PILE ARRANGEMENT--2

PLATE NO. 145

TABLE2-1,-2 CHANNEL : KAMAL(BRANCH) (2)

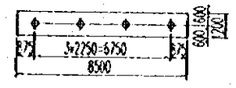
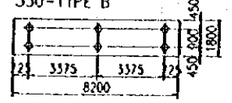
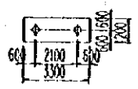
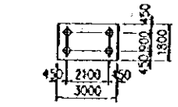
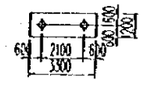
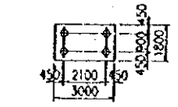
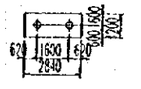
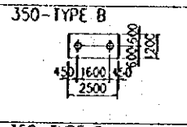
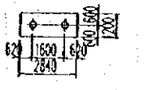
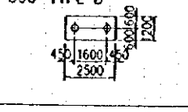
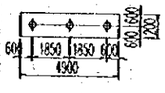
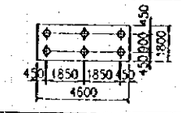
No of Bridge	No of Structure	Pile Arrangement: Abutment	Pile Arrangement: Pier	Pile: No.	Pile: Length	Elevation: Abut	Elevation: Pier	Remarks
BKE13	KE15-2		1- 350-TYPE B 	A 8	11.5	3.343	3.349	2-Span R.B
				P 6	11.5			
BKE14	KE16		1- 	A 4	14.5	3.434	3.440	2-Span R.B
				P 4	14.5			
BKE15	KE17-1		1- 	A 4	17.5	3.511	3.517	2-Span R.B
				P 4	17.5			
BKE16	KE18		1- 350-TYPE B 	A 4	17.5	3.584	3.590	2-Span P
				P 2	17.5			
BKE17	KE19		1- 350-TYPE B 	A 4	17.5	3.620	3.626	2-Span P
				P 2	17.5			
BKE18	KE20-1		1- 	A 6	17.5	3.658	3.664	2-Span R.B
				P 6	17.5			

TABLE3 CHANNEL : TANJUNGAN (1)

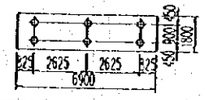
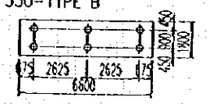
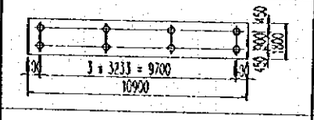
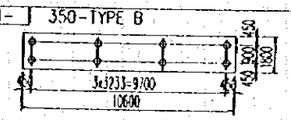
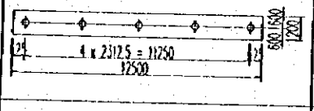
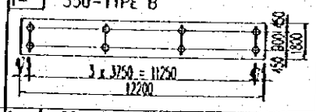
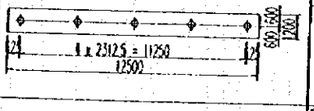
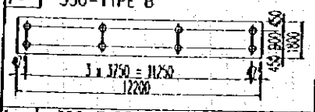
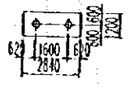
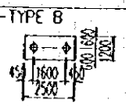
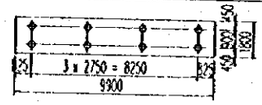
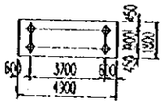
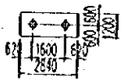
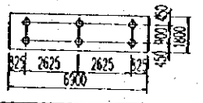
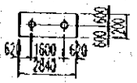
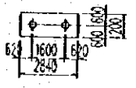
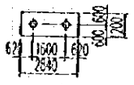
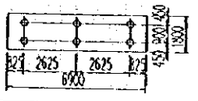
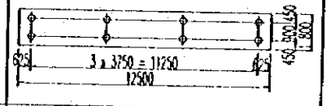
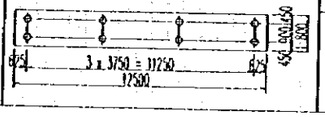
No of Bridge	No of Structure	Pile Arrangement: Abutment	Pile Arrangement: Pier	Pile: No.	Pile: Length	Elevation: Abut	Elevation: Pier	Remarks
BTM 1	TM 1		2- 350-TYPE B 	A 12	16.5	1.508	1.518	3-Span R.B
				P 12	16.5			
BTM 3	TM 3-4		1- 350-TYPE B 	A 16	12.5	1.740	1.750	2-Span R.B (Approach cushion slab)
				P 8	12.5			
BTM 4	TM 5		1- 350-TYPE B 	A 10	11.5	1.715	1.725	2-Span R.B
				P 8	11.5			
BTM 5	TM 6		1- 350-TYPE B 	A 10	10.5	1.753	1.763	2-Span R.B (Skew)
				P 8	10.5			
BKM 6			1- 	A 4	10.5			2-Span P
				P 2	10.5			

TABLE4 CHANNEL : SALURAN CENGKARENG (1)

No of Bridge	No of Structure	Pile Arrangement: Abutment	Pile Arrangement: Pier	Pile: No.	Pile: Length	Elevation: Abut	Elevation: Pier	Remarks
BCM 2	CM 3			A 16	6.5	2.451		1-Span R.B
				P				
BCM 3	CM 6			A 8	6.5	2.484		1-Span R.B
				P				
BCM 4	CM 7			A 4	7.5	2.506		1-Span P
				P				
BCM 5	CM 9			A 12	8.5	2.612		1-Span R.B
				P				
BCM 6	CM11			A 12	10.5	2.705		1-Span R.B
				P				
BCM 7	CM13			A 4	10.5	2.854		1-Span P
				P				
BCM 8	CM15			A 4	9.5	3.013		1-Span P
				P				
BCM 9	CM16			A 4	8.5	3.096		1-Span P
				P				
BCM10	CM17-1			A 12	9.5	3.157		1-Span R.B
				P				
BCM11	CM18-4			A 16	9.5	3.273		1-Span R.B (Approach cushion slab)
				P				
BCM12	CM19-1			A 16	8.5	3.321		1-Span R.B (Approach cushion slab)
				P				

All PC Pile are specified as ø350(Type A)unless otherwise done.

Column Remarks

RB : Road Bridge
P : Pedestrian Bridge

REFERENCE

NO.

PREPARED
CHECKED
SUBMITTED
DATE

MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF HUMAN SETTLEMENTS

JAPAN INTERNATIONAL COOPERATION AGENCY
THE DETAILED DESIGN FOR URBAN DRAINAGE PROJECT
IN THE CITY OF JAKARTA

TITLE OF DRAWING
PILE ARRANGEMENT--2

DWG NO
J-70-50-003

APPROVED

DATE

PILE ARRANGEMENT-3

PLATE NO. 146

TABLE4 CHANNEL : SALURAN CENGKARENG (2)

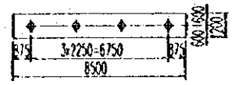
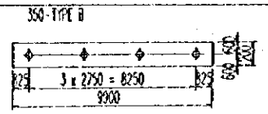
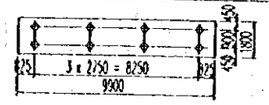
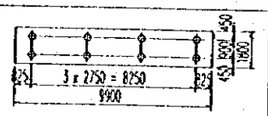
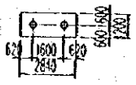
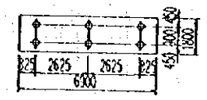
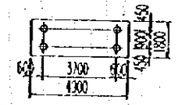
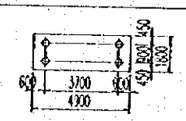
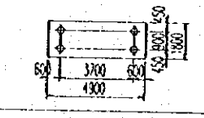
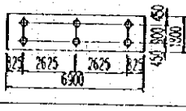
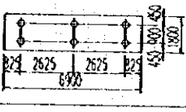
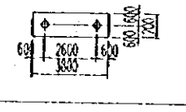
No.of Bridge	No.of Structure	Pile Arrangement Abutment	Pile Arrangement No- Pier	Pile	No.	Length	Elevation Abut	Elevation Pier	Remarks
BCM13	CM20			A	8	7.5	3.396		1-Span R.B
				P					
BCM14	CM22			A	8	8.5	3.448		1-Span R.B
				P					

TABLE5 CHANNEL : GEDE/BOR

No.of Bridge	No.of Structure	Pile Arrangement Abutment	Pile Arrangement No- Pier	Pile	No.	Length	Elevation Abut	Elevation Pier	Remarks
BGM 1	GM 1-2			A	16	9.5	3.970		1-Span R.B (2lanes)
				P					
BGM 2	GM 1-4			A	16	9.5	3.994		1-Span R.B (2lanes)
				P					
BGM 3	GM 5			A	4	9.5	4.102		1-Span R.B (changed from P)
				P					
BGM 4	GM 6			A	12	9.5	4.165		1-Span R.B
				P					
BGM 5	GM 7			A	8	10.5	4.165		1-Span R.B
				P					
BGM 6	GM 8			A	8	10.5	4.192		1-Span R.B
				P					
BGM 7	GM 9			A	8	10.5	4.192		1-Span R.B
				P					
BGM 8	GM10-2			A	12	10.5	4.254		1-Span R.B
				P					
BGM 9	GM11-2			A	12	10.5	4.299		1-Span R.B
				P					
BGM10	GM13-1			A	4	8.5	4.349		1-Span R.B
				P					

All PC Pile are specified as ø350(Type A)unless otherwise done.

Column Remarks

R.B : Road Bridge
P : Pedestrian Bridge

REFERENCE

PREPARED
CHECKED
SUBMITTED
DATE

MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF HUMAN SETTLEMENTS

JAPAN INTERNATIONAL COOPERATION AGENCY
THE DETAILED DESIGN FOR URBAN DRAINAGE PROJECT IN THE CITY OF JAKARTA

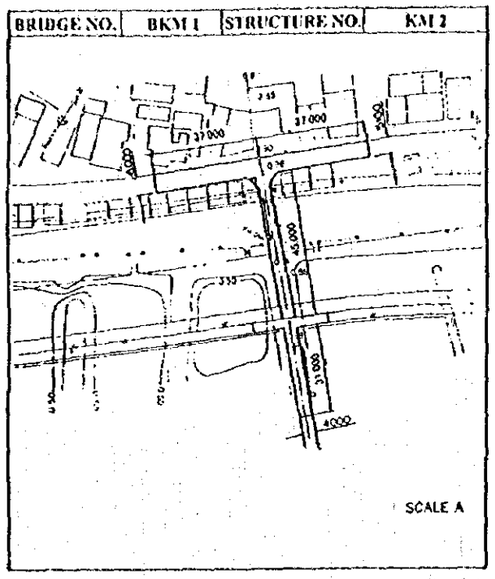
TITLE OF DRAWING
PILE ARRANGEMENT-3

DWG NO
J-70-50-004

APPROVED

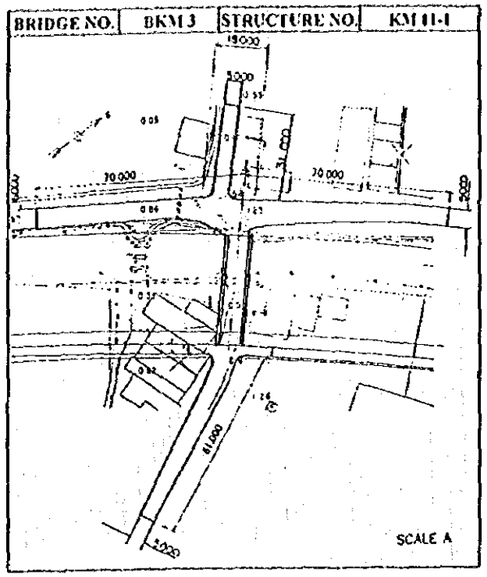
DATE

BRIDGE NO. BKM 1 — STRUCTURE NO. KM 2



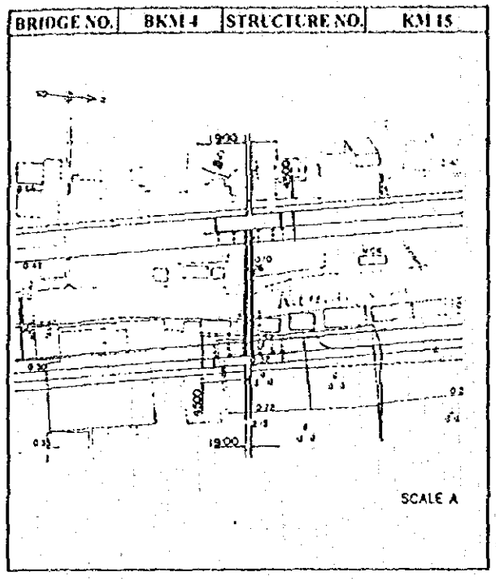
Bridge No.	BKM 1					
Bridge Width (m)	Carriageway	4.00	Elevation (m)	Bridge		2.283
	OTHERS	2 x 0.30		Road		0.910
	Total	4.60		Difference		1.373
Approach Road (Length, m)	Trunk Line	76.00	Stair for Pedestrian (m)			
	Branch Line	74.00	Type of Side Protection			R.W.S.P

BRIDGE NO. BKM 3 — STRUCTURE NO. KM 11-1



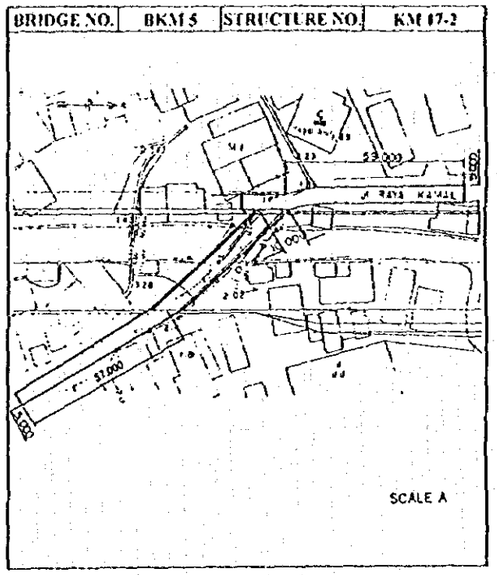
Bridge No.	BKM 3					
Bridge Width (m)	Carriageway	9.00	Elevation (m)	Bridge		2.647
	OTHERS	2 x 0.30		Road		0.854
	Total	9.60		Difference		1.793
Approach Road (Length, m)	Trunk Line	144.02	Stair for Pedestrian (m)			
	Branch Line	102.51	Type of Side Protection			R.W

BRIDGE NO. BKM 4 — STRUCTURE NO. KM 15



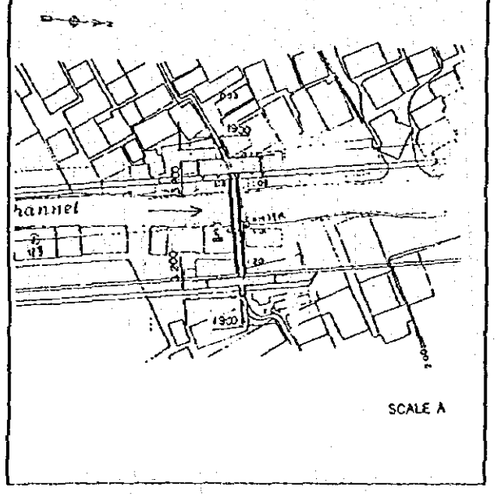
Bridge No.	BKM 4					
Bridge Width (m)	Carriageway	1.900	Elevation (m)	Bridge		2.810
	OTHERS	2 x 0.30		Road		0.680
	Total	2.50		Difference		2.130
Approach Road (Length, m)	Trunk Line		Stair for Pedestrian (m)			9.00
	Branch Line		Type of Side Protection			WALL

