

BAR BENDING SCHEDULE

SHAPE

TYPE	SHAPE	DA	NUMBER	LENGTH (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	R
BRIDGE A											
B1	1	19	24	5900	5900						
B2	1	13	32	2900	2900						
B3	1	13	8	5900	5900						
B4	2	13	32	1255	400	100	400	300	65		

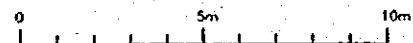
BAR WEIGHT

TYPE	DA	LENGTH (mm)	NUMBER	WEIGHT PER M ² (kg)	WEIGHT PER BAR (kg)	WEIGHT (kg)	SHAPE
BRIDGE A							
B1	19	5900	24	2.23	13.157	315	
B2	13	2900	31	1.04	3.016	93	
B3	13	5900	8	1.04	8.136	43	
B4	13	1255	32	1.04	1.315	42	

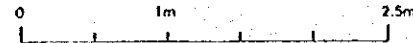
BAR BENDING DETAIL

DA	a	b	l	R	L	OVERLAP WEIGHT (kg)
D13	86	156	222	42	455	0.453
D19	75	193	288	48	580	0.874
D19	94	236	330	60	665	1.496
D25	104	272	378	66	770	2.341
D25	122	308	428	78	875	3.483
D29	141	349	490	90	1015	5.118
D32	151	385	536	96	1120	6.976

SCALE A
1 : 100



SCALE B
1 : 25



NO.	DATE	REVISIONS	PREPARED	CHECKED	APPROVED

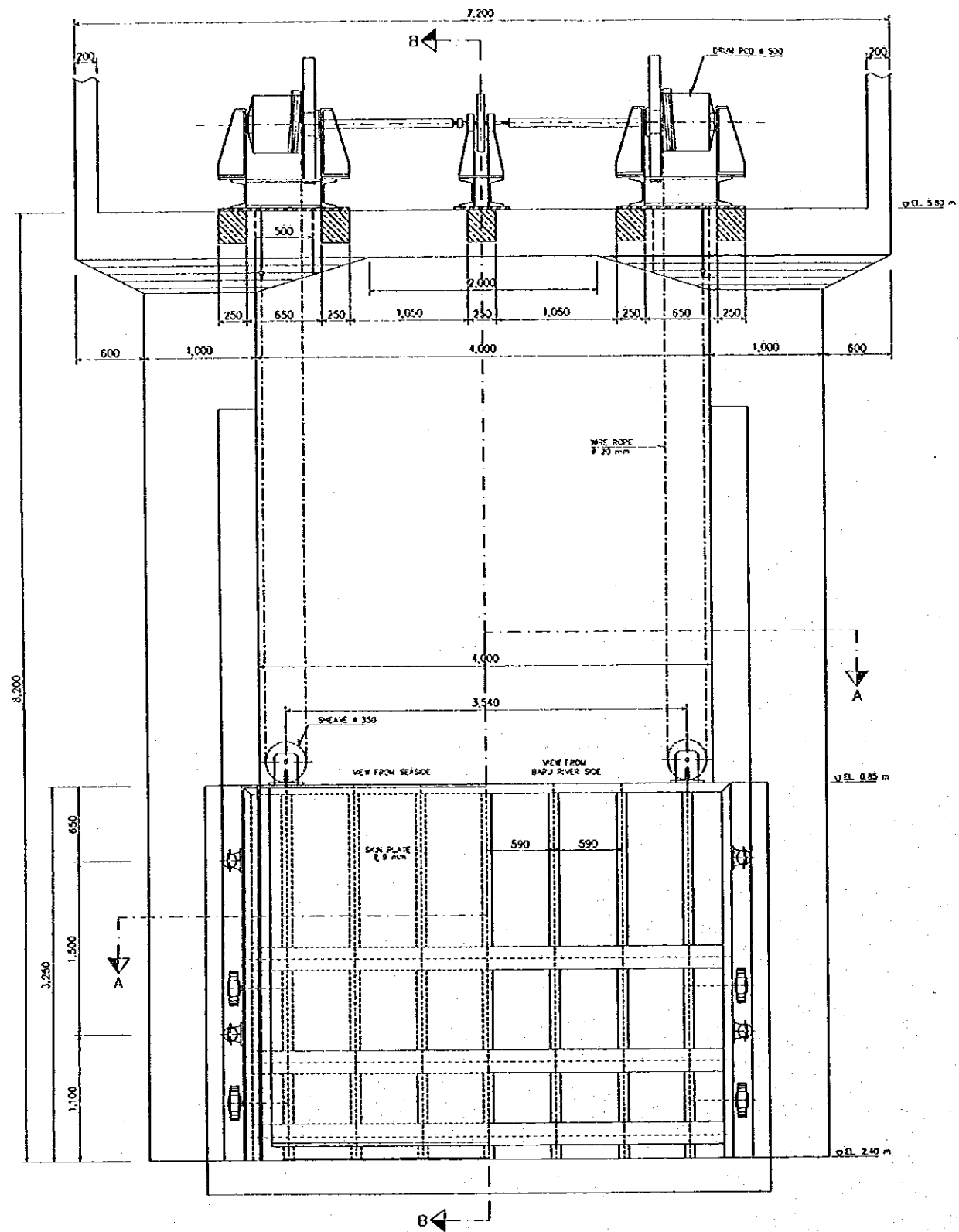
THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT
AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

IRATUNBELIDMA FLOOD CONTROL PROJECT
COMPONENT: URBAN DRAINAGE SYSTEM IMPROVEMENT
BAKU PUMPED STATION GATE
REINFORCING BAR ARRANGEMENT
INSPECTION BRIDGE

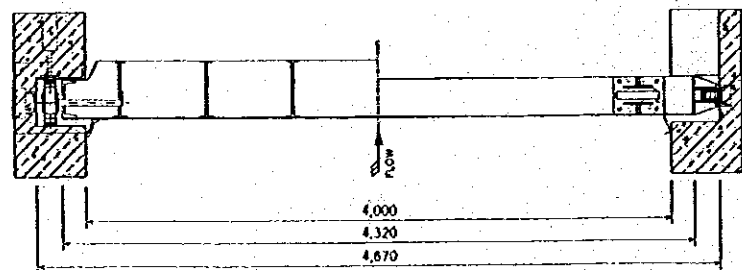
PROVINCE: **CENTRAL JAYA**
PROJECT NAME: **FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN IRATUNBELIDMA BY THE REPUBLIC OF INDONESIA**
DISTRICT: **SIBILANG CITY**
DRAWING NO: **U-P3-G-CI-11**
SHEET NO: **125**
DATE: CONTRACT NO:

SAPAN INTERNATIONAL COOPERATION AGENCY
CIVIL ENGINEERING CO., LTD. IN ASSOCIATION WITH
PACIFIC CONSULTANTS INTERNATIONAL AND
PACIFIC INTERNATIONAL INC.

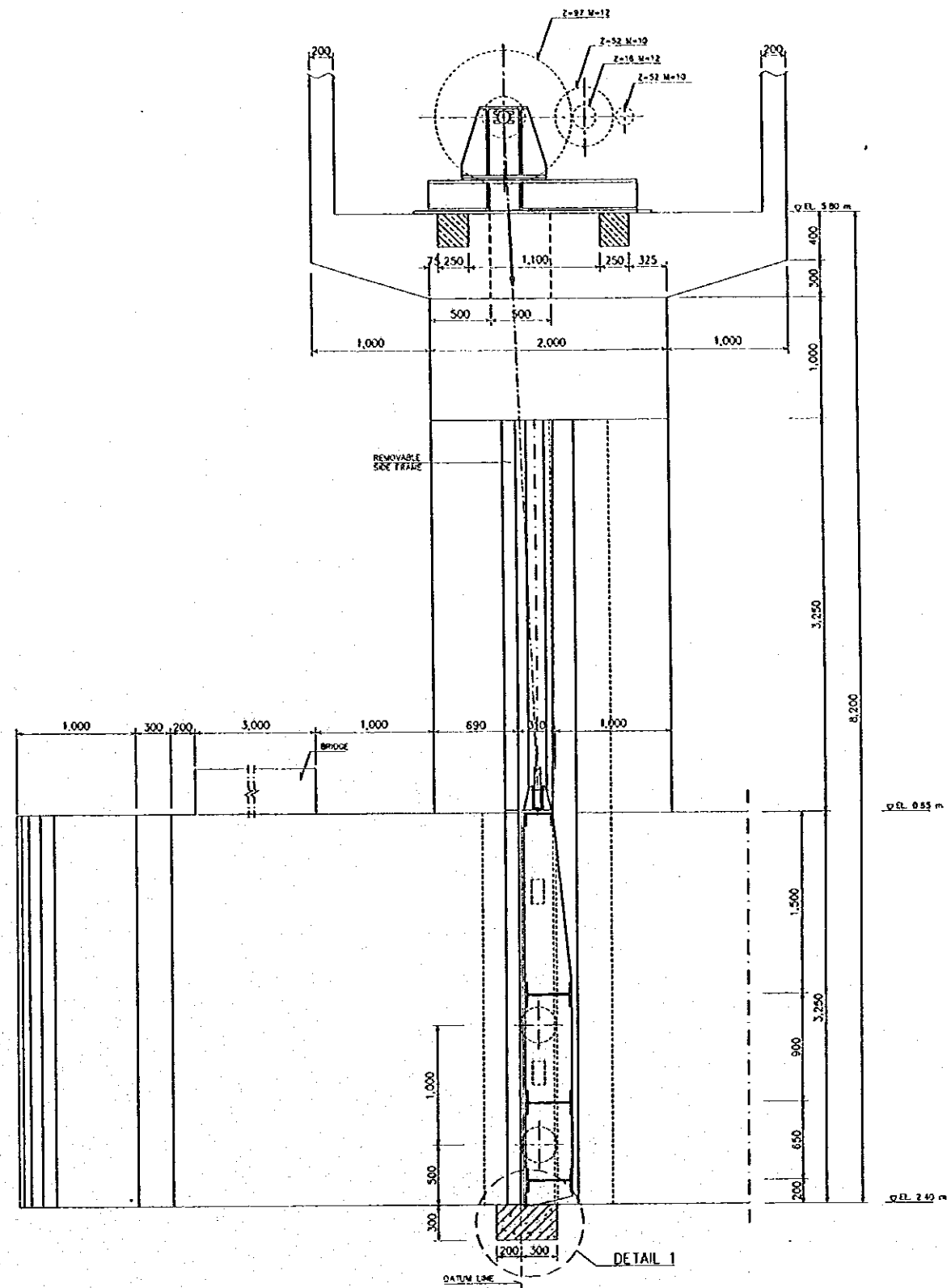
DESIGNED: *[Signature]*
CHECKED: *[Signature]*
DATE OF PLANNING AND DESIGN:
PROJECT MANAGER:



ELEVATION
SCALE A



SECTION A-A
SCALE A

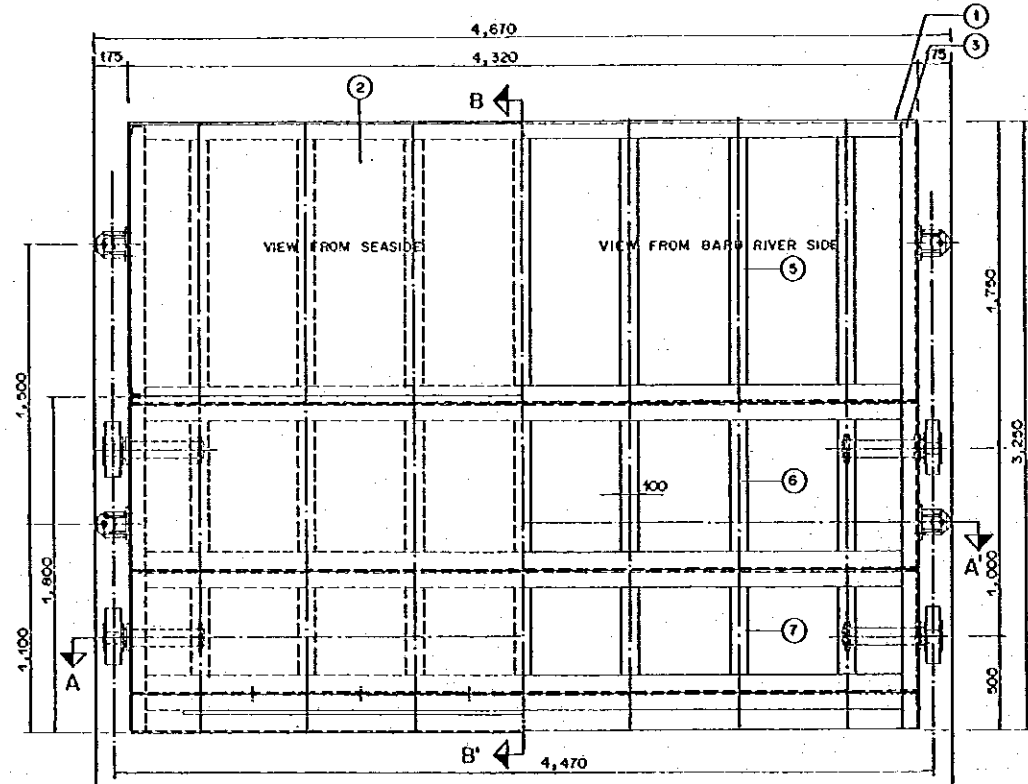


SECTION B-B
SCALE A

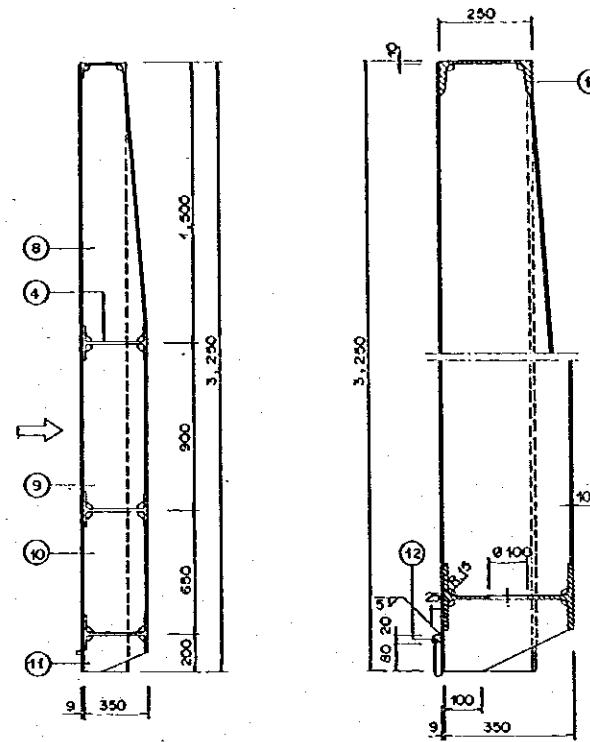
SCALE A
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NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAVA
BRATUNGSILAYA FLOOD CONTROL PROJECT COMPONENT: URBAN DRAINAGE SYSTEM IMPROVEMENT BARU PUMPING STATION GATE GENERAL ARRANGEMENT GATE		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN BRATUNGSILAYA IN THE PROVINCE OF INDONESIA
DEAN INTERNATIONAL COOPERATION AGENCY CIL INTERNATIONAL CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL AND PAKO INTERNATIONAL INC.		DISTRICT SEMARANG CITY
DESIGNED CHECKED APPROVED PROJECT MANAGER		DRAWING NO. U-P3-G-Me-1 SHEET NO. 126 DATE CONTRACT NO.



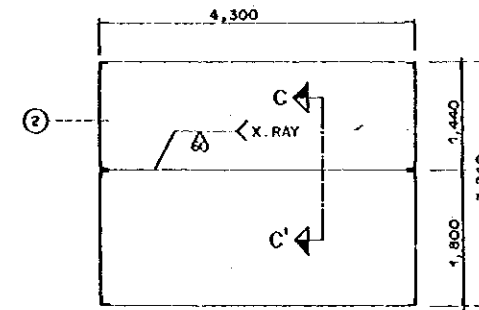
ELEVATION OF GATE LEAF
SCALE A



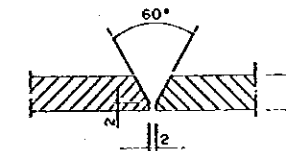
(SCALE A)

(SCALE B)

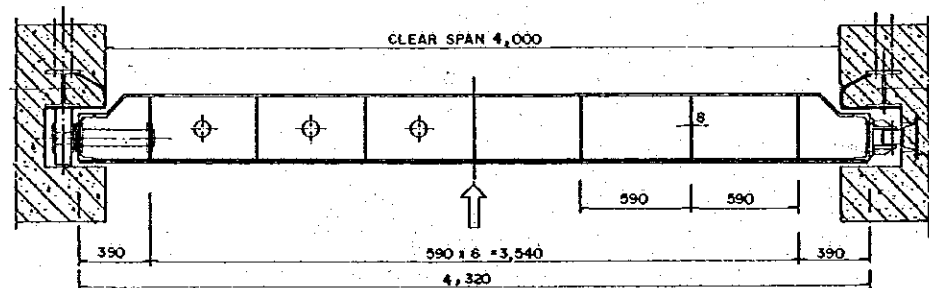
SECTION OF GATE LEAF
B - B'



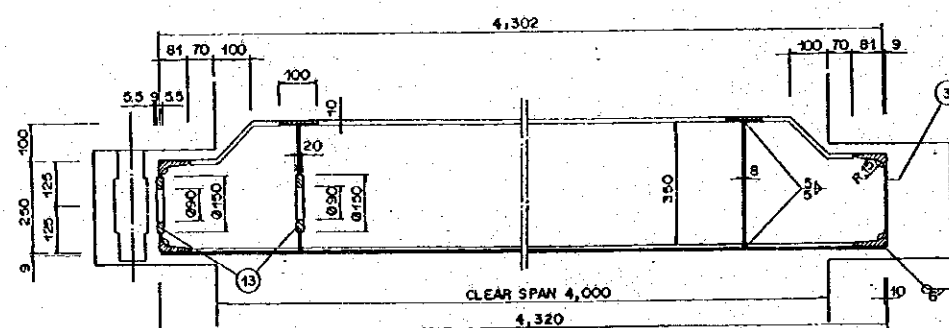
SKIN PLATE
SCALE C



SECTION (C - C')
SCALE B

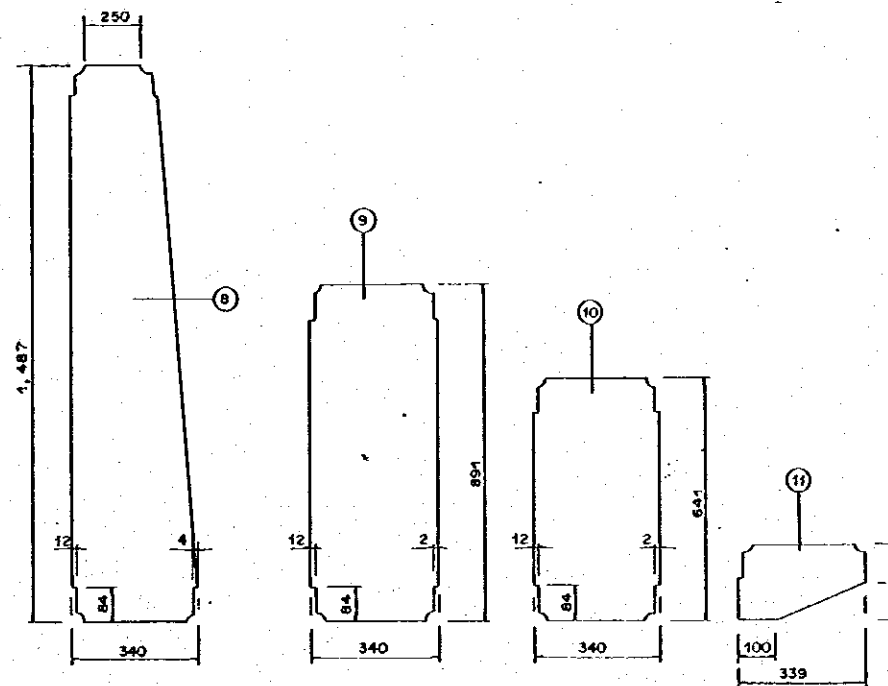


(SCALE A)



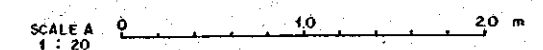
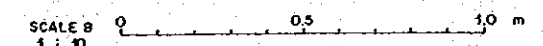
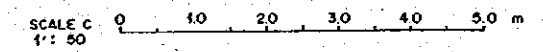
(SCALE B)

SECTION OF GATE LEAF
A - A'



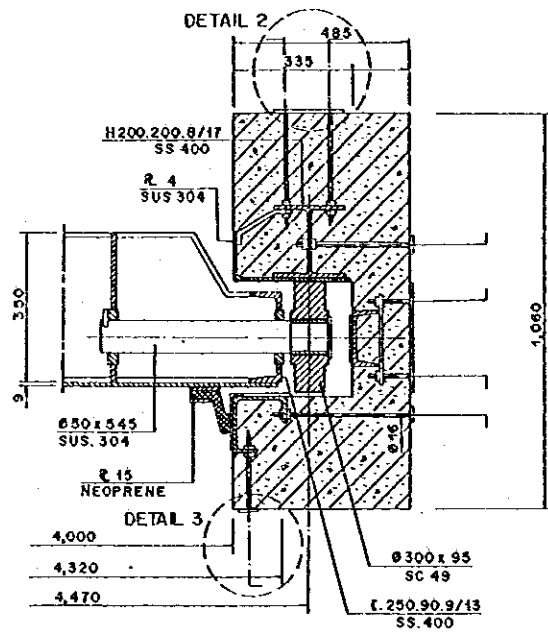
DIMENSION OF GIRDS
SCALE B

FRFT No.	DESCRIPTION	QTY	MATERIAL	DIMENSION
1	HORIZONTAL BEAM	1	SS. 400	E 250
2	SKIN PLATE	1	SS. 400	R. 9
3	VERTICAL BEAM	2	SS. 400	E . 250
4	HORIZONTAL BEAM	3	SS. 400	H 350.175.7/11
5	VERTICAL GIRDER	7	SS. 400	R. 10
6	VERTICAL GIRDER	7	SS. 400	R. 10
7	VERTICAL GIRDER	7	SS. 400	R. 10
8	VERTICAL GIRDER	7	SS. 400	R. 8
9	VERTICAL GIRDER	7	SS. 400	R. 8
10	VERTICAL GIRDER	7	SS. 400	R. 8
11	VERTICAL GIRDER	7	SS. 400	R. 8
12	STOPPER	1	SS. 400	R. 20 x 25
13	REINFORCEMENT	8	SS. 400	Ø 150 x 20

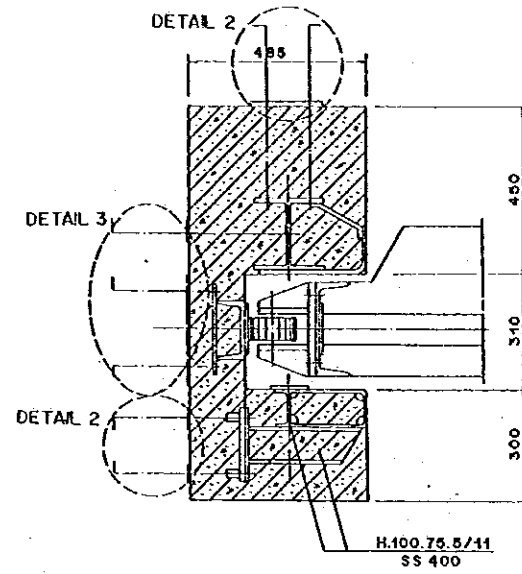


NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

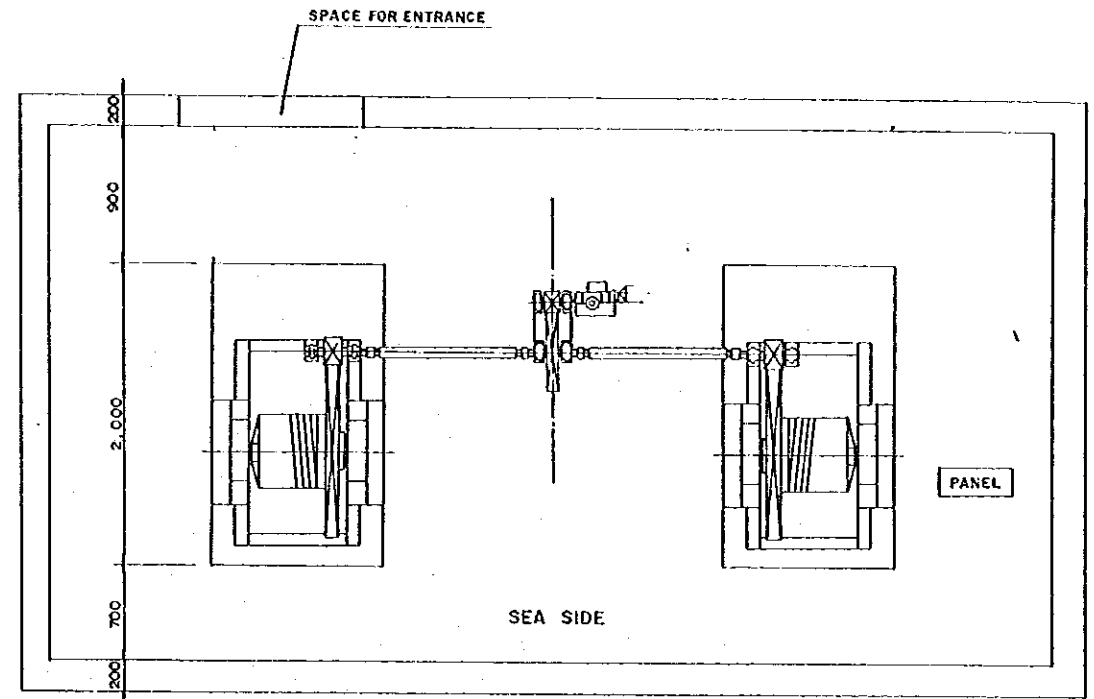
THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE: CENTRAL JAWA PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT OF SEMARANG IN THE REPUBLIC OF INDONESIA DISTRICT: SEMARANG CITY DRAWING NO. U-PS-6-MF-2 SHEET NO. 127 DATE: _____ CONTRACT NO. _____
BATURAHAYANA FLOOD CONTROL PROJECT COMPONENT: URBAN DRAINAGE SYSTEM IMPROVEMENT BARU PUMPING STATION GATE DETAIL OF GATE LEAF		DESIGNED: [Signature] CHECKED: [Signature] CHIEF OF PLANNING AND DESIGN PROJECT MANAGER
SAFARI INTERNATIONAL COOPERATION AGENCY CITI ENGINEERING CO. LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL AND PARCO INTERNATIONAL INC.		APPROVED: [Signature]



