

37300
15235

ENTRANCE

SLIDING DOOR

CONCRETE PAVING

O/M OFFICE

RECEIVING POLE

TRANSFORMER 160kVA
15(22)kV/0.38-0.22kV

DISTRIBUTION PANEL

PUMP AND GATE LOCAL PANEL

REFER TO DWG. No. PB-PDI-TD-502

63/7/8
POLE OF 12m
DT
EXISTING OF POWER COMPANY

2 BRANCH OF THANH DA
3AV/240*120

3ACV 24kV 50mm²+AC50mm² (84m)

LAKE

THANH DA PARK

NO.	DATE	DESCRIPTIONS	BY	APRO.
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REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
PUMP DRAINAGE IMPROVEMENT
THANH DA PUMPING STATION

GENERAL LAYOUT OF
ELECTRICAL EQUIPMENT

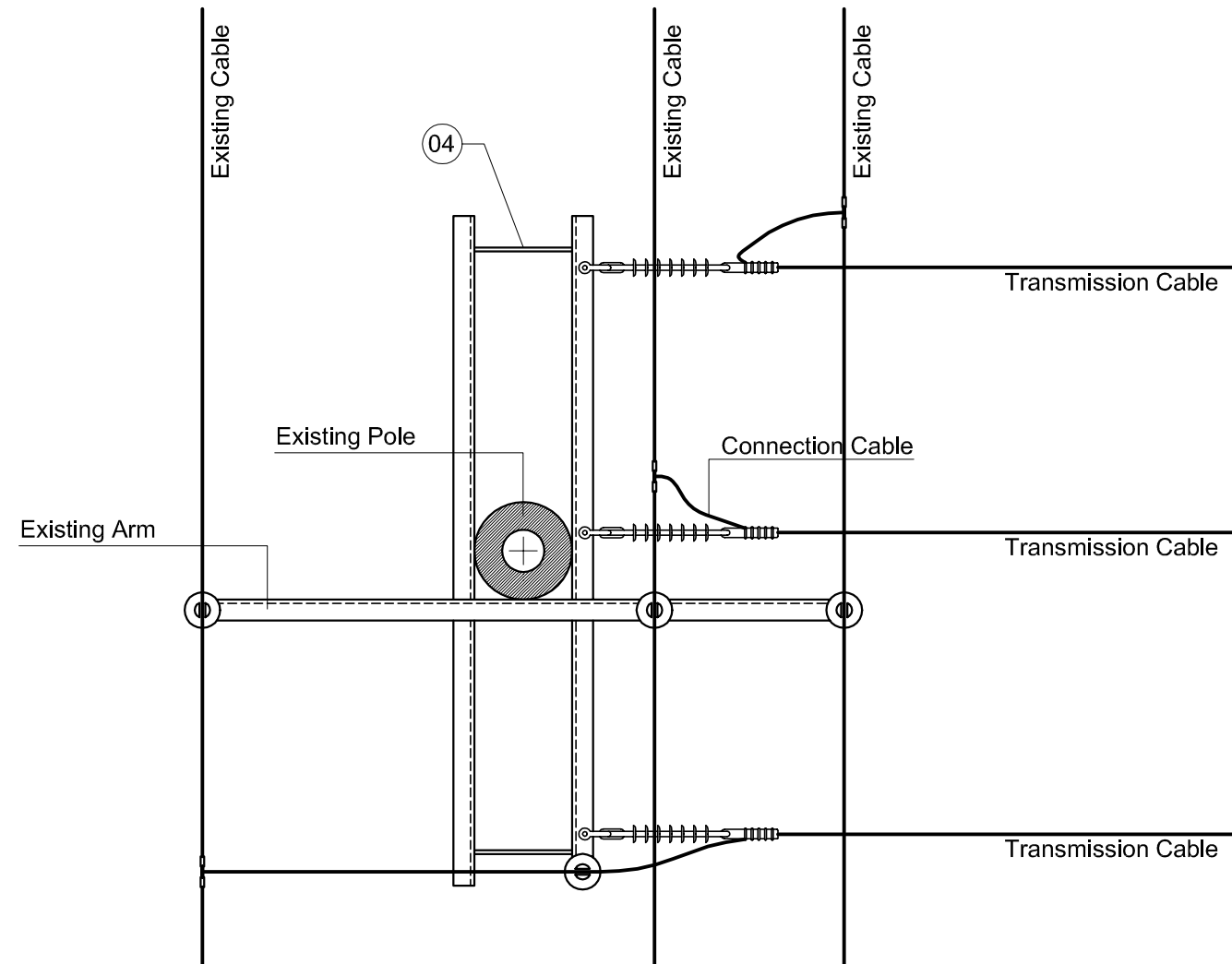
SCALE : 1 : 100

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

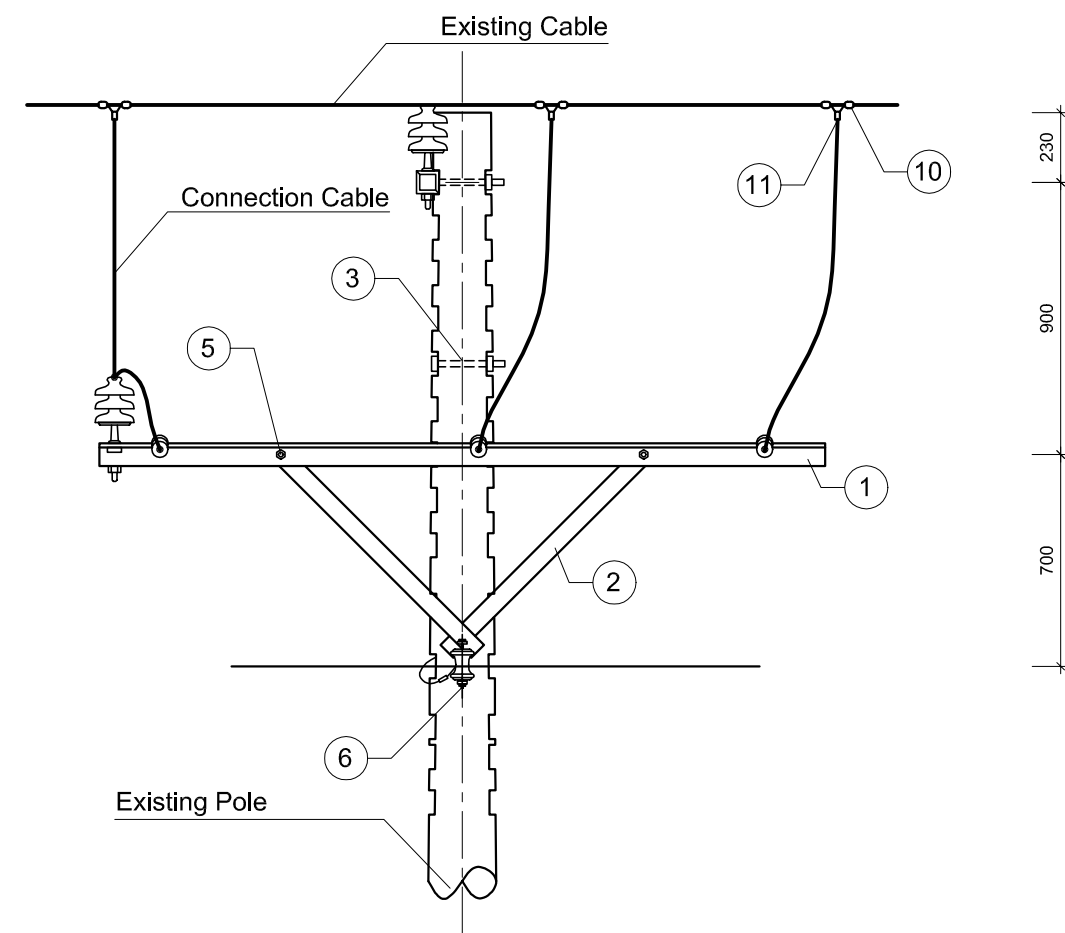
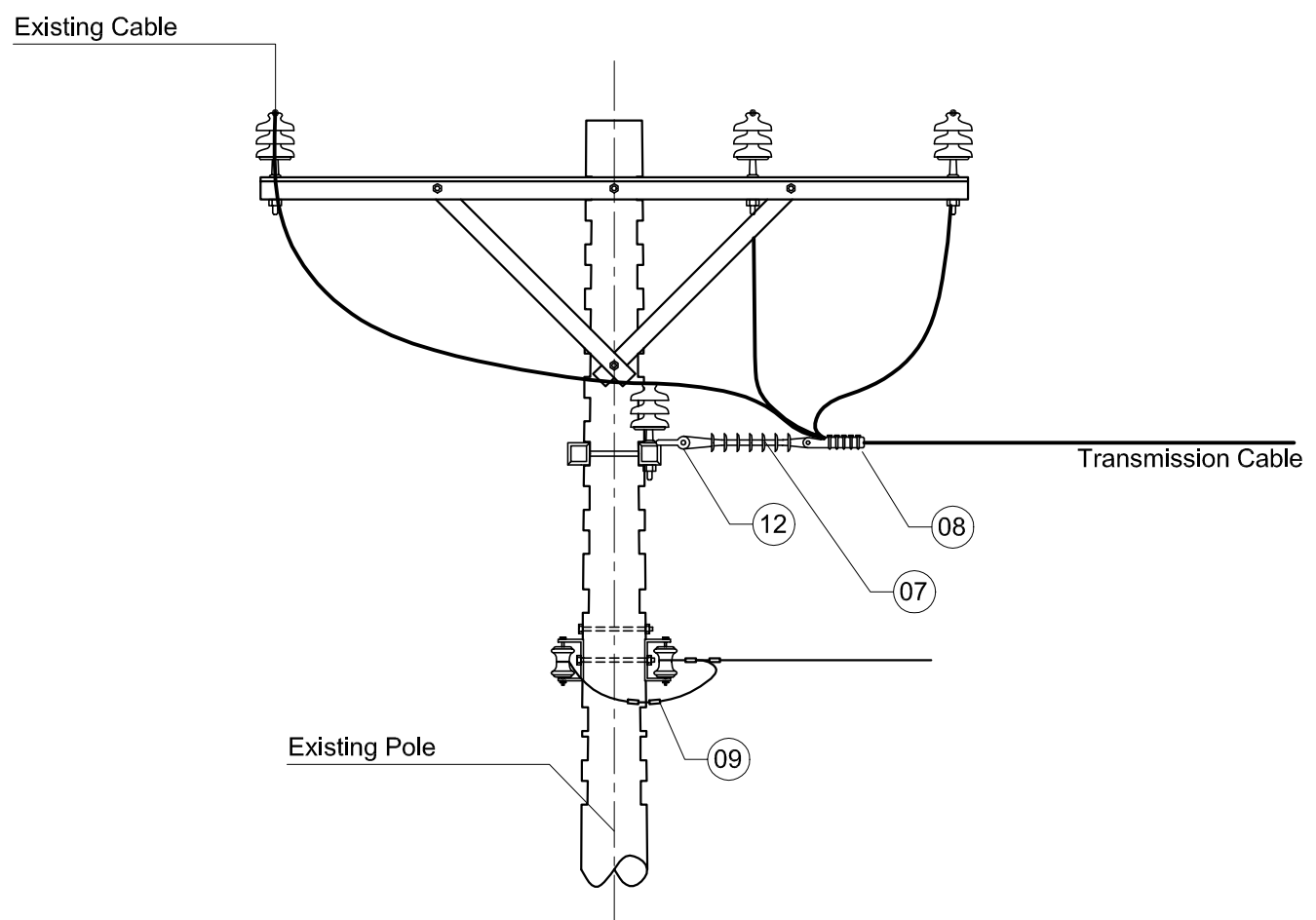
DESIGNED _____ CHECKED _____

