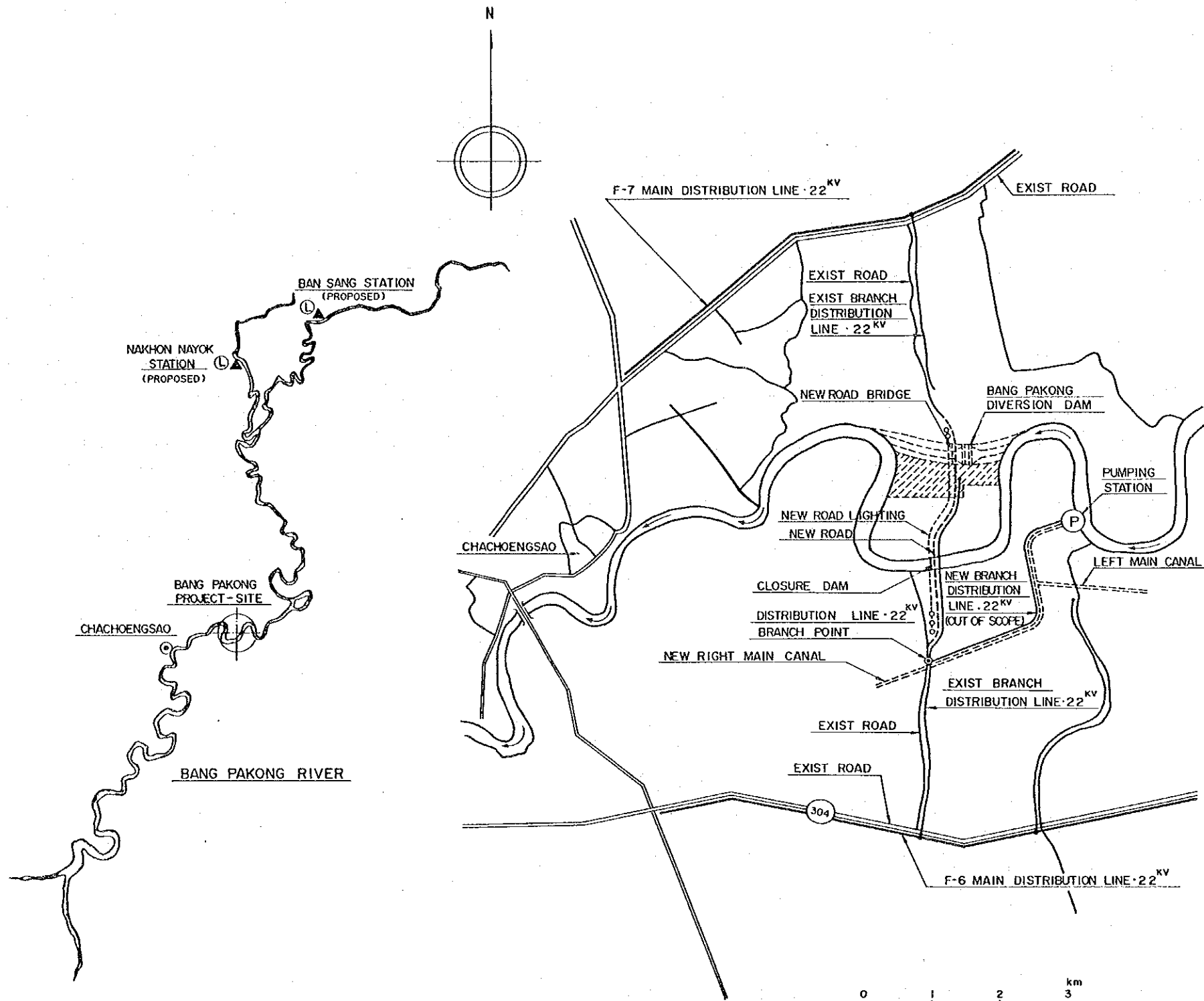


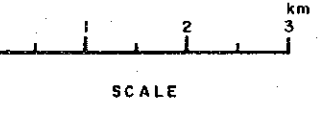
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
PUMPING STATION PUMP EQUIPMENT PLAN OF PIPING & WIRING	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. PST - 1076	

0 10m
SCALE

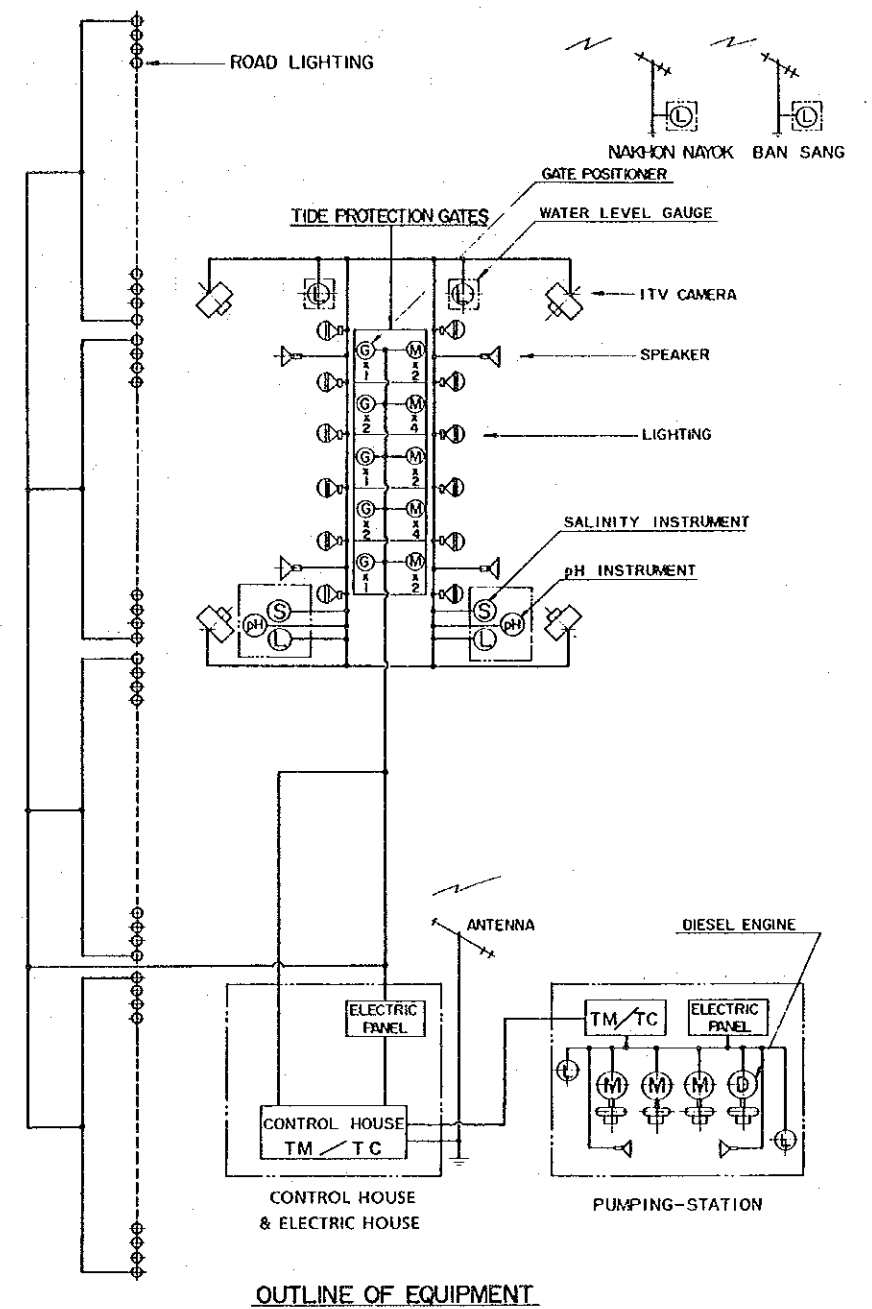
CONTROL SYSTEM & ELECTRICAL FACILITIES



LOCATION OF PROJECT SITE

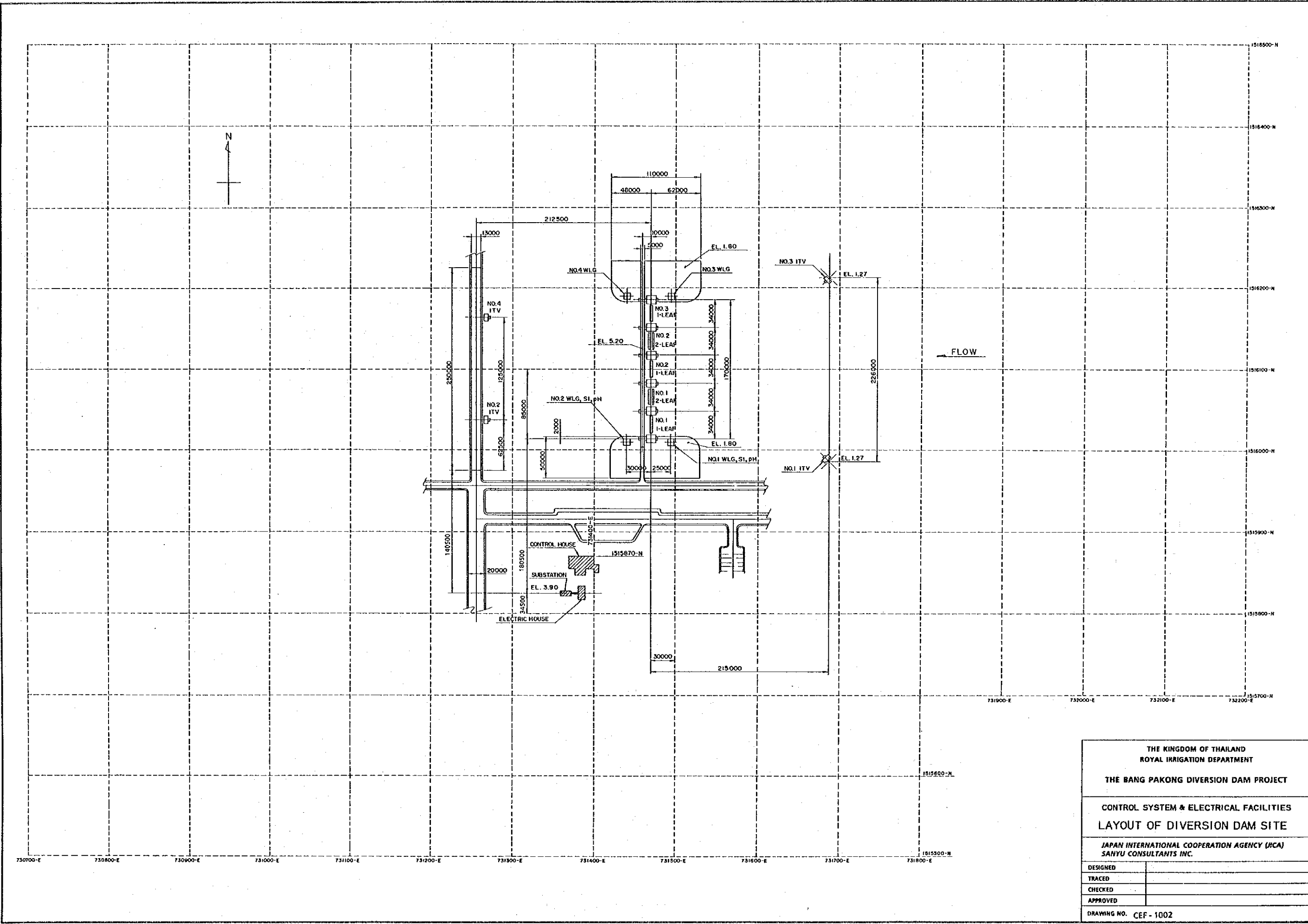


LOCATION OF PROJECTS



OUTLINE OF EQUIPMENT

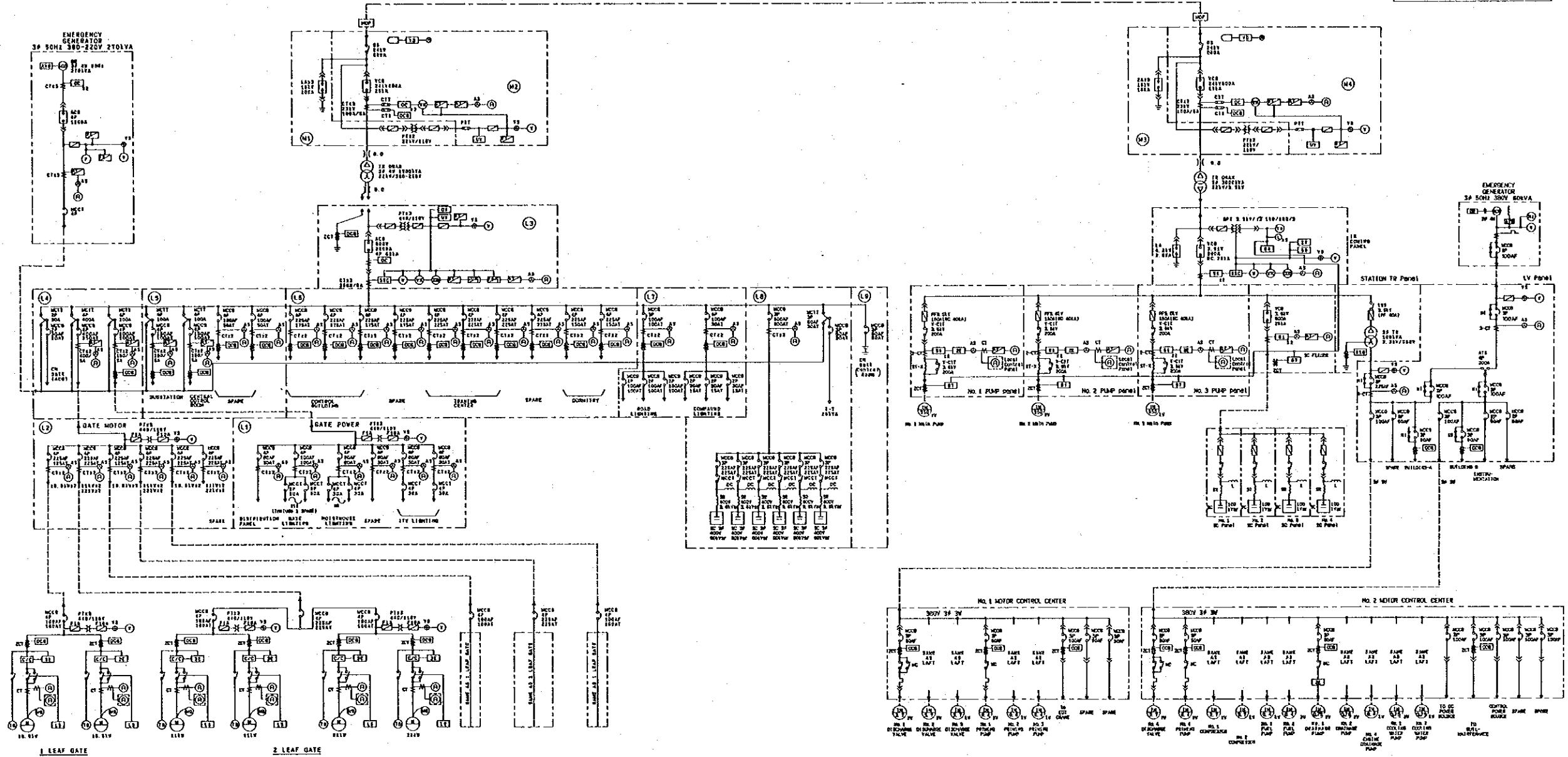
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES	
GENERAL PLAN	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF - 1001	



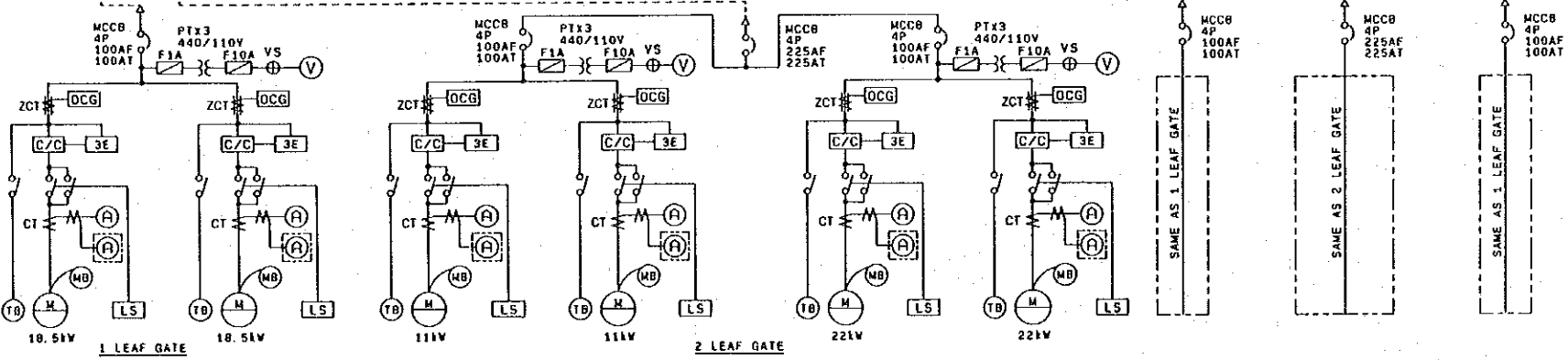
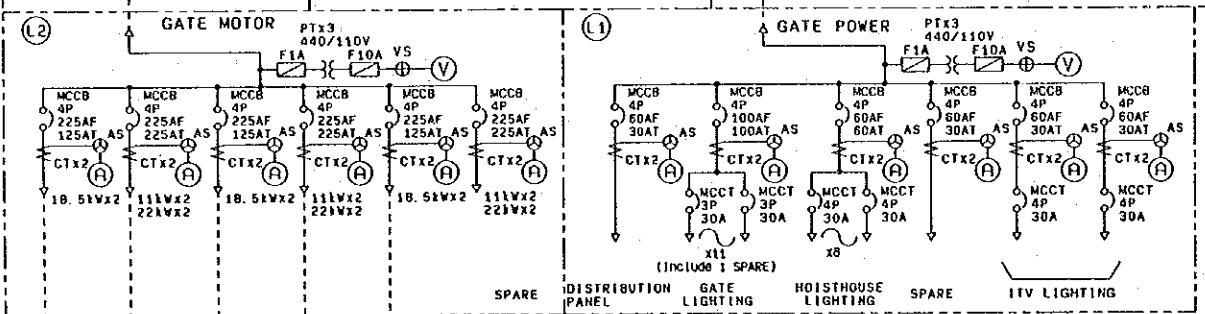
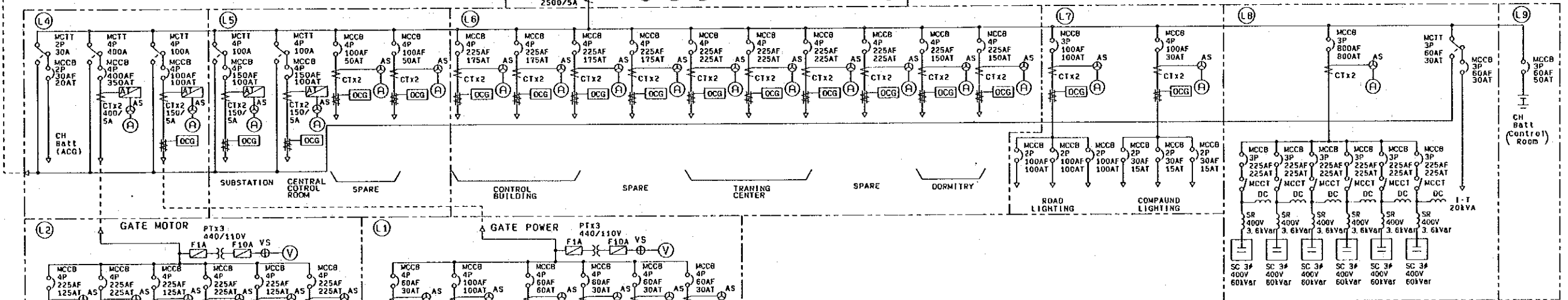
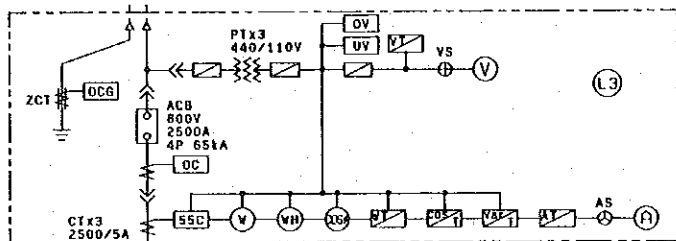
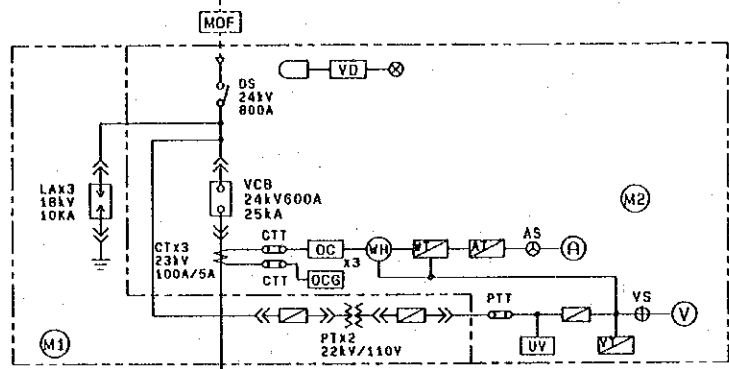
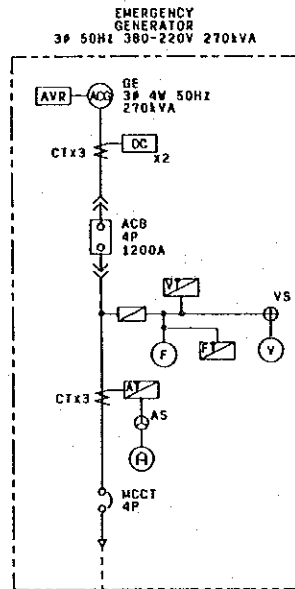
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES LAYOUT OF DIVERSION DAM SITE	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1002	

22kV OVER HEAD MAIN DISTRIBUTION LINE (F-6) HAL 240mm²

----- OUT OF SCOPE



THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT THE BANG PAKONG DIVERSION DAM PROJECT CONTROL SYSTEM & ELECTRICAL FACILITIES SINGLE LINE DIAGRAM JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1003	



THE KINGDOM OF THAILAND
ROYAL IRRIGATION DEPARTMENT

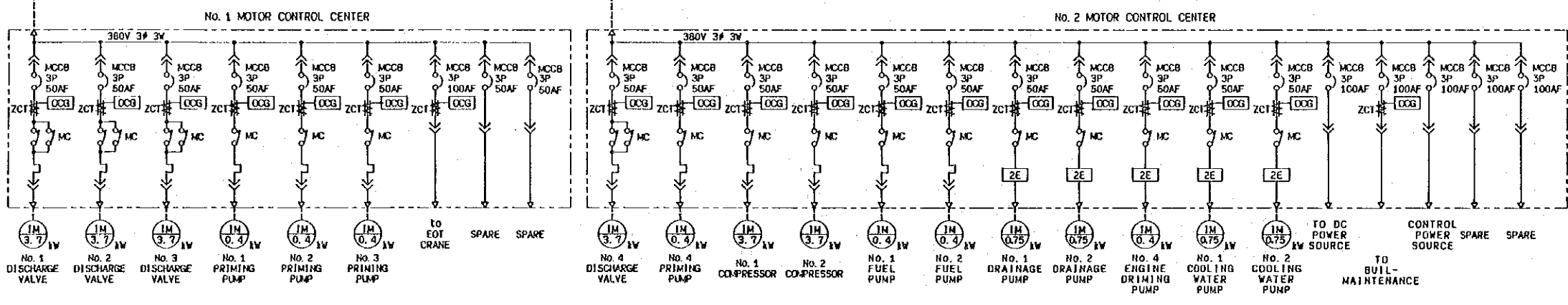
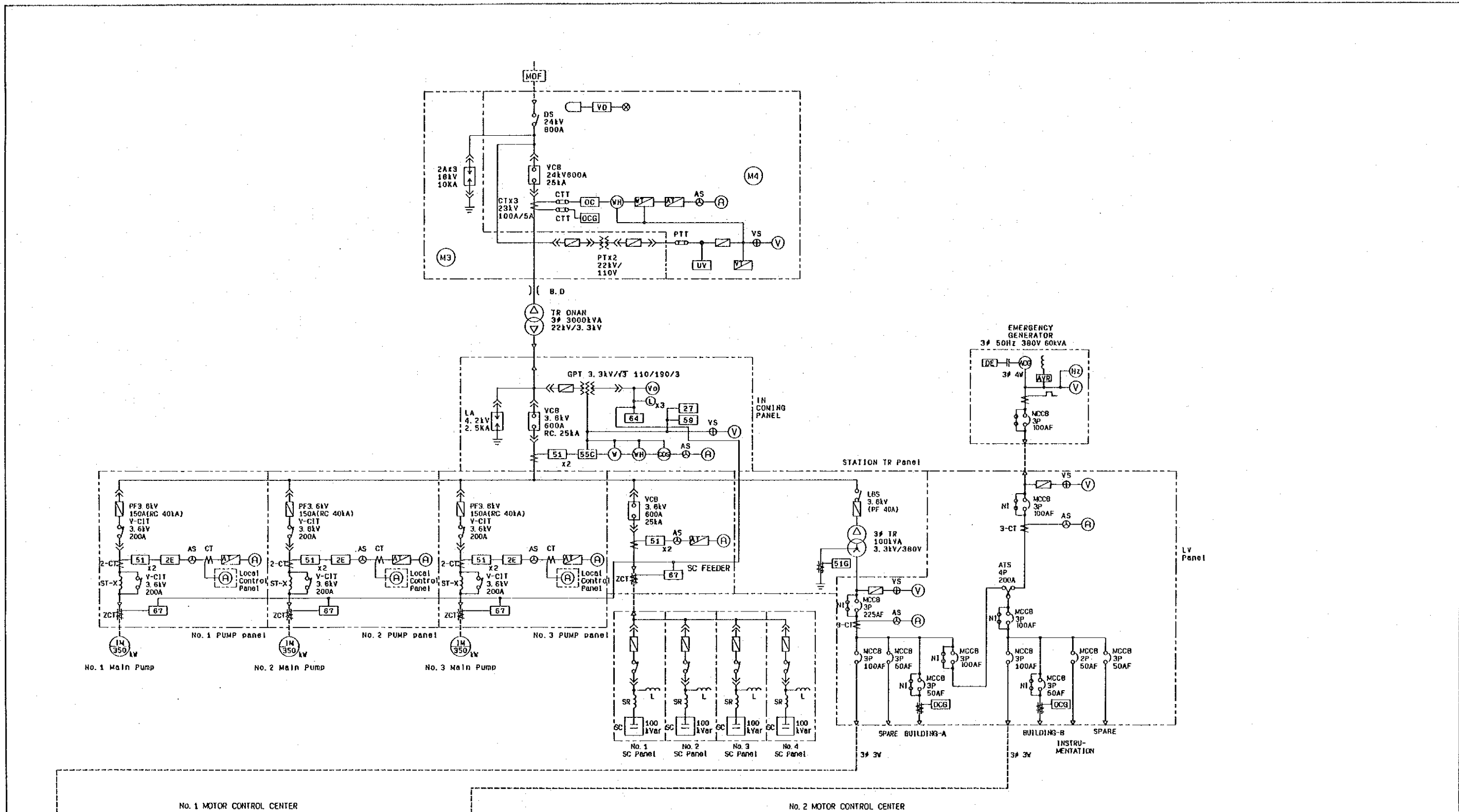
THE BANG PAKONG DIVERSION DAM PROJECT

CONTROL SYSTEM & ELECTRICAL FACILITIES
SINGLE LINE DIAGRAM
OF DIVERSION DAM

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
SANYU CONSULTANTS INC.

DESIGNED	
TRACED	
CHECKED	
APPROVED	

DRAWING NO. CEF-1004



THE KINGDOM OF THAILAND
ROYAL IRRIGATION DEPARTMENT

THE BANG PAKONG DIVERSION DAM PROJECT

**CONTROL SYSTEM & ELECTRICAL FACILITIES
SINGLE LINE DIAGRAM
OF PUMPING STATION**

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
SANYU CONSULTANTS INC.

DESIGNED	
TRACED	
CHECKED	
APPROVED	

DRAWING NO. CEF-1005

Water Level x4 Point
 Salinity Density x6 Point
 pH x2 Point
 Water Temperature x2 Point

7 Gates
 Gate Opening
 Gate Information
 Motor Current

Electric Facility
 Information

Data Processing and Filing System
 - Gathering Data (water level, gate opening, current and voltage, salinity density and so on)
 - Data Conversion
 - Calculation of Dam and River Data (Outflow, Inflow, Pumping Discharge, Others)
 - Display Data on the Mimic and Mini-Mimic Panels
 - Daily report
 - Monthly report
 - Operation report
 - Data filing
 - Alarm

Control and monitoring System
 - Control and monitoring of Gates, pumps and electric Facilities
 - Calculation of Target Opening and Outflow
 - Relay Sequence and Programable-Controller
 - Man-machine Interface
 - Alarm
 - Emergency Stop

ITV Monitoring, Broad Casting and Radio Communication System
 - Display four ITV Pictures with two color Monitors
 - Broad Casting and Warning
 - Radio Communication

2 Stations
 River Water Level

Data record by the printers
 - daily report
 - monthly report
 - Operation report
 - Hourly report
 - Alarm report

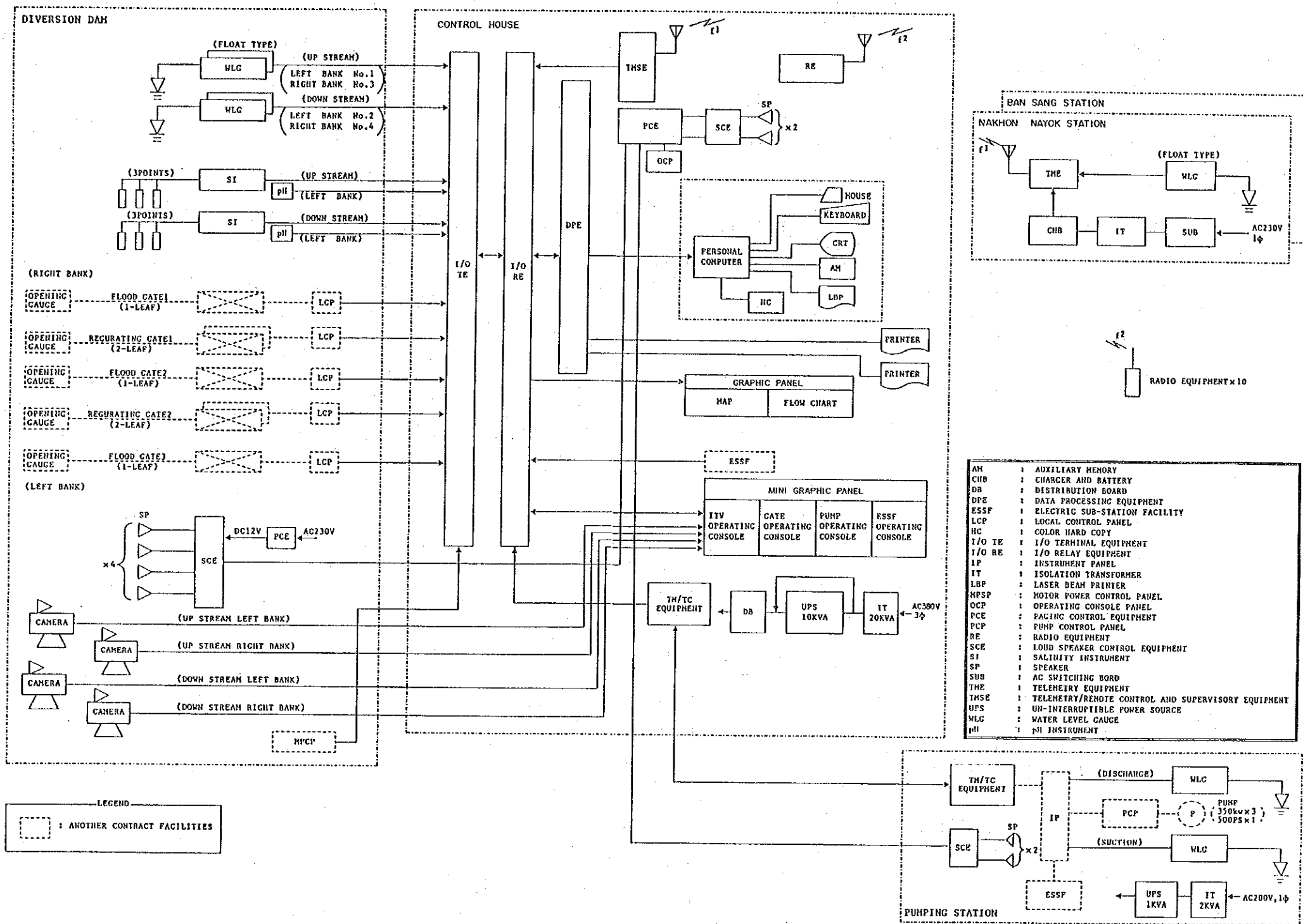
Data Display on the Graphic and Mini Graphic Panels
 - Outflow, Inflow and Pumping Discharge
 - Gate condition and Pump Condition
 - Power Condition

Data Display on the Visual Display
 - The graph of Water level, discharge
 - The Dam Hydrological data graph
 - data table
 - Modification to water level, discharge
 - Modification to Dam Hydrological data
 - Others

Pumping Station
 - Transmit Monitoring and Controlling Information of Pumping Station by Communication Circuit

Radio

THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES DATA FLOW DIAGRAM	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1006	



- AM : AUXILIARY MEMORY
- CHB : CHARGER AND BATTERY
- DB : DISTRIBUTION BOARD
- DPE : DATA PROCESSING EQUIPMENT
- ESSF : ELECTRIC SUB-STATION FACILITY
- LCP : LOCAL CONTROL PANEL
- HC : COLOR HARD COPY
- I/O TE : I/O TERMINAL EQUIPMENT
- I/O RE : I/O RELAY EQUIPMENT
- IP : INSTRUMENT PANEL
- IT : ISOLATION TRANSFORMER
- LBP : LASER BEAM PRINTER
- HPSF : MOTOR POWER CONTROL PANEL
- OCP : OPERATING CONTROL PANEL
- PCE : PACING CONTROL EQUIPMENT
- PCP : PUMP CONTROL PANEL
- RE : RADIO EQUIPMENT
- SCE : LOUD SPEAKER CONTROL EQUIPMENT
- SI : SALINITY INSTRUMENT
- SP : SPEAKER
- SUB : AC SWITCHING BOARD
- THE : TELEMETRY EQUIPMENT
- THSE : TELEMETRY/REMOTE CONTROL AND SUPERVISORY EQUIPMENT
- UPS : UN-INTERRUPTIBLE POWER SOURCE
- WLG : WATER LEVEL GAUGE
- pH : pH INSTRUMENT

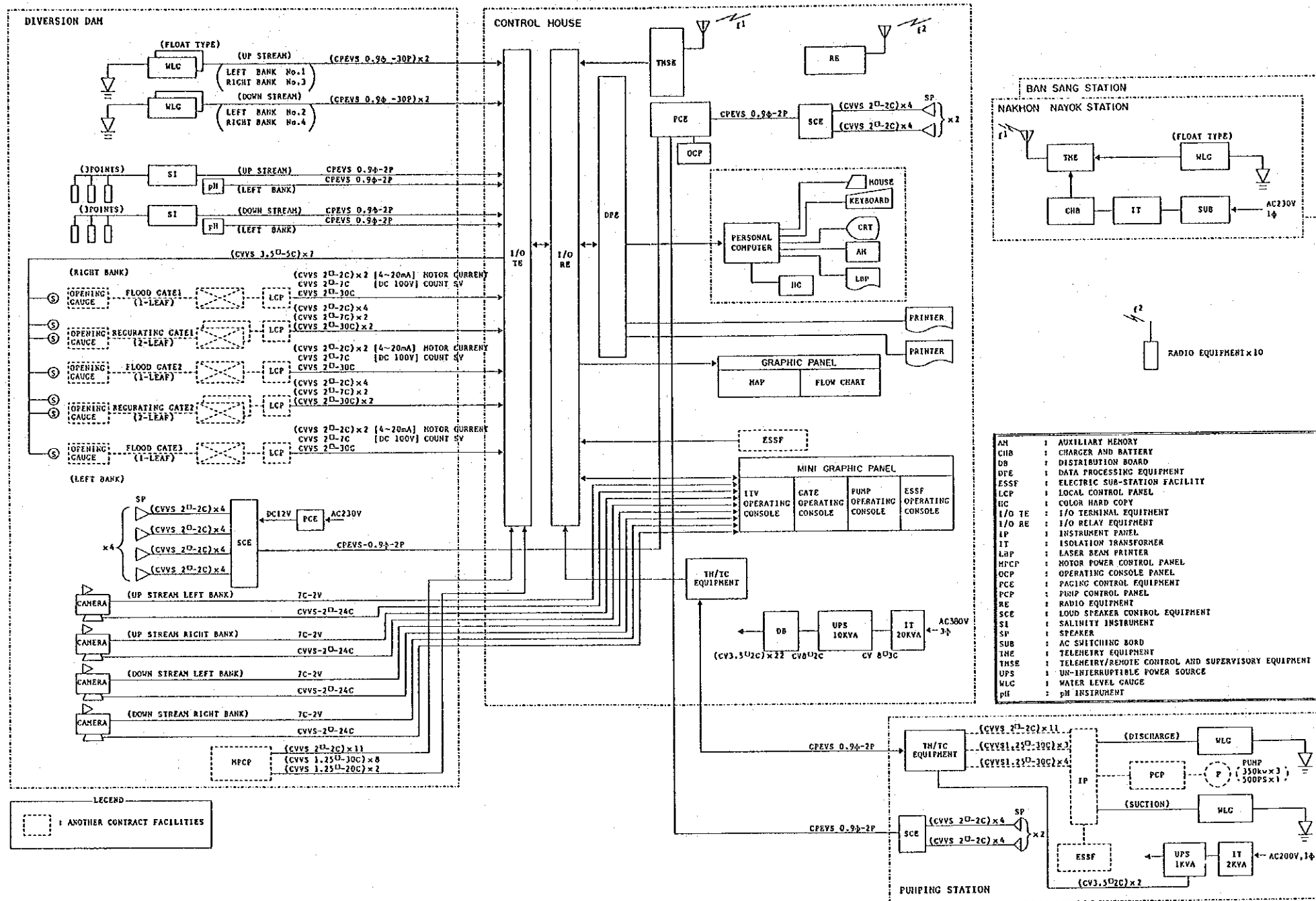
THE KINGDOM OF THAILAND
ROYAL IRRIGATION DEPARTMENT

THE BANG PAKONG DIVERSION DAM PROJECT

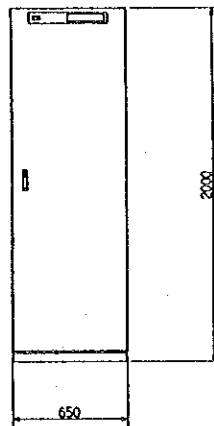
**CONTROL SYSTEM & ELECTRICAL FACILITIES
SYSTEM COMPONENTS**

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
SANYU CONSULTANTS INC.

