Tables

Table C1-1 List of Temporary Bench Marks

Sub-project	No.	UTM	Northing (m)	Easting (m)	Elevation*2 (m)	Remaks
Ream Kon	TBM.06	Ind1954*1	1412839	333212	19.594	On the curb of bridge of existing weir (upstream, right side of the river)
		WGS84	1413159	332787		
Por Canal	TBM.05	Ind1954*1	1412595	332465	17.840	Near existing intake, existing main canal right side
		WGS84	1412914	332041		
Damnak Ampil	HW	Ind1954*1	1380405	370838	20.15*3	On the curb of bridge of existing weir (upstream, left side of the river)
		WGS84	1380724	370415	23.673	
Wat Loung	TBM.07	Ind1954*1	1382468	375489	20.94*4	Near the bridge of rural road
		WGS84	1382787	375065		
Wat Chrey	TBM.09	Ind1954*1	1398492	361557	14.047	Near the bridge of rural road
		WGS84	1398811	361133		
Lum Hach	TBM.10	Ind1954*1	1362350	425890	39.782	Proposed headwork site (left side of the river)
		WGS84	1362669	425467		

*1 UTM Zone48N Ellipsoid-Everest1830 Datum-Indian1954

*2 EGM96 Geoid model except for Damnak Ampil and Wat Loung

*3 El. 20.15m derives from elevation data in the drawing of the Project Proposal for Rehabilitation of Damnak Ampil Irrigation Project, MOWRAM December 2004. EL.23.673m is observed by connecting to the National Bench Mark system.
The former number is used in the present study in order to consistently compare elevation of Damnak Ampil Sub-project and Wat Loung sub-project. Accordingly, the elevation data of the two sub-projects in the present study is lower than national bench mark network by 3.523m.

*4 Connected with Damanak Ampil HW

TBM points above were surveyed by Static Dual Frequency GPS receivers to connect with the National Bench Mark network using base stations in Battambang (N2) and, Pursat (N15) and Kampong Chhnang (N4) provinces, with results computed in WGS84 datum and then converted to Indian 1954 datum (the datum of existing topomap with a scale of 1 to 100,000).

The elevation of the TBM was determined in the GPS Post Processing software by using EGM96 (Global) Geoid model which is used for determining elevation in recent ortho-photo mapping in Cambodia.

Reference points

GPS base station		UTM	Northing	Easting	Elevation (m)
Battambang	N2	WGS84	1447871	305875	13.8857
Pursat	N15	WGS84	1386934	381847	17.3062
Kompong Chn	N4	WGS84	1362669	463852	15.1214

Table C1-2 Inventory Survey Results of Project Facilities at Ream Kon Rehabilitation Sub-Project

Description	Nos. or Q'ty	Unit	Existing Condition	Description	Judgment
Existing area	50	Ha	Supplemental irrigation	Located in the upstream of the area, irrigated by farmers pump	
Headworks	1	nos.	Not functioing, deteriorated	10 nos. of movable gate	To be constructed
Intake	1	nos.	Poor	Concrete is severely deteriorated by cracks. Reinforcing bars get rusty.	To be constructed
Main canal	11.9	km	Poor	Earth canal, downstream capacity needs to be expanded. water level is lower than ground surface.	To be rehabilitated
Secondary canal	17.1	km	Poor	Earth canal, downstream capacity needs to be expanded. water level is lower than ground surface.	To be rehabilitated
Related structures	3.0	nos.	Poor	Culvert, Check, Bridge	Not enough numbers, to be reahbilitated/ replaced/ constructed
Tertiary canal	-	km			To be constructed
Main drain					A flood gate is required
Secondary drain					
Tertiary drain					
Inspection road	26	km	Poor	Not jeepable	To be rehabilitated

Table C1-3 Inventory Survey Results of Project Facilities at Por Canal Rehabilitation Sub-Project

Description	Nos. or Q'ty	Unit	Existing Condition	Description	Judgment
Existing area	100	Ha	Supplemental irrigation	Located in the upstream of the area, irrigated by farmers pump	Water level in the canal be raised
Headworks	1	nos.	Not functioing, deteriorated	The same Headworks of Ream Kon sub-project	Common use with Ream Kon
Intake	1	nos.	Poor	Size: 2(w)x2(h)x1(no.), very deteriorated	To be constructed
Main canal	11.7	km	Poor	Earth canal, sedimentation, water level is lower than ground surface	To be rehabilitated
Secondary canal	8.2	km	Poor	Earth canal, sediment, lower water level is lower than ground surface	To be rehabilitated
Related structures	10	nos.	Poor	The bottom is too high, clogged by soils and grass, Newly constructed, gate sill elevation is not known	Not enough numbers, to be reahbilitated/ replaced/ constructed
Tertiary canal					To be constructed
Main drain					
Secondary drain					
Tertiary drain					
Inspection road					To be rehabilitated

Table C1-4 Inventory Survey Results of Project Facilities at Damnak Ampil Rehabilitation Sub-Project

Description	Nos. or Q'ty	Unit	Existing Condition	Description	Judgment
Existing area	500	Ha	Supplemental irrigation	Supplemental irrigation to paddy by farmers pump	
Headworks	1	nos.	Constructed in 2006	Size: 10m(B) x 3m(H) x 7(nos) Automatice gate, fall down at WL16.85m, stand up at WL 13.70m, counterweight 16.0 ton - 16.8 ton per a gate, 1.7m(B) x 3.5m(H)x4(nos) Sluice gate	Gates needs improvement
Intake	1	nos.	Good	Designed intake water level=17.00m	can be used
Main canal	7.5	km	Good	Earth canal, Only the 1st 7.3km was rehabilitated in 2006. Q=8.0m3/sec	can be used
Secondary canal	17.6	km	Poor		To be rehabilitated
Related structures	6	nos.	Fair	Check, 3 turnout, spillway, bridge	Not enough numbers, to be reahbilitated/ replaced/ constructed
Tertiary canal					To be constructed
Main drain					
Secondary drain					
Tertiary drain					
Inspection road					To be constructed

Table C1-5 Inventory Survey Results of Project Facilities at Wat Loung Rehabilitation Sub-Project

Description	Nos. or Q'ty	Unit	Existing Condition	Description	Judgment
Existing area	130	Ha	Supplemental irrigation	Supplemental irrigation to paddy by farmers pump	
Headworks	1	nos.		Completely washed away	Water is to be supplied from Damnak Ampil wier
Intake	1	nos.		Completely washed away	Not neccessary
Main canal	17.2	km	Poor	Earth canal, sedimentation, water level is lower than ground surface	To be rehabilitated
Secondary canal	1.8	km	Poor	3 nos., Earth canal, sediment, lower water level is lower than ground surface	To be rehabilitated
Related structures	6	nos.	Poor	Aqueducts x2, Checks x2, Bridges x2	Not enough numbers, to be reahbilitated/ replaced/ constructed
Tertiary canal	-	km			To be constructed
Main drain					
Secondary drain					
Tertiary drain					
Inspection road					To be rehabilitated

Table C1-6 Inventory Survey Results of Project Facilities at Wat Chre Rehabilitation Sub-Project

Description	Nos. or Q'ty	Unit	Existing Condition	Description	Judgment
Existing area	60	Ha	Supplemental irrigation	Supplemental irrigation to paddy by farmers pump	
Headworks	1	nos.		Completely washed away	To be constructed
Intake	1	nos.		Completely washed away	To be constructed
Main canal	4.0	km	Poor	Earth canal, sedimentation, water level is lower than ground surface	To be rehabilitated
Secondary canal	4.5	km	Poor	Earth canal, sediment, lower water level is lower than ground surface	To be rehabilitated
Related structures	3		Poor	2 off-takes, Spillway, Bridge	Not enough numbers, to be reahbilitated/ replaced/ constructed
Tertiary canal					To be constructed
Main drain					
Secondary drain	2.2				
Tertiary drain					
Inspection road					To be rehabilitated

Table C1-7 Inventory Survey Results of Project Facilities at Lum Hach Rehabilitation Sub-Project

Description	Nos. or Q'ty	Unit	Existing Condition	Description	Judgment
Existing area	200	Ha	Supplemental irrigation	Supplemental irrigation to paddy	
Headworks		nos.	None	Completely washed away	To be constructed
Intake			None		To be constructed
Main canal	11.4	km	Poor	Earth canal, sedimentation, water level is lower than ground surface	To be rehabilitated
Secondary canal					To be constructed
Related structures	10		fair to poor	Off-take, Check, Bridge x2, culverts x10	Not enough numbers, to be reahbilitated/ replaced/ constructed
Tertiary canal					To be constructed
Main drain					
Secondary drain	16.4	km	Fair	2 nos., the Boribo River sometimes flows into the drains when the water level is high.	A flood gate is required
Tertiary drain					
Inspection road					To be rehabilitated

Table C3-1 Irrigation Water Requirement of Wet Season Paddy by Transplanting in Ream Kon and Por Canal Sub-projects (1/2)

Item	Jun	Jul						Aug						Sep						Oct						Nov						Dec					
	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31
ETo (mm/day)	4.1	4.3	4.3	4.3	4.3	4.3	4.3	3.9	3.9	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Percolation (mm/day)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
After transplanting, β					0.6	0.6																															
In vegetation, β							0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4																							
In reproductive, β																	1.0	1.0	0.6	0.6	0.6	0.6	1.0	1.0													
In maturing, β																									0.6	0.6	-	-	-								
Effective rainfall (mm/day)	1.7	4.0	2.3	2.7	2.4	2.2	2.6	1.7	1.8	1.9	1.8	3.0	1.9	2.3	2.8	3.5	2.8	3.4	2.7	5.6	2.8	7.3	2.7	6.1	2.1	0.6	0.6	0.6	0.6	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Overall irrigation efficiency 66%																																					
1st rotation																																					
Land preparation, LP (mm/day)	8.3	10.6	12.2	14.4																																	
Percolation, P × m (mm/day)					2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	3.5	3.5	2.1	2.1	2.1	2.1	3.5	3.5	2.1	2.1	0.0	0.0	0.0								
Crop coefficient, Kc					1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.00	0.97	0.95	0.95	0.95	0.00	0.00	0.00								
Consumptive use, ETo×Kc + (mm/day)					6.8	6.8	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.4	5.4	5.4	7.5	7.5	6.1	6.1	6.1	5.9	7.2	7.1	5.5	5.5	0.0	0.0	0.0								
FW=ETc + P - ER (mm/day)					4.6	4.2	3.9	3.8	3.7	3.9	2.7	3.8	3.3	2.6	1.9	2.6	4.1	4.8	0.5	3.3	0.0	3.2	1.1	5.0	5.0	4.9	0.0	0.0	0.0								
Net field water req FW +LP (mm/day)	8.3	10.6	12.2	14.4	4.6	4.2	3.9	3.8	3.7	3.9	2.7	3.8	3.3	2.6	1.9	2.6	4.1	4.8	0.5	3.3	0.0	3.2	1.1	5.0	5.0	4.9	0.0	0.0	0.0								
Unit irrigation water requirem (mm/day)	12.6	16.0	18.5	21.9	6.9	6.4	6.0	5.8	5.6	5.8	4.0	5.7	5.0	3.9	2.9	4.0	6.2	7.3	0.7	5.0	0.0	4.8	1.7	7.6	7.5	7.5	0.0	0.0	0.0								
Unit irrigation water requirem (l /sec/ha)	1.46	1.85	2.15	2.53	0.80	0.74	0.69	0.67	0.65	0.68	0.47	0.66	0.58	0.45	0.33	0.46	0.72	0.84	0.08	0.57	0.00	0.56	0.19	0.88	0.87	0.87	0.00	0.00	0.00								
2nd rotation																																					
Land preparation, LP (mm/day)		8.6	10.4	12.5	14.6																																
Percolation, P × m (mm/day)						2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	3.5	3.5	2.1	2.1	2.1	2.1	3.5	3.5	2.1	2.1	0.0	0.0	0.0								
Crop coefficient, Kc						1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.00	0.97	0.95	0.95	0.95	0.00	0.00	0.00								
Consumptive use, ETo×Kc + (mm/day)						6.8	6.3	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.4	5.4	5.4	7.5	7.5	6.1	6.1	6.1	5.9	7.2	6.9	5.5	5.5	0.0	0.0	0.0								
FW=ETc + P - ER (mm/day)						4.2	4.6	3.8	3.7	3.9	2.7	3.8	3.3	2.8	1.9	2.6	2.0	4.8	1.9	3.3	0.0	3.4	0.0	5.1	6.4	4.9	4.9	0.0	0.0	0.0								
Net field water req FW +LP (mm/day)		8.6	10.4	12.5	14.6	4.2	4.6	3.8	3.7	3.9	2.7	3.8	3.3	2.8	1.9	2.6	2.0	4.8	1.9	3.3	0.0	3.4	0.0	5.1	6.4	4.9	4.9	0.0	0.0	0.0							
Unit irrigation water requirem (mm/day)		13.1	15.8	18.9	22.2	6.4	7.0	5.8	5.6	5.8	4.0	5.7	5.0	4.2	2.9	4.0	3.0	7.3	2.8	5.0	0.0	5.1	0.0	7.7	9.6	7.5	7.4	0.0	0.0	0.0							
Unit irrigation water requirem (l /sec/ha)		1.51	1.82	2.19	2.57	0.74	0.81	0.67	0.65	0.68	0.47	0.66	0.58	0.49	0.33	0.46	0.35	0.84	0.33	0.57	0.00	0.59	0.00	0.89	1.12	0.87	0.86	0.00	0.00	0.00							
3rd rotation																																					
Land preparation, LP (mm/day)			8.6	10.6	12.6	14.2																															
Percolation, P × m (mm/day)							2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	3.5	3.5	2.1	2.1	2.1	2.1	3.5	3.5	2.1	2.1	0.0	0.0	0.0						
Crop coefficient, Kc							1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.00	0.97	0.95	0.95	0.95	0.00	0.00	0.00						
Consumptive use, ETo×Kc + (mm/day)							6.3	6.3	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.4	5.4	5.4	7.5	7.5	6.1	6.1	5.9	7.0	6.9	5.5	5.5	0.0	0.0	0.0						
FW=ETc + P - ER (mm/day)							4.6	4.5	3.7	3.9	2.7	3.8	3.3	2.8	2.1	2.6	2.0	2.7	1.9	4.7	0.0	3.4	0.0	3.8	6.4	6.3	4.9	5.0	0.0	0.0	0.0						
Net field water req FW +LP (mm/day)			8.6	10.6	12.6	14.2	4.6	4.5	3.7	3.9	2.7	3.8	3.3	2.8	2.1	2.6	2.0	2.7	1.9	4.7	0.0	3.4	0.0	3.8	6.4	6.3	4.9	5.0	0.0	0.0	0.0						
Unit irrigation water requirem (mm/day)			13.0	16.0	19.2	21.5	7.0	6.9	5.6	5.8	4.0	5.7	5.0	4.2	3.1	4.0	3.0	4.1	2.8	7.1	0.0	5.1	0.0	5.8	9.8	9.6	7.4	7.5	0.0	0.0	0.0						
Unit irrigation water requirem (l /sec/ha)			1.50	1.85	2.22	2.49	0.81	0.80	0.65	0.68	0.47	0.66	0.58	0.49	0.36	0.46	0.35	0.47	0.33	0.82	0.00	0.59	0.00	0.67	1.13	1.11	0.86	0.87	0.00	0.00	0.00						
4th rotation																																					
Land preparation, LP (mm/day)				8.6	10.6	12.3	14.7																														
Percolation, P × m (mm/day)								2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	3.5	3.5	2.1	2.1	2.1	2.1	3.5	3.5	2.1	2.1	0.0	0.0	0.0					
Crop coefficient, Kc								1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.00	0.97	0.95	0.95	0.95	0.00	0.00	0.00					
Consumptive use, ETo×Kc + (mm/day)								6.3	6.3	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.4	5.4	5.4	7.5	7.5	6.1	6.1	6.1	5.7	7.0	6.9	5.5	5.5	0.0	0.0	0.0					
FW=ETc + P - ER (mm/day)								4.5	4.4	3.9	2.7	3.8	3.3	2.8	2.1	2.8	2.0	2.7	0.0	4.7	0.2	3.4	0.0	4.0	5.1	6.4	6.3	5.0	5.0	0.0	0.0	0.0					
Net field water req FW +LP (mm/day)				8.6	10.6	12.3	14.7	4.5	4.4	3.9	2.7	3.8	3.3	2.8	2.1	2.8	2.0	2.7	0.0	4.7	0.2	3.4	0.0	4.0	5.1	6.4	6.3	5.0	5.0	0.0	0.0	0.0					
Unit irrigation water requirem (mm/day)				13.1	16.1	18.7	22.3	6.9	6.7	5.8	4.0	5.7	5.0	4.2	3.1	4.3	3.0	4.1	0.0	7.1	0.4	5.1	0.0	6.1	7.8	9.7	9.5	7.5	7.6	0.0	0.0	0.0					
Unit irrigation water requirem (l /sec/ha)				1.51	1.87	2.16	2.58	0.80	0.77	0.68	0.47	0.66	0.58	0.49	0.36	0.49	0.35	0.47	0.00	0.82	0.04	0.59	0.00	0.70	0.90	1.13	1.10	0.87	0.88	0.00	0.00	0.00					
5th rotation																																					
Land preparation, LP (mm/day)					8.7	10.4	12.7	14.6																													
Percolation, P × m (mm/day)									2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	3.5	3.5	2.1	2.1	2.1	2.1	3.5	3.5	2.1	2.1	0.0	0.0	0.0				
Crop coefficient, Kc									1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.00	0.97	0.95	0.95	0.95	0.00	0.00	0.00				
Consumptive use, ETo×Kc + (mm/day)									6.3	5.3	5.6	5.6	5.6	5.6	5.6	5.6	5.4	5.4	5.4	5.4	7.5	7.5	7.5	6.1	6.1	5.9	5.7	7.0	6.9	5.5	5.5	0.0	0.0	0.0			
FW=ETc + P - ER (mm/day)									4.4	4.6	2.7	3.8	3.3	2.8	2.1	2.8	2.2	2.7	0.0	2.6	0.2	4.8	0.0	4.0	5.3	5.1	6.4	6.4	5.0	5.4	0.0	0.0	0.0				
Net field water req FW +LP (mm/day)					8.7	10.4	12.7	14.6	4.4	4.6	2.7	3.8	3.3	2.8	2.1	2.8	2.2	2.7	0.0	2.6	0.2	4.8	0.0	4.0	5.3	5.1	6.4	6.4	5.0	5.4	0.0	0.0	0.0				
Unit irrigation water requirem (mm/day)					13.1	15.8	19.3	22.1	6.7	6.9	4.0	5.7	5.0	4.2	3.1	4.3	3.3	4.1	0.0	3.9	0.4	7.2	0.0	6.1	8.1	7.8	9.6	9.6	7.6	8.2	0.0	0.0	0.0				
Unit irrigation water requirem (l /sec/ha)					1.52	1.83	2.23	2.56	0.77	0.80	0.47	0.66	0.58	0.49	0.36	0.49	0.38	0.47	0.00	0.45	0.04	0.84	0.00	0.70	0.93	0.90	1.12	1.12	0.88	0.94	0.00	0.00	0.00				
6th rotation																																					
Land preparation, LP (mm/day)						8.6	10.7	12.6	14.5																												
Percolation, P × m (mm/day)										2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	3.5	3.5	2.1	2.1	2.1	2.1	3.5	3.5	2.1	2.1	0.0	0.0	0.0		
Crop coefficient, Kc										1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.00	0.97	0.95	0.95	0.95	0.00	0.00	0.00		
Consumptive use, ETo×Kc + (mm/day)										6.3	6.3	5.6	5.6	5.6	5.6	5.6	5.4	5.4	5.4	5.4	7.5	7.5	7.5	6.1	6.1	5.9	5.7	7.0	6.9	5.5	5.5	0.0	0.0	0.0		
FW=ETc + P - ER (mm/day)										4.6	3.4	3.8	3.3	2.8	2.1	2.8	2.2	2.9	0.0	2.6	0.0	4.8	1.4	4.0	5.3	5.3	5.1	6.4	6.4	5.4	5.5	0.0	0.0	0.0		
Net field water req FW +LP (mm/day)						8.6	10.7	12.6	14.5	4.6	3.4	3.8	3.3	2.8	2.1	2.8	2.2	2.9	0.0	2.6	0.0	4.8	1.4	4.0	5.3	5.3	5.1	6.4	6.4	5.4	5.5	0.0	0.0	0.0		
Unit irrigation water requirem (mm/day)						13.0	16.2	19.1	21.9	6.9	5.1	5.7	5.0	4.2	3.1	4.3	3.3	4.4	0.0	3.9	0.0	7.2	2.1	6.1	8.1	8.0	7.7	9.8	9.7	8.2	8.3	0.0	0.0	0.0		
Unit irrigation water requirem (l /sec/ha)						1.50	1.88	2.21	2.54	0.80	0.59	0.66	0.58	0.49	0.36	0.49	0.38	0.50	0.00	0.45	0.00	0.84	0.25	0.70	0.93	0.93	0.89	1.13	1.13	0.94	0.96	0.00	0.00	0.00		
7th rotation																																					
Land preparation, LP (mm/day)							8.7	10.6	12.5	14.6																											
Percolation, P × m (mm/day)											2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	3.5	3.5	2.1	2.1	2.1	2.1	3.5	3.5	2.1	2.1	0.0	0.0	0.0	
Crop coefficient, Kc											1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.00	0.97	0.95	0.95	0.95	0.00	0.00	0.00	
Consumptive use, ETo×Kc + (mm/day)											6.3	6.3	5.6	5.6	5.6	5.6	5.4	5.4	5.4	5.4	7.5	7.5	7.5	6.1	6.1	5.9	5.9	5.9	5.7	7.0	6.9	5.5	5.5	0.0	0.0	0.0	
FW=ETc + P - ER (mm/day)											3.4	4.5	3.3	2.8	2.1	2.8	2.2	2.9	0.0	2.6	0.0	2.7	1.4	5.4	5.3	5.3	5.2	5.1	6.5	6.8	5.5	5.5	0.0	0.0	0.0	
Net field water req FW +LP (mm/day)							8.7	10.6	12.5	14.6	3.4	4.5	3.3	2.8	2.1	2.8	2.2	2.9	0.0	2.6	0.0	2.7	1.4	5.4	5.3	5.3	5.2	5.1	6.5	6.8	5.5	5.5	0.0	0.0	0.0	
Unit irrigation water requirem (mm/day)							13.2	16.1	19.0	22.2	5.1	6.8	5.0	4.2	3.1	4.3	3.3	4.4	0.0	3.9	0.0	4.1	2.1	8.2	8.1	8.0	8.0	7.8	9.8	10.3	8.3	8.3	0.0	0.0	0.0	
Unit irrigation water requirem (l /sec/ha)							1.52	1.87	2.20	2.57	0.59	0.79	0.58	0.49	0.36	0.49	0.38	0.50	0.00	0.45	0.00	0.47	0.25	0.95	0.93	0.93	0.92	0.90	1.14	1.19	0.96	0.96	0.00	0.00	0.00	

To be continued

Table C3-1 Irrigation Water Requirement of Wet Season Paddy by Transplanting in Ream Kon and Por Canal Sub-projects (2/2)

Item	Jun	Jul						Aug						Sep						Oct						Nov						Dec					
	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31
9th rotation																																					
Land preparation, LP (mm/day)								8.7	10.6	12.6	13.2																										
Percolation, P×m (mm/day)												2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	3.5	3.5	2.1	2.1	2.1	2.1	3.5	3.5	2.1	2.1	0.0	0.0	0.0	
Crop coefficient, Kc												1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.00	0.97	0.95	0.95	0.95	0.00	0.00	0.00	
Consumptive use, ETcxKc + (mm/day)												6.3	6.3	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.4	5.4	5.4	7.5	7.3	5.9	5.9	5.9	5.7	7.0	6.9	5.5	5.5	0.0	0.0	0.0	
FW=ETc + P - ER (mm/day)												4.5	4.0	2.8	2.1	2.8	2.2	2.9	0.0	2.8	0.0	2.7	0.0	5.4	6.7	5.3	5.2	5.3	5.2	6.9	6.9	5.5	5.5	0.0	0.0	0.0	
Net field water req FW +LP (mm/day)								8.7	10.6	12.6	13.2	4.5	4.0	2.8	2.1	2.8	2.2	2.9	0.0	2.8	0.0	2.7	0.0	5.4	6.7	5.3	5.2	5.3	5.2	6.9	6.9	5.5	5.5	0.0	0.0	0.0	
Unit irrigation water requirem (mm/day)								13.1	16.0	19.2	20.0	6.8	6.1	4.2	3.1	4.3	3.3	4.4	0.0	4.2	0.0	4.1	0.0	8.2	10.2	8.0	8.0	8.1	7.9	10.4	10.4	8.3	8.3	0.0	0.0	0.0	
Unit irrigation water requirem (l /sec/ha)								1.52	1.86	2.22	2.31	0.79	0.70	0.49	0.36	0.49	0.38	0.50	0.00	0.49	0.00	0.47	0.00	0.95	1.18	0.93	0.92	0.93	0.91	1.20	1.21	0.96	0.96	0.00	0.00	0.00	
9th rotation																																					
Land preparation, LP (mm/day)									8.6	10.7	11.6	14.5																									
Percolation, P×m (mm/day)													2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	3.5	3.5	2.1	2.1	2.1	2.1	3.5	3.5	2.1	2.1	0.0	0.0	0.0
Crop coefficient, Kc													1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.00	0.97	0.95	0.95	0.95	0.00	0.00	0.00
Consumptive use, ETcxKc + (mm/day)													6.3	6.3	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.4	5.4	5.4	7.3	7.3	5.9	5.9	5.9	5.7	7.0	6.9	5.5	5.5	0.0	0.0	0.0
FW=ETc + P - ER (mm/day)													4.0	3.5	2.1	2.8	2.2	2.9	0.0	2.8	0.0	2.7	0.0	3.3	6.7	6.7	5.2	5.3	5.4	5.6	7.0	6.9	5.5	5.5	0.0	0.0	0.0	
Net field water req FW +LP (mm/day)									8.6	10.7	11.6	14.5	4.0	3.5	2.1	2.8	2.2	2.9	0.0	2.8	0.0	2.7	0.0	3.3	6.7	6.7	5.2	5.3	5.4	5.6	7.0	6.9	5.5	5.5	0.0	0.0	0.0	
Unit irrigation water requirem (mm/day)									13.1	16.2	17.6	22.0	6.1	5.3	3.1	4.3	3.3	4.4	0.0	4.2	0.0	4.1	0.0	5.0	10.2	10.2	8.0	8.1	8.2	8.4	10.6	10.4	8.3	8.3	0.0	0.0	0.0	
Unit irrigation water requirem (l /sec/ha)									1.52	1.87	2.04	2.55	0.70	0.61	0.36	0.49	0.38	0.50	0.00	0.49	0.00	0.47	0.00	0.58	1.18	1.18	0.92	0.93	0.95	0.98	1.22	1.21	0.96	0.96	0.00	0.00	0.00	
10th rotation																																					
Land preparation, LP (mm/day)										8.7	10.0	12.6	14.0																								
Percolation, P×m (mm/day)														2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	3.5	3.5	2.1	2.1	2.1	2.1	3.5	3.5	2.1	2.1	0.0	0.0
Crop coefficient, Kc														1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.00	0.97	0.95	0.95	0.95	0.00	0.00	0.00
Consumptive use, ETcxKc + (mm/day)														6.3	6.3	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.4	5.4	5.2	7.3	7.3	5.9	5.9	5.7	5.6	6.9	6.9	5.5	2.1	0.0	0.0
FW=ETc + P - ER (mm/day)														3.5	2.8	2.8	2.2	2.9	0.0	2.8	0.0	2.9	0.0	3.3	4.6	6.7	6.6	5.3	5.4	5.6	5.6	6.9	6.9	5.5	2.1	0.0	0.0
Net field water req FW +LP (mm/day)										8.7	10.0	12.6	14.0	3.5	2.8	2.8	2.2	2.9	0.0	2.8	0.0	2.9	0.0	3.3	4.6	6.7	6.6	5.3	5.4	5.6	5.6	6.9	6.9	5.5	2.1	0.0	0.0
Unit irrigation water requirem (mm/day)										13.1	15.2	19.1	21.2	5.3	4.2	4.3	3.3	4.4	0.0	4.2	0.0	4.3	0.0	5.0	7.0	10.2	10.1	8.1	8.2	8.4	8.4	10.4	10.4	8.3	3.2	0.0	0.0
Unit irrigation water requirem (l /sec/ha)										1.52	1.76	2.21	2.45	0.61	0.49	0.49	0.38	0.50	0.00	0.49	0.00	0.50	0.00	0.58	0.81	1.18	1.17	0.93	0.95	0.98	0.98	1.21	1.21	0.96	0.37	0.00	0.00
11th rotation																																					
Land preparation, LP (mm/day)											8.4	10.6	12.2	13.3																							
Percolation, P×m (mm/day)															2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	3.5	3.5	2.1	2.1	2.1	3.5	3.5	2.1	2.1	0.0
Crop coefficient, Kc															1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.00	0.97	0.95	0.95	0.95	0.00	0.00	0.00
Consumptive use, ETcxKc + (mm/day)															6.3	6.3	5.6	5.6	5.6	5.6	5.6	5.6	5.4	5.4	5.2	5.2	7.3	7.3	5.9	5.7	5.6	5.5	6.9	6.9	2.1	2.1	0.0
FW=ETc + P - ER (mm/day)															2.8	3.5	2.2	2.9	0.0	2.8	0.0	2.9	0.0	3.3	4.6	4.6	6.6	6.7	5.4	5.6	5.6	5.5	6.9	6.9	2.1	2.1	0.0
Net field water req FW +LP (mm/day)											8.4	10.6	12.2	13.3	2.8	3.5	2.2	2.9	0.0	2.8	0.0	2.9	0.0	3.3	4.6	4.6	6.6	6.7	5.4	5.6	5.6	5.5	6.9	6.9	2.1	2.1	0.0
Unit irrigation water requirem (mm/day)											12.8	16.1	18.4	20.2	4.2	5.3	3.3	4.4	0.0	4.2	0.0	4.3	0.0	5.0	7.0	7.0	10.1	10.2	8.2	8.4	8.4	8.3	10.4	10.4	3.2	3.2	0.0
Unit irrigation water requirem (l /sec/ha)											1.48	1.86	2.13	2.34	0.49	0.62	0.38	0.50	0.00	0.49	0.00	0.50	0.00	0.58	0.81	0.81	1.17	1.18	0.95	0.98	0.98	0.96	1.21	1.21	0.37	0.37	0.00
12th rotation																																					
Land preparation, LP (mm/day)												8.7	10.4	11.7	12.5																					
Percolation, P×m (mm/day)																2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	3.5	3.5	2.1	2.1	2.1	2.1	3.5	3.5	2.1	2.1
Crop coefficient, Kc																1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.00	0.97	0.95	0.95	0.95	0.00	0.00	0.00
Consumptive use, ETcxKc + (mm/day)																6.3	6.3	5.6	5.6	5.6	5.6	5.6	5.6	5.4	5.2	5.2	5.2	7.3	7.3	5.7	5.6	5.5	5.5	6.9	3.5	2.1	2.1
FW=ETc + P - ER (mm/day)																3.5	2.9	2.9	0.0	2.8	0.0	2.9	0.0	3.5	4.6	4.6	4.5	6.7	6.8	5.6	5.6	5.5	5.5	6.9	3.5	2.1	2.1
Net field water req FW +LP (mm/day)												8.7	10.4	11.7	12.5	3.5	2.9	2.9	0.0	2.8	0.0	2.9	0.0	3.5	4.6	4.6	4.5	6.7	6.8	5.6	5.6	5.5	5.5	6.9	3.5	2.1	2.1
Unit irrigation water requirem (mm/day)												13.1	15.7	17.7	18.9	5.3	4.4	4.4	0.0	4.2	0.0	4.3	0.0	5.3	7.0	7.0	6.9	10.2	10.3	8.4	8.4	8.3	8.3	10.4	5.3	3.2	3.2
Unit irrigation water requirem (l /sec/ha)												1.52	1.82	2.05	2.19	0.62	0.50	0.50	0.00	0.49	0.00	0.50	0.00	0.61	0.81	0.81	0.80	1.18	1.19	0.98	0.98	0.96	0.96	1.21	0.61	0.37	0.37

