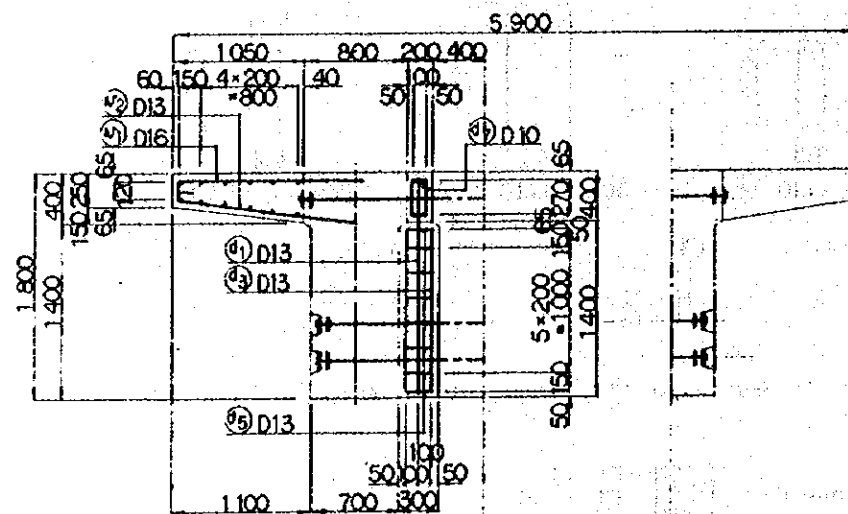
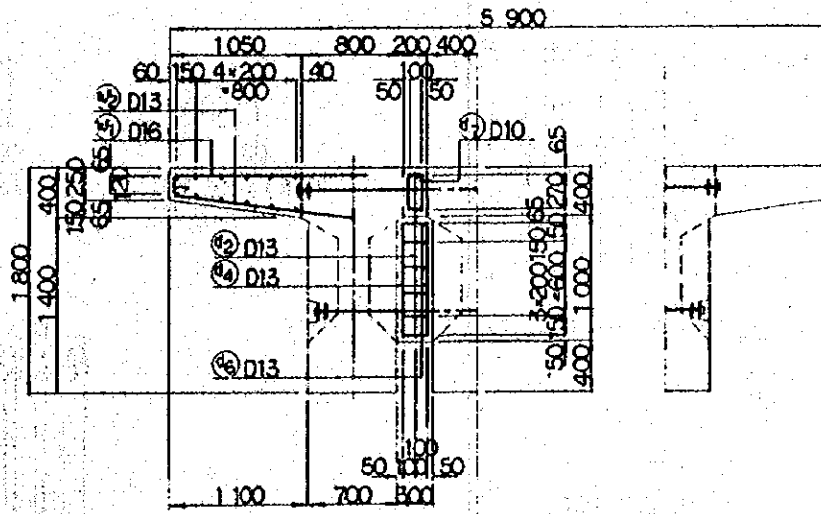


PLAN SCALE 1:50



END CROSS BEAM



MIDDLE CROSS BEAM

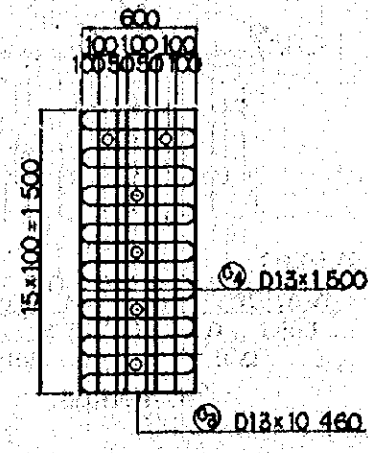
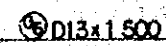
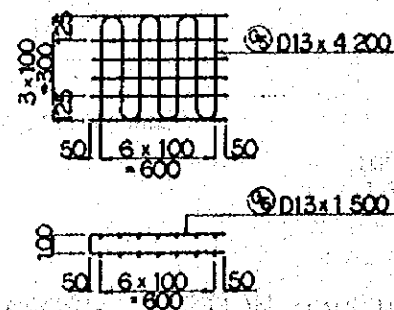
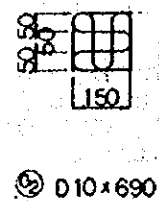
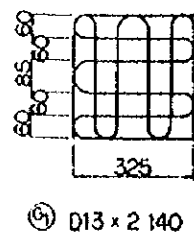
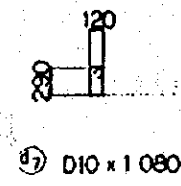
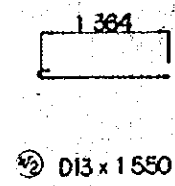
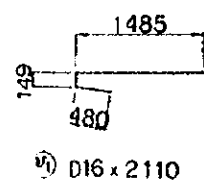
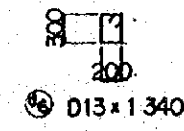
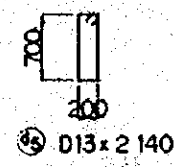
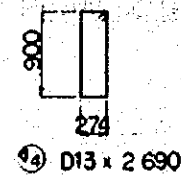
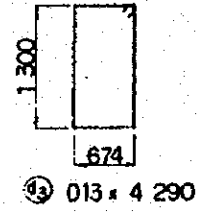
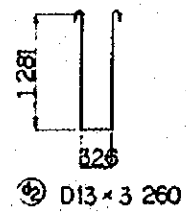
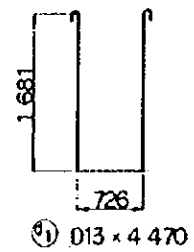
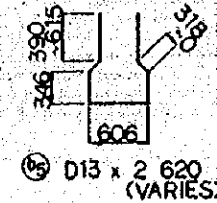
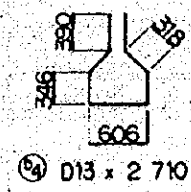
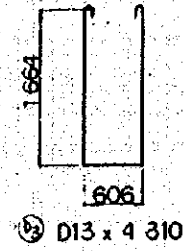
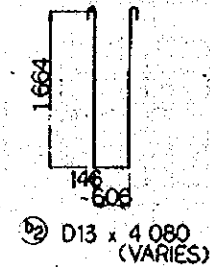
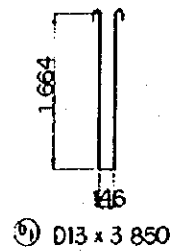
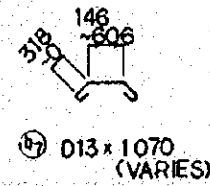
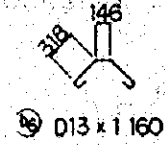
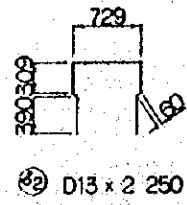
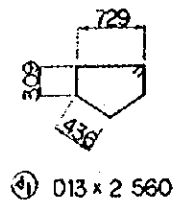
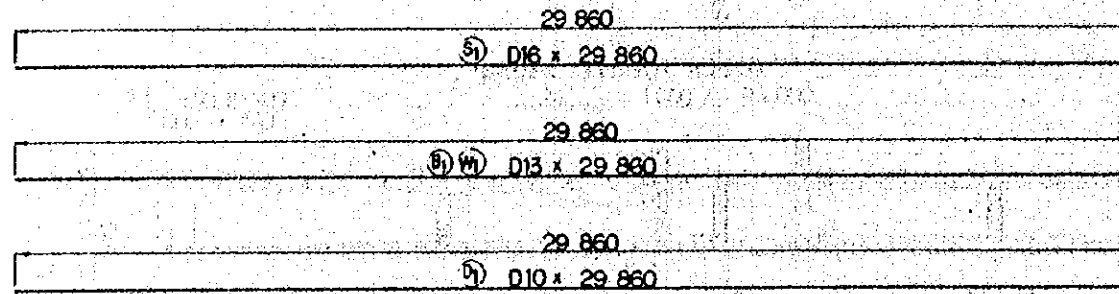
CROSS SECTION SCALE 1:30

NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. REINFORCEMENT OF ANCHORAGE AND RECESS DIMENSION ARE EXAMPLES AND THESE SHALL BE REVIEWED AND, IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS FOR THE SELECTED PRESTRESSING SYSTEM

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1AUG84	CLY	AD	K.A.	K.M.A.K
A	15FEB84	CLY	AD	K.A.	K.M.A.K
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED
P.C. GIRDER PC 06 P.C. CABLE AND REINF. BAR ARRANGEMENT OF LATERAL JOINT					
PACKAGE: I CIVIL AND ARCHITECTURAL WORK					
SCALE	DRAWING NO.				
AS NOTED	CS - 036				

NOTE:  
1 ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED



### BAR SCHEDULE

REINF. No.	DIA (mm)	LENGTH (mm)	NUMBER/ONE BEAM		TOTAL NUMBER	UWEIGHT (kg/m)	WEIGHT (kg)
			EXTERIOR	INTERIOR			
<b>MAIN BEAM</b>							
S 1	D16	29 860	8	8	32	1.560	1 490.6
A 1	D13	2 560	150	150	600	0.995	1 528.3
2		2 250	2	2	8	.	17.9
B 1	D13	29 860	12	12	48	0.995	1 426.1
b 1	D13	3 850	40	40	160	0.995	612.9
2		4 080	48	48	192	.	779.4
3		4 310	16	16	64	.	274.5
4		2 710	40	40	160	.	431.4
5		2 620	48	48	192	.	500.5
6		1 160	40	40	160	.	184.7
7		1 070	48	48	192	.	204.4
G 1	D13	2 140	24	24	96	0.995	204.4
2	D10	690	68	—	136	0.560	52.6
3	D13	10 460	4	4	16	0.995	166.5
4		1 500	32	32	128	.	191.0
5		4 200	4	4	16	.	66.9
6		1 500	12	12	48	.	71.6
<b>WEIGHT OF BARS FOR MAIN BEAM</b>							
						D16	1 490.6 kg
						D13	6 660.5 kg
						D10	52.6 kg
						<b>TOTAL WEIGHT</b>	<b>8 203.7 kg</b>
<b>LATERAL JOINT</b>							
W 1	D13	29 860	—	—	24	0.995	713.1
W 1	D16	2 110	—	—	300	1.560	987.5
2	D13	1 550	—	—	300	0.995	462.7
D 1	D10	29 860	—	—	12	0.560	200.7
d 1	D13	4 470	—	—	6	0.995	26.7
2		3 260	—	—	9	.	29.2
3		4 290	—	—	12	.	51.2
4		2 690	—	—	18	.	48.2
5		2 140	—	—	48	.	102.2
6		1 340	—	—	54	.	72.0
7	D10	1 080	—	—	450	0.560	272.2
<b>WEIGHT OF BARS FOR LATERAL JOINT</b>							
						D16	987.5 kg
						D13	1 505.3 kg
						D10	472.9 kg
						<b>TOTAL WEIGHT</b>	<b>2 965.7 kg</b>
<b>TOTAL WEIGHT OF BARS</b>							
						D16	2 478.1 kg
						D13	8 165.8 kg
						D10	525.5 kg
						<b>TOTAL WEIGHT</b>	<b>11 169.4 kg</b>

REPUBLIC OF INDONESIA  
MINISTRY OF COMMUNICATIONS  
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENKARENG AIRPORT  
CONSTRUCTION PROJECT

