

ROYAL GOVERNMENT OF LAOS

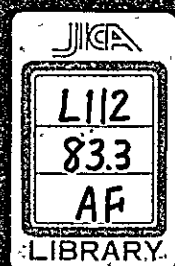
THA NGON AGRICULTURAL DEVELOPMENT PROJECT

DESIGN DRAWINGS

MARCH 1969

OVERSEAS TECHNICAL COOPERATION AGENCY

TOKYO



ROYAL GOVERNMENT OF LAOS

THA NGON AGRICULTURAL DEVELOPMENT PROJECT

DESIGN DRAWINGS

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MARCH 1969

OVERSEAS TECHNICAL COOPERATION AGENCY

TOKYO

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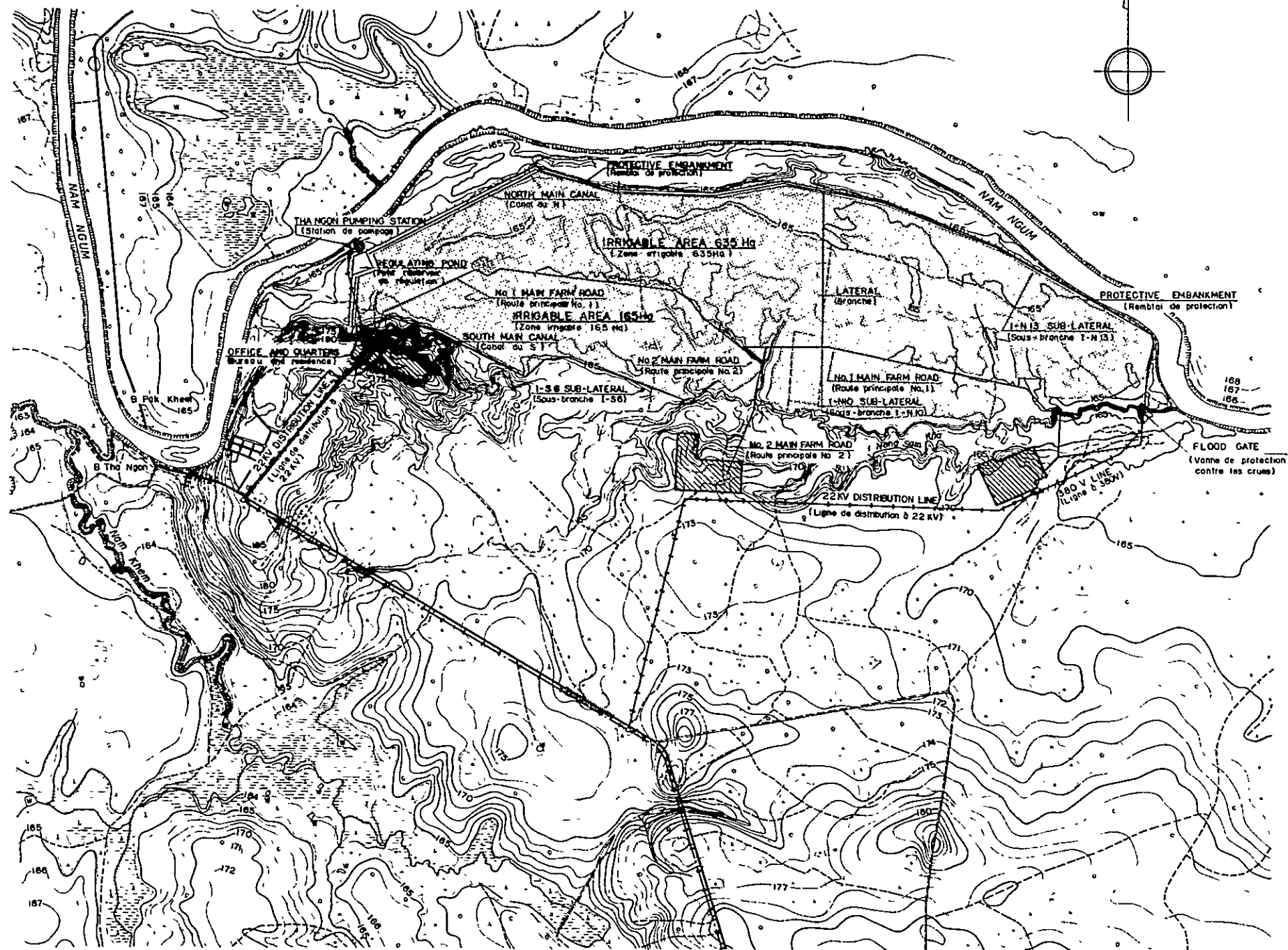
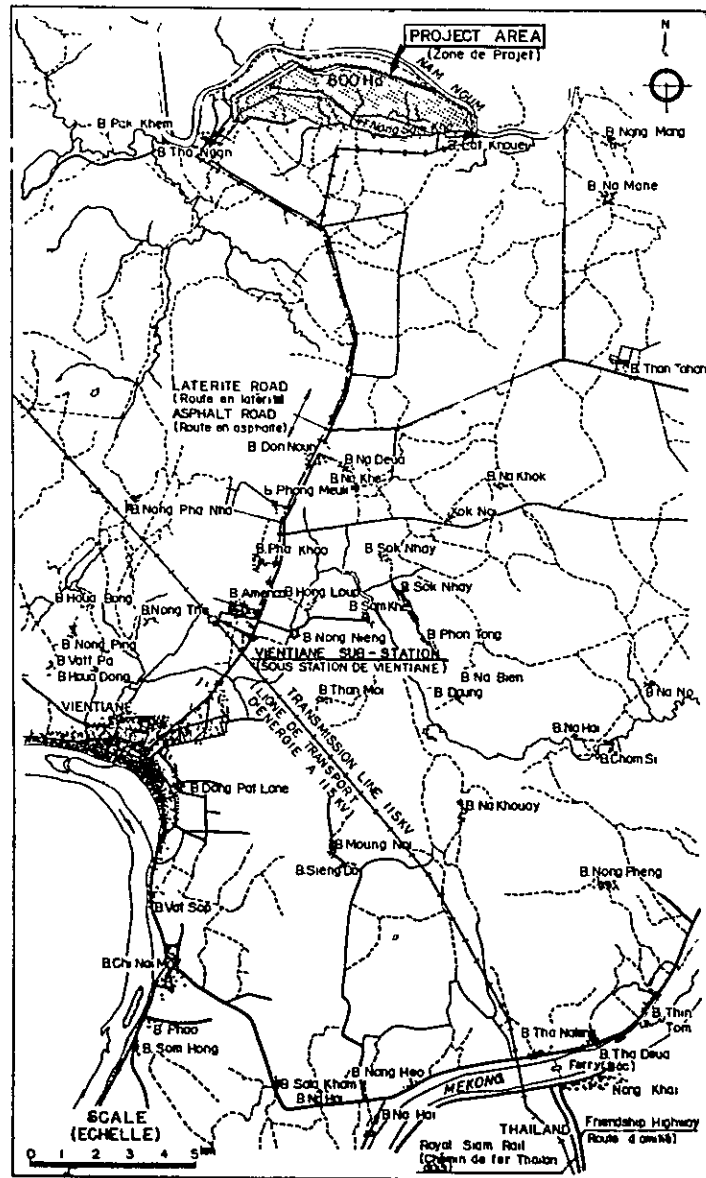
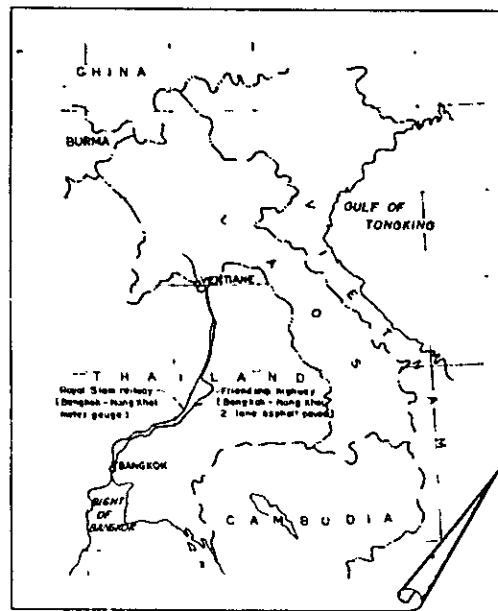
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THA NGON AGRICULTURAL DEVELOPMENT PROJECT

LIST OF DESIGN DRAWINGS

No.	DRAW. NO.	T I T L E	No.	DRAW. NO.	T I T L E	No.	DRAW. NO.	T I T L E
1	0001	LOCATION MAP	32	2015	NORTH MAIN CANAL, CROSS SECTION (1)			<u>PROTECTIVE EMBANKMENT</u>
2	0002	GENERAL PROJECT MAP	33	2016	" " (2)	61	5001	PROFILE AND CROSS SECTION (1)
3	0003	GENERAL PLAN AND LAYOUT <sup>/1</sup>	34	2017	" " (3)	62	5002	" " (2)
4	0004	FARM LATERAL, DRAINAGE CANAL AND SECONDARY ROAD TABLE OF DIMENSIONS	35	2018	" " (4)			<u>FLOOD GATE</u>
		<u>THA NGON PUMPING STATION</u>	36	2019	" " (5)	63	6001	GENERAL PLAN
5	1001	GENERAL PLAN	37	2020	" " (6)	64	6002	PLAN AND PROFILE
6	1002	PLAN AND PROFILE	38	2021	" " (7)	65	6003	CULVERT, CHUTE AND STILLING BASIN
7	1003	PLAN OF CONTROL HOUSE	39	2022	SOUTH MAIN CANAL, CROSS SECTION (1)	66	6004	OUTLET OF CULVERT
8	1004	PLAN AND PROFILE, CONTROL HOUSE	40	2023	" " (2)	67	6005	PROFILE AND CROSS SECTION (1)
9	1005	INTAKE AND SUMP (1)	41	2024	" " (3)	68	6006	" " (2)
10	1006	" (2)	42	2025	TURNOUT			<u>FARM ROAD</u>
11	1007	OUTLET OF DISCHARGE PIPE	43	2026	NO. 10 TURNOUT	69	7001	NO.1 MAIN FARM ROAD, PROFILE AND CROSS SECTION (1)
12	1008	CONTROL HOUSE, SUPER STRUCTURE (1)	44	2027	CHECK STRUCTURE (1)	70	7002	" " (2)
13	1009	" (2)	45	2028	" (2)	71	7003	" " (3)
14	1010	" (3)	46	2029	CULVERT	72	7004	" " (4)
15	1011	" (4)	47	2030	SIDE SPILLWAY	73	7005	" " (5)
16	1012	REGULATOR	48	2031	DRAINAGE CROSSING	74	7006	" " (6)
17	1013	SPILLWAY	49	2032	CONCRETE PIPE AND PILE	75	7007	" " (7)
		<u>MAIN CANAL</u>			<u>LATERAL AND SUB-LATERAL</u>	76	7008	NO.2 MAIN FARM ROAD PROFILE AND CROSS SECTION
18	2001	NORTH MAIN CANAL, PLAN AND PROFILE(1)	50	3001	LATERAL, PROFILE AND CROSS SECTION	77	7009	NO.2' MAIN FARM ROAD PROFILE AND CROSS SECTION
19	2002	" " (2)	51	3002	I-N.10 SUB-LATERAL, PROFILE AND CROSS SECTION	78	7010	CONCRETE BRIDGE (1)
20	2003	" " (3)	52	3003	I-N.13 SUB-LATERAL, PROFILE AND CROSS SECTION	79	7011	" (2)
21	2004	" " (4)	53	3004	I-S.6 SUB-LATERAL, PROFILE AND CROSS SECTION (1)			<u>PURCHASER'S OFFICE AND QUARTER</u>
22	2005	" " (5)	54	3005	" " (2)	80	8001	OFFICE AND QUARTER (1)
23	2006	" " (6)	55	3006	CULVERT AND DROP	81	8002	" " (2)
24	2007	" " (7)	56	3007	DIVISION BOX (1)	82	8003	" " (3)
25	2008	" " (8)	57	3008	" (2)	83	8004	" " (4)
26	2009	" " (9)			<u>DRAINAGE CANAL</u>	84	8005	" " (5)
27	2010	" " (10)			D-C1 DRAINAGE CANAL PROFILE AND CROSS SECTION	85	11001	METEOROLOGICAL RECORD AT VIENTIANE
28	2011	SOUTH MAIN CANAL, PLAN AND PROFILE(1)	58	4001	D-C2 " "	86	11002	HYDROGRAPH AND RATING CURVE AT THA NGON
29	2012	" " (2)	59	4002	" " "	87	11003	CONSTRUCTION SCHEDULE
30	2013	" " (3)	60	4003	CULVERT AND DROP			
31	2014	" " (4)						

/1: This drawing is prepared in a blue-print paper.



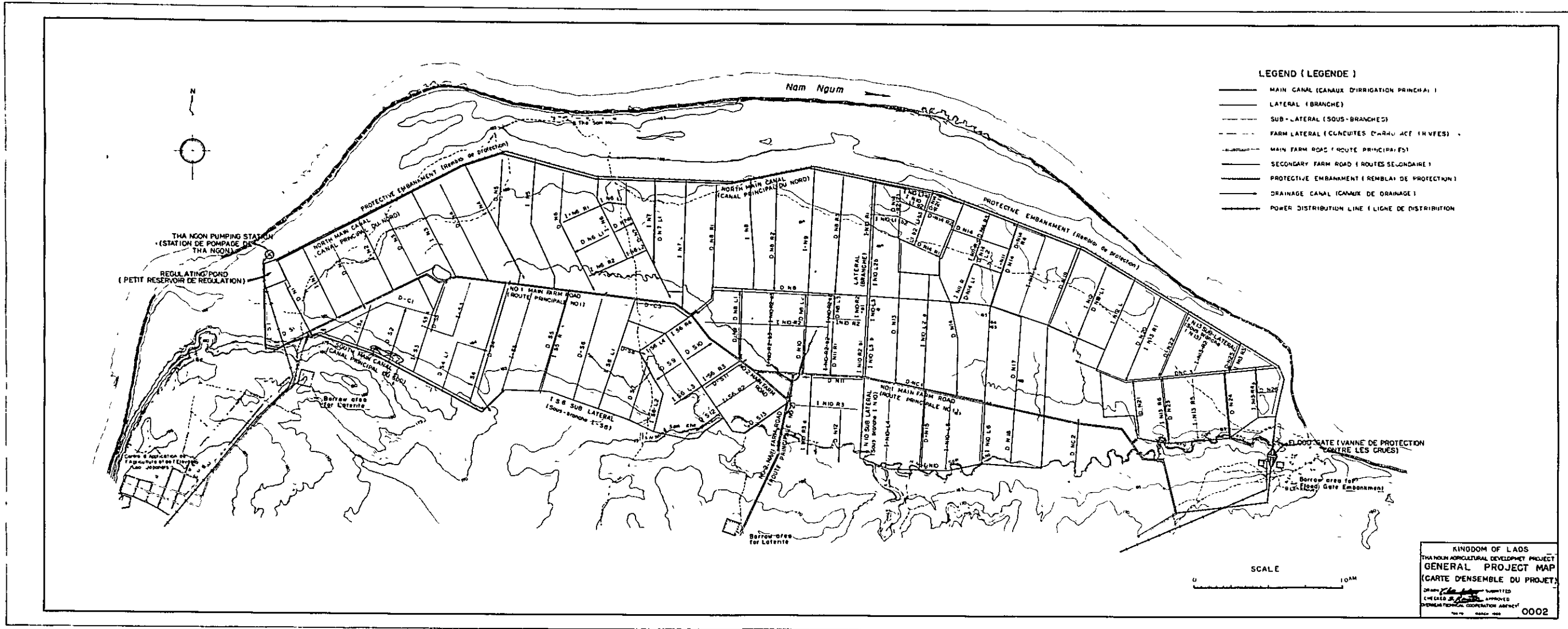
- Main canal (Canaux principaux)
- Lateral and sub-lateral (Branche et sous-branches)
- Protective embankment (Remblai de protection)
- Main farm road (Routes vicinales principales)
- Power distribution line (Ligne de distribution électrique à 22 KV)
- Power distribution line, not covered this project (Ligne de distribution électrique à 22 KV, non prévue dans ce projet)
- Irrigable area (Zone irrigable)
- Natural stream (Cours d'eau naturels)
- ▨ Farmers residential area (Quartier résidentiel des fermiers)



**KINGDOM OF LAOS**  
**THA NGOU AGRICULTURAL DEVELOPMENT PROJECT**  
**LOCATION MAP**  
**(CARTE DE SITUATION)**

DRAWN *[Signature]* SUBMITTED \_\_\_\_\_  
 CHECKED *[Signature]* APPROVED \_\_\_\_\_  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1969

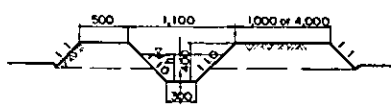
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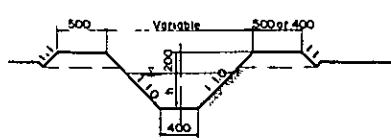
FARM LATERAL

CANAL NAME	HEAD WATER EL (m)	DISTANCE (m)	GRADIENT	WATER DEPTH (m)	CANAL NAME	HEAD WATER EL (m)	DISTANCE (m)	GRADIENT	WATER DEPTH (m)
I-N1	166.80	324.00	1/500	0.23	I-N11-L	165.00	1/800	0.27	
	213.00	1/400	0.22			305.00	1/300	0.20	
I-N2	166.80	216.00	1/300	0.20		481.00	1/800	0.27	
	275.00	1/200	0.18		I-N12	165.40	338.00	1/2000	0.33
	482.00	1/500	0.23			153.00	1/200	0.18	
I-N3	166.70	216.00	1/300	0.20	I-N12-L	165.40	563.00	1/2000	0.33
	401.00	1/200	0.18			318.00	1/400	0.22	
I-N4	166.80	324.00	1/1000	0.28	I-N13	165.02	1,952.95	1/2500	0.35
	488.00	1/200	0.18			312.00	1/1500	0.31	
I-N5	166.50	594.00	1/300	0.20	I-N13-R1	165.28	624.00	1/400	0.22
	264.00	1/1000	0.28		I-N13-R2	165.10	338.00	1/1000	0.28
I-N6	166.50	192.00	1/200	0.18	I-N13-R3	165.02	198.00	1/500	0.23
	411.00	1/400	0.22		I-N13-R4	164.73	329.00	1/600	0.24
I-N6-R1	165.50	270.00	1/200	0.18	I-N13-R5	164.58	437.00	1/1000	0.28
I-N6-R2	164.50		1/300	0.20	I-N13-R6	164.48	437.00	1/1500	0.31
I-N6-L1	165.50	190.00	1/200	0.18					
I-N6-L2	164.50	170.00			I-S1	166.58	358.00	1/600	0.24
I-N7	166.40	213.00			I-S2	165.65	60.00	1/400	0.22
	301.00	1/300	0.20			257.00	1/300	0.20	
I-N7-L	166.42	204.50	1/1000	0.28	I-S3	165.50	800.00	1/1000	0.28
	108.00	1/400	0.22			160.00	1/300	0.20	
	324.00	1/200	0.18		I-S3-L	164.85	108.00	1/200	0.18
	384.00	1/300	0.20		I-S4	165.83	395.00	1/400	0.22
I-N8	166.00	88.00	1/200	0.18	I-S5	165.68	764.00		
	662.00	1/500	0.23		I-S5-R	165.60	388.00	1/500	0.23
I-N9	166.10	370.00	1/300	0.20		540.00	1/800	0.27	
	497.00	1/400	0.22		I-S6	164.44	733.40	1/1500	0.31
I-N10	163.83	1,368.00	1/1600	0.32		216.00	1/300	0.20	
I-N10-R1	165.90	358.00	1/400	0.22	I-S6-R1	164.44	508.00	1/400	0.22
	378.00	1/800	0.27		I-S6-R2	164.39	324.00	1/800	0.27
I-N10-R2	164.02	1,118.00	1/1000	0.28	I-S6-R3	164.25	270.00	1/200	0.18
I-N10-R2-a		108.00	1/800	0.27	I-S6-R4	163.97	108.00	1/200	
I-N10-R2-b	163.81	162.00	1/300	0.20	I-S6-L1	165.18	97.00		
I-N10-R2-c	163.34	216.00	1/1000	0.28		718.00	1/1000	0.28	
I-N10-R2-d	164.02	324.00	1/300	0.20	I-S6-L2	164.41	405.00	1/500	0.23
I-N10-R2-e	163.76	270.00			I-S6-L3	164.25	246.00	1/200	0.18
I-N10-R2-f	163.34		1/800	0.27	I-S6-L4	163.98	207.00		
I-N10-R3	164.17	460.00	1/600	0.24					
I-N10-R3-a	164.03	108.00	1/800	0.27					
I-N10-L1-a	165.90	755.00	1/1500	0.31					
I-N10-L1-b	165.78	107.00	1/200	0.18					
I-N10-L1-c	165.90	358.00	1/1000	0.28					
I-N10-L1-d	165.13	325.00							
	153.00	1/300	0.20						
I-N10-L1-e	164.78	108.00	1/400	0.22					
I-N10-L2-a	165.05	674.00	1/600	0.27					
	384.50	1/400	0.22						
I-N10-L2-b	165.05	324.00	1/600	0.24					
I-N10-L2-c	164.03	108.00	1/800	0.27					
I-N10-L3-a	164.02	324.00	1/300	0.20					
I-N10-L4	163.83	548.00	1/800	0.27					
I-N10-L5	163.57	482.00							
I-N10-L6	163.44	393.00							
I-N11	165.60	805.00	1/600	0.24					
	435.00	1/400	0.22						
I-N11-R1	165.02	210.00	1/1000	0.28					
	288.00	1/300	0.20						
I-N11-R1-a	164.81	182.00	1/1000	0.28					
I-N11-L	165.60	409.10	1/2000	0.33					

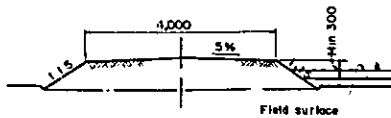
TYPICAL SECTION FARM LATERAL



DRAINAGE CANAL



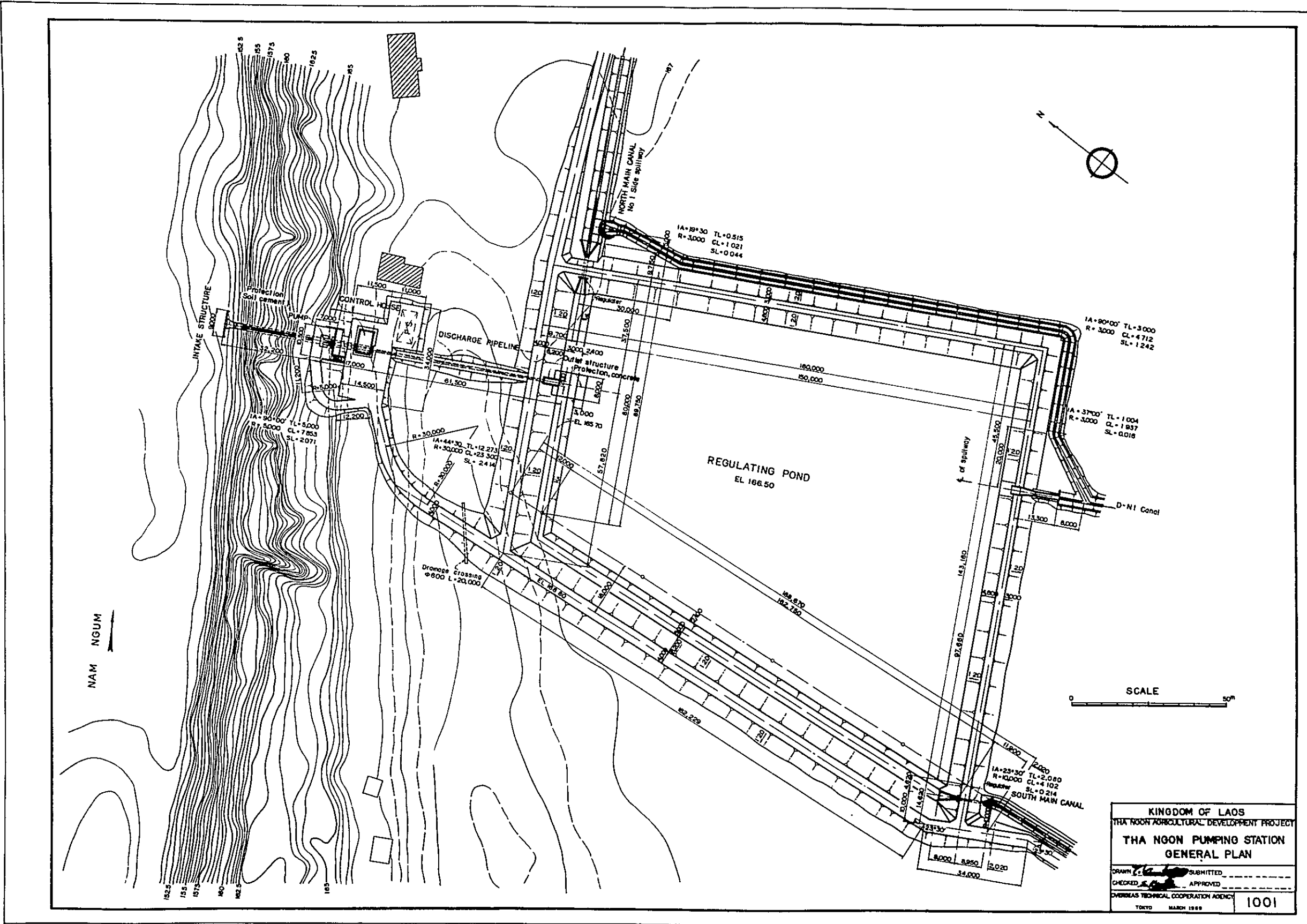
SECONDARY FARM ROAD



NOTE Dimension in mm

DRAINAGE CANAL

CANAL NAME	TAIL WATER EL (m)	DISTANCE (m)	GRADIENT	DISCHARGE (m³/sec)	CANAL BASE WIDTH B (m)	WATER DEPTH (m)	CANAL NAME	TAIL WATER EL (m)	DISTANCE (m)	GRADIENT	DISCHARGE (m³/sec)	CANAL BASE WIDTH B (m)	WATER DEPTH (m)
D-N1	164.35	370.00	1/150	1.000	0.60	0.58	D-N14-L1	163.53	52.00	1/100	0.073	0.30	0.20
	214.27	1/1000	0.725	*	0.85			266.00	1/400	*	*	*	0.28
D-N2	163.01	100.00	1/500	0.208	0.30	0.48	D-N14-L2	164.33	162.00	1/500	0.031	*	0.18
	200.00	1/100	*	*	0.33		D-N15	162.47	526.00	1/1000	0.203	0.50	0.48
	238.00	1/300	*	*	0.42		D-N16	*	414.00	1/800	0.085	0.40	0.32
D-N3	162.80	400.00	1/200	0.188	*	0.37	D-N17	162.26	500.00	*	0.226	*	0.51
	197.00	1/1000	*	*	0.53			315.00	1/150	*	*	*	0.34
D-N4	162.48	200.00	1/500	0.489	0.60	0.60	D-N18	162.51	395.00	1/1000	0.141	*	0.43
	*	1/100	*	*	0.39		D-N19	163.01	100.00	1/200	0.366	0.50	0.44
	358.00	1/500	*	*	0.60			797.00	1/400	0.224	*	0.41	
D-N5	162.45	350.00	1/200	0.190	0.40	0.34	D-N19-L1	163.87	550.00	*	0.101	0.30	0.33
	480.00	1/300	*	*	0.37		D-N20	163.40	158.00	1/500	0.126	0.40	0.34
D-N6	162.05	266.00	1/600	0.267	0.50	0.50		216.00	1/200	*	*	0.28	
	314.00	*	0.163	0.30	0.44			252.00	1/600	*	*	0.36	
	262.00	1/150	*	*	0.32		D-N21	163.72	223.00	1/800	0.121	*	0.37
D-N6-L1	162.54	265.00	1/1000	0.104	0.40	0.37	D-N22	163.69	484.00	*	0.174	0.50	0.44
D-N7	162.08	292.00	1/800	0.597	0.70	0.70	D-N23	163.58	437.00	1/500	0.083	0.30	0.30
	282.00	*	0.593	*	*		D-N24	163.75	437.00	1/800	0.174	0.50	0.44
	300.00	1/100	*	0.50	0.46		D-N25	164.62	198.00	1/400	0.039	0.30	0.20
D-N7-R1	162.80	160.00	*	0.061	0.30	0.18	D-N26	164.07	167.00	1/1200	0.037	*	0.26
D-N7-L1	162.45	283.00	1/200	0.104	0.28	0.28		285.00	1/1000	*	*	0.25	
	287.00	1/100	*	*	0.23								
D-N8	161.88	211.00	1/800	1.090	1.00	0.85	D-S1	165.52	270.00	1/400	0.337	0.50	0.50
	209.00	*	0.748	0.80	0.76		D-S2	162.98	392.00	1/200	0.225	0.40	0.37
	204.00	*	0.705	*	0.72			132.00	*	0.184	*	0.33	
	213.00	1/1000	0.430	0.60	0.66		D-S3	163.02	108.00	1/100	0.020	0.30	0.10
	208.00	*	0.347	0.59	0.59		D-S4	162.71	506.00	1/1000	0.041	0.80	0.90
D-N8-R1	161.97	100.00	1/400	0.344	0.50	0.50		465.00	1/250	0.237	0.40	0.40	
	615.00	1/200	*	*	0.43		D-S4-L1	163.38	588.00	1/500	0.546	0.60	0.62
D-N8-R2	162.95	500.00	1/500	0.665	0.60	0.69	D-S5	162.58	539.00	1/800	0.147	0.40	0.42
	307.00	1/150	*	*	0.50			159.00	1/100	*	0.30	0.28	
D-N8-R3	163.09	400.00	1/500	0.316	0.50	0.51	D-S6	162.13	700.00	1/800	0.289	0.50	0.54
	433.00	1/200	*	*	0.41			89.00	1/100	*	0.40	0.35	
D-N8-L1	162.42	218.00	1/600	0.041	0.30	0.23	D-S7	162.39	300.00	1/1000	0.151	*	0.59
D-N8-L2	162.72	217.00	1/800	0.083	*	0.35		141.00	1/100	*	*	0.25	
D-N8-L3	162.90	166.00	1/200	0.031	*	0.15	D-S8	162.59	164.00	1/400	0.036	0.50	0.20
D-N9	162.50	200.00	1/800	0.032	*	0.21	D-S9	162.65	231.00	1/200	0.081	*	0.24
D-N10	162.17	333.00	1/400	0.126	0.40	0.33	D-S10	161.53	233.00	*	0.080	*	*
D-N11	161.91	204.00	1/500	0.149	0.38	0.38	D-S11	162.07	162.00	1/100	0.062	*	0.18
	206.00	*	0.041	0.30	0.23			183.00	1/600	*	*	0.30	
D-N11-R1	162.32	229.00	*	0.063	*	0.26	D-S12	163.38	206.00	1/300	0.034	*	0.17
	148.00	1/200	*	*	0.21		D-S13	162.48	395.00	*	0.073	*	0.27
D-N12	161.94	388.00	1/800	0.101	0.40	0.35	D-S13-R	162.60	248.00	1/500	0.020	*	0.15
D-N13	162.25	740.00	1/400	0.328	0.50	0.49							
	217.00	1/500	*	*	0.52		D-NC-1	161.80	196.00	1/1500	1.240	1.00	1.10
D-N14	162.27	651.00	1/600	0.604	0.70	0.65		204.00	*	0.636	*	0.75	
	305.00	1/900	0.554	*	0.70			210.00	*	0.433	0.80	0.65	
	209.00	*	0.419	*	0.60			204.43	*	0.105	0.50	0.39	
	216.00	*	0.216	0.50	0.48			555.57	1/1000	*	0.40	0.38	
	214.00	*	0.110	0.40	0.38		D-NC-2	162.50	332.00	1/800	0.059	0.30	0.27
	392.00	1/1500	0.073	*	0.37		D-NC-3	162.78	412.00	1/600	0.823	0.80	0.74
D-N14-R1	163.88	300.00	1/1000	0.063	0.30	0.32		212.00	1/1500	0.564	*	0.73	
	142.00	1/400	*	*	0.26			455.00	*	0.288	0.60	0.63	
D-N14-R2	164.12	280.00	1/1500	0.112									

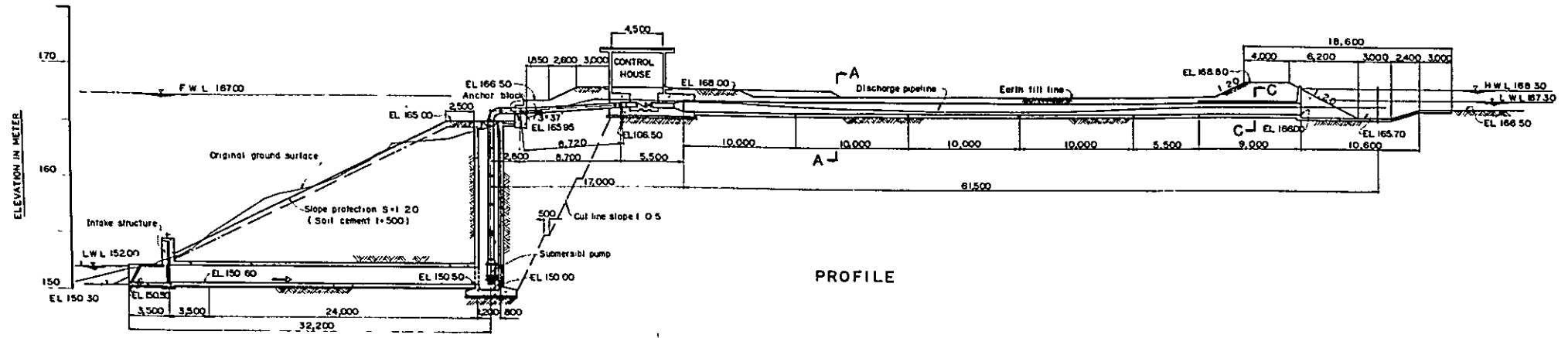


KINGDOM OF LAOS  
 THA NGOU AGRICULTURAL DEVELOPMENT PROJECT  
**THA NGON PUMPING STATION  
 GENERAL PLAN**

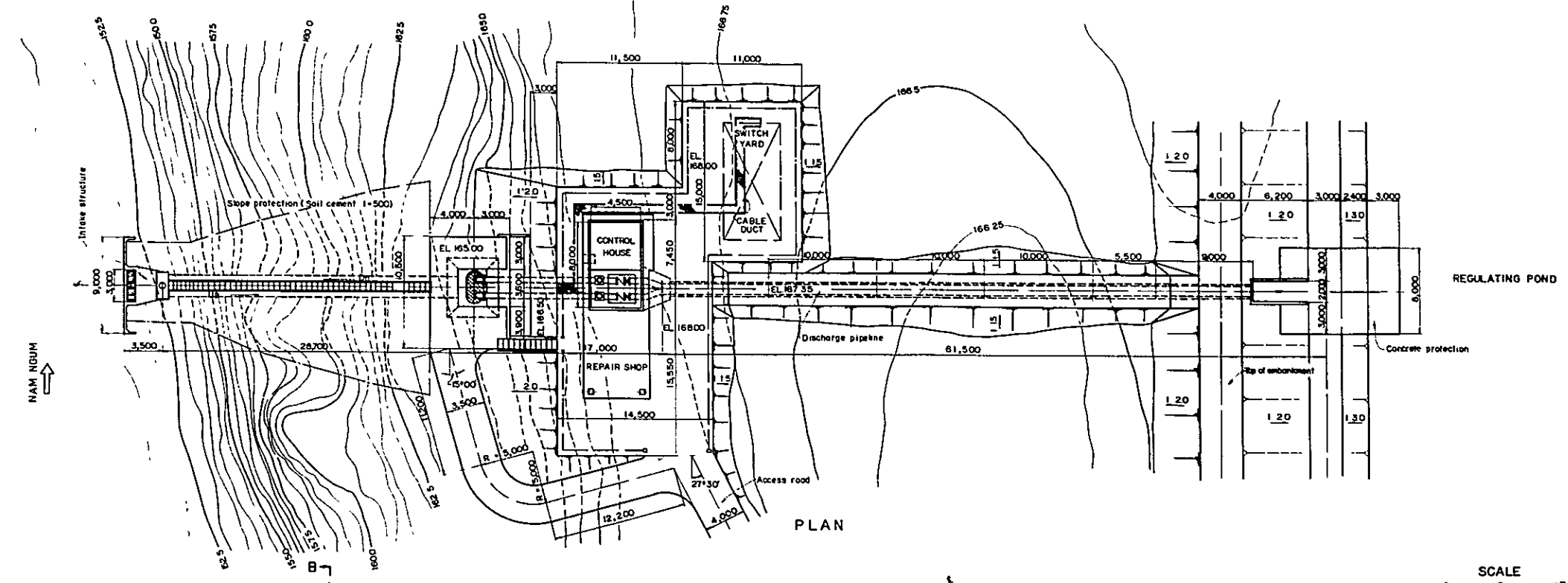
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 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1969

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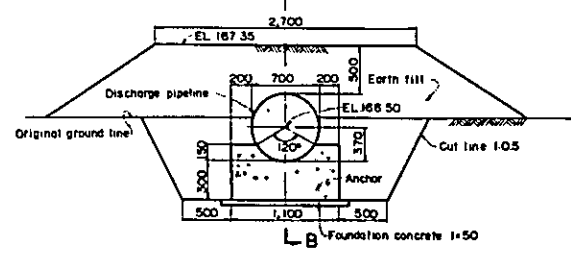




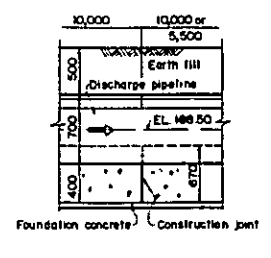
PROFILE



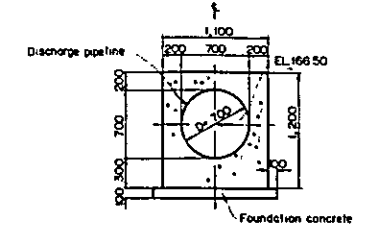
PLAN



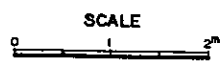
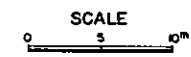
SECTION A-A



SECTION B-B



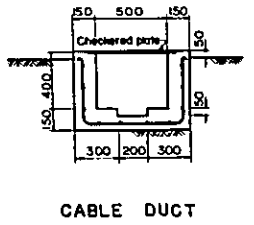
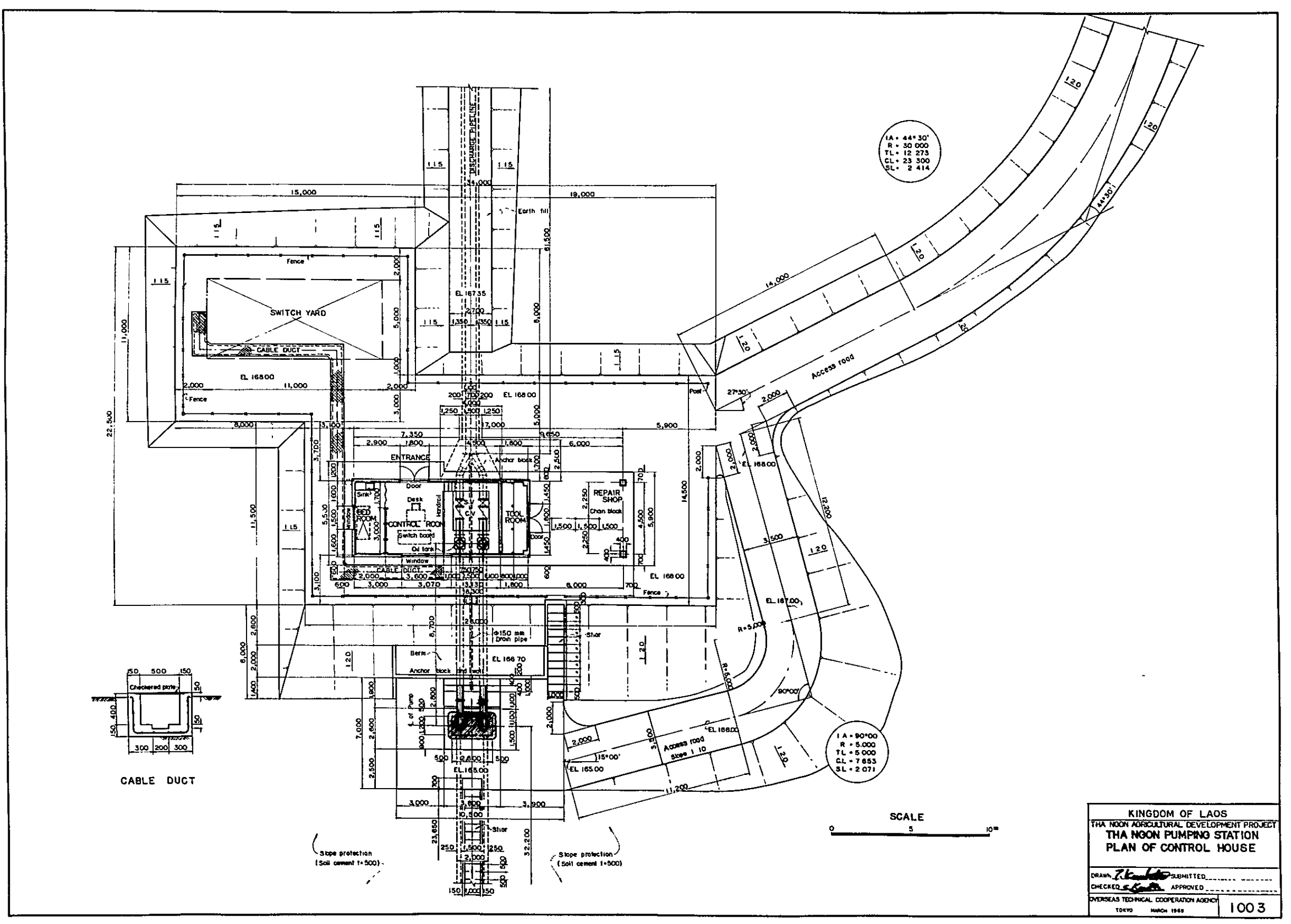
SECTION C-C



KINGDOM OF LAOS  
THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
**THA NGON PUMPING STATION  
PLAN AND PROFILE**

DRAWN: [Signature] SUBMITTED: [Signature]  
CHECKED: [Signature] APPROVED: [Signature]

CHINESE TECHNICAL COOPERATION AGENCY  
TOKYO MARCH 1966 **1002**



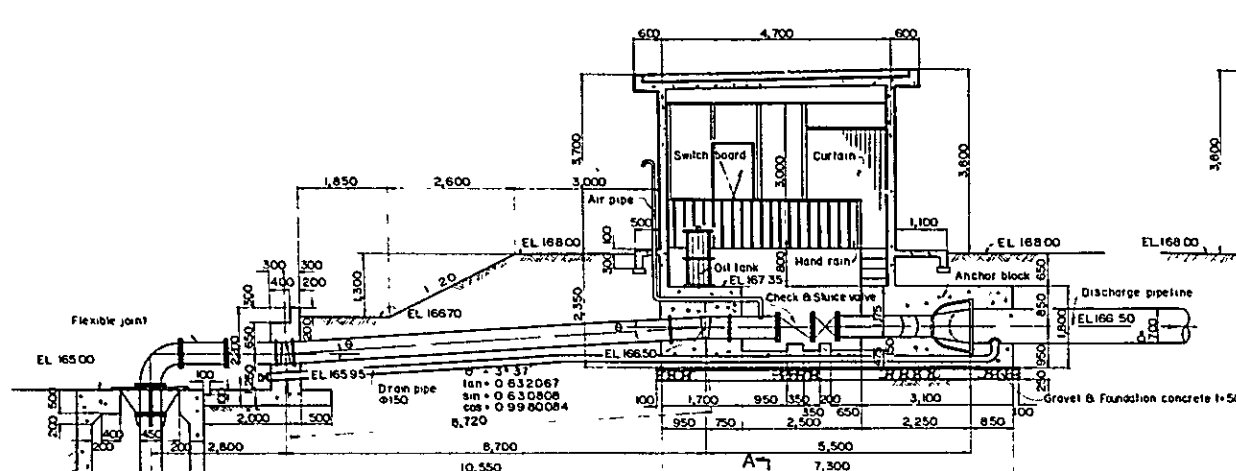
CABLE DUCT

IA = 44\*30'  
 R = 30 000  
 TL = 12 273  
 CL = 23 300  
 SL = 2 414

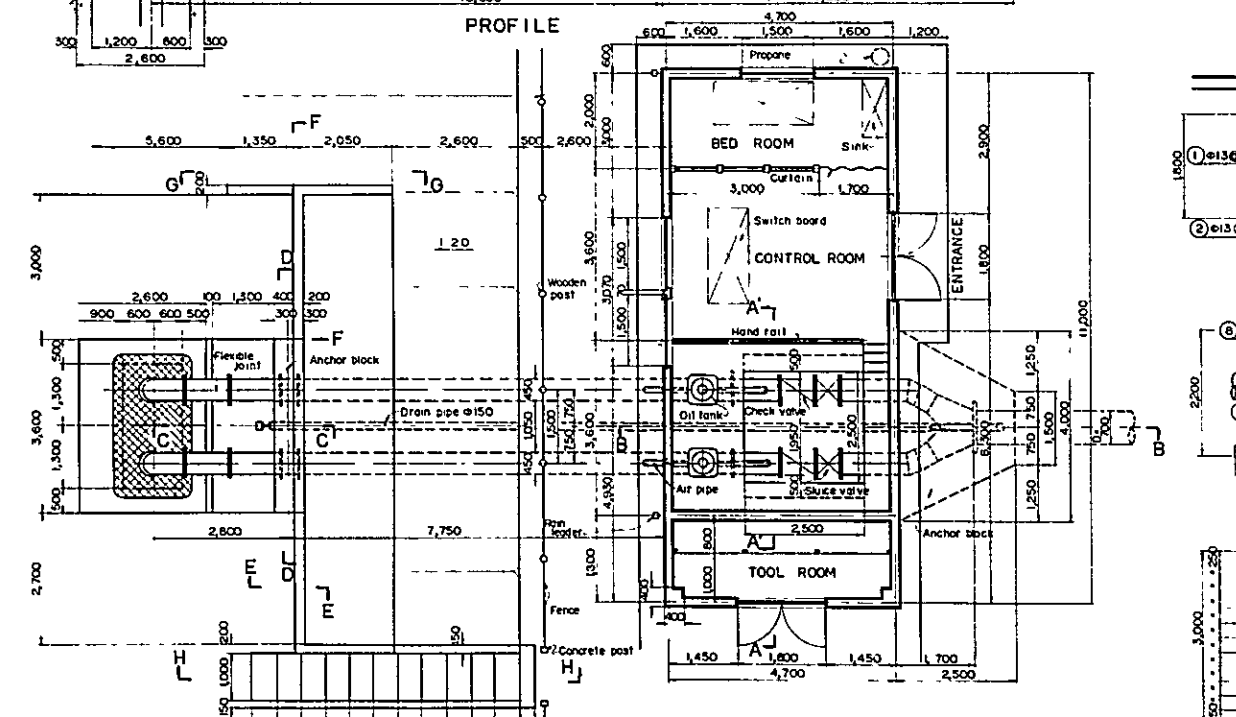
IA = 90\*00'  
 R = 5 000  
 TL = 5 000  
 EL = 7 853  
 SL = 2 071



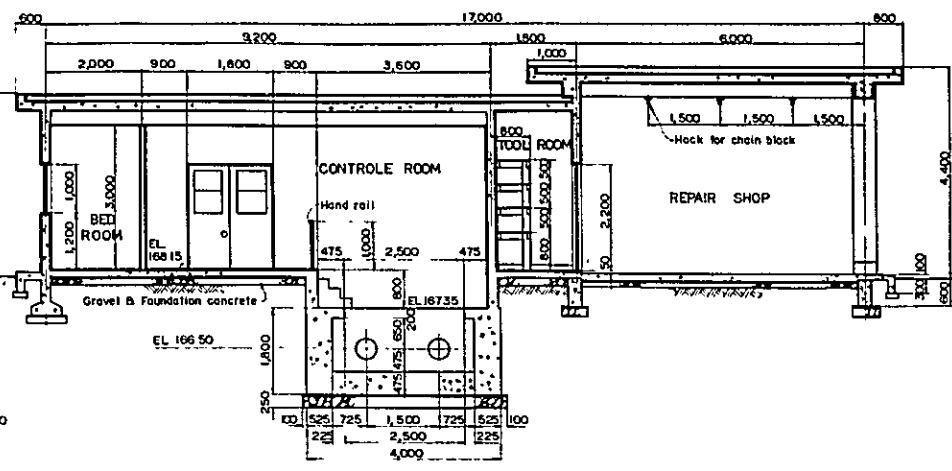
KINGDOM OF LAOS	
THA NOON AGRICULTURAL DEVELOPMENT PROJECT	
THA NOON PUMPING STATION	
PLAN OF CONTROL HOUSE	
DRAWN <i>Z. Kumbho</i>	SUBMITTED
CHECKED <i>Z. Kumbho</i>	APPROVED
OVERSEAS TECHNICAL COOPERATION AGENCY	
TOKYO	MARCH 1968
1003	



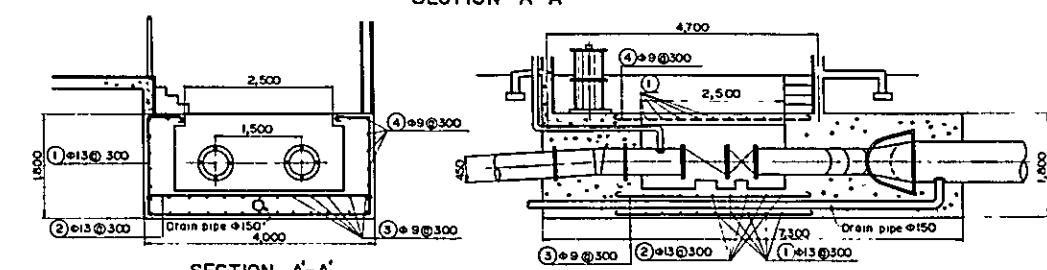
PROFILE



PLAN

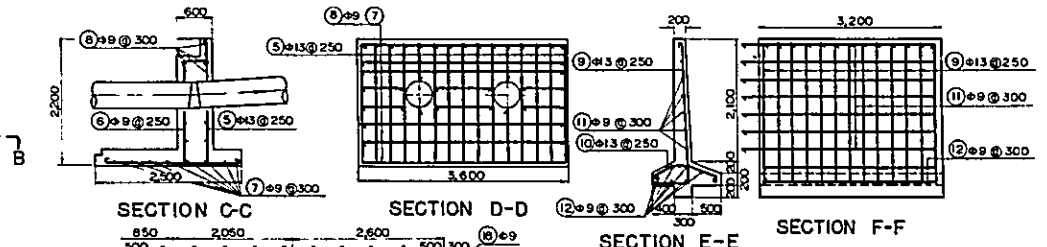


SECTION A-A



SECTION A-A'

SECTION B-B

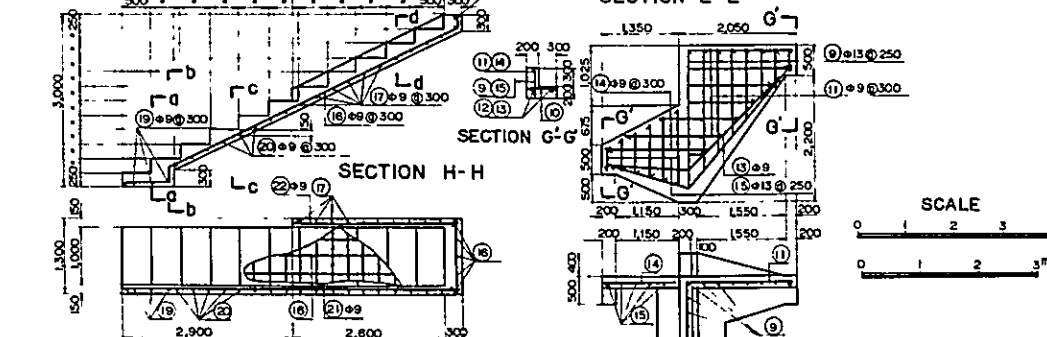


SECTION C-C

SECTION D-D

SECTION E-E

SECTION F-F



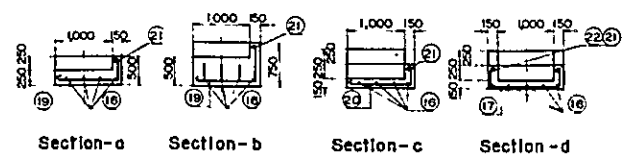
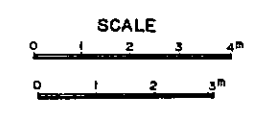
SECTION G-G

PLAN OF SECTION H-H

TABLE OF REINFORCEMENT BARS

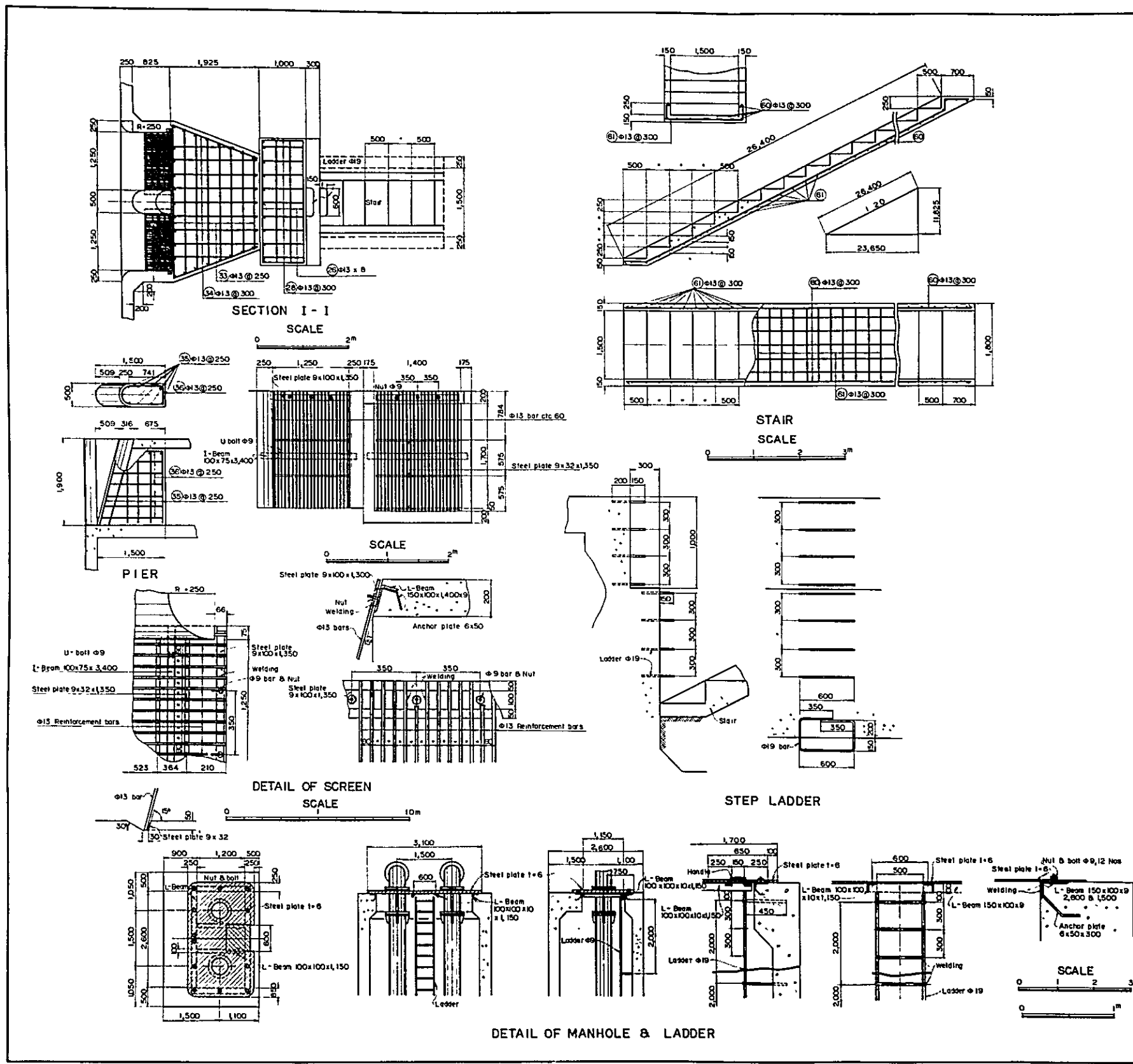
MARK	Ø	LENGTH	NOS	T LENGTH	U WEIGHT	WEIGHT	REMARKS	MARK	Ø	LENGTH	NOS	T LENGTH	U WEIGHT	WEIGHT	REMARKS
1	13	9.32	9	83.88	1.042	87.41		11	9	4.62	7	32.34	0.499	18.10	
2	4	1.1	9	36.99		38.53		12	4.32	7	30.24			18.08	
3	9	3.58	26	93.08	0.499	46.45		13	2.93	16	46.88			23.40	
4	3.58	14	50.12			25.01		14	0.88	12	10.56			5.27	
5	13	3.98	13	51.48	1.042	53.54		15	4.08	2	8.16			4.08	
6	0.88	2	1.76			1.80		16	2.68	2	5.36			2.68	
7	2.76	2	5.52			5.78		17	1.48	3	4.44			2.22	
8	3.18	15	47.70	0.499	20.63	23.97		18	1.08	6	6.48			3.24	
9	0.88	2	1.76			1.88		19	7.51	4	30.04			14.98	
10	1.93	2	3.86			2.00		20	3.48	1	3.48			1.74	
11	3.68	8	29.44			14.69		21	1.95	10	19.50			9.88	
12	3.68	9	33.12			16.53		22	1.38	1	1.38			0.69	
13	2.38	4	9.52			4.75		23	1.68	3	5.04			2.52	
14	3.26	20	65.20	1.042	68.00	71.20		24	1.48	8	11.84			5.91	
15	1.99	16	31.84			33.18		25	7.06	1	7.06			3.53	
16	1.56	20	31.20			32.51		26	3.18	1	3.18			1.59	
17	1.11	16	17.76			18.51									
18	0.68	6	3.88			4.13									
TOTAL														58740 kg ± 0.6 ton	

KINGDOM OF LAOS  
 THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
 THA NGON PUMPING STATION  
 PLAN AND PROFILE, CONTROL HOUSE  
 DRAWN: [Signature] SUBMITTED  
 CHECKED: [Signature] APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1968  
 1004



Section-a Section-b Section-c Section-d



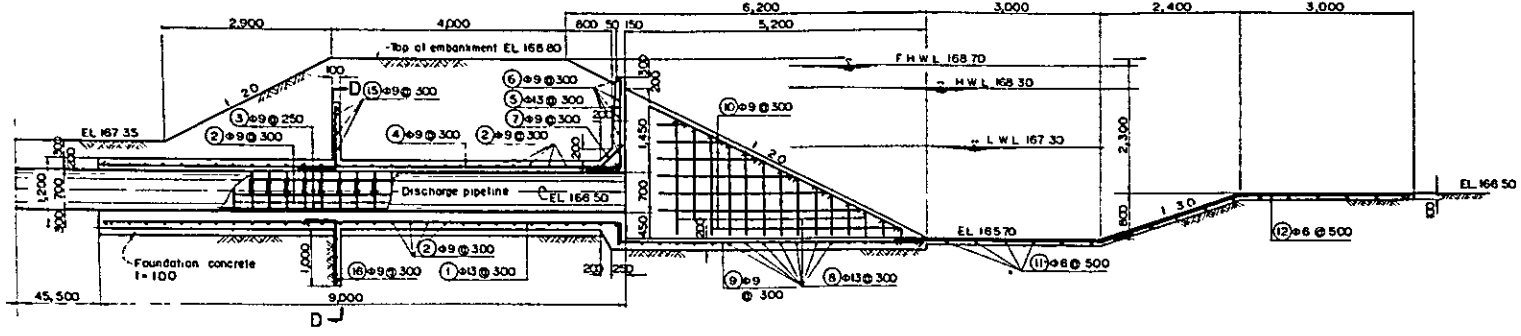


**TABLE OF REINFORCEMENT BARS**

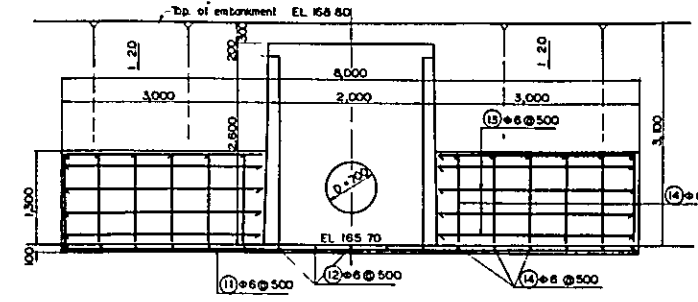
MARK	Φ	LENGTH	NOS	T LENGTH	U WEIGHT	TOTAL WEIGHT	REMARKS
1	13	2.36	11	25.96	1.042	27.05	
2	13	3.26	30	97.80		101.91	
3	13	1.66	11	18.26		19.03	
4	13	3.26	28	91.28		95.12	
5	13	1.21	6	7.26		7.61	
6	13	5.58	12	66.96		69.53	
7	13	3.26	12	39.12		40.77	
8	13	1.66	22	36.52		38.06	
9	13	3.36	8	26.88		28.01	
10	13	3.61	4	14.44		15.05	
11	13	2.41	4	9.64		10.05	
12	13	3.69	8	29.52		30.51	
13	13	3.61	4	14.44		15.05	
14	13	2.41	4	9.64		10.05	
15	13	8.74	4	34.96	1.578	55.17	
16	13	7.94	8	63.52		100.24	
17	13	3.66	4	14.64	1.042	15.26	
18	13	2.66	8	21.28		22.18	
19	13	2.26	24	54.24		56.52	
20	13	4.01	30	120.30		125.61	
21	13	2.31	12	27.72		28.89	
22	13	1.56	12	18.72		19.51	
23	13	14.26	12	170.82	1.578	269.56	
24	13	2.92	6	17.52		18.24	
25	13	3.66	9	32.94	1.042	34.33	
26	13	3.26	9	29.34		30.58	
27	13	9.84	13	127.92	1.578	197.76	
28	13	2.16	26	56.16	1.042	58.52	
29	13	2.21	14	30.94		32.24	
30	13	2.16	8	17.28		18.01	
31	13	3.26	18	58.68		61.14	
32	13	1.03	52	53.56	0.499	58.73	
33	13	3.26	2	6.52	1.042	8.15	
34	13	2.26	26	58.76		61.23	
35	13	3.62	7	25.34	1.578	29.99	
36	13	4.22	7	29.54		30.62	
37	13	1.18	11	12.98	0.499	14.48	
38	13	4.46	2	8.92	1.042	9.30	
39	13	5.08	8	40.64		42.18	
40	13	2.66	10	26.60		27.51	
41	13	3.66	4	14.64		15.26	
42	13	2.66	4	10.64		11.05	
43	13	1.56	11	17.16		17.88	
44	13	1.18	11	12.98		13.30	
45	13	2.51	12	30.12		31.39	
46	13	1.09	4	4.36		4.52	
47	13	1.36	18	24.48		25.58	
48	13	2.31	18	41.58		43.33	
49	13	1.51	18	27.18		28.33	
50	13	2.61	8	20.88		21.76	
51	13	2.06	5	10.30		10.74	
52	13	2.16	2	4.32		4.51	
53	13	1.41	4	5.64		5.86	
54	13	2.56	8	20.48		21.21	
55	13	2.36	1	2.36		2.46	
56	13	2.46	2	4.92		5.13	
57	13	2.66	2	5.32		5.56	
58	13	3.59	7	25.13		26.11	
59	13	0.66	32	21.12		22.00	
60	13	1.10	36	39.60		41.24	
61	13	1.56	36	56.16		58.28	
62	13	0.88	164	144.32	0.499	149.81	
63	13	0.88	220	193.60		200.61	
64	13	4.42	82	362.44	1.578	370.63	
65	13	4.42	110	486.20		505.23	
66	13	11.00	24	264.00	1.042	270.09	
67	13	15.58	36	560.88		585.39	
68	13	2.18	90	196.40		204.57	
69	13	2.16	110	237.60		247.56	
70	13	2.21	90	198.90		207.26	
71	13	2.21	110	243.10		253.31	
72	13	17.33	40	693.20		722.32	
73	13	14.88	75	1116.00		1162.88	
74	13	3.63	74	268.62	0.499	274.05	
75	13	3.71	76	281.96	1.042	289.81	
76	13	2.68	74	198.32	0.499	203.87	
77	13	2.76	76	209.76	1.042	215.57	
78	13	18.19	40	727.60		756.16	
79	13	0.98	300	294.00	0.499	300.71	
80	13	6.10	4	24.40		25.18	
81	13	3.06	12	36.72		38.33	
82	13	8.96	23	206.08	2.226	210.74	
83	13	10.01	18	180.18		187.06	
84	13	4.58	23	107.34	1.578	111.50	
85	13	6.52	16	104.32		108.20	
86	13	1.26	48	57.96		60.16	
87	13	2.91	36	104.76		108.32	
88	13	32.68	9	294.12		306.39	
89	13	2.56	67	171.52		178.48	
90	13	2.26	1	2.26		2.37	
91	13	1.96	3	5.88		6.28	
TOTAL						12,022.12 kg = 12.03 tgh	