DATE : _____ DWG. No. PB - PDI - TD - 501

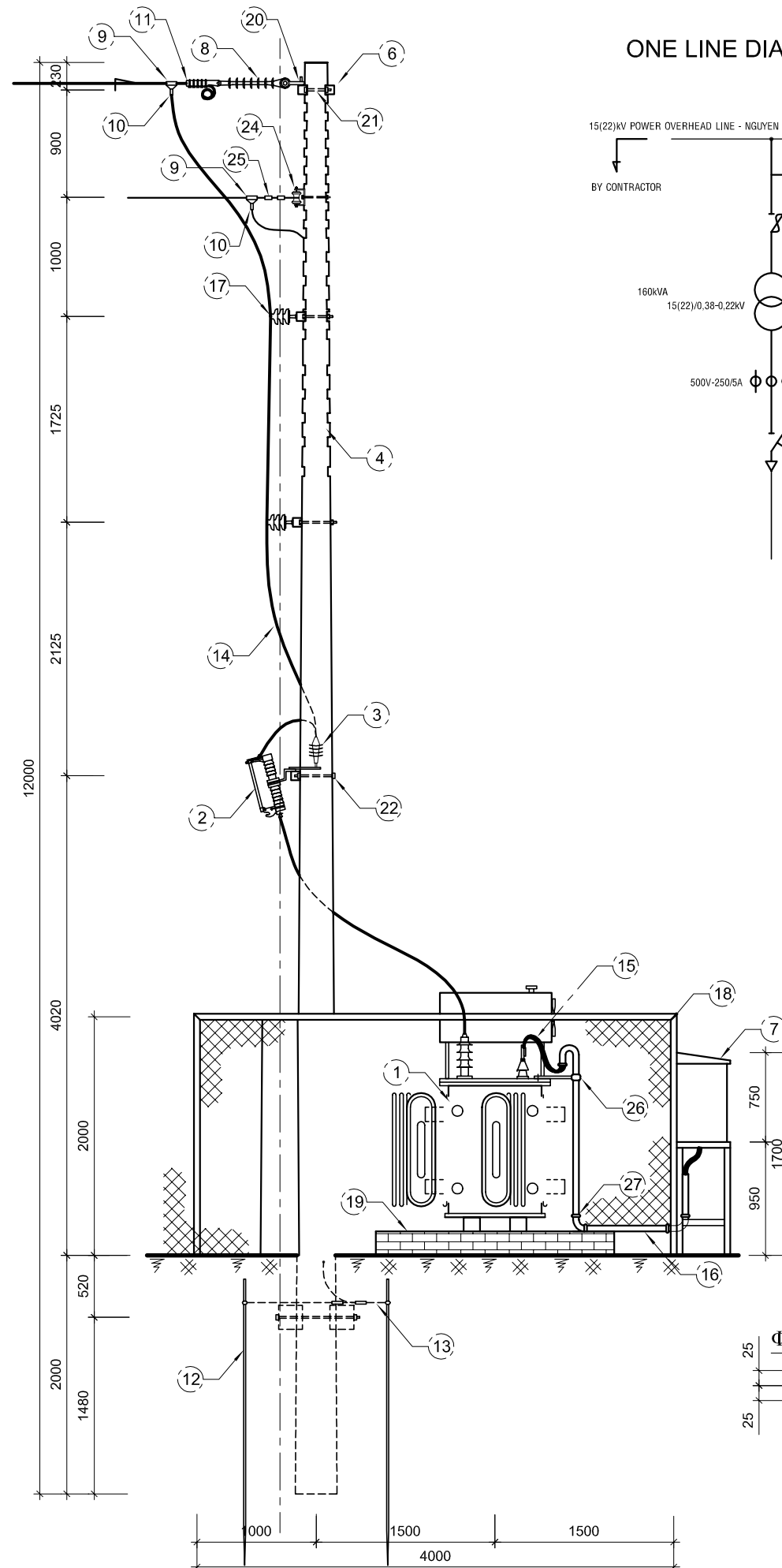
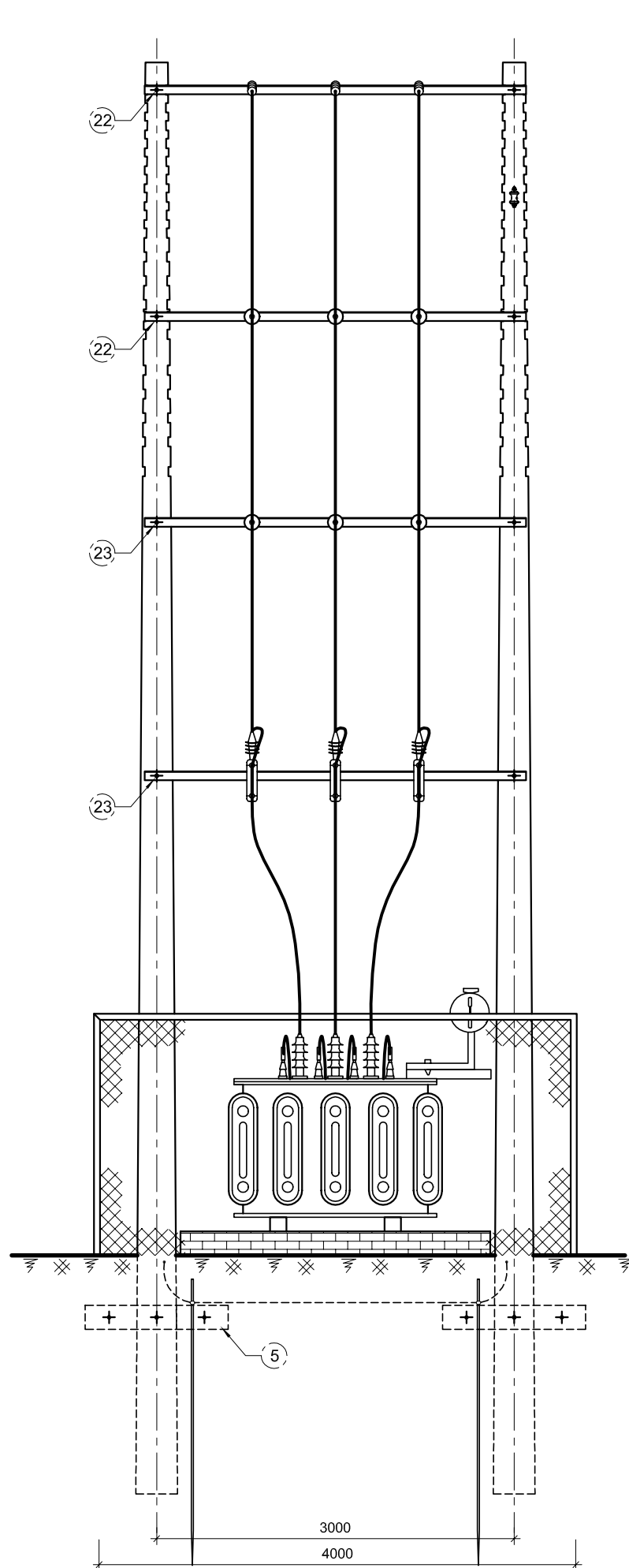


LIST OF MATERIAL AND EQUIPMENT

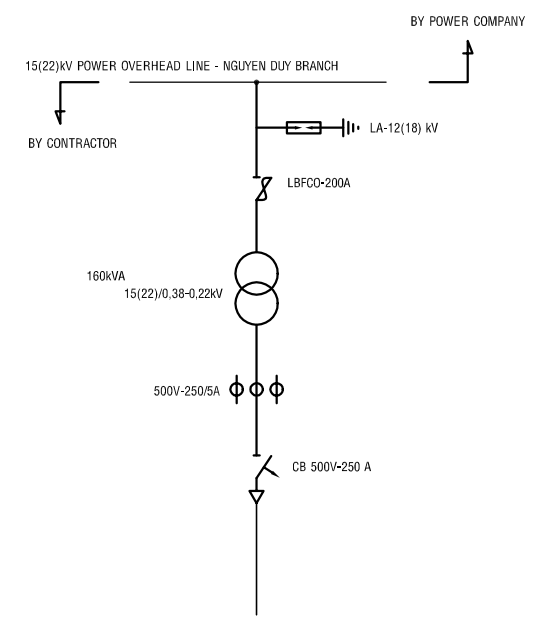
No.	ITEM	UNIT	QTY
01	Steel arm L75x75x8 - 2.4m	arm	02
02	Supporting steel-bar 60x6 - 0.92m	bar	04
03	Bolt 16 x 300	pcs	03
04	Bolt 16x300 VRS	pcs	02
	Square washer	pcs	10
05	Bolt 16x40	pcs	04
	Square washer Φ14	pcs	08
06	Uclevis and spool insulator	pcs	01
07	Polymer insulator of 24kV	pcs	03
08	tension ball	pcs	03
09	Pressure clamp	pcs	04
10	Bail clamp	pcs	03
11	Hotline clamp	pcs	03
12	U Clamp	pcs	03



NO.	DATE	DESCRIPTIONS	BY	APRO.
REVISIONS				
PROJECT MANAGEMENT UNIT FOR HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT				
THE DETAILED DESIGN ON HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT PROJECT IN THE SOCIALIST REPUBLIC OF VIET NAM				
PACKAGE B PUMP DRAINAGE IMPROVEMENT THANH DA PUMPING STATION				
CONNECTIONDIAGRAM TO EXISTING TRANSMISSION LINE				
SCALE : 1:12.5				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		PACIFIC CONSULTANTS INTERNATIONAL		
DESIGNED		CHECKED		
DATE :		DWG. No. PB - PDI - TD - 502		