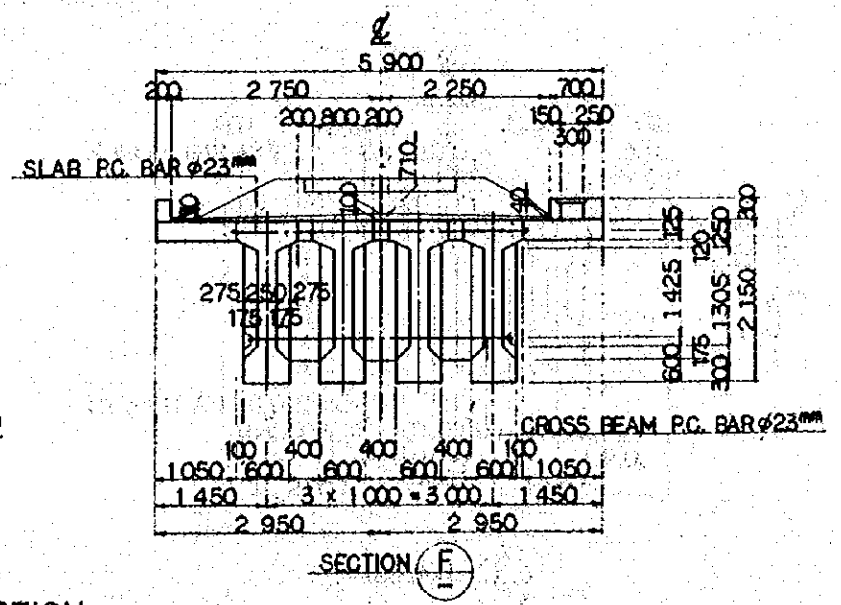
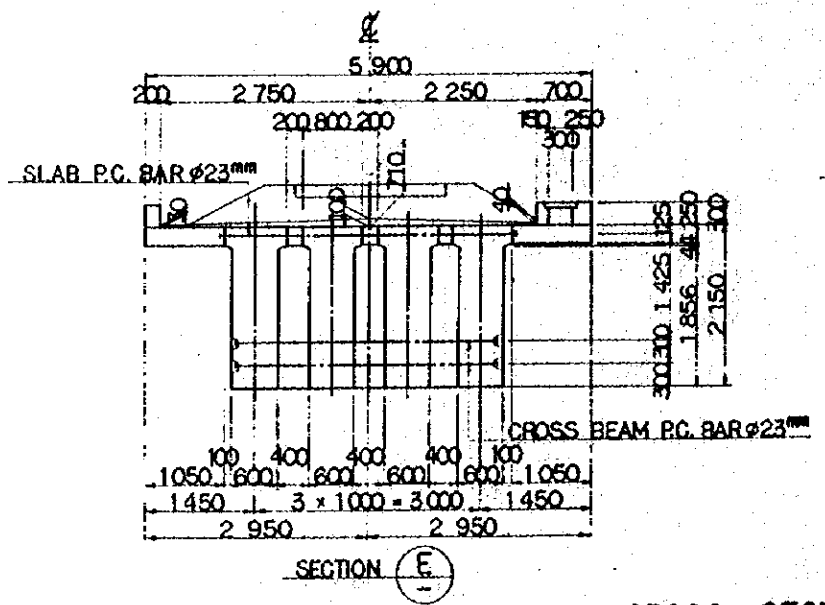
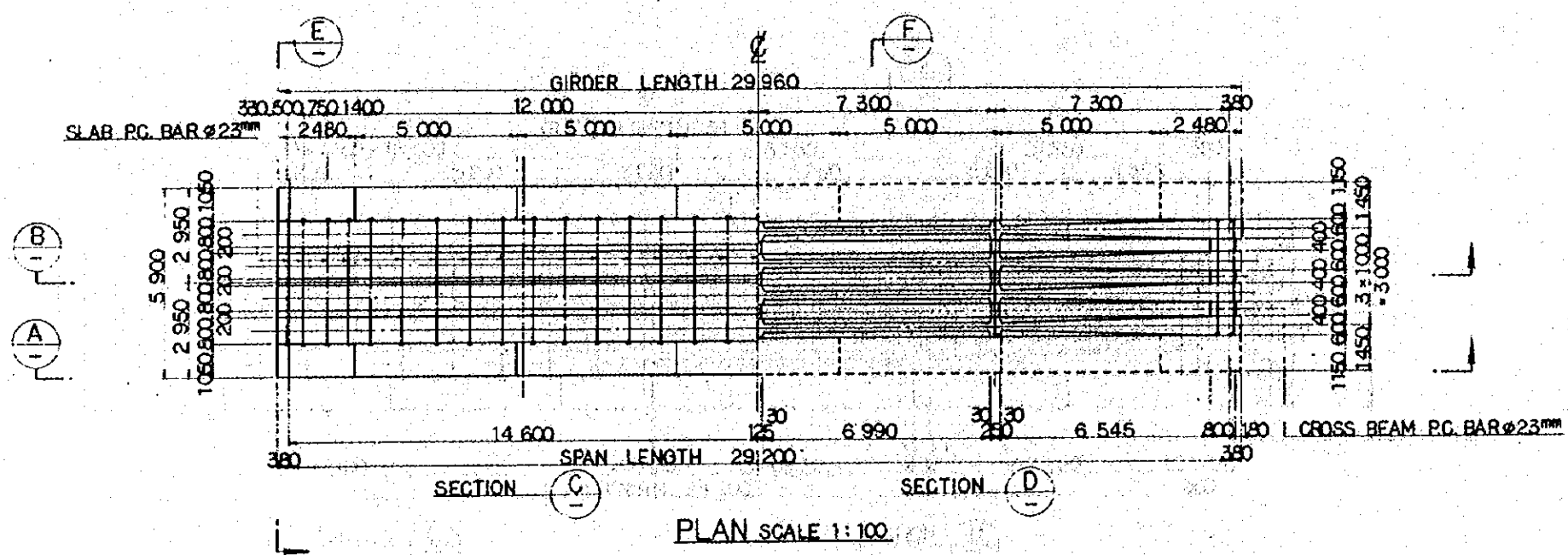
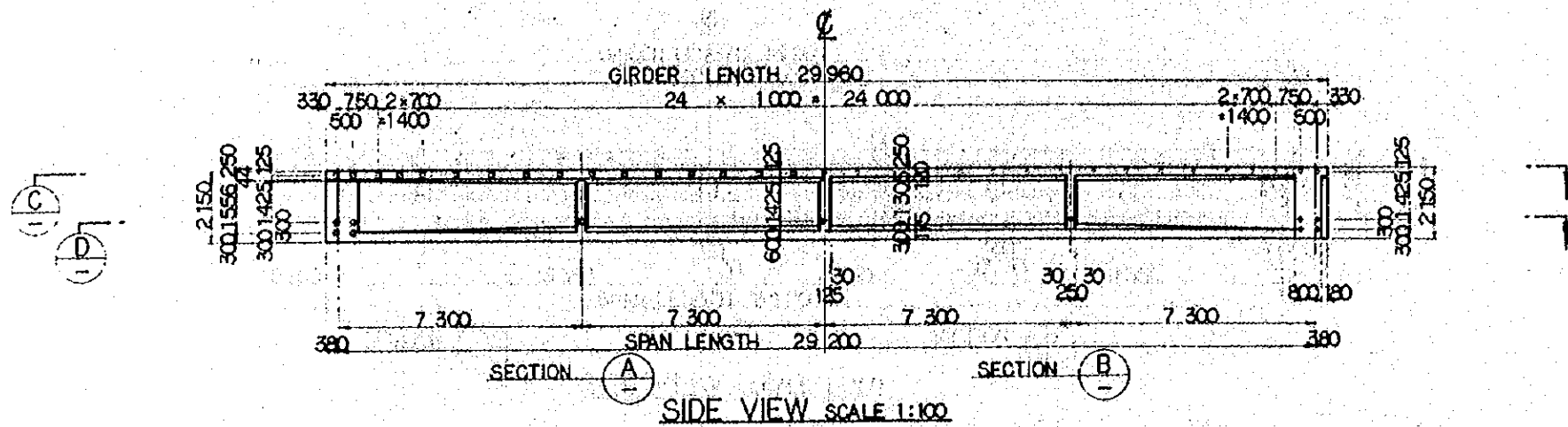
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1 AUG '84	HYAO	KA	KN	AK
A	5 FEB '84	HYAO	KA	KN	AK