KINGDOM OF LAOS  
 THE AGRICULTURAL DEVELOPMENT PROJECT  
**THA NOON PUMPING STATION  
 INTAKE AND SUMP (2)**

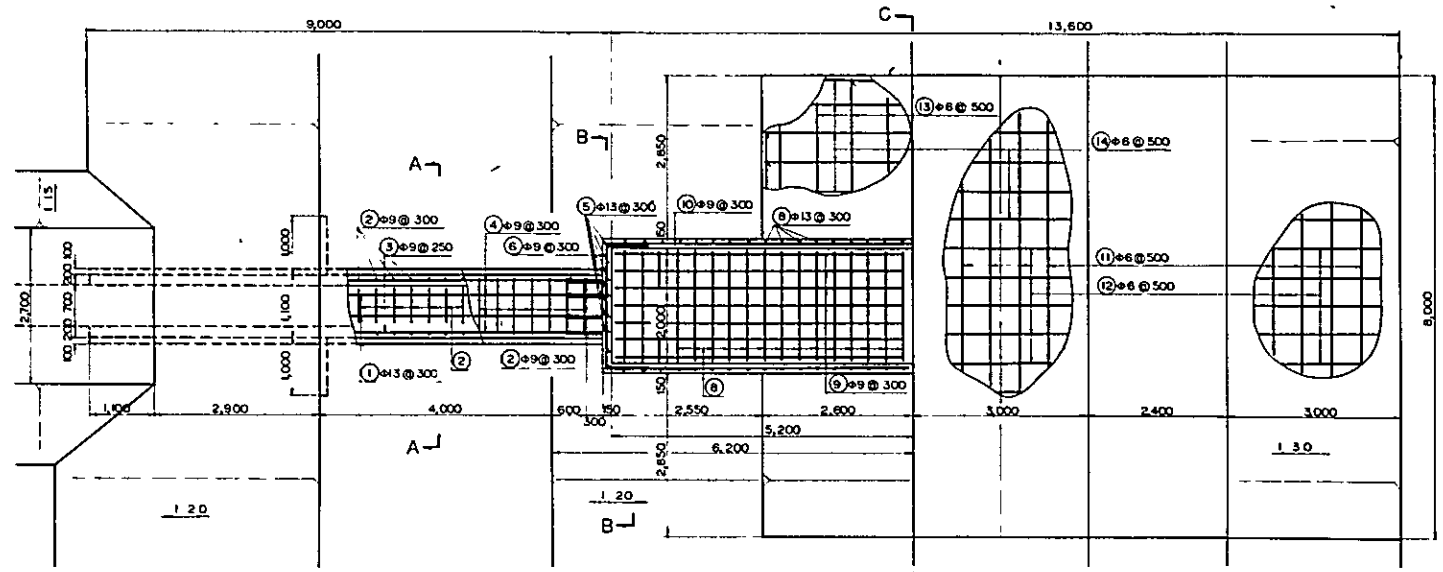
DRAWN: *[Signature]* SUBMITTED: \_\_\_\_\_  
 CHECKED: *[Signature]* APPROVED: \_\_\_\_\_  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 10610 MARCH 1966 1006



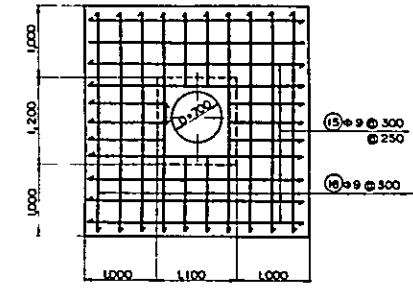
PROFILE



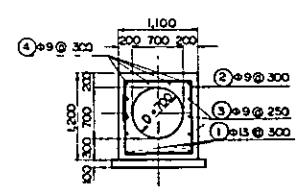
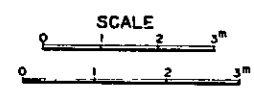
SECTION C-C



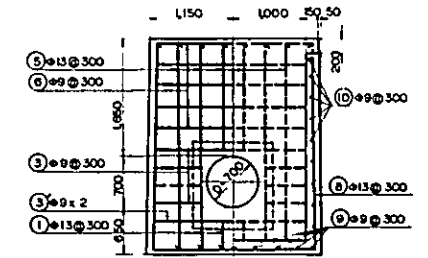
PLAN



SECTION D-D



SECTION A-A

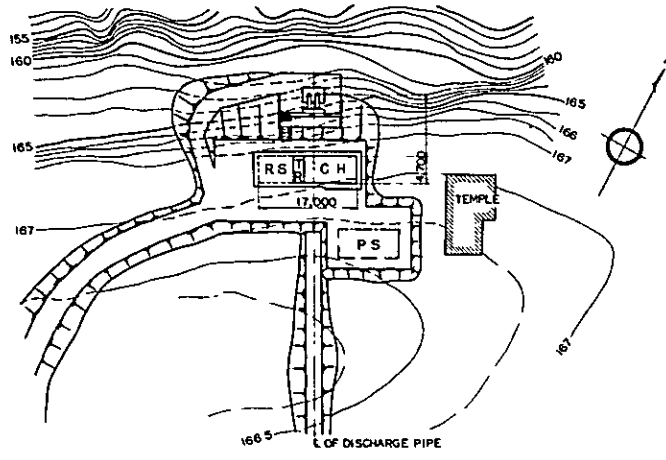


SECTION B-B

TABLE OF REINFORCEMENT BARS

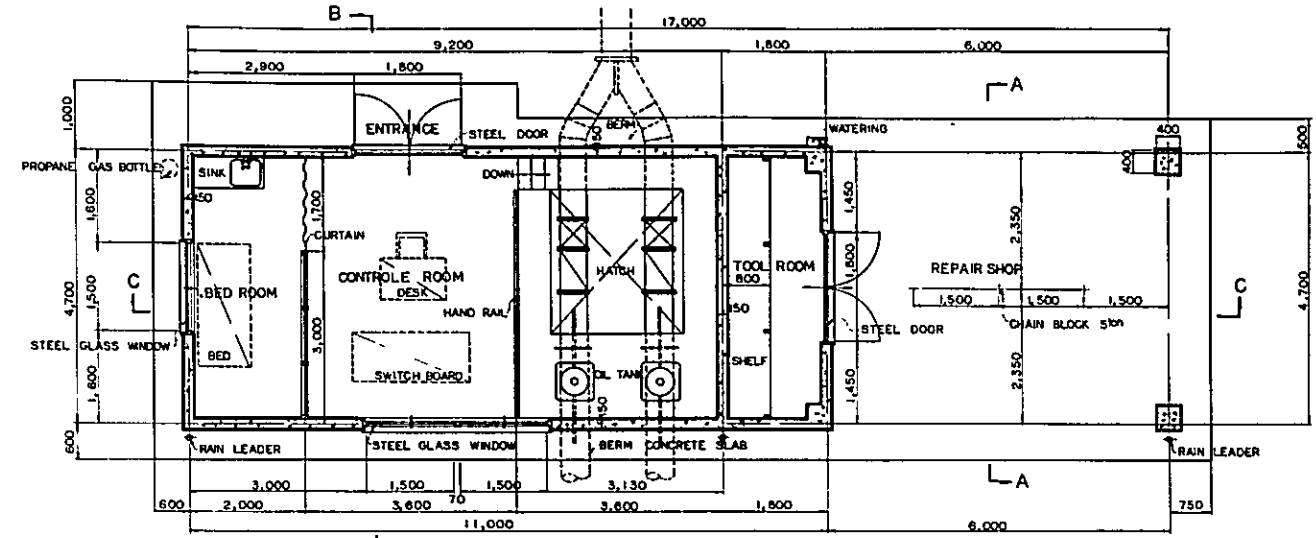
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1	10.55	4	38.80	1.042	38.4		10	6.45	2	12.92	0.499	8.5	
2	4.28	30	17.84	0.499	9.9		10	2.90	16	48.40	-	23.2	
3	10.76	6	64.56	-	32.3		11	6.44	17	143.48	0.220	32.7	
3'	1.28	2	2.56	-	1.3		12	9.84	5	48.20	-	10.6	
4	9.66	4	38.64	-	19.3		13	2.87	10	28.70	-	6.4	
5	2.46	4	9.84	1.042	10.3		14	12.36	12	148.32	-	32.7	
5'	3.11	2	6.22	-	6.5		15	1.78	10	17.80	0.499	8.9	
6	3.08	5	15.40	0.499	9.2		16	3.18	6	19.08	-	9.6	
7	0.78	4	3.12	-	1.6		16	1.78	8	14.24	-	7.1	
8	13.56	18	92.88	1.042	96.6		16	3.18	6	19.08	-	9.6	
9	6.36	9	57.24	0.499	28.6		TOTAL					400.5 kg = 0.4 ton	

KINGDOM OF LAOS  
 THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
 THA NGON PUMPING STATION  
 OUTLET OF DISCHARGE PIPE  
 DRAWN *[Signature]* SUBMITTED  
 CHECKED *[Signature]* APPROVED  
 SHERREAS TECHNICAL COOPERATION AGENCY  
 1007  
 TORITO MARCH 1989



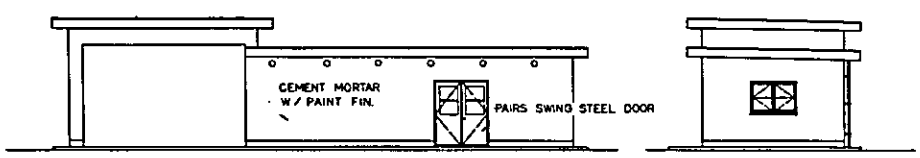
PLOT PLAN

SCALE  
0 10 20 30m



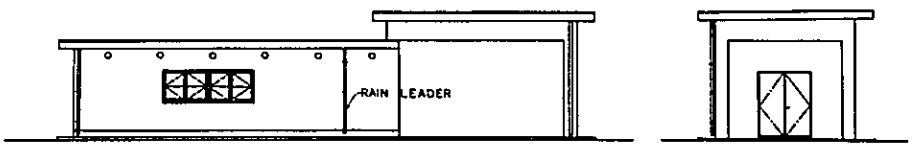
PLAN

SCALE 5m  
FLOOR AREA 79.9 m<sup>2</sup>  
17,000 x 4,700 = 79.9



FRONT

RIGHT SIDE



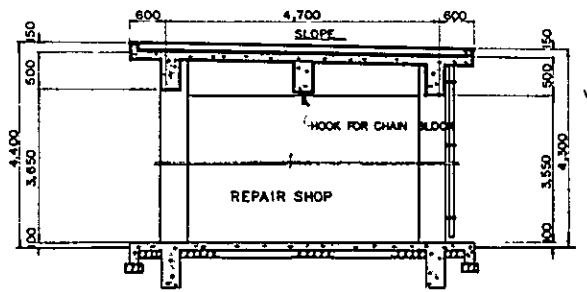
REAR SIDE

LEFT SIDE

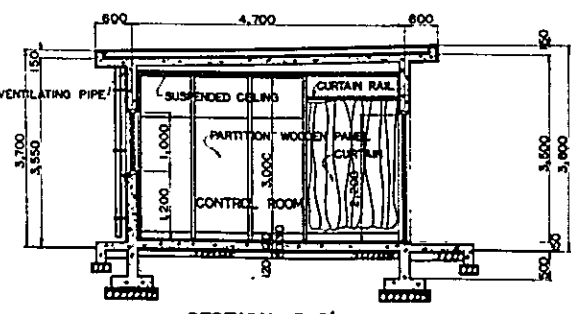
ELEVATIONS

SCALE 5m

EXTERIOR FINISH SCHEDULE					
ROOF	WATER PROOF CEMENT MORTAR (METAL TROWEL)	BERM	CONCRETE SLAB (METAL TROWEL)		
EXTERNAL WALL	CEMENT MORTAR				
SKIRTING	CEMENT MORTAR (METAL TROWEL)				
INTERIOR FINISH SCHEDULE					
	FLOOR	SKIRTING	WALL	CEILING	REMARKS
CONTROL ROOM	CEMENT MORTAR (METAL TROWEL)	CEMENT MORTAR (METAL TROWEL)	CEMENT MORTAR W/ PAINT	PLYWOOD SHEATHING W/ PAINT	PARTITION, HANDRAIL
BED ROOM	CEMENT MORTAR (METAL TROWEL)	CEMENT MORTAR (METAL TROWEL)	CEMENT MORTAR W/ PAINT	PLYWOOD SHEATHING W/ PAINT	SINK, CURTAIN
TOOL ROOM	CEMENT MORTAR (METAL TROWEL)	CEMENT MORTAR	CEMENT MORTAR	CEMENT MORTAR	SHELF OF TOOLS
REPAIR SHOP	CONCRETE SLAB MONOLITHIC FIN.	CEMENT MORTAR	CEMENT MORTAR	CEMENT MORTAR	HOOK FOR CHAIN BLOCK

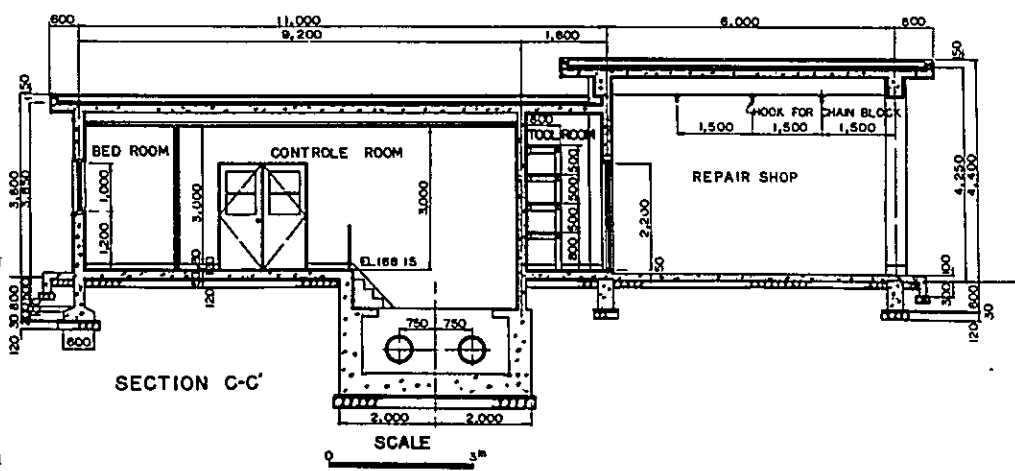


SECTION A-A'



SECTION B-B'

SCALE 3m



SECTION C-C'

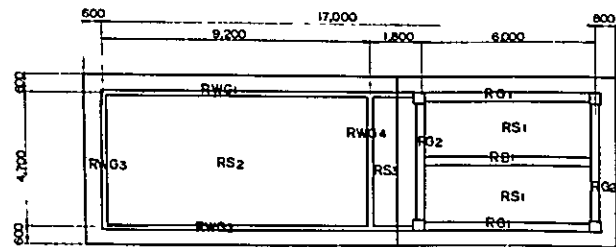
SCALE 3m

SOIL BEARING CAPACITY . PERMANENT 10 TON/M<sup>2</sup>

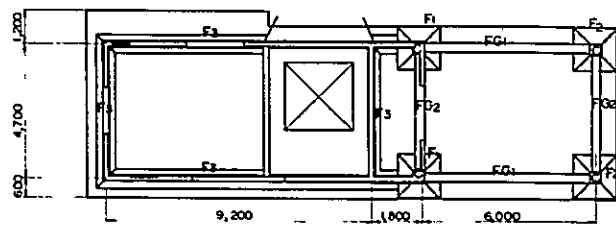
KINGDOM OF LAOS  
THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
THA NGON PUMPING STATION  
CONTROL HOUSE  
SUPER STRUCTURE (I)

DRAWN: *[Signature]* SUBMITTED  
CHECKED: *[Signature]* APPROVED: *[Signature]*  
OVERSEAS TECHNICAL COOPERATION AGENCY  
TOKYO MARCH 1982

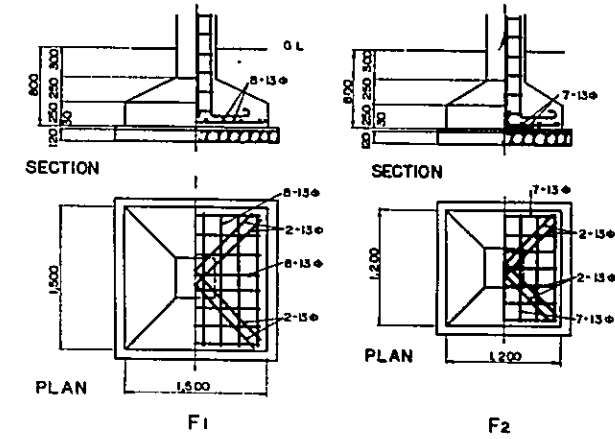
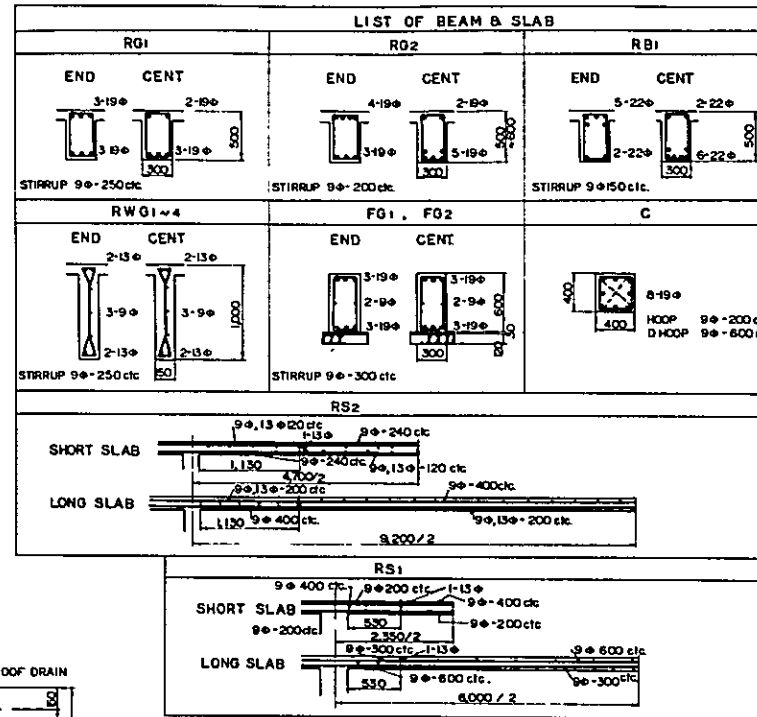
1008



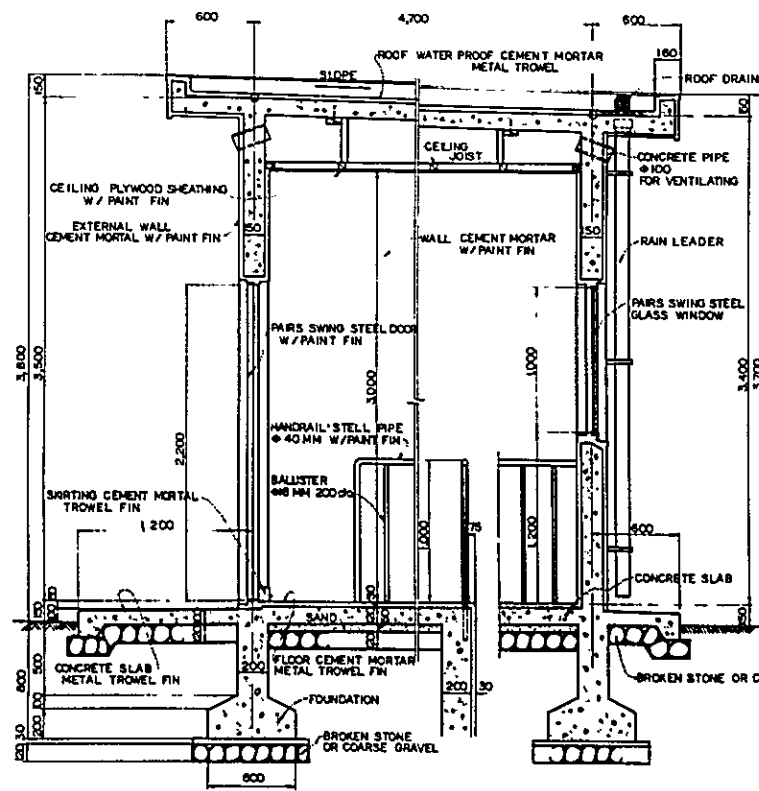
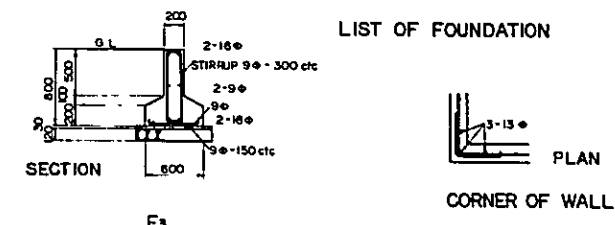
ROOF CONSTRUCTION PLAN



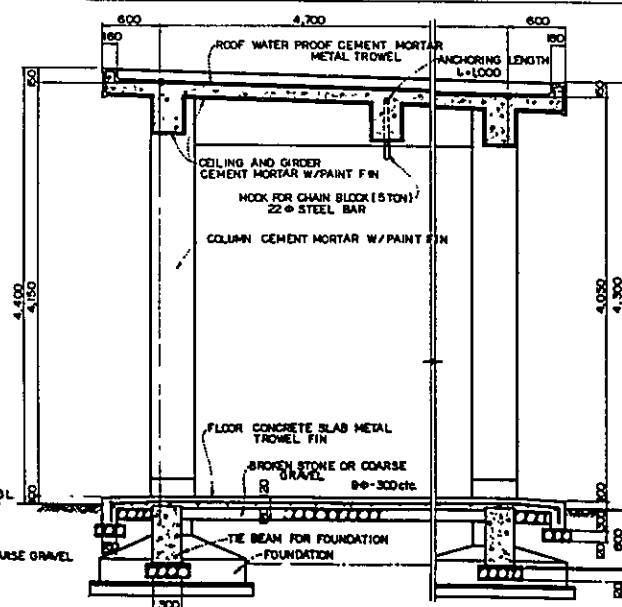
FOUNDATION PLAN



LIST OF FOUNDATION

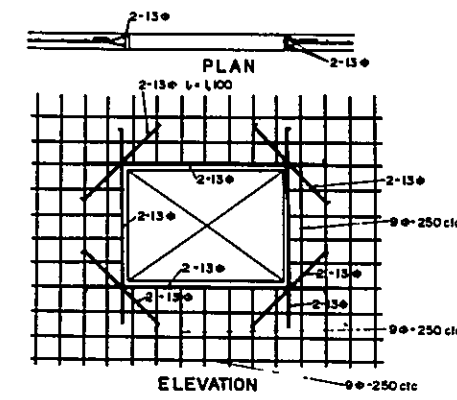
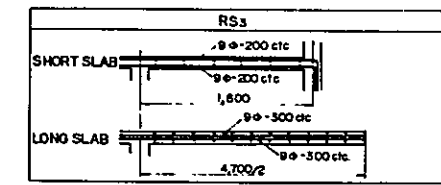


SECTIONAL DETAIL OF CONTROL HOUSE SCALE



SECTIONAL DETAIL OF REPAIR SHOP

SCALE




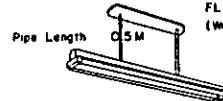

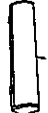
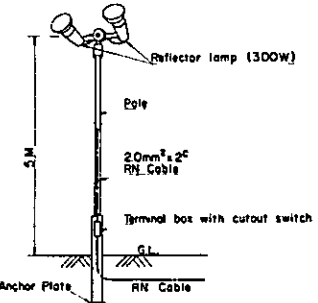
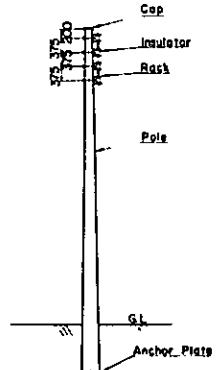
WALL ELEVATION

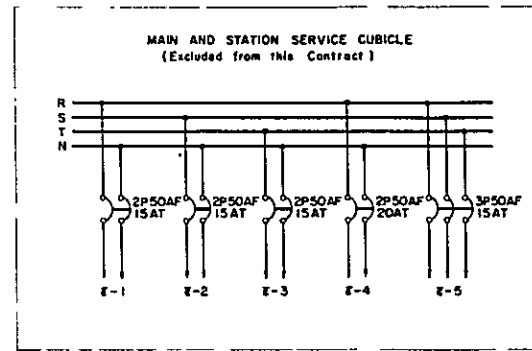
NOTES	
1	SOIL BEARING CAPACITY ALLOWABLE UNIT STRESS PERMANENT 10 TON / M <sup>2</sup> TEMPORARY 20 TON / M <sup>2</sup>
2	CONCRETE ALLOWABLE COMPRESSIVE UNIT STRESS PERMANENT 135 kg / CM <sup>2</sup> MIXING RATIO OF CONCRETE CEMENT 1 SAND 2 GRAVEL 4
3	REINFORCEMENT BAR ALLOWABLE TENSILE UNIT STRESS PERMANENT 1,600 kg / CM <sup>2</sup>

KINGDOM OF LAOS  
 THA NOON AGRICULTURAL DEVELOPMENT PROJECT  
 THA NOON PUMPING STATION  
 CONTROL HOUSE  
 SUPER STRUCTURE (2)

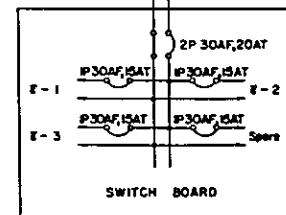
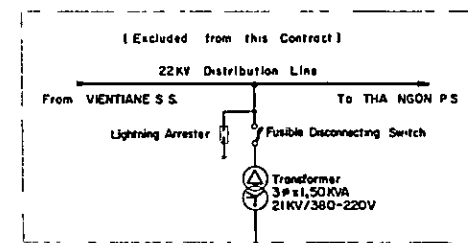
DRAWN: [Signature] SUBMITTED  
 CHECKED: [Signature] APPROVED  
 SUDREAS TECHNICAL COOPERATION AGENCY  
 T0110 MARCH 1989 1009



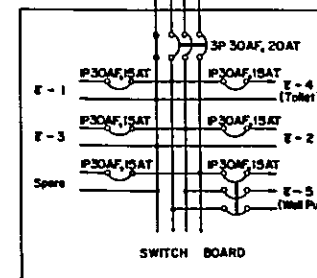
<p><b>TYPE (A)</b> FLUORESCENT LIGHTING FIXTURE</p> <p>-1 FL 40Wx2 15 Nos -2 FL 40Wx1 4 Nos -3 FL 20W x2 3 Nos -4 FL 20W x1 3 Nos</p>  <p>CEILING MOUNTED TYPE</p> <p>-1 Control House, Office, Quarters -2 Control House, Office, Quarters -3 Quarters -4 Office, Quarters</p>	<p><b>TYPE (B)</b> FLUORESCENT LIGHTING FIXTURE</p> <p>FL 40Wx2 6 Nos (Weather Proof)</p> <p>Pipe Length 0.5M</p>  <p>PIPE PENDANT TYPE</p> <p>Control House, Office</p>
<p><b>TYPE (C)</b> FLUORESCENT LIGHTING FIXTURE</p> <p>FL 20Wx1 5 Nos (Weather Proof)</p>  <p>CEILING MOUNTED TYPE</p> <p>Office, Quarters, Toilet</p>	<p><b>TYPE (D)</b> FLUORESCENT LIGHTING FIXTURE</p> <p>FL 20Wx1 2 Nos (Weather Proof)</p> <p>Plastic Cover</p>  <p>BRACKET TYPE</p> <p>Control House, Office</p>
<p><b>TYPE (E)</b> INCANDESCENT LIGHTING FIXTURE</p> <p>5 Sets</p>  <p>Control House, Slide Gate of Pondage</p>	<p><b>STANDARD POLE FOR LOW TENSION OVERHEAD LINE</b></p> 



**CONTROL HOUSE**



**QUARTERS**



**OFFICE**

SYMBOL	DESCRIPTION
	Fluorescent lighting fixture with two lamps
	Fluorescent lighting fixture with one lamp
	Bracket type fluorescent lighting fixture (vertically mounted)
	Reflector type fluorescent lighting fixture
	Convenience outlet, 15A, 3-pin well mounted (weather proof type)
	Duplicate convenience outlet, 15A, 3-pin well mounted
	Tumbler switch, 10A, 1-way (weather proof type), (110A, 3-way)
	Safety switch 3P, 15A, 380V (weather proof type)
	Power cubicle of switch board
	Concealed piping in the ceiling or wall
	Concealed piping in the floor
	Concealed cabling in the ceiling or wall ("F" cable)
	Exposed cabling ("F" cable)
	Under ground cabling ("RN" cable)

**MOUNTING HEIGHT**

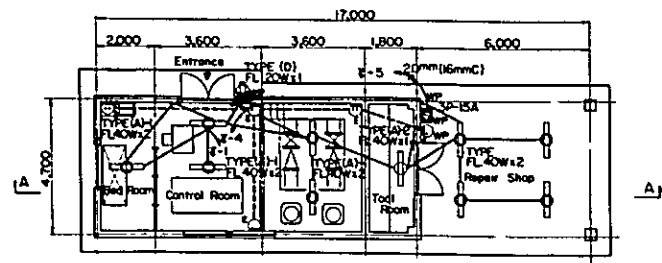
Mounting height is as follows, unless otherwise noted on the drawings

- (1) Convenience outlet (wall mounted type) : 30 cm above the floor to the top
- (2) Safety switch : 140 cm above the floor to the top
- (3) Tumbler switch : 120 cm above the floor to the top
- (4) Bracket light : 250 cm above the floor to the top
- (5) Switch Board : 200 cm above the floor to the top

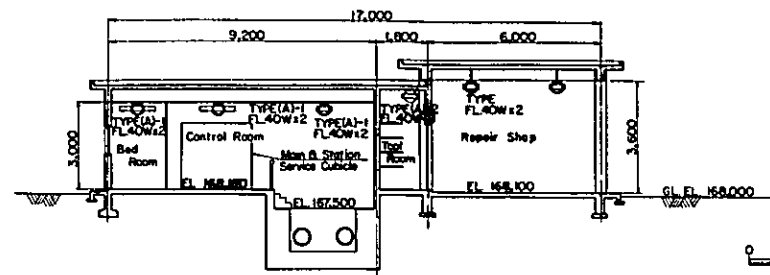
**NOTE :**

- (1) All conduit piping shall be rigid steel conduit
- (2) Conduit pipe and wire shall be 16mm Ø and 16mm, 2-wire respectively, unless otherwise noted on the drawings
- (3) "F" cable shall be 600V, 16mm, 3-core, polyvinyl chloride insulated, polyvinyl chloride sheathed, flat type cable, unless otherwise noted on the drawings. Where 1-core of them shall be used for earth of appliances
- (4) "RN" cable shall be 600V, 2.0mm, 2-core, rubber insulated, chloroprene sheathed cable, unless otherwise noted on the drawings.
- (5) Rated voltage of lighting fixtures shall be 220V, 50Hz, single phase

<b>KINGDOM OF LAOS</b> THA NGON AGRICULTURAL DEVELOPMENT PROJECT THA NGON PUMPING STATION CONTROL HOUSE SUPER STRUCTURE (3)	
DRAWN <i>H. Phommavong</i>	SUBMITTED
CHECKED <i>S. Khamthoum</i>	APPROVED
OVERSEAS TECHNICAL COOPERATION AGENCY	
TOKYO	MARCA 1969

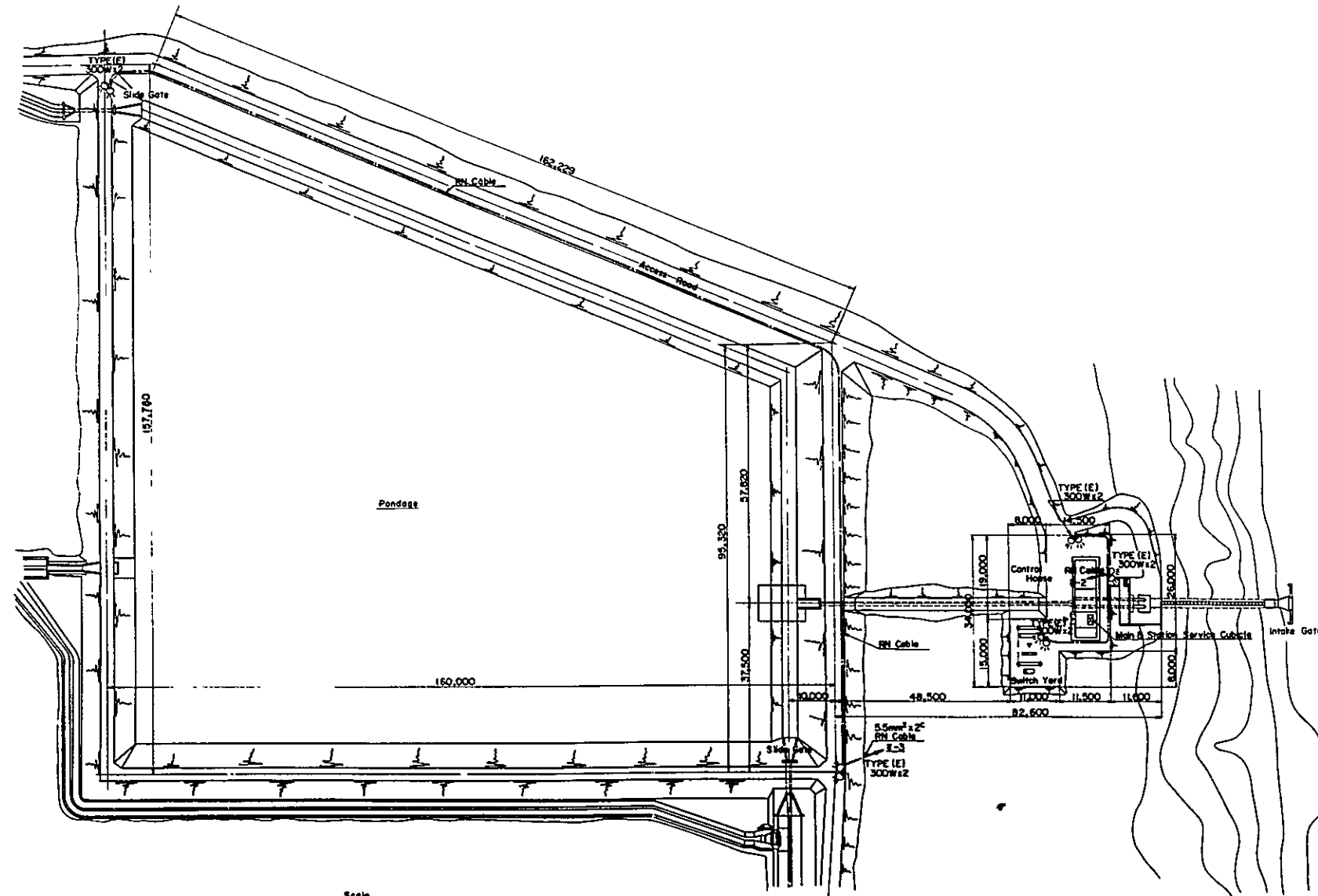


CONTROL HOUSE



A-A SECTION

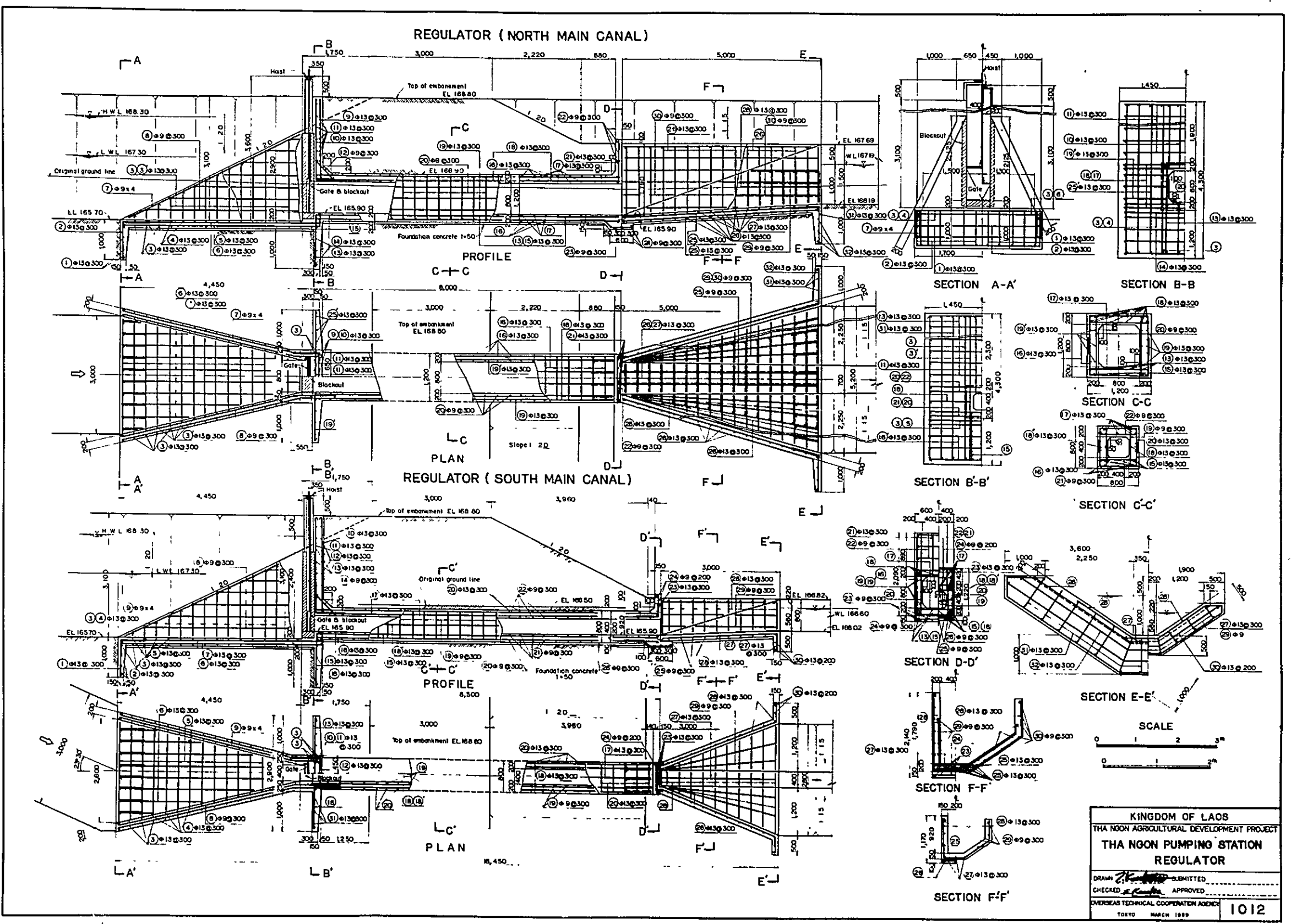
Scale  
0 1 2 3 4 5 (M)



Scale  
0 5 10 15 20 25 (M)

GENERAL PLAN

KINGDOM OF LAOS	
THA NGON AGRICULTURAL DEVELOPMENT PROJECT	
THA NGON PUMPING STATION	
CONTROL HOUSE	
SUPER STRUCTURE (4)	
DRAWN <i>A. Phomm</i>	SUBMITTED
CHECKED <i>S. Kongsak</i>	APPROVED
OVERSEAS TECHNICAL COOPERATION AGENCY	
TOKYO MARCH 1968	1011



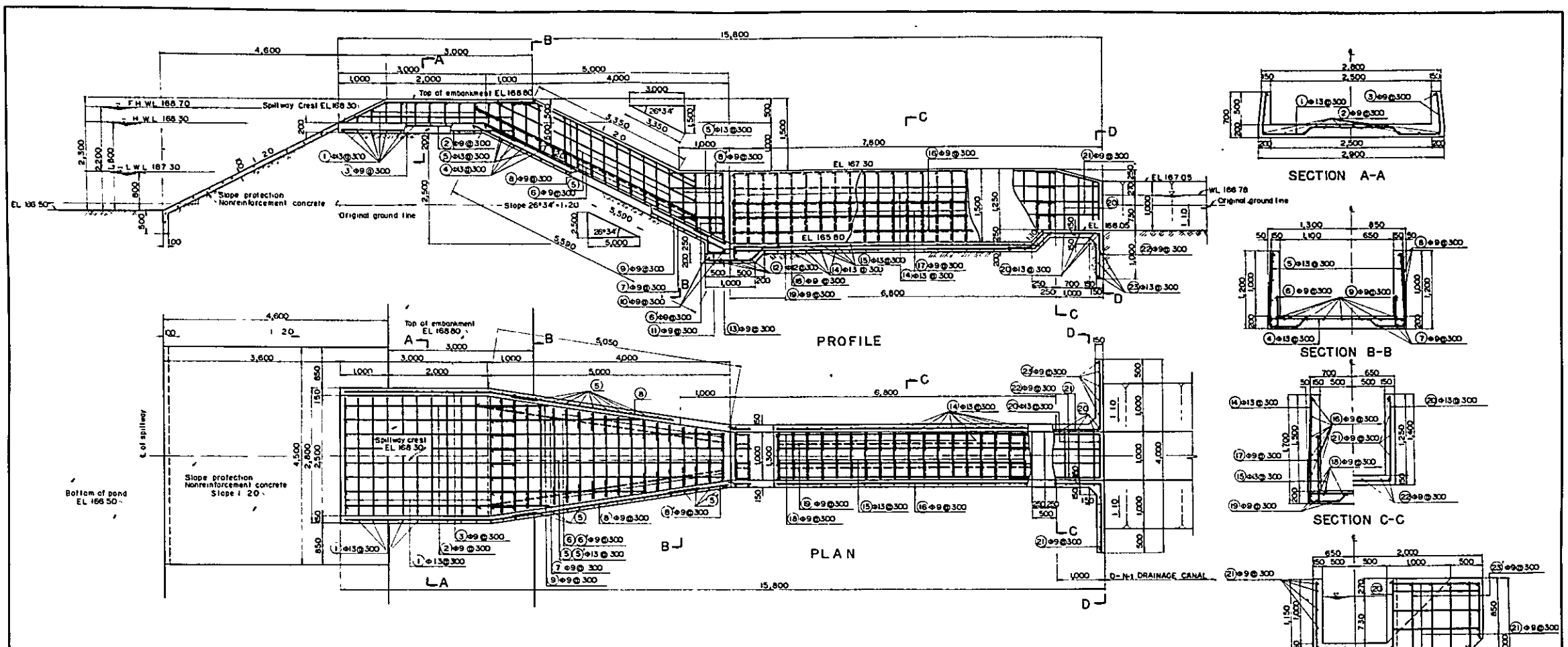


TABLE OF REINFORCEMENT BARS

REGULATOR OF NORTH MAIN CANAL								REGULATOR OF SOUTH MAIN CANAL								SPILLWAY							
MARK	Ø	LENGTH	NOS	T LENGTH	U WEIGHT	T WEIGHT	REMARKS	MARK	Ø	LENGTH	NOS	T LENGTH	U WEIGHT	T WEIGHT	REMARKS	MARK	Ø	LENGTH	NOS	T LENGTH	U WEIGHT	T WEIGHT	REMARKS
1	13	356	3	1068	1042	113		25	13	516	12	6192	1042	646		17	13	972	10	9720	1042	1013	
2	14	141	14	2534		254		26	14	356	17	9350		975		18	14	1082	2	2164		226	
3	17	501	17	8517		898		27	14	146	17	2482		259		19	9	088	58	5104	0499	235	
4	17	436	4	1744		182		28	14	186	34	6324		659		20	13	198	58	11368	1042	1185	
5	17	356	2	712		75		29	9	528	6	4224	0499	211		21	9	088	29	2552	0499	128	
6	17	166	17	2822		294		30	9	538	12	6456		323		22	9	088	2	356		28	
7	17	251	16	4016		419		31	13	181	14	2531	1042	284		23	9	088	29	2552		128	
8	17	146	1	146		16		32	13	1012	3	3036		317		24	9	088	2	356		28	
9	17	356	2	712		75		18	14	872	12	10464		1091		25	13	131	5	740	1042	78	
10	17	550	4	2200		230		TOTAL 1,672.9 kg = 1.7 ton								26	9	088	2	356		28	
11	17	550	4	2200		230		REGULATOR OF SOUTH MAIN CANAL								27	13	356	3	1088	1042	112	
12	17	271	6	1626		170		1	13	181	12	2172	1042	227		28	9	088	3	284		14	
13	17	526	4	2104		220		2	14	316	3	948		99		29	9	088	16	11936	0499	398	
14	17	536	4	2144		224		3	14	401	17	7837		817		30	9	088	42	4956		248	
15	17	271	6	1626		170		4	14	288	2	572		60		31	9	088	6	2208	0499	111	
16	17	656	4	2624	0499	131		5	14	436	4	1744		182		32	9	088	6	2208	0499	111	
17	17	288	28	8064		403		6	14	436	4	1744		182		33	9	088	2	356		28	
18	17	226	4	904	1042	95		7	14	166	32	5512		554		34	13	436	6	2616	1042	273	
19	17	298	4	1184		124		8	14	211	17	3587		374		35	13	436	2	740		78	
20	17	356	6	2136		223		9	14	286	2	572		60		36	13	436	2	740		78	
21	17	146	2	292		31		10	14	331	2	1082		111		37	13	436	3	1088	1042	112	
22	17	266	4	1064		111		11	14	341	4	2164		226		38	13	436	11	3841		380	
23	17	656	4	2624	0499	131		12	14	436	4	1744		182		39	9	088	6	2208	0499	111	
24	17	226	4	904	1042	95		13	14	436	4	1744		182		40	9	088	2	356		28	
25	17	298	4	1184		124		14	14	436	4	1744		182		41	13	436	6	2616	1042	273	
26	17	356	6	2136		223		15	14	436	4	1744		182		42	13	436	2	740		78	
27	17	146	2	292		31		16	14	436	4	1744		182		43	13	436	2	740		78	
28	17	266	4	1064		111		17	14	436	4	1744		182		44	13	436	2	740		78	
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30	17	226	4	904	1042	95		19	14	436	4	1744		182		46	13	436	2	740		78	
31	17	298	4	1184		124		20	14	436	4	1744		182		47	13	436	2	740		78	
32	17	356	6	2136		223		21	14	436	4	1744		182		48	13	436	2	740		78	
33	17	146	2	292		31		22	14	436	4	1744		182		49	13	436	2	740		78	
34	17	266	4	1064		111		23	14	436	4	1744		182		50	13	436	2	740		78	
35	17	656	4	2624	0499	131		24	14	436	4	1744		182		51	13	436	2	740		78	
36	17	226	4	904	1042	95		25	14	436	4	1744		182		52	13	436	2	740		78	
37	17	298	4	1184		124		26	14	436	4	1744		182		53	13	436	2	740		78	
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56	17	356	6	2136		223		45	14	436	4	1744		182		72	13	436	2	740		78	
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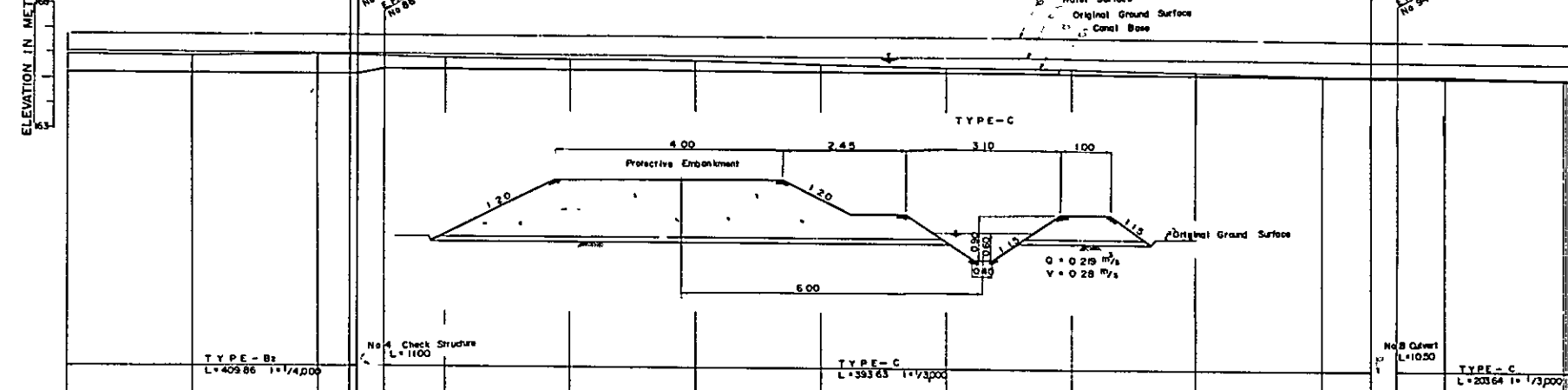
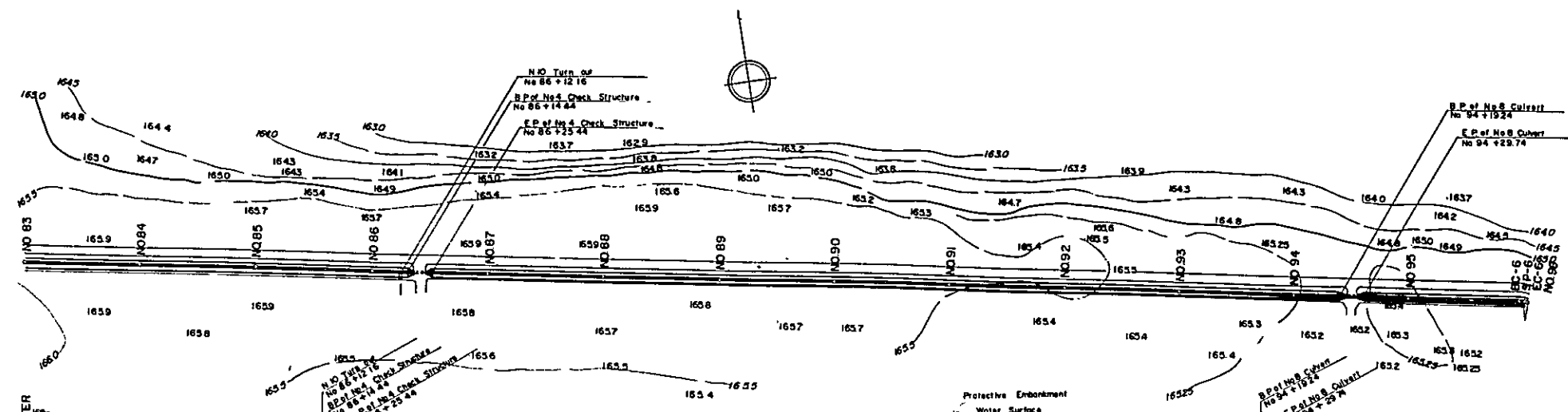




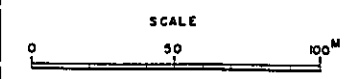






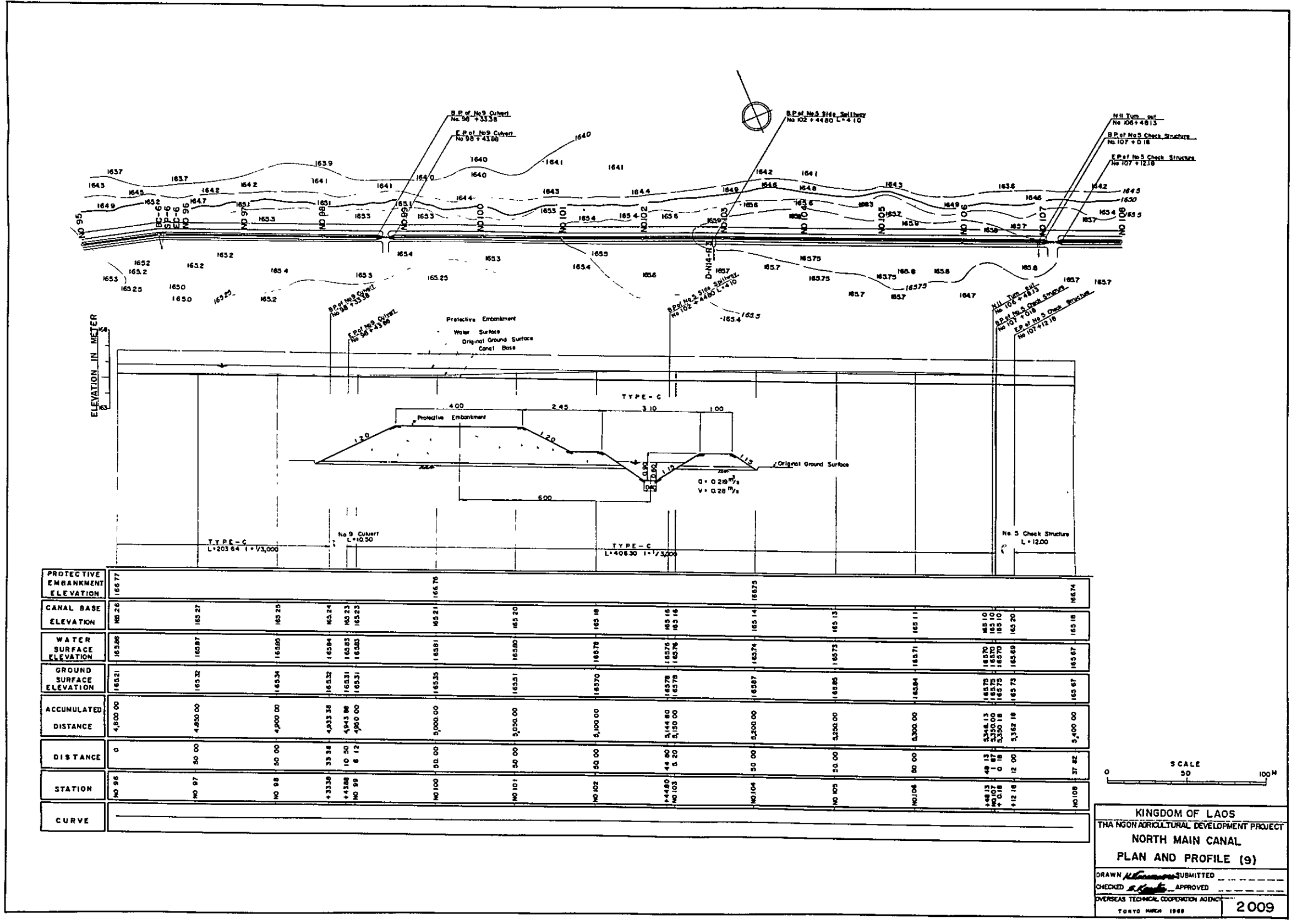


STATION	NO 84	NO 85	NO 86	NO 87	NO 88	NO 89	NO 90	NO 91	NO 92	NO 93	NO 94	NO 95
PROTECTIVE EMBANKMENT ELEVATION	16670	16670	16670	16670	16670	16670	16670	16670	16670	16670	16670	16670
CANAL BASE ELEVATION	165.26	165.26	165.23	165.23	165.42	165.41	165.39	165.37	165.36	165.34	165.32	165.30
WATER SURFACE ELEVATION	166.09	166.07	166.06	166.05	166.02	166.01	165.99	165.97	165.96	165.94	165.92	165.90
GROUND SURFACE ELEVATION	165.92	165.91	165.89	165.87	165.87	165.77	165.87	165.53	165.51	165.42	165.30	165.30
ACCUMULATED DISTANCE	0	4,230.00	4,300.00	4,312.45	4,323.44	4,350.00	4,400.00	4,450.00	4,550.00	4,600.00	4,700.00	4,750.00
DISTANCE	0	50.00	50.00	12.45	11.00	24.56	50.00	50.00	50.00	50.00	50.00	50.00



KINGDOM OF LAOS  
 THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
 NORTH MAIN CANAL  
 PLAN AND PROFILE (B)

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 CHECKED: *[Signature]* APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 2 008



PROTECTIVE EMBANKMENT ELEVATION	166.77													166.76			166.74							
CANAL BASE ELEVATION	165.26	165.27	165.25	165.24	165.23	165.23	165.23	165.21	165.20	165.18	165.16	165.16	165.14	165.13	165.11	165.10	165.10	165.10	165.09	165.08	165.07	165.06		
WATER SURFACE ELEVATION	165.26	165.27	165.25	165.24	165.23	165.23	165.21	165.20	165.18	165.16	165.16	165.14	165.13	165.11	165.10	165.10	165.10	165.09	165.08	165.07	165.06	165.05	165.04	
GROUND SURFACE ELEVATION	165.21	165.22	165.24	165.23	165.23	165.23	165.21	165.20	165.18	165.16	165.16	165.14	165.13	165.11	165.10	165.10	165.10	165.09	165.08	165.07	165.06	165.05	165.04	
ACCUMULATED DISTANCE	0.00	4.200	8.400	12.600	16.800	21.000	25.200	29.400	33.600	37.800	42.000	46.200	50.400	54.600	58.800	63.000	67.200	71.400	75.600	79.800	84.000	88.200	92.400	
DISTANCE	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	
STATION	No. 96	No. 97	No. 98	+3336	+4336	No. 99	No. 100	No. 101	No. 102	+4480	No. 103	No. 104	No. 105	No. 106	+4812	+4812	+4812	+1218	No. 108					
CURVE																								

SCALE  
0 50 100M

KINGDOM OF LAOS  
THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
NORTH MAIN CANAL  
PLAN AND PROFILE (9)

DRAWN *[Signature]* SUBMITTED  
CHECKED *[Signature]* APPROVED  
OVERSEAS TECHNICAL COOPERATION AGENCY  
TOKYO MARCH 1989

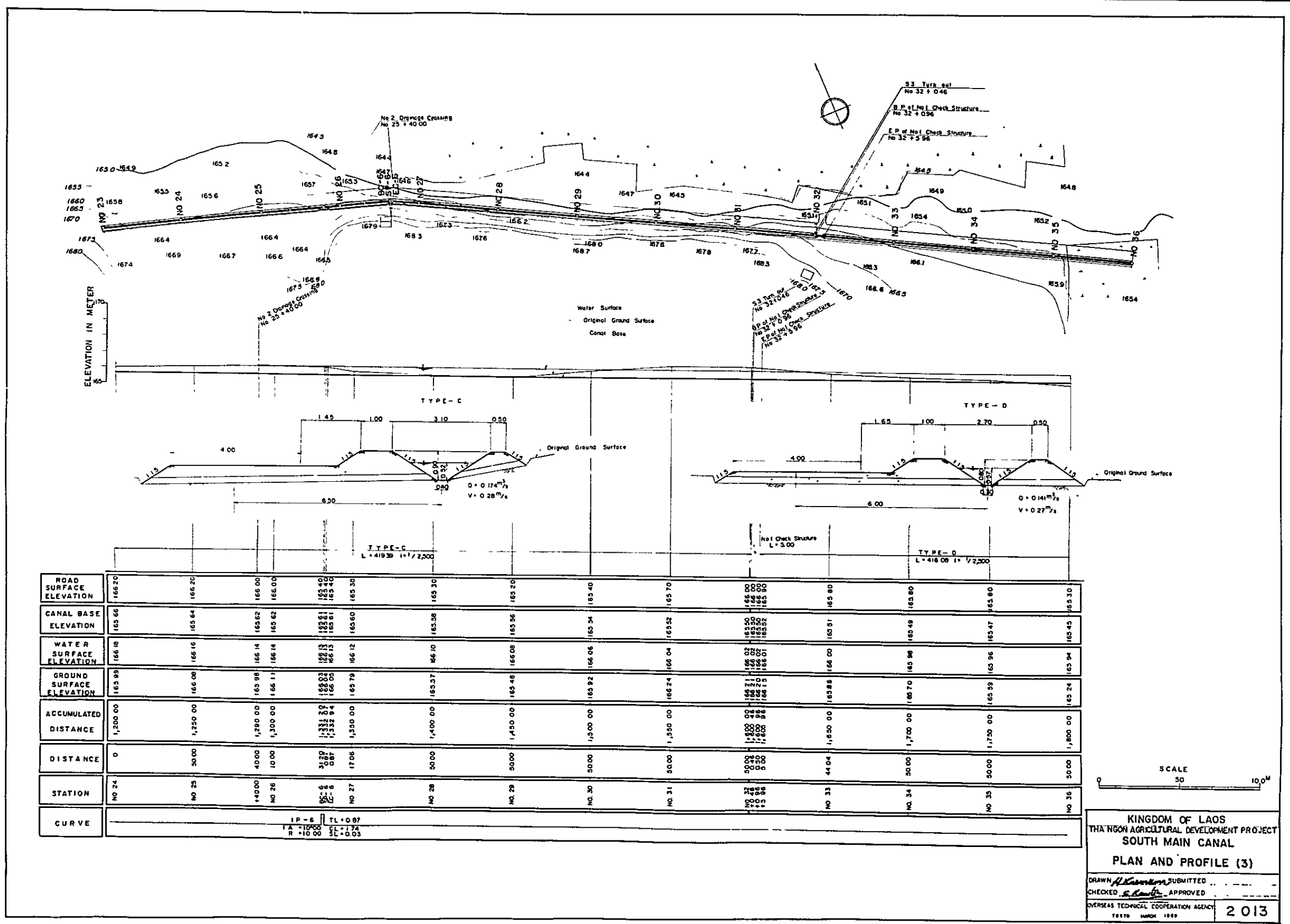
2009



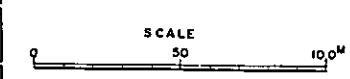








ROAD SURFACE ELEVATION	16620	16620	16600	16600	16540	16540	16530	16520	16540	16570	16500	16500	16580	16580	16530
CANAL BASE ELEVATION	16566	16564	16562	16562	16561	16561	16558	16556	16554	16552	16550	16552	16548	16547	16545
WATER SURFACE ELEVATION	16618	16616	16614	16614	16613	16613	16610	16608	16606	16604	16602	16601	16598	16596	16594
GROUND SURFACE ELEVATION	16599	16600	16596	16611	16602	16605	16592	16582	16592	16624	16621	16620	16670	16659	16624
ACCUMULATED DISTANCE	0	1,200.00	1,290.00	1,300.00	1,332.89	1,332.94	1,400.00	1,450.00	1,500.00	1,550.00	1,600.00	1,600.00	1,650.00	1,700.00	1,800.00
DISTANCE	0	30.00	40.00	10.00	32.89	0.05	30.00	50.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
STATION	NO 24	NO 25	+40.00	NO 26	32.89	0.05	NO 27	NO 28	NO 29	NO 30	NO 31	NO 32	NO 33	NO 34	NO 35
CURVE	IP = 6 TL = 0.87 LA = 10.00 CL = 1.74 R = 10.00 SL = 0.03														

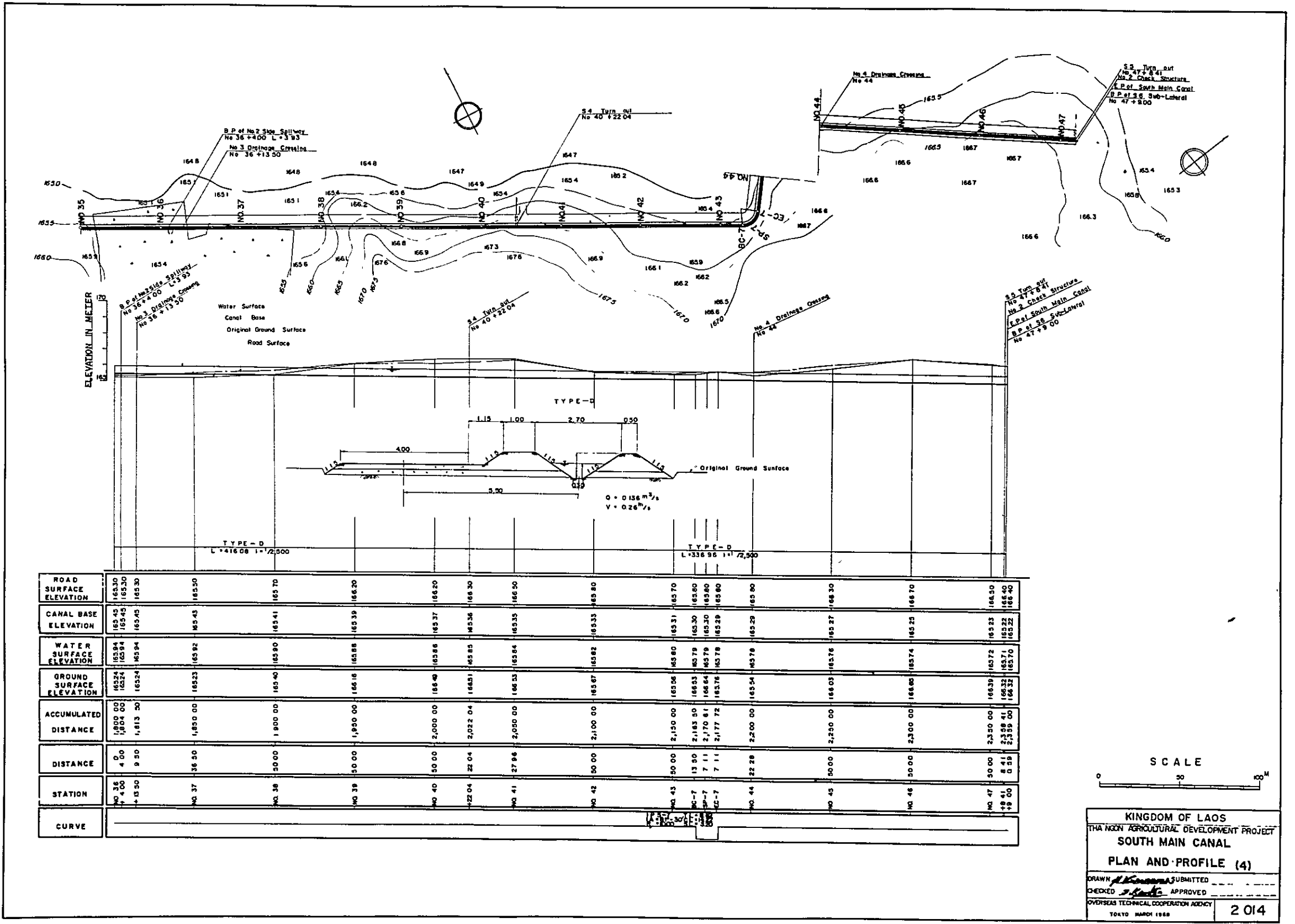


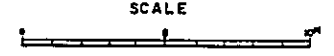
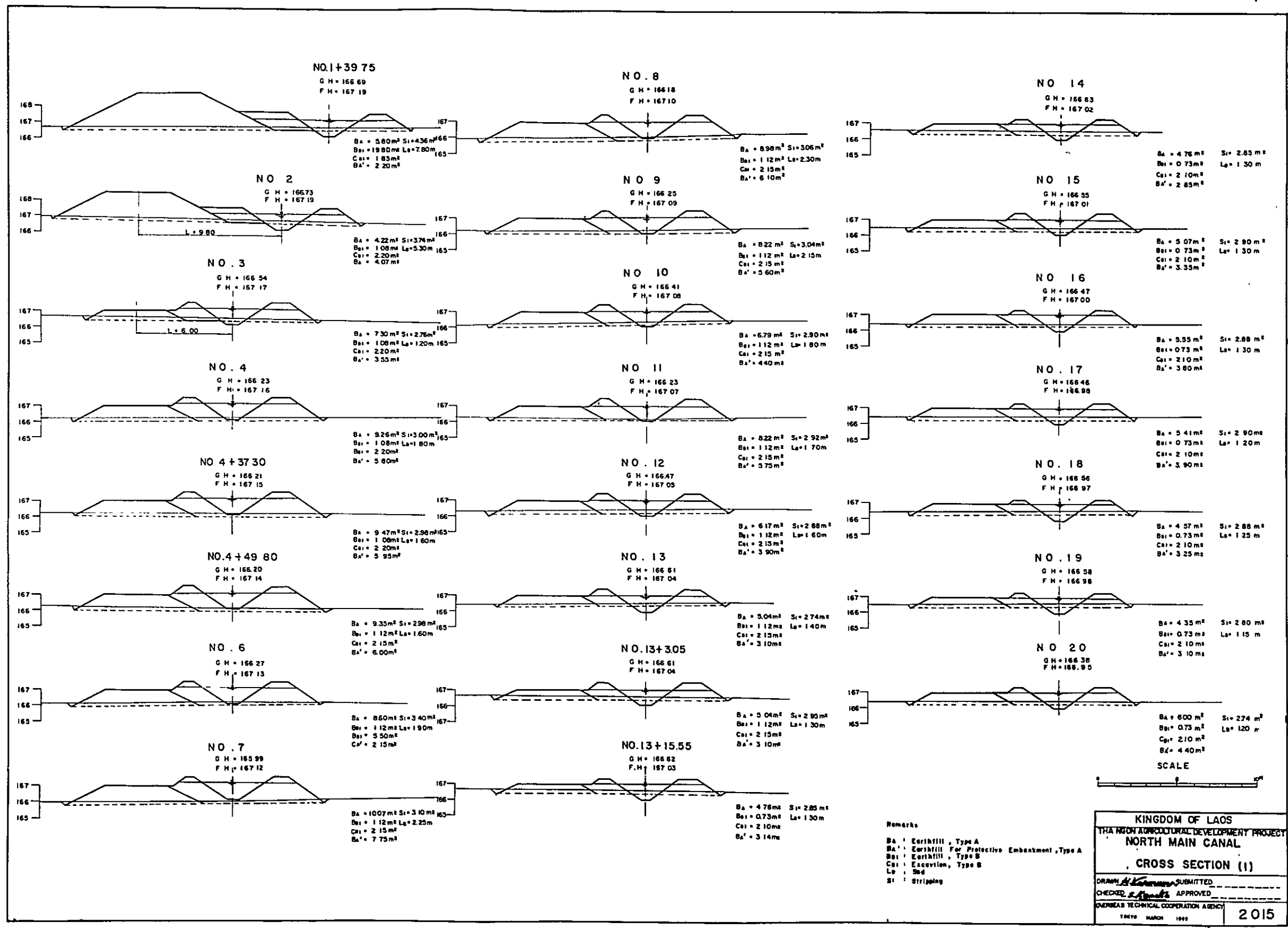
KINGDOM OF LAOS  
 THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
 SOUTH MAIN CANAL  
 PLAN AND PROFILE (3)

