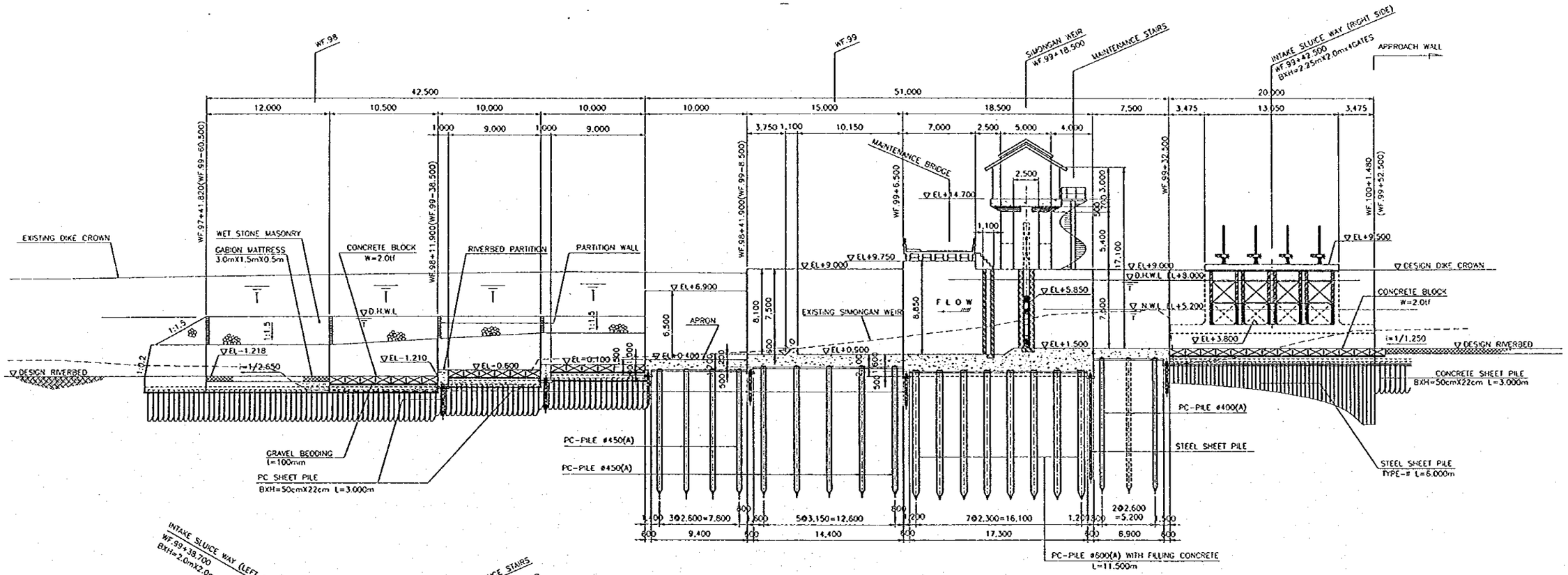
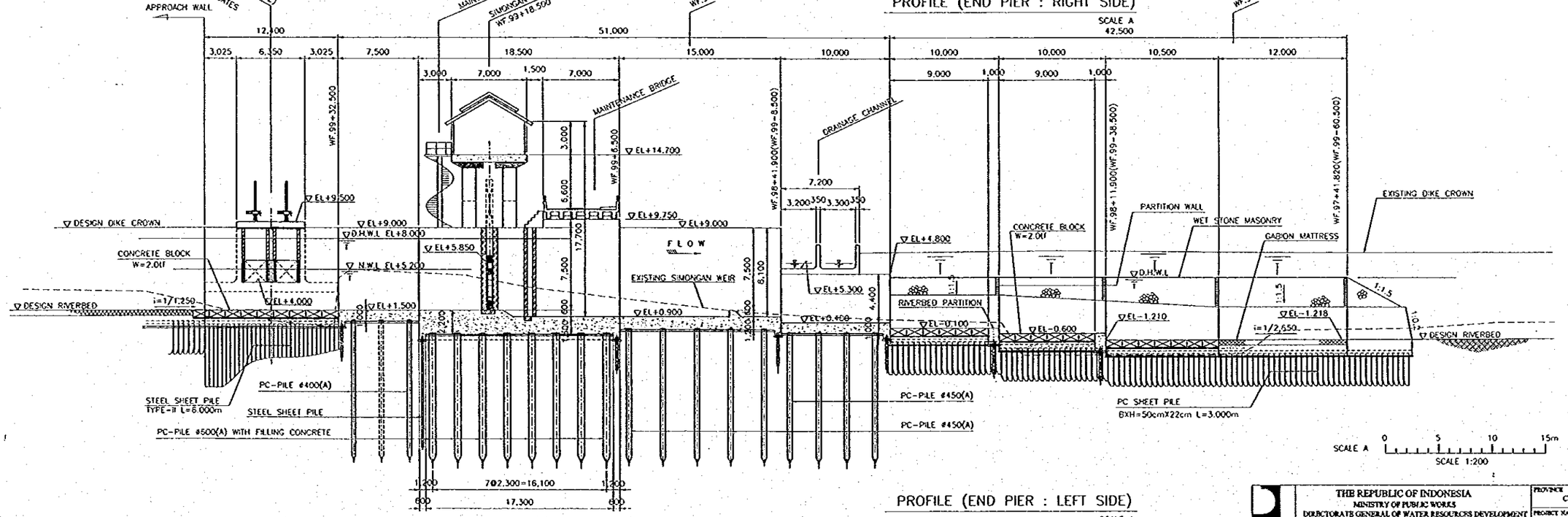


PROFILE (END PIER : RIGHT SIDE)

SCALE A



PROFILE (END PIER : LEFT SIDE)

SCALE A

NOTE:
PILE LENGTH SHOWN ON THIS DRAWING IS TENTATIVE.
THE CONTRACTOR SHALL DETERMINE THE LENGTH OF PILE BY TEST PILING.

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

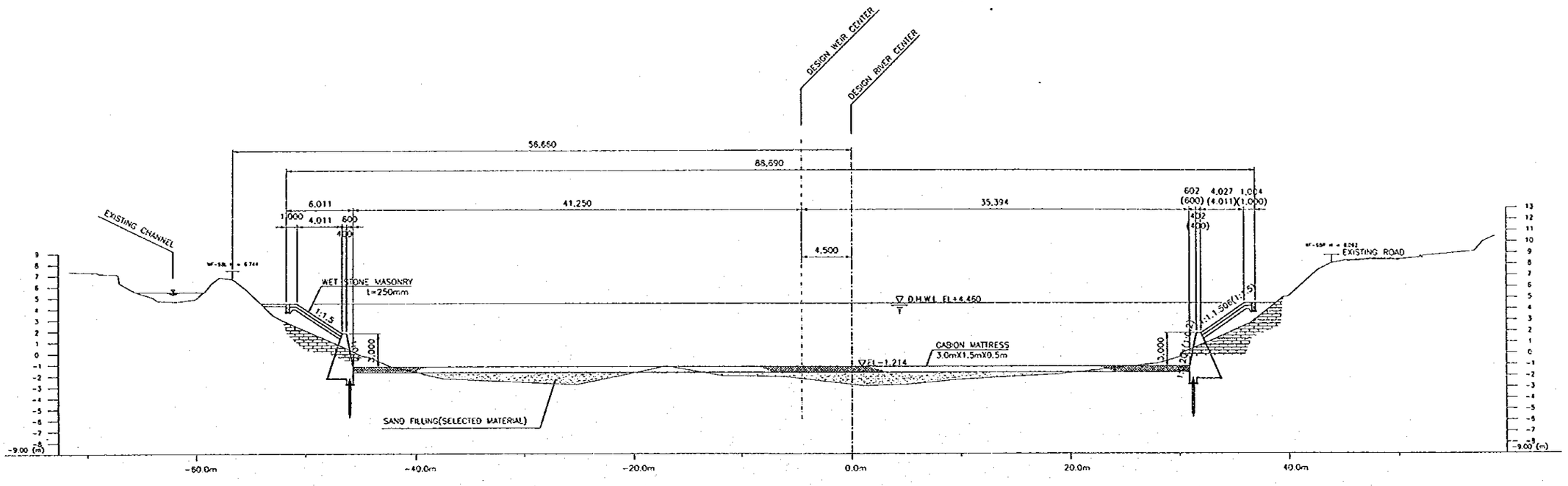
GENERAL DRAWING

PROFILE OF WEIR (2/2)

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL AND PADCO INTERNATIONAL INC.

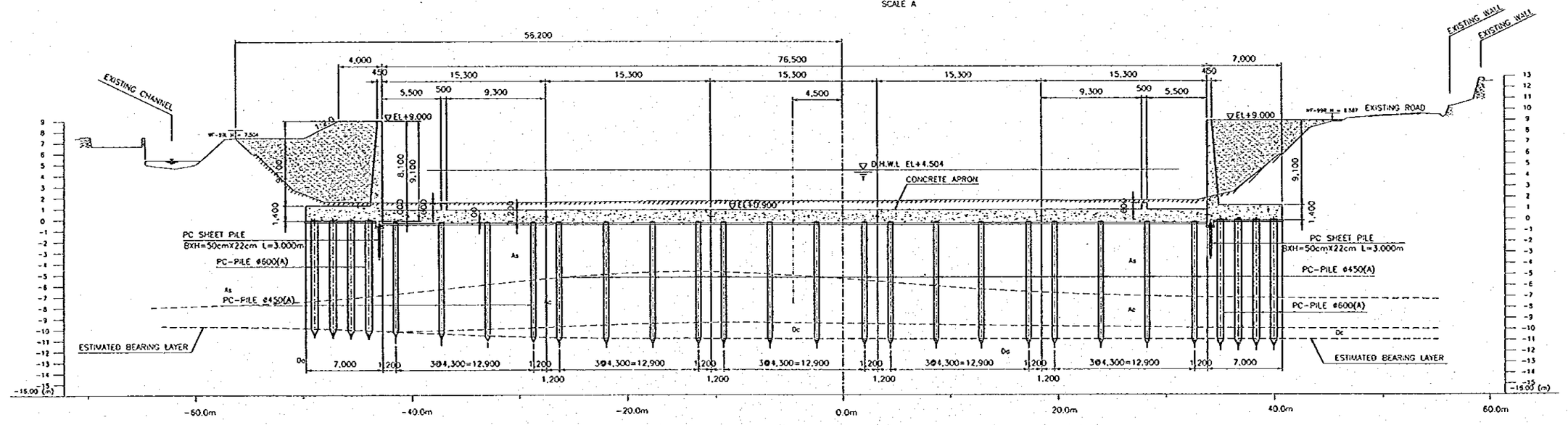
ORIGINATED
CHECKED
APPROVED
CHIEF OF PLANNING AND DESIGN
PROJECT MANAGER

PROVINCE: CENTRAL JAVA
PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY
DRAWING NO. W3-P2-GE-Lo-3
SHEET NO. 13
DATE
CONTRACT NO.



CROSS SECTION (WF.98)

SCALE A



CROSS SECTION (WF.99)

SCALE A

SCALE A 0 5 10 15m

SCALE 1:200

NOTE:
1. PILE LENGTH SHOWN ON THIS DRAWING IS TENTATIVE.
THE CONTRACTOR SHALL DETERMINE THE LENGTH OF PILE BY TEST PILING.
2. THE ESTIMATED FORMATION OF GEOLOGICAL LAYER IS SHOWN ON THE DRAWING FOR REFERENCE.
As,Ac,Dc AND Do SHOWN ON THE DRAWING INDICATE LAYER'S NAME AND ARE DESCRIBED AS FOLLOWS:
As : ALLUVIUM SOIL CONSISTING OF FINE GRAIN TO MIDDLE GRAIN SAND, CONTAINING THE INTERCALATED CLAY AND SILT PARTIALLY.
N-VALUE OF 15 ~ 30
Ac : SOFT ALLUVIUM SOIL CONSISTING OF CLAY AND SANDY CLAY.
N-VALUE OF 10 ~ 20
Dc : DILUVIUM SOIL CONSISTING OF HARD CLAY, PARTLY CONTAINING CORAL LIMESTONE.
N-VALUE OF 20 ~ 35
Do : DAMAR FORMATION (SEDIMENTARY ROCK UNIT) WITH N-VALUE OF MORE THAN 50.

The number in parentheses shows the design dimensions of channel cross section which is perpendicular to the design center line of river channel. (WF.98)

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

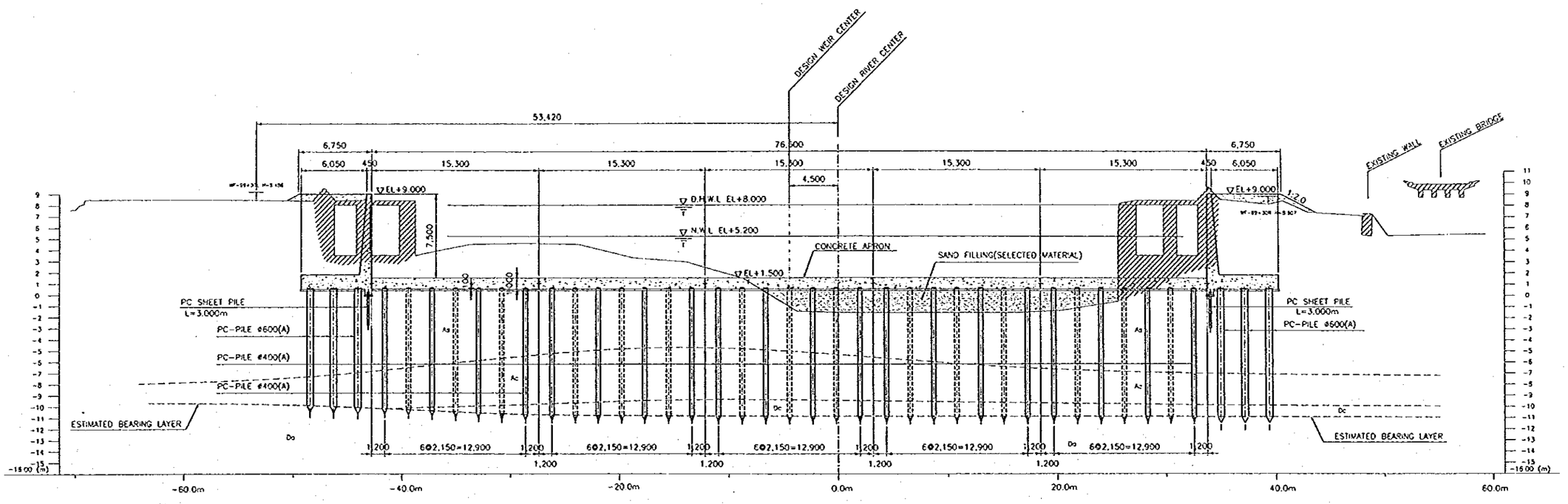
JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

GENERAL DRAWING
CROSS SECTIONS (1/2)

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD in association with
PACIFIC CONSULTANTS INTERNATIONAL
FASCO INTERNATIONAL INC.

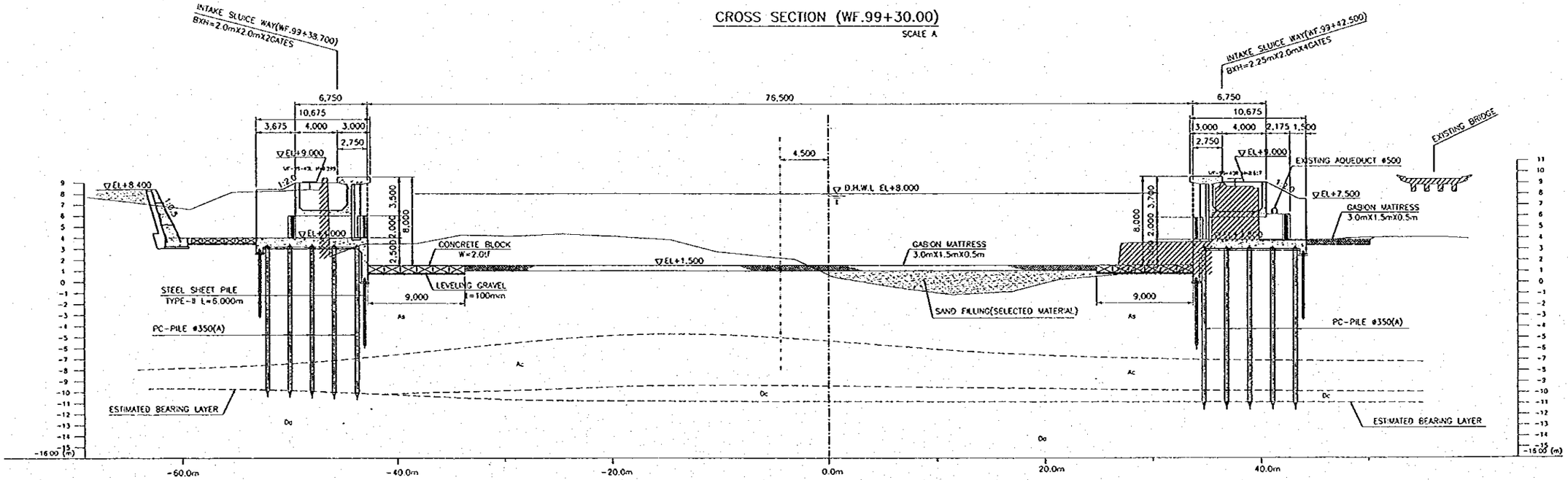
DESIGNED
CHECKED
APPROVED
CHIEF OF PLANNING AND DESIGN
PROJECT MANAGER

PROVINCE: CENTRAL JAVA
PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY
DRAWING NO. W3-P8-GE-Cr-7
SHEET NO. 14
DATE
CONTRACT NO.



CROSS SECTION (WF.99+30.00)

SCALE A



CROSS SECTION (WF.99+43.00)

SCALE A

SCALE A 0 5 10 15m

SCALE : 1:200

NOTE:
1. PILE LENGTH SHOWN ON THIS DRAWING IS TENTATIVE.
THE CONTRACTOR SHALL DETERMINE THE LENGTH OF PILE BY TEST PILING.
2. THE ESTIMATED FORMATION OF GEOLOGICAL LAYER IS SHOWN ON THE DRAWING FOR REFERENCE.
As,Ac,Dc AND Do SHOWN ON THE DRAWING INDICATE LAYER'S NAME AND ARE DESCRIBED AS FOLLOWS:
As : ALLUVIUM SOIL CONSISTING OF FINE GRAIN TO MIDDLE GRAIN SAND, CONTAINING THE INTERCALATED CLAY AND SILT PARTIALLY.
N-VALUE OF 15 ~ 30
Ac : SOFT ALLUVIUM SOIL CONSISTING OF CLAY AND SANDY CLAY.
N-VALUE OF 10 ~ 20
Dc : DILUVIUM SOIL CONSISTING OF HARD CLAY, PARTLY CONTAINING CORAL LIMESTONE.
N-VALUE OF 20 ~ 35
Do : DAMAR FORMATION (SEDIMENTARY ROCK UNIT) WITH N-VALUE OF MORE THAN 50.