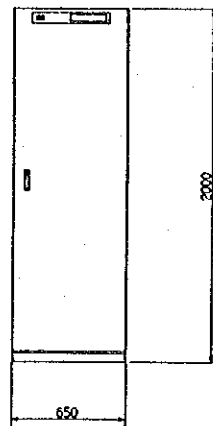
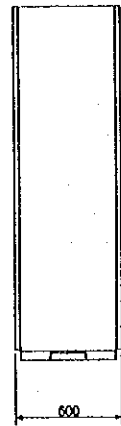
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DRAWING NO. CEF-1007	



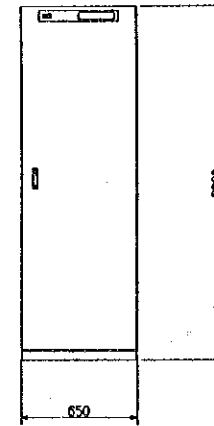
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES	
WIRING OF CONTROL SYSTEM	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF - 1008	



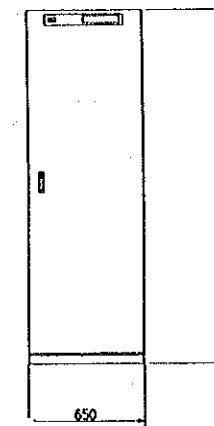
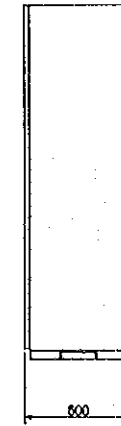
I/C TERMINAL EQUIPMENT



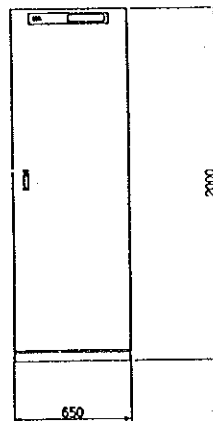
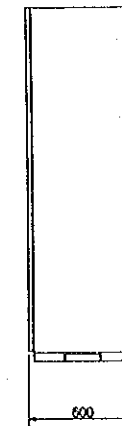
I/O RELAY EQUIPMENT



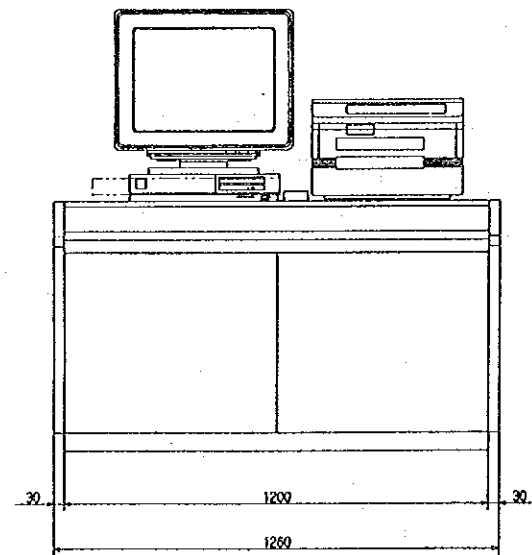
DATA PROCESSING EQUIPMENT



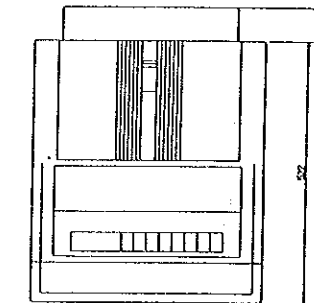
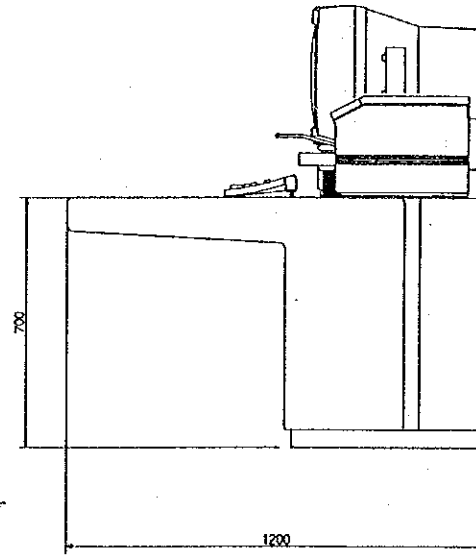
TM/TC EQUIPMENT



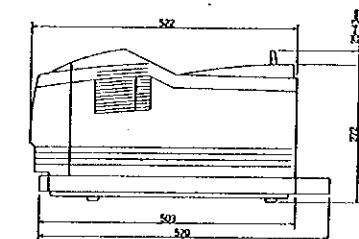
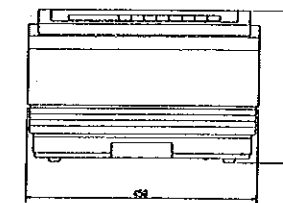
TELEMETRY / REMOTE CONTROL
AND SUPERVISORY EQUIPMENT



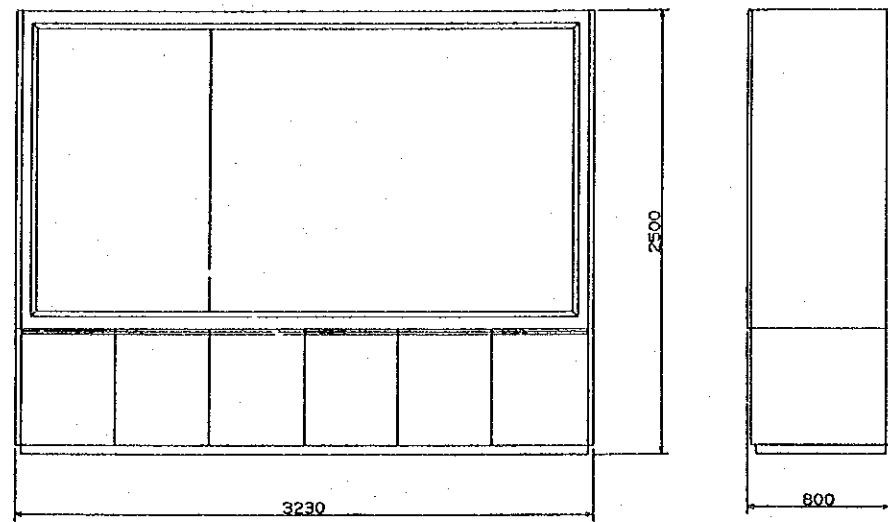
PERSONAL COMPUTER
COLOR HARD COPY EQUIPMENT



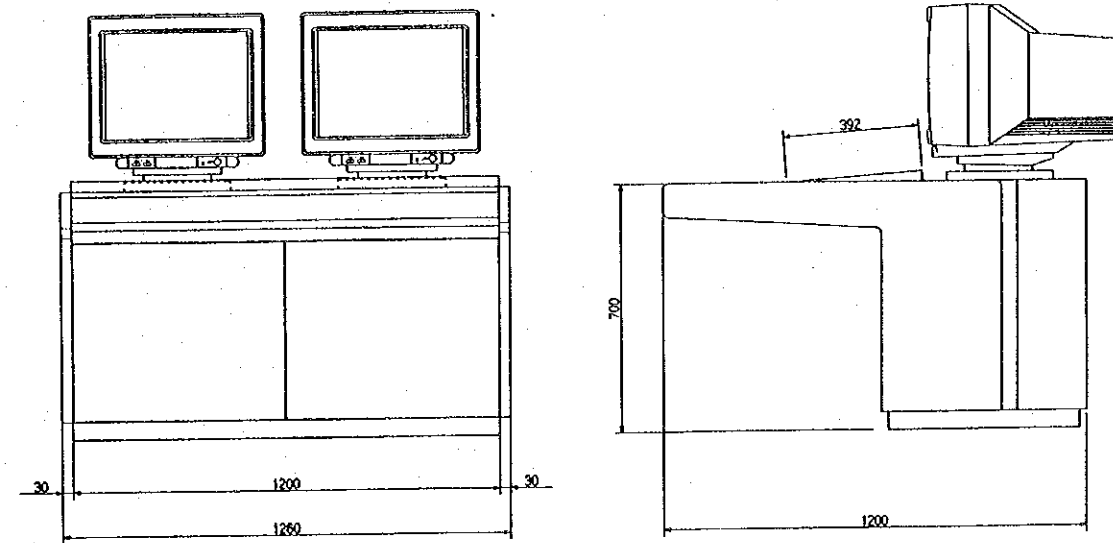
LASER BEAM PRINTER



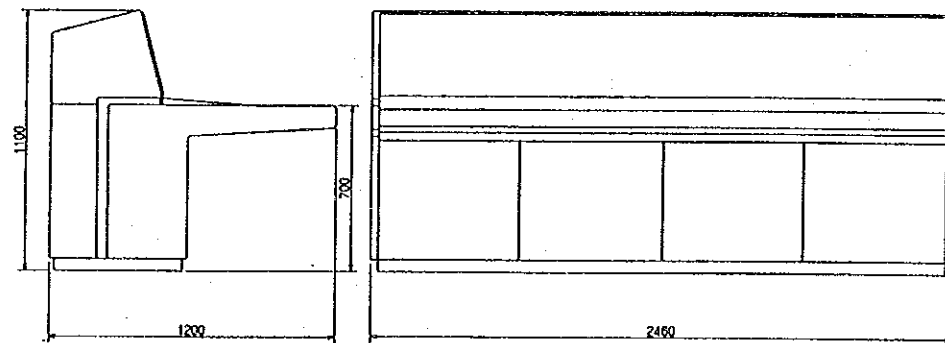
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES OUTSIDE VIEW OF EQUIPMENTS(1/5)	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1009	



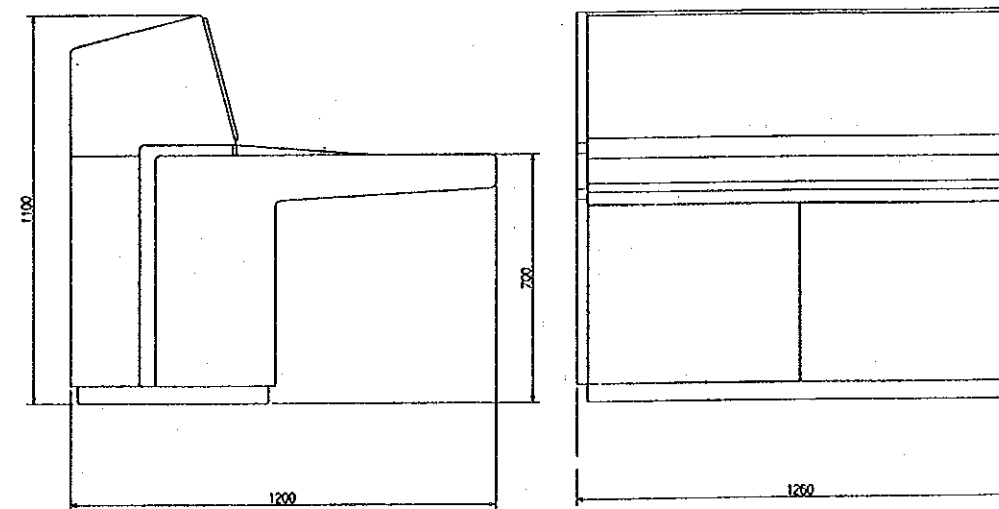
GRAPHIC PANEL



ITV OPERATING CONSOLE

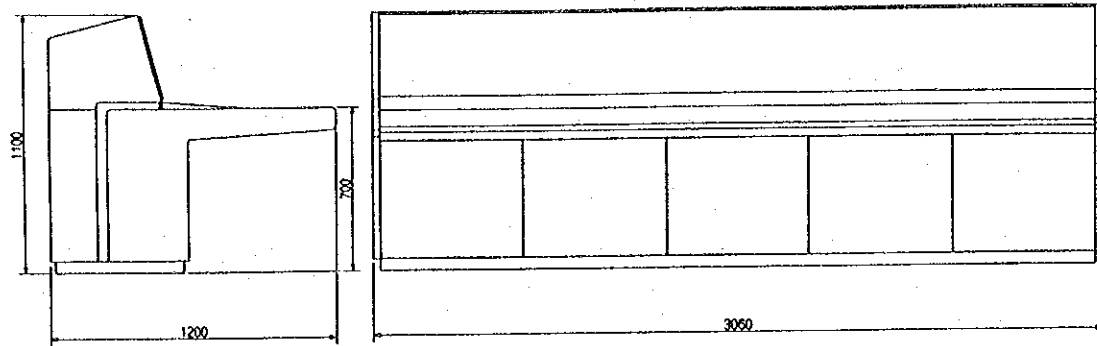


GATE OPERATING CONSOLE

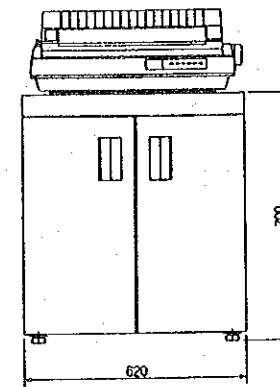


PUMP OPERATING CONSOLE

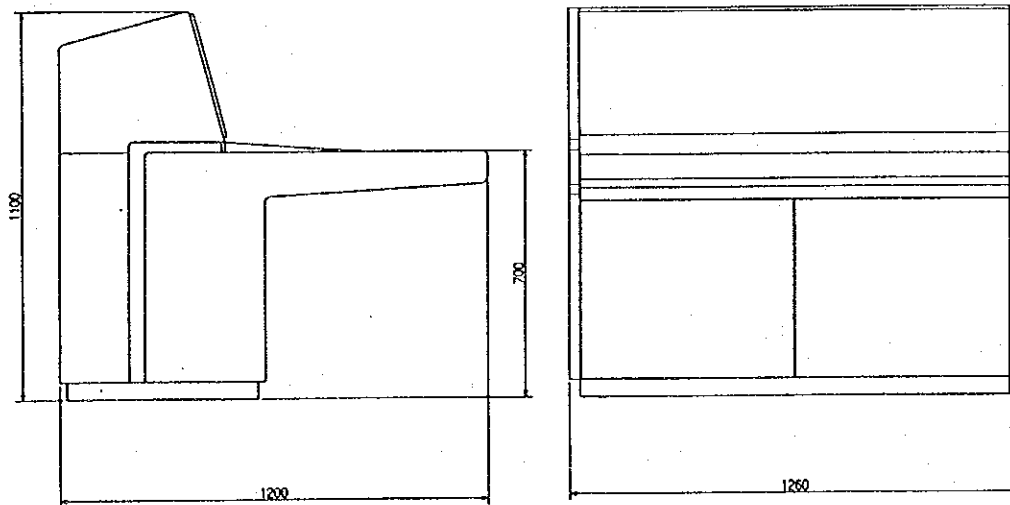
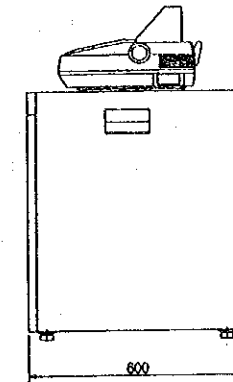
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES OUTSIDE VIEW OF EQUIPMENTS (2/5)	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
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APPROVED	
DRAWING NO. CEF-1010	



ESSF OPERATING CONSOLE

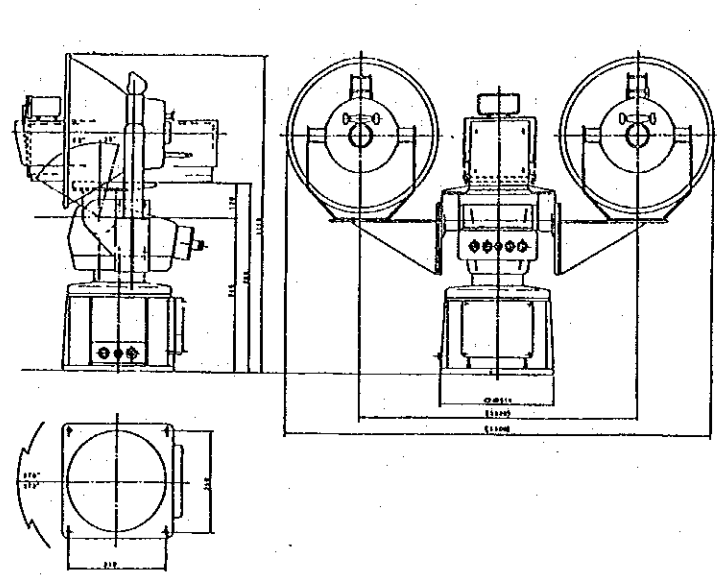


PRINTER

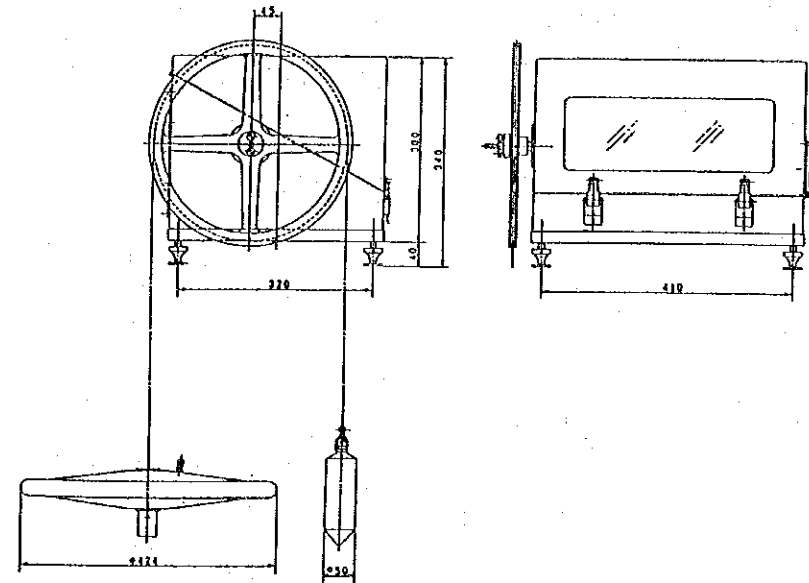


PAGING/RADIO OPERATING CONSOLE

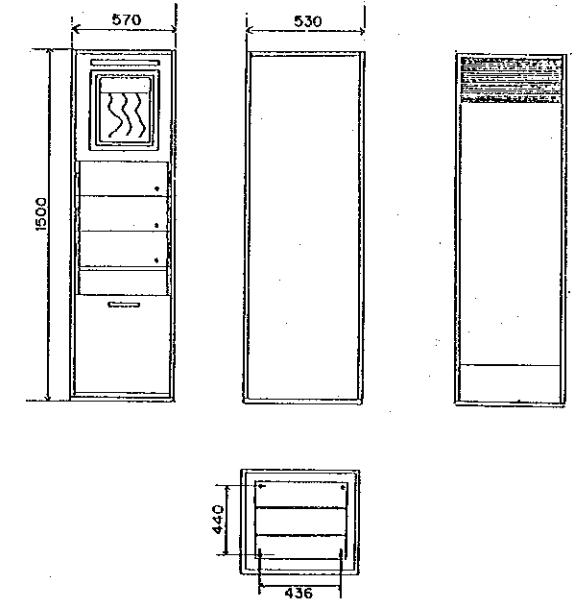
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES OUTSIDE VIEW OF EQUIPMENTS (3/5)	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
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APPROVED	
DRAWING NO. CEF-1011	



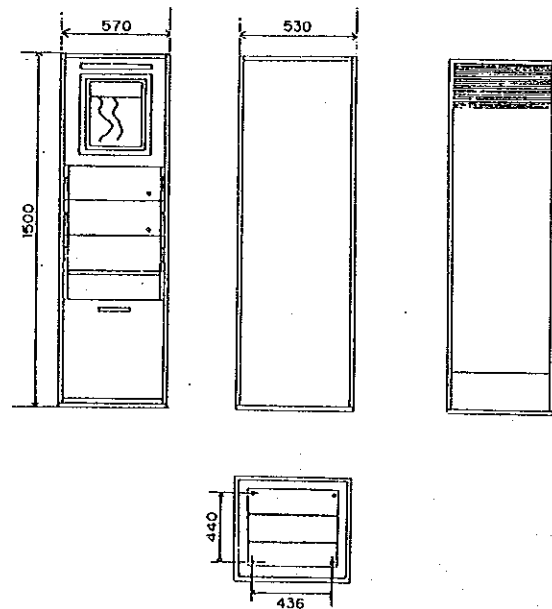
CAMERA



WATER LEVEL GAUGE

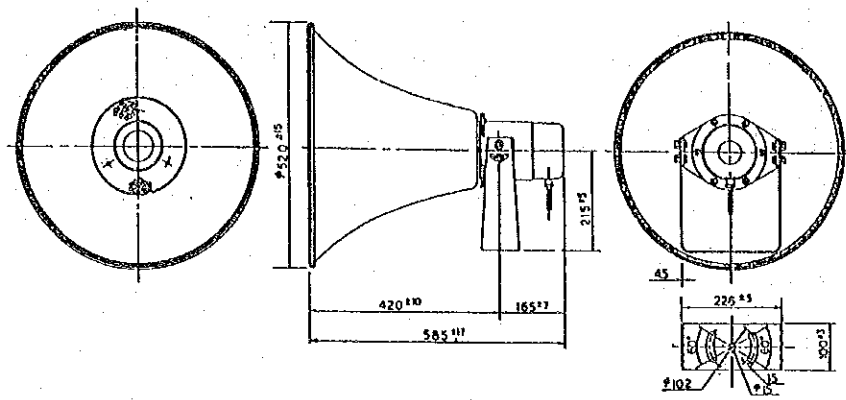


SALINITY INSTRUMENT

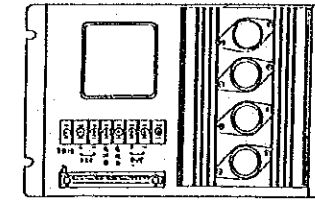
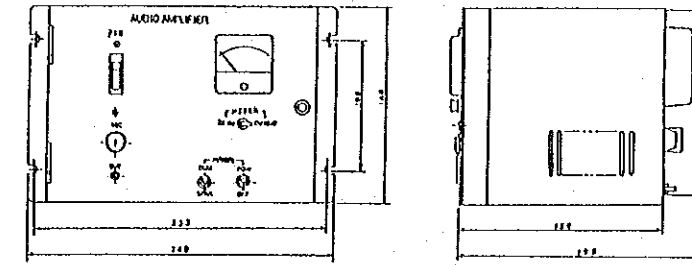


pH MEASURING INSTRUMENTS
WITH WATER TEMPERATURE GAUGE

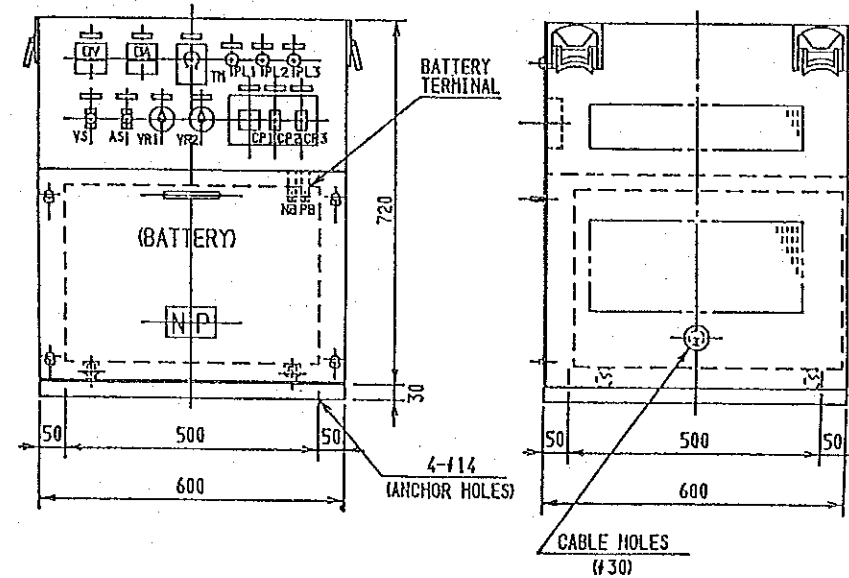
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES OUTSIDE VIEW OF EQUIPMENTS (4/5)	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF - 1012	



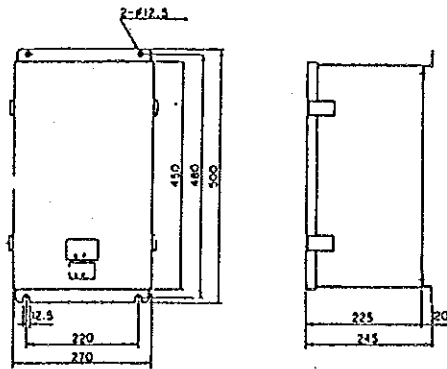
OUTLINE DRAWING OF LOUDSPEAKER



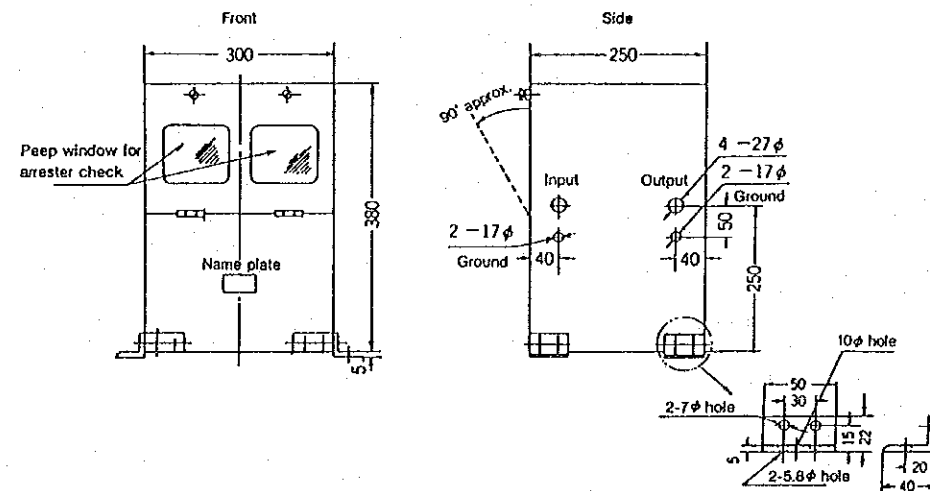
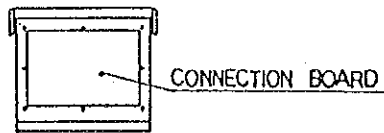
OUTLINE DRAWING OF AUDIO AMPLIFIER



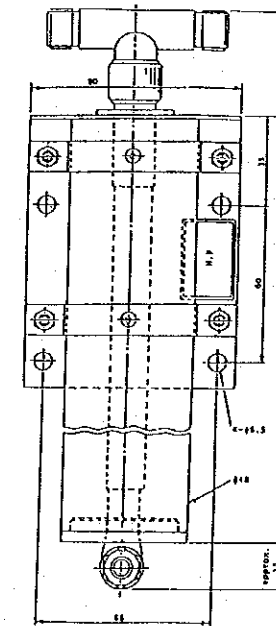
EXTERNAL VIEW OF POWER SUPPLY EQUIPMENT



EXTERNAL VIEW OF TELEMETRY EQUIPMENT

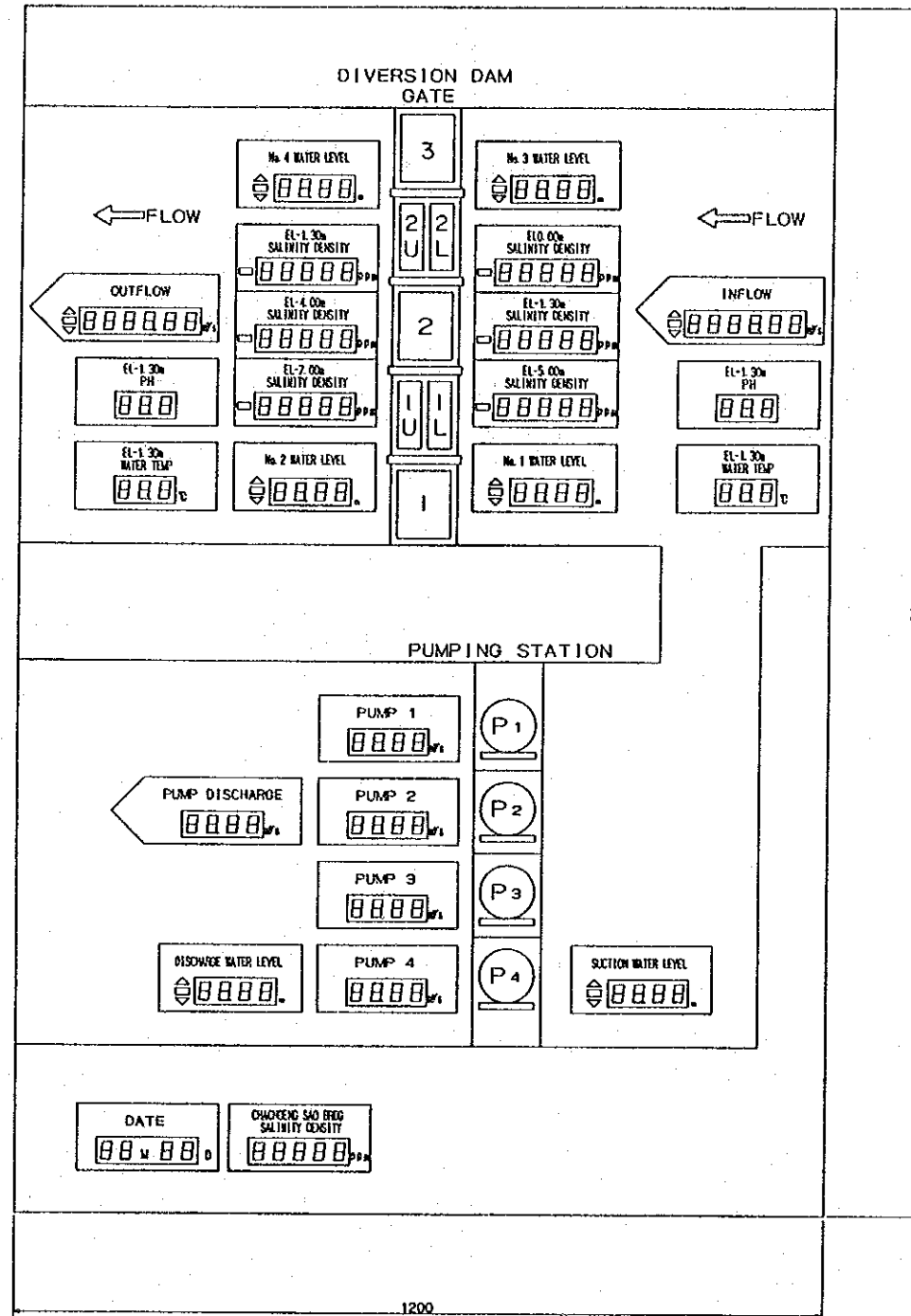


EXTERNAL VIEW OF ISOLATION TRANSFORMER (0.5kVA)