DRAWN *A. Kavan* SUBMITTED  
 CHECKED *S. Kavan* APPROVED

OVERSEAS TECHNICAL COOPERATION AGENCY  
 19810 MARCH 1989

2 013



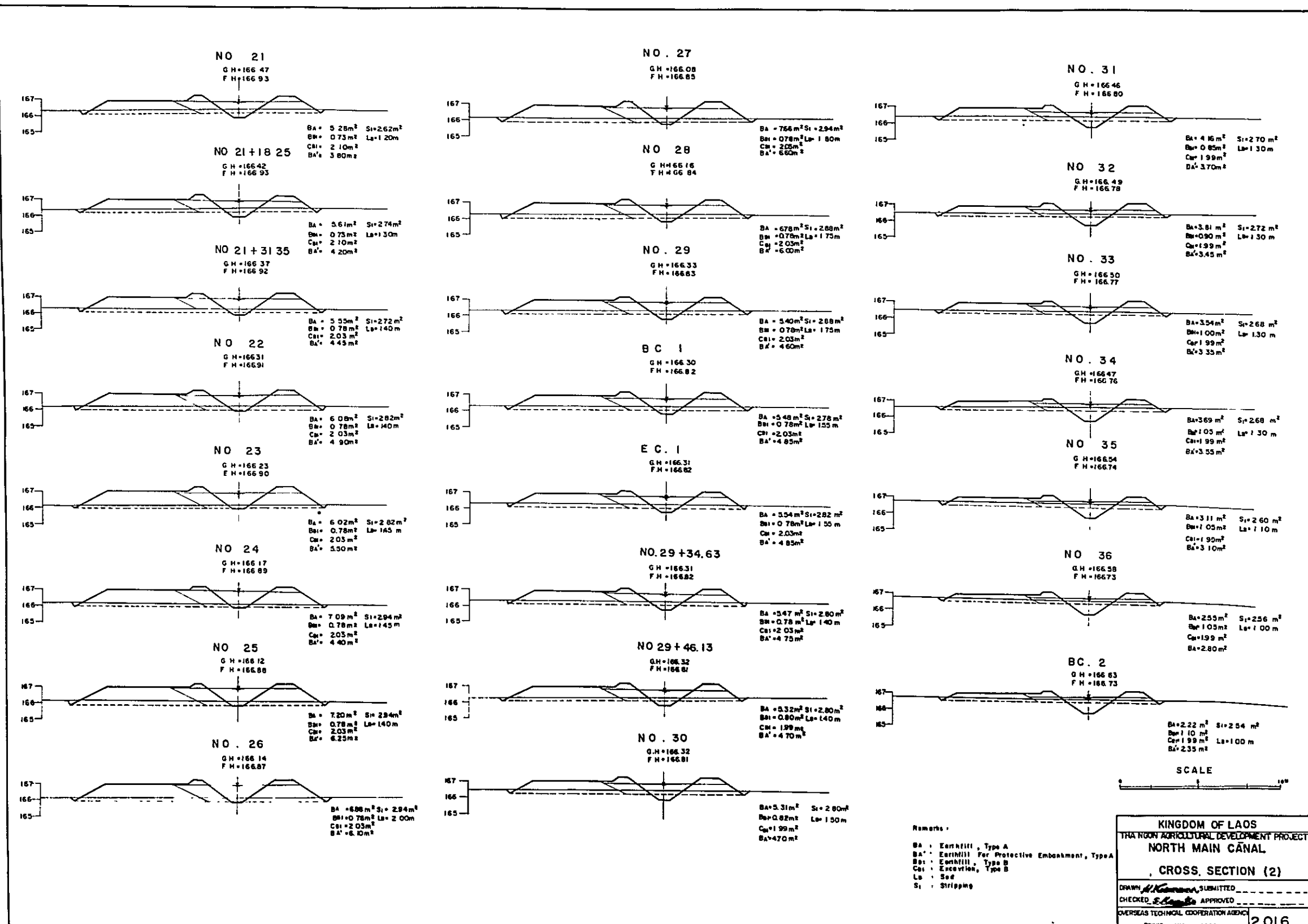


Remarks  
 BA : Earthfill, Type A  
 BA' : Earthfill For Protective Embankment, Type A  
 BA'' : Earthfill, Type B  
 CA : Excavation, Type B  
 LA : Sed  
 ST : Stripping

KINGDOM OF LAOS  
 THE HIGH AGRICULTURAL DEVELOPMENT PROJECT  
 NORTH MAIN CANAL  
 CROSS SECTION (1)

DRAWN *[Signature]* SUBMITTED  
 CHECKED *[Signature]* APPROVED

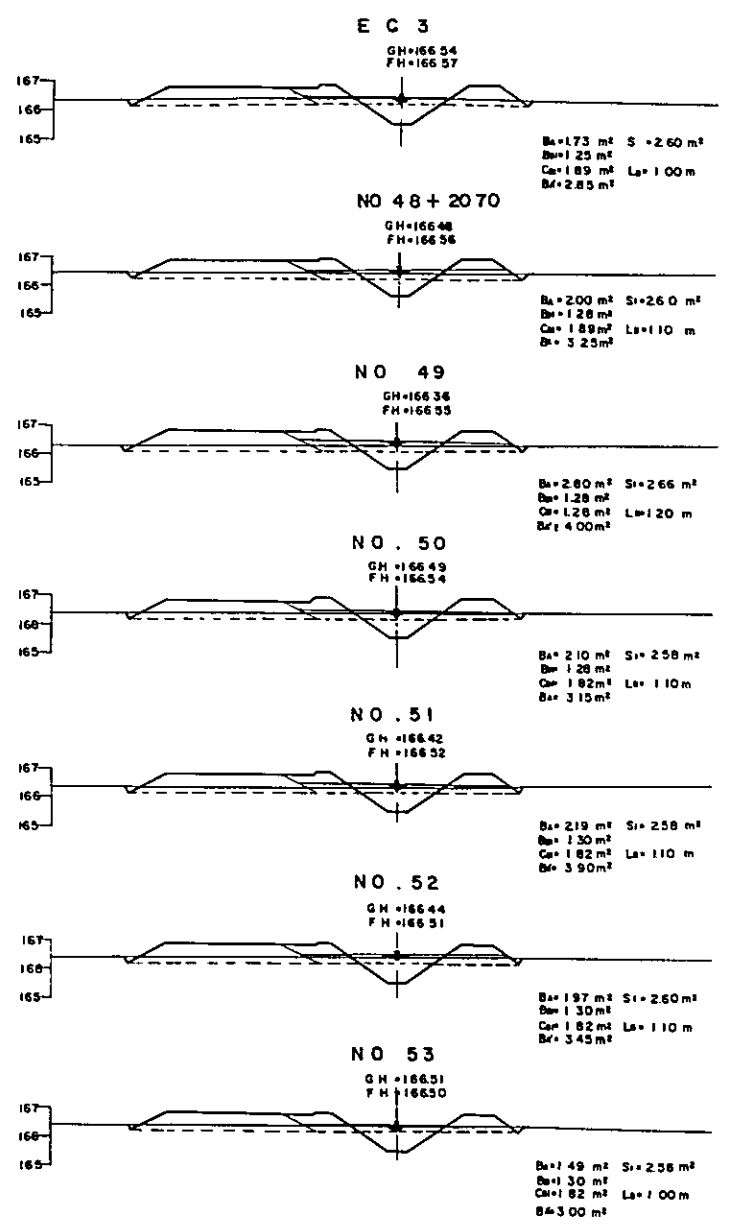
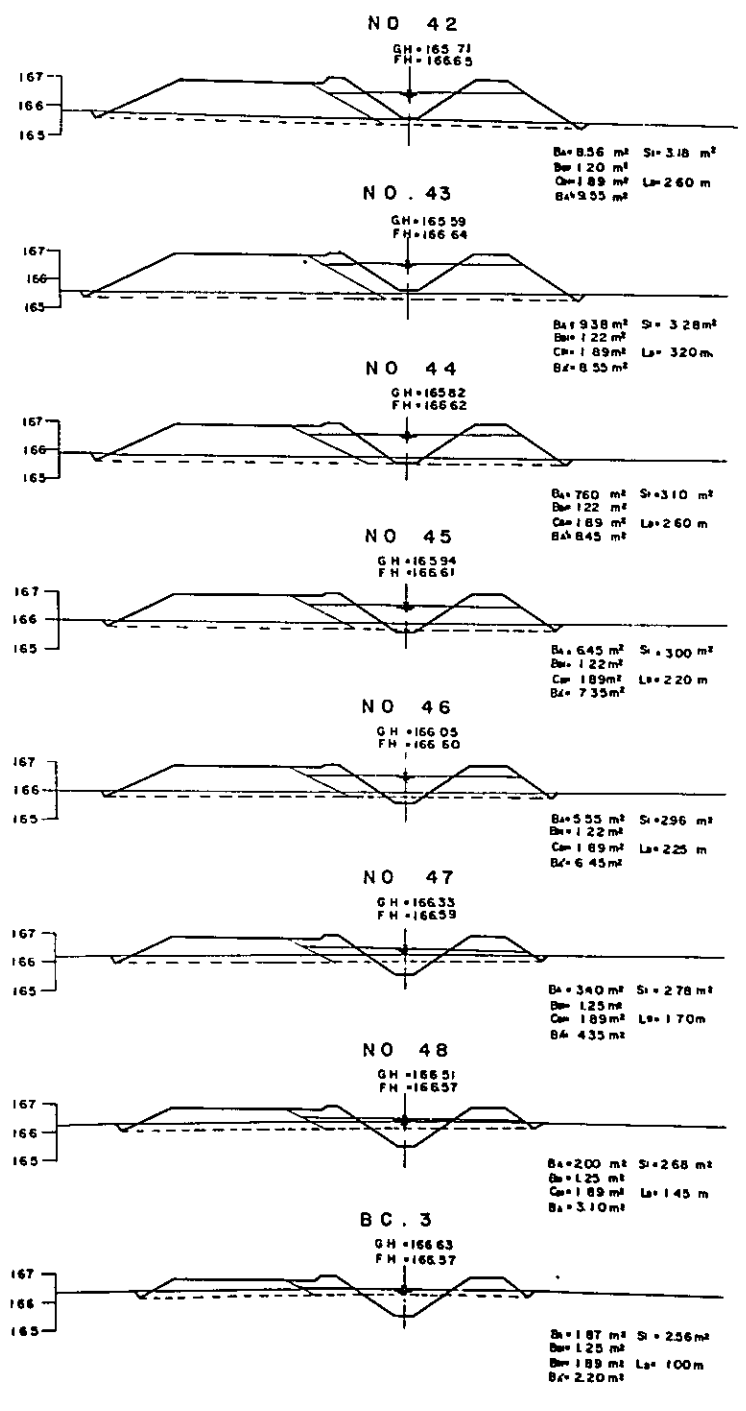
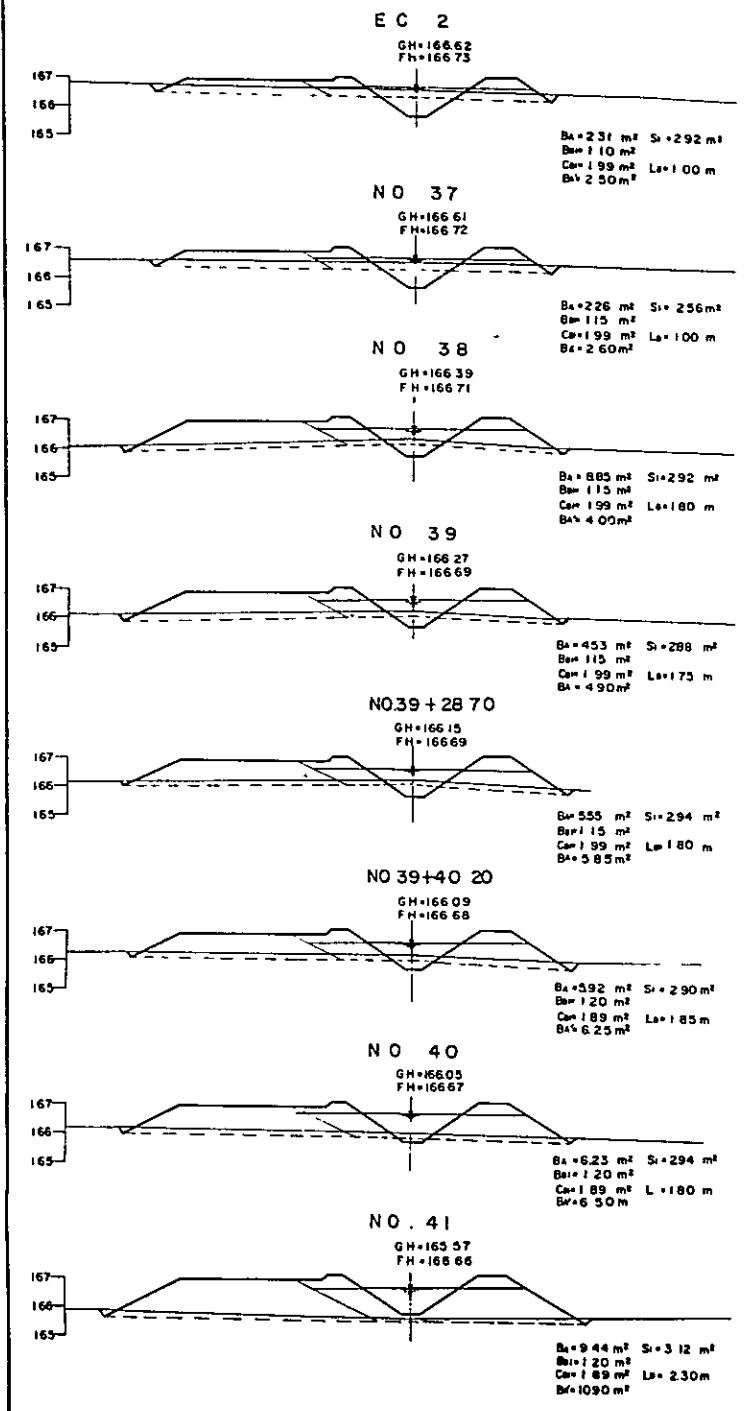
OVERSEAS TECHNICAL COOPERATION AGENCY  
 2015



Remarks:  
 BA : Embankment, Type A  
 BA' : Embankment For Protective Embankment, Type A  
 SB : Excavation, Type B  
 CB : Excavation, Type B  
 Ls : Soil  
 Si : Stripping

KINGDOM OF LAOS  
 THA HOON AGRICULTURAL DEVELOPMENT PROJECT  
 NORTH MAIN CANAL  
 CROSS SECTION (2)

DRAWN: *[Signature]* SUBMITTED: \_\_\_\_\_  
 CHECKED: *[Signature]* APPROVED: \_\_\_\_\_  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO, JAPAN 1989 2016

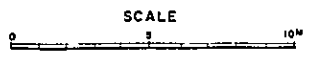
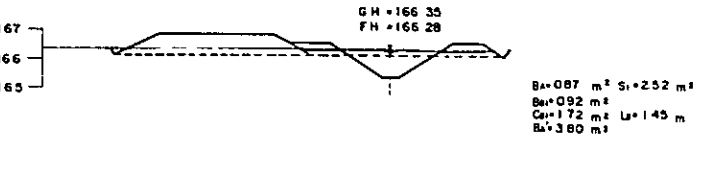
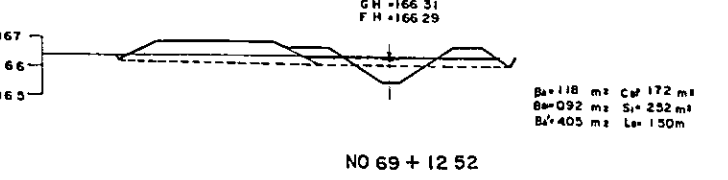
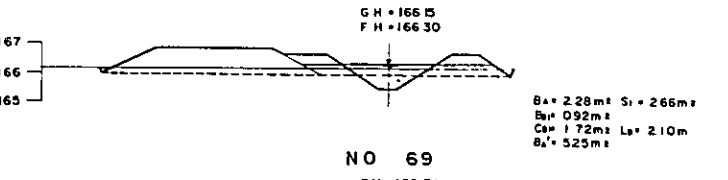
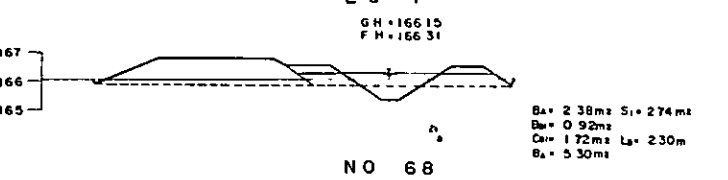
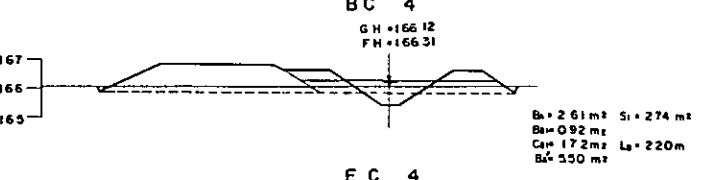
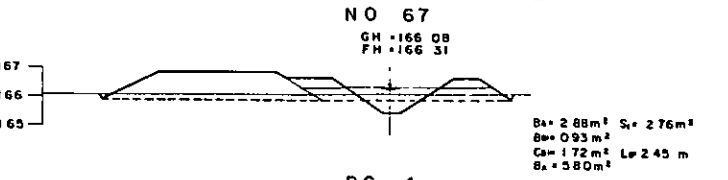
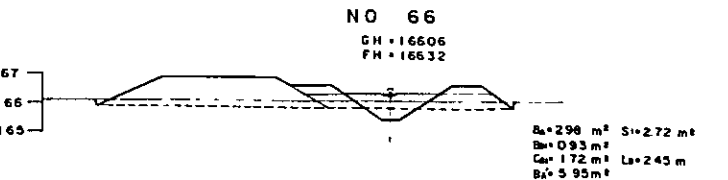
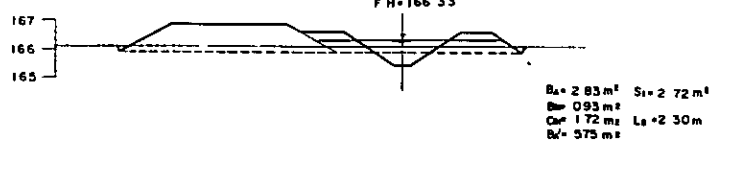
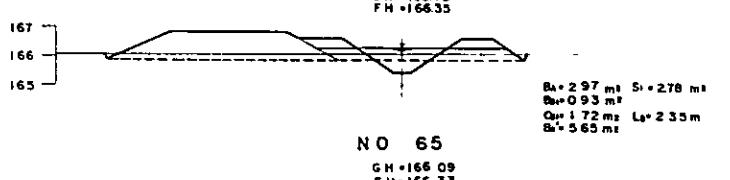
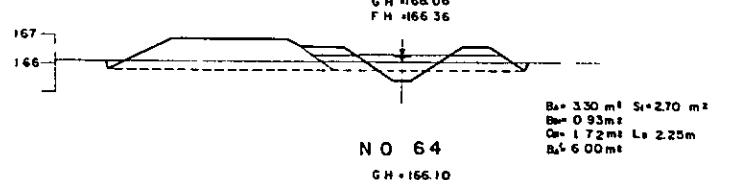
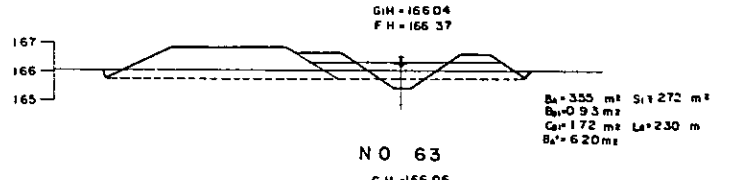
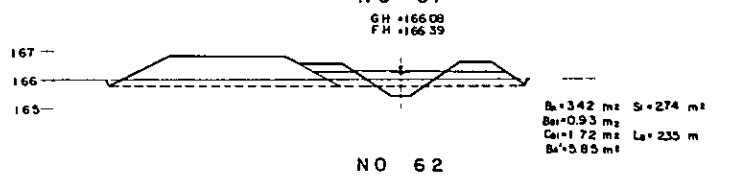
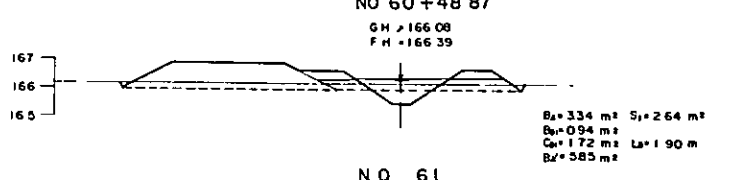
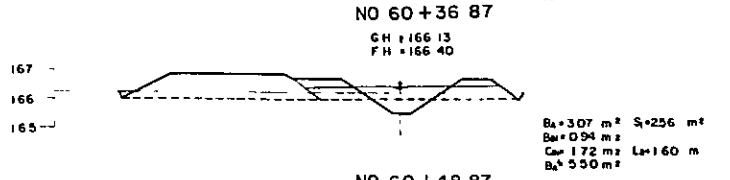
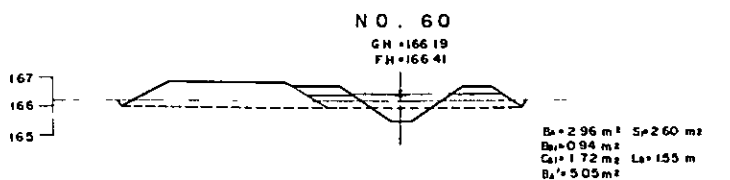
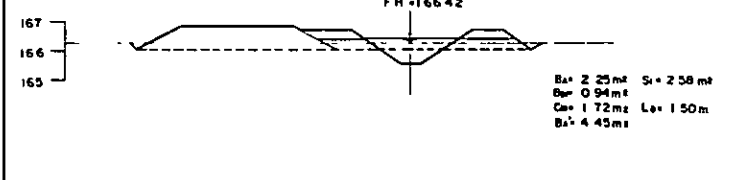
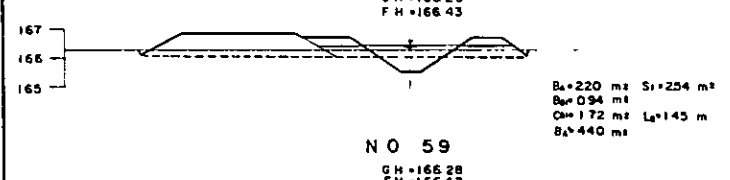
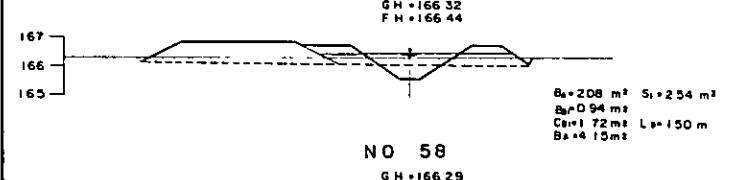
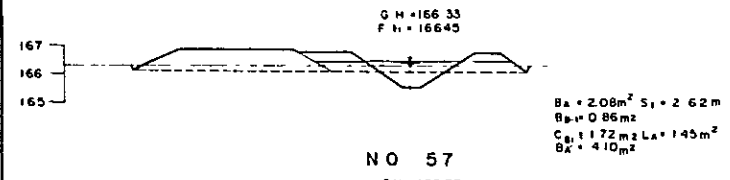
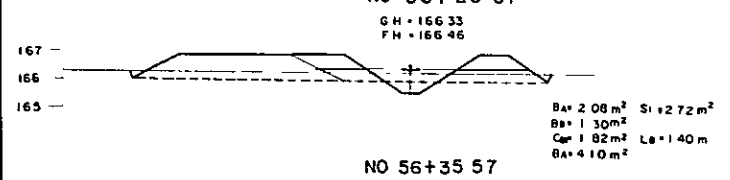
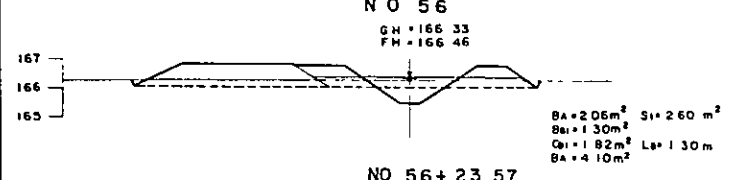
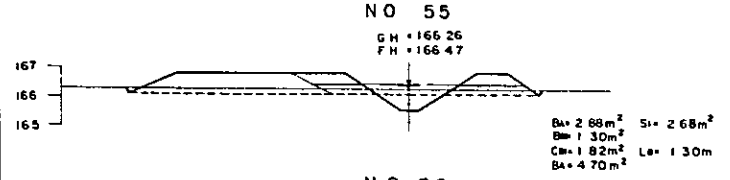
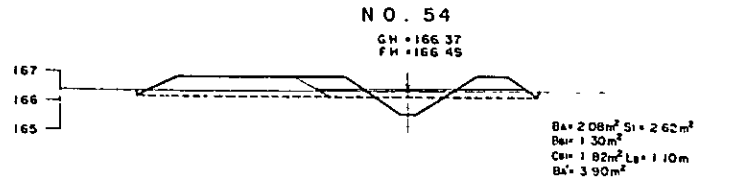


Remarks:  
 BA Earthfill, Type A  
 BA' Earthfill For Protective Embankment, Type A  
 BA'' Earthfill, Type B  
 CA Excavation, Type B  
 LA Sed  
 S1 Striping

SCALE  
0 5 10 m

KINGDOM OF LAOS  
 THE NONG AGRICULTURAL DEVELOPMENT PROJECT  
 NORTH MAIN CANAL  
 CROSS SECTION (3)

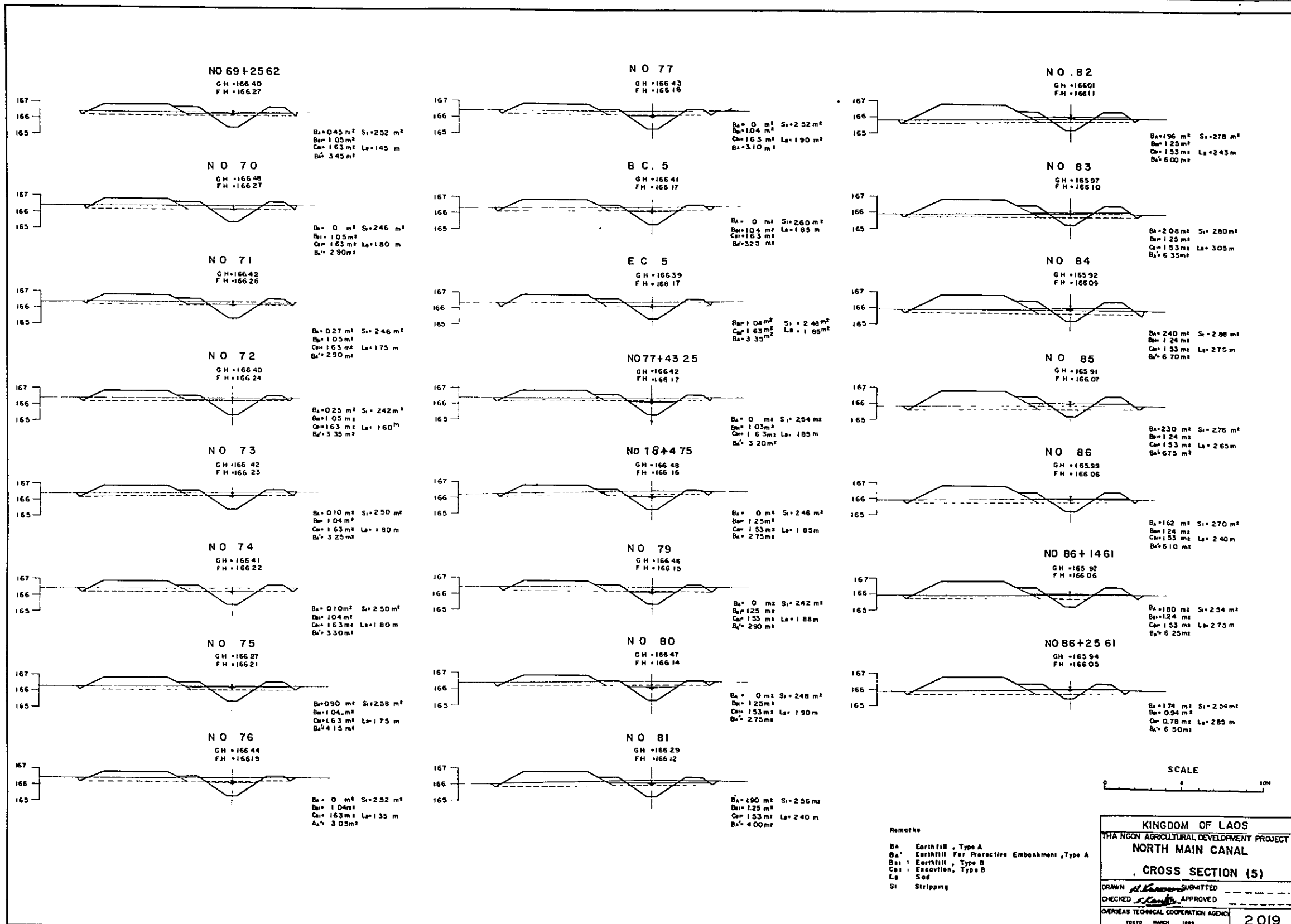
DRAWN: [Signature] SUBMITTED: [Signature]  
 CHECKED: [Signature] APPROVED: [Signature]  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1980 2 017



Remarks:  
 $B_a$  Earthfill, Type A  
 $B_b$  Earthfill For Protective Embankment, Type A  
 $B_c$  Earthfill, Type B  
 $C_e$  Excavation, Type B  
 $L_e$  Sed  
 $S_i$  Stripping

KINGDOM OF LAOS  
 THA'NGON AGRICULTURAL DEVELOPMENT PROJECT  
 NORTH MAIN CANAL  
 CROSS SECTION (4)

DRAWN *[Signature]* SUBMITTED  
 CHECKED *[Signature]* APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 2 018



NO 69+2562  
GH = 166.40  
FH = 166.27

Ba = 0.45 m<sup>2</sup> Sa = 232 m<sup>2</sup>  
Bb = 1.05 m<sup>2</sup> La = 145 m  
Cb = 1.63 m<sup>2</sup>  
Bb' = 3.45 m<sup>2</sup>

NO 70  
GH = 166.48  
FH = 166.27

Ba = 0 m<sup>2</sup> Sa = 246 m<sup>2</sup>  
Bb = 1.05 m<sup>2</sup> La = 180 m  
Cb = 1.63 m<sup>2</sup>  
Bb' = 2.90 m<sup>2</sup>

NO 71  
GH = 166.42  
FH = 166.26

Ba = 0.27 m<sup>2</sup> Sa = 246 m<sup>2</sup>  
Bb = 1.05 m<sup>2</sup> La = 175 m  
Cb = 1.63 m<sup>2</sup>  
Bb' = 2.90 m<sup>2</sup>

NO 72  
GH = 166.40  
FH = 166.24

Ba = 0.25 m<sup>2</sup> Sa = 242 m<sup>2</sup>  
Bb = 1.05 m<sup>2</sup> La = 160 m  
Cb = 1.63 m<sup>2</sup>  
Bb' = 3.35 m<sup>2</sup>

NO 73  
GH = 166.42  
FH = 166.23

Ba = 0.10 m<sup>2</sup> Sa = 250 m<sup>2</sup>  
Bb = 1.04 m<sup>2</sup> La = 180 m  
Cb = 1.63 m<sup>2</sup>  
Bb' = 3.25 m<sup>2</sup>

NO 74  
GH = 166.41  
FH = 166.22

Ba = 0.10 m<sup>2</sup> Sa = 250 m<sup>2</sup>  
Bb = 1.04 m<sup>2</sup> La = 180 m  
Cb = 1.63 m<sup>2</sup>  
Bb' = 3.30 m<sup>2</sup>

NO 75  
GH = 166.27  
FH = 166.21

Ba = 0.90 m<sup>2</sup> Sa = 258 m<sup>2</sup>  
Bb = 1.04 m<sup>2</sup> La = 175 m  
Cb = 1.63 m<sup>2</sup>  
Bb' = 4.15 m<sup>2</sup>

NO 76  
GH = 166.44  
FH = 166.19

Ba = 0 m<sup>2</sup> Sa = 252 m<sup>2</sup>  
Bb = 1.04 m<sup>2</sup> La = 135 m  
Cb = 1.63 m<sup>2</sup>  
Bb' = 3.05 m<sup>2</sup>

NO 77  
GH = 166.43  
FH = 166.18

Ba = 0 m<sup>2</sup> Sa = 252 m<sup>2</sup>  
Bb = 1.04 m<sup>2</sup> La = 190 m  
Cb = 1.63 m<sup>2</sup>  
Bb' = 3.10 m<sup>2</sup>

BC 5  
GH = 166.41  
FH = 166.17

Ba = 0 m<sup>2</sup> Sa = 260 m<sup>2</sup>  
Bb = 1.04 m<sup>2</sup> La = 185 m  
Cb = 1.63 m<sup>2</sup>  
Bb' = 3.25 m<sup>2</sup>

EC 5  
GH = 166.39  
FH = 166.17

Ba = 1.04 m<sup>2</sup> Sa = 248 m<sup>2</sup>  
Bb = 1.04 m<sup>2</sup> La = 185 m  
Cb = 1.63 m<sup>2</sup>  
Bb' = 3.35 m<sup>2</sup>

NO 77+43 25  
GH = 166.42  
FH = 166.17

Ba = 0 m<sup>2</sup> Sa = 254 m<sup>2</sup>  
Bb = 1.03 m<sup>2</sup> La = 185 m  
Cb = 1.63 m<sup>2</sup>  
Bb' = 3.20 m<sup>2</sup>

NO 78+475  
GH = 166.48  
FH = 166.16

Ba = 0 m<sup>2</sup> Sa = 246 m<sup>2</sup>  
Bb = 1.25 m<sup>2</sup> La = 185 m  
Cb = 1.53 m<sup>2</sup>  
Bb' = 2.75 m<sup>2</sup>

NO 79  
GH = 166.46  
FH = 166.15

Ba = 0 m<sup>2</sup> Sa = 242 m<sup>2</sup>  
Bb = 1.25 m<sup>2</sup> La = 188 m  
Cb = 1.53 m<sup>2</sup>  
Bb' = 2.90 m<sup>2</sup>

NO 80  
GH = 166.47  
FH = 166.14

Ba = 0 m<sup>2</sup> Sa = 248 m<sup>2</sup>  
Bb = 1.25 m<sup>2</sup> La = 190 m  
Cb = 1.53 m<sup>2</sup>  
Bb' = 2.75 m<sup>2</sup>

NO 81  
GH = 166.29  
FH = 166.12

Ba = 1.90 m<sup>2</sup> Sa = 256 m<sup>2</sup>  
Bb = 1.25 m<sup>2</sup> La = 240 m  
Cb = 1.53 m<sup>2</sup>  
Bb' = 4.00 m<sup>2</sup>

NO 82  
GH = 166.01  
FH = 166.11

Ba = 1.96 m<sup>2</sup> Sa = 278 m<sup>2</sup>  
Bb = 1.25 m<sup>2</sup> La = 243 m  
Cb = 1.53 m<sup>2</sup>  
Bb' = 6.00 m<sup>2</sup>

NO 83  
GH = 165.97  
FH = 166.10

Ba = 2.08 m<sup>2</sup> Sa = 280 m<sup>2</sup>  
Bb = 1.25 m<sup>2</sup> La = 305 m  
Cb = 1.53 m<sup>2</sup>  
Bb' = 6.35 m<sup>2</sup>

NO 84  
GH = 165.92  
FH = 166.09

Ba = 2.40 m<sup>2</sup> Sa = 288 m<sup>2</sup>  
Bb = 1.24 m<sup>2</sup> La = 275 m  
Cb = 1.53 m<sup>2</sup>  
Bb' = 6.70 m<sup>2</sup>

NO 85  
GH = 165.91  
FH = 166.07

Ba = 2.30 m<sup>2</sup> Sa = 276 m<sup>2</sup>  
Bb = 1.24 m<sup>2</sup> La = 265 m  
Cb = 1.53 m<sup>2</sup>  
Bb' = 6.75 m<sup>2</sup>

NO 86  
GH = 165.99  
FH = 166.06

Ba = 1.62 m<sup>2</sup> Sa = 270 m<sup>2</sup>  
Bb = 1.24 m<sup>2</sup> La = 240 m  
Cb = 1.53 m<sup>2</sup>  
Bb' = 6.10 m<sup>2</sup>

NO 86+1461  
GH = 165.92  
FH = 166.06

Ba = 1.80 m<sup>2</sup> Sa = 254 m<sup>2</sup>  
Bb = 1.24 m<sup>2</sup> La = 275 m  
Cb = 1.53 m<sup>2</sup>  
Bb' = 6.25 m<sup>2</sup>

NO 86+2561  
GH = 165.94  
FH = 166.05

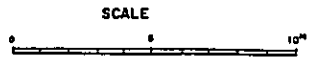
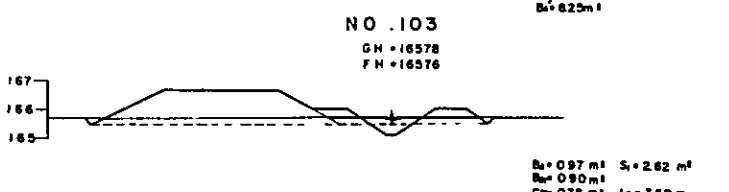
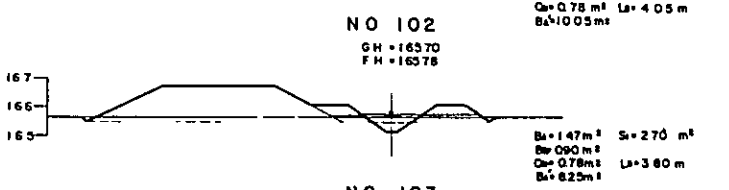
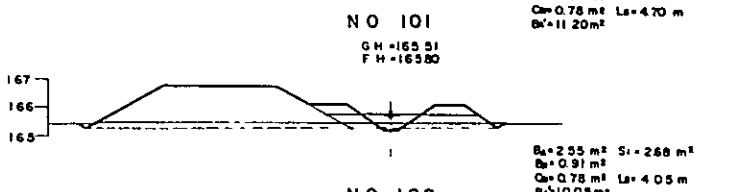
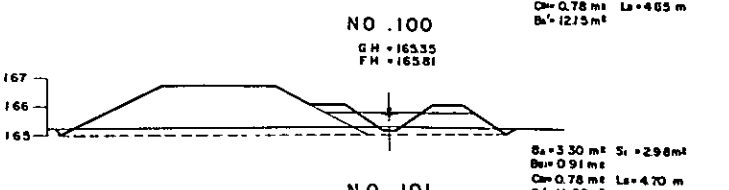
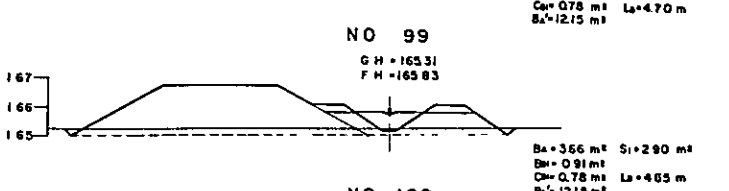
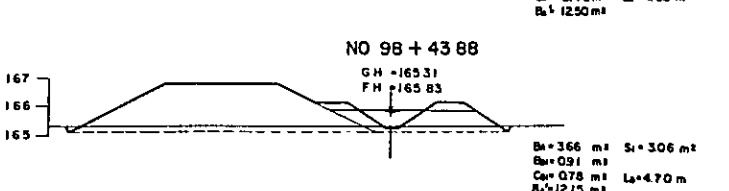
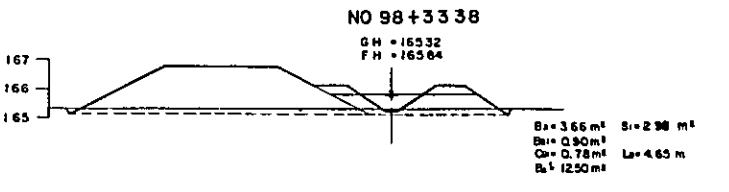
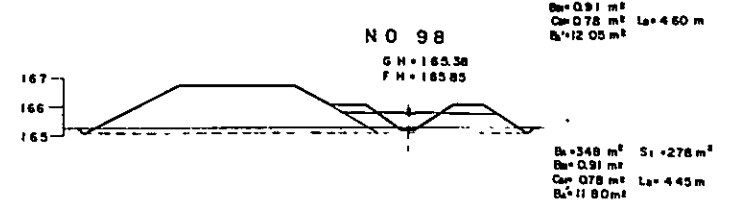
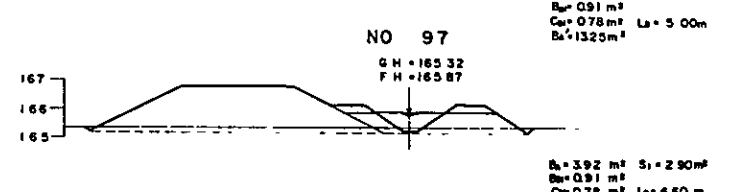
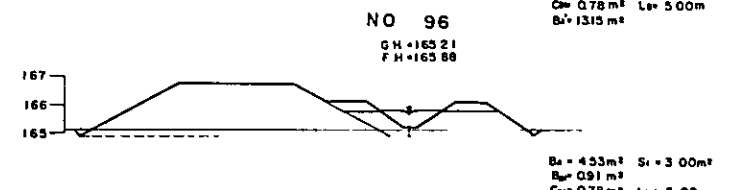
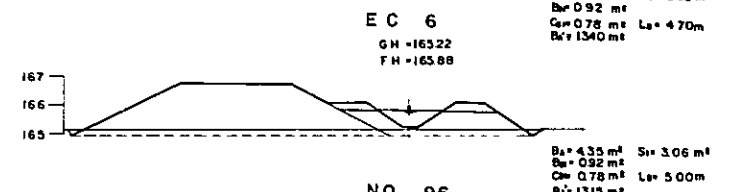
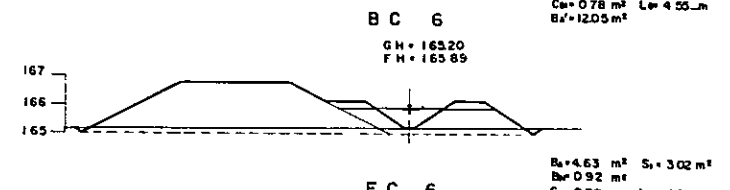
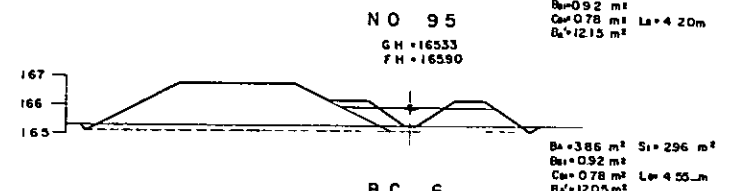
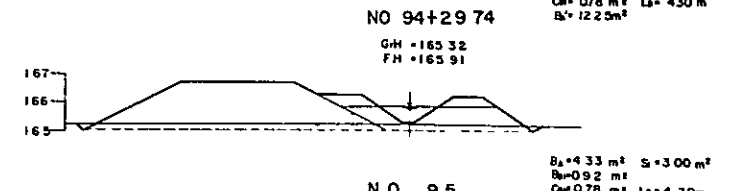
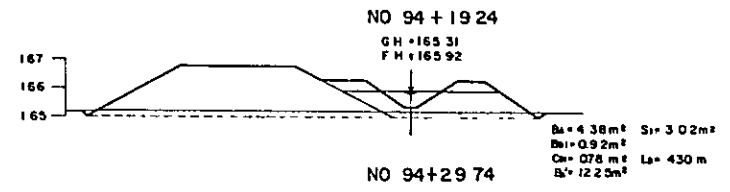
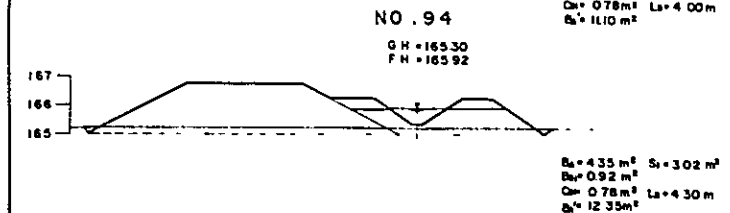
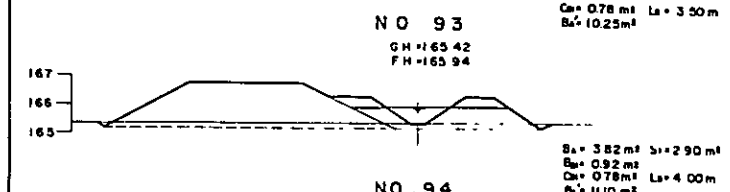
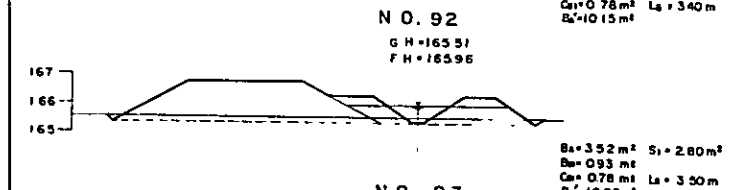
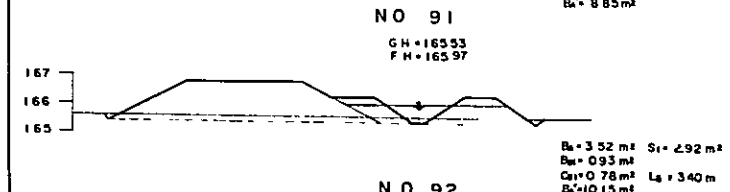
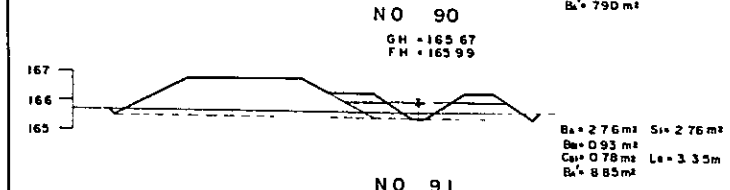
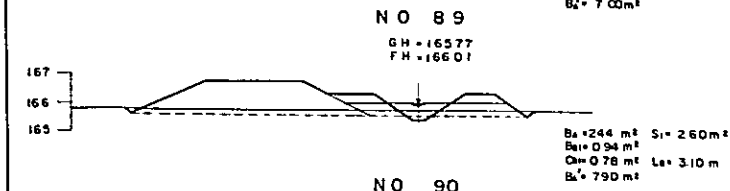
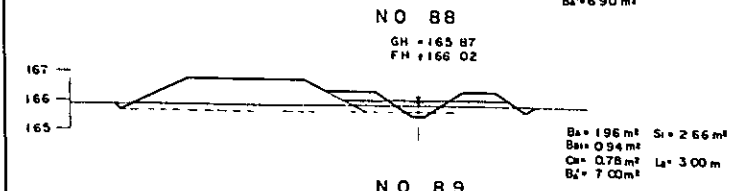
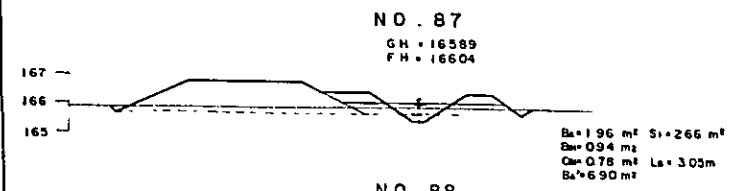
Ba = 1.74 m<sup>2</sup> Sa = 254 m<sup>2</sup>  
Bb = 0.94 m<sup>2</sup> La = 285 m  
Cb = 0.78 m<sup>2</sup>  
Bb' = 6.50 m<sup>2</sup>

- Remarks
- Ba Earthfill, Type A
  - Bb Earthfill For Protective Embankment, Type A
  - Bb' Earthfill, Type B
  - Cb Excavation, Type B
  - La Soil
  - Si Stripping

SCALE  
0 5 10m

KINGDOM OF LAOS  
THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
NORTH MAIN CANAL  
CROSS SECTION (5)

DRAWN *[Signature]* SUBMITTED  
CHECKED *[Signature]* APPROVED  
OVERSEAS TECHNICAL COOPERATION AGENCY  
1967 MARCH 1969 2019

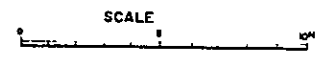
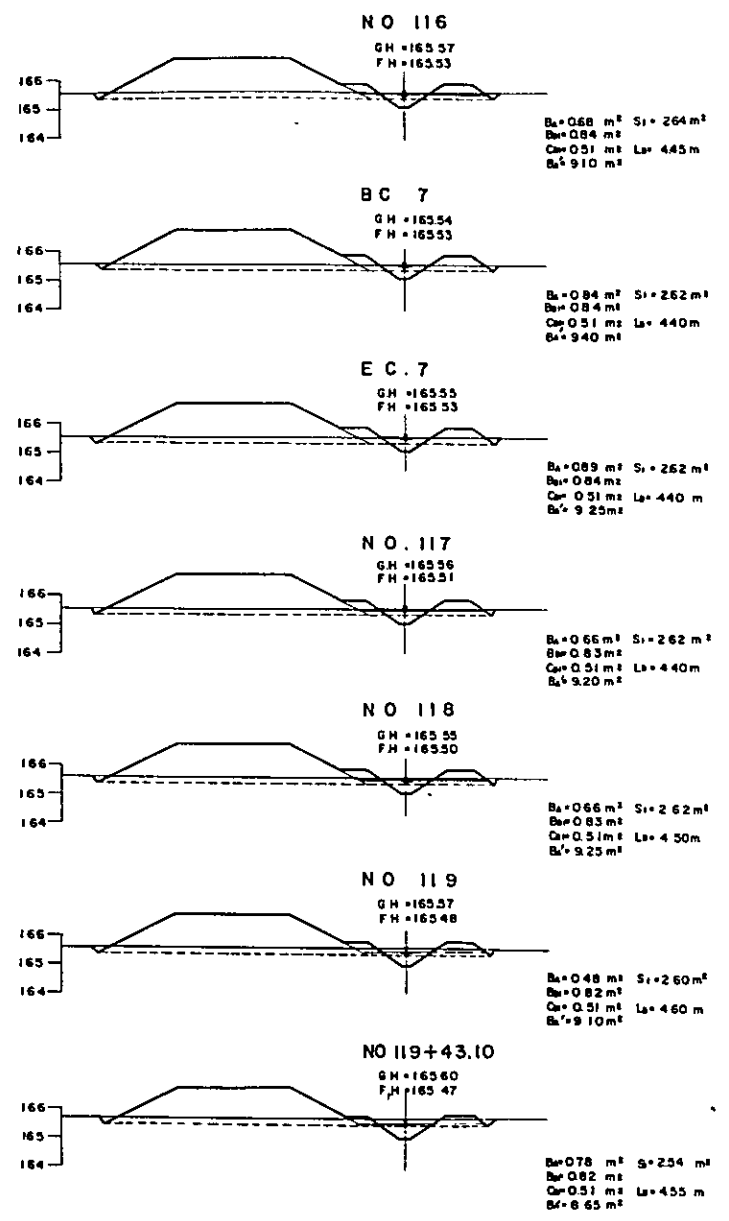
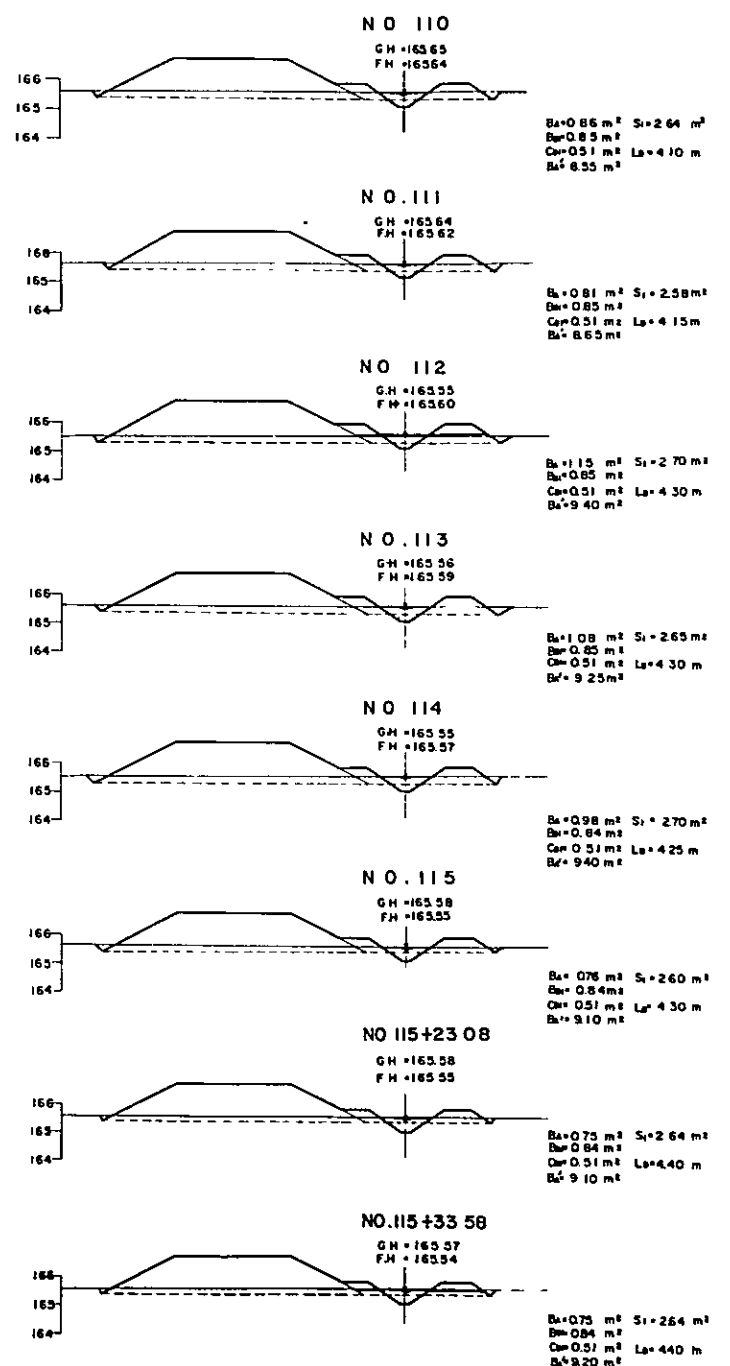
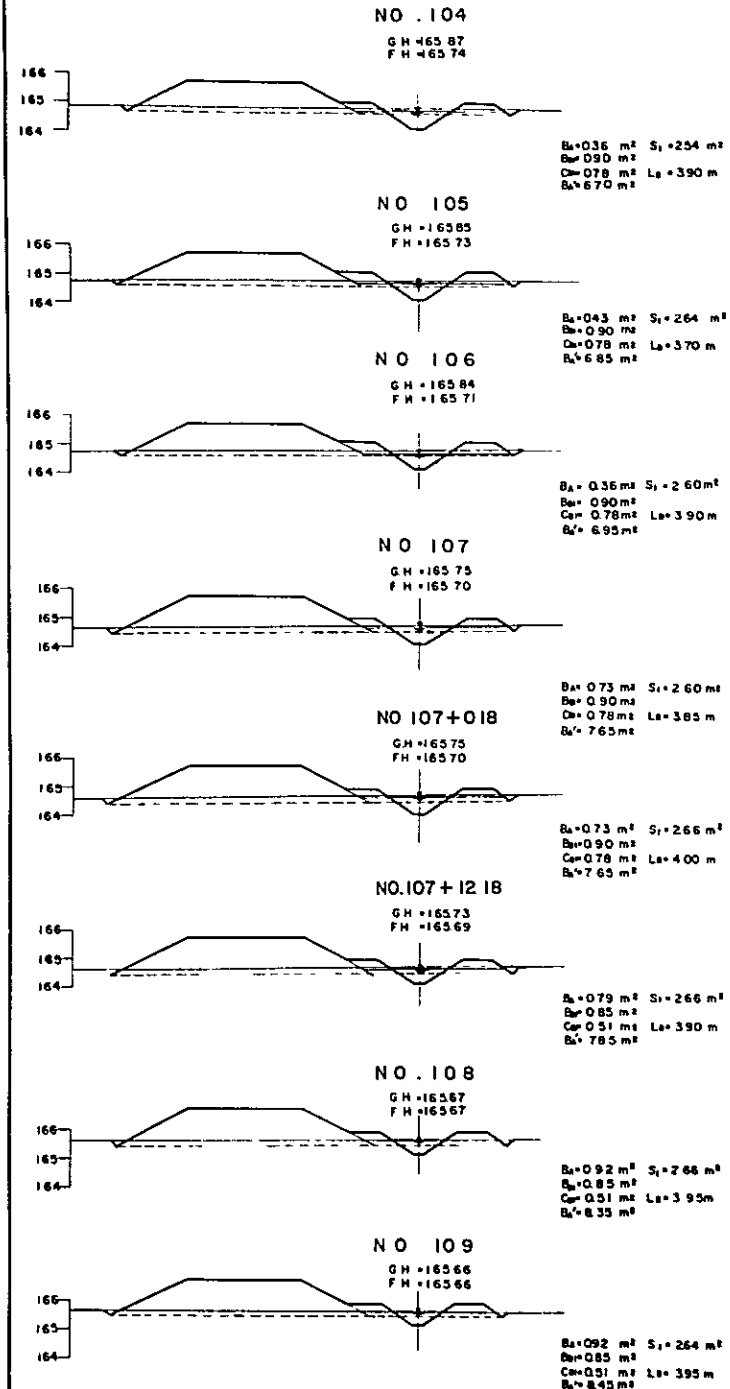


Remarks  
 $B_s$  Earthfill, Type A  
 $B_{s'}$  Earthfill For Protective Embankment, Type A  
 $B_s$  Earthfill, Type B  
 $C_s$  Excavation, Type B  
 $L_s$  Sed  
 $S_i$  Stripping

**KINGDOM OF LAOS**  
**THA HOON AGRICULTURAL DEVELOPMENT PROJECT**  
**NORTH MAIN CANAL**  
**CROSS SECTION (6)**

DRAWN *[Signature]* SUBMITTED  
 CHECKED *[Signature]* APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 2020

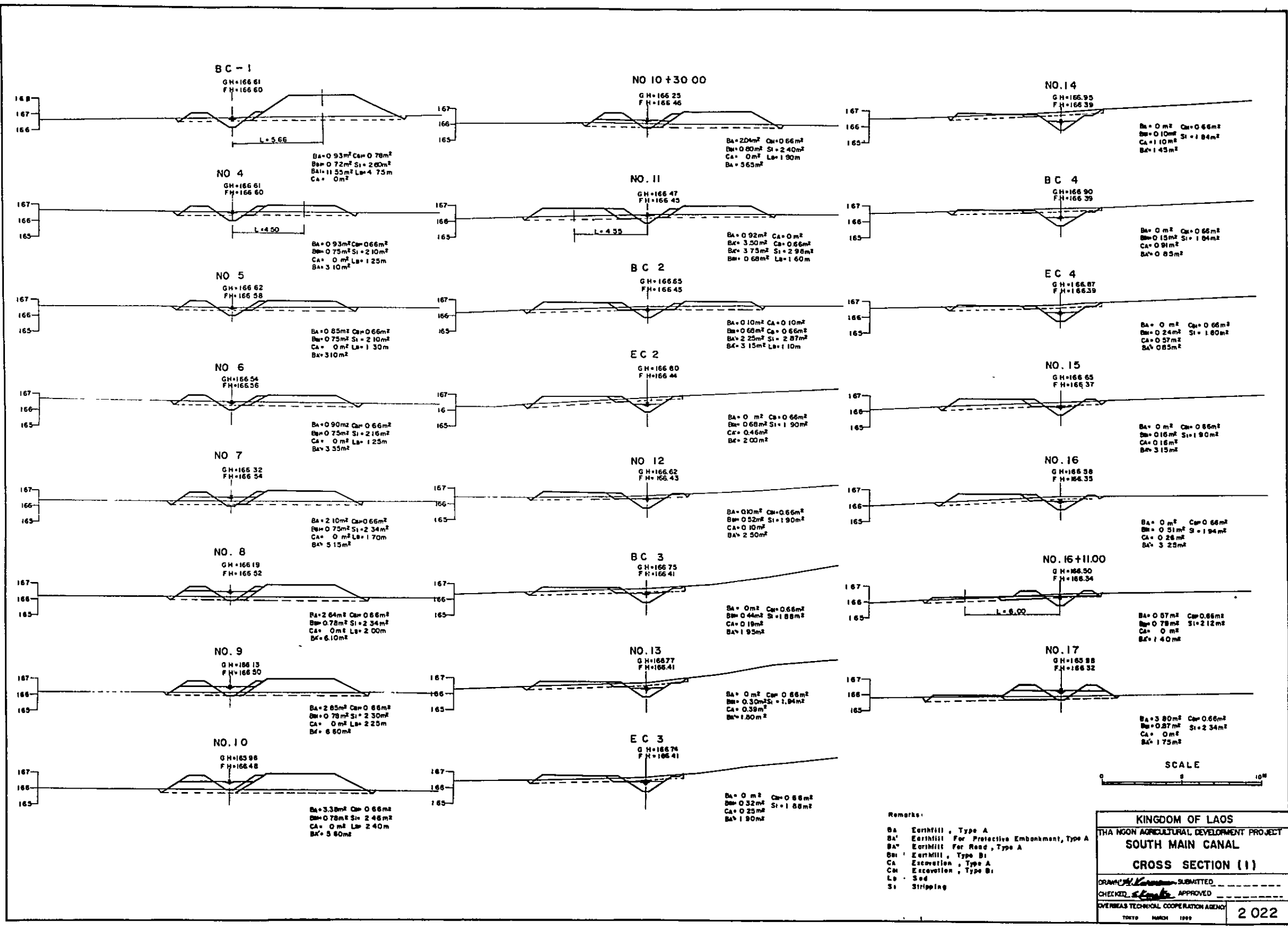




Remarks  
 BA Earthfill, Type A  
 BA' Earthfill For Protective Embankment, Type A  
 BA'' Earthfill, Type B  
 CA Excavation, Type B  
 LA Sod  
 SI Stripping

KINGDOM OF LAOS  
 THE NOON AGRICULTURAL DEVELOPMENT PROJECT  
 NORTH MAIN CANAL  
 CROSS SECTION (7)