BRIDGE NO. BKM 5 — STRUCTURE NO. KM 17-2



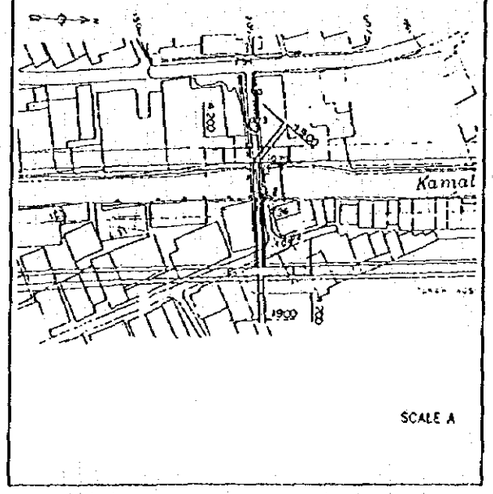
Bridge No.	BKM 5					
Bridge Width (m)	Carriageway	9.00	Elevation (m)	Bridge		3.039
	OTHERS	2 x 0.30		Road		1.139
	Total	9.60		Difference		1.900
Approach Road (Length, m)	Trunk Line	118.00	Stair for Pedestrian (m)			
	Branch Line		Type of Side Protection			RW

BRIDGE NO. BKM 6 — STRUCTURE NO. KM 19



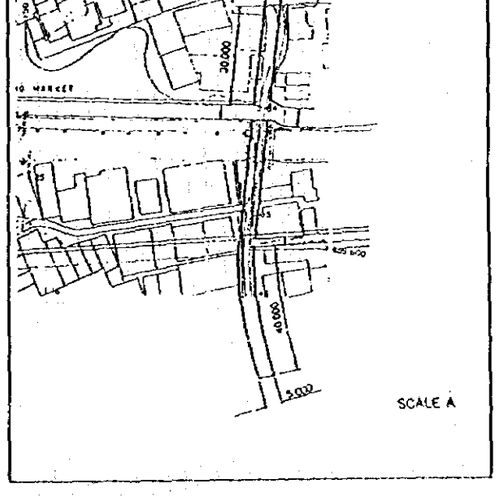
Bridge No.	BKM 6					
Bridge Width (m)	Carriageway	1.900	Elevation (m)	Bridge		2.909
	OTHERS	2 x 0.30		Road		1.569
	Total	2.50		Difference		1.430
Approach Road (Length, m)	Trunk Line		Stair for Pedestrian (m)			6.40
	Branch Line		Type of Side Protection			WALL

BRIDGE NO. BKM 7 — STRUCTURE NO. KM 20



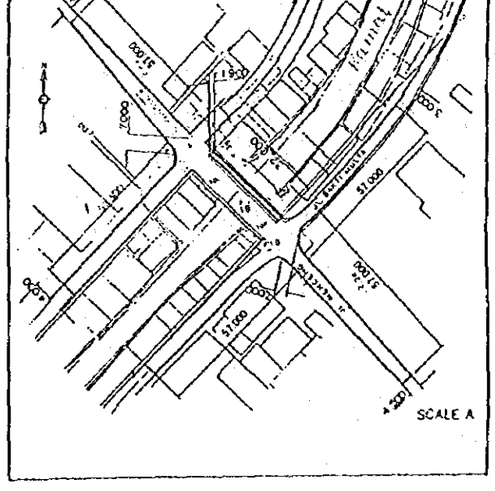
Bridge No.	BKM 7					
Bridge Width (m)	Carriageway	1.900	Elevation (m)	Bridge		3.037
	OTHERS	2 x 0.30		Road		2.087
	Total	2.50		Difference		0.970
Approach Road (Length, m)	Trunk Line		Stair for Pedestrian (m)			6.40
	Branch Line		Type of Side Protection			WALL

BRIDGE NO. BKM 8 — STRUCTURE NO. KM 21-2



Bridge No.	BKM 8					
Bridge Width (m)	Carriageway	4.00	Elevation (m)	Bridge		3.166
	OTHERS	2 x 0.30		Road		2.106
	Total	4.60		Difference		1.060
Approach Road (Length, m)	Trunk Line	70.00	Stair for Pedestrian (m)			
	Branch Line		Type of Side Protection			RW

BRIDGE NO. BKM 9 — STRUCTURE NO. KM 22-3



Bridge No.	BKM 9					
Bridge Width (m)	Carriageway	1.900	Elevation (m)	Bridge		3.185
	OTHERS	2 x 0.30		Road		1.375
	Total	3.50		Difference		1.810
Approach Road (Length, m)	Trunk Line		Stair for Pedestrian (m)			6.40
	Branch Line		Type of Side Protection			WALL

SCALE A 0 20 40 60 80 100m

REFERENCE

PREPARED .....
CHECKED .....
SUBMITTED .....
DATE .....

MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF HUMAN SETTLEMENTS

JAPAN INTERNATIONAL COOPERATION AGENCY
THE DETAILED DESIGN FOR URBAN DRAINAGE PROJECT
IN
THE CITY OF JAKARTA

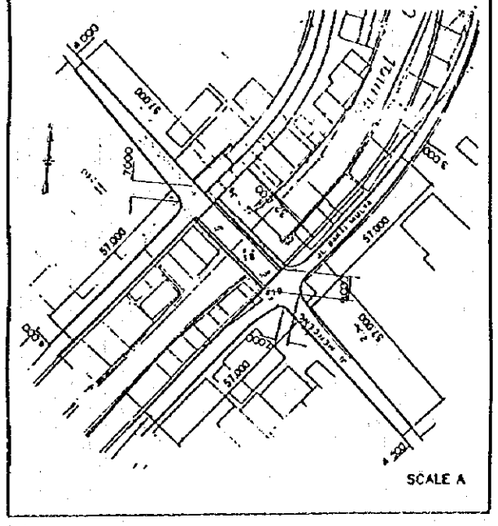
TITLE OF DRAWING
APPROACH ROAD -1
(BKM-1,-3,-4,-5,-6,-7,-8,-9)

DWG NO
J - 80 - 10 - 001

APPROVED

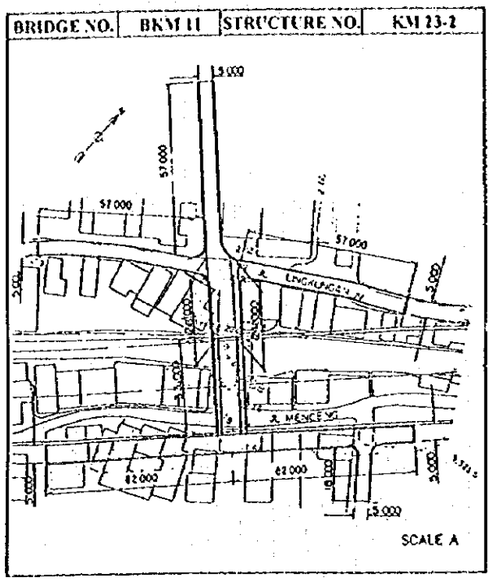
DATE

BRIDGE NO. BKM 10 | STRUCTURE NO. KM 22-4



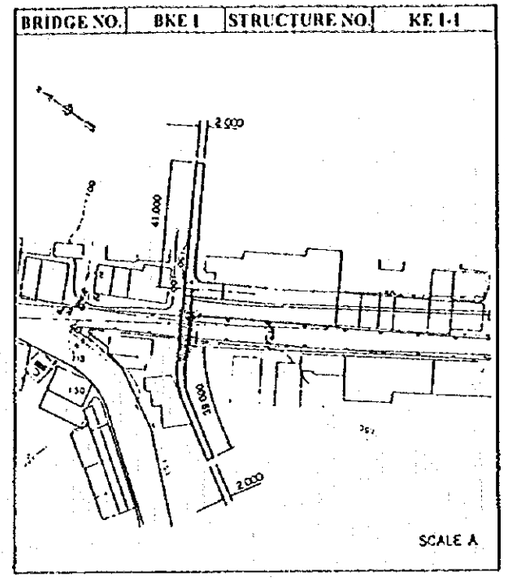
Bridge No.	BKM 10				
Bridge Width (m)	Carriageway	9.00	Elevation (m)	Bridge	3.366
	OTHERS	2 x 0.30		Road	2.180
	Total	9.60		Difference	1.186
Approach Road (Length, m)	Trunk Line	121.00	Stair for Pedestrian (m)		
	Branch Line	228.00	Type of Side Protection		RW

BRIDGE NO. BKM 11 | STRUCTURE NO. KM 23-2



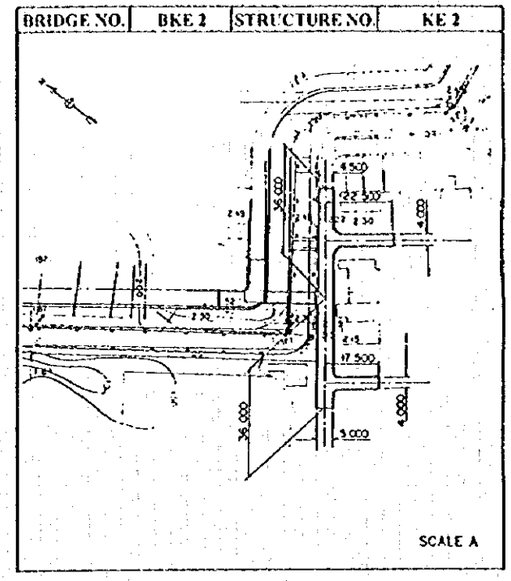
Bridge No.	BKM 11				
Bridge Width (m)	Carriageway	9.00	Elevation (m)	Bridge	3.716
	OTHERS	2 x 0.30		Road	2.140
	Total	9.50		Difference	1.576
Approach Road (Length, m)	Trunk Line	90.00	Stair for Pedestrian (m)		
	Branch Line	267.20	Type of Side Protection		RW

BRIDGE NO. BKE 1 | STRUCTURE NO. KE 1-1



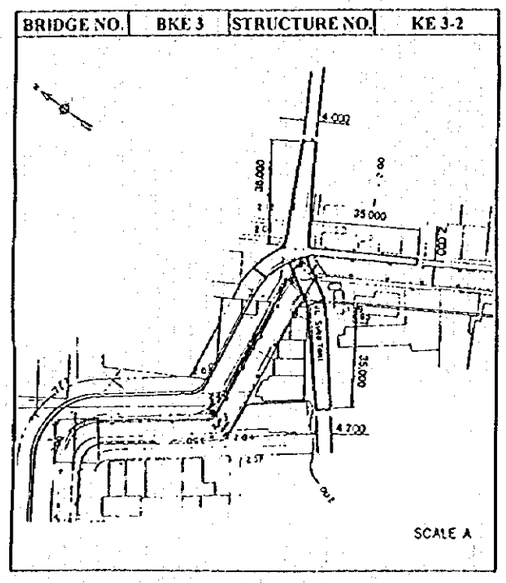
Bridge No.	BKE 1				
Bridge Width (m)	Carriageway	2.40	Elevation (m)	Bridge	3.183
	OTHERS	2 x 0.30		Road	1.140
	Total	3.00		Difference	2.043
Approach Road (Length, m)	Trunk Line	90.00	Stair for Pedestrian (m)		
	Branch Line		Type of Side Protection		RW

BRIDGE NO. BKE 2 | STRUCTURE NO. KE 2



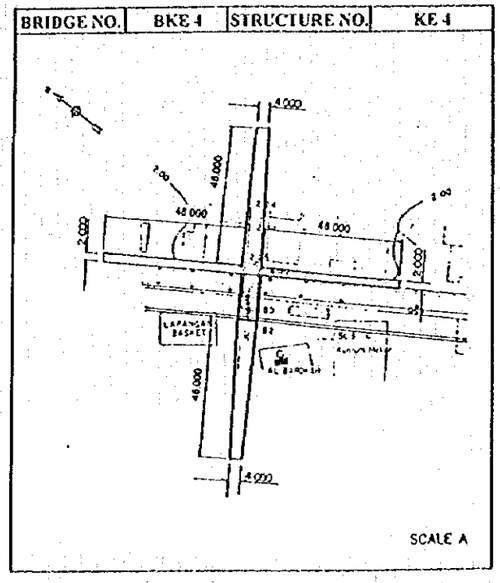
Bridge No.	BKE 1				
Bridge Width (m)	Carriageway	4.00	Elevation (m)	Bridge	3.450
	OTHERS	2 x 0.30		Road	1.920
	Total	4.60		Difference	1.530
Approach Road (Length, m)	Trunk Line	72.00	Stair for Pedestrian (m)		
	Branch Line	40.00	Type of Side Protection		R.W

BRIDGE NO. BKE 3 | STRUCTURE NO. KE 3-2



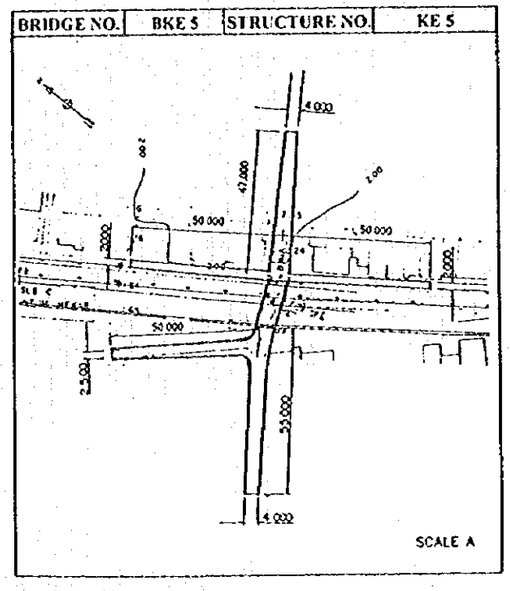
Bridge No	BKE 3				
Bridge Width (m)	Carriageway	5.40	Elevation (m)	Bridge	3.551
	OTHERS	2 x 0.60		Road	2.160
	Total	6.60		Difference	1.391
Approach Road (Length, m)	Trunk Line	71.00	Stair for Pedestrian (m)		
	Branch Line	36.00	Type of Side Protection		RW

BRIDGE NO. BKE 4 | STRUCTURE NO. KE 4



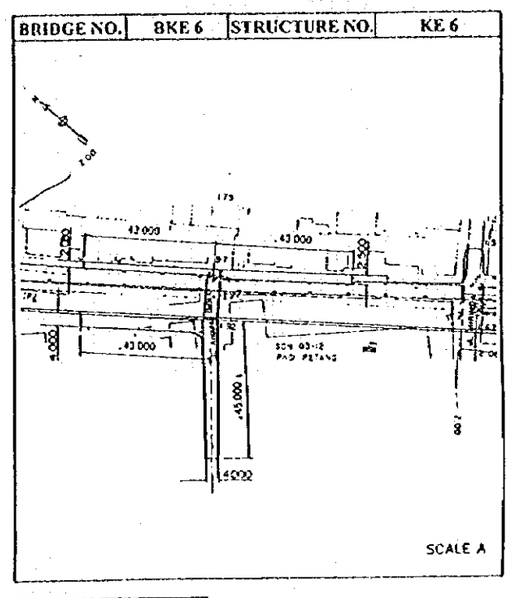
Bridge No	BKE 4				
Bridge Width (m)	Carriageway	5.40	Elevation (m)	Bridge	3.649
	OTHERS	2 x 0.60		Road	1.820
	Total	6.60		Difference	1.829
Approach Road (Length, m)	Trunk Line	92.00	Stair for Pedestrian (m)		
	Branch Line	92.00	Type of Side Protection		RW

BRIDGE NO. BKE 5 | STRUCTURE NO. KE 5



Bridge No	BKE 5				
Bridge Width (m)	Carriageway	5.40	Elevation (m)	Bridge	3.739
	OTHERS	2 x 0.60		Road	1.890
	Total	6.60		Difference	1.849
Approach Road (Length, m)	Trunk Line	102.00	Stair for Pedestrian (m)		
	Branch Line	150.00	Type of Side Protection		RW

BRIDGE NO. BKE 6 | STRUCTURE NO. KE 6



Bridge No	BKE 6				
Bridge Width (m)	Carriageway	4.00	Elevation (m)	Bridge	3.772
	OTHERS	2 x 0.30		Road	1.920
	Total	4.60		Difference	1.852
Approach Road (Length, m)	Trunk Line	48.00	Stair for Pedestrian (m)		
	Branch Line	88.00	Type of Side Protection		RW

SCALE A 0 20 40 60 80 100m

REFERENCE | DWG NO.

