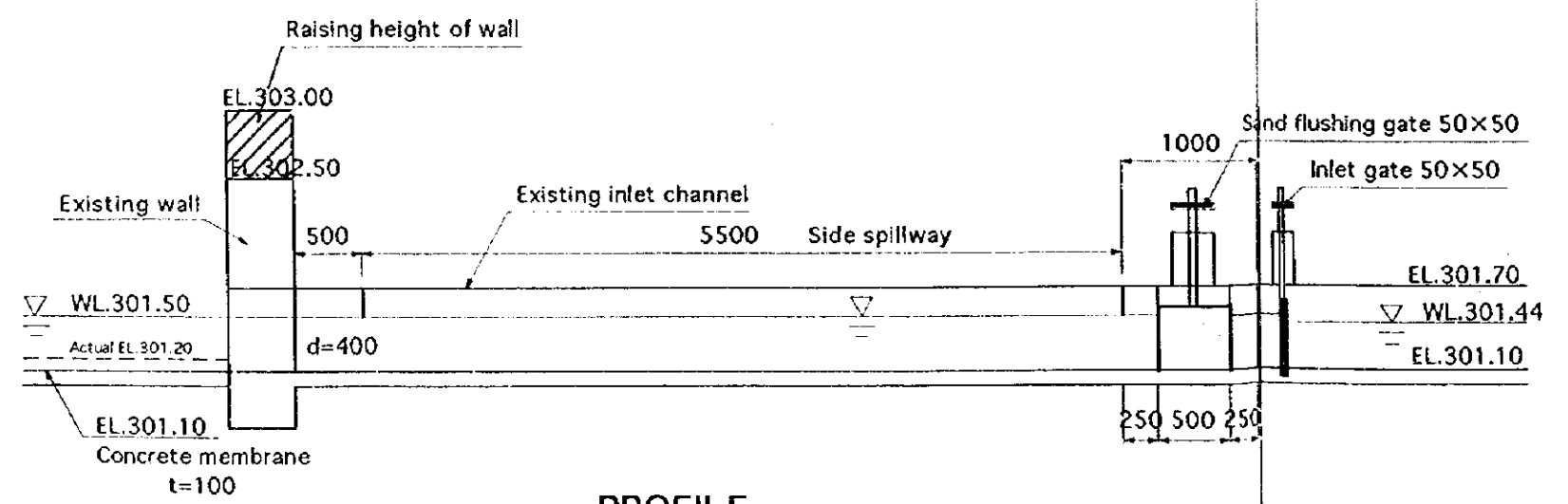
THE UNITED REPUBLIC OF TANZANIA			
FEASIBILITY STUDY ON THE SMALLHOLDER IRRIGATION PROJECT IN CENTRAL WAMI RIVER BASIN, MOROGORO			
TITLE OF DRAWING			
GENERAL LAYOUT OF MKULA SCHEME			
Date		Drawing No.	404
JAPAN INTERNATIONAL COOPERATION AGENCY			



SCALE 0 1 2m



SCALE 0 1 2m



PROFILE

SCALE 0 1 2 3 4 5m

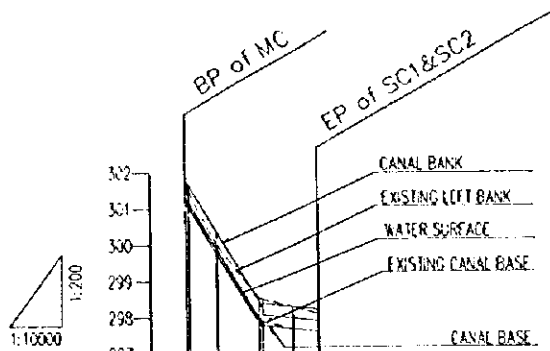
THE UNITED REPUBLIC OF TANZANIA			
FEASIBILITY STUDY ON THE SMALLHOLDER IRRIGATION PROJECT IN CENTRAL WAMI RIVER BASIN, MOROGORO			
TITLE OF DRAWING		MKULA SCHEME INTAKE	
Date	Drawing No.	405	
JAPAN INTERNATIONAL COOPERATION AGENCY			

Main canal

Secondary canal 1

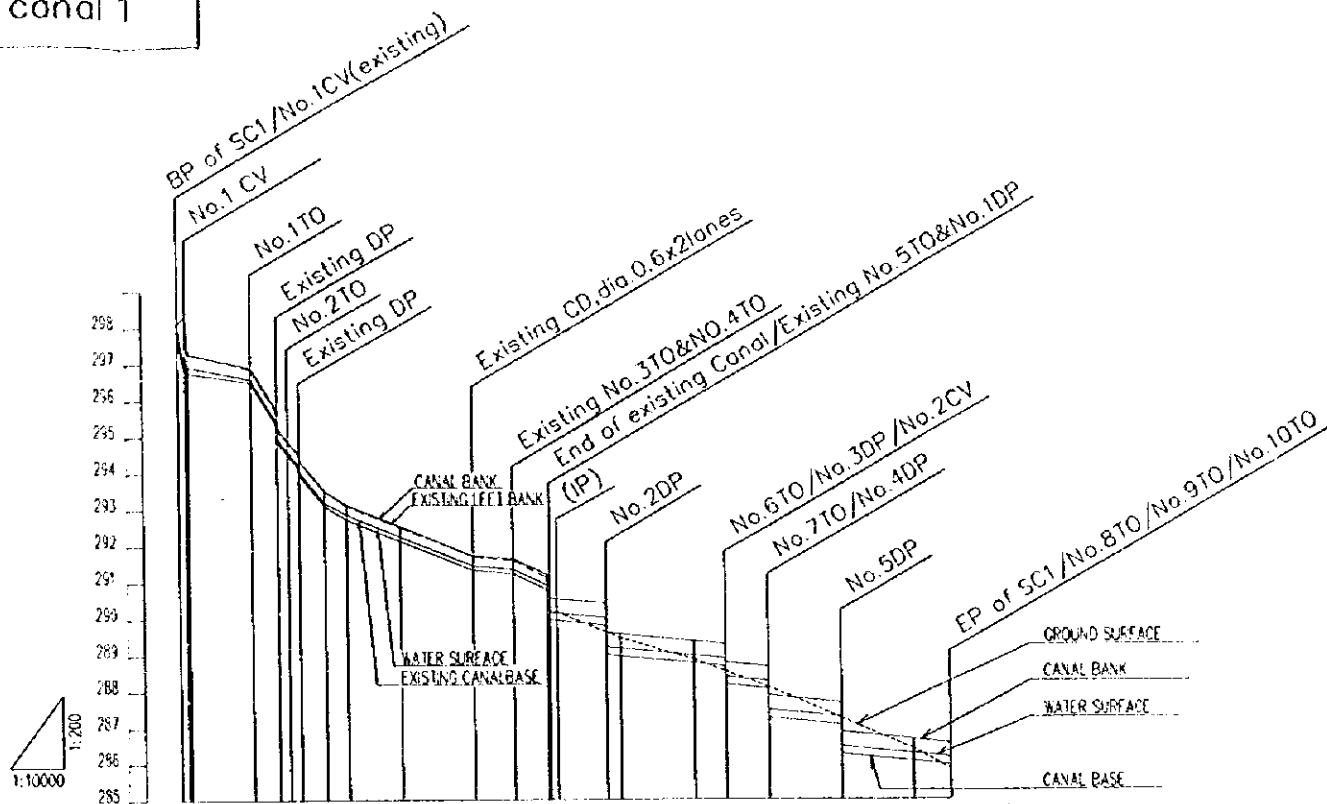
ABBREVIATIONS

- BP : Beginning Point
- EP : End Point
- DP : Drop
- TO : Turnout
- CK : Check
- CV : Culvert
- CD : Cross Drain



CANAL TYPE	①	②	③
CANAL BANK ELEVATION	301.70	301.63	301.47
WATER SURFACE ELEVATION	301.44	301.43	301.18
CANAL BASE ELEVATION	301.10	301.03	299.75
GROUND SURFACE ELEVATION			
EXISTING LEFT BANK ELEVATION	301.27	301.12	299.74
EXISTING CANAL BASE ELEVATION	301.27	301.12	299.74
REDUCED DISTANCE	0.00	4.08	43.00
DISTANCE	0.00	38.92	57.00
STATION NO.	BP	(IP 1)+43	EP

- CANAL TYPE
- ① $Q=0.18$ $B=0.6$ $I=1/500$
 $n=0.34$ $H=0.6$ $V=0.87$
 - ② $Q=0.18$ $B=0.6$ $I=1/30$
 $n=0.13$ $H=0.6$ $V=2.4$
 - ③ $Q=0.18$ $B=0.4$ $I=1/500$
 $n=0.29$ $H=0.6$ $V=0.89$