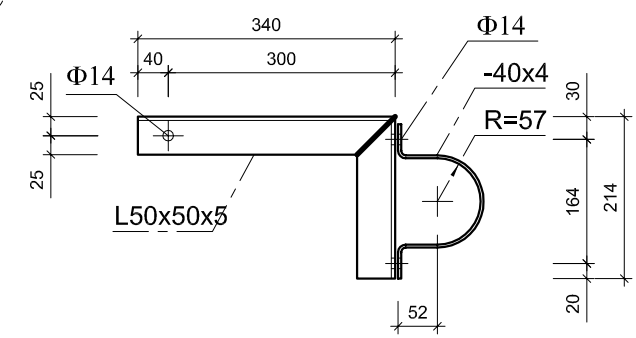


ONE LINE DIAGRAM OF THANH DA STATION



LIST OF MATERIAL AND EQUIPMENT

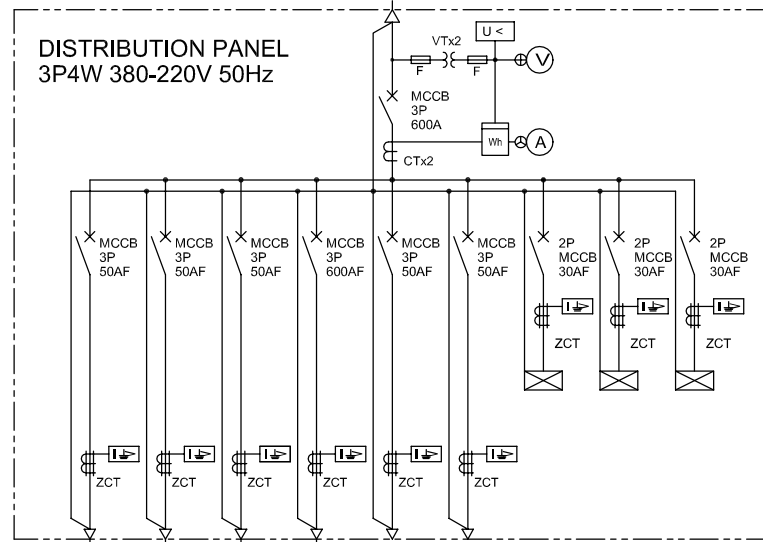
No.	ITEM	UNIT	QTY
1	Three phase transformer 160kVA 15(22)/0.4kV	pcs.	1
2	LBFCC - 24kV - 200A	set	3
3	LA - 12kV	set	3
4	Centrifugal concrete pole of 12m	pole	2
5	Guy of 1.2m	set	4
6	Arm L75x75x8 - 3.2m	arm	5
7	Meter cubicle and LV equipment	set	1
8	Polymer insulator	set	3
9	Bail clamp	set	3
10	Hotline clamp	set	3
11	Tension Clamp	set	3
12	Grounding pole of 2,5φ16	pcs	4
13	Bare copper conductor of 25mm ²	kg	7
14	Cable of 24kV - 25mm ²	m	30
15	Cable of 500V - 3M200 mm ²	m	15
	Cable of 500V - M150 mm ²	m	5
16	PVC pipe of φ114	m	3
17	Standing insulator of 24kV	set	6
18	Fence (See drawing No. PB-PDI-TD-508)	lot	1
19	Foundation (See drawing PB-PDI-TD-508)	lot	1
20	U Clamp	pcs	3
21	Bolt φ 16x300 VRS	set	2
22	Bolt φ 16x300	set	4
23	Bolt φ 16x300	set	4
24	Uclewise and spool insulator	set	1
25	Clamp of 3 Bolt	pcs	2
26	Cable suspension structure	set	1
27	Elbow of φ114	pcs	3



CABLE SUSPENSION STRUCTURE

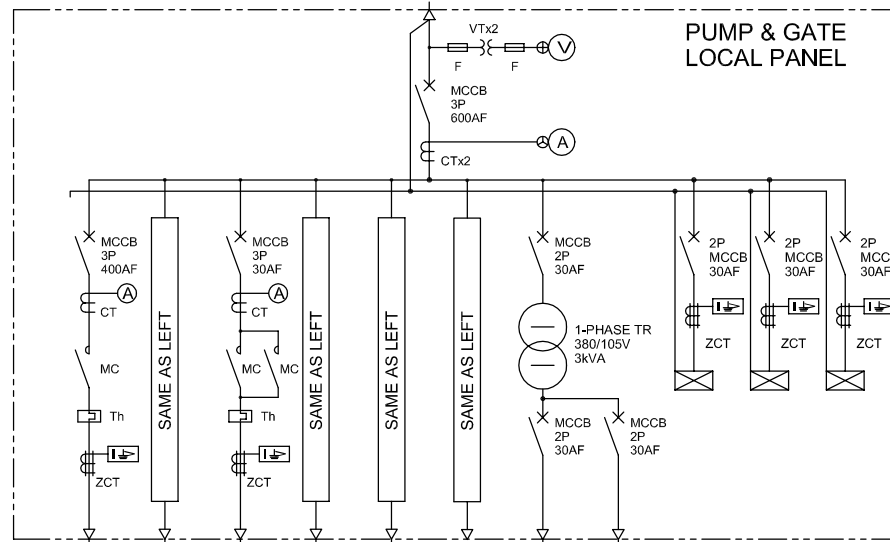
NO.	DATE	DESCRIPTIONS	BY	APRO.
REVISIONS				
PROJECT MANAGEMENT UNIT FOR HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT				
THE DETAILED DESIGN ON HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT PROJECT IN THE SOCIALIST REPUBLIC OF VIET NAM				
PACKAGE B PUMP DRAINAGE IMPROVEMENT THANH DA PUMPING STATION				
SINGLE LINE DIAGRAM FOR RECEIVING SYSTEM				
SCALE : 1 : 25				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED		CHECKED		
DATE :		DWG. No. PB - PDI - TD - 503		

METER CUBICLE & LV EQUIPMENT



kW	20	10	10	50	10	10	10	10	10
LOAD	O/M OFFICE DISTRIBUTION BOARD	INSTRUMENT	OUTDOOR LIGHTING	PUMP & GATE LOCAL PANEL	SPARE	SPARE	CONTROL	SPACE HEATER	PANEL LIGHTING
No.	TDP	LP-TD202	LP-TD203	LP-TD101					

FROM DISTRIBUTION PANEL
3P4W 380-220V 50Hz



kW	18.5	18.5	1.5	1.5	2.2	5.0	1.5	1.5	10	10	10
LOAD	No.1 MAIN PUMP	No.2 MAIN PUMP	INLET GATE No.1	INLET GATE No.2	BY PASS GATE	SPARE	INSTRUMENTATION EQUIPMENT	INSTRUMENTATION EQUIPMENT	CONTROL	SPACE HEATER	PANEL LIGHTING
No.	TD101	TD102	TD103	TD104	TD105						

SYMBOL	DESCRIPTION
(A)	AMMETER
(V)	VOLTMETER
Wh	WATT-HOUR METER
U<	UNDER VOLTAGE RELAY
(I)	OVER CURRENT GROUND RELAY
Th	THERMAL OVER CURRENT RELAY
TR	TRANSFORMER
CT	CURRENT TRANSFORMER
VT	VOLTAGE TEST TERMINAL
ZCT	ZERO PHASE CURRENT TRANSFORMER
MCCB	MOLDED CASE CIRCUIT BREAKER
MC	MAGNETIC CONTACTOR
(A)	AMMETER CHANGE-OVER SWITCH
(V)	VOLTMETER CHANGE-OVER SWITCH
M	MOTOR

NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
PUMP DRAINAGE IMPROVEMENT
THANH DA PUMPING STATION

SINGLE LINE DIAGRAM FOR
DISTRIBUTION SYSTEM

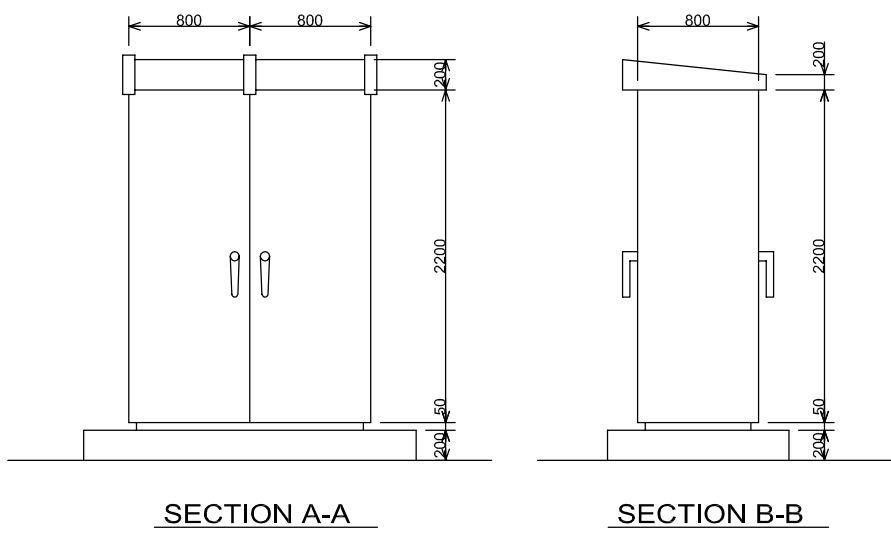
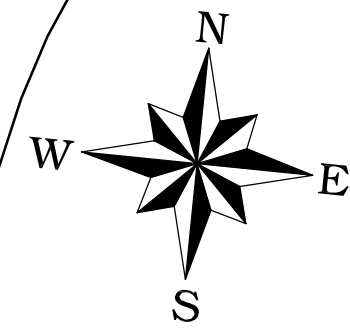
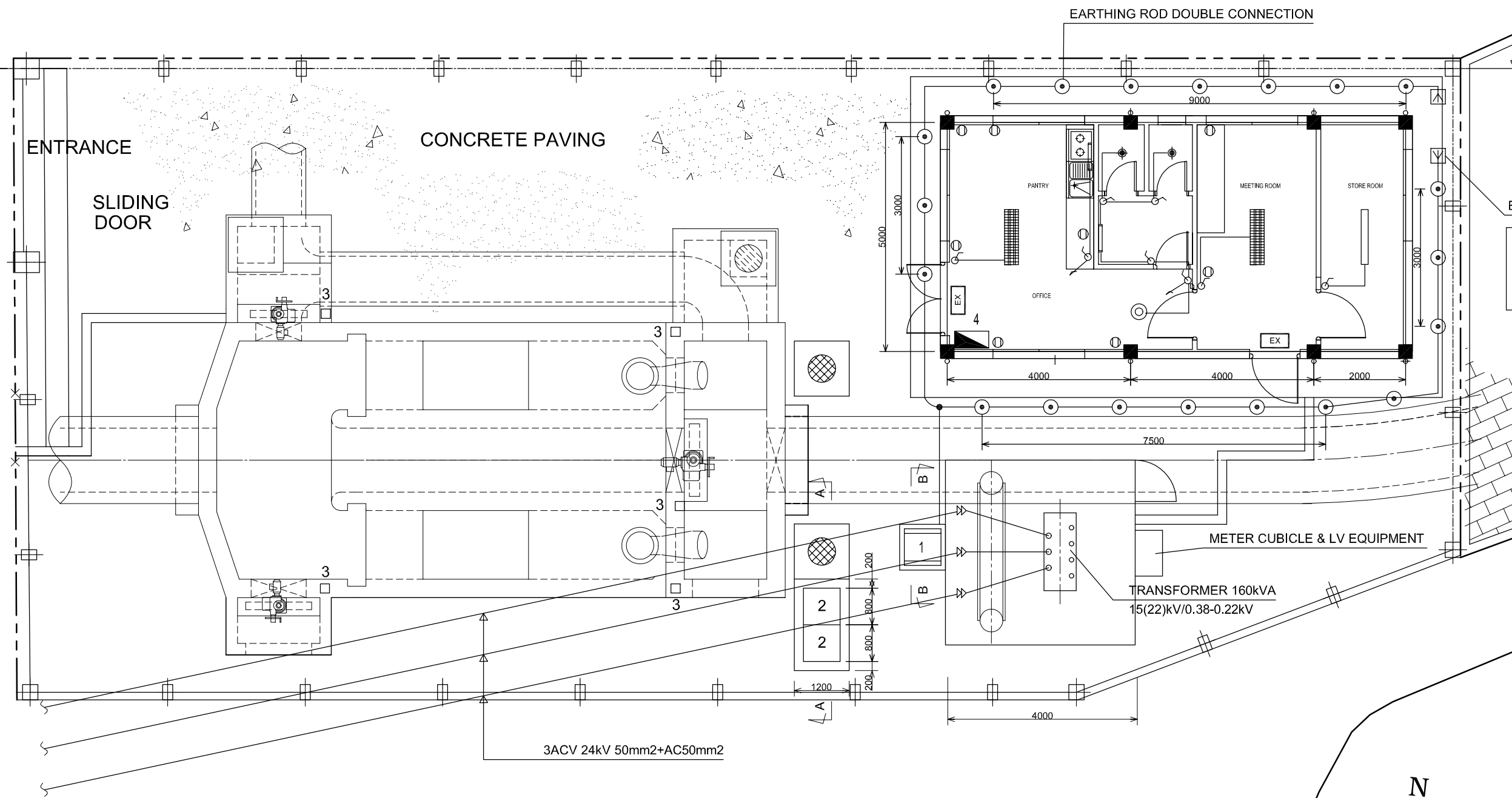
SCALE : NONE