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

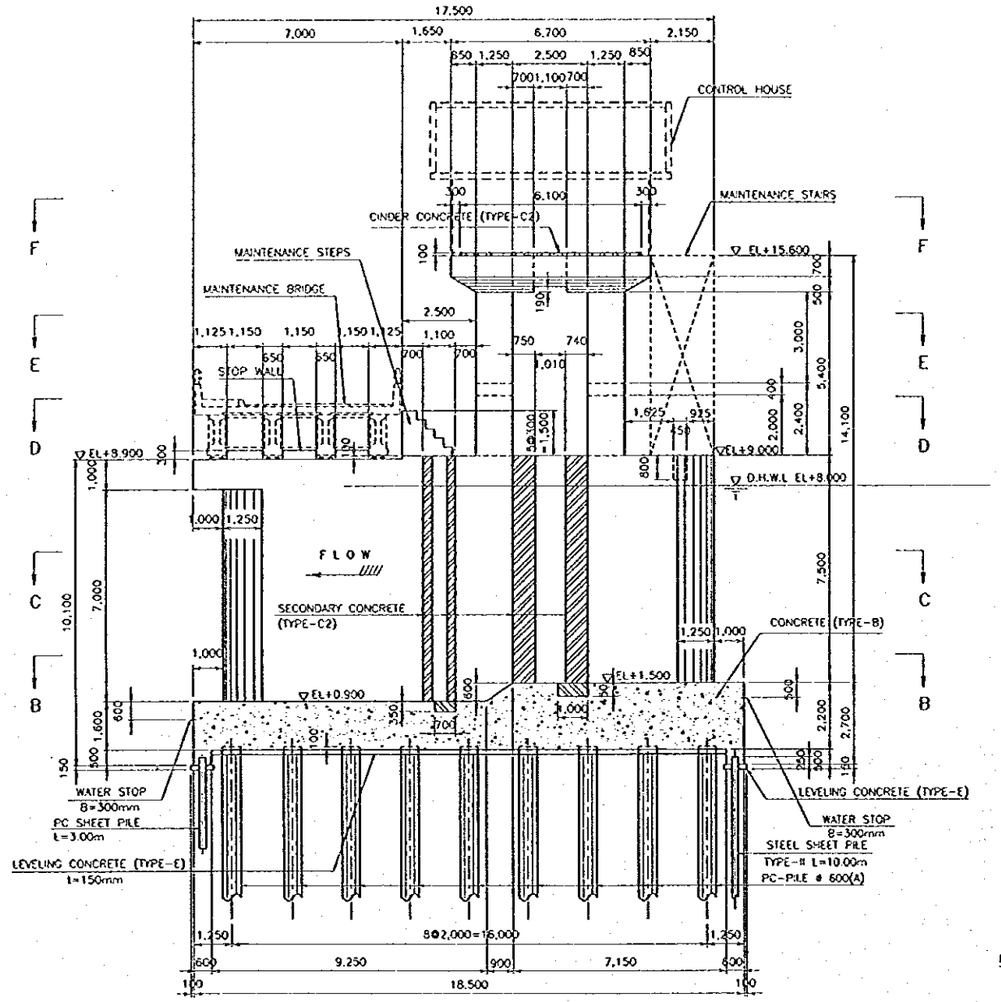
JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

GENERAL DRAWING
CROSS SECTIONS (2/2)

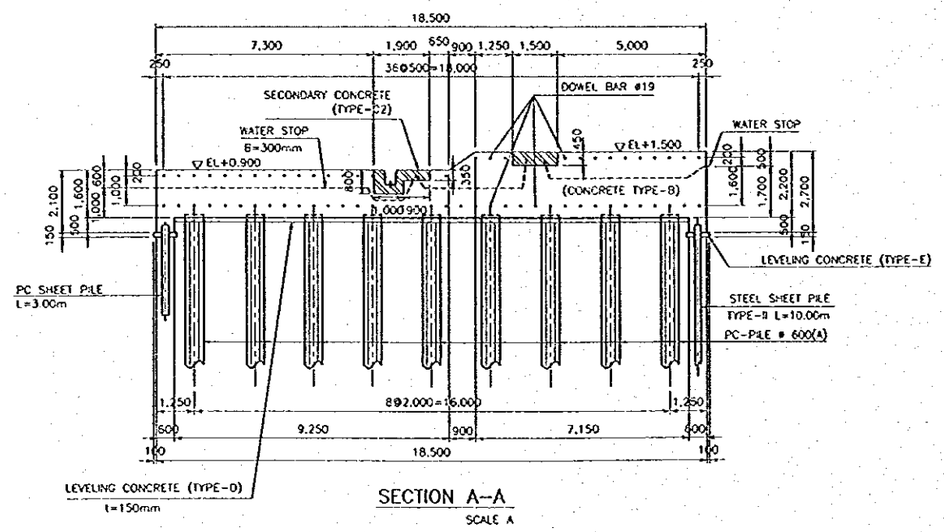
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD
PACIFIC CONSULTANTS INTERNATIONAL
FAKIH INTERNATIONAL INC

DESIGNED	
CHECKED	
APPROVED	CHIEF OF PLANNING AND DESIGN
	PROJECT MANAGER

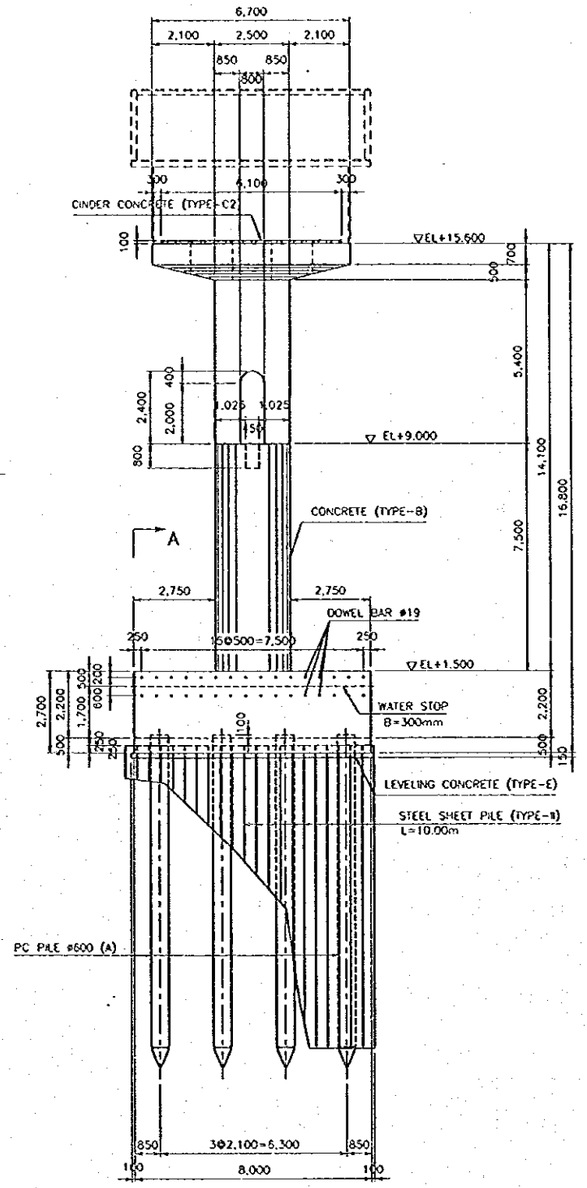
PROVINCE: CENTRAL JAVA
PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY
DRAWING NO. W2-P2-0E-Cr-0
SHEET NO. 15
DATE
CONTRACT NO.



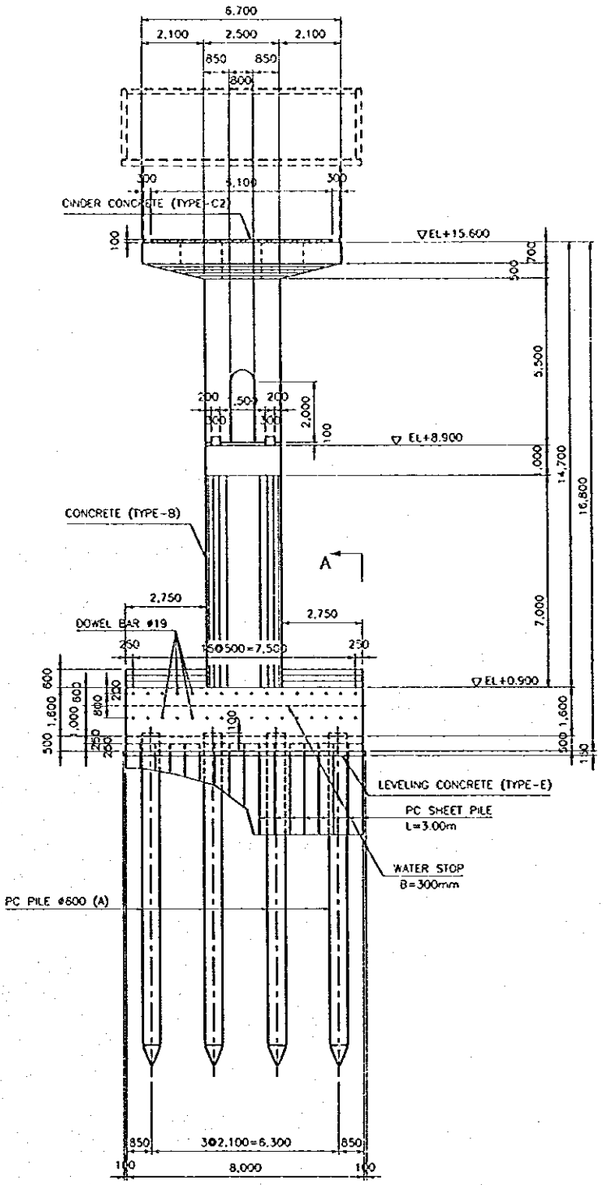
PROFILE OF CENTER PIER
SCALE A



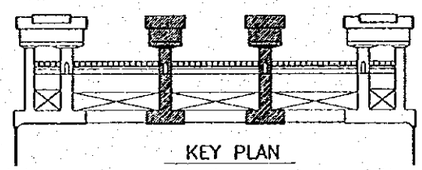
SECTION A–A
SCALE A



UPSTREAM ELEVATION OF CENTER PIER
SCALE A



DOWNSTREAM ELEVATION OF CENTER PIER
SCALE A



KEY PLAN

SCALE A 0 5.0 10.0m
SCALE 1:100

NOTE :
PILE LENGTH SHOWN ON THE DRAWING IS TENTATIVE.
THE CONTRACTOR SHOULD DETERMINE THE LENGTH OF PILE BY TEST PILING.

NO	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

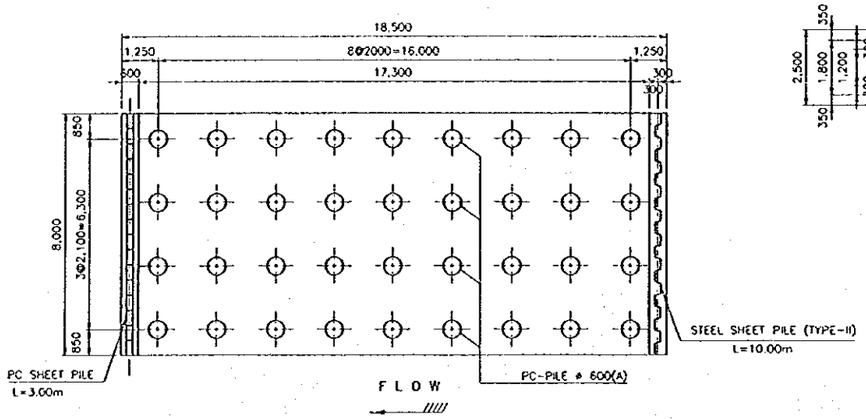
JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

WEIR PIER, GATE FLOOR SLAB AND APRON
CENTER PIER (1/2)

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL AND PADCO INTERNATIONAL LLC

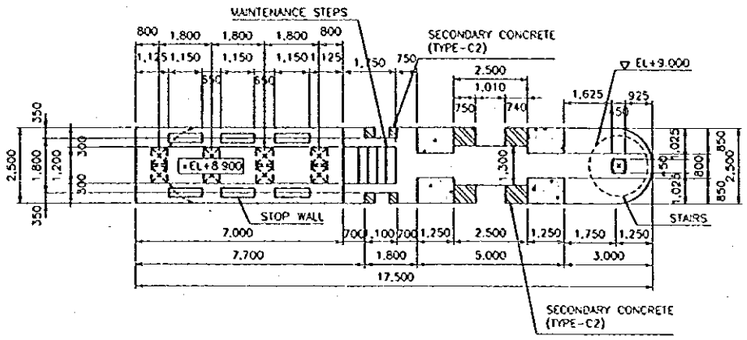
DESIGNED
CHECKED
APPROVED
CHIEF OF PLANNING AND DESIGN
PROJECT MANAGER

PROVINCE: CENTRAL JAVA
PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY
DRAWING NO: WG-P2-WE-B1-5
SHEET NO: 16
DATE
CONTRACT NO.



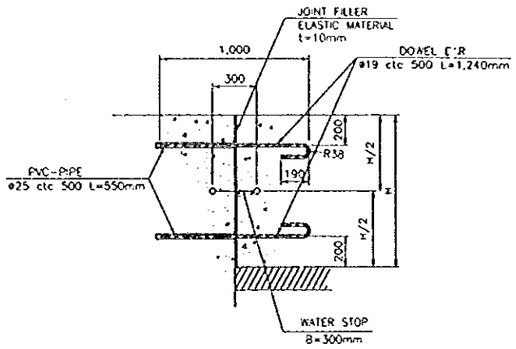
PILE ARRANGEMENT OF CENTER PIER

SCALE A



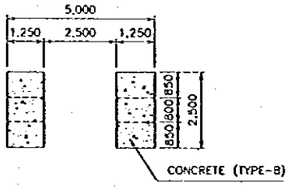
SECTION D-D

SCALE A



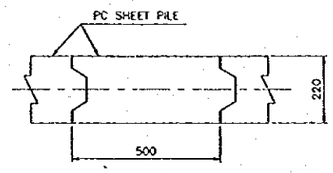
DETAIL OF JOINTING

SCALE B



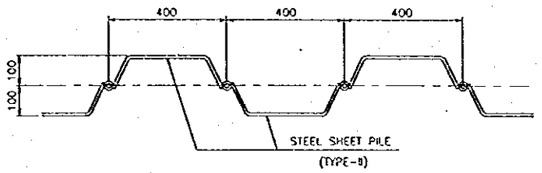
SECTION E-E

SCALE A



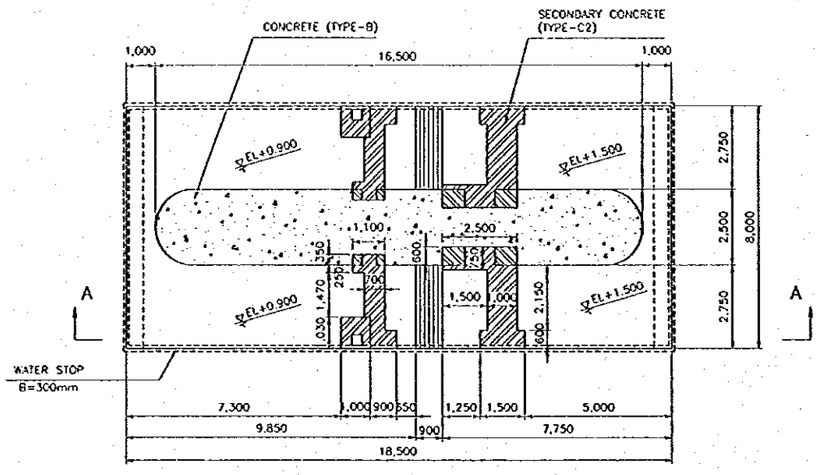
SECTION OF PC SHEET PILE

SCALE C



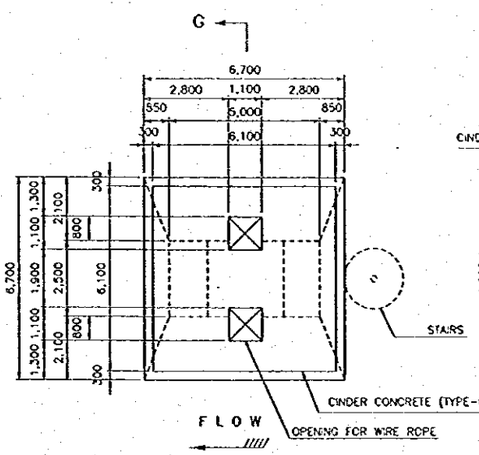
SECTION OF STEEL SHEET PILE

SCALE C



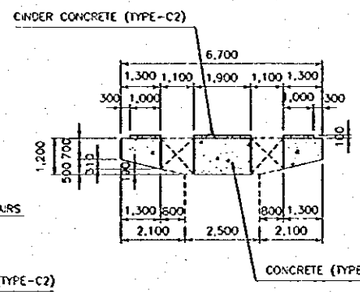
SECTION B-B

SCALE A



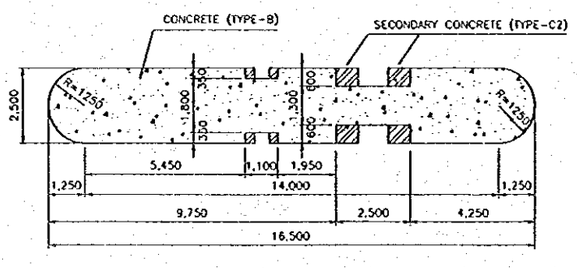
SECTION F-F

SCALE A



SECTION G-G

SCALE A



SECTION C-C

SCALE A

SCALE A 0 5.0 10.0m

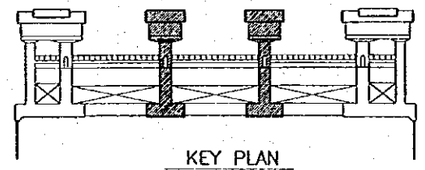
SCALE 1:100

SCALE B 0 1.0 2.0m

SCALE 1:20

SCALE C 0 0.5 1.0m

SCALE 1:10



KEY PLAN

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT
AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

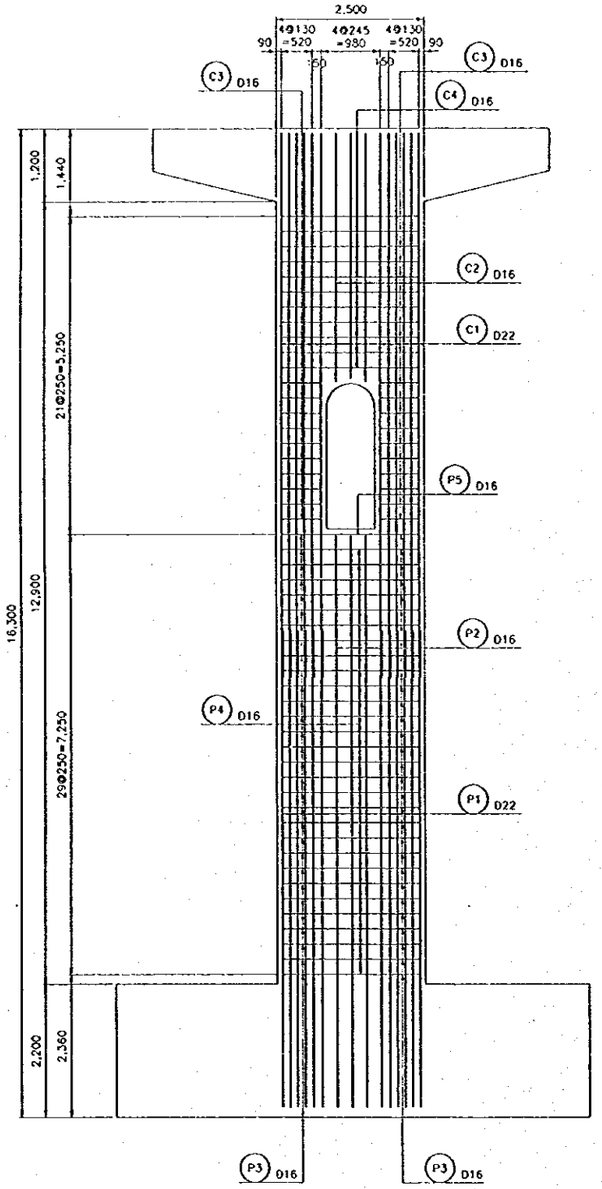
JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

WEIR PIER, GATE FLOOR SLAB AND APRON
CENTER PIER (2/2)

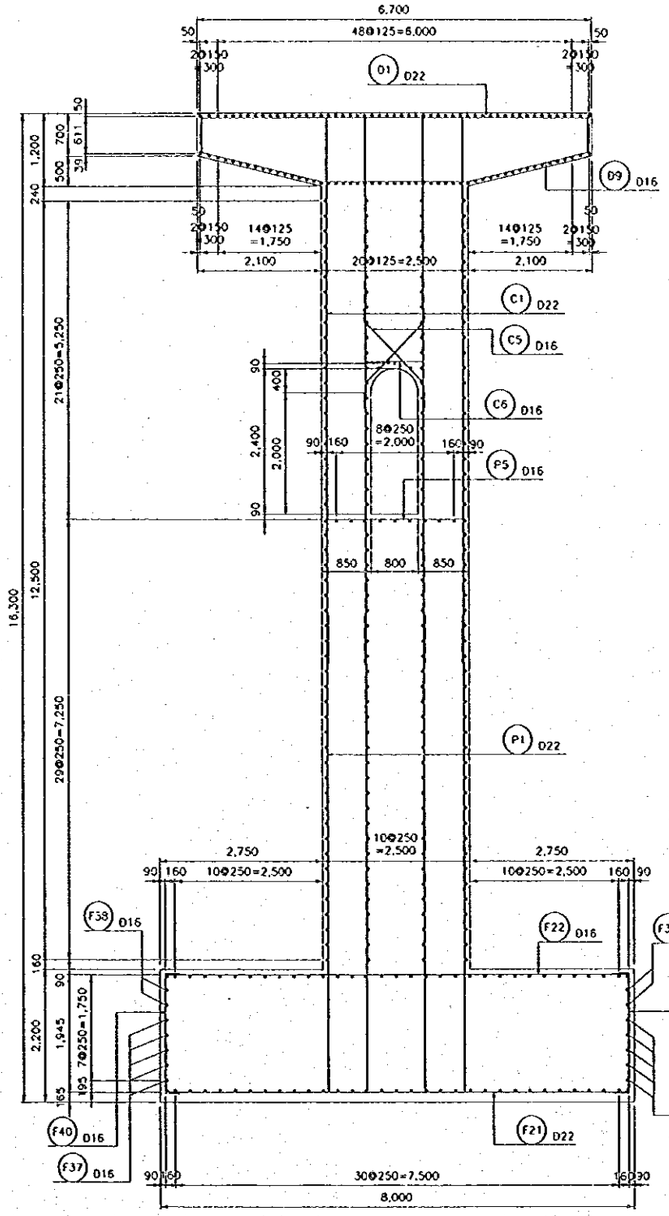
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD. IN ASSOCIATION WITH
PACIFIC CONSULTANTS INTERNATIONAL AND
PASCO INTERNATIONAL INC.