SECTION C - C

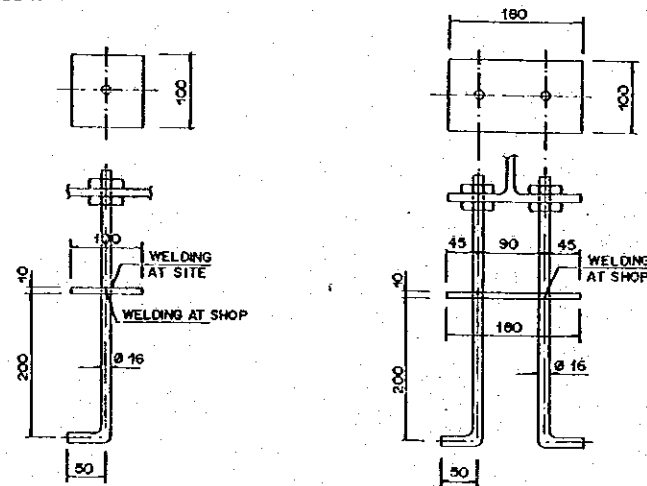


SECTION D - D



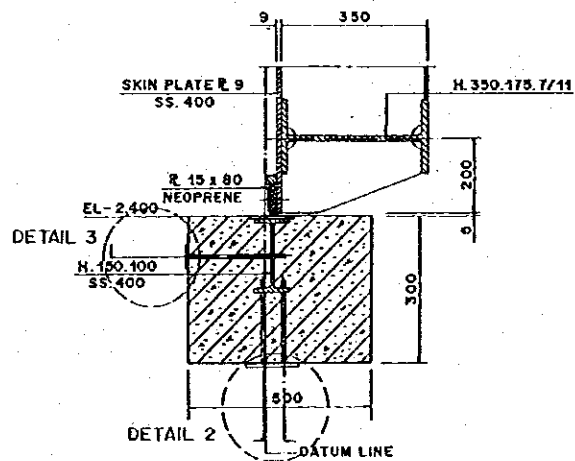
PLAN OF HOIST
SCALE B

DETAIL OF GUIDE FRAME
SCALE A

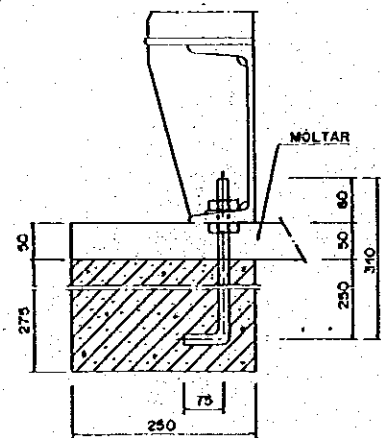


DETAIL 3
SCALE C

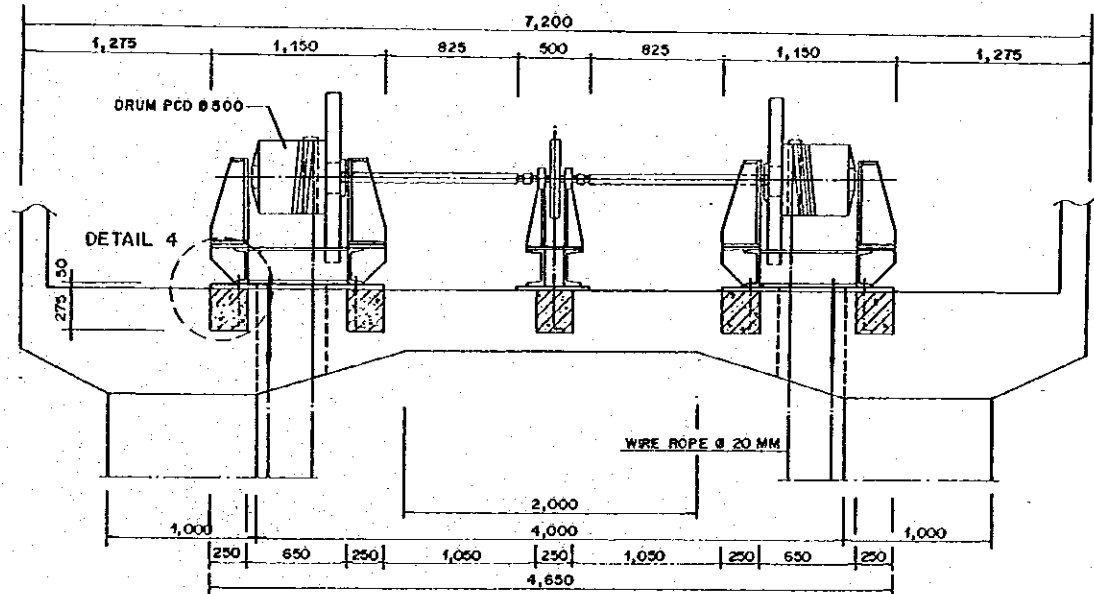
DETAIL 2
SCALE C



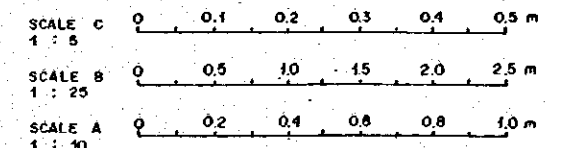
DETAIL 1
SCALE A



DETAIL 4
SCALE C

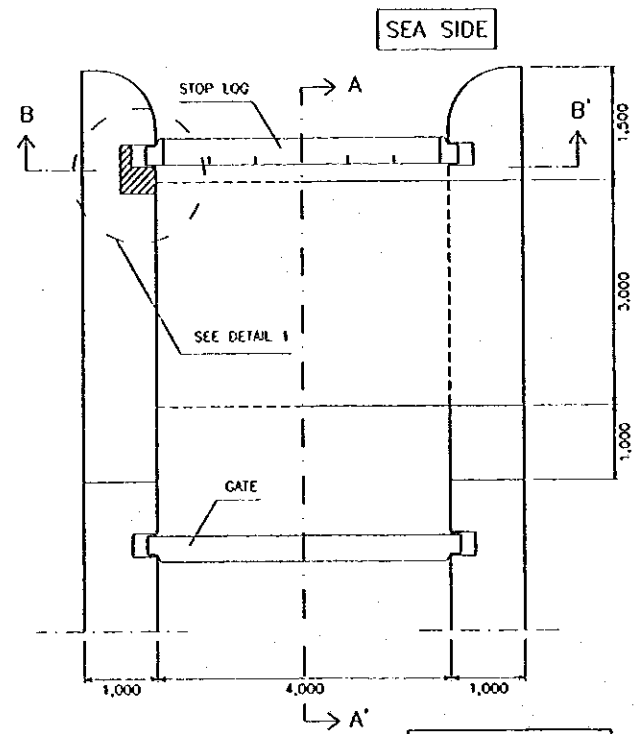


ELEVATION OF HOIST
SCALE B



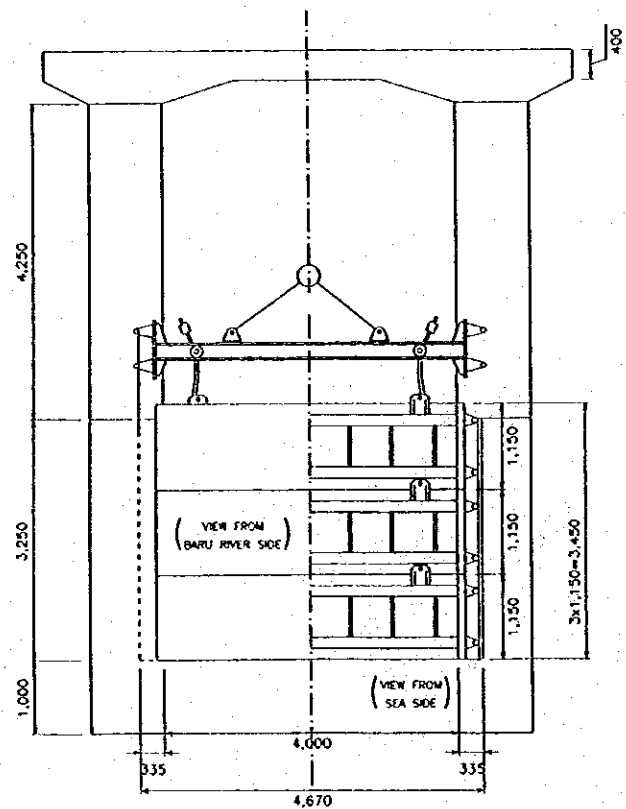
NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAVA
BRATUNGLA FLOOD CONTROL PROJECT COMPONENT: URBAN DRAINAGE SYSTEM IMPROVEMENT BARU PUMPING STATION GATE DETAIL OF GUIDE FRAME / LAYOUT OF HOIST		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
JAPAN INTERNATIONAL COOPERATION AGENCY CITY SEMARANG CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL AND JACO INTERNATIONAL INC.		DISTRICT SEMARANG CITY
DESIGNED CHECKED CHIEF OF PLANNING AND DESIGN		DRAWING NO. U-P3-8-Ms-3 SHEET NO. 128 DATE CONTRACT NO.



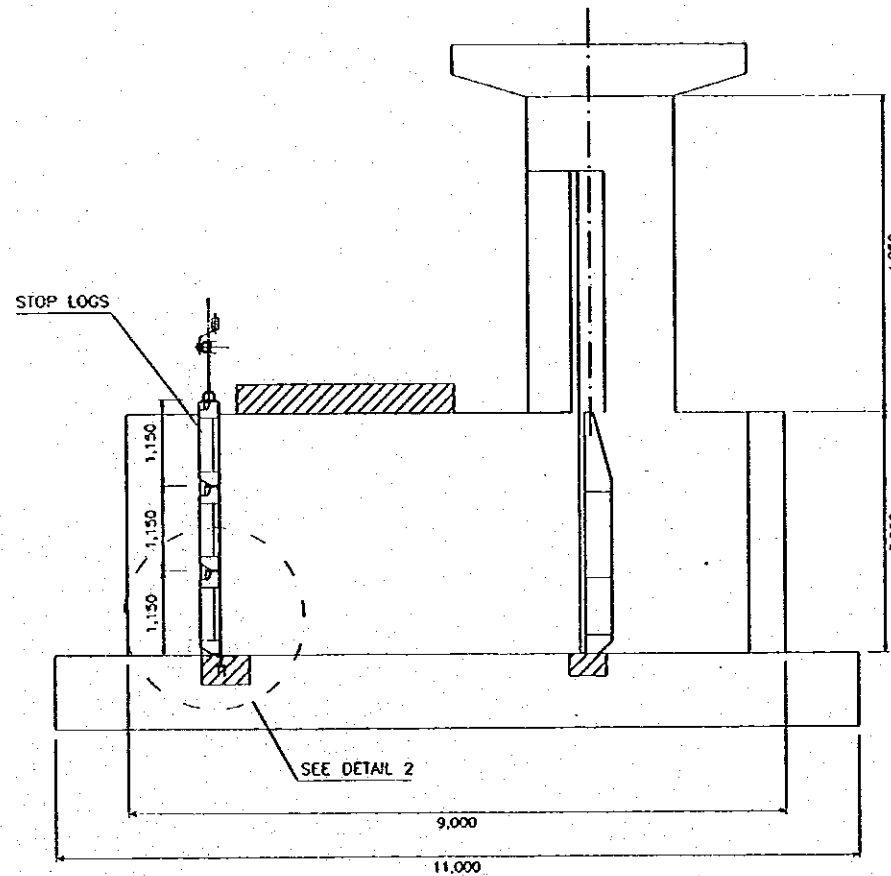
SECTION A-A'

SCALE A



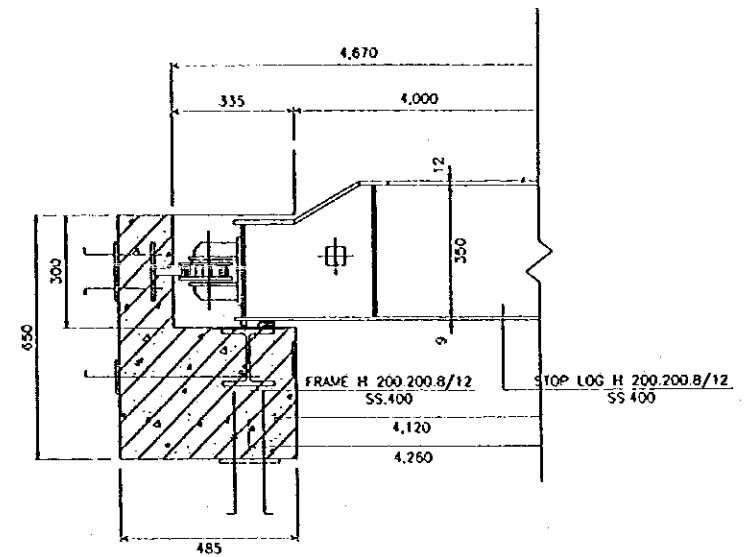
SECTION B-B'

SCALE A



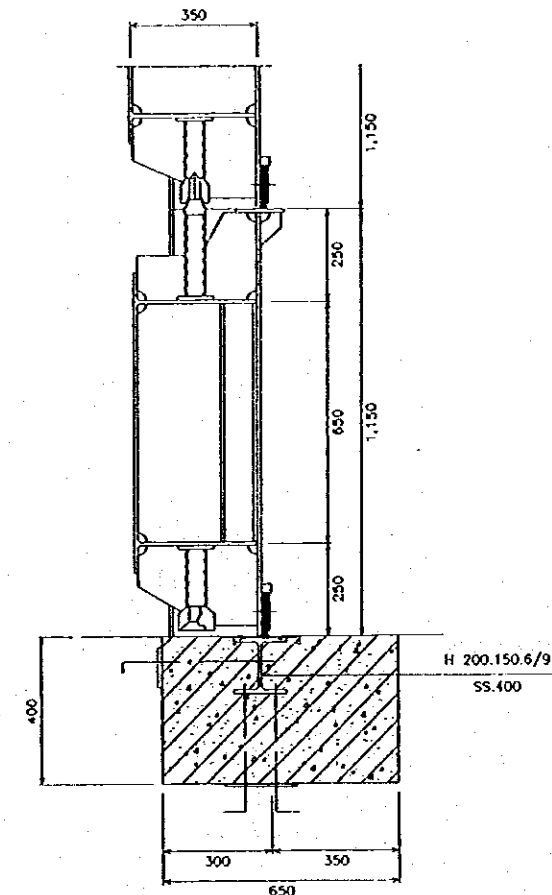
SECTION A-A'

SCALE A



DETAIL 1

SCALE B



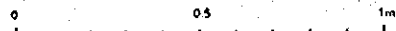
DETAIL 2

SCALE B

SCALE A
1 : 50

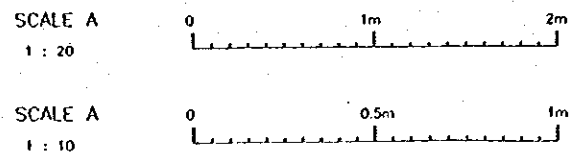
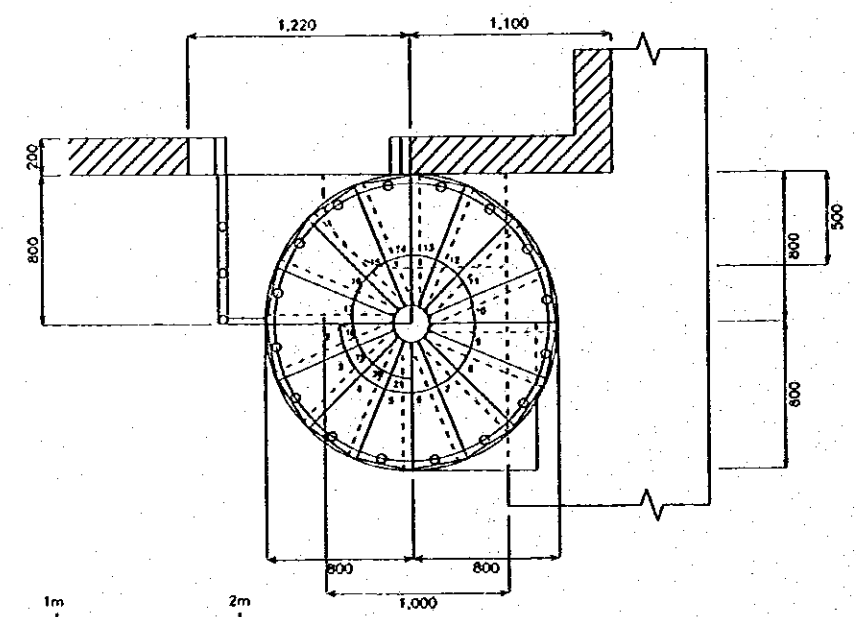
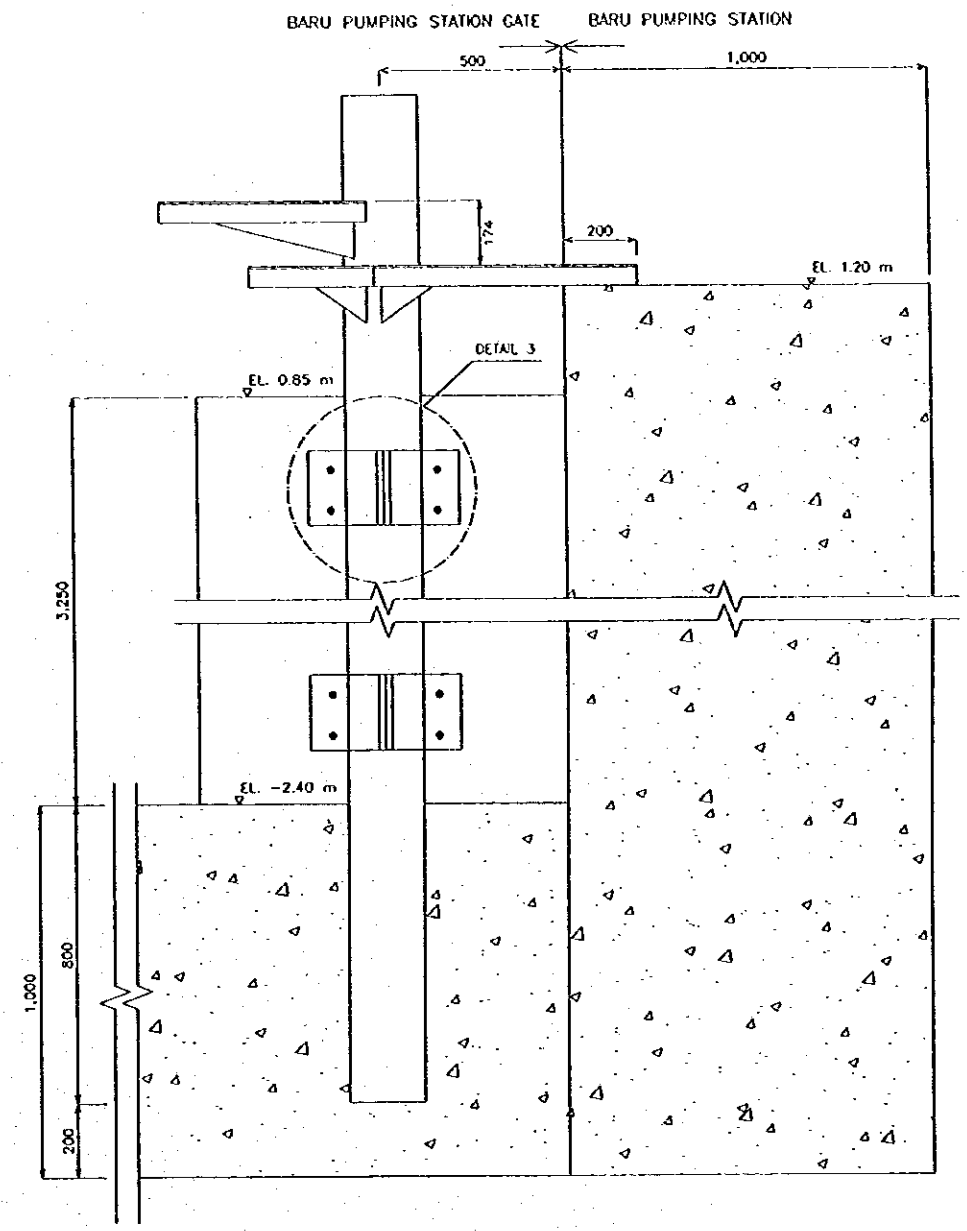
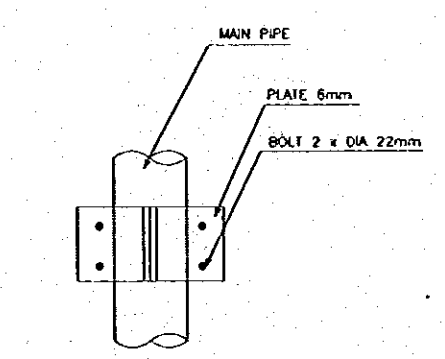
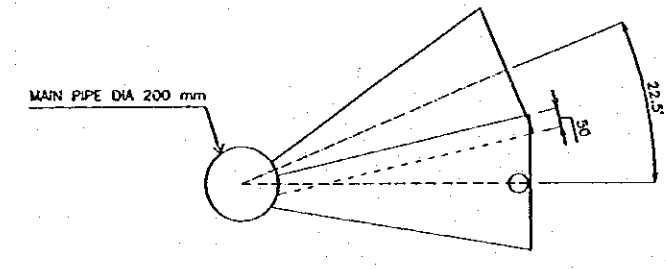
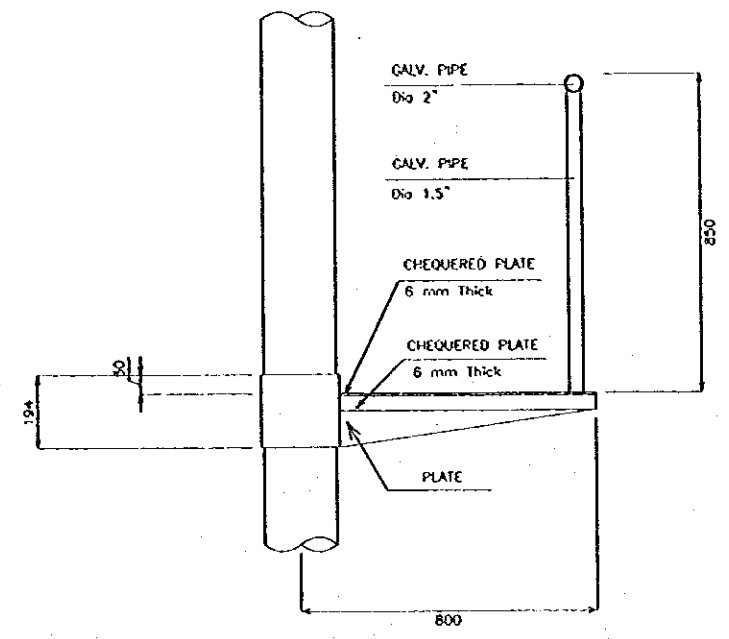
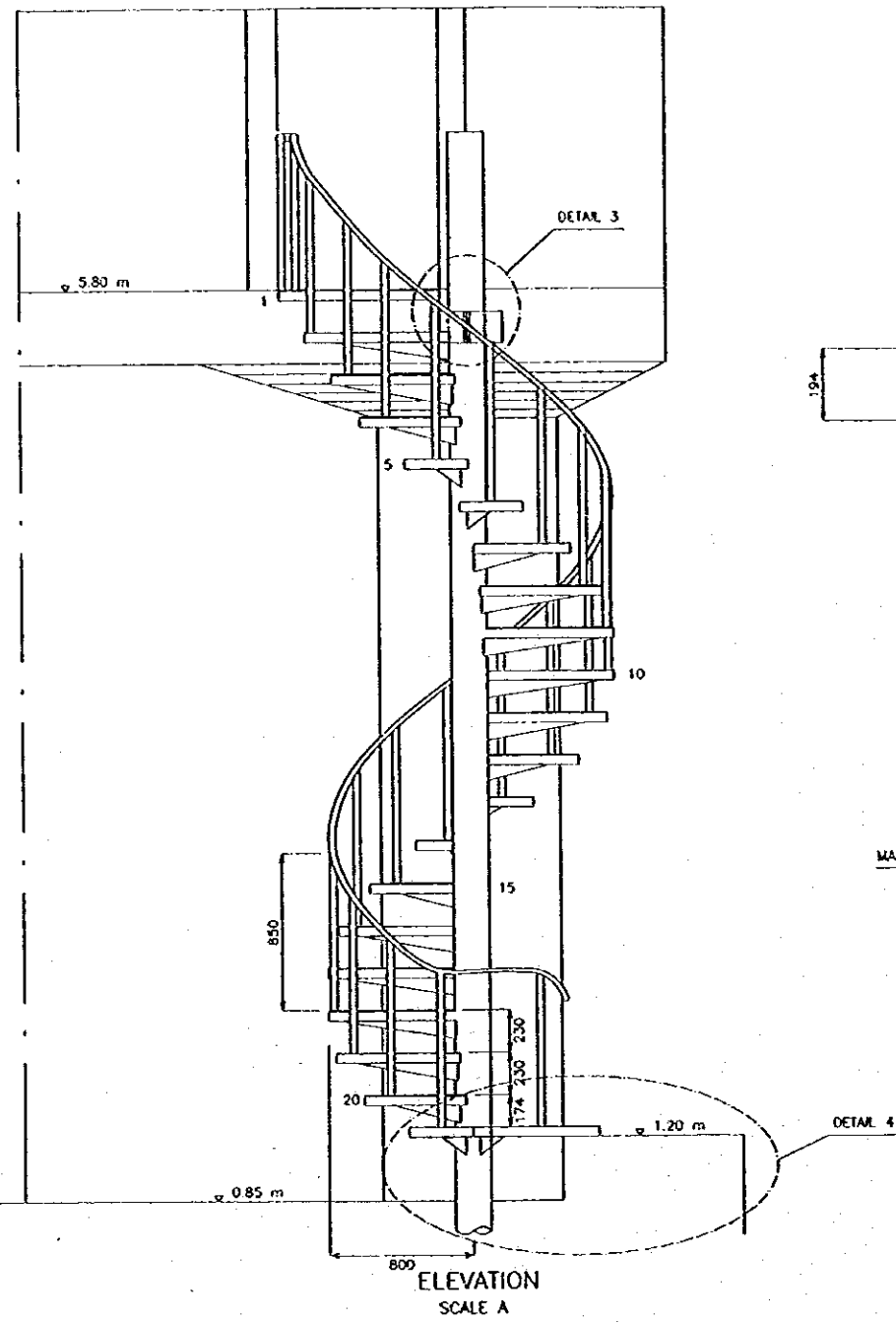


SCALE B
1 : 10



NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

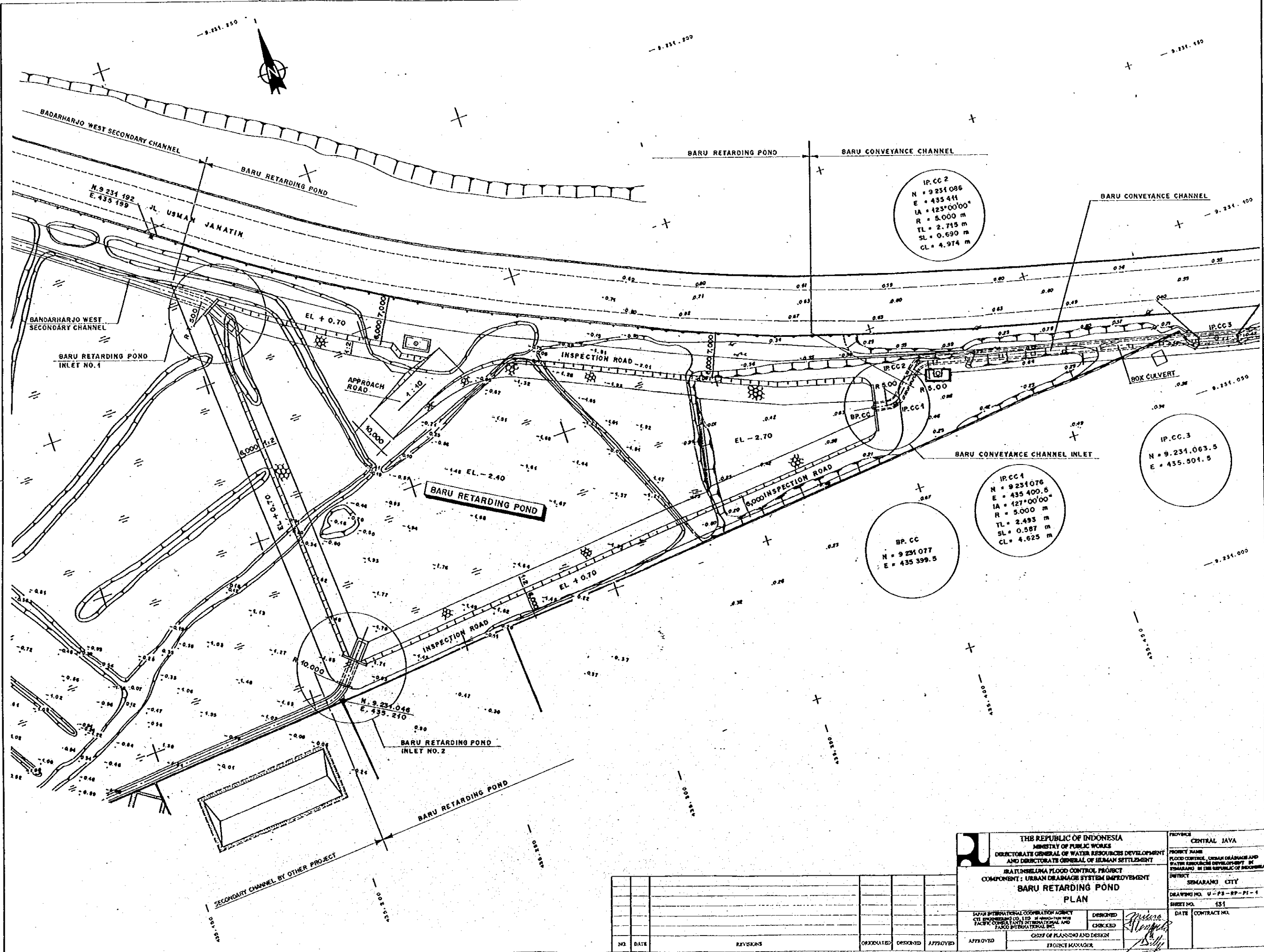
THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAYA
BRATUNIBALAYA FLOOD CONTROL PROJECT COMPONENT : URBAN DRAINAGE SYSTEM IMPROVEMENT BARU PUMPING STATION GATE STOP LOGS		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT OF SEMARANG IN THE REPUBLIC OF INDONESIA
CIJ ENGINEERING CO., LTD. IS APPROVED THE PACIFIC CROSS ISLAND DEVELOPMENT AND PACIFIC INTERNATIONAL INC.		DISTRICT SEMARANG CITY
CHIEF OF PLANNING AND DESIGN PROJECT MANAGER		DRAWING NO. U-P3-G-Me-4 SHEET NO. 129
DATE		CONTRACT NO.