REVISIONS DATE RELEASD DRAWN CHECKED REVIEWED SUBMITTED

P.C. GIRDER  
PC 06  
REINF. BAR SCHEDULE

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
SCALE: AS NOTED DRAWING NO: CS - 037



CROSS SECTION SCALE 1:50

- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. MAIN BEAM SHALL BE PRECAST AND ALL THE OTHER CONCRETE EXCEPT R.C. COVER SHALL BE CAST IN PLACE
  3. P.C. STRAND 12T 12.7 MEANS A GROUP OF 12 NO STRANDS FOR PRESTRESSED CONCRETE OF 12.7 MM DIAMETER EACH AND SHALL CONFORM TO JIS G 3536 SWPR7B 12T 12.7 OR EQUIVALENT
  4. P.C. BAR SHALL CONFORM TO THE REQUIREMENTS AS FOLLOWS:  
 MINIMUM ULTIMATE TENSILE STRENGTH : 190  $N/mm^2$   
 MINIMUM YIELD STRESS : 160  $N/mm^2$
  5. THIS DRAWING SHALL BE APPLIED TO  
 : B11 - PC28  
 : B04 - PC12  
 : B05 - PC14
  6. DESIGN TRAIN LOAD : EQUIVLENT TO  
 KS - 16

SUPERSTRUCTURE MATERIAL SCHEDULE (B05-PC13)

ITEM	TYPE	UNIT	QUANTITY	
MAIN BEAM	CONCRETE CLASS A ( $16 \times 400 \frac{1}{4} m^2$ )	$m^3$	119.8	
	P.C. STRAND 12 T 12.7 (IS-190 $\frac{1}{4} m^2$ )	kg	5,784.8	
	SHEATH $\phi 65$ and 70	m	631.6	
	FORMS	$m^2$	654.7	
	ANCHORING DEVICE FOR 12 T 12.7	EACH	40	
	REINFORCING BAR	kg	1,490.6	
			13	6,755.4
			10	68.0
	TOTAL			8,314.0
	LATERAL JOINT	CONCRETE CLASS B ( $16 \times 300 \frac{1}{4} m^2$ )	$m^3$	9.6
P.C. BAR $\phi 23$ (IS-110 $\frac{1}{4} m^2$ )		kg	557.0	
SHEATH $\phi 35$		m	163.0	
FORMS		$m^2$	40.2	
ANCHOR PLATE, MUT FOR $\phi 23$		EACH	88	
REINFORCING BAR		kg	994.1	
			13	1,669.5
			10	397.3
	TOTAL			3,060.9
SIDEWALK CONCRETE CLASS C ( $16 \times 240 \frac{1}{4} m^2$ )	$m^3$	15.7		
BRIDGE RAILING AND DUCT CONCRETE	$m^3$	5.8		
FORMS	$m^2$	54.3		
MORTAR WITH SLOPE-PROTECTIVE MORTAR	$m^3$	10.1		
DRAINAGE	EACH	8		
ELASTOMERIC BEARING PADS	FIX. FOR R=120 ton		4	
	MOV. FOR R=120 ton		4	