PREPARED .....
CHECKED .....
SUBMITTED .....
DATE .....

MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF HUMAN SETTLEMENTS

JAPAN INTERNATIONAL COOPERATION AGENCY
THE DETAILED DESIGN FOR URBAN DRAINAGE PROJECT IN THE CITY OF JAKARTA

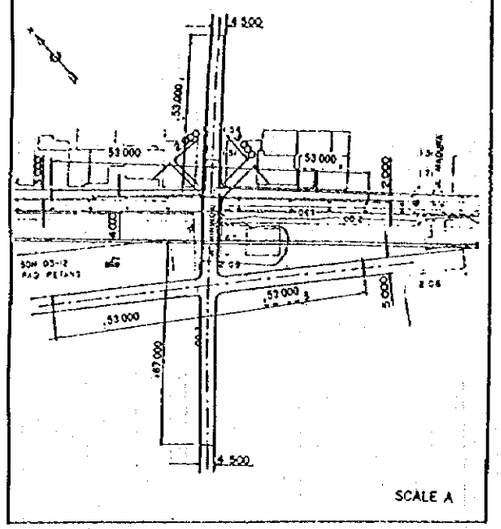
TITLE OF DRAWING
APPROACH ROAD -2
(BKM-10,-11,BKE-1,-2,-3,-4,-5,-6)

DWG NO
J - 60 - 10 - 002

APPROVED

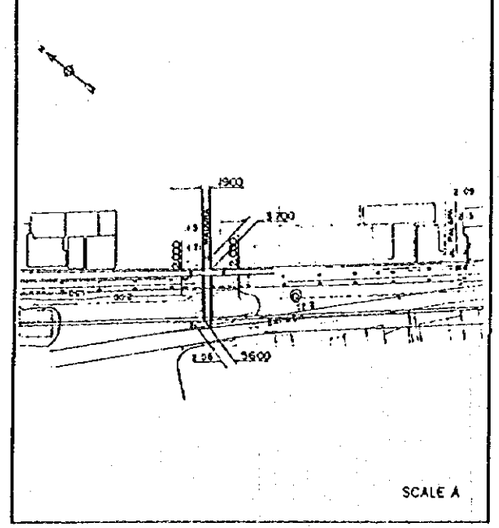
DATE

BRIDGE NO. | BKE 7 | STRUCTURE NO. | KE 7



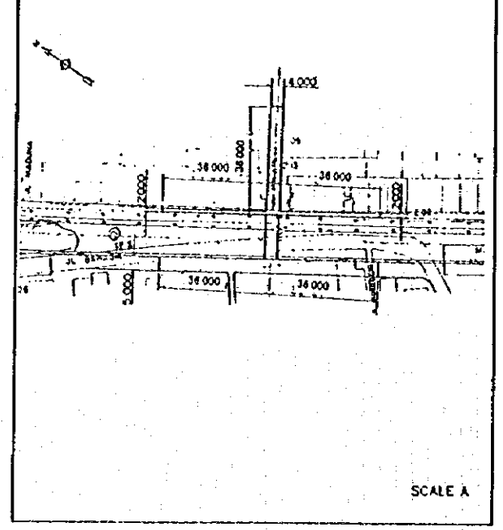
Bridge No	BKE 7					
Bridge Width (m)	Carriageway	5.40	Elevation (m)	Bridge		3.83
	OTHERS	2 x 0.60		Road		1.82
	Total	6.60		Difference		2.01
Approach Road (Length, m)	Trunk Line	236.00	Stair for Pedestrian (m)			
	Branch Line	106.00	Type of Side Protection			RW

BRIDGE NO. | BKE 8 | STRUCTURE NO. | KE 9



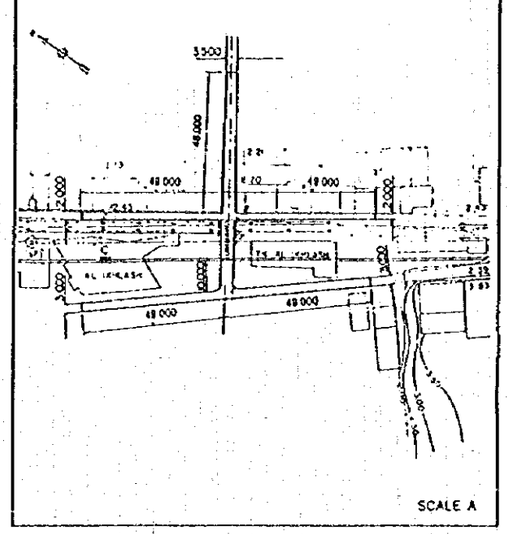
Bridge No	BKE 8				
Bridge Width (m)	Carriageway	1.900	Elevation (m)	Bridge	3.324
	OTHERS	2 x 0.30		Road	1.870
	Total	2.50		Difference	1.454
Approach Road (Length, m)	Trunk Line		Stair for Pedestrian (m)		7.40
	Branch Line		Type of Side Protection		WALL

BRIDGE NO. | BKE 9 | STRUCTURE NO. | KE 10-1



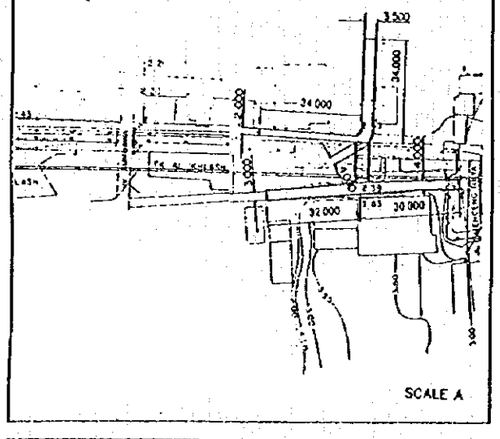
Bridge No	BKE 9					
Bridge Width (m)	Carriageway	4.00	Elevation (m)	Bridge		3.903
	OTHERS	2 x 0.30		Road		2.560
	Total	4.60		Difference		1.343
Approach Road (Length, m)	Trunk Line	108.00	Stair for Pedestrian (m)			
	Branch Line	72.00	Type of Side Protection			R.W

BRIDGE NO. | BKE 10 | STRUCTURE NO. | KE 12



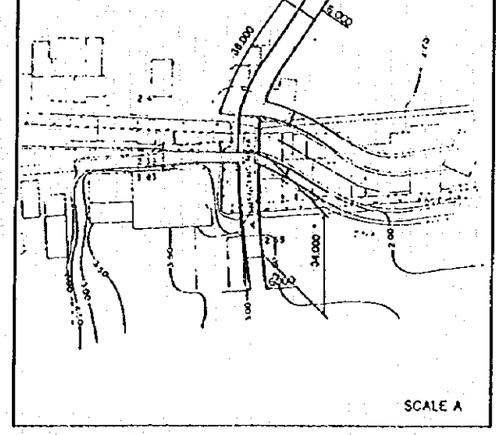
Bridge No	BKE 10					
Bridge Width (m)	Carriageway	5.40	Elevation (m)	Bridge		3.832
	OTHERS	2 x 0.60		Road		2.000
	Total	6.60		Difference		1.832
Approach Road (Length, m)	Trunk Line	156.00	Stair for Pedestrian (m)			
	Branch Line	98.00	Type of Side Protection			RW

BRIDGE NO. | BKE 11 | STRUCTURE NO. | KE 14



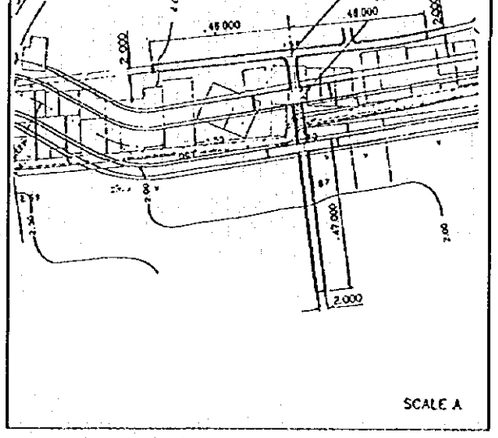
Bridge No	BKE 11					
Bridge Width (m)	Carriageway	4.00	Elevation (m)	Bridge		3.857
	OTHERS	2 x 0.30		Road		2.430
	Total	4.60		Difference		1.427
Approach Road (Length, m)	Trunk Line	96.00	Stair for Pedestrian (m)			
	Branch Line	31.00	Type of Side Protection			RW

BRIDGE NO. | BKE 13 | STRUCTURE NO. | KE 15-2



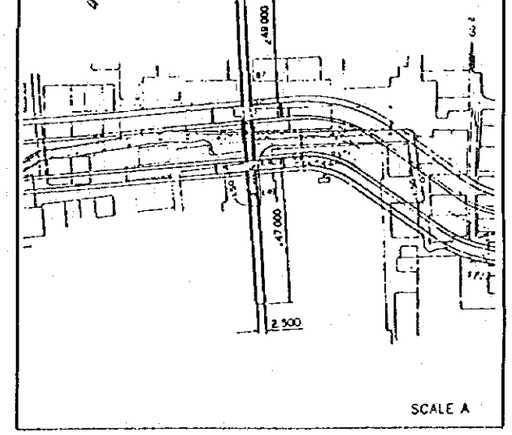
Bridge No	BKE 13					
Bridge Width (m)	Carriageway	7.00	Elevation (m)	Bridge		3.918
	OTHERS	2 x 0.60		Road		2.670
	Total	8.20		Difference		1.248
Approach Road (Length, m)	Trunk Line	70.00	Stair for Pedestrian (m)			
	Branch Line		Type of Side Protection			RW

BRIDGE NO. | BKE 14 | STRUCTURE NO. | KE 16



Bridge No	BKE 14					
Bridge Width (m)	Carriageway	4.000	Elevation (m)	Bridge		3.954
	OTHERS	2 x 0.30		Road		1.750
	Total	4.600		Difference		2.204
Approach Road (Length, m)	Trunk Line	151.00	Stair for Pedestrian (m)			
	Branch Line		Type of Side Protection			RW

BRIDGE NO. | BKE 15 | STRUCTURE NO. | KE 17-1



Bridge No	BKE 15					
Bridge Width (m)	Carriageway	7.40	Elevation (m)	Bridge		4.031
	OTHERS	2 x 0.30		Road		1.900
	Total	8.00		Difference		2.131
Approach Road (Length, m)	Trunk Line	98.00	Stair for Pedestrian (m)			
	Branch Line		Type of Side Protection			RW

SCALE A 0 20 40 60 80 100m

REFERENCE	DWG NO.	

PREPARED ....
CHECKED ....
SUBMITTED ....
DATE ....

MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF HUMAN SETTLEMENTS

JAPAN INTERNATIONAL COOPERATION AGENCY
THE DETAILED DESIGN FOR URBAN DRAINAGE PROJECT
IN
THE CITY OF JAKARTA

TITLE OF DRAWING
APPROACH ROAD -3
(BKE-7,-8,-9,-10,-11,-13,-14,-15)

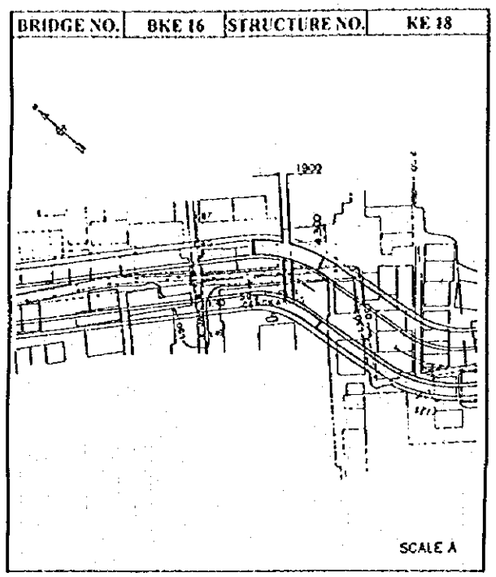
DWG NO
J - 80 - 10 - 003

APPROVED

DATE

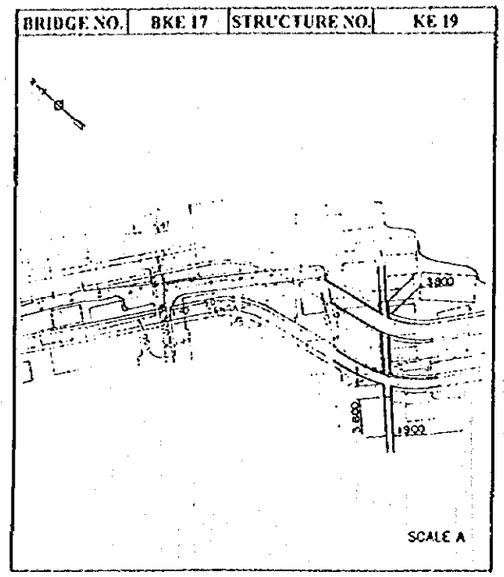
PLATE NO. 150

BRIDGE NO. BKE 16 — STRUCTURE NO. KE 18



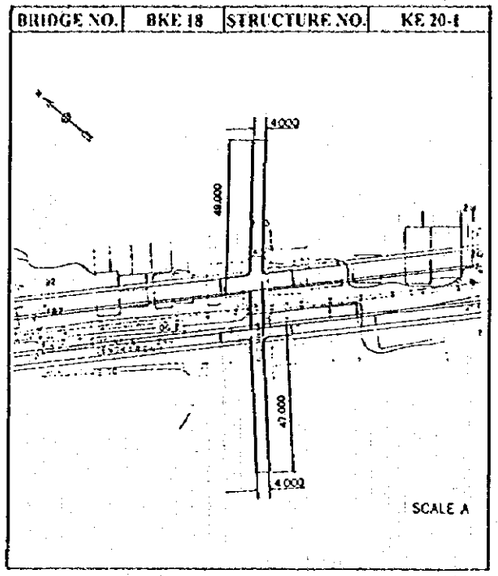
Bridge No.	BKE 16				
Bridge Width (m)	Carriageway	1.900	Elevation (m)	Bridge	3.034
	OTHERS	2 x 0.30		Road	1.870
	Total	2.50		Difference	2.164
Approach Road (Length, m)	Trunk Line		Stair for Pedestrian (m)		8.60
	Branch Line		Type of Side Protection		WALL