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED _____ CHECKED _____

DATE : _____ DWG. No. PB - PDI - TD - 504



LEGEND:

No.	EQUIPMENT NAME & SIZE	WEIGHT(kg)
1	DISTRIBUTION PANEL W800xD800xH2450	300
2	PUMP & GATE LOCAL PANEL W800xD800xH2450 x2SET	600
3	LOCAL CONTROL SWITCH BOX	
4	O/M OFFICE DISTRIBUTION BOARD (ARCHITECTURE WORK)	
	EARTH ROD DOUBLE CONNECTION	
	EARTH PLATE	

NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
PUMP DRAINAGE IMPROVEMENT
THANH DA PUMPING STATION

**LAYOUT OF ELECTRICAL EQUIPMENT
AND EARTHING SYSTEM**

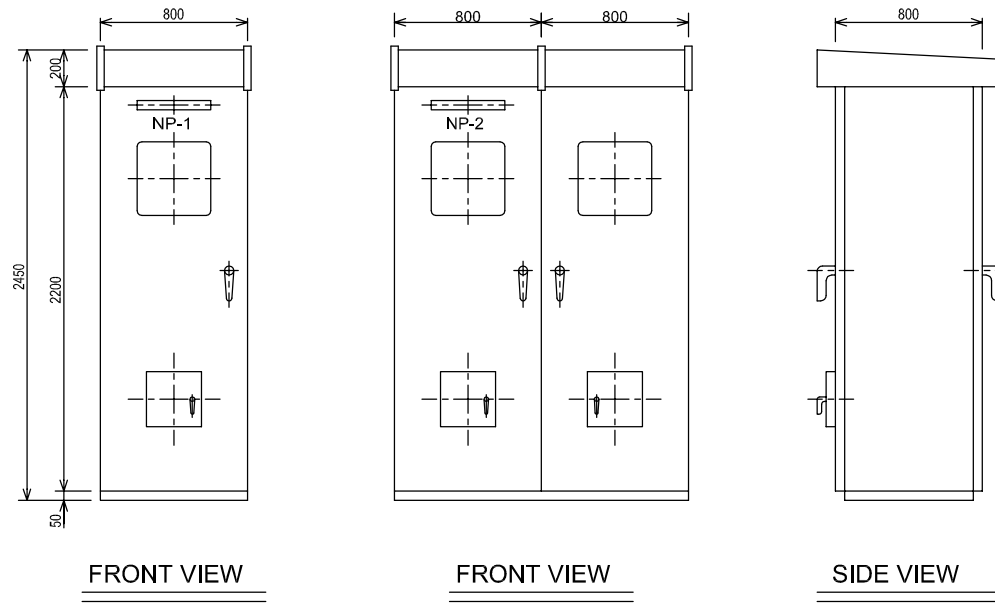
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JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED _____ CHECKED _____

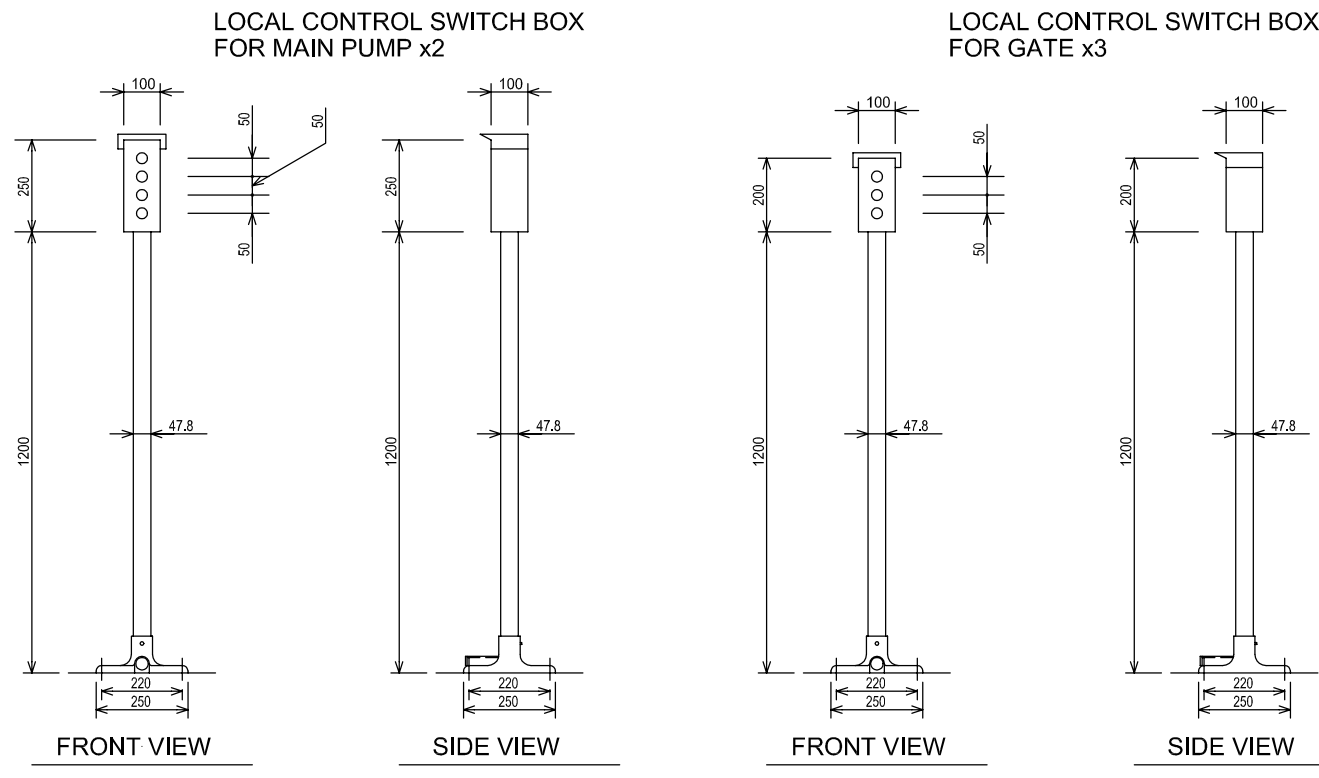
DATE : _____ DWG. No. PB - PDI - TD - 505



NAME PLATE(NP)

No.	DESCRIPTION
NP-1	DISTRIBUTION PANEL
NP-2	PUMP & GATE LOCAL PANEL

(S=1/20)



(S=1/10)

NO.	DATE	DESCRIPTIONS	BY	APRO.
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REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
PUMP DRAINAGE IMPROVEMENT
THANH DA PUMPING STATION