CANAL TYPE	$Q=0.08$ $B=0.6$ $I=1/31-1/139$ $n=0.07-0.17$ $H=0.4$ $V=0.8-1.8$					$Q=0.08$ $B=0.3$ $I=1/500$ $n=0.21$ $H=0.6$ $V=0.73$				
CANAL BANK ELEVATION	298.10	298.10	298.10	298.10	298.10	288.96	288.96	288.96	288.96	288.96
WATER SURFACE ELEVATION	297.91	296.90	296.90	296.90	296.90	288.87	288.87	288.87	288.87	288.87
CANAL BASE ELEVATION	297.63	296.74	296.74	296.74	296.74	288.69	288.69	288.69	288.69	288.69
GROUND SURFACE ELEVATION										
EXISTING LEFT BANK ELEVATION	297.63	296.74	296.74	296.74	296.74	288.69	288.69	288.69	288.69	288.69
EXISTING CANAL BASE ELEVATION	297.63	296.74	296.74	296.74	296.74	288.69	288.69	288.69	288.69	288.69
REDUCED DISTANCE	0.00	10.00	14.00	100.00	136.00	700.00	742.50	800.00	900.00	1000.00
DISTANCE	0.00	10.00	14.00	114.00	150.00	810.00	852.50	912.50	1012.50	1112.50
STATION NO.	BP	+12	+16	+30	+70	+42.5	+42.5	+57.5	+100	EP +51

THE UNITED REPUBLIC OF TANZANIA

FEASIBILITY STUDY ON THE SMALLHOLDER IRRIGATION PROJECT IN CENTRAL WAMI RIVER BASIN, MOROGORO

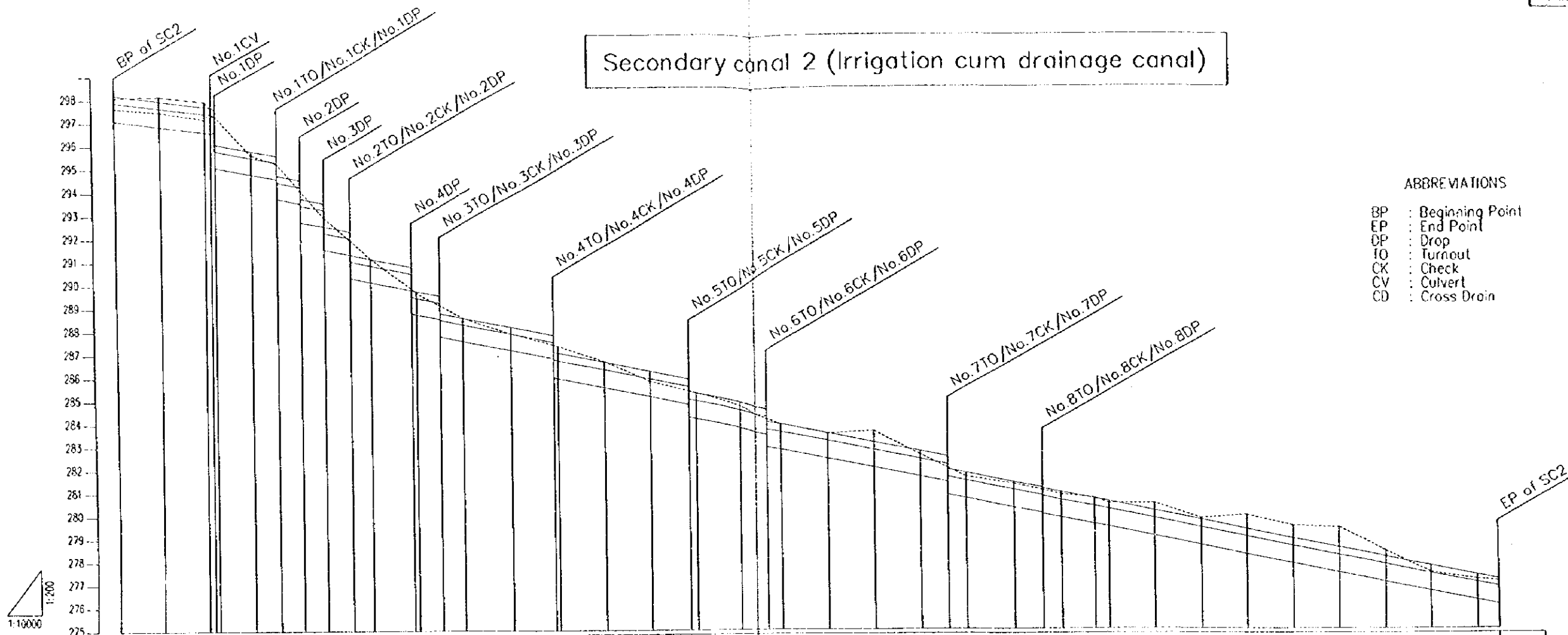
TITLE OF DRAWING: MKULA SCHEME

PROFILE OF MAIN & SECONDARY CANAL 1

Date	Drawing No.	406
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JAPAN INTERNATIONAL COOPERATION AGENCY

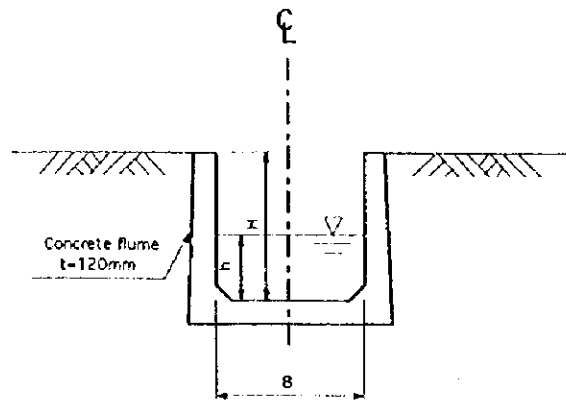
Secondary canal 2 (Irrigation cum drainage canal)



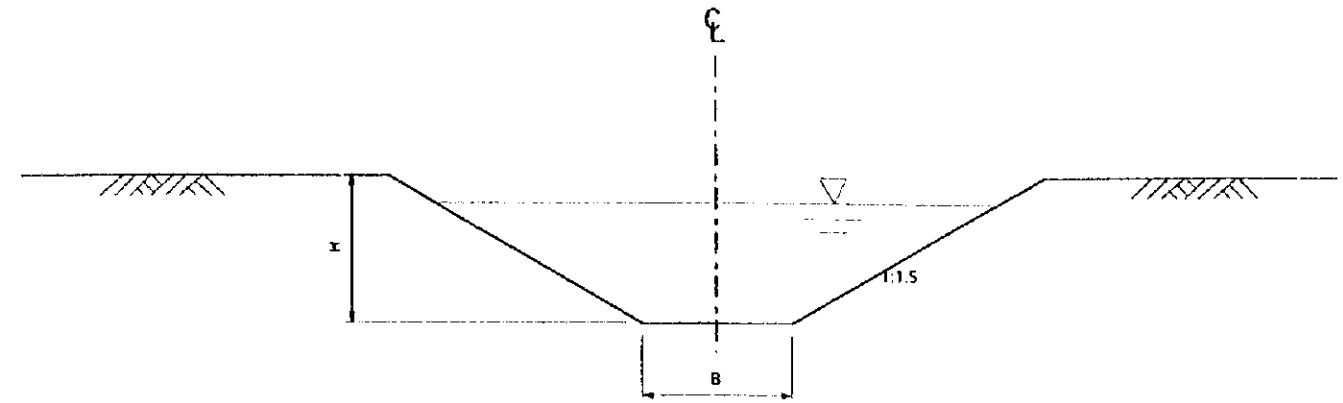
- ABBREVIATIONS
- BP : Beginning Point
 - EP : End Point
 - DP : Drop
 - TO : Turnout
 - CK : Check
 - CV : Culvert
 - CD : Cross Drain