Summary table of unit irrigation water requirement

	Jun	Jul						Aug						Sep						Oct						Nov						Dec						Total
	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31	(mm)
1st rotation (l /sec/ha)	1.46	1.85	2.15	2.53	0.80	0.74	0.69	0.67	0.65	0.68	0.47	0.66	0.58	0.45	0.33	0.46	0.72	0.84	0.08	0.57	0.00	0.56	0.19	0.88	0.87	0.87	0.00	0.00	0.00									897
2nd rotation (l /sec/ha)		1.51	1.82	2.19	2.57	0.74	0.81	0.67	0.65	0.68	0.47	0.66	0.58	0.49	0.33	0.46	0.35	0.84	0.33	0.57	0.00	0.59	0.00	0.89	1.12	0.87	0.86	0.00	0.00	0.00								909
3rd rotation (l /sec/ha)			1.50	1.85	2.22	2.49	0.81	0.80	0.65	0.68	0.47	0.66	0.58	0.49	0.36	0.46	0.35	0.47	0.33	0.82	0.00	0.59	0.00	0.67	1.13	1.11	0.86	0.87	0.00	0.00	0.00								917
4th rotation (l /sec/ha)				1.51	1.87	2.16	2.58	0.80	0.77	0.68	0.47	0.66	0.58	0.49	0.36	0.49	0.35	0.47	0.00	0.82	0.04	0.59	0.00	0.70	0.90	1.13	1.10	0.87	0.88	0.00	0.00	0.00								919
5th rotation (l /sec/ha)						1.52	1.83	2.23	2.56	0.77	0.80	0.47	0.66	0.58	0.49	0.36	0.49	0.38	0.47	0.00	0.45	0.04	0.84	0.00	0.70	0.93	0.90	1.12	1.12	0.88	0.94	0.00	0.00	0.00							931
6th rotation (l /sec/ha)							1.50	1.88	2.21	2.54	0.80	0.59	0.66	0.58	0.49	0.36	0.49	0.38	0.50	0.00	0.45	0.00	0.84	0.25	0.70	0.93	0.93	0.89	1.13	1.13	0.94	0.96	0.00	0.00	0.00	0.00						957
7th rotation (l /sec/ha)								1.52	1.87	2.20	2.57	0.59	0.79	0.58	0.49	0.36	0.49	0.38	0.50	0.00	0.45	0.00	0.47	0.25	0.95	0.93	0.93	0.92	0.90	1.14	1.19	0.96	0.96	0.00	0.00	0.00						968
8th rotation (l /sec/ha)								1.52	1.86	2.22	2.31	0.79	0.70	0.49	0.36	0.49	0.38	0.50	0.00	0.49	0.00	0.47	0.00	0.95	1.18	0.93	0.92	0.93	0.91	1.20	1.21	0.96	0.96	0.00	0.00	0.00	0.00					983
9th rotation (l /sec/ha)									1.52	1.87	2.04	2.55	0.70	0.61	0.36	0.49	0.38	0.50	0.00	0.49	0.00	0.47	0.00	0.58	1.18	1.18	0.92	0.93	0.95	0.98	1.22	1.21	0.96	0.96	0.00	0.00	0.00					996
10th rotation (l /sec/ha)										1.52	1.76	2.21	2.45	0.61	0.49	0.49	0.38	0.50	0.00	0.49	0.00	0.50	0.00	0.58	0.81	1.18	1.17	0.93	0.95	0.98	0.98	1.21	1.21	0.96	0.37	0.00	0.00				981
11th rotation (l /sec/ha)											1.48	1.86	2.13	2.34	0.49	0.62	0.38	0.50	0.00	0.49	0.00	0.50	0.00	0.58	0.81	0.81	1.17	1.18	0.95	0.98	0.98	0.96	1.21	1.21	0.37	0.37	0.00			966
12th rotation (l /sec/ha)												1.52	1.82	2.05	2.19	0.62	0.50	0.50	0.00	0.49	0.00	0.50	0.00	0.61	0.81	0.81	0.80	1.18	1.19	0.98	0.98	0.96	0.96	1.21	0.61	0.37	0.37		952
Maximum (l /sec/ha)	1.46	1.85	2.15	2.53	2.57	2.49	2.58	2.56	2.54	2.67	2.31	2.55	2.45	2.34	2.19	0.62	0.72	0.84	0.33	0.82	0.04	0.84	0.25	0.95	1.18	1.18	1.17	1.18	1.19	1.20	1.22	1.21	1.21	1.21	0.61	0.37	0.37	948

Table C3-2 Summary of Irrigation and Drainage Plan of Six Sub-projects

No.	Description	Name of Sub-project						Total
		Ream Kon	Por Canal	Damnak Ampil	Wat Loung	Wat Chre	Lum Hach	
1.	Sub-project area (ha)	1,890	1,940	2,270	2,540	1,020	3,100	12,760
	(Pump irrigation area included above)	(280)	0	(500)	(800)	(400)	(410)	(2,390)
2.	Annual irrigation area (ha)	2,413	2,494	2,364	2,645	1,062	4,700	15,678
	- Early wet season paddy (ha)	1,180	1,220	94	105	42	1,300	3,941
	- Medium wet season paddy (ha)	1,180	1,220	2,270	2,540	1,020	3,100	11,330
	- Dry season paddy (ha)	53	54	0	0	0	300	407
3.	Major water source	Moun Russei River		Pursat River			Boribo River	
	- Name of headworks	Moung Russei (Reconstruction)		Damnak Ampil (Existing)		Wat Chre (Reconstruc.)	Lum Hach (Reconstruc.)	
	- Intake water level (EL. m)	15.50	15.00	17.00	17.00	13.00	38.00 - 36.00	
	- Diversion water requirement at intake (m^3/sec)	2.66	2.74	7.93	3.45	1.39	6.60	
4.	Main canals (nos.)	2	2	1	1	1	1	8
	- Total length (km)	18.4	12.7	7.5	20.3	4.7	16.4	80
5.	Nos. of secondary canals	16	12	3	10	6	11	58
	- Total length (km)	12.9	15.8	17.6	31.1	14.7	42.4	135
6.	Number of Tertiary Blocks (No.)	47	42	50	54	27	67	287
	Total length of tertiary canals (km)	57	55	85	81	27	67	372
7.	Main drains	- Moung Russei, - Ou Anlong Rolus	- Moung Russei, - MD-1	Ou Bakan/Boeung Khnar River	Boeung Khnar R.	- Boeung Khnar R., - Ta Paong stream	Boribo River	
	- Total length (km)	7.2	9.3	-	-	-	-	17
	- Drainage water requirement from paddy field (lit/sec/ha)	7.17	7.17	6.32	6.32	6.32	6.83	
	- Drainage water requirement from other land (lit/sec/ha)	19~25	19~25	18~25	18~25	18~25	19~25	
8.	Secondary drains (nos.)	9	10	4	8	7	11	49
	- Total length of seconday drains (km)	25.1	14.8	28.2	37.7	14.8	53.9	175
9.	Collector drains (nos.)	3	2	0	0	0	0	5
	- Total length of collector drain (New, km)	19.4	10.0	0	0	0	0	29

Table C5-1 Irrigation Water Requirement of Wet Season Paddy by Transplanting in Damnak Ampil, Wat Loung, and Wat Chre Sub-projects (1/2)

Item		Jun				Jul						Aug						Sep						Oct						Nov						Dec					
		11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25
ETo	(mm/day)	3.9	3.9	3.9	3.9	4.1	4.1	4.1	4.1	4.1	4.1	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Percolation	(mm/day)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
After transplanting, β										0.6	0.6																													
In vegetation, β												0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4																				
In reproductive, β																					1.0	1.0	0.6	0.6	0.6	0.6	0.6	0.6	1.0	1.0											
In maturing, β																															0.6	0.6									
Effective rainfall	(mm/day)	2.1	2.2	1.5	1.8	2.3	1.9	1.5	2.7	2.9	2.1	2.2	2.6	2.7	2.4	2.9	2.1	3.1	3.3	3.9	4.1	3.3	2.3	4.0	2.6	5.0	1.7	3.2	2.8	0.6	0.4	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0
Overall Irrigation efficiency	66%																																							
1st rotation																																								
Land preparation, LP	(mm/day)	8.5	10.0	12.1	13.5																																			
Percolation, P×m	(mm/day)					1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5	2.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	1.5	1.5	0.0	0.0	0.0											
Crop coefficient, Kc						1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.96	0.96	0.00	0.00	0.00											
Consumptive use, ETcxKc + PxB	(mm/day)					6.0	6.0	5.5	5.5	5.5	5.5	5.1	5.1	5.1	4.9	4.9	6.4	6.4	5.4	5.4	5.4	5.4	5.4	5.0	6.0	6.0	5.1	5.1	0.0	0.0	0.0											
FW=ETc + P - ER	(mm/day)					3.6	4.1	3.9	2.8	2.6	3.3	2.9	2.5	2.3	2.4	2.0	4.3	3.3	2.1	1.5	1.3	2.1	3.1	1.0	3.5	1.0	3.4	1.9	0.0	0.0	0.0											
Net field water req FW +LP	(mm/day)	8.5	10.0	12.1	13.5	3.6	4.1	3.9	2.8	2.6	3.3	2.9	2.5	2.3	2.4	2.0	4.3	3.3	2.1	1.5	1.3	2.1	3.1	1.0	3.5	1.0	3.4	1.9	0.0	0.0	0.0										
Unit irrigation water requirement	(mm/day)	12.8	15.1	18.4	20.5	5.5	6.2	6.0	4.3	4.0	5.1	4.4	3.7	3.6	3.7	3.0	6.5	4.9	3.2	2.3	1.9	3.2	4.7	1.5	5.3	1.5	5.1	2.9	0.0	0.0	0.0										
Unit irrigation water requirement	(l /sec/ha)	1.49	1.75	2.13	2.37	0.64	0.71	0.69	0.49	0.46	0.58	0.51	0.43	0.41	0.43	0.34	0.76	0.57	0.37	0.27	0.22	0.37	0.54	0.18	0.61	0.18	0.59	0.34	0.00	0.00	0.00										
2nd rotation																																								
Land preparation, LP	(mm/day)		8.5	10.4	11.9	13.1																																		
Percolation, P×m	(mm/day)						1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5	2.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	1.5	1.5	0.0	0.0	0.0										
Crop coefficient, Kc							1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.96	0.96	0.00	0.00	0.00										
Consumptive use, ETcxKc + PxB	(mm/day)						6.0	6.0	5.5	5.5	5.5	5.1	5.1	5.1	5.1	4.9	4.9	6.4	6.4	5.4	5.4	5.4	5.4	5.4	5.0	6.0	6.0	5.1	5.1	0.0	0.0	0.0										
FW=ETc + P - ER	(mm/day)						4.1	4.4	2.8	2.6	3.3	2.9	2.5	2.3	2.6	2.0	2.8	3.3	3.1	1.5	1.3	2.1	3.1	1.4	2.5	1.0	4.3	1.9	2.3	0.0	0.0	0.0										
Net field water req FW +LP	(mm/day)		8.5	10.4	11.9	13.1	4.1	4.4	2.8	2.6	3.3	2.9	2.5	2.3	2.6	2.0	2.8	3.3	3.1	1.5	1.3	2.1	3.1	1.4	2.5	1.0	4.3	1.9	2.3	0.0	0.0	0.0									
Unit irrigation water requirement	(mm/day)		12.8	15.7	18.0	19.9	6.2	6.7	4.3	4.0	5.1	4.4	3.7	3.6	4.0	3.0	4.3	4.9	4.7	2.3	1.9	3.2	4.7	2.1	3.7	1.5	6.6	2.9	3.5	0.0	0.0	0.0									
Unit irrigation water requirement	(l /sec/ha)		1.48	1.82	2.08	2.30	0.71	0.78	0.49	0.46	0.58	0.51	0.43	0.41	0.46	0.34	0.49	0.57	0.54	0.27	0.22	0.37	0.54	0.24	0.43	0.18	0.76	0.34	0.41	0.00	0.00	0.00									
3rd rotation																																								
Land preparation, LP	(mm/day)			8.6	10.2	11.6	13.6																																	
Percolation, P×m	(mm/day)							1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5	2.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	1.5	1.5	0.0	0.0	0.0								
Crop coefficient, Kc								1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.96	0.96	0.00	0.00	0.00								
Consumptive use, ETcxKc + PxB	(mm/day)							6.0	6.0	5.5	5.5	5.1	5.1	5.1	5.1	5.1	4.9	4.9	6.4	6.4	5.4	5.4	5.4	5.4	5.4	5.0	6.0	6.0	5.1	4.9	0.0	0.0	0.0								
FW=ETc + P - ER	(mm/day)							4.4	3.3	2.6	3.3	2.9	2.5	2.3	2.6	2.1	2.8	1.8	3.1	2.5	1.3	2.1	3.1	1.4	2.8	0.0	4.3	2.9	2.3	4.3	0.0	0.0	0.0								
Net field water req FW +LP	(mm/day)			8.6	10.2	11.6	13.6	4.4	3.3	2.6	3.3	2.9	2.5	2.3	2.6	2.1	2.8	1.8	3.1	2.5	1.3	2.1	3.1	1.4	2.8	0.0	4.3	2.9	2.3	4.3	0.0	0.0	0.0								
Unit irrigation water requirement	(mm/day)			13.0	15.5	17.5	20.6	6.7	5.0	4.0	5.1	4.4	3.7	3.6	4.0	3.3	4.3	2.7	4.7	3.8	1.9	3.2	4.7	2.1	4.3	0.0	6.6	4.4	3.5	6.5	0.0	0.0	0.0								
Unit irrigation water requirement	(l /sec/ha)			1.51	1.79	2.03	2.39	0.78	0.58	0.46	0.58	0.51	0.43	0.41	0.46	0.38	0.49	0.31	0.54	0.44	0.22	0.37	0.54	0.24	0.50	0.00	0.76	0.51	0.41	0.75	0.00	0.00	0.00								
4th rotation																																								
Land preparation, LP	(mm/day)				8.5	10.0	11.9	14.0																																	
Percolation, P×m	(mm/day)								1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5	2.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	1.5	1.5	0.0	0.0	0.0							
Crop coefficient, Kc									1.10	1.10	1.10	1.10	1.1	1.1	1.1	1.1	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.96	0.96	0.00	0.00	0.00							
Consumptive use, ETcxKc + PxB	(mm/day)								6.0	6.0	5.5	5.1	5.1	5.1	5.1	5.1	5.1	4.9	4.9	6.4	6.4	5.4	5.4	5.4	5.4	5.4	5.0	6.0	6.0	4.9	4.9	0.0	0.0	0.0							
FW=ETc + P - ER	(mm/day)								3.3	3.1	3.3	2.9	2.5	2.3	2.6	2.1	3.0	1.8	1.6	2.5	2.3	2.1	3.1	1.4	2.8	0.4	3.3	2.9	3.3	4.3	4.5	0.0	0.0	0.0							
Net field water req FW +LP	(mm/day)				8.5	10.0	11.9	14.0	3.3	3.1	3.3	2.9	2.5	2.3	2.6	2.1	3.0	1.8	1.6	2.5	2.3	2.1	3.1	1.4	2.8	0.4	3.3	2.9	3.3	4.3	4.5	0.0	0.0	0.0							
Unit irrigation water requirement	(mm/day)				12.9	15.2	18.1	21.3	5.0	4.7	5.1	4.4	3.7	3.6	4.0	3.3	4.5	2.7	2.4	3.8	3.4	3.2	4.7	2.1	4.3	0.6	5.0	4.4	5.0	6.5	6.8	0.0	0.0	0.0							
Unit irrigation water requirement	(l /sec/ha)				1.50	1.76	2.09	2.46	0.58	0.54	0.58	0.51	0.43	0.41	0.46	0.38	0.53	0.31	0.28	0.44	0.40	0.37	0.54	0.24	0.50	0.07	0.58	0.51	0.58	0.75	0.78	0.00	0.00	0.00							
5th rotation																																								
Land preparation, LP	(mm/day)					8.5	10.2	12.2	12.7																																
Percolation, P×m	(mm/day)									1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5	2.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	1.5	1.5	0.0	0.0	0.0					
Crop coefficient, Kc										1.10	1.10	1.10	1.10	1.1	1.1	1.1	1.1	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.96	0.96	0.00	0.00	0.00					
Consumptive use, ETcxKc + PxB	(mm/day)									6.0	6.0	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.9	4.9	6.4	6.4	5.4	5.4	5.4	5.4	5.4	5.0	6.0	5.8	4.9	4.9	0.0	0.0	0.0					
FW=ETc + P - ER	(mm/day)									3.1	3.8	2.9	2.5	2.3	2.6	2.1	3.0	1.9	1.6	1.0	2.3	3.1	3.1	1.4	2.8	0.4	3.7	1.9	3.3	5.2	4.5	4.2	0.0	0.0	0.0					
Net field water req FW +LP	(mm/day)					8.5	10.2	12.2	12.7	3.1	3.8	2.9	2.5	2.3	2.6	2.1	3.0	1.9	1.6	1.0	2.3	3.1	3.1	1.4	2.8	0.4	3.7	1.9	3.3	5.2	4.5	4.2	0.0	0.0	0.0					
Unit irrigation water requirement	(mm/day)					12.8	15.5	18.5	19.2	4.7	5.8	4.4	3.7	3.6	4.0	3.3	4.5	2.9	2.4	1.5	3.4	4.7	4.7	2.1	4.3	0.6	5.6	2.9	5.0	7.9	6.8	6.4	0.0	0.0	0.0					
Unit irrigation water requirement	(l /sec/ha)					1.48	1.80	2.15	2.23	0.54	0.67	0.51	0.43	0.41	0.46	0.38	0.53	0.34	0.28	0.18	0.40	0.54	0.54	0.24	0.50	0.07	0.65	0.33	0.58	0.92	0.78	0.74	0.00	0.00	0.00					
6th rotation																																								
Land preparation, LP	(mm/day)						8.5	10.4	11.3	12.5																															
Percolation, P×m	(mm/day)										1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5	2.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	1.5	1.5	0.0	0.0	0.0				
Crop coefficient, Kc											1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.96	0.96	0.00	0.00	0.00					
Consumptive use, ETcxKc + PxB	(mm/day)										6.0	5.6	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.9	4.9	6.4	6.4	5.4	5.4	5.4	5.4	5.4	5.0	5.8	5.8	4.9	4.9	0.0	0.0	0.0				
FW=ETc + P - ER	(mm/day)										3.8	3.4	2.5	2.3	2.6	2.1	3.0	1.9	1.8	1.0	0.8	3.1	4.1	1.4	2.8	0.4	3.7	2.3	2.3	5.2	5.4	4.2	4.2	0.0	0.0	0.0				
Net field water req FW +LP	(mm/day)						8.5	10.4	11.3	12.5	3.8	3.4	2.5	2.3	2.6	2.1	3.0	1.9	1.8	1.0	0.8	3.1	4.1	1.4	2.8	0.4	3.7	2.3	2.3	5.2	5.4	4.2	4.2	0.0	0.0	0.0				
Unit irrigation water requirement	(mm/day)						13.0	15.8	17.1	18.9	5.8	5.2	3.7	3.6	4.0	3.3	4.5	2.9	2.7	1.5	1.2	4.7	6.2	2.1	4.3	0.6	5.6	3.4	3.5	7.9	8.2	6.4	6.3	0.0	0.0	0.0				
Unit irrigation water requirement	(l /sec/ha)						1.50	1.83	1.98	2.19	0.67	0.60	0.43	0.41	0.46	0.38	0.53	0.34	0.31	0.18	0.13	0.54	0.72	0.24	0.50	0.07	0.65	0.40	0.40	0.92	0.95	0.74	0.73	0.00	0.00	0.00				
7th rotation																																								
Land preparation, LP	(mm/day)							8.6	9.8	11.1	13.3																														
Percolation, P×m	(mm/day)											1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5	2.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	1.5	1.5	0.0	0.0	0.0			
Crop coefficient, Kc												1.10	1.1	1.1	1.1	1.1	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.96	0.96	0.00	0.00	0.00			
Consumptive use, ETcxKc + PxB	(mm/day)											5.6	5.6	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.9	4.9	6.4	6.4	5.4	5.4	5.4	5.4	5.4	4.8	5.8	5.8	4.9	4.9	0.0	0.0	0.0			
FW=ETc + P - ER	(mm/day)											3.4	3.0	2.3	2.6	2.1	3.0	1.9	1.8	1.2	0.8	1.6	4.1	2.4	2.8	0.4	3.7	2.3	2.7	4.2	5.4	5.2	4.2	4.2	0.0	0.0	0.0			
Net field water req FW +LP	(mm/day)							8.6	9.8	11.1	13.3	3.4	3.0	2.3	2.6	2.1	3.0	1.9	1.8	1.2	0.8	1.6	4.1	2.4	2.8	0.4	3.7	2.3	2.7	4.2	5.4	5.2	4.2	4.2	0.0	0.0	0.0			
Unit irrigation water requirement	(mm/day)							13.1	14.9	16.8	20.2	5.2	4.5	3.6	4.0	3.3	4.5	2.9	2.7	1.8	1.2	2.4	6.2	3.6	4.3	0.6	5.6	3.4	4.0	6.4	8.2	7.8	6.3	6.3	0.0	0.0	0.0			
Unit irrigation water requirement	(l /sec/ha)							1.51	1.72	1.95	2.34	0.60	0.52	0.41	0.46	0.38	0.53	0.34	0.31	0.21	0.13	0.28	0.72	0.42	0.50	0.07	0.65	0.40	0.47	0.74	0.95	0.91	0.73	0.73	0.00	0.00	0.00			

To be continued

Table C5-1 Irrigation Water Requirement of Wet Season Paddy by Transplanting in Damnak Ampil, Wat Loung, and Wat Chre Sub-projects (2/2)