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

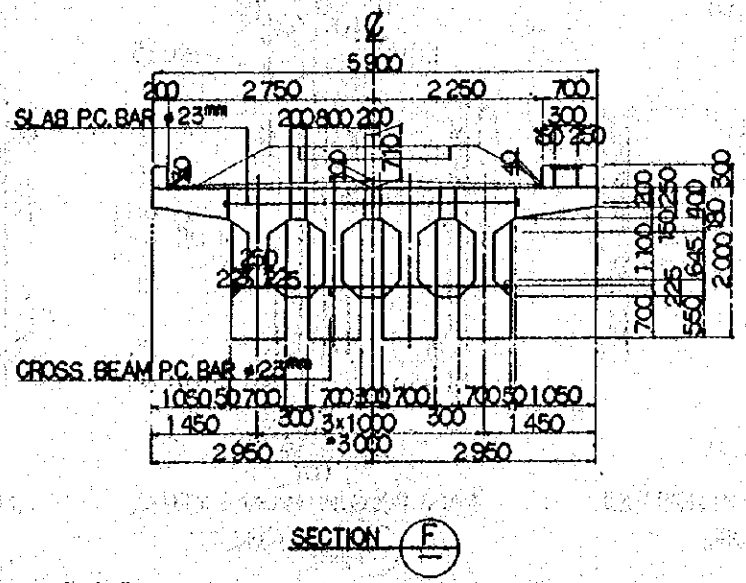
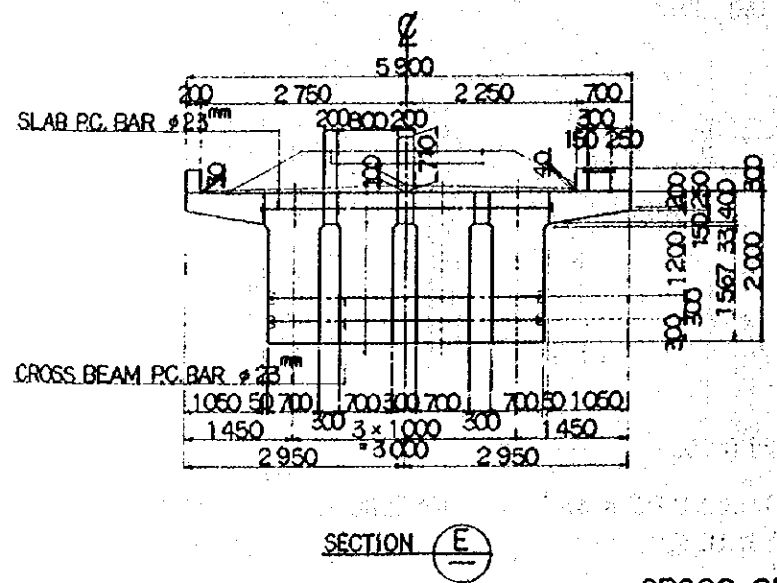
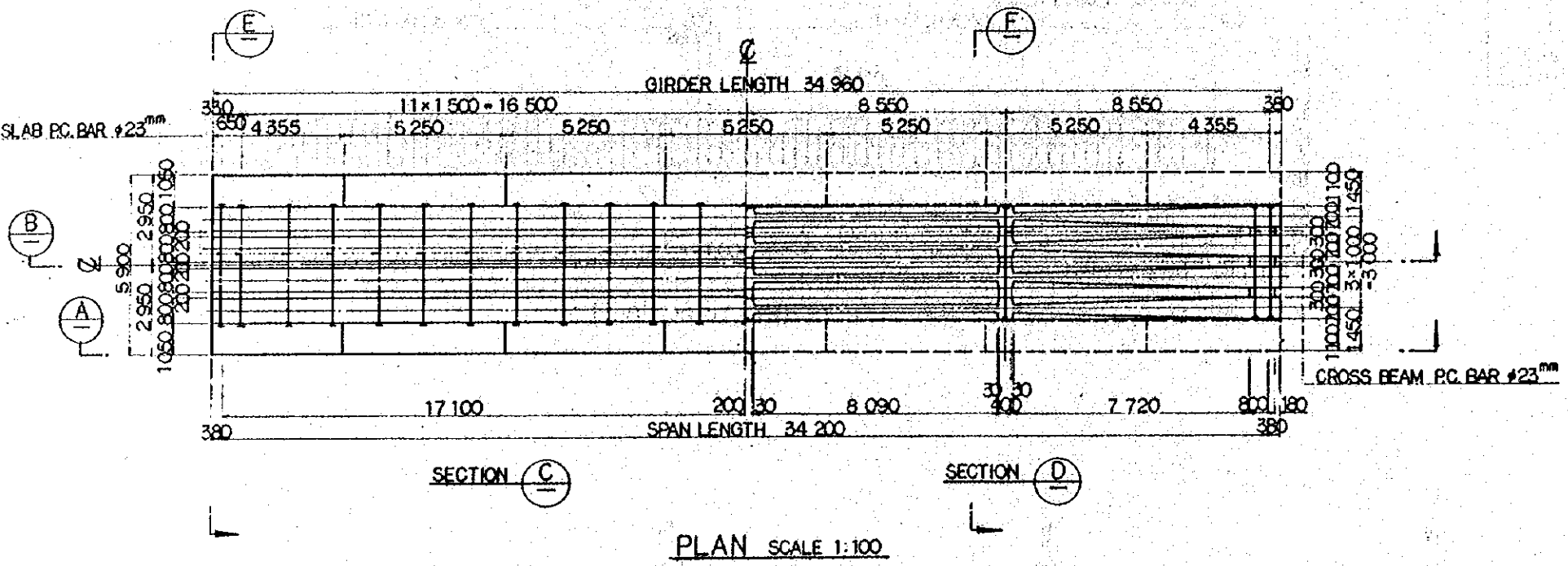
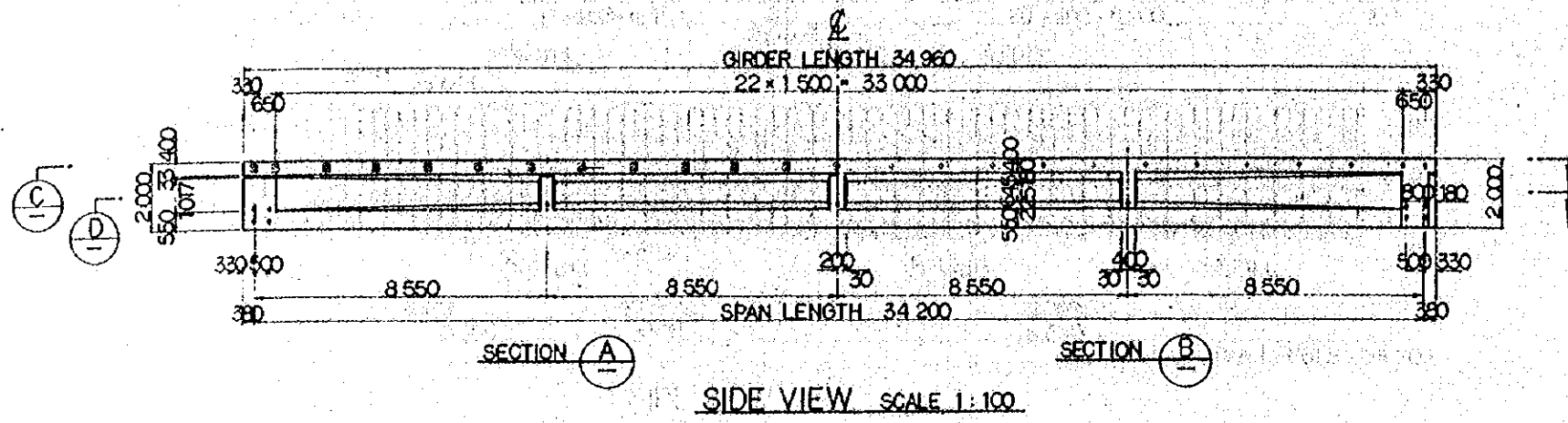
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1AUG/84	HY	AD	KA	UM	AK
A	15FEB/84	HY	AD	KA	UM	AK

PC GIRDER  
 PC 13  
 GENERAL VIEW

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: AS NOTED DRAWING NO: CS - 038



- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. MAIN BEAM SHALL BE PRECAST AND ALL THE OTHER CONCRETE EXCEPT R.C. COVER SHALL BE CAST IN PLACE
  3. P.C. STRAND 12T 15.2 MEANS A GROUP OF 12 NO STRANDS FOR PRESTRESSED CONCRETE OF 15.2 MM DIAMETER EACH AND SHALL CONFORM TO JIS G 3536 SWPR7A 12T 15.2 OR EQUIVALENT
  4. P.C. BAR SHALL CONFORM TO THE REQUIREMENTS AS FOLLOWS:  
 MINIMUM ULTIMATE TENSILE STRENGTH:  $165 \text{ kg/mm}^2$   
 MINIMUM YIELD STRESS:  $140 \text{ kg/mm}^2$
  5. THIS DRAWING SHALL BE APPLIED TO:  
 : B05 - PC 16  
 : B05 - PC 18  
 : B09 - PC 26
  6. DESIGN TRAIN LOAD: EQUIVALENT TO  
 KS - 16

SUPERSTRUCTURE MATERIAL SCHEDULE (B05-PC15)

ITEM	TYPE	UNIT	QUANTITY
MAIN BEAM	CONCRETE	CLASS A ( $f_c = 400 \text{ kg/cm}^2$ )	$\text{m}^3$ 165.7
	P.C. STRAND	12T 15.2 ( $f_s = 165 \text{ kg/mm}^2$ )	kg 11441.5
	SHEATH	$\phi 75$	m 822.2
	FORMS		$\text{m}^2$ 725.4
	ANCHORING DEVICE	FOR 12T 15.2	EACH 48
	REINFORCING BAR	19	kg 2509.9
		16	"
		13	" 8144.4
		10	" 55.6
	TOTAL		
LATERAL JOINT	CONCRETE	CLASS B ( $f_c = 300 \text{ kg/cm}^2$ )	$\text{m}^3$ 11.9
	P.C. BAR	$\phi 23$ ( $f_s = 110 \text{ kg/mm}^2$ )	kg 456.8
	SHEATH	$\phi 35$	m 133.7
	FORMS		$\text{m}^2$ 33.7
	ANCHOR PLATE/MUT	FOR $\phi 23$	EACH 72
REINFORCING BAR	16	kg 1158.6	
	13	" 1727.7	
	10	" 555.6	
TOTAL			3439.9
SIDEWALK CONCRETE	CLASS C ( $f_c = 240 \text{ kg/cm}^2$ )	$\text{m}^3$	23.9
BRIDGE RAILING AND DUCT	CONCRETE	$\text{m}^3$	6.8
MORTAR WITH SLOPE PROTECTIVE MORTAR	FORMS	$\text{m}^2$	63.3
DRAINAGE		$\text{m}^3$	11.8
ELASTOMERIC BEARING PADS	FIX. FOR R = 140 ton	"	4
	MOV. FOR R = 140 ton	"	4

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

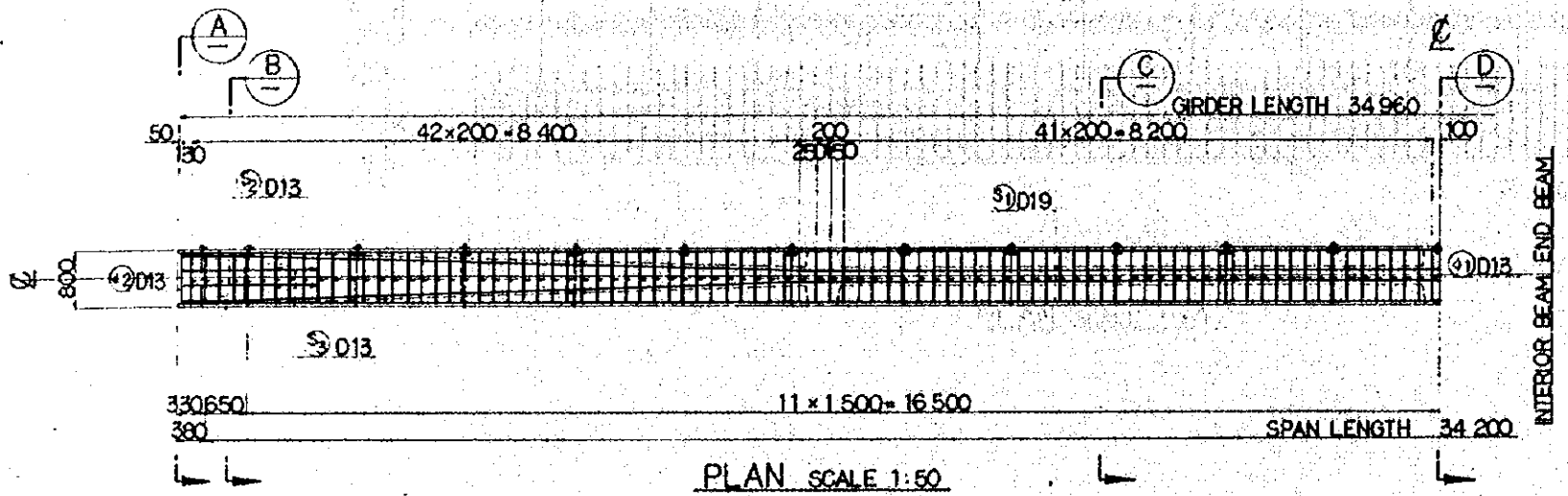
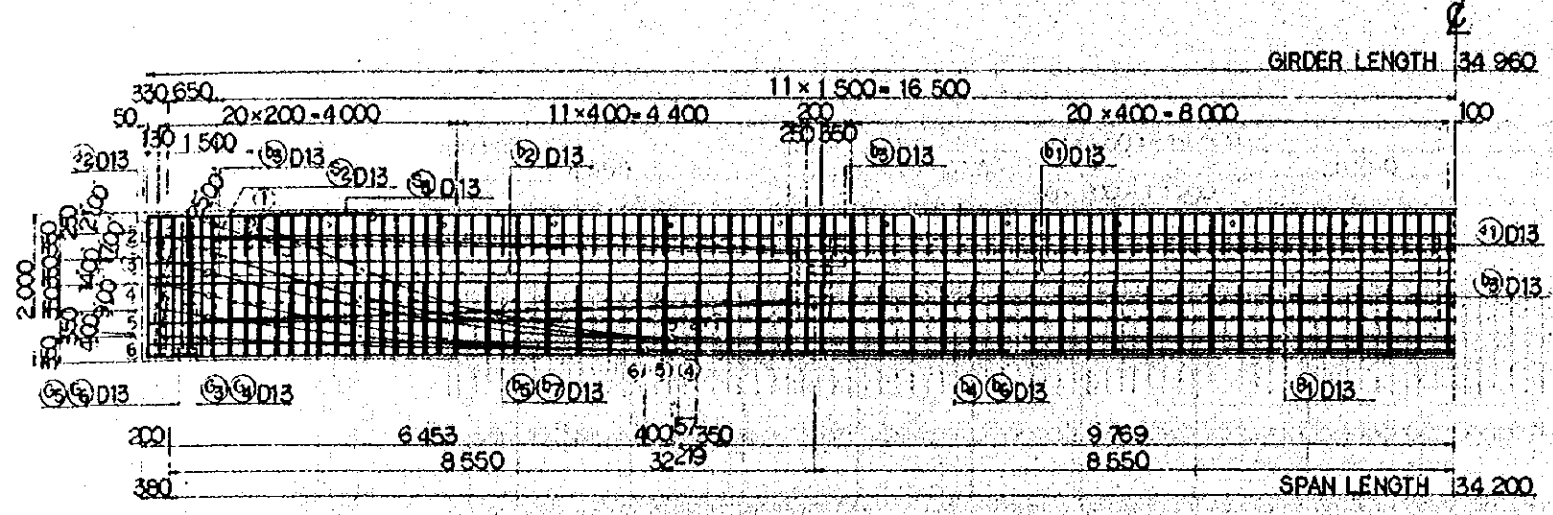
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1 AUG 84	NY	AO	KY	KM	MS
A	15 FEB 84	NY	AO	KA	KM	MS