CANAL TYPE	O=15 B=0.8 I=1/400 h=0.75 H=11 V=0.95										O=18 B=0.8 I=1/250 h=0.77 H=11 V=1.19																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
CANAL BANK ELEVATION	298.19	297.94	297.69	297.66	297.57	295.76	295.55	294.70	294.50	293.70	291.12	290.81	290.74	290.45	289.74	289.51	288.78	288.55	287.87	287.79	287.07	286.65	285.79	285.56	285.37	285.29	284.79	284.55	283.91	283.51	283.20	283.13	282.58	282.40	282.22	282.00	281.38	281.14	280.84	280.66	280.53	280.44	279.94	279.80	279.63	279.40	279.33	279.00	278.93	278.80	278.60	278.53	278.36	277.73	277.63	277.44	277.33	277.14	277.05	276.82	277.15																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
WATER SURFACE ELEVATION	297.88	297.63	297.38	297.35	297.26	295.45	295.24	294.39	294.19	293.39	290.81	290.50	290.43	289.72	289.49	288.76	288.53	287.85	287.77	287.05	286.63	285.77	285.54	285.35	285.17	285.09	284.59	284.35	283.71	283.31	283.00	282.83	282.65	282.43	282.25	282.03	281.41	281.17	280.87	280.69	280.56	280.47	279.97	279.83	279.66	279.43	279.36	279.03	288.96	288.77	288.58	288.51	288.32	288.23	288.04	287.95	287.76	287.67	287.48	287.39	287.20	287.11	286.92	286.83	286.64	286.55	286.36	286.27	286.08	285.99	285.80	285.71	285.52	285.43	285.24	285.15	284.96	284.87	284.68	284.59	284.40	284.31	284.12	284.03	283.84	283.75	283.56	283.47	283.28	283.19	283.00	282.91	282.72	282.63	282.44	282.35	282.16	282.07	281.88	281.79	281.60	281.51	281.32	281.23	281.04	280.95	280.76	280.67	280.48	280.39	280.20	280.11	279.92	279.83	279.64	279.55	279.36	279.27	279.08	278.99	278.80	278.71	278.52	278.43	278.24	278.15	277.96	277.87	277.68	277.59	277.40	277.31	277.12	277.03	276.84	276.75	276.56	276.47	276.28	276.19	276.00	275.91	275.72	275.63	275.44	275.35	275.16	275.07	274.88	274.79	274.60	274.51	274.32	274.23	274.04	273.95	273.76	273.67	273.48	273.39	273.20	273.11	272.92	272.83	272.64	272.55	272.36	272.27	272.08	271.99	271.80	271.71	271.52	271.43	271.24	271.15	270.96	270.87	270.68	270.59	270.40	270.31	270.12	270.03	269.84	269.75	269.56	269.47	269.28	269.19	269.00	268.91	268.72	268.63	268.44	268.35	268.16	268.07	267.88	267.79	267.60	267.51	267.32	267.23	267.04	266.95	266.76	266.67	266.48	266.39	266.20	266.11	265.92	265.83	265.64	265.55	265.36	265.27	265.08	264.99	264.80	264.71	264.52	264.43	264.24	264.15	263.96	263.87	263.68	263.59	263.40	263.31	263.12	263.03	262.84	262.75	262.56	262.47	262.28	262.19	262.00	261.91	261.72	261.63	261.44	261.35	261.16	261.07	260.88	260.79	260.60	260.51	260.32	260.23	260.04	259.95	259.76	259.67	259.48	259.39	259.20	259.11	258.92	258.83	258.64	258.55	258.36	258.27	258.08	257.99	257.80	257.71	257.52	257.43	257.24	257.15	256.96	256.87	256.68	256.59	256.40	256.31	256.12	256.03	255.84	255.75	255.56	255.47	255.28	255.19	255.00	254.91	254.72	254.63	254.44	254.35	254.16	254.07	253.88	253.79	253.60	253.51	253.32	253.23	253.04	252.95	252.76	252.67	252.48	252.39	252.20	252.11	251.92	251.83	251.64	251.55	251.36	251.27	251.08	250.99	250.80	250.71	250.52	250.43	250.24	250.15	249.96	249.87	249.68	249.59	249.40	249.31	249.12	249.03	248.84	248.75	248.56	248.47	248.28	248.19	248.00	247.91	247.72	247.63	247.44	247.35	247.16	247.07	246.88	246.79	246.60	246.51	246.32	246.23	246.04	245.95	245.76	245.67	245.48	245.39	245.20	245.11	244.92	244.83	244.64	244.55	244.36	244.27	244.08	243.99	243.80	243.71	243.52	243.43	243.24	243.15	242.96	242.87	242.68	242.59	242.40	242.31	242.12	242.03	241.84	241.75	241.56	241.47	241.28	241.19	241.00	240.91	240.72	240.63	240.44	240.35	240.16	240.07	239.88	239.79	239.60	239.51	239.32	239.23	239.04	238.95	238.76	238.67	238.48	238.39	238.20	238.11	237.92	237.83	237.64	237.55	237.36	237.27	237.08	236.99	236.80	236.71	236.52	236.43	236.24	236.15	235.96	235.87	235.68	235.59	235.40	235.31	235.12	235.03	234.84	234.75	234.56	234.47	234.28	234.19	234.00	233.91	233.72	233.63	233.44	233.35	233.16	233.07	232.88	232.79	232.60	232.51	232.32	232.23	232.04	231.95	231.76	231.67	231.48	231.39	231.20	231.11	230.92	230.83	230.64	230.55	230.36	230.27	230.08	229.99	229.80	229.71	229.52	229.43	229.24	229.15	228.96	228.87	228.68	228.59	228.40	228.31	228.12	228.03	227.84	227.75	227.56	227.47	227.28	227.19	227.00	226.91	226.72	226.63	226.44	226.35	226.16	226.07	225.88	225.79	225.60	225.51	225.32	225.23	225.04	224.95	224.76	224.67	224.48	224.39	224.20	224.11	223.92	223.83	223.64	223.55	223.36	223.27	223.08	222.99	222.80	222.71	222.52	222.43	222.24	222.15	221.96	221.87	221.68	221.59	221.40	221.31	221.12	221.03	220.84	220.75	220.56	220.47	220.28	220.19	220.00	219.91	219.72	219.63	219.44	219.35	219.16	219.07	218.88	218.79	218.60	218.51	218.32	218.23	218.04	217.95	217.76	217.67	217.48	217.39	217.20	217.11	216.92	216.83	216.64	216.55	216.36	216.27	216.08	215.99	215.80	215.71	215.52	215.43	215.24	215.15	214.96	214.87	214.68	214.59	214.40	214.31	214.12	214.03	213.84	213.75	213.56	213.47	213.28	213.19	213.00	212.91	212.72	212.63	212.44	212.35	212.16	212.07	211.88	211.79	211.60	211.51	211.32	211.23	211.04	210.95	210.76	210.67	210.48	210.39	210.20	210.11	209.92	209.83	209.64	209.55	209.36	209.27	209.08	208.99	208.80	208.71	208.52	208.43	208.24	208.15	207.96	207.87	207.68	207.59	207.40	207.31	207.12	207.03	206.84	206.75	206.56	206.47	206.28	206.19	206.00	205.91	205.72	205.63	205.44	205.35	205.16	205.07	204.88	204.79	204.60	204.51	204.32	204.23	204.04	203.95	203.76	203.67	203.48	203.39	203.20	203.11	202.92	202.83	202.64	202.55	202.36	202.27	202.08	201.99	201.80	201.71	201.52	201.43	201.24	201.15	200.96	200.87	200.68	200.59	200.40	200.31	200.12	200.03	199.84	199.75	199.56	199.47	199.28	199.19	199.00	198.91	198.72	198.63	198.44	198.35	198.16	198.07	197.88	197.79	197.60	197.51	197.32	197.23	197.04	196.95	196.76	196.67	196.48	196.39	196.20	196.11	195.92	195.83	195.64	195.55	195.36	195.27	195.08	194.99	194.80	194.71	194.52	194.43	194.24	194.15	193.96	193.87	193.68	193.59	193.40	193.31	193.12	193.03	192.84	192.75	192.56	192.47	192.28	192.19	192.00	191.91	191.72	191.63	191.44	191.35	191.16	191.07	190.88	190.79	190.60	190.51	190.32	190.23	190.04	189.95	189.76	189.67	189.48	189.39	189.20	189.11	188.92	188.83	188.64	188.55	188.36	188.27	188.08	187.99	187.80	187.71	187.52	187.43	187.24	187.15	186.96	186.87	186.68	186.59	186.40	186.31	186.12	186.03	185.84	185.75	185.56	185.47	185.28	185.19	185.00	184.91	184.72	184.63	184.44	184.35	184.16	184.07	183.88	183.79	183.60	183.51	183.32	183.23	183.04	182.95	182.76	182.67	182.48	182.39	182.20	182.11	181.92	181.83	181.64	181.55	181.36	181.27	181.08	180.99	180.80	180.71	180.52	180.43	180.24	180.15	179.96	179.87	179.68	179.59	179.40	179.31	179.12	179.03	178.84	178.75	178.56	178.47	178.28	178.19	178.00	177.91	177.72	177.63	177.44	177.35	177.16	177.07	176.88	176.79	176.60	176.51	176.32	176.23	176.04	175.95	175.76	175.67	175.48	175.39	175.20	175.11	174.92	174.83	174.64	174.55	174.36	174.27	174.08	173.99	173.80	173.71	173.52	173.43	173.24	173.15	172.96	172.87	172.68	172.59	172.40	172.31	172.12	172.03	171.84	171.75	171.56	171.47	171.28	171.19	171.00	170.91	170.72	170.63	170.44	170.35	170.16	170.07	169.88	169.79	169.60	169.51	169.32	169.23	169.04	168.95	168.76	168.67	168.48	168.39	168.20	168.11	167.92	167.83	167.64	167.55	167.36	167.27	167.08	166.99	166.80	166.71	166.52	166.43	166.24	166.15	165.96	165.87	165.68	165.59	165.40	165.31	165.12	165.03	164.84	164.75	164.56	164.47	164.28	164.19	164.00	163.91	163.72	163.63	163.44	163.35	163.16	163.07	162.88	162.79	162.60	162.51	162.32	162.23	162.04	161.95	161.76	161.67	161.48	161.39	161.20	161.11	160.92	160.83	160.64	160.55	160.36	160.27	160.08	159.99	159.80	159.71	159.52	159.43	159.24	159.15	158.96	158.87	158.68	158.59	158.40	158.31	158.12	158.03	157.84	157.75	157.56	157.47	157.28	157.19	157.00	156.91	156.72	156.63	156.44	156.35	156.16	156.07	155.88	155.79	155.60	155.51	155.32	155.23	155.04	154.95	154.76	154.67	154.48	154.39	154.20	154.11	153.92	153.83	153.64	153.55	153.36