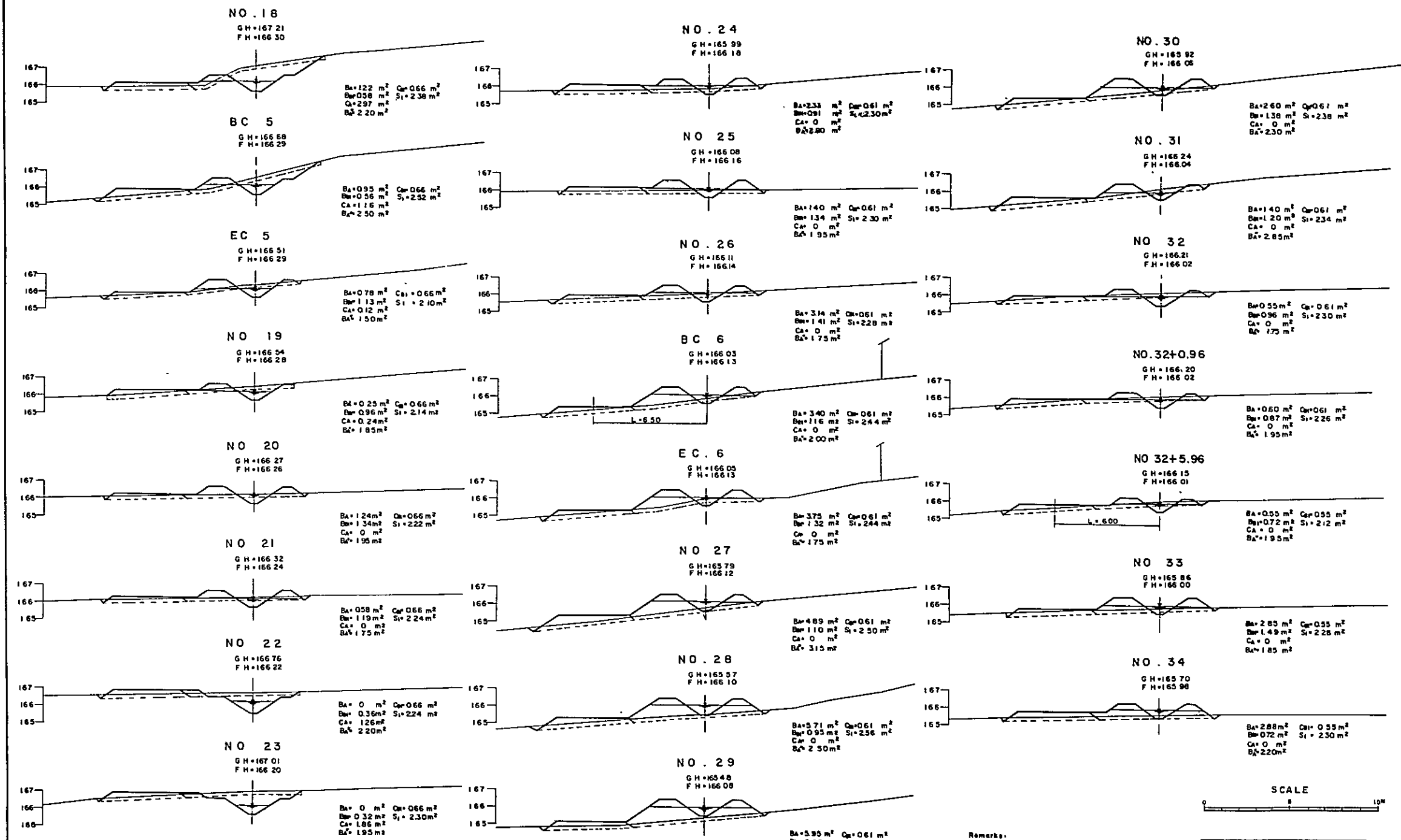
DRAWN *[Signature]* SUBMITTED  
 CHECKED *[Signature]* APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 19678 MARCH 1968 2 021



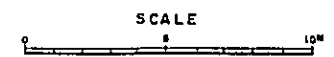
Remarks:

- Ba Earthfill, Type A
- Ba' Earthfill For Protective Embankment, Type A
- Ba'' Earthfill For Road, Type A
- Ba1 Earthfill, Type B1
- Ca Excavation, Type A
- Ca1 Excavation, Type B1
- Ls Sed
- Si Stripping

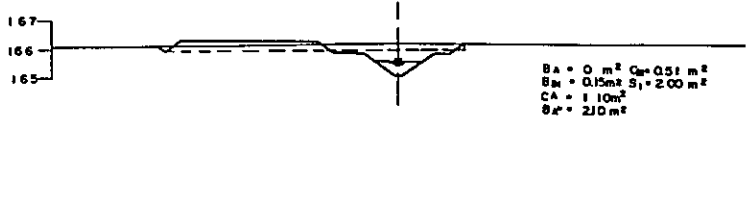
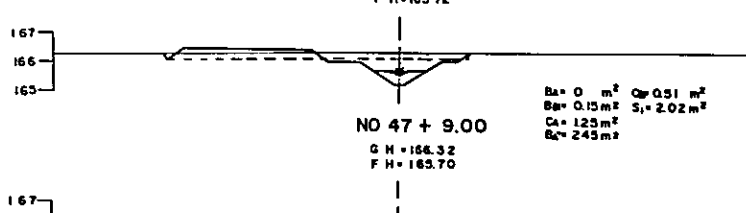
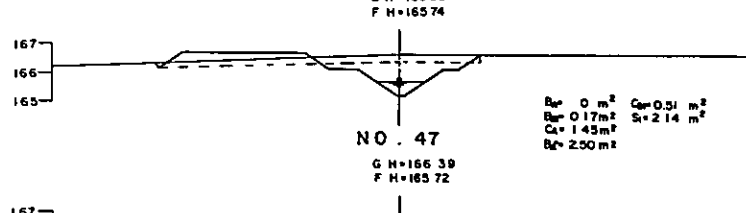
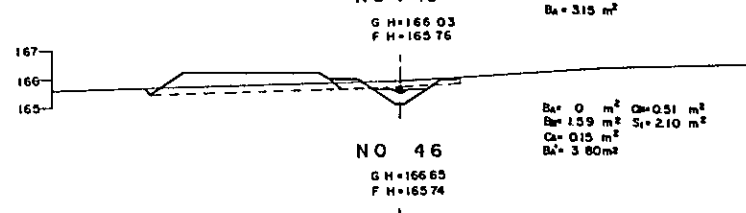
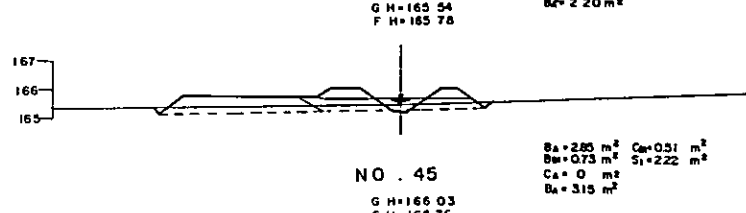
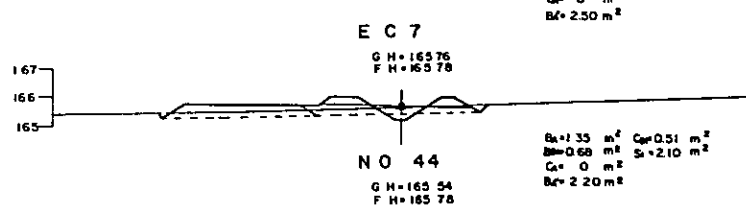
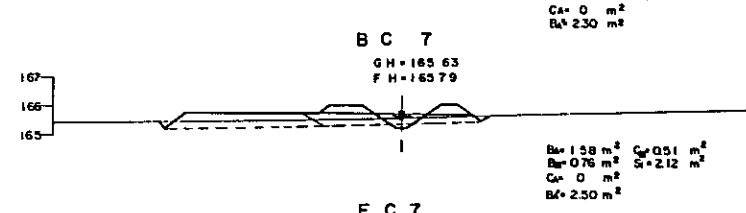
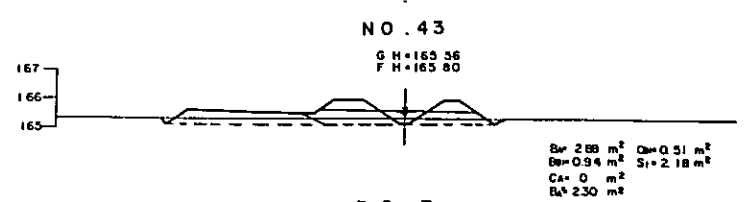
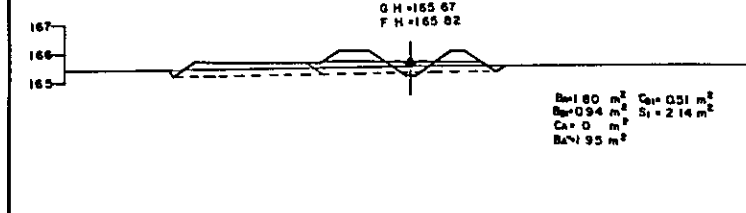
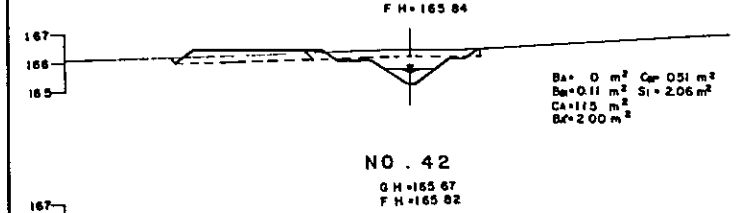
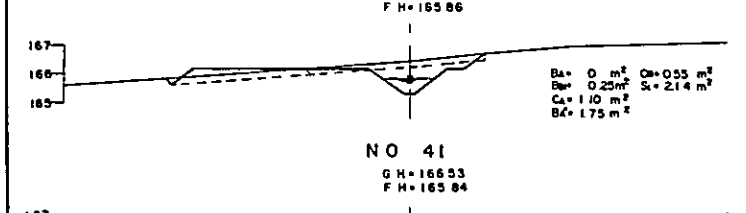
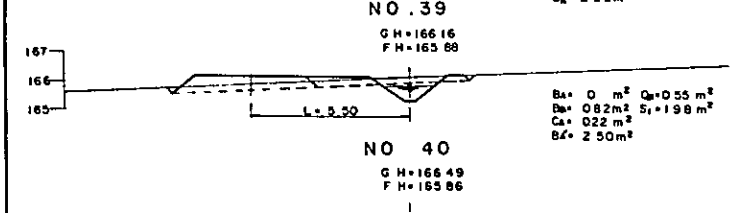
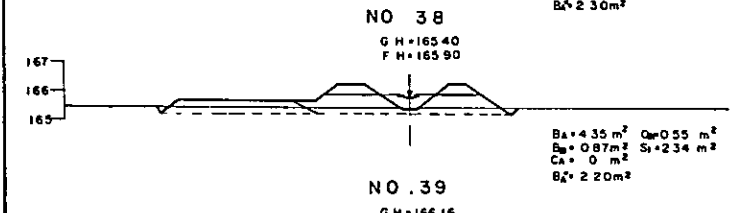
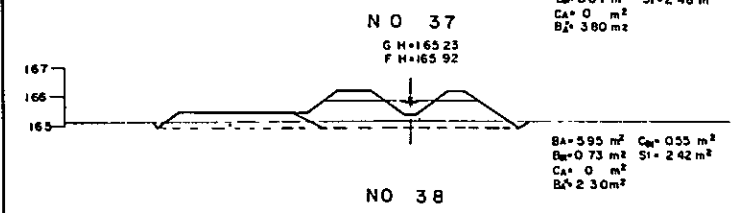
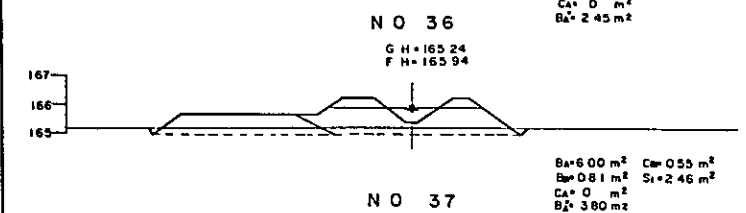
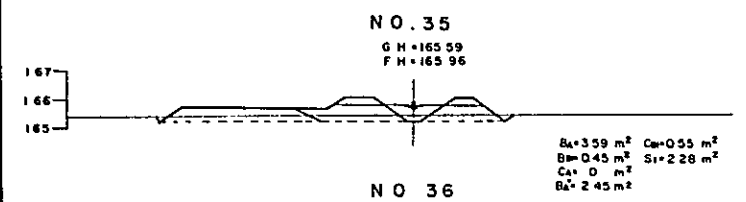
KINGDOM OF LAOS	
THA NGON AGRICULTURAL DEVELOPMENT PROJECT	
SOUTH MAIN CANAL	
CROSS SECTION (1)	
DRAWN: <i>[Signature]</i>	SUBMITTED: _____
CHECKED: <i>[Signature]</i>	APPROVED: _____
OVERSEAS TECHNICAL COOPERATION AGENCY	
TOKYO MARCH 1989	2 022



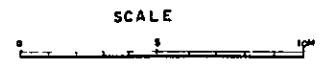
Remarks:  
 Ba: Earthfill, Type A  
 Bb: Earthfill For Protective Embankment, Type A  
 Bc: Earthfill For Road, Type A  
 Bb: Earthfill, Type B  
 Ca: Excavation, Type A  
 Ca: Excavation, Type B  
 La: Sed  
 Sa: Strippling



KINGDOM OF LAOS  
 THE NGON AGRICULTURAL DEVELOPMENT PROJECT  
 SOUTH MAIN CANAL  
 CROSS SECTION (2)  
 DRAWN: *[Signature]* SUBMITTED  
 CHECKED: *[Signature]* APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 2 023



Remarks  
 $B_1$  - Earthfill, Type A  
 $B_2$  - Earthfill For Protective Embankment, Type A  
 $B_3$  - Earthfill For Road, Type A  
 $B_4$  - Earthfill, Type B1  
 $C_1$  - Excavation, Type A  
 $C_2$  - Excavation, Type B1  
 $L_1$  - Sed  
 $S_1$  - Striping



KINGDOM OF LAOS  
 THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
 SOUTH MAIN CANAL  
 CROSS SECTION (3)

DRAWN *[Signature]* SUBMITTED  
 CHECKED *[Signature]* APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 2024

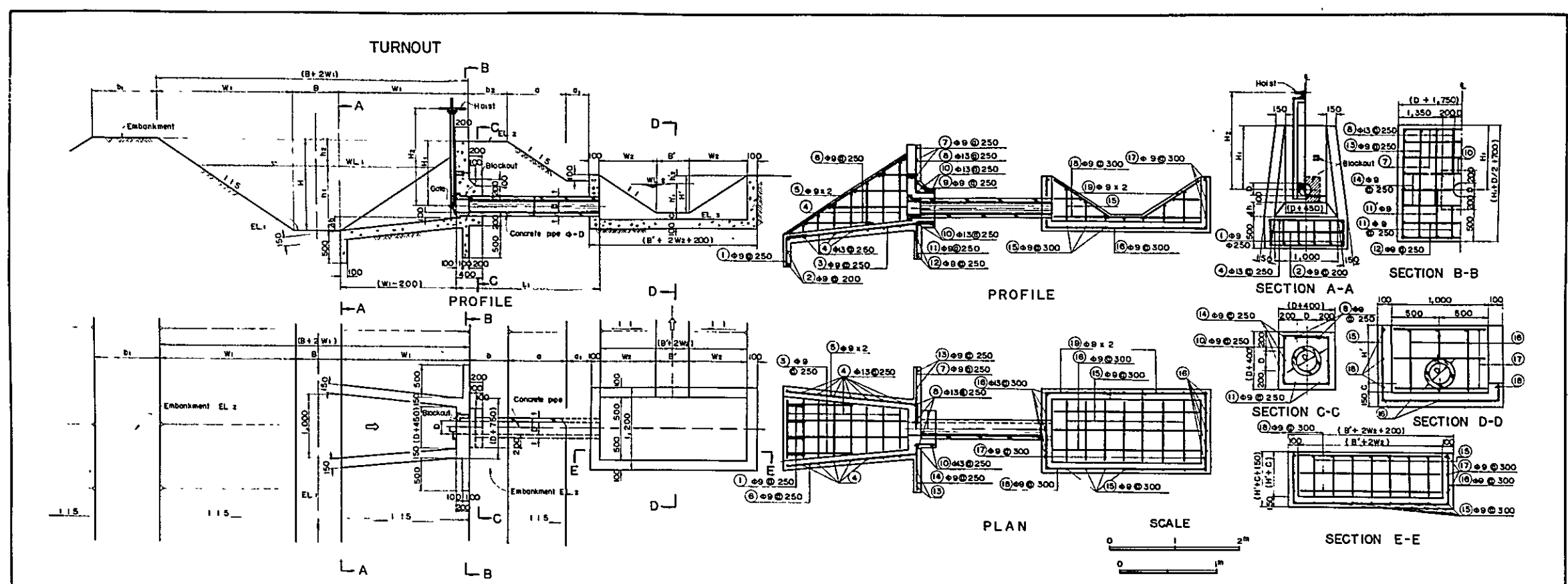


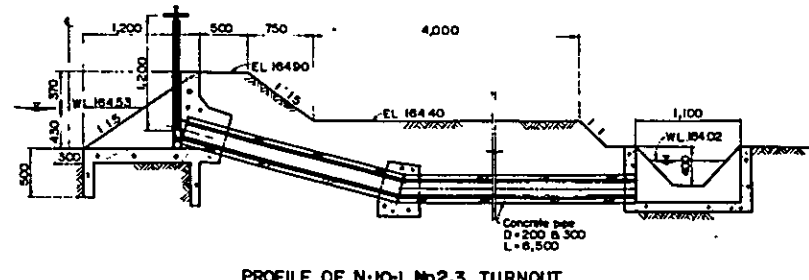
TABLE OF DIMENSION (MM)

TO NO	STATION	B	W <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	H	h <sub>1</sub>	h <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>	Δh	a	a <sub>1</sub>	D
N-1	No 143500	700	2,100	500	1,000	1,400	1,000	400	1,000	1,500	200	1,005	195	200
2	No 151130	"	"	"	"	"	990	410	"	"	"	825	375	"
3	No 211860	600	1,950	"	1,300	1,000	300	900	1,400	"	"	845	55	"
4	No 2913230	"	"	"	"	"	980	320	"	"	"	480	220	"
5	No 3912645	"	"	"	"	"	970	330	"	"	"	630	70	"
6	No 491507	"	"	"	"	"	840	380	"	"	"	465	235	"
7	No 5912157	"	"	"	"	"	920	380	"	"	"	640	360	"
8	No 6911107	"	1,800	"	1,200	890	310	800	"	"	"	880	40	"
9	No 7741100	"	"	"	"	"	880	340	"	"	"	485	235	"
11	No 1064813	400	1,350	"	"	900	600	650	1,200	"	"	510	190	300
12	No 1113340	300	1,200	"	"	800	490	310	600	"	"	480	220	200
L 1	No 441200	"	4,000	4,000	"	480	520	800	"	"	"	810	390	"
2	No 915500	"	"	"	"	430	370	"	"	"	"	780	420	300
3	No 915500	"	"	"	"	"	840	360	"	"	"	840	360	200
S-1	No 314457	400	1,350	500	1,000	900	550	350	700	"	"	465	235	"
2	No 2343107	"	"	"	4,000	"	540	380	"	"	"	1,215	485	"
3	No 321048	"	"	"	"	"	620	380	"	"	"	1,320	360	"
4	No 4012204	300	1,200	"	"	800	510	290	600	"	"	375	325	"
5	No 474841	"	"	"	"	490	310	810	"	-10	405	295	"	"

TO NO	l	B'	W <sub>1</sub>	N <sub>1</sub>	N <sub>2</sub>	H'	C	WL <sub>1</sub>	WL <sub>2</sub>	EL <sub>1</sub>	EL <sub>2</sub>	EL <sub>3</sub>	DL	DATE
N-1	50	300	400	220	180	400	470	187.15	188.80	186.15	187.55	186.11	188.21	C
2	"	"	"	200	200	"	90	187.04	"	186.05	187.45	186.51	188.61	"
3	"	"	"	"	"	"	180	186.95	188.70	185.93	187.23	186.32	188.42	"
4	"	"	"	280	120	"	310	186.82	188.80	185.84	187.14	186.21	188.31	"
5	"	"	"	200	200	"	250	186.89	188.50	185.72	187.02	186.06	188.13	"
6	"	"	"	180	220	"	100	186.57	"	185.63	186.93	186.87	188.07	"
7	"	"	"	220	180	"	750	186.46	188.20	185.54	186.84	186.23	188.33	"
8	"	"	"	150	250	"	600	186.28	188.00	185.39	186.59	186.25	188.55	"
9	"	"	"	200	200	"	600	186.17	188.10	185.31	186.61	186.30	188.40	"
11	70	"	"	240	180	"	100	185.70	185.60	185.10	186.00	184.87	185.78	"
12	50	"	"	"	"	"	100	185.47	185.40	184.98	185.78	184.83	185.59	"
L 1	"	"	"	250	120	"	180	185.09	185.05	184.61	185.61	184.91	185.00	"
2	70	"	"	230	170	"	180	184.88	184.82	184.31	184.91	183.61	184.00	"
3	50	"	"	270	130	"	140	"	"	"	"	183.20	"	"
S-1	"	"	"	240	180	"	290	186.60	188.58	186.05	186.95	186.05	188.61	"
2	"	"	"	220	180	"	100	186.19	185.85	185.85	186.55	185.53	188.38	"
3	"	"	"	280	120	"	100	186.82	185.50	185.50	186.40	184.74	186.21	"
4	"	"	"	220	180	"	250	185.87	185.63	185.36	186.18	185.36	188.51	"
5	"	"	"	"	"	"	340	185.71	185.68	185.22	186.02	185.12	188.32	"

TABLE OF REINFORCEMENT BARS

MARK	Φ	U	N-1, N-2				N-3, N-4, N-5, N-6, N-7				N-8, N-9				N-11, N-12, N-10-L-1, 2, 3				S-1, S-2, S-3, S-4, S-5				REMARKS
			LENGTH	NOS	T LENGTH	WEIGHT	LENGTH	NOS	T LENGTH	WEIGHT	LENGTH	NOS	T LENGTH	WEIGHT	LENGTH	NOS	T LENGTH	WEIGHT	LENGTH	NOS	T LENGTH	WEIGHT	
1	9	0.499	0.83	6	4.98	2.49	0.83	6	4.98	2.49	0.83	6	4.98	2.49	0.83	6	4.98	2.49	0.83	6	4.98	2.49	
2	"	"	1.38	2	2.76	1.38	1.38	2	2.76	1.38	1.38	2	2.76	1.38	1.38	2	2.76	1.38	1.38	2	2.76	1.38	
3	"	"	2.46	2	4.92	2.46	2.46	2	4.92	2.46	2.46	2	4.92	2.46	2.46	2	4.92	2.46	2.46	2	4.92	2.46	
4	"	"	2.65	2	5.30	2.65	2.65	2	5.30	2.65	2.65	2	5.30	2.65	2.65	2	5.30	2.65	2.65	2	5.30	2.65	
5	"	"	2.18	2	4.36	2.18	2.18	2	4.36	2.18	2.18	2	4.36	2.18	2.18	2	4.36	2.18	2.18	2	4.36	2.18	
6	13	1.042	2.41	8	19.28	20.09	2.31	8	18.48	19.28	2.28	7	18.82	18.49	1.65	4	6.52	6.80	1.65	4	6.52	6.80	
7	9	0.499	2.92	2	5.84	2.92	2.92	2	5.84	2.92	2.92	2	5.84	2.92	1.95	2	3.90	1.95	2	3.90	1.95		
8	"	"	0.88	2	1.76	0.88	0.88	2	1.76	0.88	0.88	2	1.76	0.88	0.88	2	1.76	0.88	0.88	2	1.76	0.88	
9	15	1.042	1.26	2	2.52	2.63	1.21	2	2.42	2.53	1.11	2	2.22	2.32	1.01	2	2.02	2.11	1.01	2	2.02	2.11	
10	9	0.499	0.48	2	0.96	0.48	0.48	2	0.96	0.48	0.48	2	0.96	0.48	0.48	2	0.96	0.48	0.48	2	0.96	0.48	
11	"	"	3.39	1	3.39	1.69	3.38	1	3.38	1.69	3.38	1	3.38	1.69	3.38	1	3.38	1.69	3.38	1	3.38	1.69	
12	"	"	0.88	1	0.88	0.44	0.88	1	0.88	0.44	0.88	1	0.88	0.44	0.88	1	0.88	0.44	0.88	1	0.88	0.44	
13	"	"	0.88	2	1.76	0.88	0.88	2	1.76	0.88	0.88	2	1.76	0.88	0.88	2	1.76	0.88	0.88	2	1.76	0.88	
14	"	"	1.98	2	3.96	1.98	1.98	2	3.96	1.98	1.98	2	3.96	1.98	1.98	2	3.96	1.98	1.98	2	3.96	1.98	
15	"	"	1.89	4	7.56	3.78	1.88	4	7.52	3.76	1.78	4	7.12	3.58	1.68	4	6.72	3.36	1.68	4	6.72	3.36	
16	"	"	0.83	6	4.98	2.49	0.83	6	4.98	2.49	0.83	6	4.98	2.49	0.83	6	4.98	2.49	0.83	6	4.98	2.49	
17	"	"	2.96	3	8.88	3.99	2.76	3	8.28	3.57	2.66	3	7.98	3.19	2.56	3	7.68	3.04	2.56	3	7.68	3.04	
18	"	"	2.63	5	13.15	7.08	3.03	5	15.15	7.58	3.23	5	16.15	8.07	2.63	5	13.15	7.08	2.63	5	13.15	7.08	
19	"	"	1.29	5	6.45	3.20	1.29	5	6.45	3.20	1.29	5	6.45	3.20	1.29	5	6.45	3.20	1.29	5	6.45	3.20	
20	"	"	1.18	3	3.54	1.77	1.18	3	3.54	1.77	1.18	3	3.54	1.77	1.18	3	3.54	1.77	1.18	3	3.54	1.77	
21	"	"	0.88	4	3.52	1.76	0.88	4	3.52	1.76	0.88	4	3.52	1.76	0.88	4	3.52	1.76	0.88	4	3.52	1.76	
22	"	"	1.18	2	2.36	1.18	1.18	2	2.36	1.18	1.18	2	2.36	1.18	1.18	2	2.36	1.18	1.18	2	2.36	1.18	
TOTAL			85.29 x 2		170.58 kg				85.90 x 2		171.80 kg			79.80 x 2		159.60 kg			82.53 x 10		825.3 kg		



KINGDOM OF LAOS  
 THE AGRICULTURAL DEVELOPMENT PROJECT  
**MAIN CANAL  
 TURNOUT**  
 DRAWN *[Signature]* SUBMITTED  
 CHECKED *[Signature]* APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1988  
**2025**

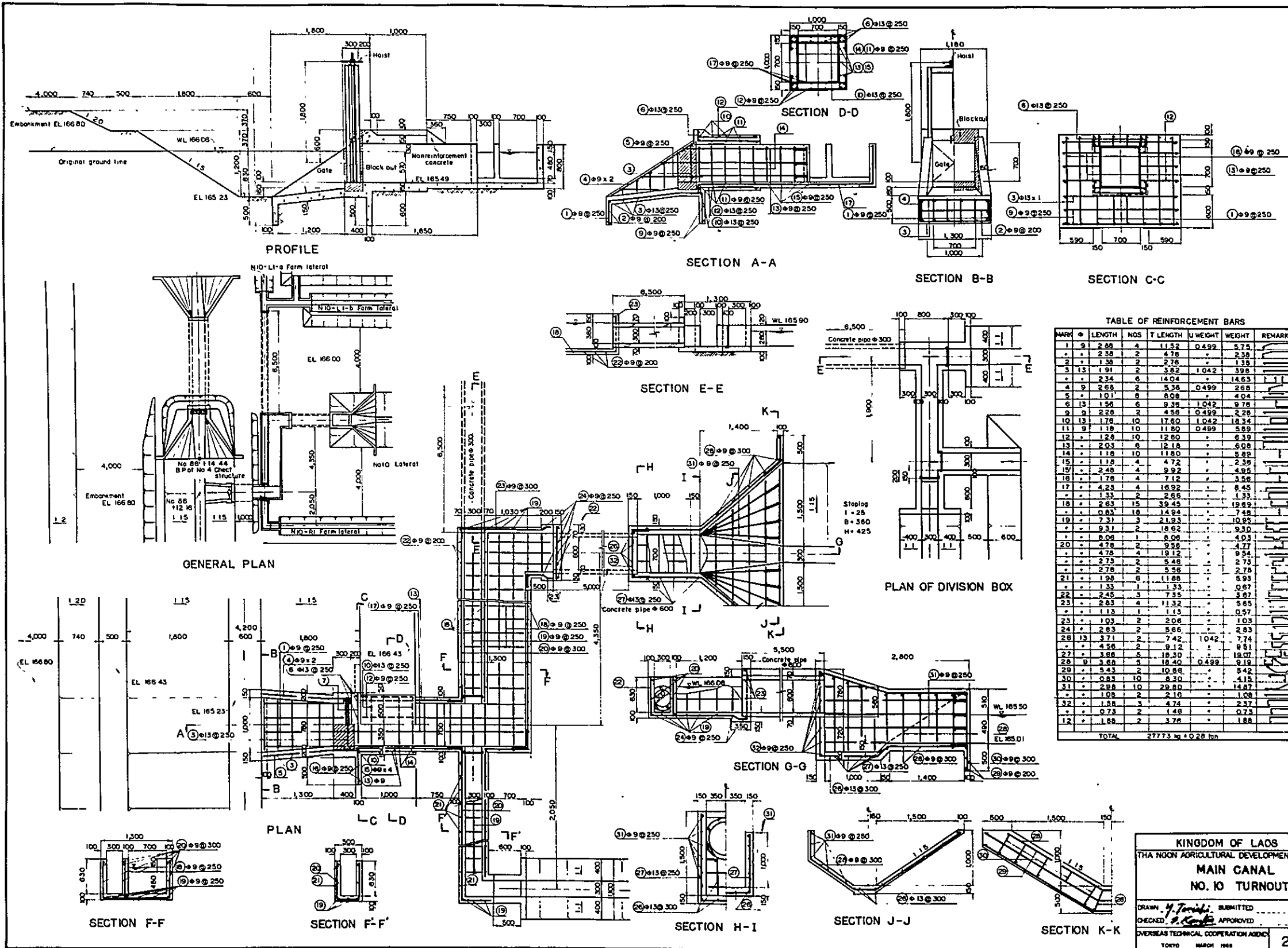


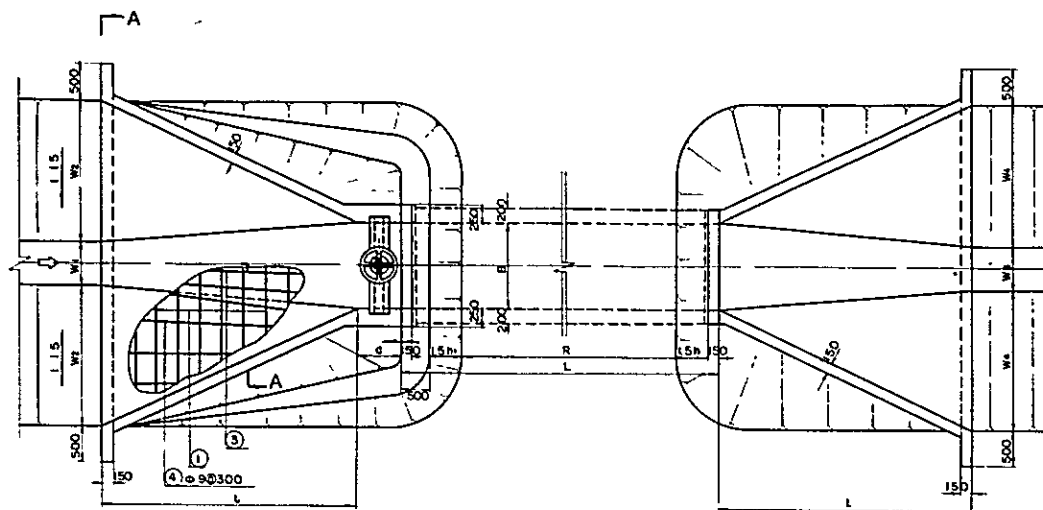
TABLE OF REINFORCEMENT BARS

MARK	LENGTH	NOS	T LENGTH	U WEIGHT	WEIGHT	REMARKS
1	2.65	4	11.52	0.499	5.75	
2	2.38	2	4.78		2.38	
3	1.38	2	2.76		1.38	
4	1.91	2	3.82	1.042	3.96	
5	2.34	6	14.04		14.63	
6	2.65	2	5.38	0.499	2.68	
7	1.01	8	8.08		4.04	
8	1.56	6	9.36	1.042	9.76	
9	2.28	2	4.56	0.499	2.28	
10	1.78	10	17.60	1.042	18.34	
11	1.18	10	11.80	0.499	5.89	
12	1.29	10	12.80		6.39	
13	2.03	8	12.18		6.08	
14	1.18	10	11.80		5.89	
15	1.18	4	4.72		2.36	
16	2.48	4	9.92		4.85	
17	1.78	4	7.12		3.56	
18	4.23	4	16.92		8.45	
19	1.35	2	2.65		1.32	
20	2.65	15	39.45		19.89	
21	0.83	18	14.94		7.41	
22	7.31	3	21.93		10.85	
23	9.31	2	18.62		9.30	
24	8.08	1	8.08		4.03	
25	4.78	2	9.56		4.77	
26	4.78	4	19.12		9.54	
27	2.73	2	5.46		2.73	
28	2.78	2	5.56		2.78	
29	1.98	6	11.88		5.93	
30	1.33	1	1.33		0.67	
31	2.45	3	7.35		3.67	
32	2.63	4	11.32		5.65	
33	1.13	1	1.13		0.57	
34	1.03	2	2.06		1.03	
35	2.83	2	5.66		2.83	
36	3.71	2	7.42	1.042	7.74	
37	4.58	2	9.12		4.58	
38	3.88	5	19.30		18.07	
39	3.88	5	19.30	0.499	9.19	
40	5.43	2	10.86		5.42	
41	8.30	10	83.00		41.50	
42	2.88	10	28.80		14.40	
43	1.08	2	2.16		1.08	
44	1.58	3	4.74		2.37	
45	0.73	2	1.46		0.73	
46	1.88	2	3.76		1.88	
TOTAL			277.73	kg @ 2.8		

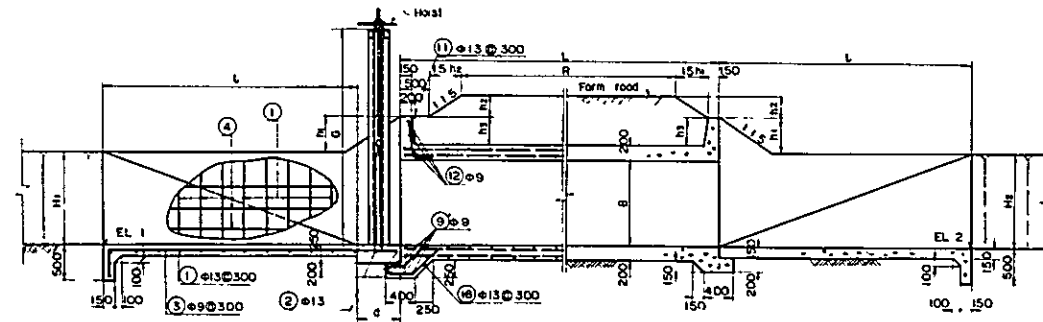
KINGDOM OF LAOS  
 THE NON AGRICULTURAL DEVELOPMENT PROJECT  
**MAIN CANAL**  
**NO. 10 TURNOUT**

DRAWN: *H. Tani* SUBMITTED  
 CHECKED: *S. Kanda* APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1969

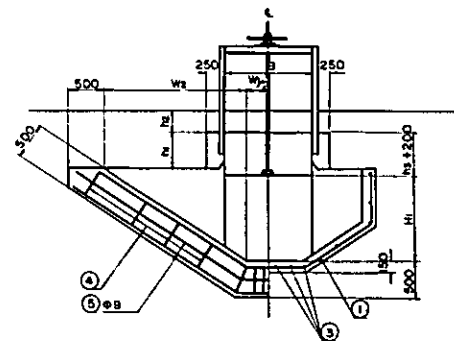
2026



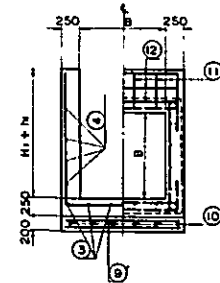
PLAN



PROFILE



SECTION A-A



SECTION B-B SECTION C-C

TABLE OF DIMENSION

	W1	H1	W2	L	d	B	h1	h2	h3	R	L	O	W3	H2	W4	EL. 1 (m)	EL. 2 (m)
N No 1CS	600	1,300	1,950	4,000	600	1,200	100	0	0	3,850	4,500	2,600	600	1,300	1,950	165.93	165.94
N No 2CS	600	1,300	1,950	3,500	800	1,200	100	0	0	6,350	7,000	2,600	600	1,300	1,950	165.63	165.64
N No 3CS	600	1,200	1,800	3,500	600	1,100	300	0	200	4,850	5,500	2,600	600	1,200	1,800	165.39	165.41
N No 4CS	600	1,200	1,800	2,500	500	800	0	200	200	4,250	5,500	2,000	400	900	1,350	165.23	165.45
N No 5CS	400	800	1,350	2,000	500	700	200	300	200	5,950	7,500	1,600	300	800	1,200	165.10	165.20
S No 1CS	400	900	1,350	2,000	500	700	0	0	0	700	1,000	1,600	400	800	1,200	165.50	165.52

TABLE OF REINFORCEMENT BAR

		N, No 1 CS		N, No 2 CS		N, No 3 CS		N, No 4 CS		N, No 5 CS		S, No 1 CS	
INLET TRANSITION													
No	φ	LENGTH	NOS	WEIGHT	LENGTH	NOS	WEIGHT	LENGTH	NOS	WEIGHT	LENGTH	NOS	WEIGHT
1	13	5.10	14	74	5.10	12	64	4.78	11	55	4.52	9	42
2	13	4.78	2	10	4.78	2	10	4.78	3	15	4.16	2	8
3	9	5.08	6	15	4.58	6	13	4.58	8	13	3.43	5	8
4	9	5.20	8	20	4.70	8	18	4.70	8	18	3.58	6	9
5	9	6.45	2	6	6.45	2	6	6.10	2	6	4.81	2	5
SUB TOTAL		125		111		107		79		57		58	
BARREL													
6	13	2.56	32	85	2.56	46	128	2.46	58	97	2.16	38	85
7	13	1.78	64	117	1.78	96	178	1.66	76	131	1.36	78	107
8	9	4.58	40	90	7.08	40	139	5.58	34	93	5.68	28	77
9	9	1.68	5	4	1.68	5	4	1.58	5	4	1.28	5	3
10	13	1.49	6	9	1.49	6	9	1.49	5	8	1.49	4	6
9'	9	1.68	5	4	1.68	5	4	1.58	5	4	1.28	5	3
10'	13	1.75	8	11	1.75	6	11	1.75	5	9	1.75	4	7
11	13	—	—	—	—	—	—	0.86	5	5	0.86	4	4
12	9	—	—	—	—	—	—	1.68	2	2	1.38	2	1
SUB TOTAL		320		471		353		293		365		70	
OUTLET TRANSITION													
SUB TOTAL		TYPE C 116		TYPE D 98		TYPE M 98		TYPE K 53		TYPE J 44		TYPE H 46	
TOTALING		581		680		558		425		468		172	

\* See Draw No 2029, Culvert

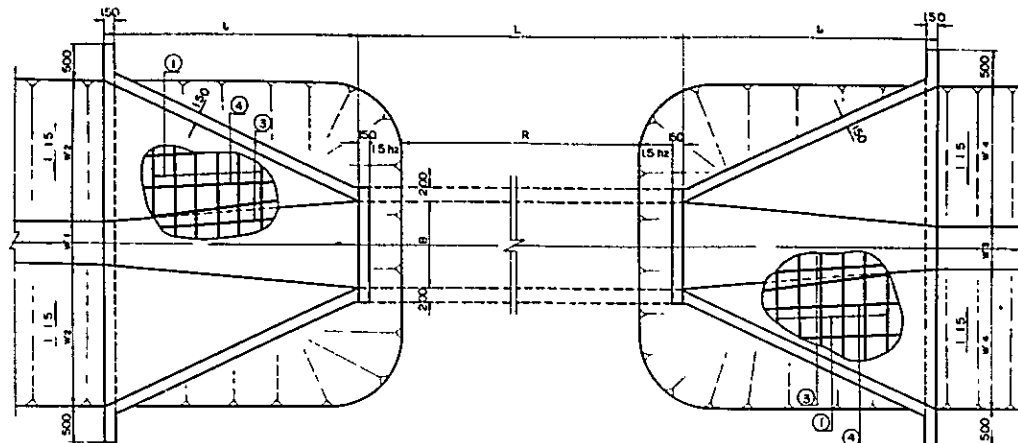
KINGDOM OF LAOS  
THA NOON AGRICULTURAL DEVELOPMENT PROJECT  
MAIN CANAL  
CHECK STRUCTURE (1)

DRAWN *Y. Terachi* SUPERVISOR  
CHECKED *Y. Terachi* APPROVED  
OVERSEAS TECHNICAL COOPERATION AGENCY  
TOKYO MARCH 1989

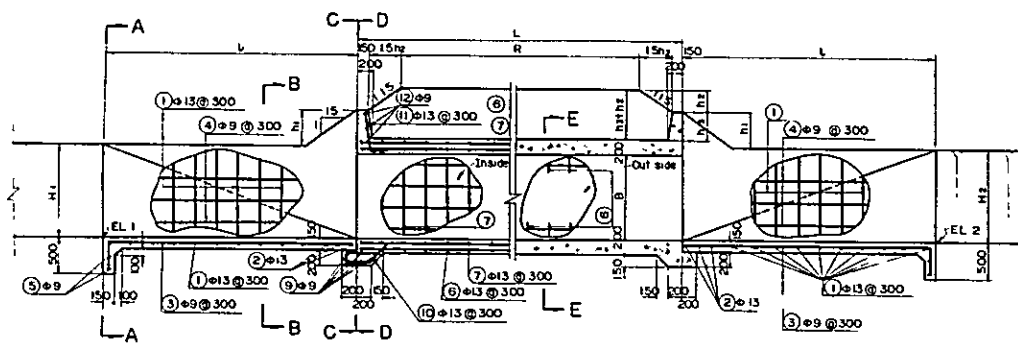
2027



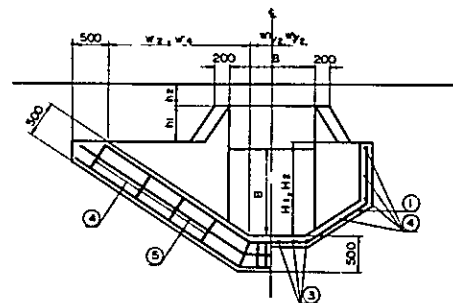




PLAN

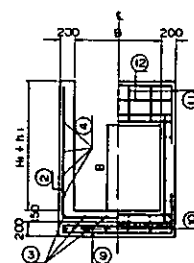


PROFILE

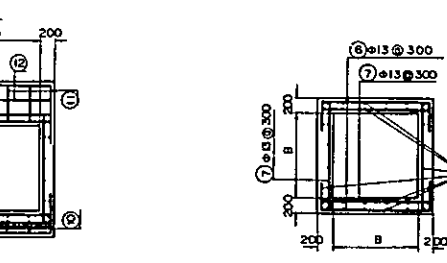


SECTION A-A

SECTION B-B



SECTION C-C



SECTION D-D

SECTION E-E

TABLE OF DIMENSION (mm)

	w1	H1	w2	L	B	h1	h2	h3	R	L	w3	H2	w4	EL1(m)	EL2(m)
N, NO 1 CV	700	1,400	2,100	4,000	1,300	100	0	0	4,500	4,500	700	1,400	2,100	166.15	166.15
NO 2 CV	700	1,400	2,100	4,000	1,200	0	0	0	4,500	4,500	600	1,300	1,950	166.05	166.03
NO 3 CV	600	1,300	1,950	3,500	1,200	100	0	0	4,500	4,500	600	1,300	1,950	165.84	165.84
NO 4 CV	600	1,300	1,950	3,500	1,200	100	0	0	4,500	4,500	600	1,300	1,950	165.72	165.74
NO 5 CV	600	1,300	1,950	3,500	1,100	0	0	0	5,000	5,000	600	1,200	1,800	165.54	165.54
NO 6 CV	600	1,200	1,800	3,500	1,100	200	200	100	4,000	5,000	600	1,200	1,800	165.49	165.50
NO 7 CV	600	1,200	1,800	3,000	1,100	200	200	100	4,600	5,500	600	1,200	1,800	165.31	165.33
NO 8 CV	400	900	1,350	2,500	800	200	200	100	4,600	5,500	400	900	1,350	165.32	165.31
NO 9 CV	400	1,900	1,350	2,500	800	200	200	100	4,600	5,500	400	900	1,350	165.24	165.23
NO 10 CV	300	1,800	1,200	2,000	700	200	400	100	5,000	6,500	300	800	1,200	165.06	165.05
S, NO 1 CV	400	900	1,350	2,500	700	0	0	100	4,700	15,000	400	900	1,350	165.94	165.92
NO 2 CV	400	900	1,350	2,500	700	0	0	0	6,000	6,000	400	900	1,350	165.61	165.80
Ls, NO 1 CV	300	1,000	1,500	1,500	700	0	0	100	4,700	5,000	300	1,000	1,500	163.77	163.76

TABLE OF REINFORCEMENT BAR (TRANSITION)

NO	TYPE-A		TYPE-B		TYPE-C		TYPE-D		TYPE-E		TYPE-F		TYPE-G												
	UNIT	NOS WEIGHT	UNIT LENGTH	NOS WEIGHT	UNIT LENGTH	NOS WEIGHT	UNIT LENGTH	NOS WEIGHT	UNIT LENGTH	NOS WEIGHT	UNIT LENGTH	NOS WEIGHT	UNIT LENGTH	NOS WEIGHT											
1	13	5.38	14	7.8	5.28	14	7.7	5.10	14	7.4	5.10	12	6.4	4.99	12	6.2	4.78	12	6.0	4.78	11	5.5			
2	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.41	1.5	
3	9	4.46	6	1.3	4.46	6	1.3	4.46	6	1.3	3.96	6	1.2	3.96	6	1.2	3.96	6	1.2	3.86	6	1.2	3.86	6	1.2
4	9	4.65	10	2.3	4.65	10	2.3	4.60	10	2.3	4.10	8	1.6	4.16	8	1.6	4.10	8	1.6	4.10	8	1.6	4.10	8	1.6
5	9	6.68	2	7	6.68	2	7	6.45	2	6	6.45	2	6	6.45	2	6	6.10	2	6	6.10	2	6	6.10	2	6
TOTAL(kg)	121		120		116		98		98		94		84												

TABLE OF REINFORCEMENT BAR (BARREL)

NO	TYPE-A		TYPE-B		TYPE-C		TYPE-D		TYPE-E		TYPE-F		TYPE-G									
	UNIT	NOS WEIGHT	UNIT LENGTH	NOS WEIGHT	UNIT LENGTH	NOS WEIGHT	UNIT LENGTH	NOS WEIGHT	UNIT LENGTH	NOS WEIGHT	UNIT LENGTH	NOS WEIGHT	UNIT LENGTH	NOS WEIGHT								
6	13	2.86	32	9.5	2.56	32	8.5	2.48	36	9.2	2.48	38	9.7	2.18	38	8.5	1.86	46	8.9	1.86	102	1.97
7	13	1.88	64	12.4	1.76	64	11.7	1.66	72	12.4	1.68	76	13.1	1.30	76	10.7	1.26	92	12.1	1.26	204	2.67
8	9	4.58	40	9.0	4.58	40	9.0	5.08	34	8.5	5.58	34	9.3	5.58	28	7.7	6.58	28	9.0	15.96	28	21.9
9	9	1.78	10	8	1.68	10	8	1.58	10	8	1.58	10	8	1.28	10	6	1.18	10	6	1.18	10	6
10	13	1.49	12	1.8	1.49	12	1.8	1.49	10	1.8	1.49	10	1.8	1.49	8	1.2	1.48	8	1.2	1.49	8	1.2
TOTAL(kg)	335		318		325		345		287		318		318									

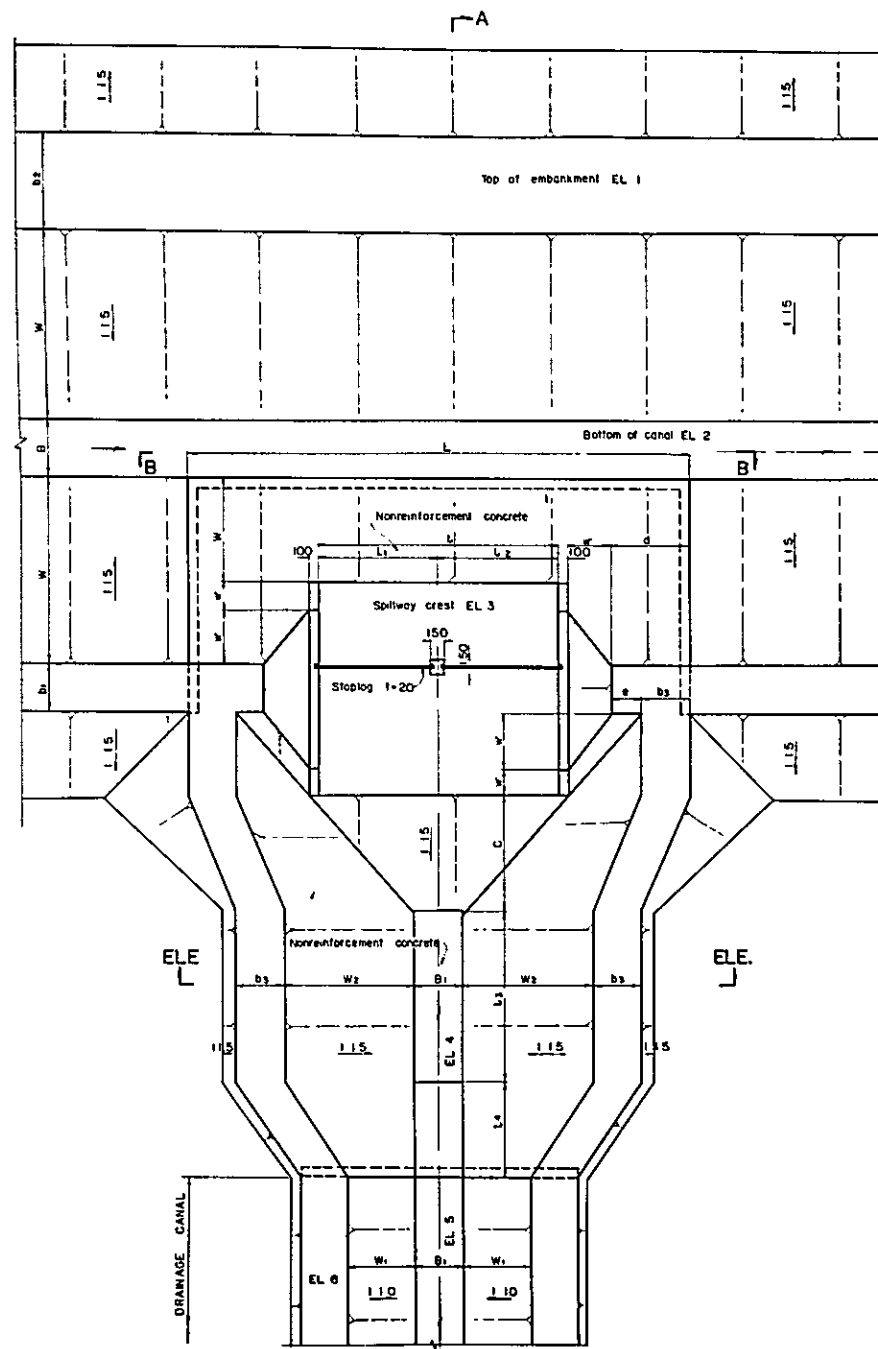
TABLE OF QUANTITY

CANAL	NORTH MAIN CANAL									
	NO 1 CV	NO 2 CV	NO 3 CV	NO 4 CV	NO 5 CV	NO 6 CV	NO 7 CV	NO 8 CV	NO 9 CV	NO 10 CV
Inlet Transition	A 121	B 120	D 98	D 98	E 98	G 94	H 85	I 55	J 55	L 44
Barrel	A 335	B 318	B 318	B 318	C 325	C 325	D 345	E 287	E 287	F 318
Outlet Transition	A 121	C 118	D 98	D 98	F 94	G 94	H 85	I 55	I 55	J 44
Total(kg)	577	554	514	514	515	513	515	397	397	408

KINGDOM OF LAOS  
THA NOON AGRICULTURAL DEVELOPMENT PROJECT  
MAIN CANAL  
CULVERT

DRAWN *U. Tanika* SUBMITTED  
CHECKED *S. Kanda* APPROVED  
OVERSEAS TECHNICAL COOPERATION AGENCY  
TOKYO MARCH 1989

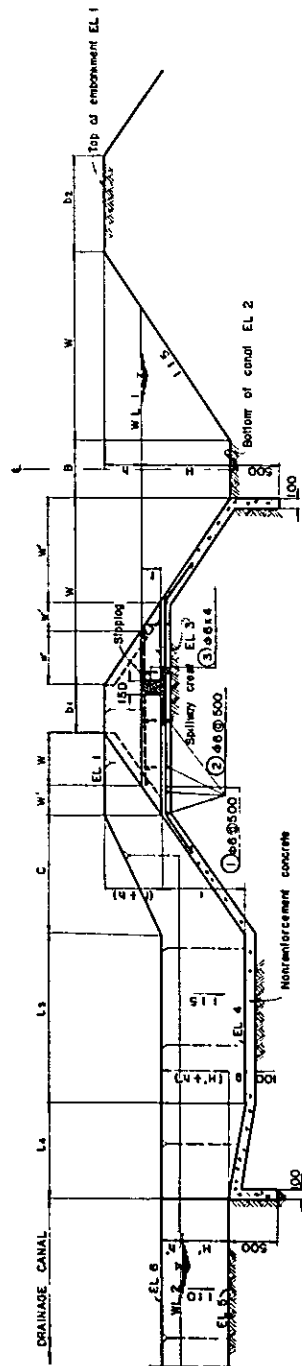
2029



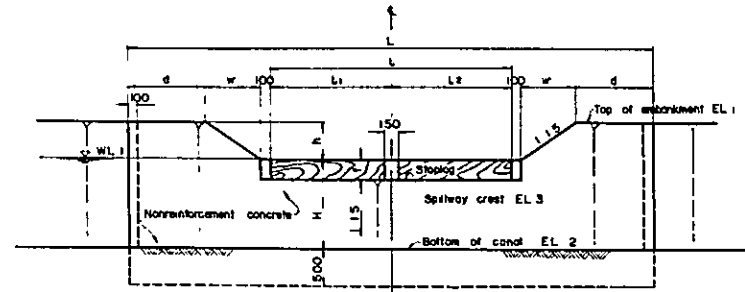
PLAN

TABLE OF DIMENSION (MM)

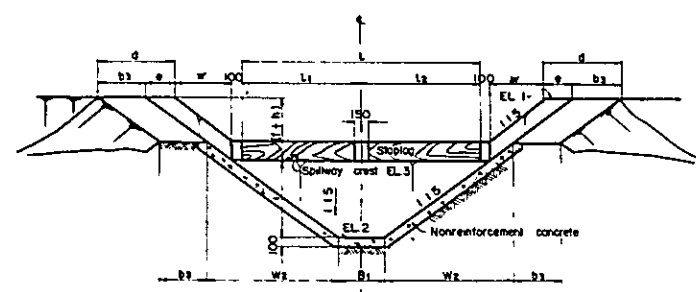
N-No	B	B <sub>1</sub>	W	W <sub>1</sub>	W <sub>2</sub>	W'	W''	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	L	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	d	H	h	H'	N'	C	e	f	g	i	WL 1	WL 2	EL 1	EL 2	EL 3	EL 4	EL 5	EL 6	
N-No 1	700	800	2,100	900	1,275	1,050	800	450	800	1,000	500	5,800	2,500	1,250	2,200	1,000	950	1,000	400	710	180	760	450	300	130	850	187.19	189.80	187.59	186.19	188.89	189.04	188.19	187.08
" 2	600	"	1,950	1,320	2,050	1,095	480	375	"	"	5,010	2,300	1,150	1,150	"	875	980	320	820	170	1,535	375	250	"	880	199.87	185.80	187.19	185.89	186.82	184.73	184.88	185.30	
" 3	"	500	"	1,180	1,985	930	570	450	"	"	5,040	2,000	1,000	1,000	"	950	920	380	480	"	585	480	300	"	1,020	188.51	185.80	186.89	185.59	186.82	185.19	185.34	186.50	
" 4	"	600	1,800	1,000	1,775	840	510	"	"	"	5,220	2,000	1,150	"	"	880	340	500	500	90	"	"	"	"	570	188.22	188.00	188.58	185.38	185.92	185.35	185.50	186.50	
" 5	400	400	1,350	1,200	2,025	600	450	300	"	"	4,100	1,800	"	"	"	800	800	300	400	800	240	300	200	"	310	185.78	185.10	186.08	185.18	185.86	185.55	184.70	185.90	
" 6	300	500	1,200	750	1,320	435	465	"	"	"	3,630	1,300	"	"	"	"	490	310	430	300	90	"	"	"	330	185.55	185.50	185.86	185.08	185.25	184.92	185.07	185.80	
S-No 1	400	"	1,350	1,000	1,725	"	540	375	1,000	500	"	"	"	"	"	875	940	380	500	300	210	375	250	"	880	188.48	188.20	188.84	185.94	186.23	185.55	185.70	186.70	
" 2	300	600	1,200	920	1,805	"	465	300	500	1,000	"	"	"	"	"	800	490	310	620	300	2325	300	200	"	2,210	185.94	184.50	186.25	185.45	185.74	183.73	183.88	184.80	



SECTION A-A



SECTION B-B



ELEVATION

TABLE OF REINFORCEMENT BARS

	N-No 1	N-No 2	N-No 3	N-No 4	N-No 5	N-No 6	S-No 1	S-No 2	REMARKS
1	3.72	3.33	3.68	3.54	3.12	3.16	3.95	3.15	
2	6	6	5	6	4	4	4	4	
Total	22.32	19.98	18.30	21.24	12.48	12.84	15.80	12.60	
Nos	1	2	2	2	2	2	2	2	
Total	3.64	3.16	2.52	3.28	3.04	3.10	4.40	3.10	
2	2.72	2.52	2.22	2.52	1.82	1.52	1.72	1.62	
Nos	2	2	2	2	2	2	2	2	
Total	5.44	5.04	4.44	5.04	3.64	3.04	3.44	3.24	
3	3.32	3.02	2.82	3.12	2.22	1.92	2.12	2.04	
Nos	4	4	4	3	3	3	5	3	
Total	13.28	12.08	11.28	9.36	8.68	6.76	10.60	8.12	
4	1.12	1.02	1.12	1.12	0.92	0.92	1.02	0.92	
Nos	4	4	4	4	4	4	4	4	
Total	4.48	4.08	4.48	4.48	3.68	3.68	4.08	3.68	
Subtotal	49.18	44.34	41.02	43.40	29.50	28.22	38.32	29.74	
TOTAL LENGTH		302.70 m		UNIT WEIGHT		0.6 ± 0.22 kg/m			
TOTAL WEIGHT		302.70 × 0.22 = 66.594 kg = 0.07 ton							

KINGDOM OF LAOS  
 THE NOON AGRICULTURAL DEVELOPMENT PROJECT  
**MAIN CANAL  
 SIDE SPILLWAY**

DRAWN: *Y. Tansil* SUBMITTED  
 CHECKED: *S. Kamath* APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 19670 MARCH 1968

2030

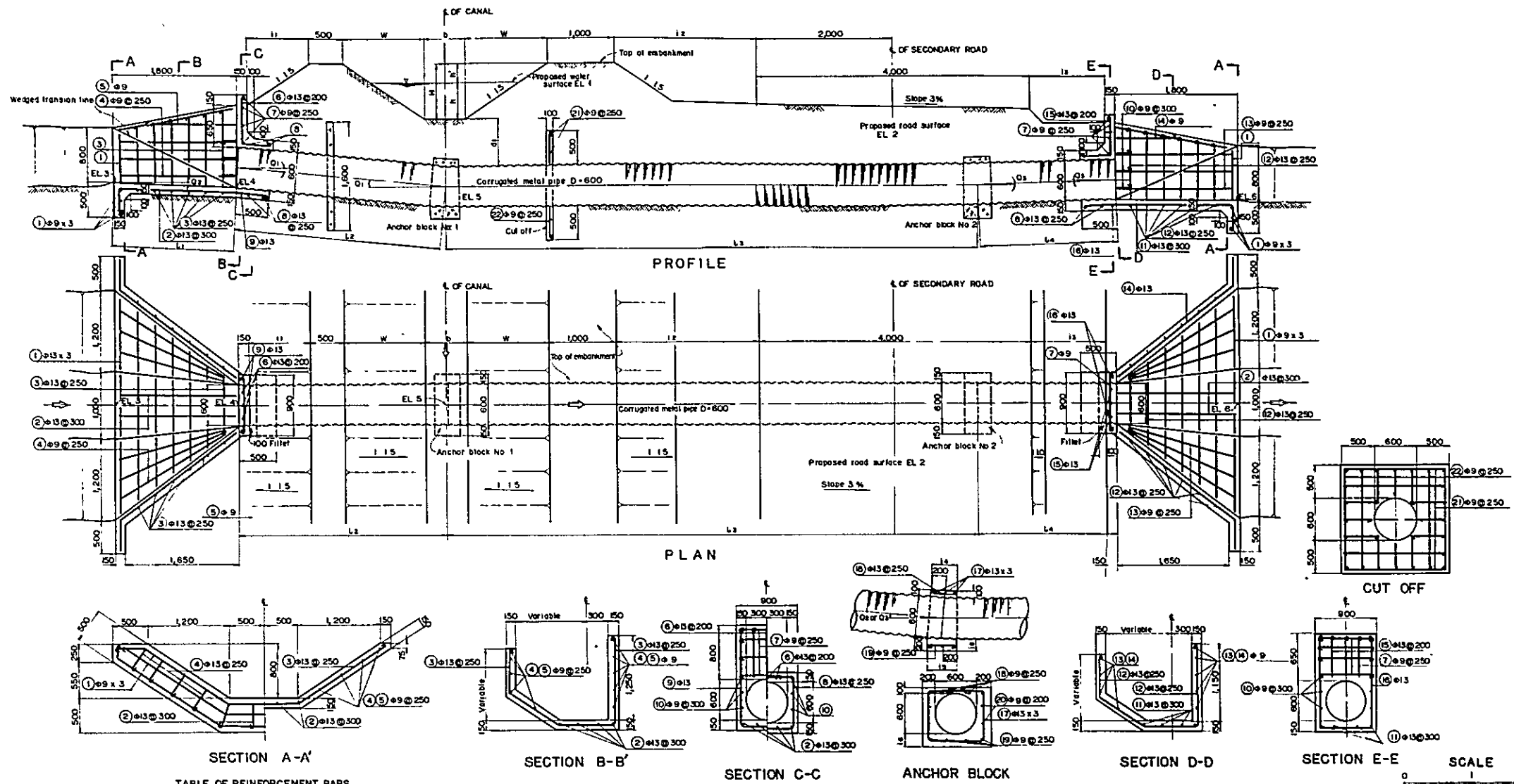
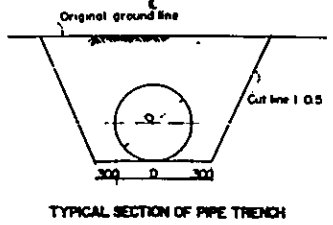


TABLE OF REINFORCEMENT BARS

MARK	φ	LENGTH	No 1, No 2, No 4			No 3			REMARKS	
			NOS	T LENGTH	U WEIGHT	WEIGHT	LENGTH	NOS		T LENGTH
1	9	5.44	6	32.64	0.499	16.29	5.44	6	32.64	16.29
2	13	2.88	4	11.44	1.042	12.00	2.88	4	11.44	12.00
3		4.22	6	25.32		26.56	4.22	6	25.32	26.56
4	9	2.44	6	14.64	0.499	7.31	2.44	6	14.64	7.31
5		2.54	4	10.16		5.07	2.54	4	10.16	5.07
6	13	1.36	3	4.08	1.042	4.28	1.36	3	4.08	4.28
7	9	1.24	8	9.92	0.499	4.95	1.24	8	9.92	4.95
8	13	4.12	4	16.48	1.042	17.29	4.12	4	16.48	17.29
9		5.32	1	5.32		5.58	5.32	1	5.32	5.58
10	9	1.14	12	13.68	0.499	6.83	1.14	12	13.68	6.83
11	13	2.88	4	11.44	1.042	12.00	2.88	4	11.44	12.00
12		4.12	6	24.72		25.94	4.12	6	24.72	25.94
13	9	2.44	6	14.64	0.499	7.31	2.44	6	14.64	7.31
14		2.29	4	9.16		4.57	2.29	4	9.16	4.57
15	13	1.26	3	3.78	1.042	3.97	1.26	3	3.78	3.97
16		3.92	1	3.92		4.12	3.92	1	3.92	4.12
17		3.76	8	30.08		31.37	3.76	8	30.08	31.37
18	9	0.46	8	3.68	0.499	1.92	0.46	8	3.68	1.92
19		0.58	8	4.64		2.32	0.58	8	4.64	2.32
20		0.53	8	4.24		2.12	0.53	8	4.24	2.12
21		1.08	20	21.60		10.78	1.08	20	21.60	10.78
22		1.08	20	21.60		10.78	1.08	20	21.60	10.78
TOTAL			215.86	kg + 0.22 ton			200.57	kg + 0.20 ton		

TABLE OF DIMENSION (M)

D/C	STATION	H	h	h	b	W	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l		
No 1	3-	No 17	0.90	0.54	0.36	0.40	1.35	0.225	1.450	1.000	0.400	0.500	0.150	1.800	2.498	7.000	2.022	37.24	4.48	0.32	0.32	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600
2		No 25+400	0.52	0.38		0.135			1.825	2.426		2.057	0.47	0.27	1.200	0.14		10.48	10.18	10.452																		
3		No 38+135	0.80	0.51	0.29	0.30	1.20	0.845	1.650				1.800	2.858		2.000	0.37	4.48		0.84	0.500	0.674	0.439	0.435	0.424													
4		No 44		1.048	0.31		0.165	1.100					1.625	2.227	6.500	2.026	0.01	0.28		0.06	1.0579	0.500	0.504	0.474	0.420	0.430												

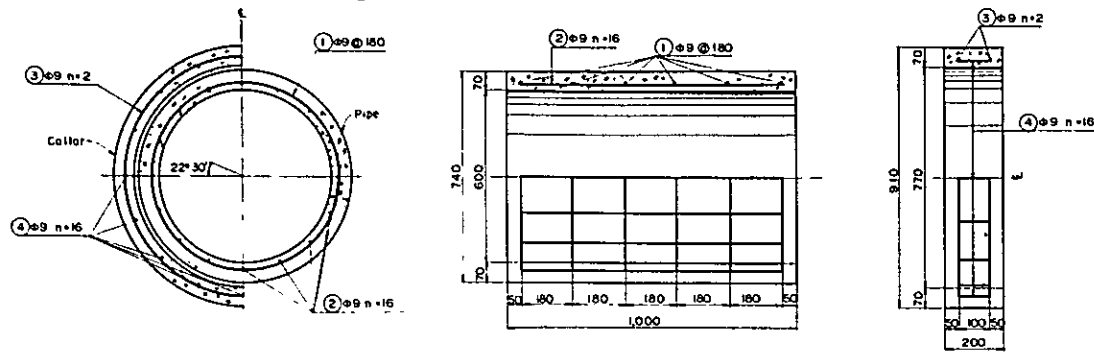


KINGDOM OF LAOS  
 THE NOON AGRICULTURAL DEVELOPMENT PROJECT  
**MAIN CANAL  
 DRAINAGE CROSSING**

DRAWN: *V. Tantisak* SUBMITTED  
 CHECKED: *S. Kongsak* APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1969