BRIDGE NO. BKE 17 — STRUCTURE NO. KE 19



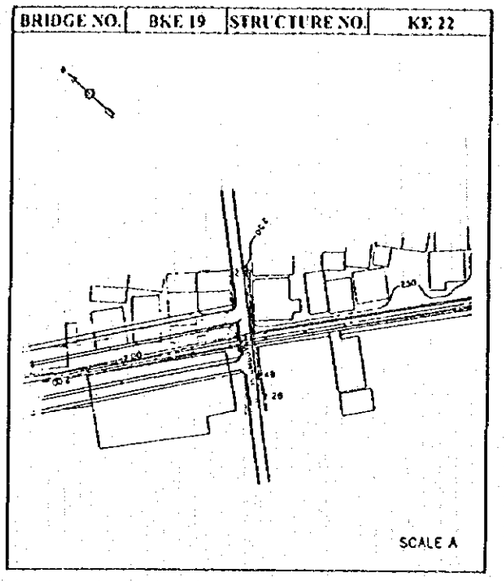
Bridge No.	BKE 17				
Bridge Width (m)	Carriageway	1.900	Elevation (m)	Bridge	4.070
	OTHERS	2 x 0.30		Road	2.170
	Total	2.30		Difference	1.900
Approach Road (Length, m)	Trunk Line		Stair for Pedestrian (m)		7.60
	Branch Line		Type of Side Protection		WALL

BRIDGE NO. BKE 18 — STRUCTURE NO. KE 20-1



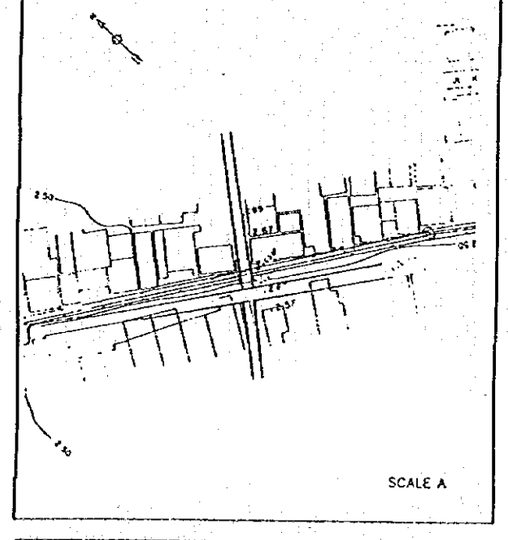
Bridge No.	BKE 18				
Bridge Width (m)	Carriageway	4.00	Elevation (m)	Bridge	4.198
	OTHERS	2 x 0.30		Road	2.650
	Total	4.60		Difference	2.148
Approach Road (Length, m)	Trunk Line	98.00	Stair for Pedestrian (m)		
	Branch Line		Type of Side Protection		R.W

BRIDGE NO. BKE 19 — STRUCTURE NO. KE 22



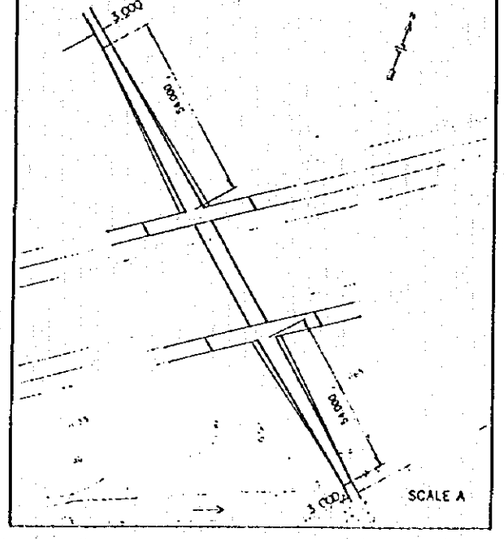
Bridge No.	BKE 19				
Bridge Width (m)	Carriageway	4.00	Elevation (m)	Bridge	2.380
	OTHERS	2 x 0.30		Road	2.380
	Total	4.60		Difference	0.000
Approach Road (Length, m)	Trunk Line		Stair for Pedestrian (m)		
	Branch Line		Type of Side Protection		

BRIDGE NO. BKE 20 — STRUCTURE NO. KE 24-1



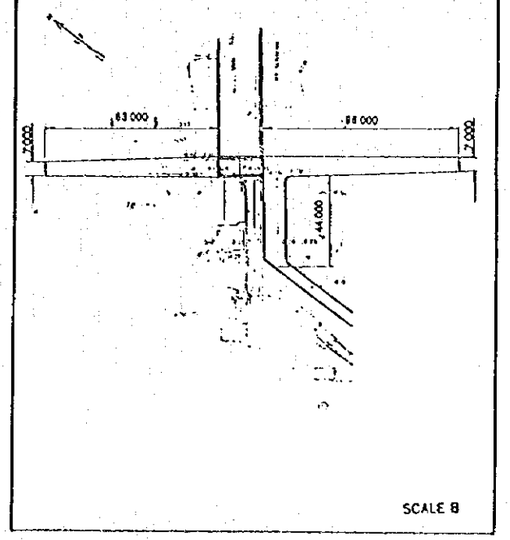
Bridge No.	BKE 20				
Bridge Width (m)	Carriageway	4.00	Elevation (m)	Bridge	2.630
	OTHERS	2 x 0.30		Road	2.930
	Total	4.60		Difference	0.000
Approach Road (Length, m)	Trunk Line		Stair for Pedestrian (m)		
	Branch Line		Type of Side Protection		

BRIDGE NO. BTM 1 — STRUCTURE NO. TM 1



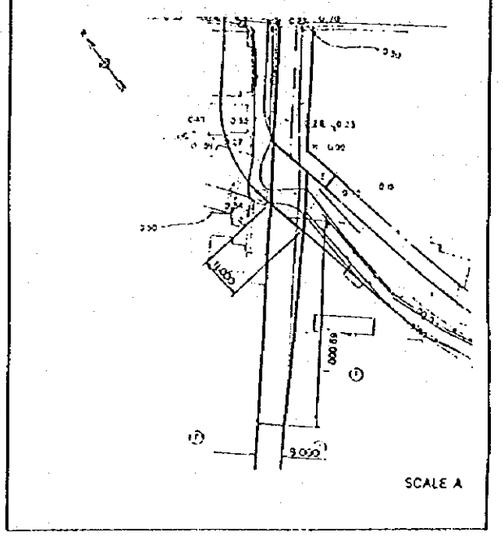
Bridge No.	BTM 1				
Bridge Width (m)	Carriageway	5.40	Elevation (m)	Bridge	2.308
	OTHERS	2 x 0.50		Road	0.349
	Total	6.40		Difference	1.968
Approach Road (Length, m)	Trunk Line	108.00	Stair for Pedestrian (m)		
	Branch Line		Type of Side Protection		SP

BRIDGE NO. BTM 3 — STRUCTURE NO. TM 3-4



Bridge No.	BTM 3				
Bridge Width (m)	Carriageway	10.00	Elevation (m)	Bridge	2.373
	OTHERS	2 x 0.30		Road	0.430
	Total	10.60		Difference	1.943
Approach Road (Length, m)	Trunk Line	174.00	Stair for Pedestrian (m)		
	Branch Line	14.00	Type of Side Protection		R.W

BRIDGE NO. BTM 4 — STRUCTURE NO. TM 5



Bridge No.	BTM 4				
Bridge Width (m)	Carriageway	14.00	Elevation (m)	Bridge	2.375
	OTHERS	2 x 0.60		Road	0.310
	Total	15.20		Difference	2.065
Approach Road (Length, m)	Trunk Line	69.00	Stair for Pedestrian (m)		
	Branch Line		Type of Side Protection		R.W

SCALE A 0 20 40 60 80 100m

SCALE B 0 30 60 90 120 150m

REFERENCE

DWG NO.

PREPARED .....
CHECKED .....
SUBMITTED .....
DATE .....

MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF HUMAN SETTLEMENTS

JAPAN INTERNATIONAL COOPERATION AGENCY
THE DETAILED DESIGN FOR URBAN DRAINAGE PROJECT IN THE CITY OF JAKARTA

TITLE OF DRAWING
APPROACH ROAD -4
(BKE-16,-17,-18,-19,-20,BTM-1,-3,-4)

DWG NO
J - 80 - 10 - 004

APPROVED

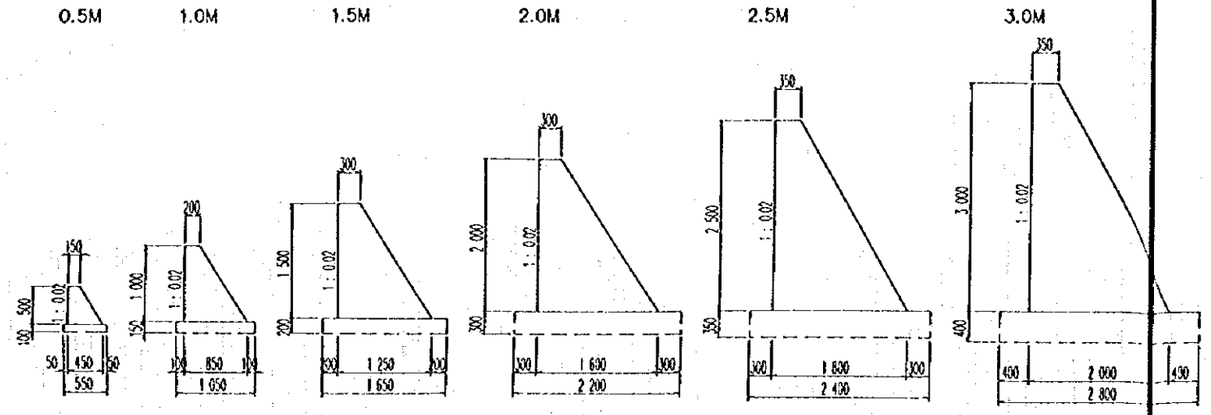
DATE

SUBSIDIARY WORK OF ACCESS ROAD

SCALE A

RETAINING WALL
SECTION

0.5M 1.0M 1.5M 2.0M 2.5M 3.0M



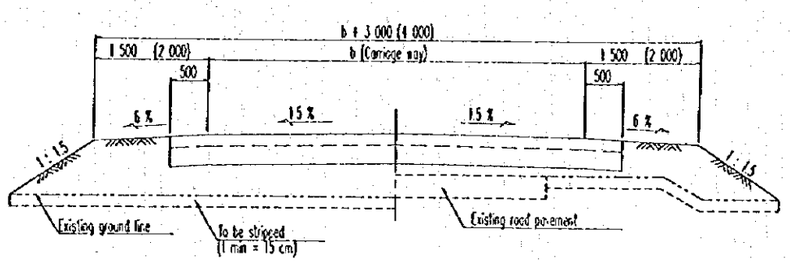
Bill of Quantities per one meter

Height (m)	Inclination	Backfilling	Retaining wall	
			Concrete (m^3)	Formwork (m^2)
0.50	0.02	Sandy soil	0.150	1.078
1.00			0.525	2.182
1.50			1.163	3.260
2.00			1.900	4.368
2.50			2.688	5.366
3.00			3.825	6.434

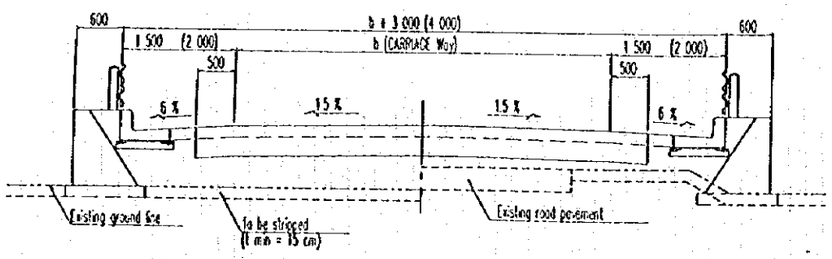
REMARKS

1) Retaining Wall of Access Road is to be selected among there standards standards corresponding to each height
2) drainage holes are properly implemented with the engineer's indication.
3) Sealing joints shall be provied at less than intervals

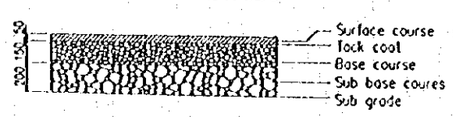
SLOPE PROTECTION
SLOPE TYPE IN FIELD AREA



RETAINING WALL IN RESIDENT AREA

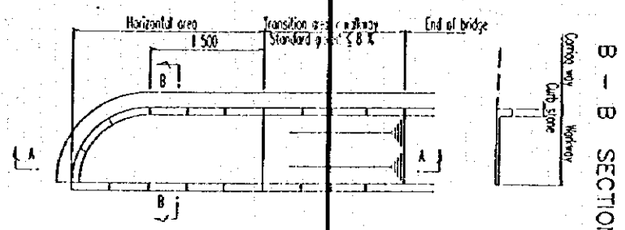


PAVEMENT DETAILS

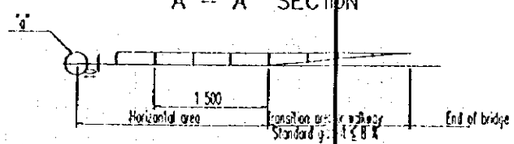


SCALE A 0 1 2 3 4m
SCALE B 0 0.4 0.8 1.2 1.6 2m
SCALE C 0 0.2 0.4 0.6 0.8 1m

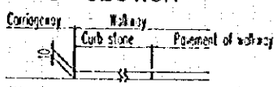
TRANSITION DETAIL



A -- A SECTION

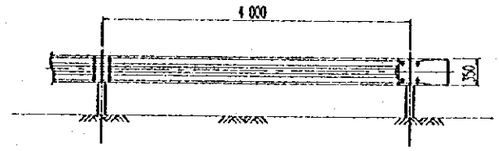


"a" SECTION



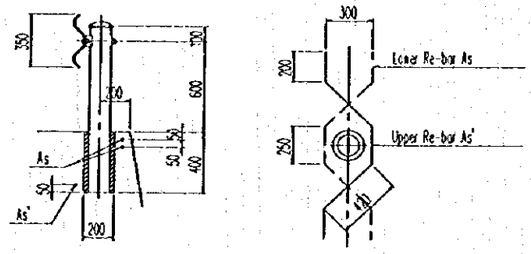
B - B SECTION

GUARD RAIL
SIDE VIEW



RE-BAR ARRANGEMENT

SCALE B



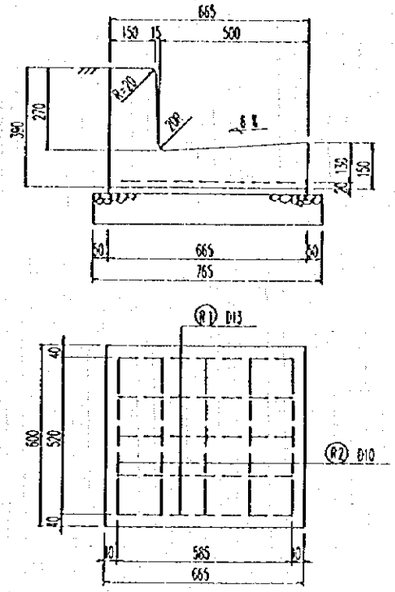
Re-bar diameter		Re-bar weight per 10 pices
As	As'	
2D16	2D13	76.16 kg