DETAIL 3
SCALE B

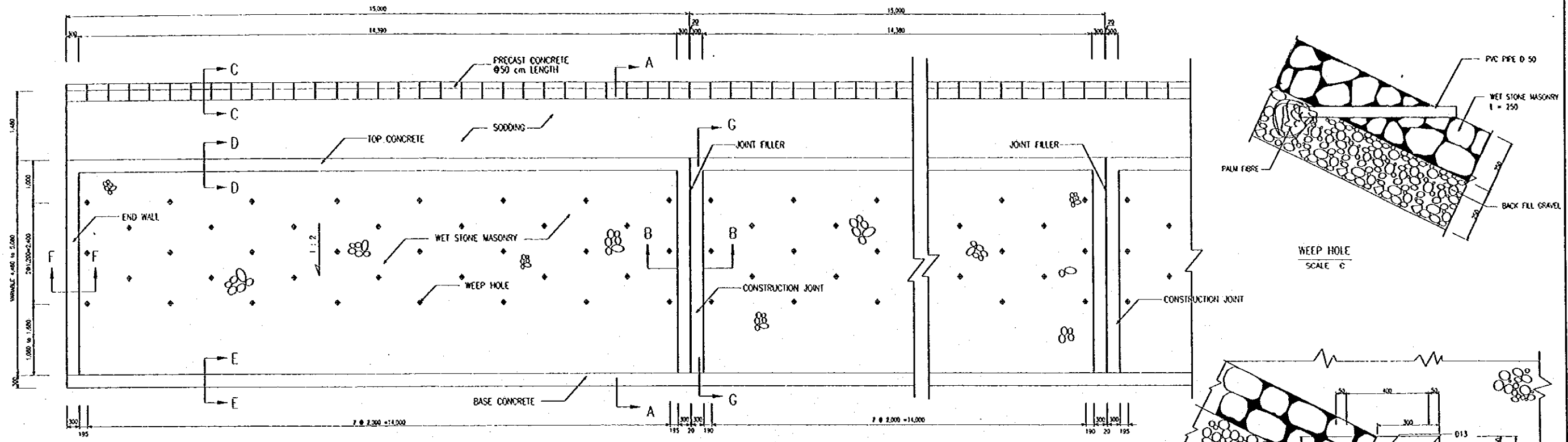
NO.	DATE	REVISIONS	CONTRACTED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAVA
BRATUNGSILANA FLOOD CONTROL PROJECT COMPONENT : URBAN DRAINAGE SYSTEM IMPROVEMENT BARU PUMPING STATION GATE DETAIL OF STAIRWAY		PROJECT NAME BRATUNGSILANA FLOOD CONTROL PROJECT DISTRICT SEMARANG CITY
JAPAN INTERNATIONAL COOPERATION AGENCY CITY ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL AND YAKKO INTERNATIONAL INC.		DRAWING NO. U.P3-G-MI-1 SHEET NO. 130
DESIGNED CHECKED APPROVED	DATE PROJECT MANAGER	DATE CONTRACT NO.

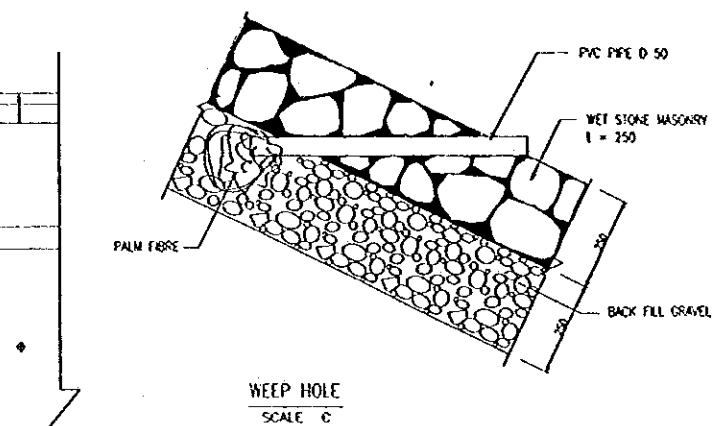


NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

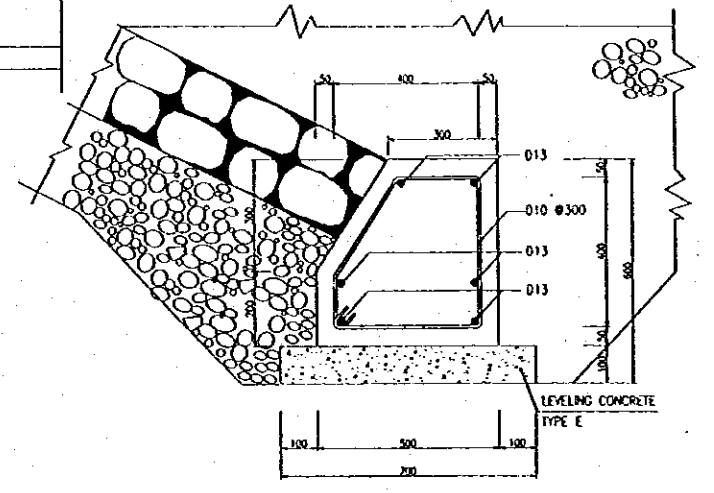
THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE: CENTRAL JAWA PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT OF SEMARANG IN THE REPUBLIC OF INDONESIA DISTRICT: SEMARANG CITY DRAWING NO. U-PS-RP-PI-4 SHEET NO. 131 DATE: _____ CONTRACT NO. _____
JAPAN INTERNATIONAL COOPERATION AGENCY CITY ENGINEERING CO., LTD. PACIFIC CONSULTANTS (INDONESIA) AND FARO INTERNATIONAL INC.		DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> CHIEF OF PLANNING AND DESIGN PROJECT MANAGER



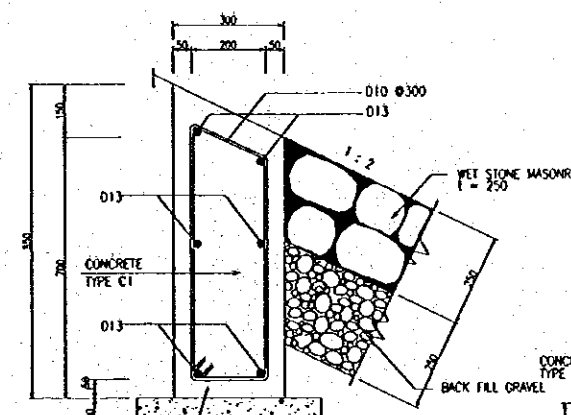
PLAN OF WET MASONRY RETAINMENT, TYPE A-4
SCALE A



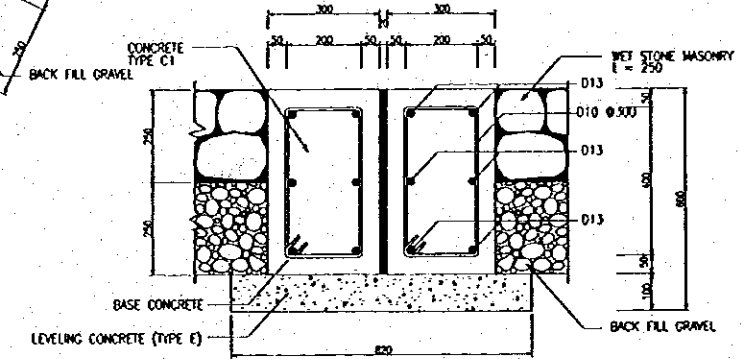
SECTION E-E
SCALE C



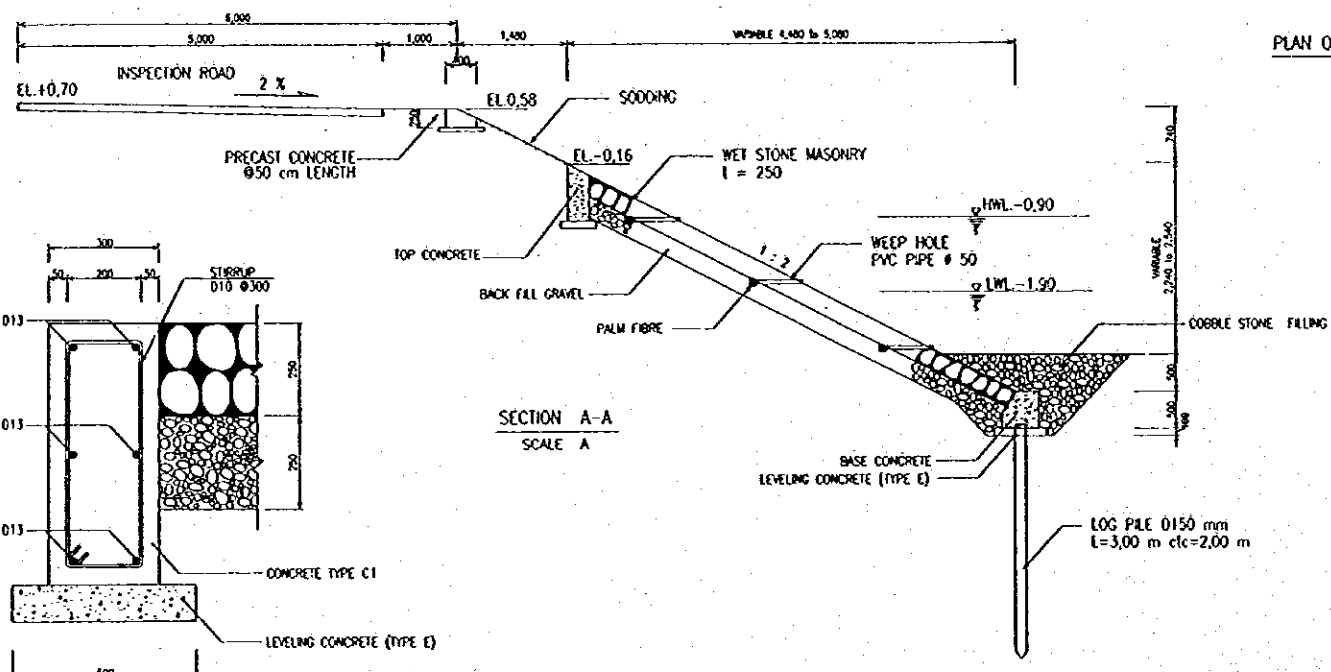
SECTION E-E
BASE CONCRETE
SCALE C



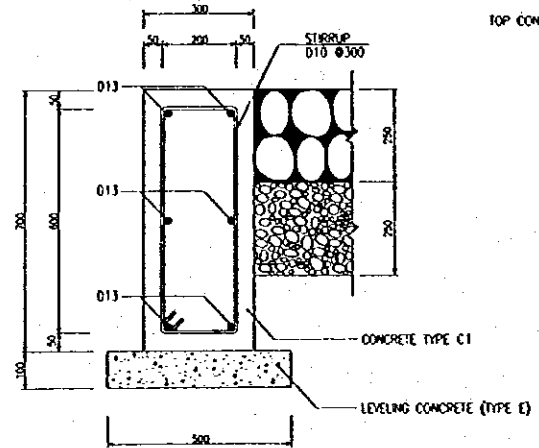
SECTION D-D
TOP CONCRETE
SCALE C



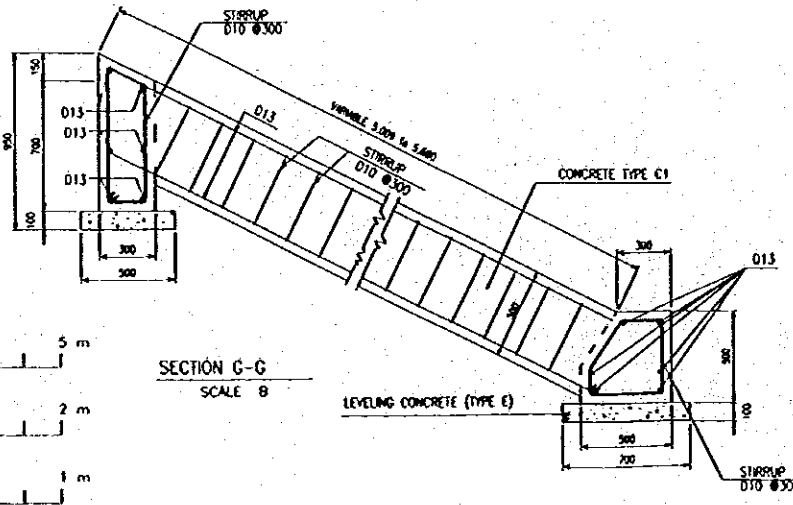
SECTION B-B
CONSTRUCTION JOINT
SCALE C



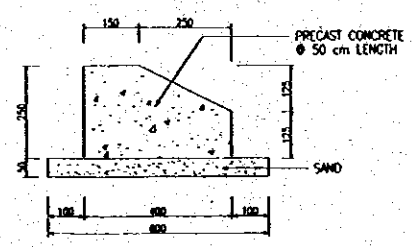
SECTION A-A
SCALE A



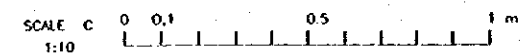
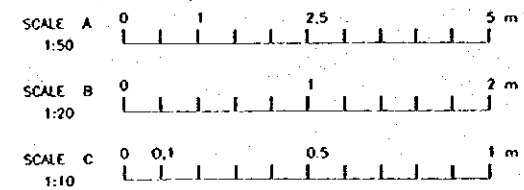
SECTION F-F
END WALL
SCALE C



SECTION C-C
PRECAST CONCRETE
SCALE C



SECTION C-C
PRECAST CONCRETE
SCALE C



NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED	APPROVED

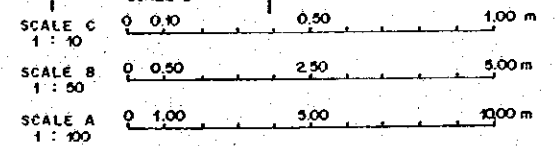
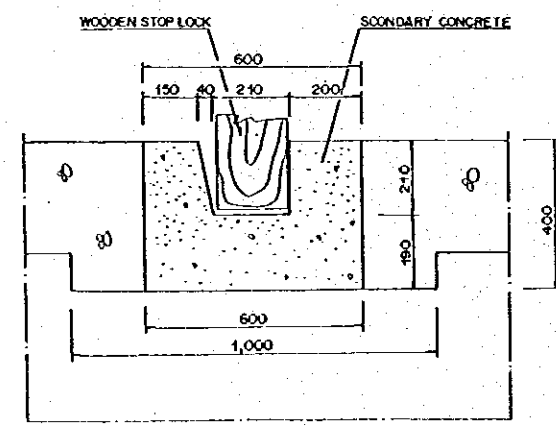
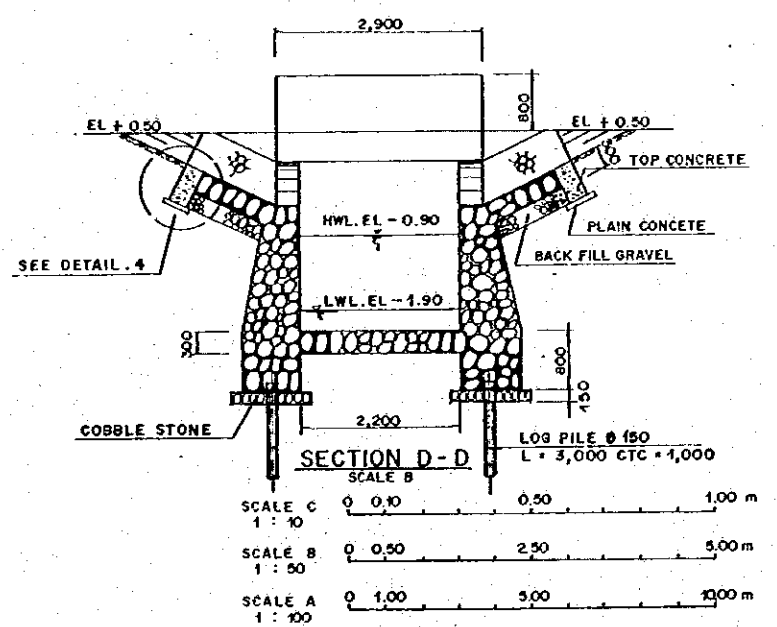
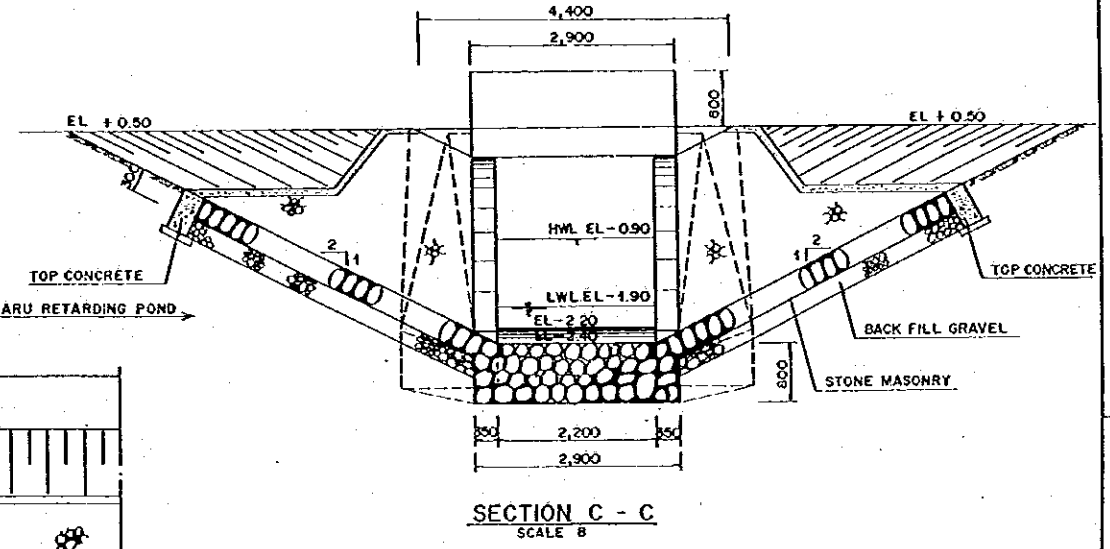
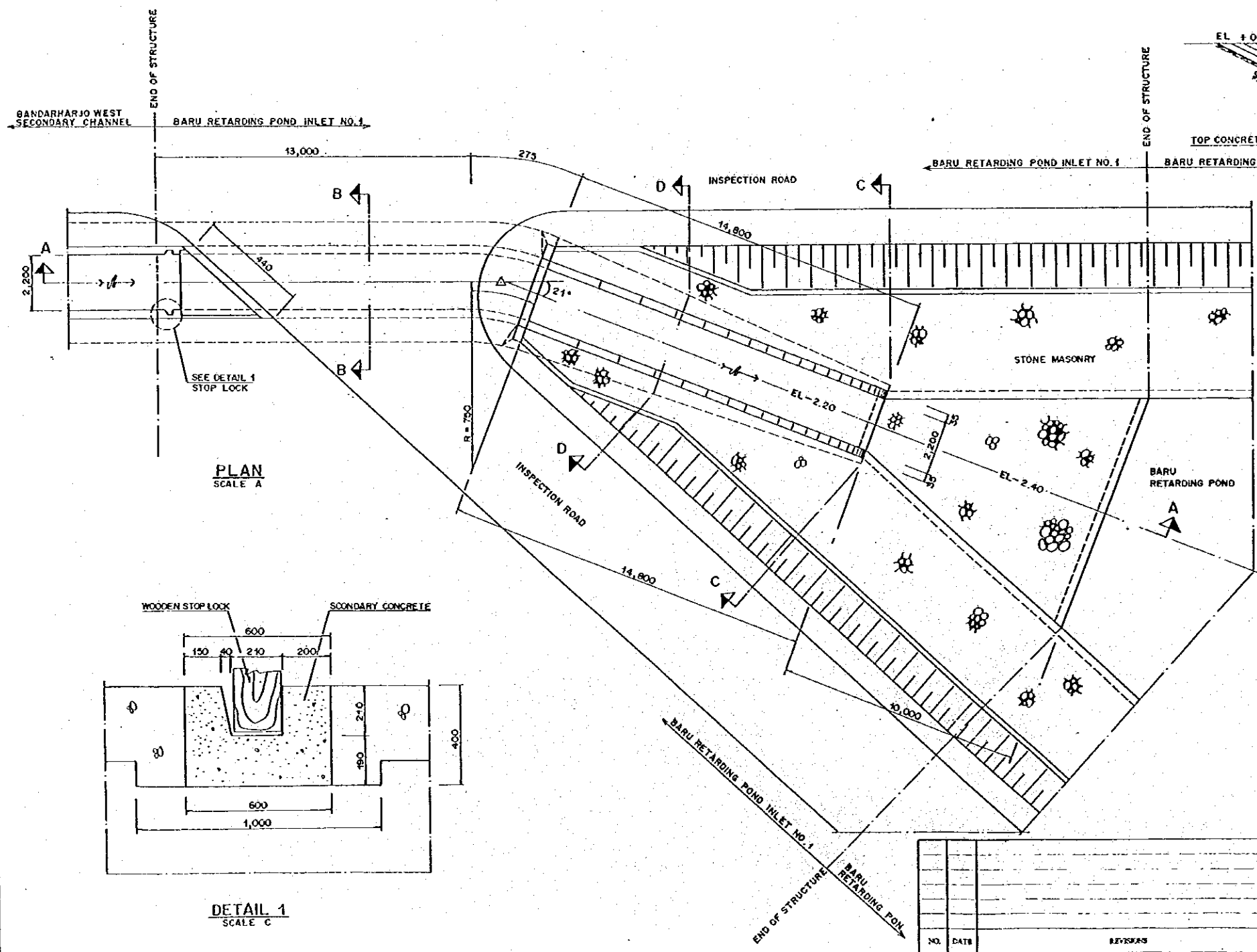
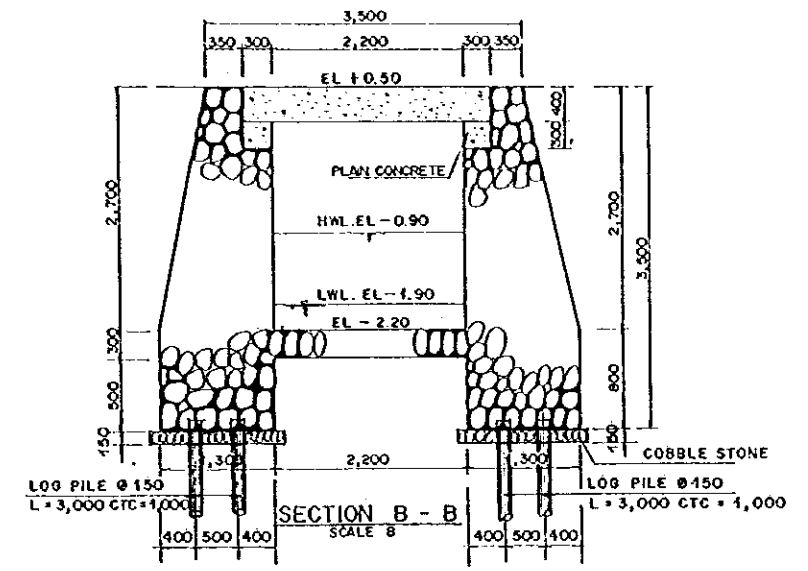
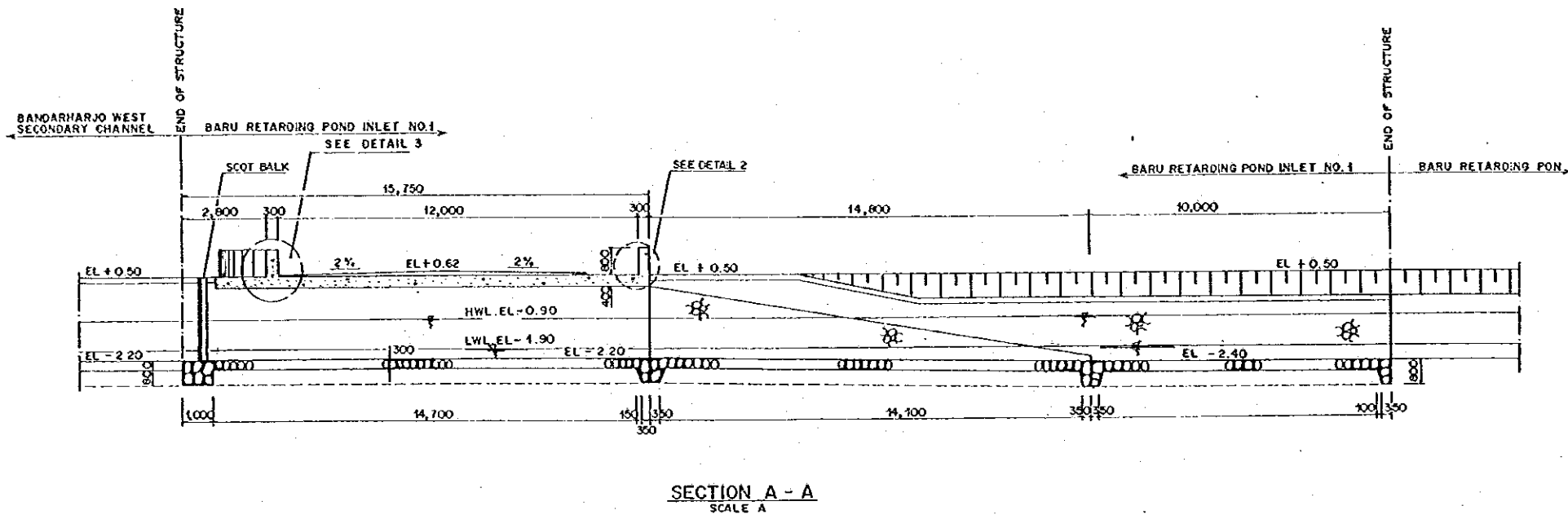
THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
 DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT
 AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

JRATUNGGAL FLOOD CONTROL PROJECT
COMPONENT: URBAN DRAINAGE SYSTEM IMPROVEMENT
BARU RETARDING POND
RETAINMENT
(WET MASONRY TYPE A-4)

JAPAN INTERNATIONAL COOPERATION AGENCY
 CITY ENGINEERING CO., LTD. IN ASSOCIATION WITH
 PACIFIC CONSULTANTS INTERNATIONAL AND
 TAIKOO INTERNATIONAL PCL.