Item		Jun				Jul					Aug						Sep						Oct						Nov						Dec				
		11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25
9th rotation																																								
Land preparation, LP	(mm/day)								8.4	9.7	11.7	12.9																												
Percolation, P × m	(mm/day)												1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5	2.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	1.5	1.5	0.0	0.0	0.0		
Crop coefficient, Kc													1.10	1.1	1.1	1.1	1.1	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.96	0.96	0.00	0.00	0.00		
Consumptive use, EToxKc + Pxβ	(mm/day)												5.6	5.6	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.9	4.9	6.4	6.4	5.4	5.4	5.4	5.4	5.2	4.8	5.8	5.8	4.9	4.9	0.0	0.0	0.0		
FW=ETc + P - ER	(mm/day)												3.0	2.8	2.6	2.1	3.0	1.9	1.8	1.2	0.9	1.6	2.6	2.4	3.8	0.4	3.7	2.3	2.7	4.6	4.4	5.2	5.1	4.2	4.2	0.0	0.0	0.0		
Net field water req FW +LP	(mm/day)							8.4	9.7	11.7		12.9	3.0	2.8	2.6	2.1	3.0	1.9	1.8	1.2	0.9	1.6	2.6	2.4	3.8	0.4	3.7	2.3	2.7	4.6	4.4	5.2	5.1	4.2	4.2	0.0	0.0	0.0		
Unit irrigation water requirement	(mm/day)							12.7	14.7	17.8		19.5	4.5	4.3	4.0	3.3	4.5	2.9	2.7	1.8	1.4	2.4	3.9	3.6	5.8	0.6	5.6	3.4	4.0	7.0	6.7	7.8	7.8	6.3	6.4	0.0	0.0	0.0		
Unit irrigation water requirement	(l /sec/ha)							1.47	1.71	2.06		2.25	0.52	0.50	0.46	0.38	0.53	0.34	0.31	0.21	0.17	0.28	0.45	0.42	0.67	0.07	0.65	0.40	0.47	0.81	0.78	0.91	0.90	0.73	0.74	0.00	0.00	0.00		
9th rotation																																								
Land preparation, LP	(mm/day)									8.4	10.1	11.4	12.3																											
Percolation, P × m	(mm/day)													1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5	2.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	1.5	1.5	0.0	0.0	0.0		
Crop coefficient, Kc														1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.96	0.00	0.00	0.00		
Consumptive use, EToxKc + Pxβ	(mm/day)													5.6	5.6	5.1	5.1	5.1	5.1	5.1	5.1	4.9	4.9	6.4	6.4	5.4	5.4	5.4	5.2	5.2	5.8	5.8	4.8	4.9	0.0	0.0	0.0		
FW=ETc + P - ER	(mm/day)													2.8	3.1	2.1	3.0	1.9	1.8	1.2	0.9	1.8	2.6	0.9	3.8	1.4	3.7	2.3	2.7	4.6	4.8	5.2	5.1	4.1	4.2	0.0	0.0	0.0		
Net field water req FW +LP	(mm/day)									8.4	10.1	11.4	12.3	2.8	3.1	2.1	3.0	1.9	1.8	1.2	0.9	1.8	2.6	0.9	3.8	1.4	3.7	2.3	2.7	4.6	4.8	5.2	5.1	4.1	4.2	0.0	0.0	0.0		
Unit irrigation water requirement	(mm/day)									12.7	15.3	17.2	18.7	4.3	4.7	3.3	4.5	2.9	2.7	1.8	1.4	2.7	3.9	1.3	5.8	2.1	5.6	3.4	4.0	7.0	7.3	7.8	7.8	6.3	6.4	0.0	0.0	0.0		
Unit irrigation water requirement	(l /sec/ha)									1.47	1.77	2.00	2.16	0.50	0.55	0.38	0.53	0.34	0.31	0.21	0.17	0.31	0.45	0.15	0.67	0.24	0.65	0.40	0.47	0.81	0.84	0.91	0.90	0.73	0.74	0.00	0.00	0.00		
10th rotation																																								
Land preparation, LP	(mm/day)										8.5	9.9	11.0	12.2																										
Percolation, P × m	(mm/day)														1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5	2.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	1.5	1.5	0.0	0.0	0.0	
Crop coefficient, Kc															1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.96	0.96	0.00	0.00	0.00	
Consumptive use, EToxKc + Pxβ	(mm/day)														5.6	5.6	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.9	4.9	6.4	5.4	5.4	5.4	5.2	5.2	5.2	5.8	5.8	4.9	4.8	0.0	0.0	0.0	
FW=ETc + P - ER	(mm/day)														3.1	2.6	3.0	1.9	1.8	1.2	0.9	1.8	2.8	0.9	2.3	1.4	4.7	2.3	2.7	4.6	4.8	4.5	5.1	5.1	4.2	4.8	0.0	0.0	0.0	
Net field water req FW +LP	(mm/day)										8.5	9.9	11.0	12.2	3.1	2.6	3.0	1.9	1.8	1.2	0.9	1.8	2.8	0.9	2.3	1.4	4.7	2.3	2.7	4.6	4.8	4.5	5.1	5.1	4.2	4.8	0.0	0.0	0.0	
Unit irrigation water requirement	(mm/day)										12.9	15.0	16.7	18.5	4.7	4.0	4.5	2.9	2.7	1.8	1.4	2.7	4.2	1.3	3.6	2.1	7.1	3.4	4.0	7.0	7.3	6.8	7.8	7.8	6.4	7.3	0.0	0.0	0.0	
Unit irrigation water requirement	(l /sec/ha)										1.49	1.74	1.93	2.14	0.55	0.46	0.53	0.34	0.31	0.21	0.17	0.31	0.49	0.15	0.41	0.24	0.82	0.40	0.47	0.81	0.84	0.79	0.90	0.90	0.74	0.85	0.00	0.00	0.00	
11th rotation																																								
Land preparation, LP	(mm/day)											8.4	9.7	10.9	12.5																									
Percolation, P × m	(mm/day)															1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	1.5	1.5	0.0	0.0	0.0	
Crop coefficient, Kc																1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.96	0.00	0.00	0.00	
Consumptive use, EToxKc + Pxβ	(mm/day)															5.6	5.6	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.9	4.9	6.4	5.4	5.4	5.2	5.2	5.2	6.2	5.8	4.8	4.8	0.0	0.0	0.0	
FW=ETc + P - ER	(mm/day)															2.6	3.5	1.9	1.8	1.2	0.9	1.8	2.8	1.1	2.3	0.0	4.7	2.3	2.7	4.6	4.8	4.5	5.5	5.1	4.2	4.8	0.0	0.0	0.0	
Net field water req FW +LP	(mm/day)											8.4	9.7	10.9	12.5	2.6	3.5	1.9	1.8	1.2	0.9	1.8	2.8	1.1	2.3	0.0	4.7	2.3	2.7	4.6	4.8	4.5	5.5	5.1	4.2	4.8	0.0	0.0	0.0	
Unit irrigation water requirement	(mm/day)											12.8	14.7	16.5	19.0	4.0	5.3	2.9	2.7	1.8	1.4	2.7	4.2	1.6	3.6	0.0	7.1	3.4	4.0	7.0	7.3	6.8	8.3	7.8	6.3	7.3	0.0	0.0	0.0	
Unit irrigation water requirement	(l /sec/ha)											1.48	1.70	1.91	2.19	0.46	0.61	0.34	0.31	0.21	0.17	0.31	0.49	0.19	0.41	0.00	0.82	0.40	0.47	0.81	0.84	0.79	0.96	0.90	0.73	0.85	0.00	0.00	0.00	
12th rotation																																								
Land preparation, LP	(mm/day)												8.4	9.6	11.1	11.9																								
Percolation, P × m	(mm/day)																1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	1.5	1.5	0.0	0.0	0.0
Crop coefficient, Kc																	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.96	0.00	0.00	0.00
Consumptive use, EToxKc + Pxβ	(mm/day)																5.6	5.6	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.9	4.9	6.4	5.4	5.2	5.2	5.2	6.2	5.8	4.8	4.8	0.0	0.0	0.0
FW=ETc + P - ER	(mm/day)																3.5	2.4	1.8	1.2	0.9	1.8	2.8	1.1	2.5	0.0	3.2	3.3	2.7	4.6	4.8	4.5	4.5	5.5	5.2	4.8	4.8	0.0	0.0	0.0
Net field water req FW +LP	(mm/day)												8.4	9.6	11.1	11.9	3.5	2.4	1.8	1.2	0.9	1.8	2.8	1.1	2.5	0.0	3.2	3.3	2.7	4.6	4.8	4.5	4.5	5.5	5.2	4.8	4.8	0.0	0.0	0.0
Unit irrigation water requirement	(mm/day)												12.7	14.6	16.9	18.1	5.3	3.7	2.7	1.8	1.4	2.7	4.2	1.6	3.8	0.0	4.9	4.9	4.0	7.0	7.3	6.8	6.8	8.3	7.8	7.3	7.3	0.0	0.0	0.0
Unit irrigation water requirement	(l /sec/ha)												1.47	1.69	1.95	2.09	0.61	0.43	0.31	0.21	0.17	0.31	0.49	0.19	0.44	0.00	0.56	0.57	0.47	0.81	0.84	0.79	0.79	0.96	0.91	0.84	0.85	0.00	0.00	0.00
12th rotation																																								
Land preparation, LP	(mm/day)													8.3	9.8	10.7	13.0																							
Percolation, P × m	(mm/day)																	1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	1.5	1.5	0.0	0.0
Crop coefficient, Kc																		1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.96	0.00	0.00
Consumptive use, EToxKc + Pxβ	(mm/day)																	5.6	5.6	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.9	4.9	6.4	5.2	5.2	5.2	5.2	5.2	6.2	5.8	4.8	4.8	0.0	0.0
FW=ETc + P - ER	(mm/day)																	2.4	2.3	1.2	0.9	1.8	2.8	1.1	2.5	0.1	3.2	1.8	3.7	4.6	4.8	4.5	4.5	4.5	5.5	5.8	4.8	4.8	0.0	0.0
Net field water req FW +LP	(mm/day)													8.3	9.8	10.7	13.0	2.4	2.3	1.2	0.9	1.8	2.8	1.1	2.5	0.1	3.2	1.8	3.7	4.6	4.8	4.5	4.5	4.5	5.5	5.8	4.8	4.8	0.0	0.0
Unit irrigation water requirement	(mm/day)													12.6	14.8	16.2	19.6	3.7	3.5	1.8	1.4	2.7	4.2	1.6	3.8	0.1	4.9	2.7	5.6	7.0	7.3	6.8	6.8	6.8	8.4	8.8	7.3	7.3	0.0	0.0
Unit irrigation water requirement	(l /sec/ha)													1.46	1.71	1.88	2.27	0.43	0.40	0.21	0.17	0.31	0.49	0.19	0.44	0.01	0.56	0.31	0.64	0.81	0.84	0.79	0.79	0.79	0.97	1.02	0.84	0.85	0.00	0.00

Summary table of unit irrigation water requirement

		Jun				Jul					Aug						Sep						Oct						Nov						Dec					Total
		11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	(mm)
1st rotation	(l /sec/ha)	1.49	1.75	2.13	2.37	0.64	0.71	0.69	0.49	0.46	0.58	0.51	0.43	0.41	0.43	0.34	0.76	0.57	0.37	0.27	0.22	0.37	0.54	0.18	0.61	0.18	0.59	0.34	0.00	0.00	0.00										796
2nd rotation	(l /sec/ha)		1.48	1.82	2.08	2.30	0.71	0.78	0.49	0.46	0.58	0.51	0.43	0.41	0.46	0.34	0.49	0.57	0.54	0.27	0.22	0.37	0.54	0.24	0.43	0.18	0.76	0.34	0.41	0.00	0.00	0.00										788
3rd rotation	(l /sec/ha)			1.51	1.79	2.03	2.39	0.78	0.58	0.46	0.58	0.51	0.43	0.41	0.46	0.38	0.49	0.31	0.54	0.44	0.22	0.37	0.54	0.24	0.50	0.00	0.76	0.51	0.41	0.75	0.00	0.00	0.00										795
4th rotation	(l /sec/ha)				1.50	1.76	2.09	2.46	0.58	0.54	0.58	0.51	0.43	0.41	0.46	0.38	0.53	0.31	0.28	0.44	0.40	0.37	0.54	0.24	0.50	0.07	0.58	0.51	0.58	0.75	0.78	0.00	0.00	0.00									803
5th rotation	(l /sec/ha)					1.48	1.80	2.15	2.23	0.54	0.67	0.51	0.43	0.41	0.46	0.38	0.53	0.34	0.28	0.18	0.40	0.54	0.54	0.24	0.50	0.07	0.65	0.33	0.58	0.92	0.78	0.74	0.00	0.00	0.00								807
6th rotation	(l /sec/ha)						1.50	1.83	1.98	2.19	0.67	0.60	0.43	0.41	0.46	0.38	0.53	0.34	0.31	0.18	0.13	0.54	0.72	0.24	0.50	0.07	0.65	0.40	0.40	0.92	0.95	0.74	0.73	0.00	0.00	0.00								812
7th rotation	(l /sec/ha)							1.51	1.72	1.95	2.34	0.60	0.52	0.41	0.46	0.38	0.53	0.34	0.31	0.21	0.13	0.28	0.72	0.42	0.50	0.07	0.65	0.40	0.47	0.74	0.95	0.91	0.73	0.73	0.00	0.00	0.00								820
8th rotation	(l /sec/ha)								1.47	1.71	2.06	2.25	0.52	0.50	0.46	0.38	0.53	0.34	0.31	0.21	0.17	0.28	0.45	0.42	0.67	0.07	0.65	0.40	0.47	0.81	0.78	0.91	0.90	0.73	0.74	0.00	0.00	0.00						828
9th rotation	(l /sec/ha)									1.47	1.77	2.00	2.16	0.50	0.55	0.38	0.53	0.34	0.31	0.21	0.17	0.31	0.45	0.15	0.67	0.24	0.65	0.40	0.47	0.81	0.84	0.91	0.90	0.73	0.74	0.00	0.00	0.00					805
10th rotation	(l /sec/ha)										1.49	1.74	1.93	2.14	0.55	0.46	0.53	0.34	0.31	0.21	0.17	0.31	0.49	0.15	0.41	0.24	0.82	0.40	0.47	0.81	0.84	0.79	0.90	0.90	0.74	0.85	0.00	0.00	0.00			820
11th rotation	(l /sec/ha)											1.48	1.70	1.91	2.19	0.46	0.61	0.34	0.31	0.21	0.17	0.31	0.49	0.19	0.41	0.00	0.82	0.40	0.47	0.81	0.84	0.79	0.96	0.90	0.73	0.85	0.00	0.00	0.00	0.00	0.00	793
12th rotation	(l /sec/ha)												1.47	1.69	1.95	2.09	0.61	0.43	0.31	0.21	0.17	0.31	0.49	0.19	0.44	0.00	0.56	0.57	0.47	0.81	0.84	0.79	0.79	0.96	0.91	0.84	0.85	0.00	0.00	0.00	0.00	810
13th rotation	(l /sec/ha)													1.46	1.71	1.88	2.27	0.43	0.40	0.21	0.17	0.31	0.49	0.19	0.44	0.01	0.56	0.31	0.64	0.81	0.84	0.79	0.79	0.79	0.97	1.02	0.84	0.85	0.00	0.00	828
Maximum	(l /sec/ha)	1.49	1.75	2.13	2.37	2.30	2.39	2.46	2.23	2.19	2.34	2.25	2.16	2.14	2.19	2.09	2.27	0.57	0.54	0.44	0.40	0.54	0.72	0.42	0.67	0.24	0.82	0.57	0.64	0.92	0.95	0.91	0.96	0.95	0.97	1.02	0.85	0.85	0.00	0.00	808

Table C8-1 Irrigation Water Requirement of Ealry Wet Season Paddy by Transplanting in Lum Hach Sub-projects (1/2)

Item		Apr						May						Jun						Jul									
		1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-31
ETo	(mm/day)	5.3	5.3	5.3	5.3	5.3	5.3	5.0	5.0	5.0	5.0	5.0	5.0	4.7	4.7	4.7	4.7	4.7	4.7	4.4	4.4	4.4	4.4	4.4	4.4	4.5	4.5	4.5	4.5	4.5	4.5
Percolation	(mm/day)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
After transplanting, β						0.6	0.5																						
In vegetation, β								0.4	0.4	0.4																			
In reproductive, β											1.0	1.0	0.6	0.6	1.0	1.0													
In maturing, β																	0.6	0.6	-	-	-								
Effective rainfall	(mm/day)	0.4	0.3	0.3	0.3	0.4	0.4	1.0	1.2	2.2	2.1	2.7	1.9	2.4	2.4	2.2	2.7	3.2	3.2	2.2	2.1	3.6	3.3	3.6	3.0	3.1	3.0	3.3	3.3	3.6	4.1
Overall irrigation efficiency	66%																														
1st block																															
Land preparation, LP	(mm/day)	9.1	11.9	14.8	17.6																										
Percolation, P×m	(mm/day)					1.8	1.8	1.2	1.2	1.2	3.0	3.0	1.8	1.8	3.0	3.0	1.8	1.8	0.0	0.0	0.0										
Crop coefficient, Kc						1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.95	0.95	0.00										
Consumptive use, EToxKc + Pxβ	(mm/day)					7.6	7.6	6.7	6.7	6.7	8.3	8.3	7.1	6.7	7.9	7.4	6.2	6.2	4.4	4.2	0.0										
FW=ETc + P - ER	(mm/day)					7.3	7.2	5.7	5.6	4.6	6.2	5.6	5.2	4.3	5.5	5.3	3.6	3.0	1.2	1.9	0.0										
Net field water req FW +LP	(mm/day)	9.1	11.9	14.8	17.6	7.3	7.2	5.7	5.6	4.6	6.2	5.6	5.2	4.3	5.5	5.3	3.6	3.0	1.2	1.9	0.0										
Unit diversion water requirement	(mm/day)	13.8	18.1	22.4	26.7	11.0	10.9	8.7	8.4	6.9	9.4	8.5	7.8	6.6	8.3	8.0	5.4	4.5	1.8	3.0	0.0										
Unit diversion water requirement	(l /sec/ha)	1.60	2.09	2.60	3.09	1.28	1.26	1.01	0.97	0.80	1.09	0.98	0.90	0.76	0.96	0.92	0.62	0.53	0.21	0.34	0.00										
2nd block																															
Land preparation, LP	(mm/day)		9.1	12.0	14.8	17.6																									
Percolation, P×m	(mm/day)						1.8	1.8	1.2	1.2	1.2	3.0	3.0	1.8	1.8	3.0	3.0	1.8	1.8	0.0	0.0	0.0										
Crop coefficient, Kc							1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.95	0.95	0.00									
Consumptive use, EToxKc + Pxβ	(mm/day)						7.6	7.3	6.7	6.7	6.7	8.3	8.3	6.7	6.7	7.9	7.4	6.2	6.2	4.2	4.2	0.0									
FW=ETc + P - ER	(mm/day)						7.2	6.3	5.6	4.6	4.7	5.6	6.4	4.3	4.3	5.7	4.8	3.0	3.0	1.9	2.1	0.0									
Net field water req FW +LP	(mm/day)		9.1	12.0	14.8	17.6	7.2	6.3	5.6	4.6	4.7	5.6	6.4	4.3	4.3	5.7	4.8	3.0	3.0	1.9	2.1	0.0									
Unit diversion water requirement	(mm/day)		13.8	18.1	22.4	26.6	10.9	9.6	8.4	6.9	7.1	8.5	9.6	6.6	6.5	8.7	7.2	4.5	4.5	3.0	3.2	0.0									
Unit diversion water requirement	(l /sec/ha)		1.60	2.10	2.59	3.08	1.26	1.11	0.97	0.80	0.82	0.98	1.11	0.76	0.75	1.00	0.83	0.53	0.52	0.34	0.37	0.00									
3rd block																															
Land preparation, LP	(mm/day)			9.1	11.9	14.8	17.5																								
Percolation, P×m	(mm/day)							1.8	1.8	1.2	1.2	1.2	3.0	3.0	1.8	1.8	3.0	3.0	1.8	1.8	0.0	0.0	0.0								
Crop coefficient, Kc								1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.95	0.95	0.00								
Consumptive use, EToxKc + Pxβ	(mm/day)							7.3	7.3	6.7	6.7	6.7	8.3	7.9	6.7	6.7	7.9	7.4	6.2	6.0	4.2	4.2	0.0								
FW=ETc + P - ER	(mm/day)							6.3	5.2	4.6	4.7	4.0	6.4	5.5	4.3	4.5	5.2	4.2	3.0	3.7	2.1	0.5	0.0								
Net field water req FW +LP	(mm/day)			9.1	11.9	14.8	17.5	6.3	6.2	4.6	4.7	4.0	6.4	5.5	4.3	4.5	5.2	4.2	3.0	3.7	2.1	0.5	0.0								
Unit diversion water requirement	(mm/day)			13.8	18.1	22.4	26.5	9.6	9.3	6.9	7.1	6.1	9.6	8.4	6.5	6.8	7.9	6.4	4.5	5.7	3.2	0.8	0.0								
Unit diversion water requirement	(l /sec/ha)			1.60	2.10	2.59	3.07	1.11	1.08	0.80	0.82	0.71	1.11	0.97	0.75	0.79	0.92	0.74	0.52	0.66	0.37	0.10	0.00								
4th block																															
Land preparation, LP	(mm/day)				9.1	11.9	14.7	16.5																							
Percolation, P×m	(mm/day)								1.8	1.8	1.2	1.2	1.2	3.0	3.0	1.8	1.8	3.0	3.0	1.8	1.8	0.0	0.0	0.0							
Crop coefficient, Kc									1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.95	0.95	0.00							
Consumptive use, EToxKc + Pxβ	(mm/day)								7.3	7.3	6.7	6.7	6.7	7.9	7.9	6.7	6.7	7.9	7.4	6.0	6.0	4.2	4.2	0.0							
FW=ETc + P - ER	(mm/day)								6.2	5.2	4.7	4.0	4.8	5.5	5.5	4.5	4.0	4.7	4.2	3.7	3.9	0.5	0.9	0.0							
Net field water req FW +LP	(mm/day)				9.1	11.9	14.7	16.5	6.2	5.2	4.7	4.0	4.8	5.5	5.5	4.5	4.0	4.7	4.2	3.7	3.9	0.5	0.9	0.0							
Unit diversion water requirement	(mm/day)				13.8	18.1	22.2	25.0	9.3	7.8	7.1	6.1	7.3	8.4	8.3	6.8	6.1	7.1	6.3	5.7	5.9	0.8	1.4	0.0							
Unit diversion water requirement	(l /sec/ha)				1.60	2.09	2.58	2.89	1.08	0.91	0.82	0.71	0.84	0.97	0.96	0.79	0.70	0.82	0.73	0.66	0.68	0.10	0.16	0.00							
5th block																															
Land preparation, LP	(mm/day)					9.1	11.9	14.0	16.3																						
Percolation, P×m	(mm/day)									1.8	1.8	1.2	1.2	1.2	3.0	3.0	1.8	1.8	3.0	3.0	1.8	1.8	0.0	0.0	0.0						
Crop coefficient, Kc										1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.95	0.95	0.00						
Consumptive use, EToxKc + Pxβ	(mm/day)									7.3	7.3	6.7	6.7	6.3	7.9	7.9	6.7	6.7	7.9	7.2	6.0	6.0	4.2	4.2	0.0						
FW=ETc + P - ER	(mm/day)									5.2	5.3	4.0	4.8	4.0	5.5	5.7	4.0	3.5	4.6	4.9	3.9	2.3	0.9	0.6	0.0						
Net field water req FW +LP	(mm/day)					9.1	11.9	14.0	16.3	5.2	5.3	4.0	4.8	4.0	5.5	5.7	4.0	3.5	4.6	4.9	3.9	2.3	0.9	0.6	0.0						
Unit diversion water requirement	(mm/day)					13.8	18.0	21.2	24.6	7.8	8.0	6.1	7.3	6.0	8.3	8.7	6.1	5.2	7.0	7.5	5.9	3.6	1.4	0.9	0.0						
Unit diversion water requirement	(l /sec/ha)					1.60	2.08	2.45	2.85	0.91	0.93	0.71	0.84	0.70	0.96	1.00	0.70	0.61	0.82	0.87	0.68	0.41	0.16	0.10	0.00						
6th block																															
Land preparation, LP	(mm/day)						9.1	11.5	13.8	15.1																					
Percolation, P×m	(mm/day)										1.8	1.8	1.2	1.2	1.2	3.0	3.0	1.8	1.8	3.0	3.0	1.8	1.8	0.0	0.0	0.0				
Crop coefficient, Kc											1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.95	0.00				
Consumptive use, EToxKc + Pxβ	(mm/day)										7.3	7.3	6.7	6.3	6.3	7.9	7.9	6.7	6.7	7.6	7.2	6.0	6.0	4.2	4.2	0.0				
FW=ETc + P - ER	(mm/day)										5.3	4.6	4.8	4.0	3.9	5.7	5.2	3.5	3.4	5.4	5.1	2.3	2.7	0.6	1.2	0.0				
Net field water req FW +LP	(mm/day)						9.1	11.5	13.8	15.1	5.3	4.6	4.8	4.0	3.9	5.7	5.2	3.5	3.4	5.4	5.1	2.3	2.7	0.6	1.2	0.0				
Unit diversion water requirement	(mm/day)						13.8	17.4	20.9	22.9	8.0	7.0	7.3	6.0	5.9	8.7	7.9	5.2	5.2	8.2	7.7	3.6	4.1	0.9	1.8	0.0				
Unit diversion water requirement	(l /sec/ha)						1.59	2.01	2.42	2.65	0.93	0.81	0.84	0.70	0.69	1.00	0.92	0.61	0.60	0.94	0.89	0.41	0.47	0.10	0.21	0.00				

To be continued

Table C8-1 Irrigation Water Requirement of Early Wet Season Paddy by Transplanting in Lum Hach Sub-projects (2/2)

Item		Apr						May						Jun						Jul						Aug					
		1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-31
7th block																															
Land preparation, LP	(mm/day)							8.9	11.4	13.0	15.2																				
Percolation, P×m	(mm/day)											1.8	1.8	1.2	1.2	1.2	3.0	3.0	1.8	1.8	3.0	3.0	1.8	1.8	0.0	0.0	0.0				
Crop coefficient, Kc												1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.95	0.95	0.00				
Consumptive use, ETo×Kc + P×β	(mm/day)											7.3	7.3	6.3	6.3	6.3	7.9	7.9	6.7	6.4	7.6	7.2	6.0	6.0	4.2	4.2	0.0				
FW=ETc + P - ER	(mm/day)											4.6	5.4	4.0	3.9	4.2	5.2	4.7	3.4	4.2	5.5	3.5	2.7	2.4	1.2	1.1	0.0				
Net field water req FW +LP	(mm/day)							8.9	11.4	13.0	15.2	4.6	5.4	4.0	3.9	4.2	5.2	4.7	3.4	4.2	5.5	3.5	2.7	2.4	1.2	1.1	0.0				
Unit diversion water requirement	(mm/day)							13.5	17.2	19.6	23.0	7.0	8.2	6.0	5.9	6.3	7.9	7.1	5.2	6.3	8.4	5.4	4.1	3.6	1.8	1.6	0.0				
Unit diversion water requirement	(l/sec/ha)							1.57	1.99	2.27	2.67	0.81	0.95	0.70	0.69	0.73	0.92	0.82	0.60	0.73	0.97	0.62	0.47	0.42	0.21	0.19	0.00				
8th block																															
Land preparation, LP	(mm/day)								8.9	10.8	13.1	14.4																			
Percolation, P×m	(mm/day)												1.8	1.8	1.2	1.2	1.2	3.0	3.0	1.8	1.8	3.0	3.0	1.8	1.8	0.0	0.0	0.0			
Crop coefficient, Kc													1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.95	0.95	0.00			
Consumptive use, ETo×Kc + P×β	(mm/day)												7.3	6.9	6.3	6.3	6.3	7.9	7.9	6.4	6.4	7.6	7.2	6.0	6.0	4.2	4.2	0.0			
FW=ETc + P - ER	(mm/day)												5.4	4.6	3.9	4.2	3.7	4.7	4.6	4.2	4.3	4.0	3.9	2.4	3.0	1.1	1.2	0.0			
Net field water req FW +LP	(mm/day)								8.9	10.8	13.1	14.4	5.4	4.6	3.9	4.2	3.7	4.7	4.6	4.2	4.3	4.0	3.9	2.4	3.0	1.1	1.2	0.0			
Unit diversion water requirement	(mm/day)								13.5	16.4	19.8	21.9	8.2	6.9	5.9	6.3	5.5	7.1	7.0	6.3	6.6	6.0	5.9	3.6	4.5	1.6	1.8	0.0			
Unit diversion water requirement	(l/sec/ha)								1.56	1.90	2.29	2.53	0.95	0.80	0.69	0.73	0.64	0.82	0.82	0.73	0.76	0.70	0.68	0.42	0.52	0.19	0.21	0.00			
9th block																															
Land preparation, LP	(mm/day)									8.7	10.9	12.5	15.4																		
Percolation, P×m	(mm/day)													1.8	1.8	1.2	1.2	1.2	3.0	3.0	1.8	1.8	3.0	3.0	1.8	1.8	0.0	0.0	0.0		
Crop coefficient, Kc														1.10	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.05	1.05	0.95	0.95	0.95	0.95	0.95	0.00		
Consumptive use, ETo×Kc + P×β	(mm/day)													6.9	6.9	6.3	6.3	6.3	7.9	7.6	6.4	6.4	7.6	7.2	6.0	6.0	4.2	4.2	0.0		
FW=ETc + P - ER	(mm/day)													4.6	4.5	4.2	3.7	3.1	4.6	5.4	4.3	2.8	4.3	3.6	3.0	2.9	1.2	0.9	0.0		
Net field water req FW +LP	(mm/day)									8.7	10.9	12.5	15.4	4.6	4.5	4.2	3.7	3.1	4.6	5.4	4.3	2.8	4.3	3.6	3.0	2.9	1.2	0.9	0.0		
Unit diversion water requirement	(mm/day)									13.2	16.5	18.9	23.3	6.9	6.8	6.3	5.5	4.7	7.0	8.2	6.6	4.2	6.6	5.4	4.5	4.4	1.8	1.4	0.0		
Unit diversion water requirement	(l/sec/ha)									1.53	1.91	2.19	2.69	0.80	0.79	0.73	0.64	0.54	0.82	0.94	0.76	0.49	0.76	0.63	0.52	0.51	0.21	0.16	0.00		