2031

D = 600 mm



Concrete volume

Pipe	3 14 x 0.07 x 0.07 x 10 = 0.15
Collar	3 14 x 0.04 x 0.07 x 0.2 = 0.04
Total	0.19 m <sup>3</sup>

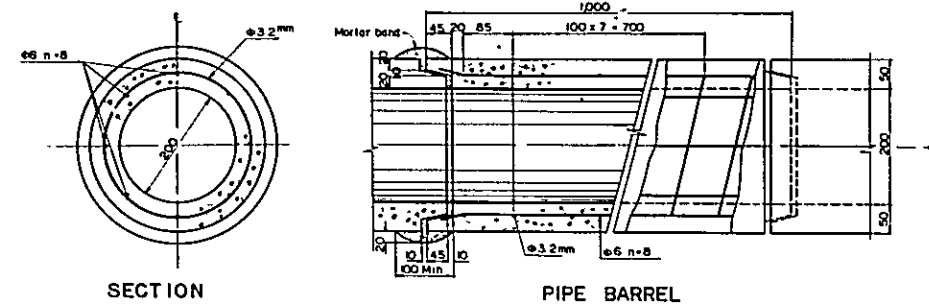
MARK	φ	LENGTH	NOS	T LENGTH	WEIGHT	WEIGHT
1	9	2.78	6	16.68	0.49	8
2	9	1.10	16	17.60	0.49	9
						17 kg

MARK	φ	LENGTH	NOS	T LENGTH	WEIGHT	WEIGHT
3	9	3.32	2	6.64	0.49	3
4	9	0.32	16	5.12	0.49	3
						6 kg

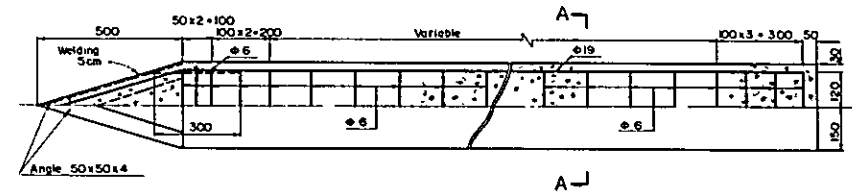
Pipe with Collar 23 kg

D = 200 mm



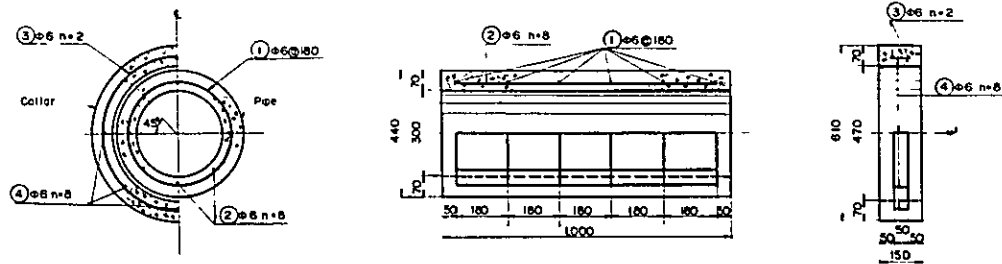
DESCRIPTION	CALCULATION	UNIT	QUANTITY
Concrete	3 14 x 0.25 x 0.05 x 0.955	m <sup>3</sup>	0.04
Mortar	3 14 x 0.25 x 0.05 x 0.01 x 3 14 x 0.3 x 0.02 x 0.07	m <sup>3</sup>	0.002
Reinforcement bar	6mm 0.95 x 8 x 0.22	kg	2
Wire	3.2mm 3 14 x 0.25 x 2 √(3 14 x 0.25 x 0.006) + 2 √(3 14 x 0.25 x 0.017)	m	8.7

CONCRETE PILE



ELEVATION AND SECTION B-B  
(TYPE A & B)

D = 300 mm



Concrete volume

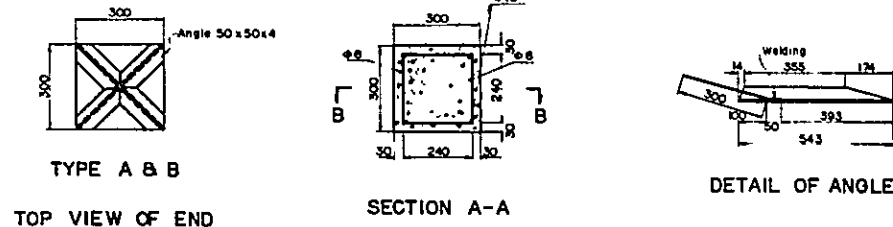
Pipe	3 14 x 0.37 x 0.07 x 10 = 0.09
Collar	3 14 x 0.54 x 0.07 x 0.15 = 0.02
Total	0.11 m <sup>3</sup>

MARK	φ	LENGTH	NOS	T LENGTH	WEIGHT	WEIGHT
1	6	1.58	6	9.48	0.49	5
2	6	1.02	8	8.16	0.49	4
						9 kg

MARK	φ	LENGTH	NOS	T LENGTH	WEIGHT	WEIGHT
3	6	2.12	2	4.24	0.49	2
4	6	0.30	8	2.40	0.49	1
						3 kg

Pipe with Collar 12 kg

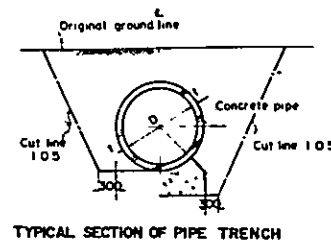


TYPE A & B  
TOP VIEW OF END

SECTION A-A

DETAIL OF ANGLE

TYPE	LENGTH	MATERIALS	UNIT QTY
A	3 m	Concrete	0.24 m <sup>3</sup>
		6mm bar	2.6 kg
		3mm bar	3.77 kg
B	5 m	Concrete	0.42 m <sup>3</sup>
		19mm bar	44.70 kg
		6mm bar	8.39 kg



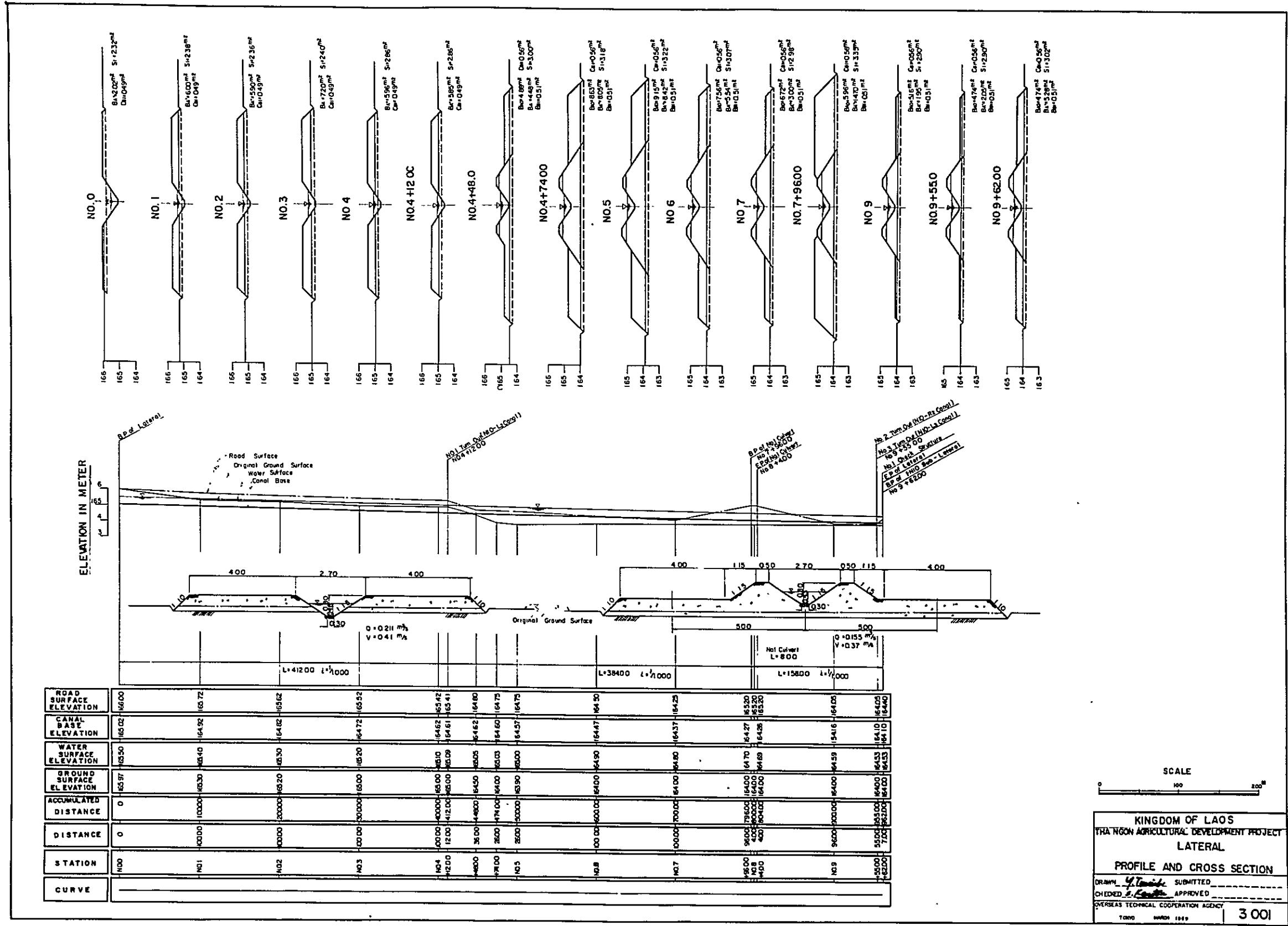
TYPICAL SECTION OF PIPE TRENCH



KINGDOM OF LAOS  
THA NOON AGRICULTURAL DEVELOPMENT PROJECT  
**MAIN CANAL  
CONCRETE PIPE AND PILE**

DRAWN *Y. Tomida* SUBMITTED  
CHECKED *S. Kawata* APPROVED  
OVERSEAS TECHNICAL COOPERATION AGENCY  
TOKYO MARCH 1988

2032

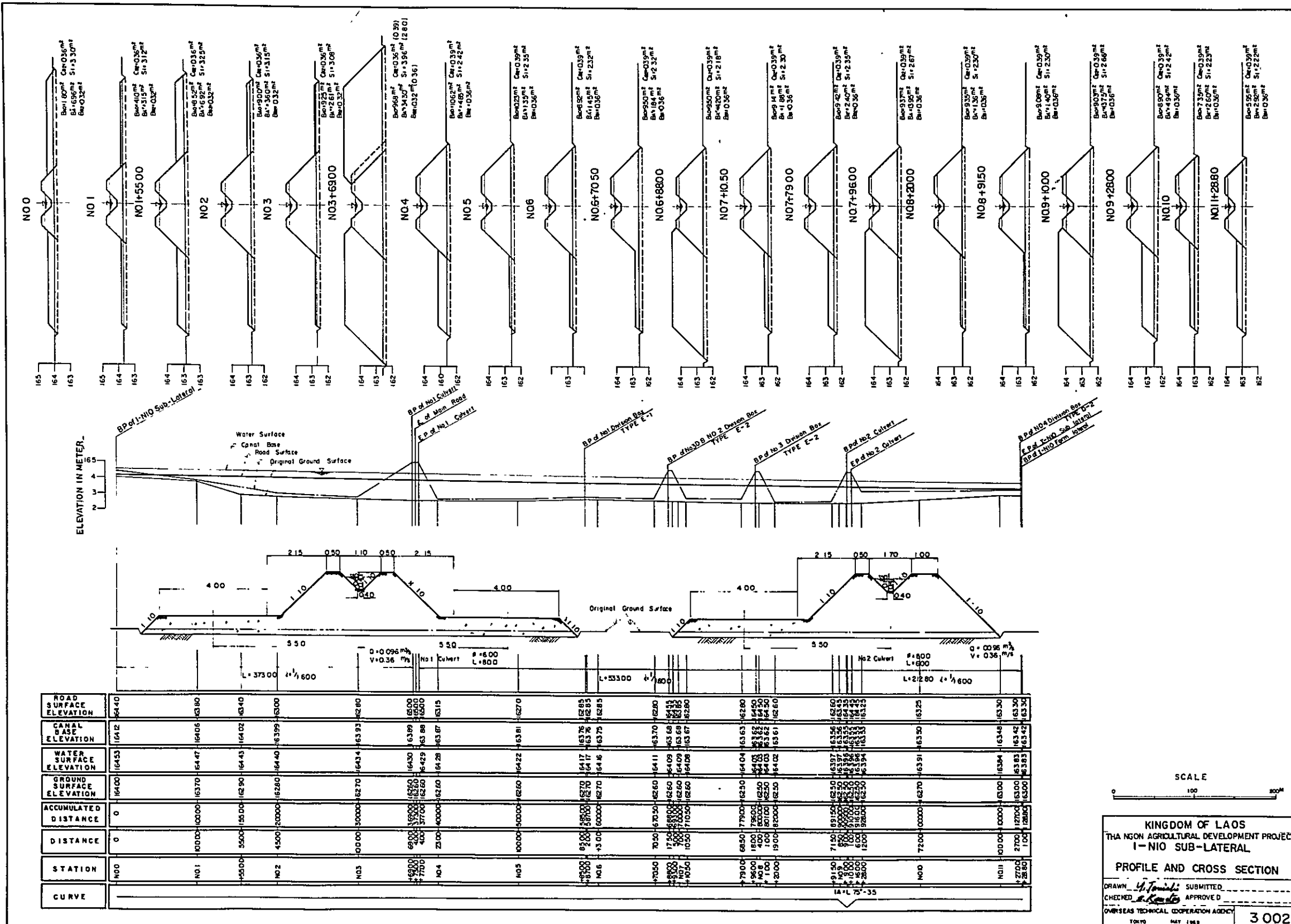


ROAD SURFACE ELEVATION	CANAL BASE ELEVATION	WATER SURFACE ELEVATION	GROUND SURFACE ELEVATION	ACCUMULATED DISTANCE	DISTANCE	STATION	CURVE
166.00	165.02	165.50	165.57	0	0	NO.0	
165.72	164.92	165.40	165.30	10000	10000	NO.1	
165.62	164.82	165.30	165.20	20000	10000	NO.2	
165.52	164.72	165.20	165.00	30000	20000	NO.3	
165.42	164.62	165.10	164.80	40000	10000	NO.4	
165.41	164.61	165.09	164.79	41200	12000	NO.4	
164.80	164.62	165.05	164.50	4800	3500	NO.4	
164.75	164.60	165.03	164.50	7000	2500	NO.4	
164.75	164.57	165.00	164.50	9000	2500	NO.4	
164.30	164.47	164.90	164.30	16000	7000	NO.4	
164.25	164.37	164.80	164.30	20000	10000	NO.4	
163.20	164.27	164.70	163.20	27500	15500	NO.4	
163.20	164.26	164.69	163.20	28000	16000	NO.4	
163.30	164.25	164.70	163.30	30000	18000	NO.4	
164.05	164.16	164.59	164.05	30000	18000	NO.4	
164.05	164.10	164.53	164.05	35000	25000	NO.4	
164.00	164.10	164.53	164.00	35000	25000	NO.4	
164.00	164.10	164.53	164.00	35000	25000	NO.4	

SCALE  
0 100 200

KINGDOM OF LAOS  
THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
LATERAL  
PROFILE AND CROSS SECTION

DRAWN *[Signature]* SUBMITTED  
CHECKED *[Signature]* APPROVED  
OVERSEAS TECHNICAL COOPERATION AGENCY  
3 001



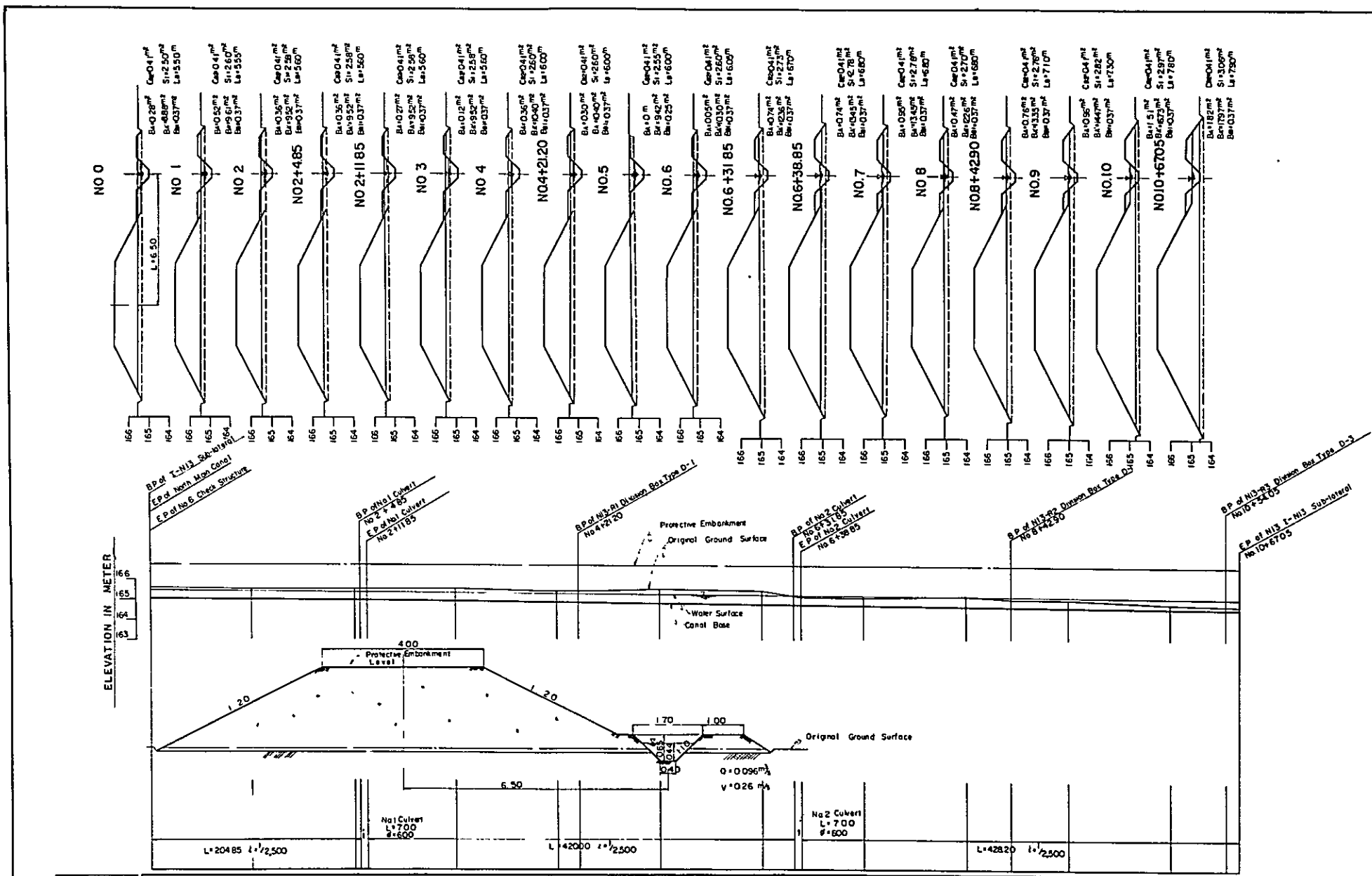
ROAD SURFACE ELEVATION	CANAL BASE ELEVATION	WATER SURFACE ELEVATION	GROUND SURFACE ELEVATION	ACCUMULATED DISTANCE	DISTANCE	STATION	CURVE
164.40	164.12	164.33	164.00	0	0	NO0	
163.90	164.06	164.47	163.70	100.00	100.00	NO1	
163.40	164.02	164.43	162.90	200.00	100.00	NO2	
163.00	163.99	164.40	162.60	300.00	100.00	NO3	
162.80	163.93	164.34	162.70	400.00	100.00	NO4	
162.70	163.89	164.30	162.60	500.00	100.00	NO5	
162.65	163.88	164.29	162.50	600.00	100.00	NO6	
162.60	163.87	164.28	162.50	700.00	100.00	NO7	
162.50	163.81	164.22	162.50	800.00	100.00	NO8	
162.40	163.76	164.17	162.40	900.00	100.00	NO9	
162.30	163.72	164.16	162.30	1000.00	100.00	NO10	
162.20	163.67	164.15	162.20	1100.00	100.00	NO11	

SCALE  
0 100 200

KINGDOM OF LAOS  
THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
I-NIO SUB-LATERAL  
PROFILE AND CROSS SECTION

DRAWN *H. Tanaka* SUBMITTED  
CHECKED *H. Tanaka* APPROVED

OVERSEAS TECHNICAL COOPERATION AGENCY  
3 002  
TOKYO MAY 1963



PROTECTIVE EMBANKMENT ELEVATION	CANAL BASE ELEVATION	WATER SURFACE ELEVATION	GROUND SURFACE ELEVATION	ACCUMULATED DISTANCE	DISTANCE	STATION	CURVE
166.71	165.03	165.47	165.60	0	0	NO.0	
				00.00	00.00	NO.1	
				204.85	204.85	NO.2	
				211.85	7.00	NO.2+11.85	
				300.00	88.15	NO.3	
				400.00	20.00	NO.4	
				421.20	21.20	NO.4+21.20	
				500.00	78.80	NO.5	
				600.00	20.00	NO.6	
				631.85	31.85	NO.6+31.85	
				638.85	7.00	NO.6+38.85	
				700.00	61.15	NO.7	
				800.00	20.00	NO.8	
				842.30	42.30	NO.8+42.30	
				900.00	57.10	NO.9	
				1000.00	20.00	NO.10	
				1040.05	40.05	NO.10+40.05	
				1070.05	30.00	NO.10+70.05	

SCALE  
0 100 200

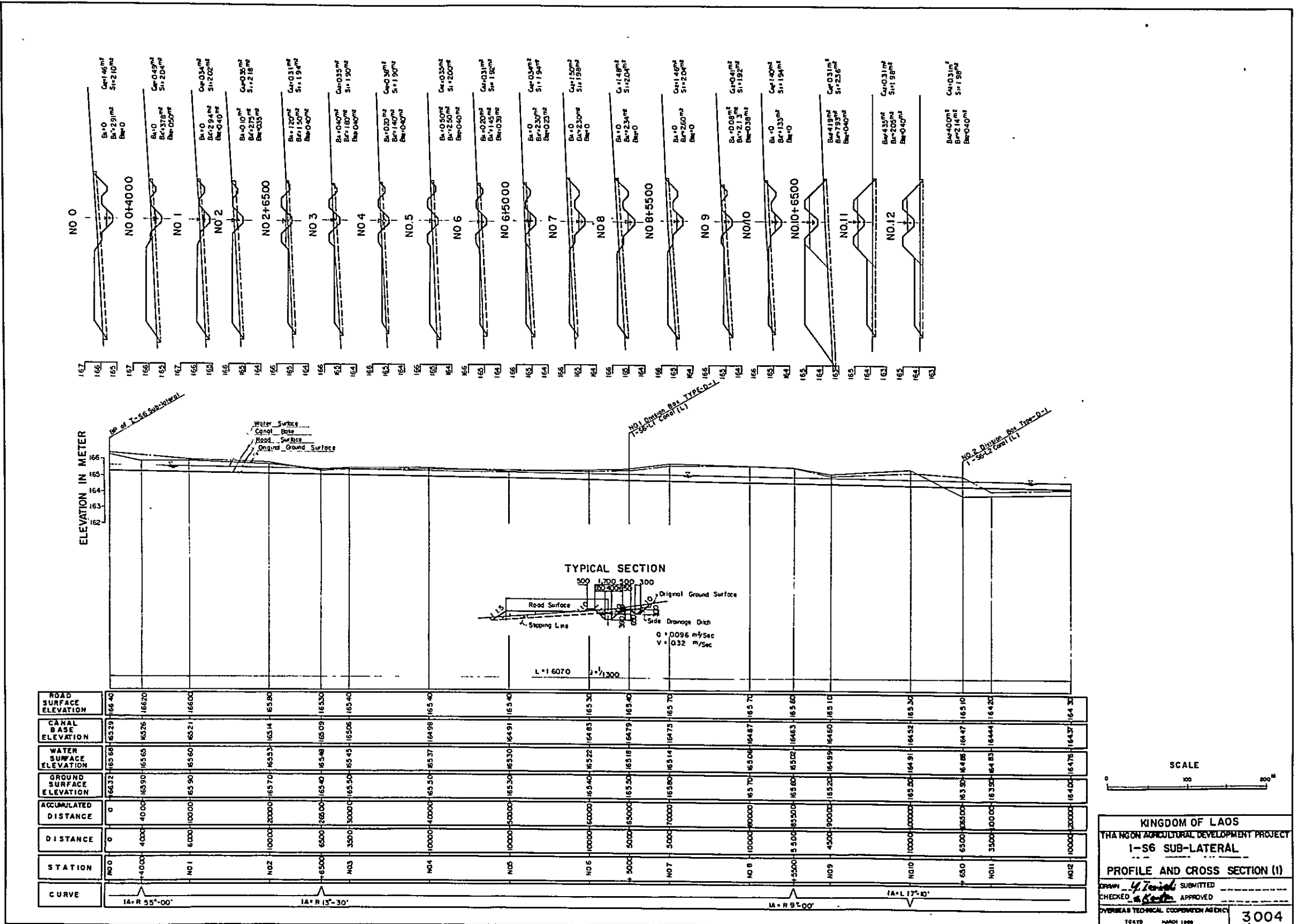
KINGDOM OF LAOS  
THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
I-N13 SUB-LATERAL

**PROFILE AND CROSS SECTION**

DRAWN *[Signature]* SUBMITTED  
CHECKED *[Signature]* APPROVED

OVERSEAS TECHNICAL COOPERATION AGENCY  
TOKYO MAY 1969

**3 003**

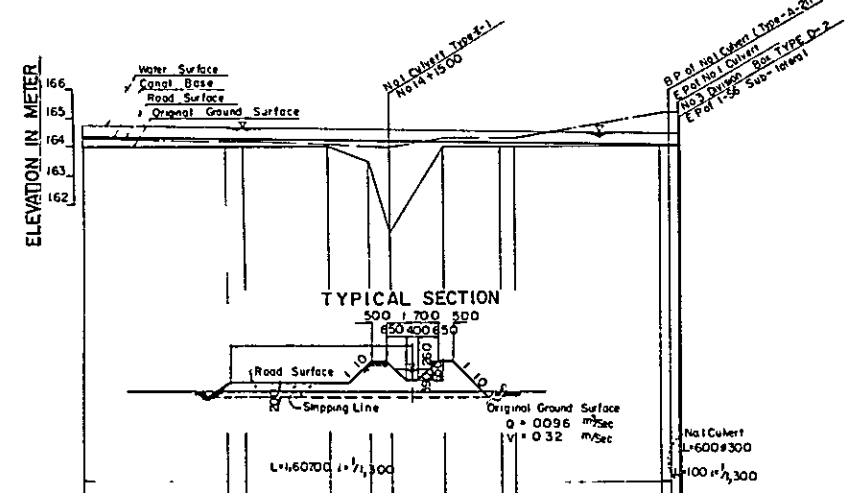
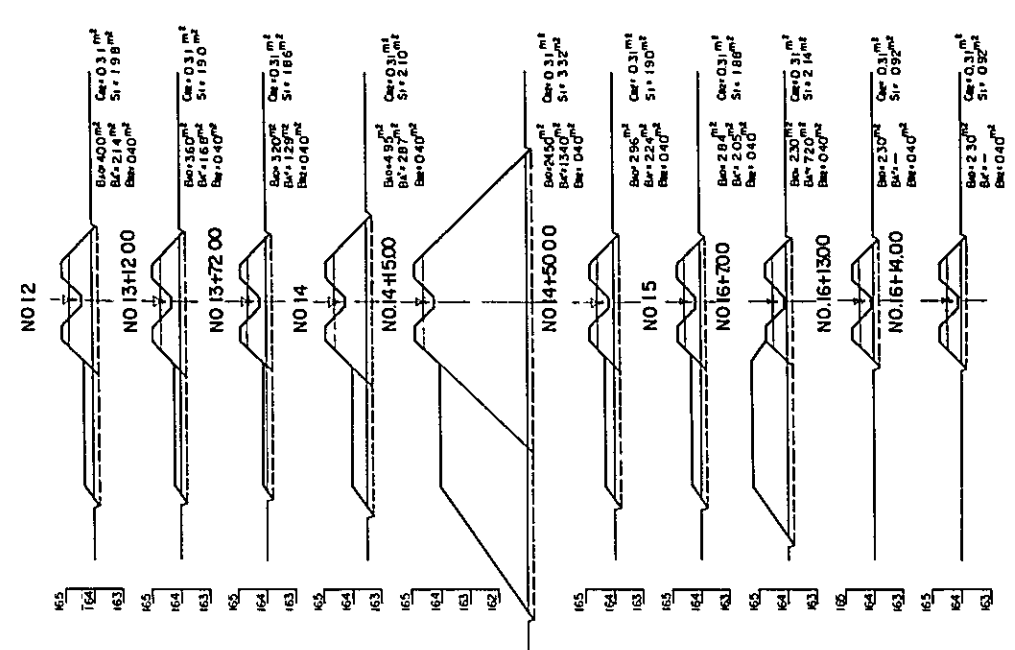


ROAD SURFACE ELEVATION	CANAL BASE ELEVATION	WATER SURFACE ELEVATION	GROUND SURFACE ELEVATION	ACCUMULATED DISTANCE	DISTANCE	STATION	CURVE
166.40	163.29	165.68	163.32	0	0	NO 0	1A R 55'-00"
166.20	163.26	165.65	163.50	40.00	4.000	NO 1	
166.00	163.21	165.60	165.50	100.00	6.000	NO 2	
165.90	163.14	165.53	163.70	200.00	10.000	NO 3	1A R 13'-30"
165.30	163.09	165.48	165.40	260.00	6.000	NO 4	
165.40	163.08	165.43	165.50	300.00	3.000	NO 5	
165.40	164.98	165.37	165.50	400.00	10.000	NO 6	
165.30	164.83	165.22	165.40	500.00	10.000	NO 7	
165.40	164.79	165.18	165.50	600.00	10.000	NO 8	1A R 55'-00"
165.70	164.73	165.14	165.80	700.00	10.000	NO 9	
165.70	164.67	165.06	165.70	800.00	10.000	NO 10	1A R 17'-40"
165.60	164.63	165.02	165.60	850.00	5.000	NO 11	
165.10	164.60	164.95	165.20	900.00	4.500	NO 12	
165.10	164.47	164.88	165.30	950.00	6.000		
164.20	164.44	164.83	165.35	1000.00	3.000		
164.30	164.37	164.76	165.40	1000.00	0.000		

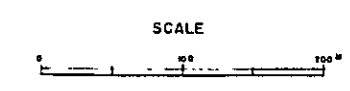


KINGDOM OF LAOS  
 THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
 I-S6 SUB-LATERAL  
 PROFILE AND CROSS SECTION (1)  
 DRAWN: [Signature] SUBMITTED  
 CHECKED: [Signature] APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1969  
 3004



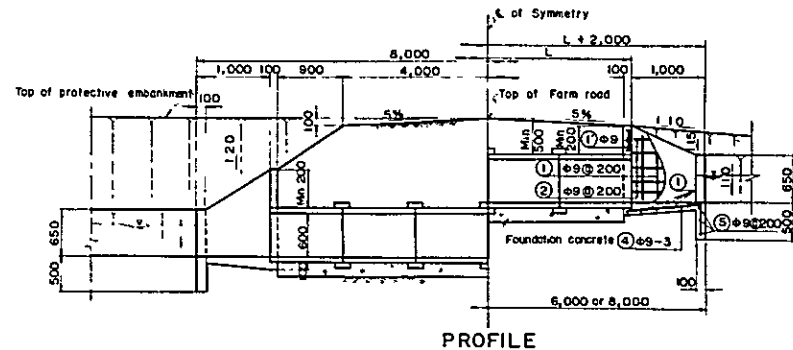
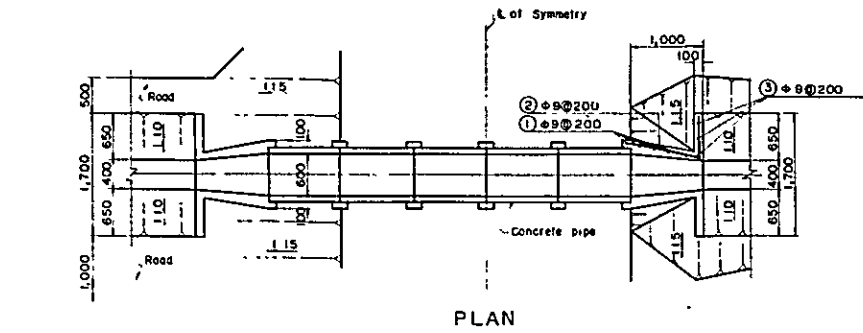


	NO 12	NO 13	NO 13+12.00	NO 13+72.00	NO 14	NO 14+50.00	NO 15	NO 16	NO 16+700	NO 16+1300	NO 16+14.00	NO 16+14.00
ROAD SURFACE ELEVATION	164.30	164.37	164.20	164.20	164.10	164.30	164.30	164.20	164.20	164.20	164.20	164.20
CANAL BASE ELEVATION		164.37	164.20	164.20	164.24	164.14	164.14	164.08	164.08	164.08	164.08	164.08
WATER SURFACE ELEVATION	164.76	164.76	164.68	164.67	164.63	164.53	164.53	164.43	164.43	164.43	164.43	164.43
SURFACE ELEVATION	164.00	164.00	164.00	164.00	164.00	164.00	164.00	164.00	164.00	164.00	164.00	164.00
ACCUMULATED DISTANCE	0	1200	31200	31200	37200	40000	41800	46000	46000	46000	46000	46000
DISTANCE	0	1200	1200	1200	8000	2800	1500	3500	3500	3500	3500	3500
STATION	NO 12	NO 13	NO 13+12.00	NO 13+72.00	NO 14	NO 14+50.00	NO 15	NO 16	NO 16+700	NO 16+1300	NO 16+14.00	NO 16+14.00
CURVE		1A+L28°-15'		1A+L29°-05'								



KINGDOM OF LAOS  
 THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
 1-S6 SUB-LATERAL  
 PROFILE AND CROSS SECTION (2)  
 DRAWN *Y. Trivicki* SUBMITTED \_\_\_\_\_  
 CHECKED *P. K. Khamta* APPROVED \_\_\_\_\_  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1988 3 005

CULVERT



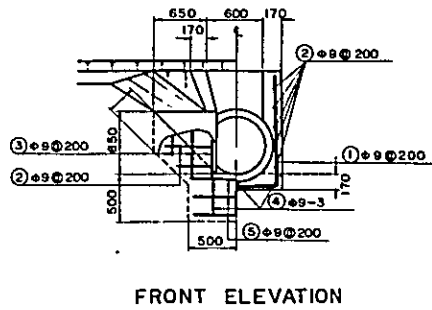
TYPE - A  
(Q = 0.096 m<sup>3</sup>/sec)  
TYPE - A.1 TYPE - A.2

NOTE,  
TYPE-A2(1) L = 4.00 m  
TYPE-A2(2) L = 6.00 m

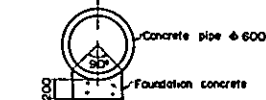
TABLE OF REINFORCEMENT BAR

MARK	Ø	UNIT LENGTH	NO.	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT	REMARKS
1	Ø 27	5x2	27	110	0.49	13.28	[L]
1'	Ø 71	2x2	2	2.84	-	1.40	[L]
2	Ø 188	10x2	37	20	-	18.23	[L]
3	Ø 98	6x2	11	52	-	5.65	[L]
4	Ø 78	3x2	10	56	-	5.18	[L]
5	Ø 128	3x2	7	56	-	3.71	[L]
TOTAL							47.35 = 0.048 ton

DROP



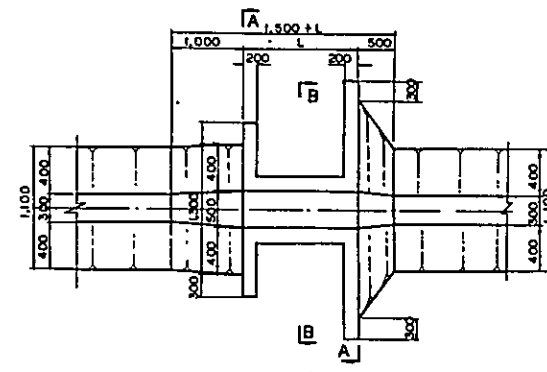
FRONT ELEVATION



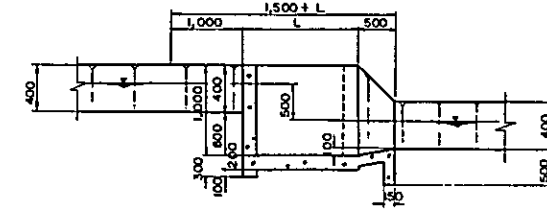
BARREL SECTION  
(Road wide 60m)



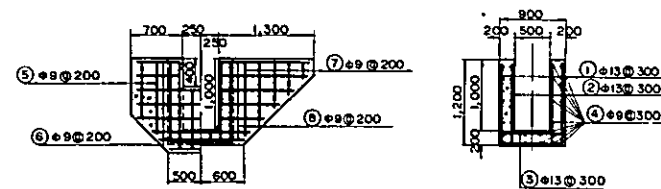
BARREL SECTION  
(Road wide 40m)



PLAN



PROFILE



SECTION A-A

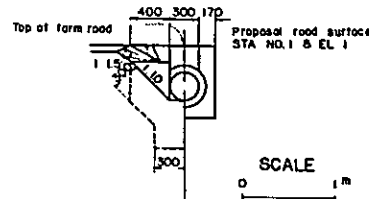
SECTION B-B

TYPE - I  
(Q = 48 L<sup>3</sup>/sec)

SCALE  
0 1 2m

TABLE OF REINFORCEMENT BAR

MARK	LENGTH	NO.	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT	REMARKS	
1	15	328	5	18.30	1.04	18.96 [L]	
2	136	10	13.60	-	14.15	[L]	
3	108	5	5.40	-	5.52	[L]	
4	9	151	20	30.20	0.49	14.80 [L]	
5	108	8	8.64	-	3.12	[L]	
6	108	10	10.80	-	9.60	[L]	
7	158	12	18.96	-	9.28	[L]	
8	158	12	18.72	-	9.18	[L]	
TOTAL							82.62 kg = 0.083 ton



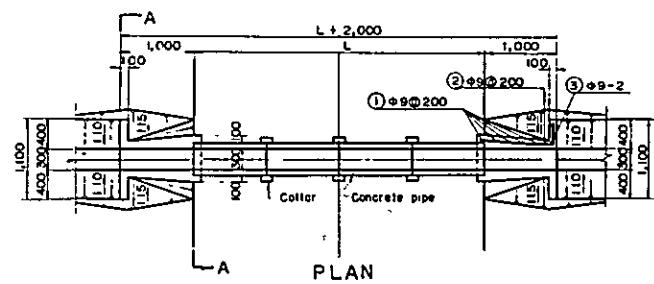
SECTION A-A

SCALE  
0 1m

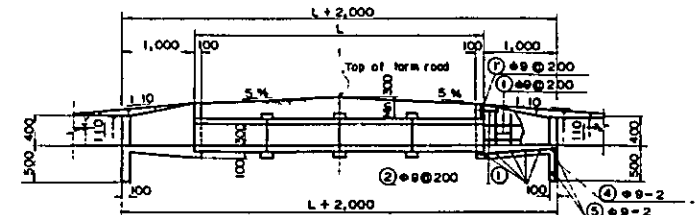
TABLE OF REINFORCEMENT BAR

MARK	Ø	UNIT LENGTH	NO.	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT	REMARKS
1	Ø 188	5x2	18	60	0.49	9.12	[L]
1'	Ø 48	2x2	1	84	-	0.91	[L]
2	Ø 178	8x2	21	12	-	10.35	[L]
3	Ø 81	4x2	8	48	-	3.18	[L]
4	Ø 78	2x2	7	84	-	3.45	[L]
5	Ø 58	2x2	2	4	-	1.10	[L]
TOTAL							28.11 = 0.028 ton

NOTE,  
TYPE - B1 L = 6.00 m  
TYPE - B2 L = 4.00 m  
TYPE - B3 L = 3.00 m



PLAN



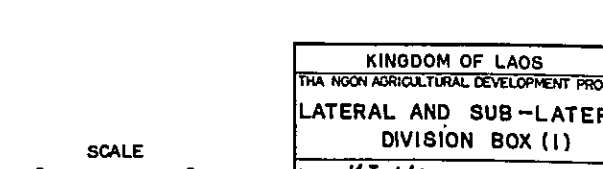
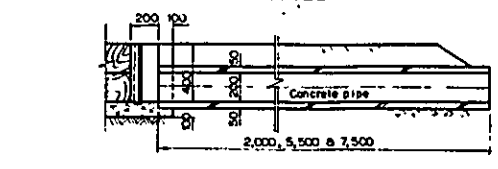
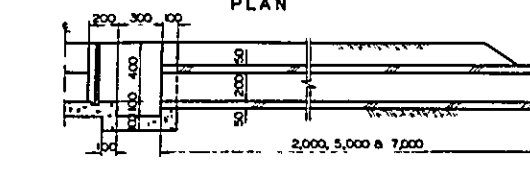
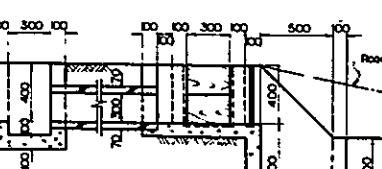
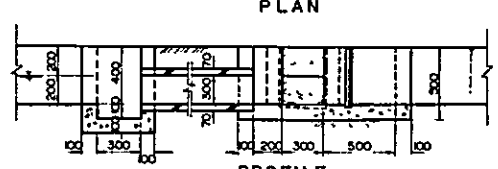
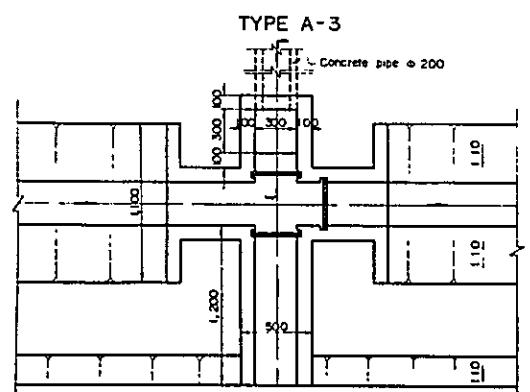
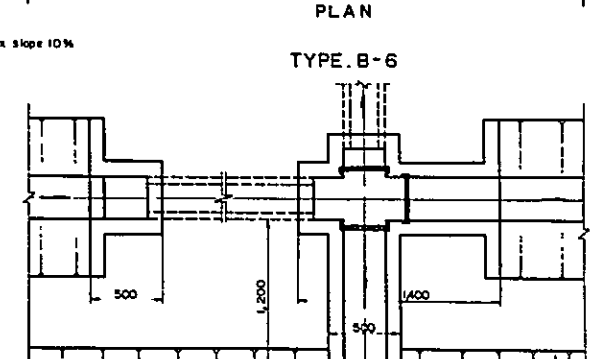
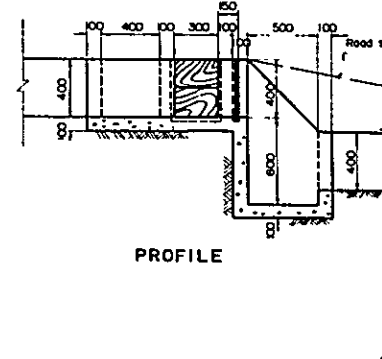
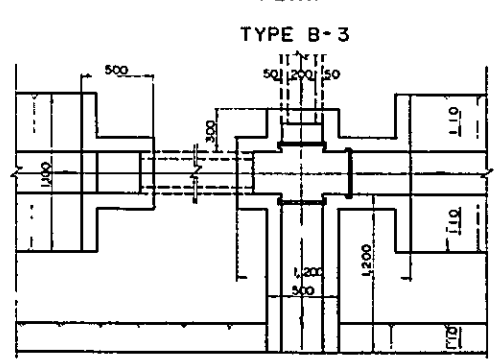
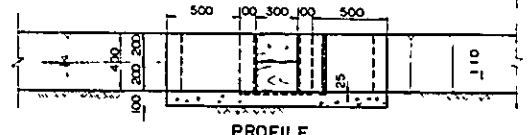
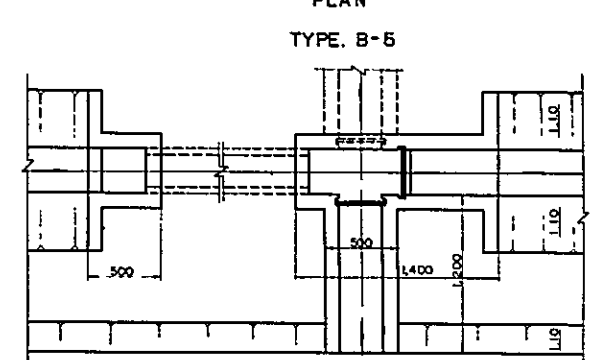
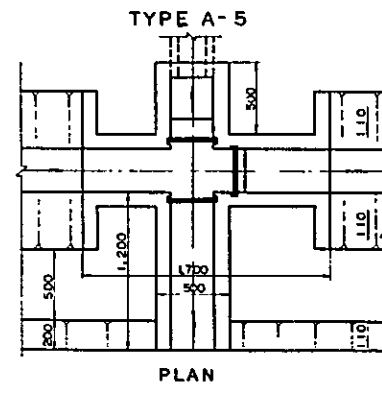
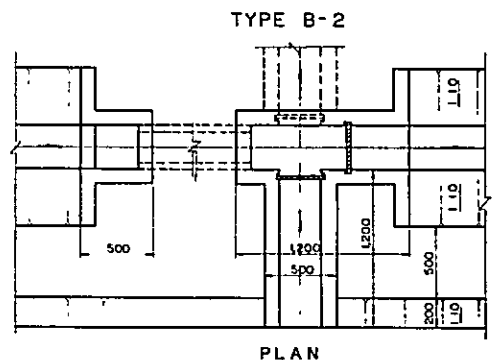
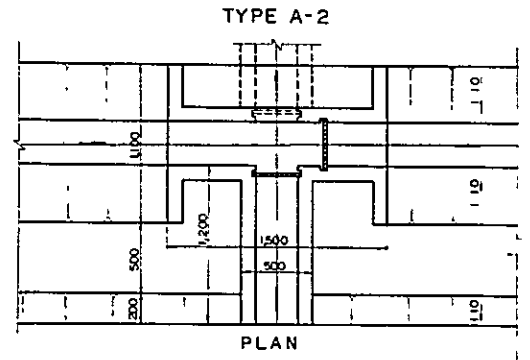
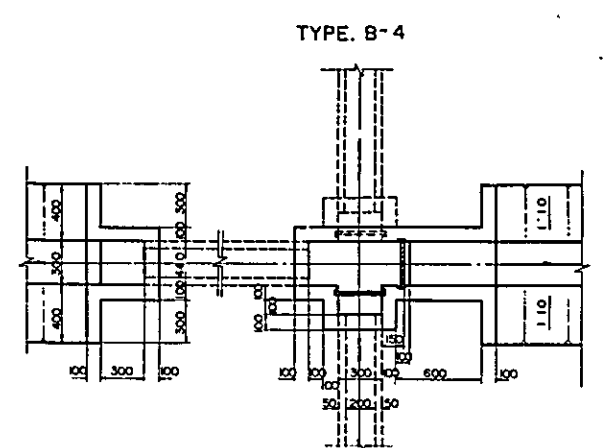
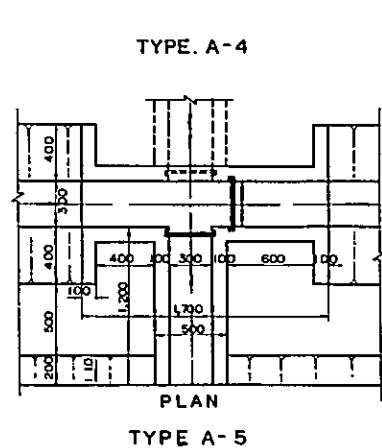
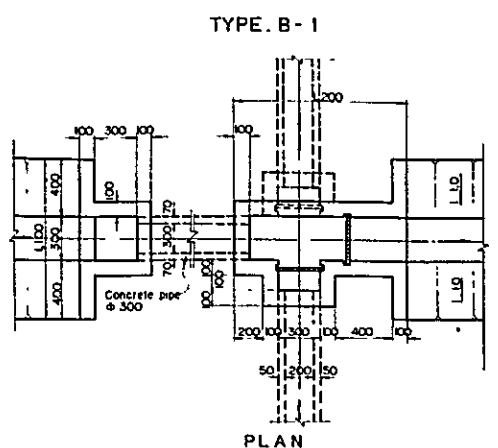
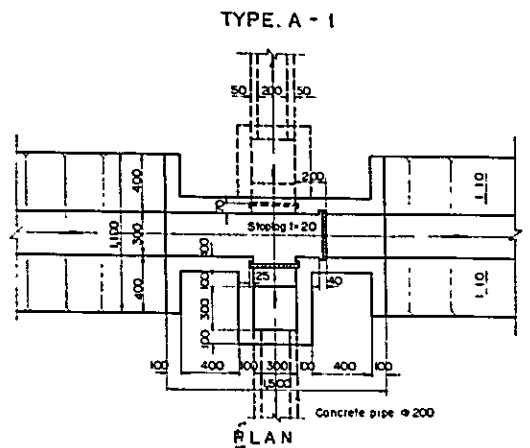
PROFILE

TYPE - B  
(Q = 0.048 m<sup>3</sup>/sec)

SCALE  
0 1 2m

KINGDOM OF LAOS  
THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
LATERAL AND SUB-LATERAL  
CULVERT AND DROP

DRAWN *Y. Tanishi* SUBMITTED  
CHECKED *S. Kanda* APPROVED  
OVERSEAS TECHNICAL COOPERATION AGENCY  
3006



KINGDOM OF LAOS  
THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
LATERAL AND SUB-LATERAL  
DIVISION BOX (I)  
DRAWN *S. Kama* SUBMITTED  
CHECKED *S. Kama* APPROVED  
OVERSEAS TECHNICAL COOPERATION AGENCY  
TOKYO MARCH 1968 3007

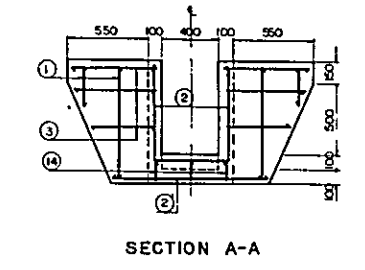
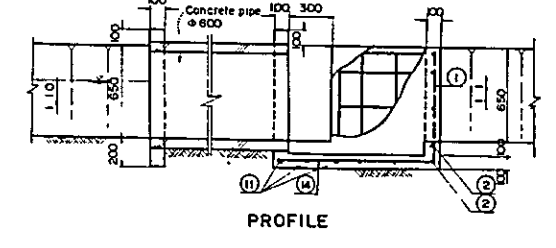
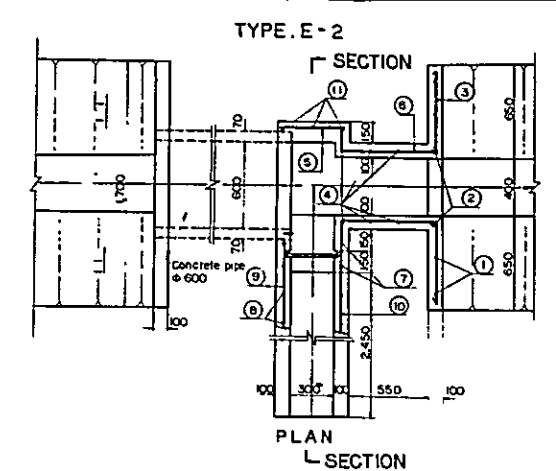
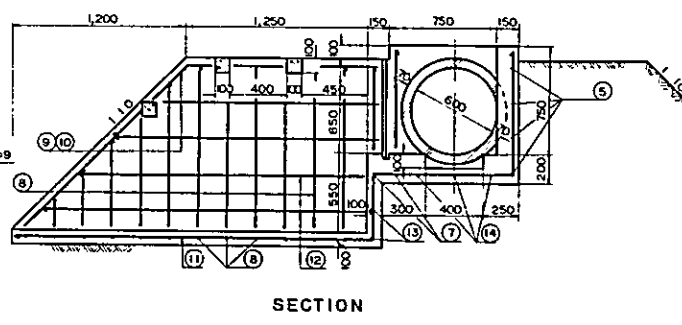
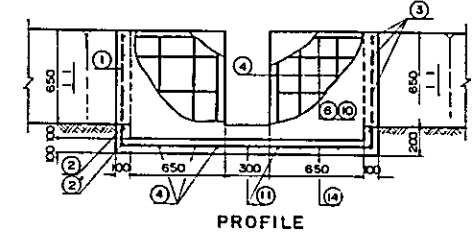
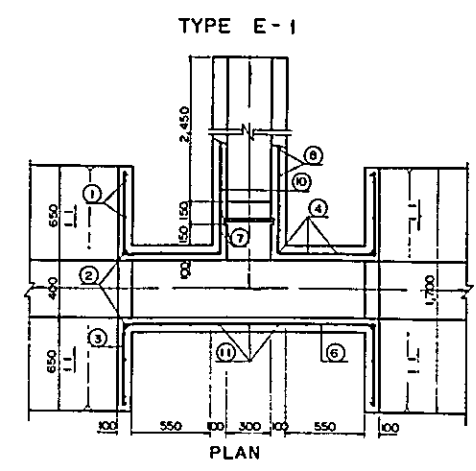
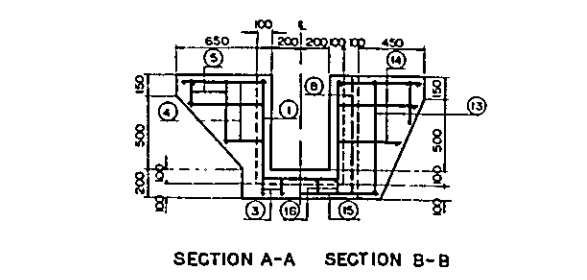
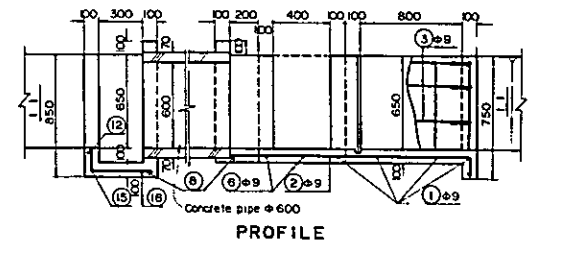
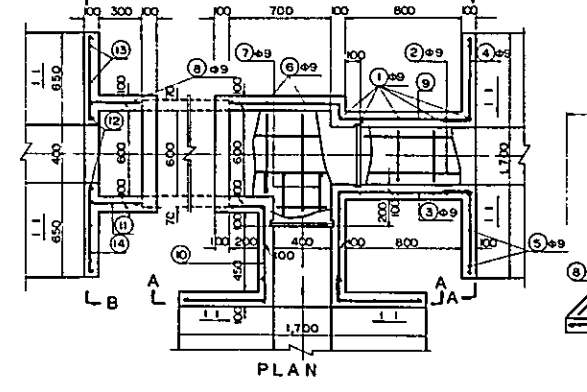
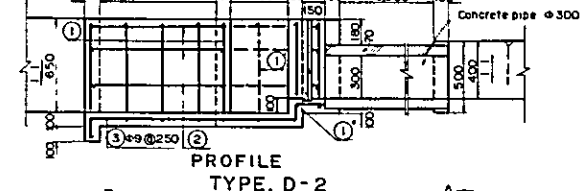
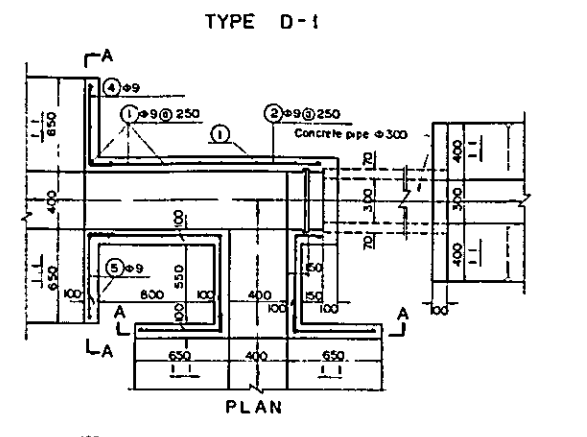
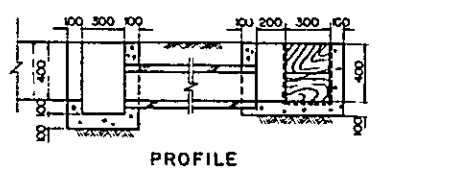
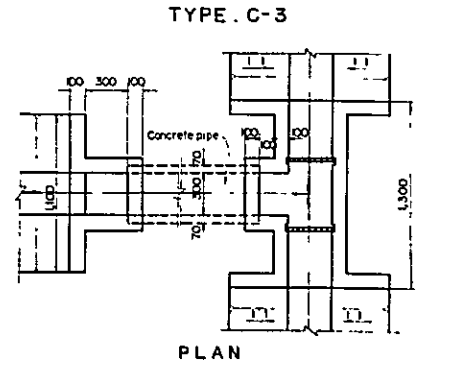
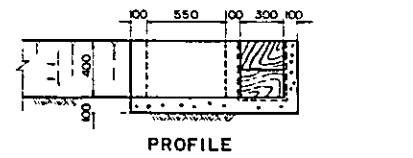
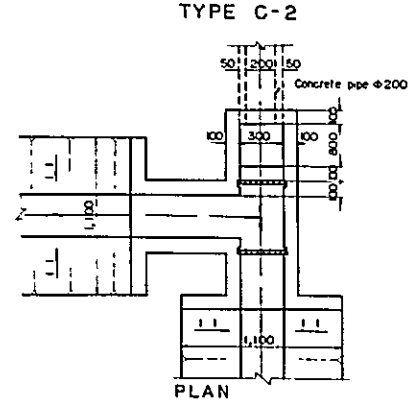
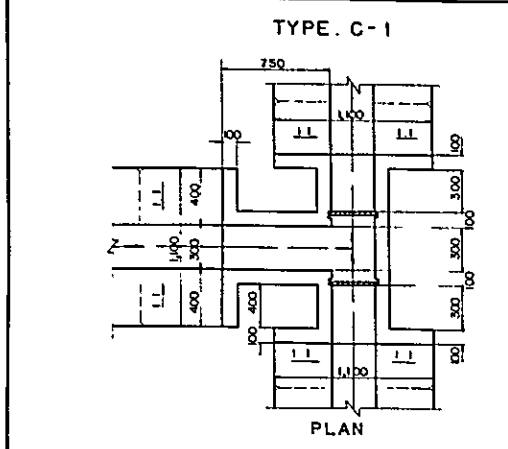


TABLE OF REINFORCEMENT BARS

TYPE D - 1						
MARK	φ	LENGTH	NOS	T LENGTH	U WEIGHT	T WEIGHT
1	9	198	8	1584	0.499	791
2	-	178	1	178	-	0.89
3	-	148	2	296	-	1.48
4	-	0.68	1	0.68	-	0.34
5	-	1.78	3	5.34	-	2.67
6	-	1.78	3	5.34	-	2.67
7	-	1.03	3	3.09	-	1.55
8	-	2.03	4	8.12	-	4.06
9	-	0.88	4	3.52	-	1.78
10	-	0.77	12	9.24	-	4.61
11	-	0.48	8	3.84	-	1.92
TOTAL 29.66 kg						

TYPE D - 2						
MARK	φ	LENGTH	NOS	T LENGTH	U WEIGHT	T WEIGHT
1	9	198	9	1782	0.499	890
2	-	193	4	772	-	3.86
3	-	1.83	3	5.49	-	2.74
4	-	0.77	12	9.24	-	4.61
5	-	0.48	8	3.84	-	1.92
6	-	1.58	2	3.16	-	1.58
7	-	1.08	4	4.32	-	2.16
8	-	2.38	3	7.14	-	3.57
9	-	1.93	3	5.79	-	2.89
10	-	1.08	3	3.24	-	1.62
11	-	0.53	6	3.18	-	1.59
12	-	1.98	1	1.98	-	0.99
13	-	0.71	4	2.84	-	1.42
14	-	0.85	6	5.10	-	2.55
15	-	1.18	1	1.18	-	0.59
16	-	0.73	4	2.92	-	1.46
TOTAL 42.45 kg						

TABLE OF REINFORCEMENT BARS

TYPE E - 1						
MARK	φ	U WEIGHT	LENGTH	NOS	T LENGTH	WEIGHT
1	9	0.499	0.71	8	5.68	2.84
2	-	-	1.98	2	3.96	1.98
3	-	-	1.18	2	2.36	1.18
4	-	-	0.85	12	10.20	5.09
5	-	-	2.18	6	13.08	6.53
6	-	-	-	-	0.58	3
7	-	-	2.08	2	4.16	2.08
8	-	-	2.98	6	17.88	8.93
9	-	-	1.68	6	10.08	5.03
10	-	-	-	-	2.53	3
11	-	-	3.28	6	19.68	9.76
12	-	-	4.60	3	13.80	6.89
13	-	-	2.33	4	9.32	4.65
14	-	-	0.58	2	1.16	0.58
15	-	-	2.23	3	6.69	3.34
TOTAL 63.08 kg						

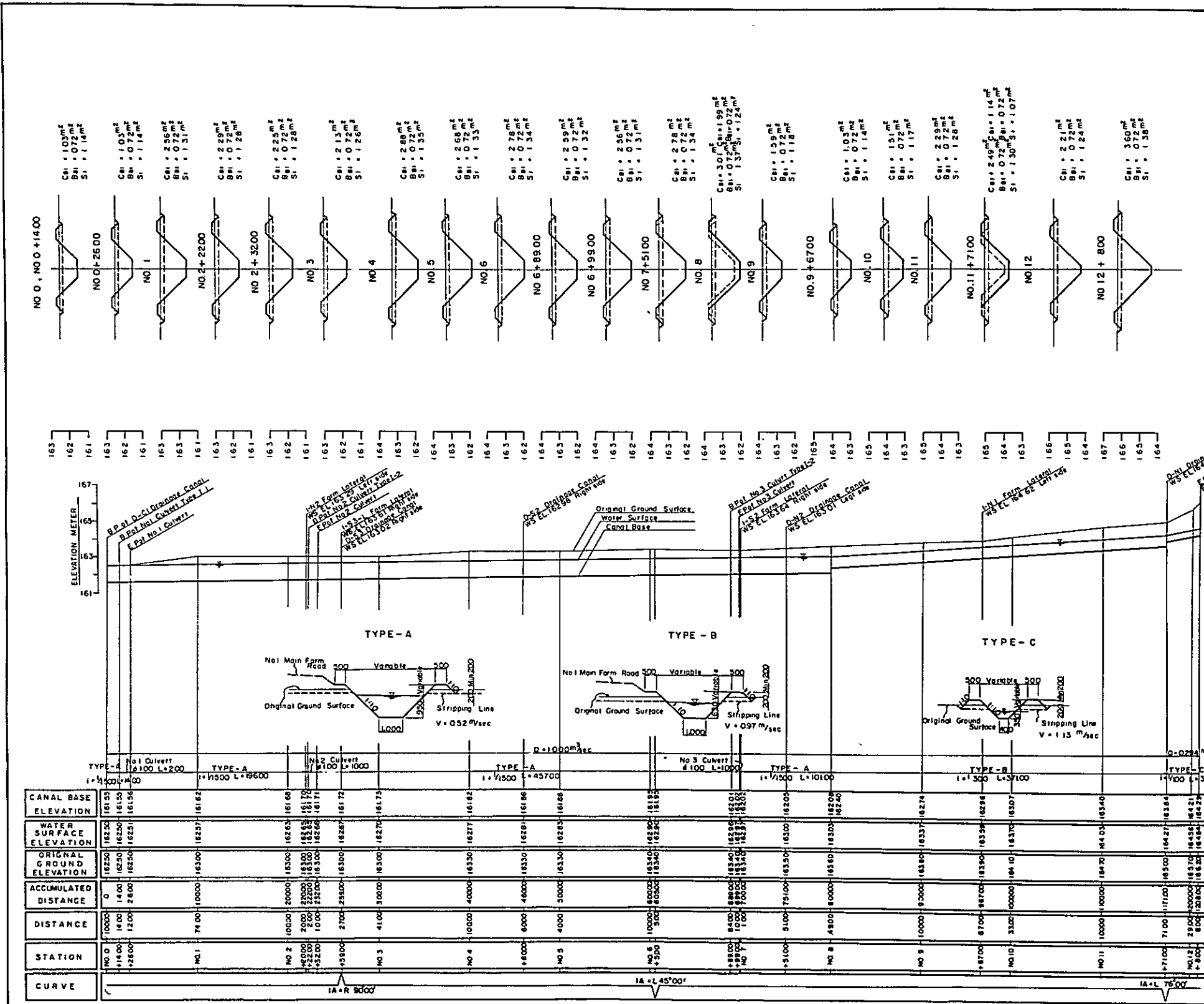
TYPE E - 2						
MARK	φ	U WEIGHT	LENGTH	NOS	T LENGTH	WEIGHT
1	9	0.499	0.71	4	2.84	1.42
2	-	-	1.98	1	1.98	0.99
3	-	-	1.18	1	1.18	0.59
4	-	-	0.85	8	5.10	2.55
5	-	-	2.18	3	6.54	3.27
6	-	-	-	-	0.58	3
7	-	-	2.08	2	4.16	2.08
8	-	-	2.98	6	17.88	8.93
9	-	-	1.68	6	10.08	5.03
10	-	-	-	-	2.53	3
11	-	-	3.28	3	9.84	4.92
12	-	-	4.60	3	13.80	6.89
13	-	-	2.33	4	9.32	4.65
14	-	-	0.58	2	1.16	0.58
15	-	-	2.23	3	6.69	3.34
TOTAL 50.89 kg						

KINGDOM OF LAOS  
 PHA NGON AGRICULTURAL DEVELOPMENT PROJECT  
 LATERAL AND SUB-LATERAL  
 DIVISION BOX (2)