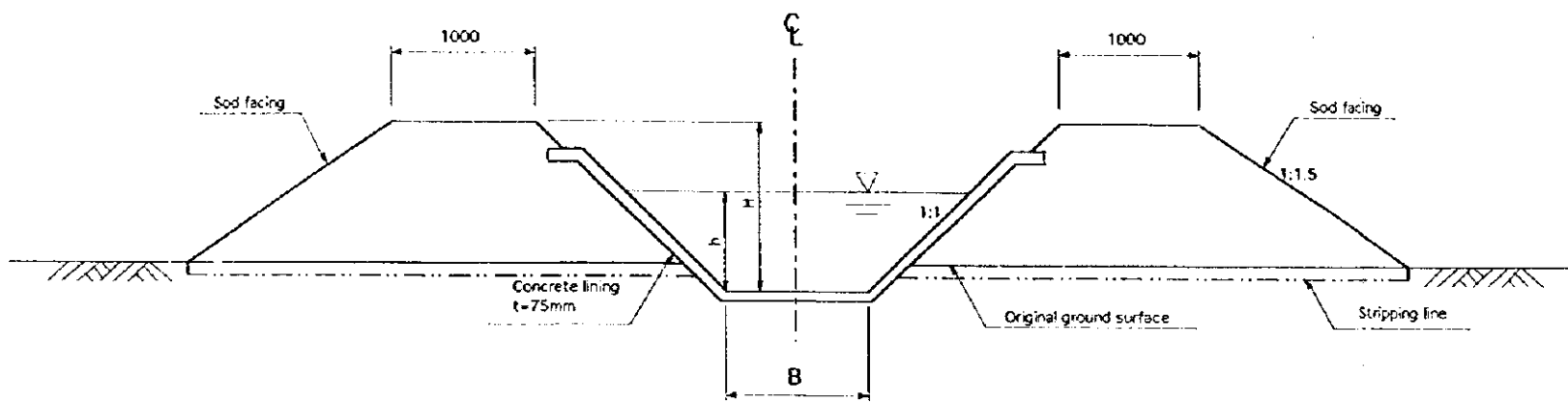
FLUME CANAL



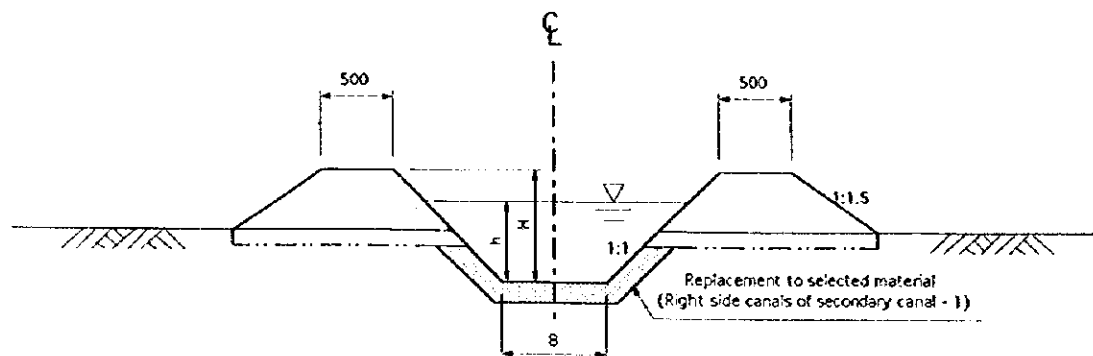
IRRIGATION CUM DRAINAGE CANAL (EARTHEN ROAD & CANAL)



CONCRETE LINING CANAL



TERTIARY CANAL (EARTHEN CANAL)



IRRIGATION CANAL

(Unit : m)

Name of Canal	Name of Reache	L (km)	Q (m ³ /sec)	B	H	h	i (1/a)	V (m/sec)	Remark
Main canal	Reaches-1	0.004	0.18	0.60	0.60	0.34	500	0.87	Flume type
	Reaches-2	0.101	0.18	0.60	0.60	0.13	30	2.40	Flume type
	Reaches-3	0.075	0.18	0.40	0.60	0.29	500	0.89	Concrete Lining type
Secondary canal-1	Reaches-1	0.503	0.08	0.60	0.40	0.07-0.17	31-139	0.8-1.8	Existing Canal
	Reaches-2	0.548	0.08	0.30	0.60	0.21	500	0.73	Concrete Lining type
Secondary canal-2 (Irrigation cum drainage canal)	Reaches-1	0.953	1.50	0.80	1.10	0.79	400	0.95	Earthen type
	Reaches-2	2.046	1.80	0.80	1.10	0.77	250	1.19	Earthen type
Tertiary canal	Right side canals of SC1	0.19	0.08	0.50	0.50	0.09	35	1.80	Earthen type (earth lining)
	Others Canals	0.24	0.03	0.40	0.40	0.05	30	1.50	Earthen type

L: length, Q: design discharge, B: bottom width, H: canal height, h: water depth,
i: canal gradient, V: flow velocity in roughness coefficient of 0.015 for concrete lining canal and 0.03 for earthen canal