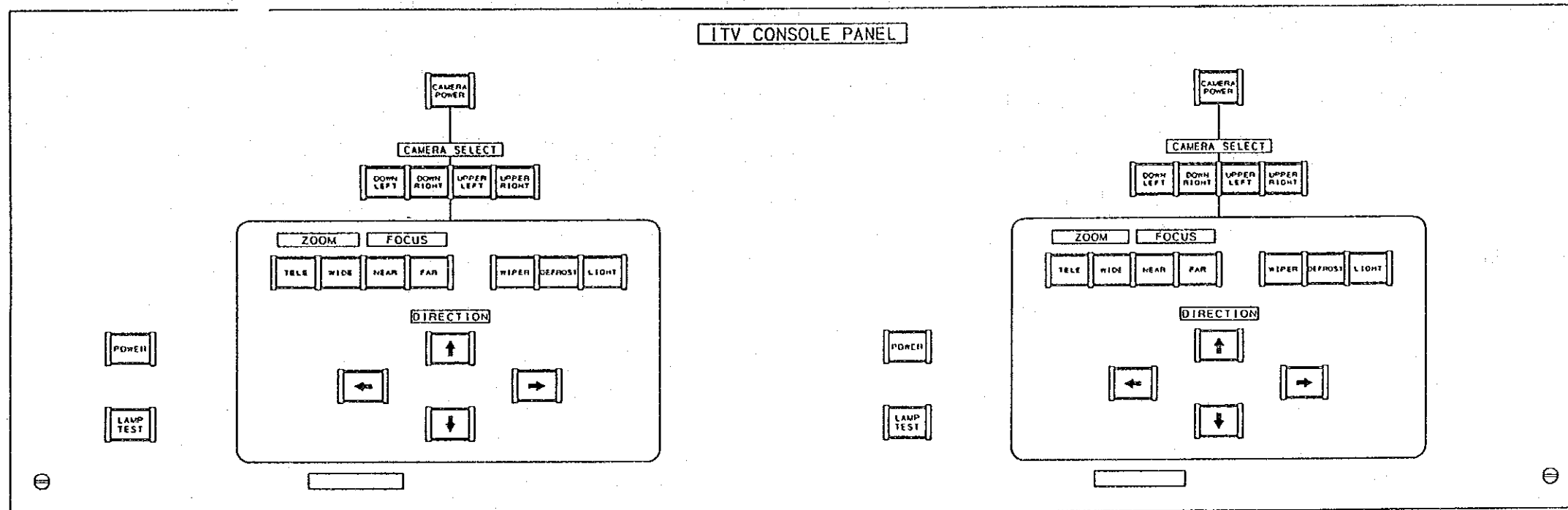
EXTERNAL VIEW OF COAXIAL ARRESTER

THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES OUTSIDE VIEW OF EQUIPMENTS(5/5)	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF - 1013	

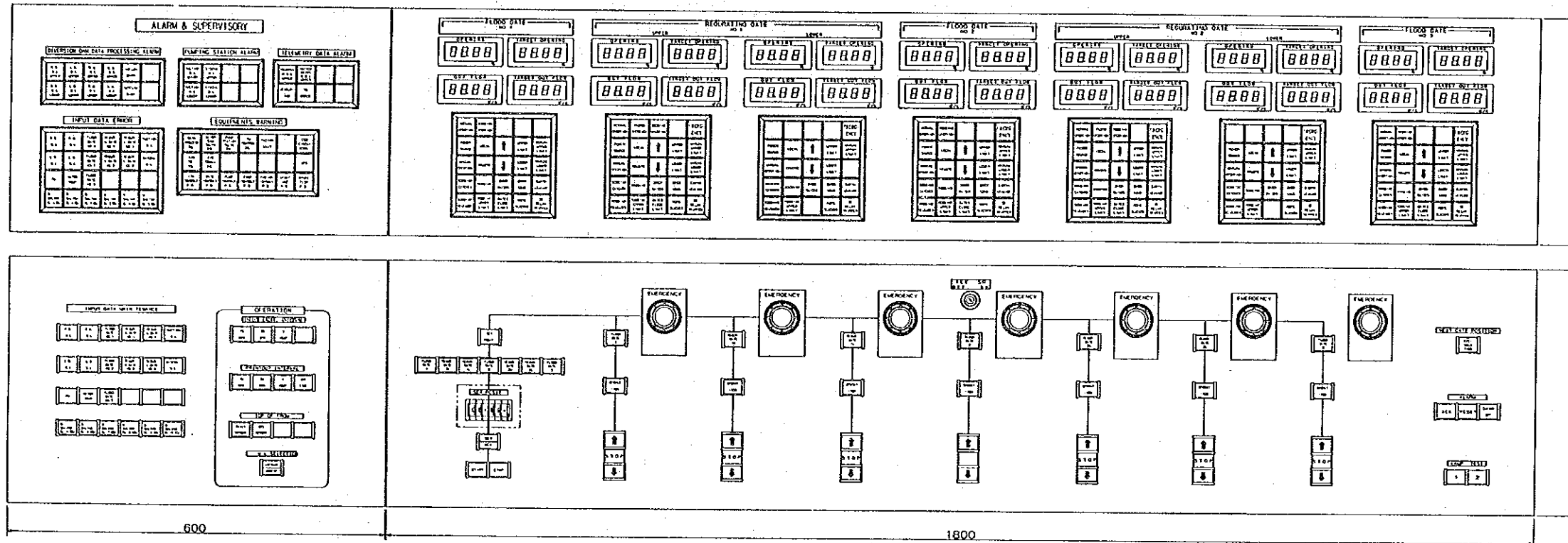


THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES GRAPHIC PANEL LAYOUT (2/2)	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1015	

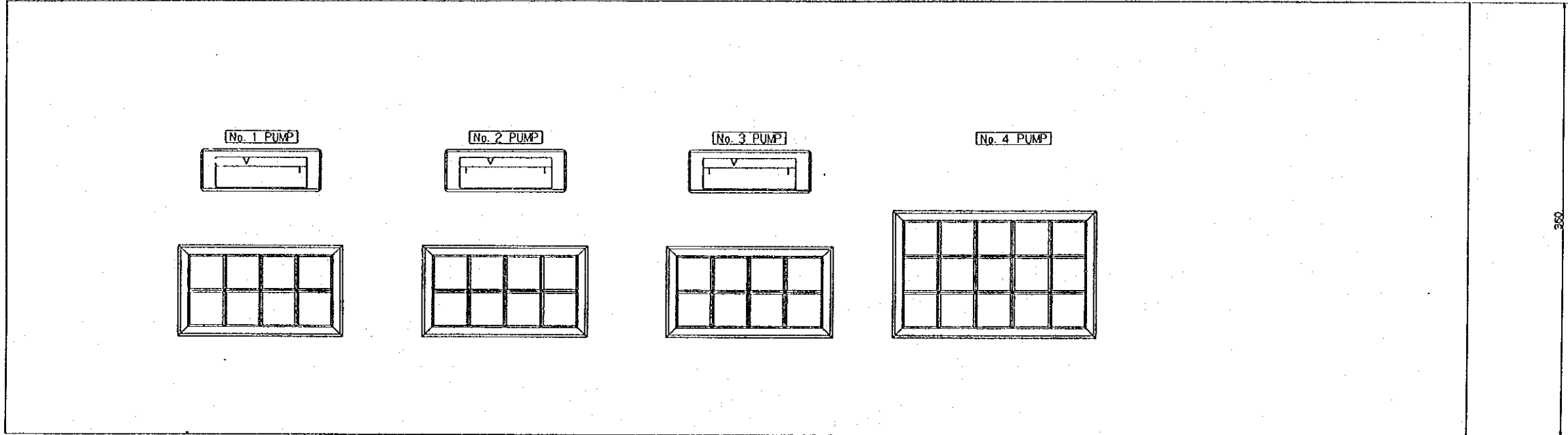
ITV CONSOLE PANEL



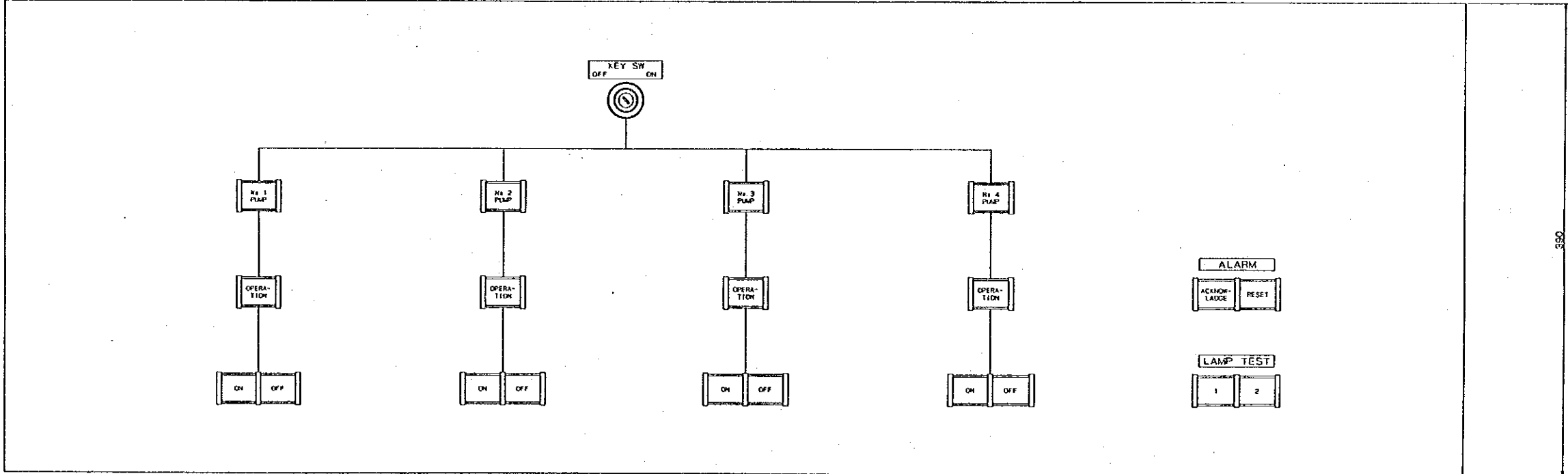
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES ITV OPERATING CONSOLE PANEL	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1016	



THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES GATE OPERATING CONSOLE PANEL	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
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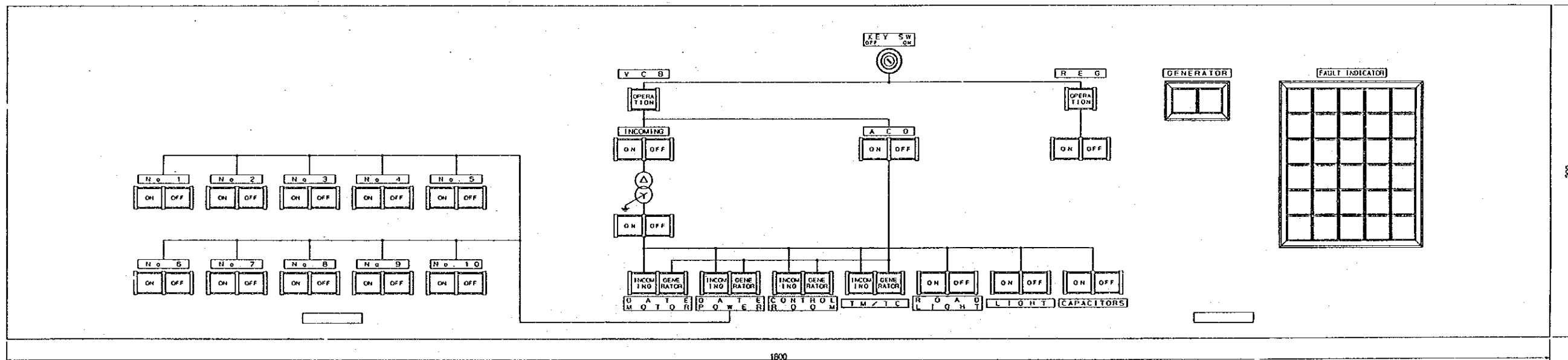
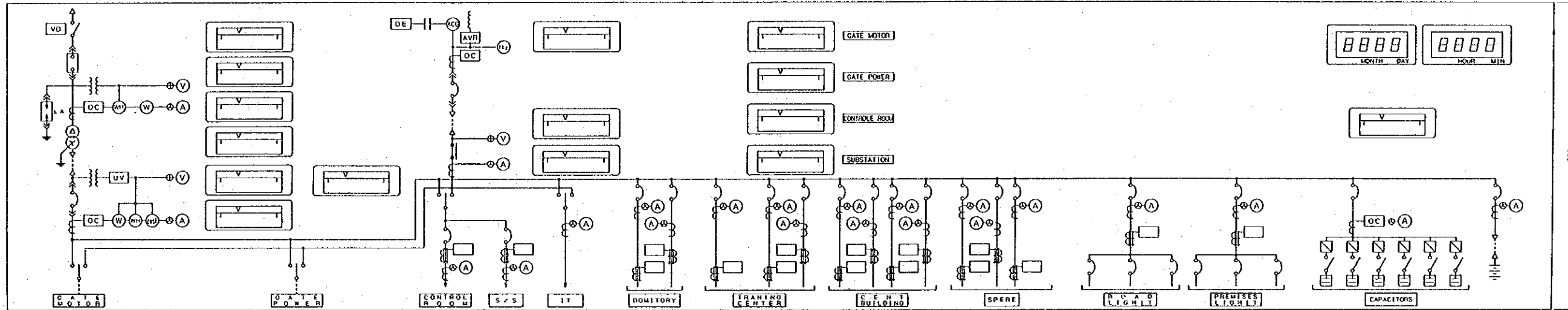
380



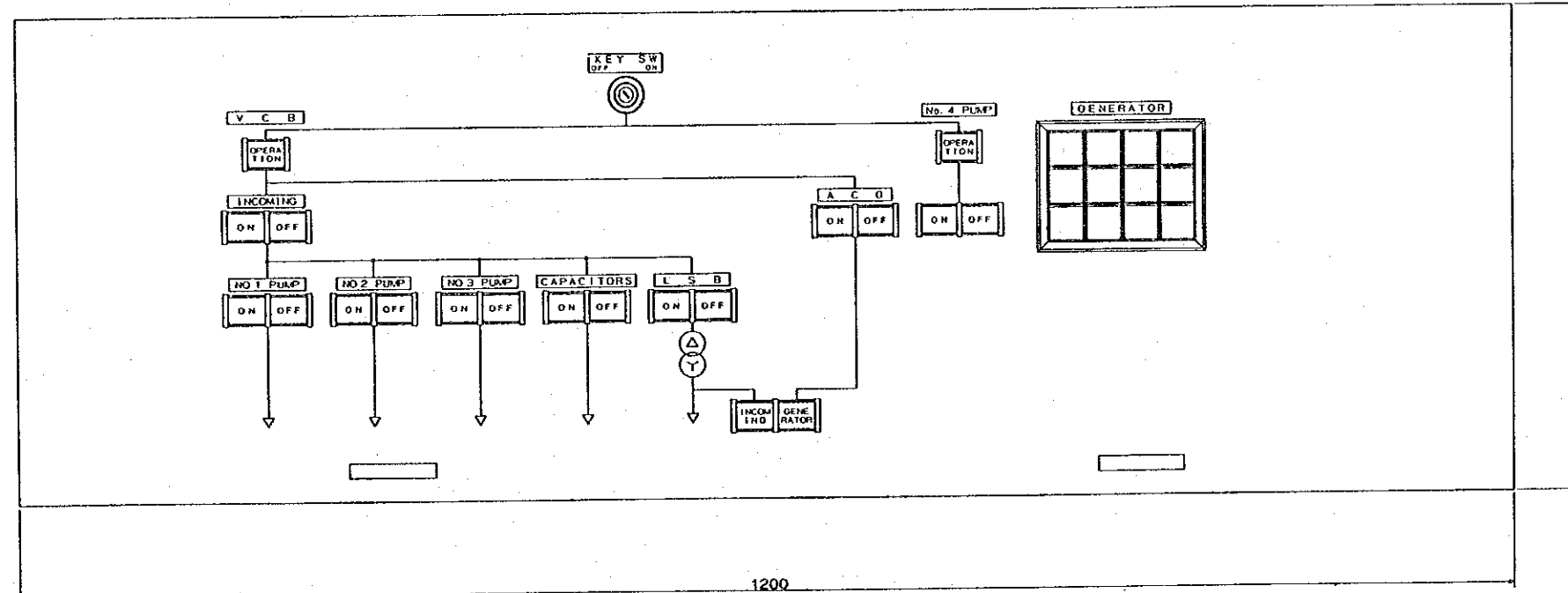
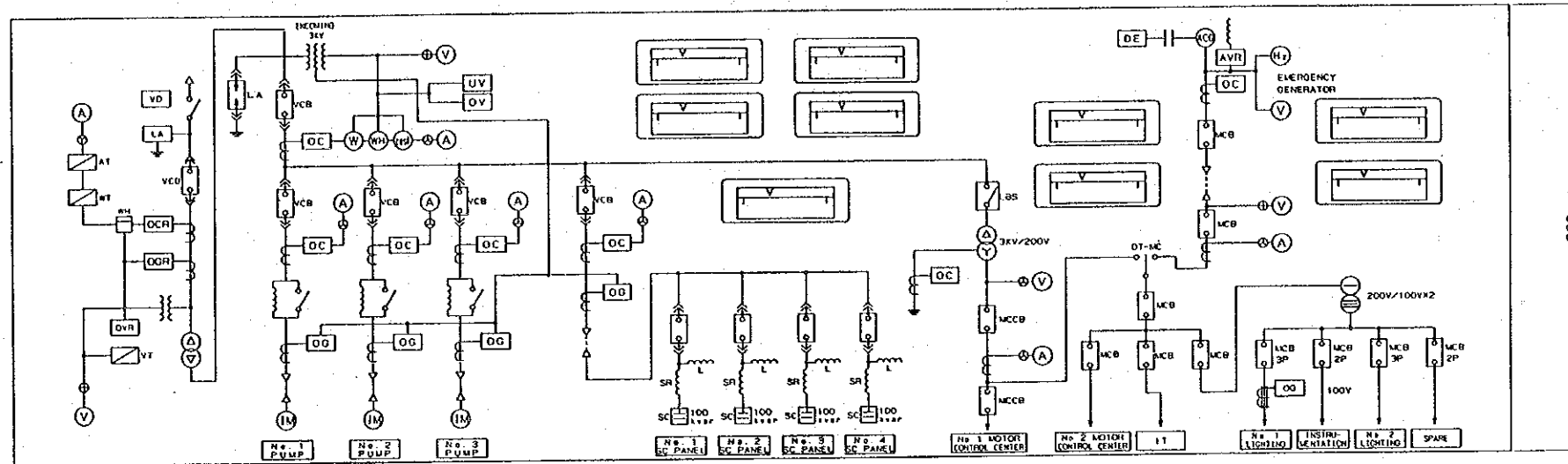
380

1200

THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES PUMP OPERATING CONSOLE PANEL	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF - 1018	



THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES No. 1 SUBSTATION OPERATING CONSOLE PANEL	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1019	

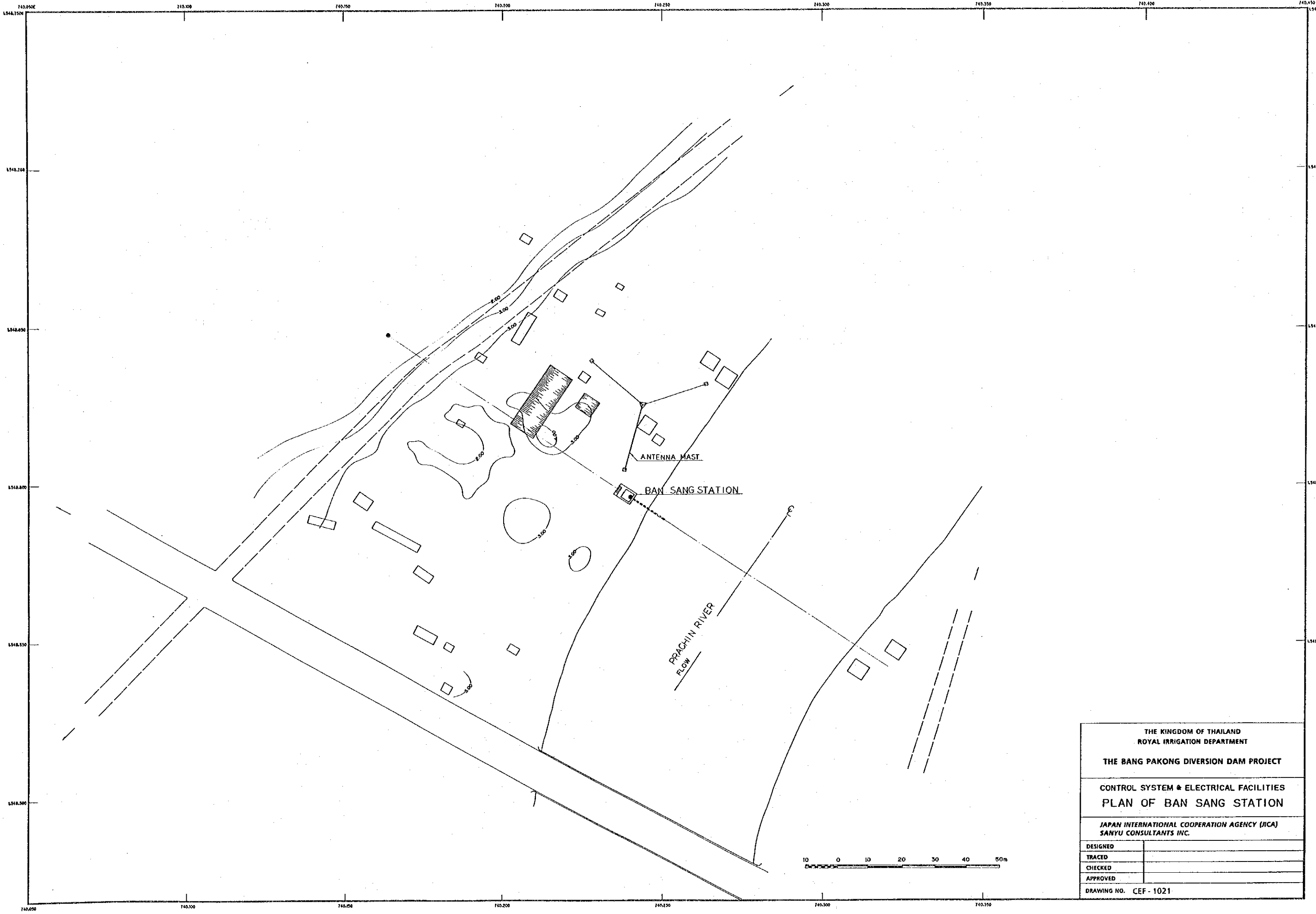


1200

360

360

THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT THE BANG PAKONG DIVERSION DAM PROJECT CONTROL SYSTEM & ELECTRICAL FACILITIES No.2 SUBSTATION OPERATING CONSOLE PANEL JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1020	

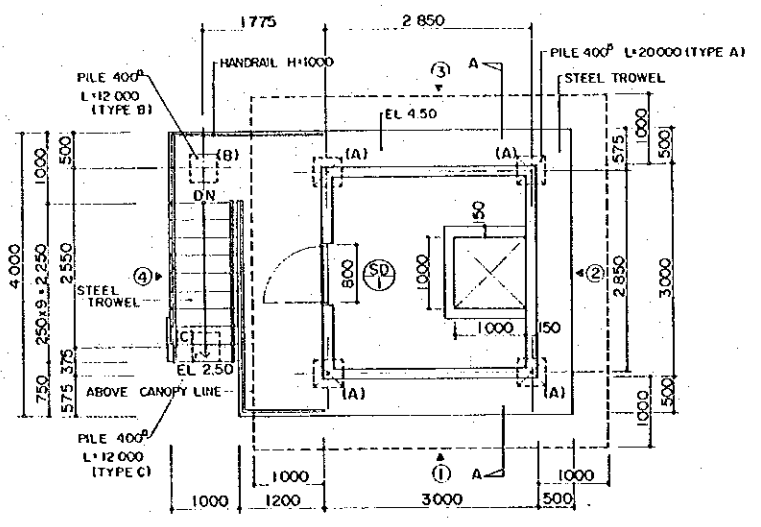


THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES PLAN OF BAN SANG STATION	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF - 1021	

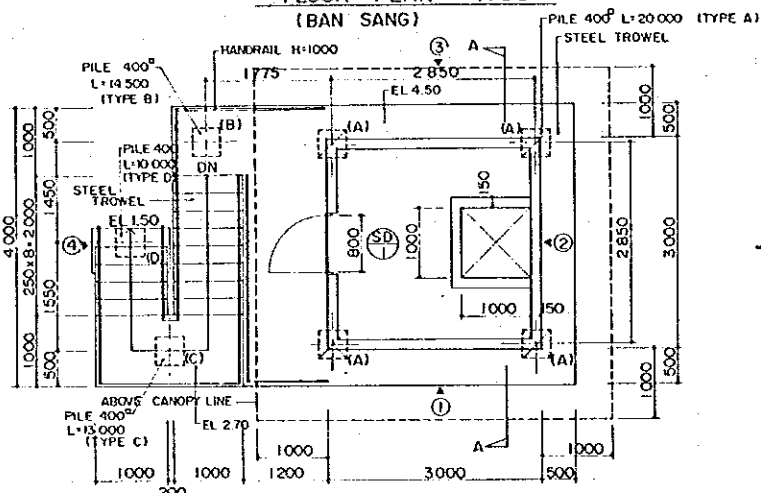


THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES PLAN OF NAKHON NAYOK STATION	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF - 1022	

EXTERNAL FINISHING SCHEDULE		INTERNAL FINISHING SCHEDULE				
ROOF	: C-PAC MONIER / C-PAC MONIER COVER	ROOM	FLOOR	WALL	CEILING	REMARKS
WALL	: MORTAR STEEL TROWEL W/ EMULSION PAINT FINISH	STATION ROOM	STEEL TROWEL	EXPOSED CONCRETE	EXPOSED CONCRETE	
STAIRCASE	: <FLOOR> STEEL TROWEL FINISH <HANDRAIL> STAINLESS STEEL					

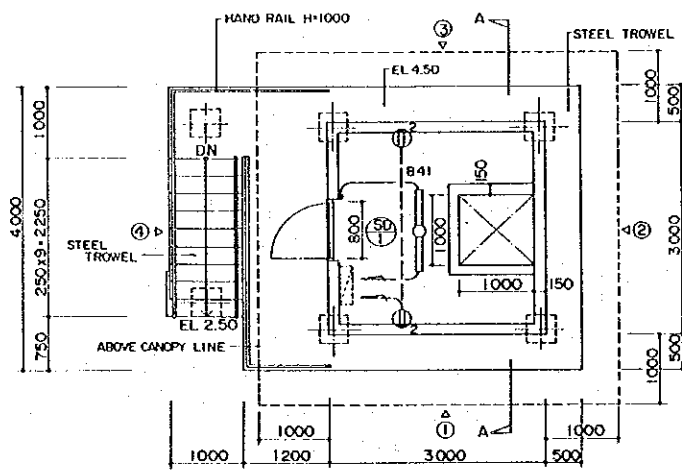
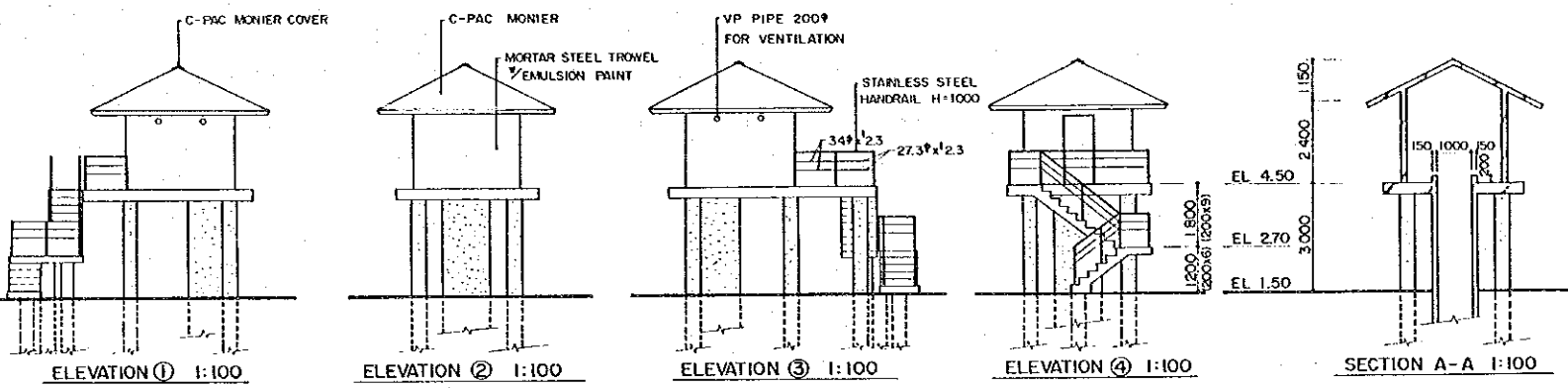
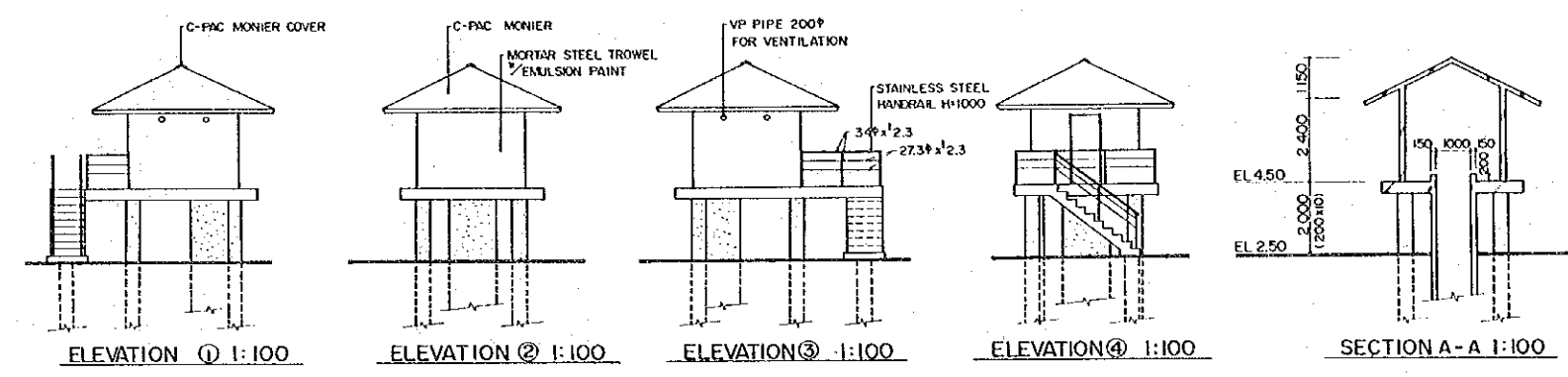


FLOOR PLAN 1:50 (BAN SANG)

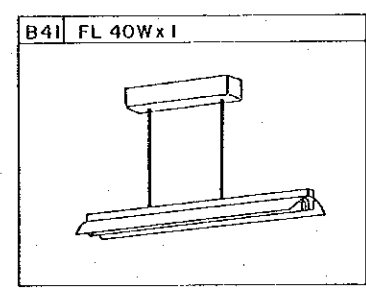


FLOOR PLAN 1:50 (NAKHONG NAYOK)

NOTE: RE-BAR ARRANGEMENT SEE DWG. NO. CEF - 1024



LIGHTING & RECEPTACLE WIRING 1:50 (COMMON)



SYMBOL-TYPE	(SD)
QUANTITY	2
FRAME	2 1/4" STEEL FRAMES
PANEL	STEEL
HARDWARE	3x5 HINGE, KNOB, LOCK
FINISH	PAINT
REMARKS	DOOR STOP
SIZE	800 2000

LEGEND

	FLOURESCENT LAMP B41 FL 40W x 1 INDUSTRY TYPE
	GROUNDING DUPLEX UNIVERSAL RECEPTACLE 10A 250V
	SWITCH 15A 300V
	DISTRIBUTION PANEL DETAIL SHOULD BE REFERRED TO DWG. NO. _____

NOTE

1. WIRES AND CONDUITS SIZE WHERE NOT SPECIFIED IN DRAWING SHOULD BE AS FOLLOWS; THW 2.5SQ x 2, E 2.5' (EMT 1/2')

THE KINGDOM OF THAILAND
ROYAL IRRIGATION DEPARTMENT

THE BANG PAKONG DIVERSION DAM PROJECT

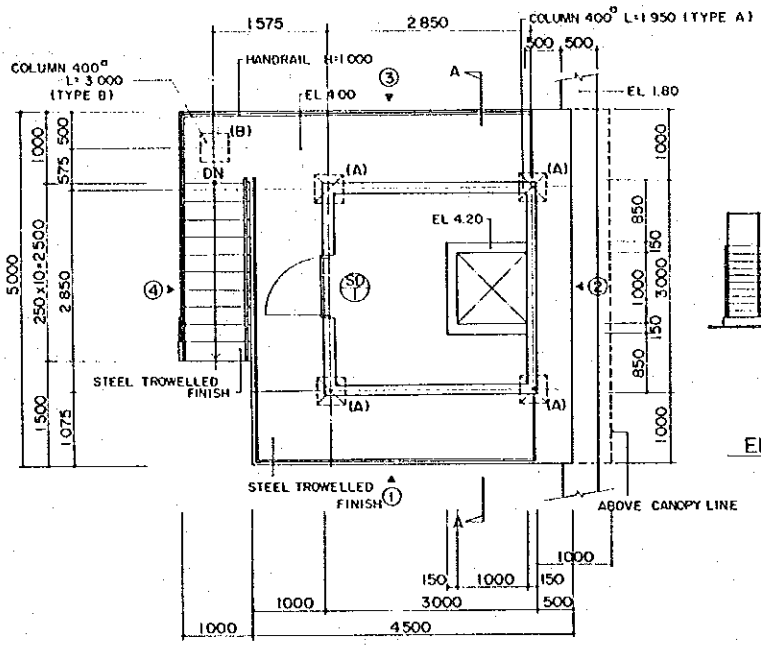
CONTROL SYSTEM & ELECTRICAL FACILITIES
OBSERVATION HOUSE FOR RIVER

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
SANYU CONSULTANTS INC.