DRAWN: Y. KAWA  
 CHECKED: K. KAWA  
 APPROVED: K. KAWA

OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO JAPAN MARCH 1968

3008

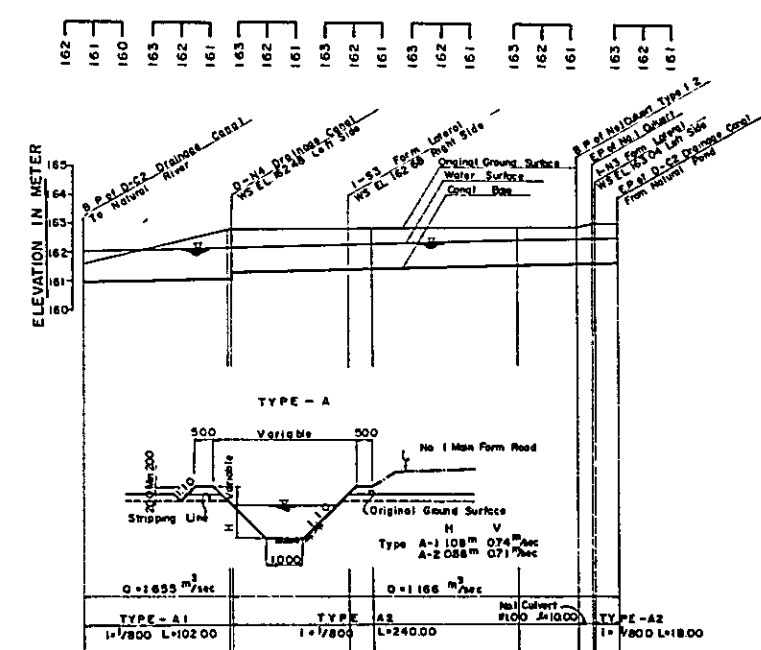
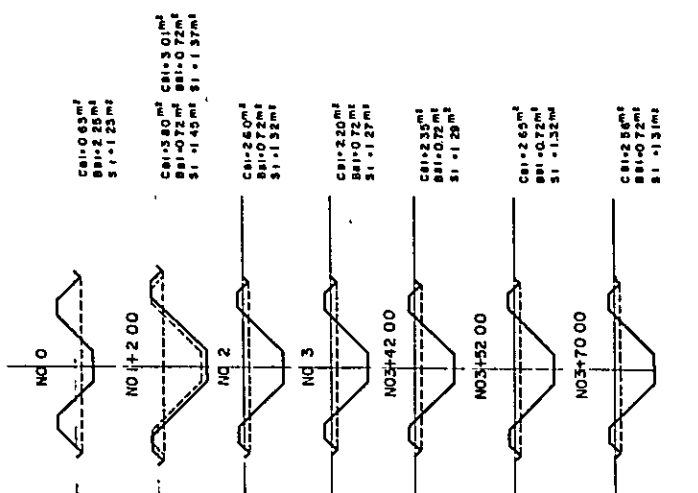


CANAL BASE ELEVATION	WATER SURFACE ELEVATION	ORIGINAL GROUND ELEVATION	ACCUMULATED DISTANCE	DISTANCE	STATION	CURVE
161.25	162.30	162.50	0	10000	NO 0	
161.35	162.50	162.50	14.00	14.00	NO 1	
161.56	162.50	162.50	28.00	14.00	NO 2	
161.62	162.50	163.00	74.00	74.00	NO 3	
161.68	162.50	163.00	100.00	100.00	NO 4	
161.72	162.50	163.00	200.00	100.00	NO 5	
161.75	162.50	163.00	250.00	50.00	NO 6	
161.82	162.50	163.00	300.00	50.00	NO 7	
161.86	162.50	163.00	400.00	100.00	NO 8	
161.88	162.50	163.00	450.00	50.00	NO 9	
161.95	162.50	163.00	500.00	50.00	NO 10	
162.01	162.50	163.00	600.00	100.00	NO 11	
162.05	162.50	163.00	700.00	100.00	NO 12	
162.08	162.50	163.00	800.00	100.00	NO 13	
162.24	162.50	163.00	900.00	100.00	NO 14	
162.28	162.50	163.00	1000.00	100.00	NO 15	
162.37	162.50	163.00	1100.00	100.00	NO 16	
162.40	162.50	163.00	1200.00	100.00	NO 17	
162.57	162.50	163.00	1300.00	100.00	NO 18	
162.74	162.50	163.00	1400.00	100.00	NO 19	
162.78	162.50	163.00	1500.00	100.00	NO 20	
162.86	162.50	163.00	1600.00	100.00	NO 21	
162.88	162.50	163.00	1700.00	100.00	NO 22	
162.94	162.50	163.00	1800.00	100.00	NO 23	
163.00	162.50	163.00	1900.00	100.00	NO 24	
163.07	162.50	163.00	2000.00	100.00	NO 25	
163.10	162.50	163.00	2100.00	100.00	NO 26	
163.14	162.50	163.00	2200.00	100.00	NO 27	
163.17	162.50	163.00	2300.00	100.00	NO 28	
163.18	162.50	163.00	2400.00	100.00	NO 29	
163.19	162.50	163.00	2500.00	100.00	NO 30	
163.24	162.50	163.00	2600.00	100.00	NO 31	
163.28	162.50	163.00	2700.00	100.00	NO 32	
163.30	162.50	163.00	2800.00	100.00	NO 33	
163.35	162.50	163.00	2900.00	100.00	NO 34	
163.36	162.50	163.00	3000.00	100.00	NO 35	
163.37	162.50	163.00	3100.00	100.00	NO 36	
163.38	162.50	163.00	3200.00	100.00	NO 37	
163.40	162.50	163.00	3300.00	100.00	NO 38	
163.40	162.50	163.00	3400.00	100.00	NO 39	
163.40	162.50	163.00	3500.00	100.00	NO 40	
163.40	162.50	163.00	3600.00	100.00	NO 41	
163.40	162.50	163.00	3700.00	100.00	NO 42	
163.40	162.50	163.00	3800.00	100.00	NO 43	
163.40	162.50	163.00	3900.00	100.00	NO 44	
163.40	162.50	163.00	4000.00	100.00	NO 45	

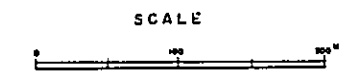
KINGDOM OF LAOS  
 THE NGON AGRICULTURAL DEVELOPMENT PROJECT  
 DRAINAGE CANAL  
**D-CI DRAINAGE CANAL**  
 PROFILE AND CROSS SECTION

DRAWN *Y. Tawila* SUBMITTED  
 CHECKED *S. Kham* APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1969

**4001**

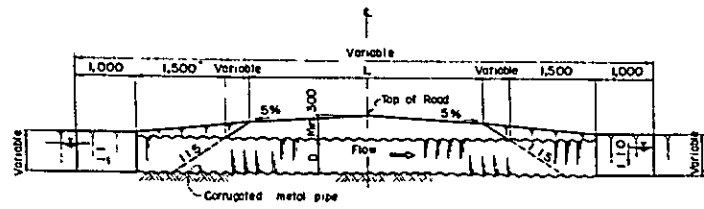


	NO 0	NO 1	NO 2	NO 3	NO 3+42 00	NO 3+52 00	NO 3+70 00
CANAL BASE ELEVATION	160.00	161.28	161.38	161.40	161.52	161.58	161.62
WATER SURFACE ELEVATION	162.04	162.16	162.28	162.28	162.40	162.46	162.50
ORIGINAL GROUND ELEVATION	161.80	162.80	162.80	162.80	162.80	162.80	162.80
ACCUMULATED DISTANCE	0	100.00	180.00	200.00	300.00	342.00	370.00
DISTANCE	0	100.00	80.00	20.00	100.00	42.00	17.00
STATION	NO 0	NO 1	NO 2	NO 3	NO 3+42 00	NO 3+52 00	NO 3+70 00
CURVE							

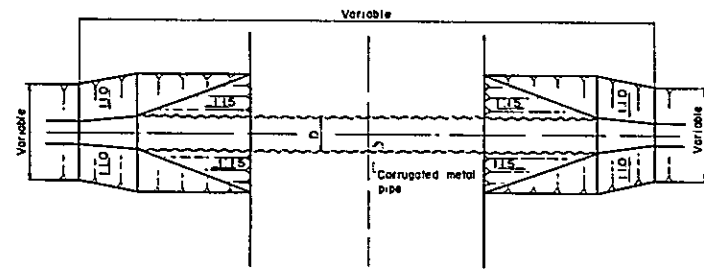


KINGDOM OF LAOS  
 THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
 DRAINAGE CANAL  
 D-C2 DRAINAGE CANAL  
 PROFILE AND CROSS SECTION  
 DRAWN *Y. Tanaka* SUBMITTED  
 CHECKED *S. Kawachi* APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TORYO MARCH 1988  
 4 002

### CULVERT



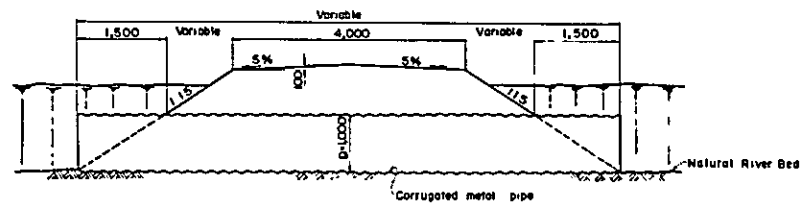
PROFILE



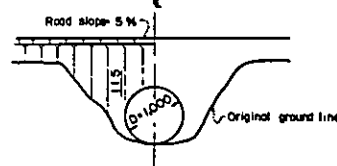
PLAN

TYPE - I

Note: Type - I 1 L = 6,000 m  
 Type - I 2 L = 4,000 m  
 Type - I 3 L = 3,000 m  
 D = 600 or 1,000 mm

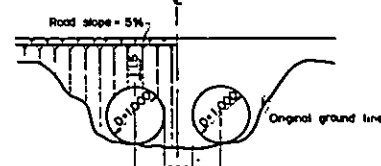


PROFILE



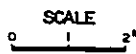
ELEVATION SECTION

TYPE - II - 1  
 (Q=0.90-2.00 m³/sec)

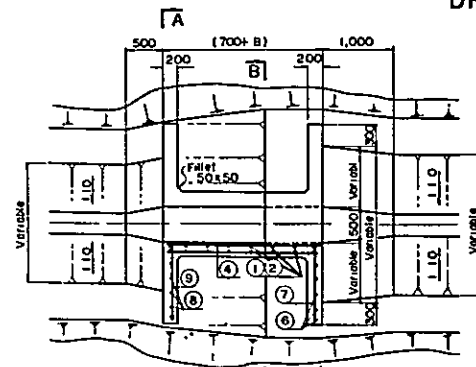


ELEVATION SECTION

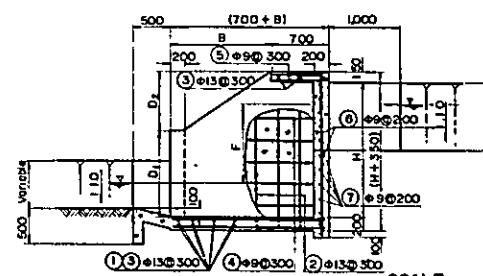
TYPE - II - 2  
 (Q=2.00-3.60 m³/sec)



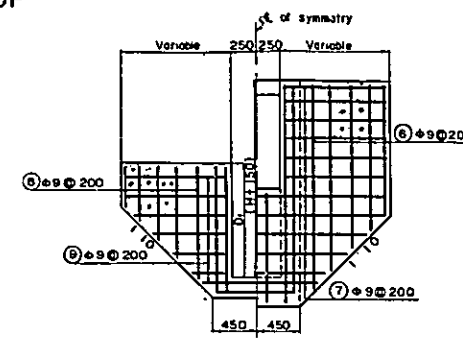
### DROP



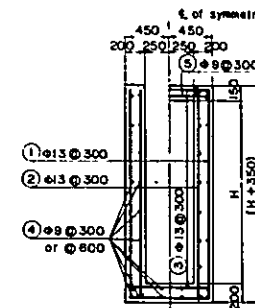
PLAN



PROFILE



SECTION A-A



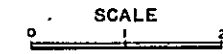
SECTION B-B

TABLE OF DIMENSIONS (mm)

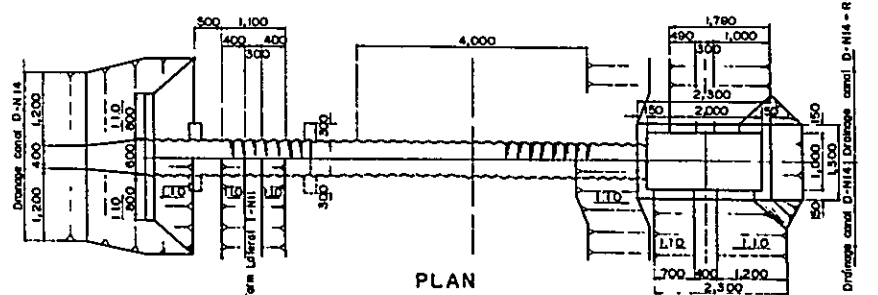
	B	D <sub>1</sub>	D <sub>2</sub>	H
TYPE-I (F=1.00m)	1,400	1,300	850	1,800
TYPE-II (F=0.90m)	900	1,000	450	1,300

TABLE OF REINFORCEMENT BAR

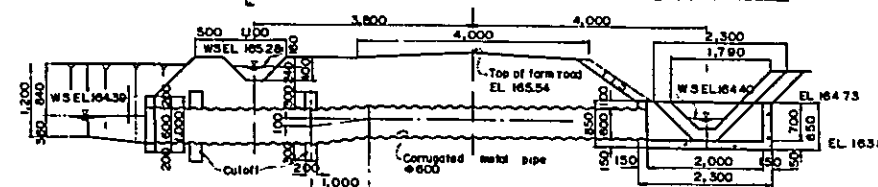
NO.	Ø	LENGTH	No.	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT	REMARKS
TYPE - I							
1	13	2.86	8	22.88	1.04	23.80	L3
2	2.06	1.6	32.96	-	34.28	L1	
3	1.06	1.4	14.84	-	15.44	-	
4	9	2.08	30	62.40	0.49	30.68	-
5	0.78	4	3.12	-	1.53	-	
6	2.13	8	17.04	-	8.35	L1	
7	1.48	1.4	20.72	-	10.16	-	
8	1.38	4	5.52	-	2.71	L1	
9	1.18	1.4	16.52	-	8.10	-	
Total				134.95 kg	0.145 ton		
TYPE - II							
1	13	3.36	12	40.32	1.04	41.73	L1
2	1.58	1.2	12.72	-	19.47	L1	
3	1.06	1.2	12.72	-	13.23	-	
4	9	1.58	24	37.92	0.49	18.56	-
5	0.78	4	3.12	-	1.53	-	
6	1.63	6	9.78	-	4.80	L1	
7	1.28	1.2	15.36	-	7.53	-	
8	1.06	6	6.48	-	3.16	L1	
9	1.28	1.2	15.36	-	7.53	-	
Total				90.56 kg	0.091 ton		



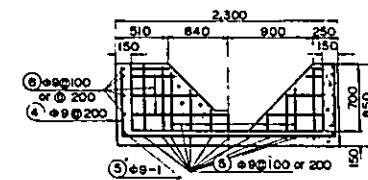
### D-N 14 DRAINAGE CROSSING



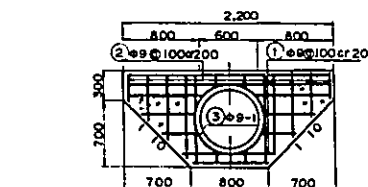
PLAN



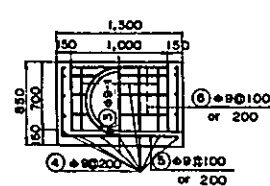
PROFILE



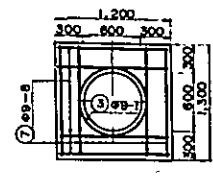
SECTION A-A



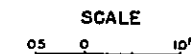
OUTLET WALL



SECTION B-B



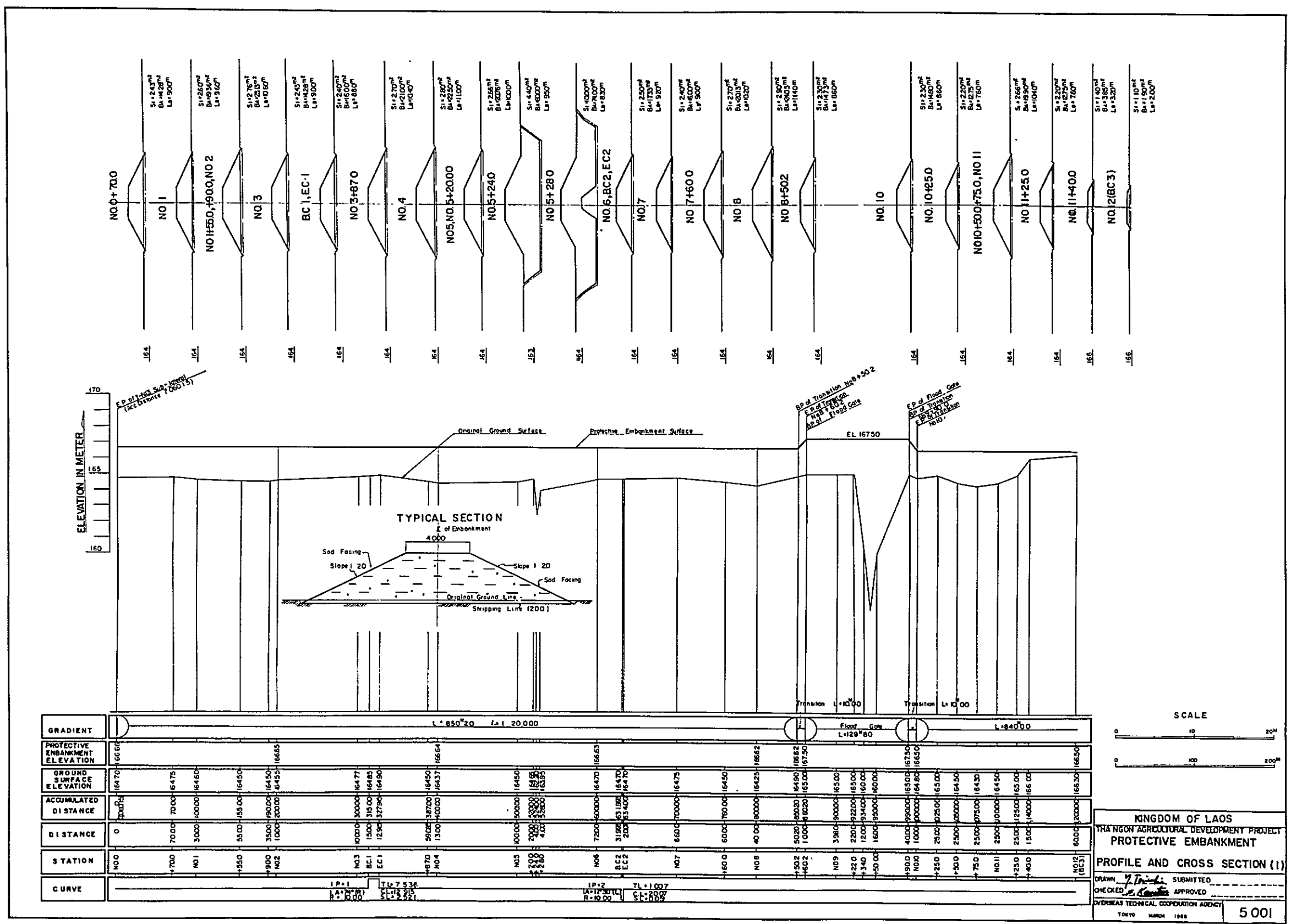
CUTOFF SECTION



KINGDOM OF LAOS  
 THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
**DRAINAGE CANAL  
 CULVERT AND DROP**

DRAWN: *[Signature]* SUBMITTED: \_\_\_\_\_  
 CHECKED: *[Signature]* APPROVED: \_\_\_\_\_  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1968

4003



GRADIENT	L = 850'±20 1:21 20.000																					
PROTECTIVE EMBANKMENT ELEVATION	166.65																				166.63	
GROUND SURFACE ELEVATION	164.70	164.75	164.80	164.85	164.90	164.95	165.00	165.05	165.10	165.15	165.20	165.25	165.30	165.35	165.40	165.45	165.50	165.55	165.60	165.65	165.70	
ACCUMULATED DISTANCE	0	700	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	
DISTANCE	0	700	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	
STATION	NO.0	700	NO.1	1500	NO.2	2500	NO.3	3500	NO.4	4500	NO.5	5500	NO.6	6500	NO.7	7500	NO.8	8500	NO.9	9500	NO.10	10000
CURVE	IP=1 TL=7.536 R=1000 CL=200 IP=2 TL=1.007 R=1000 CL=200																					

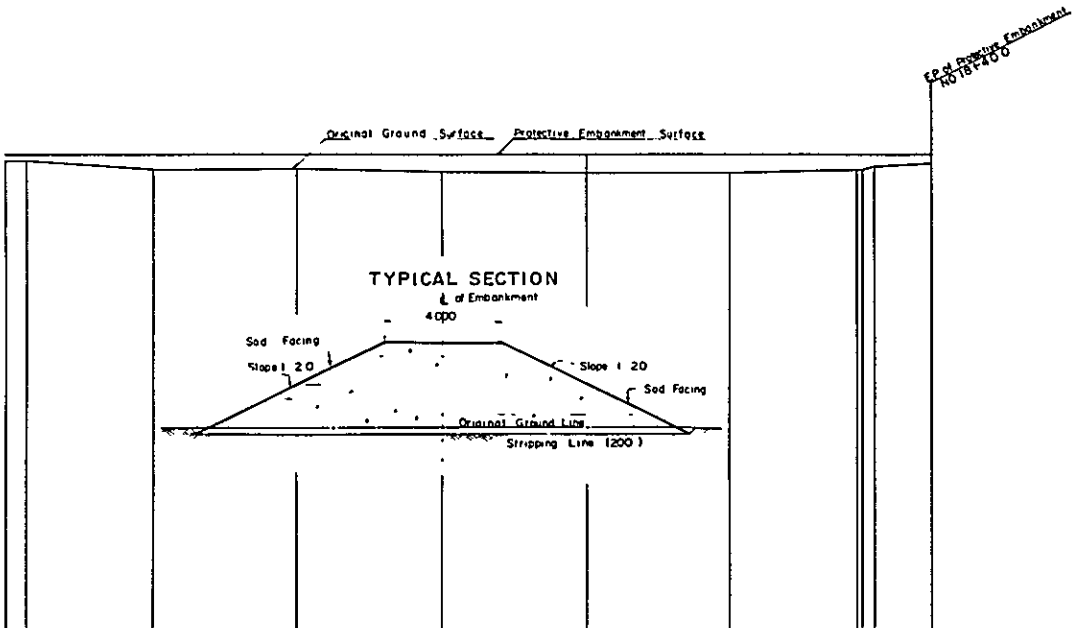
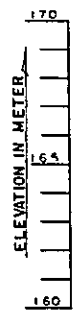
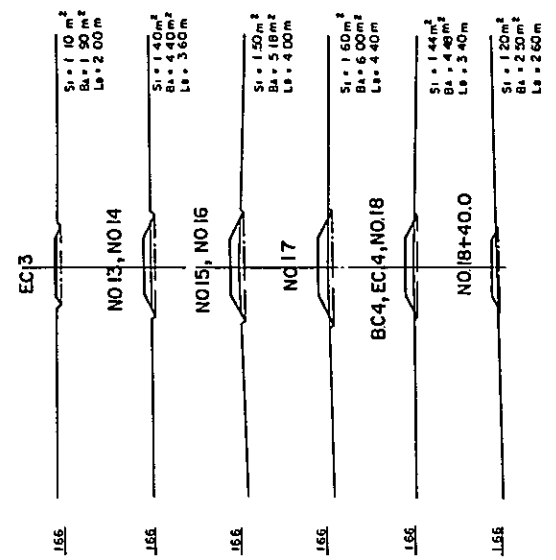
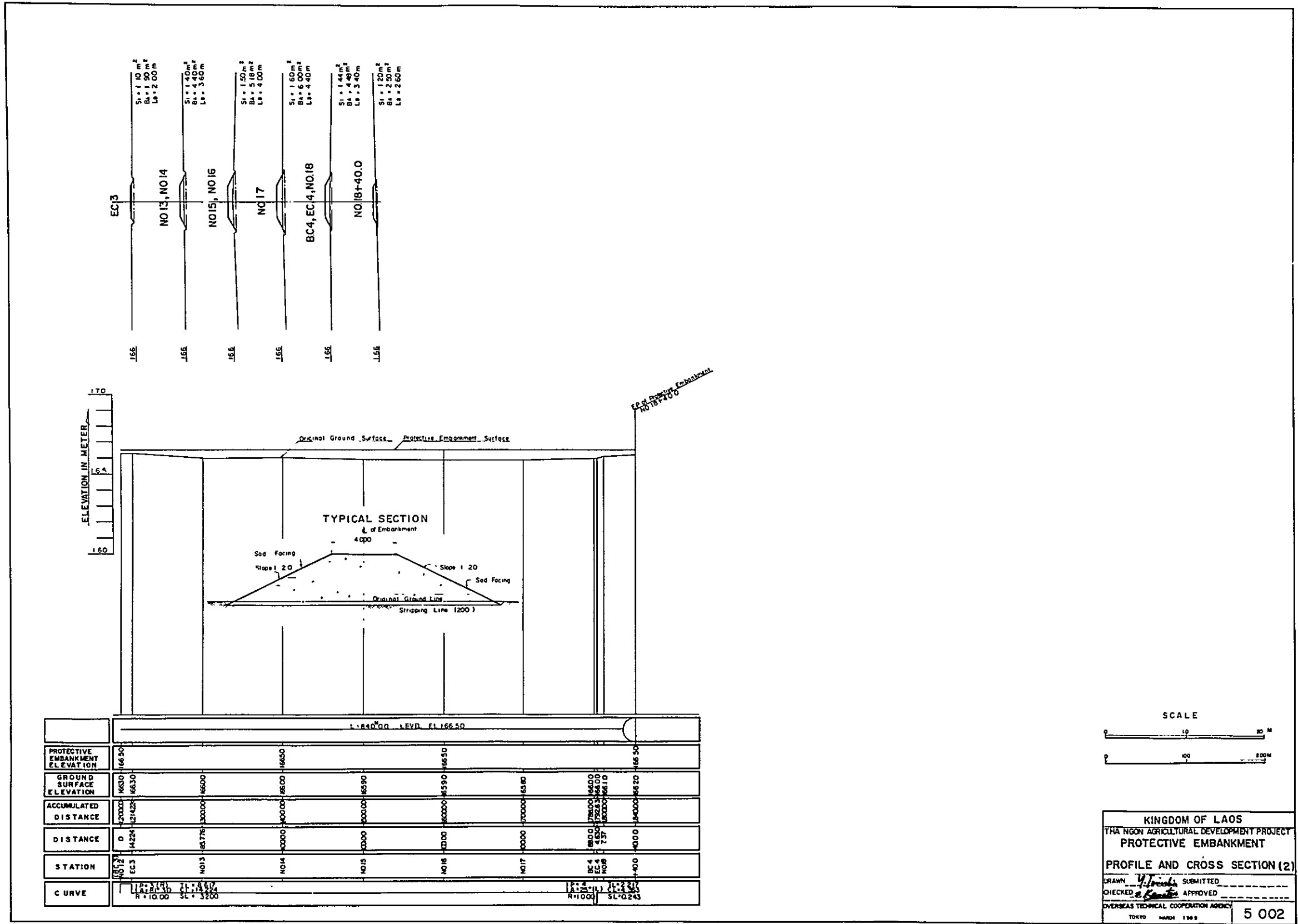
SCALE  
0 10 20M  
0 50 100M

KINGDOM OF LAOS  
THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
PROTECTIVE EMBANKMENT  
PROFILE AND CROSS SECTION (1)

DRAWN: *[Signature]* SUBMITTED  
CHECKED: *[Signature]* APPROVED  
OVERSEAS TECHNICAL COOPERATION AGENCY  
TOKYO MARCH 1988

5 001



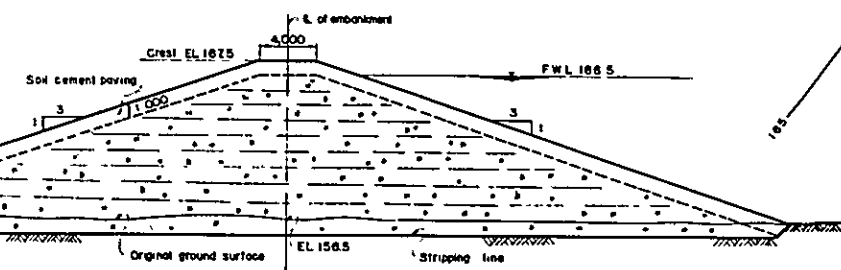
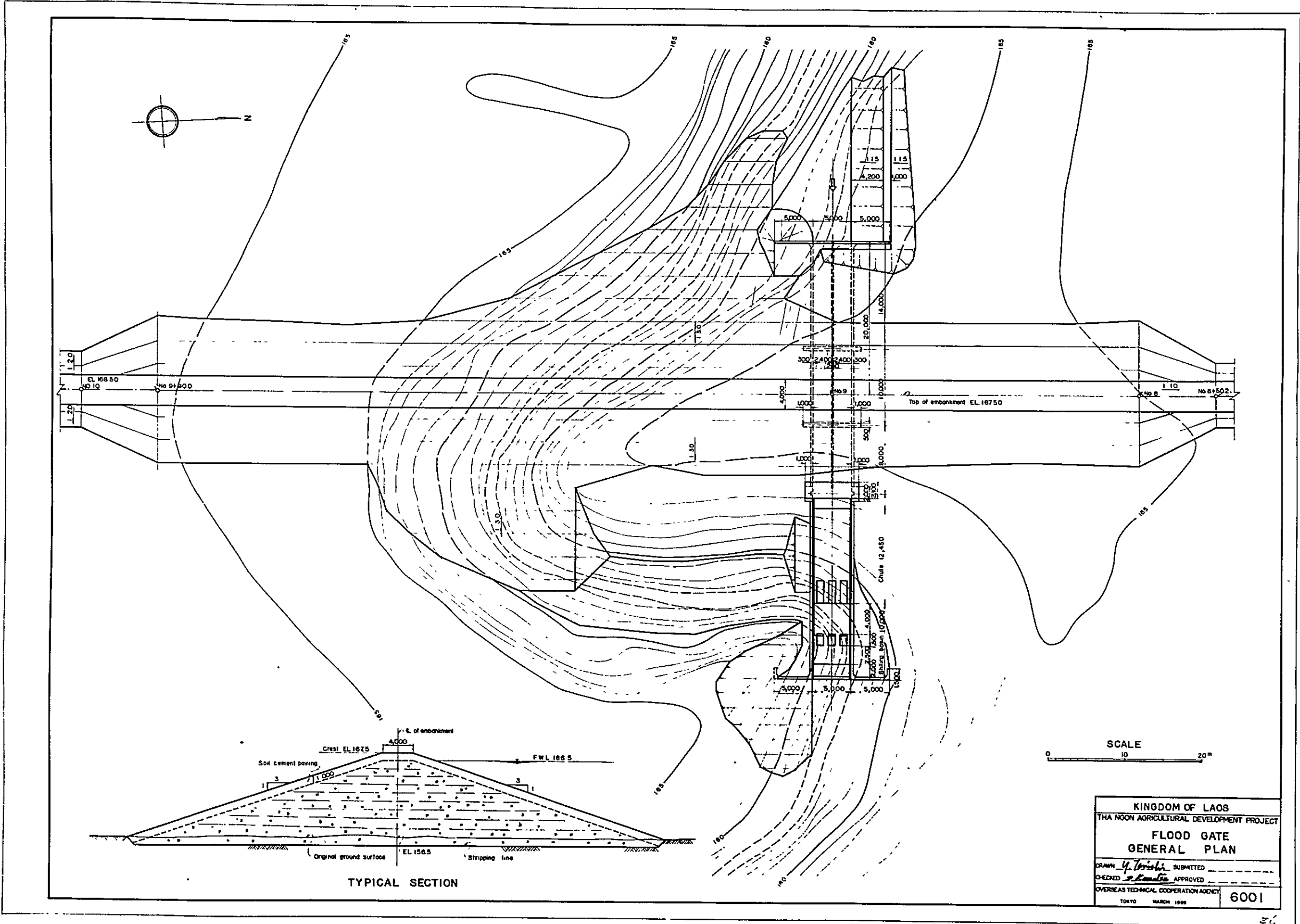


	0	14.224	28.476	42.700	56.900	71.076	85.224	99.352	113.460	127.548	141.616	155.664	169.692	183.700
PROTECTIVE EMBANKMENT ELEVATION	166.50	166.50	166.50	166.50	166.50	166.50	166.50	166.50	166.50	166.50	166.50	166.50	166.50	166.50
GROUND SURFACE ELEVATION	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00
ACCUMULATED DISTANCE	0	14.224	28.476	42.700	56.900	71.076	85.224	99.352	113.460	127.548	141.616	155.664	169.692	183.700
DISTANCE	0	14.224	28.476	42.700	56.900	71.076	85.224	99.352	113.460	127.548	141.616	155.664	169.692	183.700
STATION	NO 12	EC 3	NO 13	NO 14	NO 15	NO 16	NO 17	BC 4	EC 4	NO 18	NO 19	NO 19+40.0	NO 19+40.0	NO 19+40.0
CURVE								R=1000	R=1000	R=1000	R=1000	R=1000	R=1000	R=1000

SCALE

KINGDOM OF LAOS  
THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
PROTECTIVE EMBANKMENT  
PROFILE AND CROSS SECTION (2)

DRAWN: *Y. Pichit* SUBMITTED: \_\_\_\_\_  
CHECKED: *K. Kham* APPROVED: \_\_\_\_\_  
OVERSEAS TECHNICAL COOPERATION AGENCY  
TOKYO MARCH 1968 5 002

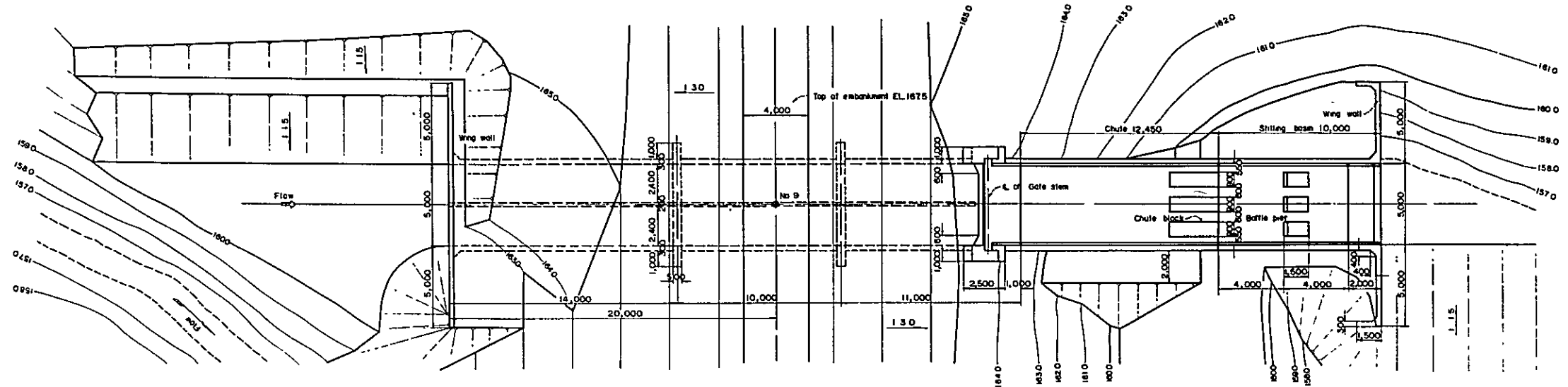


TYPICAL SECTION

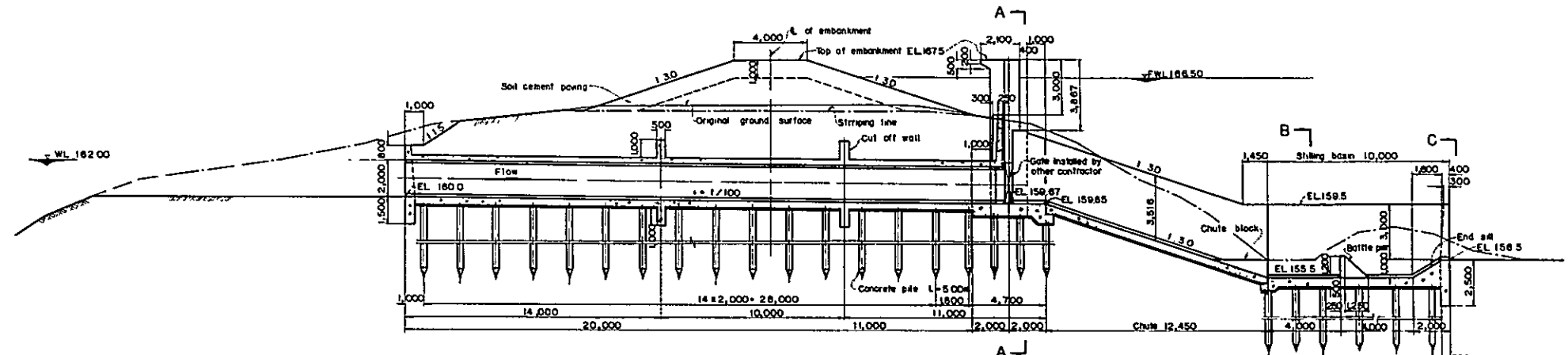


KINGDOM OF LAOS	
THA NOON AGRICULTURAL DEVELOPMENT PROJECT	
FLOOD GATE	
GENERAL PLAN	
DRAWN <i>Y. Pichit</i>	SUBMITTED
CHECKED <i>S. Kanda</i>	APPROVED
OVERSEAS TECHNICAL COOPERATION AGENCY	
TOKYO MARCH 1968	6001

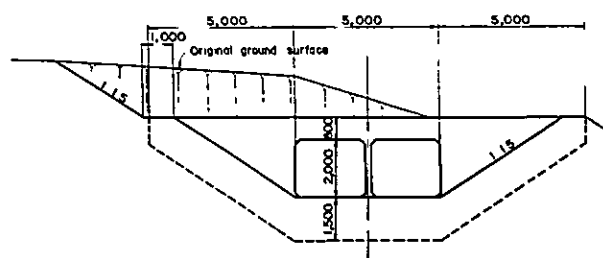
36



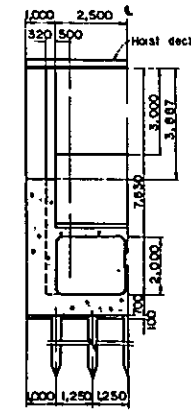
PLAN



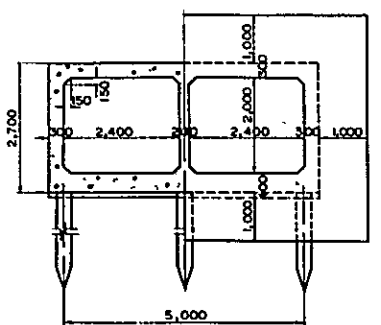
PROFILE



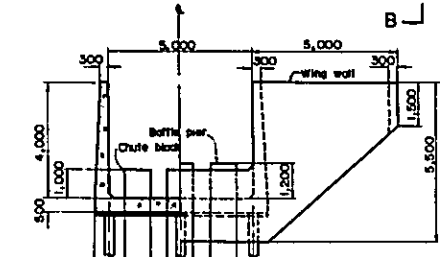
INLET ELEVATION



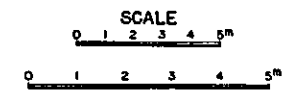
SECTION A-A



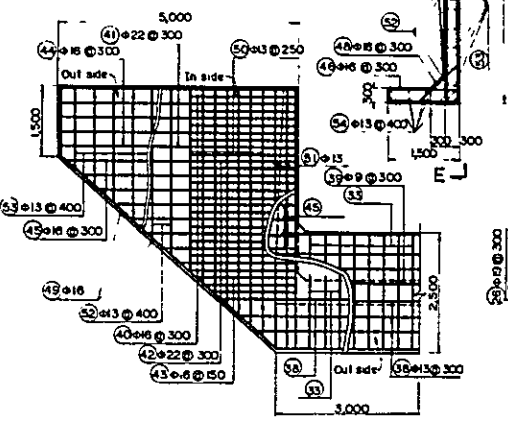
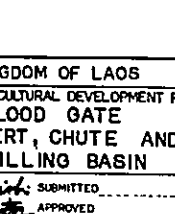
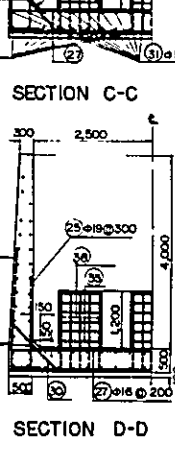
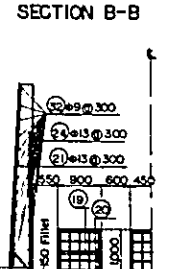
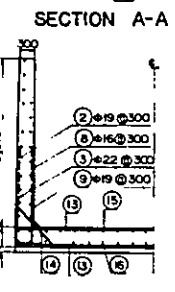
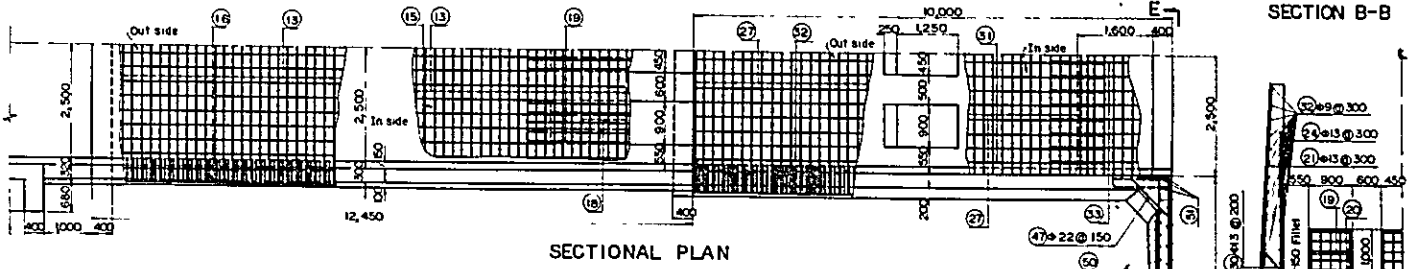
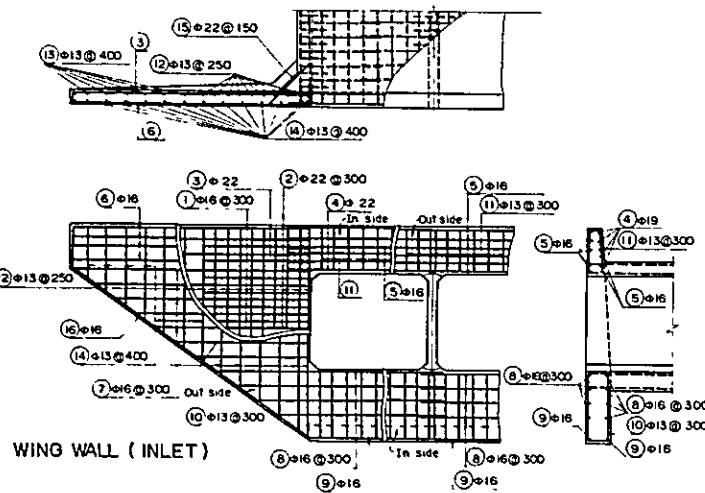
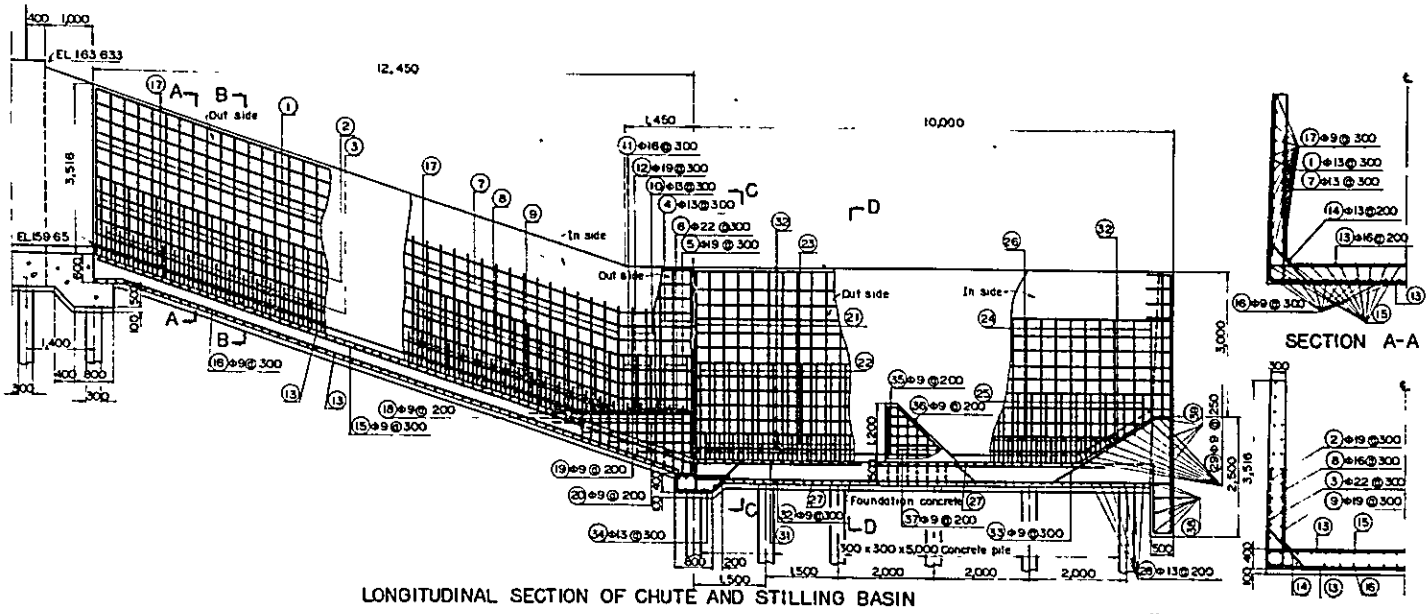
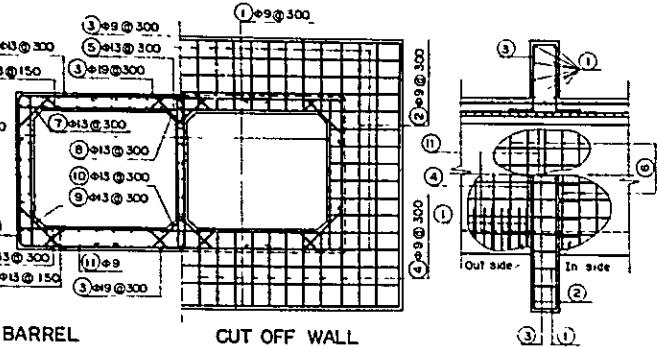
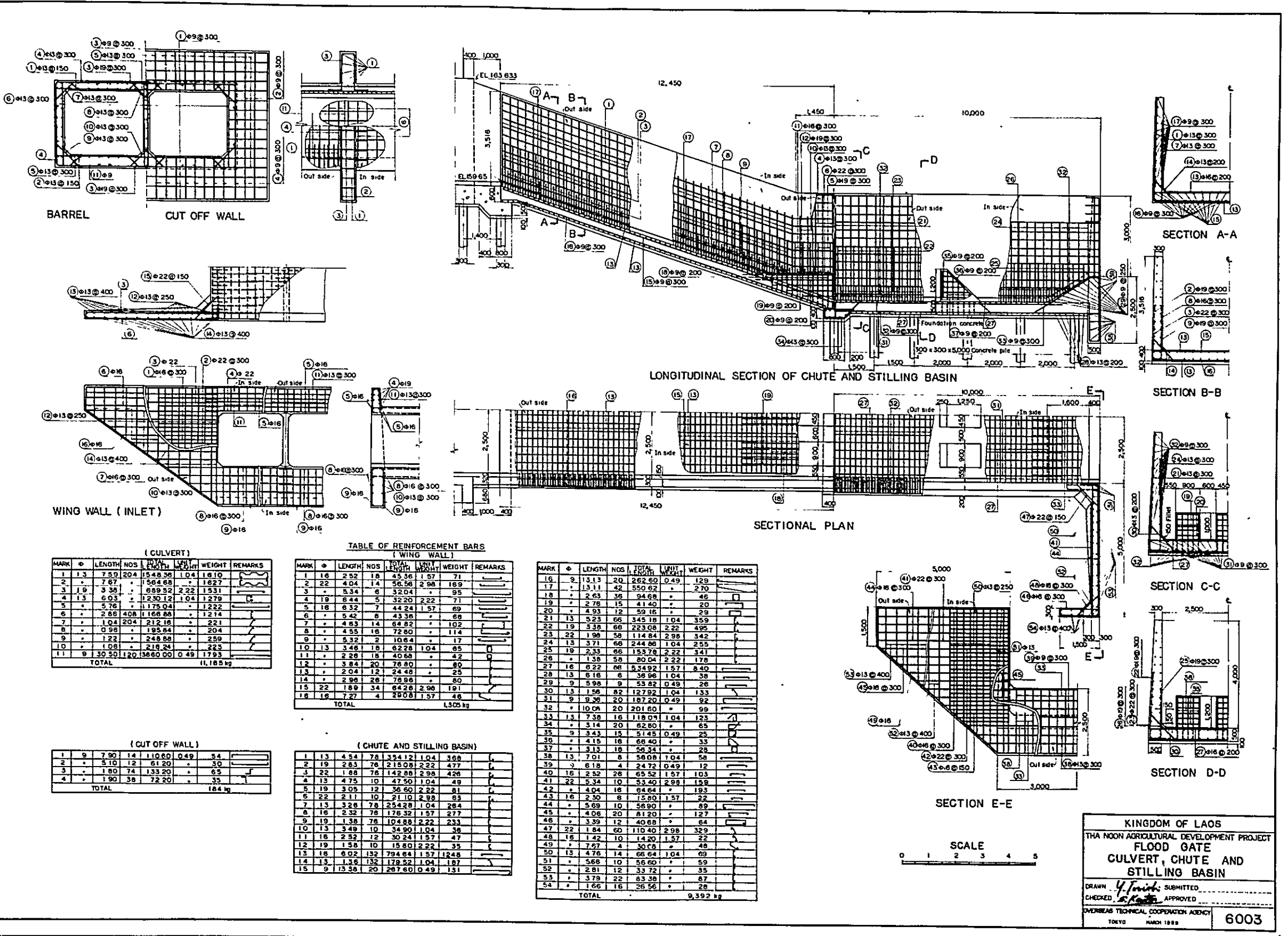
TYPICAL SECTION CUT OFF WALL



SECTION B-B SECTION C-C



KINGDOM OF LAOS  
 THA NOON AGRICULTURAL DEVELOPMENT PROJECT  
**FLOOD GATE  
 PLAN AND PROFILE**  
 DRAWN *Y. Tachibana* SUBMITTED  
 CHECKED *E. K. ...* APPROVED  
 SERRIAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1968  
**6002**



(CULVERT)

MARK	φ	LENGTH	NOS.	TOTAL LENGTH	UNIT WEIGHT	REMARKS
1	13	7.50	204	1548.36	1.04	1810
2	16	7.67	1	56.48	2.98	169
3	19	3.36	1	63.92	2.22	1531
4	13	6.03	1	1230.12	1.04	1279
5	16	5.76	1	1175.04	2.22	1222
6	19	2.85	408	1158.88	1.21	1214
7	16	1.04	204	212.16	2.21	221
8	19	0.98	1	195.84	2.21	204
9	16	1.22	1	248.88	2.29	259
10	19	1.08	1	218.88	2.23	223
11	9	30.50	120	3660.00	0.49	1793
TOTAL				11,185	11.185 kg	

TABLE OF REINFORCEMENT BARS (WING WALL)

MARK	φ	LENGTH	NOS.	TOTAL LENGTH	UNIT WEIGHT	REMARKS
1	16	2.52	18	45.36	1.57	71
2	22	4.04	14	56.56	2.98	169
3	16	5.34	6	32.04	2.22	95
4	19	6.44	5	32.20	2.22	71
5	16	6.52	7	44.24	1.57	69
6	16	5.42	8	43.36	2.22	68
7	16	4.53	14	64.82	1.02	102
8	16	4.55	16	72.80	1.14	114
9	16	5.32	2	10.64	1.17	17
10	13	3.48	18	62.28	1.04	65
11	16	2.28	18	40.68	2.22	42
12	16	3.84	20	76.80	2.22	80
13	16	2.04	12	24.48	2.22	25
14	16	2.96	28	84.96	2.22	80
15	22	1.89	34	64.26	2.98	191
16	16	7.27	4	29.08	1.57	48
TOTAL				1,305	1.305 kg	

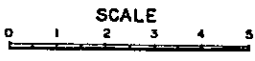
MARK	φ	LENGTH	NOS.	TOTAL LENGTH	UNIT WEIGHT	REMARKS
16	9	13.13	20	262.60	0.49	129
17	16	13.11	42	550.62	2.22	270
18	16	2.63	36	94.68	2.22	46
19	16	2.76	15	41.40	2.22	20
20	16	4.93	12	59.16	2.22	29
21	13	5.23	66	345.18	1.04	359
22	19	5.38	66	223.08	2.22	495
23	22	1.98	58	114.84	2.98	342
24	13	3.71	66	244.86	1.04	255
25	19	2.33	66	153.78	2.22	341
26	16	1.58	58	90.04	2.22	178
27	16	8.22	66	534.92	1.57	840
28	13	6.16	6	36.96	1.04	38
29	9	5.98	9	53.82	0.49	26
30	13	1.56	82	127.92	1.04	133
31	9	9.38	20	187.20	0.49	92
32	16	10.04	20	200.80	2.22	99
33	13	7.58	16	119.04	1.04	123
34	16	5.14	20	82.80	2.22	65
35	9	3.43	15	51.45	0.49	25
36	16	4.15	16	66.40	2.22	33
37	16	5.13	16	82.08	2.22	28
38	13	7.01	8	56.08	1.04	58
39	9	6.18	4	24.72	0.49	12
40	16	2.52	26	65.52	1.57	103
41	22	5.34	10	53.40	2.98	159
42	16	4.04	16	64.64	2.22	193
43	16	2.30	6	15.80	1.57	22
44	16	5.69	10	56.90	2.22	89
45	16	4.06	20	81.20	2.22	127
46	16	3.39	12	40.68	2.22	64
47	22	1.84	60	110.40	2.98	329
48	16	1.42	10	14.20	1.57	22
49	16	7.67	4	30.68	2.22	48
50	13	4.76	14	66.64	1.04	69
51	16	5.66	10	56.60	2.22	59
52	16	2.81	12	33.72	2.22	35
53	16	3.78	22	65.36	2.22	87
54	16	1.66	16	26.56	2.22	28
TOTAL				9,392	9.392 kg	

(CUT OFF WALL)

MARK	φ	LENGTH	NOS.	TOTAL LENGTH	UNIT WEIGHT	REMARKS
1	9	7.90	14	110.60	0.49	54
2	16	5.10	12	61.20	2.22	30
3	16	1.80	74	133.20	2.22	65
4	19	1.90	36	72.20	2.22	35
TOTAL				184	1.84 kg	

(CHUTE AND STILLING BASIN)

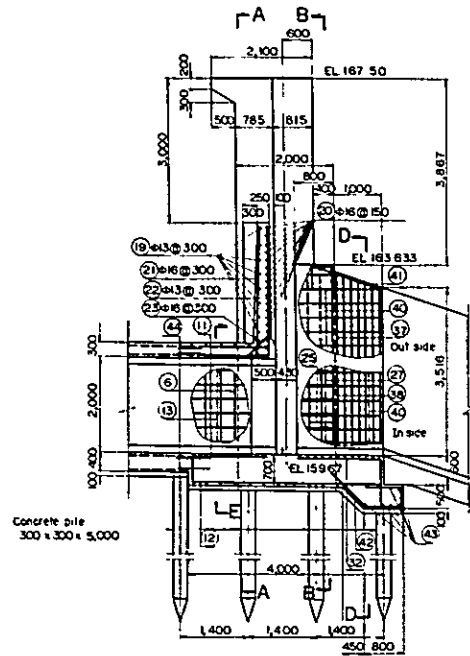
MARK	φ	LENGTH	NOS.	TOTAL LENGTH	UNIT WEIGHT	REMARKS
1	13	4.54	78	354.12	1.04	368
2	19	2.83	78	215.08	2.22	477
3	22	1.88	76	142.88	2.98	426
4	13	4.75	10	47.50	1.04	49
5	19	3.05	12	36.60	2.22	81
6	22	2.11	10	21.10	2.98	63
7	13	3.28	78	254.28	1.04	264
8	16	2.32	78	176.32	1.57	277
9	19	1.38	78	104.88	2.22	233
10	13	3.48	10	34.80	1.04	36
11	16	2.52	12	30.24	1.57	47
12	19	1.58	10	15.80	2.22	35
13	16	6.02	132	794.64	1.57	1248
14	13	1.38	132	179.22	1.04	187
15	9	13.38	20	267.60	0.49	131



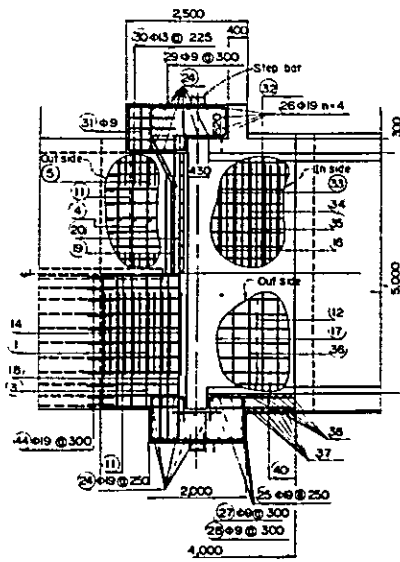
KINGDOM OF LAOS  
 THA NOON AGRICULTURAL DEVELOPMENT PROJECT  
**FLOOD GATE  
 CULVERT, CHUTE AND  
 STILLING BASIN**

DRAWN: *Y. Fournier* SUBMITTED  
 CHECKED: *S. K. ...* APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1988

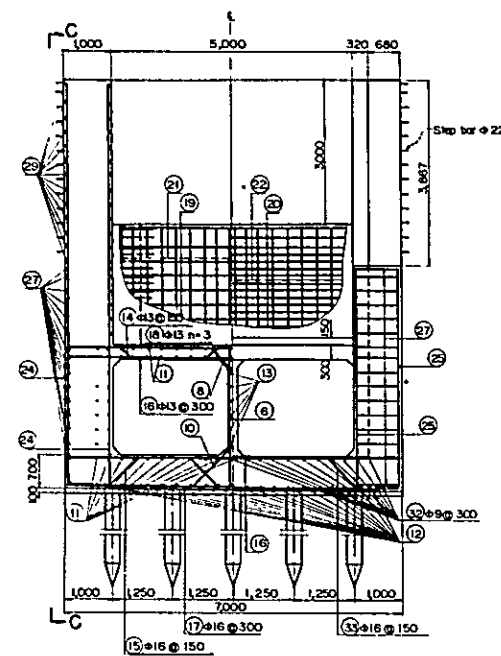
**6003**



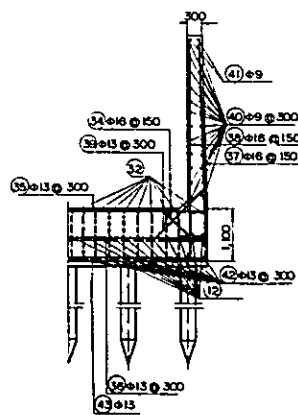
PROFILE



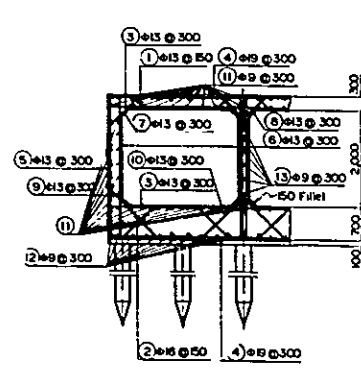
PLAN



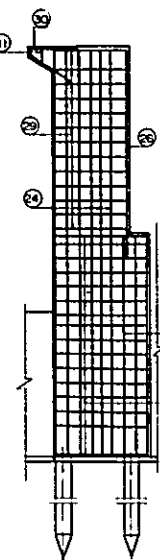
SECTION A-A SECTION B-B



SECTION D-D



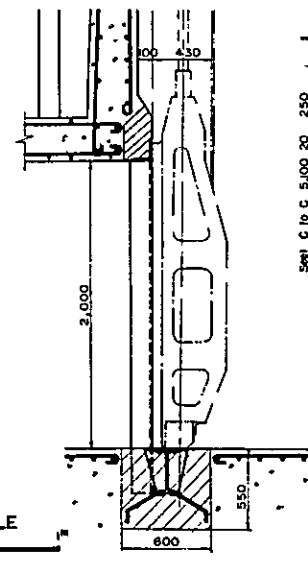
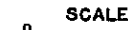
SECTION E-E



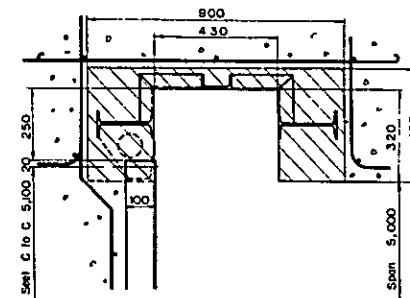
SECTION C-C

TABLE OF REINFORCEMENT BAR

MARK	Ø	LENGTH	NO.	TOTAL LENGTH	UNIT WEIGHT	REMARKS
1	13	7.59	7	53.13	1.04	55
2	16	4.60	14	67.20	1.57	106
3	13	5.76	8	46.08	1.04	48
4	19	3.31	8	27.04	2.22	60
5	13	6.39	8	51.12	1.04	53
6	-	3.16	22	69.52	-	72
7	-	1.11	8	8.88	-	9
8	-	0.96	14	13.44	-	14
9	-	1.61	9	12.86	-	13
10	-	1.51	14	21.14	-	22
11	9	1.92	90	184.70	0.49	81
12	-	4.55	22	100.10	-	49
13	-	1.43	12	17.16	-	8
14	13	7.46	4	29.84	1.04	31
15	16	8.02	2	16.04	1.57	25
16	13	7.28	9	65.34	1.04	68
17	16	7.32	6	43.92	1.57	69
18	13	7.26	3	21.78	1.04	23
19	-	5.96	8	47.68	-	50
20	16	9.53	16	152.48	1.57	239
21	-	3.02	18	54.36	-	65
22	13	3.53	18	59.94	1.04	62
23	16	0.95	18	17.10	1.57	27
24	19	9.28	16	148.48	2.22	330
25	-	5.83	9	52.47	-	116
26	-	3.73	4	14.92	-	33
27	9	6.07	16	97.12	0.49	48
28	-	1.13	16	18.08	-	9
29	-	5.20	13	67.60	-	33
30	13	2.41	5	12.05	1.04	13
31	9	2.41	2	4.82	0.49	2
32	-	2.89	22	83.38	-	31
33	16	7.77	5	38.85	1.57	61
34	-	6.42	7	44.94	-	71
35	13	5.96	4	23.84	1.04	25
36	-	7.56	4	30.24	-	31
37	16	5.00	14	70.00	1.57	110
38	-	4.53	14	63.42	-	100
39	13	1.66	8	13.28	1.04	14
40	9	1.83	48	87.84	0.49	43
41	-	1.56	2	3.16	-	2
42	13	3.04	22	66.88	1.04	70
43	-	5.96	6	35.76	-	37
44	19	0.88	112	98.56	2.22	219
TOTAL					2,667 kg	