CHECKED: [Signature]
 PROJECT MANAGER: [Signature]

PROVINCE: CENTRAL JAVA
 DISTRICT: SEMARANG CITY
 DRAWING NO. U-P3-RP-RV-1
 SHEET NO. 132
 DATE: [] CONTRACT NO. []

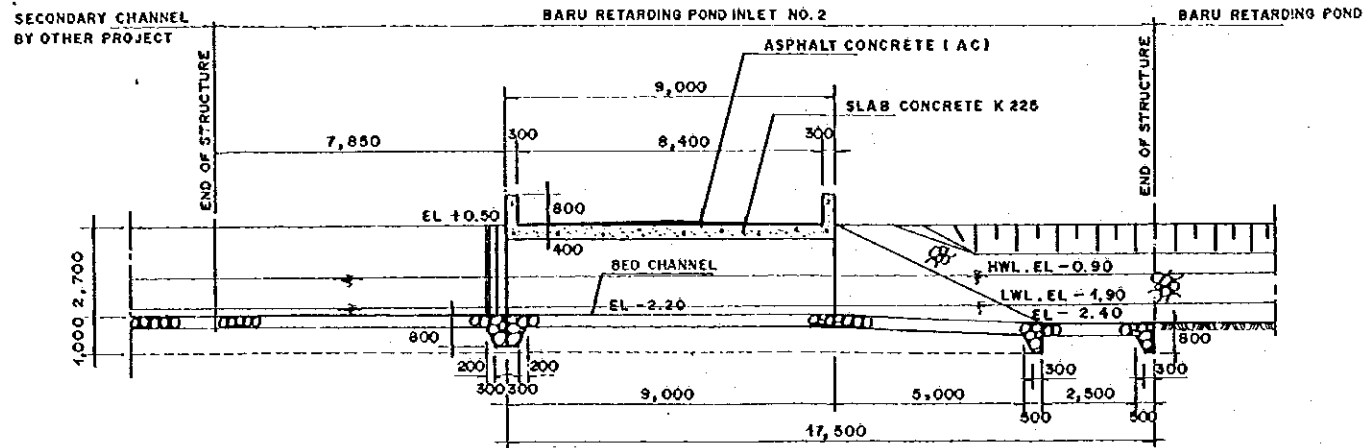


NO.	DATE	REVISIONS	CALCULATED	DESIGNED	APPROVED

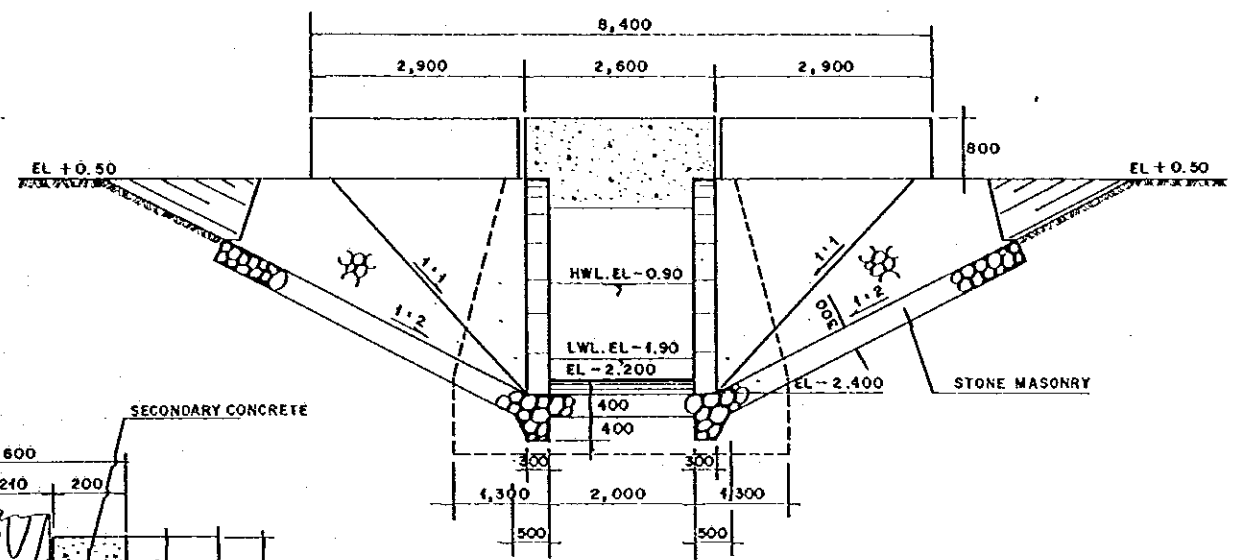
THE REPUBLIC OF INDONESIA
 MINISTRY OF PUBLIC WORKS
 DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT
 JATUNGGULANA FLOOD CONTROL PROJECT
 COMPONENT : URBAN DRAINAGE SYSTEM IMPROVEMENT
BARU RETARDING POND INLET NO.1
PLAN AND SECTION (1 OF 2)
 DRAWING NO. U-PS-RP-M1-1
 SHEET NO. 133

PROVINCE: CENTRAL JAVA
 PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG BY THE REPUBLIC OF INDONESIA
 DISTRICT: SEMARANG CITY
 DATE: _____
 CONTRACT NO.: _____

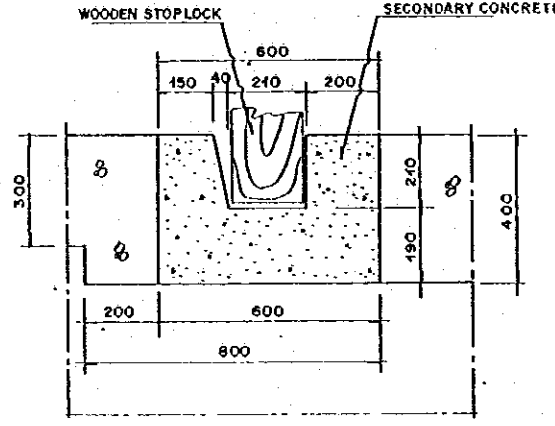
SIAH INTERNATIONAL COOPERATION AGENCY
 CIVIL ENGINEERING CO., LTD.
 PACIFIC CONSULTANTS INTERNATIONAL AND SIAH INTERNATIONAL INC.
 CHIEF OF PLANNING AND DESIGN
 PROJECT MANAGER



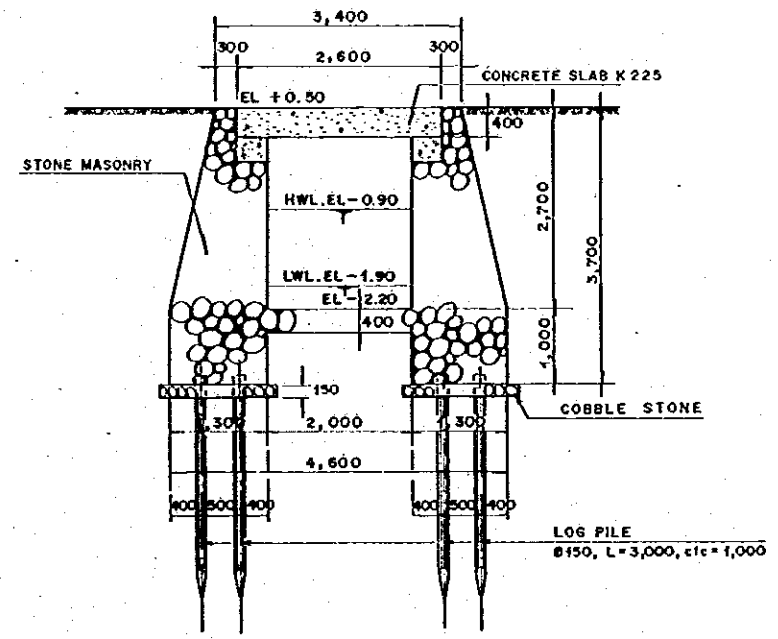
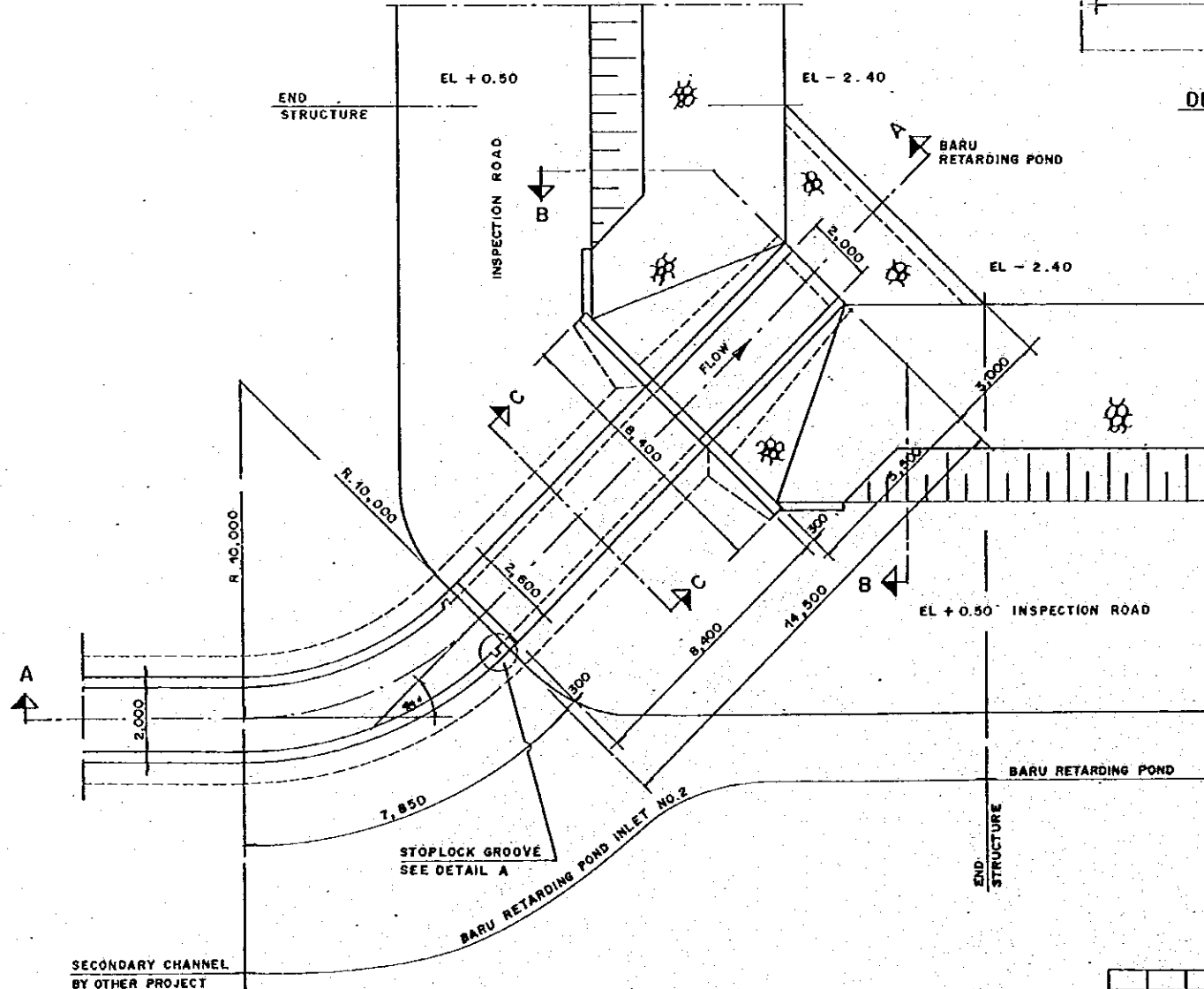
SECTION A - A
SCALE . A



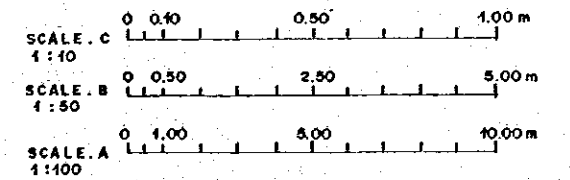
SECTION B - B
SCALE . B



DETAIL A
SCALE . C

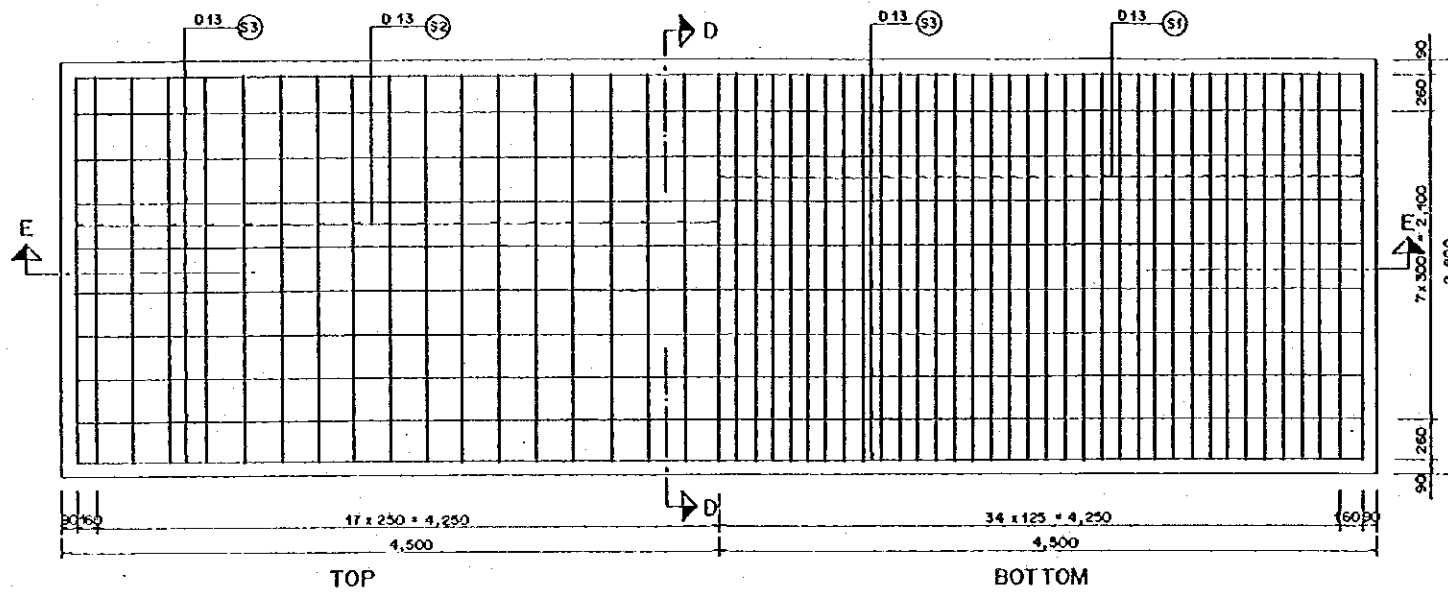


SECTION C - C
SCALE . B



THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAVA
BATUNGLUNG FLOOD CONTROL PROJECT COMPONENT 1: URBAN DRAINAGE SYSTEM IMPROVEMENT BARU RETARDING POND INLET NO. 2 PLAN AND SECTION (1/2)		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN BATUNGLUNG, IN THE REPUBLIC OF INDONESIA
LAM INTERNATIONAL COOPERATION AGENCY PT. INDOREKSO CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL AND JAWA INTERNATIONAL INC.		DISTRICT SEMARANG CITY
DESIGNED CHECKED DATE		DRAWING NO. U-P3-RP-M-3 SHEET NO. 135
CEPT OF PLANNING AND DESIGN PROJECT MANAGER		CONTRACT NO.

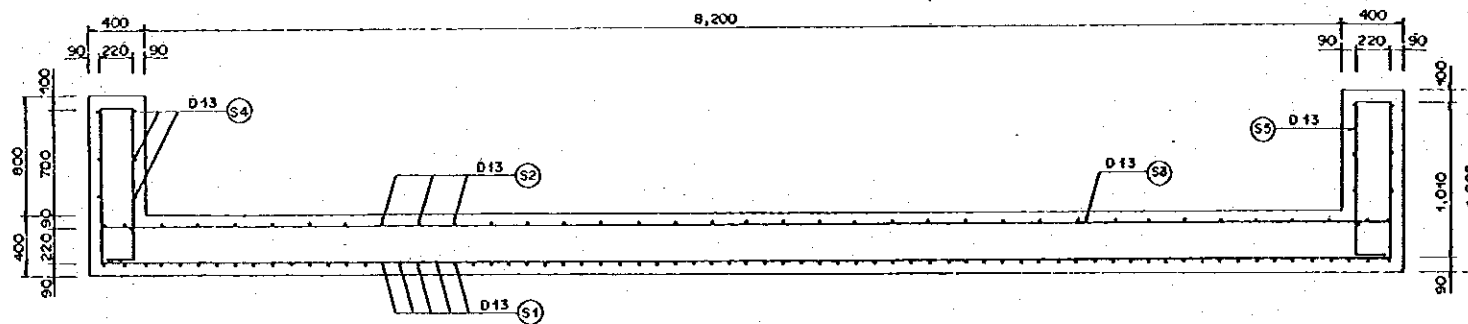
NO.	DATE	REVISIONS	OPERATED	DESIGNED	APPROVED	APPROVED



SLAB REINFORCING BAR
SCALE A

SLAB REINFORCING BAR

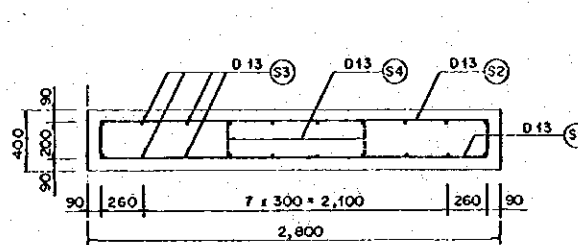
TYPE	SHAPE	DIA	NUMBER	LENGTH (mm)	L1	L2	L3	L4	H	R
S1	1	0 13	71	3,060	2,620	220				
S2	2	0 13	37	2,620	2,620					
S3	2	0 13	20	8,820	8,820					
S4	3	0 13	12	400	200	100	50			
S5	4	0 13	20	2,440	1,010	220	200			



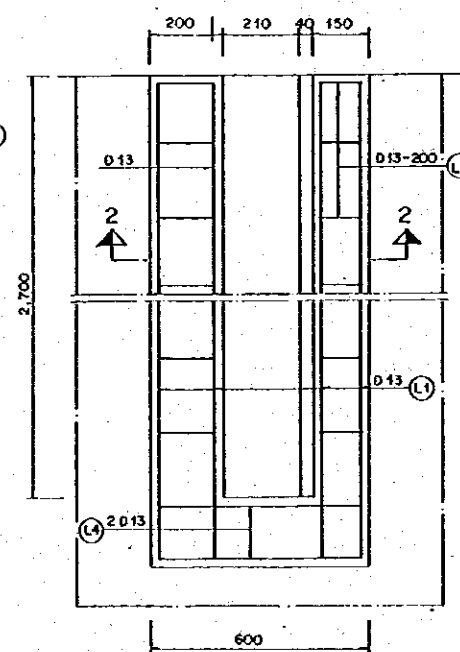
SECTION E-E
SCALE A

BAR WEIGHT

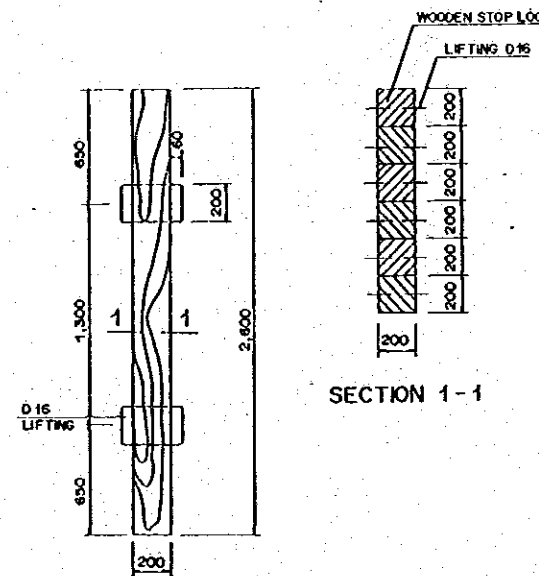
TYPE	DIA (mm)	LENGTH (mm)	NUMBER	WEIGHT PER m (kg/m)	WEIGHT PER BAR (kg)	WEIGHT	SHAPE
S1	13	3,060	71	1,04	3,182	225,954	
S2	13	2,620	37	1,04	2,725	100,817	
S3	13	8,820	20	1,04	9,173	183,46	
S4	13	400	12	1,04	0,416	4,99	
S5	13	2,440	20	1,04	2,496	49,92	
TOTAL = 565,14 kg							



SECTION D-D
SCALE A



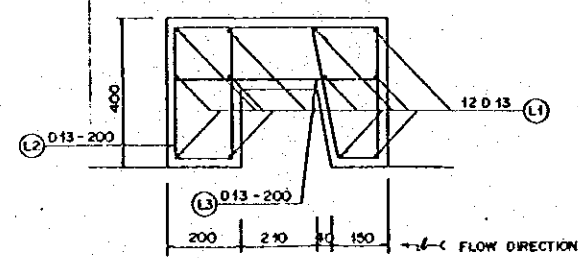
REINFORCING BAR OF STOP LOCK GROOVE
SCALE C



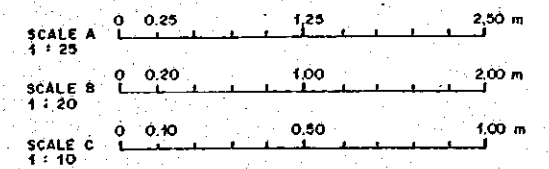
DETAIL OF WOODEN STOP LOCK
SCALE B

STOP LOCK GROOVE

TYPE	DIA	LENGTH (mm)	NUMBER	WEIGHT/m (kg/m)	WEIGHT/BAR (kg)	WEIGHT (kg)	SHAPE
L1	13	2,840	24	1,040	2,953	71	
L2	13	1,230	30	1,040	1,279	38	
L3	13	520	30	1,040	0,541	16	
L4	13	860	4	1,040	0,894	4	
TOTAL = 129 kg							



SECTION 2-2
SCALE C



NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

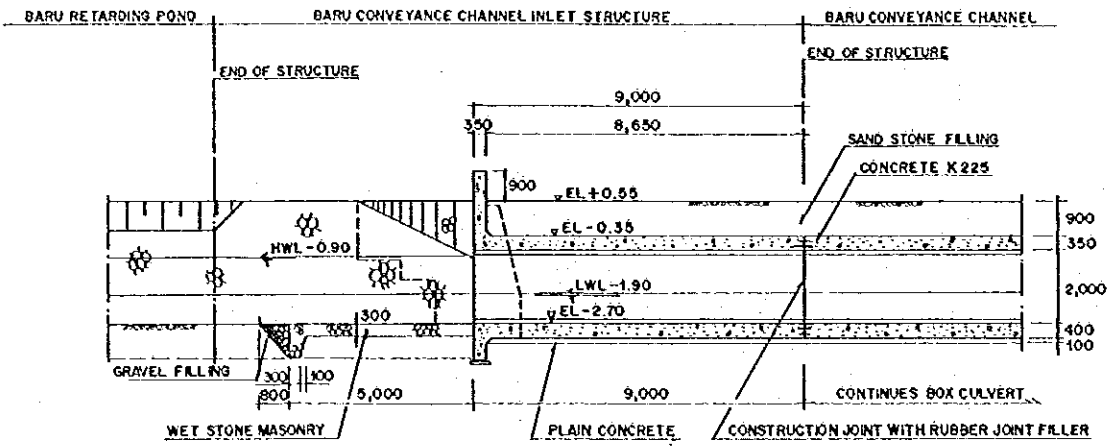
THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT

BRATUNGLUNA FLOOD CONTROL PROJECT
COMPONENT : URBAN DRAINAGE SYSTEM IMPROVEMENT
BARU RETARDING POND
INLET NO.2 (2/2)
REINFORCING BAR ARRANGEMENT

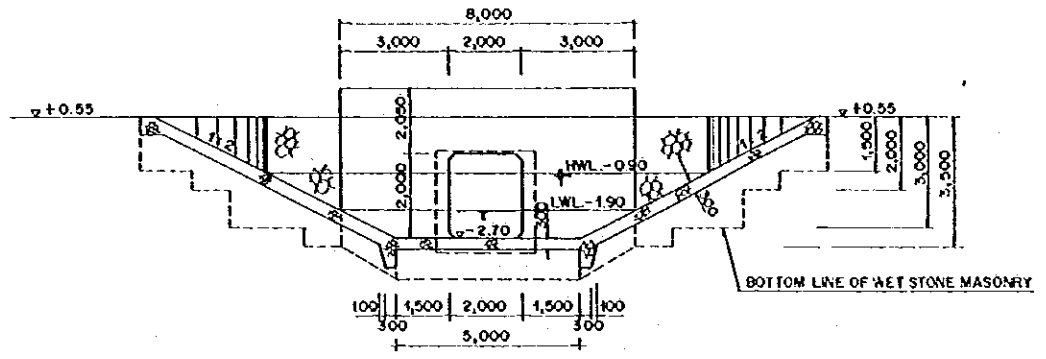
JAWA INTERNATIONAL COOPERATION AGENCY
CIT ENGINEERING CO. LTD IN ASSOCIATION WITH
PACIFIC CONSULTANTS INTERNATIONAL AND
FARCO INTERNATIONAL INC.