THE UNITED REPUBLIC OF TANZANIA

FEASIBILITY STUDY ON THE SMALLHOLDER IRRIGATION PROJECT IN CENTRAL WAMI RIVER BASIN, MOROGORO

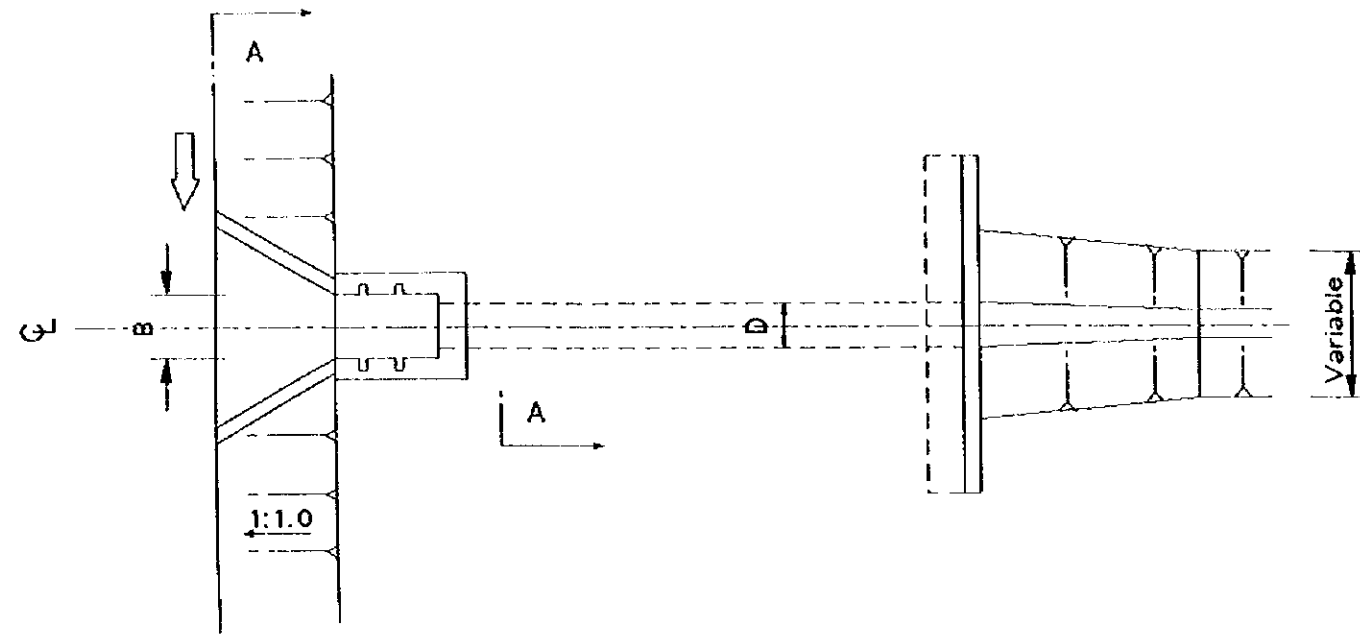
TITLE OF DRAWING MKULA SCHEME

TYPICAL CROSS SECTION OF CANAL

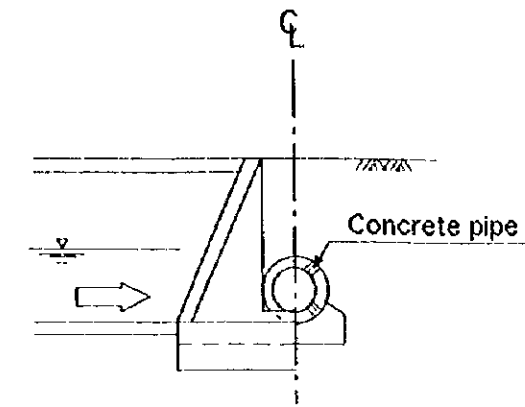
Date Drawing No. 408

JAPAN INTERNATIONAL COOPERATION AGENCY

TURNOUT

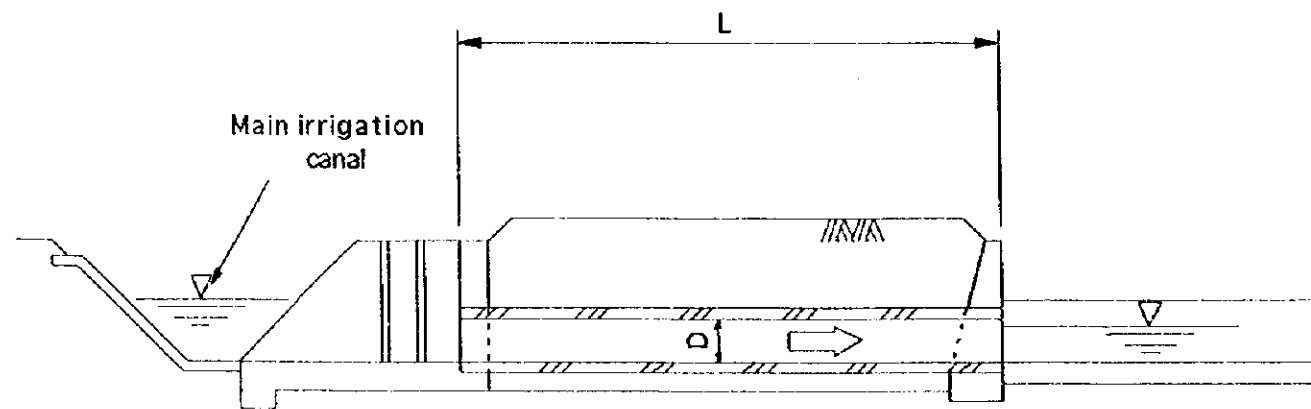


PLAN



SECTION A-A

DIMENSION OF TURNOUT



PROFILE

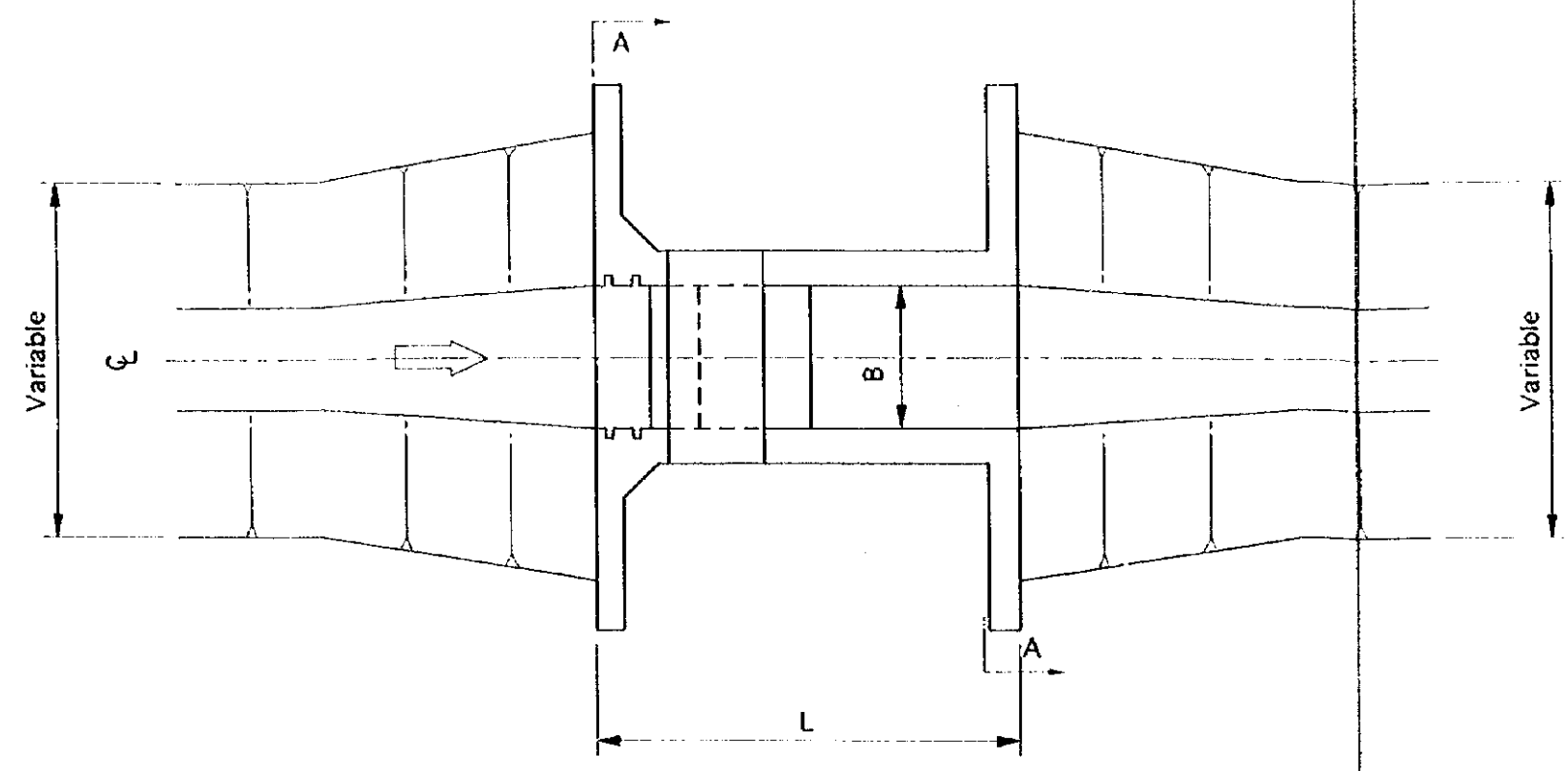
(Unit:m)

Name of Canal	Name of Structure	Sta. No.	Qi (m3/sec)	L	D	B	Remarks
SC-1	No.1 Turnout	No.1	0.03	4.00	0.30	0.60	
	No.2 Turnout	No.1+50.00	0.03	1.50	0.30	0.60	
	No.3 Turnout	No.4+54.00	0.03	-	-	-	existing
	No.4 Turnout	No.4+54.00	0.03	4.00	0.30	0.60	
	No.5 Turnout	No.5+3.00	0.03	-	-	-	existing
	No.6 Turnout	No.7+42.50	0.03	4.00	0.30	0.60	
	No.7 Turnout	No.8	0.03	1.50	0.30	0.60	
	No.8 Turnout	EP.(No.10+51.00)	0.03	1.50	0.30	0.60	
	No.9 Turnout	EP.(No.10+51.00)	0.03	4.00	0.30	0.60	
	No.10 Turnout	EP.(No.10+51.00)	0.03	4.00	0.30	0.60	
SC-2	8 turnouts		0.03	4.00	0.30	0.60	

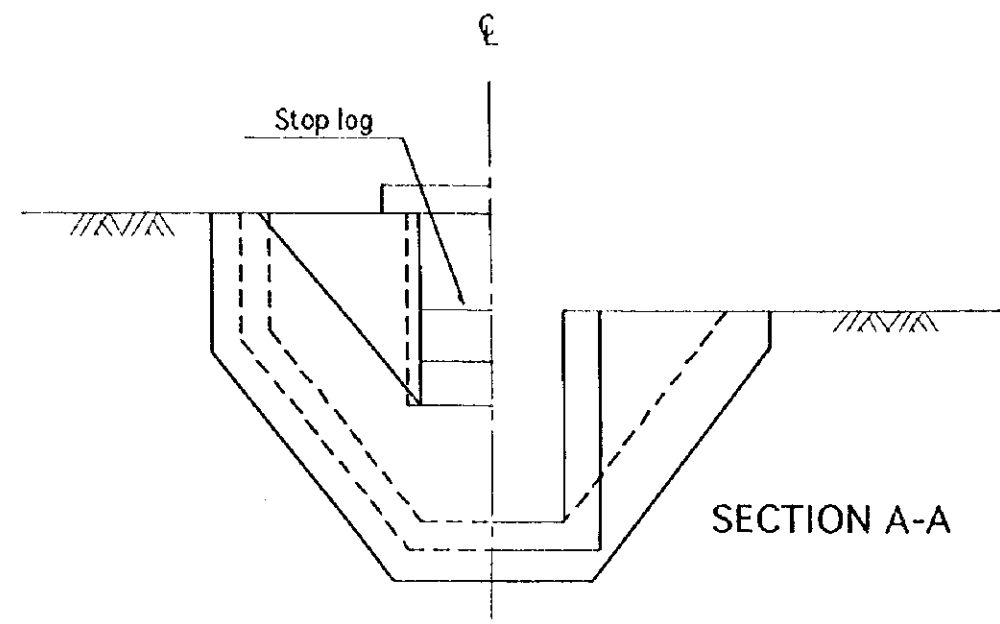
Qi : design offtake discharge

THE UNITED REPUBLIC OF TANZANIA			
FEASIBILITY STUDY ON THE SMALLHOLDER IRRIGATION PROJECT IN CENTRAL WAMI RIVER BASIN, MOROGORO			
TITLE OF DRAWING		MKULA SCHEME	
TURNOUT			
Date		Drawing No.	409
JAPAN INTERNATIONAL COOPERATION AGENCY			