DESIGNED
CHECKED
APPROVED
CHIEF OF PLANNING AND DESIGN
PROJECT MANAGER

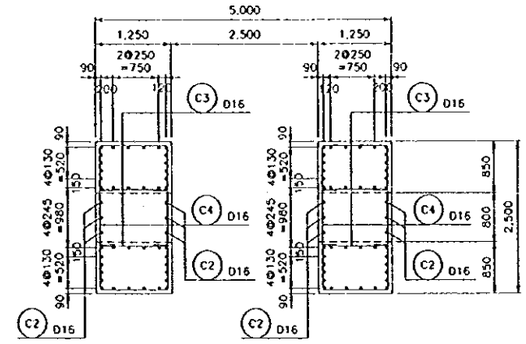
PROVINCE: CENTRAL JAVA
PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY
DRAWING NO. WG-F2-WPI-01-3
SHEET NO. 17
DATE
CONTRACT NO



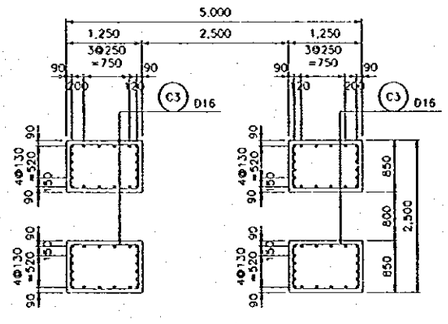
1 – 1



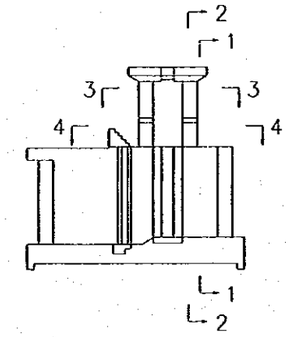
2 – 2



3 – 3



4 – 4



KEY PLAN

SCALE A 0 2.5 5.0m

SCALE 1:50

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

PROVINCE: CENTRAL JAVA

PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

DISTRICT: SEMARANG CITY

JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

WEIR PIER, GATE FLOOR SLAB AND APRON
REINFORCING BAR ARRANGEMENT FOR CENTER PIER (1/8)

DRAWING NO. WG-P2-WE-Re-3

SHEET NO. 18

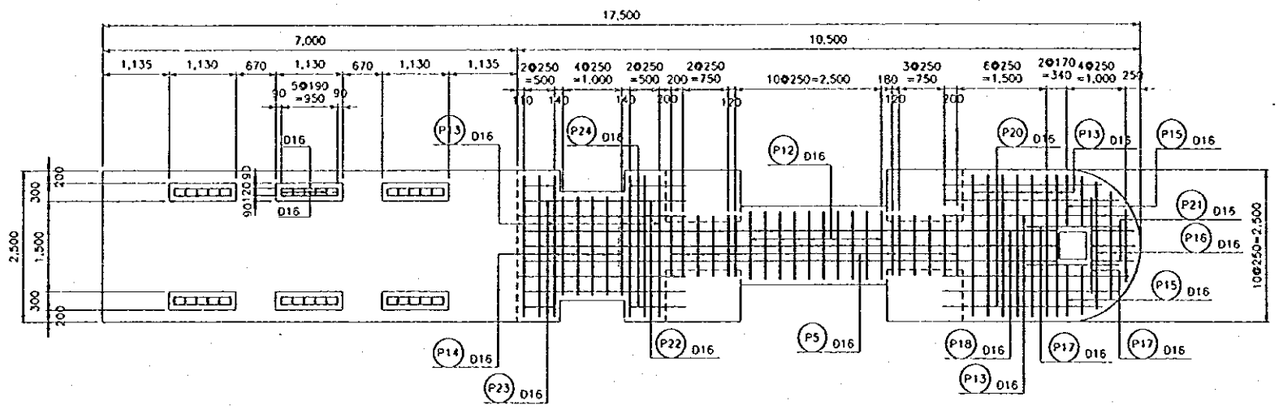
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD
PACIFIC CONSULTANTS INTERNATIONAL
FAMCO INTERNATIONAL INC.

DESIGNED | CHECKED | APPROVED

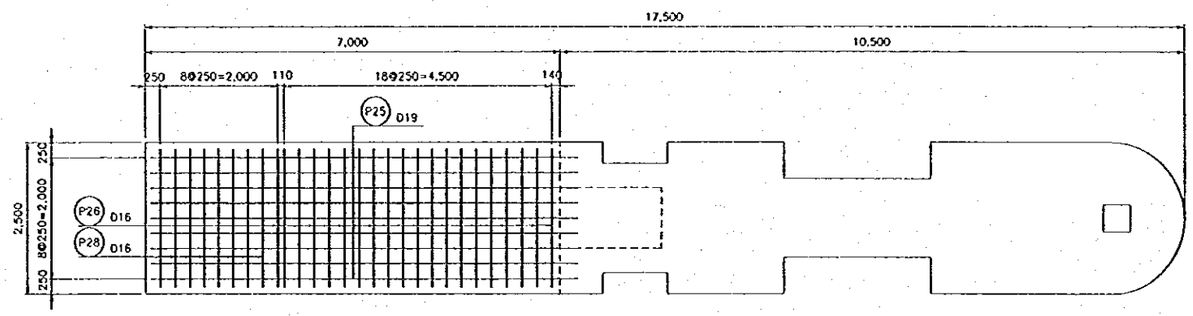
CHIEF OF PLANNING AND DESIGN | PROJECT MANAGER

DATE | CONTRACT NO.

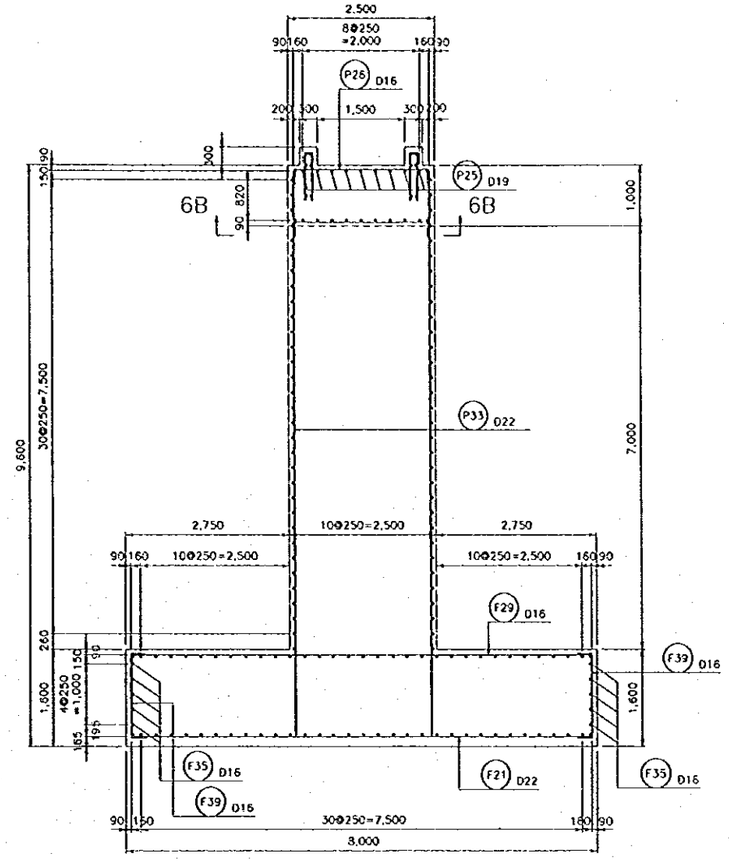
NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED



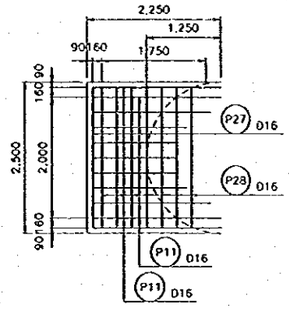
5 – 5



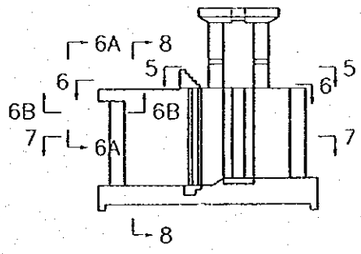
6 – 6



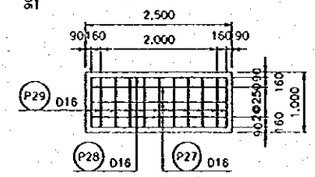
8 – 8



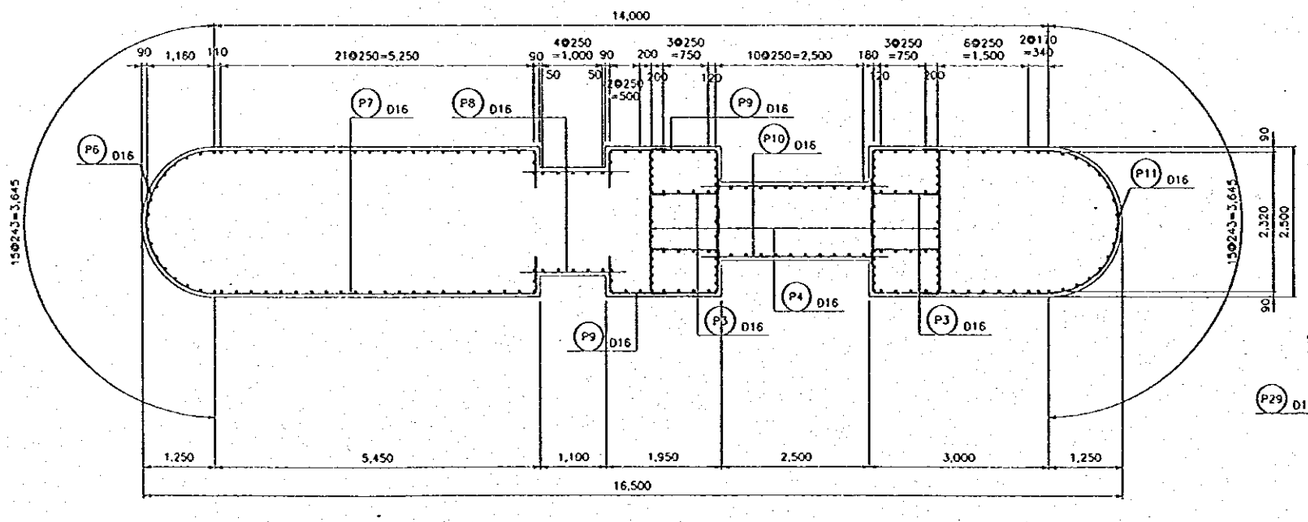
6B – 6B



KEY PLAN



6A – 6A



7 – 7

SCALE A 0 2.5 5.0m

SCALE 1:50

NO	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

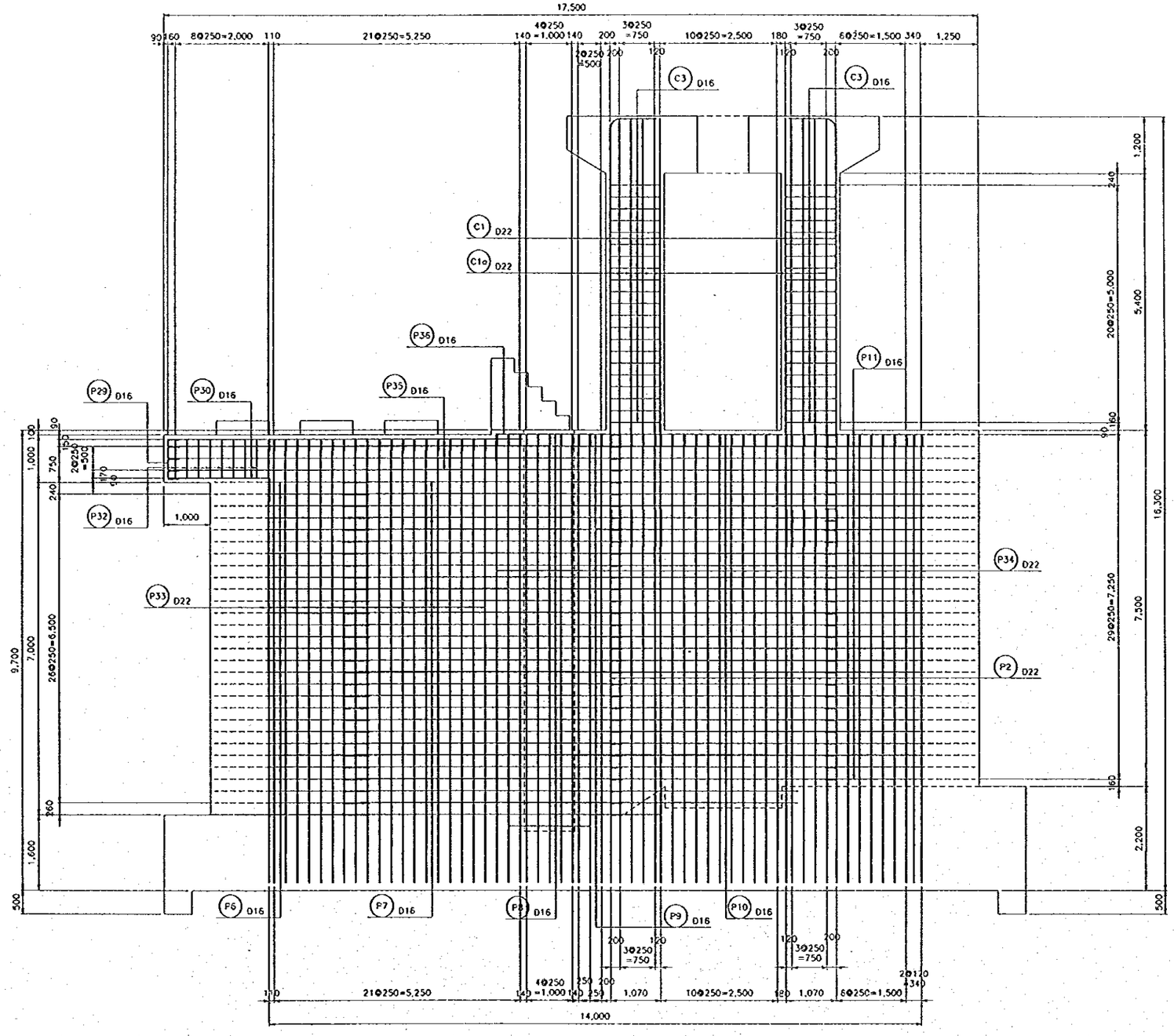
JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

WEIR PIER, GATE FLOOR SLAB AND APRON
REINFORCING BAR ARRANGEMENT FOR CENTER PIER (2 / 6)

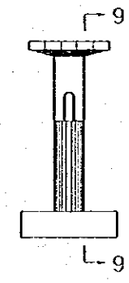
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL AND PASCO INTERNATIONAL INC.

DESIGNED
CHECKED
APPROVED
CHIEF OF PLANNING AND DESIGN
PROJECT MANAGER

PROVINCE: CENTRAL JAVA
PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY
DRAWING NO. WG – P2 – WE – RE – 6
SHEET NO. 19
DATE
CONTRACT NO.



9 – 9



KEY PLAN

SCALE A 0 2.5 5.0m

SCALE 1:50

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

PROVINCE: CENTRAL JAVA

PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

DISTRICT: SEMARANG CITY

JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

WEIR PIER, GATE FLOOR SLAB AND APRON
REINFORCING BAR ARRANGEMENT FOR CENTER PIER (3 / 8)

DRAWING NO: W2 – P2 – WE – R8 – 5

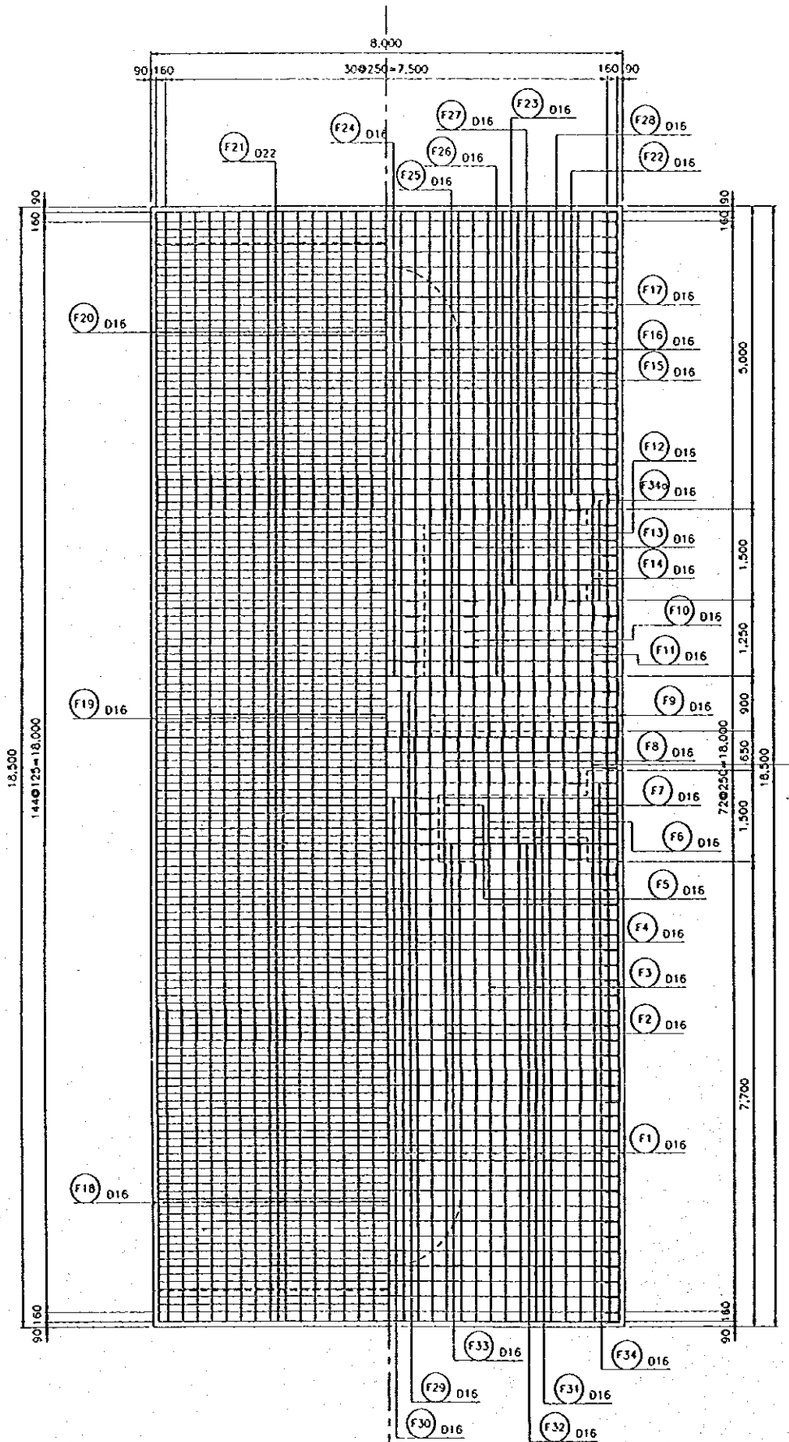
SHEET NO: 20

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD in association with PACIFIC CONSULTANTS INTERNATIONAL and PASCO INTERNATIONAL INC.