Summary table of unit diversion water requirement

		Apr						May						Jun						Jul						Aug						Total
								1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-30	1-5	6-10	11-15	16-20	21-25	26-31	1-5	6-10	11-15	16-20	21-25	26-31	(mm)
1st block	(l/sec/ha)	1.60	2.09	2.60	3.09	1.28	1.26	1.01	0.97	0.80	1.09	0.98	0.90	0.76	0.96	0.92	0.62	0.53	0.21	0.34	0.00											951
2nd block	(l/sec/ha)		1.60	2.10	2.59	3.08	1.26	1.11	0.97	0.80	0.82	0.98	1.11	0.76	0.75	1.00	0.83	0.53	0.52	0.34	0.37	0.00										931
3rd block	(l/sec/ha)			1.60	2.10	2.59	3.07	1.11	1.08	0.80	0.82	0.71	1.11	0.97	0.75	0.79	0.92	0.74	0.52	0.66	0.37	0.10	0.00									898
4th block	(l/sec/ha)				1.60	2.09	2.58	2.89	1.08	0.91	0.82	0.71	0.84	0.97	0.96	0.79	0.70	0.82	0.73	0.66	0.68	0.10	0.16	0.00									868
5th block	(l/sec/ha)					1.60	2.08	2.45	2.85	0.91	0.93	0.71	0.84	0.70	0.96	1.00	0.70	0.61	0.82	0.87	0.68	0.41	0.16	0.10	0.00									837
6th block	(l/sec/ha)						1.59	2.01	2.42	2.65	0.93	0.81	0.84	0.70	0.69	1.00	0.92	0.61	0.60	0.94	0.89	0.41	0.47	0.10	0.21	0.00								812
7th block	(l/sec/ha)							1.57	1.99	2.27	2.67	0.81	0.95	0.70	0.69	0.73	0.92	0.82	0.60	0.73	0.97	0.62	0.47	0.42	0.21	0.19	0.00					792
8th block	(l/sec/ha)								1.56	1.90	2.29	2.53	0.95	0.80	0.69	0.73	0.64	0.82	0.82	0.73	0.76	0.70	0.68	0.42	0.52	0.19	0.21	0.00				775
9th block	(l/sec/ha)									1.53	1.91	2.19	2.69	0.80	0.79	0.73	0.64	0.54	0.82	0.94	0.76	0.49	0.76	0.63	0.52	0.51	0.21	0.16	0.00			762
Maximum	(l/sec/ha)	1.60	2.09	2.60	**3.09**	3.08	3.07	2.89	2.85	2.65	2.67	2.53	2.69	0.97	0.96	1.00	0.92	0.82	0.82	0.94	0.97	0.70	0.76	0.63	0.52	0.51	0.21	0.16	0.00			847

Figures

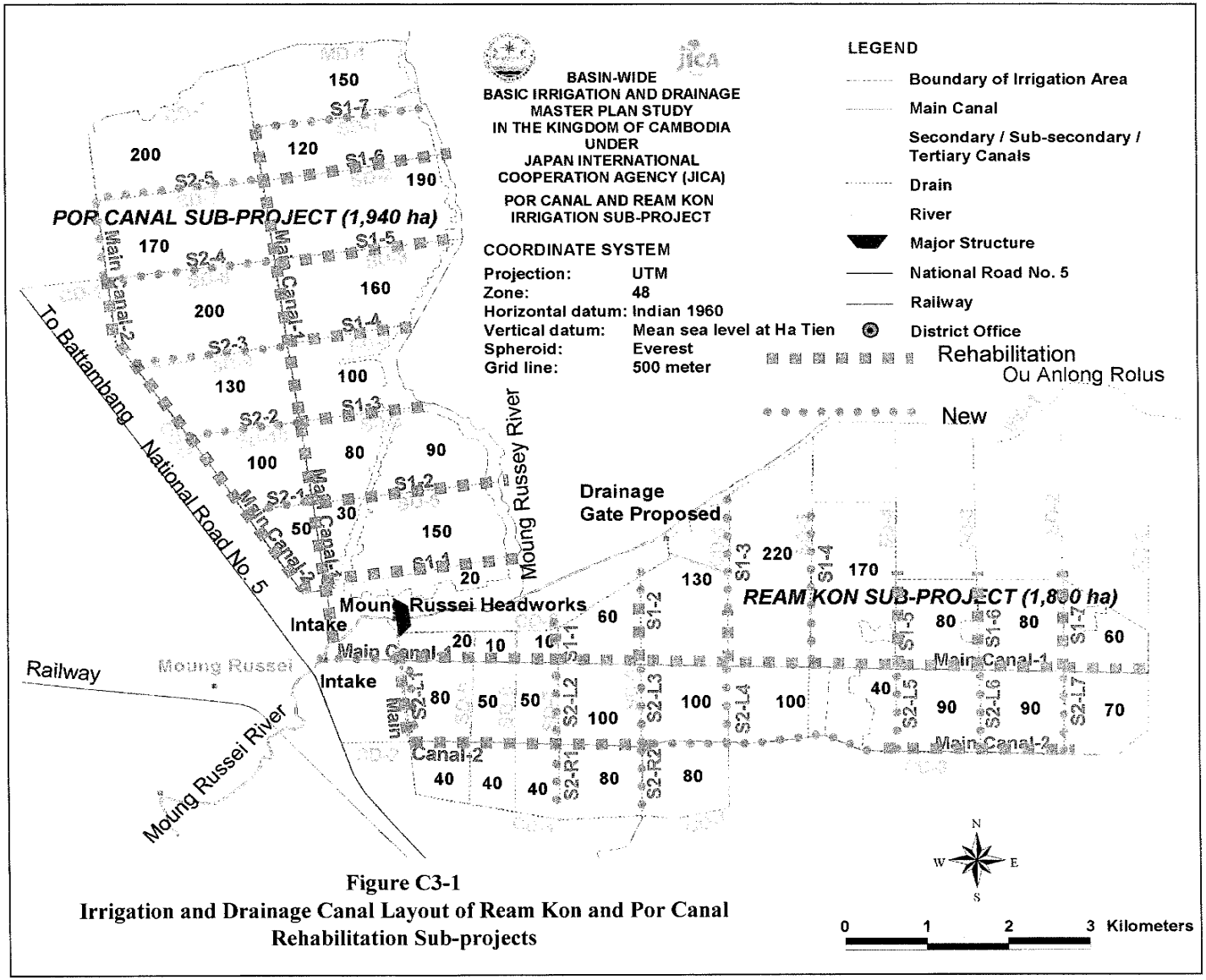


Figure C3-1
Irrigation and Drainage Canal Layout of Ream Kon and Por Canal Rehabilitation Sub-projects

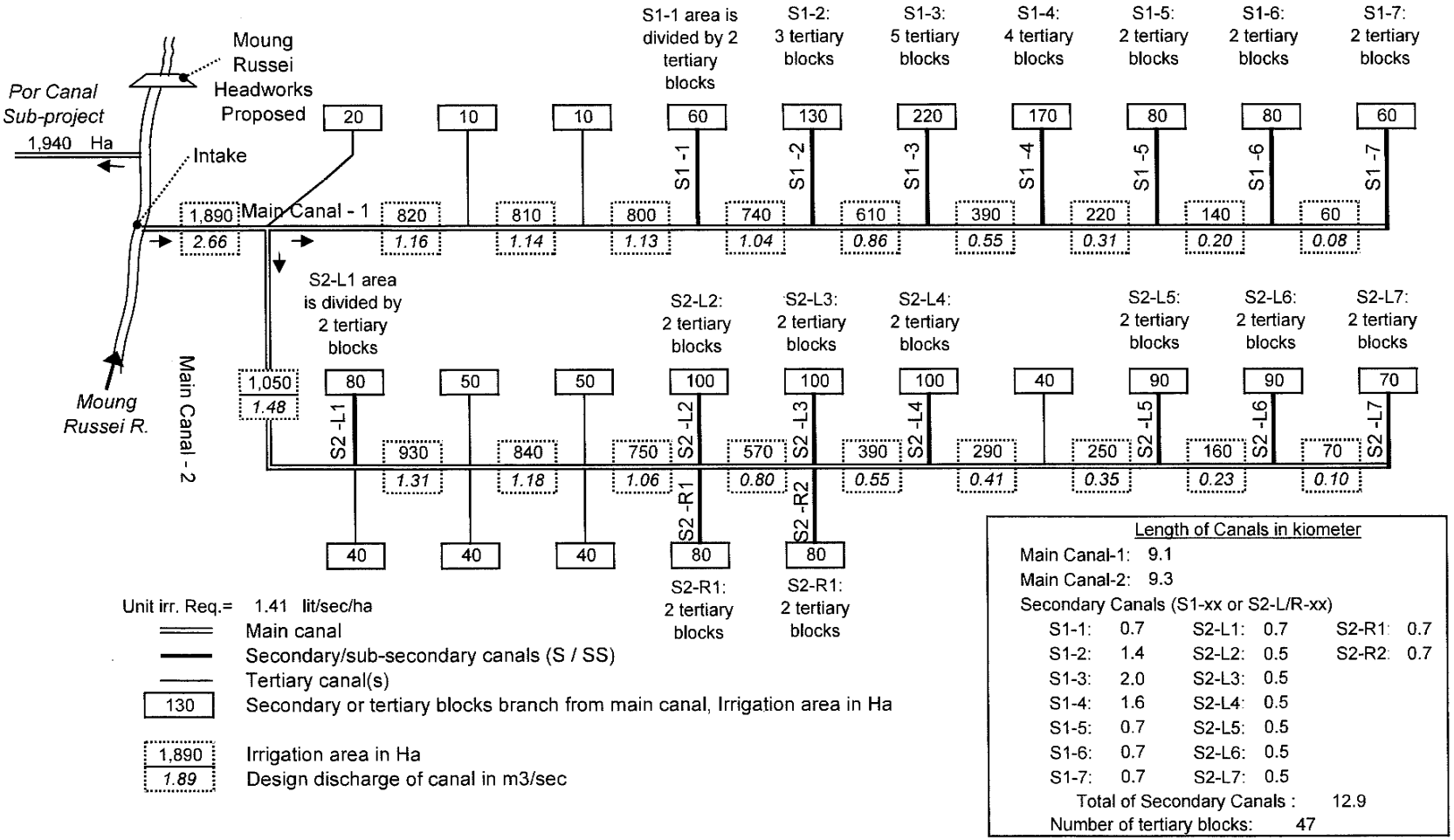


Figure C3-2A Irrigation Area Diagram of Ream Kon Sub-project

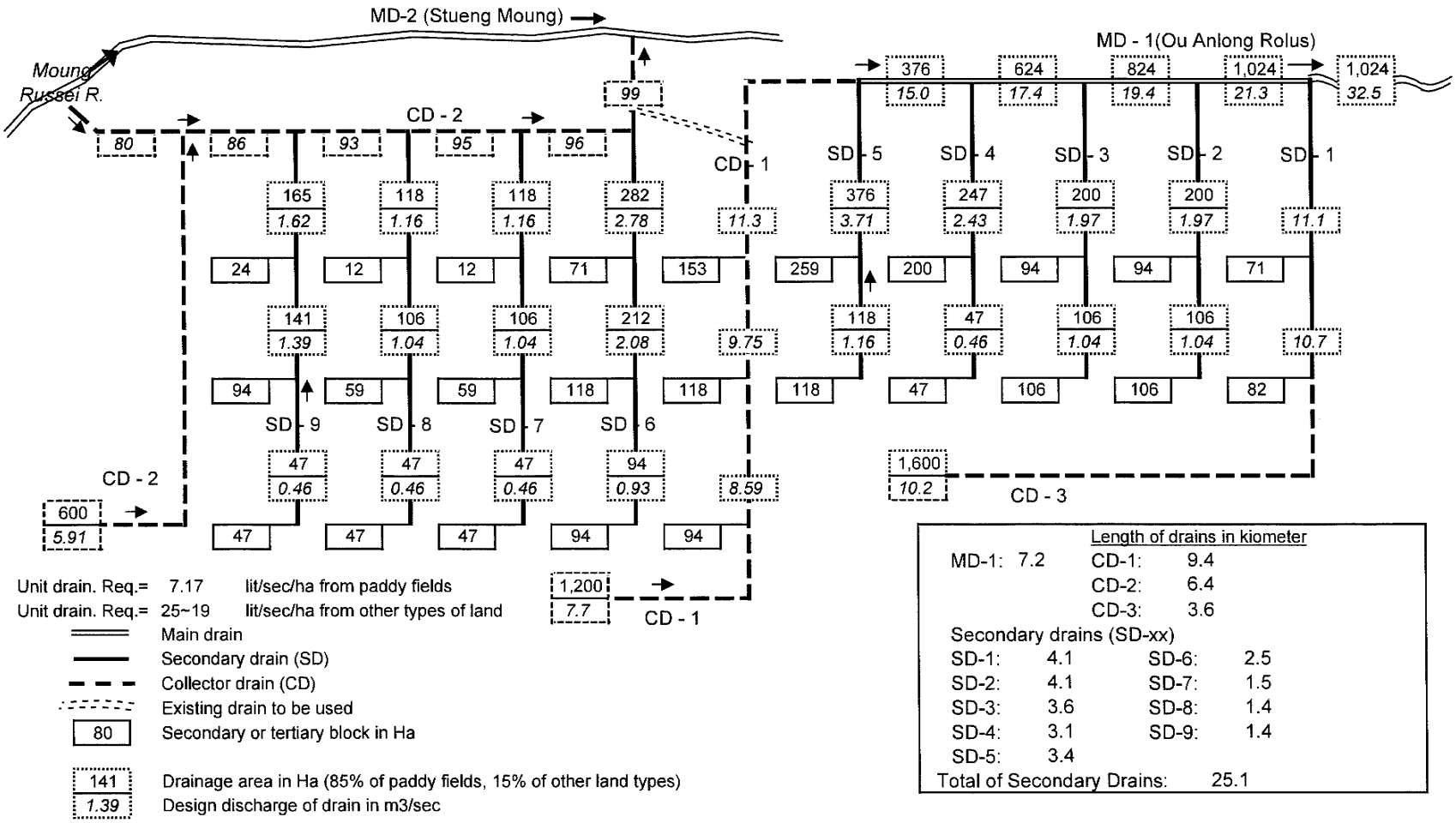


Figure C3-2B Drainage Area Diagram of Ream Kon Sub-project

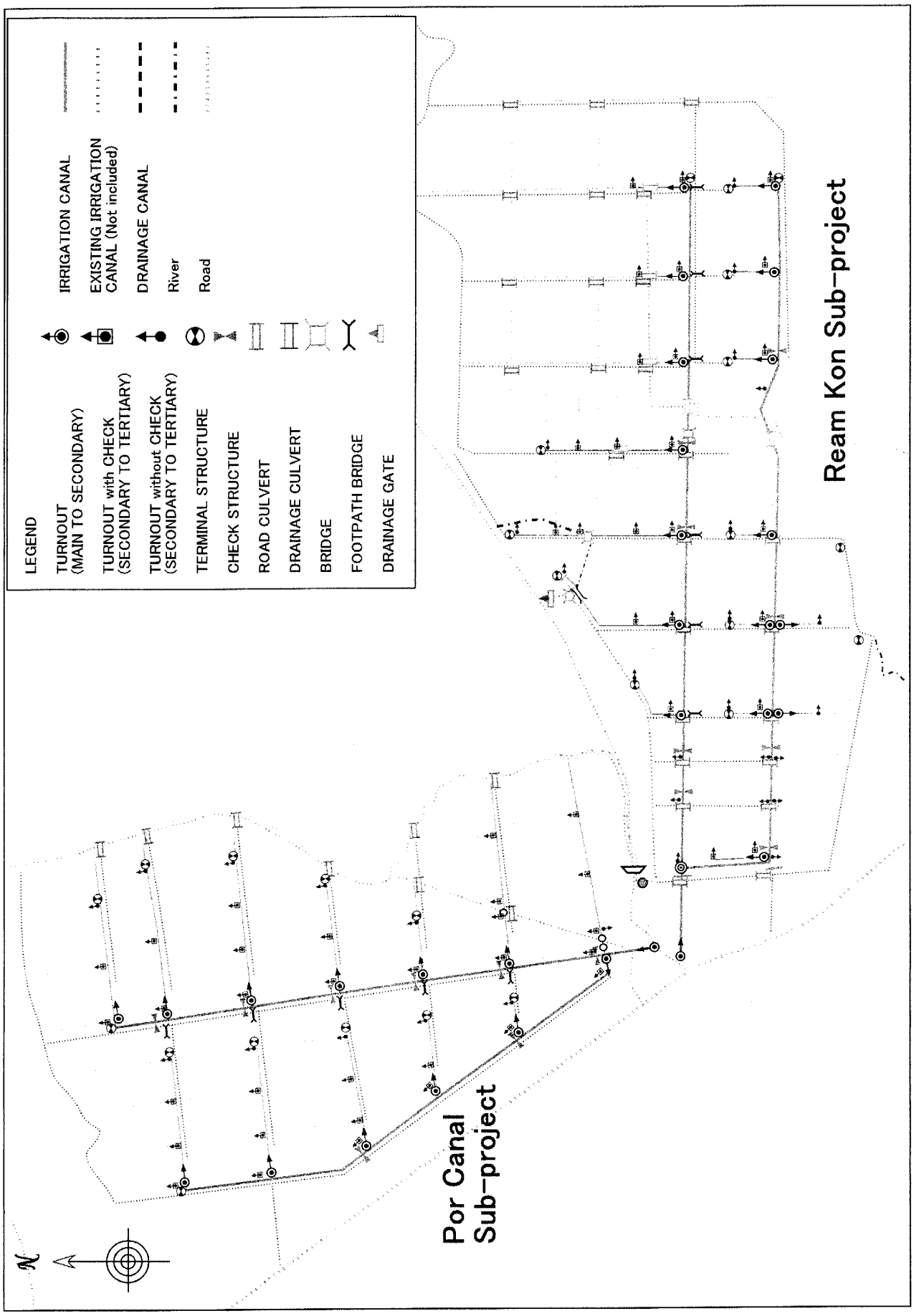
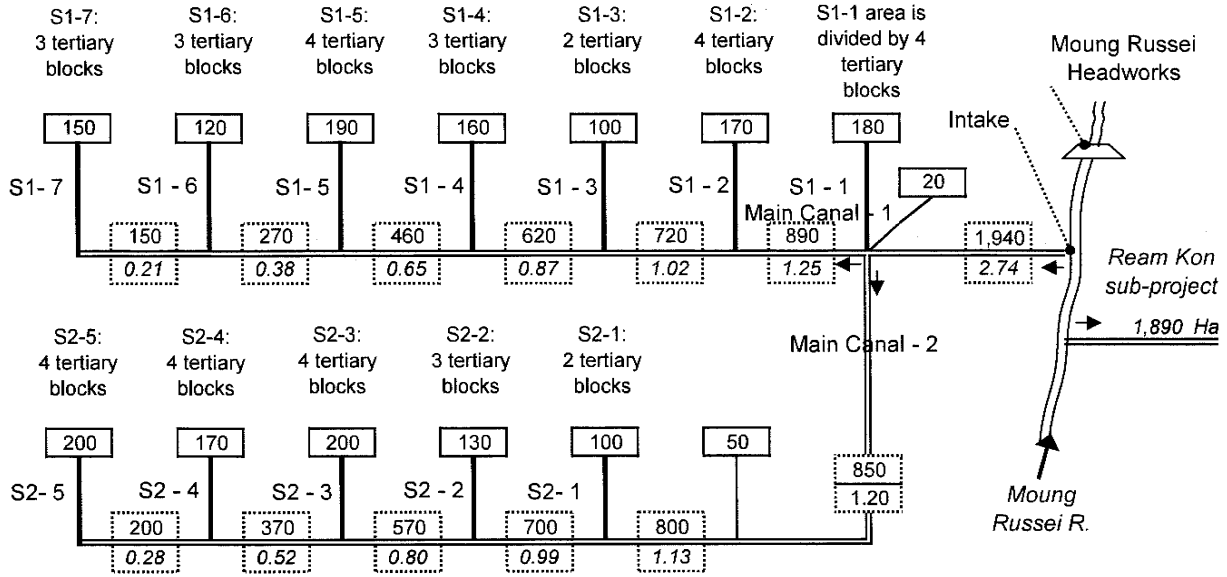


Figure C3-3 Location Map of Structures, Ream Kon and Por Canal Sub-projects



Unit irr. Req.= 1.41 lit/sec/ha

Main canal

Secondary/sub-secondary canals (S / SS)

Tertiary canal(s)

130 Secondary or tertiary blocks branch from main canal, Irrigation area in Ha

1,940 Irrigation area in Ha

1.94 Design discharge of canal in m3/sec

Length of Canals in kiometer

Main Canal-1: 6.6

Main Canal-2: 6.1

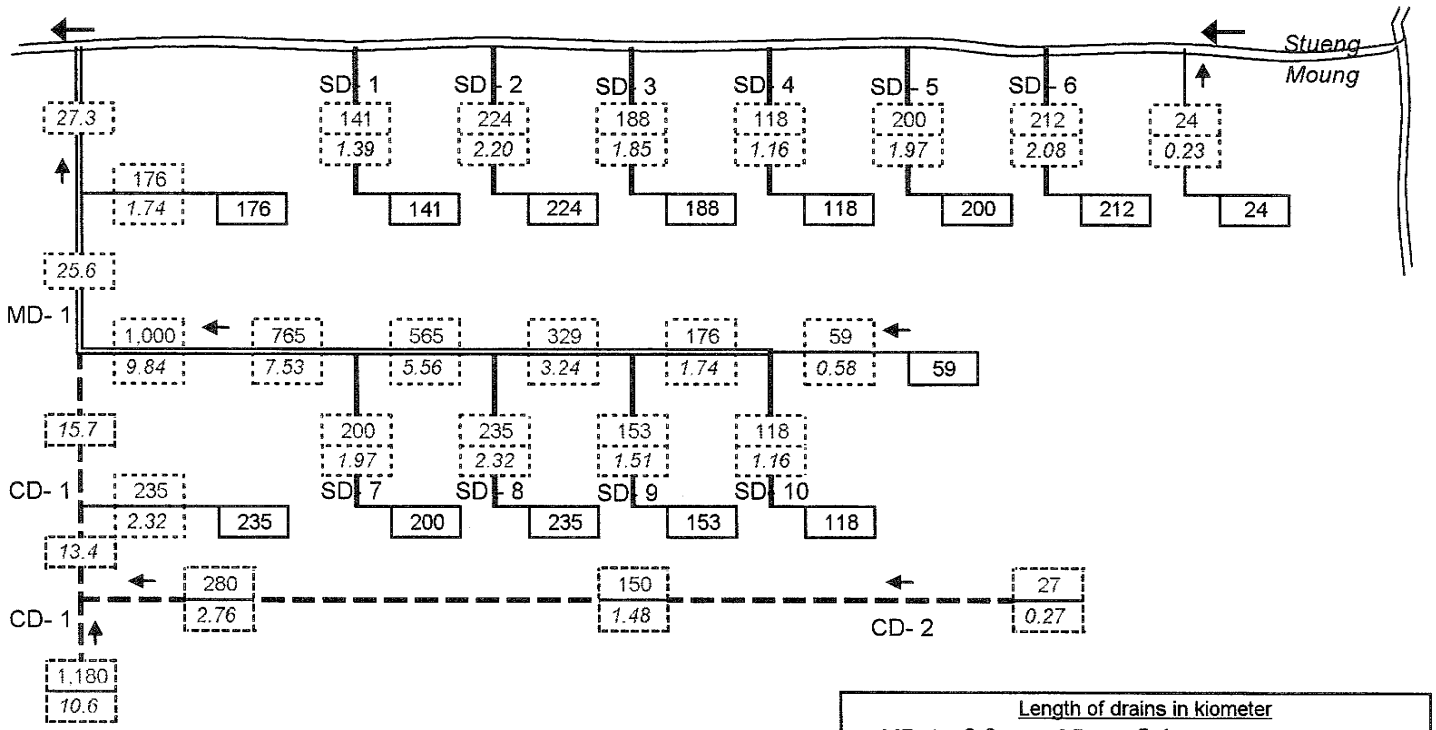
Secondary canals (S1-xx or S2-xx)

S1-1:	1.7	S1-5:	1.6	S2-2:	1.0
S1-2:	1.6	S1-6:	1.7	S2-3:	1.5
S1-3:	0.6	S1-7:	1.5	S2-4:	1.6
S1-4:	1.0	S2-1:	0.5	S2-5:	1.5

Total Secondary Canals : 15.8

Number of tertiary blocks: 42

Figure C4-1 Irrigation Area Diagram of Por Canal Sub-project



Unit drain. Req.= 7.17 lit/sec/ha from paddy fields

Unit drain. Req.= 25~19 lit/sec/ha from other types of land

Main drain

Secondary drain (SD)

Collector drain (CD)

80 Secondary or tertiary block in Ha

235 Drainage area in Ha (85% of paddy fields, 15% of other land types)

2.32 Design discharge of drain in m3/sec

Length of drains in kiometer

MD-1:	9.3	CD-1:	5.4
		CD-2:	4.6

Secondary drains (SD-xx)

SD-1:	1.7	SD-7:	1.5
SD-2:	1.8	SD-8:	1.5
SD-3:	1.9	SD-9:	1.4
SD-4:	1.1	SD-10:	0.9
SD-5:	1.2		
SD-6:	1.8		

Total of Secondary Drains: 14.8

Figure C4-2 Drainage Area Diagram of Por Canal Sub-project

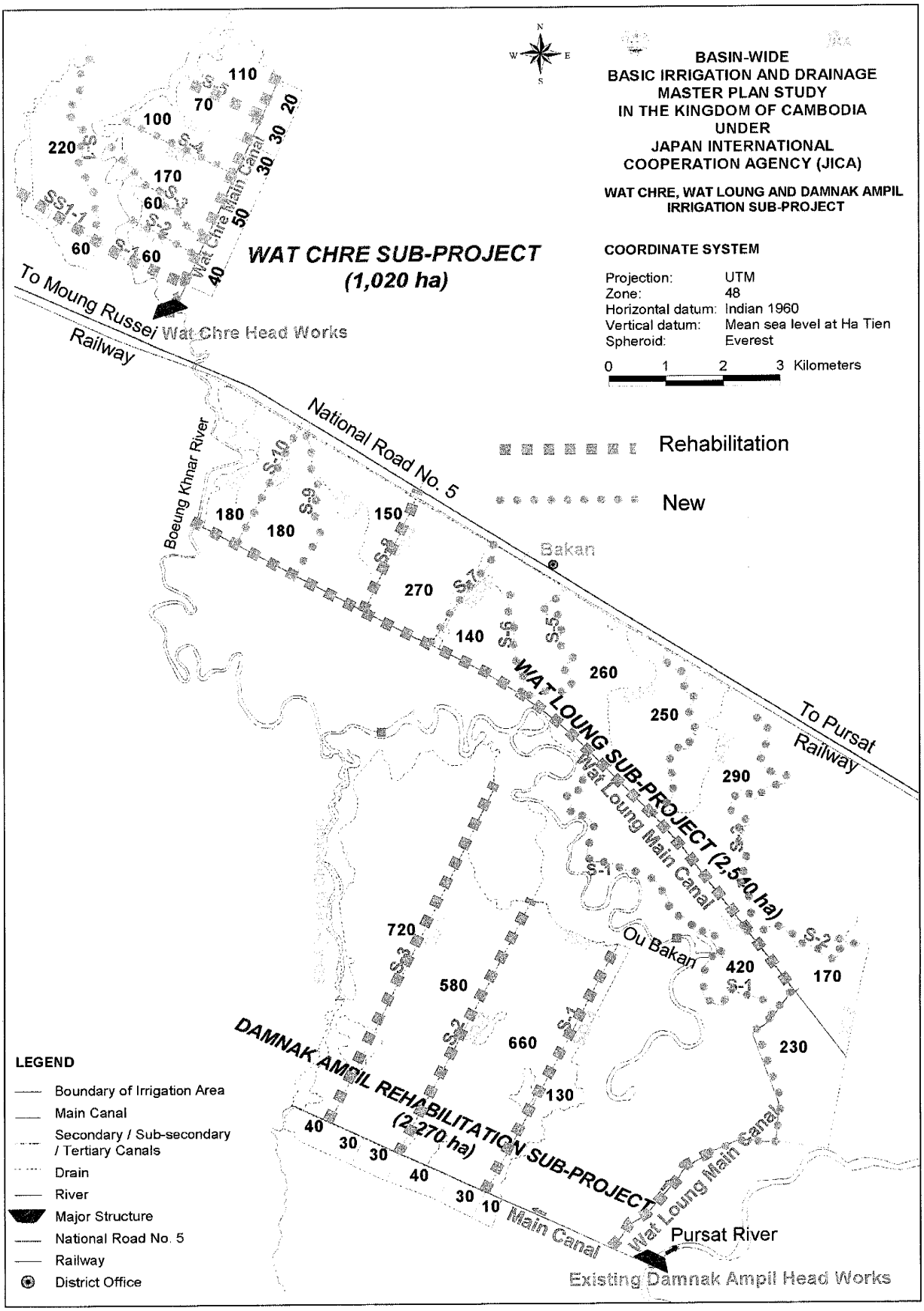


Figure C5-1
Irrigation and Drainage Canal Layout of Damnak Ampil, Wat Loung, and Wat Chre Rehabilitation Sub-projects