DIMENSION OF SWITCHGEARS
AND CONTROL PANELS FOR
ELECTRICAL EQUIPMENT

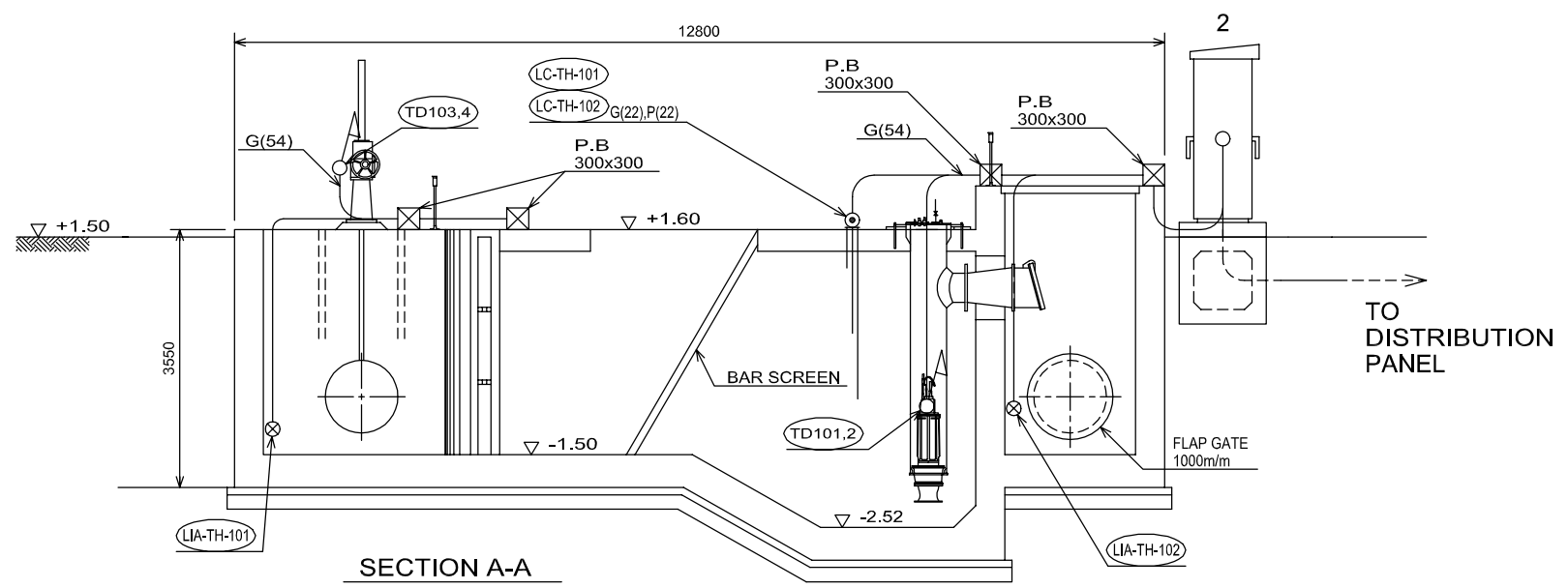
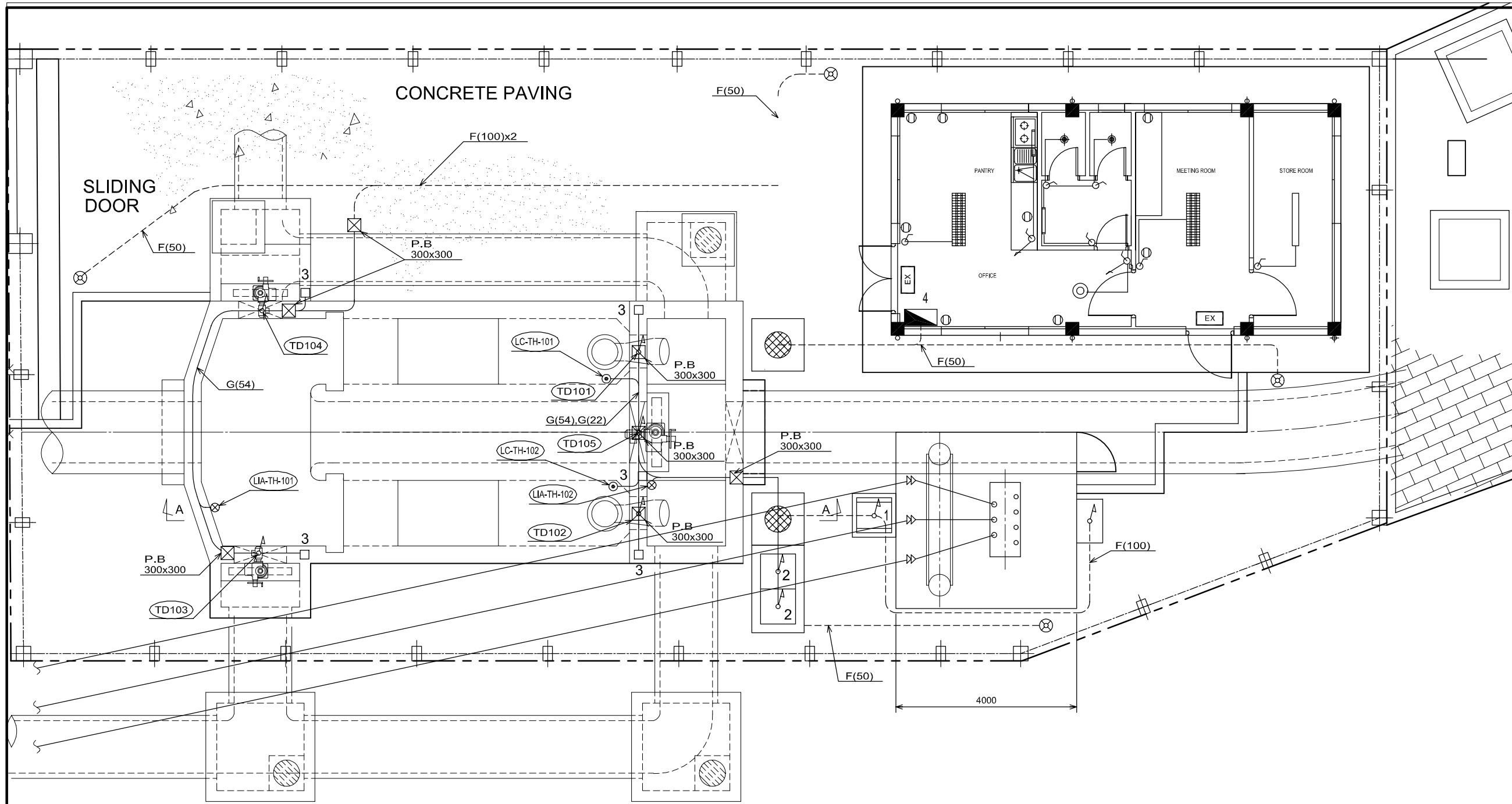
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JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED _____ CHECKED _____

DATE : _____ DWG. No. PB - PDI - TD - 506



INSTRUMENTATION LIST

ITEM No.	NAME OF ITEM
LIA-TH-101	LEVEL METER FOR INLET GATE No.1 (INSIDE)
LIA-TH-102	LEVEL METER FOR BY-PASS GATE (OUTSIDE)
LC-TH-101	LEVEL SWITCH FOR No.1 MAIN PUMP
LC-TH-102	LEVEL SWITCH FOR No.2 MAIN PUMP

MOTOR LIST

MOTOR No.	NAME OF EQUIPMENT
TD101	No.1 MAIN PUMP
TD102	No.2 MAIN PUMP
TD103	INLET GATE No.1
TD104	INLET GATE No.2
TD105	BY-PASS GATE

LEGEND

No.	EQUIPMENT NAME & SIZE	WEIGHT(kg)
1	DISTRIBUTION PANEL W800xD800xH2450	300
2	PUMP & GATE LOCAL PANEL W800xD800xH2450x2SET	600
3	LOCAL CONTROL SWITCH BOX	
4	O/M OFFICE DISTRIBUTION BOARD (ARCHITECTURE WORK)	

NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
PUMP DRAINAGE IMPROVEMENT
THANH DA PUMPING STATION

WIRING AND PIPING PLAN

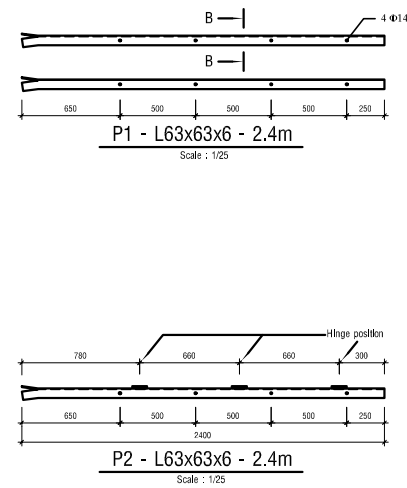
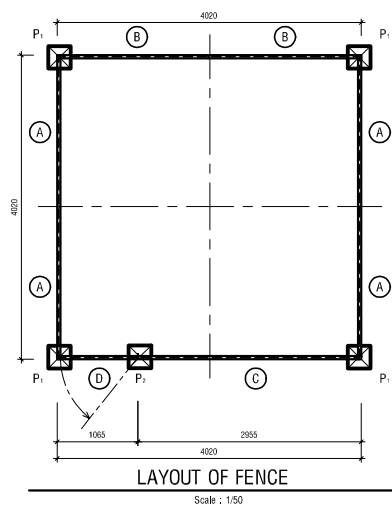
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JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

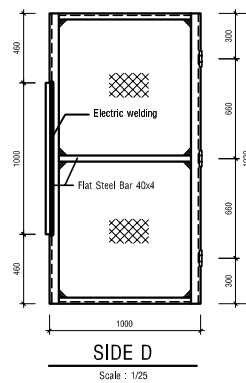
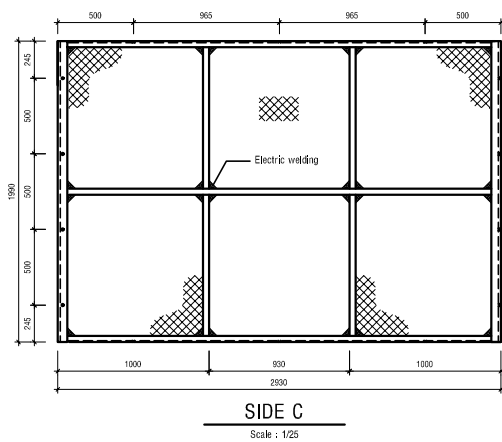
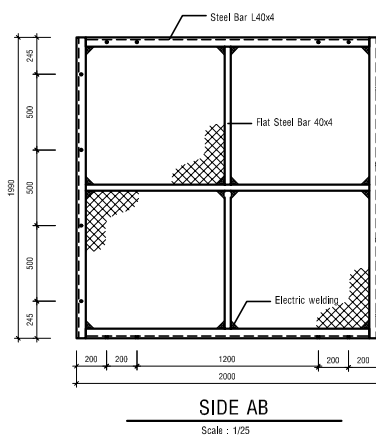
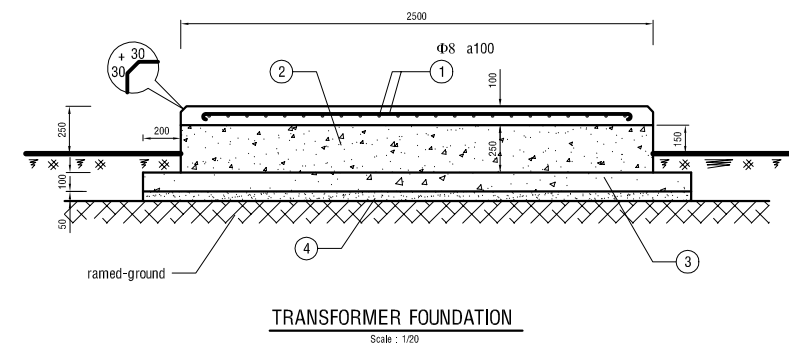
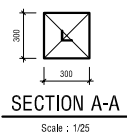
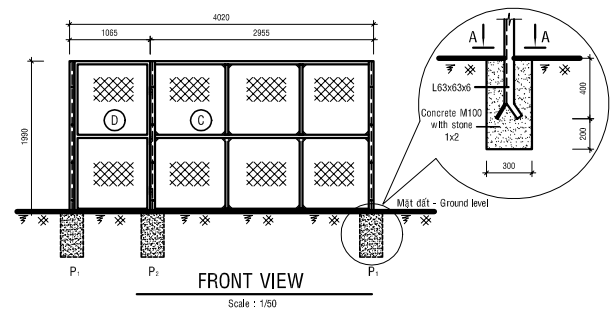
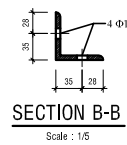
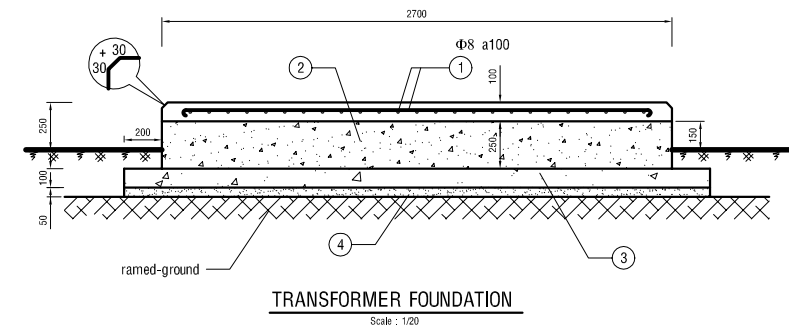
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED _____ CHECKED _____