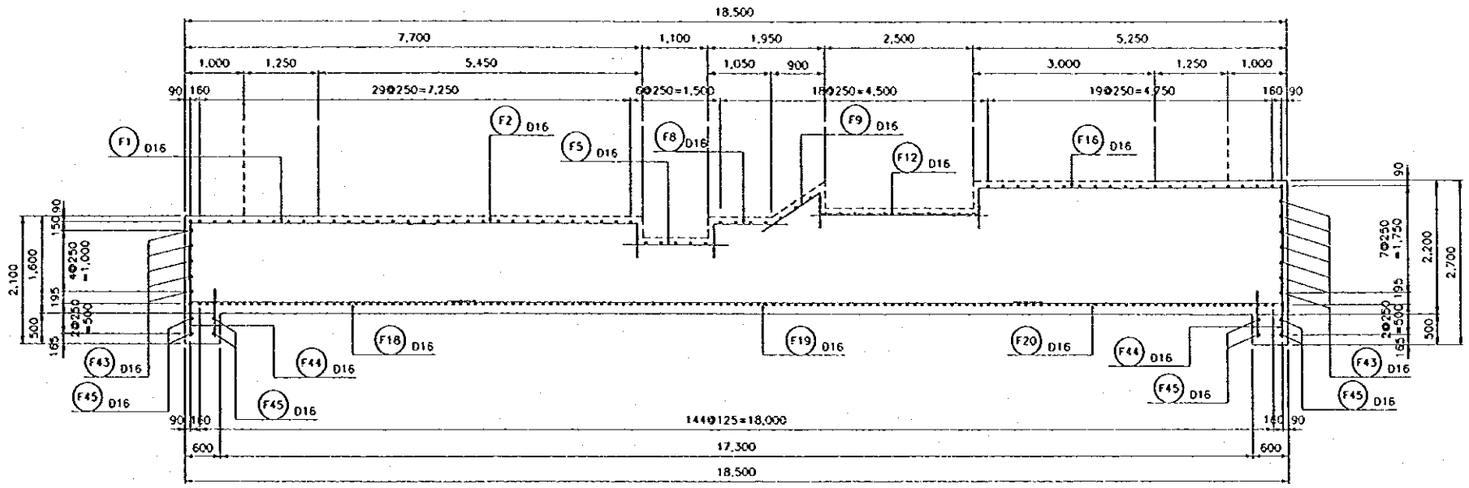
DESIGNED | CHECKED | APPROVED | CHIEF OF PLANNING AND DESIGN | PROJECT MANAGER

DATE | CONTRACT NO

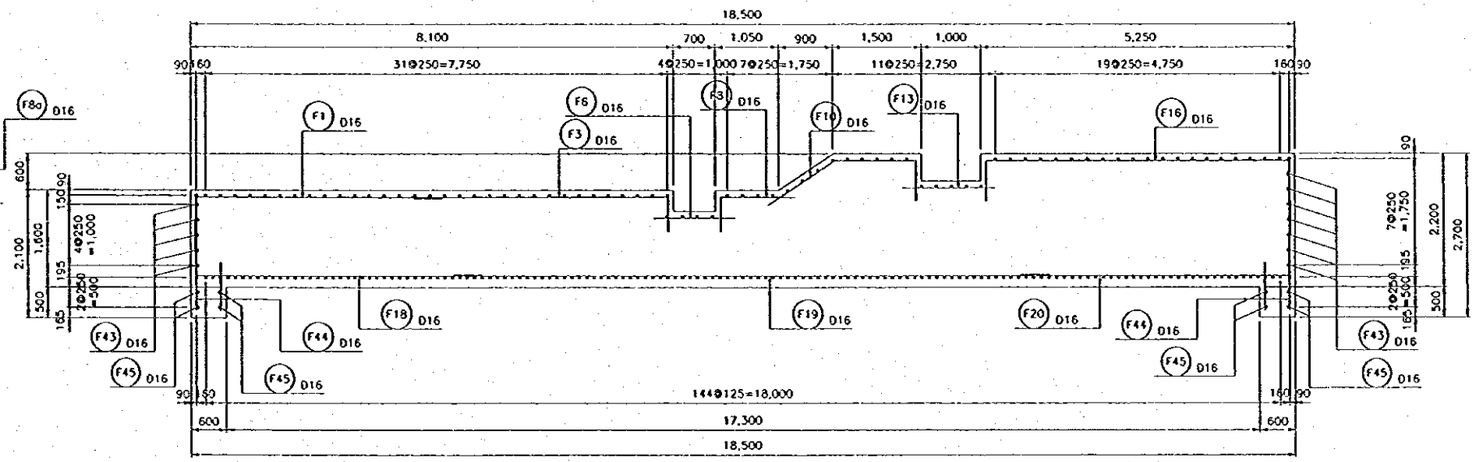
NO	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED



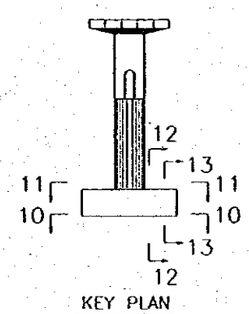
10 – 10 11 – 11



12 – 12



13 – 13



KEY PLAN

SCALE A 0 2.5 5.0m

SCALE 1:50

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

PROVINCE: CENTRAL JAVA

PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

DISTRICT: SEMARANG CITY

JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

WEIR PIER, GATE FLOOR SLAB AND APRON
REINFORCING BAR ARRANGEMENT FOR CENTER PIER(4/8)

DRAWING NO. W2-P2-WE-Re-8

SHEET NO. 31

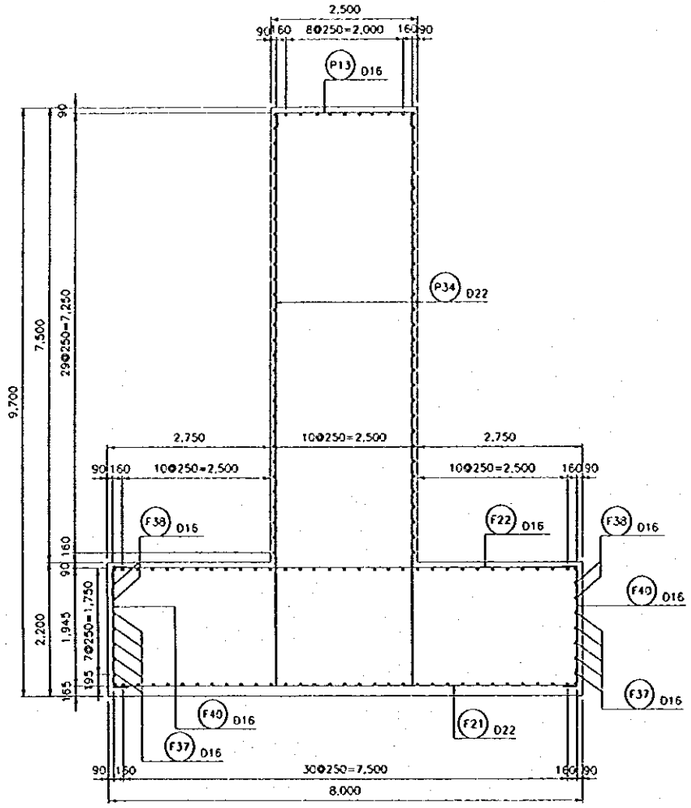
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD in association with PACIFIC CONSULTANTS INTERNATIONAL and PARCO INTERNATIONAL INC.

DESIGNED
CHECKED
APPROVED

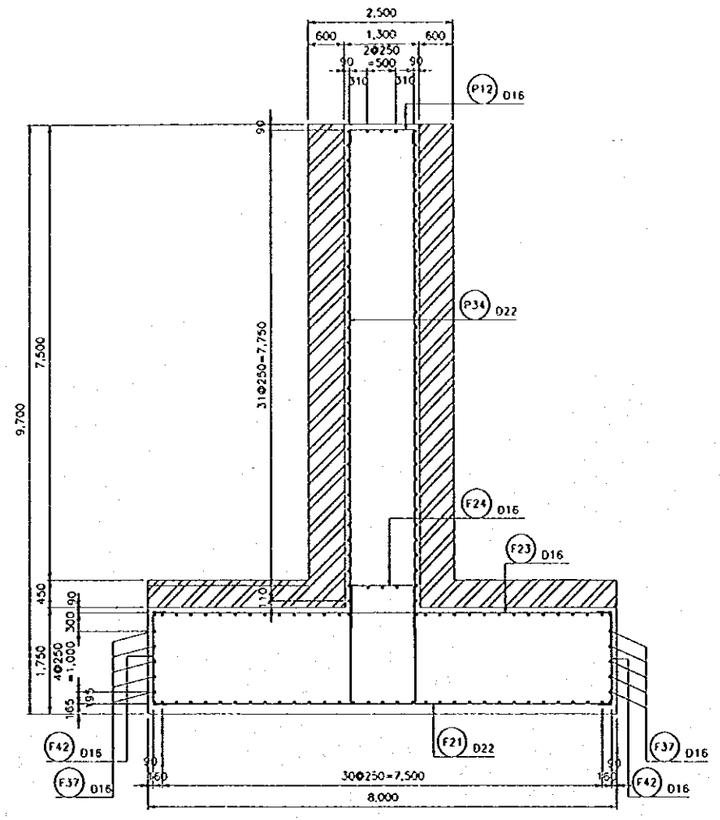
DIREKTUR JENDERAL SUMBER DAYA AIR
DIREKTUR JENDERAL CIPTA KARYA
PROJECT MANAGER

DATE
CONTRACT NO.

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED



14 – 14



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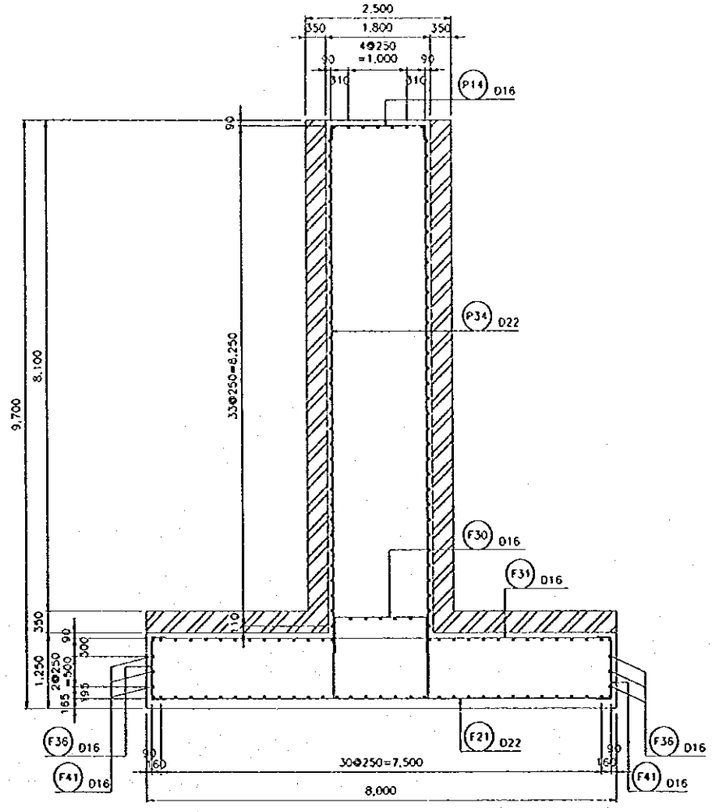
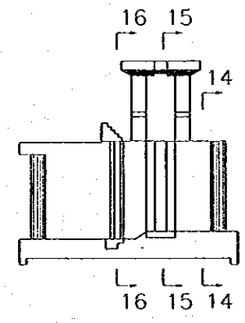


16 – 16



KEY PLAN

SCALE A 0 2.5 5.0m

SCALE 1:50

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT
AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

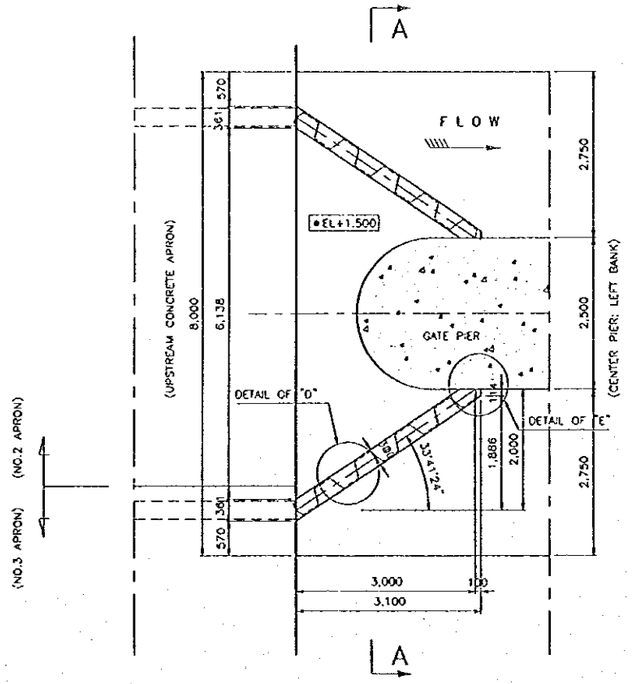
JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY/GARANG RIVER IMPROVEMENT

WEIR PIER, GATE FLOOR SLAB AND APRON
REINFORCING BAR ARRANGEMENT FOR CENTER PIER(5/8)

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD IN ASSOCIATION WITH
PACIFIC CONSULTANTS INTERNATIONAL AND
PADCO INTERNATIONAL INC.

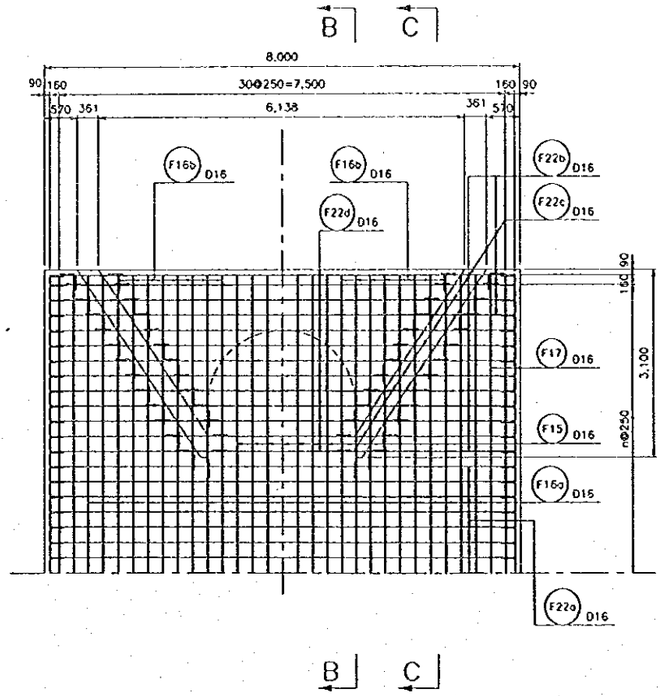
DESIGNED
CHECKED
APPROVED
CHIEF OF PLANNING AND DESIGN
PROJECT MANAGER

PROVINCE: CENTRAL JAVA
PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY
DRAWING NO. W3-P2-WE-Ra-7
SHEET NO. 33
DATE
CONTRACT NO.



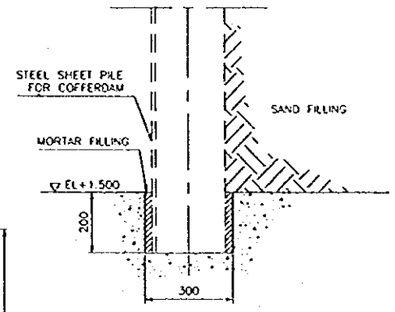
ARRANGEMENT OF SLIT FOR COFFERDAM

SCALE A



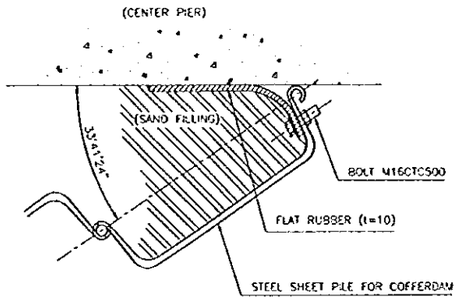
BAR ARRANGEMENT OF SLIT

SCALE A



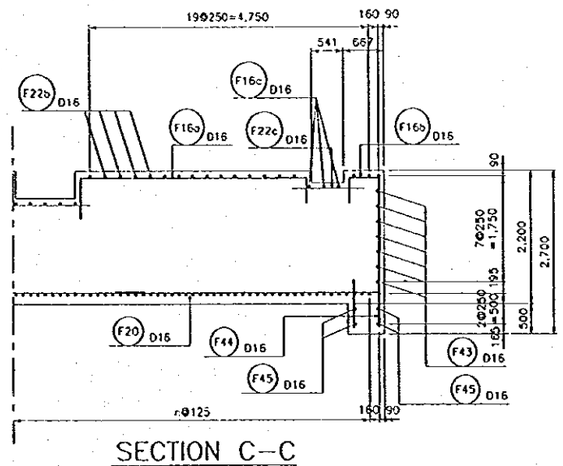
DETAIL OF "D"

SCALE B



DETAIL OF "E"

SCALE C

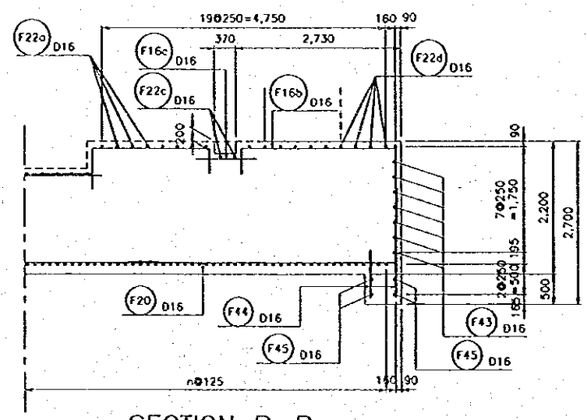


SECTION C–C

SCALE A

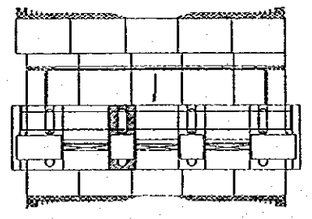
SECTION A–A

SCALE A



SECTION B–B

SCALE A



KEY PLAN

SCALE A 0 2.5 5.0m

SCALE 1:50

SCALE B 0 0.5 1.0m

SCALE 1:10

SCALE C 0 0.25 0.5m

SCALE 1:5

NOTE:

1. DETAIL OF "D" AND "E" ARE DRAWINGS FOR REFERENCE IN TEAMS OF TEMPORARY COFFERDAM.

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT
AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