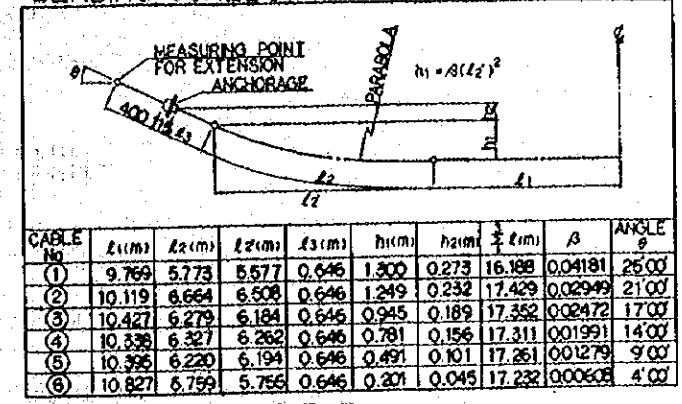
REVISIONS DATE CHECKED DRAWN CALCD REVIEWED SUBMITTED

P.C. GIRDER  
 PC 15  
 GENERAL VIEW

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: AS NOTED DRAWING NO: CS - 039



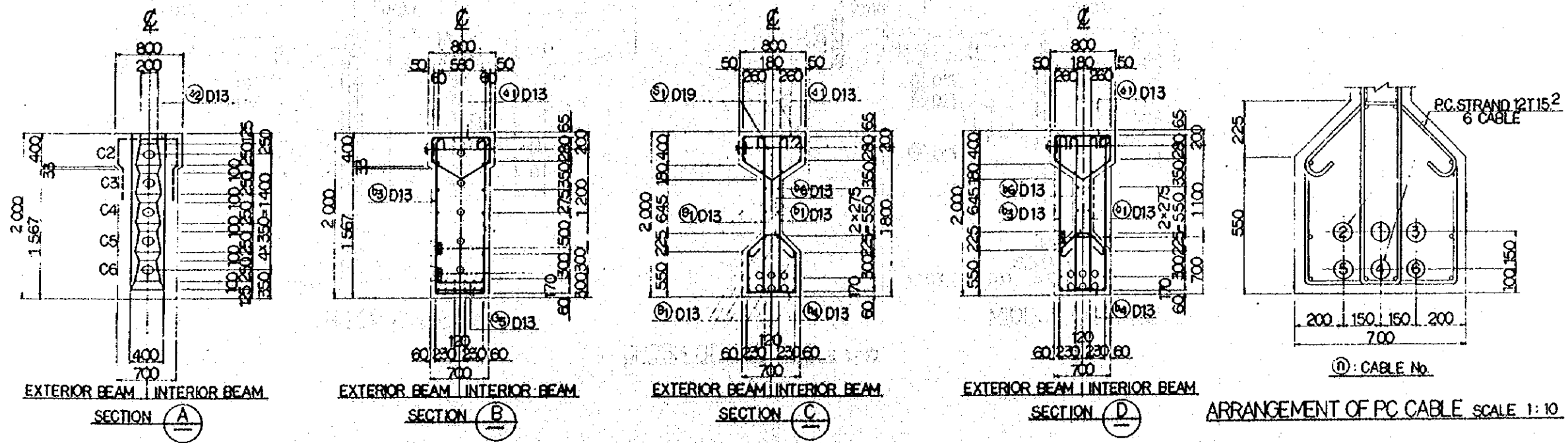
BENDING SCHEDULE OF PC CABLES



SCHEDULE OF PC BAR

SLAB	3 800
CROSS BEAM	3 520

- NOTES:
- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  - REINFORCEMENT OF ANCHORAGE AND RECESS DIMENSION ARE EXAMPLES AND THESE SHALL BE REVIEWED AND, IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURES INSTRUCTIONS FOR THE SELECTED PRESTRESSING SYSTEM
  - JACKING LOAD INCLUDE FRICTION IN THE JACK AND ANCHORAGE. EXTENSION SHOWS TOTAL VALUE OF THOSE AT BOTH ENDS MEASURED AT THE POINT 30CM OUTSIDE FROM ANCHORAGE SURFACE. AFTER THE PRESTRESSING SYSTEM IS DETERMINED THESE VALUES SHALL BE REVIEWED ALONG WITH THE OTHER ASSUMED FACTORS AND, IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURES INSTRUCTIONS. INITIAL STRESS DO NOT INCLUDE OTHER FACTORS THAN FRICTION LOSSES.
  - TENSIONING SEQUENCE OF LATERAL PC. BARS SHALL BE AT EVERY OTHER BAR