DROP



PLAN



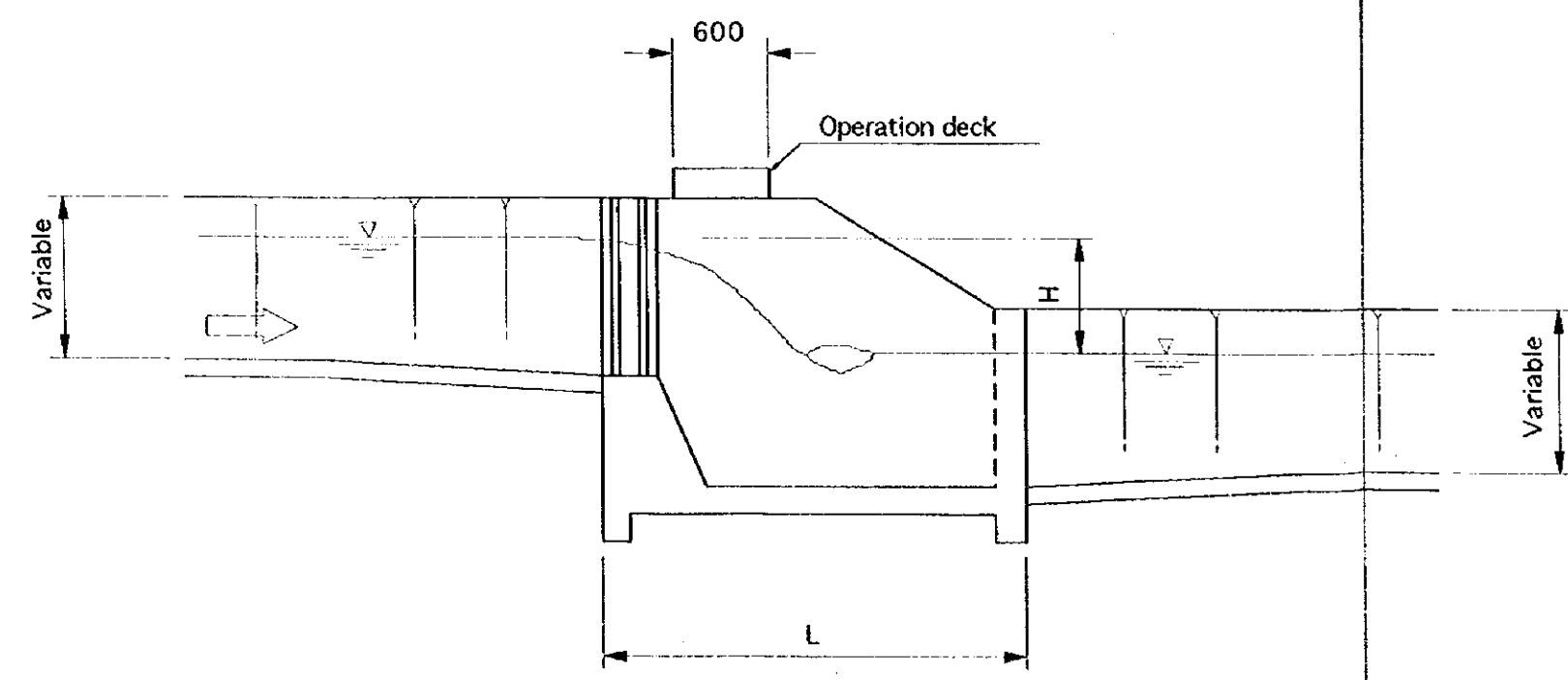
SECTION A-A

DIMENSION OF DROP

(Unit:m)

Name of Canal	Name of Structure	Sta. No.	Qi (m ³ /sec)	H	L	B
SC-1	No.1 Drop	No.5+3.00	0.08	0.80	2.40	0.50
	No.2 Drop	No.5+80.00	0.08	0.80	2.40	0.50
	No.3 Drop	No.7+42.50	0.08	0.50	1.50	0.50
	No.4 Drop	No.8	0.08	0.80	2.40	0.50
	No.5 Drop	No.9	0.08	0.80	2.40	0.50
SC-2	No.1 Drop	-130	1.50	1.50	4.50	1.20
	No.2 Drop	-50	1.50	0.80	2.40	1.20
	No.3 Drop	No.1	1.50	1.00	3.00	1.20
	No.4 Drop	No.2+90.00	1.50	1.00	3.00	1.20

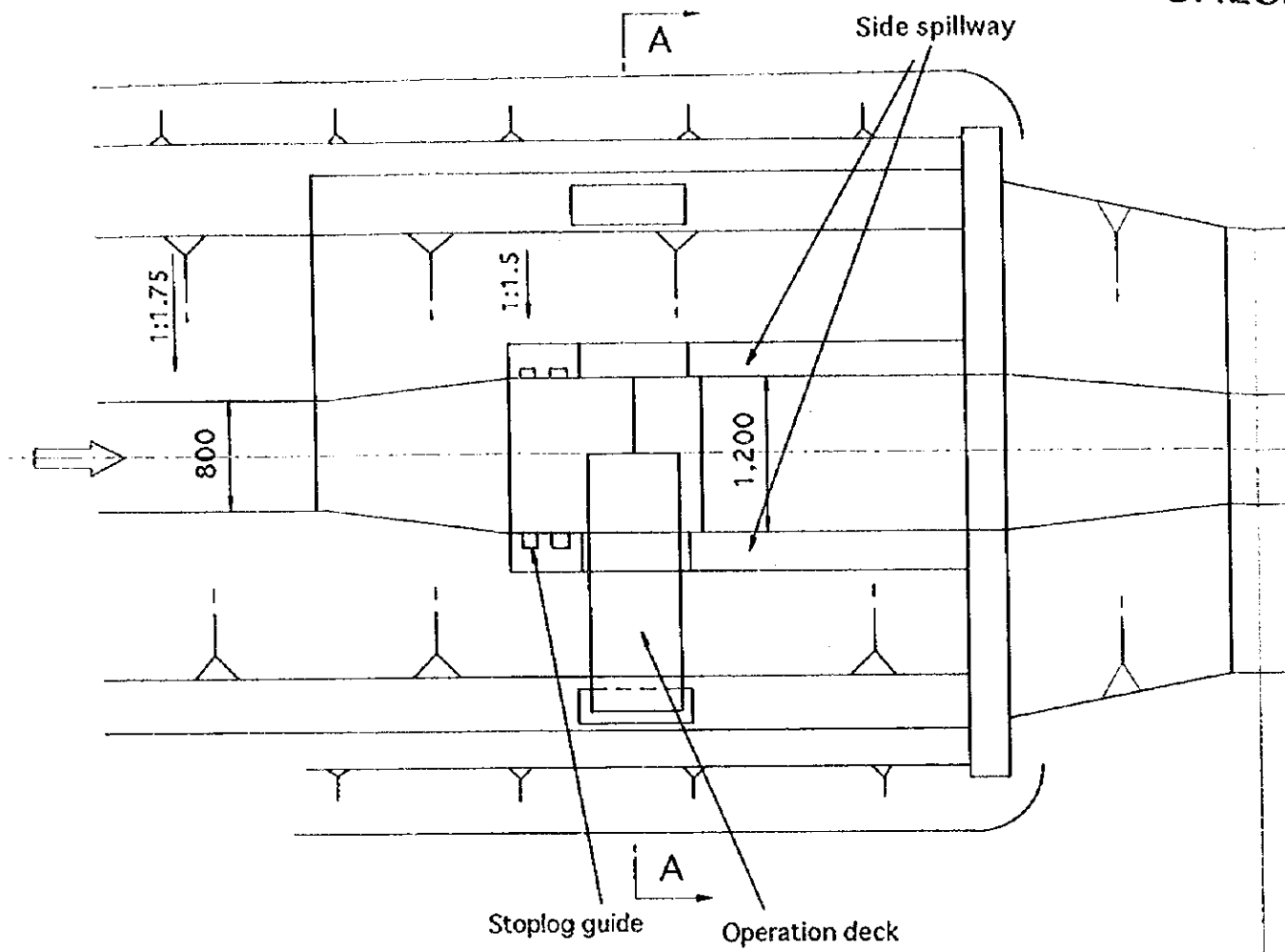
Qi : design discharge



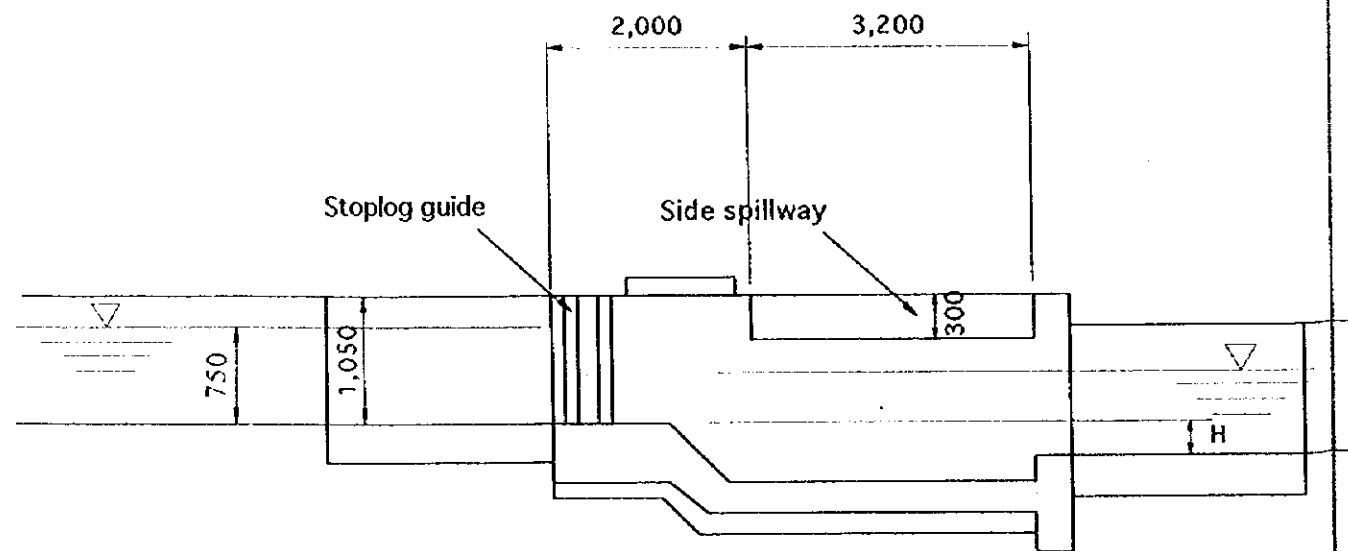
PROFILE

THE UNITED REPUBLIC OF TANZANIA			
FEASIBILITY STUDY ON THE SMALLHOLDER IRRIGATION PROJECT IN CENTRAL WAMI RIVER BASIN, MOROGORO			
TITLE OF DRAWING		MKULA SCHEME	
		DROP	
Date		Drawing No.	410
JAPAN INTERNATIONAL COOPERATION AGENCY			