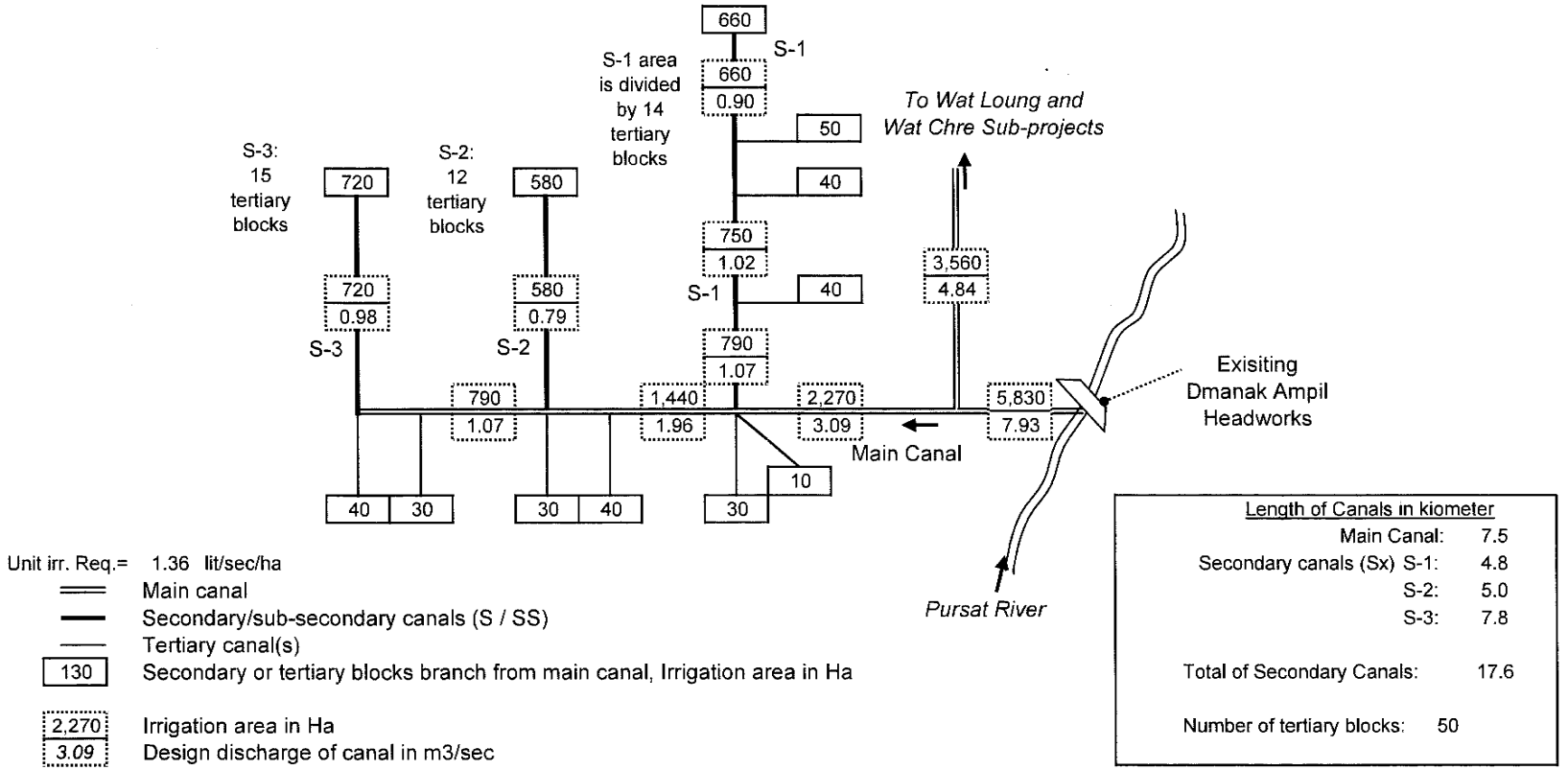
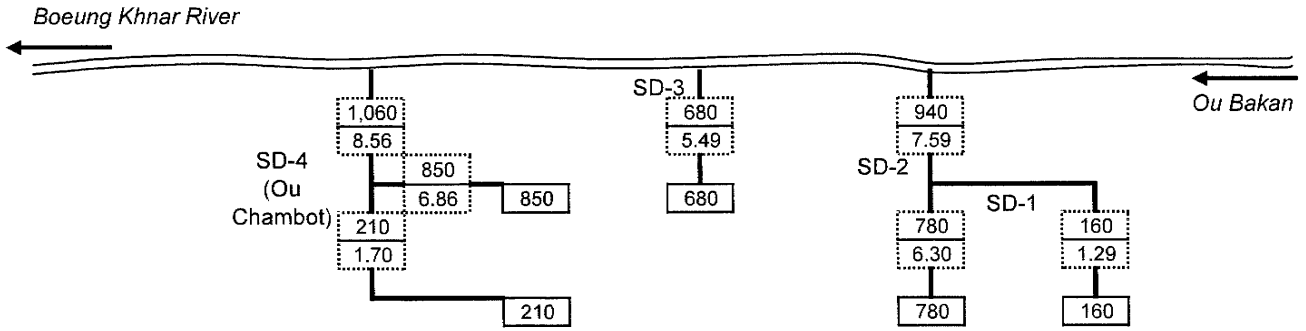


Figure C5-2A Irrigation Area Diagram of Damnak Ampil Rehabilitation Sub-project



Unit drain. Req.= 6.32 lit/sec/ha from paddy fields
Unit drain. Req.= 25~18 lit/sec/ha from other types of land

Main drain
Secondary drain
Collector drain
80 Secondary or tertiary block in Ha

1,060 Drainage area in Ha (85% of paddy fields, 15% of other land types)
9.55 Design discharge of drain in m3/sec

Length of Drains in kiometer	
Seondary Drains (SD-xx)	
SD-1:	6.4
SD-2:	6.8
SD-3:	7.8
SD-4:	7.2
Total of Secondary Drains:	28.2

Figure C5-2B Drainage Area Diagram of Damnak Ampil Rehabilitation Sub-project

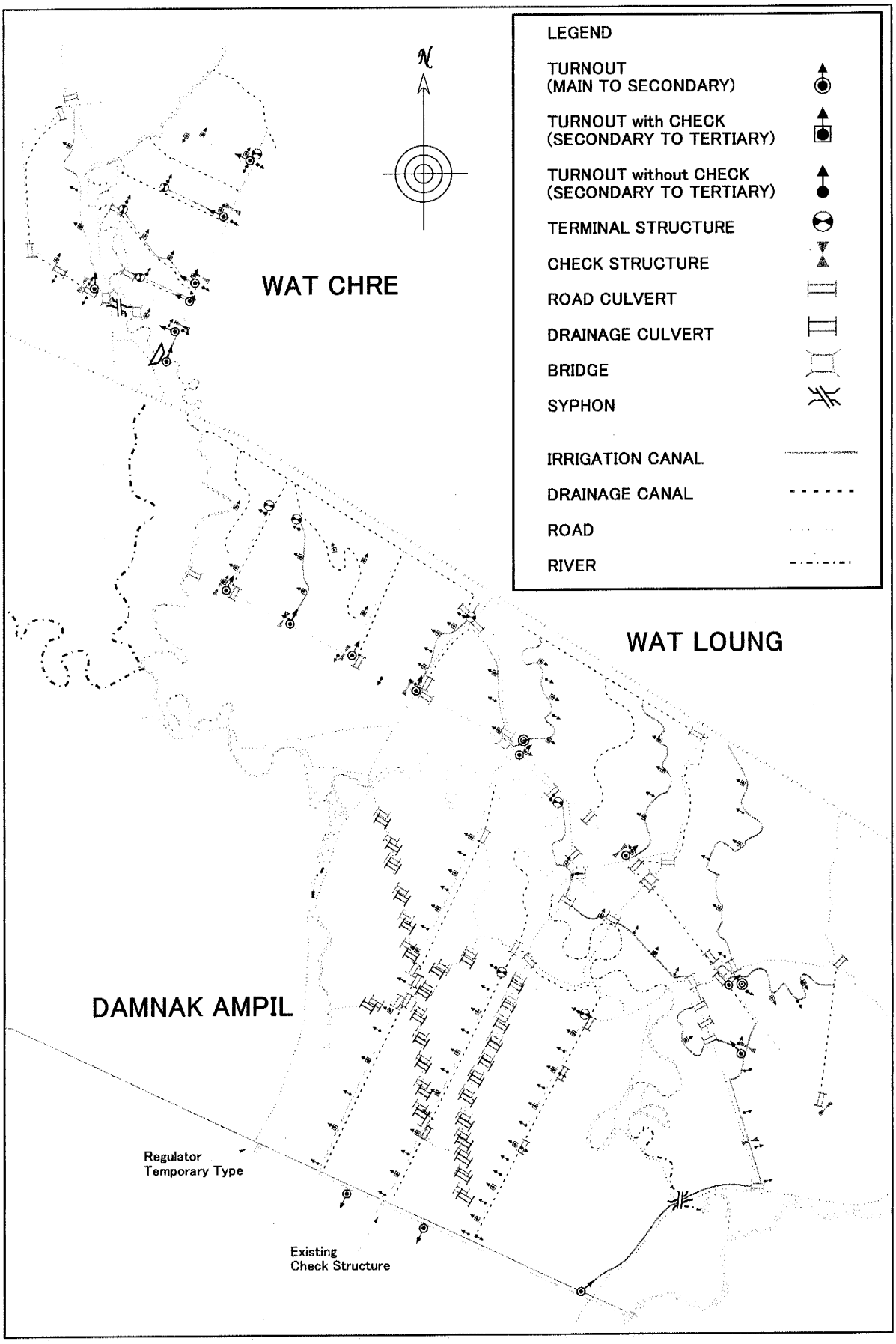


Figure C5-3 Location Map of Structures, Damnak Ampil, Wat Loung and Wat Chre Sub-projects

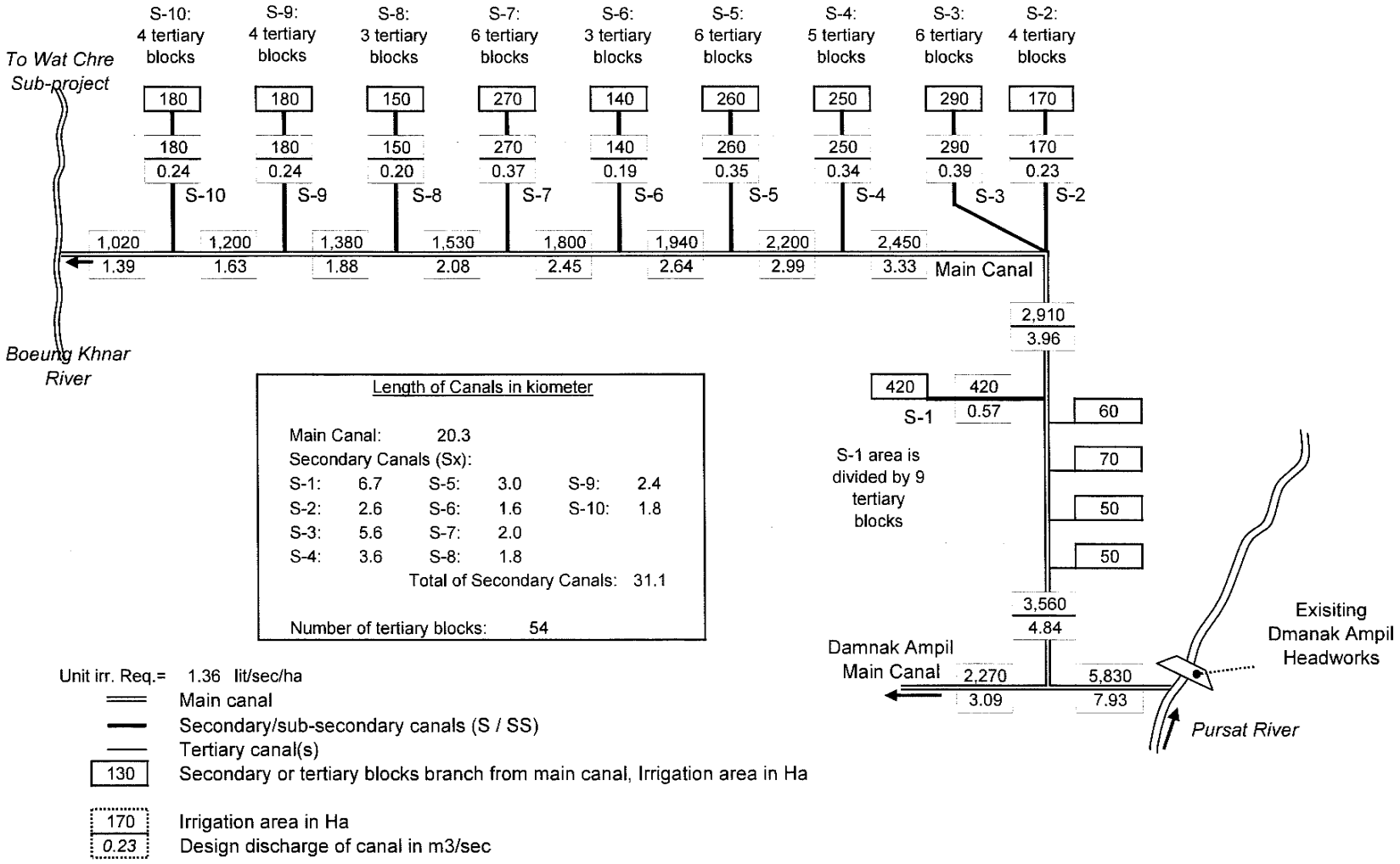
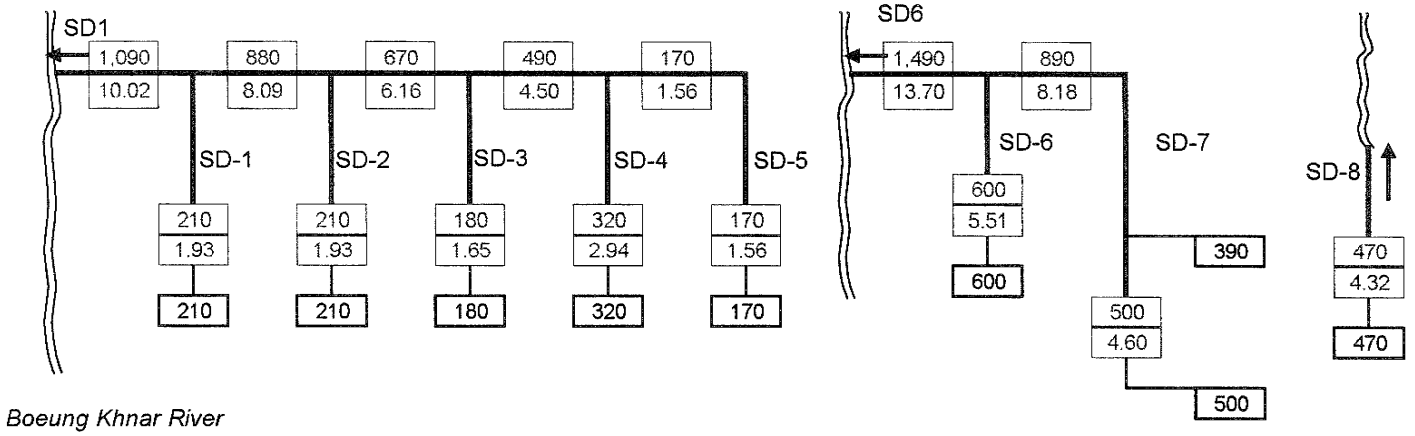


Figure C6-1 Irrigation Area Diagram of Wat Loung Sub-project



Length of Drains in kiometer			
Secondary drains (SD-xx)			
SD-1:	2.7	SD-6:	6.1
SD-2:	3.3	SD-7:	9.5
SD-3:	4.2	SD-8:	3.7
SD-4:	4.5		
SD-5:	3.7		
Total of Secondary Drains:			37.7

Unit drain. Req.= 6.32 lit/sec/ha from paddy fields
Unit drain. Req.= 25~18 lit/sec/ha from other types of land

Main drain
Secondary drain
Collector drain
80 Secondary or tertiary block in Ha

210 Drainage area in Ha (85% of paddy fields, 15% of other land types)
1.93 Design discharge of drain in m3/sec

Figure C6-2 Drainage Area Diagram of Wat Loung Sub-project

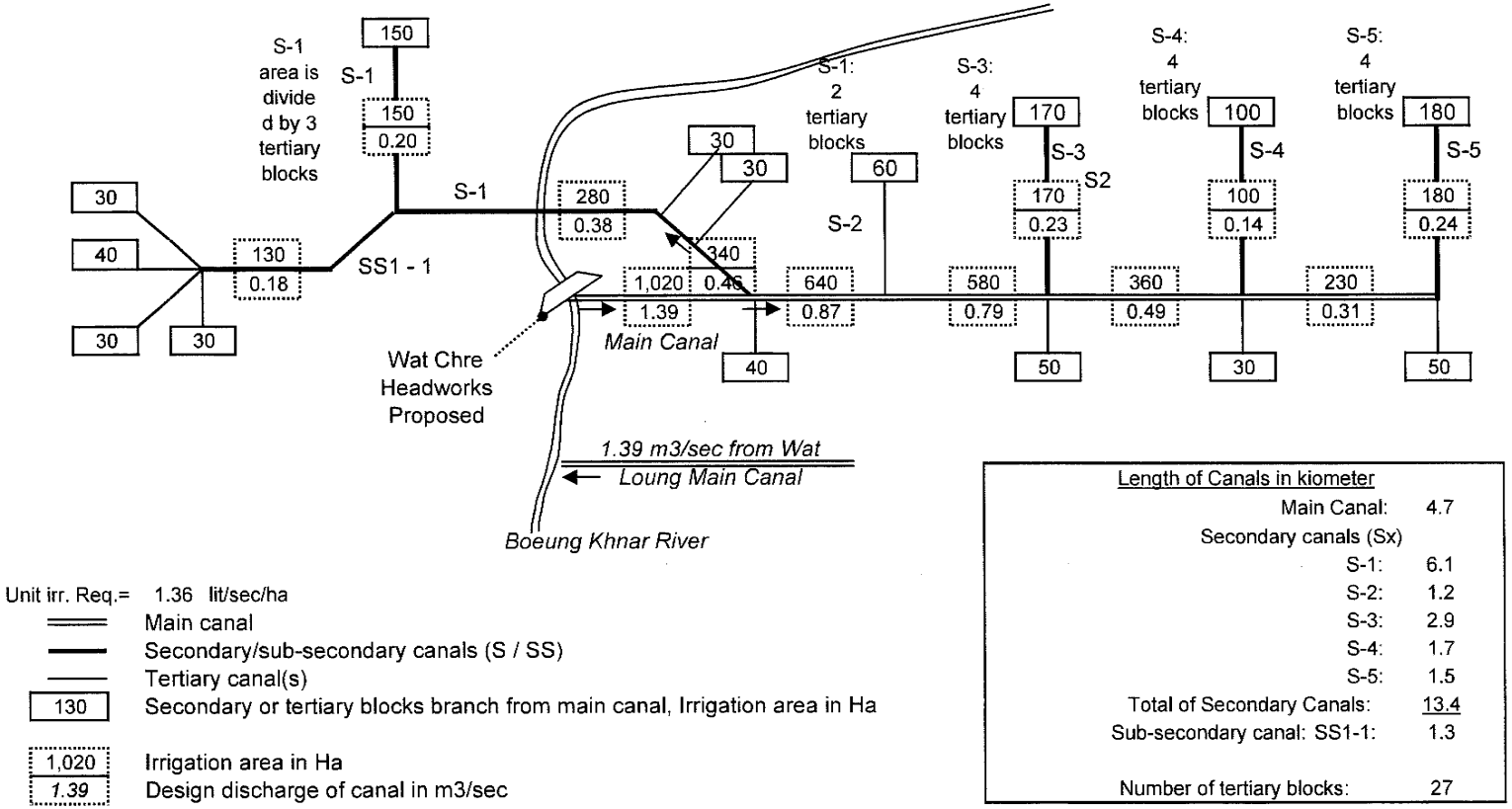
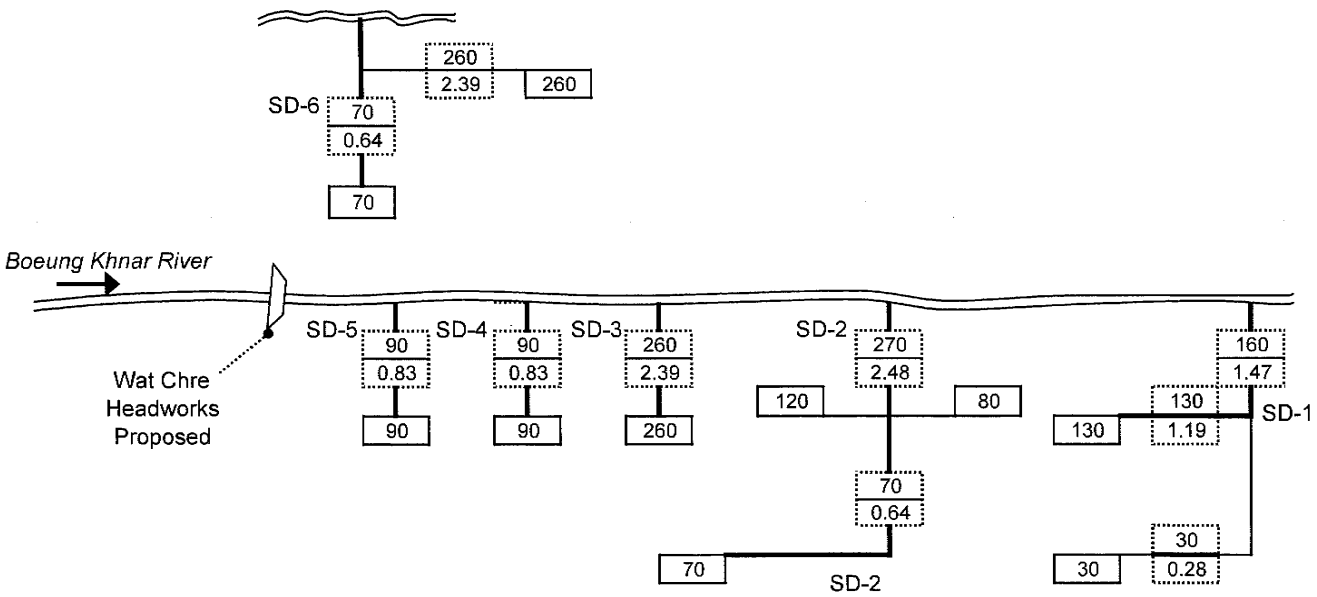


Figure C7-1 Irrigation Area Diagram of Wat Chre Sub-project



Unit drain. Req.= 6.32 lit/sec/ha from paddy fields
Unit drain. Req.= 25~18 lit/sec/ha from other types of land

Main drain
Secondary drain
Collector drain
80 Secondary or tertiary block in Ha

260
2.39
Drainage area in Ha (85% of paddy fields, 15% of other land types)
Design discharge of drain in m3/sec

Length of Drains in kiometer		
Secondary drains (SD-xx):	SD-1:	2.2
	SD-2:	2.2
	SD-3:	3.5
	SD-4:	2.1
	SD-5:	1.5
	SD-6:	1.8
	SD-7:	1.5
Total of Secondary Drains:		14.8

Figure C7-2 Drainage Area Diagram of Wat Chre Sub-project

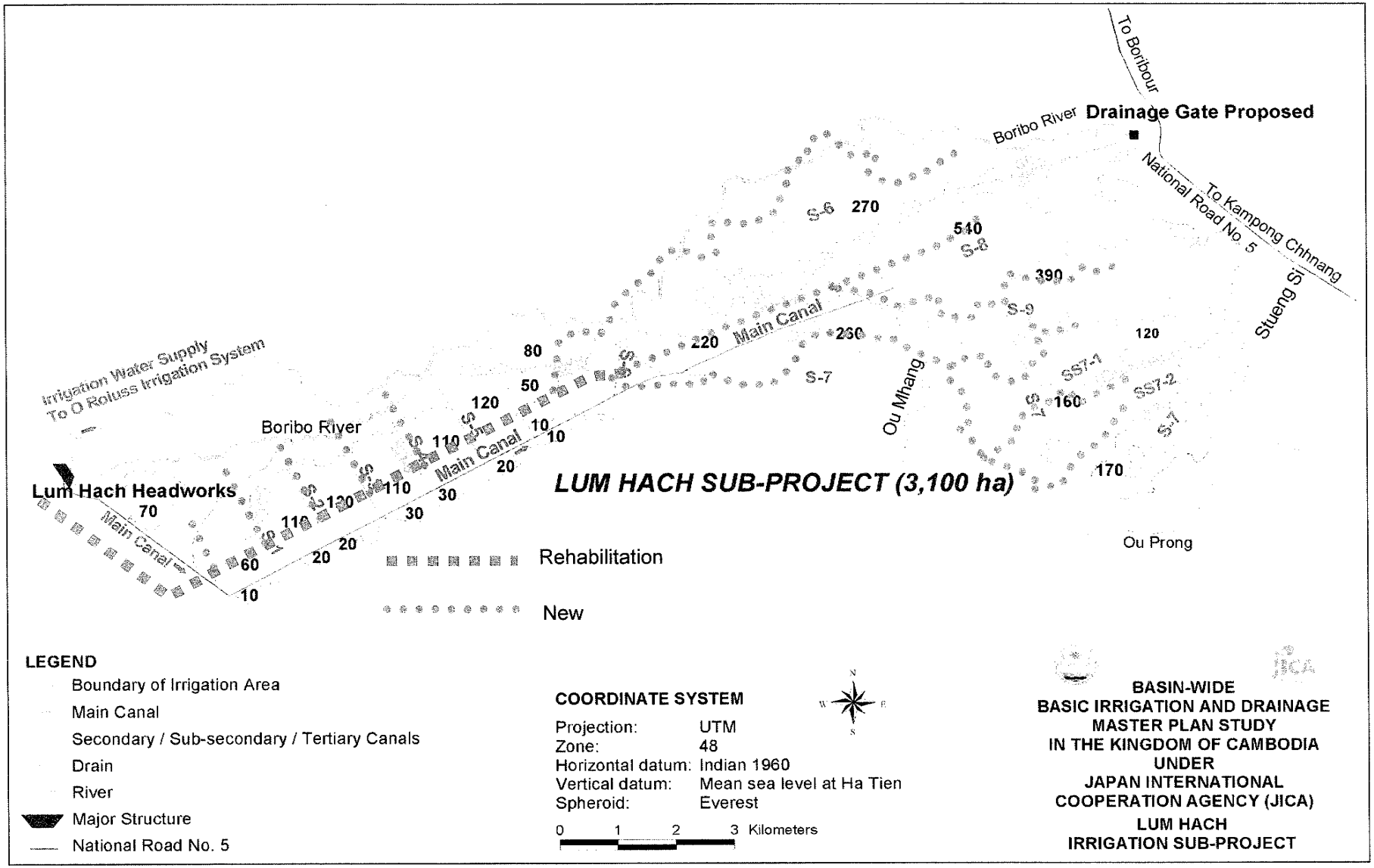


Figure C8-1 Irrigation and Drainage Canal Layout of Lum Hach Rehabilitation Sub-project