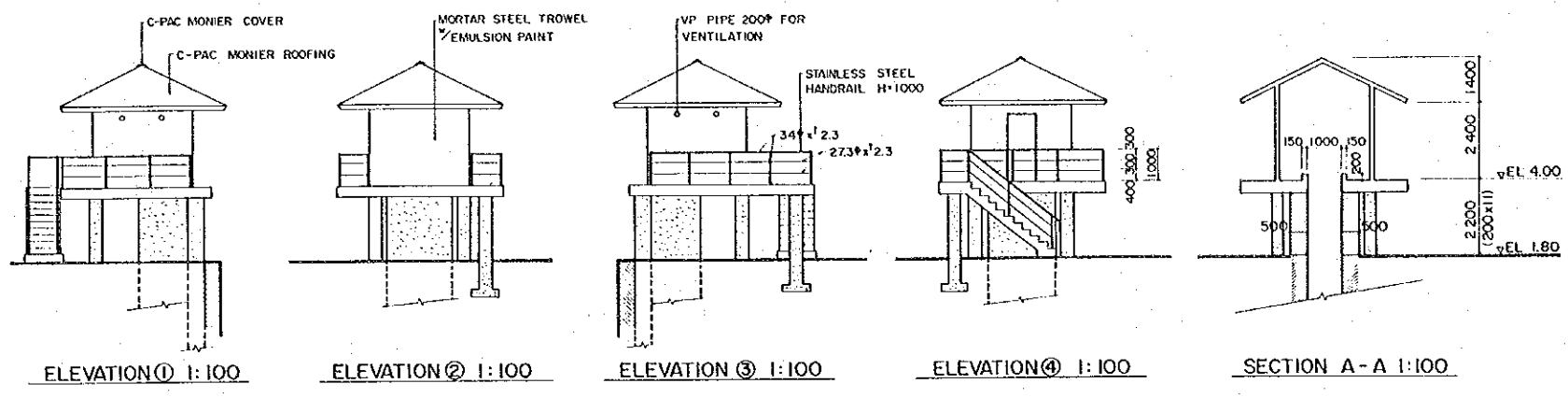
DESIGNED	
TRACED	
CHECKED	
APPROVED	

DRAWING NO. CEF - 1023

EXTERNAL FINISHING SCHEDULE		INTERNAL FINISHING SCHEDULE			
ROOM	FLOOR	WALL	CEILING	REMARKS	
STATION ROOM	STEEL TROWELED FINISH	EXPOSED CONCRETE	EXPOSED CONCRETE		
ROOF : C-PAC MONIER ROOFING, C-PAC MONIER COVER					
WALL : MORTAR STEEL TROWEL W/EMULSION PAINT FINISH					

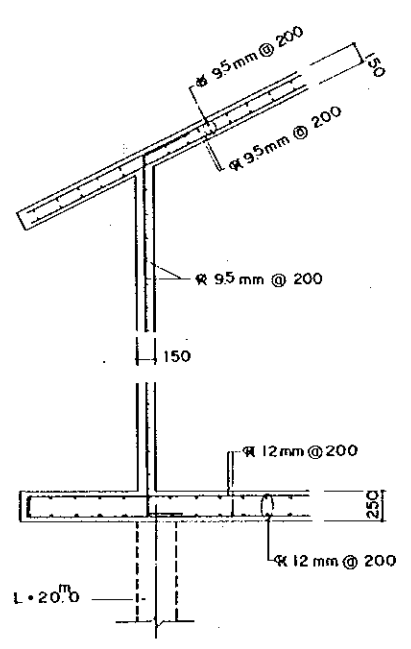


FLOOR PLAN 1:50

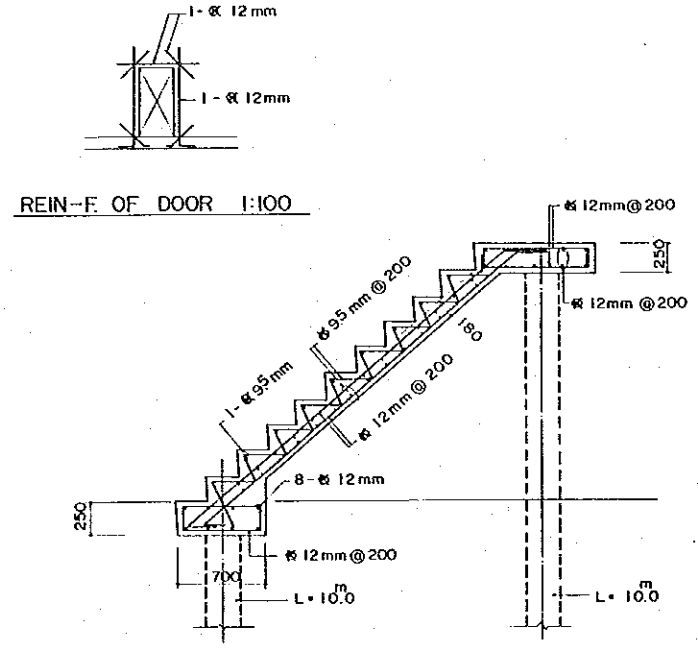


ELEVATION ① 1:100 ELEVATION ② 1:100 ELEVATION ③ 1:100 ELEVATION ④ 1:100 SECTION A-A 1:100

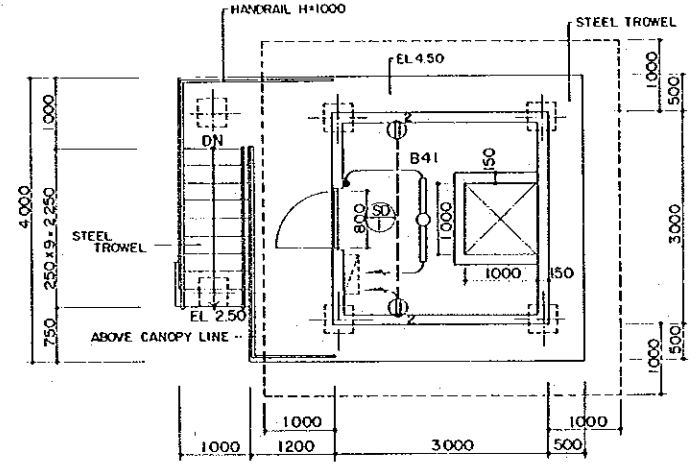
SYMBOL-TYPE	Ⓢ
QUANTITY	1 NO
FRAME	2"x4" STEEL FRAME
PANEL	STEEL
HARDWARE	3x5" HINGE, KNOB, MORTISE LOCK
FINISH	PAINT
REMARKS	DOOR STOP
SIZE	800 2000



BAR ARRANGEMENT 1:30

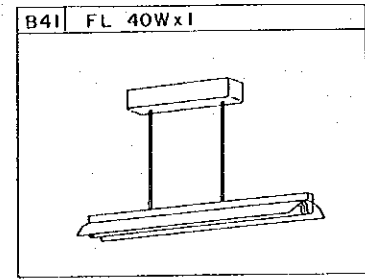


REIN-F. OF DOOR 1:100 SECT. OF STAIRS 1:30



LIGHTING & RECEPTACLE WIRING 1:50

LEGEND	
	FLOURESCENT LAMP B41 FL 40W x 1, INDUSTRY TYPE
	GROUNDING DUPLEX UNIVERSAL RECEPTACLE 10A 250V
	SWITCH 15A 300V
	DISTRIBUTION PANEL DETAIL SHOULD BE REFERRED TO DWG. NO.
NOTE	
1. WIRES AND CONDUITS SIZE WHERE NOT SPECIFIED IN DRAWING SHOULD BE AS FOLLOWS: THW 2.5SQ x 2, E 2.5" (EMT 1/2")	



THE KINGDOM OF THAILAND
ROYAL IRRIGATION DEPARTMENT

THE BANG PAKONG DIVERSION DAM PROJECT

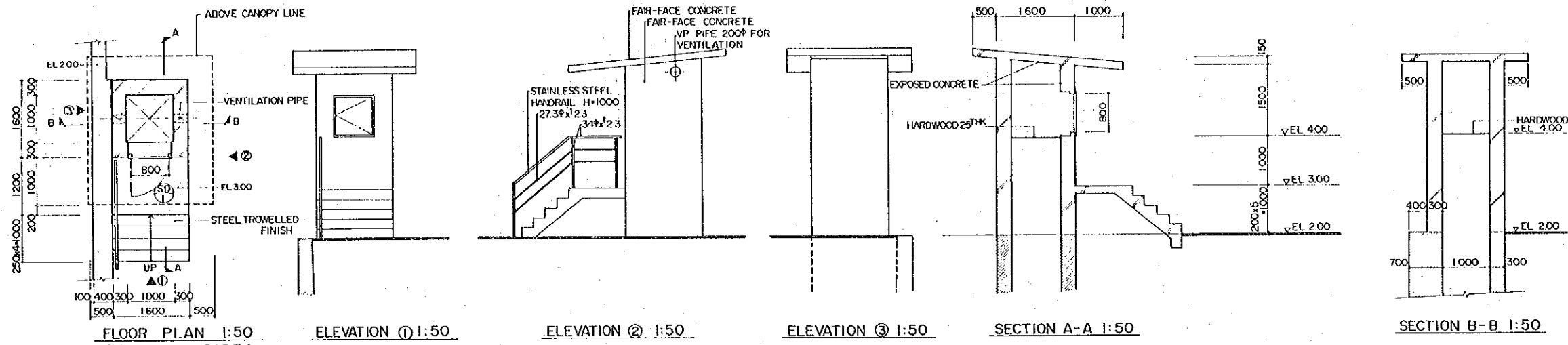
CONTROL SYSTEM & ELECTRICAL FACILITIES
OBSERVATION HOUSE FOR DAM SITE

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
SANYU CONSULTANTS INC.

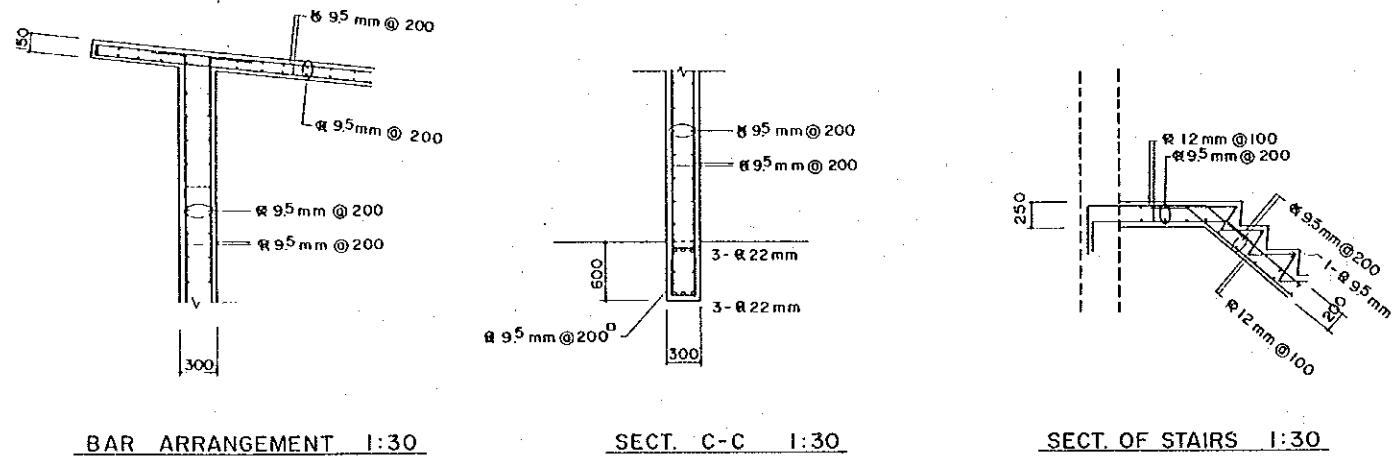
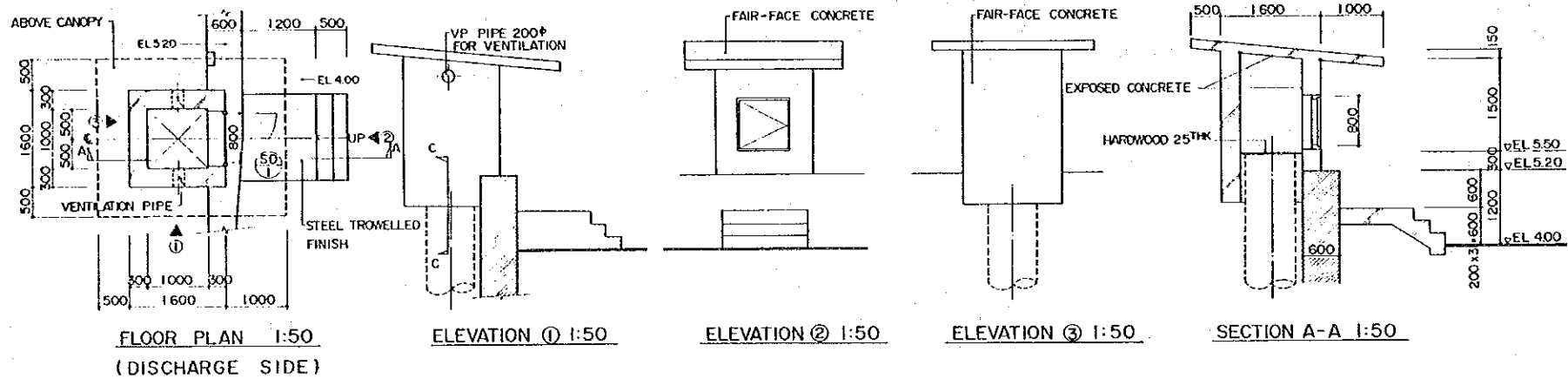
DESIGNED	
TRACED	
CHECKED	
APPROVED	

DRAWING NO. CEF - 1024

EXTERNAL FINISHING SCHEDULE	
ROOF : FAIR-FACE CONCRETE	
WALL : FAIR-FACE CONCRETE	
STAIRCASE : < FLOOR >	STEEL TROWELLED FINISH
< HAND RAIL >	STAINLESS STEEL H=1.000

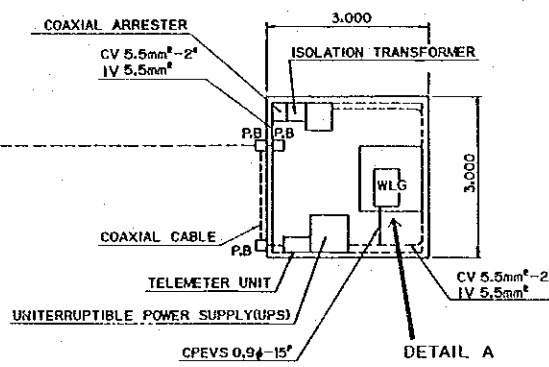
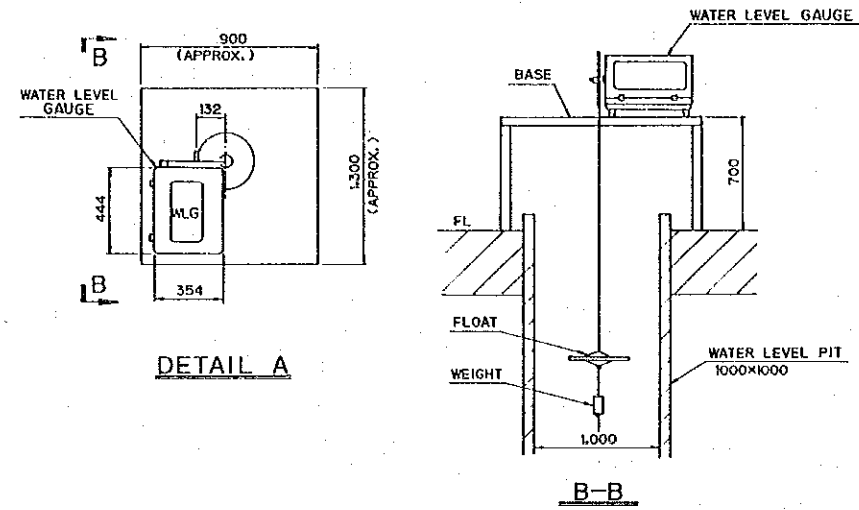
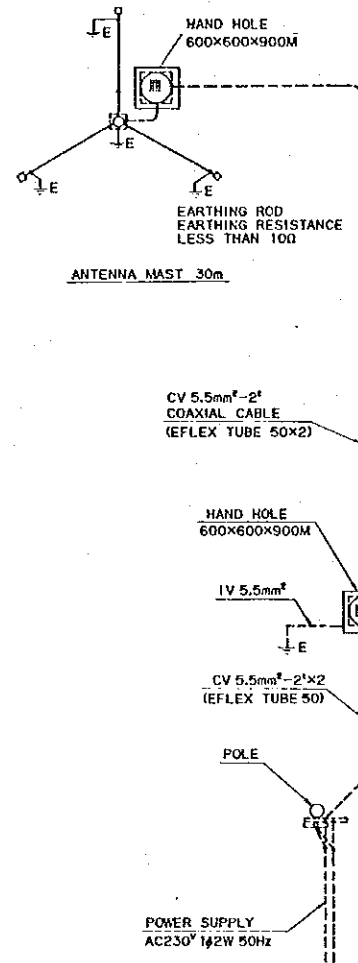


SYMBOL-TYPE	(SD)
QUANTITY	2
FRAME	2"x4" STEEL FRAME
PANEL	STEEL
HARDWARE	2"x4" HINGE, KNOB, MORTISE LOCK
FINISH	PAINT
REMARK	
SIZE	800 800



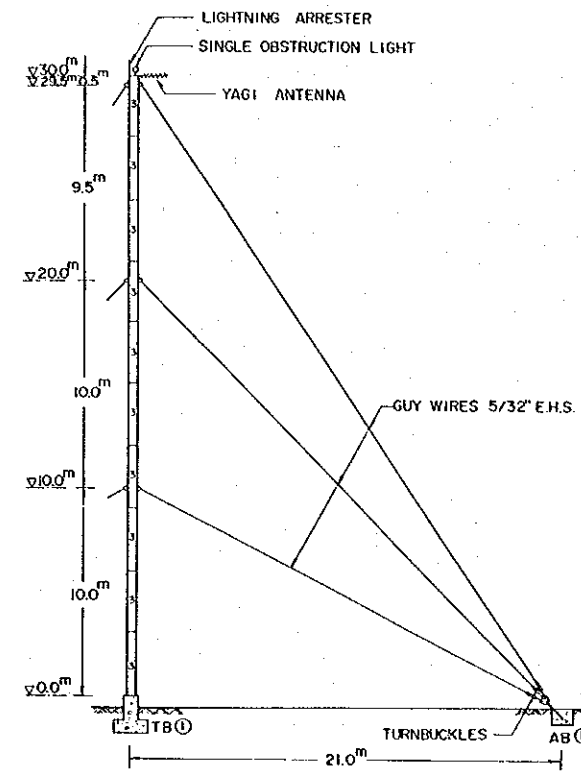
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES OBSERVATION HOUSE FOR PUMPING STATION	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO.	CEF - 1025

INSTALLATION OF WATER LEVEL GAUGE EQUIPMENT FOR NAKHON NAYOK STATION AND BAN SANG STATION

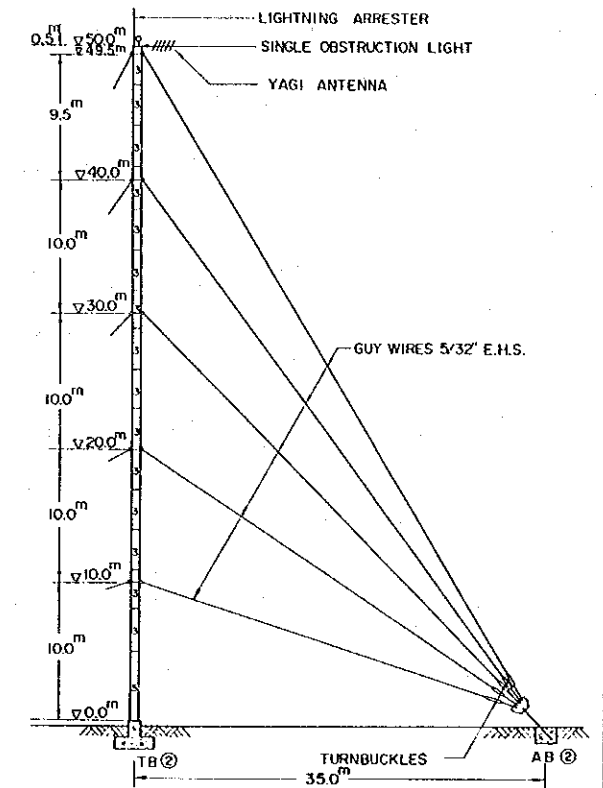


PULL BOX

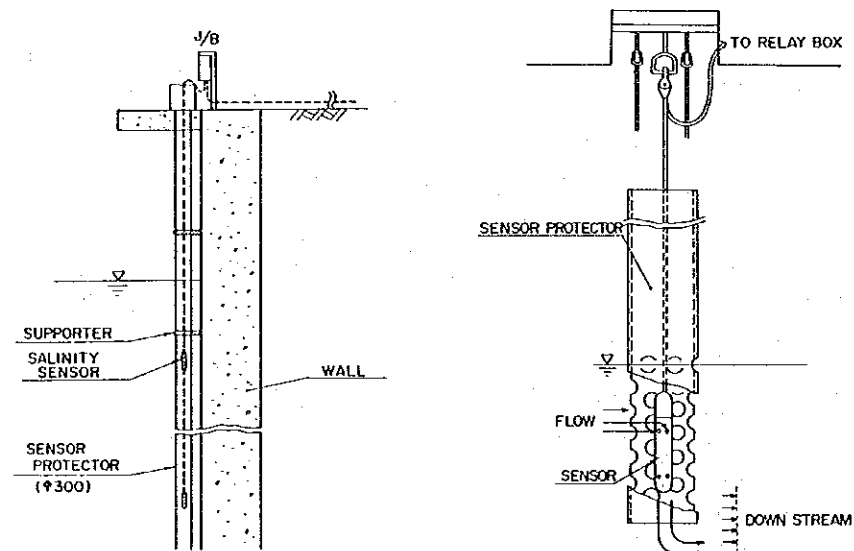
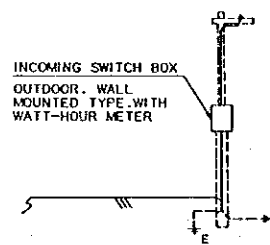
PLAN



30m. ANTENNA MAST

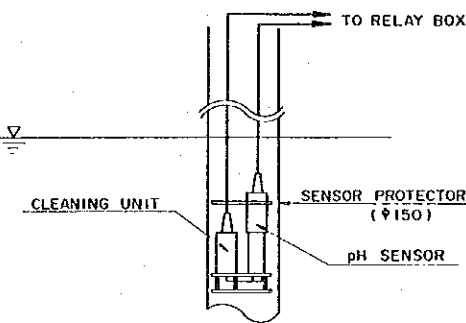


50m. ANTENNA MAST



INSTALLATION OF SALINITY INSTRUMENT

SALINITY SENSOR

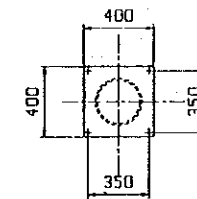
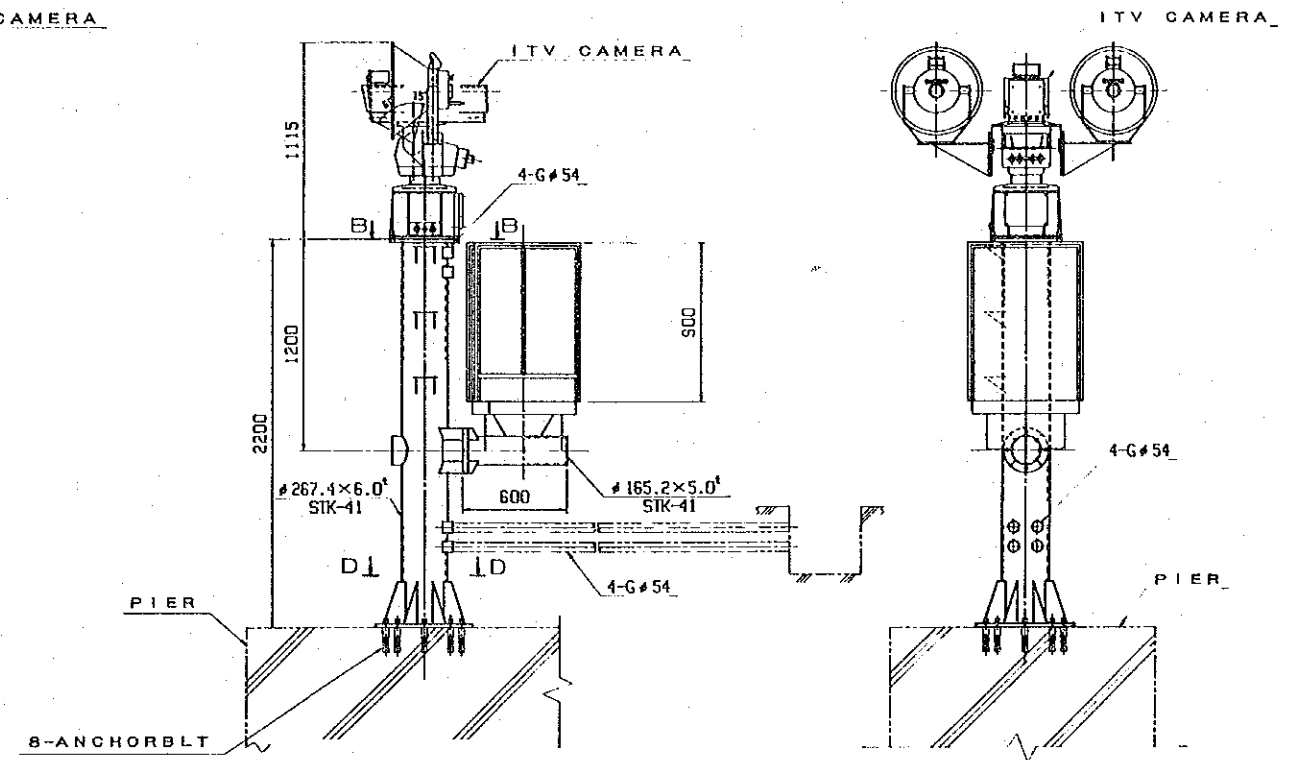
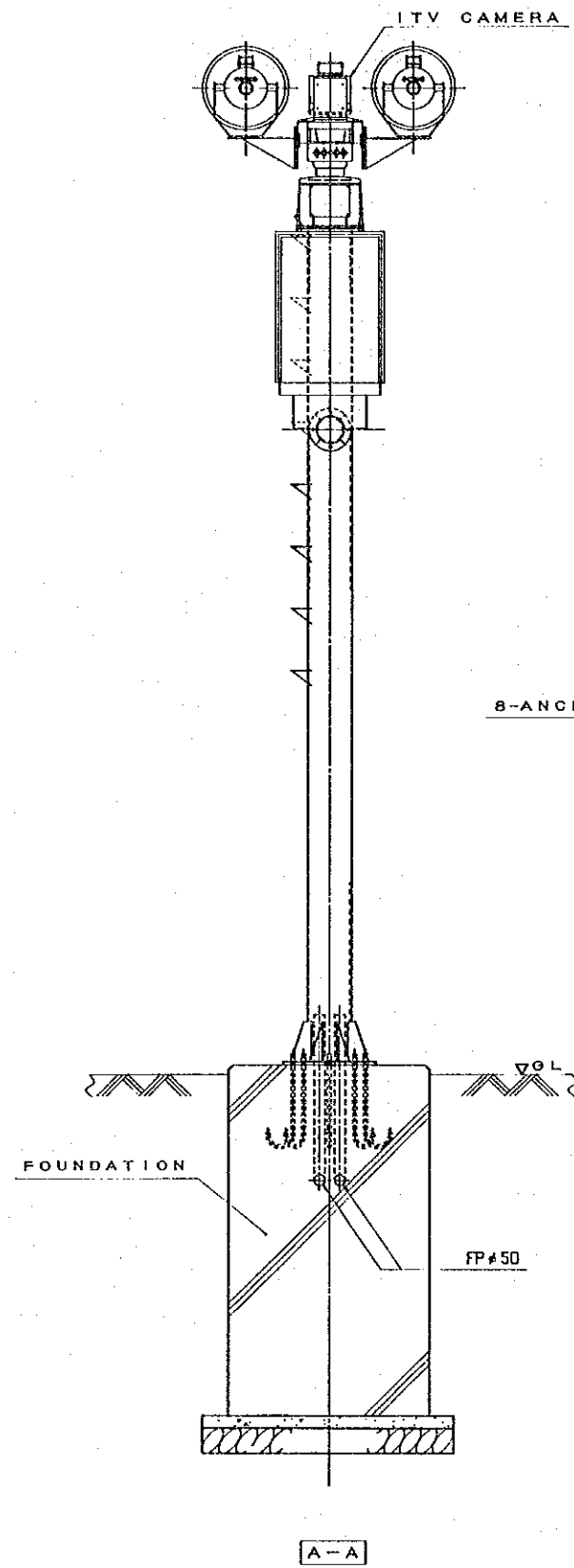
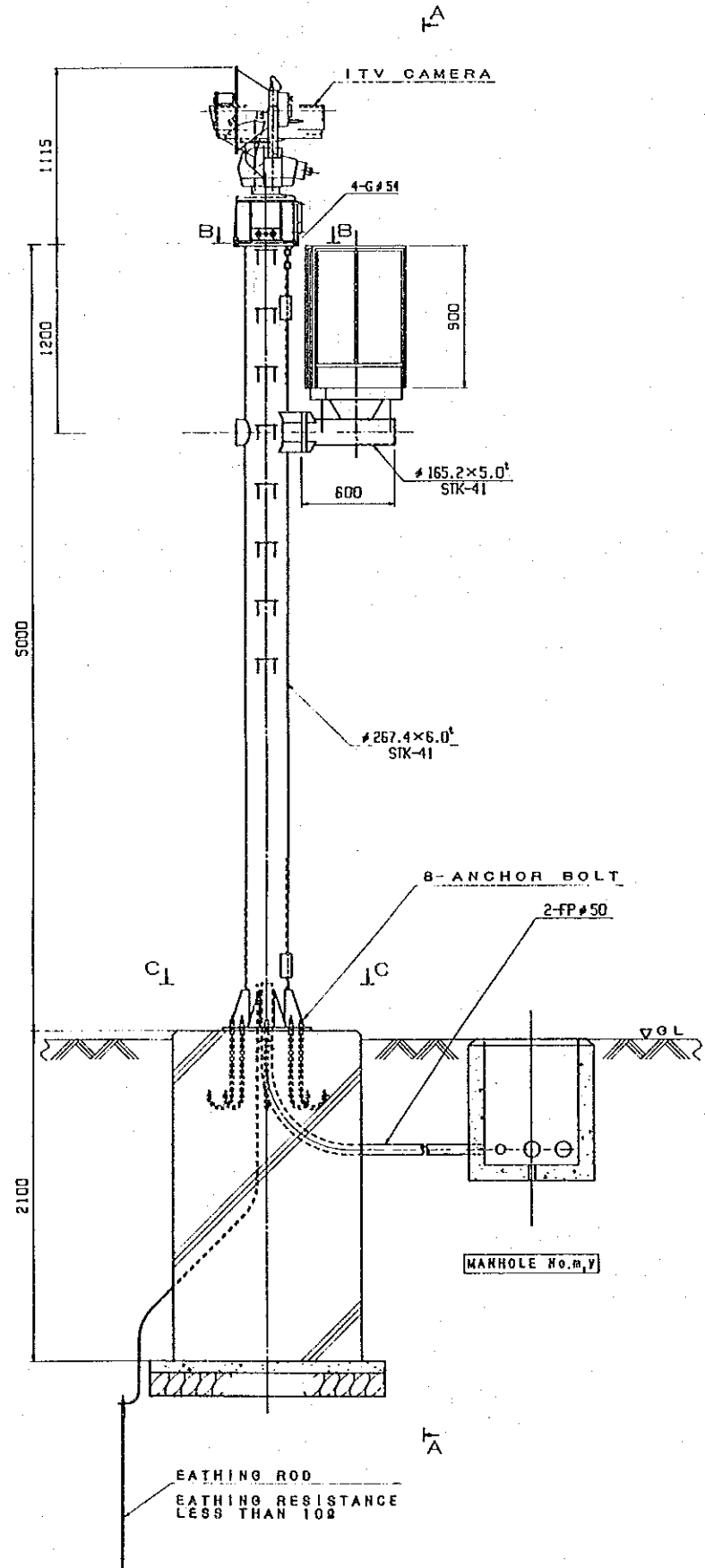


INSTALLATION OF pH SENSOR

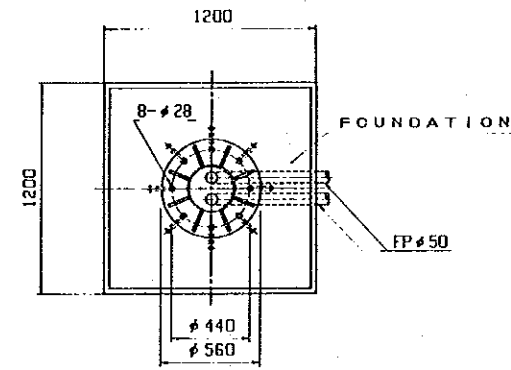
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES WATER LEVEL GAUGE & OTHERS	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1026	

INSTALLATION OF ITV CAMERAS AT UPPER STREAM

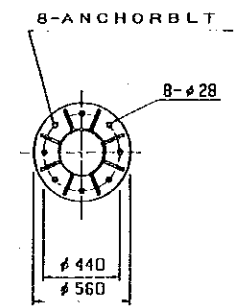
INSTALLATION OF ITV CAMERAS AT DOWN STREAM



B-B

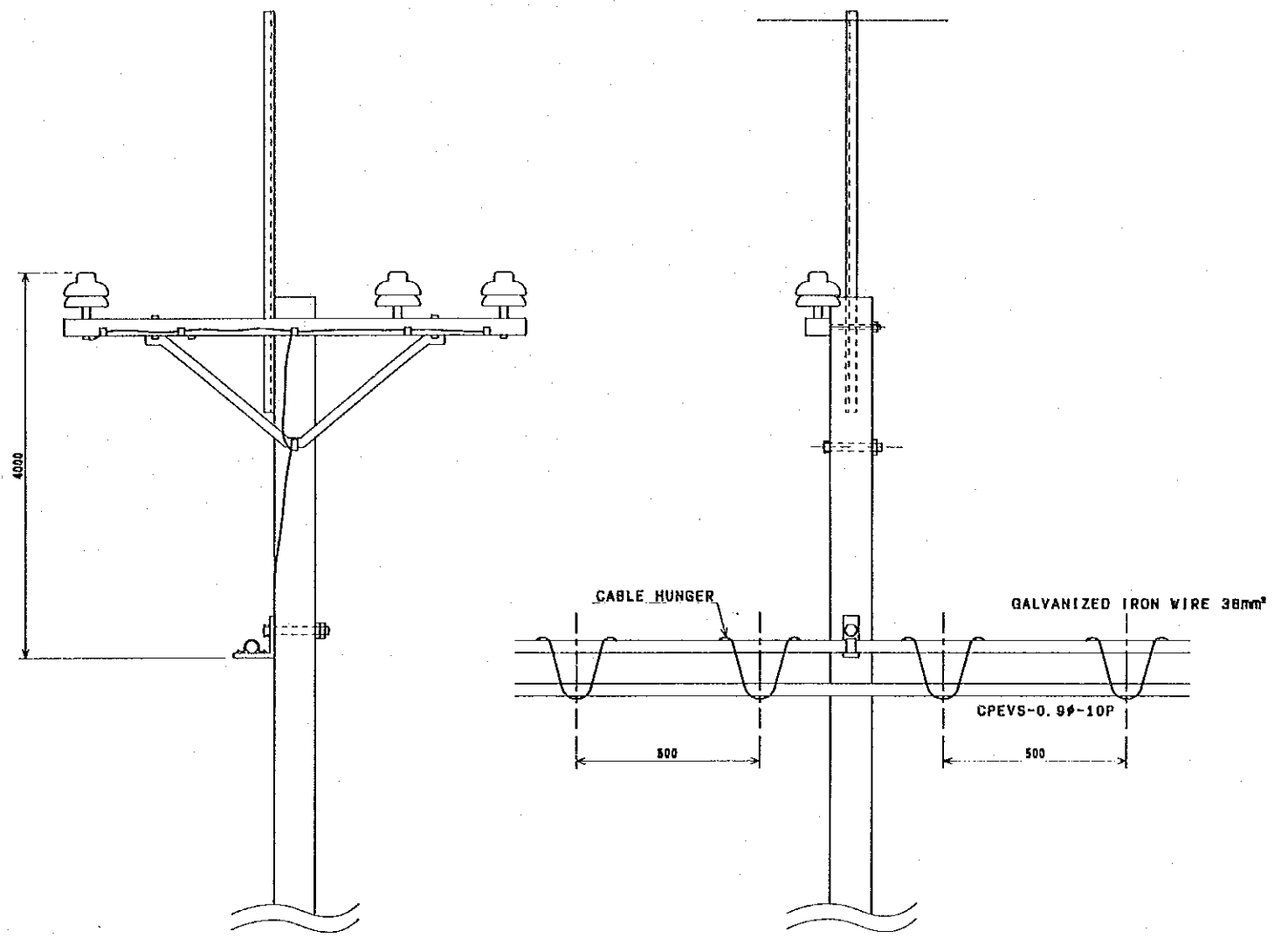
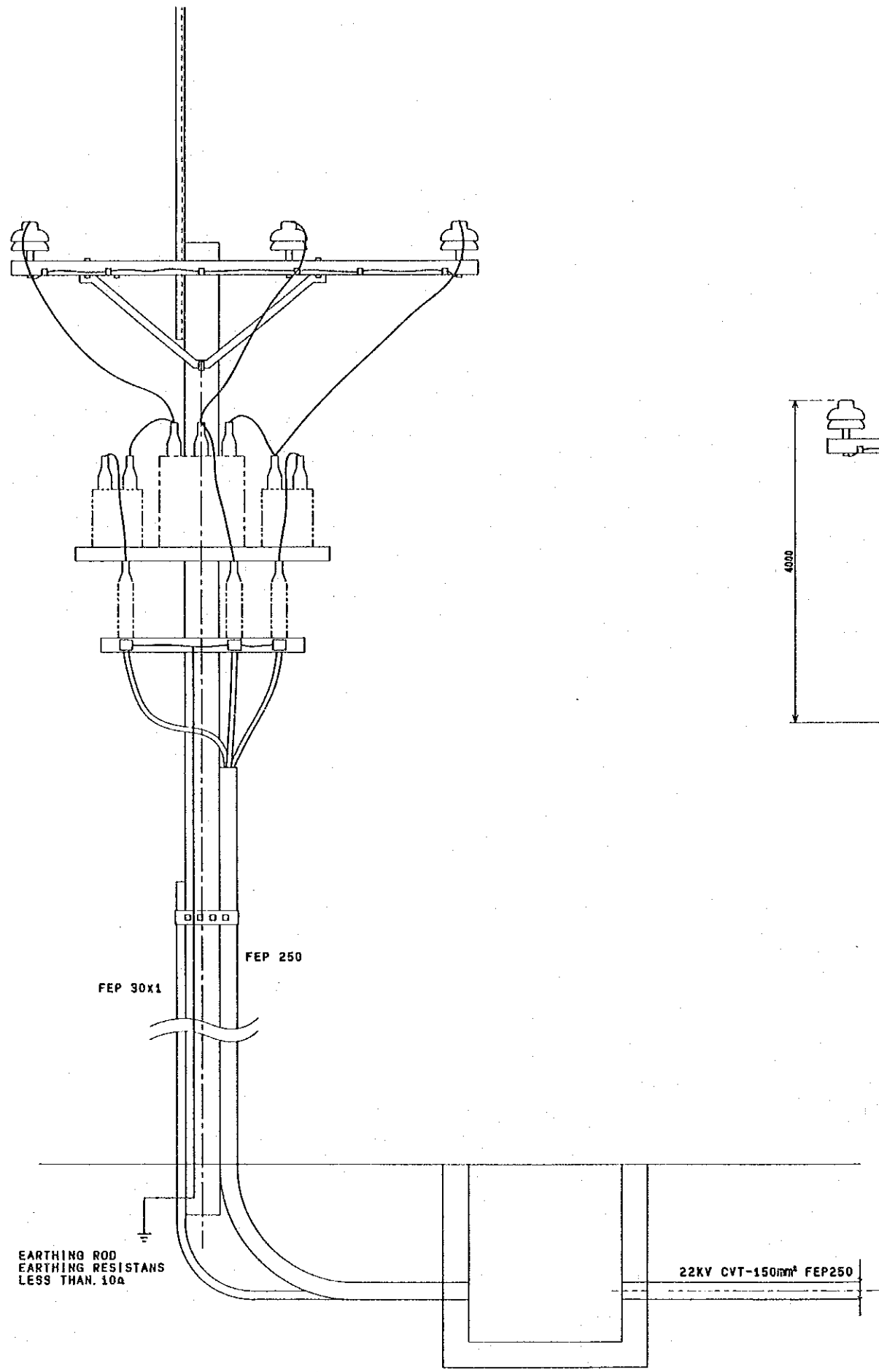