REMARKS

1) Posts are constructed at 4m intervals
2) Products of manufacture can be used after the engineer approvals

DRAINAGE BLOCK

SCALE C



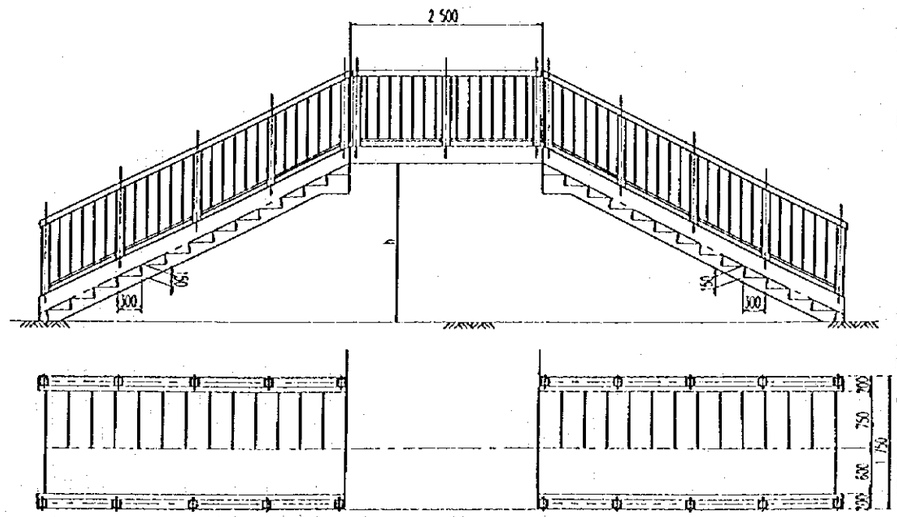
Bill of Quantites per 10m			
Basic material (m^2)	Number	Leveling mortar (m^3)	Filing mortar (m^3)
0.155	16.5	0.133	0.133

	Re-Bar per one block			
	Diameter	Length (mm)	Member	Weight (kg)
R1	D13	565	5	2.940
R2				

REMARKS

1) Concrete strength : σ_{ck} = 240 kgf/cm

FOOT BRIDGE



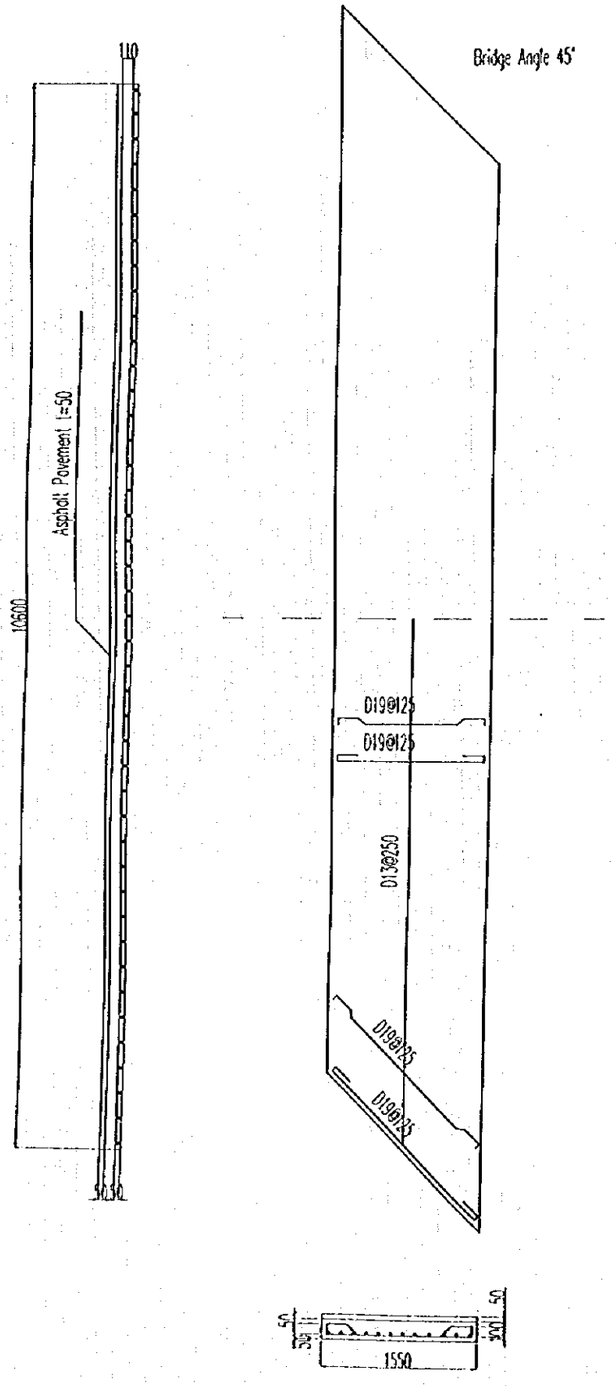
REFERENCE	DWG NO	PREPARED CHECKED SUBMITTED DATE	MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HUMAN SETTLEMENTS JAPAN INTERNATIONAL COOPERATION AGENCY THE DETAILED DESIGN FOR URBAN DRAINAGE PROJECT THE CITY OF JAKARTA

TITLE OF DRAWING	APPROVED
SUBSIDIARY WORK OF ACCESS ROAD	
DWG NO S-80-10-009	DATE

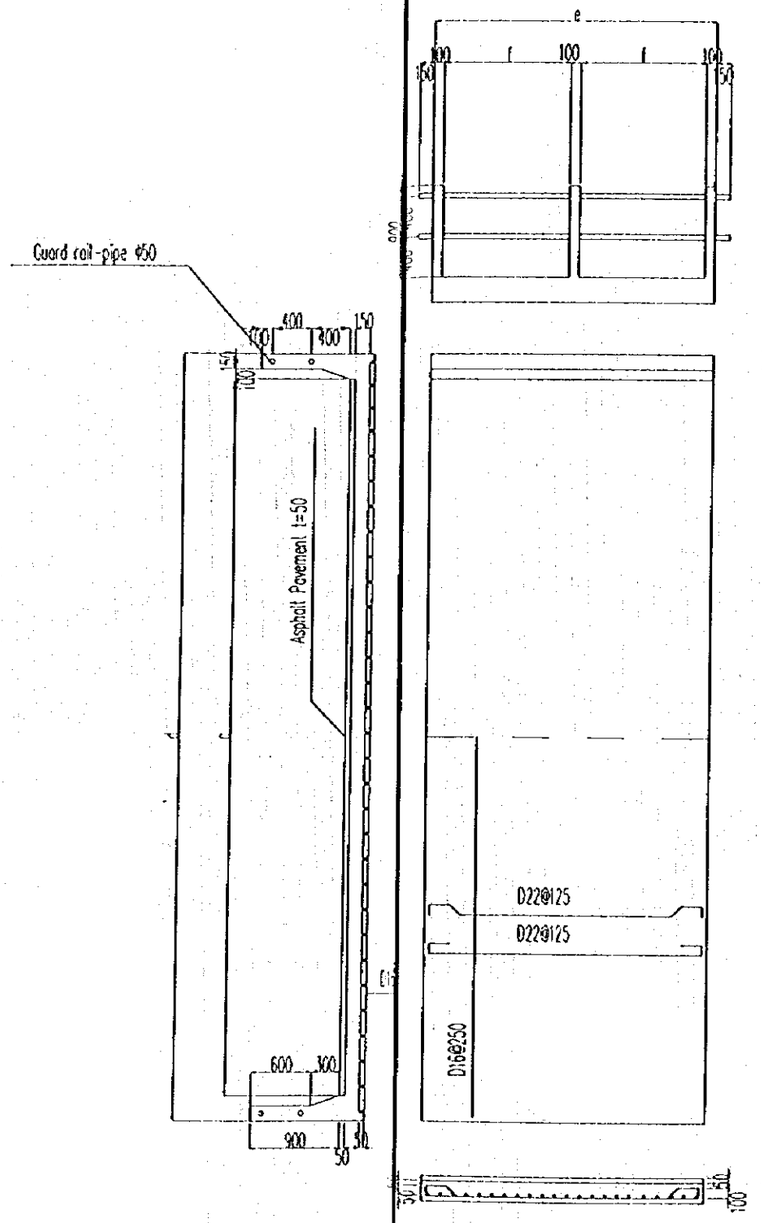
PLATE NO. 152

IN-SITU BRIDGE BMM1-16,BNM1-4,BKE19,20
RE-BAR ARRANGEMENT OF SUPER STRUCTURE

BMM12



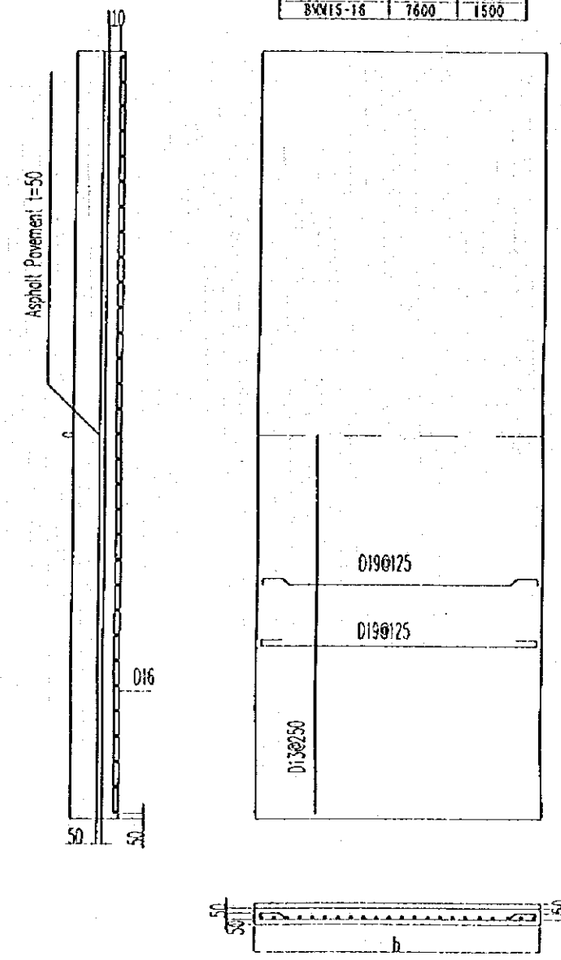
BMM13,14,BNM1-4,BKE19,20



	c	d	e	f
BMM13,14	7100	7600	2500	1100
BNM1-4	7700	8200	2500	1100
BKE19,20	4100	7600	2300	1000

BMM1-11,15,16

	a	b
BMM1,7	7600	1800
BMM2-6	9000	1800
BMM8-11	7600	1550
BMM15-16	7600	1500



REFERENCE	DWG NO

PREPARED
CHECKED
SUBMITTED
DATE

MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF HUMAN SETTLEMENTS

JAPAN INTERNATIONAL COOPERATION AGENCY
THE DETAILED DESIGN FOR URBAN DRAINAGE PROJECT IN THE CITY OF JAKARTA

TITLE OF DRAWING
IN-SITU SLAB BRIDGE

DWG NO.
J-90-10-001

APPROVED

DATE

Description	Quantity
KEY EVENT	
PREPARATORY WORKS	
1. Temporary Buildings	L.S.
2. Temporary Facilities	L.S.
KAMAL DRAINAGE CHANNEL (MAIN)	
I Section BP-KM15+0m (Stage II)	1,392 lin.m
Channel excavation,BP-KM15+0m	1,392 lin.m
Levee,Right,KM00+73m-KM14+23m	1,289 lin.m
Levee,Left,KM01+16m-KM14+23m	1,223 lin.m
Bridge BKM-1 at KM05-1m,3-span,Roadway	14.9m(S)x9.0m(W)
II Section KM15+0m-KM21+0m (Stage II)	313 lin.m
Channel excavation,KM18+0m-KM21+0m	313 lin.m
Levee,Right,KM18+23m-KM21+0m	290 lin.m
Revetment I,Left,KM18+37m-KM18+13m	145 lin.m
Revetment II,Left,KM18+13m-KM21+0m	160 lin.m
Sluiceway SKM-1R at KM17-20m w/side gate,2-lane	1.1m(W)x4.362m(L)
Sluiceway SKM-1L at KM20+16m w/side gate,1-lane	1.2m(W)x9.871m(L)
Bridge BKM-3 at KM20-3m,3-span,Roadway	13.35m(S)x7.0m(W)
III Section KM21+0m-KM26+0m (Stage II)	436 lin.m
Channel excavation,KM21+0m-KM26+0m	436 lin.m
Levee,Right,KM21+0m-KM26+0m	436 lin.m
Revetment II,Left,KM21+0m-KM26+0m	436 lin.m
Sluiceway SKM-2R at KM21+6m w/side gate,1-lane	1.2m(W)x4.331m(L)
Sluiceway SKM-2L at KM24+35m w/side gate,1-lane	1.1m(W)x6.564m(L)
IV Section KM26+0m-KM40+32m (Stage II)	992 lin.m
Channel excavation,KM26+0m-KM40+32m	992 lin.m
Levee,Right,KM26+0m-KM35+136m	814 lin.m
Levee,Right,KM38+90m-KM40+32m	67 lin.m
Levee,Left,KM26+0m-KM35+141m	803 lin.m
Parapet wall,Left,KM35+141m-KM40+32m	195 lin.m
Revetment I,Right,KM35+107m-KM40+32m	229 lin.m
Revetment I,Left,KM32+61m-KM40+32m	486 lin.m
Sluiceway SKM-3L at KM26+2m w/side gate,1-lane	1.5m(W)x0.300m(L)
Sluiceway SKM-3R at KM27+42m w/side gate,1-lane	1.3m(W)x4.264m(L)
Sluiceway SKM-4L at KM29+19m w/side gate,1-lane	0.8m(W)x8.309m(L)
Sluiceway SKM-5L at KM31+56m w/side gate,1-lane	1.0m(W)x6.326m(L)
Sluiceway SKM-6L at KM38+3m w/side gate,1-lane	1.0m(W)x5.700m(L)
Sluiceway SKM-4R at KM40+32m w/side gate,1-lane	0.8m(W)x3.682m(L)
Bridge BKM-4 at KM31-1m,3-span,Pedestrian	13.1m(S)x1.9m(W)
Bridge BKM-5 at KM36-31m,4-span,Roadway	14.15m(S)x7.0m(W)
Bridge BKM-8 at KM40+0m,3-span,Pedestrian	12.15m(S)x1.9m(W)
V Section KM40+32m-KM48+0m (Stage II)	542 lin.m
Channel excavation,KM40+32m-KM48+0m	542 lin.m
Levee,Right,KM40+32m-KM45+2m	298 lin.m
Relocation road,Right,KM45+2m-KM46+30m	101 lin.m
Parapet wall,Left,KM40+32m-KM43+54m	285 lin.m
Levee,Left,KM45+2m-KM48+0m	229 lin.m
Revetment I,Right,KM40+32m-KM45+2m	298 lin.m
Revetment I,Left,KM40+32m-KM45+2m	298 lin.m
Revetment II,Right,KM45+2m-KM47+71m	234 lin.m
Sluiceway SKM-7L at KM42+7m w/side gate,1-lane	0.7m(W)x5.700m(L)
Sluiceway SKM-5R at KM45+6m w/side gate,1-lane	0.8m(W)x5.544m(L)
Sluiceway SKM-8L at 46+35m w/side gate,1-lane	1.0m(W)x8.426m(L)
Bridge BKM-7 at KM42+0m,3-span,Pedestrian	12.15m(S)x1.9m(W)
Bridge BKM-8 at KM45-1m,3-span,Roadway	12.5m(S)x7.0m(W)
VI Section KM48+0m-KM57+0m (Stage III)	783 lin.m
Channel excavation,KM48+0m-KM57+0m	783 lin.m
Levee,Left,KM48+0m-KM48+122m	121 lin.m
Inspection road,Right,KM48+131m-KM57+0m	632 lin.m
Revetment II,Right,KM48+0m-KM57+0m	783 lin.m
Revetment I,Left,KM48+121m-KM54+0m	268 lin.m
Sluiceway SKM-6R at KM50+31m w/side gate,1-lane	0.8m(W)x5.542m(L)
Sluiceway SKM-7R at KM54-26m w/side gate,1-lane	1.0m(W)x8.536m(L)
Bridge BKM-10 at KM50-5m,3-span,Roadway	11.9m(S)x7.0m(W)
Bridge BKM-11 at KM54-4m,3-span,Roadway	11.9m(S)x7.0m(W)