PROVINCE: CENTRAL JAVA
PROJECT NAME: BRATUNGLUNA FLOOD CONTROL AND URBAN DRAINAGE SYSTEM IMPROVEMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
DISTRICT: SEMARANG CITY
DRAWING NO. U-P3-RP-M-4
SHEET NO: 136
DATE: CONTRACT NO.:

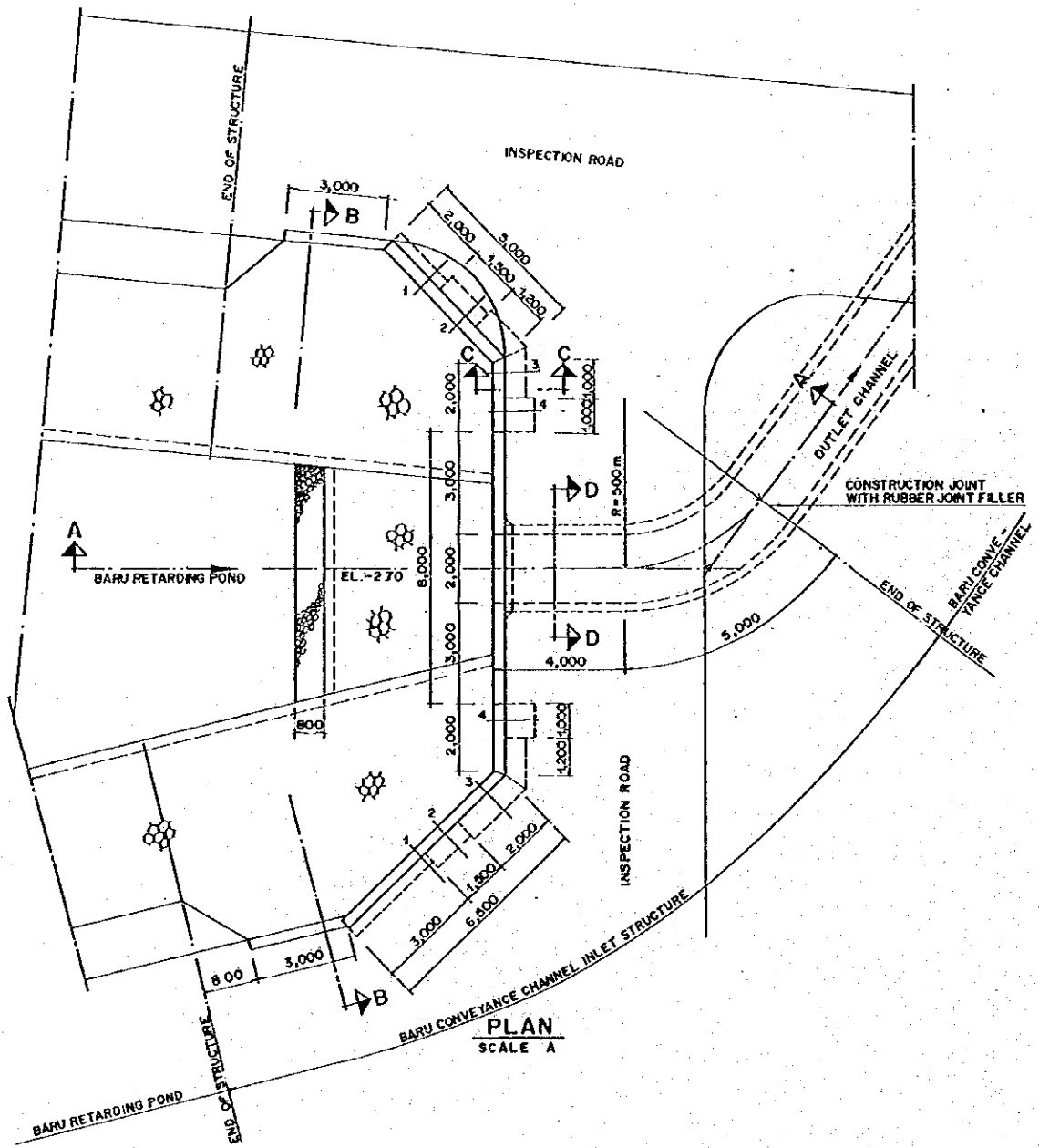
APPROVED: CHIEF OF PLANNING AND DESIGN
PROJECT MANAGER



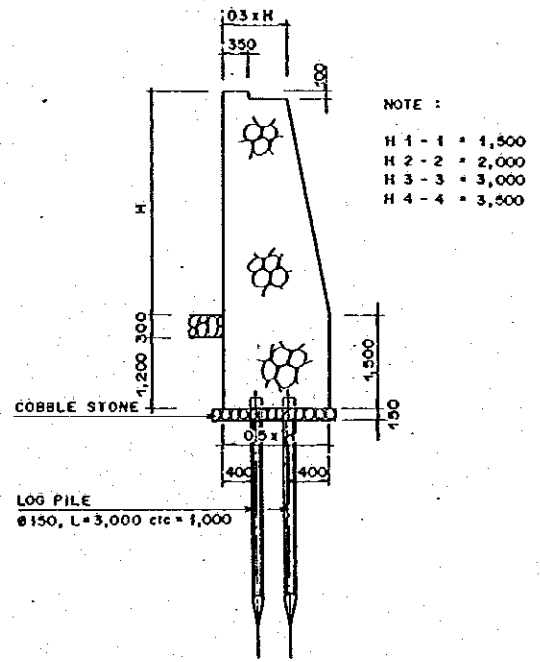
SECTION A-A
SCALE A



SECTION B-B
SCALE A

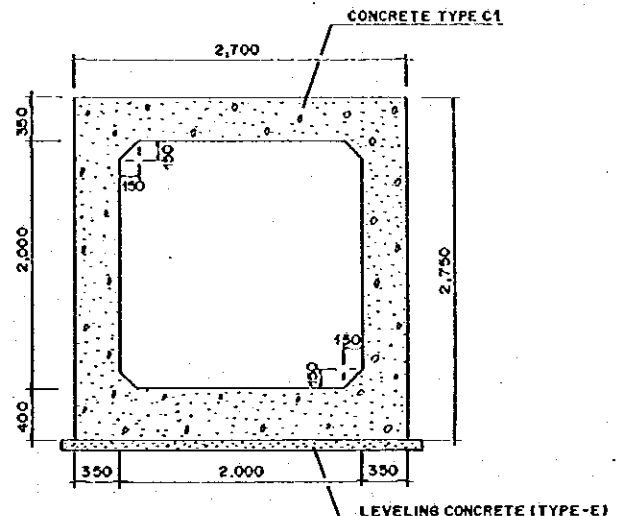


PLAN
SCALE A

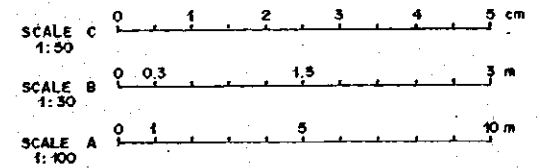


SECTION C-C
SCALE C
(WET STONE MASONRY)

NOTE :
H 1 - 1 = 1,500
H 2 - 2 = 2,000
H 3 - 3 = 3,000
H 4 - 4 = 3,500

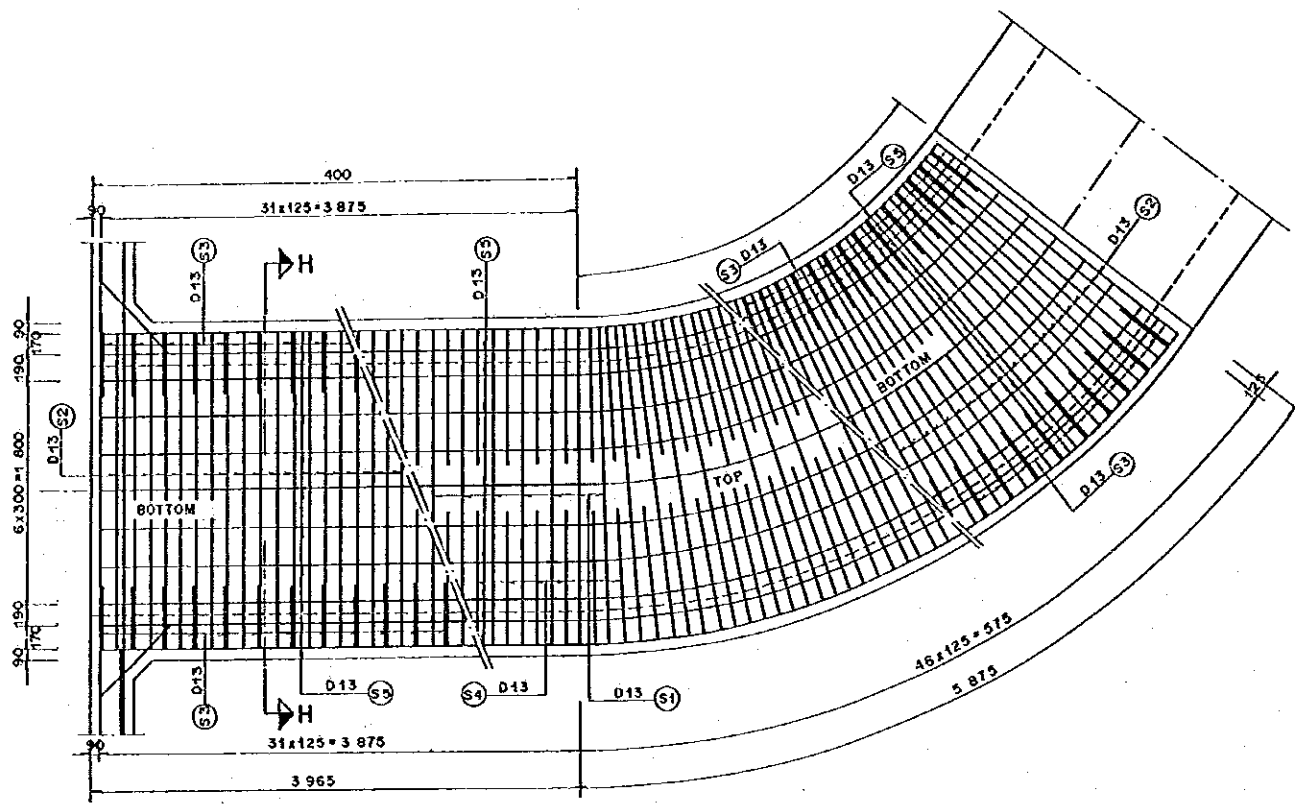


SECTION D-D
SCALE B
(BOX CULVERT)

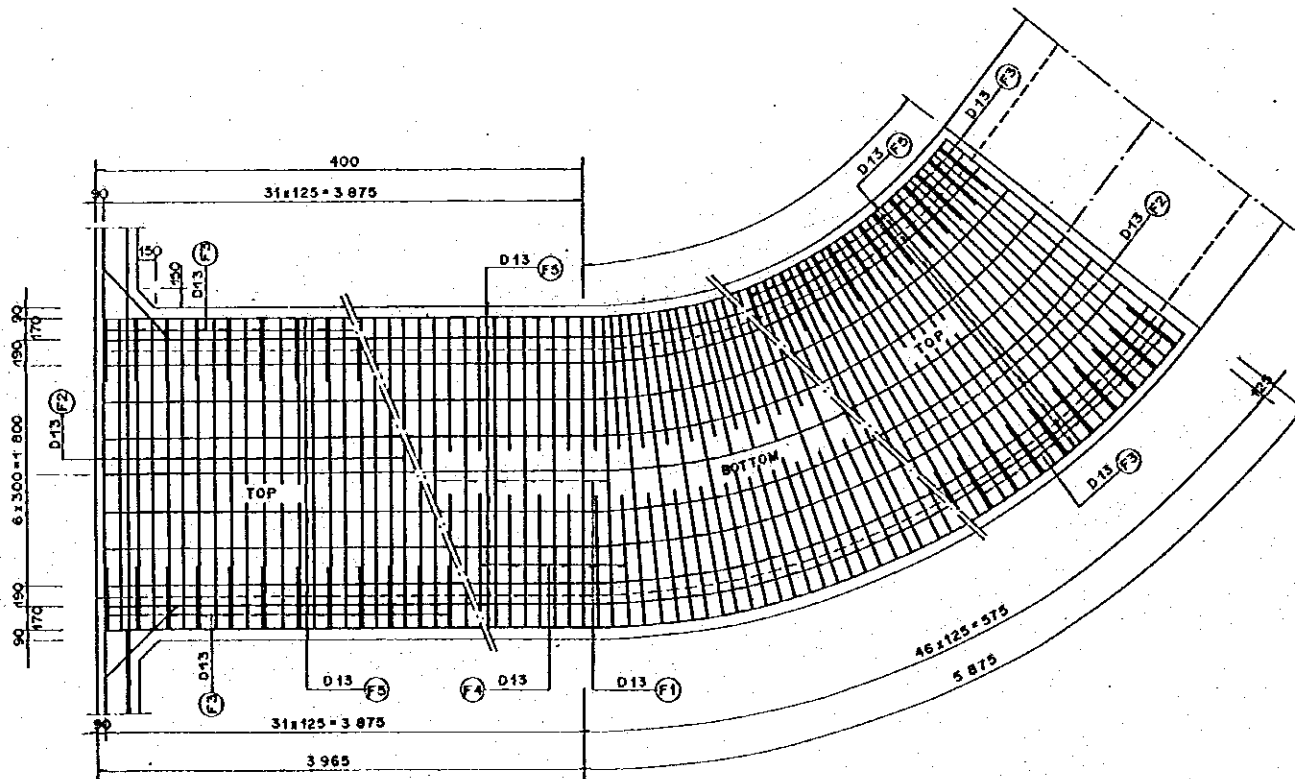


NO.	DATE	REVISIONS	DESIGNED	CHECKED	APPROVED

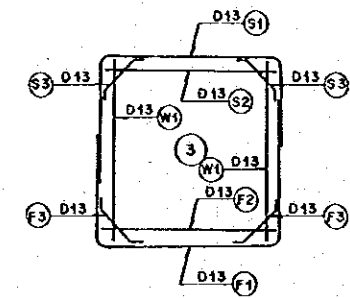
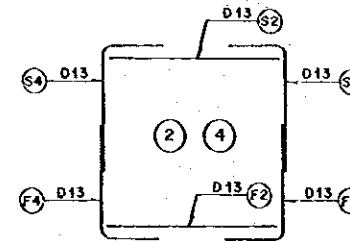
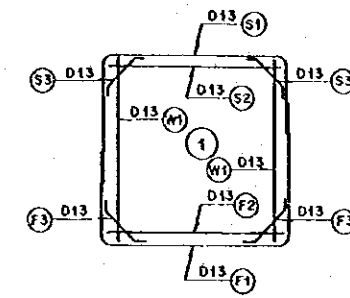
THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF URBAN SETTLEMENT		PROVINCE CENTRAL JAVA
MATURSELUNA FLOOD CONTROL PROJECT COMPONENT : URBAN DRAINAGE SYSTEM IMPROVEMENT BARU RETARDING POND BARU CONVEYANCE CHANNEL INLET PLAN AND SECTION (1/3)		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
GIPAN INTERNATIONAL COOPERATION AGENCY CIVIL ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL AND PACIFIC INTERNATIONAL INC.		DISTRICT SEMARANG CITY
CHECKED CHECKED CODE OF PLANNING AND DESIGN PROJECT MANAGER		DRAWING NO. U - P 3 - R P - M - 5
APPROVED		SHEET NO. 137
DATE		CONTRACT NO.



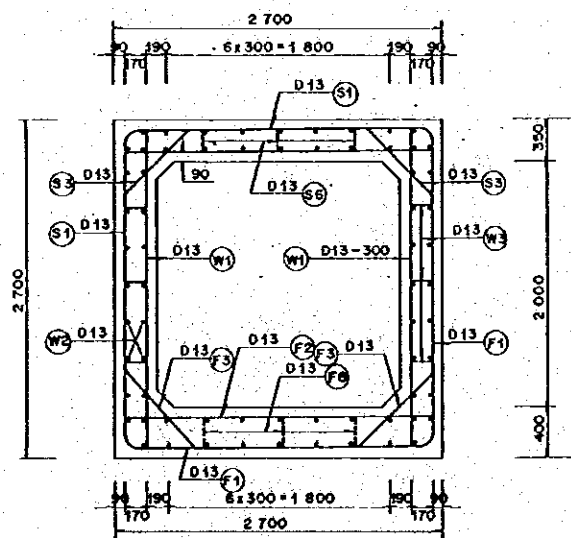
TOP SLAB
SCALE A



BOTTOM SLAB
SCALE A

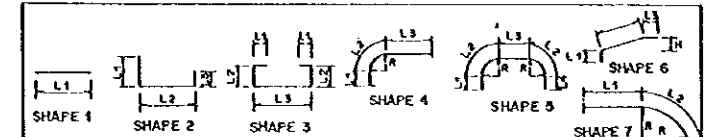


BAR LAY OUT
SCALE B



SECTION H-H
SCALE A

BAR BENDING SCHEDULE



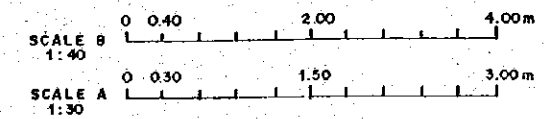
TYPE	SHAPE	DIA	NUMBER	LENGTH (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	H (mm)	R (mm)
S1	5	D13	39	5,380	1,575	220	2,240	1,120		140
S2	1	D13	77	2,520	2,520					
S3	6	D13	78	970	100	768	100		543	
S4	4	D13	78	2,300	1,116	220	957			140
S5	7	D13	22	8,820	3,910	4,910				5,000
S6	3	D13	54	870	100	196	276			
W1	1	D13	78	2,550	2,545					
W2	7	D13	22	8,820	3,910	4,910				5,000
W3	2	D13	108	400	100	196	100			
F1	5	D13	39	5,430	1,145	220	2,240	1,600		140
F2	1	D13	77	2,520	2,520					
F3	6	D13	78	1,010	100	803	100		568	
F4	4	D13	78	2,240	1,071	220	941			140
F5	1	D13	22	8,820	3,910	4,910				5,000
F6	3	D13	54	920	100	221	276			

BAR WEIGHT

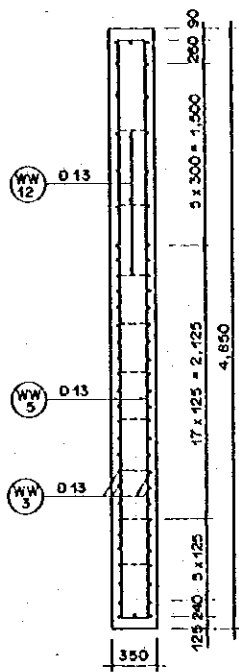
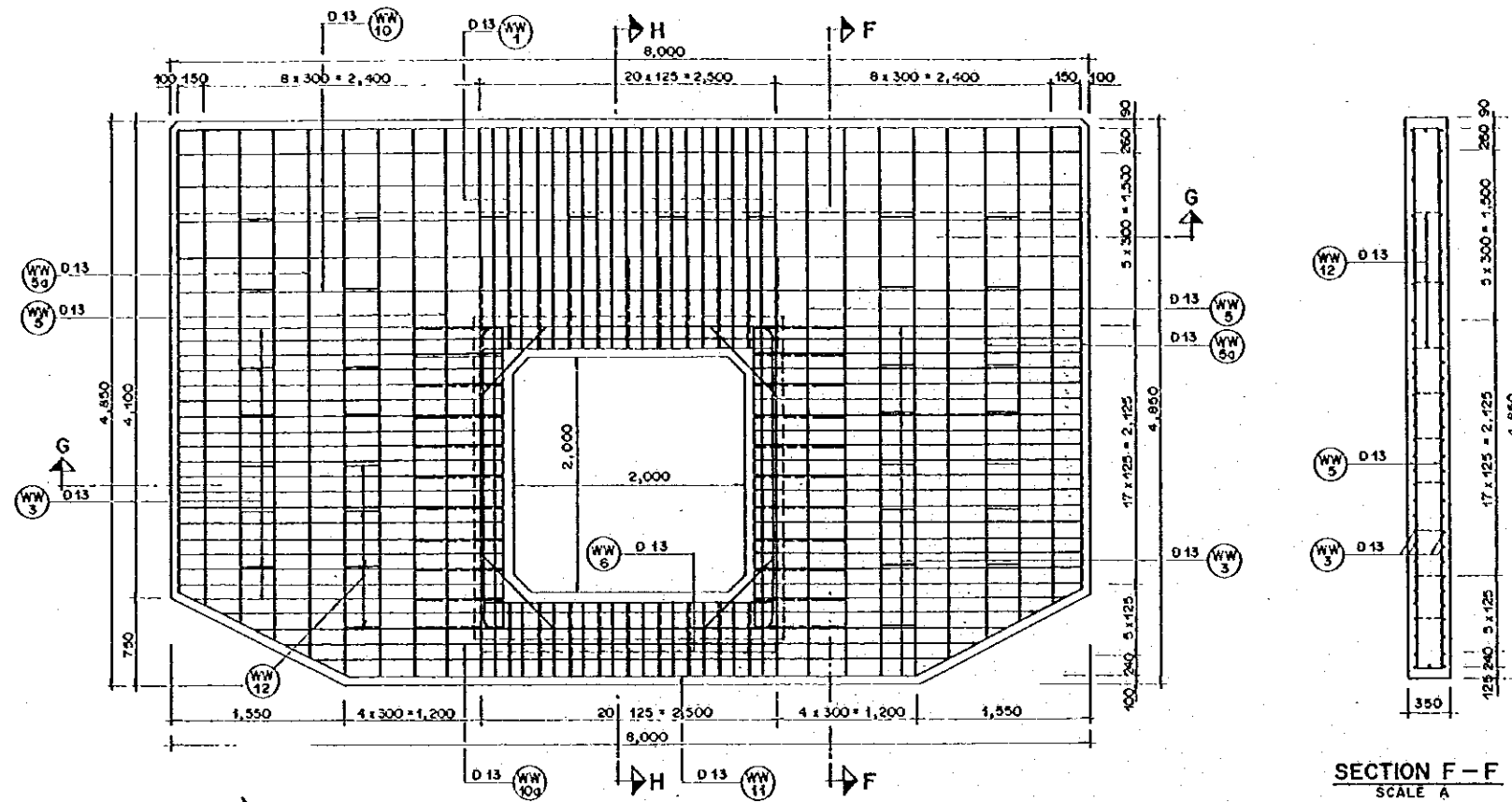
TYPE	DIA	LENGTH	NUMBER	WEIGHT PER M (kg/m)	WEIGHT PER BAR (kg)	WEIGHT (kg)	SHAPE
S1	D13	5,380	39	1.040	5.595	218.213	[Symbol]
S2	D13	2,520	77	1.040	2.6208	201.812	[Symbol]
S3	D13	970	78	1.040	1.009	78.688	[Symbol]
S4	D13	2,300	78	1.040	2.392	186.576	[Symbol]
S5	D13	8,820	22	1.040	9.173	201.806	[Symbol]
S6	D13	870	54	1.040	0.905	48.859	[Symbol]
W1	D13	2,550	78	1.040	2.652	206.856	[Symbol]
W2	D13	8,820	22	1.040	9.173	201.802	[Symbol]
W3	D13	400	108	1.040	0.416	44.928	[Symbol]
F1	D13	5,430	39	1.040	5.647	220.241	[Symbol]
F2	D13	2,520	77	1.040	2.621	201.802	[Symbol]
F3	D13	1,010	78	1.040	1.0504	81.931	[Symbol]
F4	D13	2,240	78	1.040	2.329	181.709	[Symbol]
F5	D13	8,820	22	1.040	9.173	201.802	[Symbol]
F6	D13	920	54	1.040	0.957	51.667	[Symbol]
TOTAL = 2328.690							

BAR BENDING DETAIL

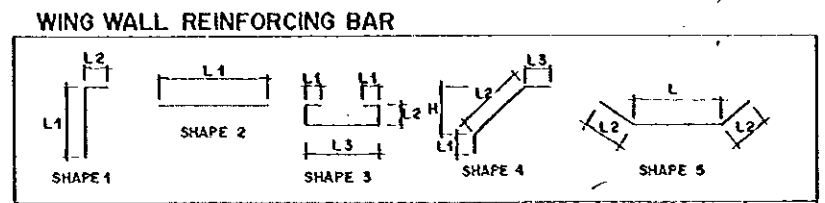
DIA	A	B	I	R	OVERLAP	
					L	WEIGHT(kg)
D13	66	156	222	42	455	0.453
D16	75	193	268	48	560	0.874
D19	94	236	330	60	665	1.496
D22	104	272	376	66	770	2.341
D25	122	306	428	78	875	3.483
D29	141	349	490	90	1015	5.116
D32	151	385	536	96	1120	6.978



THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT PRATUNJELUNA FLOOD CONTROL PROJECT COMPONENT: URBAN DRAINAGE SYSTEM IMPROVEMENT BARU RETARDING POND BARU CONVEYANCE CHANNEL INLET (2/3) BOX CULVERT REINFORCING BAR ARRANGEMENT				PROVIDER: CENTRAL JAWA PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA DISTRICT: SEMARANG CITY DRAWING NO.: U-F3-RP-M-6 SHEET NO.: 138			
OCEAN INTERNATIONAL COOPERATION AGENCY OIC ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL INC. PROJECT INTERNATIONAL INC.				CHECKED: [Signature] DATE: [Blank] CONTRACT NO.: [Blank]			
NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED	APPROVED	PROJECT MANAGER

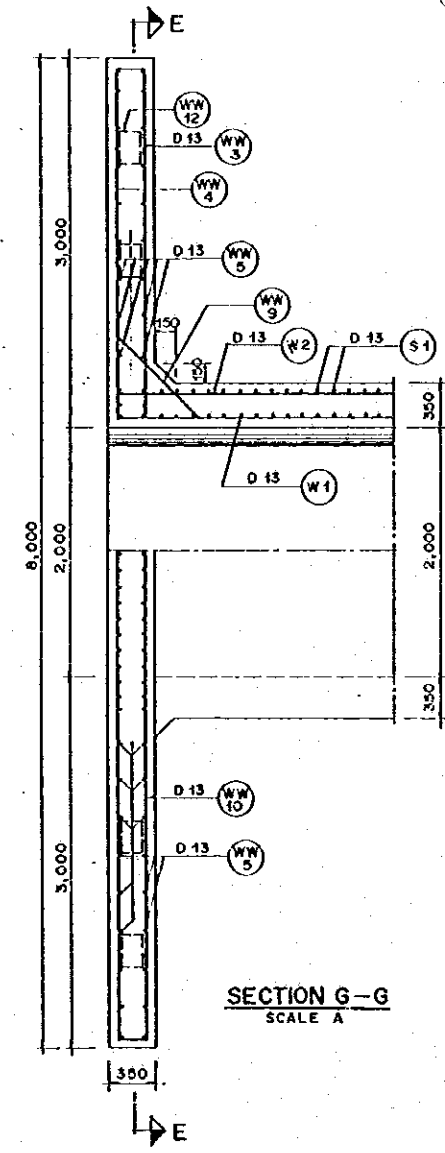


SECTION F-F
SCALE A

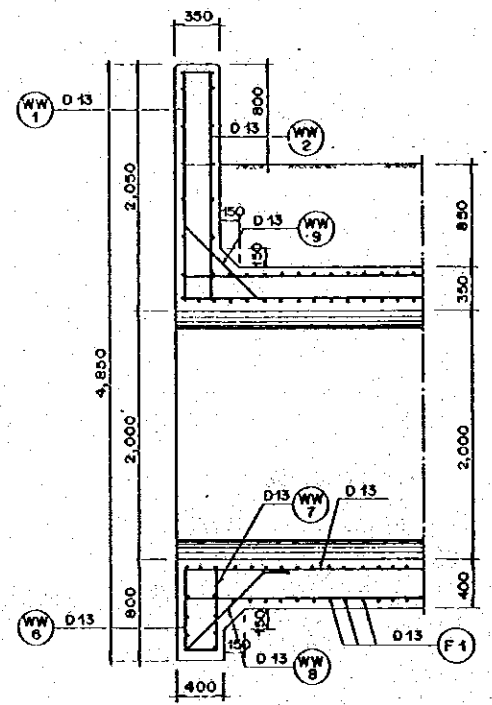


TYPE	SHAPE	DIA (mm)	NUMBER	LENGTH (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	H	R
WW 1	1	13	21	2040	1870	170				
WW 2	1	13	21	2040	1870	170				
WW 3	1	13	42	2990	2820	170				
WW 4	1	13	42	2990	2820	170				
WW 5a	2	13	16	4670	4670					
WW 6	1	13	21	840	620	220				
WW 7	1	13	21	840	620	220				
WW 8	4	13	21	903		803	100		568	
WW 9	4	13	63	1003	100	803	100		543	
WW 10	2	13	12	7820	7820					
WW 10a	2	13	4	550	550					
WW 11	5	13	2	5415	4900	515				
WW 12	3	13	34	990	5	27	35			

SECTION E-E
SCALE A



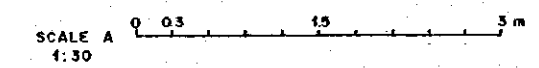
SECTION G-G
SCALE A



SECTION H-H
SCALE A

BAR WEIGHT

TYPE	DIA (mm)	LENGTH (mm)	NUMBER	WEIGHT PER m (kg/m)	WEIGHT PER BAR (kg)	WEIGHT (kg)	SHAPE
WW 1	13	2040	21	1.040	2.122	44.562	—
WW 2	13	2040	21	1.040	2.122	44.562	—
WW 3	13	2990	42	1.040	3.1096	130.603	—
WW 4	13	2990	42	1.040	3.1096	130.603	—
WW 5	13	4670	16	1.040	4.857	77.712	—
WW 5a	13	4200	20	1.040	4.368	87.36	—
WW 6	13	840	21	1.040	0.874	18.354	—
WW 7	13	840	21	1.040	0.874	18.354	—
WW 8	13	903	21	1.040	0.940	19.74	—
WW 9	13	1003	63	1.040	1.043	65.709	—
WW 10	13	7820	12	1.040	8.133	97.596	—
WW 10a	13	500	4	1.040	0.52	2.08	—
WW 11	13	5415	2	1.040	5.632	11.264	—
WW 12	13	990	34	1.040	1.023	35.006	—
TOTAL = 783.50							