DATE : _____ DWG. No. PB - PDI - TD - 507



LIST OF MATERIAL				
No.	ITEM	UNIT	QTY.	WEIGHT ,kg
1	L63x63x6 - 2400	bar	5	68.75
2	L40x40x4 - 2000	bar	12	58.08
3	L40x40x4 - 1990	bar	14	67.42
4	L40x40x4 - 1920	bar	2	9.29
5	L40x40x4 - 2930	bar	2	14.18
6	Flat steel 40x4 - 1000	bar	2	2.51
7	Flat steel 40x4 - 1990	bar	8	20.00
8	Flat steel 40x4 - 2000	bar	6	15.07
9	Flat steel 40x4 - 2930	bar	1	3.68
10	Hinge	pcs	3	
11	Bob Φ12 - 40	pcs	104	
12	Concrete with stone M100	m ³	0.27	
13	Steel grid of B40	m ²	31.83	



MATERIAL LIST			
No.	Item	Unit	QTY
1	STEEL BAR Φ 8	m	130
2	CONCRETE WITH STONE 1x2 M200	m ³	2.36
3	CONCRETE WITH STONE 4x6 M100	m ³	0.68
4	SAND	m ³	0.34

NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
PUMP DRAINAGE IMPROVEMENT
THANH DA PUMPING STATION

FENCE AND FOUNDATION
OF SUBSTATION

SCALE : 1/(5; 20; 25; 50)

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

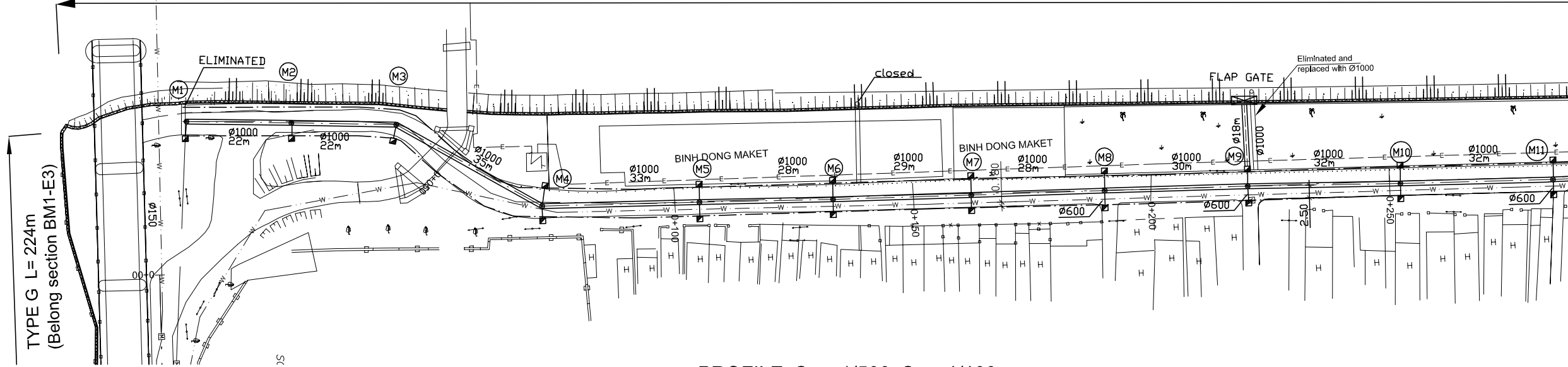
DESIGNED CHECKED

DATE : DWG. No. PB - PDI - BMC1 - 508

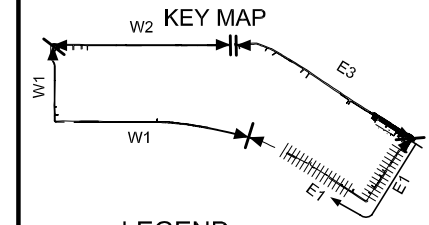
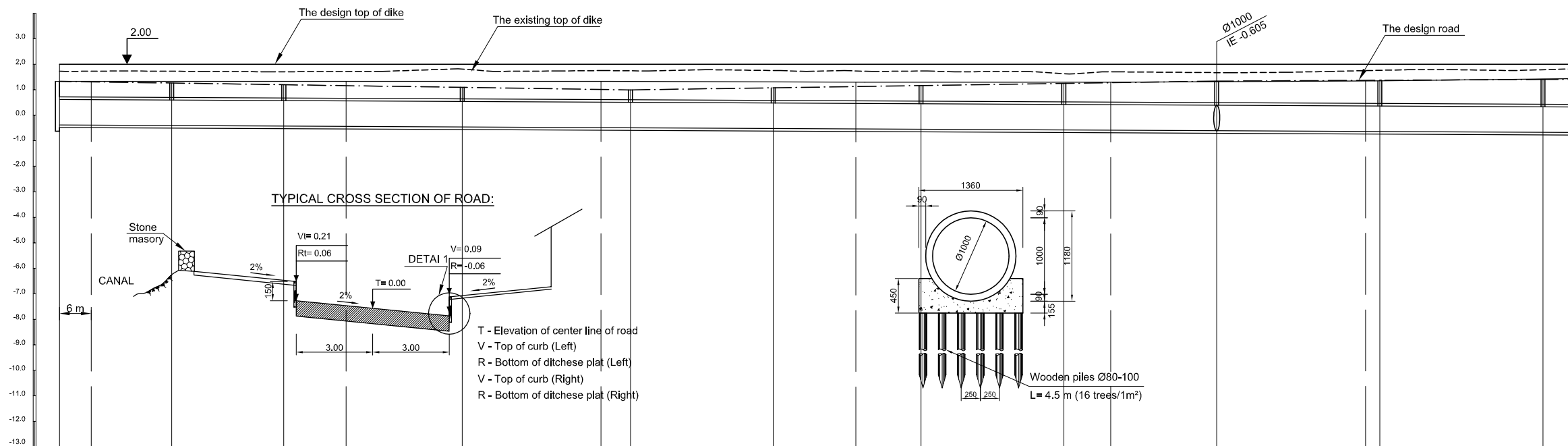
BEN ME COC (1) PUMP DRAINAGE IMPROVEMENT AREA

PLAN S = 1/500

TEMPORARY DIKE CONSTRUCTION TYPE D L = 330m (Raising of existing revetment)



PROFILE S_H = 1/500, S_V = 1/100



LEGEND

- Sewer Line
- Sewer Line
- Planned Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Temporary dike
- Design road
- No. 1 Manhole (<600mm)
- No. 2 Manhole (<1000mm)
- No. 3 Manhole (<1500mm)
- No. 4 Manhole (<2000mm)
- Spatial Manhole
- Inlet
- Existing Manhole
- Existing Inlet
- Telephone Cable Inspection Chamber
- Electric Cable Inspection Chamber
- Fire Hydrant

NO.	DATE	DESCRIPTIONS	BY	APRO.
REVISIONS				

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
PUMP DRAINAGE IMPROVEMENT
BEN ME COC(1) AREA
**PLAN AND PROFILE OF SEWER, ROAD
AND TEMPORARY DIKE (1)**
BM1- E1 (M1-M11)

SCALE : AS SHOWN

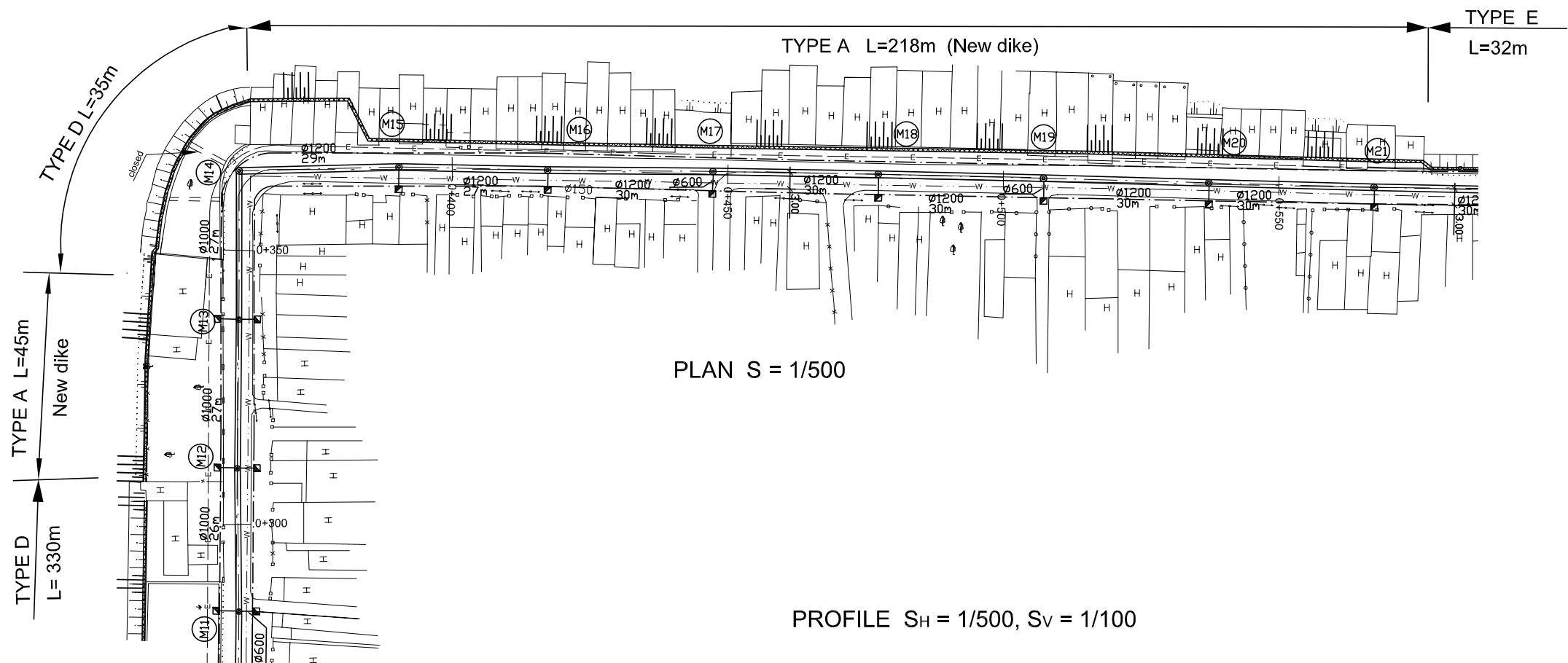
JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