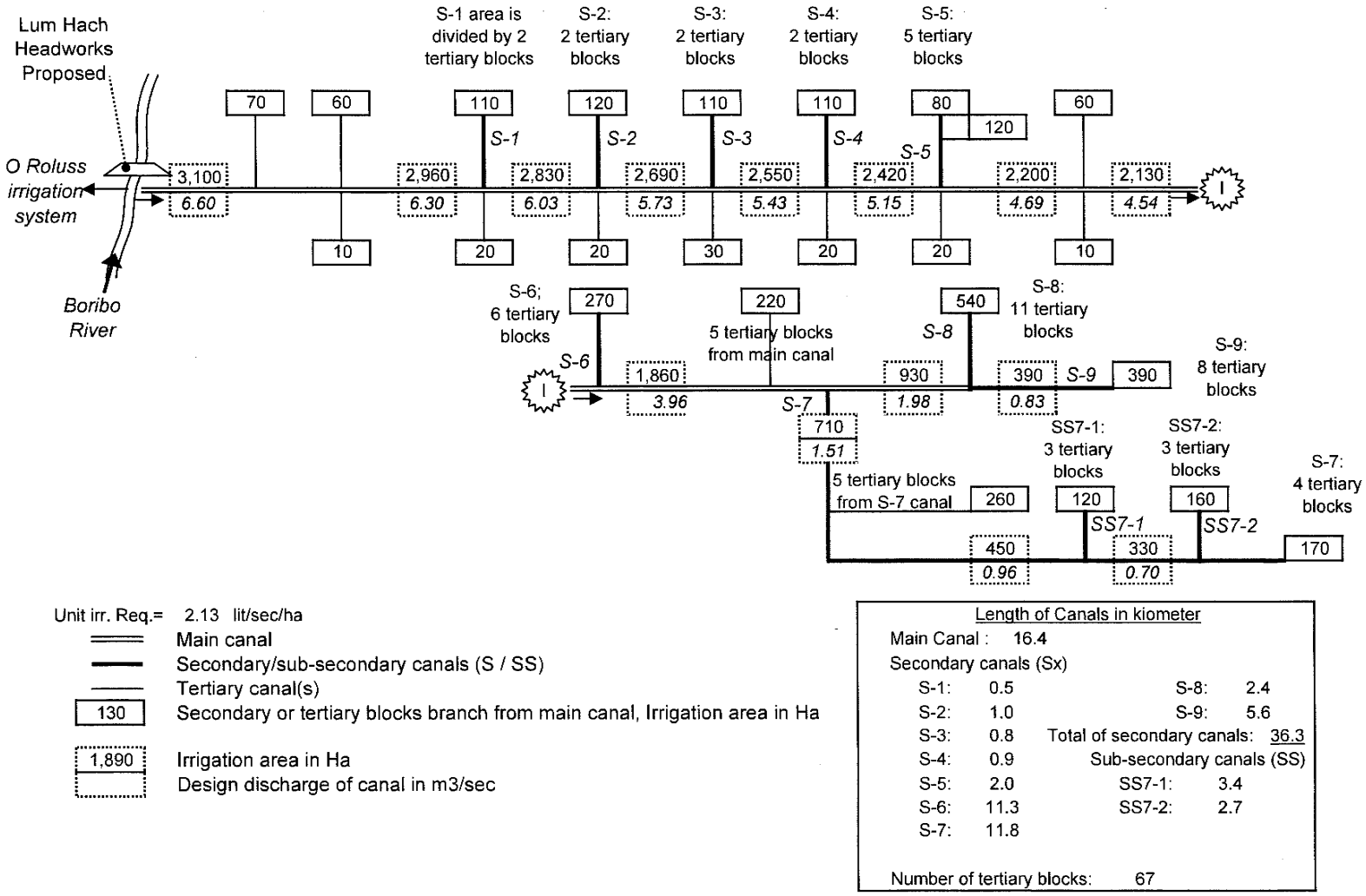


Figure C8-2A Proposed irrigation Area Diagram of Lum Hach Sub-project

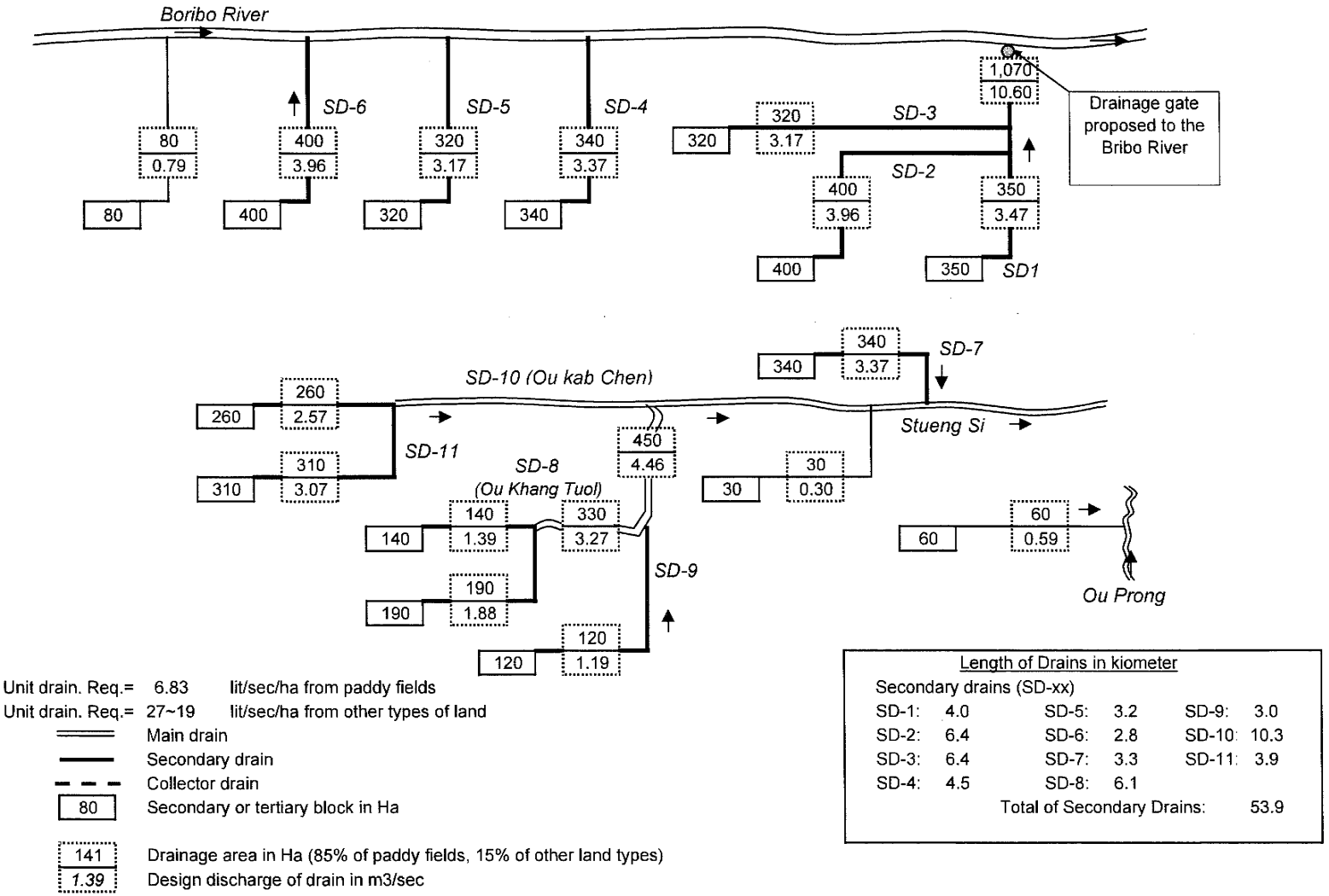


Figure C8-2B Drainage Area Diagram of Lum Hach Sub-project

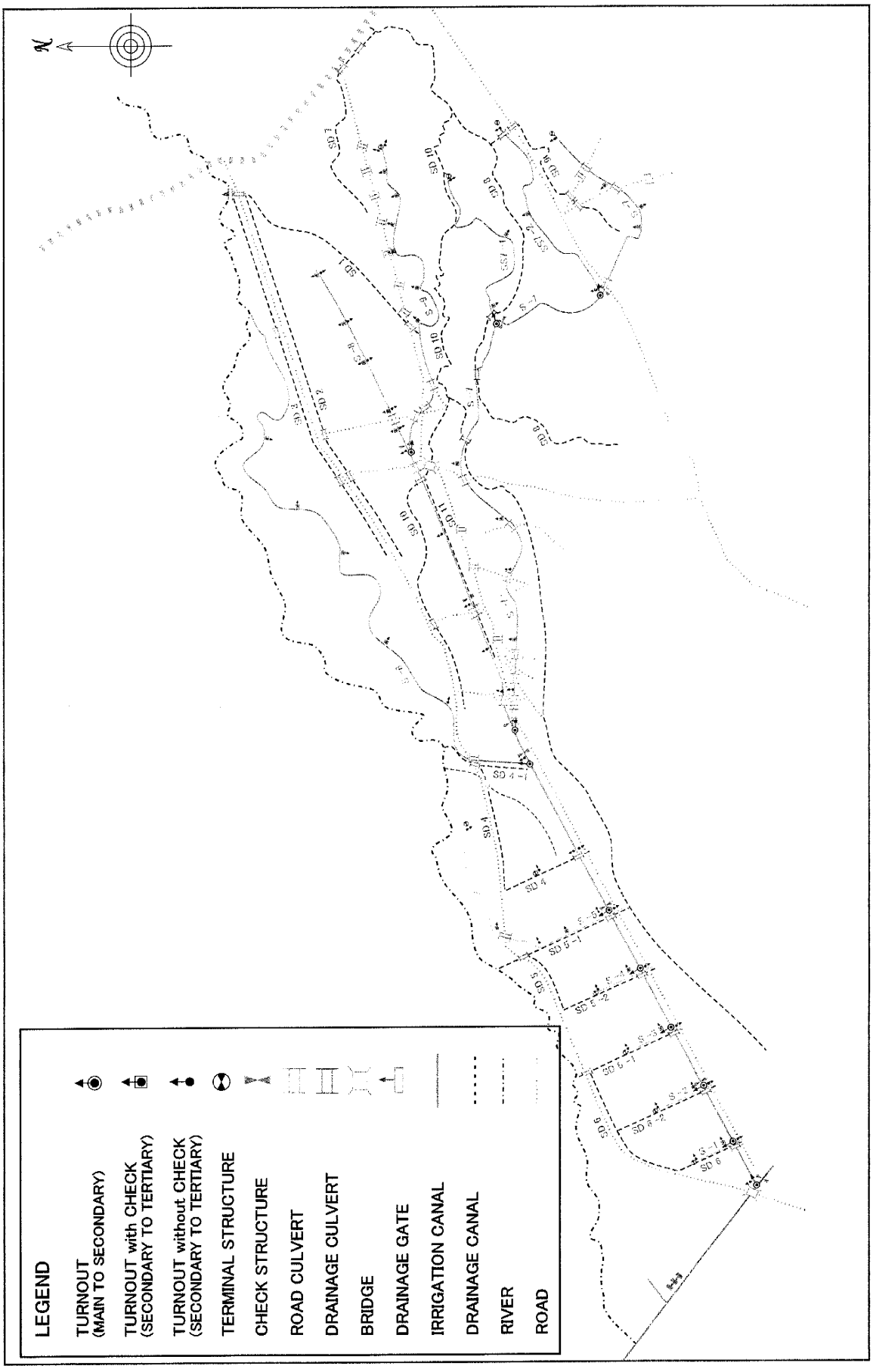
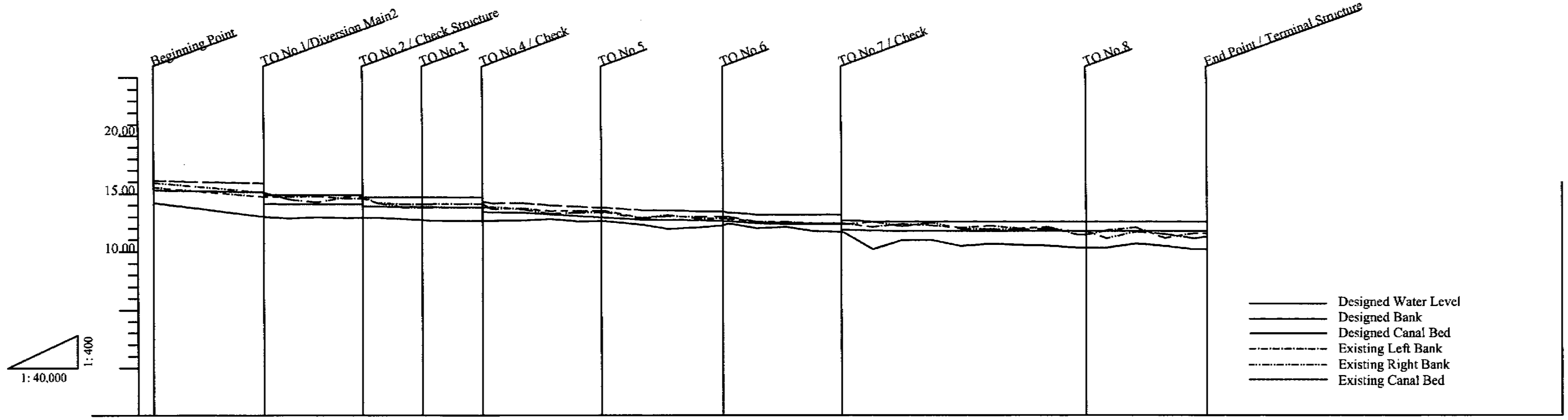


Figure C8-3 Location Map of Structures, Lum Hach Sub-projects

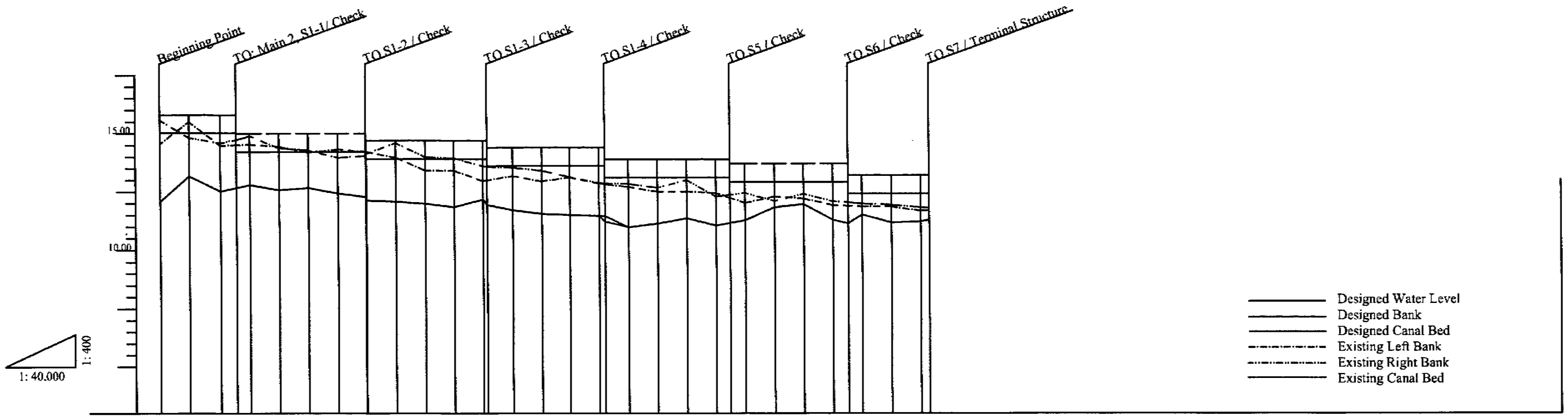
Drawings



Dimensions: Design Q = 2.66 m3/s (BP – No.1, New Section); Q = 1.16 m3/s (No.1 – +131); Q = 1.13 m3/s (+131 – No.7); Q = 1.04 m3/s (No.7 – No.9); Q = 0.86 m3/s (No.9 – No.13); Q = 0.55 m3/s (No.13 – No.17); Q = 0.31m3/s (No.17 – No.21); Q = 0.20 m3/s (No.21 – +76); Q = 0.08 m3/s (+76 – +111); Rehabilitation Section (No.1 – +111)

Station No.	Design: Canal Bank Elevation (m)	Design: Water Surface (m)	Design: Canal Bed Elevation (m)	Existing: Right Bank Elevation (m)	Existing: Left Bank Elevation (m)	Existing: Canal Bed Elevation (m)	Accumulated Distance (m)	Distance (m)
BP	16.10	15.30	14.20	15.92	15.53	14.20	0.00	0.00
No.1	15.90	15.13	13.03	15.12	14.73	13.03	945.00	945.00
No.2	14.90	14.13	12.88	14.51	14.74	12.88	1160.05	215.05
No.3	14.90	14.12	12.99	14.25	14.78	12.99	1404.05	244.00
No.4	14.90	14.11	12.91	14.74	14.60	12.91	1660.05	256.00
+131	14.90	14.10	12.93	14.74	14.60	12.93	1792.00	131.95
No.5	14.70	13.89	12.94	14.21	14.23	12.94	1916.38	124.38
No.6	14.70	13.88	12.82	13.82	14.08	12.82	2149.40	233.02
+153	14.70	13.88	12.75	13.82	14.08	12.75	2303.00	153.60
No.7	14.70	13.88	12.68	13.83	14.13	12.68	2375.58	72.58
No.8	14.70	13.87	12.68	13.83	14.14	12.68	2629.60	254.02
+190.4	14.70	13.86	12.69	13.83	14.14	12.69	2820.00	190.40
No.9	14.20	13.45	12.69	13.89	13.72	12.69	2898.58	78.58
No.10	14.20	13.39	12.71	13.67	13.73	12.71	3166.61	268.03
No.11	14.00	13.23	12.83	13.27	13.52	12.83	3405.78	239.17
Mo.12	13.90	13.10	12.64	13.41	13.53	12.64	3640.78	235.00
+196	13.80	12.99	12.65	13.41	13.53	12.65	3837.00	196.22
No.13	13.80	12.96	12.65	13.42	13.53	12.65	3869.98	32.98
No.14	13.60	12.79	12.35	12.89	12.93	12.35	4186.98	317.00
No.15	13.60	12.75	11.97	13.08	13.17	11.97	4408.36	221.38
No.16	13.50	12.74	12.09	13.02	12.88	12.09	4666.38	258.02
+213	13.50	12.69	12.37	13.02	12.88	12.37	4880.00	213.62
No.17	13.40	12.64	12.45	13.04	12.84	12.45	4926.83	46.83
No.18	13.20	12.44	12.02	12.54	12.60	12.02	5173.04	246.21
No.19	13.20	12.40	12.14	12.49	12.56	12.14	5420.04	247.00
No.20	13.20	12.38	11.76	12.44	12.47	11.76	5663.11	243.07
+230	13.20	12.37	11.71	12.44	12.47	11.71	5893.00	229.89
No.21	12.70	11.86	11.65	12.37	12.44	11.65	5916.16	23.16
No.22	12.60	11.80	10.22	12.59	12.15	10.22	6165.16	249.00
No.23	12.60	11.80	11.01	12.19	12.40	11.01	6415.16	250.00
No.24	12.60	11.80	11.01	12.52	12.27	11.01	6665.16	250.00
No.25	12.60	11.80	10.50	11.97	12.08	10.50	6915.16	250.00
No.26	12.60	11.80	10.68	11.94	12.24	10.68	7165.16	250.00
No.27	12.60	11.80	10.60	11.90	12.00	10.60	7415.16	250.00
No.28	12.60	11.80	10.53	11.97	12.13	10.53	7665.16	250.00
No.29	12.60	11.80	10.36	11.74	11.46	10.36	7915.16	250.00
+76	12.60	11.80	10.37	11.74	11.46	10.36	7991.16	76.00
No.30	12.60	11.80	10.37	11.17	11.83	10.37	8165.16	174.00
No.31	12.60	11.80	10.72	11.71	12.09	10.72	8415.16	250.00
No.32	12.60	11.80	10.52	11.52	11.19	10.52	8665.16	250.00
No.33	12.60	11.80	10.24	11.16	11.60	10.24	8915.16	250.00
+111	12.60	11.80	10.24	11.33	11.57	10.24	9026.16	111.00

BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY		Drawing No.	DRW- 01
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		Drawing Title	Profile of Irrigation Canal Ream Kon Main Canal 1

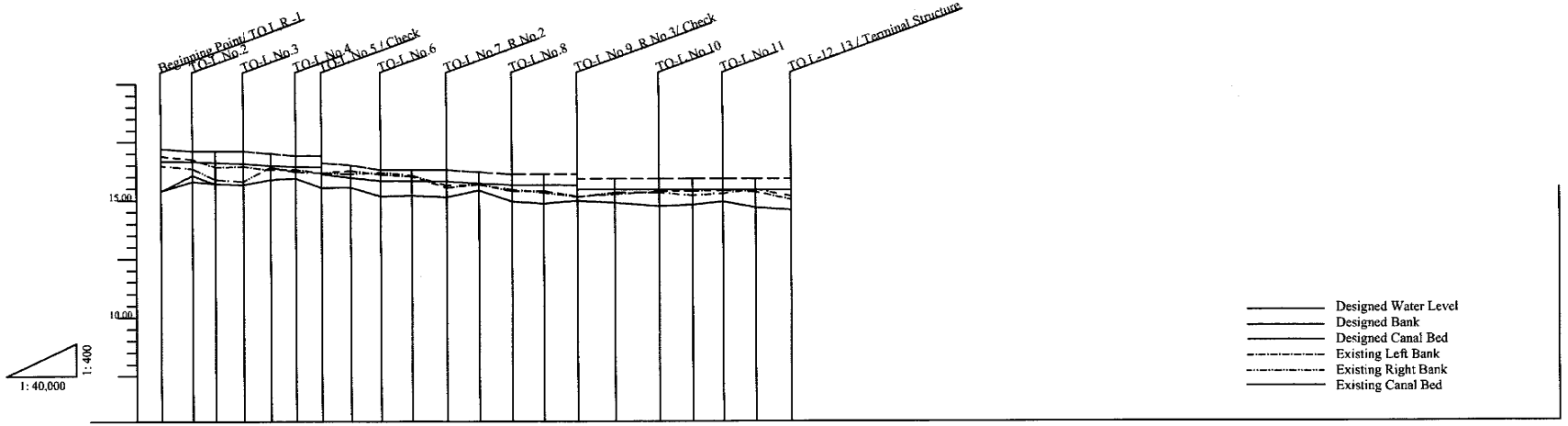


Dimensions: Design Q = 2.74m3/s (BP/No.1 – +134.9); Q = 1.25 m3/s (+134.9 – +241.6); Q = 1.02m3/s (+241.6 – +36.5); Q = 0.87 m3/s (+36.5 – +48.1), Rehabilitation Section; Q = 0.65 m3/s (+48.1 – +120.5); Q = 0.38m3/s (+120.5 – +129.1); Q = 0.21 m3/s (+129.1 – +73.1)

Station No.	Design: Canal Bank Elevation (m)	Design: Water Surface (m)	Design: Canal Bed Elevation (m)	Existing: Right Bank Elevation (m)	Existing: Left Bank Elevation (m)	Existing: Canal Bed Elevation (m)	Accumulated Distance (m)	Distance (m)
BP/No.1	15.80	15.03	12.08	15.57	14.55	12.08	0.00	0.00
No.2	15.80	15.03	13.18	14.82	15.50	13.18	247.98	247.98
No.3	15.80	15.03	12.53	14.59	14.48	12.53	517.12	269.14
+134.9	15.80	15.03	12.67	14.73	14.51	12.67	652.00	134.88
No.4	15.00	14.23	12.81	14.90	14.54	12.81	767.72	115.72
No.5	15.00	14.23	12.58	14.38	14.44	12.58	1016.34	248.62
No.6	15.00	14.22	12.67	14.29	14.20	12.67	1268.35	252.01
No.7	15.00	14.22	12.43	13.97	14.33	12.43	1520.36	252.01
+241.6	15.00	14.22	12.28	14.06	14.32	12.28	1762.00	241.64
No.8	14.70	13.92	12.13	14.15	14.22	12.13	1766.58	4.58
No.9	14.70	13.92	12.08	14.60	13.98	12.08	2018.17	251.59
No.10	14.70	13.92	11.99	14.00	13.42	11.99	2268.77	250.60
No.11	14.70	13.92	11.85	13.95	13.42	11.85	2516.97	248.20
No.12	14.70	13.92	12.17	13.61	12.97	12.17	2763.47	246.50
+36.5	14.70	13.92	11.94	13.58	13.00	11.94	2800.00	36.53
Mo.13	14.40	13.62	11.71	13.54	13.18	11.71	3018.32	218.32
Mo.14	14.40	13.62	11.56	13.41	12.95	11.56	3266.39	248.07
Mo.15	14.40	13.62	11.51	13.14	13.12	11.51	3506.95	240.56
Mo.16	14.40	13.62	11.47	12.87	12.85	11.47	3756.95	250.00
+48.1	14.40	13.62	11.47	12.86	12.82	11.33	3805.00	48.05
No.17	13.90	13.12	10.98	12.84	12.71	10.98	4006.95	201.95
No.18	13.90	13.12	11.14	12.67	12.49	11.14	4256.95	250.00
No.19	13.90	13.12	11.36	13.00	12.50	11.36	4506.95	250.00
No.20	13.90	13.12	11.05	12.28	12.43	11.05	4756.95	250.00
+120.5	13.90	13.12	11.16	12.35	12.23	11.16	4877.00	120.05
No.21	13.70	12.91	11.27	12.43	12.01	11.27	5006.95	129.95
No.22	13.70	12.91	11.82	12.09	12.28	11.82	5256.95	250.00
No.23	13.70	12.91	11.96	12.39	12.20	11.96	5506.95	250.00
No.24	13.70	12.91	11.29	12.08	11.91	11.29	5756.95	250.00
+129.1	13.70	12.91	11.14	12.03	11.88	11.14	5886.00	129.05
No.25	13.20	12.41	11.51	11.98	11.86	11.51	6006.95	120.95
No.26	13.20	12.41	11.18	11.93	11.85	11.18	6256.95	250.00
No.27	13.20	12.41	11.22	11.82	11.68	11.22	6506.95	250.00
+73.1	13.20	12.41	11.30	11.80	11.71	11.30	6580.00	73.05

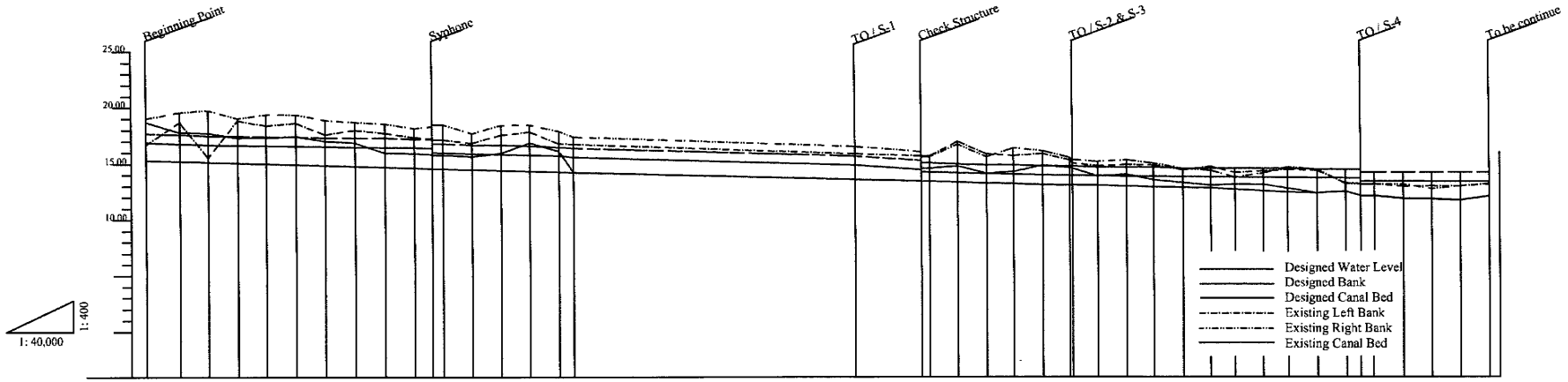
BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY		Drawing No.	DRW- 02
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		Drawing Title	Profile of Irrigation Canal Por Canal Main Canal 1