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

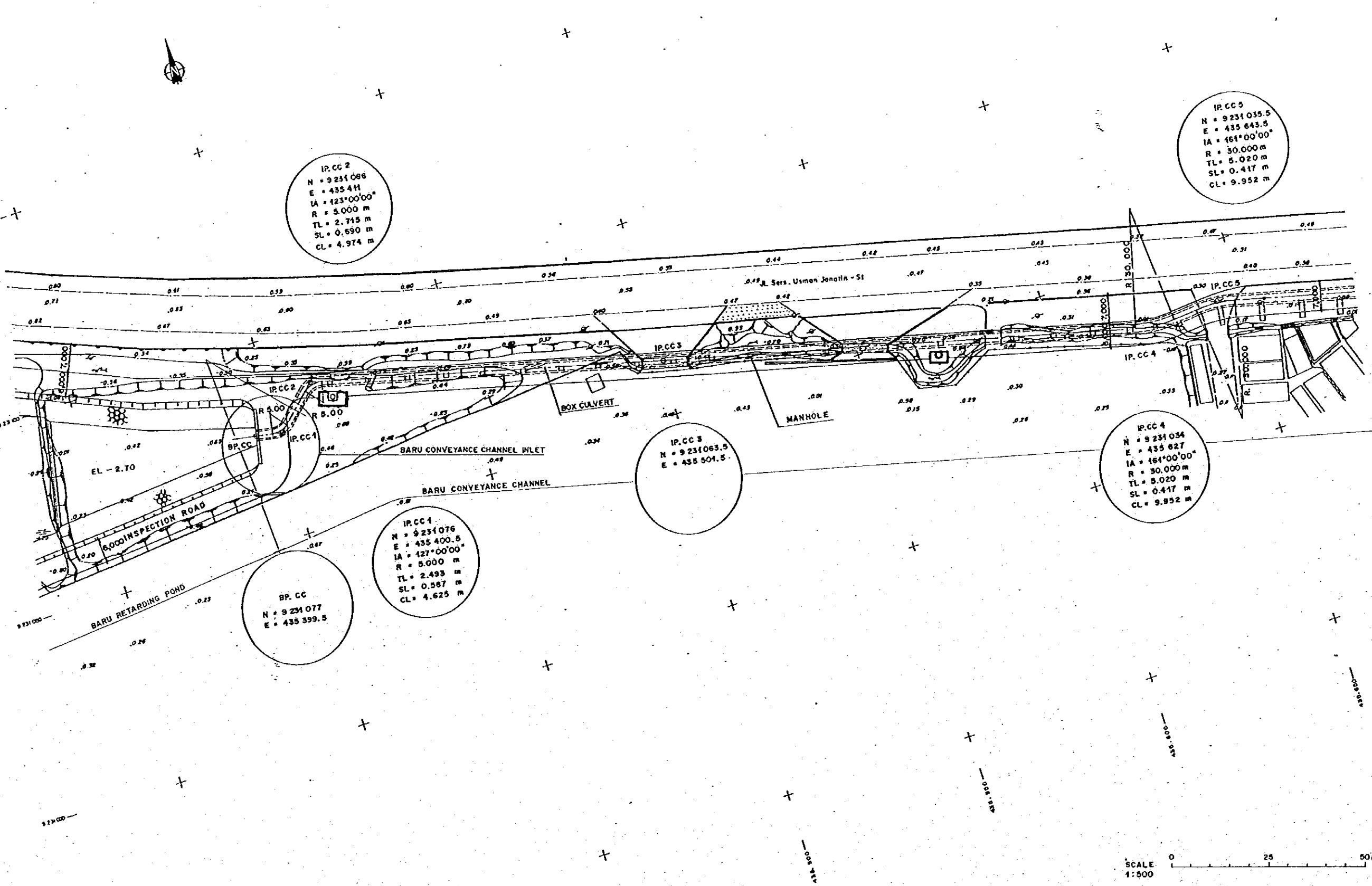
PROJECT NAME: CENTRAL JAVA
 FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT BY CHANNELS IN THE REPUBLIC OF INDONESIA
 DISTRICT: SEMARANG CITY

COMPONENT: URBAN DRAINAGE SYSTEM IMPROVEMENT
 BARU RETARDING POND
 BARU CONVEYANCE CHANNEL INLET (5/31)
 WING WALL REINFORCING BAR ARRANGEMENT

DRAWING NO. U-PS-PP-MI-7
 SHEET NO. 139

DATE: CONTRACT NO.:

APPROVED: PROJECT MANAGER



IP.CC 2
 N = 9 231 086
 E = 435 441
 IA = 123°00'00"
 R = 5.000 m
 TL = 2.715 m
 SL = 0.690 m
 CL = 4.974 m

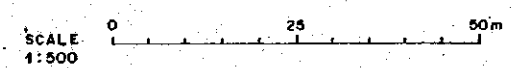
IP.CC 5
 N = 9 231 035.5
 E = 435 643.5
 IA = 161°00'00"
 R = 30.000 m
 TL = 5.020 m
 SL = 0.417 m
 CL = 9.952 m

IP.CC 3
 N = 9 231 063.5
 E = 435 501.5

IP.CC 4
 N = 9 231 034
 E = 435 627
 IA = 161°00'00"
 R = 30.000 m
 TL = 5.020 m
 SL = 0.417 m
 CL = 9.952 m

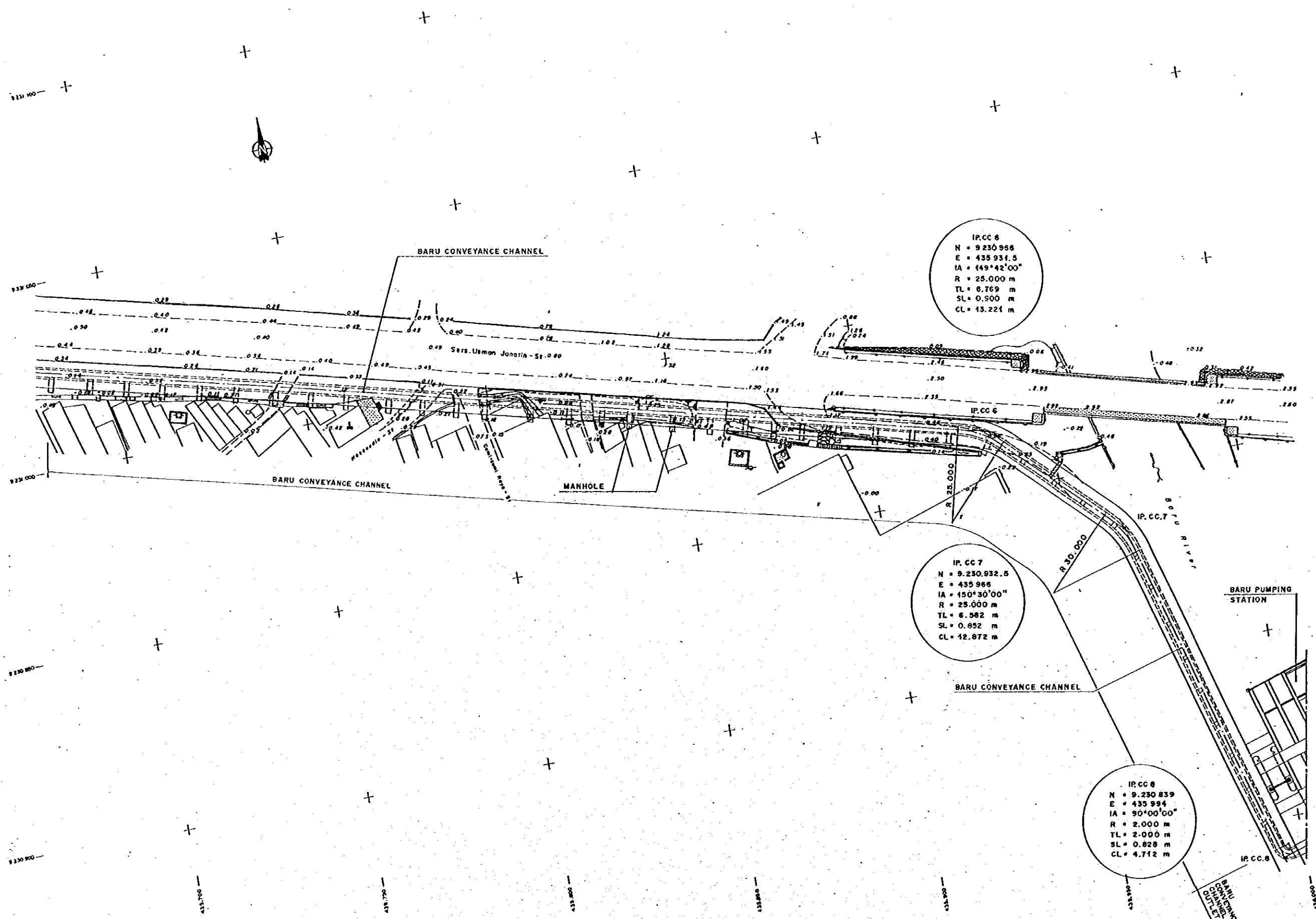
IP.CC 1
 N = 9 231 076
 E = 435 400.5
 IA = 127°00'00"
 R = 5.000 m
 TL = 2.493 m
 SL = 0.587 m
 CL = 4.623 m

BP.CC
 N = 9 231 077
 E = 435 359.5



NO.	DATE	REVISION	QUOTED	DESIGNED	APPROVED

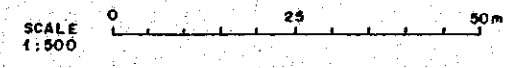
THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT BRATUNSELUNA FLOOD CONTROL PROJECT COMPONENT : URBAN DRAINAGE SYSTEM IMPROVEMENT BARU CONVEYANCE CHANNEL PLAN (1/3)		PROVINCE CENTRAL JAWA PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA DISTRICT SEMARANG CITY DRAWING NO. U.P.S - CO - PL - 1 SHEET NO. 140 DATE CONTRACT NO.
DESIGNED CHECKED APPROVED CHIEF OF PLANNING AND DESIGN PROJECT MANAGER		APPROVED



IP.CC.6
 N = 9 230 956
 E = 435 934.5
 IA = 149°42'00"
 R = 25.000 m
 TL = 6.769 m
 SL = 0.500 m
 CL = 13.224 m

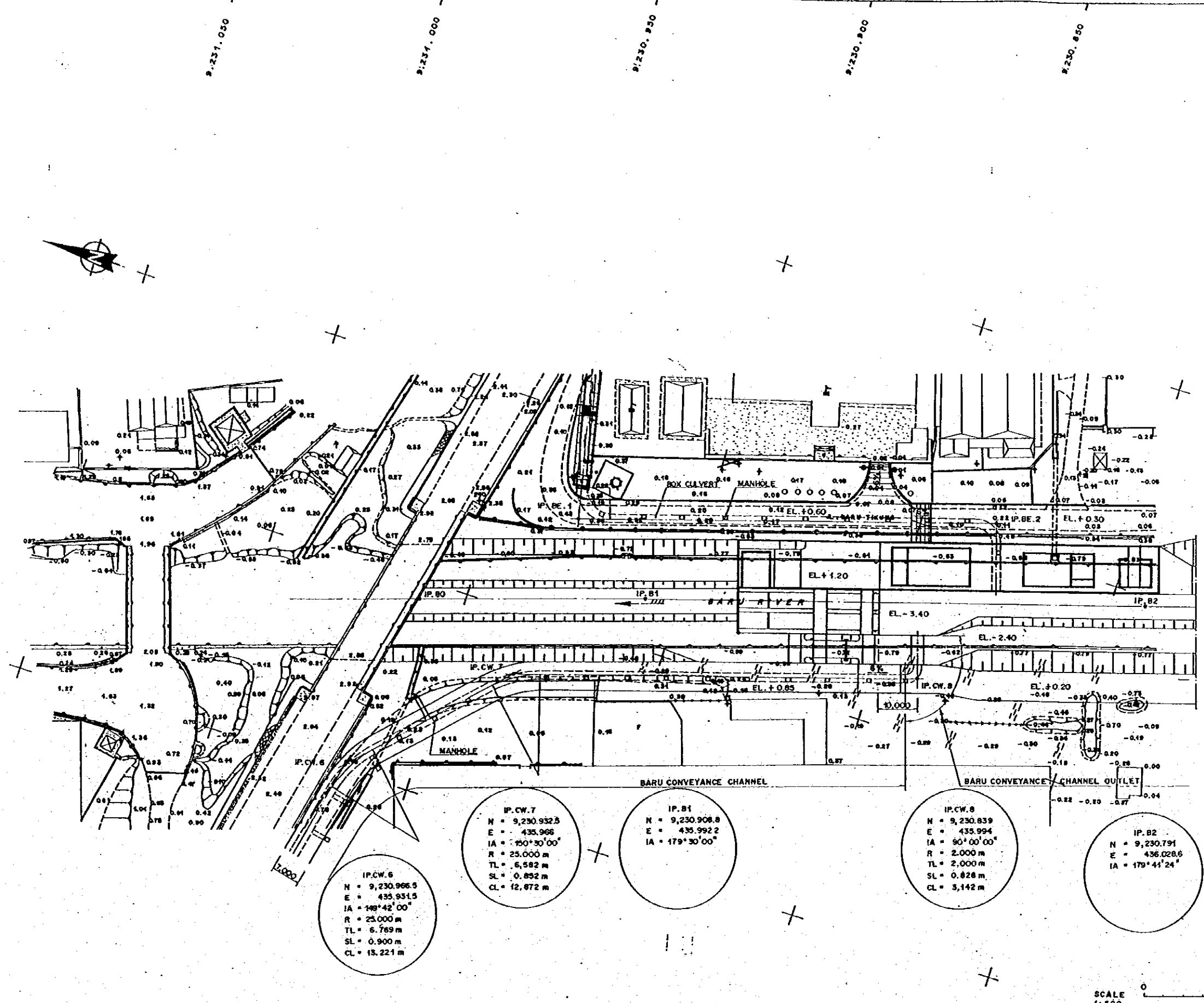
IP.CC.7
 N = 9 230 932.5
 E = 435 966
 IA = 150°30'00"
 R = 25.000 m
 TL = 6.582 m
 SL = 0.852 m
 CL = 12.872 m

IP.CC.8
 N = 9 230 839
 E = 435 994
 IA = 90°00'00"
 R = 2.000 m
 TL = 2.000 m
 SL = 0.828 m
 CL = 4.712 m

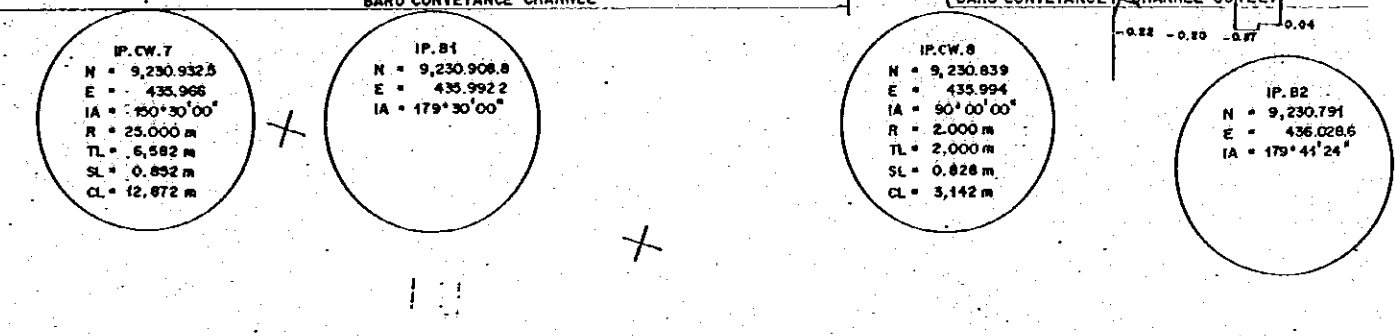


NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAWA
RATURSELUNA FLOOD CONTROL PROJECT COMPONENT : URBAN DRAINAGE SYSTEM IMPROVEMENT BARU CONVEYANCE CHANNEL PLAN (2/3)		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT OF SEMARANG IN THE REPUBLIC OF INDONESIA
LAPAN INTERNATIONAL COOPERATION AGENCY CITY ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL AND TAJCO INTERNATIONAL INC.		DISTRICT SEMARANG CITY
DESIGNED CHECKED CHIEF OF PLANNING AND DESIGN PROJECT MANAGER		DRAWING NO. U - P.3 - CC - PH - 2 SHEET NO. 141
APPROVED		DATE CONTRACT NO.



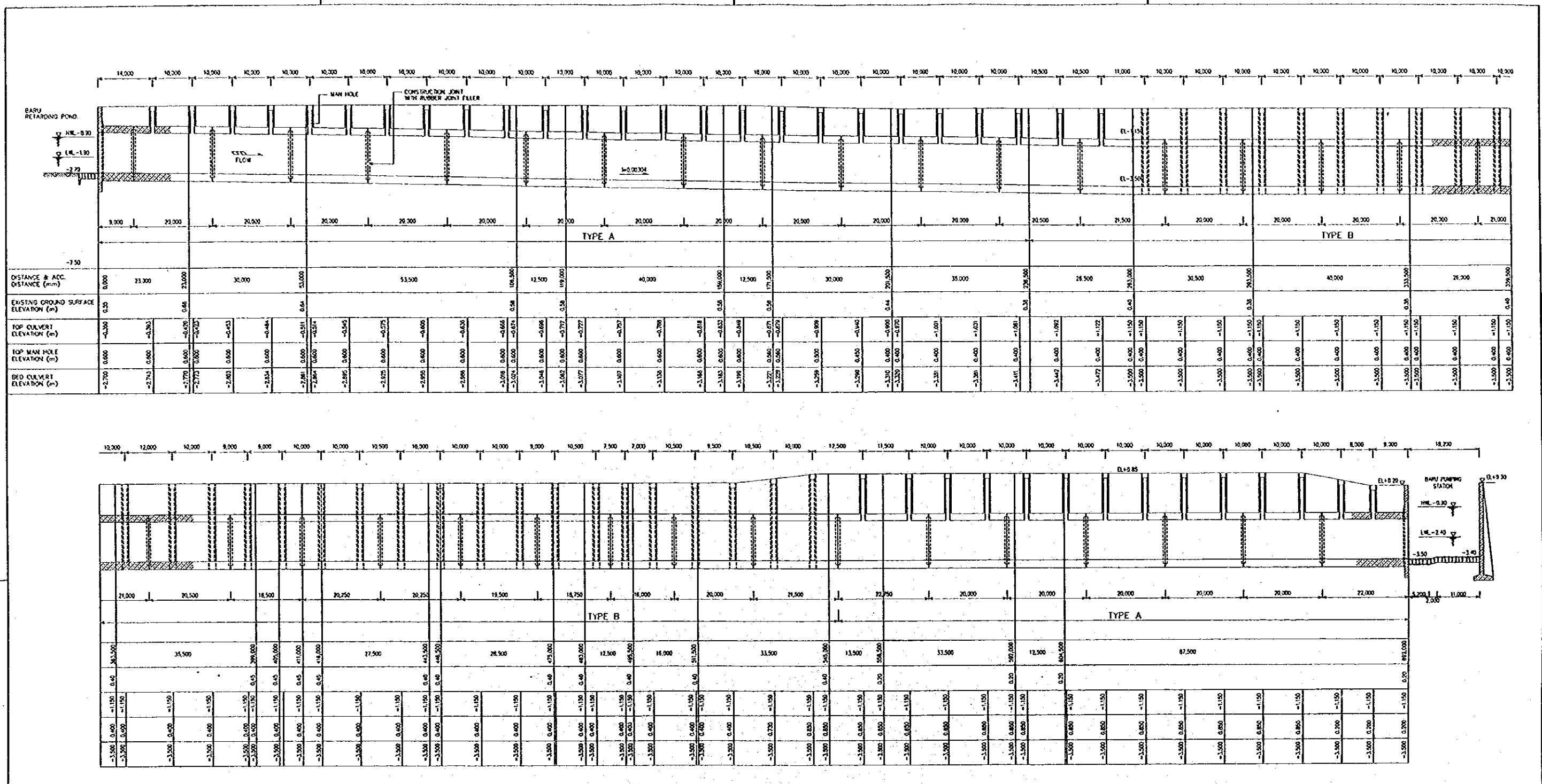
- LEGEND**
- △ GPS POINT
 - CROSS SECTION POINT
 - BUILDING
 - BUILDING (TEMPORARY OF WALLS)
 - ▣ SCHOOL
 - ▣ MOSQUE
 - ▣ GOVERNMENT OFFICE
 - ▣ FACTORY
 - ▣ HOSPITAL
 - ▣ RIVER
 - ▣ BRIDGE
 - ▣ ROAD
 - ▣ FENCE (WALL)
 - ▣ FENCE (STEEL)
 - ▣ FENCE (WOOD)
 - ▣ FENCE (WIRE)
 - ▣ REVETMENT
 - ▣ REVETMENT (STONE)
 - ▣ WATER GATE
 - ▣ EARTHY SLOPE
 - ▣ CONCRETE
 - ▣ PARK
 - ▣ ELECTRIC TOWER LINE
 - ▣ TELEPHONE TOWER
 - ▣ ELECTRIC TOWER
 - ▣ STATIC WATER



SCALE 1:500

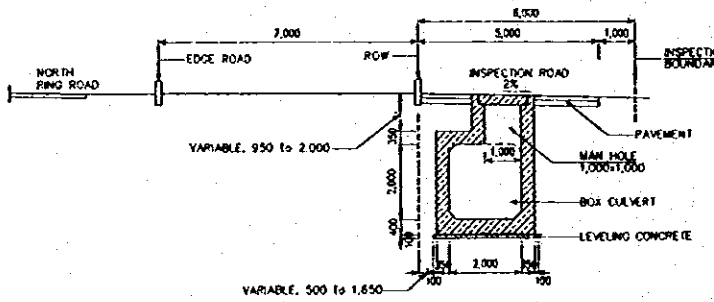
NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

<p>THE REPUBLIC OF INDONESIA</p> <p>MINISTRY OF PUBLIC WORKS</p> <p>DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT</p> <p>JRATUNSELUMA FLOOD CONTROL PROJECT</p> <p>COMPONENT : URBAN DRAINAGE SYSTEM IMPROVEMENT</p> <p>BARU CONVEYANCE CHANNEL</p> <p>PLAN</p> <p>(3/3)</p>		<p>PROVINCE</p> <p>CENTRAL JAVA</p> <p>PROJECT NAME</p> <p>FLOOD CONTROL URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA</p> <p>DISTRICT</p> <p>SEMARANG CITY</p> <p>DRAWING NO.</p> <p>U-P3-CO-PI-5</p> <p>SHEET NO.</p> <p>142</p> <p>DATE</p> <p>CONTRACT NO.</p>
<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p>CTI ENGINEERING CO., LTD. IN ASSOCIATION WITH</p> <p>PACIFIC CONSULTANTS INTERNATIONAL AND</p> <p>PRACO INTERNATIONAL, INC.</p>	<p>DESIGNED</p> <p>CHECKED</p> <p>APPROVED</p> <p>CHIEF OF PLANNING AND DESIGN</p> <p>PROJECT MANAGER</p>	<p>DATE</p> <p>CONTRACT NO.</p>

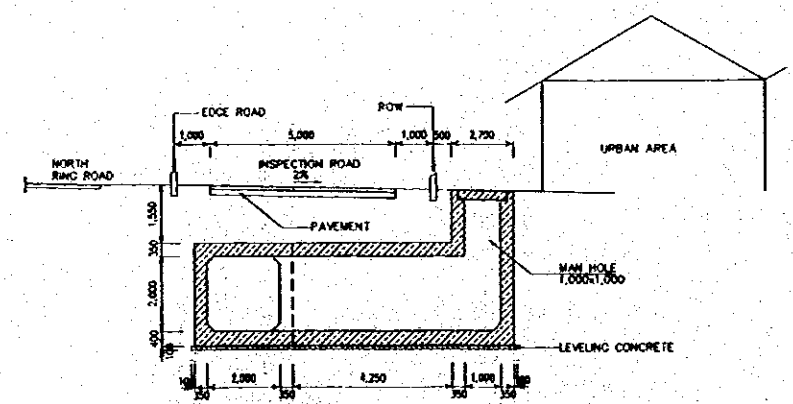


LONGITUDINAL SECTION OF BARU CONVEYANCE CHANNEL

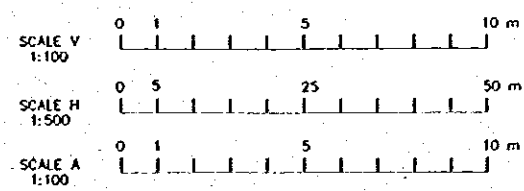
SCALE V
SCALE H



CROSS SECTION OF BARU CONVEYANCE CHANNEL TYPE - A
SCALE A



CROSS SECTION OF BARU CONVEYANCE CHANNEL TYPE - B
SCALE A



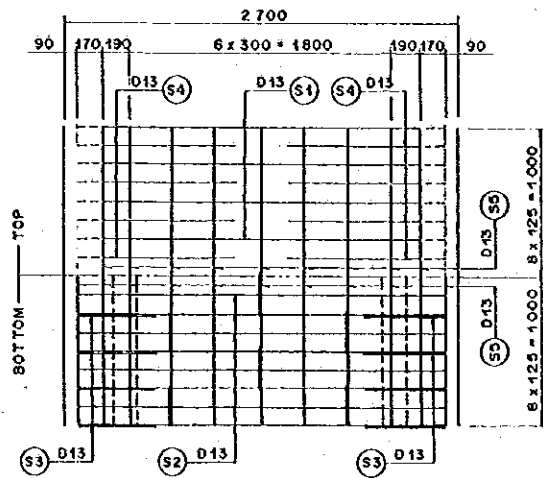
NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED	APPROVED

THE REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT
SIKURUNGKUNTA FLOOD CONTROL PROJECT
COMPONENT : URBAN DRAINAGE SYSTEM IMPROVEMENT
BARU CONVEYANCE CHANNEL
LONGITUDINAL SECTION AND CROSS SECTION

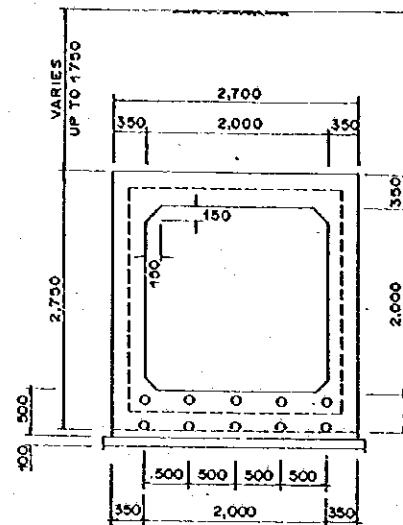
PROVINCE: CENTRAL JAVA
 PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
 PROJECT: SEMARANG CITY
 DRAWING NO. U-P3-CO-Lo-1
 SHEET NO. 143
 DATE: _____ CONTRACT NO. _____

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) ENGINEERING CONSULTANTS COMPANY LIMITED (ECC) IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL, INC. AND PARO INTERNATIONAL, INC.