DETAIL OF BLOCK OUT FOR SILL

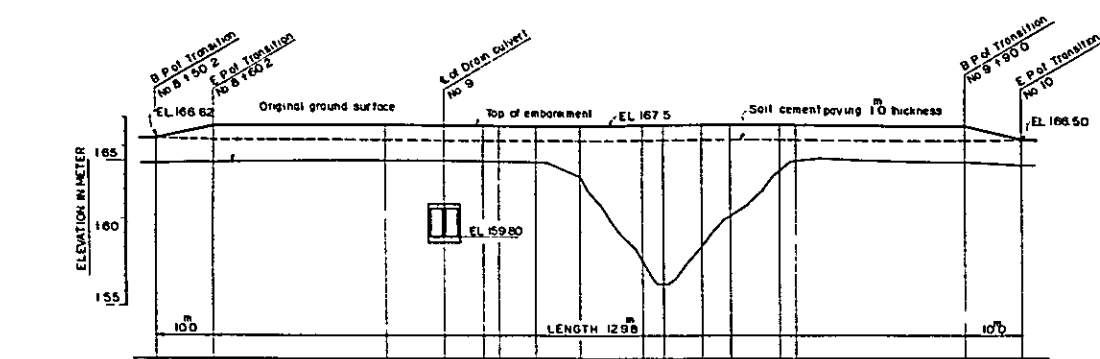


DETAIL OF BLOCK OUT FOR GUIDE FRAME



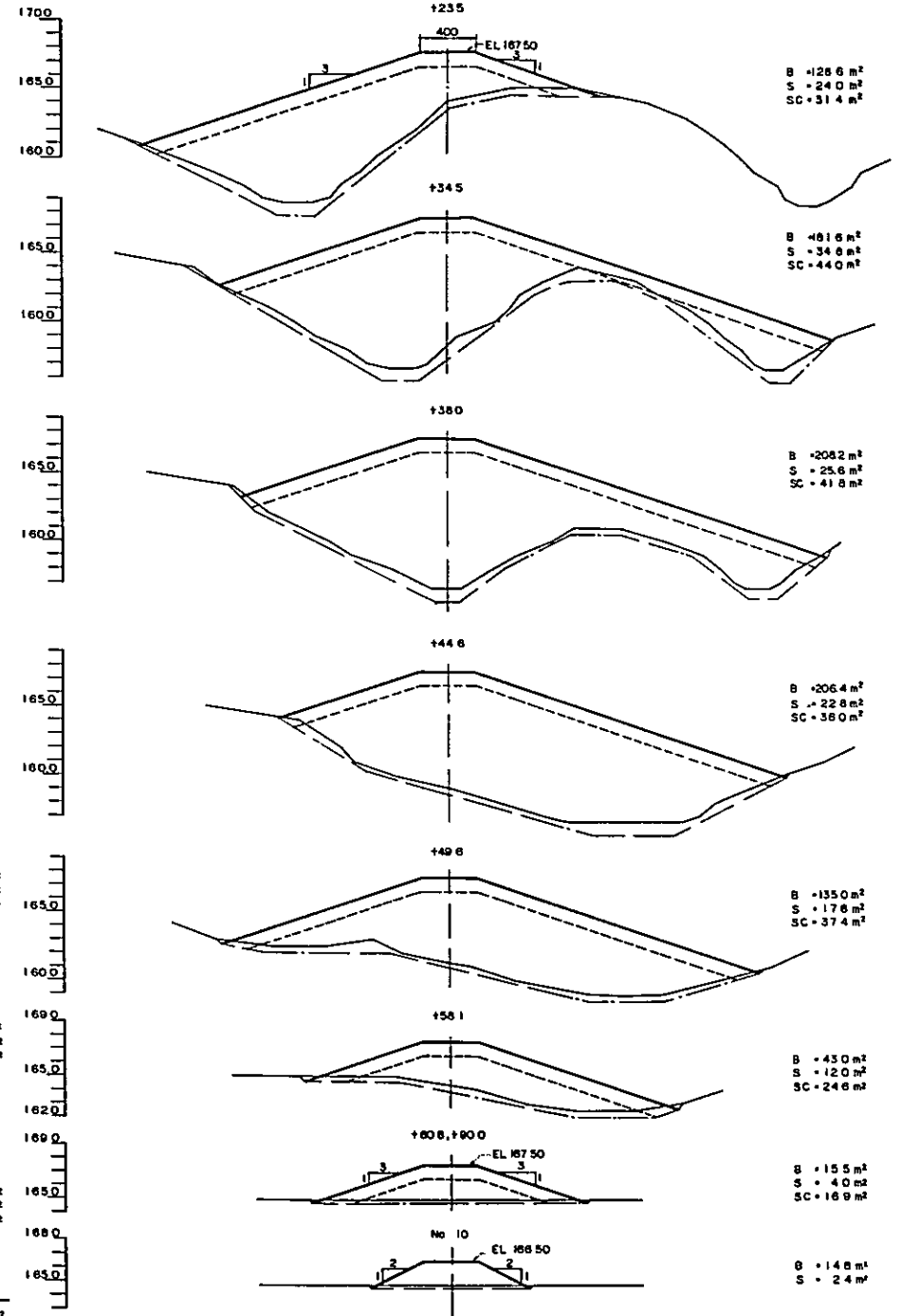
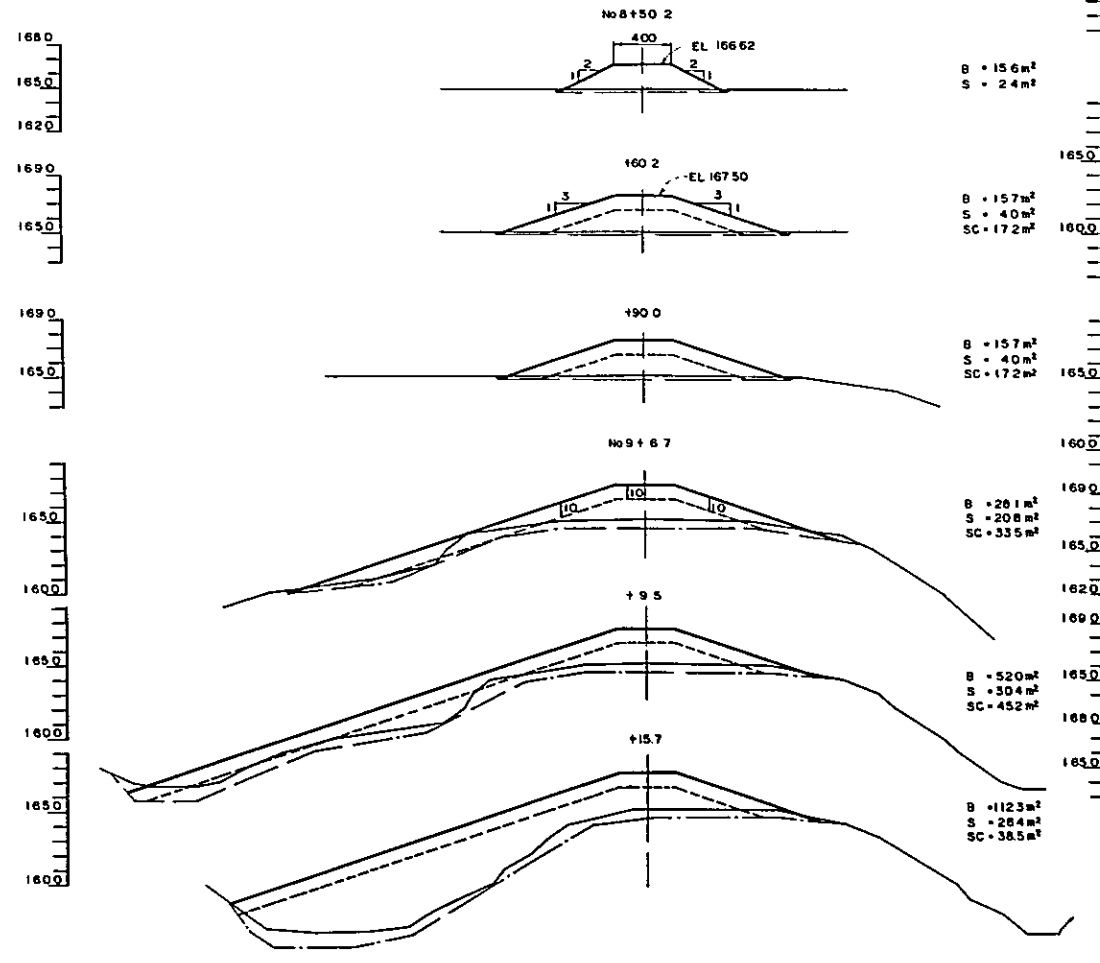
KINGDOM OF LAOS  
 THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
 FLOOD GATE  
 OUTLET OF CULVERT

DRAWN: [Signature] SUBMITTED  
 CHECKED: [Signature] APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1968  
 6004

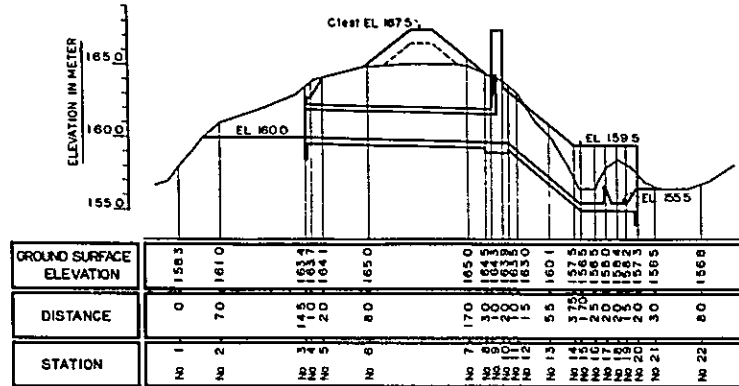


GROUND SURFACE ELEVATION	ACCUMULATED DISTANCE	STATION
164.9	0.0	No 8
165.0	800.2	160.2
165.1	890.0	160.0
165.1	900.0	No 9
165.1	907.7	+ 6.7
165.1	909.5	+ 9.5
165.0	915.7	+15.7
164.0	923.5	+23.5
158.3	934.5	158.3
156.6	939.0	156.6
159.1	944.6	144.6
161.3	949.6	149.6
164.3	955.1	155.1
165.0	960.0	No 10
164.8	990.0	160.0
164.8	1000.0	No 10

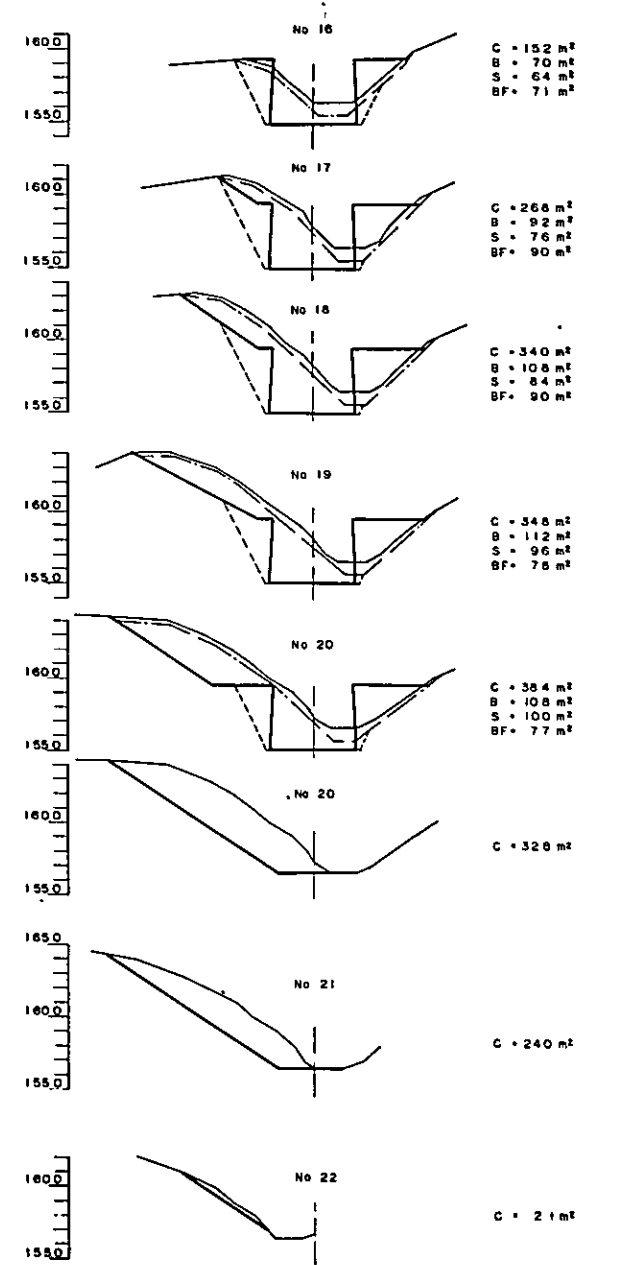
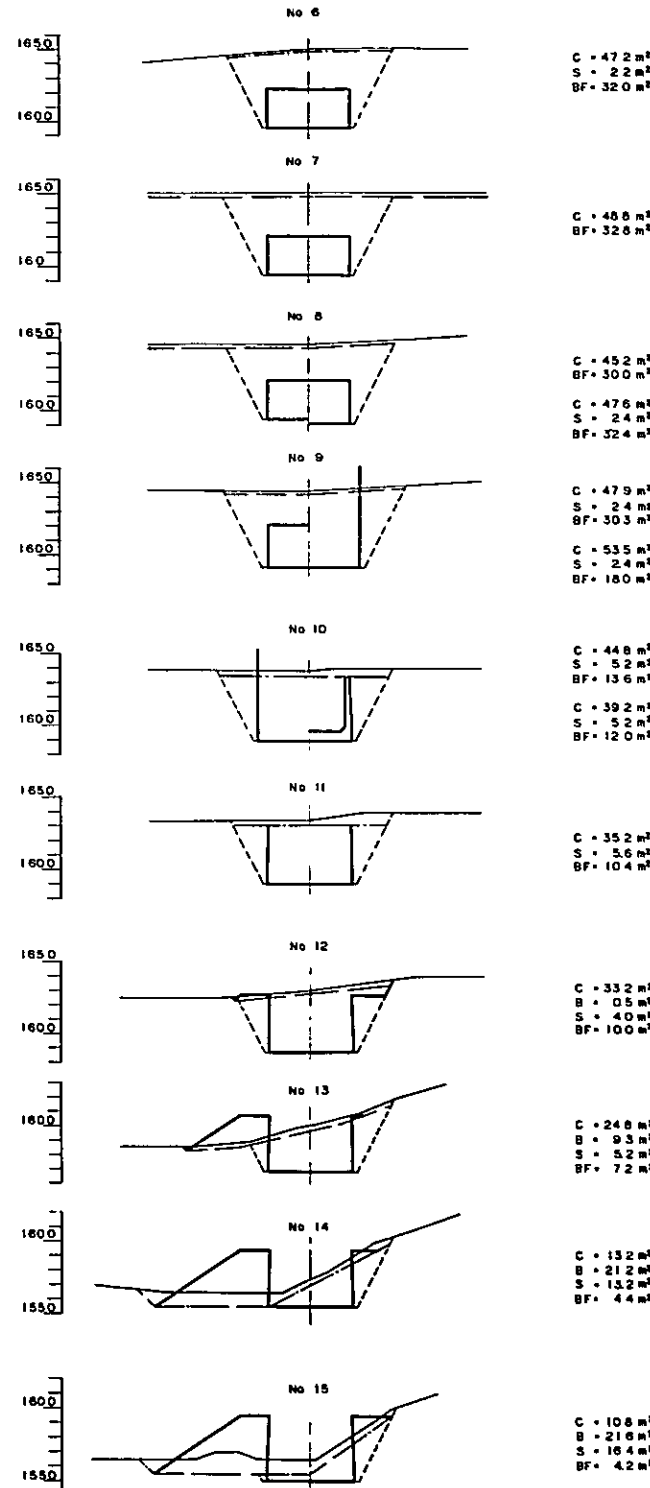
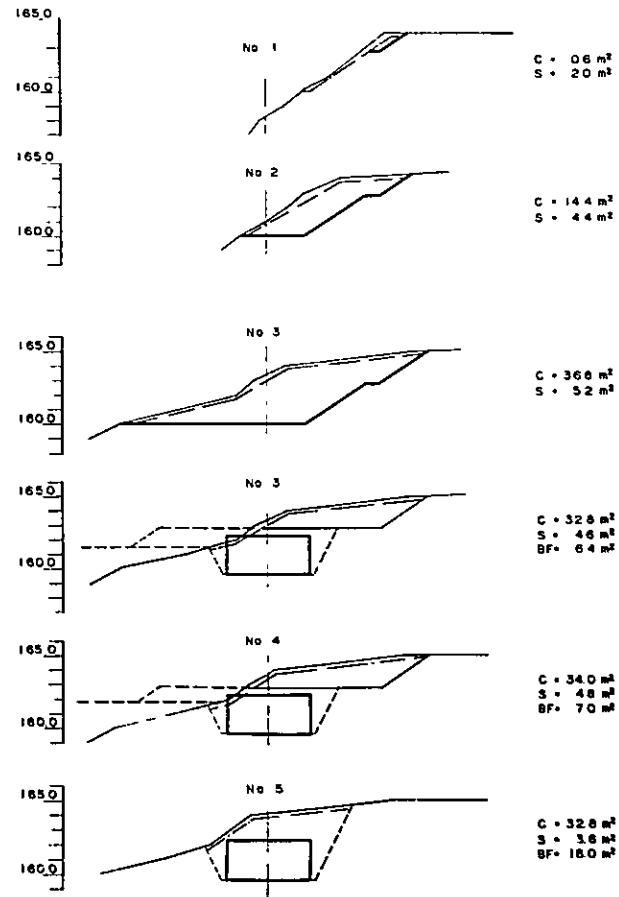
PROFILE



KINGDOM OF LAOS  
 THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
**FLOOD GATE**  
**PROFILE AND CROSS SECTION (I)**  
 DRAWN: *[Signature]* SUBMITTED: \_\_\_\_\_  
 CHECKED: *[Signature]* APPROVED: \_\_\_\_\_  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1969 6005



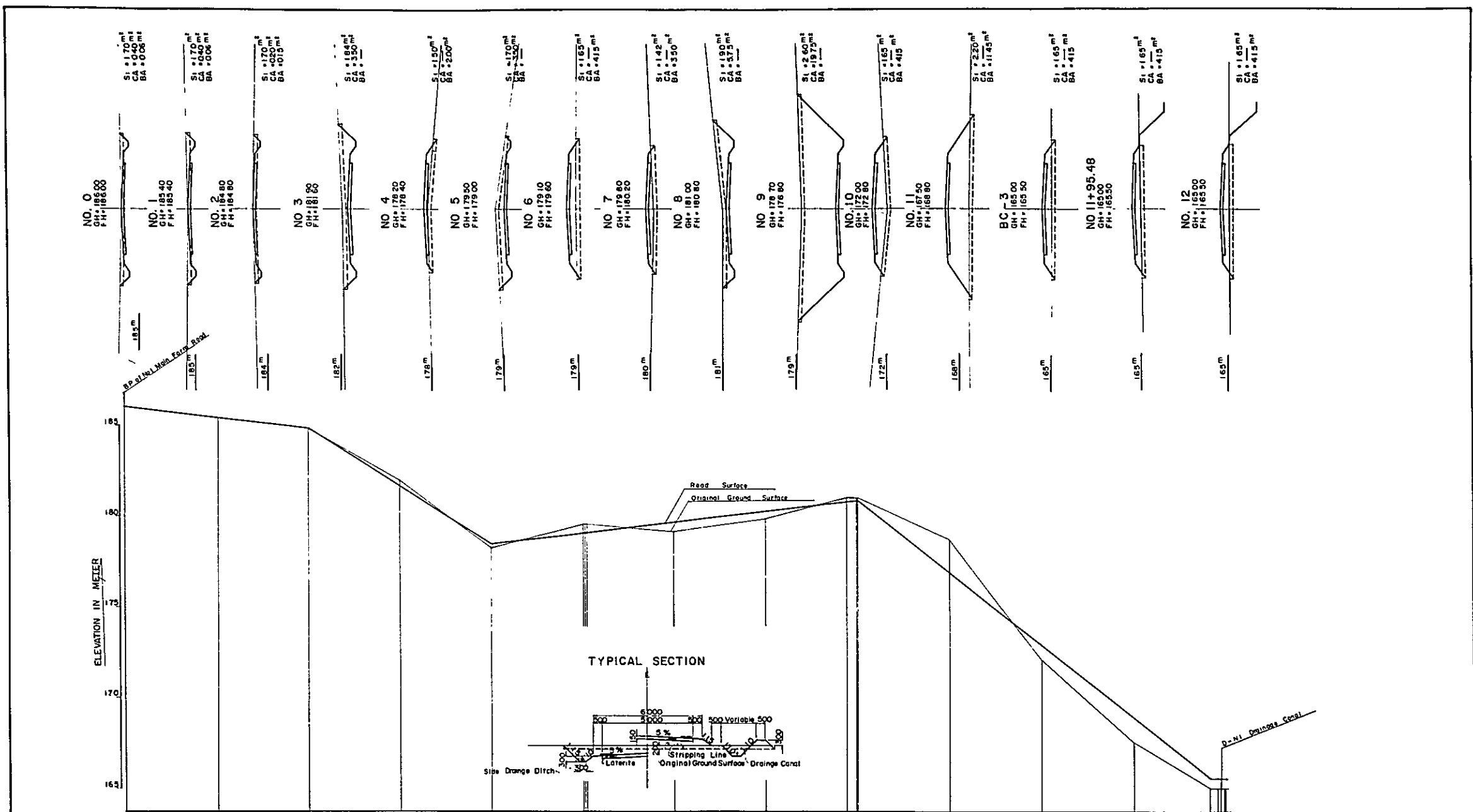
PROFILE



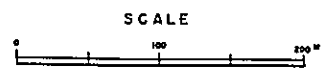
KINGDOM OF LAOS  
 THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
 FLOOD GATE  
 PROFILE AND CROSS SECTION (2)

DRAWN: *Y. P. J.* SUBMITTED: \_\_\_\_\_  
 CHECKED: *S. Keavil* APPROVED: \_\_\_\_\_  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1968

6006



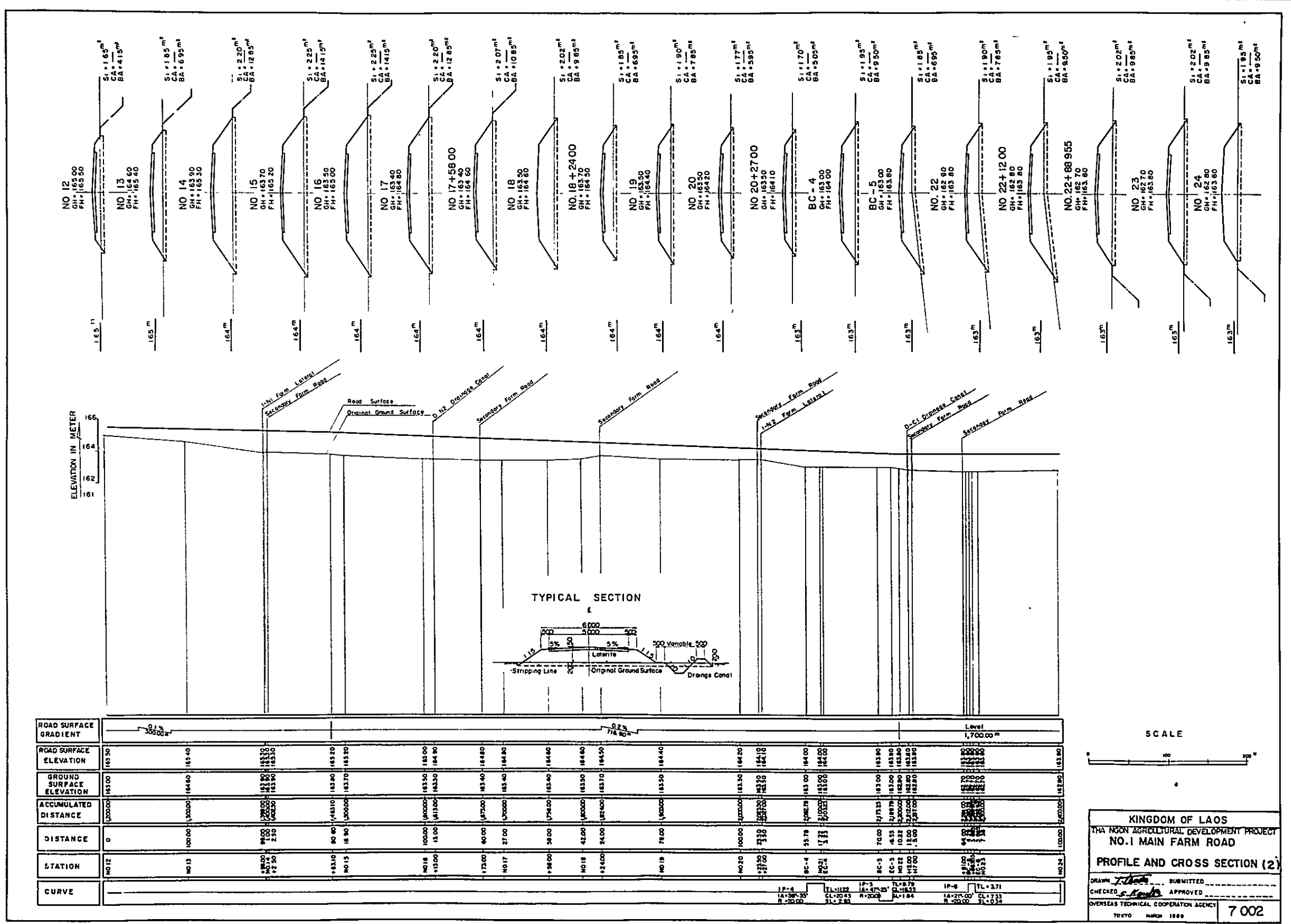
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ROAD SURFACE ELEVATION	184.00	185.40	184.80	181.80	178.40	178.00	180.70	176.80
GROUND SURFACE ELEVATION	184.00	183.40	184.80	181.80	178.20	178.30	181.00	172.00
ACCUMULATED DISTANCE	0	100.00	200.00	300.00	400.00	500.00	600.00	700.00
DISTANCE	0	100.00	100.00	100.00	100.00	100.00	100.00	100.00
STATION	NO. 0	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6	NO. 7
CURVE								



KINGDOM OF LAOS  
 THE REGION AGRICULTURAL DEVELOPMENT PROJECT  
 NO. 1 MAIN FARM ROAD  
 PROFILE AND CROSS SECTION (1)

DRAWN: *[Signature]* SUBMITTED: \_\_\_\_\_  
 CHECKED: *[Signature]* APPROVED: \_\_\_\_\_  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TDG TO NHM 1869 7 001





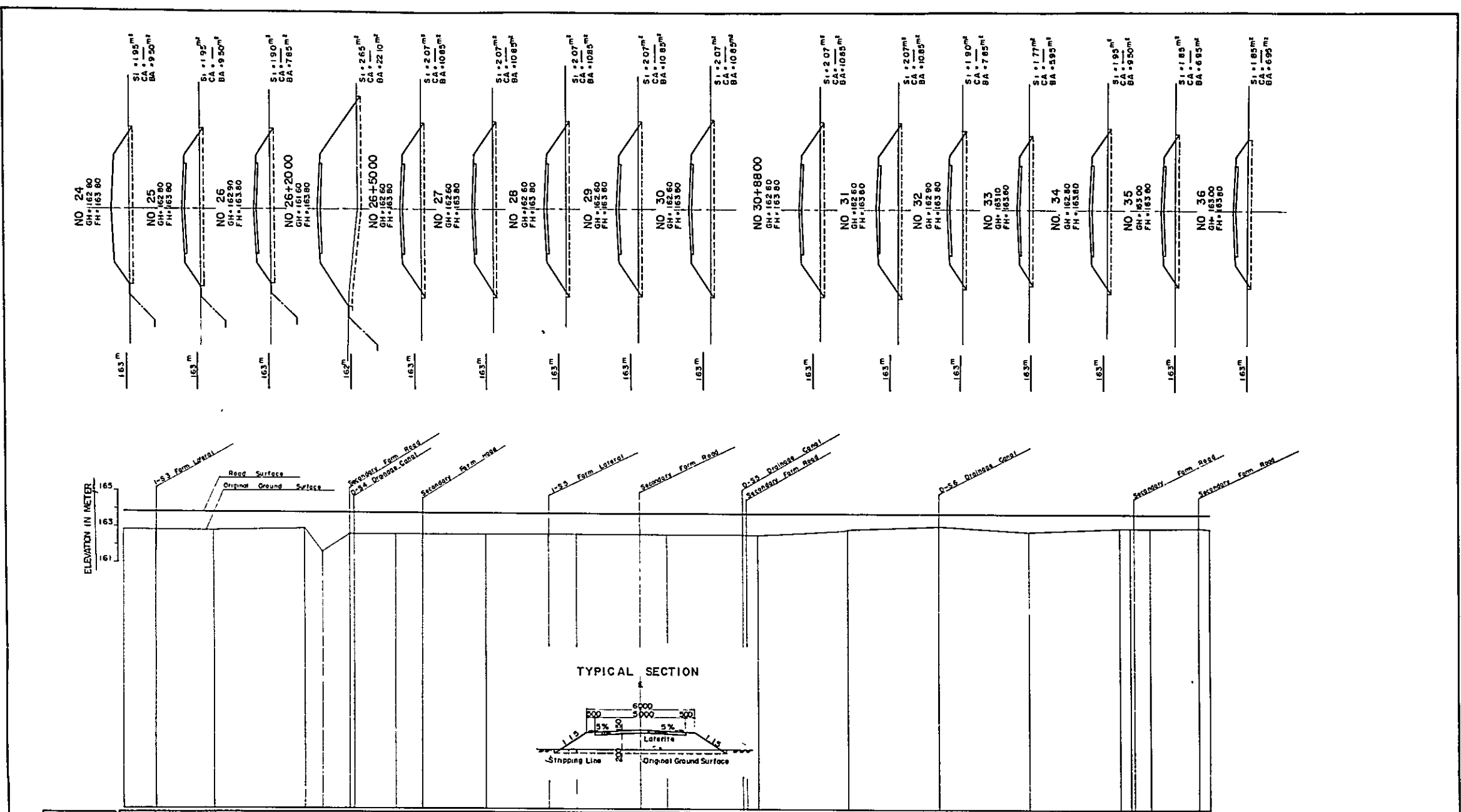
ROAD SURFACE GRADIENT	0.2%													Level				
ROAD SURFACE ELEVATION	163.30	163.40	163.50	163.60	163.70	163.80	163.90	164.00	164.10	164.20	164.30	164.40	164.50	164.60	164.70	164.80	164.90	165.00
GROUND SURFACE ELEVATION	163.00	164.60	163.10	163.20	163.30	163.40	163.50	163.60	163.70	163.80	163.90	164.00	164.10	164.20	164.30	164.40	164.50	164.60
ACCUMULATED DISTANCE	0.000	100.00	200.00	300.00	400.00	500.00	600.00	700.00	800.00	900.00	1000.00	1100.00	1200.00	1300.00	1400.00	1500.00	1600.00	1700.00
DISTANCE	0	100.00	200.00	300.00	400.00	500.00	600.00	700.00	800.00	900.00	1000.00	1100.00	1200.00	1300.00	1400.00	1500.00	1600.00	1700.00
STATION	NO 12	NO 13	NO 14	NO 15	NO 16	NO 17	NO 18	NO 19	NO 20	NO 21	NO 22	NO 23	NO 24					
CURVE																		



KINGDOM OF LAOS  
 THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
 NO.1 MAIN FARM ROAD  
 PROFILE AND CROSS SECTION (2)

DRAWN: *[Signature]* SUBMITTED: \_\_\_\_\_  
 CHECKED: *[Signature]* APPROVED: \_\_\_\_\_  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1989

**7 002**



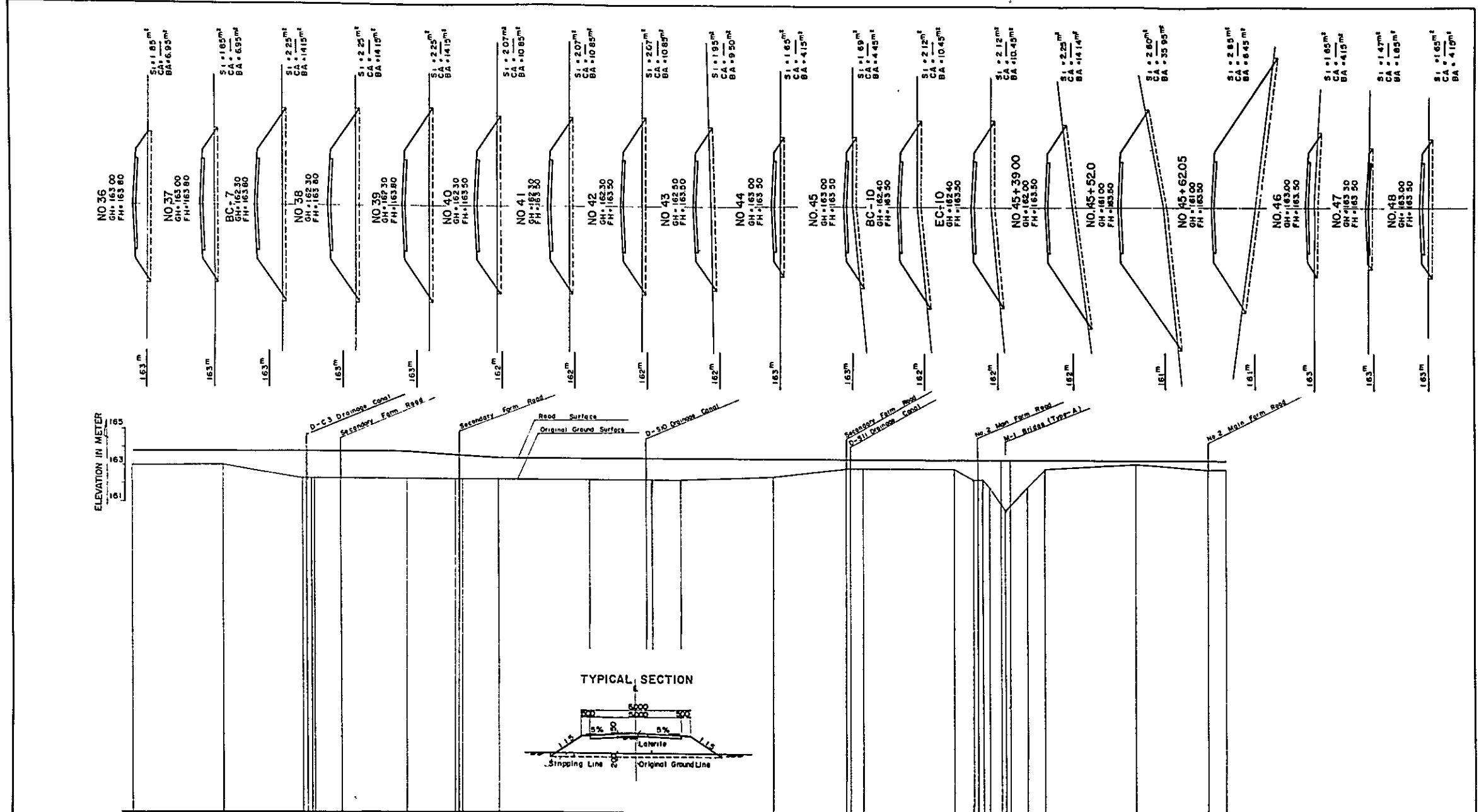
ROAD SURFACE GRADIENT	Level 1.700 00 m															
ROAD SURFACE ELEVATION	163.80	163.80	163.80	163.80	163.80	163.80	163.80	163.80	163.80	163.80	163.80	163.80	163.80	163.80	163.80	163.80
GROUND SURFACE ELEVATION	162.80	162.80	162.80	162.80	162.80	162.80	162.80	162.80	162.80	162.80	162.80	162.80	162.80	162.80	162.80	162.80
ACCUMULATED DISTANCE	0	36.00	72.00	108.00	144.00	180.00	216.00	252.00	288.00	324.00	360.00	396.00	432.00	468.00	504.00	540.00
DISTANCE	0	36.00	72.00	108.00	144.00	180.00	216.00	252.00	288.00	324.00	360.00	396.00	432.00	468.00	504.00	540.00
STATION	NO 24	NO 25	NO 26	NO 27	NO 28	NO 29	NO 30	NO 31	NO 32	NO 33	NO 34	NO 35	NO 36			
CURVE																

SCALE  
 0 20 40 80

KINGDOM OF LAOS  
 THE MOON AGRICULTURAL DEVELOPMENT PROJECT  
 NO. 1 MAIN FARM ROAD  
 PROFILE AND CROSS SECTION (3)

DRAWN *T. Thade* SUBMITTED  
 CHECKED *S. Lantia* APPROVED

OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1989 7 003



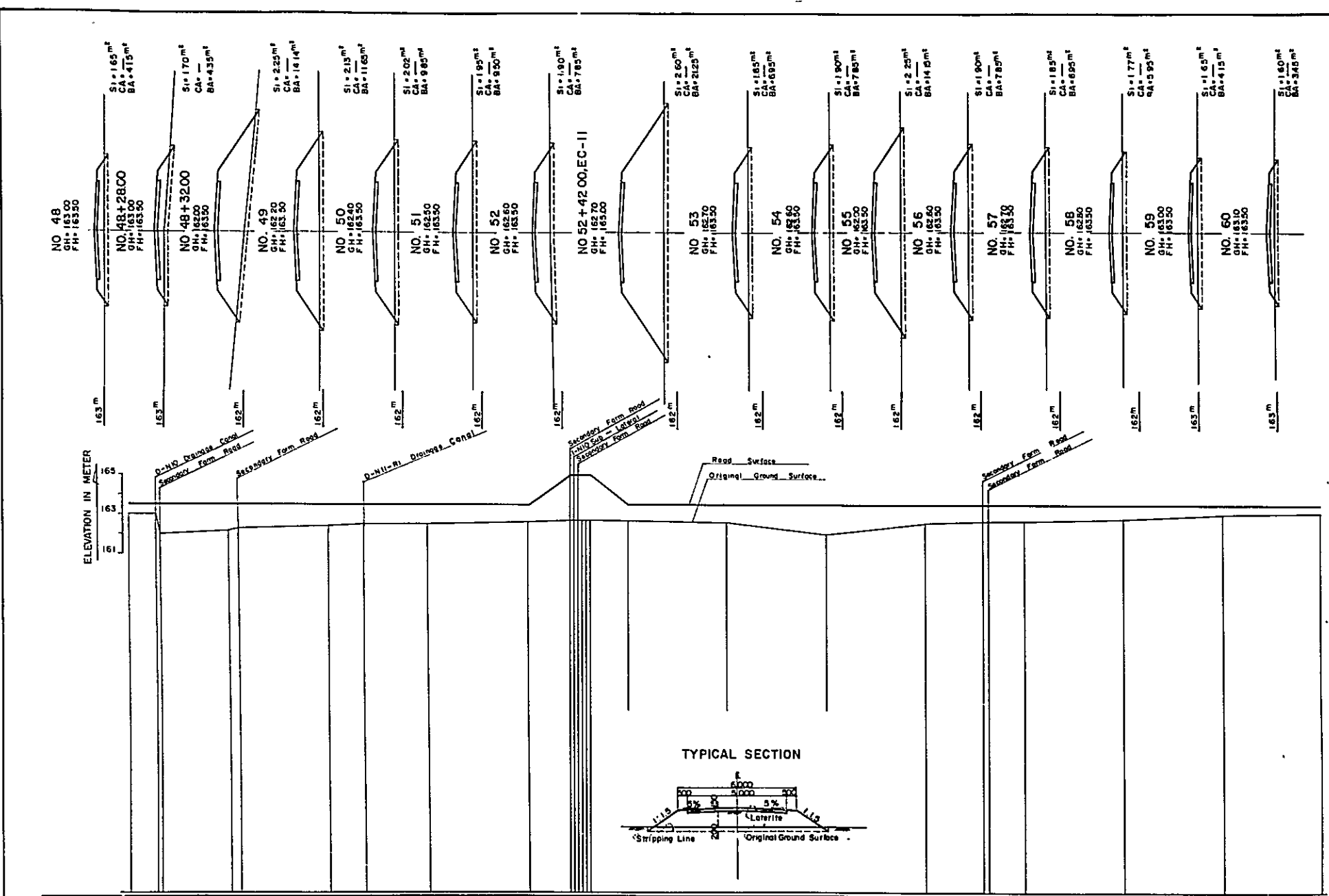
ROAD SURFACE GRADIENT	Level 1,700.00m										Level 1,200.00m									
ROAD SURFACE ELEVATION	163.80	163.80	163.80	163.80	163.80	163.80	163.80	163.80	163.80	163.80	163.30	163.30	163.30	163.30	163.30	163.30	163.30	163.30	163.30	163.30
GROUND SURFACE ELEVATION	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	162.50	162.50	162.50	162.50	162.50	162.50	162.50	162.50	162.50	162.50
ACCUMULATED DISTANCE	0.00	1700.00	3400.00	5100.00	6800.00	8500.00	10200.00	11900.00	13600.00	15300.00	17000.00	18700.00	20400.00	22100.00	23800.00	25500.00	27200.00	28900.00	30600.00	32300.00
DISTANCE	0	1700	3400	5100	6800	8500	10200	11900	13600	15300	17000	18700	20400	22100	23800	25500	27200	28900	30600	32300
STATION	NO.36	NO.37	BC-7	NO.38	NO.39	NO.40	NO.41	NO.42	NO.43	NO.44	NO.45	BC-10	EC-10	NO.45+39.00	NO.45+52.0	NO.45+62.05	NO.46	NO.47	NO.48	
CURVE			IP-7 TL=4M R=20.0 BL=0.3M		IP-8 TL=5.71 R=20.0 BL=0.34				IP-9 TL=6.41 R=20.0 BL=0.30				IP-10 TL=7.28 R=20.0 BL=0.32							

SCALE

KINGDOM OF LAOS  
THE ROON AGRICULTURAL DEVELOPMENT PROJECT  
NO.1 MAIN FARM ROAD  
PROFILE AND CROSS SECTION (4)

DRAWN *[Signature]* SUBMITTED  
CHECKED *[Signature]* APPROVED  
OVERSEAS TECHNICAL COOPERATION AGENCY  
THIRD MARCH 1988

7 004



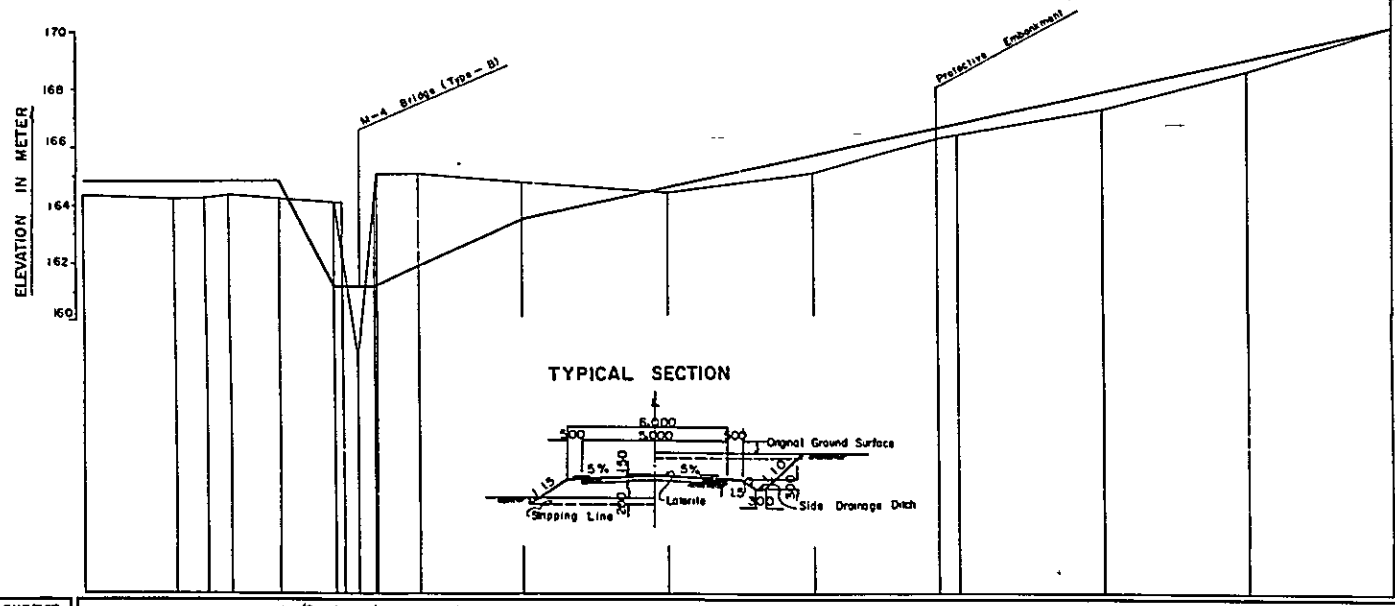
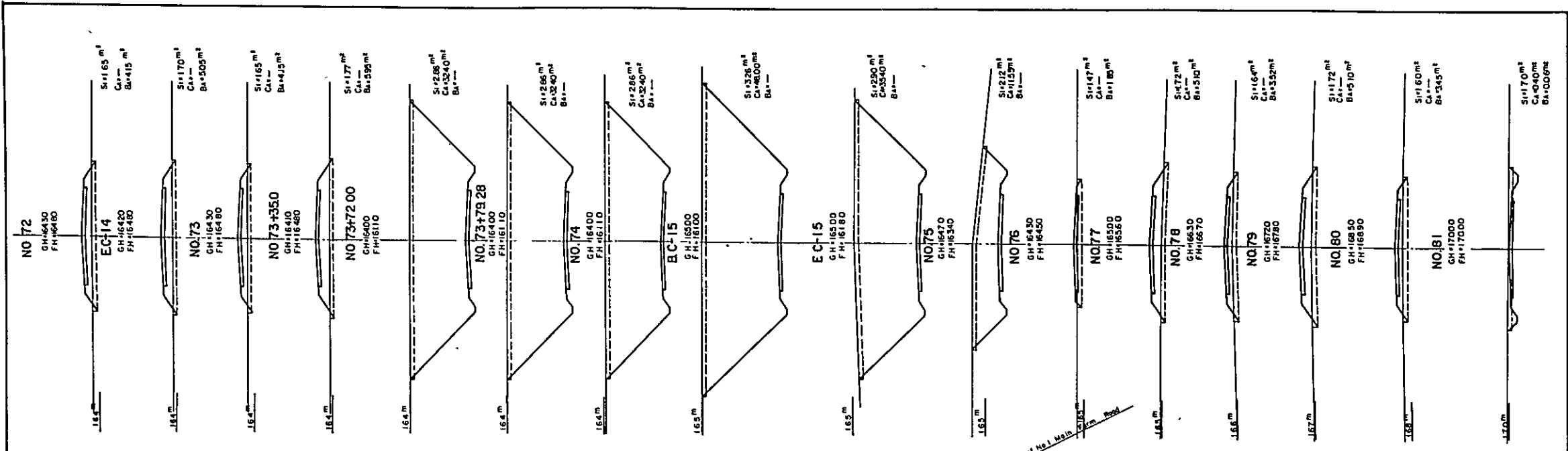
ROAD SURFACE GRADIENT	Level											Level												
	1,300.00m											1,300.00m												
ROAD SURFACE ELEVATION	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50	
GROUND SURFACE ELEVATION	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	163.00	
ACCUMULATED DISTANCE	0	20.00	40.00	60.00	80.00	100.00	120.00	140.00	160.00	180.00	200.00	220.00	240.00	260.00	280.00	300.00	320.00	340.00	360.00	380.00	400.00	420.00	440.00	
DISTANCE	0	20.00	40.00	60.00	80.00	100.00	120.00	140.00	160.00	180.00	200.00	220.00	240.00	260.00	280.00	300.00	320.00	340.00	360.00	380.00	400.00	420.00	440.00	
STATION	NO 48	28.00	48.00	68.00	88.00	108.00	128.00	148.00	168.00	188.00	208.00	228.00	248.00	268.00	288.00	308.00	328.00	348.00	368.00	388.00	408.00	428.00	448.00	
CURVE	1P-II TL-1.57 1A-1.80 CL-3.14 1B-2.00 SL-5.08																							



KINGDOM OF LAOS  
 THE NGON AGRICULTURAL DEVELOPMENT PROJECT  
 NO.1 MAIN FARM ROAD  
 PROFILE AND CROSS SECTION (5)  
 DRAWN: [Signature] SUBMITTED: \_\_\_\_\_  
 CHECKED: [Signature] APPROVED: \_\_\_\_\_  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1969

7 005





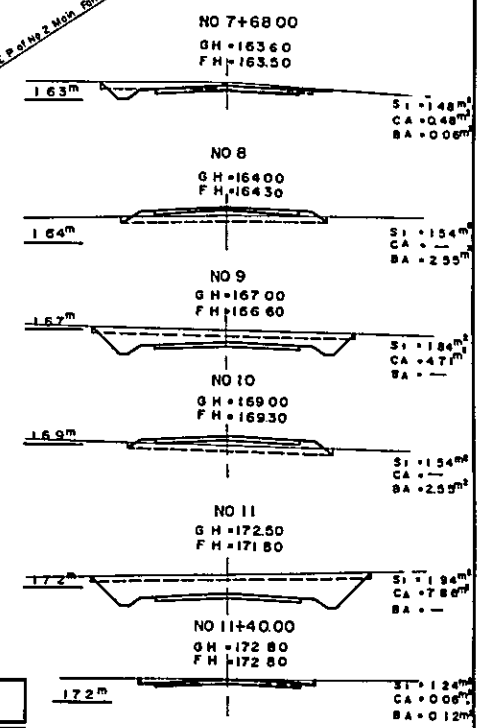
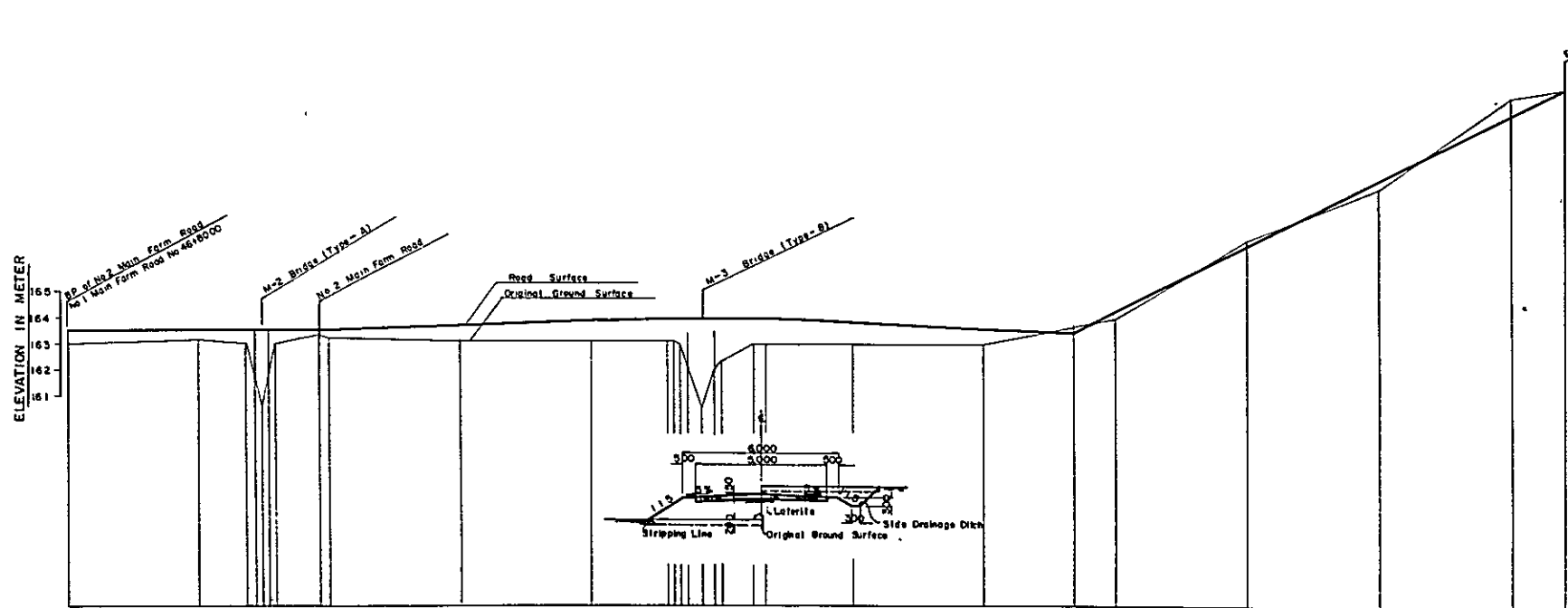
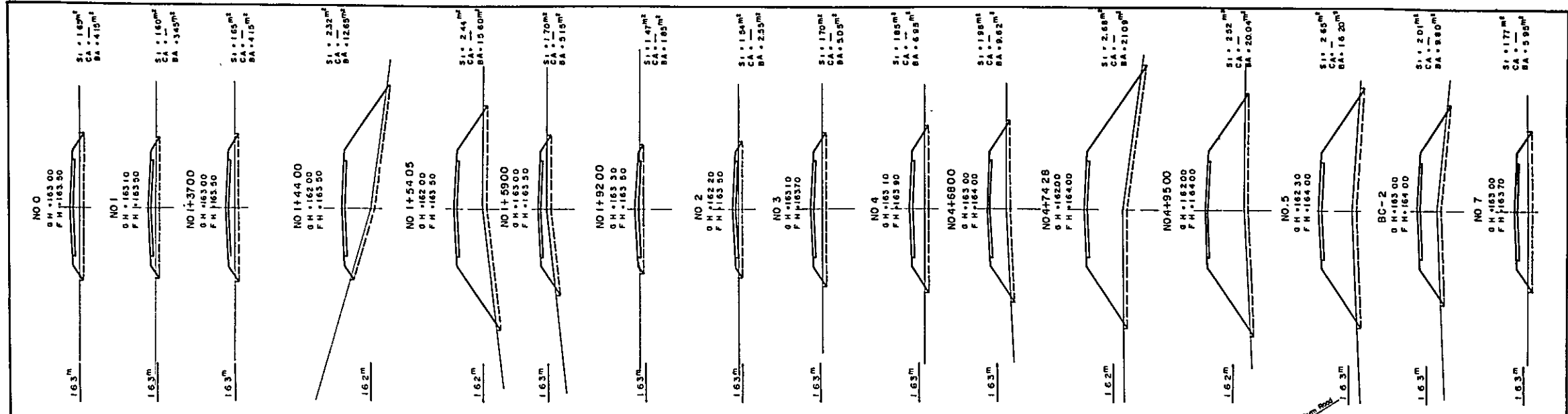
ROAD SURFACE GRADIENT	1.11% 335.00m		1.23% 160.00m		1.1% 200.00m	
ROAD SURFACE ELEVATION	164.80	164.80	164.80	164.80	164.30	164.30
GROUND SURFACE ELEVATION	164.30	164.30	164.30	164.30	164.30	164.30
ACCUMULATED DISTANCE	0	262.28	315.53	350.00	510.00	710.00
DISTANCE	0	62.18	215.47	35.00	160.00	140.00
STATION	NO 72	EC-14	NO 73	NO 73+350	NO 73+72 00	NO 73+79 28
CURVE	LA-7A R=2000	LA-7A R=2000	LA-7A R=2000	LA-7A R=2000	LA-7A R=2000	LA-7A R=2000

SCALE  
0 100 200

KINGDOM OF LAOS  
THA HOON AGRICULTURAL DEVELOPMENT PROJECT  
NO. 1 MAIN FARM ROAD  
PROFILE AND CROSS SECTION (7)

DRAWN: *[Signature]* SUBMITTED: \_\_\_\_\_  
 CHECKED: *[Signature]* APPROVED: \_\_\_\_\_

OVERSEAS TECHNICAL COOPERATION AGENCY  
7 007



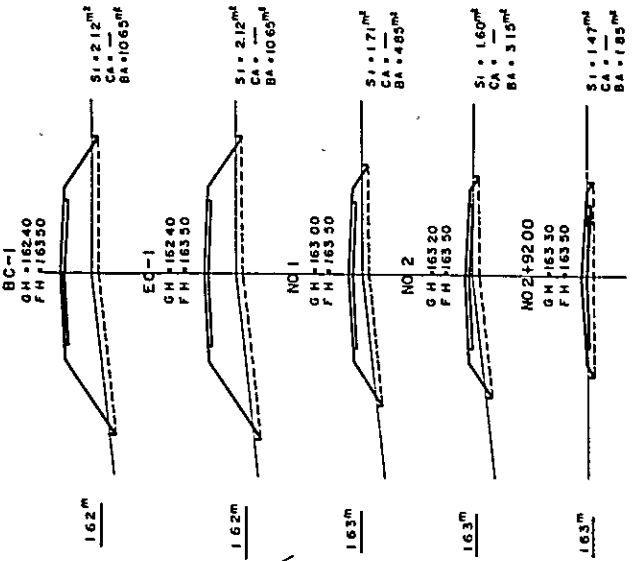
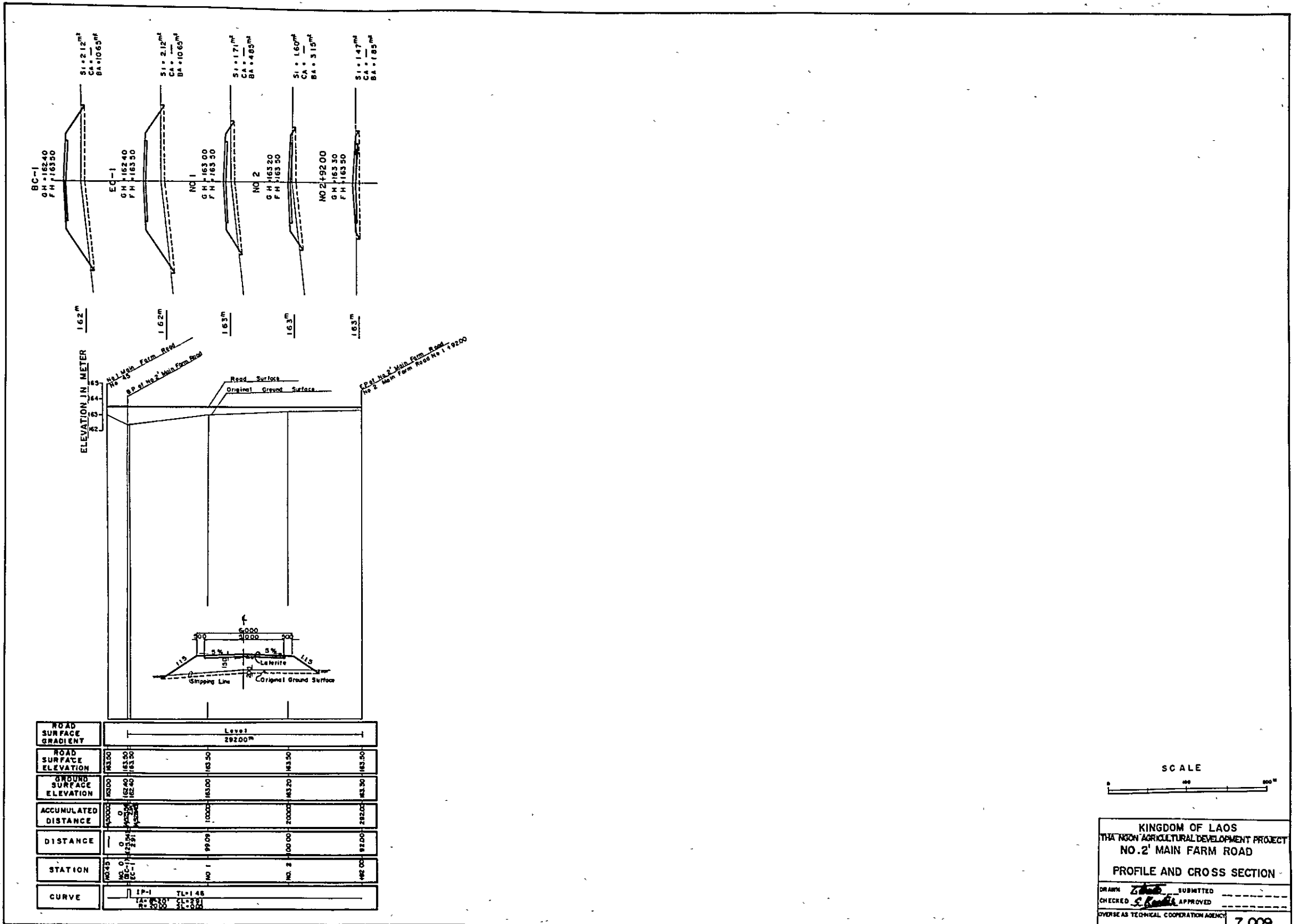
ROAD SURFACE GRADIENT	Lewl 192.00m		0.2% 276.00m		Lewl 96.24m		0.2% 243.77m	
ROAD SURFACE ELEVATION	163.50	163.50	163.50	163.50	163.50	163.50	163.50	163.50
GROUND SURFACE ELEVATION	163.00	163.10	163.20	163.30	163.40	163.50	163.60	163.70
ACCUMULATED DISTANCE	0	100.00	200.00	300.00	400.00	500.00	600.00	700.00
DISTANCE	0	100.00	200.00	300.00	400.00	500.00	600.00	700.00
STATION	NO 0	NO 1	NO 2	NO 3	NO 4	NO 5	NO 6	NO 7
CURVE								

SCALE  
0 100 200

KINGDOM OF LAOS  
THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
NO. 2 MAIN FARM ROAD  
PROFILE AND CROSS SECTION

DRAWN [Signature] SUBMITTED  
CHECKED [Signature] APPROVED  
OVERSEAS TECHNICAL COOPERATION AGENCY  
TORONTO MARCH 1968

7 008



ROAD SURFACE GRADIENT	Level 29200 <sup>m</sup>				
ROAD SURFACE ELEVATION	163.00	163.50	163.50	163.50	163.50
GROUND SURFACE ELEVATION	162.00	162.40	163.00	163.20	163.30
ACCUMULATED DISTANCE	0	98.09	100.00	200.00	292.00
DISTANCE	0	98.09	100.00	200.00	292.00
STATION	162.00	163.50	163.50	163.50	163.50
CURVE	IP-1 TL=1.45 LA=9.30 CL=2.91 R=2000 SL=0.04				

SCALE

KINGDOM OF LAOS  
 THA NHOON AGRICULTURAL DEVELOPMENT PROJECT  
 NO. 2 MAIN FARM ROAD  
 PROFILE AND CROSS SECTION

DRAWN: *[Signature]* SUBMITTED: \_\_\_\_\_  
 CHECKED: *[Signature]* APPROVED: \_\_\_\_\_  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1988 7 009



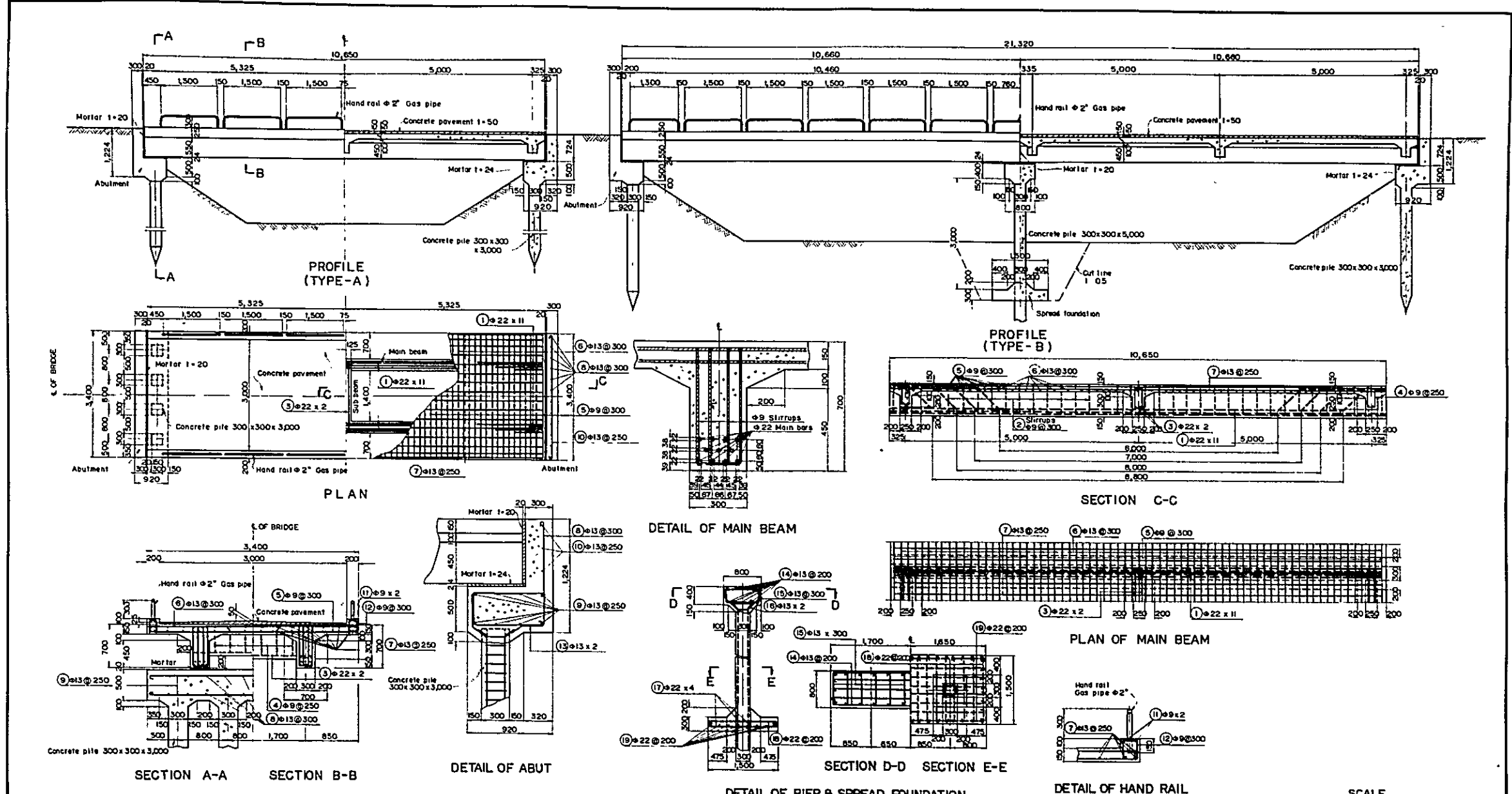


TABLE OF TYPE-A REINFORCEMENT BARS

MARK	Ø	LENGTH	NOS	TOTAL LENGTH	UNIT WEIGHT	WEIGHT	REMARKS
1	22	13.57	14	189.98	2.984	566.9	
2	9	14.02	8	112.16	0.499	55.9	
3	22	1.61	72	115.92	2.984	43.7	
4	9	1.48	12	17.76	0.499	8.9	
5	9	1.43	6	8.58	0.499	4.3	
6	13	3.48	72	250.56	0.499	125.1	
7	13	3.76	33	131.08	1.042	137.2	
8	9	12.33	32	394.56	0.499	411.2	
9	9	3.26	24	78.24	0.499	81.6	
10	9	3.59	18	64.62	0.499	67.8	
11	9	1.179	4	4.716	0.499	2.36	
12	9	0.73	72	52.56	0.499	26.3	
13	13	1.46	18	23.38	1.042	24.4	
14	9	0.66	20	13.28	0.499	13.8	
15	9	1.91	12	22.92	0.499	23.9	
TOTAL				1,995.2	3.99	1,977.0	

TABLE OF TYPE-B REINFORCEMENT BARS

MARK	Ø	LENGTH	NOS	TOTAL LENGTH	UNIT WEIGHT	WEIGHT	REMARKS
1	22	13.57	28	379.96	2.984	1,133.8	
2	9	14.02	16	224.32	0.499	111.8	
3	22	1.61	144	231.84	2.984	694.4	
4	9	1.48	24	29.28	0.499	14.7	
5	9	1.43	12	17.16	0.499	8.6	
6	13	3.48	144	501.12	0.499	250.1	
7	13	3.76	70	263.20	1.042	274.3	
8	9	12.33	64	789.12	0.499	822.3	
9	9	3.26	24	78.24	0.499	81.6	
10	9	3.56	18	64.08	0.499	67.8	
11	9	1.179	4	4.716	0.499	2.36	
12	9	0.73	144	105.12	0.499	47.1	
13	13	1.46	18	23.38	1.042	24.4	
14	9	0.66	10	6.60	0.499	3.7	
15	9	2.56	12	30.72	0.499	32.1	
16	9	1.46	4	5.84	0.499	6.1	
17	22	3.64	2	7.28	2.984	21.6	
18	9	1.94	17	31.98	0.499	33.4	
19	9	3.64	8	29.12	0.499	66.9	
20	13	0.66	20	13.28	1.042	13.8	
21	9	1.91	12	22.92	0.499	23.9	
TOTAL				3,961.8	3.99	3,989.0	

Note, a, b see to DRAW. NO 7011 CONCRETE BRIDGE (2)

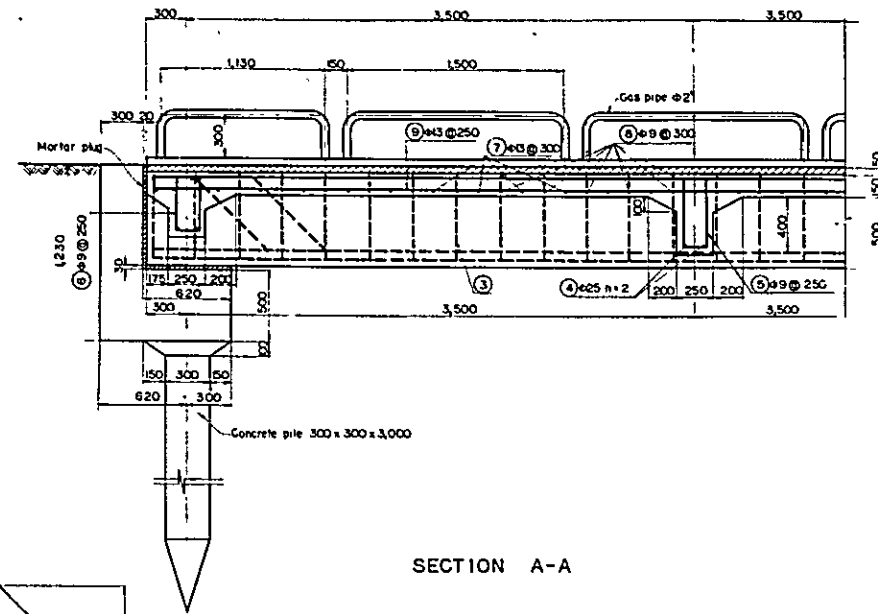
SCALE  
0 1 2 3 4 5m  
0 10 20 30 40 50cm  
0 1 2 3 4m  
0 1 2 3m  
0 1 2m