CD-3



Design	Dimensions	Q = 0.95 m3/s	Q = 0.88 m3/s	Q = 0.82 m3/s	Q = 0.75m3/s	Q = 0.63 m3/s	Q = 0.56 m3/s	Q = 0.49 m3/s	Q = 0.42 m3/s	Q = 039m3/s	Q = 022m3/s	Q = 015m3/s	Rehabilitation Section									
	Canal Bank Elevation (m)	17.20	17.10	17.10	17.10	17.00	16.90	16.90	16.50	16.30	16.30	16.30	16.20	16.10	16.10	16.10	15.90	15.90	15.90	15.90	15.90	15.90
	Water Surface (m)	16.68	16.64	16.61	16.57	16.49	16.43	16.42	15.96	15.83	15.82	15.80	15.72	15.64	15.63	15.63	15.43	15.43	15.43	15.42	15.42	15.42
	Canal Bed Elevation (m)	15.38	15.80	15.70	15.67	15.88	15.93	15.53	15.54	15.16	15.19	15.13	15.42	14.93	14.84	14.96	14.87	14.73	14.79	14.92	14.67	14.57
Existing	Right Bank Elevation (m)	16.47	16.35	15.88	15.81	16.41	16.21	16.16	16.12	16.19	16.05	15.63	15.66	15.44	15.30	15.12	15.30	15.30	15.18	15.26	15.43	15.15
	Left Bank Elevation (m)	16.89	16.75	16.42	16.44	16.30	16.31	16.16	16.26	16.09	16.01	15.53	15.68	15.37	15.37	15.14	15.23	15.35	15.36	15.39	15.33	15.00
	Canal Bed Elevation (m)	15.38	16.05	15.70	15.67	15.88	15.93	15.53	15.54	15.16	15.19	15.13	15.42	14.93	14.84	14.96	14.87	14.73	14.79	14.92	14.67	14.57
Accumulated Distance (m)		0.00	267.50	464.00	707.93	938.57	1155.01	1377.50	1625.62	1884.04	2151.48	2450.60	2726.35	3010.12	3282.91	3572.16	3892.34	4272.93	4557.08	4817.41	5099.02	5402.72
Distance (m)		0.00	267.50	196.50	243.93	230.64	216.44	222.49	248.12	258.42	267.44	299.12	275.75	283.77	272.79	289.25	320.18	380.59	284.15	260.33	281.61	303.70
Station No.		BP/No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12	No.13	No.14	No.15	No.16	No.17	No.18	No.19	No.20	No.21

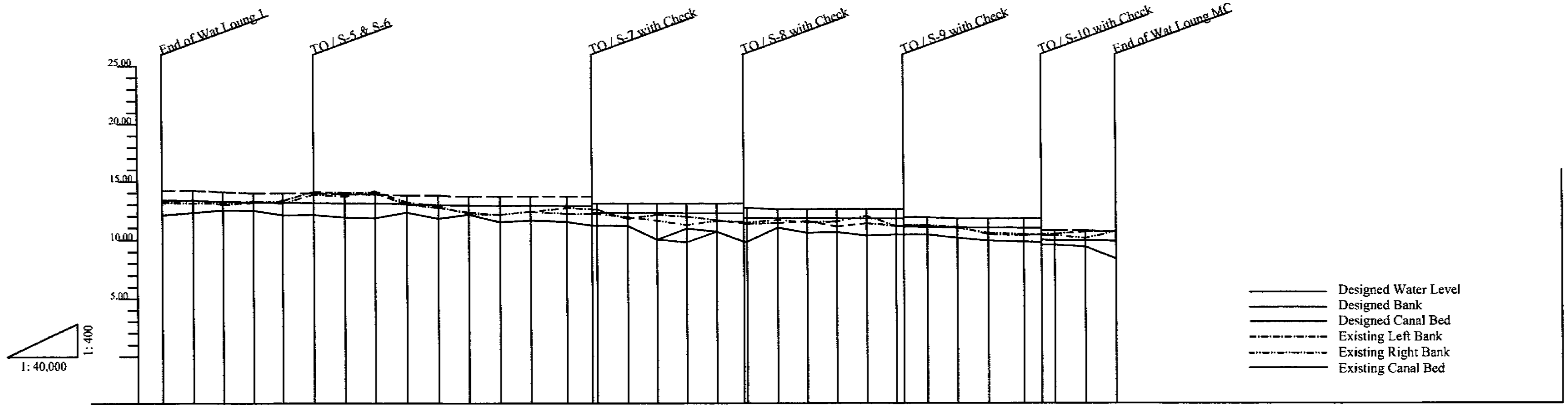
BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY		Drawing No.	DRW- 03
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		Drawing Title	Profile of Irrigation Canal Damnak Ampil Seconday No.1



	Dimensions	Design Q = 4.84 m3/s (Rehabilitation Section)	Design Q = 4.84 m3/s (New Section)	Design Q = 4.84 m3/s	Design Q = 4.84 m3/s	Design Q = 3.33 m3/s (Rehabilitation Section)	Design Q =2.99 m3/s
Design	Canal Bank Elevation (m)	17.70 17.60 17.50 17.50 17.40 17.40 17.30 17.30 17.30 17.20 17.20 16.80 16.70 16.70 16.60 16.50 16.40	15.70	15.30 15.10	15.00	14.90 14.90 14.80 14.80 14.80 14.70 14.70 14.70 14.60 14.60 14.60 14.60 14.60 14.50 14.50 14.50 14.20 14.20 14.20 14.20 14.20	
	Water Surface (m)	16.92 16.76 16.71 16.66 16.62 16.57 16.53 16.50 16.46 16.43 16.42 15.99 15.92 15.85 15.79 15.73 15.59	14.89	14.48 14.28	14.20	14.14 14.08 14.01 13.96 13.93 13.91 13.86 13.82 13.79 13.78 13.77 13.76 13.74 13.72 13.72 13.41 13.40 13.39 13.39 13.38	
	Canal Bed Elevation (m)	15.33 15.24 15.17 15.09 15.02 14.94 14.87 14.79 14.72 14.64 14.60 14.57 14.49 14.42 14.35 14.27 14.24	13.61	13.46 13.45	13.38	13.26 13.25 13.13 13.13 13.07 13.00 12.94 12.86 12.81 12.70 12.58 12.46 12.39 12.54 12.15 12.12 11.88 11.83 11.75 12.09	
Existing	Right Bank Elevation (m)	19.01 19.56 19.75 19.03 19.37 19.36 18.87 18.70 18.56 18.14 18.32 18.49 17.71 18.43 18.45 17.90 17.39	16.55	16.09 15.92	16.73	15.63 16.40 16.16 15.58 15.20 15.34 15.05 14.57 14.40 13.77 14.17 14.70 14.48 13.21 13.18 13.15 13.14 12.73 12.99 13.16	
	Left Bank Elevation (m)	16.69 18.68 15.57 18.85 18.39 18.63 17.60 18.00 17.73 17.35 17.25 17.15 16.86 17.58 17.84 16.80 16.76	15.89	15.71 15.69	17.00	15.87 15.73 15.90 15.71 14.79 14.93 14.87 14.45 14.76 14.20 14.36 14.48 14.39 13.26 13.22 13.17 12.95 13.00 12.97 13.20	
	Canal Bed Elevation (m)	18.70 17.79 17.74 17.33 17.34 17.44 17.03 16.88 15.98 15.93 15.85 15.80 15.67 15.95 16.87 16.13 14.24	13.61	13.46 13.45	14.82	14.14 14.31 14.87 14.66 13.89 14.06 13.56 13.31 13.07 13.16 13.14 12.80 12.39 12.54 12.15 12.12 11.88 11.83 11.75 12.09	
	Accumulated Distance (m)	0.00 301.63 555.91 818.31 1070.64 1338.61 1597.23 1864.80 2133.36 2394.07 2551.89 2649.56 2907.54 3168.11 3423.79 3683.65 3814.15	6324.15	6914.15 6986.10	7236.30	7494.94 7735.02 7995.02 8216.02 8220.02 8484.35 8740.07 8983.50 9245.74 9492.35 9461.74 9714.46 9931.64 10195.49 10447.40 10580.54 10704.63 10962.72 11214.68 11470.48 11728.62	
	Distance (m)	0.00 301.63 254.28 262.40 252.33 267.97 258.62 267.57 268.46 261.41 157.22 97.67 257.98 260.57 255.68 259.86 130.50	2510.00	590.00 71.95	250.20	258.64 240.08 260.00 240.00 4.00 224.20 255.72 243.43 262.24 246.61 216.00 252.72 217.18 263.85 251.91 133.14 124.09 258.09 251.96 255.80 258.14	
	Station No.	BP/No.1 No.2 No.3 No.4 No.5 No.6 No.7 No.8 No.9 No.10 +157.2 No.11 No.12 No.13 No.14 No.15 +130.5	+2510	No.17 +178.1 No.18	No.19	No.20 No.21 No.22 No.23 +25.2 No.24 No.25 No.26 No.27 No.28 No.29 No.30 No.31 No.32 No.33 +133.1 No.34 No.35 No.36 No.37 No.38	

BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY		Drawing No.	DRW- 04
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		Drawing Title	Profile of Irrigation Canal Wat Loung Main Canal (1/2)

CD-4

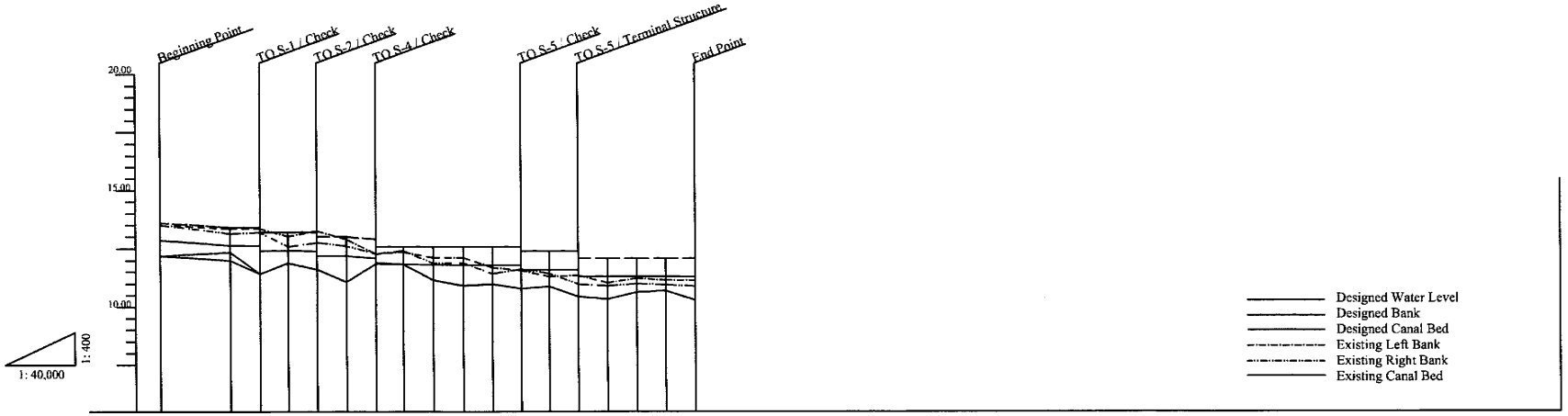


Dimensions: Design Q = 2.99 m3/s (No.38–No.43); Design Q = 2.45 m3/s (No.43–No.51); Design Q = 2.08 m3/s, Rehabilitation Section (No.51+215.2–No.56+234.4); Design Q = 1.88 m3/s (No.56+234.4–No.62+66.9); Design Q = 1.63 m3/s (No.62+66.9–No.66+149.9); Design Q = 1.39 m3/s (No.66+149.9–No.69)

	Station No.	No.38	No.39	No.40	No.41	No.42	No.43	No.44	No.45	No.46	No.47	No.48	No.49	No.50	No.51	+215.2	No.52
Design	Canal Bank Elevation (m)	14.20	14.20	14.10	14.00	14.00	14.00	13.90	13.90	13.80	13.80	13.70	13.70	13.70	13.70	13.70	13.10
Design	Water Surface (m)	13.38	13.36	13.28	13.20	13.18	13.16	13.14	13.12	13.04	12.98	12.94	12.91	12.90	12.89	12.89	12.28
Design	Canal Bed Elevation (m)	12.09	12.29	12.53	12.52	12.09	12.12	11.90	11.85	12.32	11.80	12.16	11.50	11.64	11.52	11.23	11.22
Existing	Right Bank Elevation (m)	13.16	13.14	13.15	13.33	13.11	13.90	13.71	14.17	13.22	12.89	12.19	12.14	12.40	12.20	12.30	12.20
Existing	Left Bank Elevation (m)	13.20	13.39	13.00	13.18	13.35	14.13	14.04	14.03	13.02	12.75	12.34	12.13	12.39	12.72	12.61	12.59
Existing	Canal Bed Elevation (m)	12.09	12.29	12.53	12.52	12.09	12.12	11.90	11.85	12.32	11.80	12.16	11.50	11.64	11.52	11.23	11.22
	Accumulated Distance (m)	11728.62	11992.09	12249.63	12508.22	12758.21	13027.86	13291.70	13553.54	13823.97	14094.18	14355.30	14622.33	14884.58	15196.53	15412.26	15453.88
	Distance (m)	0.00	263.47	257.54	258.59	249.99	269.65	263.84	261.84	270.43	270.21	261.12	267.03	262.25	311.95	215.73	41.62

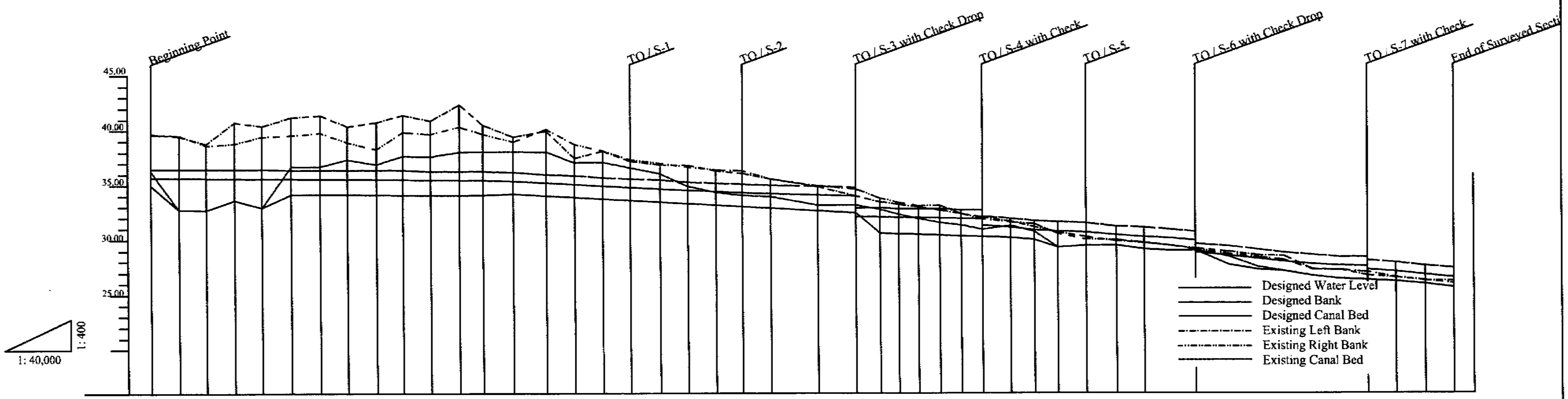
	Station No.	No.53	No.54	No.55	No.56	+234.4	No.57	No.58	No.59	No.60	No.61	No.62	+66.9	No.63	No.64	No.65	No.66	+149.9	No.67	No.68	No.69
Design	Canal Bank Elevation (m)	13.10	13.10	13.10	13.10	13.10	12.70	12.60	12.60	12.60	12.60	12.60	12.60	11.90	11.80	11.80	11.80	11.80	10.80	10.80	10.70
Design	Water Surface (m)	12.27	12.27	12.26	12.26	12.76	11.86	11.84	11.82	11.81	11.81	11.80	11.80	11.07	11.05	11.04	11.03	11.03	10.00	9.99	9.92
Design	Canal Bed Elevation (m)	11.19	10.05	10.98	10.71	9.86	9.85	11.04	10.61	10.67	10.37	10.47	10.47	10.47	10.19	9.96	9.88	9.80	9.60	9.45	8.42
Existing	Right Bank Elevation (m)	11.92	11.62	11.26	11.59	11.52	11.45	11.67	11.47	11.54	12.03	11.16	11.20	11.24	11.01	10.61	10.49	10.45	10.41	10.16	10.76
Existing	Left Bank Elevation (m)	11.77	12.13	11.95	11.66	11.38	11.35	11.42	11.58	11.13	11.40	11.16	11.17	11.20	11.10	10.50	10.41	10.47	10.52	10.71	10.73
Existing	Canal Bed Elevation (m)	11.19	10.05	9.82	10.71	9.86	9.85	11.04	10.61	10.67	10.37	10.47	10.47	10.47	10.19	9.96	9.88	9.80	9.60	9.45	8.42
	Accumulated Distance (m)	15714.62	15967.62	16220.70	16477.91	16712.26	16738.05	16999.21	17253.58	17504.65	17761.83	18014.38	18081.26	18281.37	18537.75	18804.27	19108.32	19258.26	19370.99	19634.74	19896.26
	Distance (m)	260.74	253.00	253.08	257.21	234.35	25.79	261.16	254.37	251.07	257.18	252.55	66.88	200.11	256.38	266.52	304.05	149.94	112.73	263.75	261.52

BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY		Drawing No.	DRW- 05
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		Drawing Title	Profile of Irrigation Canal Wat Loung Main Canal (2/2)



Design	Dimensions	Design Q = 1.39 m3/s	Q = 0.87 m3/s		Q = 0.49 m3/s		Q = 0.31 m3/s	Q = 0.31 m3/s										
		New Section		Q = 0.79 m3/s		Rehabilitation Section												
	Canal Bank Elevation (m)	13.60	13.40	13.40	13.20	13.20	13.00	12.90	12.60	12.60	12.60	12.60	12.60	12.40	12.40	12.10	12.10	12.10	12.10
	Water Surface (m)	12.85	12.64	12.63	12.42	12.40	12.20	12.11	11.83	11.83	11.81	11.80	11.80	11.60	11.60	11.30	11.30	11.30	11.30
	Canal Bed Elevation (m)	12.20	12.00	11.42	11.89	11.62	11.06	11.86	11.83	11.15	10.91	10.98	10.79	10.88	10.45	10.34	10.64	10.70	10.30
Existing	Right Bank Elevation (m)	13.50	13.14	13.19	12.59	12.76	12.62	12.29	12.42	11.88	11.90	11.43	11.62	11.44	10.98	10.90	11.00	10.96	10.88
	Left Bank Elevation (m)	13.50	13.34	13.34	13.02	13.25	12.89	12.29	12.37	12.12	12.13	11.70	11.57	11.30	11.36	11.04	11.23	11.16	11.14
	Canal Bed Elevation (m)	12.20	12.35	11.42	11.89	11.62	11.06	11.86	11.83	11.15	10.91	10.98	10.79	10.88	10.45	10.34	10.64	10.70	10.30
	Accumulated Distance (m)	0.00	600.00	852.76	1092.53	1342.98	1593.51	1846.28	2060.42	2317.65	2593.93	2843.41	3091.36	3329.06	3579.06	3829.06	4079.06	4329.06	4579.06
	Distance (m)	0.00	600.00	252.76	239.77	250.45	250.53	252.77	234.14	257.23	256.28	249.48	247.95	237.70	250.00	250.00	250.00	250.00	250.00
	Station No.	BP	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12	No.13	No.14	No.15	No.16	No.17

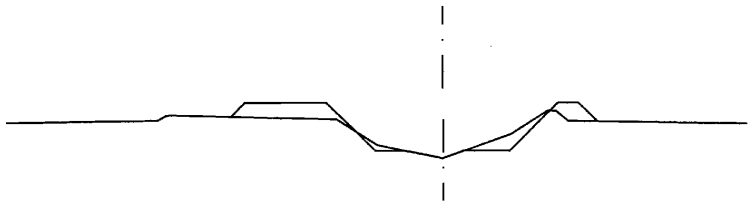
BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY		Drawing No.	DRW- 06
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		Drawing Title	Profile of Irrigation Canal Wat Chre Main Canal



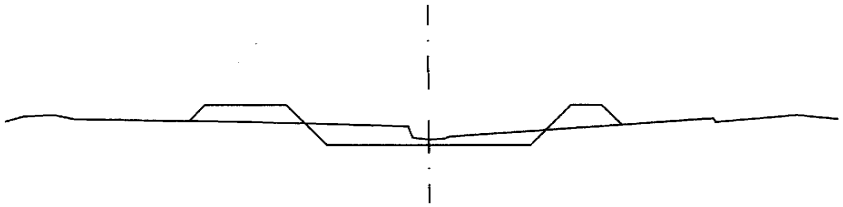
Dimensions: Design Q = 6.60 m3/s (BP/No.1 – No.18); Q = 1.13 m3/s (No.18 – No.22); Q = 1.04 m3/s (No.22 – No.25), Rehabilitation Section; Q = 0.86 m3/s (No.25 – No.31); Q = 0.55 m3/s (No.31 – No.35); Q = 0.31m3/s (No.35 – No.39); Q = 0.20 m3/s (No.39 – No.45); Q = 0.08 m3/s (No.45 – No.48)

Station No.	Distance (m)	Accumulated Distance (m)	Existing: Canal Bed Elevation (m)	Existing: Left Bank Elevation (m)	Existing: Right Bank Elevation (m)	Design: Canal Bed Elevation (m)	Design: Water Surface (m)	Design: Canal Bank Elevation (m)
BP/No.1	0.00	0.00	36.30	39.70	39.63	35.00	35.69	36.50
No.2	252.69	252.69	32.75	39.45	39.54	32.75	35.65	36.50
No.3	249.01	501.70	32.74	38.78	38.64	32.74	35.65	36.50
No.4	256.02	757.72	33.63	40.76	38.82	33.63	35.65	36.50
No.5	247.24	1004.96	32.95	40.42	39.43	32.95	35.65	36.50
No.6	267.93	1272.89	36.73	41.21	39.56	34.17	35.63	36.40
No.7	260.05	1532.94	36.73	41.39	39.78	34.16	35.61	36.40
No.8	246.63	1779.57	37.37	40.39	38.93	34.15	35.59	36.40
No.9	264.61	2044.18	36.92	40.77	38.30	34.14	35.57	36.40
No.10	239.89	2284.07	37.70	41.42	39.84	34.13	35.55	36.40
No.11	252.80	2536.87	37.65	40.92	39.69	34.12	35.53	36.30
No.12	259.42	2796.29	38.06	42.39	40.36	34.11	35.50	36.30
No.13	213.35	3009.64	38.11	40.53	39.67	34.10	35.49	36.30
No.14	275.76	3285.40	38.08	39.43	38.97	34.20	35.41	36.20
No.15	298.48	3583.88	38.07	39.96	40.13	34.03	35.24	36.00
No.16	256.63	3840.51	37.09	37.49	38.74	33.89	35.09	35.90
No.17	255.81	4096.32	37.12	38.14	38.17	33.75	34.94	35.70
No.18	250.02	4346.34	36.62	37.22	37.34	33.61	34.81	35.60
No.19	267.94	4614.28	36.07	36.88	37.02	33.46	34.66	35.50
No.20	253.60	4867.88	34.92	36.84	36.68	33.32	34.53	35.30
No.21	252.72	5120.60	34.35	36.32	36.41	33.18	34.41	35.20
No.22	241.94	5362.54	34.07	36.10	36.33	33.04	34.30	35.10
No.23	254.95	5617.49	33.95	35.58	35.56	32.90	34.21	35.00
No.24	423.99	6041.48	33.16	34.88	34.94	32.67	34.08	34.90
No.25	348.60	6390.08	33.17	34.00	34.65	32.47	34.00	34.80
No.26	217.68	6607.76	32.75	33.45	33.79	30.59	32.06	32.90
No.27	168.60	6776.36	32.31	33.22	33.40	30.54	32.03	32.80
No.28	178.13	6954.49	31.90	32.97	33.09	30.48	31.99	32.80
No.29	194.59	7149.08	31.54	32.69	33.12	30.41	31.96	32.80
No.30	195.06	7344.14	31.31	32.35	32.34	30.35	31.93	32.70
No.31	190.66	7534.80	30.92	32.03	31.84	30.29	31.90	32.70
No.32	255.89	7790.69	31.25	31.64	31.57	30.20	31.11	31.90
No.33	216.00	8006.69	30.74	31.15	31.42	30.00	30.87	31.70
No.34	211.53	8218.22	29.31	30.66	30.54	29.31	30.76	31.60
No.35	255.88	8474.10	29.47	30.25	30.02	29.47	30.66	31.50
No.36	273.96	8748.06	29.49	29.88	29.99	29.49	30.44	31.20
No.37	251.96	9000.02	29.15	29.71	29.74	29.15	30.26	31.10
No.38	250.60	9250.62	28.99	29.44	29.44	28.99	30.13	30.90
No.39	216.69	9467.31	29.02	29.19	29.10	29.02	29.93	30.70
No.40	300.85	9768.16	28.46	28.90	28.71	27.70	28.55	29.40
No.41	262.18	10030.34	27.52	28.57	28.39	27.30	28.27	29.10
No.42	242.89	10273.23	27.14	28.48	28.15	27.14	27.99	28.80
No.43	252.68	10525.91	26.71	27.31	27.27	26.71	27.76	28.60
No.44	248.85	10774.76	26.43	27.23	27.23	26.43	27.64	28.40
No.45	250.69	11025.45	26.32	26.74	27.02	26.32	27.56	28.40
No.46	255.83	11281.28	26.19	26.53	26.57	26.19	27.08	27.90
No.47	265.41	11546.69	25.98	26.26	26.29	25.98	26.80	27.60
No.48	260.02	11806.71	25.65	26.27	26.02	25.65	26.55	27.40

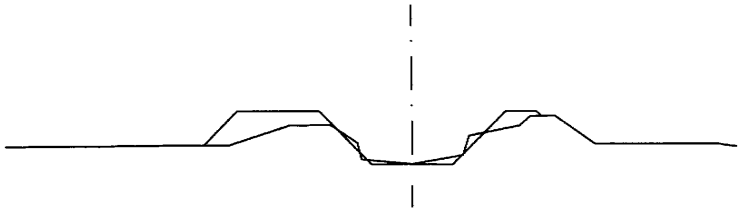
BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY		Drawing No.	DRW- 07
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		Drawing Title	Profile of Irrigation Canal Lum Hach Main Canal



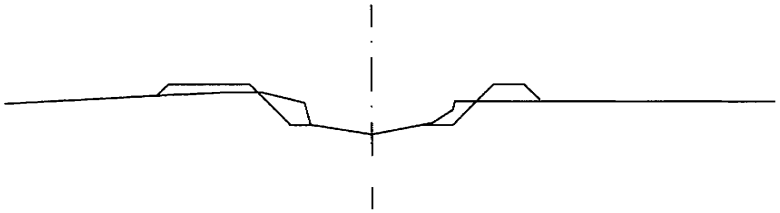
Section No. 25 of Main Canal 1
Ream Kon Sub-project



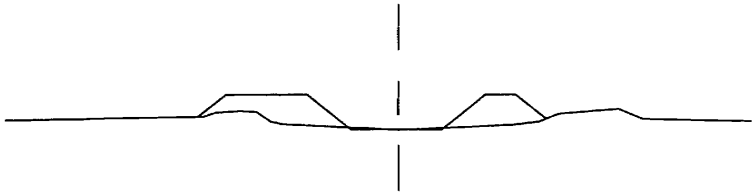
Section No. 30 of Main Canal
Wat Loung Sub-project