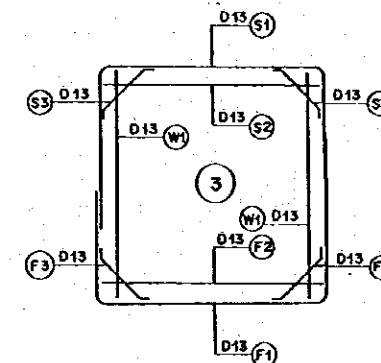
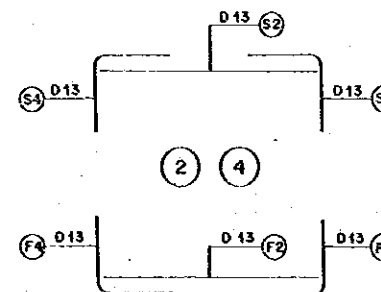
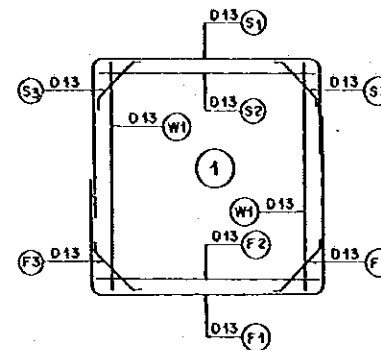
DESIGNED: _____ CHECKED: _____ CREDIT OF PLANNING AND DESIGN: _____ PROJECT MANAGER: _____



TOP SLAB
SCALE B



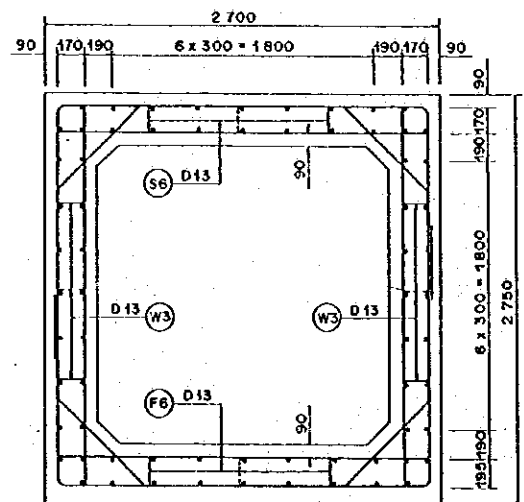
GENERAL CROSS SECTION
SCALE A



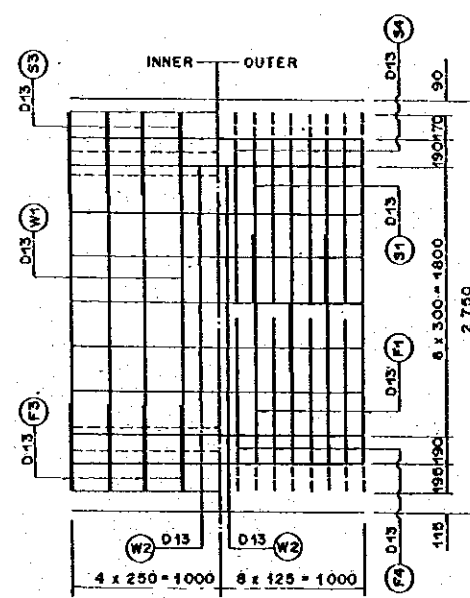
BAR LAY OUT
SCALE A

BAR BENDING SCHEDULE

TYPE	SHAPE	DIA	NUMBER	LENGTH (mm)	L1 (mm)		L2 (mm)		L3 (mm)		H (mm)	R (mm)
					L1	L2	L3	L4				
S1	5	D13	4	5380	1575	220	2240	1120				140
S2	1	D13	8	2520	2520							
S3	6	D13	8	970	100	768	100			543		
S4	4	D13	8	2300	1116	220	957					140
S5	1	D13	20	1000	1000							
S6	3	D13	6	870	100	196	276					
W1	1	D13	8	2550	2545							
W2	1	D13	28	1000	1000							
W3	2	D13	12	400	100	196	100					
F1	5	D13	4	5430	1145	220	2240	1600				140
F2	1	D13	8	2520	2520							
F3	6	D13	8	1010	100	803	100			568		
F4	4	D13	8	2240	1071	220	941					140
F5	1	D13	20	1000	1000							
F6	3	D13	6	920	100	221	276					



CROSS SECTION
SCALE B



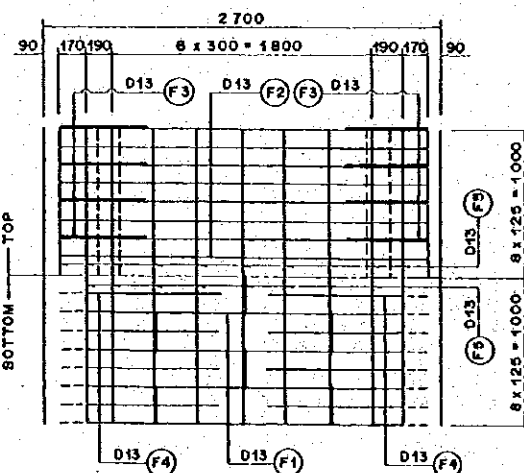
SIDE WALL
SCALE B

BAR WEIGHT

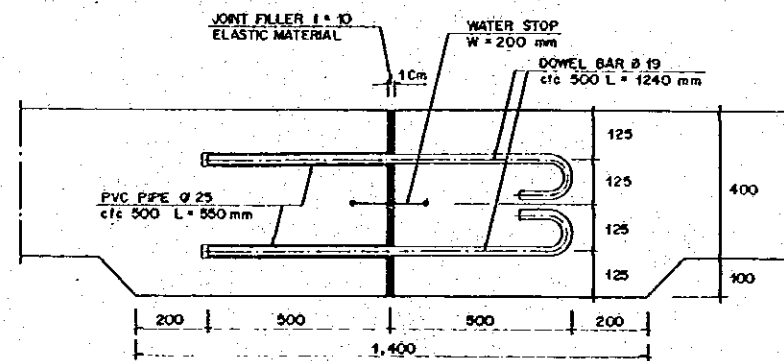
TYPE	DIA	LENGTH (mm)	NUMBER	WEIGHT PER M (kgf/m)	WEIGHT PER BAR (kgf)	WEIGHT (kgf)	SHAPE
S1	D13	5380	4	1.040	5.595	22.531	[Symbol]
S2	D13	2520	8	1.040	2.621	20.966	[Symbol]
S3	D13	970	8	1.040	1.009	8.072	[Symbol]
S4	D13	2300	8	1.040	2.392	19.136	[Symbol]
S5	D13	1000	20	1.040	1.040	20.800	[Symbol]
S6	D13	870	6	1.040	0.905	5.129	[Symbol]
W1	D13	2550	8	1.040	2.652	21.216	[Symbol]
W2	D13	1000	28	1.040	1.040	29.120	[Symbol]
W3	D13	400	12	1.040	0.416	4.992	[Symbol]
F1	D13	5430	4	1.040	5.647	22.589	[Symbol]
F2	D13	2520	8	1.040	2.621	20.966	[Symbol]
F3	D13	1010	8	1.040	1.050	8.403	[Symbol]
F4	D13	2240	8	1.040	2.330	18.637	[Symbol]
F5	D13	1000	20	1.040	1.040	20.800	[Symbol]
F6	D13	920	6	1.040	0.957	5.741	[Symbol]

BAR BENDING DETAIL

DIA	a	b	l	R	OVERLAP	
					L	WEIGHT(kgf)
D13	66	156	222	42	455	0.473
D16	75	193	288	48	580	0.885
D19	94	236	330	60	665	1.483
D22	104	272	376	66	770	2.295
D25	122	306	428	78	875	3.369
D29	141	349	490	90	1015	5.268
D32	151	385	536	96	1120	7.067



BOTTOM SLAB
SCALE B



DETAIL OF JOINTING
SCALE C

SCALE A	0	0.8	1.6	2.4	3.2	4.0 m
SCALE B	0	0.5	1.0	1.5	2.0	2.5 m
SCALE C	0	0.2	0.4	0.6	0.8	1.0 m

NO.	DATE	REVISIONS	PREPARED	DESIGNED	APPROVED

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

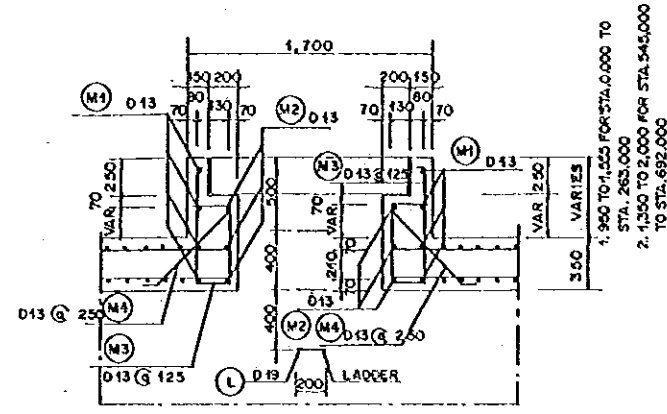
JRATUNSELUNA FLOOD CONTROL PROJECT
 COMPONENT 1: URBAN DRAINAGE SYSTEM IMPROVEMENT
 BARU CONVEYANCE CHANNEL
 REINFORCING BAR ARRANGEMENT

PROVINCE: CENTRAL JAWA
 PROJECT NAME: FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
 DISTRICT: SEMARANG CITY
 DRAWING NO. U-337CO-CI-1
 SHEET NO. 144

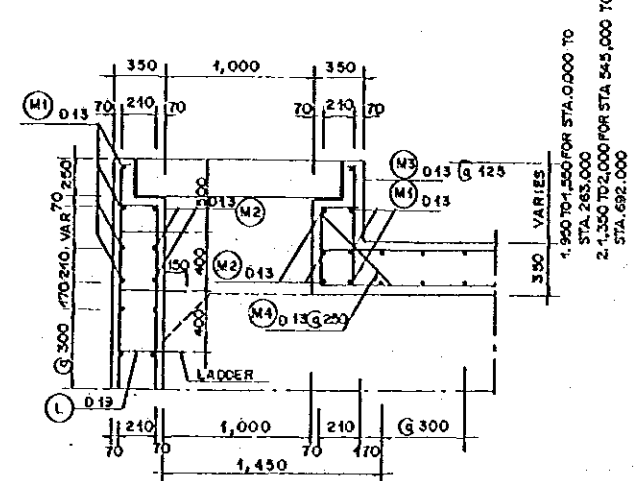
JAPAN INTERNATIONAL COOPERATION AGENCY
 CITY ENGINEERING CO., LTD. IN ASSOCIATION WITH
 PACIFIC CONSULTANTS INTERNATIONAL AND
 PAKO INTERNATIONAL INC.

DESIGNED: [Signature]
 CHECKED: [Signature]
 CHIEF OF PLANNING AND DESIGN
 PROJECT MANAGER

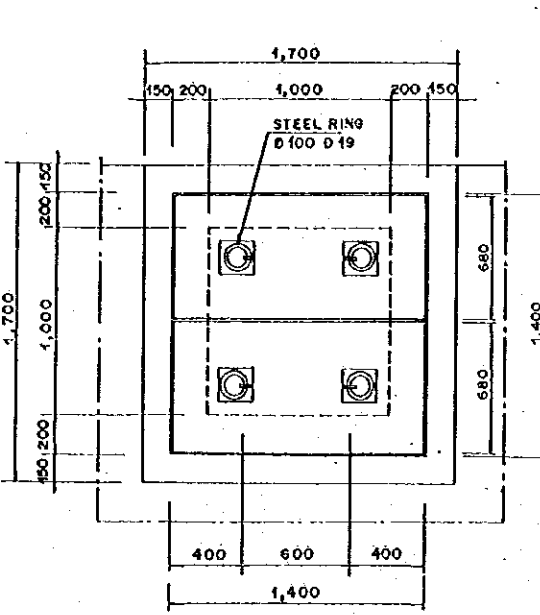
DATE: [Blank]
 CONTRACT NO.: [Blank]



SECTION A-A
SCALE B



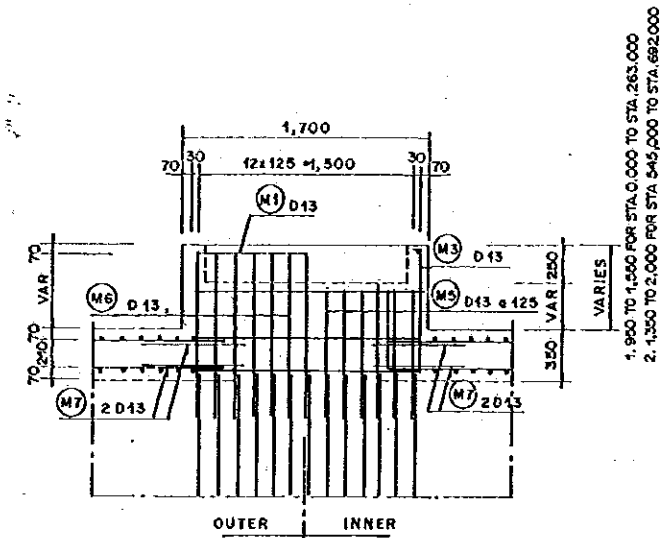
SECTION C-C
SCALE B



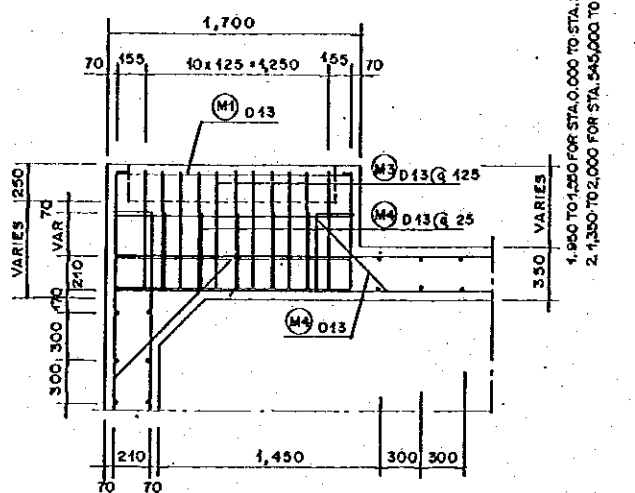
DETAIL OF COVER
SCALE C

BAR BENDING SCHEDULE

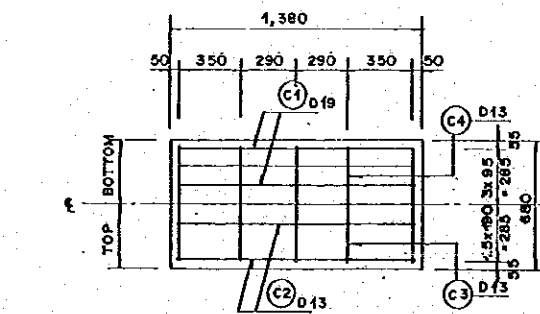
TYPE	SHAPE	DIA	NUMBER	LENGTH	SHAPE 3				H (mm)	R (mm)	REMARK
					L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)			
M1	3	13	6	6,440	1,254	220	50		140	FOR STA. 0.000 TO STA. 263.000	
M1	3	13	7	6,440	1,254	220	50		140	FOR STA. 545.000 TO STA. 692.000	
M2	3	13	3	4,760	1,000	110	50		70		
M3	5	13	33	2,440	210	846	250	50		FOR STA. 0.000 TO STA. 263.000	
M3	5	13	33	3,800	210	1,526	250	50		FOR STA. 545.000 TO STA. 692.000	
M4	4	13	15	1,260	100		100		748		
M5	7	13	13	1,095	853	240					
M6	7	13	13	1,210	1,160	90					
M7	1	13	4	875	875						
M8	1	13	4	1,200	1,200						
C1	2	19	7	1,780	100	150	1,280				
C2	1	13	4	1,320	320						
C3	1	13	5	610	610						
C4	2	13	5	610	610						
C5	6	19	2	770	200	188	120	30	60		
L	2	19	7	1,150	50	426	200				



SECTION B-B
SCALE B



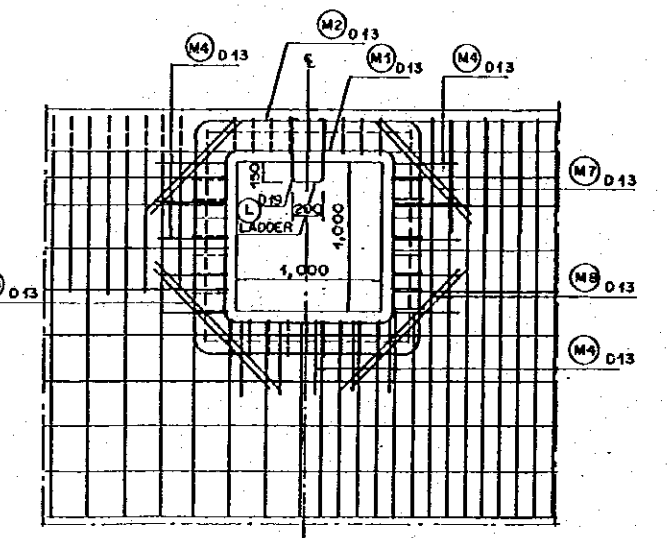
SECTION D-D
SCALE B



BAR ARRANGEMENT OF COVER
SCALE C

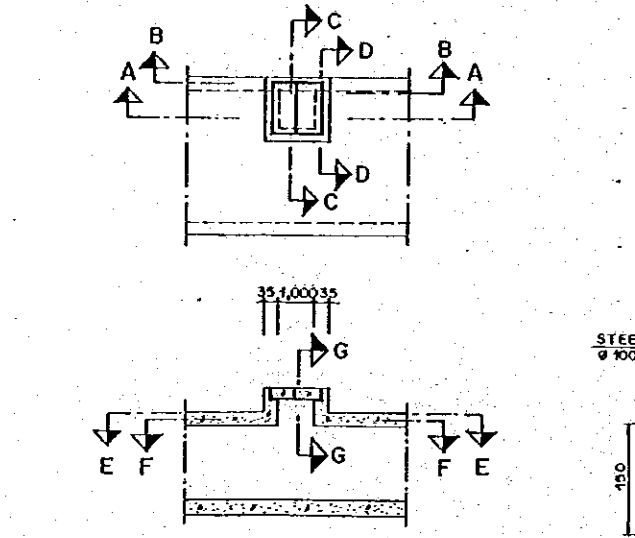
BAR WEIGHT

TYPE	DIA	LENGTH (mm)	NUMBER	WEIGHT/M (kg/m)	WEIGHT/BAR (kg)	WEIGHT (kg)	SHAPE	REMARK
M1	13	6,440	6	1.040	6.698	40.188	3	FOR STA. 0.000 TO STA. 263.000
M1	13	6,440	7	1.040	6.698	46.886	3	FOR STA. 545.000 TO STA. 692.000
M2	13	4,760	3	1.040	4.950	14.851	3	
M3	13	2,440	33	1.040	2.538	83.741	5	FOR STA. 0.000 TO STA. 263.000
M3	13	3,800	33	1.040	3.952	130.416	5	FOR STA. 545.000 TO STA. 692.000
M4	13	1,260	15	1.040	1.310	19.656	4	
M5	13	1,095	13	1.040	1.139	14.904	7	
M6	13	1,210	13	1.040	1.258	16.359	7	
M7	13	875	4	1.040	0.910	3.640	1	
M8	13	1,200	4	1.040	1.248	4.992	1	
C1	19	1,780	7	2.230	3.969	27.786	2	
C2	13	1,320	4	1.040	1.373	5.491	1	
C3	13	610	5	1.040	0.634	3.172	1	
C4	13	610	5	1.040	0.634	3.172	2	
C5	19	770	2	2.230	1.717	3.434	6	
L	19	1,150	7	2.230	2.565	17.953	2	

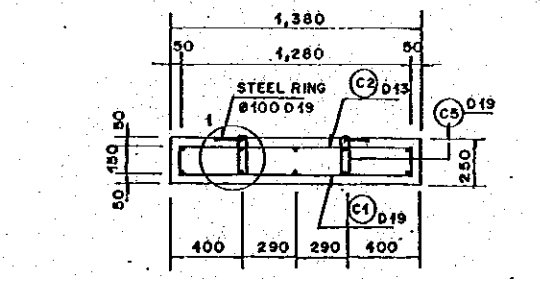


SECTION E-E
SCALE B

SECTION F-F
SCALE B



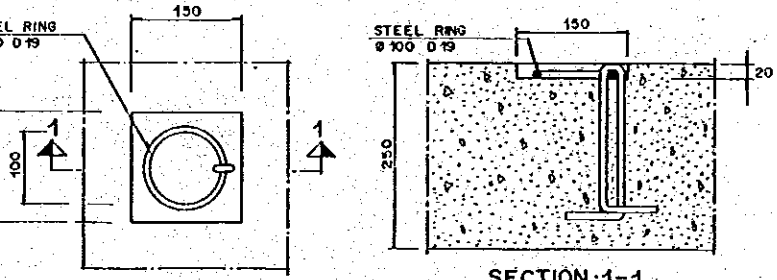
KEY PLAN
SCALE A



SECTION G-G
SCALE C

BAR BENDING DETAIL

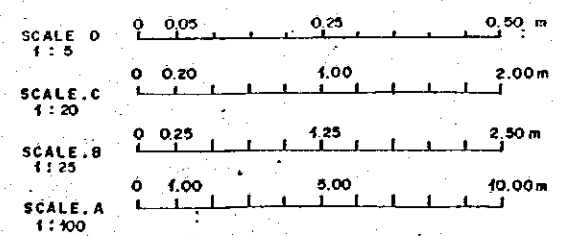
DIA	a	b	l	R	OVERLAP	
					L	WEIGHT (kg)
D13	66	156	222	42	455	0.473
D16	75	193	268	48	560	0.885
D19	94	236	330	60	665	1.483



PLAN

SECTION 1-1

DETAIL 1
SCALE D



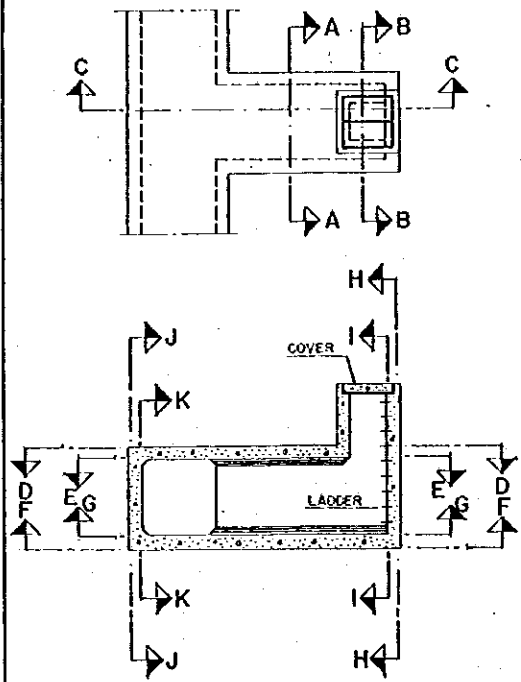
NO.	DATE	REVISIONS	DESIGNED	CHECKED	APPROVED

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

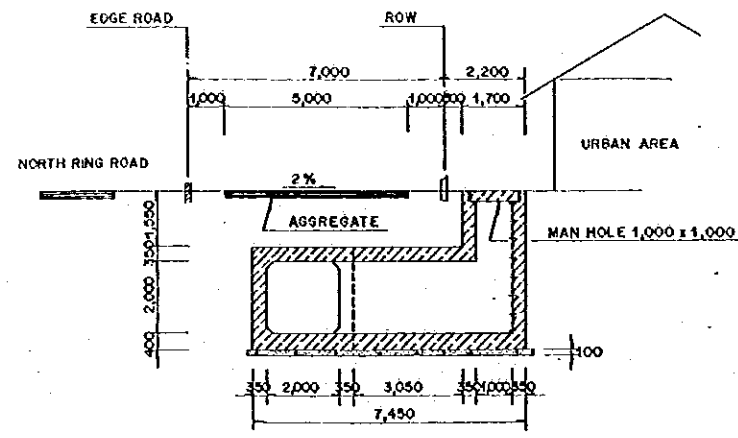
JABATANSALINA FLOOD CONTROL PROJECT
COMPONENT : URBAN DRAINAGE SYSTEM IMPROVEMENT
BARU CONVEYANCE CHANNEL
MANHOLE TYPE A
REINFORCING BAR ARRANGEMENT

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.: U - P3 - CO - CI - 8
SHEET NO.: 145
DATE: CONTRACT NO.:

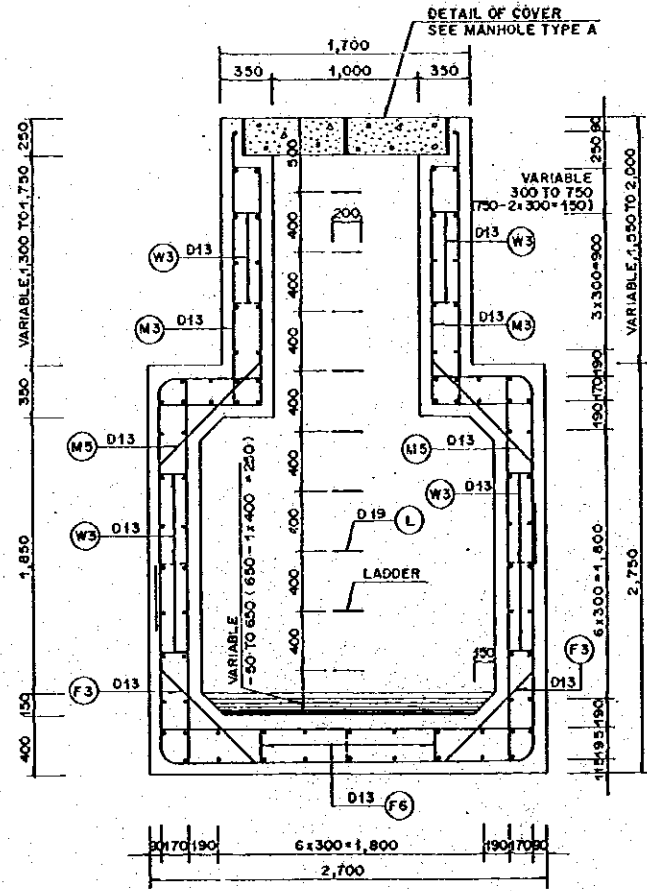
DESIGNED: CHECKED: CHER OF PLANNING AND DESIGN
PROJECT MANAGER:



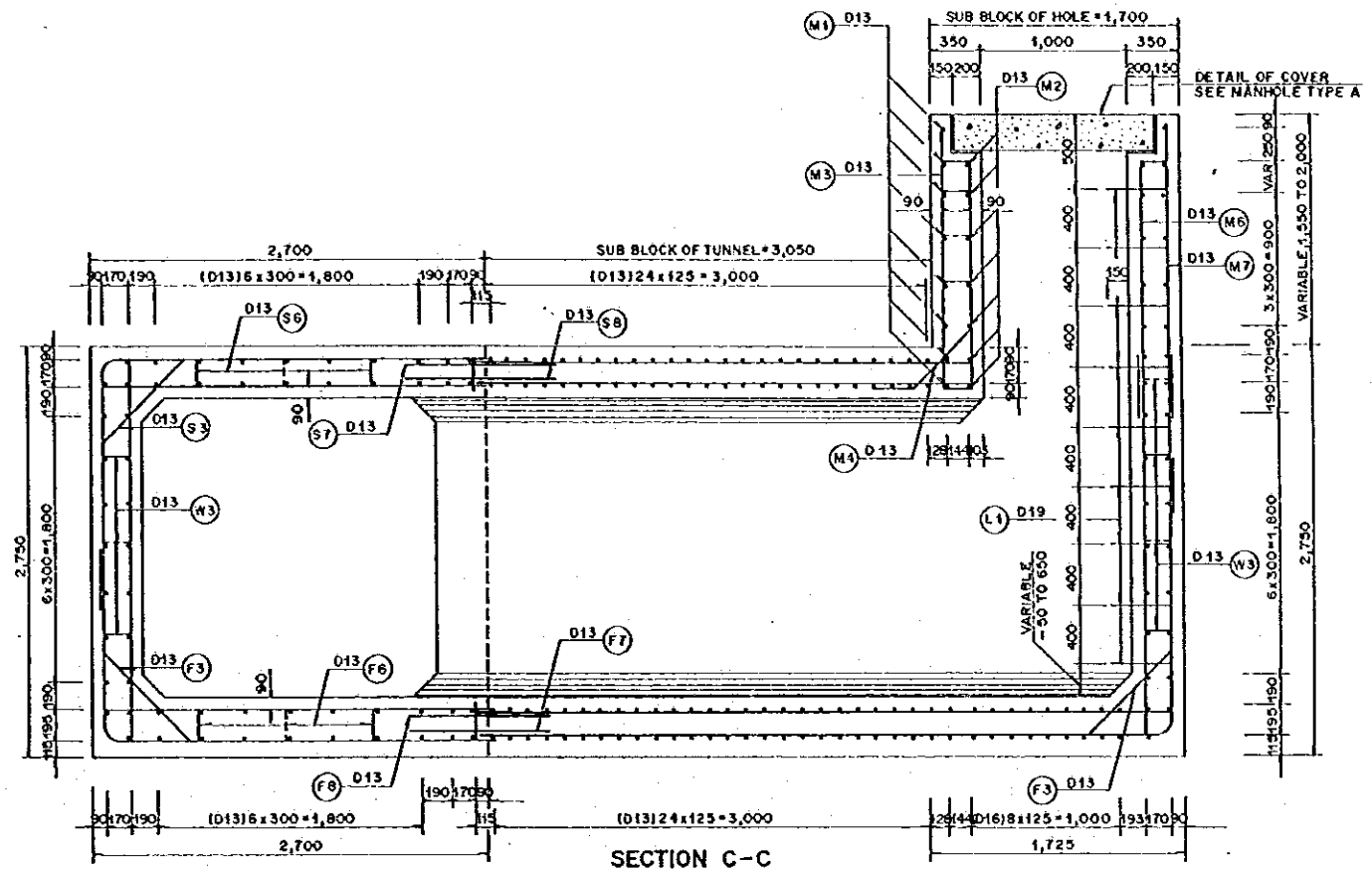
KEY PLAN
SCALE B



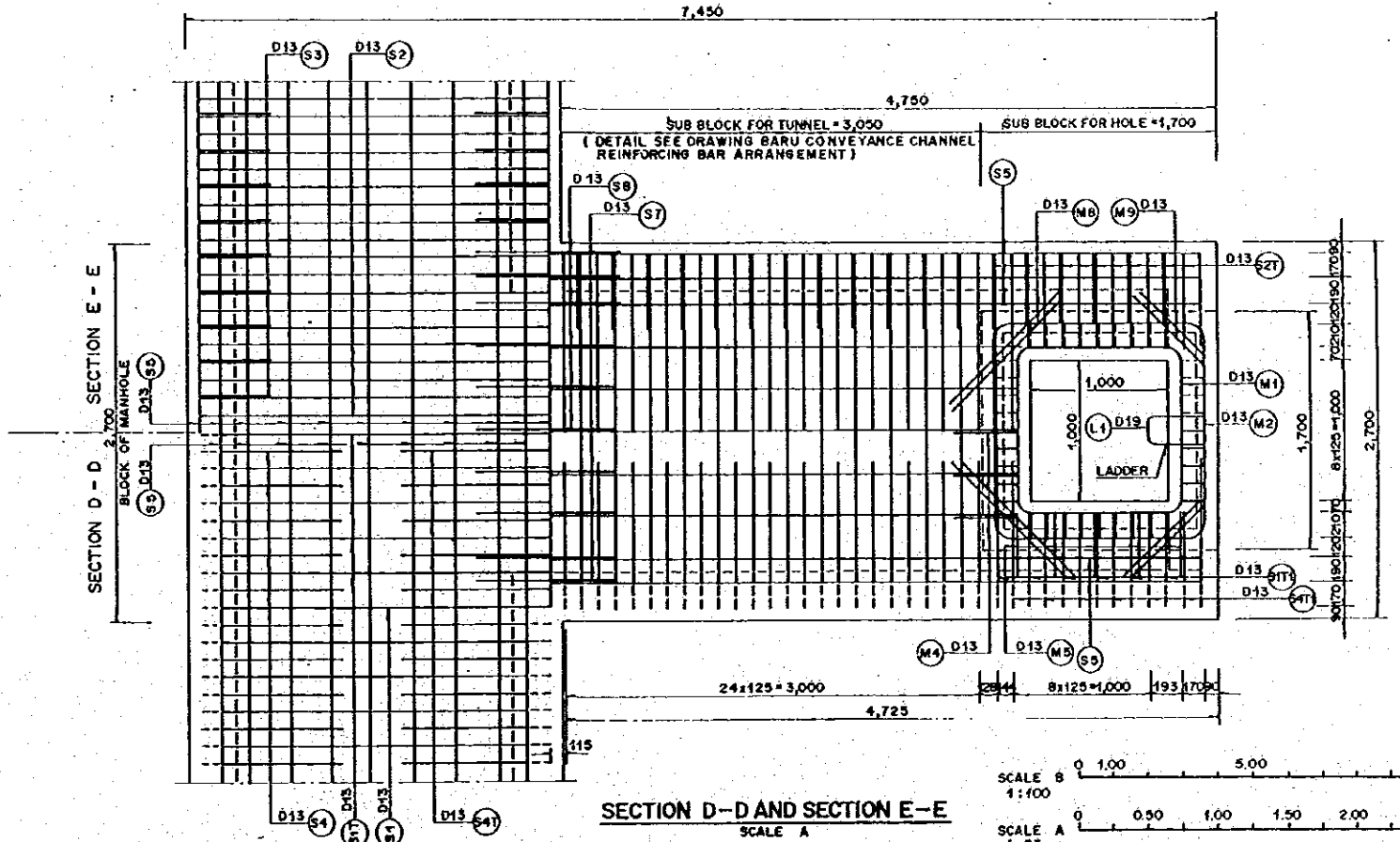
GENERAL CROSS SECTION
SCALE B



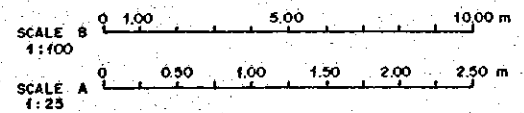
SECTION B-B
SCALE A



SECTION C-C
SCALE A



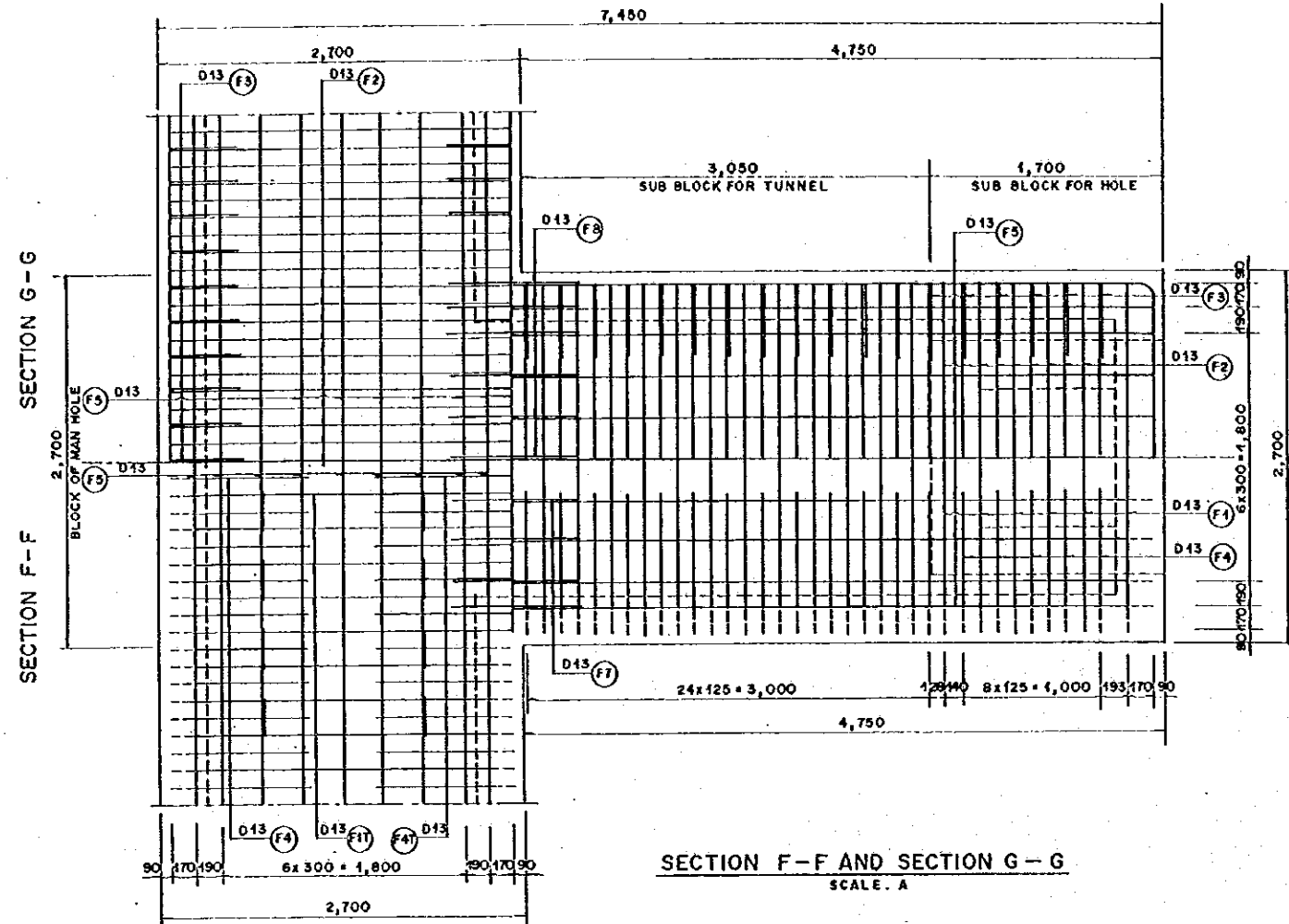
SECTION D-D AND SECTION E-E
SCALE A



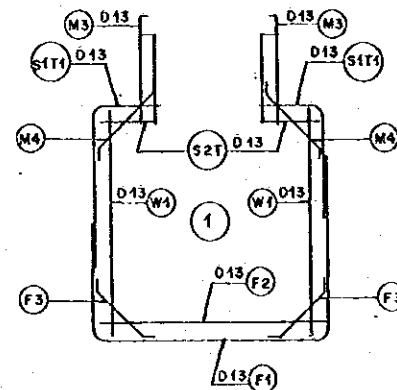
- NOTE: 1. SECTION A-A, SEE DRAWING
 * BARU CONVEYANCE CHANNEL REINFORCING BAR ARRANGEMENT *
 2. COVER, SEE DRAWING BARU CONVEYANCE CHANNEL
 * MANHOLE TYPE A REINFORCING BAR ARRANGEMENT *

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

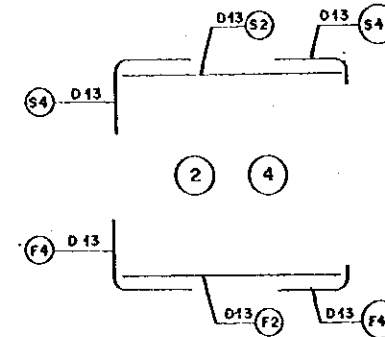
THE REPUBLIC OF INDONESIA DEPARTMENT OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAVA
RELATUNBELUKA FLOOD CONTROL PROJECT COMPONENT: URBAN DRAINAGE SYSTEM IMPROVEMENT BARU CONVEYANCE CHANNEL MANHOLE TYPE B REINFORCING BAR ARRANGEMENT (1/3)		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
LAPAN INTERNATIONAL COOPERATION AGENCY CIL INTERNATIONAL CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL, INC. LAPAN INTERNATIONAL, INC.		DISTRICT SEMARANG CITY
CHECKED [Signature]	CHECKED [Signature]	DRAWING NO. U - F3 - CO - CI - 3 SHEET NO. 146
CHIEF OF PLANNING AND DESIGN PROJECT MANAGER		DATE CONTRACT NO.



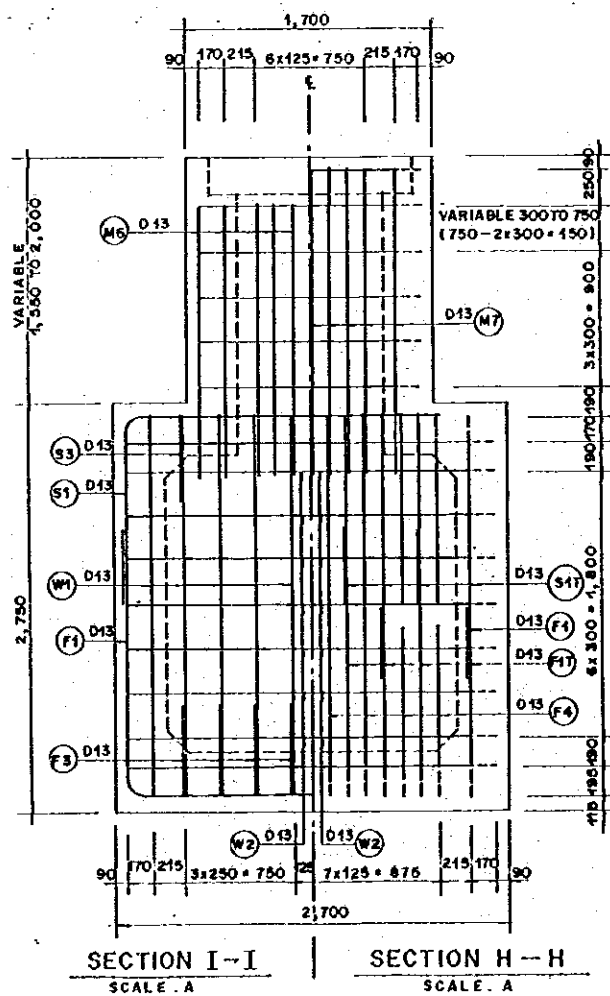
SECTION F-F AND SECTION G-G
SCALE A



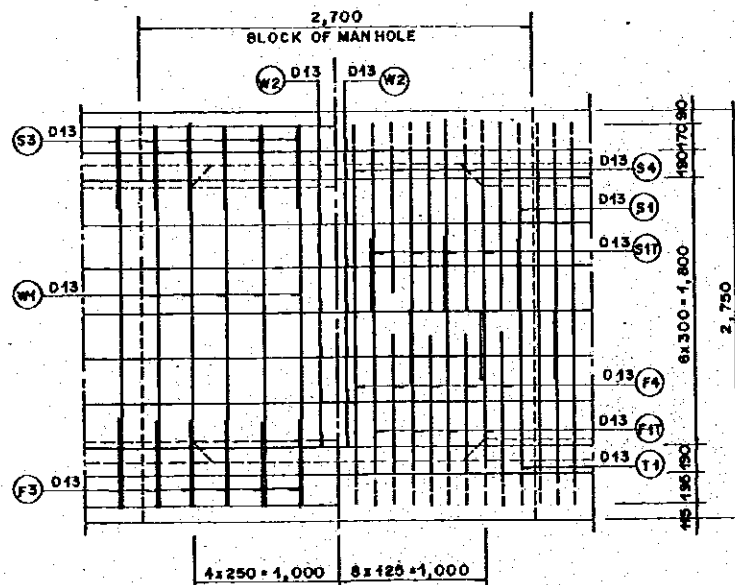
BAR LAY OUT OF SECTION B-B
(MANHOLE)
SCALE B



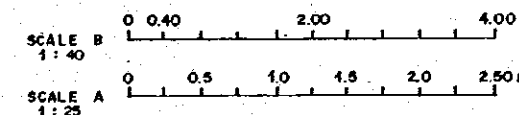
BAR LAY OUT OF SECTION C-C
(BOX CULVERT)
SCALE B



SECTION I-I | SECTION H-H
SCALE A | SCALE A



SECTION K-K | SECTION J-J
SCALE A | SCALE A

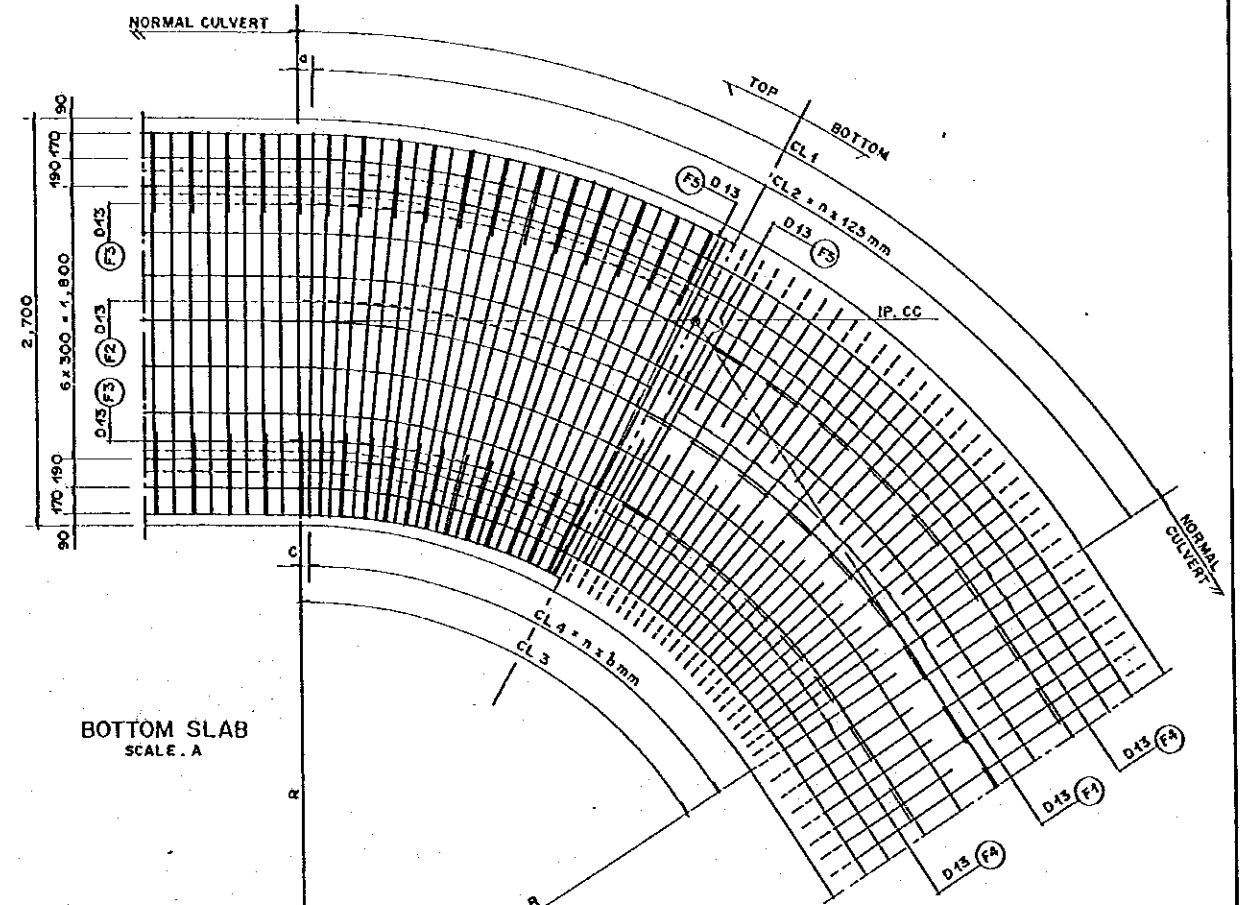


NO.	DATE	REVISIONS	ORGANIZED	DESIGNED	APPROVED

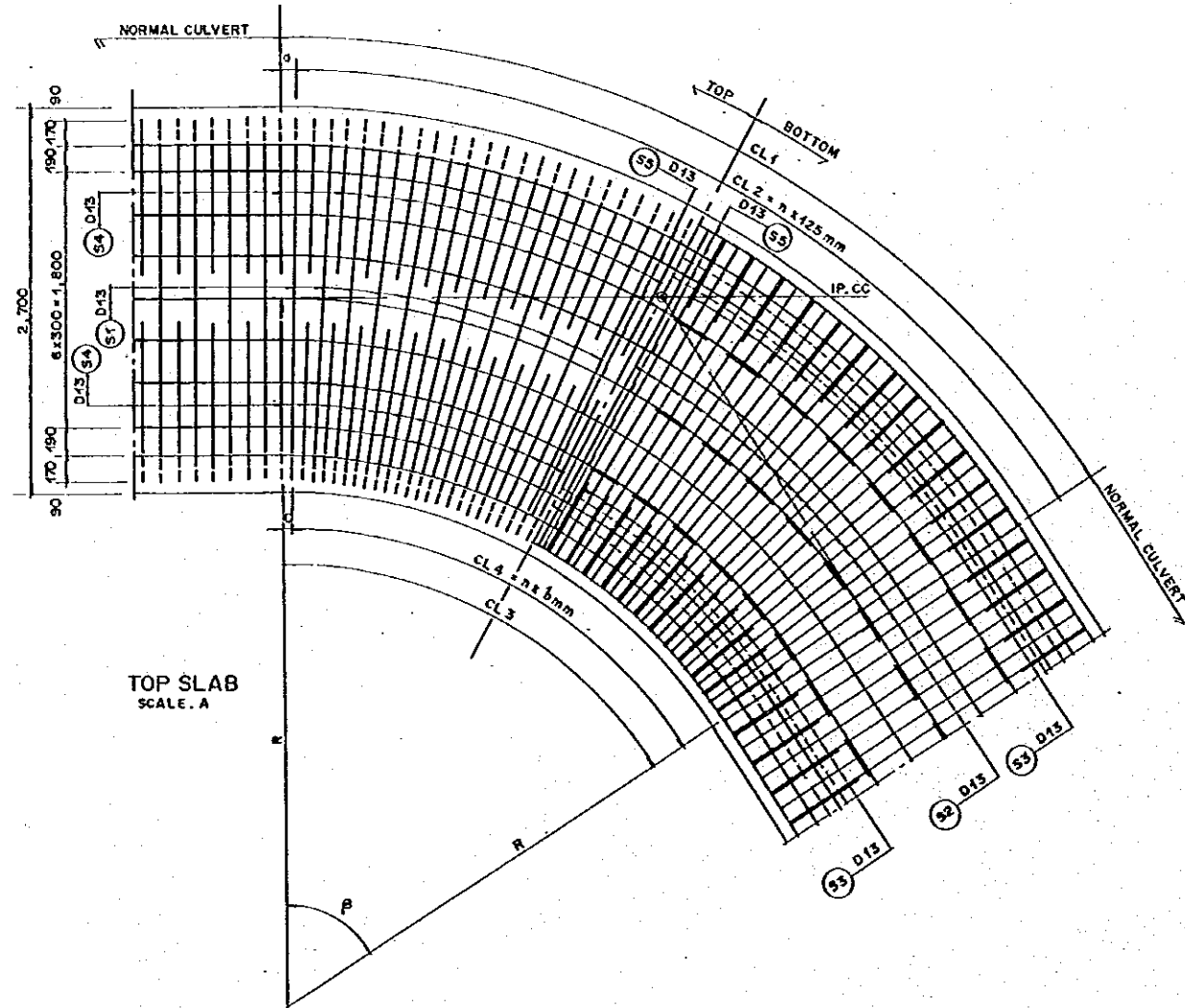
THE REPUBLIC OF INDONESIA DEPARTMENT OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAVA
SURABAYA FLOOD CONTROL PROJECT COMPONENT: URBAN DRAINAGE SYSTEM IMPROVEMENT BARU CONVEYANCE CHANNEL MANHOLE TYPE B REINFORCING BAR ARRANGEMENT (2/3)		PROJECT NAME URBAN DRAINAGE SYSTEM IMPROVEMENT AND WATER RESOURCES DEVELOPMENT IN SURABAYA IN THE REPUBLIC OF INDONESIA
LOKAL INTENSIFIKASI KEKAWASAN AGRIKULTUR CITA ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL AND PANGLOSS ENGINEERING INC.		DISTRICT SEMARANG CITY
DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> CHIEF OF PLANNING AND DESIGN		DRAWING NO. V-PS-CO-CI-4 SHEET NO. 147 DATE: 12/31 CONF. NO.:
APPROVED: <i>[Signature]</i> PROJECT MANAGER		

TABLE OF DIMENSION OF BARU CONVEYANCE CHANNEL FOR REINFORCING BAR ARRANGEMENT IN CURVE PORTION

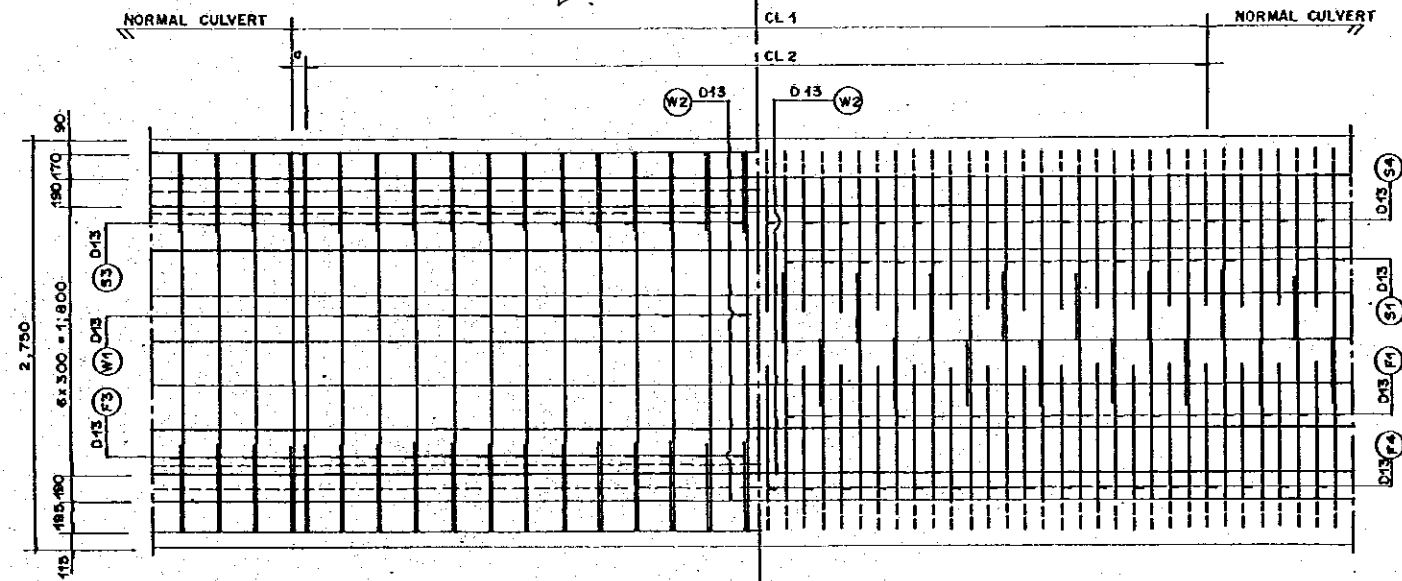
IP	NORTH (m)	EAST (m)	β	R (m)	CL.1 (mm)	n	CL.2 (mm)	a (mm)	CL.3 (mm)	b (mm)	CL.4 (mm)	c (mm)
IP. CC 2	9,231,086	435,411	57°00'00"	5.00	6,228	49	6,125	103	3,721	74	3,626	95
IP. CC 4	9,231,034	435,627	49°00'00"	30.00	10,366	82	10,250	116	9,531	115	9,430	101
IP. CC 5	9,231,035.5	435,643.5	49°00'00"	30.00	10,366	82	10,250	116	9,531	115	9,431	101
IP. CC 6	9,230,966	435,931.5	30°18'00"	25.00	13,897	110	13,750	137	12,555	113	12,430	125
IP. CC 7	9,230,932.5	435,966	29°30'00"	25.00	13,521	107	13,375	146	12,223	113	12,091	132



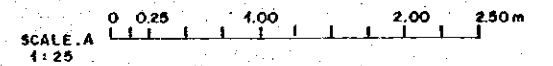
BOTTOM SLAB
SCALE . A



TOP SLAB
SCALE . A



SIDE WALL FOR OUTER CURVE
SCALE . A



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
IRATUNSELUNA FLOOD CONTROL PROJECT COMPONENT : URBAN DRAINAGE SYSTEM IMPROVEMENT BARU CONVEYANCE CHANNEL CURVE STRUCTURE REINFORCING BAR ARRANGEMENT (1/4)		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SURABAYA IN THE REPUBLIC OF INDONESIA
JAPAN INTERNATIONAL COOPERATION AGENCY CITY ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL AND TAIKOO INTERNATIONAL INC.		DISTRICT SURABAYA CITY
DESIGNED CHECKED CRUISE OF PLANNING AND DESIGN PROJECT MANAGER		DRAWING NO. U - PS - CO - CI - 5 SHEET NO. 449 DATE CONTRACT NO.