C-C

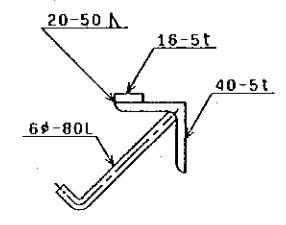
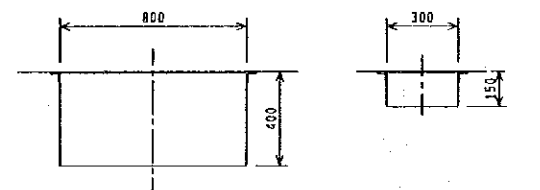
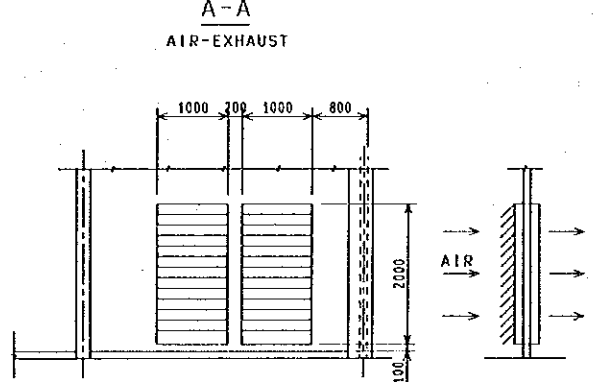
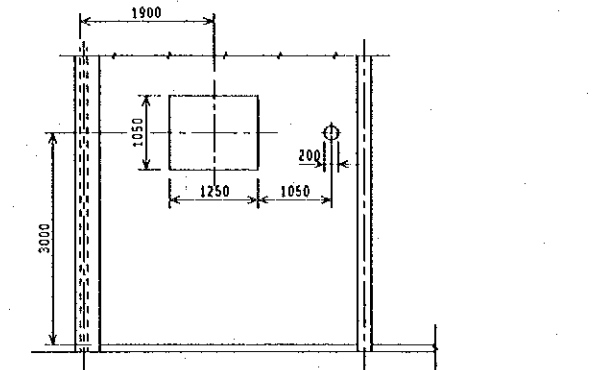
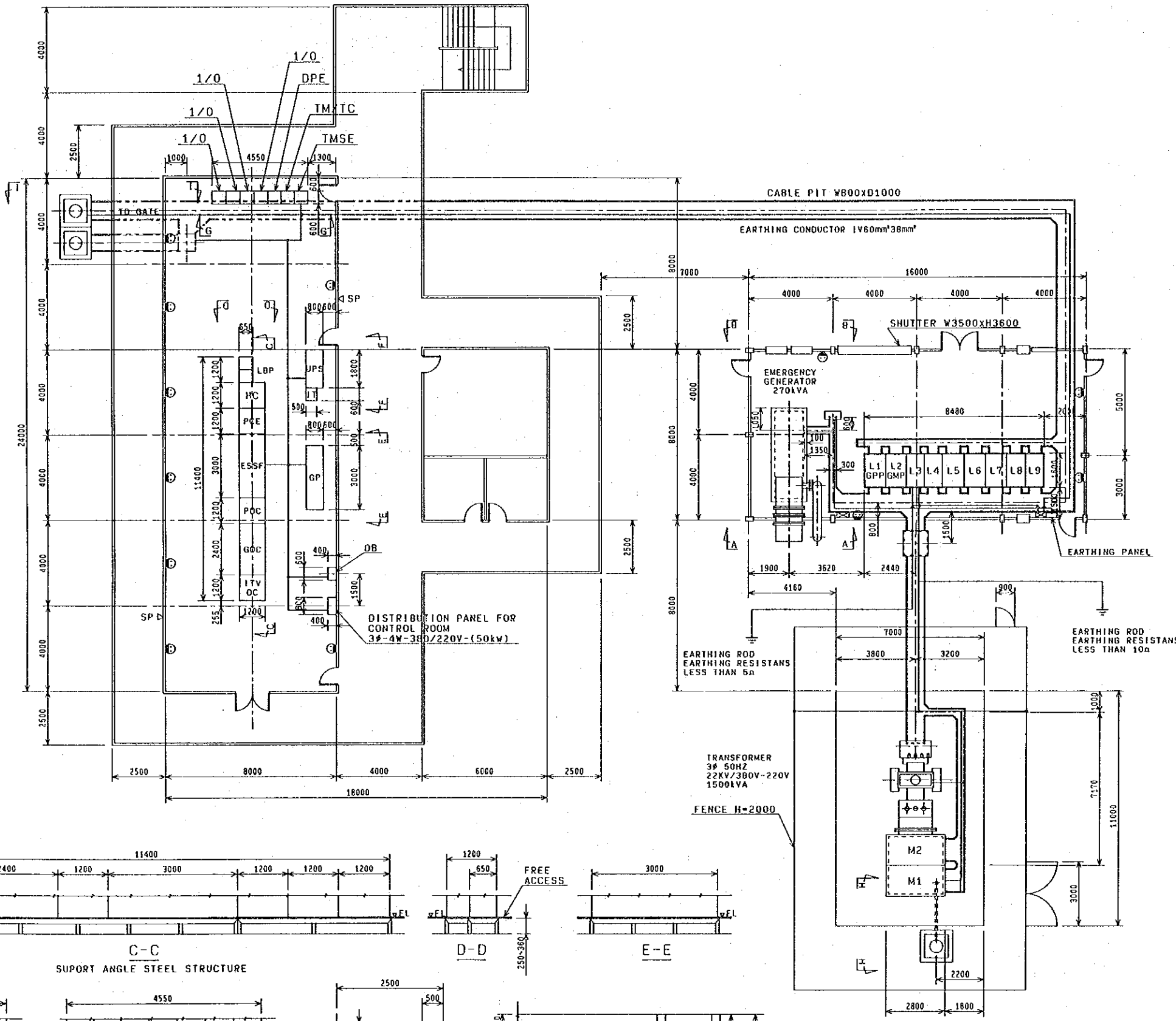


D-D

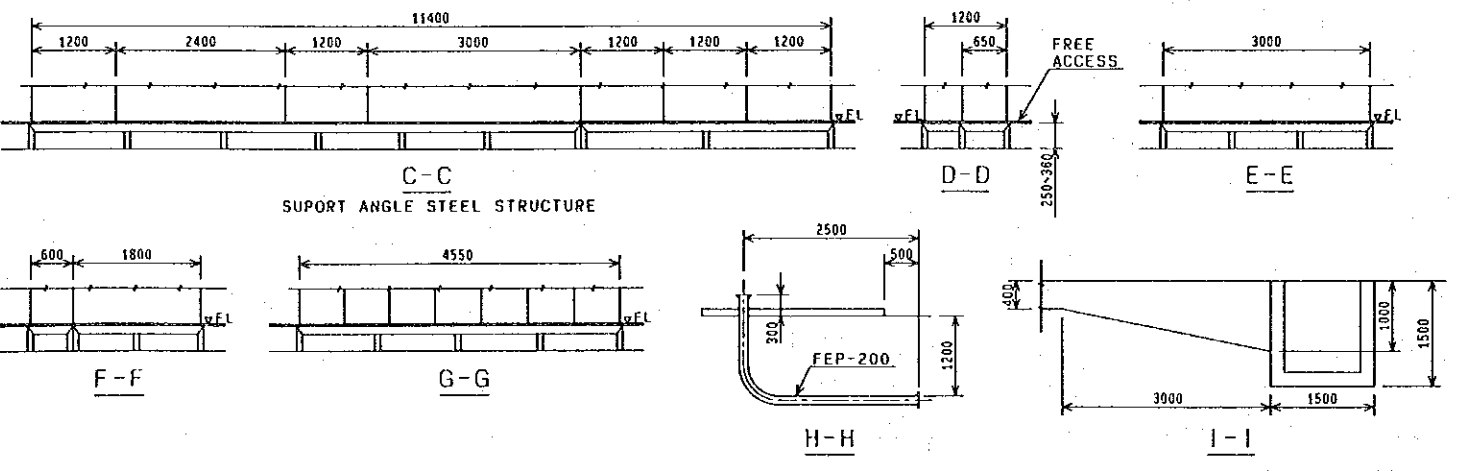
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES	
INSTALLATION OF ITV	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1027	



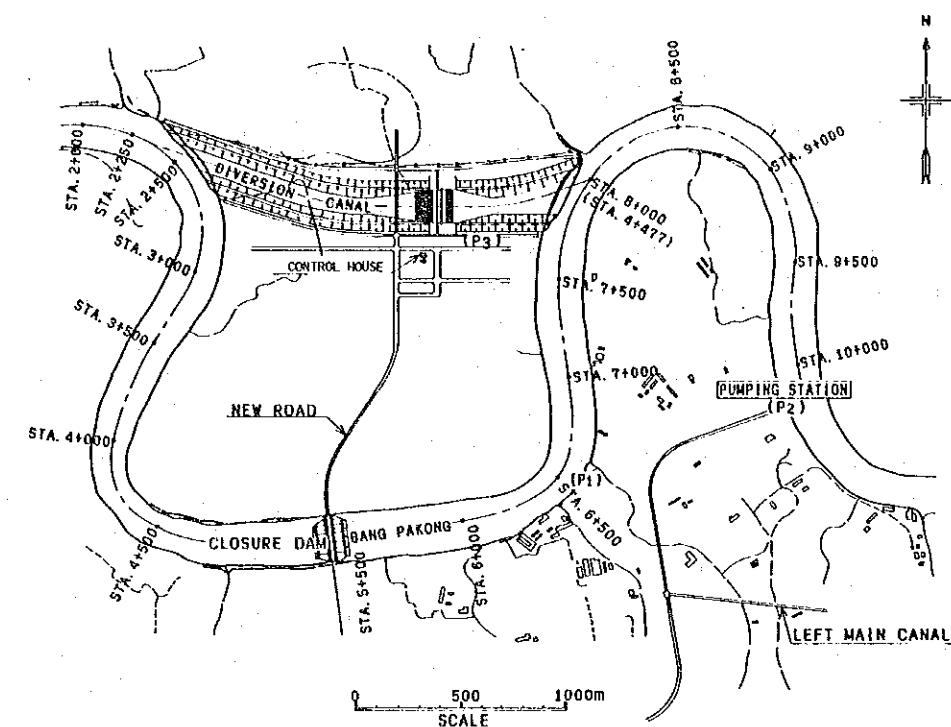
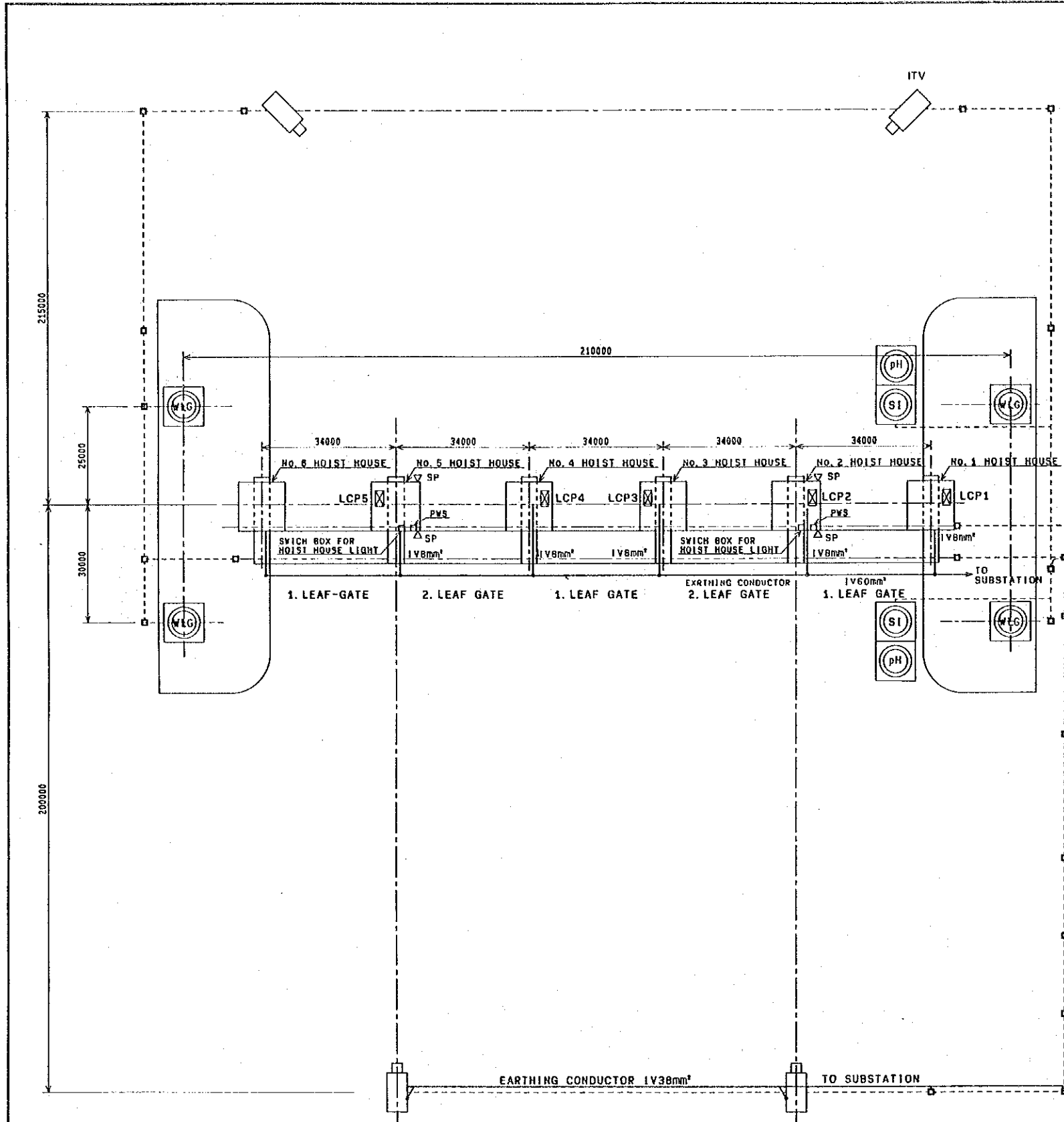
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES 22KV TERMINATION	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1028	



CABLE-PIT

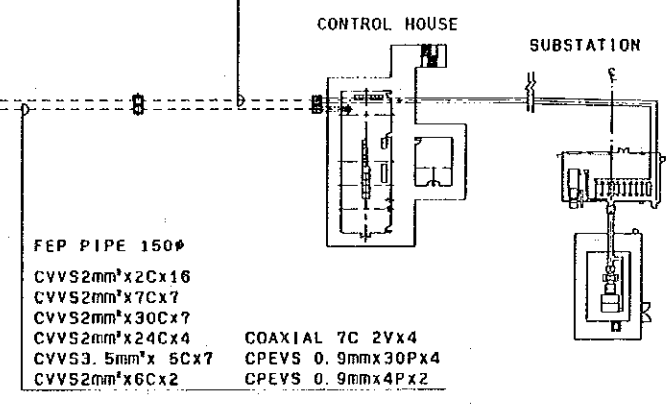


THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES LAYOUT OF No.1 SUBSTATION & CONTROL HOUSE	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1029	



KEY PLAN

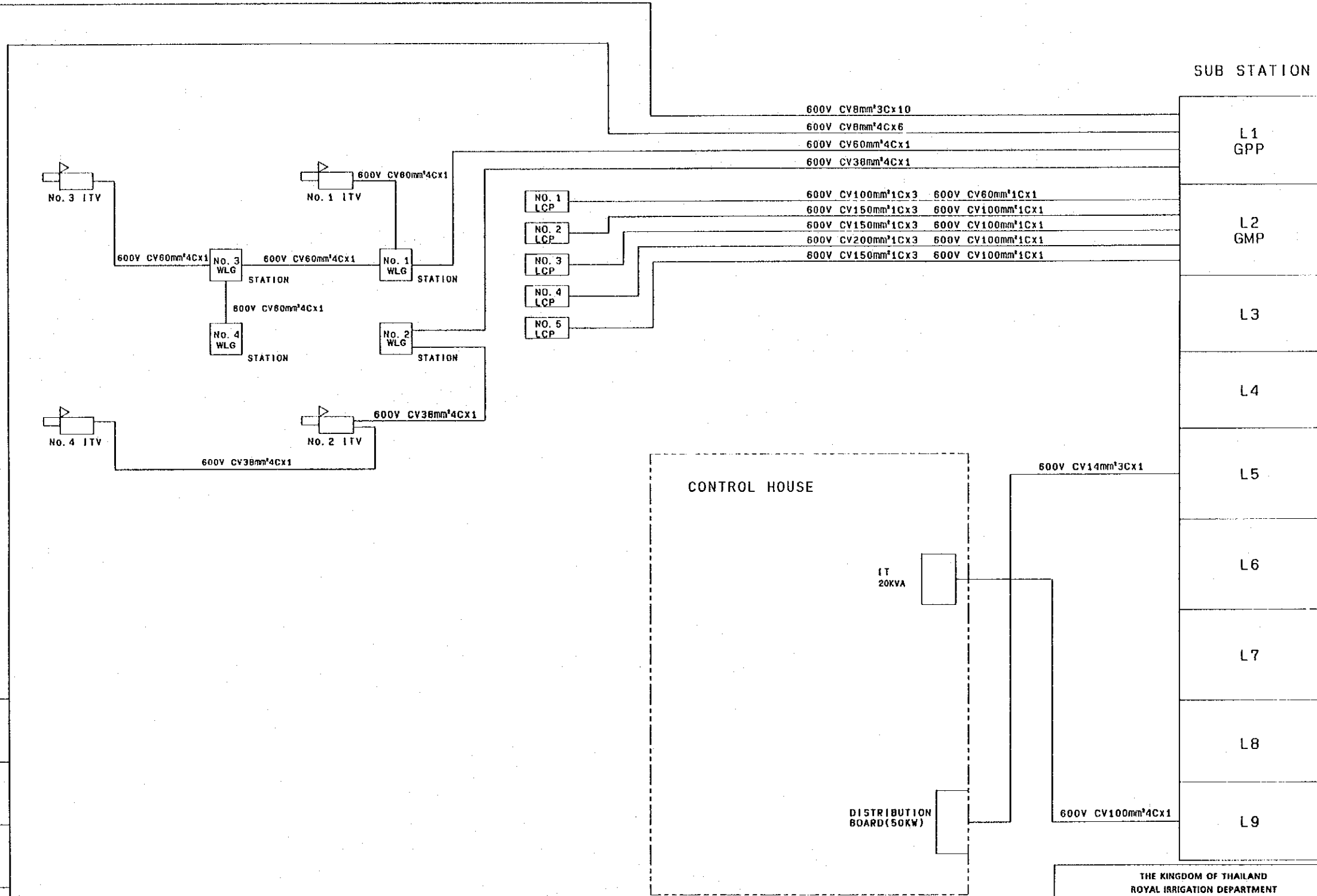
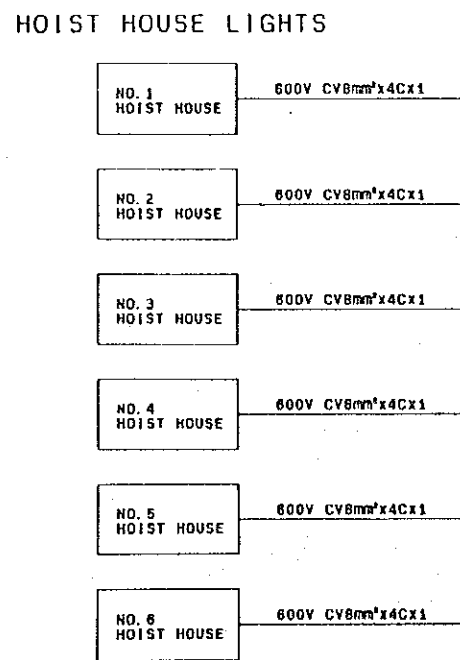
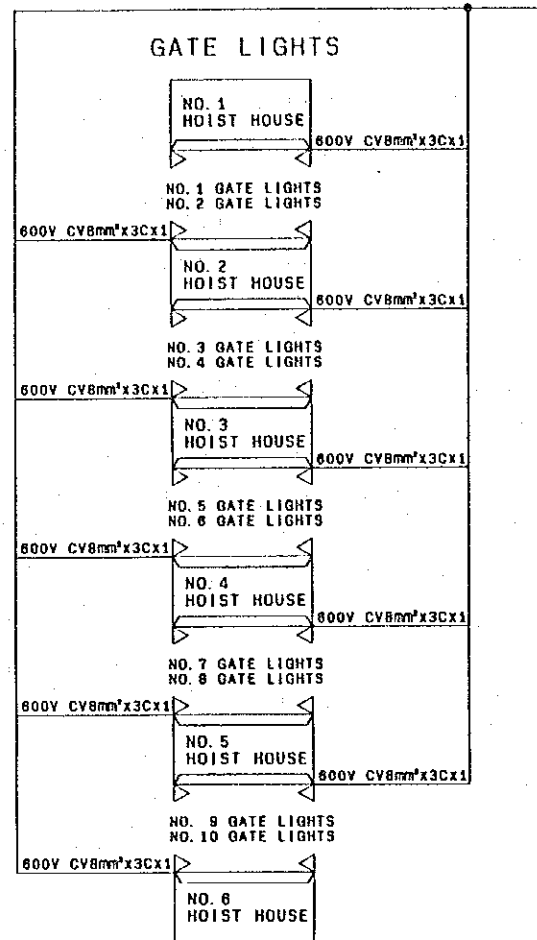
- FEP PIPE 150φ
- CV 8mm²×3C×10
 - CV 8mm²×4C×6
 - CV 60mm²×1C×1
 - CV 60mm²×4C×1
 - CV 60mm²×3C×1
 - CV 38mm²×4C×1
 - CV100mm²×3C×2
 - CV200mm²×1C×3
 - CV150mm²×1C×9
 - CV100mm²×1C×7
 - 1V60mm²×1
 - 1V 38mm²×1



- FEP PIPE 150φ
- CVVS2mm²×2C×16
 - CVVS2mm²×7C×7
 - CVVS2mm²×30C×7
 - CVVS2mm²×24C×4
 - CVVS3.5mm²×5C×7
 - CVVS2mm²×6C×2
 - COAXIAL 7C 2V×4
 - CPEVS 0.9mm×30P×4
 - CPEVS 0.9mm×4P×2

ROAD LIGHTINGS

THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES KEY PLAN OF CABLING SYSTEM	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF - 1030	

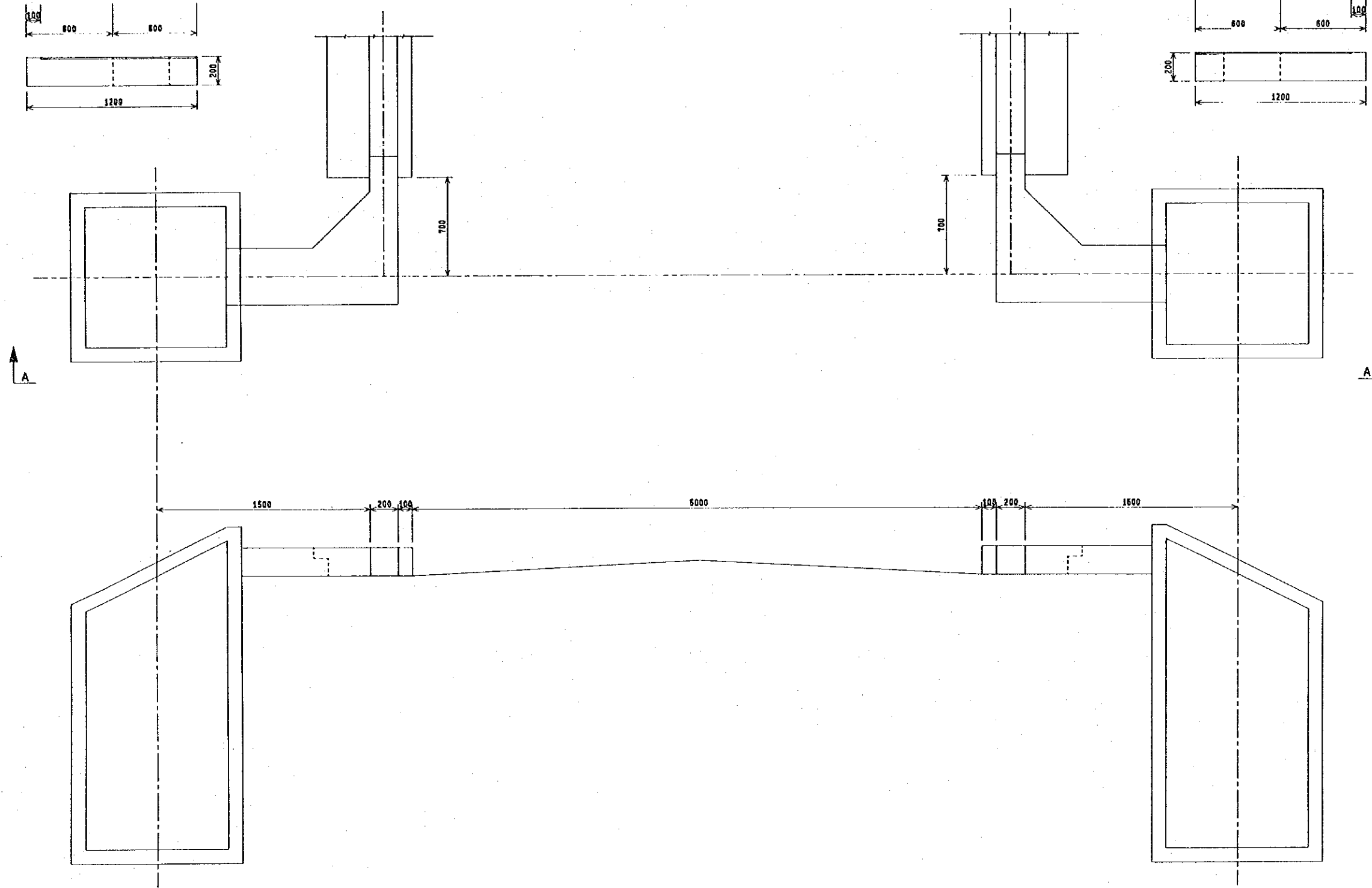
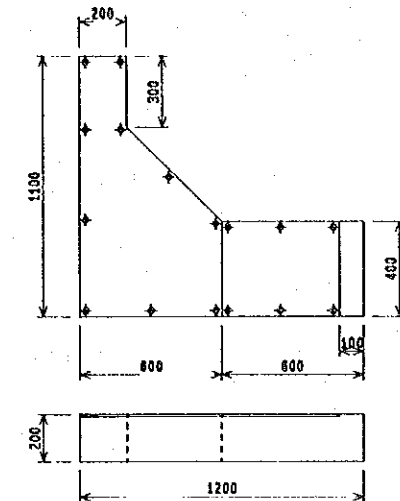
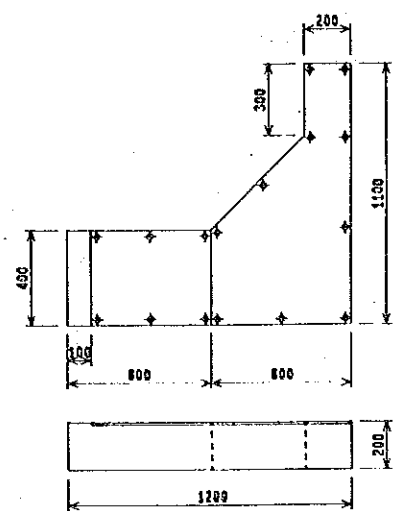


THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES WIRING OF POWER CABLE SYSTEM	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1031	

NO	CABLE SPE' C	Q' TY	FROM	TO
1	CV 100mm ² x1C	3	GMP	NO. 1 LCP
2	CV 60mm ² x1C	1	GMP	NO. 1 LCP
3	CVVS 2mm ² x2C	2	1/0	NO. 1 LCP
4	CVVS 2mm ² x7C	1	1/0	NO. 1 LCP
5	CVVS 2mm ² x30C	1	1/0	NO. 1 LCP
6	CVVS 3.5mm ² x5C	1	1/0	NO. 1 OPENIG GAUGE
7	CV 150mm ² x1C	3	GMP	NO. 2 LCP
8	CV 100mm ² x1C	1	GMP	NO. 2 LCP
9	CVVS 2mm ² x2C	4	1/0	NO. 2 LCP
10	CVVS 2mm ² x7C	2	1/0	NO. 2 LCP
11	CVVS 2mm ² x30C	2	1/0	NO. 2 LCP
12	CVVS 3.5mm ² x5C	2	1/0	NO. 2 OPENIG GAUGE
13	CV 150mm ² x1C	3	GMP	NO. 3 LCP
14	CV 100mm ² x1C	1	GMP	NO. 3 LCP
15	CVVS 2mm ² x2C	2	1/0	NO. 3 LCP
16	CVVS 2mm ² x7C	1	1/0	NO. 3 LCP
17	CVVS 2mm ² x30C	1	1/0	NO. 3 LCP
18	CVVS 3.5mm ² x5C	1	1/0	NO. 3 OPENIG GAUGE
19	CV 200mm ² x1C	3	GMP	NO. 4 LCP
20	CV 100mm ² x1C	1	GMP	NO. 4 LCP
21	CVVS 2mm ² x2C	1	1/0	NO. 4 LCP
22	CVVS 2mm ² x7C	2	1/0	NO. 4 LCP
23	CVVS 2mm ² x30C	2	1/0	NO. 4 LCP
24	CVVS 3.5mm ² x5C	2	1/0	NO. 4 OPENIG GAUGE
25	CV 150mm ² x1C	3	GMP	NO. 5 LCP
26	CV 100mm ² x1C	1	GMP	NO. 5 LCP
27	CVVS 2mm ² x2C	2	1/0	NO. 5 LCP
28	CVVS 2mm ² x7C	1	1/0	NO. 5 LCP
29	CVVS 3.5mm ² x5C	1	1/0	NO. 5 OPENIG GAUGE
30	CPEVS 0.9φ-30P	1	1/0	NO. 1 WL STATION
31	CPEVS 0.9φ-30P	1	1/0	NO. 2 WL STATION
32	CPEVS 0.9φ-30P	1	1/0	NO. 3 WL STATION
33	CPEVS 0.9φ-30P	1	1/0	NO. 4 WL STATION
34	CVVS 2mm ² x2C	1	1/0	NO. 1 SI
35	CVVS 2mm ² x2C	1	1/0	NO. 2 SI
36	CVVS 2mm ² x6C	1	1/0	NO. 1 PHG
37	CVVS 2mm ² x6C	1	1/0	NO. 2 PHG
38	7C-2V	1	ITV MONITER PANEL	NO. 1 ITV
39	CVVS 2mm ² x24C	1	ITV MONITER PANEL	NO. 1 ITV
40	CV 60mm ² x4C	1	GPP	NO. 1 WL STATION