KINGDOM OF LAOS  
THA NOON AGRICULTURAL DEVELOPMENT PROJECT  
**FARM ROAD  
CONCRETE BRIDGE (1)**

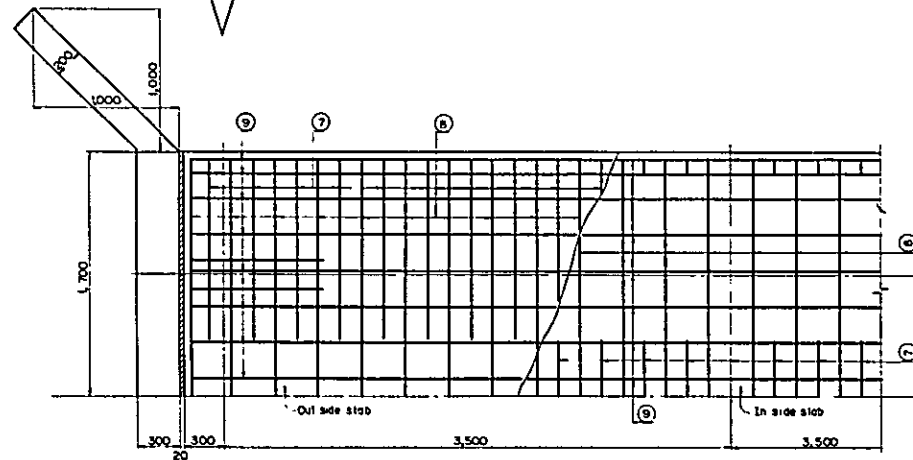
DRAWN *T. Kanda* SUBMITTED  
CHECKED *S. Kanda* APPROVED  
OVERSEAS TECHNICAL COOPERATION AGENCY  
TOKYO MARCH 1969

7010

CONCRETE BRIDGE TYPE - C

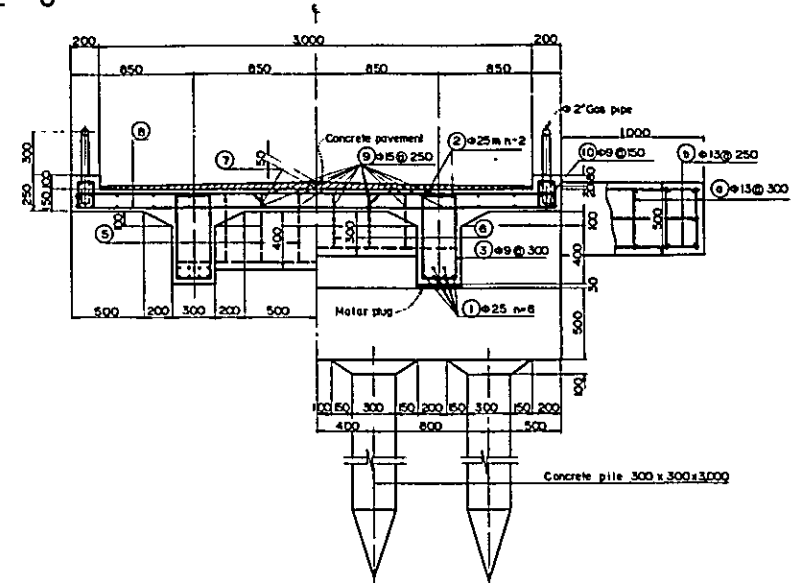


SECTION A-A

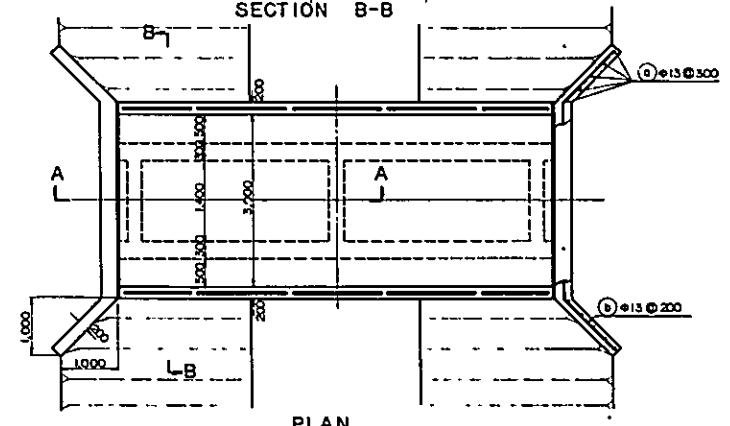


SECTIONAL PLAN

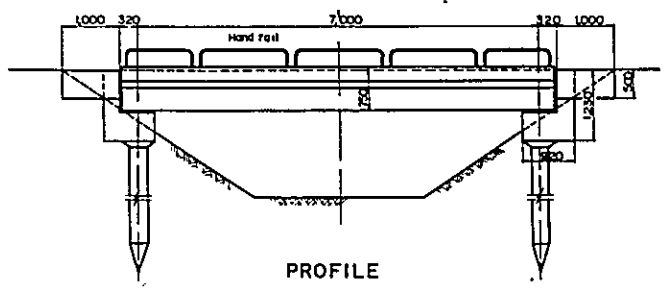
TABLE OF REINFORCEMENT BAR															
MARK	Ø	LENGTH	NOS	TOTAL LENGTH	UNIT WEIGHT	WEIGHT	REMARKS	MARK	Ø	LENGTH	NOS	TOTAL LENGTH	UNIT WEIGHT	WEIGHT	REMARKS
1	25	800	12	9600	3.85	370	→	6	9	121	12	1452	0.49	7	□
2	25	812	4	3248	-	125	~	7	13	373	25	9325	1.04	97	~
3	9	198	52	10296	0.49	51	□	8	9	348	52	18096	0.49	89	~
4	25	240	12	2880	3.85	111	→	9	13	776	18	13968	1.04	145	~
5	9	142	6	852	0.49	4	□	10	9	078	102	7056	0.49	39	□
Sub total													1,036 kg		
Abutment													228 kg		
Total													1,264 kg		



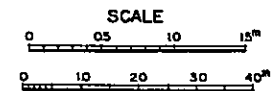
SECTION B-B



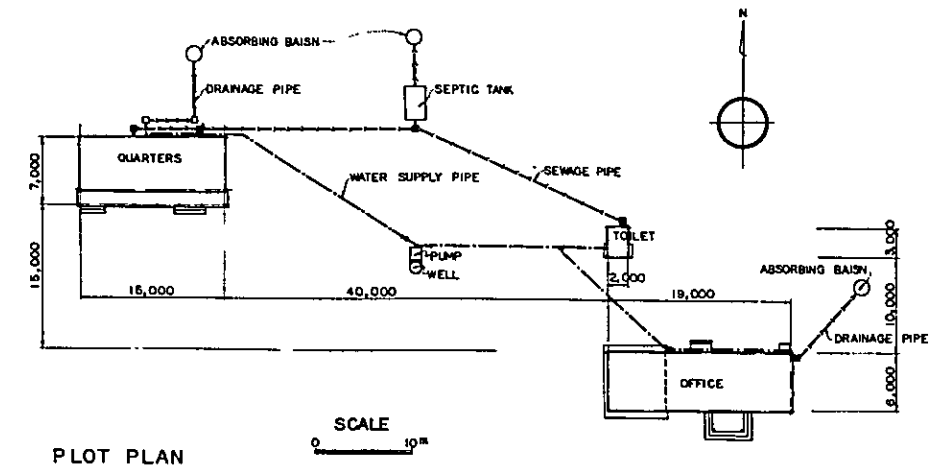
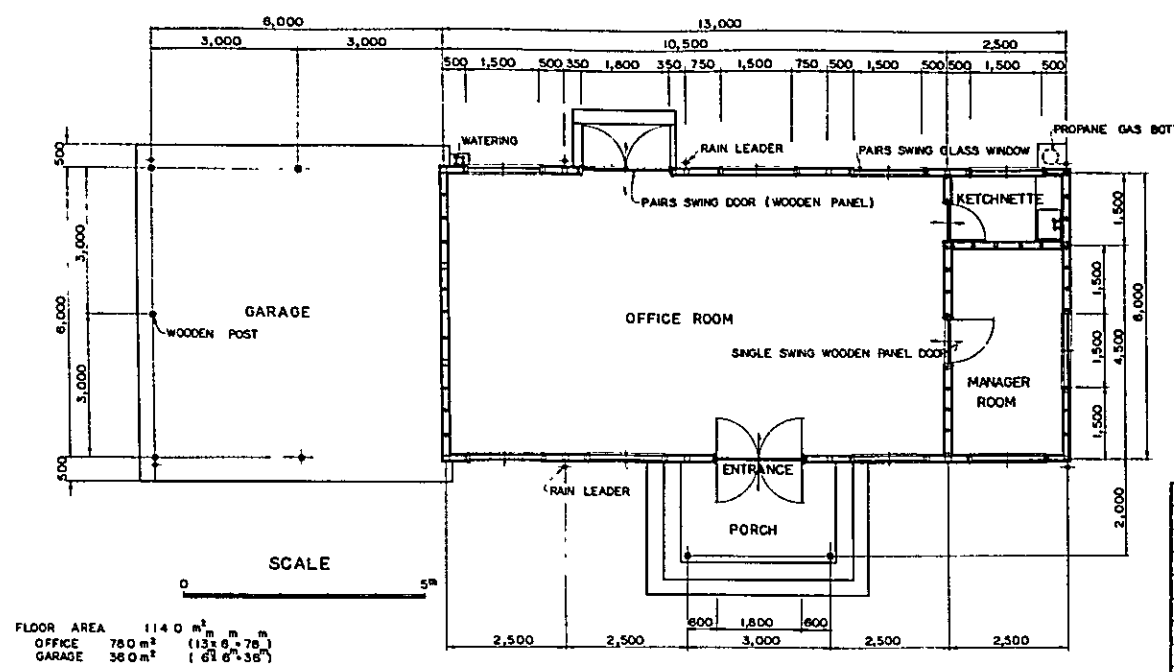
PLAN



PROFILE



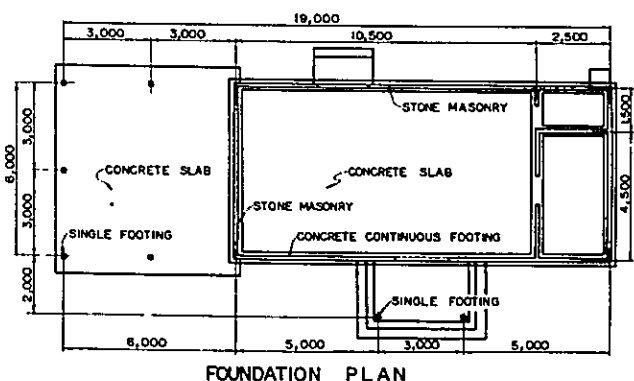
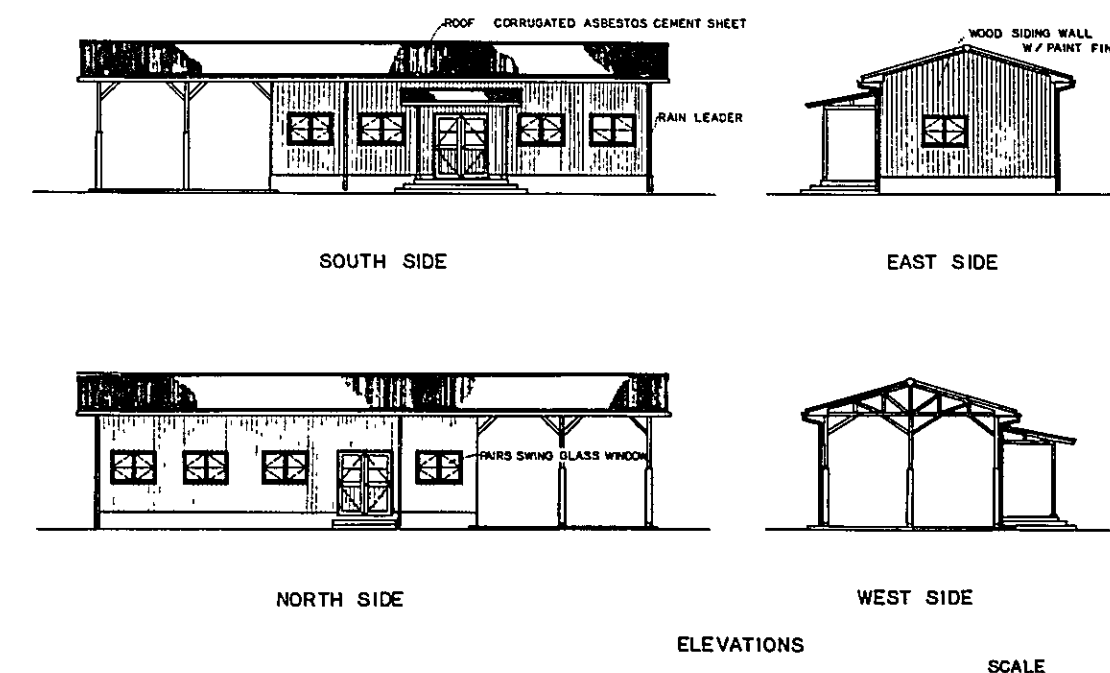
KINGDOM OF LAOS	
THA NOON AGRICULTURAL DEVELOPMENT PROJECT	
FARM ROAD	
CONCRETE BRIDGE (2)	
DRAWN <i>[Signature]</i>	SUBMITTED
CHECKED <i>[Signature]</i>	APPROVED
OVERSEAS TECHNICAL COOPERATION AGENCY	
TOYO	MARCH 1969
7011	



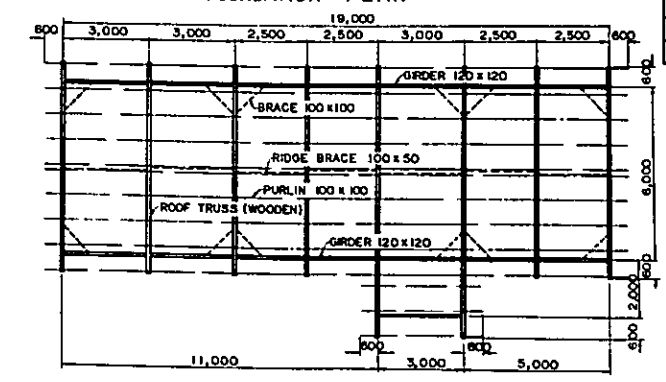
EXTERIOR FINISH SCHEDULE			
ROOF	CORRUGATED ASBESTOS CEMENT SHEET	SKIRTING	STONE MASONRY
EXTERNAL WALL	WOOD SIDING WALL W/ PAINT	GARAGE	FLOOR: CEMENT MORTAR (METAL TROWEL)
PORCH	FLOOR: CEMENT MORTAR (METAL TROWEL)	EAVES	PLYWOOD SHEATHING W/ PAINT

INTERIOR FINISH SCHEDULE				
FLOOR	SKIRTING, WAINSCOT	WALL	CEILING	REMARKS
OFFICE ROOM	CEMENT MORTAR (METAL TROWEL)	CEMENT MORTAR (METAL TROWEL)	PLYWOOD SHEATHING W/ PAINT	PLYWOOD SHEATHING W/ PAINT
MANAGER ROOM	CEMENT MORTAR (METAL TROWEL)	CEMENT MORTAR (METAL TROWEL)	PLYWOOD SHEATHING W/ PAINT	PLYWOOD SHEATHING W/ PAINT
KITCHINETTE	CEMENT MORTAR (METAL TROWEL)	CEMENT MORTAR W/ PAINT	PLYWOOD SHEATHING W/ PAINT	PLYWOOD SHEATHING W/ PAINT



LEGEND			
○	PROPANE GAS BOTTLE	☒	CATCH BASIN
⊕	GATE VALVE	---	WATER PIPE
⊕	FAUCET	---	DRAINAGE PIPE
⊕	DRAIN	---	SEWAGE PIPE
○	GAS	☒	CATCH BASIN (SEWAGE)

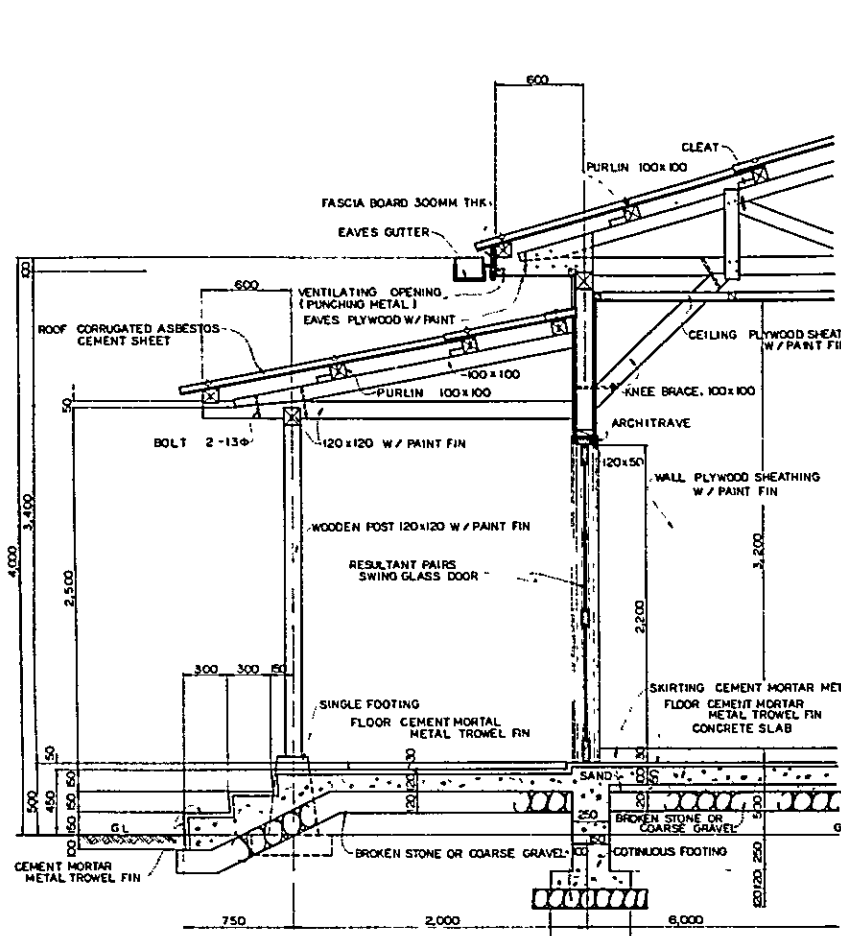


KINGDOM OF LAOS  
 THA NOON AGRICULTURAL DEVELOPMENT PROJECT  
**PURCHASERS OFFICE AND QUARTER OFFICE (I)**

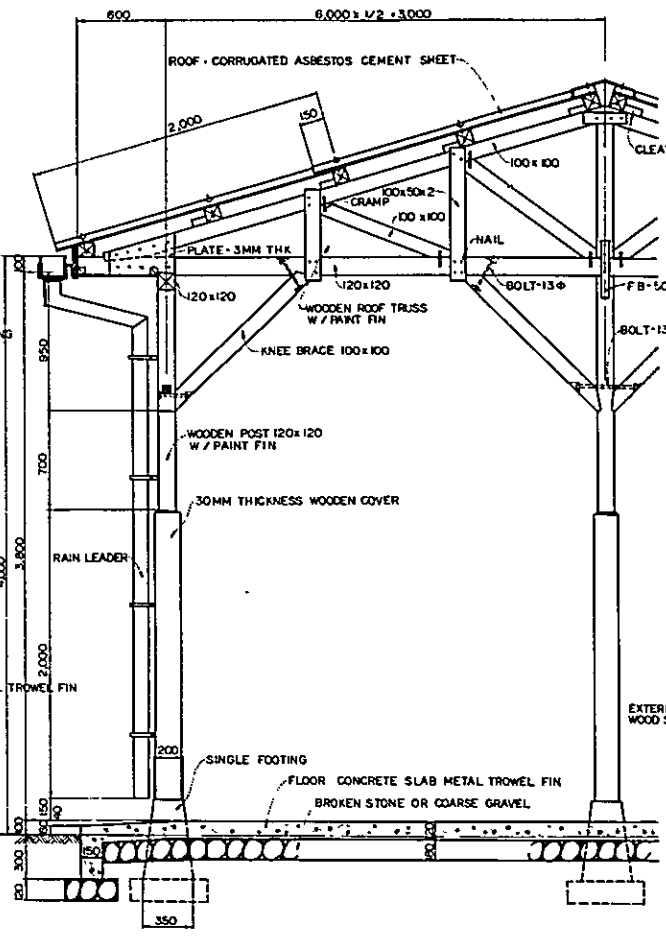
DRAWN: *S. H.* SUBMITTED  
 CHECKED: *S. H.* APPROVED

CHENREAS TECHNICAL COOPERATION AGENCY  
 10X10 MARCH 1988

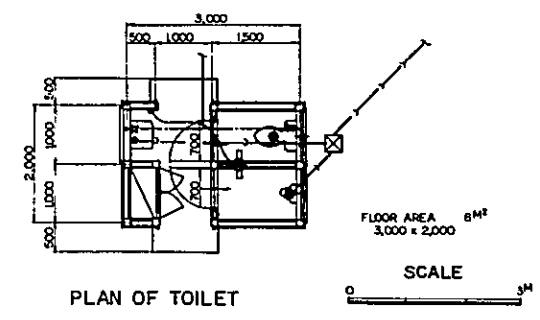
**8001**



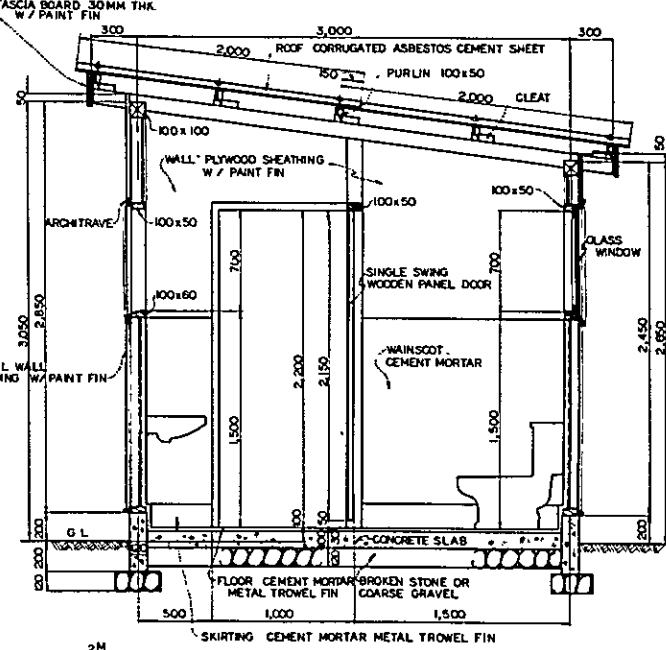
SECTIONAL DETAIL OF ENTRANCE



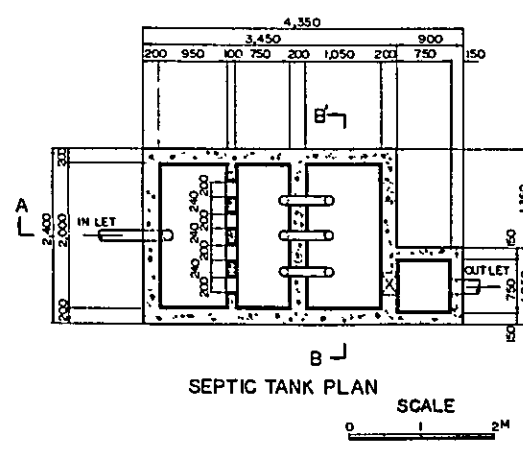
SECTIONAL DETAIL OF GARAGE



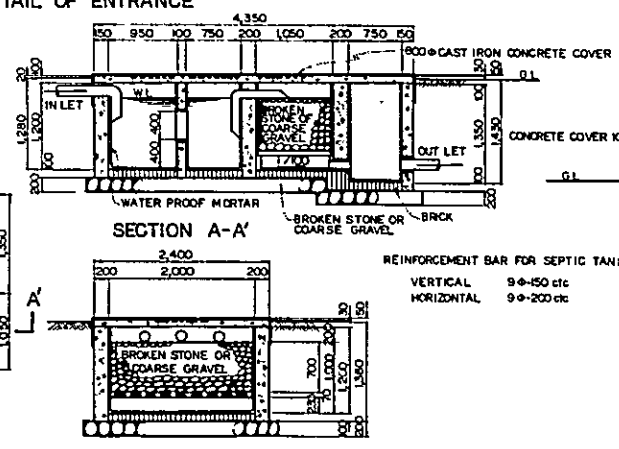
PLAN OF TOILET



SECTIONAL DETAIL OF TOILET

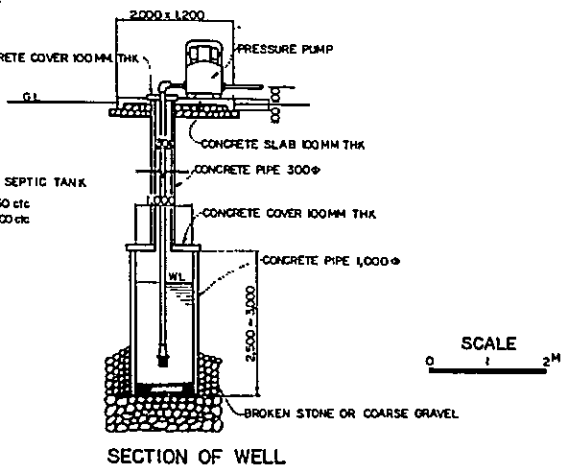


SEPTIC TANK PLAN



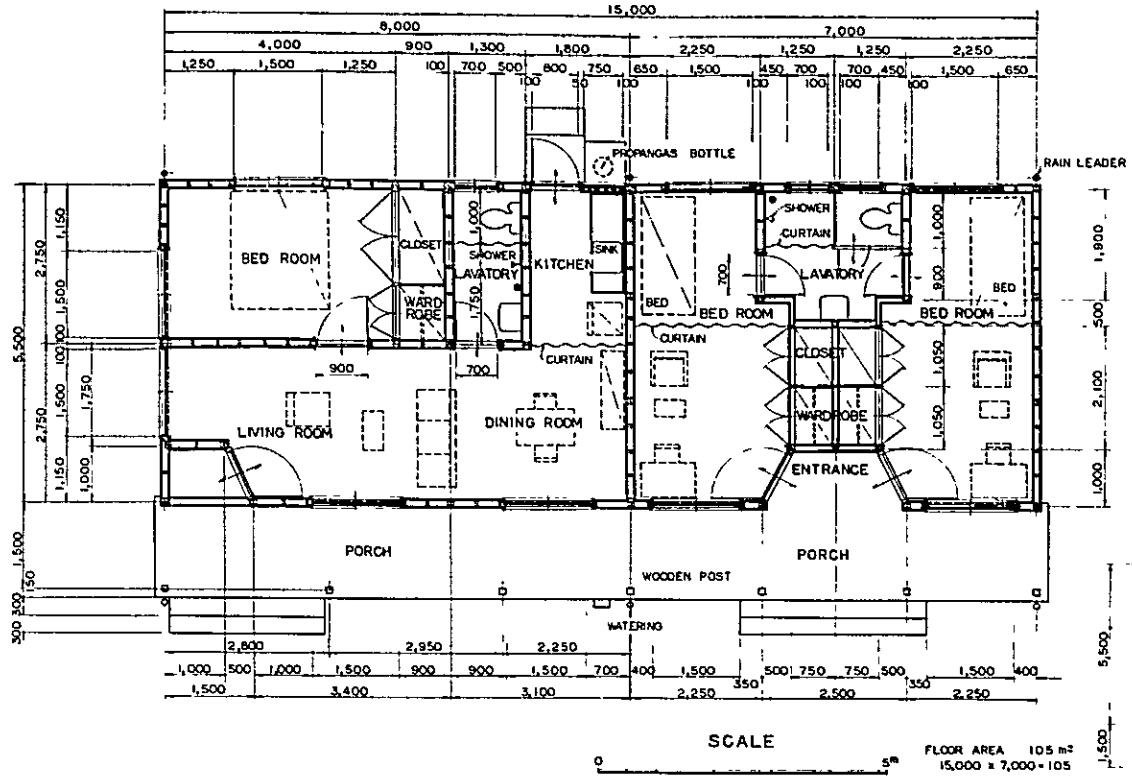
SECTION A-A'

SECTION B-B'



SECTION OF WELL

KINGDOM OF LAOS	
THA NGON AGRICULTURAL DEVELOPMENT PROJECT	
PURCHASER'S OFFICE AND QUARTER	
OFFICE (2)	
DRAWN <i>[Signature]</i> SUBMITTED	
CHECKED <i>[Signature]</i> APPROVED	
OVERSEAS TECHNICAL COOPERATION AGENCY	8002
TOKYO	MARCH 1968

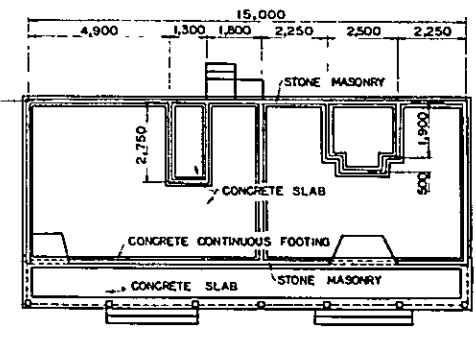


PLAN

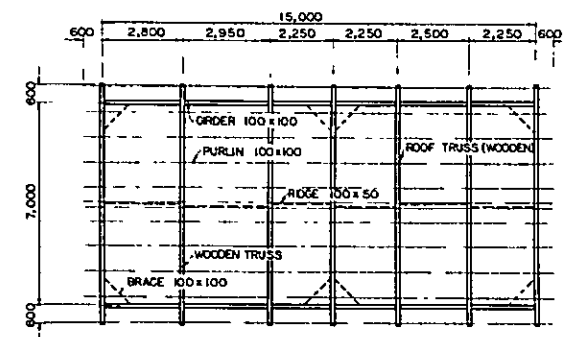
EXTERIOR FINISH SCHEDULE			
ROOF	CORRUGATED ASBESTOS CEMENT SHEET	SKIRTING	STONE MASONRY
EXTERNAL WALL	WOOD SIDING WALL W/ PAINT	EAVES	PLYWOOD SHEATHING W/ PAINT
PORCH	FLOOR CEMENT MORTAR METAL TROWEL, WALL WOOD SIDING W/ PAINT, CEILING PLYWOOD SHEATHING W/ PAINT		

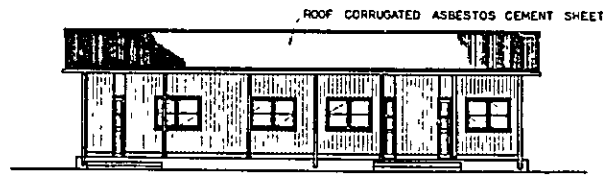
INTERIOR FINISH SCHEDULE					
	FLOOR	SKIRTING, WAINSCOT	WALL	CEILING	REMARKS
LIVING ROOM	CEMENT MORTAR METAL TROWEL	CEMENT MORTAR METAL TROWEL	PLYWOOD SHEATHING W/ PAINT	PLASTER BOARD W/ PAINT	
BED ROOM	CEMENT MORTAR METAL TROWEL	CEMENT MORTAR METAL TROWEL	PLYWOOD SHEATHING W/ PAINT	PLASTER BOARD W/ PAINT	CLOSET, WARDROBE
DINING ROOM	CEMENT MORTAR METAL TROWEL	CEMENT MORTAR W/ PAINT	PLYWOOD SHEATHING W/ PAINT	PLASTER BOARD W/ PAINT	CURTAIN
KITCHEN	CEMENT MORTAR METAL TROWEL	CEMENT MORTAR W/ PAINT	PLYWOOD SHEATHING W/ PAINT	PLYWOOD SHEATHING W/ PAINT	SINK,
LAVATORY	CEMENT MORTAR METAL TROWEL	CEMENT MORTAR W/ PAINT	PLYWOOD SHEATHING W/ PAINT	PLYWOOD SHEATHING W/ PAINT	SHOWER, PARTITION, CURTAIN



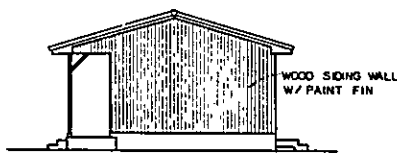
FOUNDATION PLAN



ROOF CONSTRUCTION PLAN

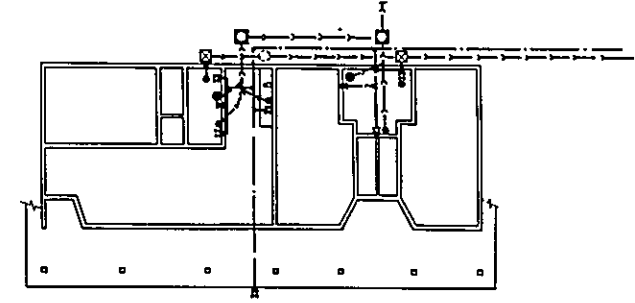


SOUTH SIDE

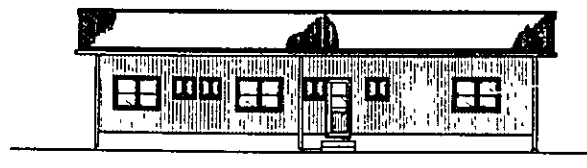


EAST SIDE

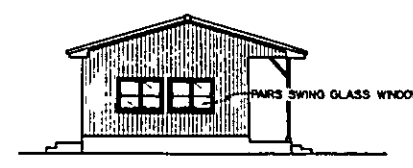
LEGEND			
○	DRAIN	○	PROPANE GAS BOTTLE
—	SEWAGE PIPE	○	GAS
⊕	FAUCET	—	WATER PIPE
⊙	SHOWER	—	DRAINAGE PIPE
⊙	FLOOR DRAIN	⊠	CATCH BASIN
		---	(SEWAGE)



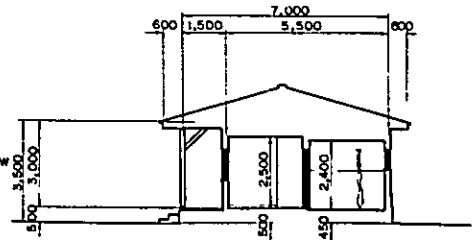
EQUIPMENT PLAN



NORTH SIDE



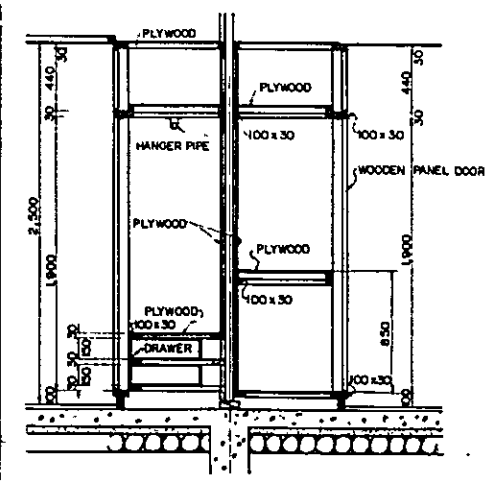
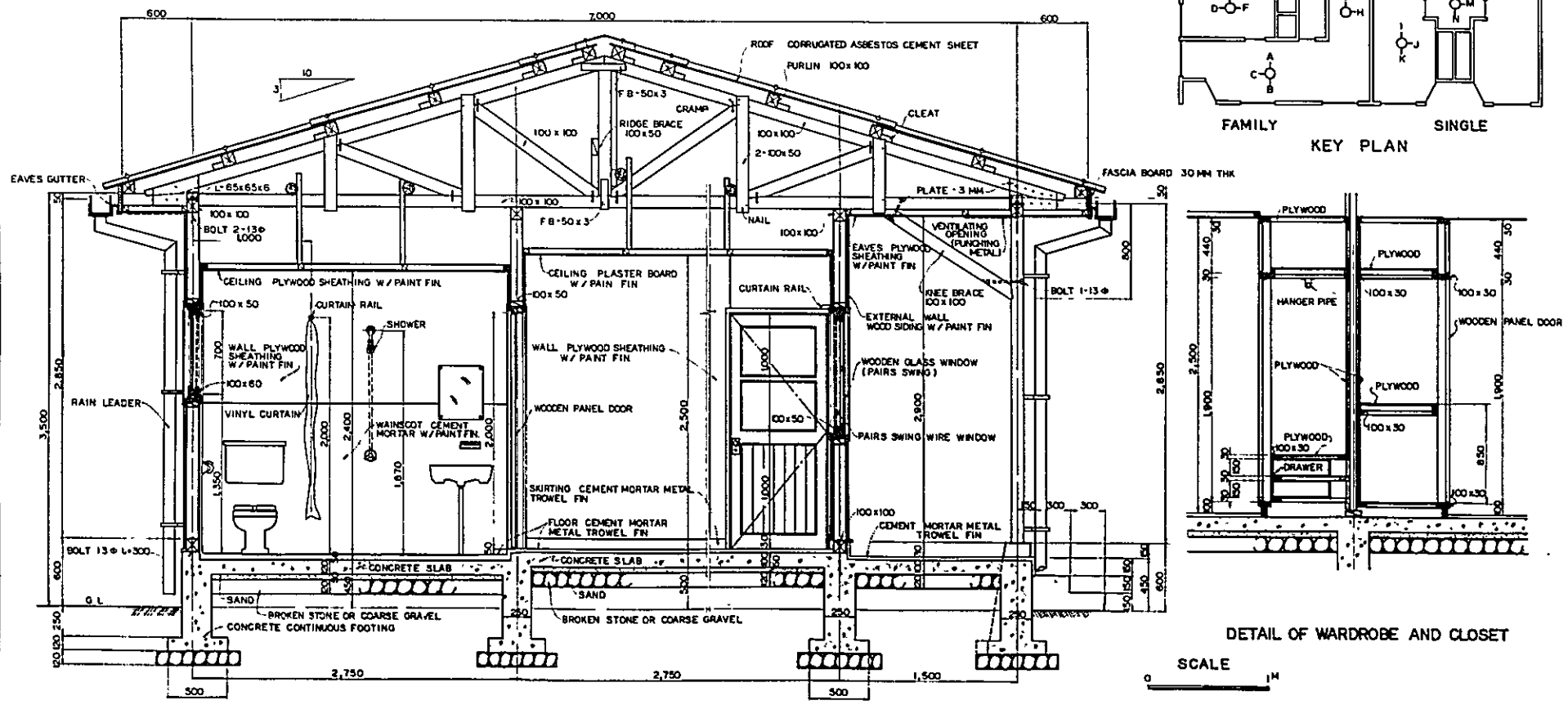
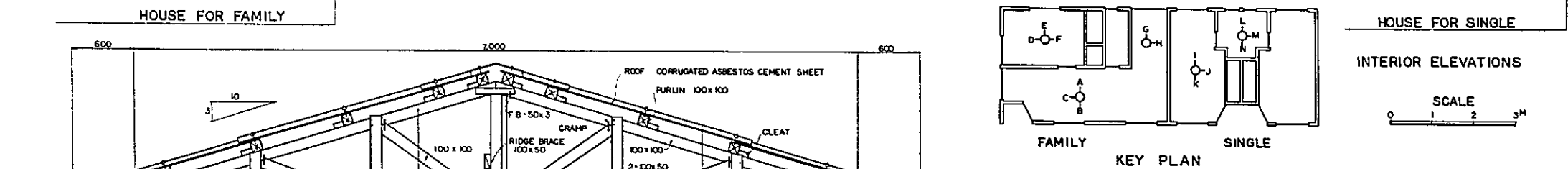
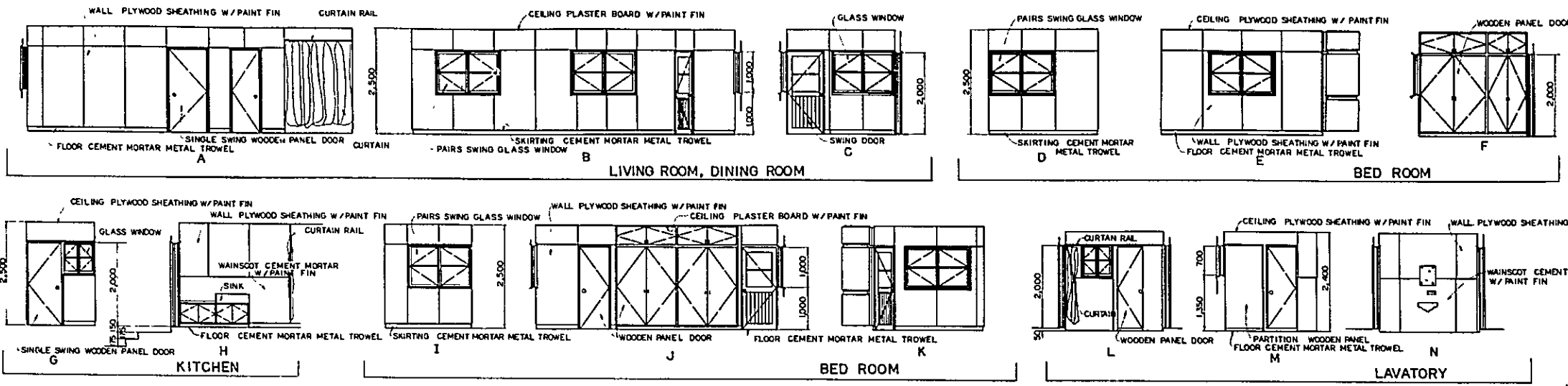
WEST SIDE



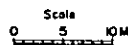
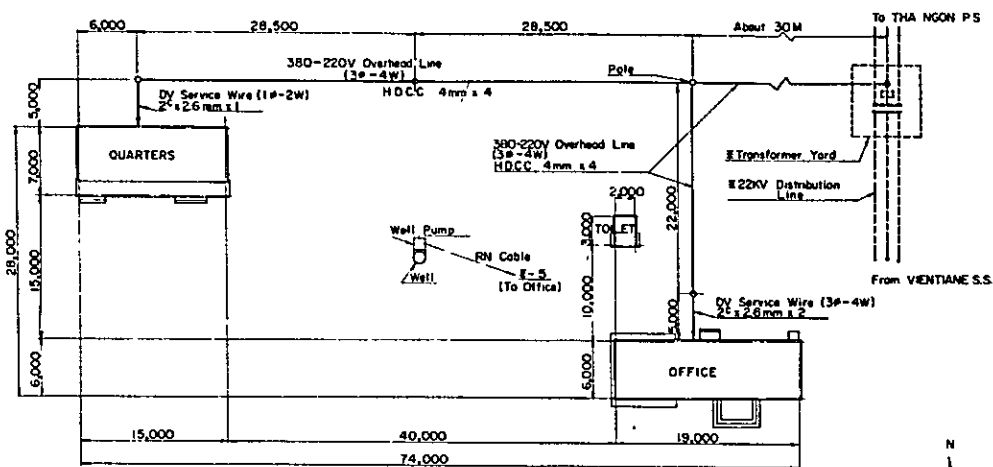
SECTION

ELEVATIONS

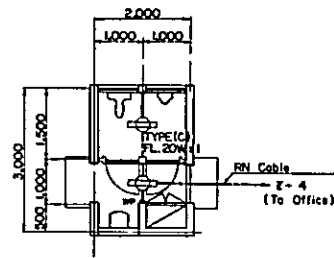
KINGDOM OF LAOS  
 THA NGON AGRICULTURAL DEVELOPMENT PROJECT  
 PURCHASER'S OFFICE AND QUARTER  
 QUARTER (3)  
 DRAWN *S. H. H.* SUBMITTED  
 CHECKED *S. H. H.* APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1969 8003



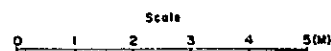
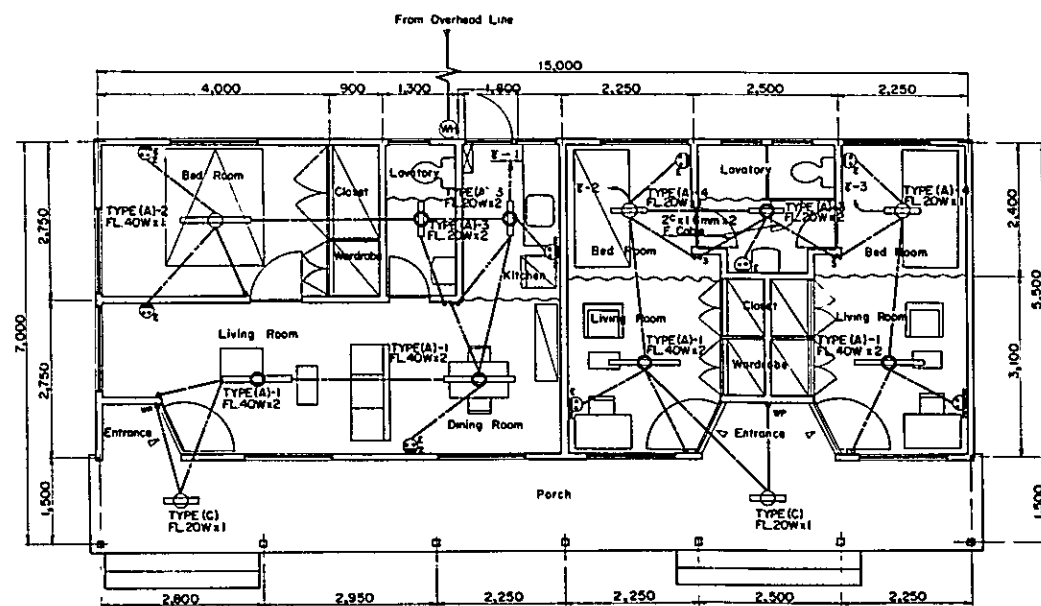
KINGDOM OF LAOS  
 THA NOON AGRICULTURAL DEVELOPMENT PROJECT  
 PURCHASER'S OFFICE AND QUARTER  
 QUARTER (4)  
 DRAWN *S. S. S.* SUBMITTED  
 CHECKED *S. S. S.* APPROVED  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1969 8004



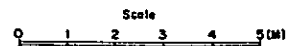
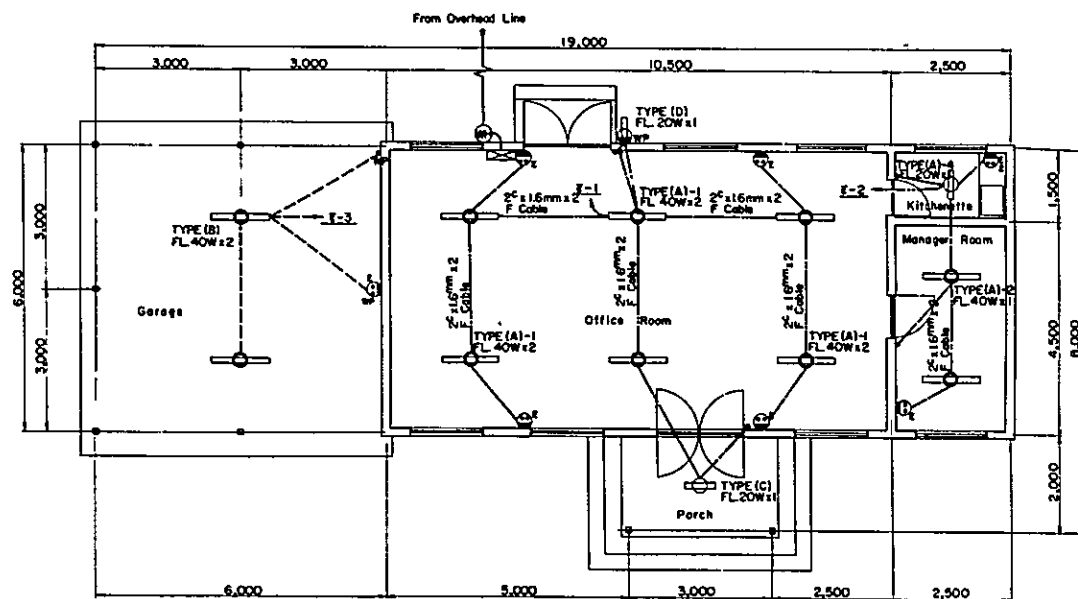
LOW TENSION OVERHEAD LINE



TOILET



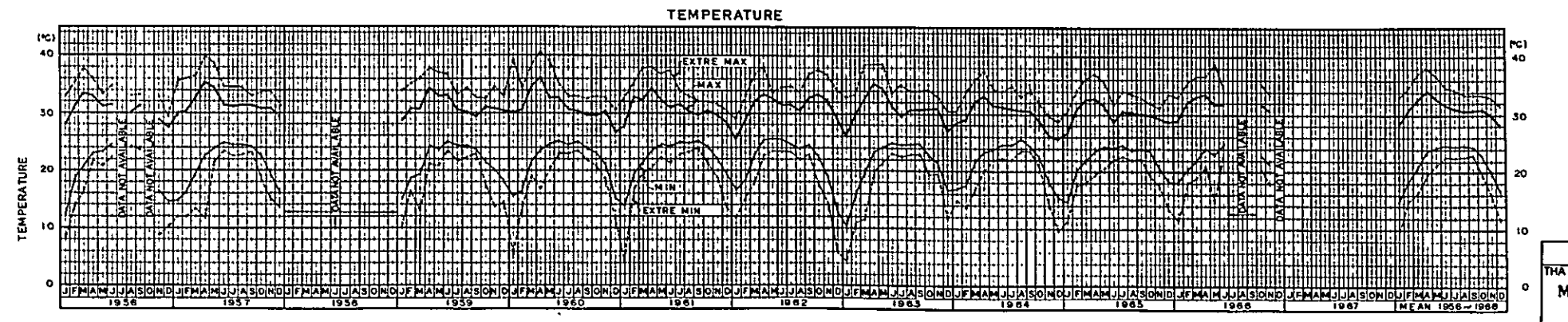
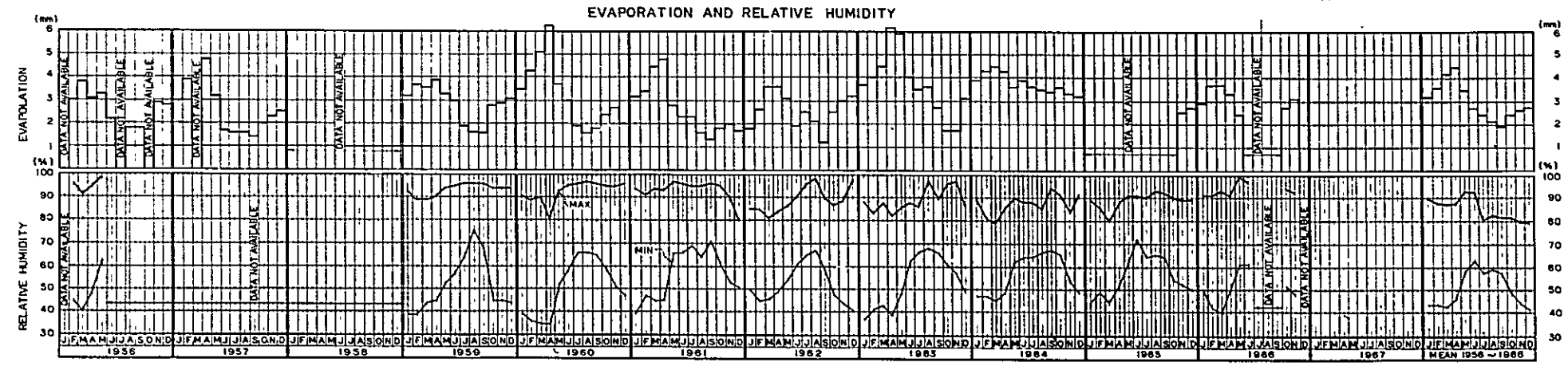
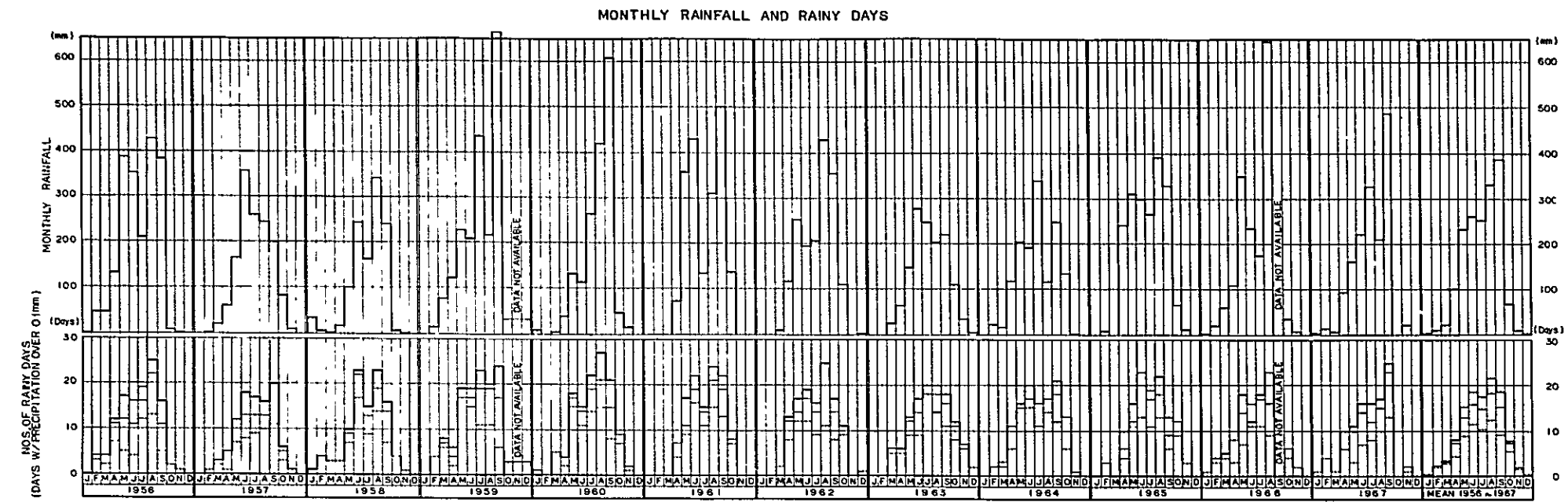
QUARTERS



OFFICE

NOTE.-  
 (1) The equipment marked with symbol 'E' are supplied and installed by the other contractor. Switch box, insulators and the other necessary fittings on the pole installed by the other contractor shall be provided and HV cable to be connected to the transformer shall also be provided.  
 (2) Watt hour meters which will be provided by the Government shall be fitted.

KINGDOM OF LAOS	
THA NGON AGRICULTURAL DEVELOPMENT PROJECT	
PURCHASER'S OFFICE AND QUARTER	
QUARTER (5)	
DRAWN <i>A.P.</i>	SUBMITTED
CHECKED <i>J. K.</i>	APPROVED
OVERSEAS TECHNICAL COOPERATION AGENCY	
TOKYO MARCH 1968	8005



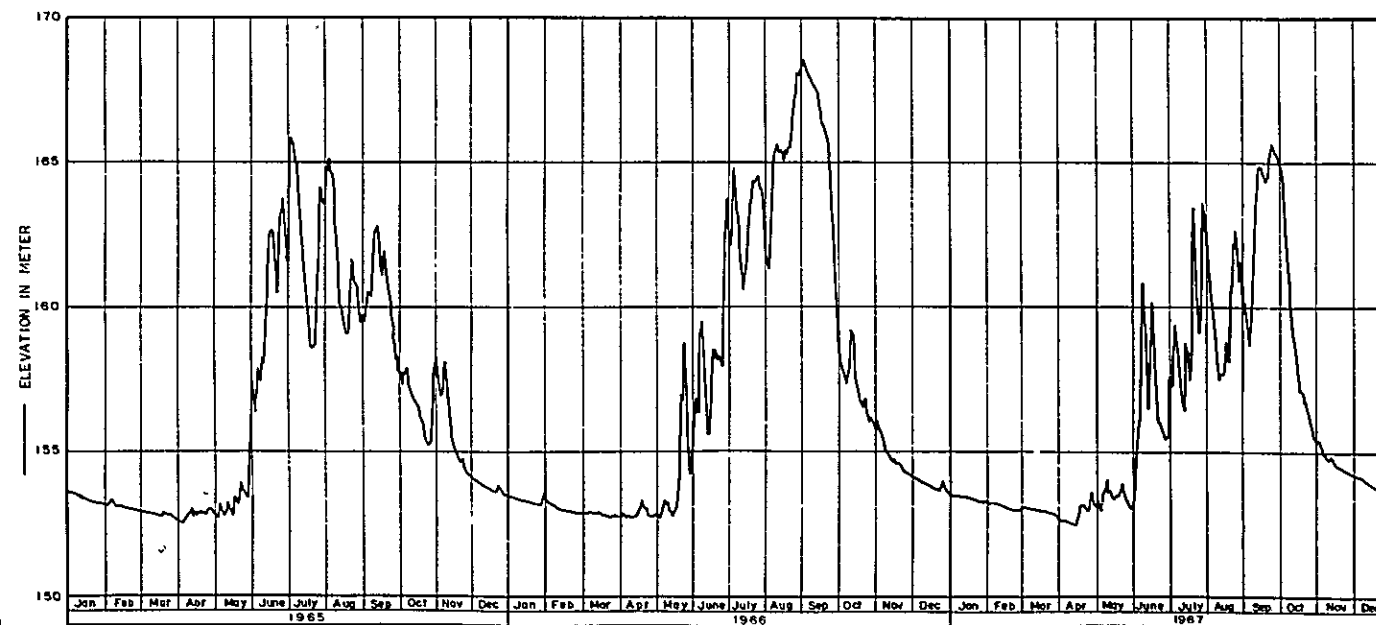
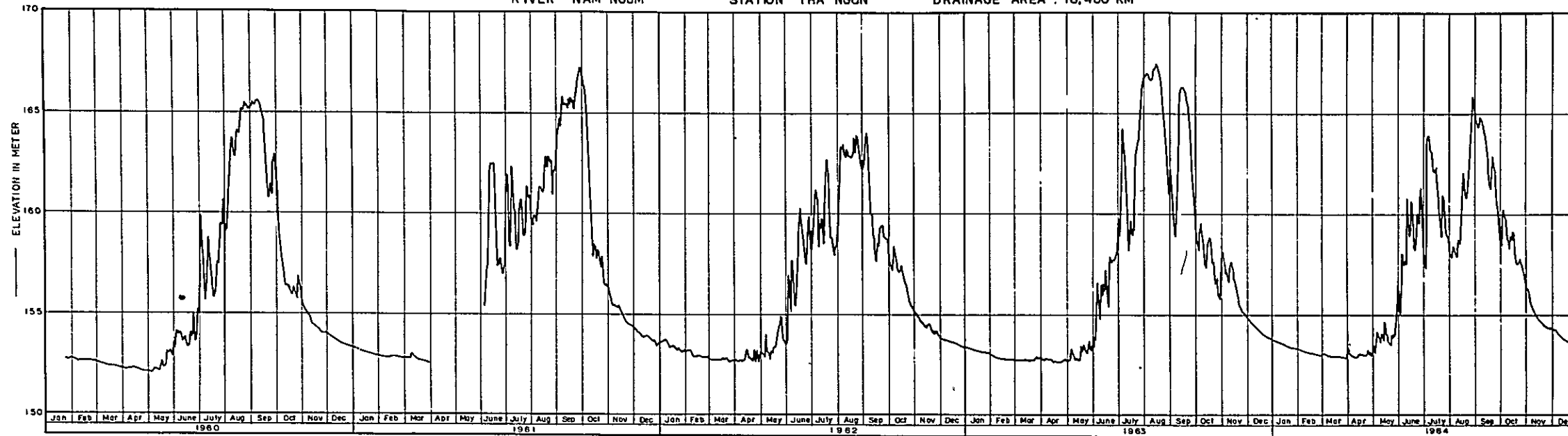
NOTE: This drawing is produced based on the information from Meteorological Department of Laos, Vientiane.

KINGDOM OF LAOS	
THA NOON AGRICULTURAL DEVELOPMENT PROJECT	
<b>METEOROLOGICAL RECORD</b>	
<b>AT VIENTIANE</b>	
DRAWN <i>[Signature]</i> SUBMITTED	CHECKED <i>[Signature]</i> APPROVED
OVERSEAS TECHNICAL COOPERATION AGENCY	11001
TOKYO	MARCH 1968

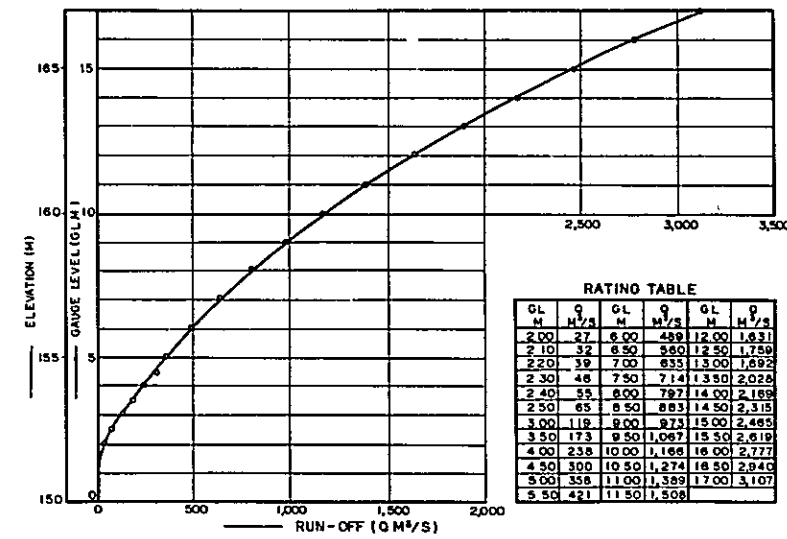


# HYDROGRAPH

RIVER : NAM NGUM      STATION : THA NGON      DRAINAGE AREA : 16,400 KM<sup>2</sup>



## RATING CURVE



GL M	Q M <sup>3</sup> /S	GL M	Q M <sup>3</sup> /S	GL M	Q M <sup>3</sup> /S
2.00	27	6.00	489	12.00	1,631
2.10	32	6.50	560	12.50	1,759
2.20	39	7.00	635	13.00	1,892
2.30	48	7.50	714	13.50	2,028
2.40	58	8.00	797	14.00	2,169
2.50	68	8.50	883	14.50	2,315
3.00	119	9.00	973	15.00	2,465
3.50	173	9.50	1,067	15.50	2,619
4.00	238	10.00	1,166	16.00	2,777
4.50	300	10.50	1,274	16.50	2,940
5.00	368	11.00	1,389	17.00	3,107
5.50	421	11.50	1,508		

NOTE : This drawing is produced based on daily records from Service Hydrologique des Travaux Publics, Vientiane.

KINGDOM OF LAOS	
THA NGON AGRICULTURAL DEVELOPMENT PROJECT	
HYDROGRAPH AND RATING CURVE	
AT THA NGON	
DRAWN <i>J. Kato</i>	SUBMITTED _____
CHECKED <i>S. Kato</i>	APPROVED _____
OVERSEAS TECHNICAL COOPERATION AGENCY	
TOKYO	MARCH 1969
11002	

Works	Unit	Quantity	1st Year						2nd Year						3rd Year												
			J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J
<b>1 Preparatory Works</b>																											
Purchase of equipments			—————																								
Supplementary survey			—————																								
Office and quarters	m <sup>2</sup>	200	—————																								
<b>2. Pumping Station</b>																											
Stripping of topsoil	m <sup>3</sup>	6,260	—————																								
Excavation	"	5,300	—————																								
Backfill	"	3,980	—————																								
Earthfill	"	16,200	—————																								
Concrete work	"	310	—————																								
Super-structure, Control house	m <sup>2</sup>	70	—————																								
Erection of pump and gate			—————																								
Erection of discharge pipe	m	60	—————																								
<b>3. Main Canal and Lateral</b>																											
Stripping of topsoil	m <sup>3</sup>	13,310	—————																								
Excavation	"	12,080	—————																								
Earthfill	"	31,960	—————																								
Canal structures	Nos	54	—————																								
<b>4. Sub-Lateral and Farm Lateral</b>																											
Stripping of topsoil	m <sup>3</sup>	24,410	—————																								
Excavation	"	13,820	—————																								
Earthfill	"	64,470	—————																								
Canal structures	Nos	633	—————																								
<b>5. Drainage Canal</b>																											
Stripping of topsoil	m <sup>3</sup>	28,850	—————																								
Excavation	"	25,560	—————																								
Earthfill	"	14,680	—————																								
Structures	Nos	188	—————																								
<b>6. Flood Gate</b>																											
Stripping of topsoil	m <sup>3</sup>	2,120	—————																								
Excavation	"	2,870	—————																								
Backfill	"	1,180	—————																								
Earthfill	"	12,420	—————																								
Concrete works	"	450	—————																								
Erection of gate	Set	1	—————																								
<b>7. Protective Embankment</b>																											
Stripping of topsoil	m <sup>3</sup>	16,300	—————																								
Earthfill	"	73,790	—————																								
Sod facing	m <sup>2</sup>	34,000	—————																								
<b>8 Main Farm Road</b>																											
Stripping of topsoil	m <sup>3</sup>	17,560	—————																								
Excavation	"	8,870	—————																								
Earthfill	"	58,780	—————																								
Surface pavement	"	7,110	—————																								
Structures	Nos	4	—————																								
<b>9 Secondary Farm Road</b>																											
Stripping of topsoil	m <sup>3</sup>	43,540	—————																								
Earthfill	"	112,400	—————																								
Structures	Nos	9	—————																								
<b>10. Power Distribution Line</b>																											
Clearing	ha	970	—————																								
Leveling	"	600	—————																								
<b>12. Priming Test and Lator Adjustment</b>																											

Remarks      ————— Earth-works  
                  ——— Concrete work and other

**KINGDOM OF LAOS**  
 TMA MOON AGRICULTURAL DEVELOPMENT PROJECT

**CONSTRUCTION SCHEDULE**

DRAWN *T.K.* SUBMITTED .....  
 CHECKED *S. K.* APPROVED .....  
 OVERSEAS TECHNICAL COOPERATION AGENCY  
 TOKYO MARCH 1989

11003