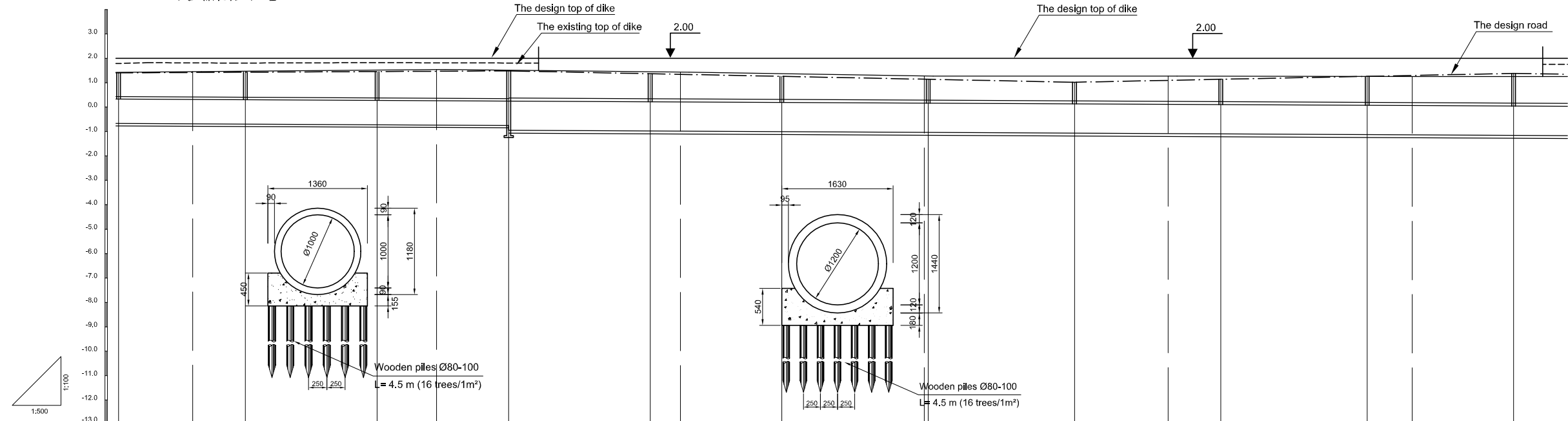
DESIGNED TOKUMASU TOSHIAKI	CHECKED KONDO MASAMI
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DATE : JUNE 2001 DWG. No. PB - PDI - BMC1-201

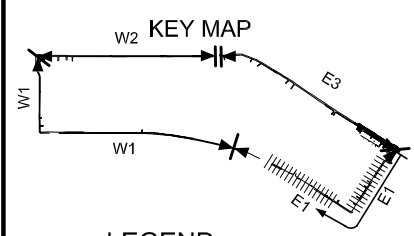
Location of Survey	0+00		0+50		0+100		0+150		0+200		0+250						
Manhole Number	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11						
Diameter (mm)	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000						
Gradient (‰)	1‰	1‰	1‰	1‰	1‰	1‰	1‰	1‰	1‰	1‰	1‰						
Length (m)	22.00	22.00	35.00	33.00	28.00	29.00	28.00	30.00	32.00	32.00							
Gradient of Road (‰)	112.00			3			4			115.00			1		64.00		
Design road Elevation (m)	1.330	1.312	1.264	1.198	1.162	1.093	1.012	0.994	1.078	1.126	1.165	1.249	1.276	1.339	1.368	1.371	1.403
Existing Ground Elevation (m)	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.31	1.30	1.30	1.30	1.30	1.32	1.35	1.35	1.43
Earth Covering (m)	0.618	0.602	0.574	0.530	0.507	0.460	0.407	0.394	0.508	0.571	0.622	0.734	0.771	0.854	0.913	0.918	0.982
Invert Elevation (m)	-0.378	-0.380	-0.400	-0.422	-0.435	-0.457	-0.485	-0.490	-0.518	-0.535	-0.547	-0.575	-0.585	-0.605	-0.635	-0.637	-0.669
Total Accumulation Length (m)	0.00	6.00	22.00	44.00	56.00	79.00	106.00	112.00	140.00	156.00	169.00	197.00	206.00	227.00	256.00	259.00	291.00



PROFILE S_H = 1/500, S_V = 1/100



Location of Survey	0+300		0+350			0+400		0+450			0+500		0+550				
Manhole Number	11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21						
Diameter (mm)	Ø1000	Ø1000	Ø1000	Ø1000	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200		
Gradient (‰)	1‰	1‰	1‰	1‰	1‰	1‰	1‰	1‰	1‰	1‰	1‰	1‰	1‰	1‰	1‰		
Length (m)	26.00	27.00	27.00	29.00	27.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00		
Gradient of Road (‰)	1		80.00			116.00		4			4		90.00				
Design road Elevation (m)	1.463	1.418	1.429	1.456	1.468	1.483	1.367	1.343	1.259	1.133	1.019	1.095	1.139	1.259	1.295	1.379	
Existing Ground Elevation (m)	1.43	1.46	1.48	1.52	1.52	1.46	1.43	1.39	1.27	1.23	1.27	1.27	1.27	1.25	1.25	1.25	
Earth Covering (m)	0.032	1.013	1.034	1.088	1.131	1.142	1.025	1.008	0.944	0.858	0.864	0.860	0.914	1.064	1.110	1.214	
Invert Elevation (m)	-0.069	-0.085	-0.095	-0.722	-0.753	-0.749	-0.978	-0.985	-1.005	-1.035	-1.035	-1.065	-1.085	-1.095	-1.125	-1.135	-1.155
Total Accumulation Length (m)	291.00	306.00	317.00	344.00	356.00	371.00	400.00	406.00	427.00	456.00	497.00	487.00	506.00	517.00	547.00	556.00	577.00



LEGEND

- Sewer Line
- Sewer Line
- Planned Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Temporary dike
- Design road
- No. 1 Manhole (<600mm)
- No. 2 Manhole (<1000mm)
- No. 3 Manhole (<1500mm)
- No. 4 Manhole (<2000mm)
- Spacial Manhole
- Inlet
- Existing Manhole
- Existing Inlet
- Telephone Cable Inspection Chamber
- Electric Cable Inspection Chamber
- Fire Hydrant

NO.	DATE	DESCRIPTIONS	BY	APRO.
REVISIONS				

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
PUMP DRAINAGE IMPROVEMENT
BEN ME COC(1) AREA
PLAN AND PROFILE OF SEWER, ROAD
AND TEMPORARY DIKE (2)
BM1 - E1 (M11-M21)

SCALE : AS SHOWN

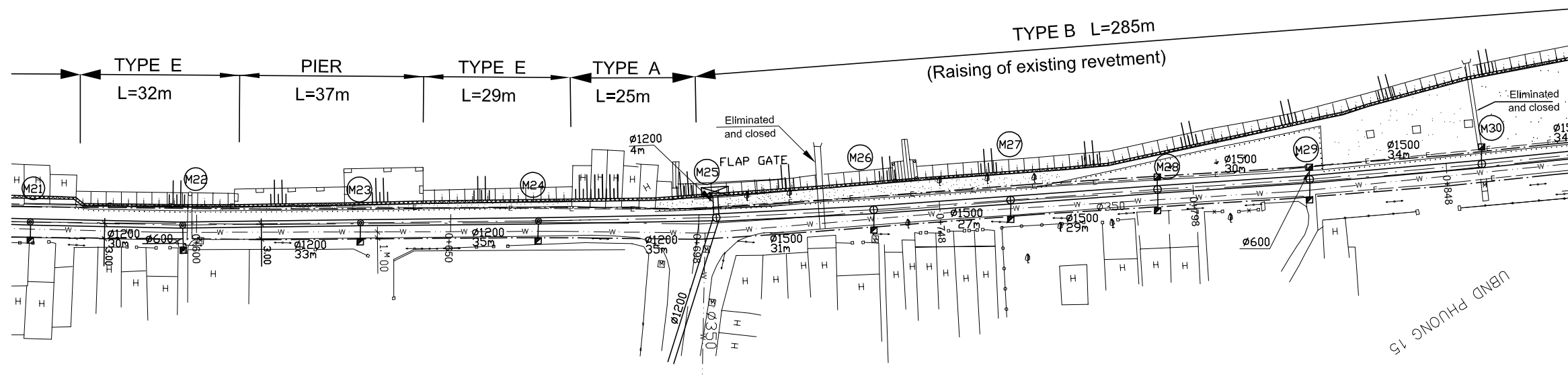
JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

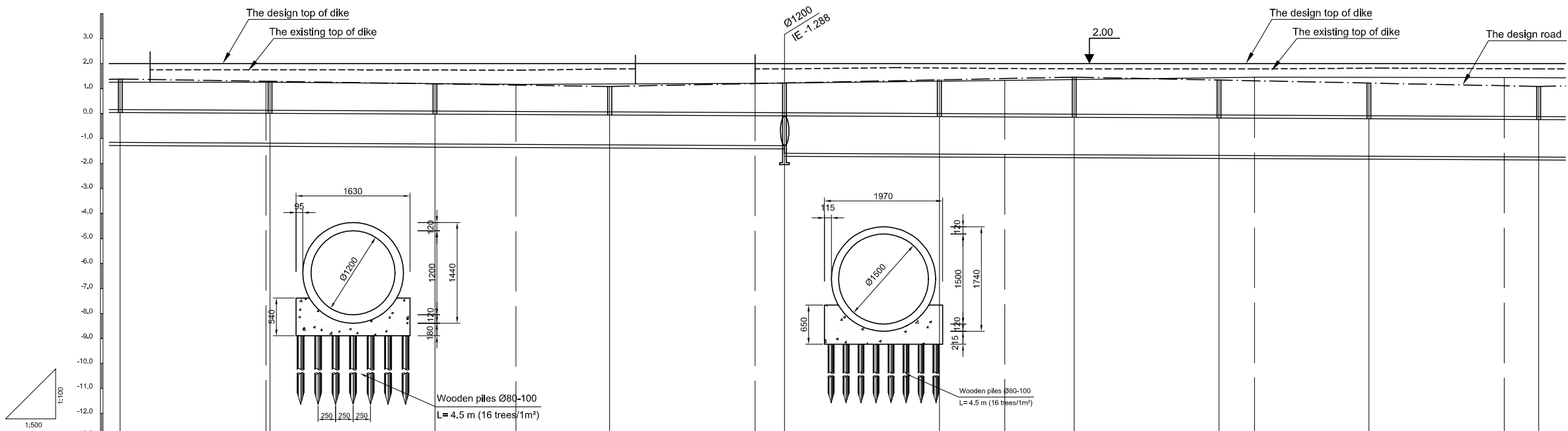
DESIGNED: TOKUMASU TOSHIKI
CHECKED: KONDO MASAMI

DATE : JUNE 2001 DWG. No. PB - PDI - BMC1-202

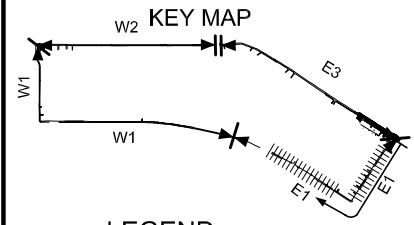
PLAN S = 1/500



PROFILE S_H = 1/500, S_V = 1/100



Location of Survey	0+600		0+650		0+698		0+748		0+798		0+848					
Manhole Number	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30						
Diameter (mm)	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	Ø1500	Ø1500	Ø1500	Ø1500	Ø1500	Ø1500					
Gradient (‰)	1‰	1‰	1‰	1‰	1‰	1‰	1‰	1‰	1‰	1‰						
Length (m)	30.00	33.00	35.00	35.00	31.00	27.00	29.00	30.00	34.00							
Gradient of Road (‰)	98.00			3			4			93.00			4			
Design road Elevation (m)	1.379	1.282	1.190	1.142	1.085	1.201	1.225	1.349	1.401	1.457	1.341	1.313	1.221	1.113	1.085	
Existing Ground Elevation (m)	1.25	1.25	1.21	1.17	1.18	1.21	1.22	1.30	1.33	1.36	1.44	1.46	1.45	1.44	1.43	
Earth Covering (m)	1.214	1.157	1.088	1.057	1.018	1.164	1.193	1.348	1.414	1.414	1.396	1.376	1.306	1.226	1.204	
Invert Elevation (m)	-1.155	-1.185	-1.218	-1.235	-1.253	-1.283	-1.288	-1.619	-1.633	-1.646	-1.675	-1.683	-1.705	-1.733	-1.739	
Total Accumulation Length (m)	577.00	606.00	607.00	640.00	556.00	675.00	704.00	710.00	741.00	754.00	768.00	797.00	804.00	827.00	854.00	861.00