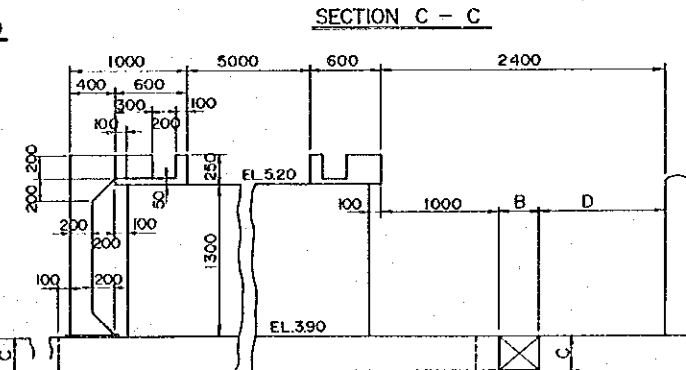
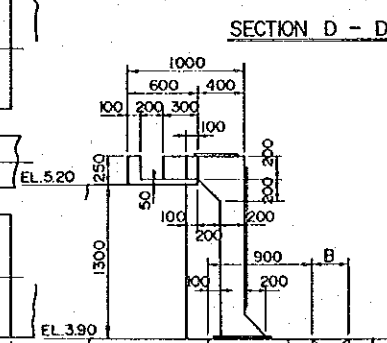
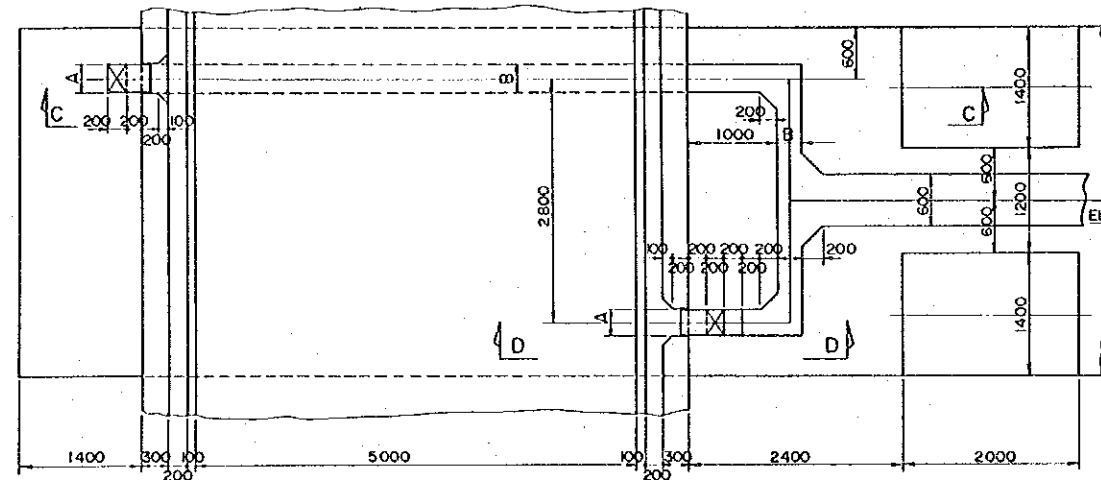
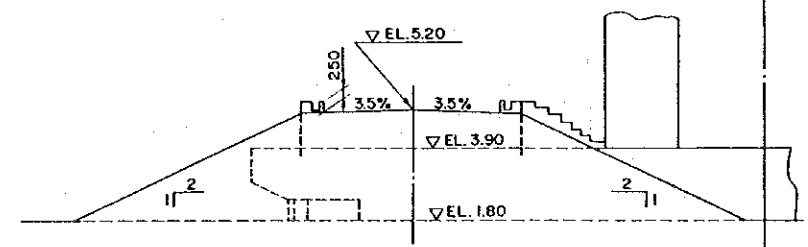
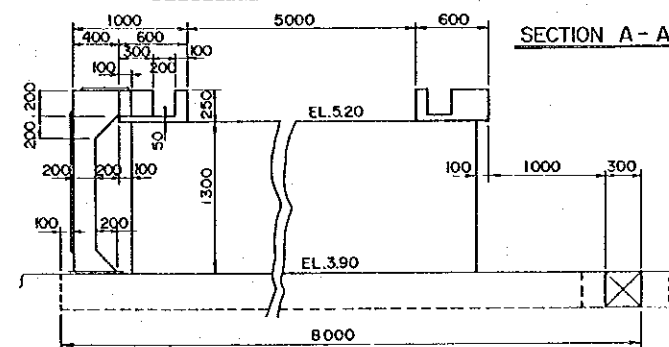
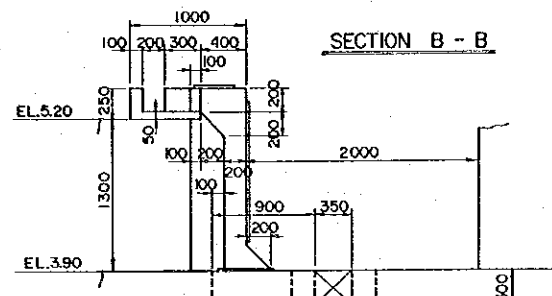
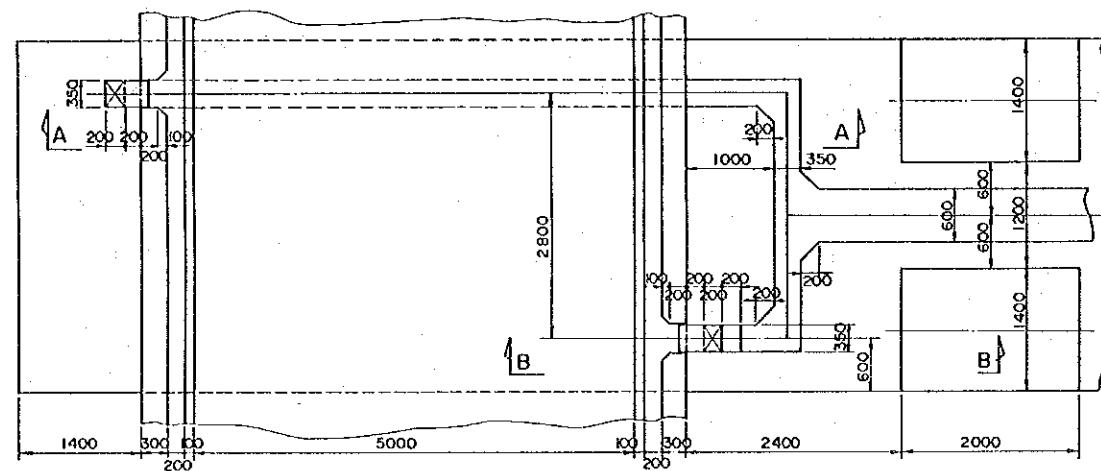
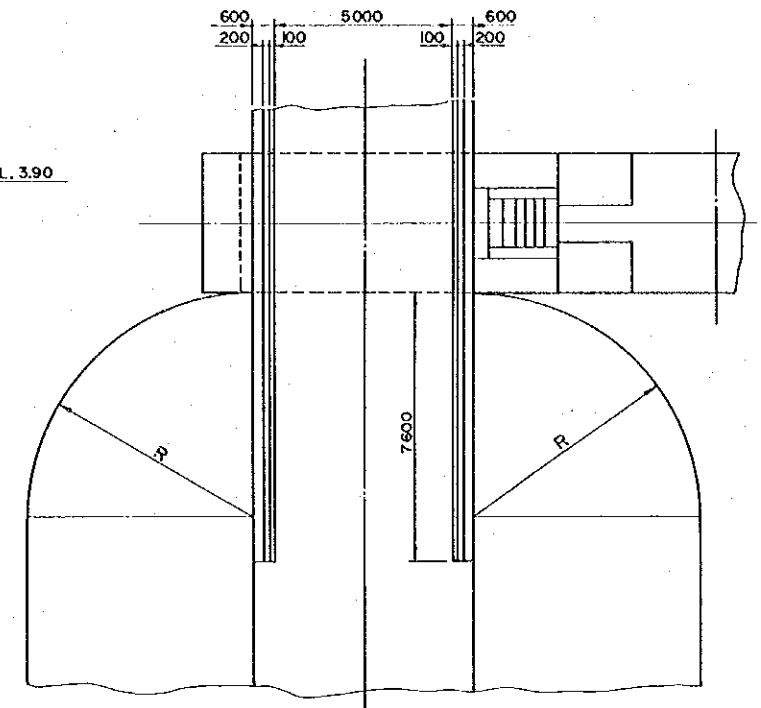
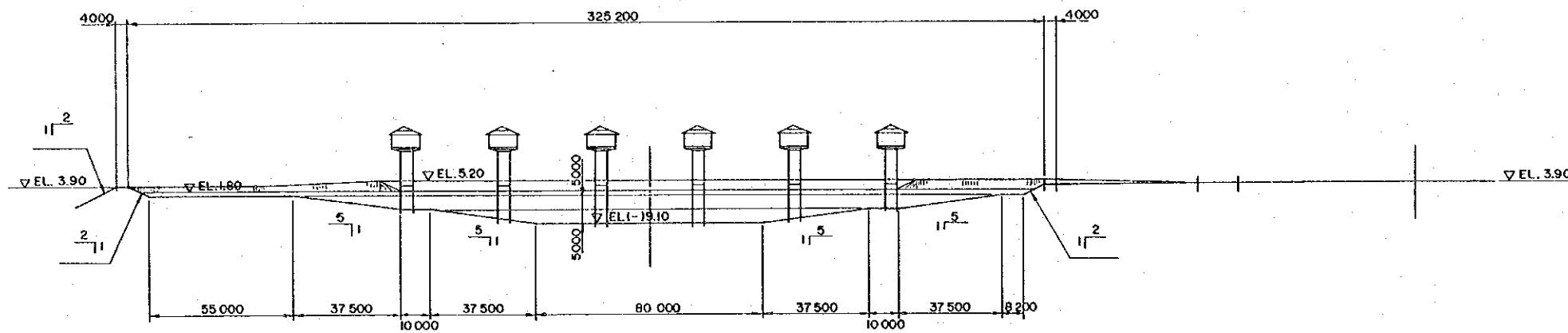
NO	CABLE SPE' C	Q' TY	FROM	TO
41	CV 60mm ² x4C	1	NO. 1 WL STATION	NO. 1 ITV
42	7C-2V	1	ITV MONITER PANEL	NO. 2 ITV
43	CVVS 2mm ² x24C	1	ITV MONITER PANEL	NO. 2 ITV
44	CV 38mm ² x4C	1	GPP	NO. 2 WL STATION
45	7C-2V	1	ITV MONITER PANEL	NO. 3 ITV
46	CVVS 2mm ² x24C	1	ITV MONITER PANEL	NO. 3 ITV
47	CV 60mm ² x4C	1	NO. 1 WL STATION	NO. 3 WL STATION
48	CV 60mm ² x4C	1	NO. 3 WL STATION	NO. 3 ITV
49	CV 60mm ² x4C	1	NO. 3 WL STATION	NO. 4 WL STATION
50	7C-2V	1	ITV MONITER PANEL	NO. 4 ITV
51	CVVS 2mm ² x24C	1	ITV MONITER PANEL	NO. 4 ITV
52	CV 38mm ² x4C	1	NO. 2 ITV	NO. 4 ITV
53	CV 8mm ² x4C	1	GPP	NO. 1 HOIST HOUSE
54	CV 8mm ² x4C	1	GPP	NO. 2 HOIST HOUSE
55	CV 8mm ² x4C	1	GPP	NO. 3 HOIST HOUSE
56	CV 8mm ² x4C	1	GPP	NO. 4 HOIST HOUSE
57	CV 8mm ² x4C	1	GPP	NO. 5 HOIST HOUSE
58	CV 8mm ² x4C	1	GPP	NO. 6 HOIST HOUSE
59	CV 8mm ² x3C	1	GPP	NO. 1 GATE LIGHT
60	CV 8mm ² x3C	1	GPP	NO. 2 GATE LIGHT
61	CV 8mm ² x3C	1	GPP	NO. 3 GATE LIGHT
62	CV 8mm ² x3C	1	GPP	NO. 4 GATE LIGHT
63	CV 8mm ² x3C	1	GPP	NO. 5 GATE LIGHT
64	CV 8mm ² x3C	1	GPP	NO. 6 GATE LIGHT
65	CV 8mm ² x3C	1	GPP	NO. 7 GATE LIGHT
66	CV 8mm ² x3C	1	GPP	NO. 8 GATE LIGHT
67	CV 8mm ² x3C	1	GPP	NO. 9 GATE LIGHT
68	CV 8mm ² x3C	1	GPP	NO. 10 GATE LIGHT
69	CPEVS 0.9φ-4P	1	PEG	NO. 5 HOIST HOUSE PAGING
70	CPEVS 0.9φ-4P	1	PEG	NO. 2 HOIST HOUSE PAGING

THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES CABLE LIST	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1032	



SECTION A-A

THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES METAL CABLING DUCT TO O/M BRIDGE PIT	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF - 1033	



HOIST HOUSE	A	B	C	D
NO. 3,4,5,6	350	350	300	1050
NO. 1, NO.2	200	200	300	1200

THE KINGDOM OF THAILAND
ROYAL IRRIGATION DEPARTMENT

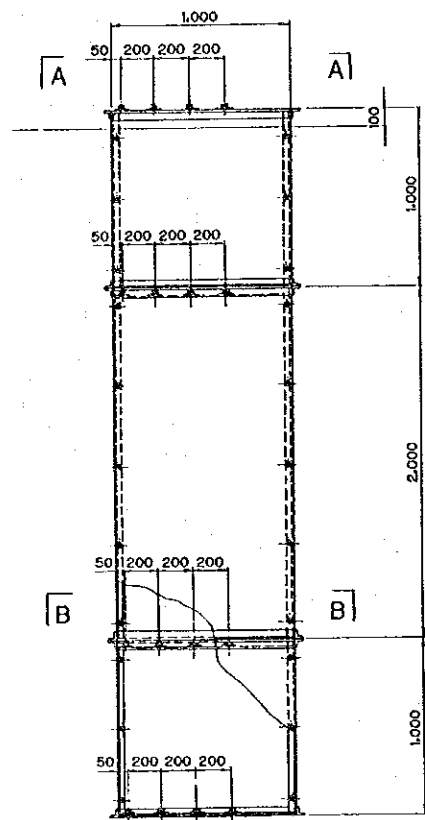
THE BANG PAKONG DIVERSION DAM PROJECT

CONTROL SYSTEM & ELECTRICAL FACILITIES
METAL CABLING DUCT TO
HOIST HOUSE

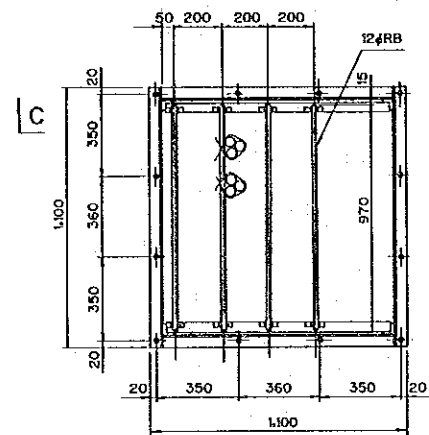
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
SANYU CONSULTANTS INC.

DESIGNED	
TRACED	
CHECKED	
APPROVED	

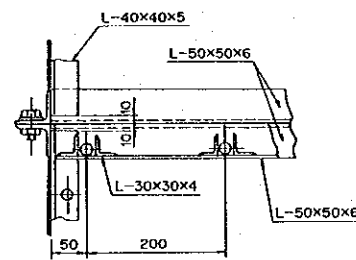
DRAWING NO. CEF-1034



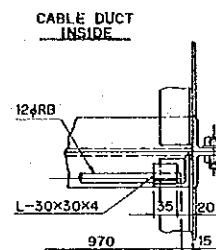
CABLE DUCT DETAIL
SCALE A



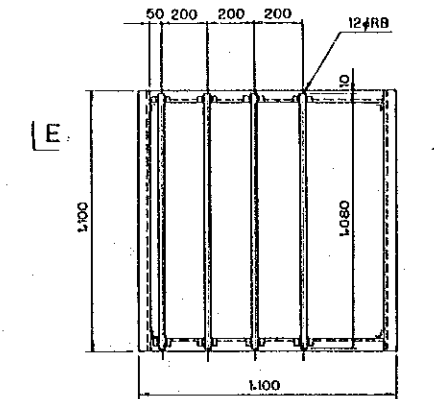
SECTION B-B
SCALE B



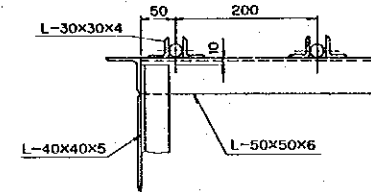
SECTION C-C
SCALE C



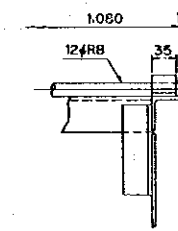
D VIEW
SCALE C



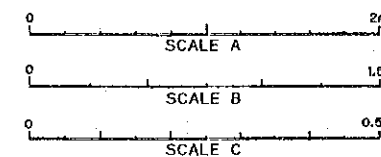
SECTION A-A
SCALE B



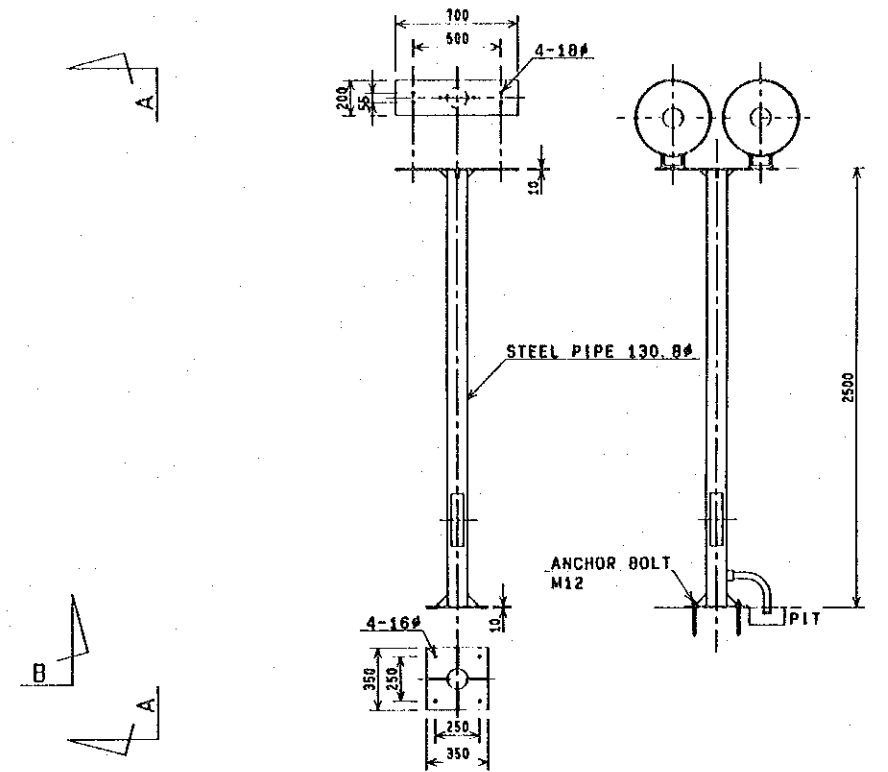
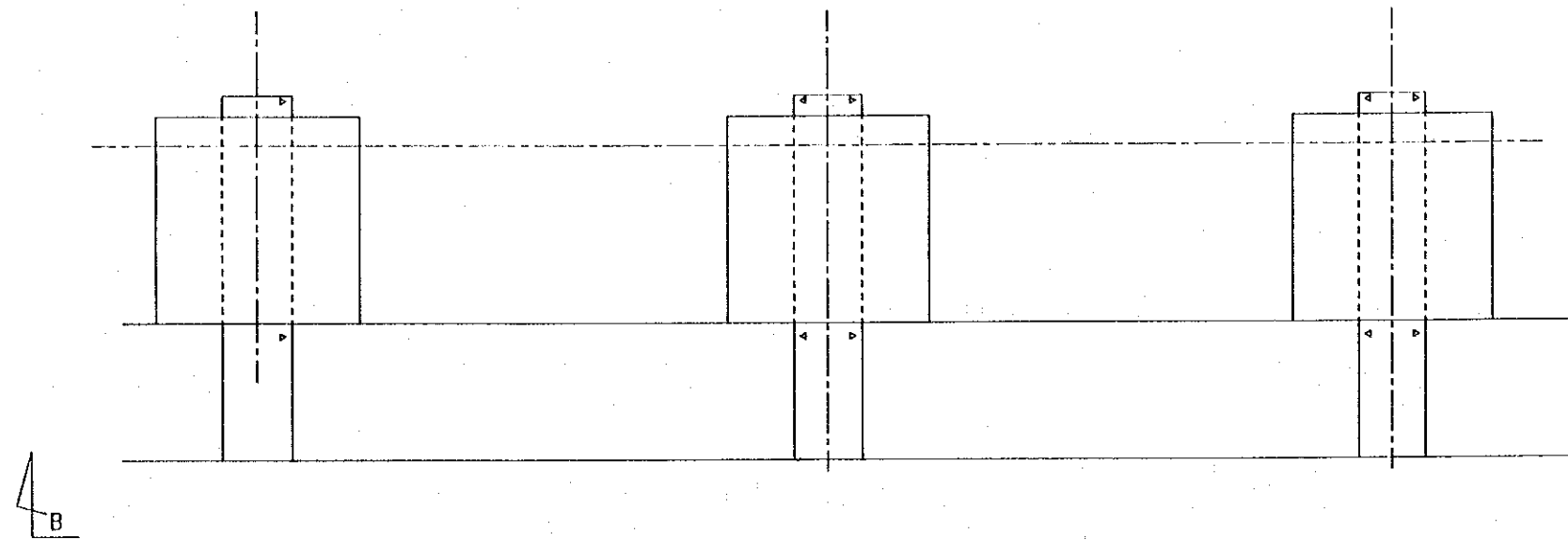
SECTION E-E
SCALE C



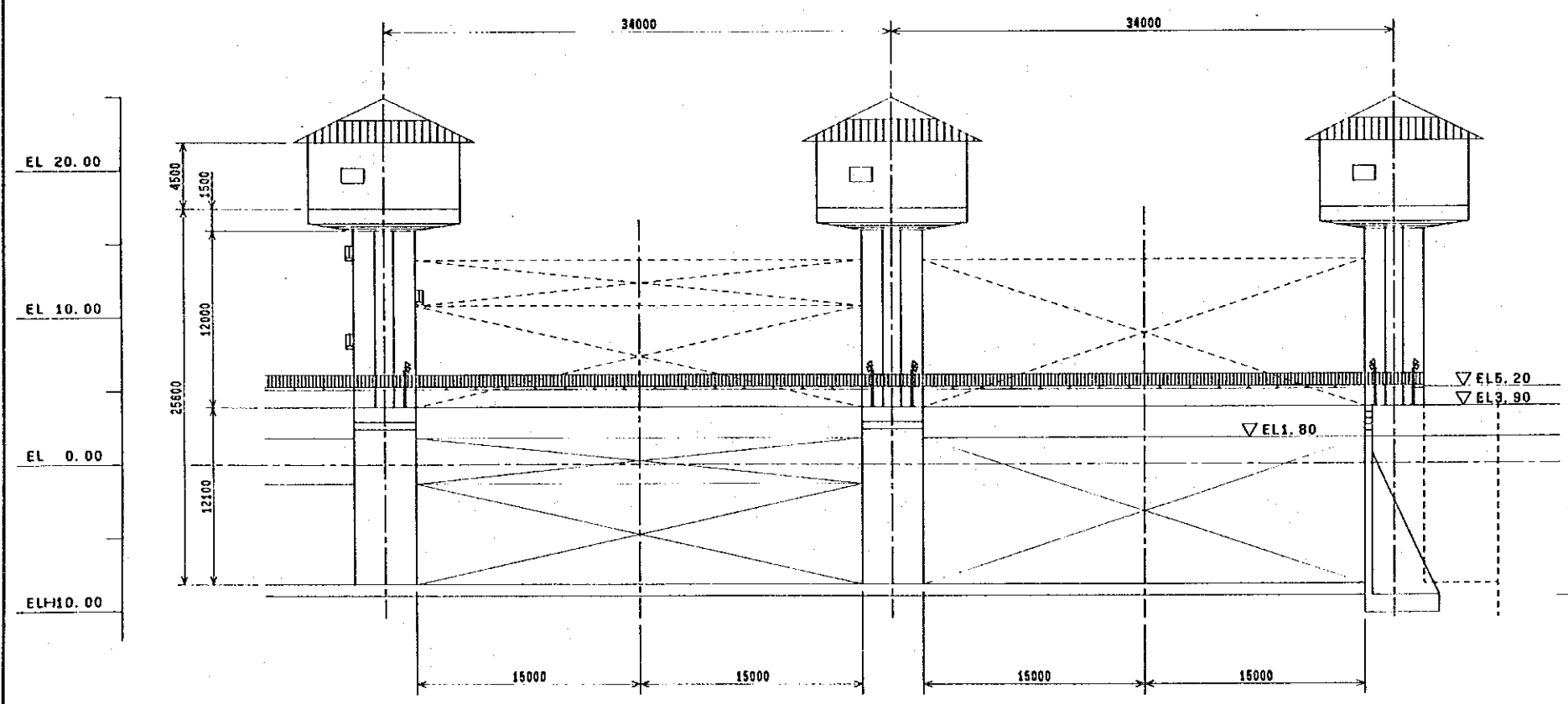
F VIEW
SCALE C



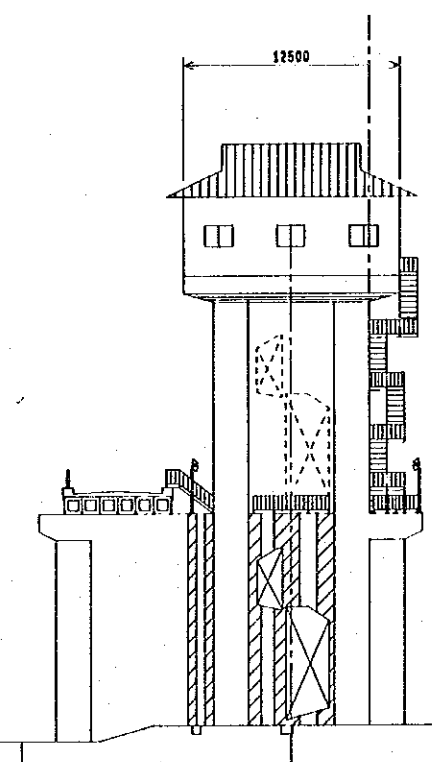
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES METAL CABLE SHAFT TO CONTROL HOUSE	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1035	



LIGHTING POLE

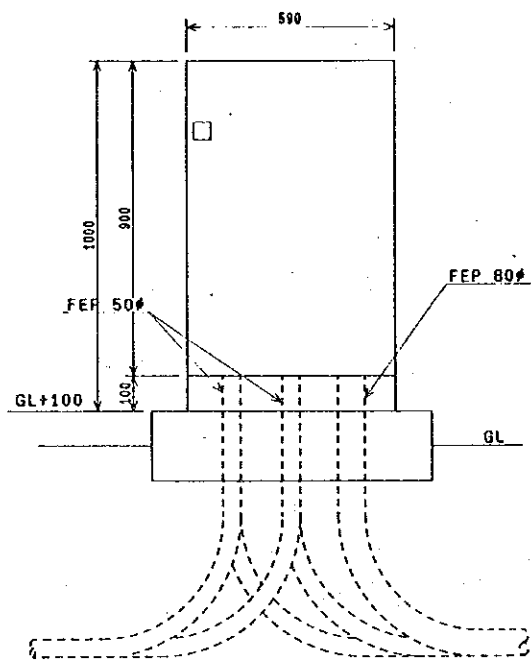
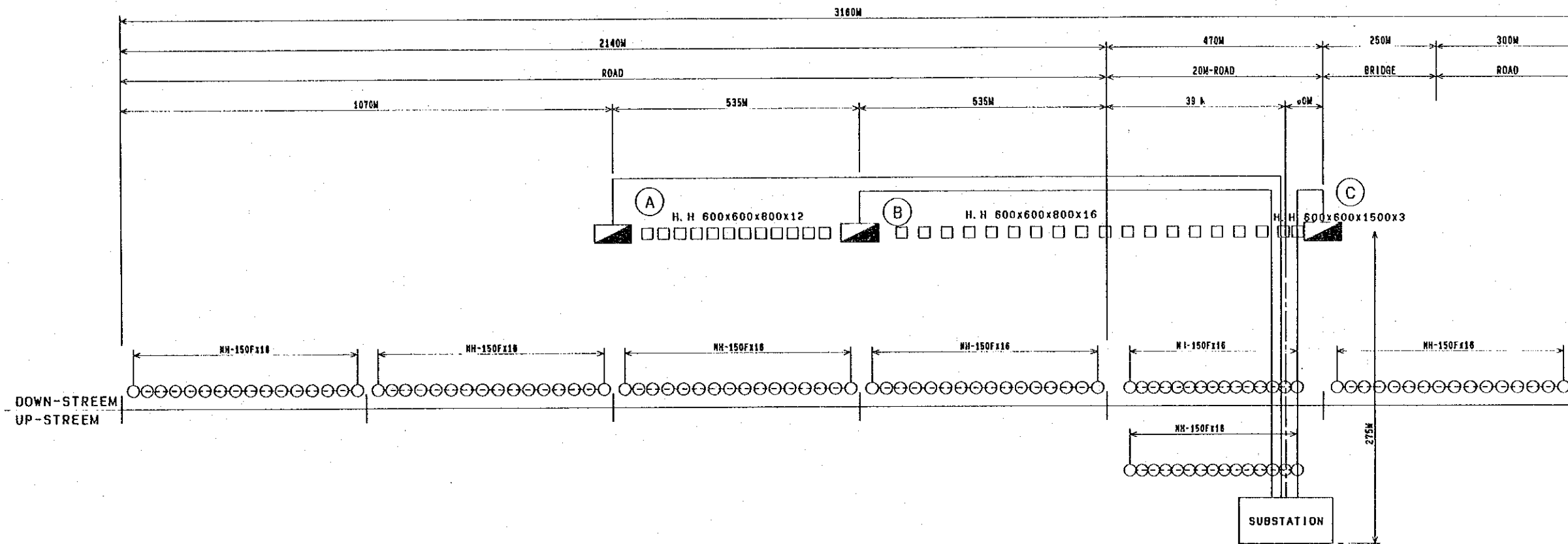


SECTION B-B

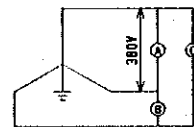
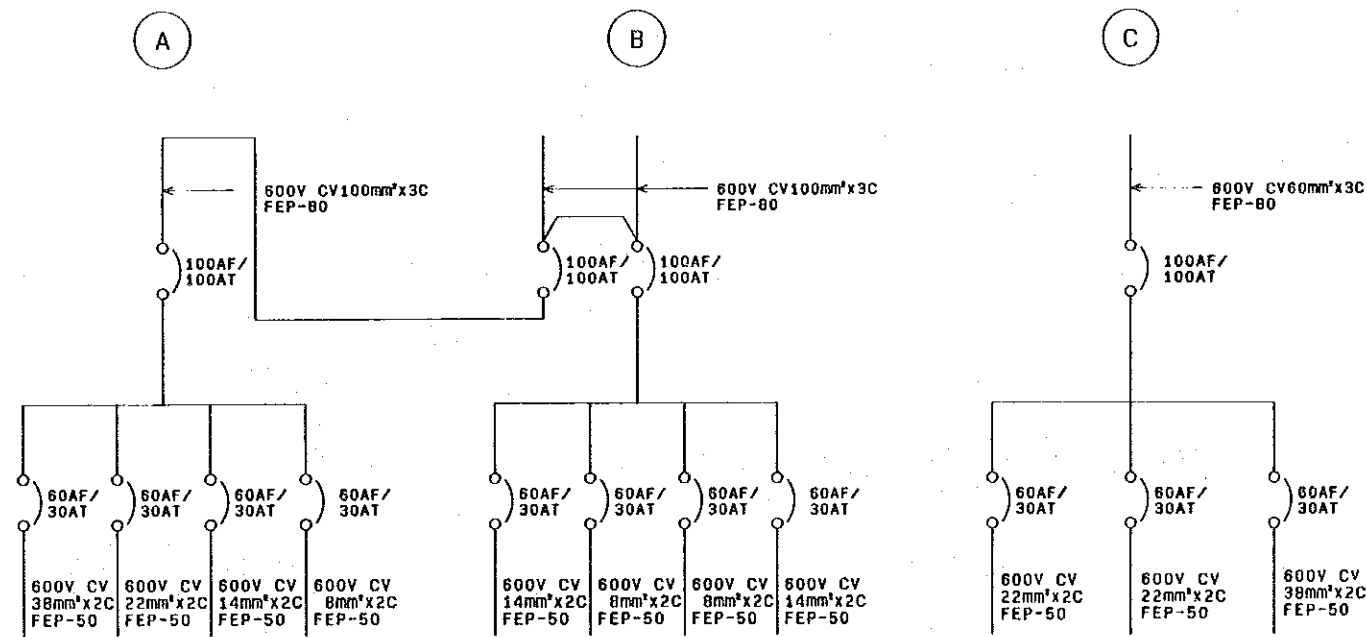


SECTION A-A

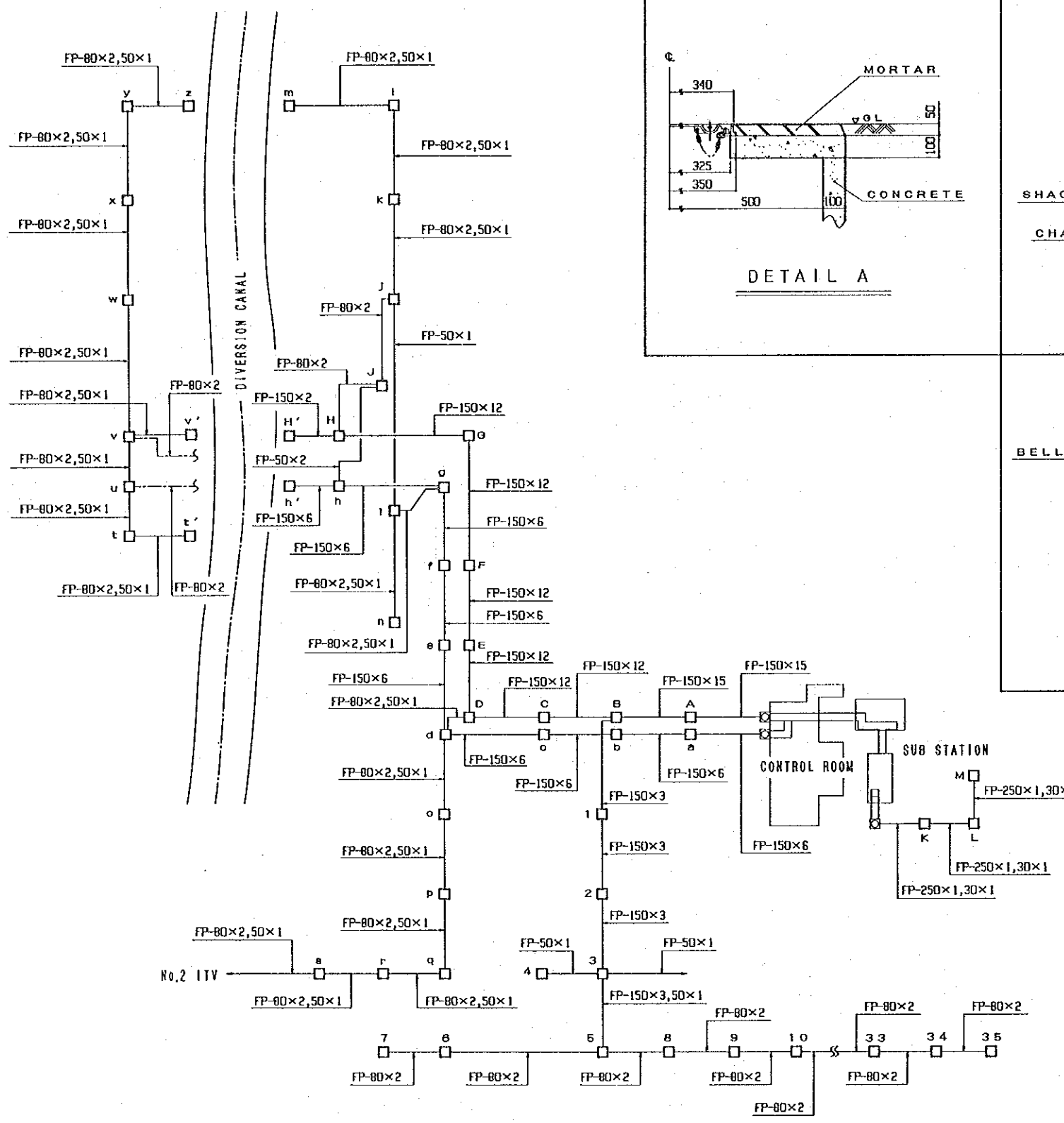
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES GATE LIGHTING	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1036	