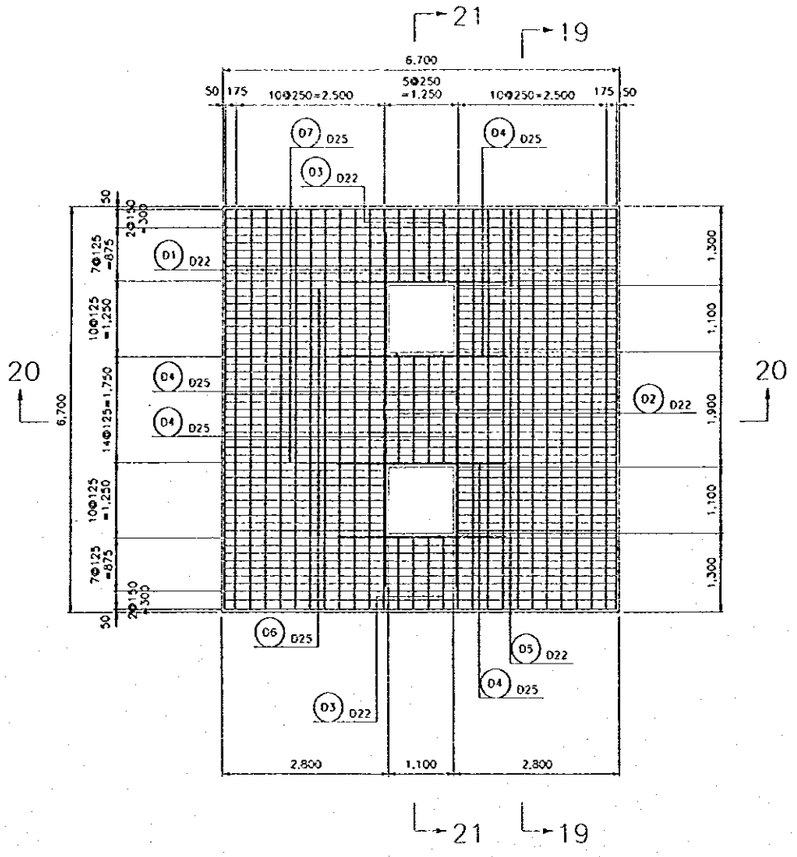
JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

WEIR PIER, GATE FLOOR SLAB AND APRON
REINFORCING BAR ARRANGEMENT FOR CENTER PIER (6 / 8)

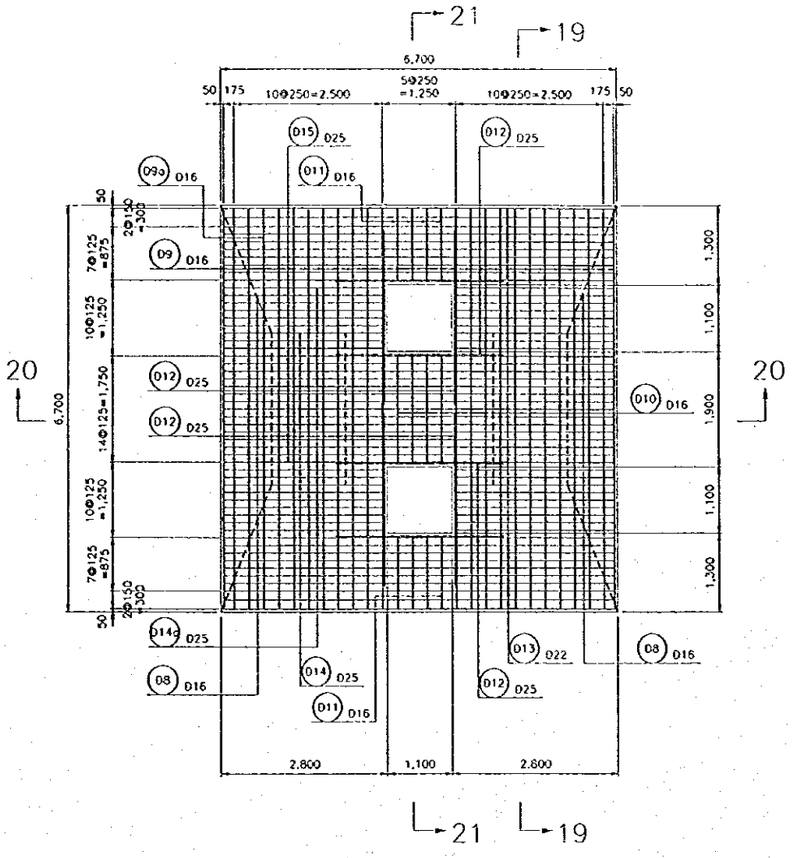
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD
PACIFIC CONSULTANTS INTERNATIONAL
PASCO INTERNATIONAL INC

DESIGNED
CHECKED
APPROVED
CHIEF OF PLANNING AND DESIGN
APPROVED
PROJECT MANAGER

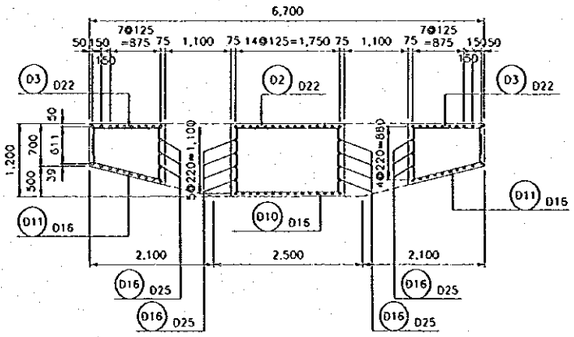
PROVINCE: CENTRAL JAVA
PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY
DRAWING NO. WG - P2 - WE - P2 - 8
SHEET NO. 23
DATE
CONTRACT NO.



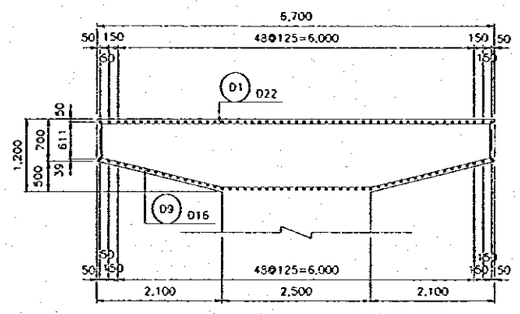
17 – 17



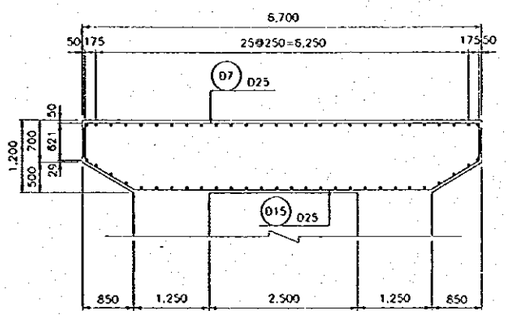
18 – 18



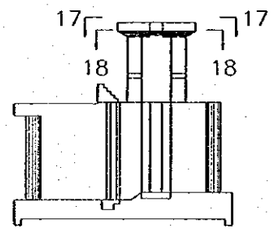
21 – 21



19 – 19



20 – 20



KEY PLAN

SCALE A 0 2.5 5.0m

SCALE 1:50

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT
AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

PROVINCE: CENTRAL JAVA
PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY

JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT
WEIR PIER, GATE FLOOR SLAB AND APRON
REINFORCING BAR ARRANGEMENT FOR CENTER PIER (7 / 8)

DRAWING NO. W9 - P2 - WE - R8 - 9
SHEET NO. 24

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD
PACIFIC CONSULTANTS INTERNATIONAL
PASCO INTERNATIONAL INC.

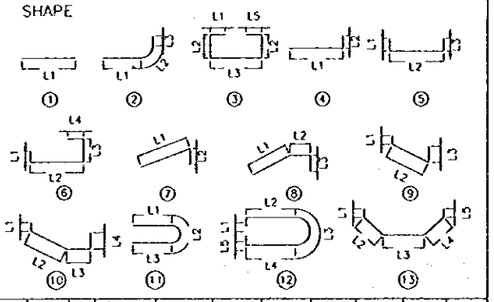
DESIGNED
CHECKED
APPROVED
CHIEF OF PLANNING AND DESIGN
PROJECT MANAGER

DATE
CONTRACT NO.

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

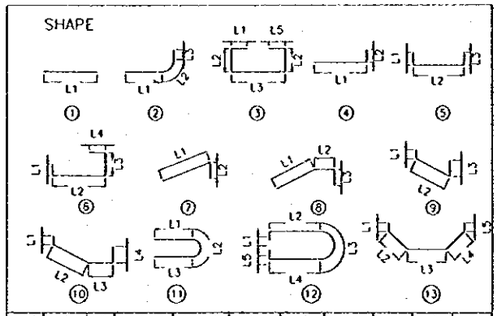
BAR BENDING SCHEDULE

SHAPE



TYPE	SHAPE	DIA	NUMBER	LENGTH (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	R (mm)
C1	1	22	56	9,000	9,000					
C1a	2	22	24	9,860	750	314	8,800			200
C2	1	16	12	4,080	4,080					
C3	3	16	84	3,540	1,012	650	1,050	850	278	
C4	5	16	44	1,520	278	950	278			
C5	12	16	4	1,950	278	1,394	278			
C6	1	16	4	980	980					
P1	1	22	80	7,750	7,745					
P2	1	16	12	9,450	9,445					
P3	5	16	120	2,260	278	1,050	650	278		
P4	5	16	58	1,520	278	950	278			
P5	5	16	12	1,520	278	950	278			
P6	11	16	29	8,200	1,278	3,645	1,278			
P7	4	16	58	4,300	3,753	580				
P8	1	16	68	1,760	1,760					
P9	5	16	66	3,720	580	1,750	1,390			
P10	1	16	64	3,180	3,180					
P11	11	16	60	12,240	1,400	2,900	3,545	2,900	1,390	
P12	5	16	10	1,960	278	1,100	278			
P13	5	16	13	2,860	278	2,300	278			
P14	5	16	5	2,180	278	1,500	278			
P15	5	16	4	1,360	278	800	278			
P16	5	16	3	2,220	278	avg 1,660	278			
P17	1	16	3	1,560	1,560					
P18	5	16	3	9,750	518	8,960	278			
P19	5	16	2	3,740	278	3,180	278			
P20	5	16	4	3,490	278	avg 2,830	278			
P21	5	16	3	1,270	278	710	278			
P22	4	16	4	3,270	518	2,750				
P23	5	16	2	1,280	518	480	278			
P24	4	16	2	1,250	278	970				
P25	1	19	9	7,340	7,340					
P26	5	16	20	2,860	278	2,300	278			
P27	5	16	3	2,860	278	2,300	278			
P28	1	16	17	2,300	2,300					
P29	5	16	11	1,360	278	800	278			
P30	4	16	2	2,670	2,150	518				
P31	4	16	9	2,430	1,915	518				
P32	5	16	16	1,360	278	800	278			
P33	1	16	40	9,350	9,345					
P34	1	16	60	9,450	9,445					
P33a	1	16	14	9,350	9,345					
P34a	1	16	14	9,450	9,445					
P35	4	16	4	8,020	7,530	518				
P36	5	16	2	1,580	518	480	580			
D1	5	22	24	7,490	457	6,572	457			
D2	5	22	4	3,140	711	1,722	711			
D3	5	22	8	2,779	591	1,722	457			
D4	1	25	8	2,700	2,700					
D5	5	22	20	7,500	464	6,572	464			
D6	5	25	36	3,800	472	2,841	721			
D7	5	22	15	7,540	464	6,572	464			
D8	13	16	2	8,000	478	2,274	2,530	2,274	478	
D9	13	16	16	7,750	471	2,154	2,530	2,154	471	
D9a	13	16	8	7,880	471	avg 1,577	avg 1,565	avg 1,577	471	

SHAPE



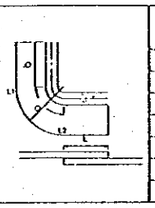
TYPE	SHAPE	DIA	NUMBER	LENGTH (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	R (mm)
D10	5	16	4	3,140	705	1,730	705			
D11	9	16	8	2,270	471	1,232	566			
D12	1	25	8	2,700	2,700					
D13	9	22	20	7,850	478	avg 257	avg 8,124	avg 257	478	
D14	10	25	24	4,010	496	avg 751	avg 2,021	732		
D14 a	10	25	12	4,030	496	929	1,909	732		
D15	13	25	12	7,850	458	928	5,000	838	496	
D16	1	25	14	8,800	8,800					
D16 a	1	25	8	8,800	8,800					
F1	4	16	34	5,090	4,190	900				
F2	4	16	12	4,370	3,790	580				
F3	4	16	14	4,770	4,190	580				
F4	1	16	8	8,280	8,280					
F5	1	16	6	1,750	1,750					
F6	1	16	14	1,360	1,360					
F7	1	16	6	2,160	2,160					
F8	4	16	20	1,780	580	1,200				
F8a	4	16	6	1,360	580	800				
F9	7	16	6	2,010	1,322	685				
F10	8	16	16	3,400	1,322	1,400	680			
F11	8	16	6	3,150	1,322	1,150	680			
F12	1	16	6	3,160	3,160					
F13	1	16	16	1,880	1,880					
F14	1	16	6	2,160	2,160					
F15	8	16	6	10,130	1,322	7,850	1,203			
F16	4	16	22	8,280	5,080	1,203				
F17	4	16	6	8,120	4,920	1,203				
F18	4	16	34	5,520	903	4,720				
F19	1	16	34	10,000	10,000					
F20	4	16	34	9,920	1,203	4,720				
F21	1	16	147	7,820	7,820					
F22	1	16	20	7,820	7,820					
F23	4	16	10	3,820	3,340	278				
F24	5	16	11	2,480	680	1,100	680			
F25	1	16	12	1,950	1,950					
F26	4	16	10	3,240	680	2,560				
F27	5	16	1	7,580	680	5,800	680			
F28	1	16	2	3,310	680	1,950	680			
F29	1	16	38	7,820	7,820					
F30	5	16	5	2,780	580	1,600	580			
F31	4	16	6	3,370	3,090	278				
F32	5	16	4	2,610	580	1,450	580			
F33	1	16	4	1,260	1,260					
F34	5	16	6	2,670	920	1,475	278			
F34a	5	16	4	2,170	920	975	278			
F35	1	16	10	7,520	7,520					
F36	1	16	6	2,840	2,840					
F37	1	16	10	9,120	9,120					
F38	1	16	4	4,820	4,820					
F38a	1	16	4	1,810	avg 1,810					
F39	5	16	60	1,880	278	1,325	278			
F40	5	16	48	2,480	278	1,925	278			
F41	5	16	8	1,530	278	975	278			
F42	5	16	10	2,030	278	1,475	278			
F43	5	16	12	8,360	278	7,800	278			
F44	1	16	138	740	740					
F45	5	16	8	8,460	330	7,800	330			

BAR WEIGHT

TYPE	DIA (mm)	LENGTH (mm)	NUMBER	WEIGHT PER "M" (kg)	WEIGHT PER "BAR" (kg)	WEIGHT (kg)	SHAPE
C1	22	9,000	56	3.04	27.36	1532.16	
C1a	22	9,860	24	3.04	29.97	719.30	
C2	16	4,080	12	1.56	6.33	76.00	
C3	16	3,540	84	1.56	5.58	478.99	
C4	16	1,520	44	1.56	2.37	104.33	
C5	16	1,950	4	1.56	3.04	12.17	
C6	16	980	4	1.56	1.53	6.12	
P1	22	7,750	80	3.04	23.56	1884.80	
P2	16	9,450	12	1.56	14.74	176.90	
P3	16	2,220	120	1.56	3.53	423.97	
P4	16	1,520	58	1.56	2.37	137.53	
P5	16	1,520	12	1.56	2.37	28.45	
P6	16	8,200	29	1.56	9.57	280.49	
P7	16	4,300	58	1.58	6.75	391.78	
P8	16	1,760	68	1.56	2.75	186.79	
P9	16	3,720	66	1.56	5.80	383.01	
P10	16	3,180	64	1.56	4.93	315.49	
P11	16	12,240	60	1.56	19.09	1145.66	
P12	16	1,860	10	1.56	2.59	25.90	
P13	16	2,860	13	1.56	4.46	58.00	
P14	16	2,180	5	1.56	3.37	16.85	
P15	16	1,360	4	1.56	2.12	8.49	
P16	16	2,220	3	1.56	3.46	10.39	
P17	16	1,560	3	1.56	2.43	7.30	
P18	16	9,750	3	1.56	15.21	45.63	
P19	16	3,740	2	1.56	5.83	11.67	
P20	16	3,490	4	1.56	5.44	21.78	
P21	16	1,270	3	1.58	1.98	5.94	
P22	16	3,270	4	1.56	5.10	20.40	
P23	16	1,280	2	1.56	2.00	3.98	
P24	16	1,250	2	1.56	1.95	3.90	
P25	19	7,340	9	2.25	16.52	148.64	
P26	16	2,860	20	1.56	4.46	89.23	
P27	16	2,860	3	1.56	4.46	13.38	
P28	16	2,300	17	1.56	3.59	61.00	
P29	16	1,360	11	1.56	2.12	23.34	
P30	16	2,670	2	1.56	4.17	8.33	
P31	16	2,430	9	1.56	3.79	34.12	
P32	16	1,360	16	1.56	2.12	33.95	
P33	16	9,350	40	1.56	14.59	583.44	
P34	16	9,450	60	1.56	14.74	884.52	
P33a	16	9,350	14	1.56	14.59	204.20	
P34a	16	9,450	14	1.56	14.74	206.36	
P35	16	8,020	8	1.56	12.51	100.08	
P36	16	1,580	2	1.56	2.46	4.93	
D1	22	7,490	24	3.04	22.77	546.47	
D2	22	3,140	4	3.04	9.55	38.18	
D3	22	2,770	8	3.04	8.42	67.37	
D4	25	2,700	8	3.98	10.75	85.97	
D5	22	7,500	20	3.04	22.80	456.00	
D6	25	3,800	36	3.98	15.24	548.78	
D7	22	7,540	15	3.04	22.92	343.82	
D8	16	8,000	2	1.56	12.48	24.96	
D9	16	7,750	16	1.56	12.09	193.44	
D9a	16	7,880	8	1.56	12.20	97.97	
				SUB-TOTAL		13317.78	

TYPE	DIA (mm)	LENGTH (mm)	NUMBER	WEIGHT PER "M" (kg)	WEIGHT PER "BAR" (kg)	WEIGHT (kg)	SHAPE
D10	16	3,140	4	1.56	4.90	19.59	
D11	16	2,270	8	1.56	3.54	28.33	
D12	25	2,700	8	3.98	10.75	85.97	
D13	22	7,850	20	3.04	23.25	465.12	
D14	25	4,010	24	3.98	15.96	383.04	
D14a	25	4,030	12	3.98	16.04	192.47	
D15	25	7,850	12	3.98	31.24	374.92	
D16	25	8,800	14	3.98	26.27	367.75	
D16a	25	8,800	8	3.98	26.27	210.14	
F1	16	5,090	34	1.56	7.94	269.97	
F2	16	4,370	12	1.56	6.82	81.81	
F3	16	4,770	14	1.56	7.44	104.13	
F4	16	8,280	8	1.56	9.30	78.37	
F5	16	1,750	6	1.56	2.75	16.47	
F6	16	1,360	14	1.56	2.12	29.70	
F7	16	2,160	6	1.56	3.37	20.22	
F8	16	1,780	20	1.56	2.78	55.54	
F8a	16	1,360	6	1.56	2.15	12.92	
F9	16	2,010	6	1.56	3.14	18.81	
F10	16	3,400	16	1.56	5.30	84.86	
F11	16	3,150	6	1.56	4.91	29.43	
F12	16	3,160	6	1.56	4.93	29.58	
F13	16	1,880	16	1.56	2.59	41.43	
F14	16	2,160	6	1.56	3.37	20.22	
F15	16	10,130	8	1.56	15.88	95.28	
F16	16	8,280	22	1.56	9.77	214.84	
F17	16	8,120	6	1.56	9.38	56.35	
F18	16	5,520	34	1.56	8.77	298.08	
F19	16	10,000	34	1.56	15.60	530.40	
F20	16	9,920	34	1.56	9.24	314.00	
F21	16	7,820	147	1.56	12.20	1793.28	
F22	16	7,820	20	1.56	12.20	243.96	
F23	16	3,820	10	1.53	5.95	59.47	
F24	16	2,480	11	1.56	3.84	42.21	
F25	16	1,950	12	1.95	1.97	23.59	
F26	16	3,240	10	1.56	5.05	50.54	
F27	16	7,860	1	1.56	12.42	12.42	
F28	16	3,310	2	1.56	5.16	10.33	
F29	16	7,820	38	1.56	12.20	463.57	
F30	16	2,780	5	1.56	4.31	21.53	
F31	16	3,370	6	1.56	5.26	31.54	
F32	16	2,610	4	1.56	4.07	16.29	
F33	16	1,260	4	1.56	1.97	7.86	
F34	16	2,670	6	1.56	4.17	24.99	
F34a	16	2,170	4	1.56	3.39	13.54	
F35	16	7,520	10	1.56	11.73	117.31	
F36	16	2,840	6	1.56	4.42	24.71	
F37	16	9,120	10	1.56	14.23	142.27	
F38	16	4,820	4	1.56	7.52	30.08	
F38a	16	1,810	4	1.56	2.51	10.05	
F39	16	1,880	60	1.56	2.93	175.97	
F40	16	2,480	48	1.56	3.87	185.70	
F41	16	1,530	8	1.56	2.39	19.09	
F42	16	2,030	10	1.98	3.17	31.67	
F43	16	8,360	12	1.56	13.04	156.50	
F44	16	740	138	1.56	1.15	157.00	
F45	16	8,460	8	1.56	13.20	105.58	
				SUB-TOTAL		8,497.93	
				TOTAL		21,815.72	