Description	Quantity
KAMAL DRAINAGE CHANNEL (BRANCH)	
I Section KE00+0m-KE10+2m (Stage III)	825 lin.m
Channel excavation, KE00+0m-KE10+2m	828 lin.m
Inspection road,Right,KE01+0m-KE10+2m	595 lin.m
Revetment II,Right,KE00+0m-KE04+70m	443 lin.m
Revetment II,Left,KE00+8m-KE02+50m	176 lin.m
Revetment I,Right,KE04+70m-KE10+2m	185 lin.m
Revetment II,Left,KE08+42m-KE10+2m	19 lin.m
Culvert CKE-1R at KE01+5m w/o gate,1-lane	0.8m(W)x2.100m(L)
Sluiceway SKE-1L at KE01+5m w/side gate,1-lane	0.8m(W)x0.300m(L)
Bridge BKE-1 at KE01-1m,2-span,Roadway	8.4m(S)x2.4m(L)
Bridge BKE-2 at KE07-24m,2-span,Roadway	8.4m(S)x4.0m(L)
Bridge BKE-3 at KE10-2m,2-span,Roadway	8.4m(S)x5.4m(L)
II Section KE10+2m-KE21+34m (Stage III)	903 lin.m
Channel excavation, KE10+7m-KE21+34m	903 lin.m
Revetment heightening,Right,KE12+48m-KE20+36m	824 lin.m
Revetment II,Left,KE10+2m-KE23+0m	908 lin.m
Revetment II,Right,KE20+36m-KE23+4m	83 lin.m
Sluiceway SKE-2L at KE12-32m w/flap gate,1-lane	0.4m(W)x0.300m(L)
Sluiceway SKE-3L at KE13+0m w/flap gate,1-lane	0.4m(W)x0.300m(L)
Culvert CKE-1L at KE15-8m w/o gate,1-lane	0.8m(W)x7.100m(L)
Ditch DKE-1L at KE18+54m w/o gate,1-lane	0.8m(W)x3.300m(L)
Ditch DKE-2L at KE21-37m w/o gate,1-lane	0.6m(W)x3.000m(L)
Sluiceway SKE-1R at KE21+5m w/side gate,1-lane	0.8m(W)x0.300m(L)
Bridge BKE-4 at KE12+2m,2-span,Roadway	8.4m(S)x5.4m(W)
Bridge BKE-5 at KE14+1m,2-span,Roadway	8.4m(S)x5.4m(W)
Bridge BKE-6 at KE15+0m,2-span,Roadway	8.4m(S)x4.0m(W)
Bridge BKE-7 at KE16-2m,2-span,Roadway	8.4m(S)x5.4m(W)
Bridge BKE-8 at KE17+6m,2-span,Pedestrian	8.4m(S)x1.9m(W)
Bridge BKE-9 at KE18-2m,2-span,Roadway	8.4m(S)x4.0m(W)
Bridge BKE-10 at KE20-2m,2-span,Roadway	7.3m(S)x5.4m(W)
Bridge BKE-11 at KE21+2m,2-span,Roadway	7.3m(S)x4.0m(W)
III Section KE21+34m-KE30+5m (Stage III)	772 lin.m
Channel excavation, KE21+34m-KE30+4m	772 lin.m
Levee,Right,KE23+4m-KE30+5m	762 lin.m
Levee,Left,KE23+0m-KE30+5m	766 lin.m
Revetment I,Right,KE23+4m-KE30+5m	762 lin.m
Revetment I,Left,KE23+0m-KE30+5m	766 lin.m
Sluiceway SKE-2R at KE25-5m w/side gate,1-lane	0.9m(W)x5.557m(L)
Sluiceway SKE-4L at KE25-5m w/side gate,1-lane	0.8m(W)x3.557m(L)
Bridge BKE-13 at KE23-3m,2-span,Roadway	7.3m(S)x7.0m(W)
Bridge BKE-14 at KE25+1m,2-span,Roadway	7.3m(S)x2.4m(W)
Bridge BKE-15 at KE26+1m,2-span,Roadway	7.3m(S)x2.4m(W)
Bridge BKE-16 at KE26+31m,2-span,Pedestrian	7.3m(S)x1.9m(W)
Bridge BKE-17 at KE27-36m,2-span,Pedestrian	7.3m(S)x1.9m(W)
Bridge BKE-18 at KE28+2m,2-span,Roadway	7.3m(S)x4.0m(W)
Bridge BKE-19 at KE30+3m,Roadway,In-situ	3.8m(S)x4.0m(W)
IV Section KE30+5m-KE33+0m (Stage III)	452 lin.m
Channel excavation, KE30+5m-KE33+0m	452 lin.m
Concrete ditch,KE30+5m-KE33+0m	452 lin.m
Sluiceway SKE-5L at KE31-43m w/flap gate,1-lane	0.4m(W)x0.300m(L)
Sluiceway SKE-3R at KE31+0m w/flap gate,1-lane	0.4m(W)x0.300m(L)
Bridge BKE-20 at KE32-4m,Roadway,In-situ	3.8m(S)x4.0m(W)

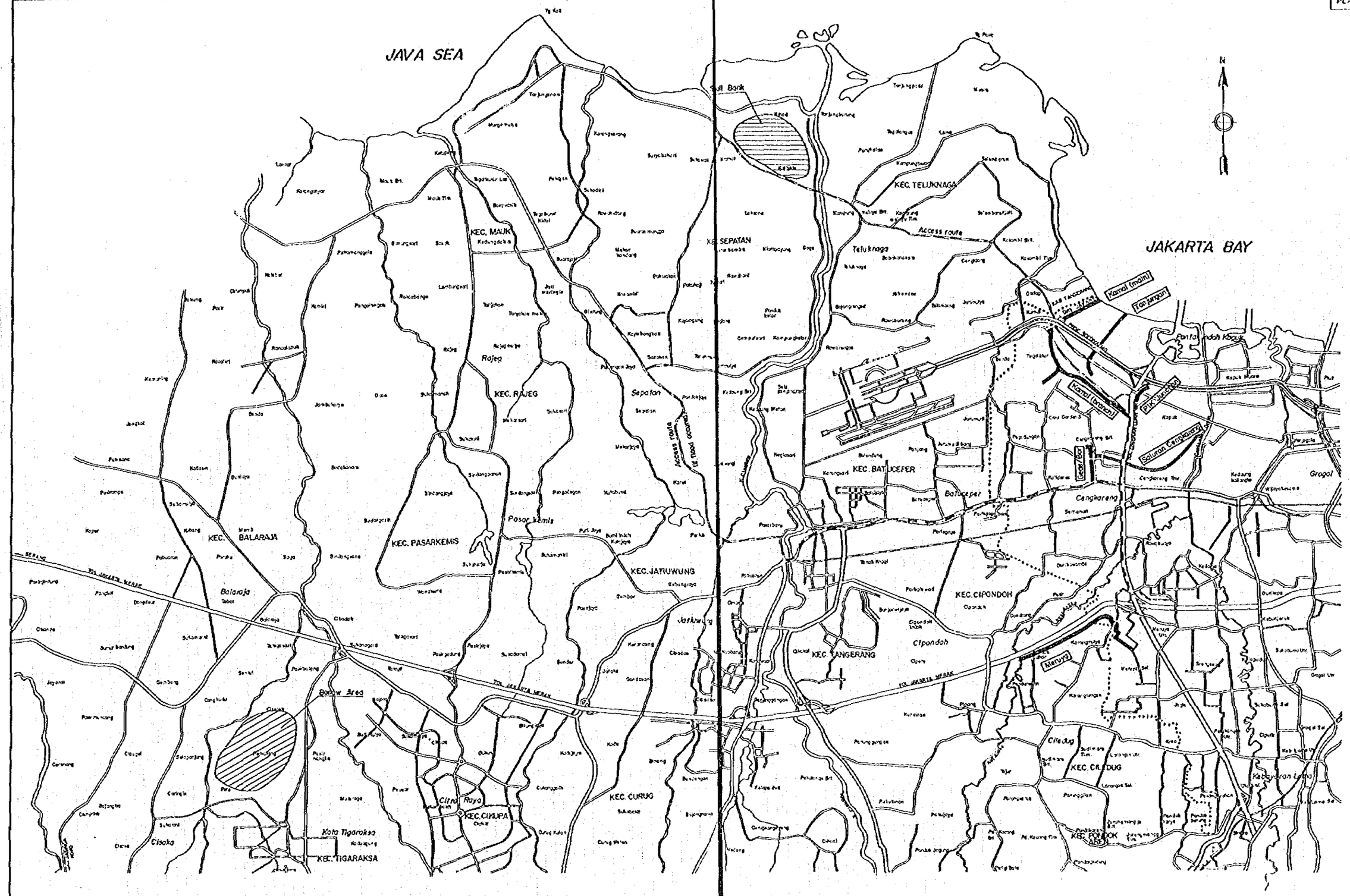
Note: Rainy season ; November – April

REFERENCE	DWG NO.	PREPARED	MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HUMAN SETTLEMENTS	TITLE OF DRAWING CONSTRUCTION TIME SCHEDULE, PACKAGE I
		CHECKED		
		SUBMITTED	JAPAN INTERNATIONAL COOPERATION AGENCY THE DETAILED DESIGN FOR URBAN DRAINAGE PROJECT IN THE CITY OF JAKARTA	DWG NO. J-95-00-001
		DATE		

APPROVED

DATE

PLATE NO. 154

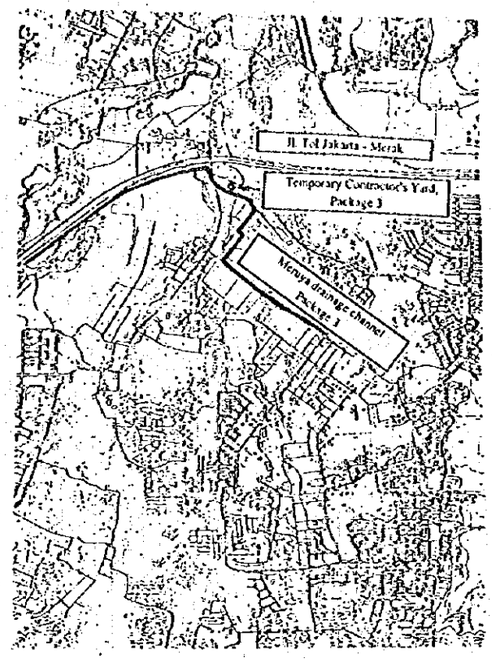


REFERENCE	DRG NO.	PREPARED	MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HUMAN SETTLEMENTS	TITLE OF DRAWING LOCATION MAP OF BORROW AREA AND SPOIL BANK
		CHECKED		
		SUBMITTED	JAPAN INTERNATIONAL COOPERATION AGENCY THE DETAILED DESIGN FOR URBAN DRAINAGE PROJECT IN THE CITY OF JAKARTA	DWG NO J-95-10-001
		DATE		

APPROVED

DATE

Cengkareng West Area



Meruyo Area

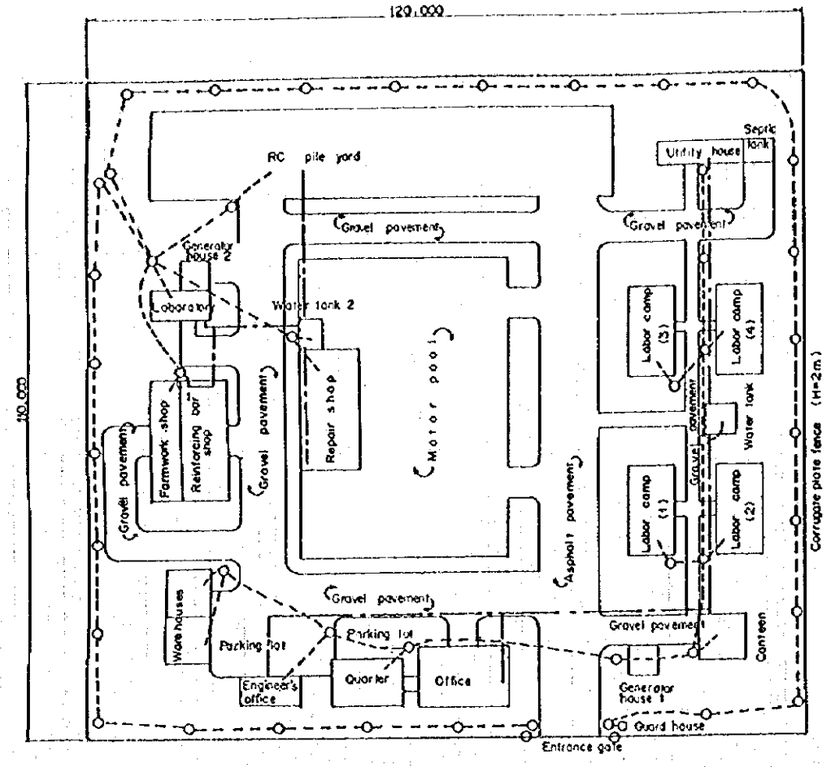
Note:

1. Temporary Contractor's Yard, Package 1.(13,200 m^2)
   for – Kamal drainage channel (main), and
   – Kamal drainage channel (branch)
2. Temporary Contractor's Yard, Package 2.(13,200 m^2)
   for – Tanjungan drainage channel, and
   – PIK Junction drainage channel
3. Temporary Contractor's Yard, package 3.(13,200 m^2 & 1,000 m^2)
   for – Gede/Bor drainage channel,
   – Saluran Cengkareng drainage channel, and
   – Meruya drainage channel

*Temporary Contractor's Yard contains office, quarter, labor camp, motor pool, repair shop, warehouse, work shop, guard house, laboratory and facilities such as telecommunication system, water supply and sewage system and power supply system.