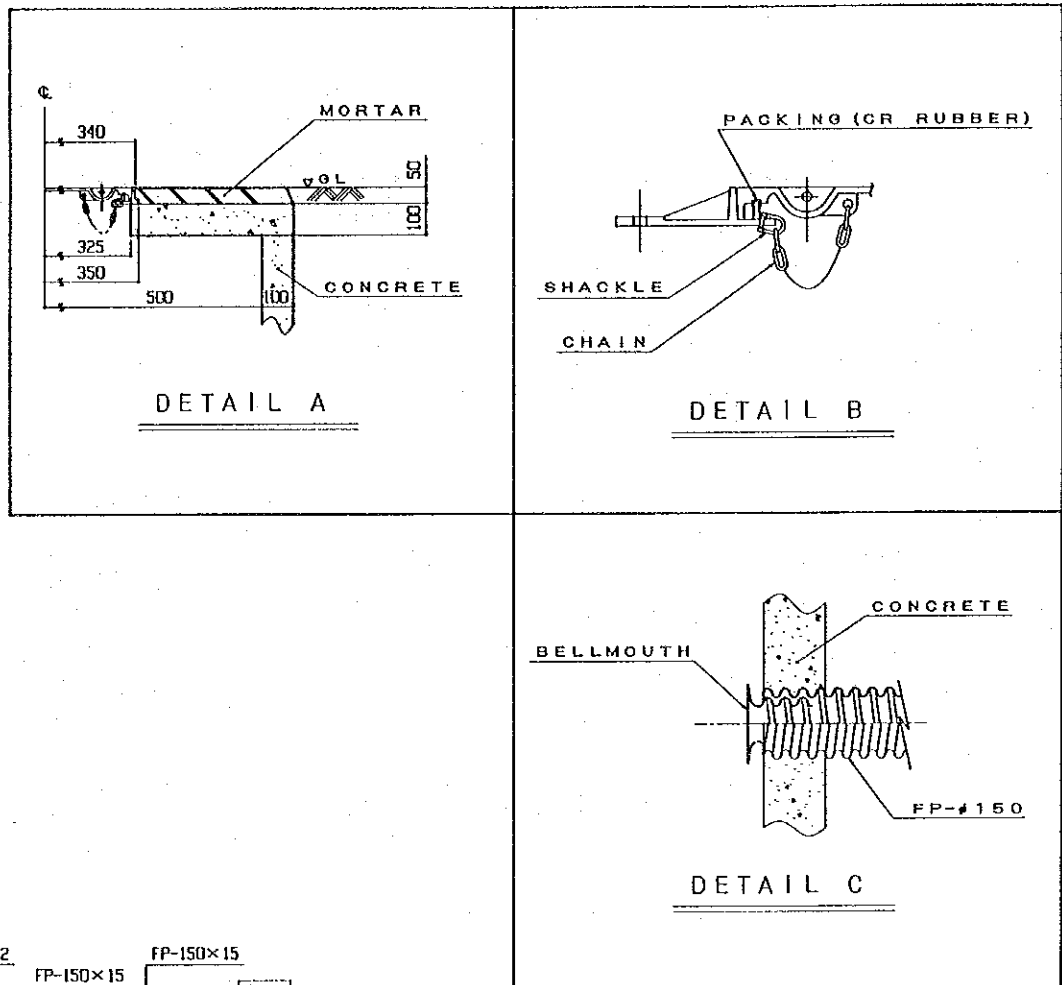
OUT LINE VIEW FOR LIGHTING PANEL



THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES ROAD LIGHTING	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1037	



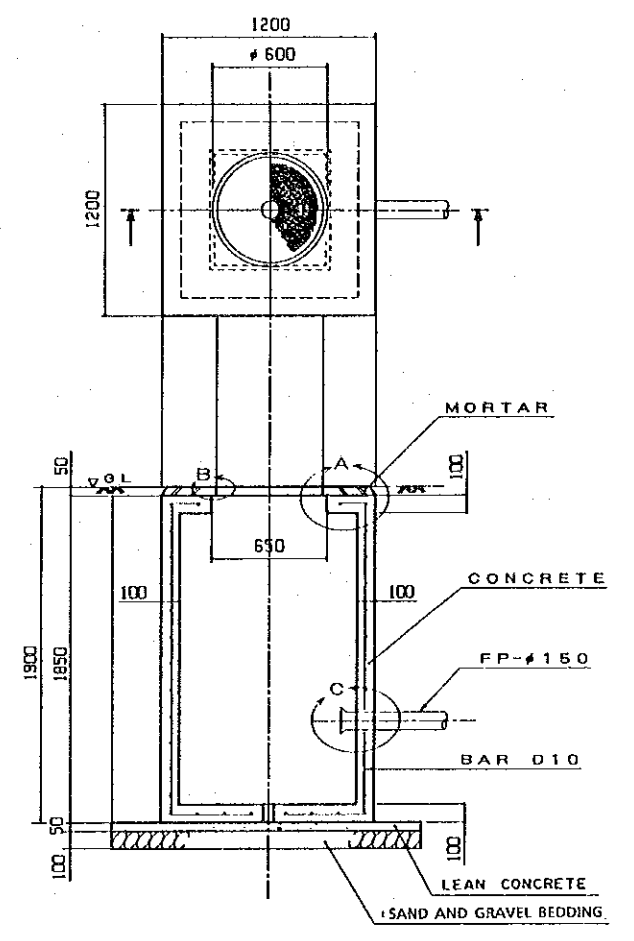
LINE SCHEMATIC FLOW



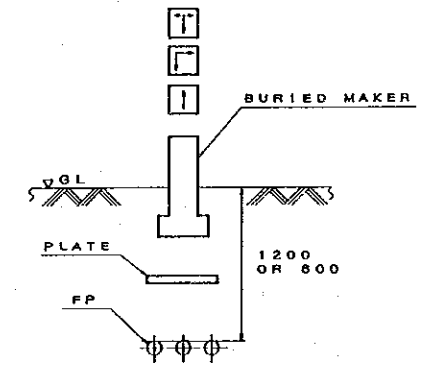
DETAIL A

DETAIL B

DETAIL C

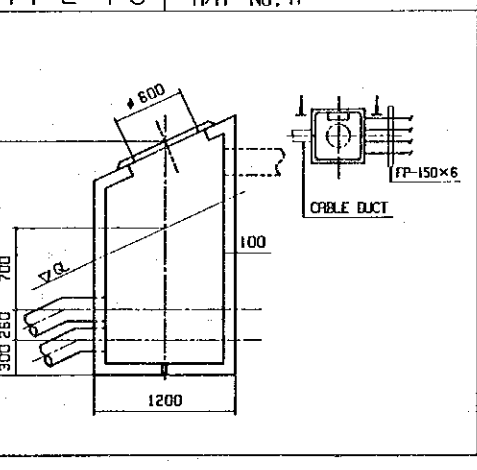
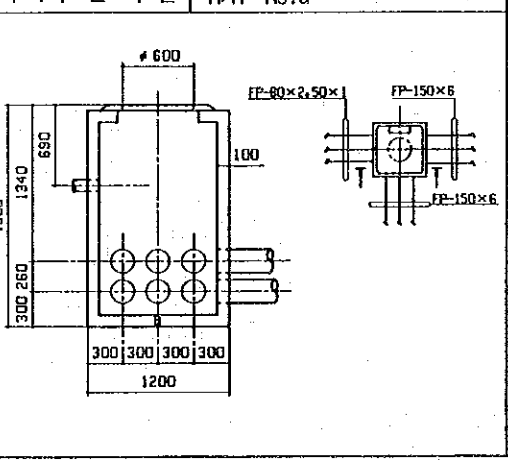
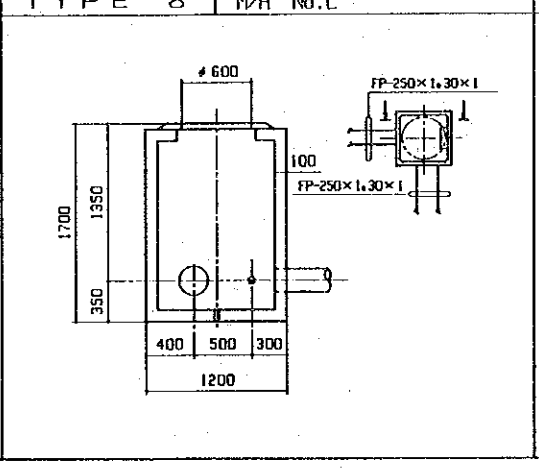
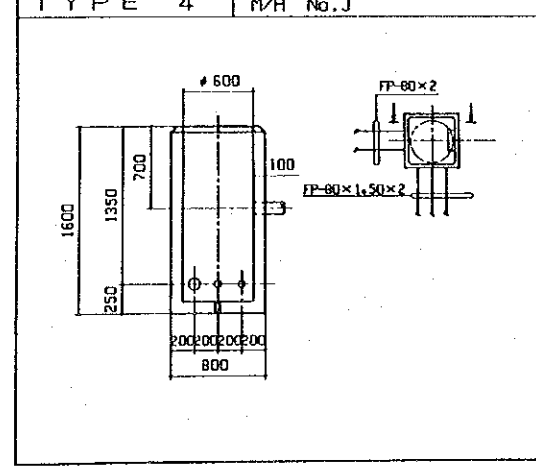
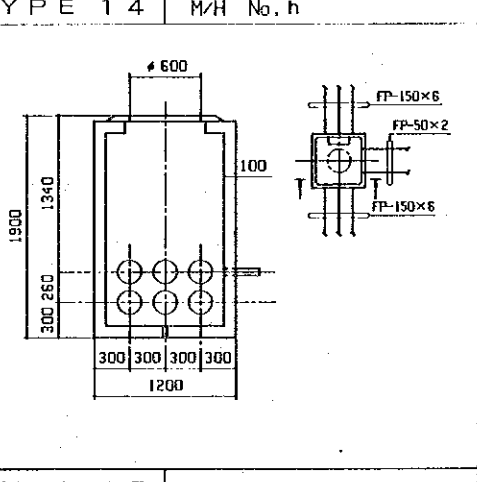
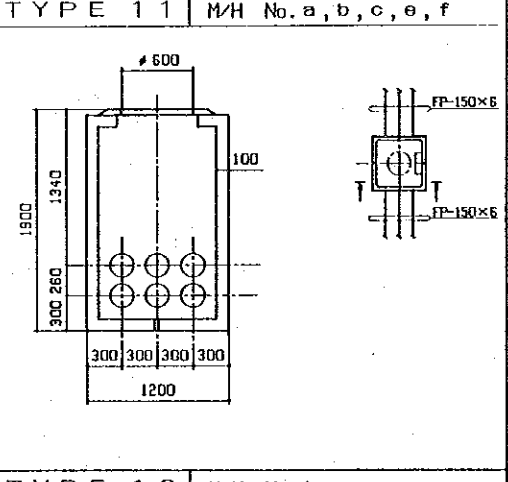
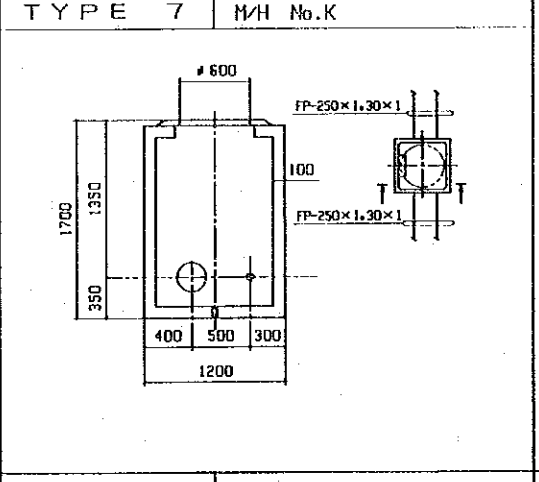
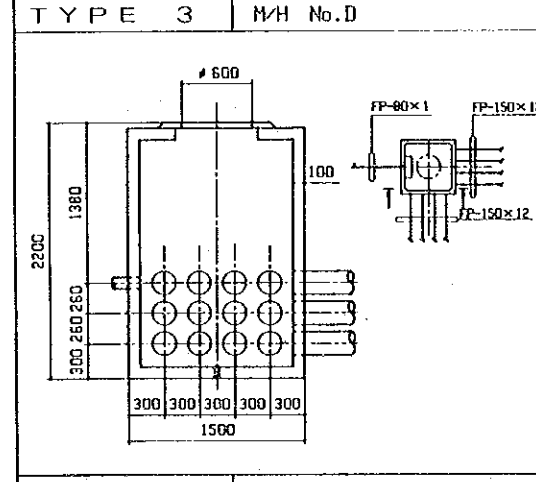
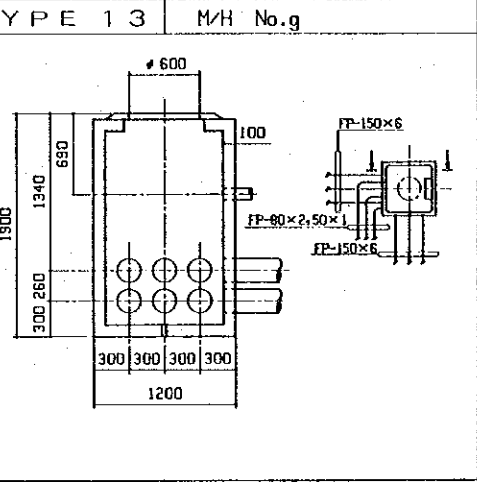
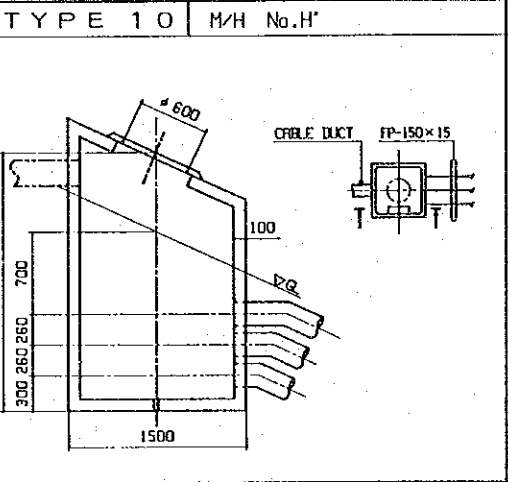
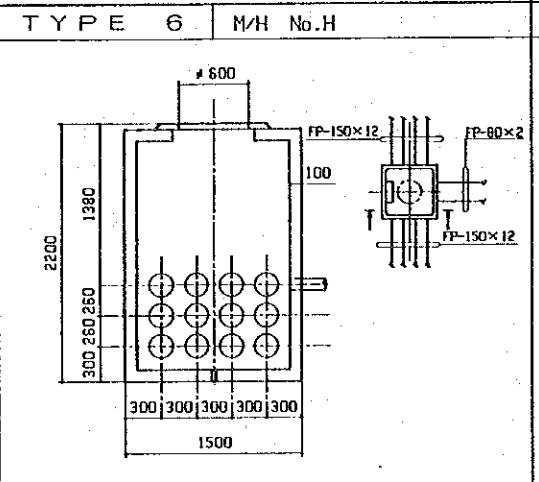
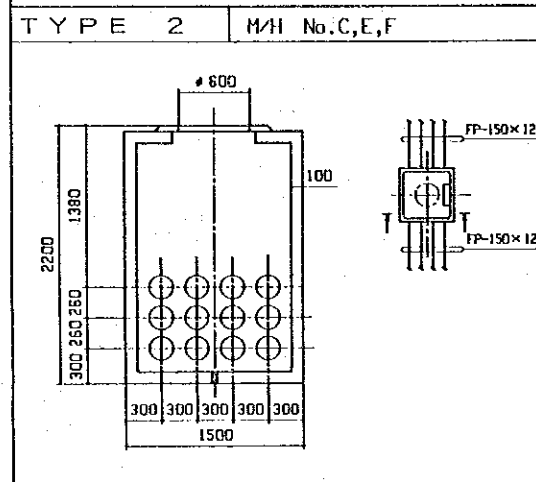
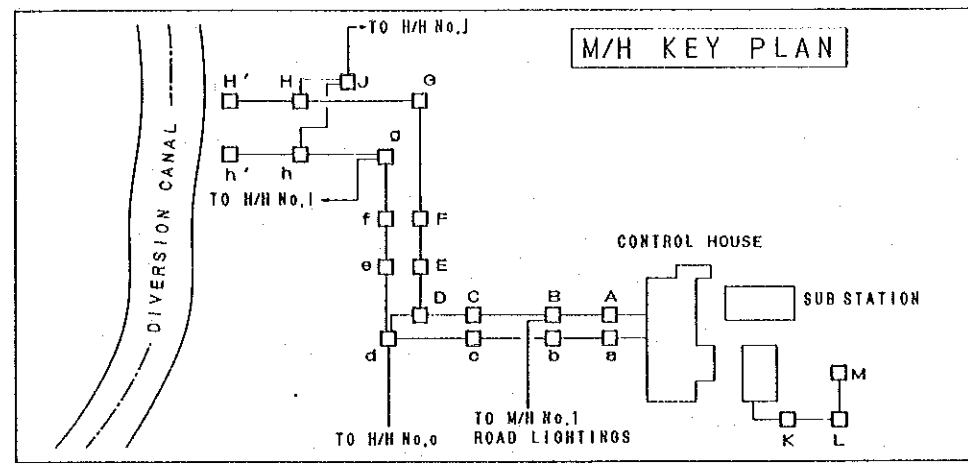
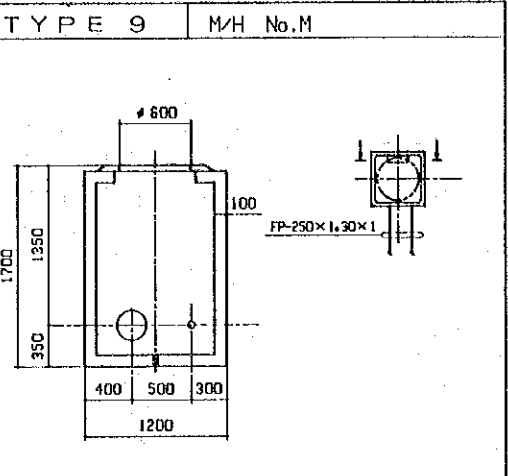
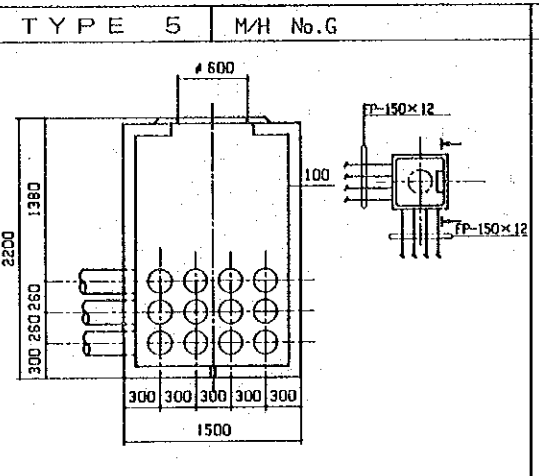
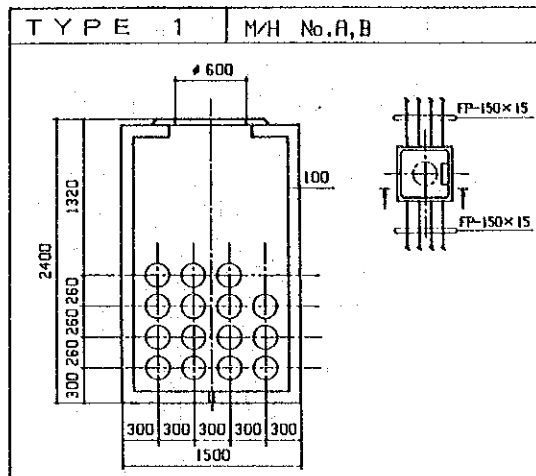


TYPICAL DRAWING OF MANHOLE



TYPICAL DRAWING OF BURIED LINE

THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES LAYOUT OF MANHOLE	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF - 1038	



M/H No.	DIMENSION OF MANHOLE WxHxD (mm)	TYPE No.	REMARK
A	1500x1500x2400	1	
B	1500x1500x2400	1	
C	1500x1500x2200	2	
D	1500x1500x2200	3	
E	1500x1500x2200	2	
F	1500x1500x2200	2	
G	1500x1500x2200	4	
H	1500x1500x2200	5	
H'	1500x1500x2500	10	
J	800x800x1600	6	
K	1200x1200x1700	7	
L	1200x1200x1700	8	
M	1200x1200x1700	9	
a	1200x1200x1900	11	
b	1200x1200x1900	11	
c	1200x1200x1900	11	
d	1200x1200x1900	12	
e	1200x1200x1900	11	
f	1200x1200x1900	11	
g	1200x1200x1900	13	
h	1200x1200x1900	14	
h'	1200x1200x2200	15	

THE KINGDOM OF THAILAND
ROYAL IRRIGATION DEPARTMENT

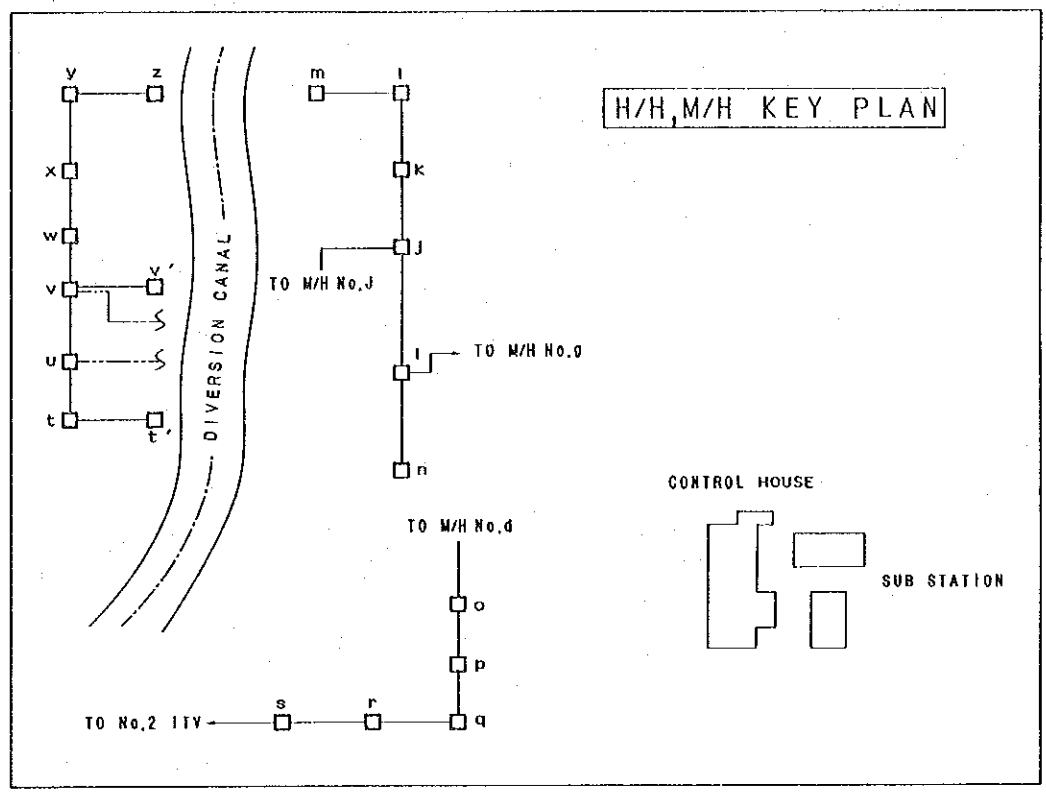
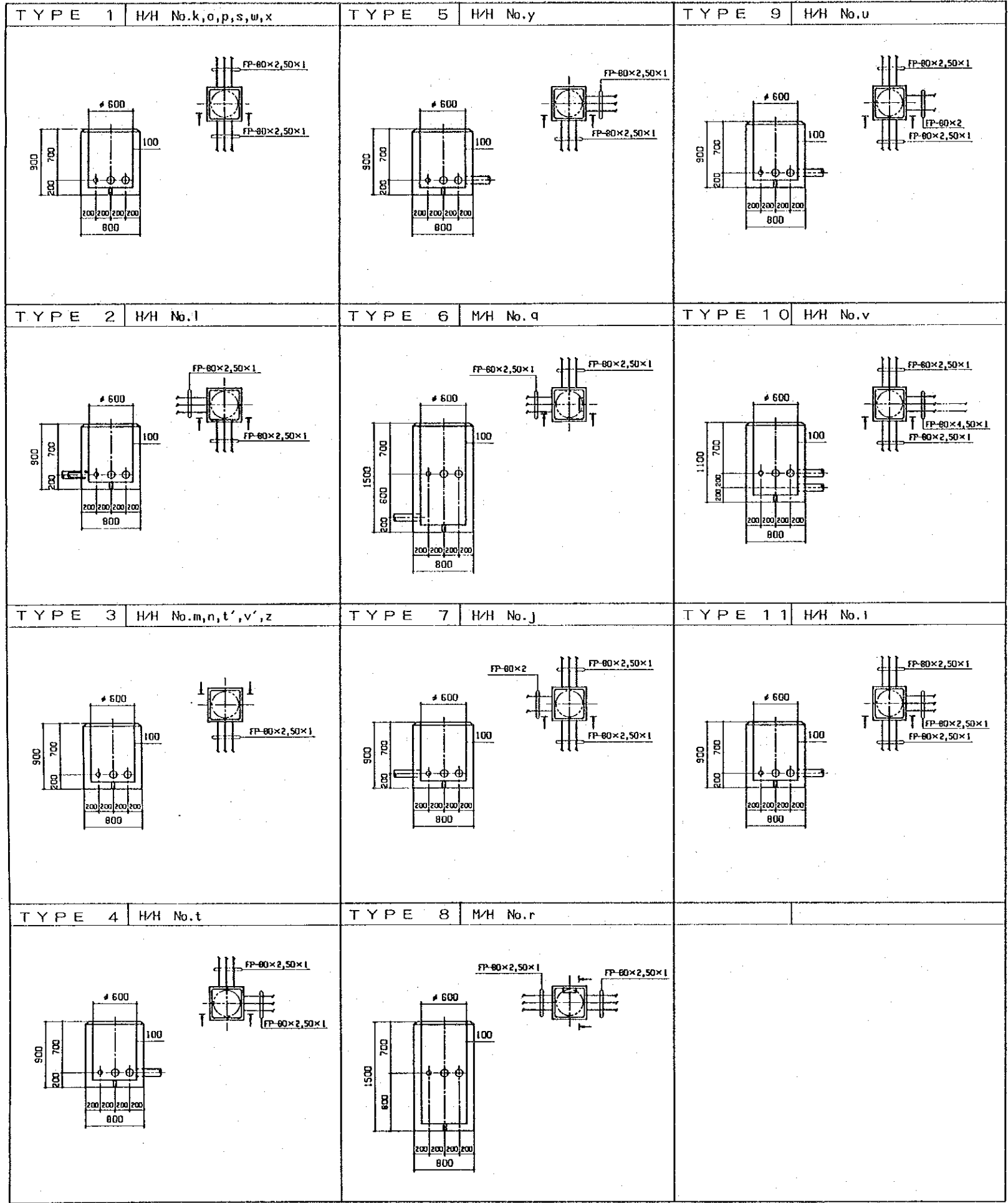
THE BANG PAKONG DIVERSION DAM PROJECT

**CONTROL SYSTEM & ELECTRICAL FACILITIES
TYPICAL DRAWING OF MANHOLE
AND HANDHOLE (1/3)**

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
SANYU CONSULTANTS INC.

DESIGNED	
TRACED	
CHECKED	
APPROVED	

DRAWING NO. CEF-1039



H/H No.	DIMENSION OF HANDHOLE WXHXD (mm)	TYPE No.	REMARK
l	800x800x900	11	
j	800x800x900	7	
k	800x800x900	1	
i	800x800x900	2	
m	800x800x900	3	
n	800x800x900	3	
o	800x800x900	1	
p	800x800x900	1	
s	800x800x900	1	
t	800x800x900	4	
t'	800x800x900	3	
u	800x800x900	9	
v	800x800x1100	10	
v'	800x800x900	3	
w	800x800x900	1	
x	800x800x900	1	
y	800x800x900	5	
z	800x800x900	3	

M/H No.	DIMENSION OF HANDHOLE WXHXD (mm)	TYPE No.	REMARK
q	800x800x1500	6	
r	800x800x1500	8	

THE KINGDOM OF THAILAND
ROYAL IRRIGATION DEPARTMENT

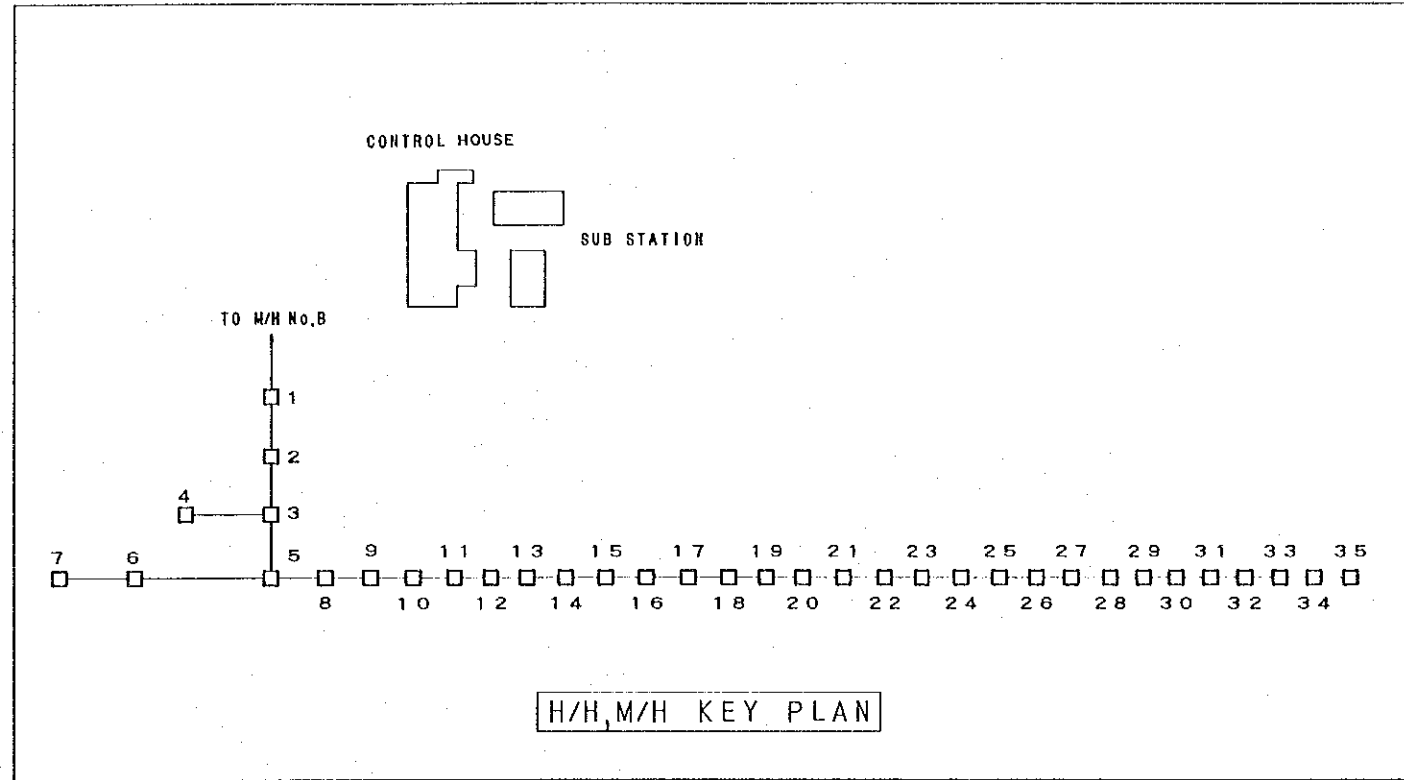
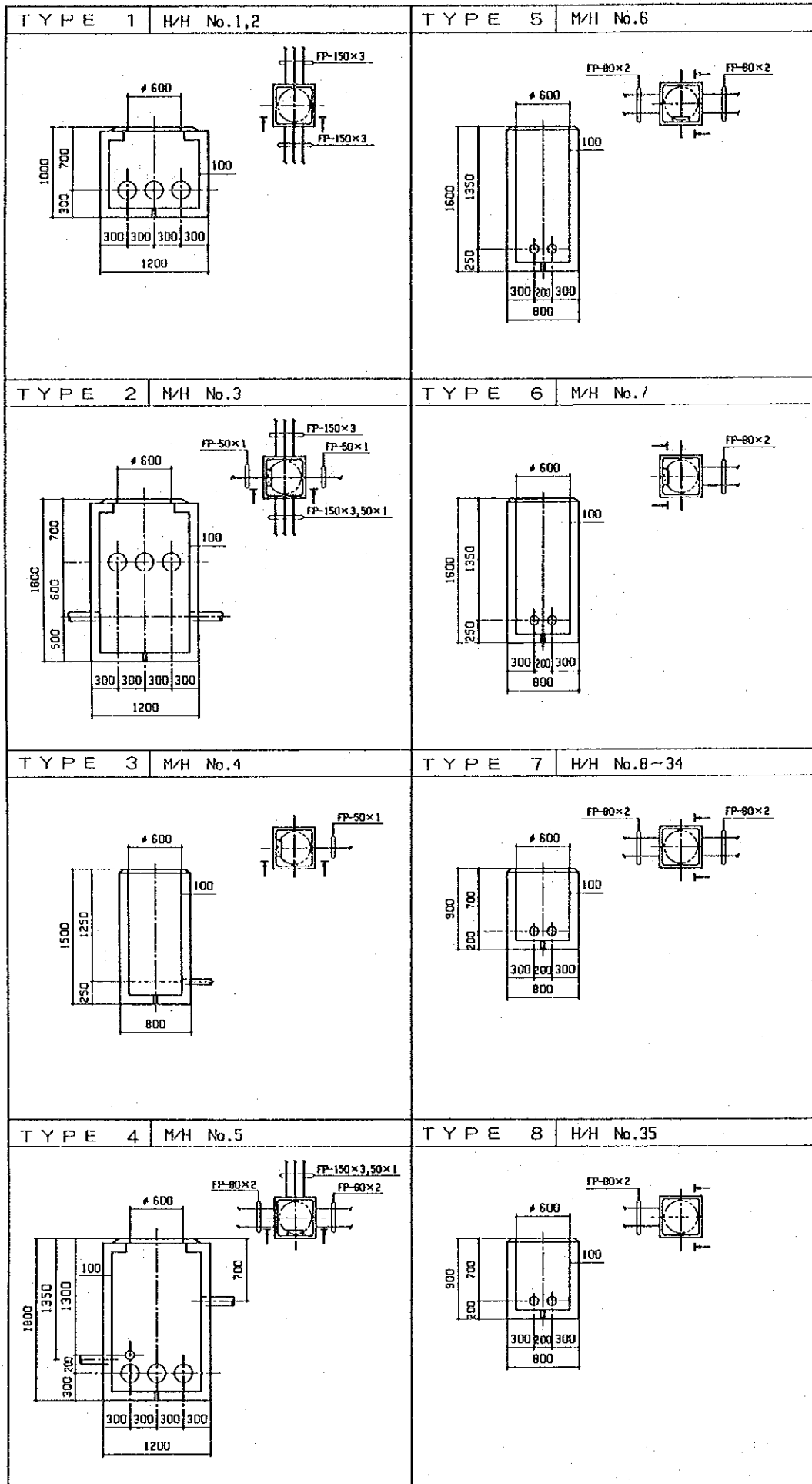
THE BANG PAKONG DIVERSION DAM PROJECT

CONTROL SYSTEM & ELECTRICAL FACILITIES
TYPICAL DRAWING OF MANHOLE
AND HANDHOLE (2/3)

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
SANYU CONSULTANTS INC.