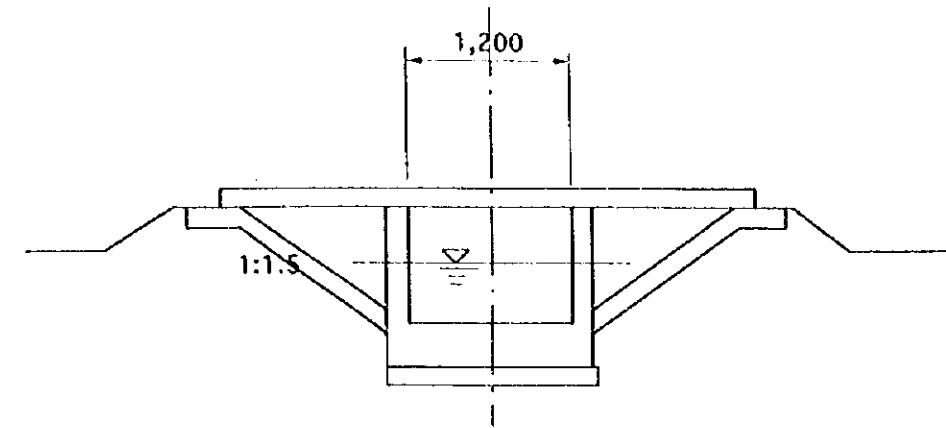
CHECK CUM DROP



PLAN



PROFILE



SECTION A-A

DIMENSION OF CHECK CUM DROP

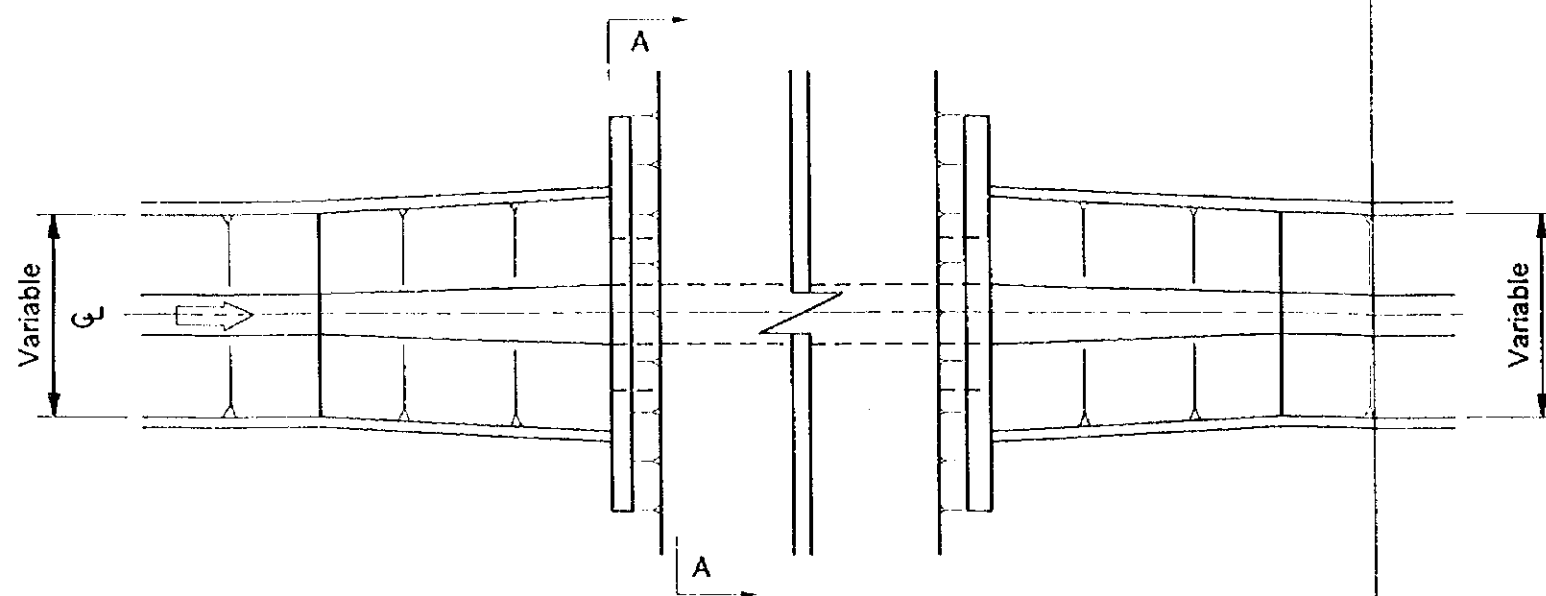
(Unit:m)

Name of Canal	Name of structure	Sta. No.	H
SC-2	No.1 Check cum Drop	No.0	0.80
	No.2 Check cum Drop	No.1+ 50.00	1.00
	No.3 Check cum Drop	No.3+ 50.00	0.70
	No.4 Check cum Drop	No.5+ 90.00	0.70
	No.5 Check cum Drop	No.8+ 85.00	0.50
	No.6 Check cum Drop	No.10 + 50.00	0.50
	No.7 Check cum Drop	No.14 + 60.00	0.50
	No.8 Check cum Drop	No.16 + 60.00	0.50

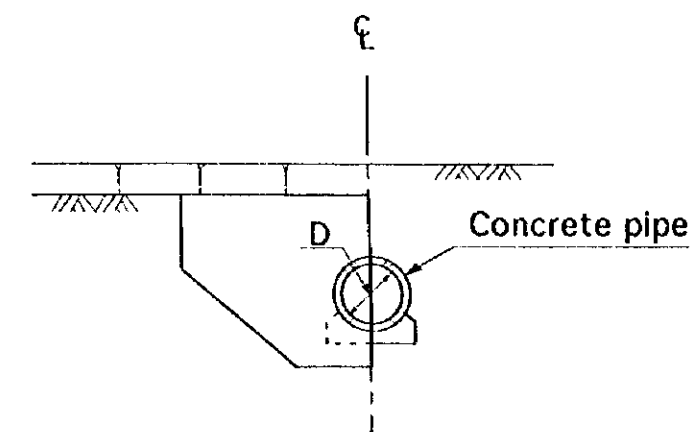
H: drop

THE UNITED REPUBLIC OF TANZANIA			
FEASIBILITY STUDY ON THE SMALLHOLDER IRRIGATION PROJECT IN CENTRAL WAMI RIVER BASIN, MOROGORO			
TITLE OF DRAWING		MKULA SCHEME	
CHECK CUM DROP			
Date		Drawing No.	411
JAPAN INTERNATIONAL COOPERATION AGENCY			