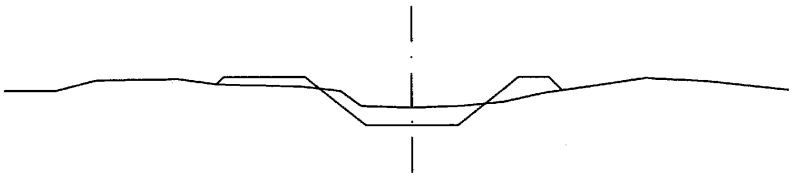
Section No. 9 of Main Canal 1
Por Canal Sub-project



Section No. 04 of Main Canal
Wat Chre Sub-project



Section No. 9 of Seconday No.1
Damnak Ampil Sub-project

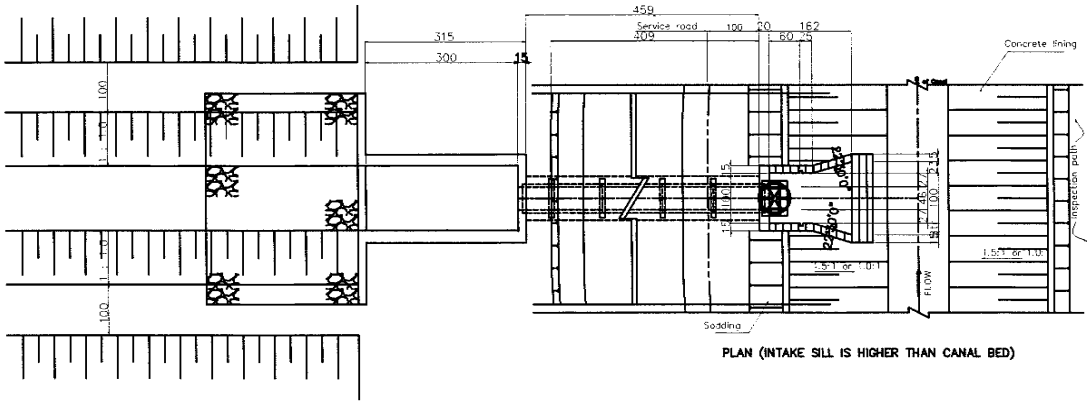


Section No. 25 of Main Canal
Lum Hach Sub-project

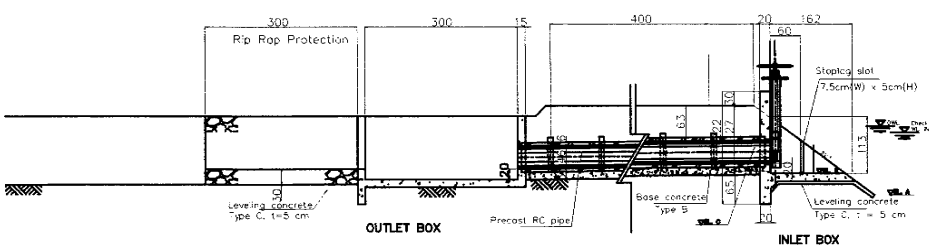
CD-8

Scale : 1 /25

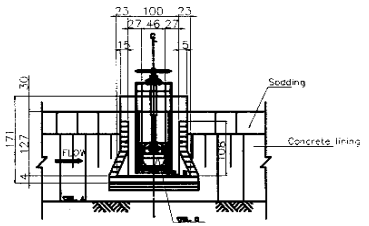
BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY	Drawing No.	DRW- 08
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	Drawing Title	Rehabilitation of Irrigation Canal Typical Cross Section



PLAN (INTAKE SILL IS HIGHER THAN CANAL BED)



PROFILE (SECTION A–A)



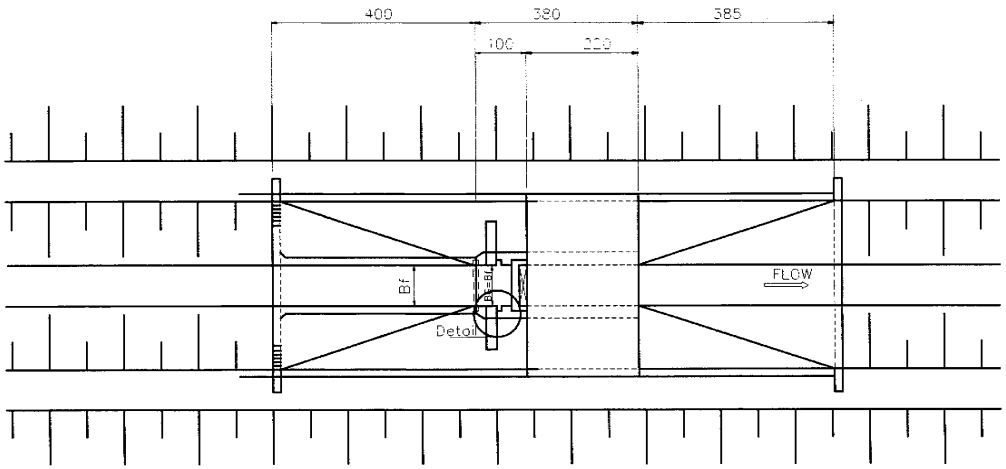
SECTION II–II
INLET BOX TYPE B

SCHALE 1 : 100

BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY IN THE KINGDOM OF CAMBODIA	Drawing No.	DRW-09
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	Drawing Title	Drainage Canal Related Structure TURNOUT

CD-10

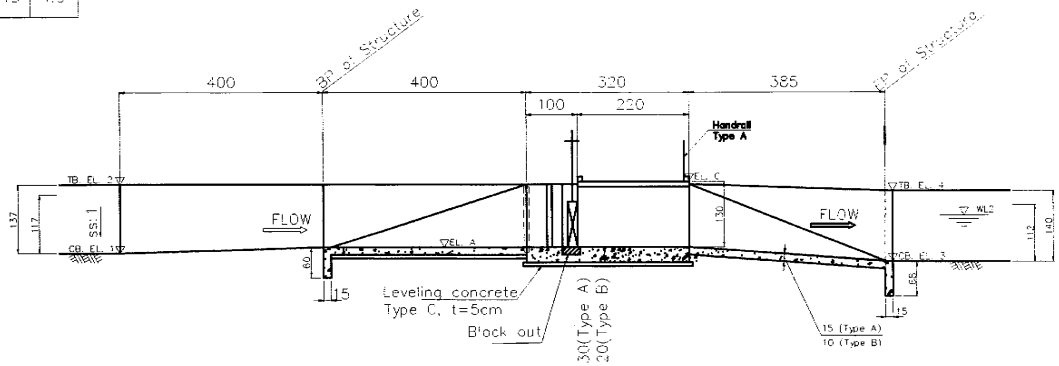
(TYPE A)



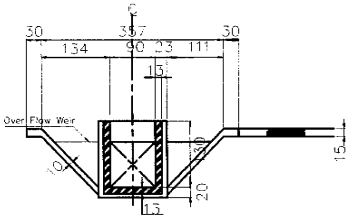
(TYPE B)

PLAN

Canal Type	ss
I-1 ~ I-8	1.0
I-9 ~ I-13	1.5

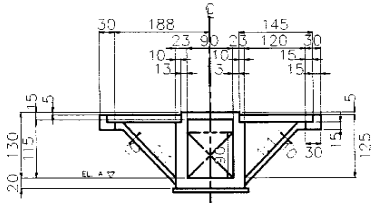


PROFILE



(TYPE B)

SECTION A–A



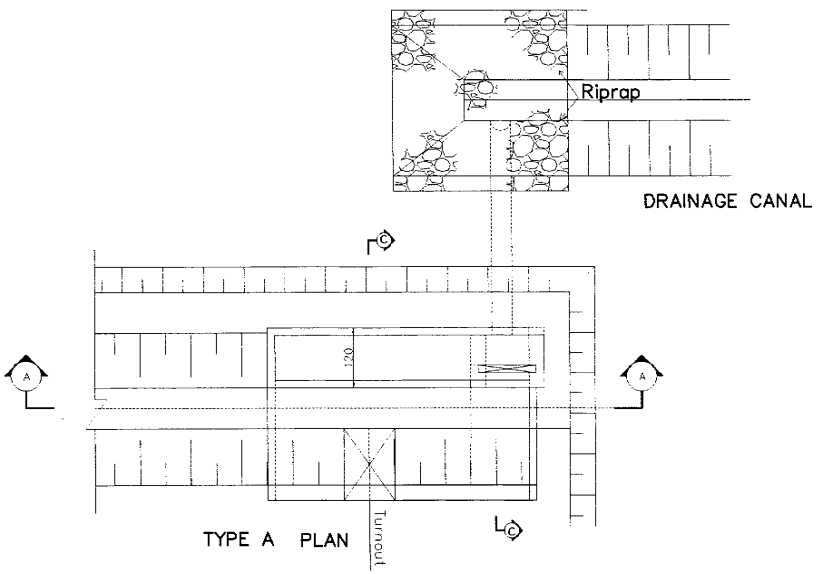
(TYPE B)

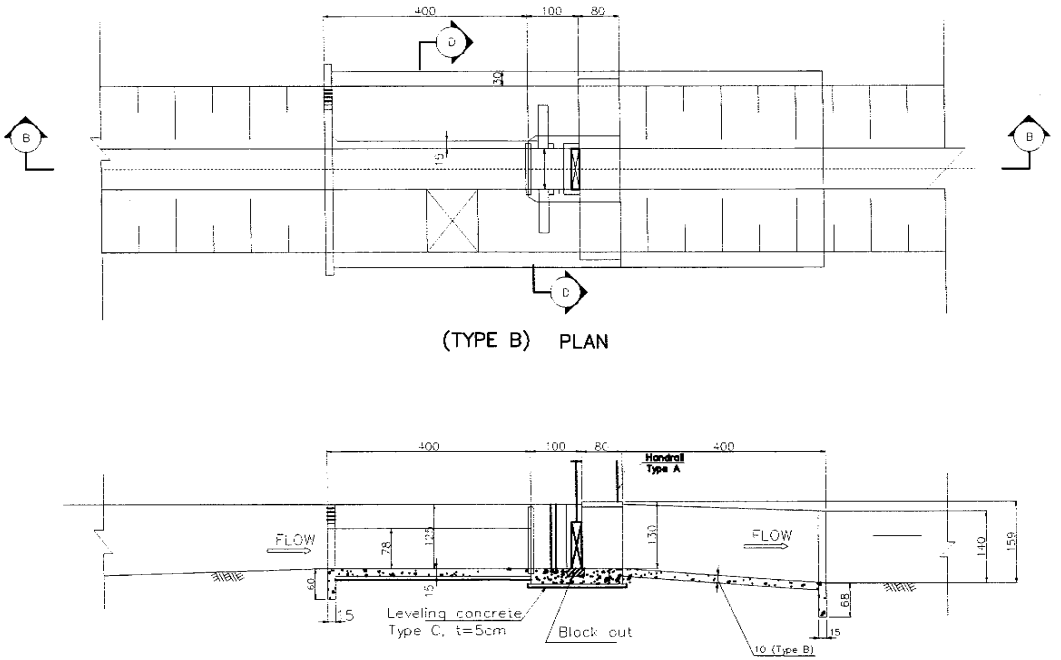
SECTION B–B

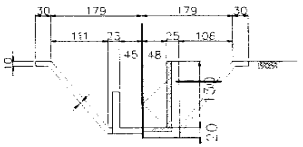
SCHALE 1 : 100

BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY IN THE KINGDOM OF CAMBODIA	Drawing No.	DRW-10
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	Drawing Title	Drainage Canal Related Structure CHECK STRUCTURE

CD-11



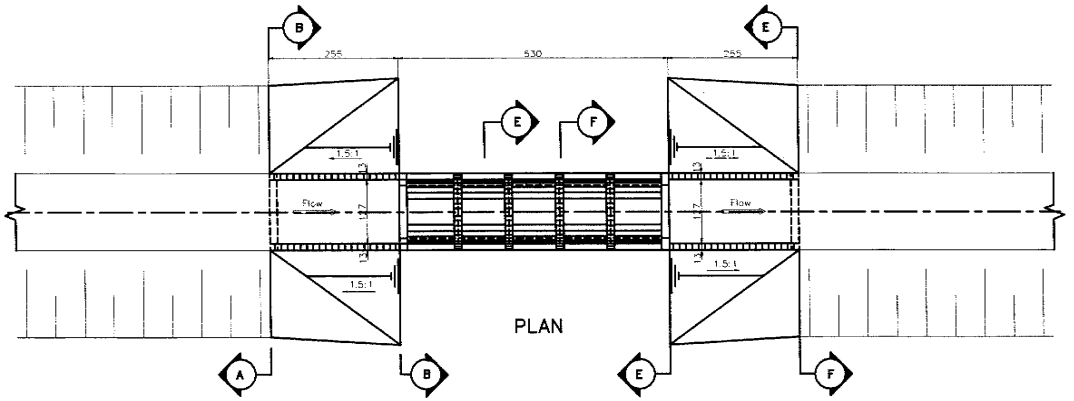




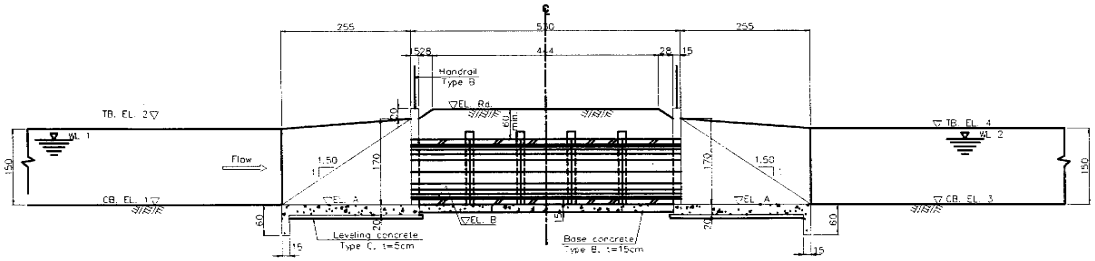
SCHALE 1 : 100

BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY IN THE KINGDOM OF CAMBODIA	Drawing No.	DRW-11
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	Drawing Title	Irrigation Canal Related Structure TERMINAL STRUCTURE

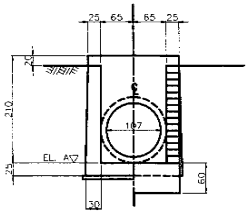
CD-12



PLAN

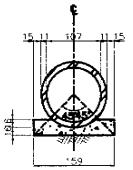


PROFILE



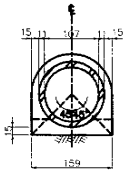
(TYPE B)

SECTION B–B



(TYPE B)

SECTION C–C



(TYPE B)

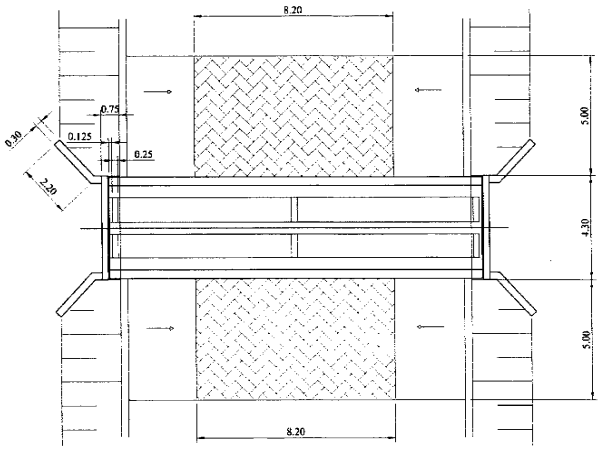
SECTION D–D

SCHALE 1 : 100

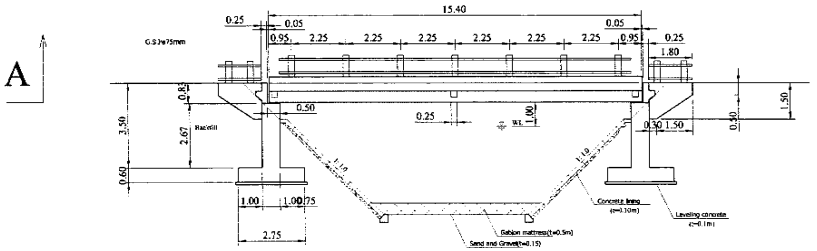
BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY IN THE KINGDOM OF CAMBODIA	Drawing No.	DRW-12
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	Drawing Title	Drainage Canal Related Structure ROAD CULVERT

CONCRETE BRIDGE

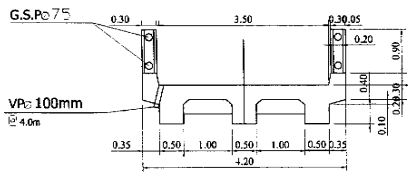
SCALE 1:200



PLAN

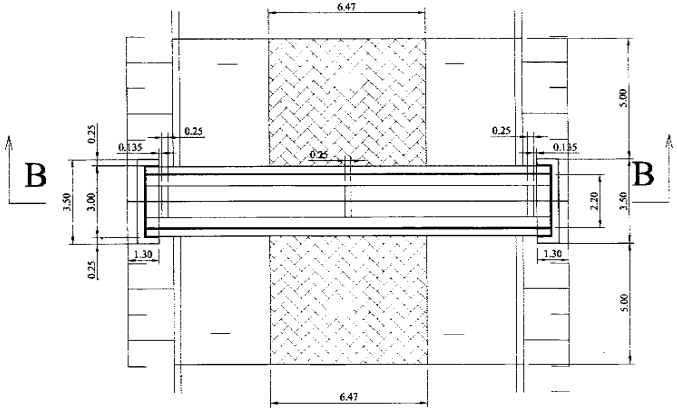


SECTION A-A

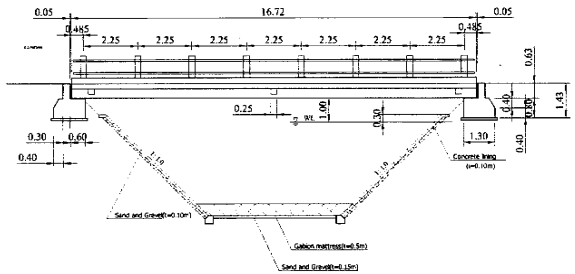


FOOT PATH

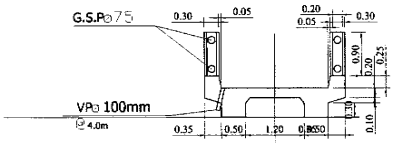
SCALE 1:200



PLAN



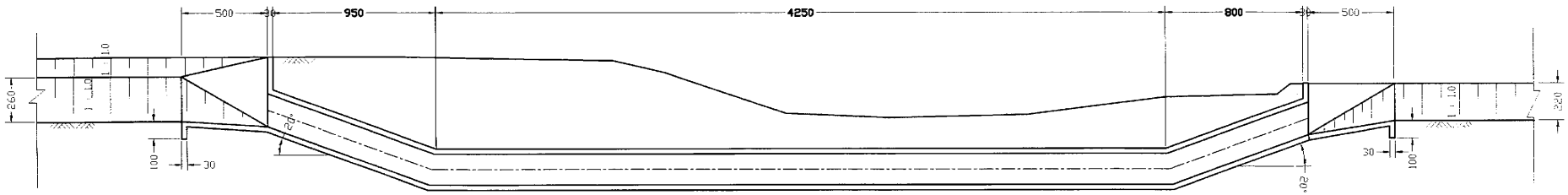
SECTION B-B



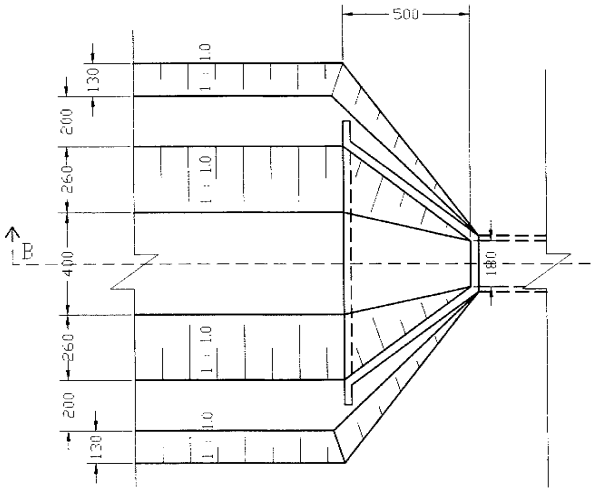
FOOT PATH

BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY IN THE KINGDOM OF CAMBODIA	Drawing No.	DRW-13
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	Drawing Title	Irrigation and Drainage Canal Related Structure Bridge and Footpath Bridge

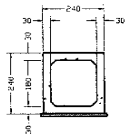
CD-13



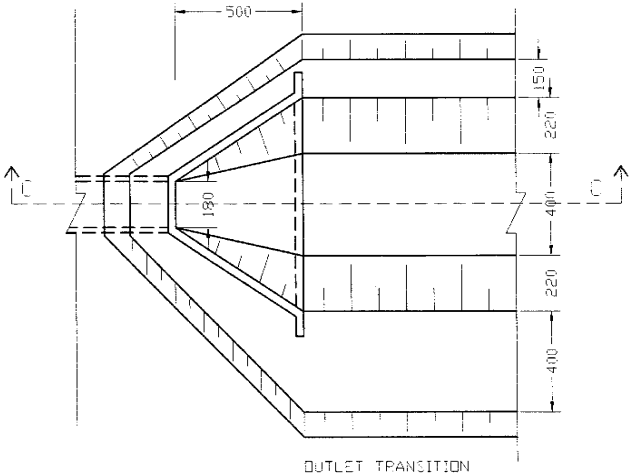
SECTION OF CONDUIT
SCALE 1 : 250



INLET TRANSITION
SCHALE 1 : 200



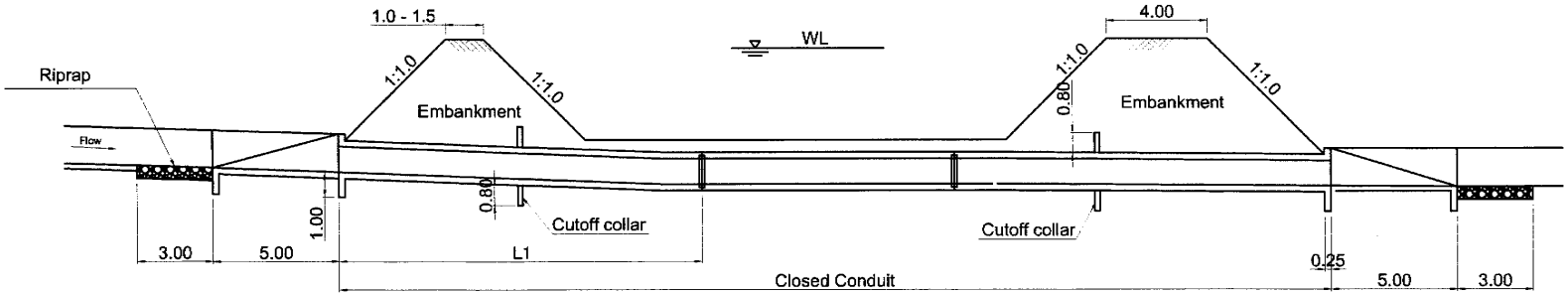
SECTION OF CONDUIT
SCALE 1 : 200



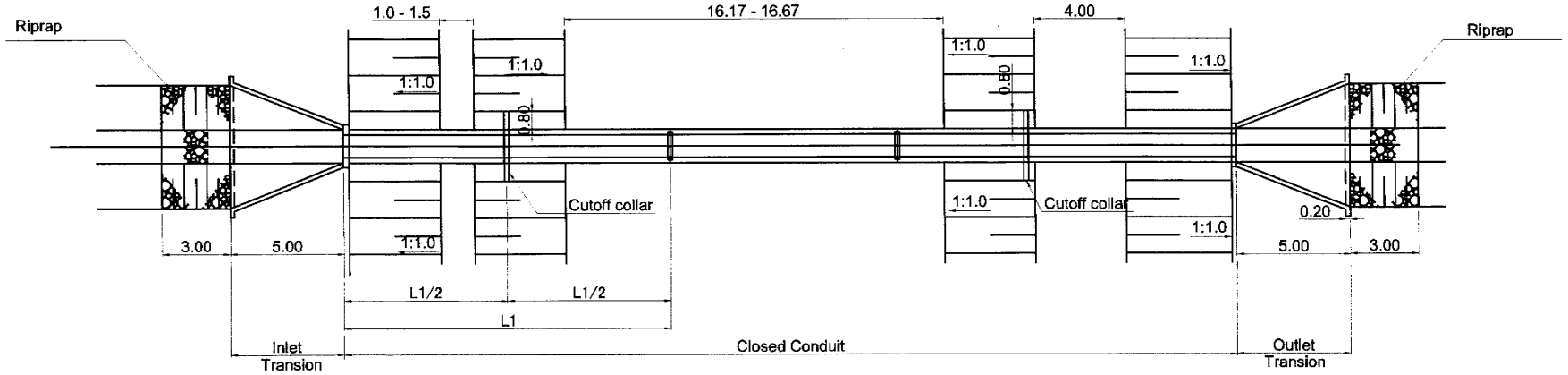
OUTLET TRANSITION
SCHALE 1 : 200

BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY IN THE KINGDOM OF CAMBODIA	Drawing No.	DRW-14
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	Drawing Title	Irrigation Canal Related Structure SYPHON

CD-14



PROFILE



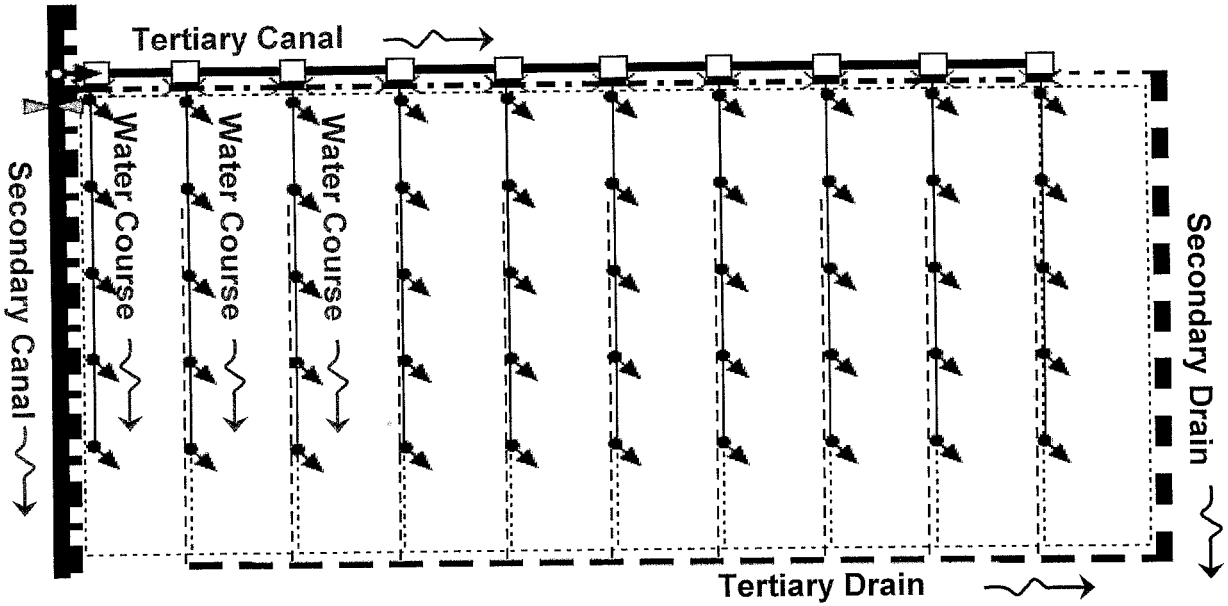
PLAN

0 5 10

SCALE 1:200

BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY IN THE KINGDOM OF CAMBODIA	Drawing No.	DRW-15
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	Drawing Title	Drainage Canal Related Structure Drainage Culvert

CD-15



Typical Layout of A Tertiary Block
(1000m x 500m =50ha)

BASIN-WIDE BASIC IRRIGATION AND DRAINAGE MASTER PLAN STUDY	Drawing No.	DRW- 16
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	Drawing Title	Tertiary Development Typical Layout