LEGEND

- Sewer Line
- Sewer Line
- Flapped Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Temporary dike
- Design road
- No. 1 Manhole (<600mm)
- No. 2 Manhole (<1000mm)
- No. 3 Manhole (<1500mm)
- No. 4 Manhole (<2000mm)
- Spatial Manhole
- Inlet
- Existing Manhole
- Existing Inlet
- Telephone Cable Inspection Chamber
- Electric Cable Inspection Chamber
- Fire Hydrant

NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
PUMP DRAINAGE IMPROVEMENT
BEN ME COC(1) AREA
**PLAN AND PROFILE OF SEWER, ROAD
AND TEMPORARY DIKE (3)**
BM1 - E1 (M21-M30)

SCALE : AS SHOWN

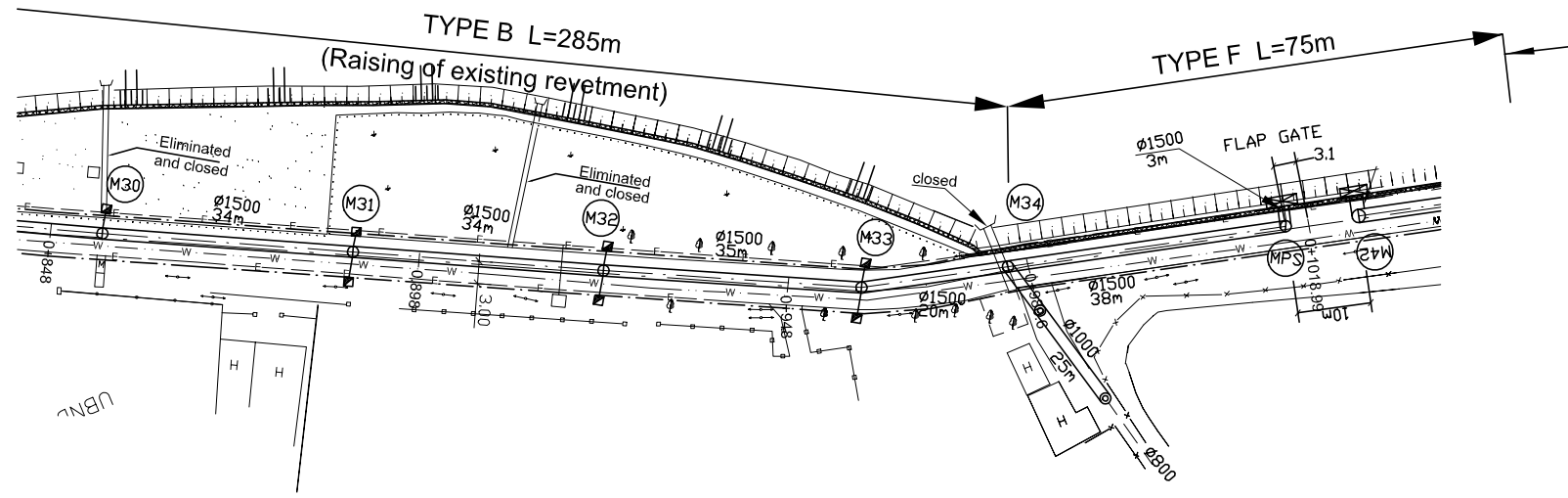
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

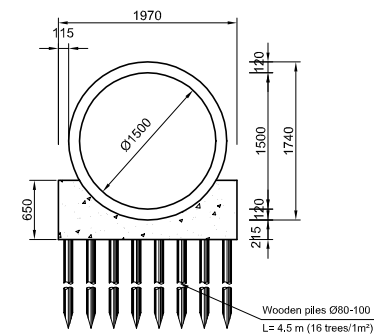
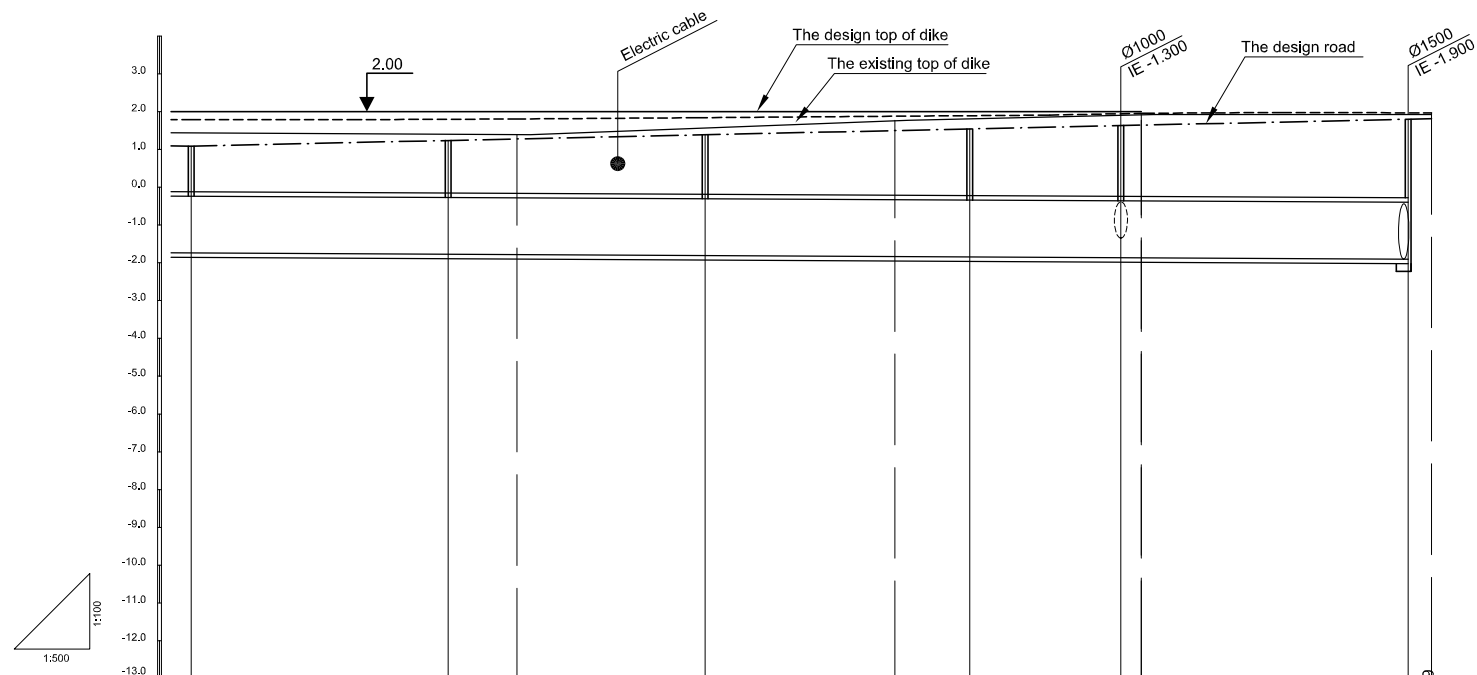
DESIGNED TOKUMASU TOSHIAKI	CHECKED KONDO MASAMI
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DATE : JUNE 2001 DWG. No. PB - PDI - BMC1-203

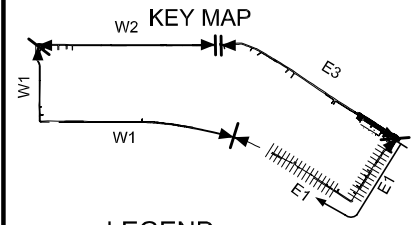
PLAN S = 1/500



PROFILE $S_H = 1/500, S_V = 1/100$



Location of Survey	0+898		0+948		0+980.0		1+018.90	
Manhole Number	M30	M31	M32	M33	M34	MPS		
Diameter (mm)	Ø1500	Ø1500	Ø1500	Ø1500	Ø1500	Ø1500		
Gradient (‰)	1‰	1‰	1‰	1‰	1‰	1‰		
Length (m)	34.00	34.00	35.00	20.00	38.00			
Gradient of Road (‰)	4.5		161.00					
Design road Elevation (m)	1.085	1.238	1.391	1.504	1.549	1.639	1.810	
Existing Ground Elevation (m)	1.43	1.40	1.39	1.77	1.82	1.90	1.92	1.92
Earth Covering (m)	1.204	1.391	1.441	1.578	1.717	1.771	1.881	2.090
Invert Elevation (m)	-1.739	-1.773	-1.783	-1.807	-1.833	-1.842	-1.862	-1.883
Total Accumulation Length (m)	861.00	895.00	904.00	929.00	954.00	964.00	984.00	1022.0
							987.00	1036.0



LEGEND

	Sewer Line
	Sewer Line
	Planned Sewer
	Existing Sewer
	Telephone Cable
	Electric Cable
	Water Pipe
	Outlet Without Flap Gate
	Outlet With Flap Gate
	Temporary dike
	Design road
	No. 1 Manhole (<600mm)
	No. 2 Manhole (<1000mm)
	No. 3 Manhole (<1500mm)
	No. 4 Manhole (<2000mm)
	Spacial Manhole
	Inlet
	Existing Manhole
	Existing Inlet
	Telephone Cable Inspection Chamber
	Electric Cable Inspection Chamber
	Fire Hydrant

NO.	DATE	DESCRIPTIONS	BY	APRO.
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REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
PUMP DRAINAGE IMPROVEMENT
BEN ME COC(1) AREA
PLAN AND PROFILE OF SEWER, ROAD
AND TEMPORARY DIKE (4)
BM1 - E1 (M30-M35)

SCALE : AS SHOWN

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED: TOKUMASU TOSHIAKI
CHECKED: KONDO MASAMI

DATE : JUNE 2001 DWG. No. PB - PDI - BMC1-204