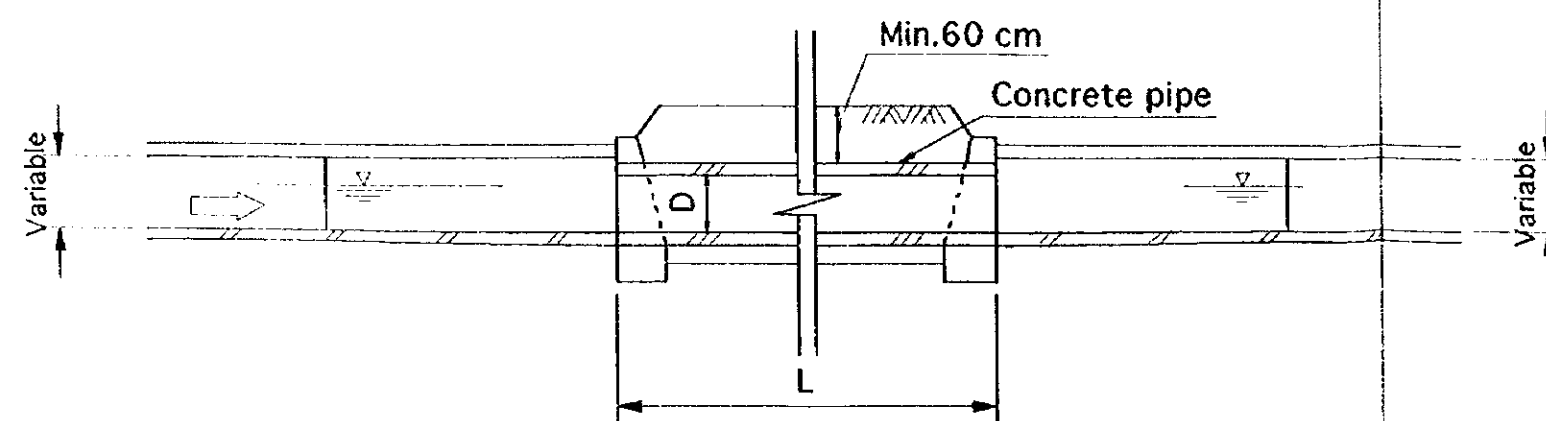
CULVERT



PLAN



SECTION A-A



PROFILE

DIMENSION OF CULVERT

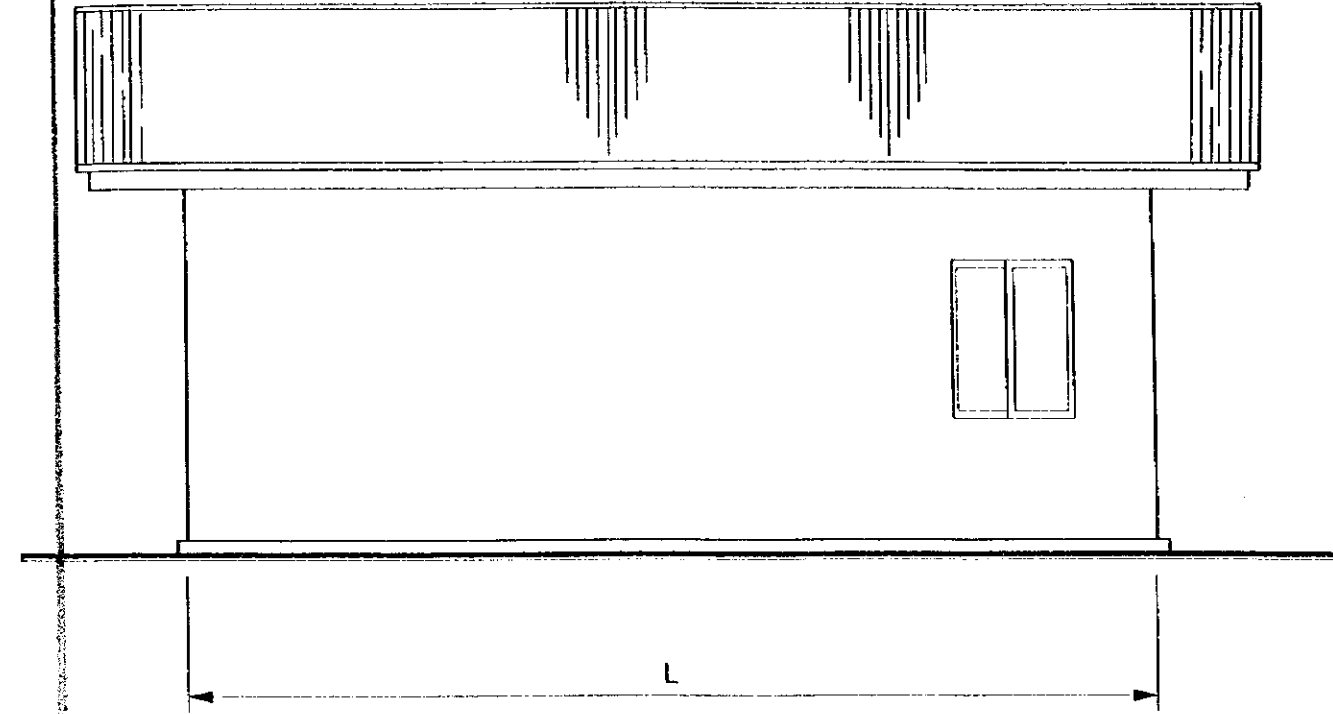
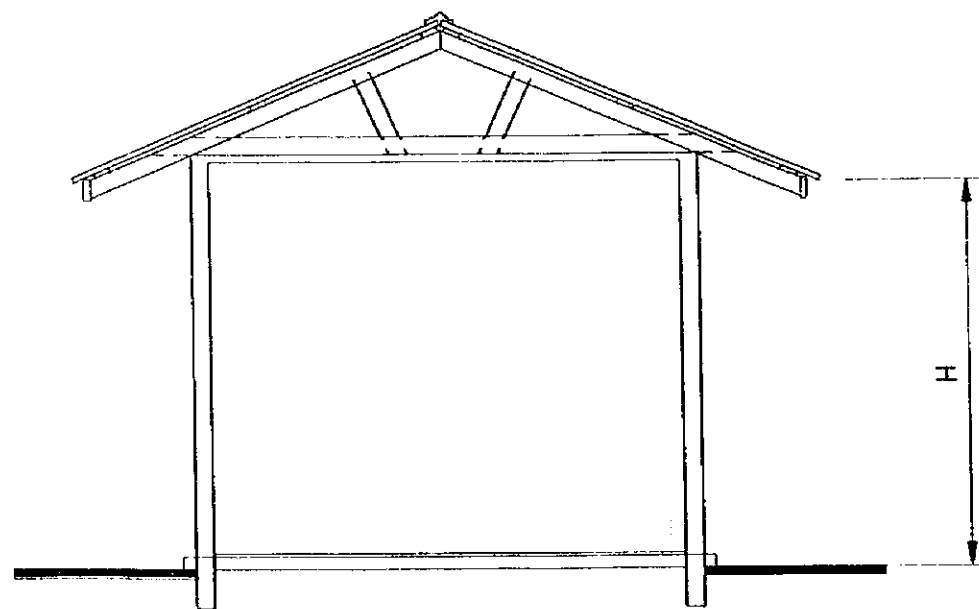
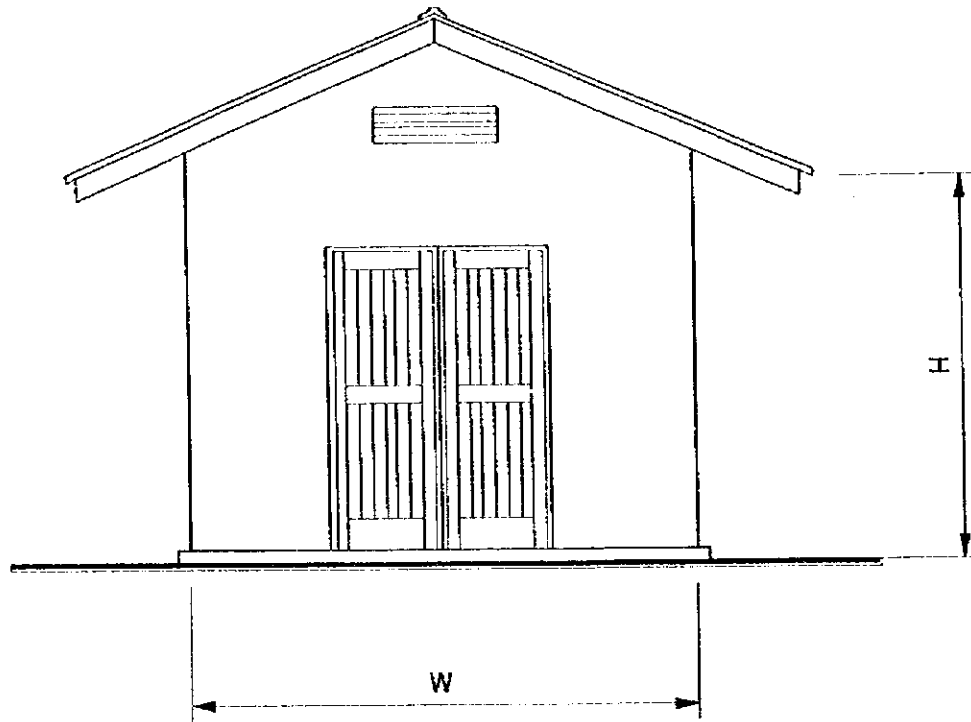
(Unit : m)

Name of Canal	Name of Structure	Sta. No.	Qi (m ³ /sec)	L	D	Remark
SC-1	No.1 Culvert	BP.	0.08	10.00	-	Existing
	No.2 Culvert	No.7+42.50	0.08	4.00	0.40	Existing
SC-2	No.1 Culvert	-140	1.50	10.00	1.00	Existing
Tertiary Canal	3nos		0.03	4.00	0.30	Existing

Qi : design canal discharge

THE UNITED REPUBLIC OF TANZANIA			
FEASIBILITY STUDY ON THE SMALLHOLDER IRRIGATION PROJECT IN CENTRAL WAMI RIVER BASIN, MOROGORO			
TITLE OF DRAWING		MKULA SCHEME	
		CULVERT	
Date		Drawing No.	412
JAPAN INTERNATIONAL COOPERATION AGENCY			

STORAGE & WUG OFFICE



(Unit : m)

ITEM	L	W	H
STORAGE	10.00	6.00	3.00
WUG OFFICE	10.00	10.00	3.00

THE UNITED REPUBLIC OF TANZANIA			
FEASIBILITY STUDY ON THE SMALLHOLDER IRRIGATION PROJECT IN CENTRAL WAMI RIVER BASIN, MOROGORO			
TITLE OF DRAWING		MKULA SCHEME	
STORAGE & WUG OFFICE			
Date		Drawing No.	413
JAPAN INTERNATIONAL COOPERATION AGENCY			