BAR BENDING DETAIL



DIA	a	b	L1+a/2	R
D13	66	156	189	42
D16	75	193	206.5	48
D19	94	236	263	60
D22	104	272	324	66
D25	122	308	357	78
D29	141	348	419.5	90
D32	151	388	465.5	96

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

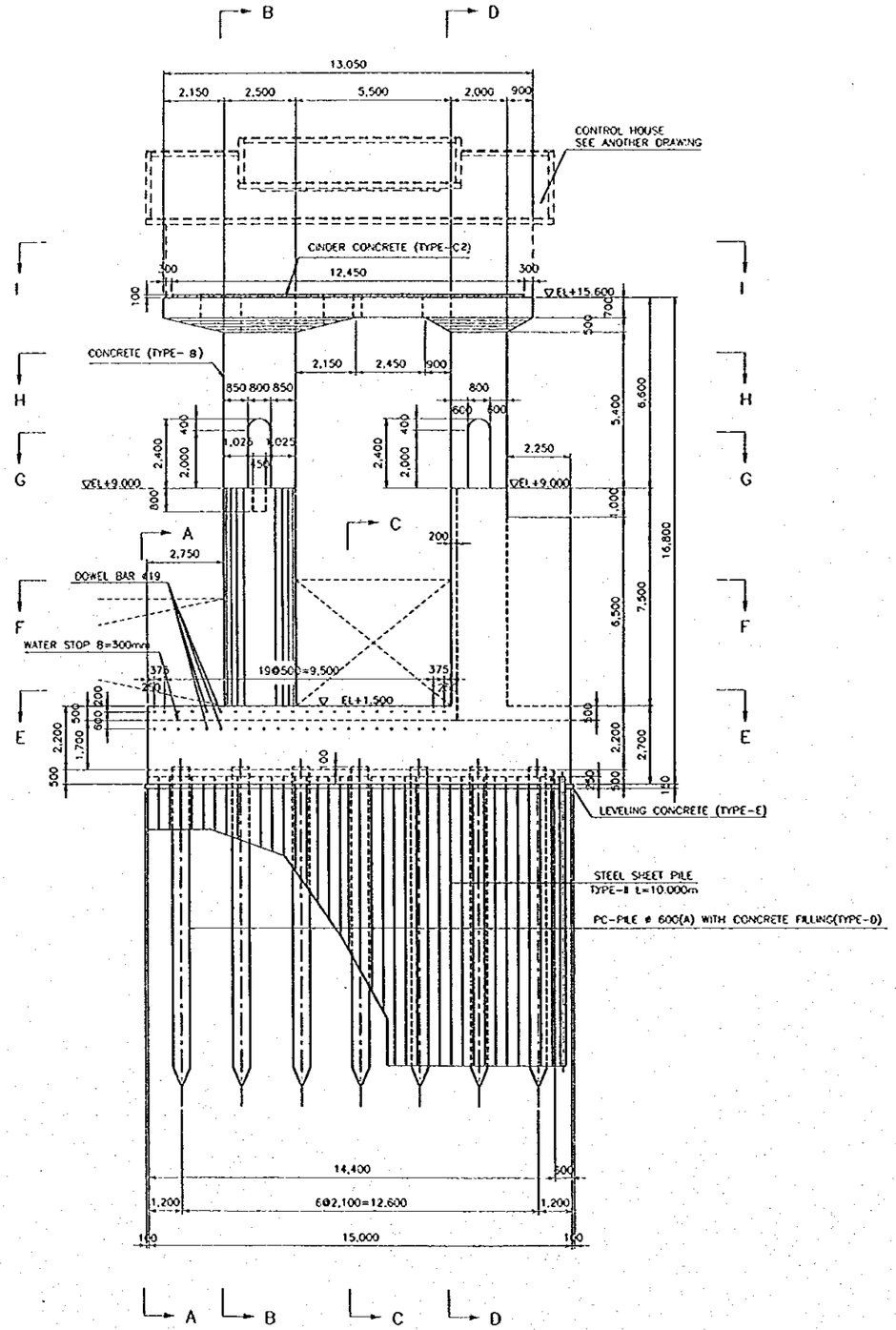
THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

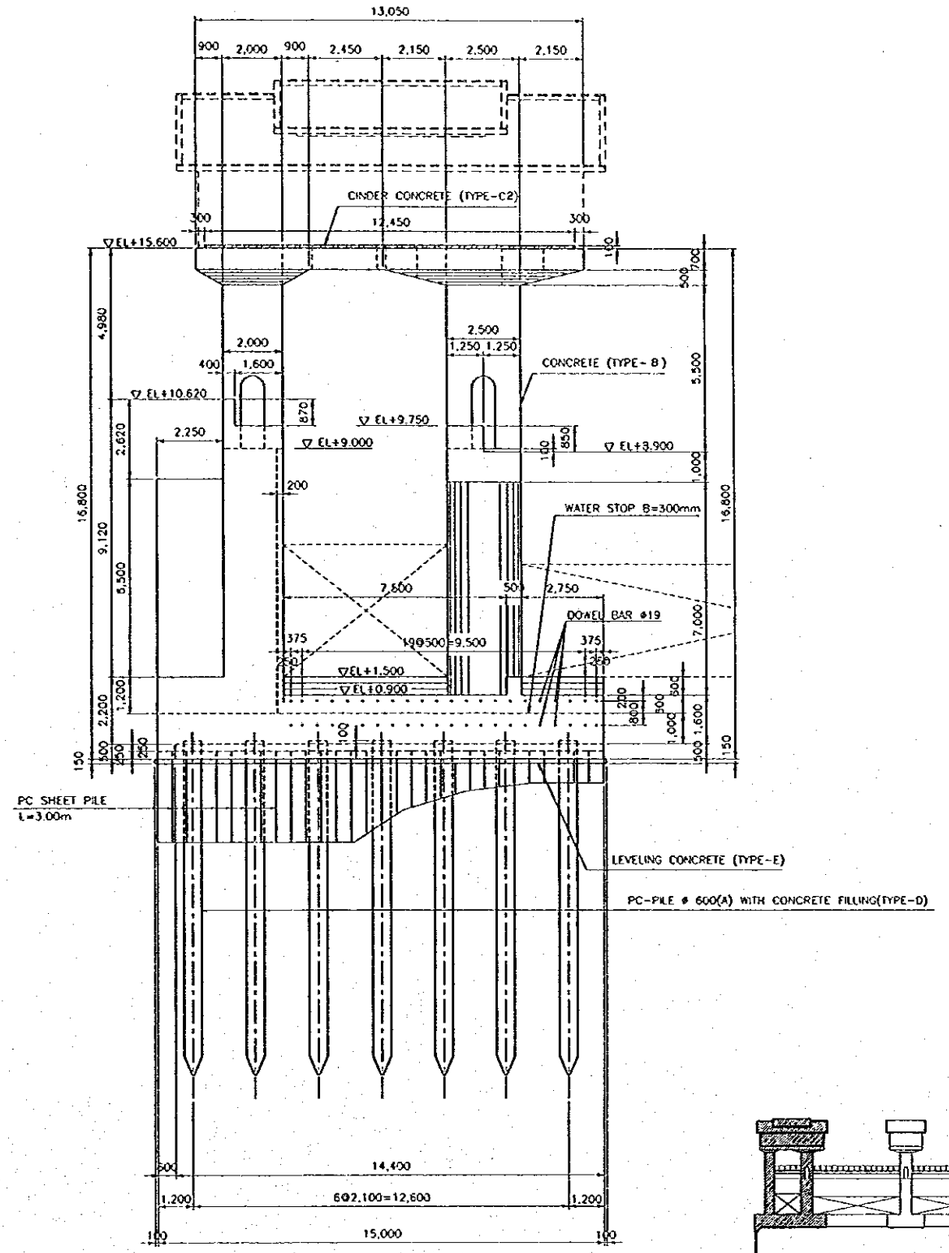
JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT
WEIR PIER, GATE FLOOR SLAB AND APRON
REINFORCING BAR ARRANGEMENT FOR CENTER PIER(8 / 8)

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL AND FAIZO INTERNATIONAL INC.

PROVINCE	CENTRAL JAVA
PROJECT NAME	FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT	SEMARANG CITY
DRAWING NO.	WG - P2 - WE - Re - 16
SHEET NO.	25
DATE	CONTRACT NO.

DESIGNED		
CHECKED		
APPROVED	CHIEF OF PLANNING AND DESIGN	
	PROJECT MANAGER	





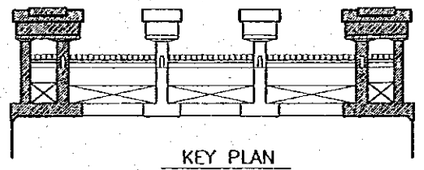
A B C D

UPSTREAM ELEVATION OF END PIER

SCALE A

DOWNSTREAM ELEVATION OF END PIER

SCALE A



KEY PLAN

SCALE A 0 5.0 10.0m

SCALE 1:100

NOTE :
PILE LENGTH SHOWN ON THE DRAWING IS TENTATIVE.
THE CONTRACTOR SHALL DETERMINE THE LENGTH OF PILE BY TEST PILING.

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

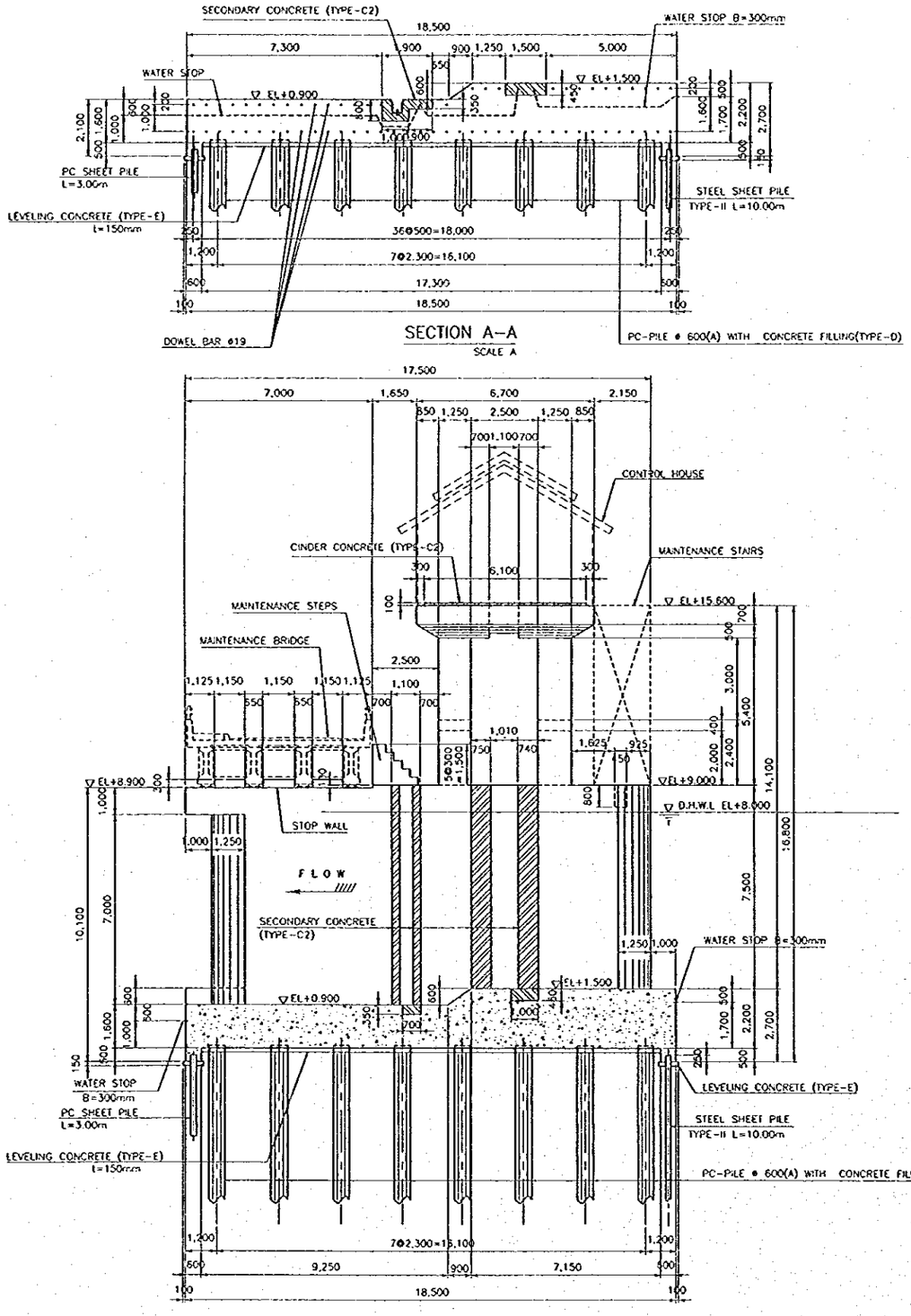
JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

WEIR PIER, GATE FLOOR SLAB AND APRON
END PIER (1/3)

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD in association with PACIFIC CONSULTANTS INTERNATIONAL and PASCO INTERNATIONAL INC

DESIGNED
CHECKED
APPROVED
CHIEF OF PLANNING AND DESIGN
PROJECT MANAGER

PROVINCE: CENTRAL JAVA
PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY
DRAWING NO. W6-P2-WE-St-H
SHEET NO. 26
DATE
CONTRACT NO.



SECTION A–A
SCALE A

SECTION C–C
SCALE A

SECTION B–B
SCALE A

SECTION D–D
SCALE A

SCALE A 0 5.0 10.0m
SCALE 1:100

KEY PLAN

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT
AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

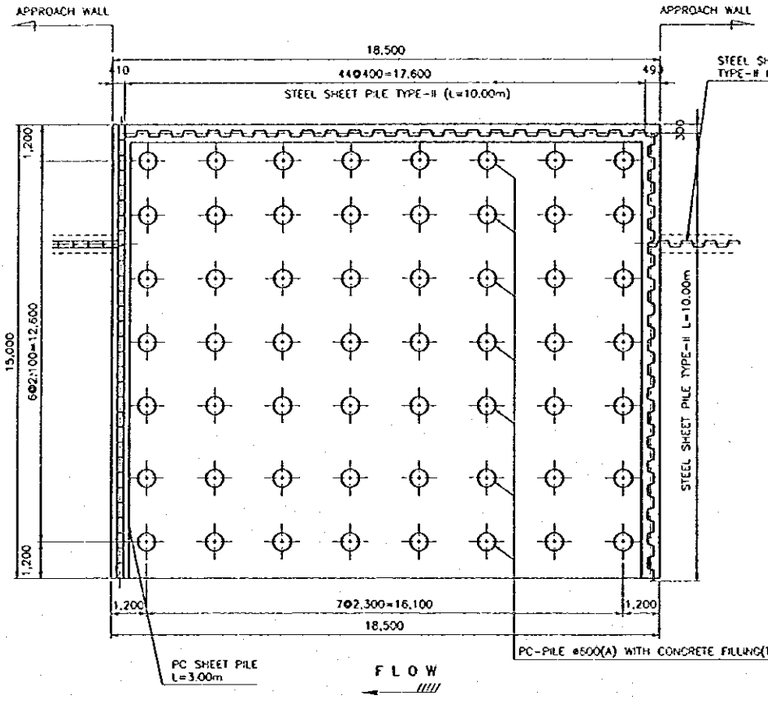
WEIR PIER, GATE FLOOR SLAB AND APRON
END PIER (2/3)

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO. LTD
PACIFIC CONSULTANTS INTERNATIONAL
PASCO INTERNATIONAL INC.

DESIGNED
CHECKED
APPROVED
CHIEF OF PLANNING AND DESIGN
PROJECT MANAGER

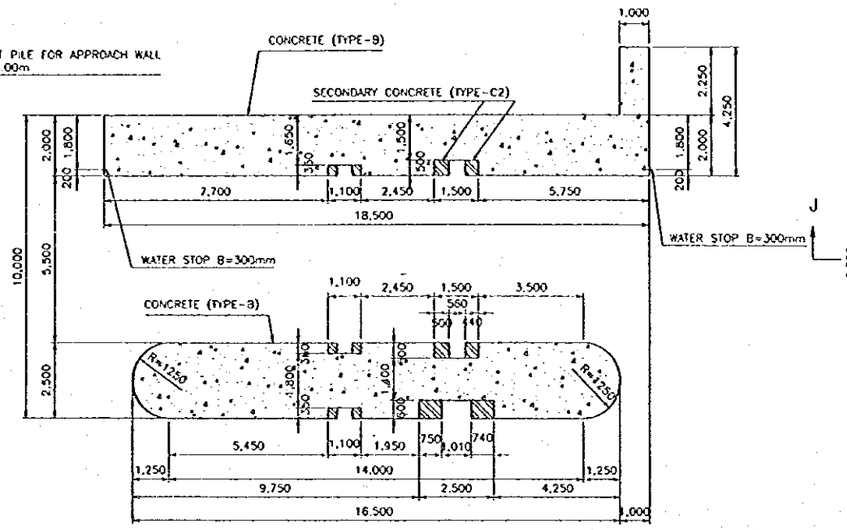
PROVINCE: CENTRAL JAVA
PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY
DRAWING NO. WG - P2 - WE - S1 - 12
SHEET NO. 27
DATE
CONTRACT NO.