REFERENCE	DWG NO.	PREPARED ..... CHECKED ..... SUBMITTED ..... DATE	MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HUMAN SETTLEMENTS JAPAN INTERNATIONAL COOPERATION AGENCY THE DETAILED DESIGN FOR URBAN DRAINAGE PROJECT IN THE CITY OF JAKARTA

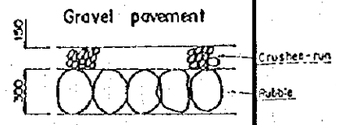
TITLE OF DRAWING LOCATION MAP OF CONTRACTOR'S TEMPORARY YARD	APPROVED
DWG NO J-95-20-001	DATE



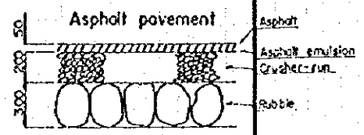
GENERAL LAYOUT OF TEMPORARY CONTRACTOR'S YARD
Scale A

LEGEND

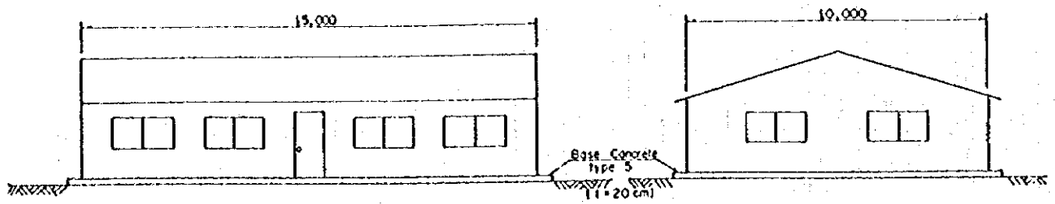
- Water distribution pipe (underground)
- Electric power distribution line
- Electric pole



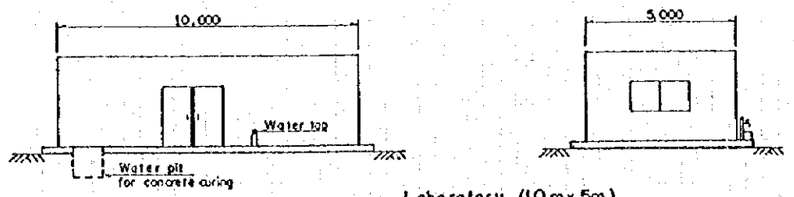
Scale C



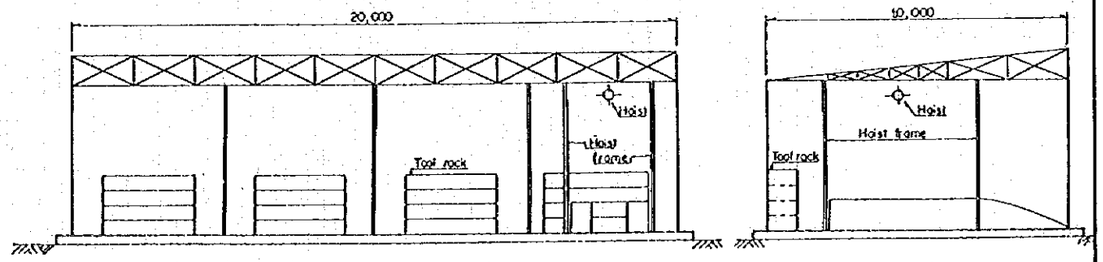
Scale C



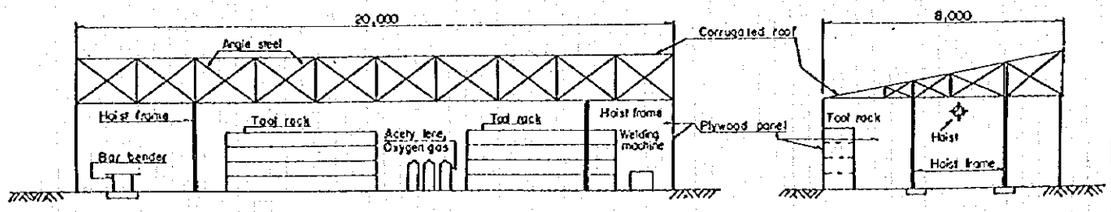
Contractor's office (15m x 10m)
Scale B



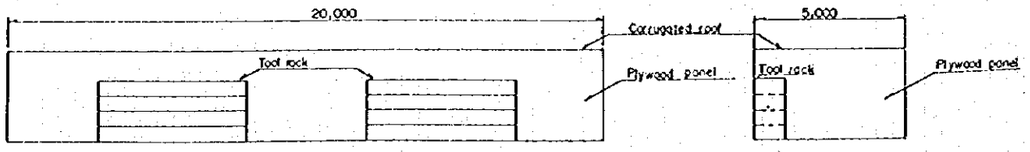
Laboratory (10m x 5m)
Scale B



Repair shop (20m x 10m)
Scale B



Reinforcing bar shop (20m x 8m)
Scale B



Formwork shop (20m x 5m)
Scale B

SCALE A 1:500 0 25 50 m

SCALE B 1:100 0 5 10 m

SCALE C 1:20 0 1 2 m

Feature of Buildings

Building	Dimension (m)			Nos.	Area (sq.m)	Material		Facility / Remarks
	Length	Width	Height			Roof	Wall	
ce	15	10	4	1	150	Wood	Brick	Office equipment and furniture
neer's office	10	5	4	1	50	Wood	Brick	Office equipment and furniture
ter	12	8	4	1	95	Wood	Brick	Furniture
r camp	15	8	4	4	480	Wood	Wood	Furniture
teen	8	7.5	3	1	60	Wood	Wood	Furniture
ity house	15	4	3	1	60	Wood	Brick	Washroom with shower and septic tank
d house	2	2	3	1	4	Wood	Brick	Furniture
ratory	10	5	3	1	50	Corrugate plate	Plywood panel	Testing equipment
house	8	7.5	3	2	120	Wood	Wood	Rack and base plate
air shop	20	10	5	1	200	Corrugate plate	Plywood panel	Hoist, 3ton : 3 m span x 5m (L)
r shop	20	8	3	1	160	Corrugate plate	Plywood panel	Hoist, 0.5ton : 3 m span x 13m (L)
work shop	20	5	3	1	100	Corrugate plate	Plywood panel	Tool rack
rator house	5	5	3	2	50	Wood	Brick	Cooler
Total					1,580			

Water Demand

Facility	Water supply
System 1	
1 Office	600 lit./day
2 Engineer's office	100 lit./day
3 Quarter	600 lit./day
4 Canteen	3,000 lit./day
5 Utility house	9,600 lit./day
Total	13,900 lit./day
Peak factor	1.5 times
Operation	24 hrs/day
Demand	14 lit./min.
System 2	
1 Laboratory	20 lit./min.
2 Repair shop	30 lit./min.
3 R-bar shop	10 lit./min.
4 Formwork shop	5 lit./min.
5 RC pile yard	10 lit./min.
Total, munite basi	75 lit./min.
Peak	1.5 times
Demand	113 lit./min.

Power Demand

Facility	Power supply
System 1	
1 Office	12 kW
2 Engineer's office	5 kW
3 Quarter	8 kW
4 Labor camp	12 kW
5 Canteen	5 kW
6 Utility house	3 kW
7 Warehouse	1 kW
Total	46 kW
Peak factor	1.2 times
Demand Factor	0.7
Load Factor	0.8
Demand	48 kW
System 2	
1 Laboratory	12 kW
2 Repair shop	10 kW
3 R-bar shop	5 kW
4 Formwork shop	3 kW
RC pile yard	3 kW
Outdoor lighting	6 kW
Total	39 kW
Peak factor	1.2 times
Demand Factor	0.7
Load Factor	0.8
Demand	41 kW

NOTE : Temporary Contractor's yard is stripped (t= 50cm approx) and embanked by borrowed earth material in a thickness of 2m (approx)

REFERENCE

DWG NO.

PREPARED .....
CHECKED .....
SUBMITTED .....
DATE .....

MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF HUMAN SETTLEMENTS

JAPAN INTERNATIONAL COOPERATION AGENCY
THE DETAILED DESIGN FOR URBAN DRAINAGE PROJECT IN THE CITY OF JAKARTA

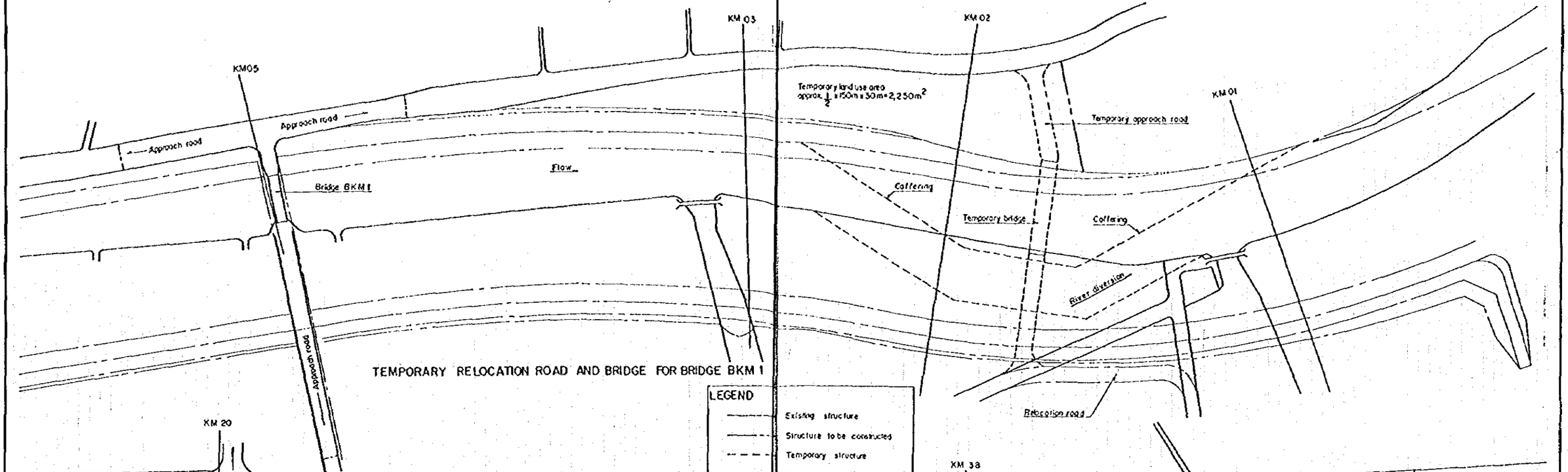
TITLE OF DRAWING
GENERAL LAYOUT PLAN OF CONTRACTOR'S TEMPORARY YARD

DWG NO.
J-95-20-002

APPROVED

DATE

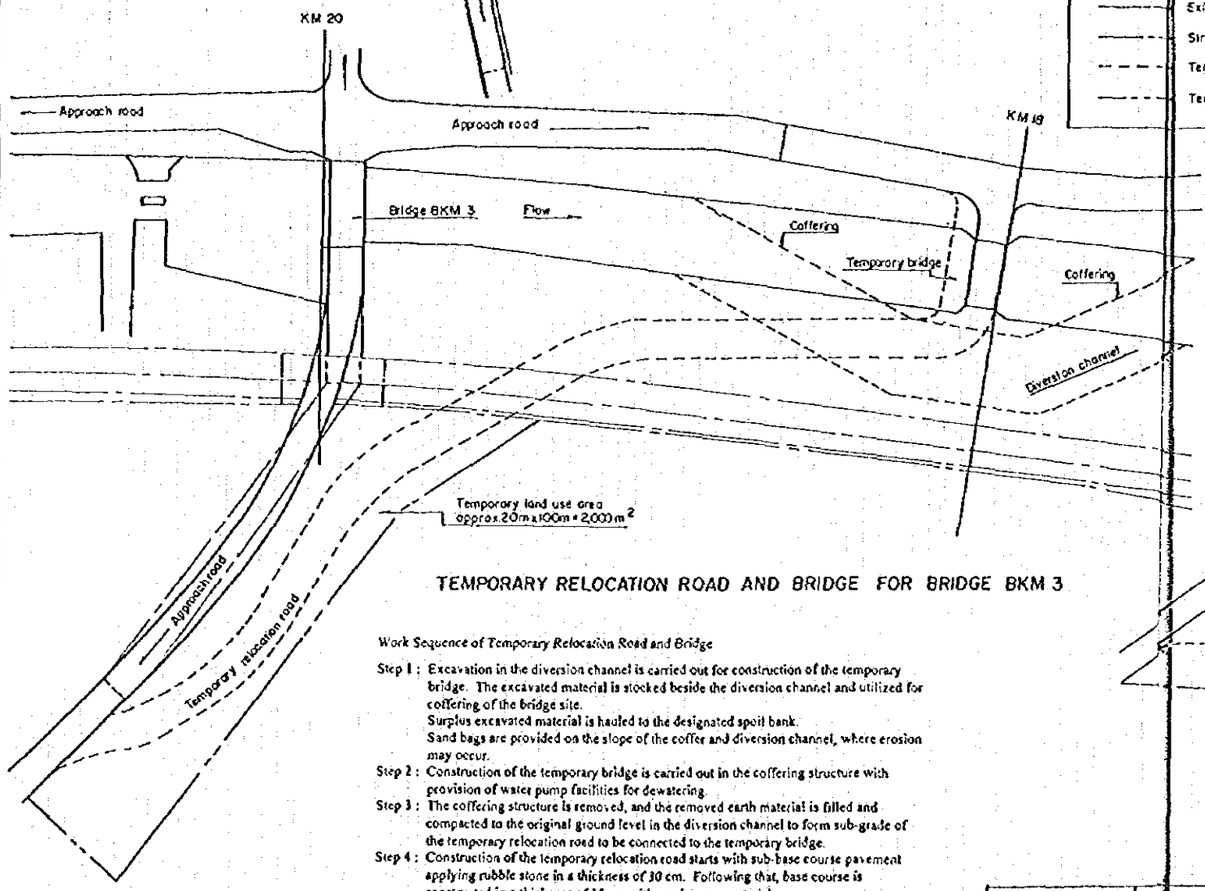
PLATE NO 157



TEMPORARY RELOCATION ROAD AND BRIDGE FOR BRIDGE BKM 1

LEGEND

- Existing structure
- Structure to be constructed
- Temporary structure
- Temporary land Boundary



TEMPORARY RELOCATION ROAD AND BRIDGE FOR BRIDGE BKM 3

Work Sequence of Temporary Relocation Road and Bridge

Step 1 : Excavation in the diversion channel is carried out for construction of the temporary bridge. The excavated material is stocked beside the diversion channel and utilized for coffering of the bridge site.
Surplus excavated material is hauled to the designated spoil bank.
Sand bags are provided on the slope of the coffer and diversion channel, where erosion may occur.

Step 2 : Construction of the temporary bridge is carried out in the coffering structure with provision of water pump facilities for dewatering.

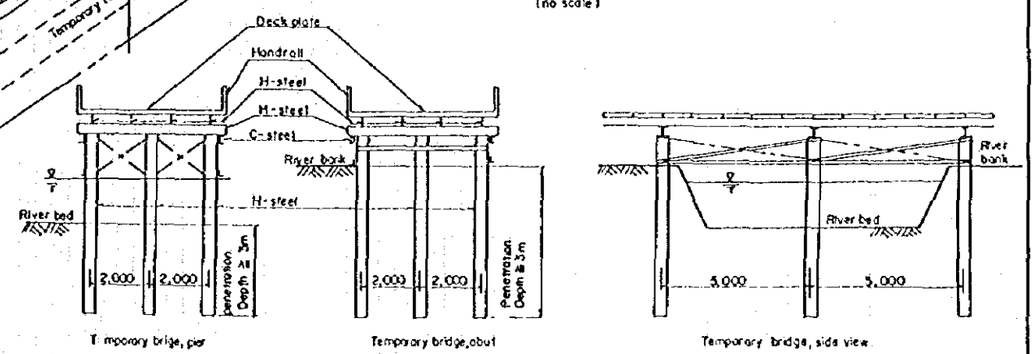
Step 3 : The coffering structure is removed, and the removed earth material is filled and compacted to the original ground level in the diversion channel to form sub-grade of the temporary relocation road to be connected to the temporary bridge.