DESIGNED	
TRACED	
CHECKED	
APPROVED	

DRAWING NO. CEF - 1040



H/H No.	DIMENSION OF HANDHOLE WxHxD (mm)	TYPE No.	REMARK
1	1200x1200x1000	1	
2	1200x1200x1000	1	
8	800x800x900	7	
9	800x800x900	7	
10	800x800x900	7	
11	800x800x900	7	
12	800x800x900	7	
13	800x800x900	7	
14	800x800x900	7	
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25	800x800x900	7	
26	800x800x900	7	
27	800x800x900	7	
29	800x800x900	7	
30	800x800x900	7	
31	800x800x900	7	
32	800x800x900	7	
33	800x800x900	7	
34	800x800x900	7	
35	800x800x900	8	

M/H No.	DIMENSION OF HANDHOLE WxHxD (mm)	TYPE No.	REMARK
3	1200x1200x1800	2	
4	800x800x1500	3	
5	1200x1200x1800	4	
6	800x800x1600	5	
7	800x800x1600	6	

THE KINGDOM OF THAILAND
ROYAL IRRIGATION DEPARTMENT

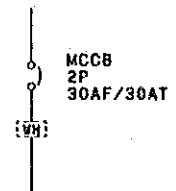
THE BANG PAKONG DIVERSION DAM PROJECT

CONTROL SYSTEM & ELECTRICAL FACILITIES
TYPICAL DRAWING OF MANHOLE
AND HANDHOLE (3/3)

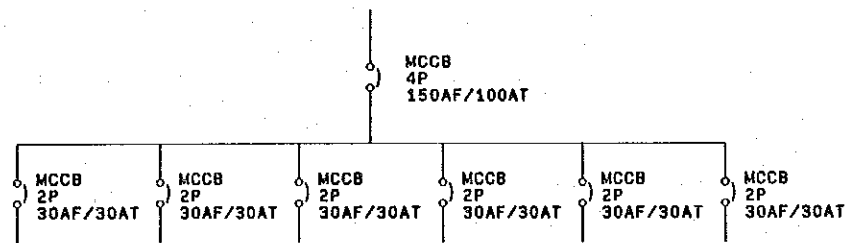
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
SANYU CONSULTANTS INC.

DESIGNED	
TRACED	
CHECKED	
APPROVED	

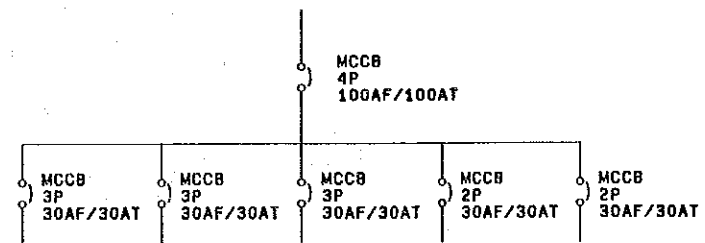
DRAWING NO. CEF-1041



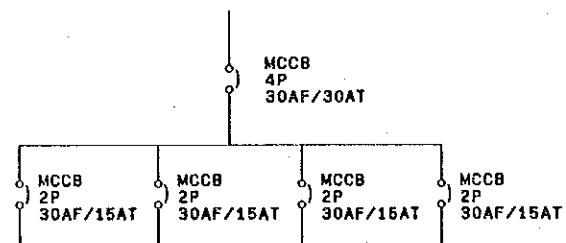
IN COMING SWITCH BOX FOR BAN SANG & NAKOHGNAYOK STATION
OUT DOOR WALL MOUNTED TYPE WITH WATT METER



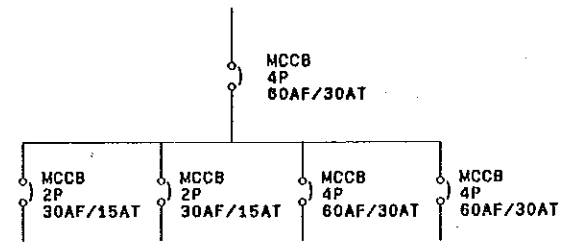
DISTRIBUTION BOARD FOR CONTROL ROOM
INDOOR WALL MOUNTED TYPE



DISTRIBUTION BOARD FOR SUBSTATION
INDOOR WALL MOUNTED TYPE



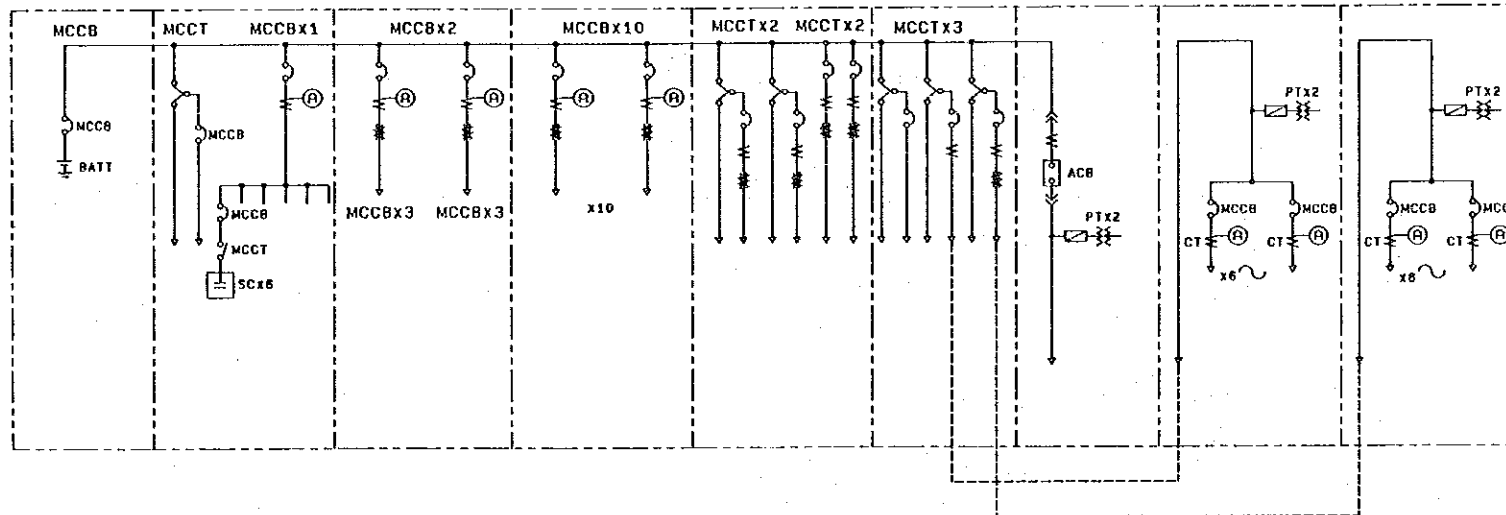
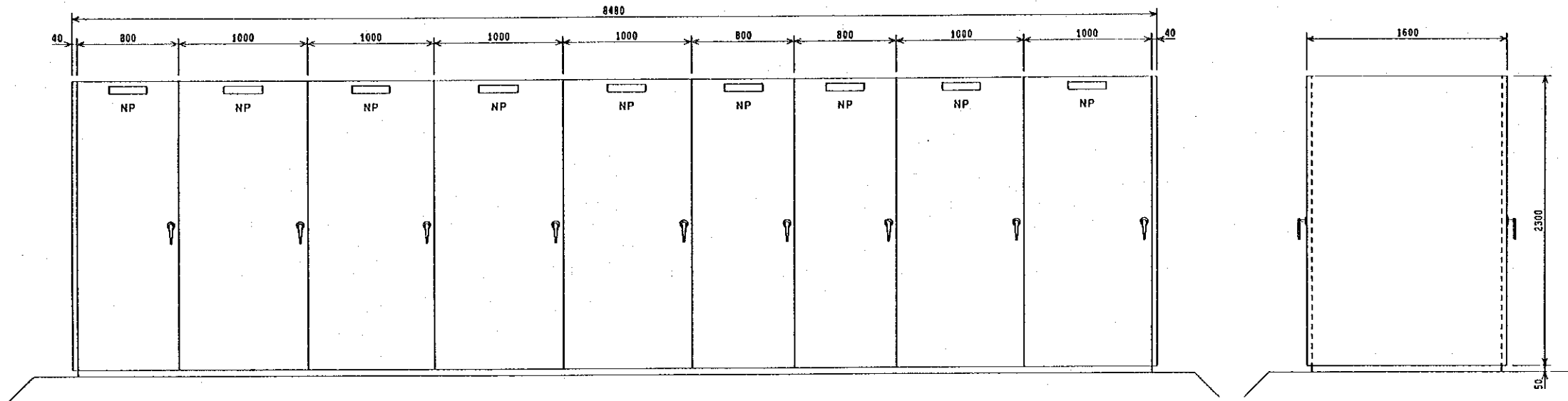
SWITCH BOX FOR HOIST HOUSE
INDOOR WALL MOUNTED TYPE



SWITCH BOX FOR OBSERVATION HOUSE
INDOOR WALL MOUNTED TYPE

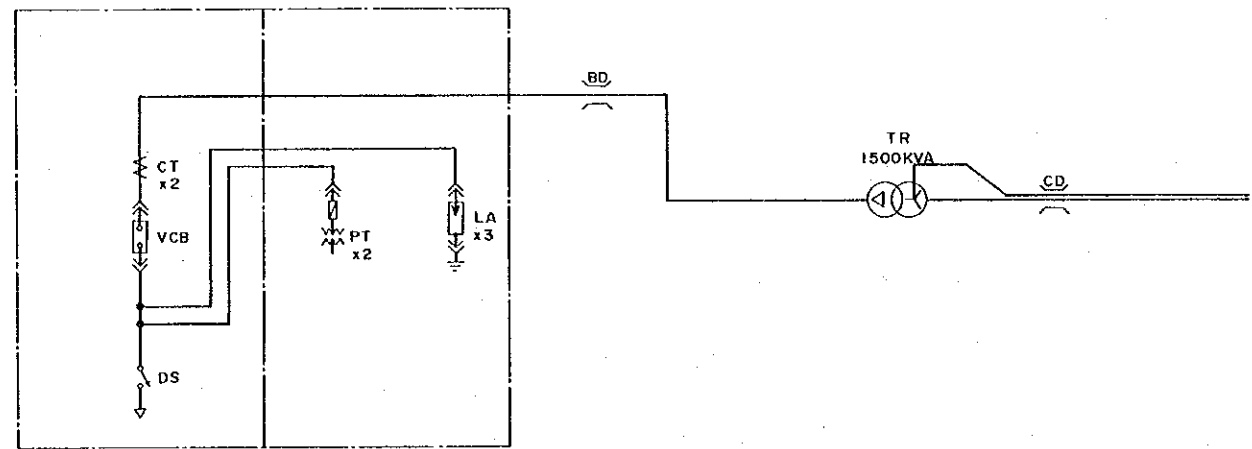
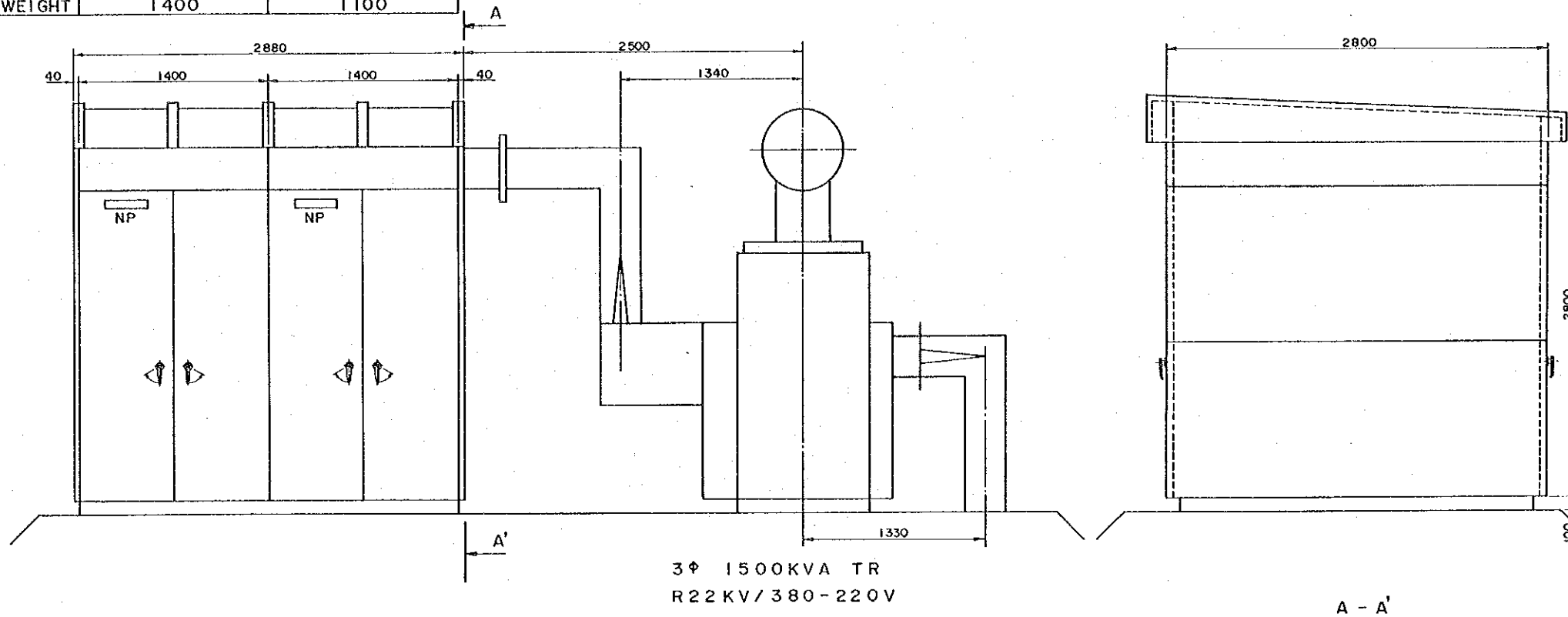
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES SINGLE LINE DIAGRAM OF DISTRIBUTION BOARD	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF - 1042	

LOCATION	L9	L8	L7	L6	L5	L4	L3	L2	L1
WEIGHT	900	900	800	800	800	700	1000	500	500



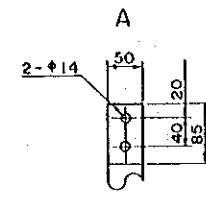
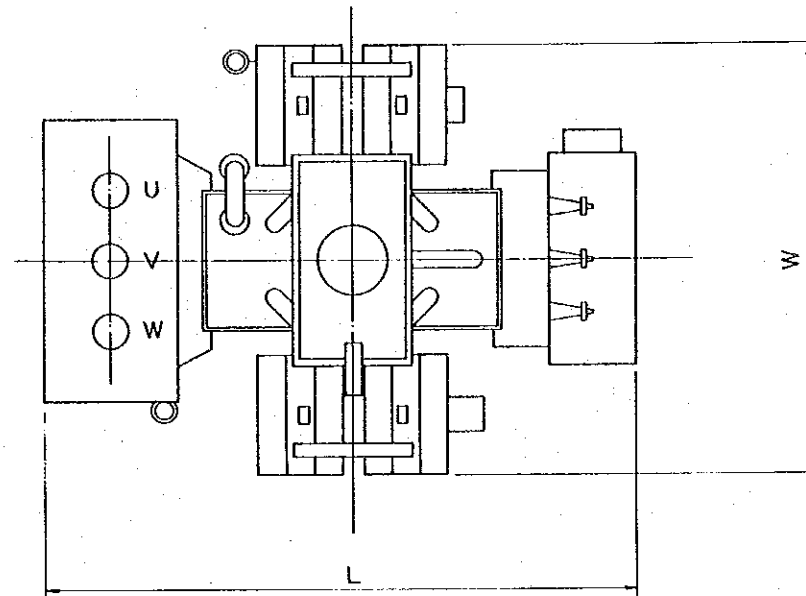
THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES INCOMING CUBICLE AND TRANSFORMER FOR No.1 SUBSTATION	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF - 1043	

LOCATION	M 1	M 2
WEIGHT	1 400	1 100

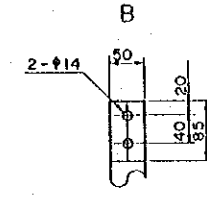


THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES	
ELECTRIC PANELS OF No.1 SUBSTATION	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF - 1044	

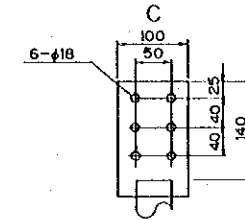
POWER TRANSFORMERS



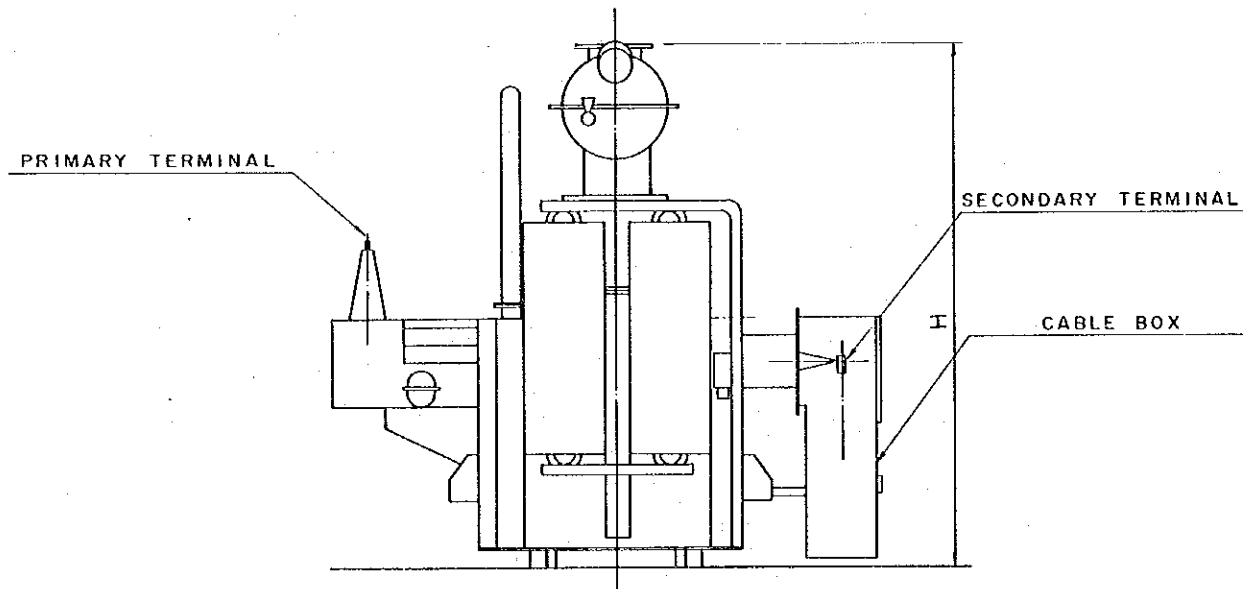
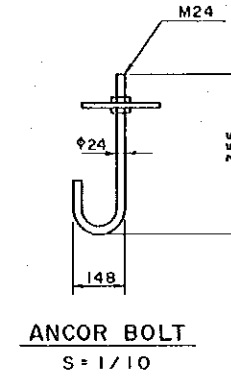
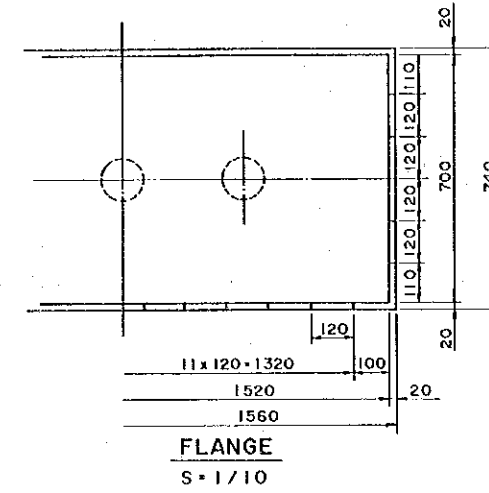
PRIMARY TERMINAL
S = 1/5



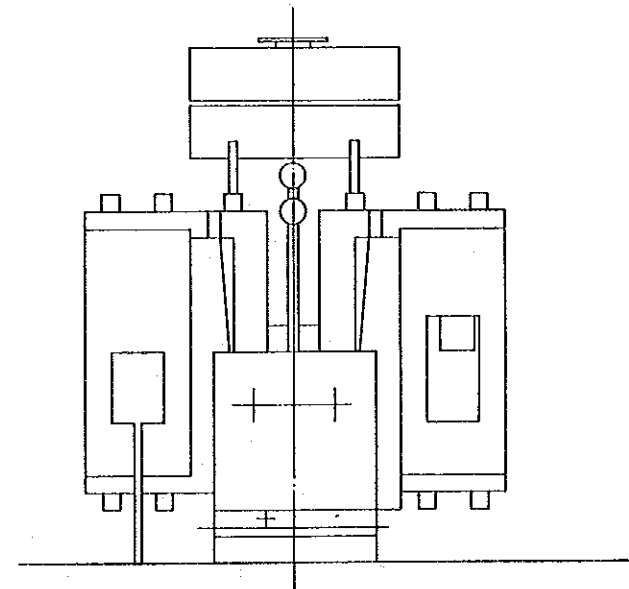
SECONDARY TERMINAL
S = 1/5



SECONDARY TERMINAL
S = 1/5



S = 1/20



	CAPACITY KVA	DIMENSION (mm)			WEIGHT (kg)	PRIMARY TERMINAL	SECONDARY TERMINAL
		L	W	H			
No.1 SUBSTATION	1500	3000	2400	3000	6300	A	C
No.2 SUBSTATION	3000	3700	2800	3000	8300	A	B

THE KINGDOM OF THAILAND
ROYAL IRRIGATION DEPARTMENT

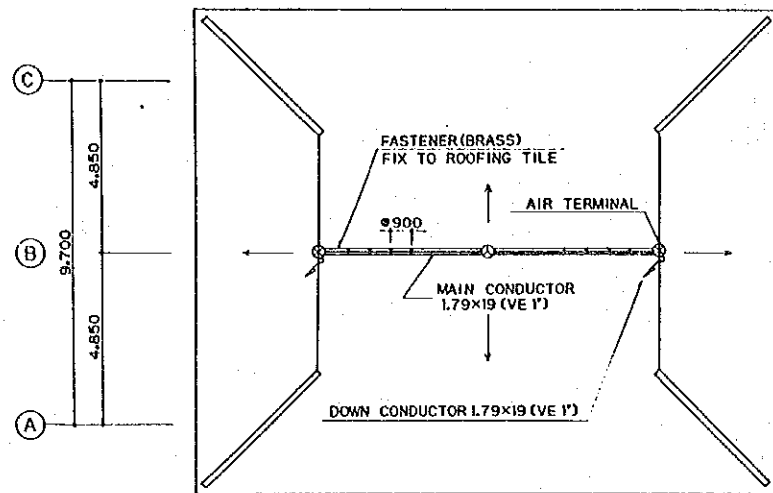
THE BANG PAKONG DIVERSION DAM PROJECT

CONTROL SYSTEM & ELECTRICAL FACILITIES
OUTSIDE VIEW OF TRANSFORMERS FOR
No.1.No.2 SUBSTATION

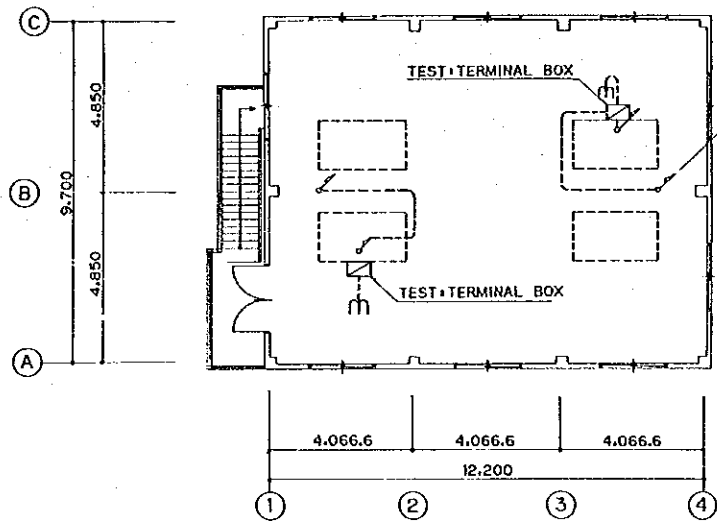
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
SANYU CONSULTANTS INC.

DESIGNED	
TRACED	
CHECKED	
APPROVED	

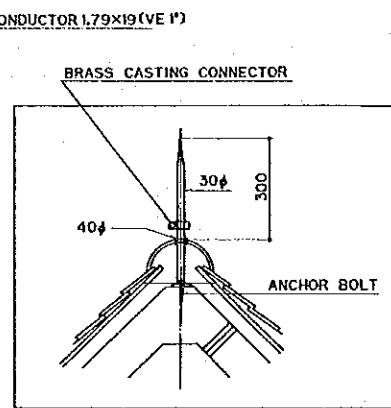
DRAWING NO. CEF - 1045



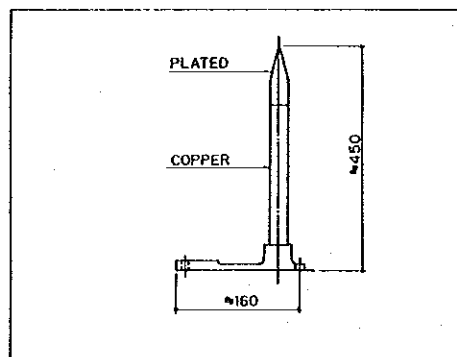
ROOF PLAN



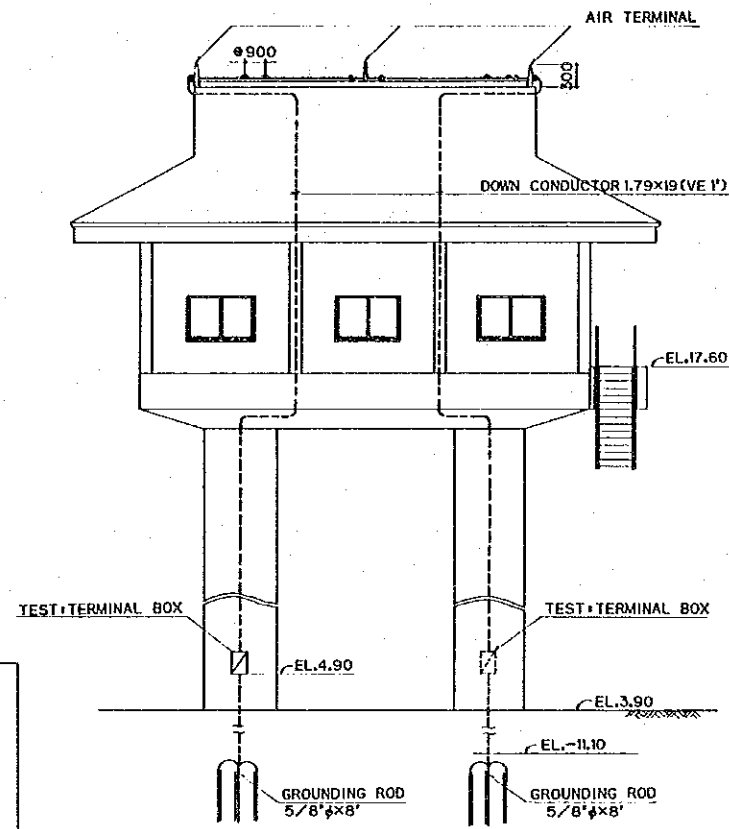
PLAN



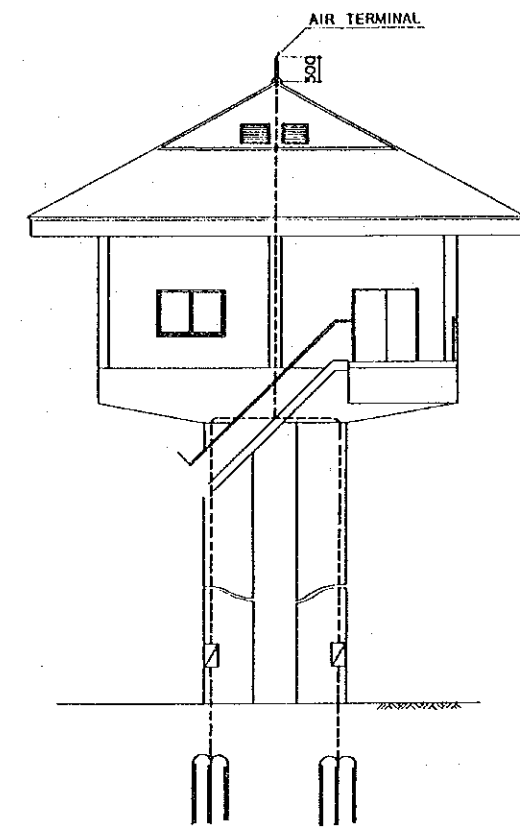
AIR TERMINAL



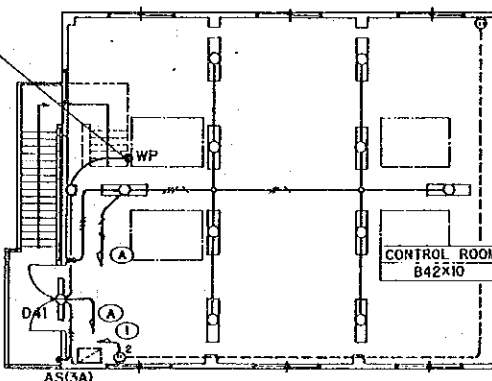
AIR TERMINAL



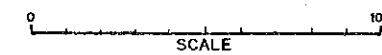
ELEVATION



ELEVATION



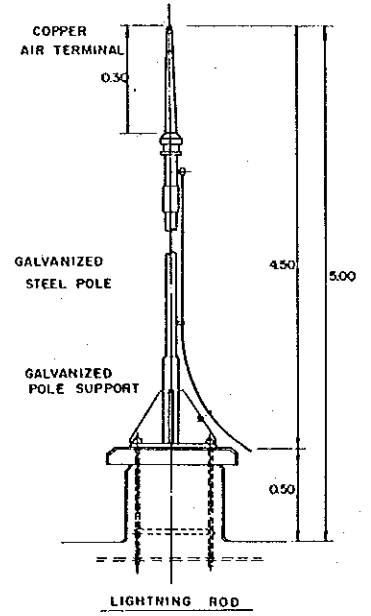
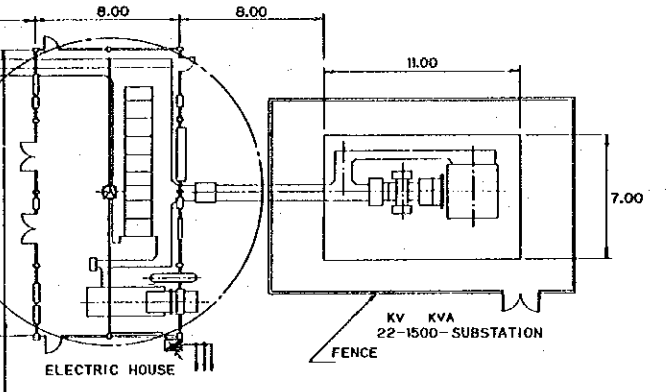
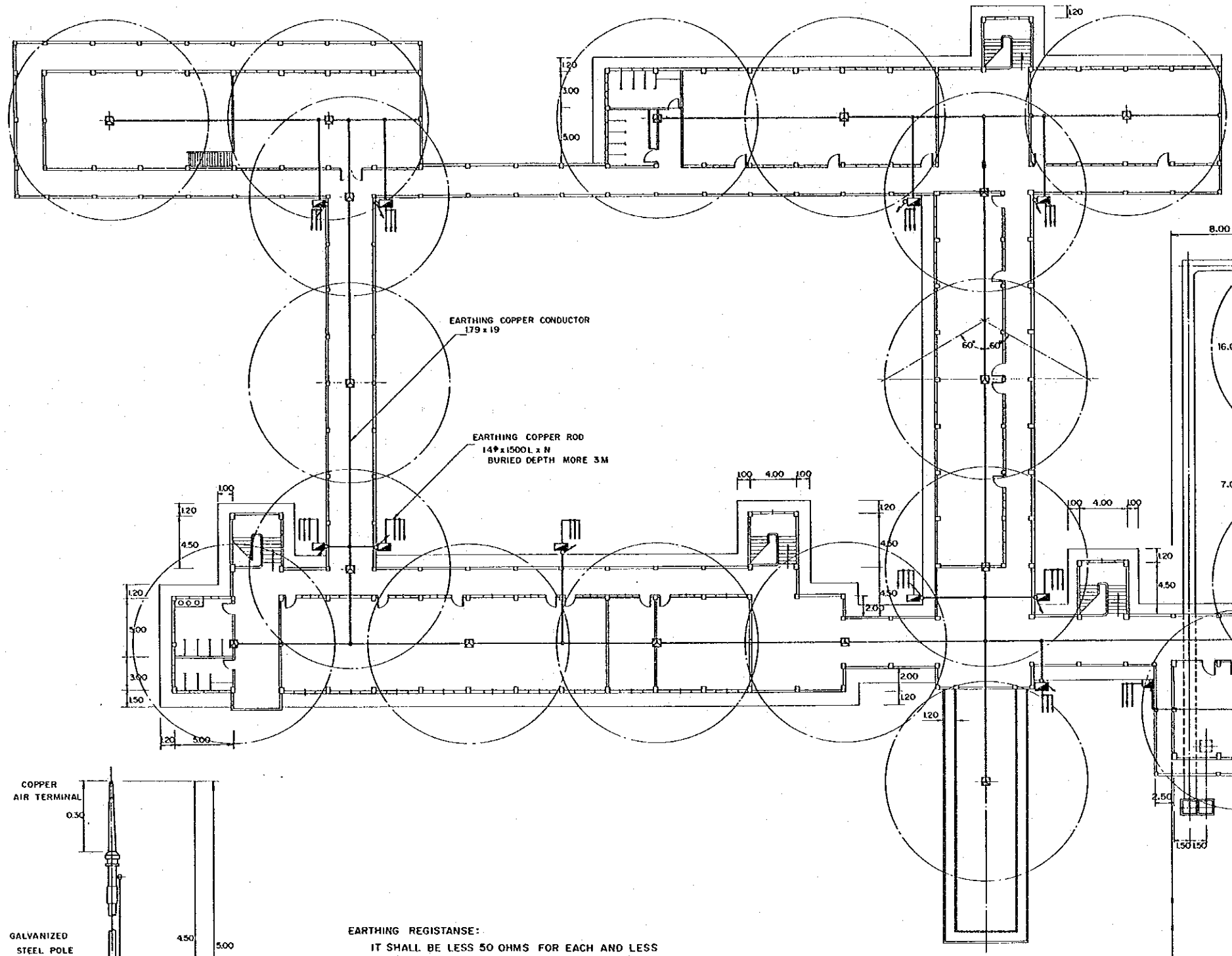
EL.17.40 LEVEL PLAN



THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES LIGHTNING ROD OF HOIST HOUSE	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1046	

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ 4.00 ㊳

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EARTHING RESISTANCE:
IT SHALL BE LESS 50 OHMS FOR EACH AND LESS
10 OHMS FOR TOTAL.
ALL DIMENSIONS: meter (m)

LAYOUT OF EARTHING RODS

SCALE: 1:200

LIGHTNING SYSTEMS FOR ELECTRIC HOUSE AND CONTROL HOUSE ARE ONLY INCLUDED IN THIS CONTRACT.

THE KINGDOM OF THAILAND ROYAL IRRIGATION DEPARTMENT	
THE BANG PAKONG DIVERSION DAM PROJECT	
CONTROL SYSTEM & ELECTRICAL FACILITIES LIGHTNING ROD OF CONTROL BUILDINGS	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC.	
DESIGNED	
TRACED	
CHECKED	
APPROVED	
DRAWING NO. CEF-1047	

JICA