NO	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED



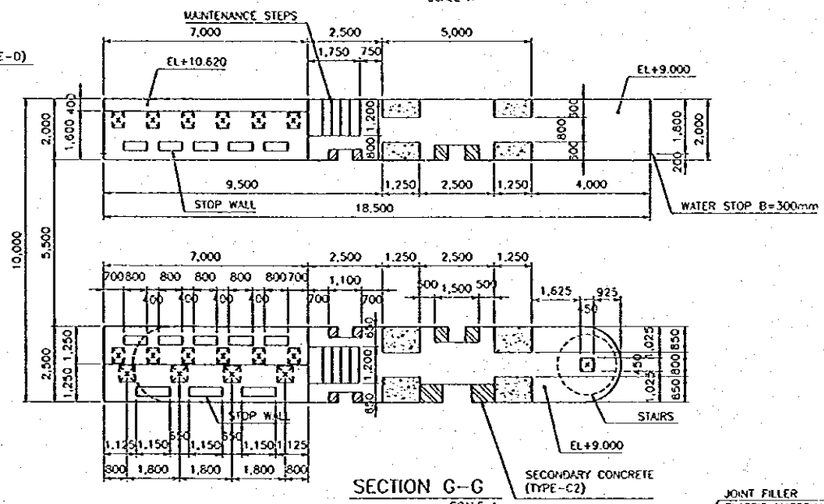
PILE ARRANGEMENT OF END PIER

SCALE A



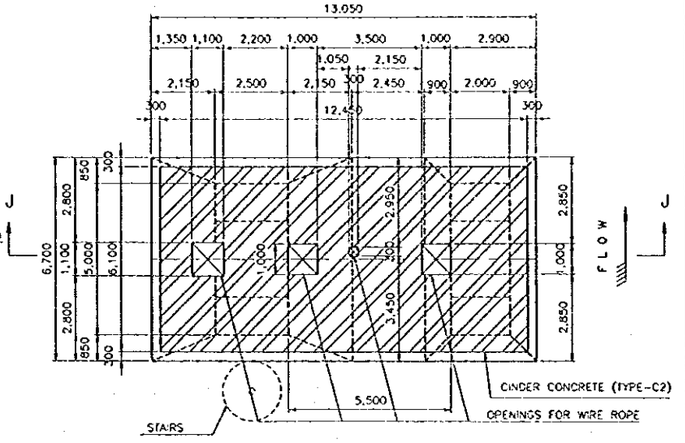
SECTION F-F

SCALE A



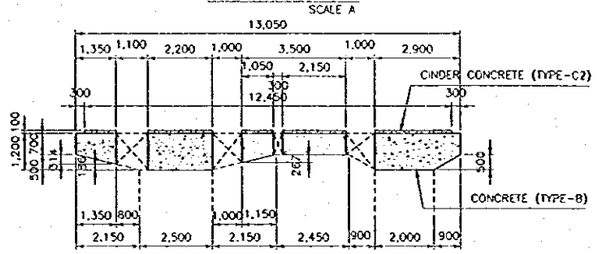
SECTION G-G

SCALE A



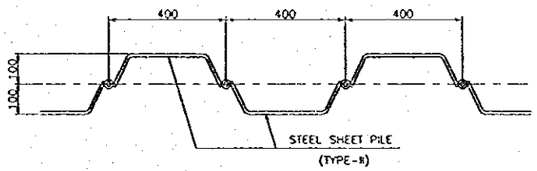
SECTION I - I

SCALE A



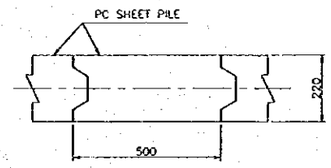
SECTION J-J

SCALE A



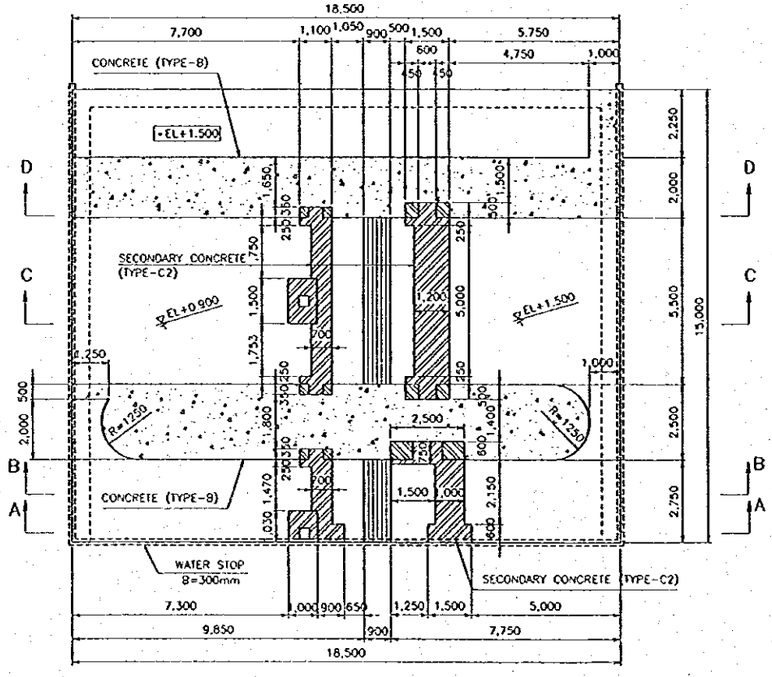
SECTION OF STEEL SHEET PILE

SCALE C



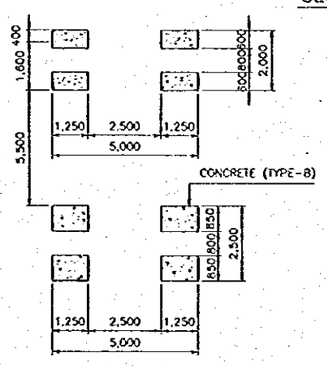
SECTION OF PC SHEET PILE

SCALE C



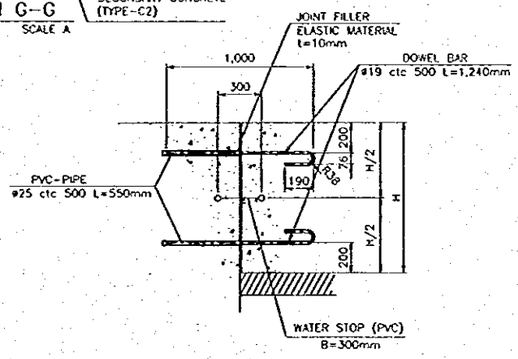
SECTION E-E

SCALE A



SECTION H-H

SCALE A



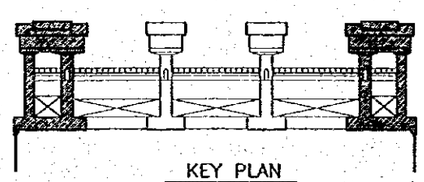
DETAIL OF JOINTING

SCALE B

SCALE A 0 5.0 10.0m
SCALE 1:100

SCALE B 0 1.0 2.0m
SCALE 1:20

SCALE C 0 0.5 1.0m
SCALE 1:10



KEY PLAN

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

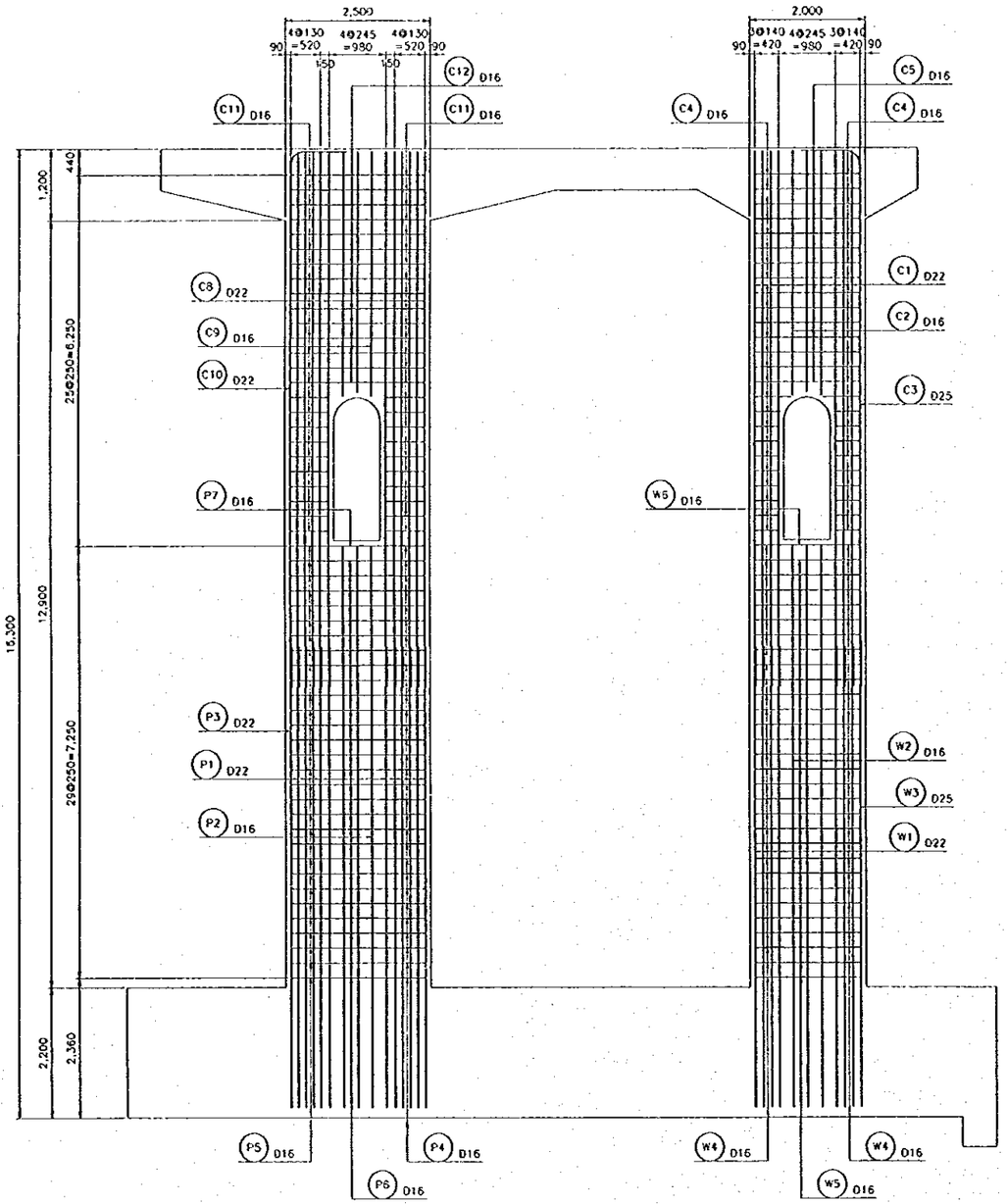
JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

WEIR PIER, GATE FLOOR SLAB AND APRON
END PIER (3/3)

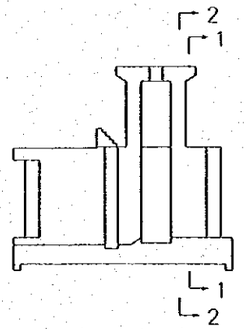
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL AND PASCO INTERNATIONAL INC.

DESIGNED
CHECKED
APPROVED
CHIEF OF PLANNING AND DESIGN
PROJECT MANAGER

PROVINCE: CENTRAL JAVA
PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY
DRAWING NO. WG - P2 - WE - ST - 15
SHEET NO. 28
DATE
CONTRACT NO.



1 – 1



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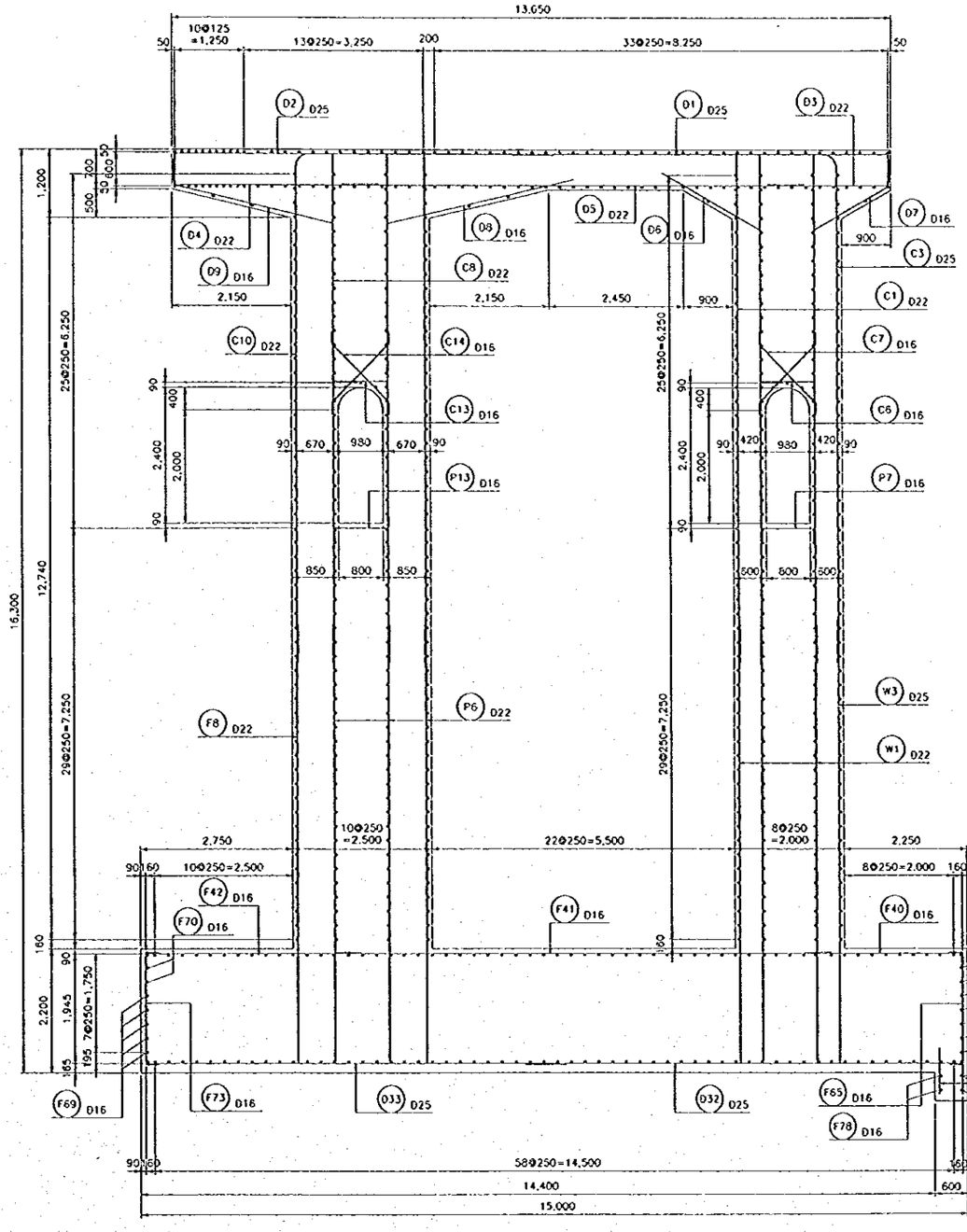


2 – 2

SCALE A 0 2.5 5.0m

SCALE 1:50

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT
AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

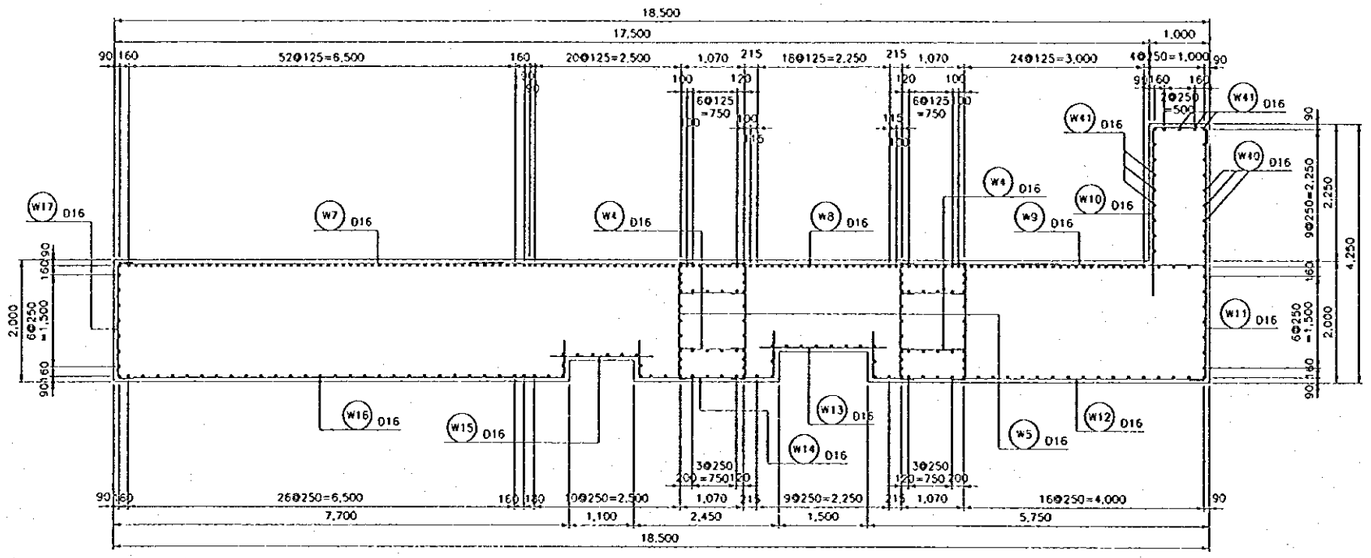
JRA TUNSELUNA FLOOD CONTROL PROJECT
COMPONENT: WEST FLOODWAY / GARANG RIVER IMPROVEMENT

WEIR PIER, GATE FLOOR SLAB AND APRON
REINFORCING BAR ARRANGEMENT FOR END PIER (1/15)

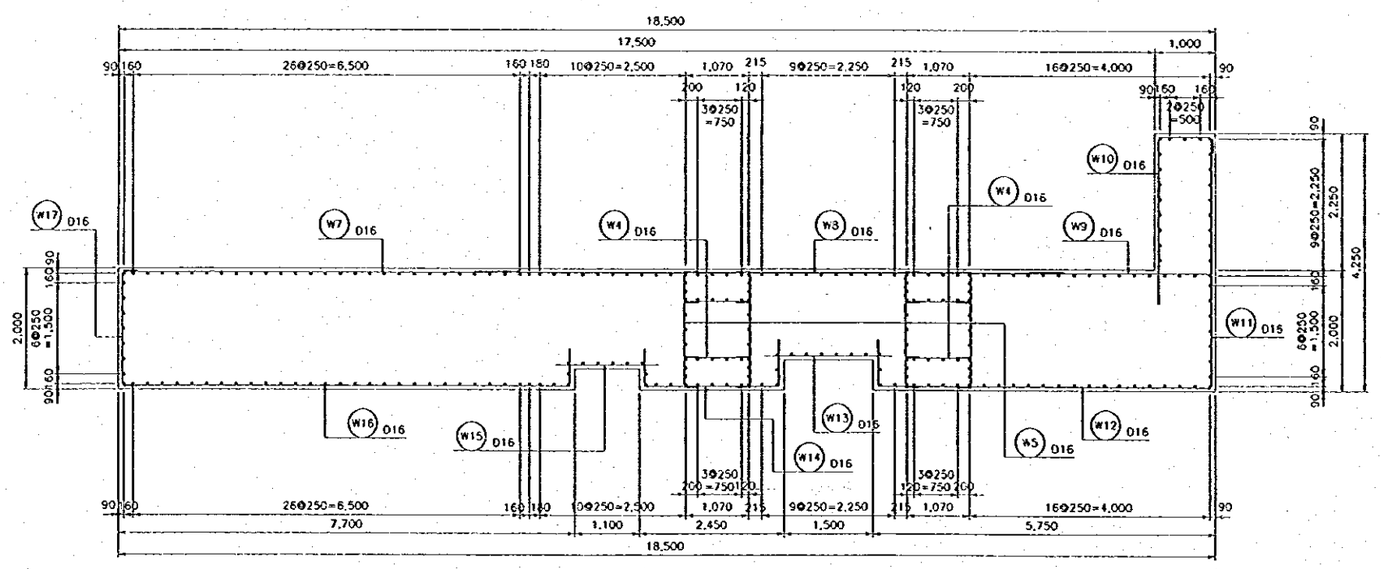
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD in association with PACIFIC CONSULTANTS INTERNATIONAL and PASCO INTERNATIONAL INC.

DESIGNED
CHECKED
APPROVED
CHIEF OF PLANNING AND DESIGN
PROJECT MANAGER
DATE
CONTRACT NO.