Step 4 : Construction of the temporary relocation road starts with sub-base course pavement applying rubble stone in a thickness of 30 cm. Following that, base course is constructed in a thickness of 15 cm with crusher-run material.

Step 5 : Surface course pavement is carried out with hot-mix asphalt in a thickness of 5 cm only for the roads at Bridge BKM 3 and BKM 5 sites.

Step 6 : After construction of permanent bridges, removal of the temporary relocation road pavement is carried out.
Following that, the temporary bridge is removed after construction of coffering structure in a same manner as described in "Step 1" without provision of sand bags.

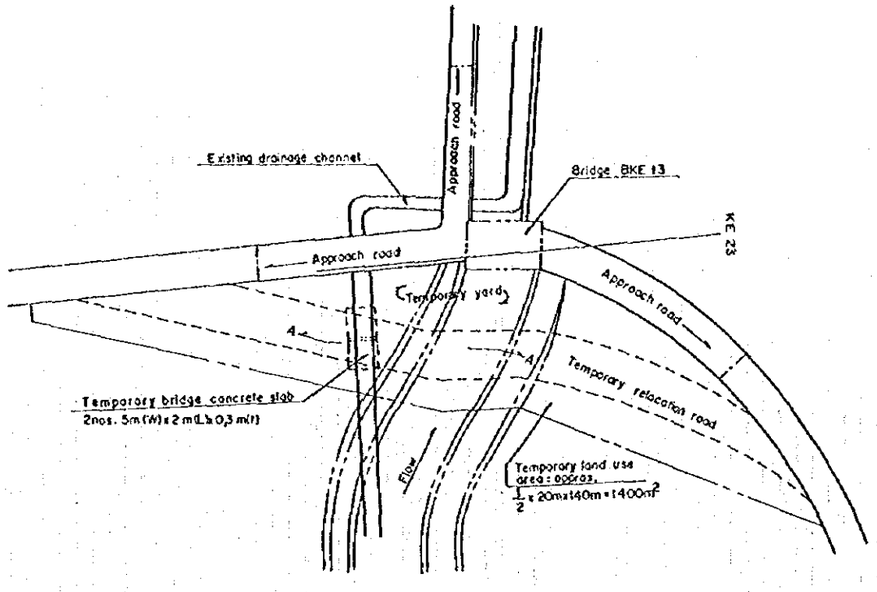
TEMPORARY BRIDGE AND RELOCATION ROAD FOR BRIDGE BKM 5
(no scale)



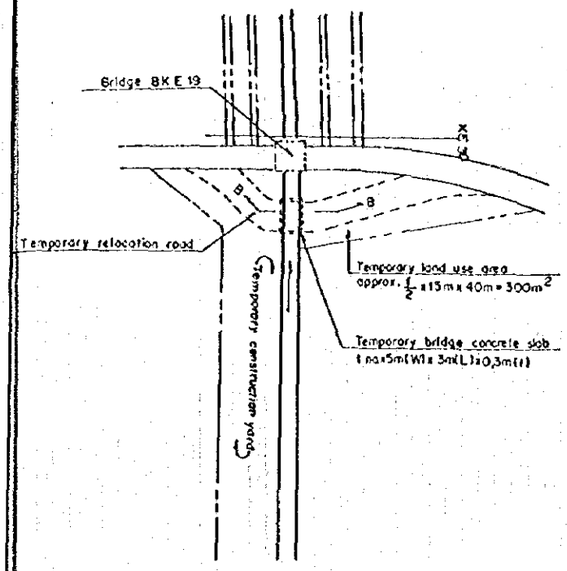
Temporary bridge, pier — Temporary bridge, abut — Temporary bridge, side view

TEMPORARY BRIDGE (no scale)

REFERENCE	DWG NO.	PREPARED ..... CHECKED ..... SUBMITTED ..... DATE	MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HUMAN SETTLEMENTS JAPAN INTERNATIONAL COOPERATION AGENCY THE DETAILED DESIGN FOR URBAN DRAINAGE PROJECT IN THE CITY OF JAKARTA	TITLE OF DRAWING TEMPORARY RELOCATION ROAD AND BRIDGE IN KAMAL DRAINAGE CHANNEL (MAIN) DWG NO. J-95-30-101	APPROVED DATE



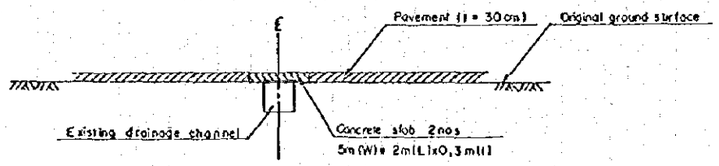
TEMPORARY RELOCATION ROAD AND BRIDGE FOR BRIDGE BKE 13



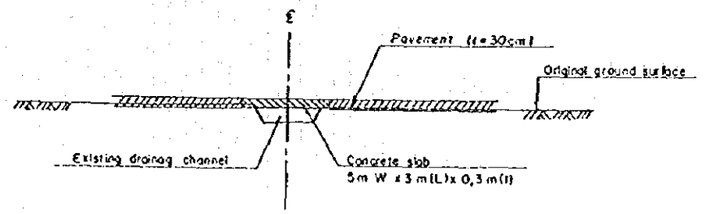
TEMPORARY RELOCATION ROAD AND BRIDGE FOR BRIDGE BKE 14

LEGEND

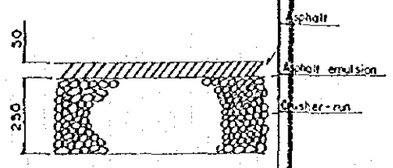
- Existing structure
- Structure to be constructed
- Temporary structure
- Temporary land boundary



SECTION A-A



SECTION B-B



Pavement for Temporary Relocation Road

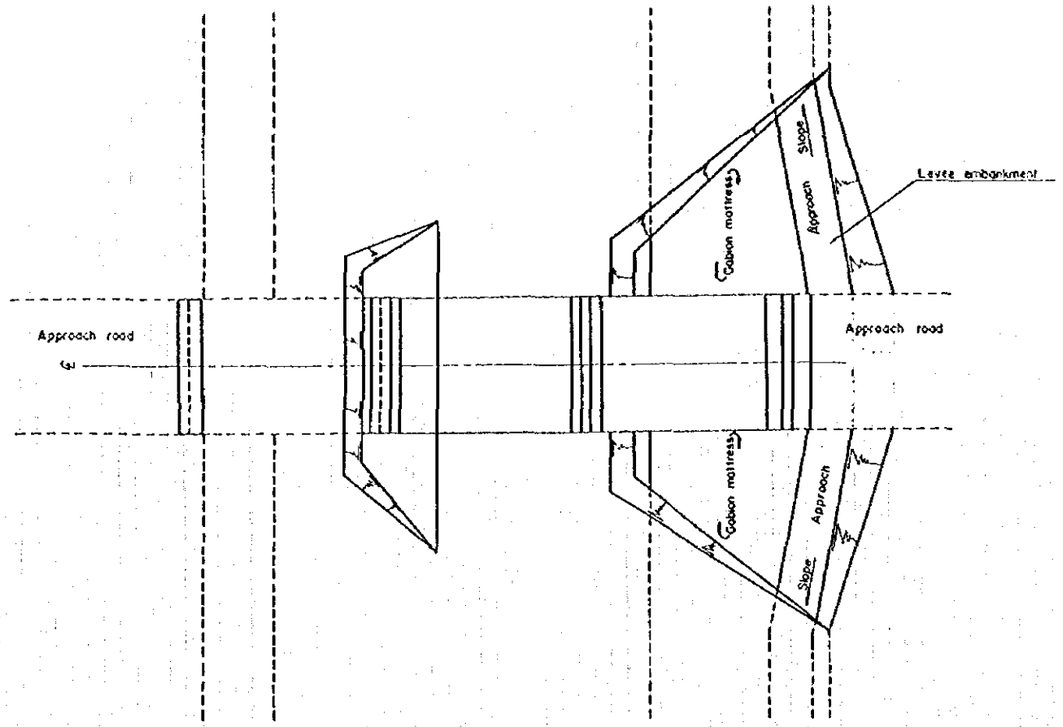
REFERENCE	NO.	PREPARED	MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HUMAN SETTLEMENTS
		CHECKED	
		SUBMITTED	JAPAN INTERNATIONAL COOPERATION AGENCY THE DETAILED DESIGN FOR URBAN DRAINAGE PROJECT IN THE CITY OF JAKARTA
		DATE	

TITLE OF DRAWING: TEMPORARY RELOCATION ROAD AND BRIDGE IN KAMAL DRAINAGE CHANNEL (BRANCH)

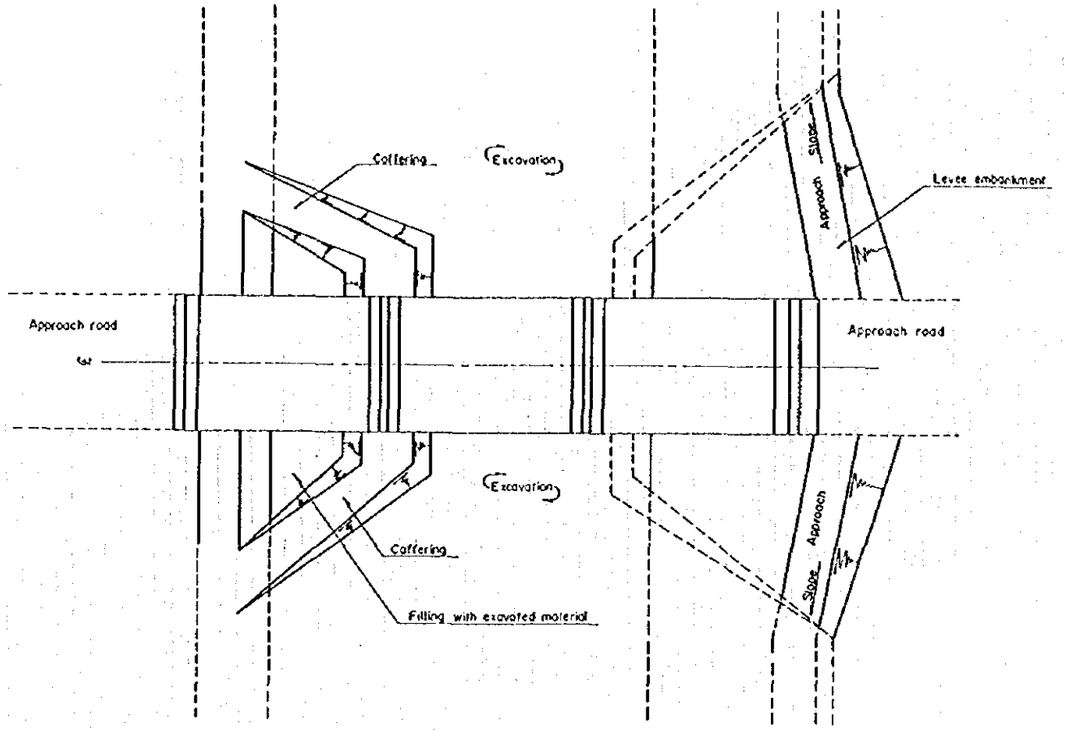
DWG NO. J-95-30-102

APPROVED

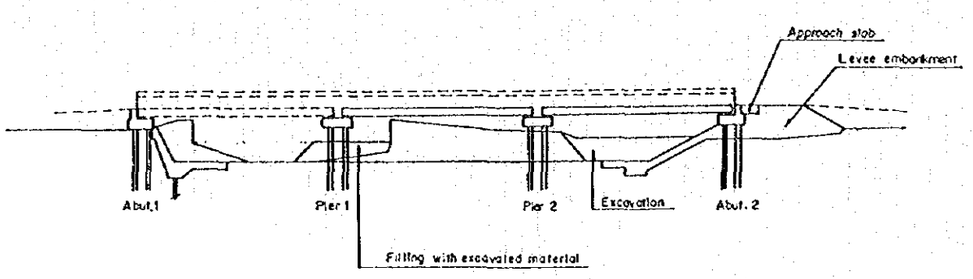
DATE



PLAN



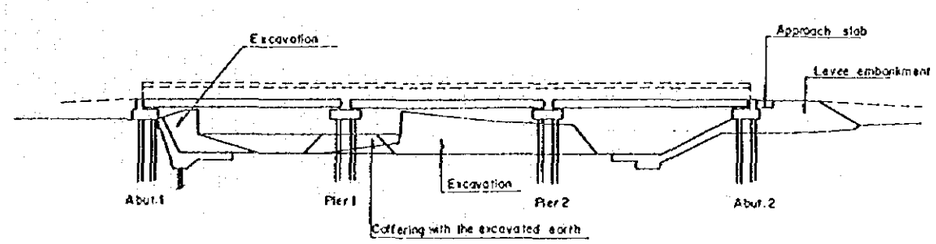
PLAN



PROFILE
CONSTRUCTION METHOD OF BRIDGE, 1ST STAGE

Work Sequence of Reconstruction of Bridge, 1st Stage

Step 1 : A PC pile is driven at Pier 2 as for test piling.
Step 2 : Excavation is carried out between Pier 2 and Abutment 2. On the same time, filling with the excavated earth material is carried out at Pier 1. Sand bags are provided on the filled slope, where erosion may occur.
Step 3 : Levee embankment and slope protectection by gabion mattress are carried out under the bridge at the Abutment 2.
Step 4 : PC piles are driven at all the foundations of substructures.
Step 5 : Concrete, type 2, is placed in those substructures, after installation of scaffolding with support and treatment of pile heads.
Step 6 : Erection of main girders is carried out between Pier 1 and Abutment 2.



PROFILE
CONSTRUCTION METHOD OF BRIDGE, 2ND STAGE

Work Sequence of Reconstruction of Bridge, 2nd Stage

Step 7 : Excavation is carried out between Pier 1 and Pier 2. On the same time, filling with the excavated earth is done between Abutment 1 and Pier 2.
Step 8 : Erection of main girders is carried out between Abutment 1 and Pier 1.
Step 9 : The filled earth material between Abutment 1 and Pier 1 is removed, and excavation is carried out in the river bank at Abutment 1. The filled earth material around Pier 1 is remained as a coffering structure.
Step 10 : Revetment on the river bank beside Abutment 1 is carried out.
Step 11 : The coffering structure is removed, and site clearance is done.

Note : Superstructures are constructed in parallel with the works described in the Step 7 to Step 11.

REFERENCE	NO.	PREPARED ..... CHECKED ..... SUBMITTED ..... DATE	MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HUMAN SETTLEMENTS JAPAN INTERNATIONAL COOPERATION AGENCY THE DETAILED DESIGN FOR URBAN DRAINAGE PROJECT IN THE CITY OF JAKARTA	TITLE OF DRAWING TEMPORARY WORKS FOR CONSTRUCTION OF BRIDGE WITH PIERS IN KAMAL DRAINAGE CHANNEL (MAIN) DWG NO. J-95-40-101	APPROVED DATE