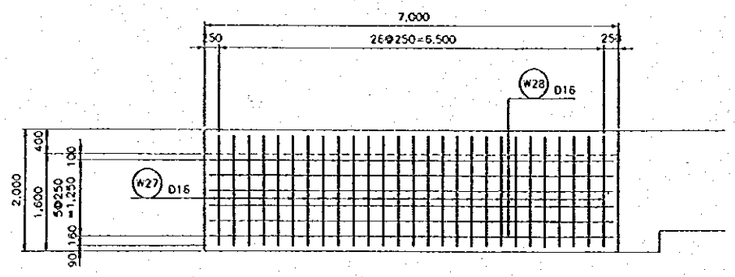
PROVINCE: CENTRAL JAVA
PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY
DRAWING NO. WG-PE-WE-Re-14
SHEET NO. 29



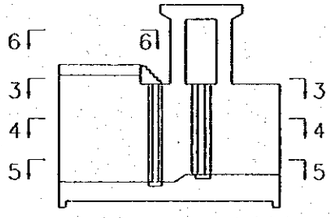
5 – 5



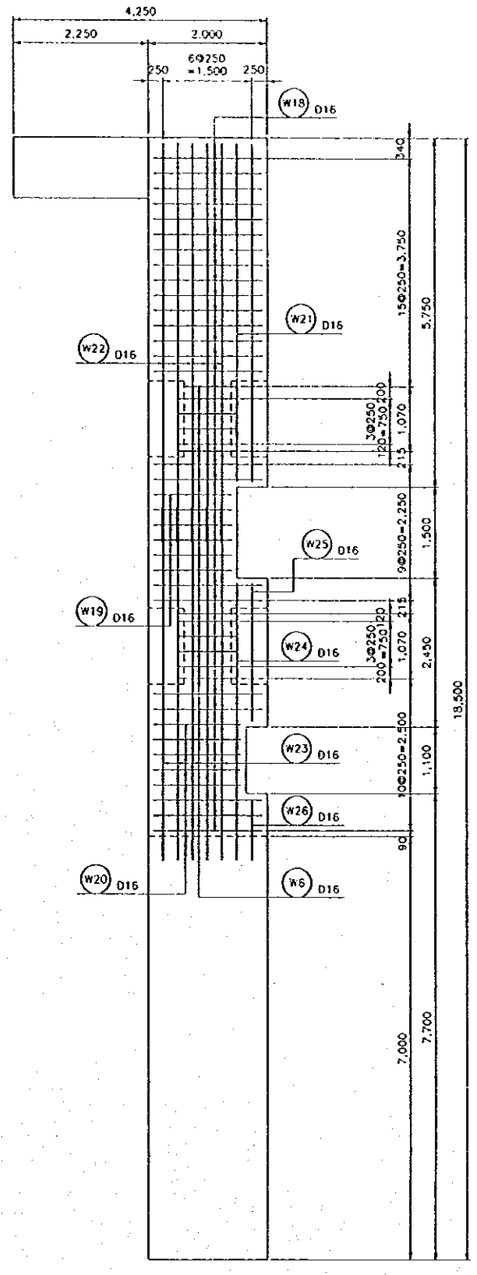
4 – 4



6 – 6



KEY PLAN



3 – 3

SCALE A 0 2.5 5.0m

SCALE 1:50

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

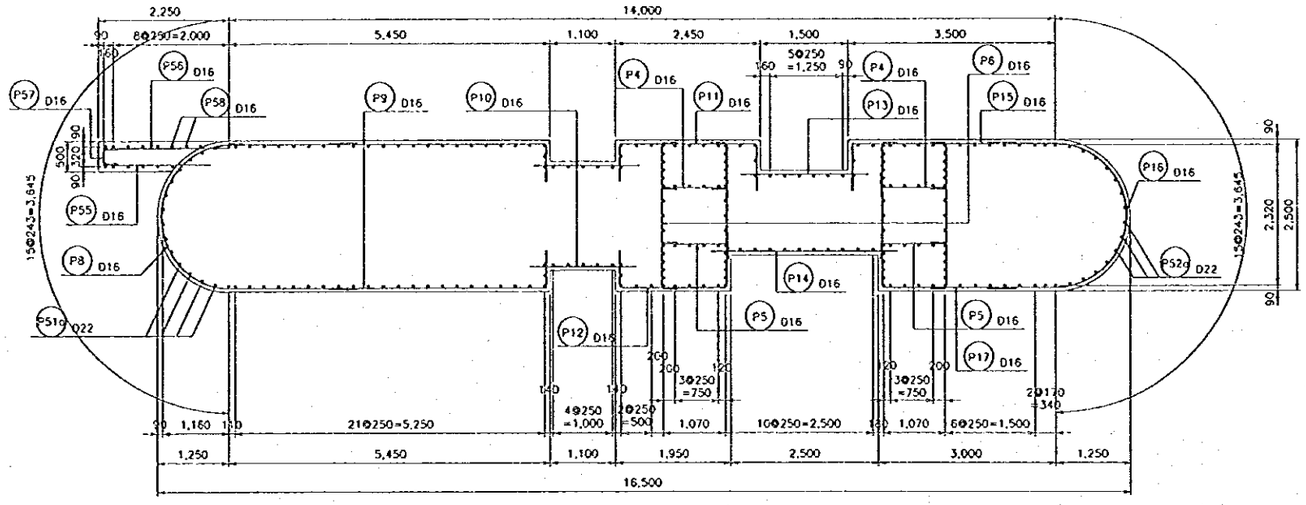
JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

WEIR PIER, GATE FLOOR SLAB AND APRON
REINFORCING BAR ARRANGEMENT FOR END PIER(2/15)

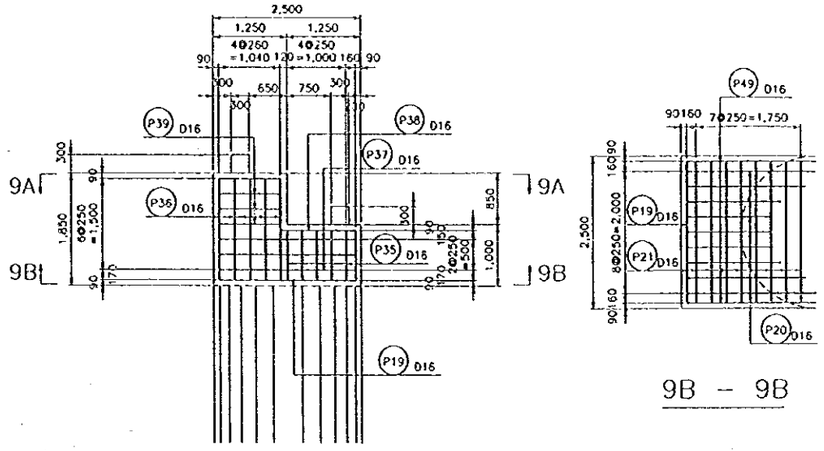
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD in association with PACIFIC CONSULTANTS INTERNATIONAL and PASCO INTERNATIONAL INC.

DESIGNED | CHECKED | APPROVED | CHIEF OF PLANNING AND DESIGN | PROJECT MANAGER

PROVINCE: CENTRAL JAVA
PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY
DRAWING NO. W3-P2-WE-Re-15
SHEET NO. 38
DATE | CONTRACT NO.

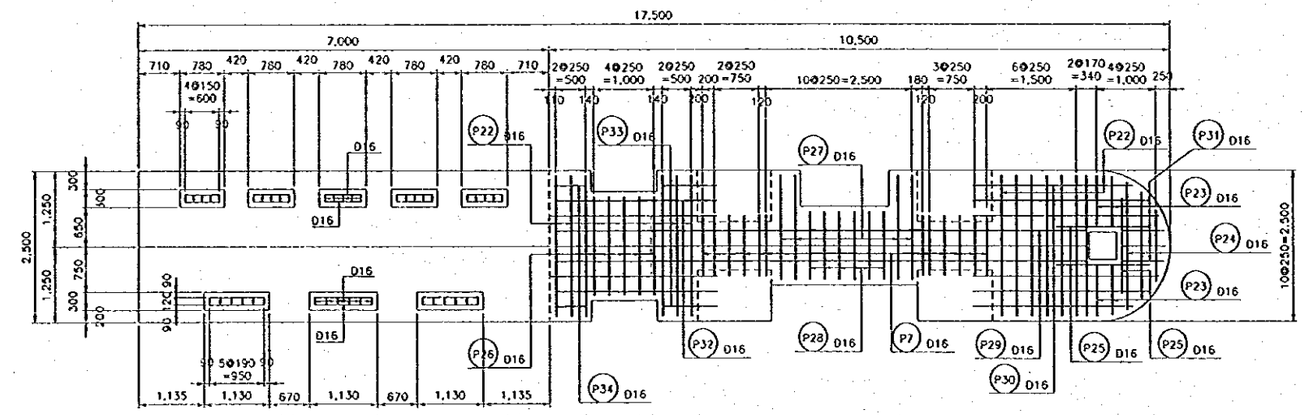


7 – 7

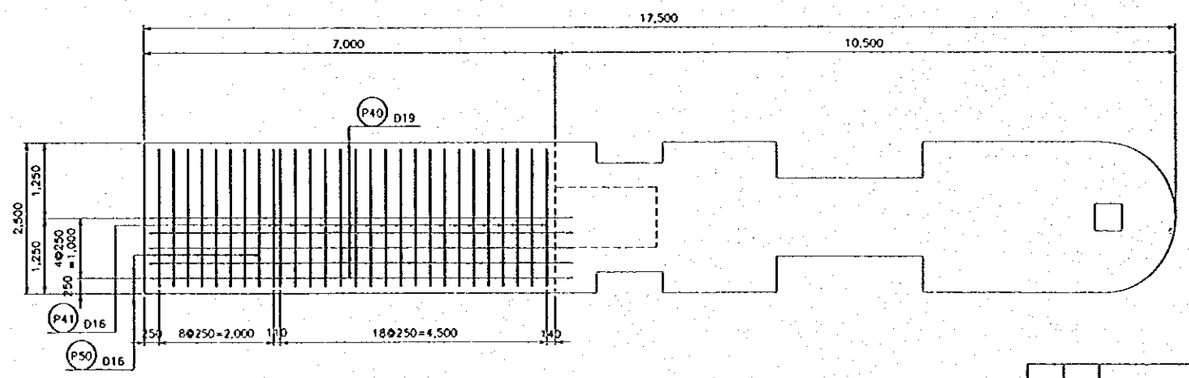


10 – 10

9B – 9B



8 – 8



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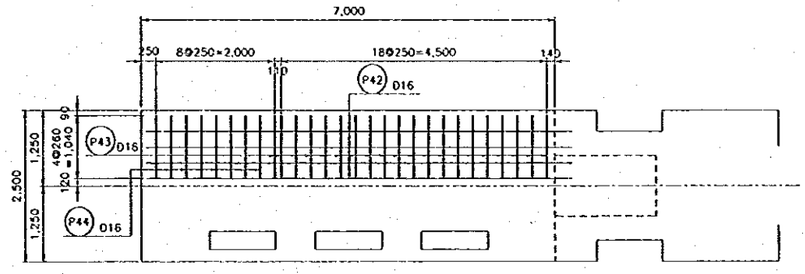
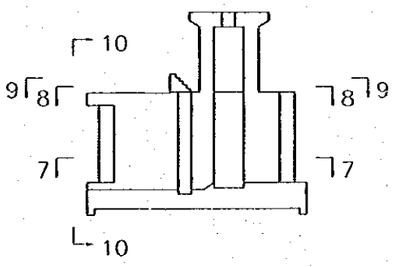


9A – 9A



KEY PLAN

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SCALE 1:50

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

PROVINCE: CENTRAL JAVA

PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

DISTRICT: SEMARANG CITY

IRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

WEIR PIER, GATE FLOOR SLAB AND APRON
REINFORCING BAR ARRANGEMENT FOR END PIER (3/15)

DRAWING NO. WG – P2 – WE – PR – 16

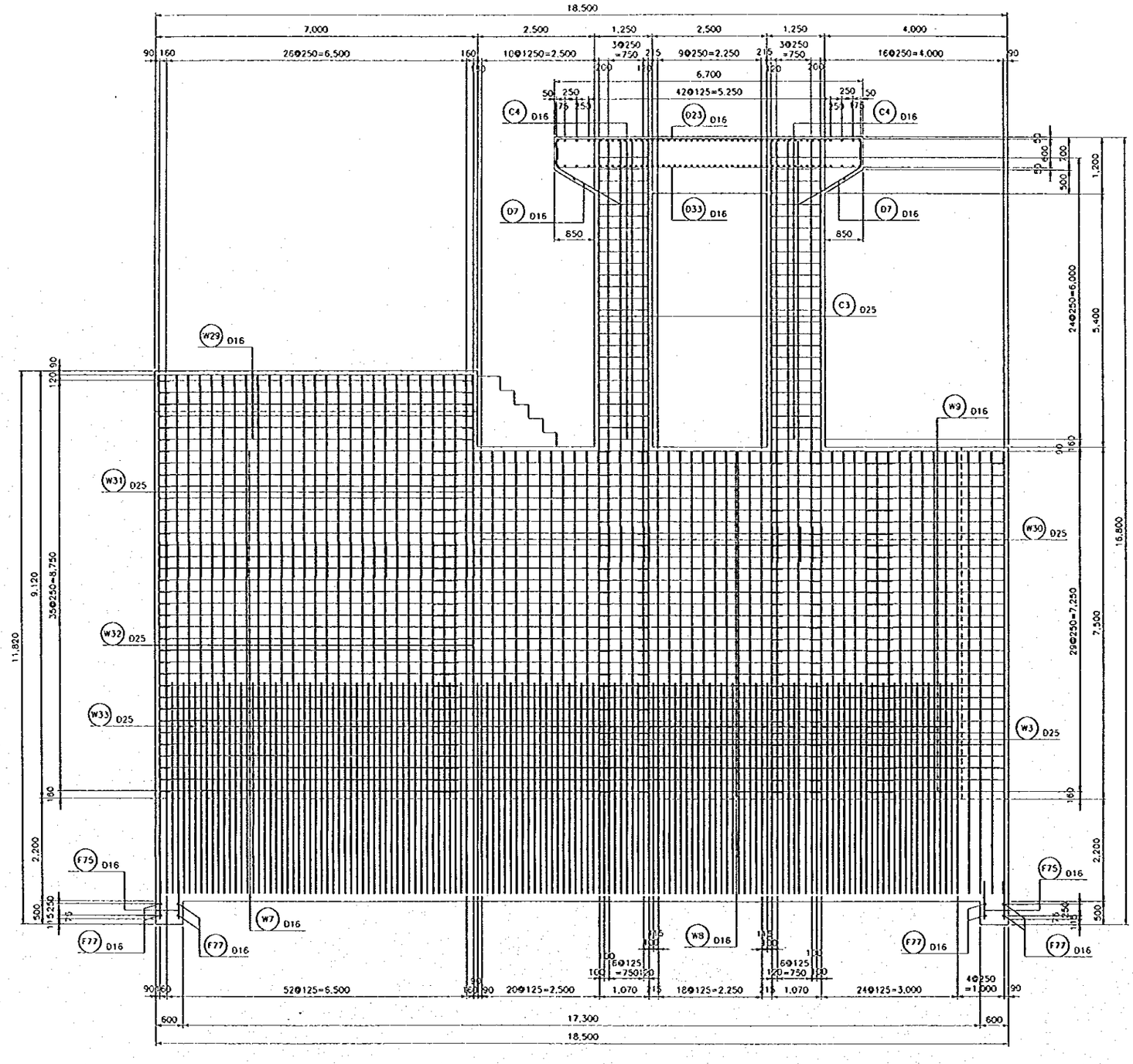
SHEET NO. 31

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD in association with PACIFIC CONSULTANTS INTERNATIONAL and PASCO INTERNATIONAL INC.

DESIGNED | CHECKED | APPROVED | CHIEF OF PLANNING AND DESIGN | PROJECT MANAGER

DATE | CONTRACT NO.

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED



11 – 11

KEY PLAN

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SCALE 1:50

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

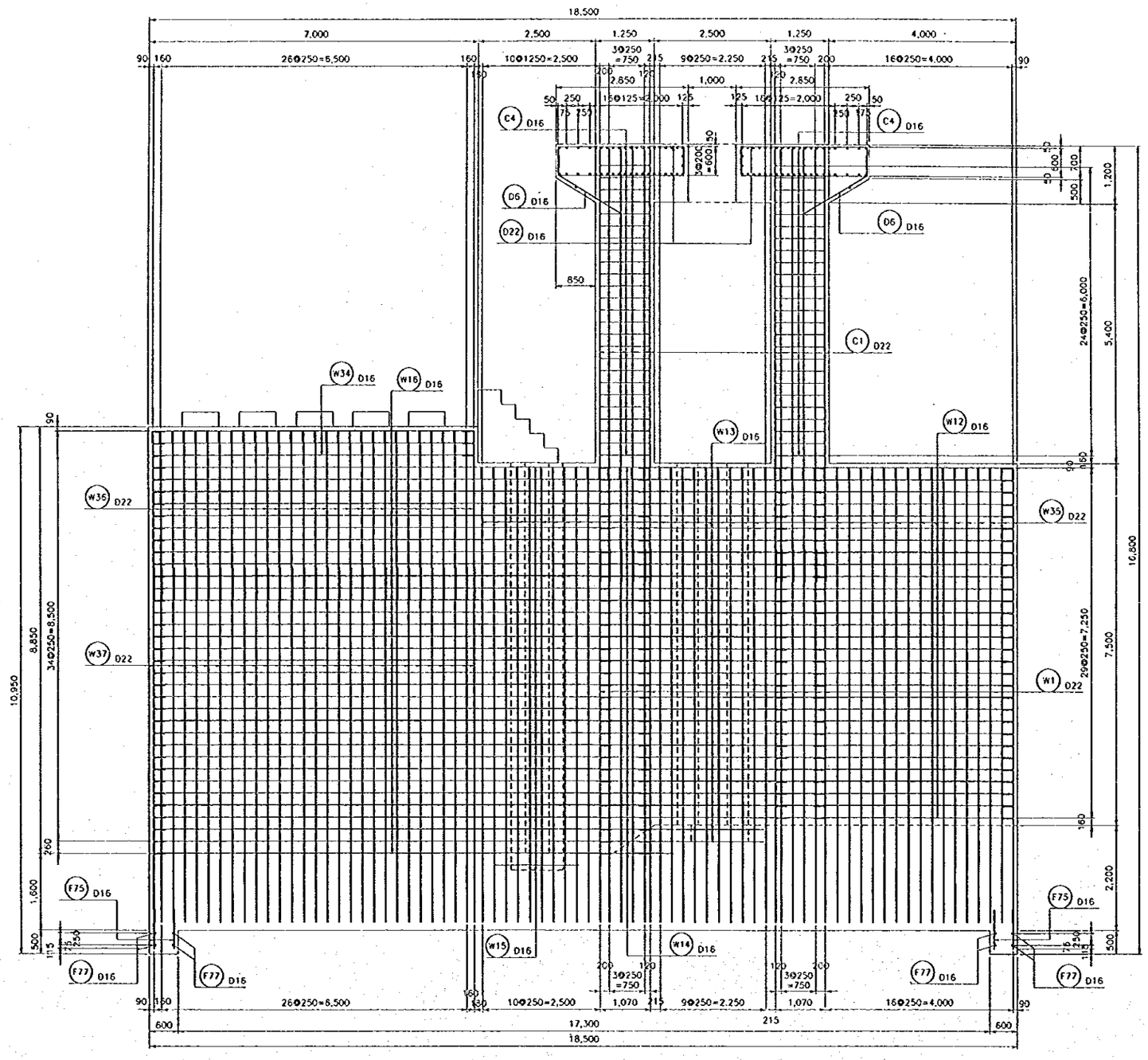
JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

WEIR PIER, GATE FLOOR SLAB AND APRON REINFORCING BAR ARRANGEMENT FOR END PIER(4/15)

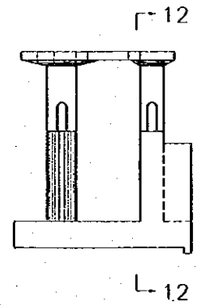
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL AND PASCO INTERNATIONAL INC.

DESIGNED
CHECKED
APPROVED
CHIEF OF PLANNING AND DESIGN
PROJECT MANAGER

PROVINCE: CENTRAL JAVA
PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY
DRAWING NO. WG-P2-WE-R4-17
SHEET NO. 31
DATE
CONTRACT NO.



12 – 12



KEY PLAN

SCALE A 0 2.5 5.0m

SCALE 1:50

NO	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

PROVINCE: CENTRAL JAVA

PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

DISTRICT: SEMARANG CITY

JRATUNSELUNA FLOOD CONTROL PROJECT
COMPONENT : WEST FLOODWAY / GARANG RIVER IMPROVEMENT

WEIR PIER, GATE FLOOR SLAB AND APRON

REINFORCING BAR ARRANGEMENT FOR END PIER (5/15)

DRAWING NO. WG – PZ – WE – PE – 16

SHEET NO. 33

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING CO., LTD in ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL PASCO INTERNATIONAL INC

DESIGNED | CHECKED | APPROVED

CHIEF OF PLANNING AND DESIGN

PROJECT MANAGER

DATE | CONTRACT NO.