CROSS SECTION SCALE 1:30

REPUBLIC OF INDONESIA  
MINISTRY OF COMMUNICATIONS  
DIRECTORATE GENERAL OF LAND TRANSPORT  
AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT  
CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY  
(JICA)

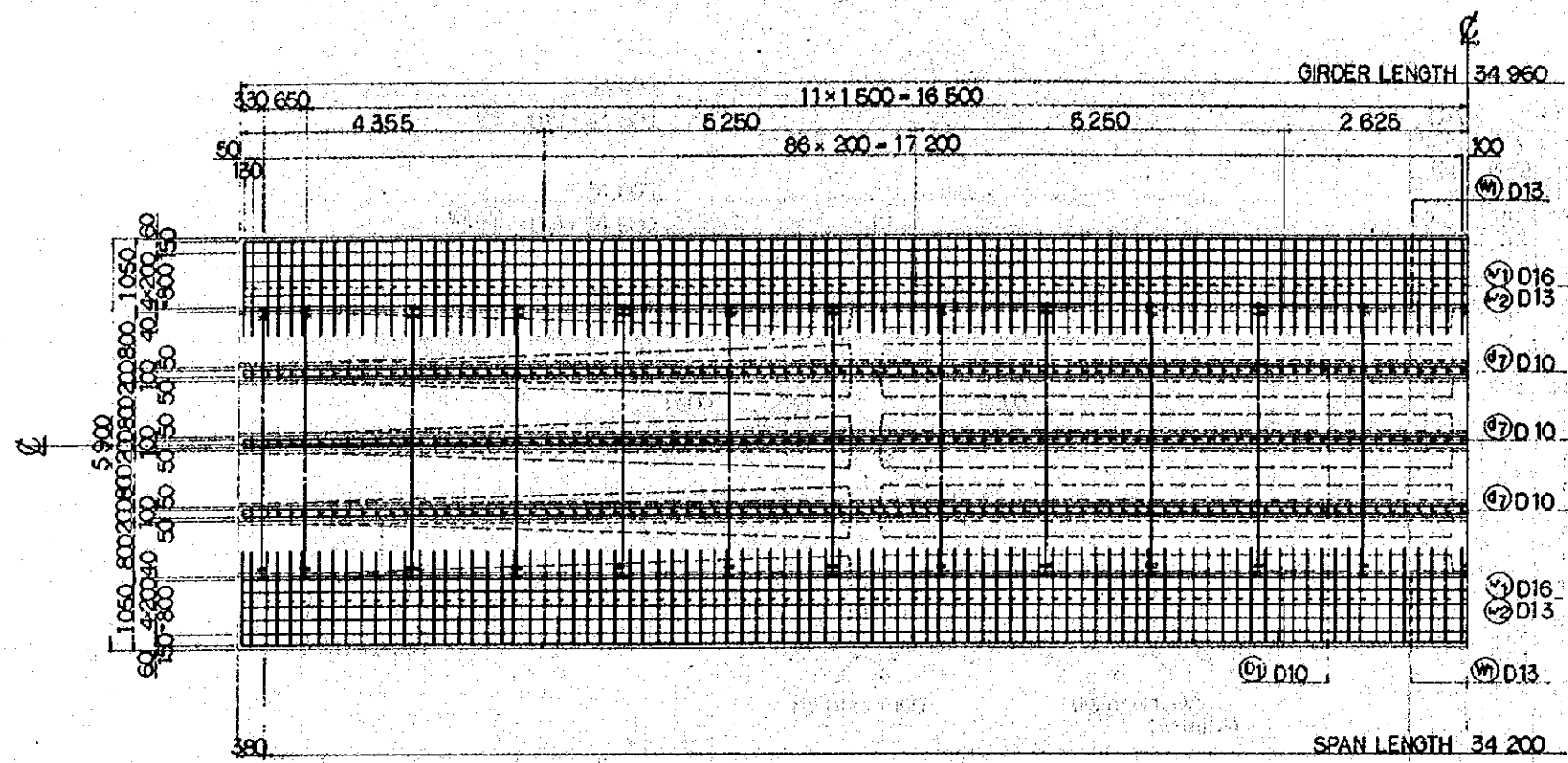
REVISIONS	DATE	REASON	DESIGNED	CHECKED	REVIEWED	SUBMITTED
B	1 AUG '84	MY AOK	SK	AKM	AK	AK
A	15 FEB '84	MY AOK	SK	AKM	AK	AK

PC GIRDER  
PC 15  
PC CABLE AND REINF BAR  
ARRANGEMENT OF MAIN BEAM

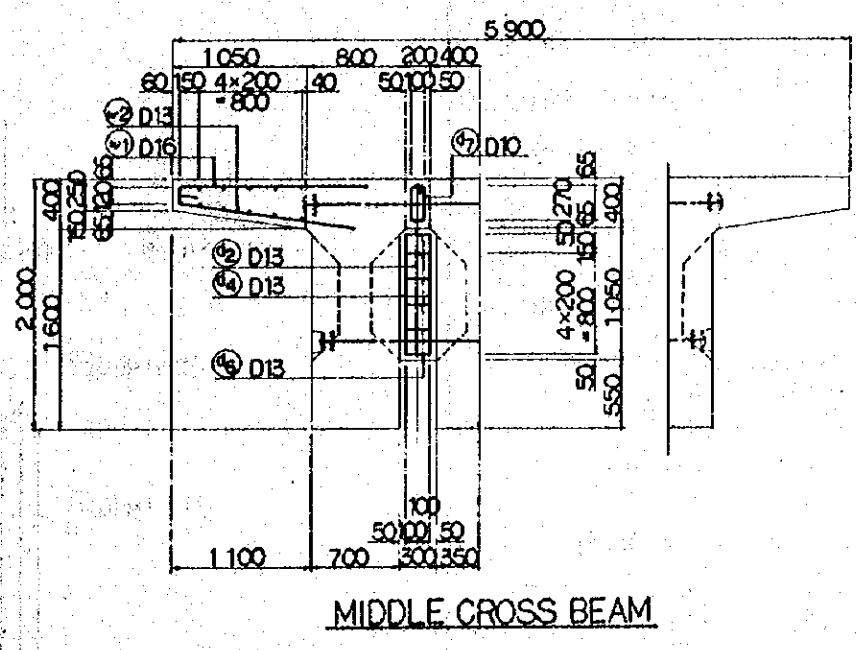
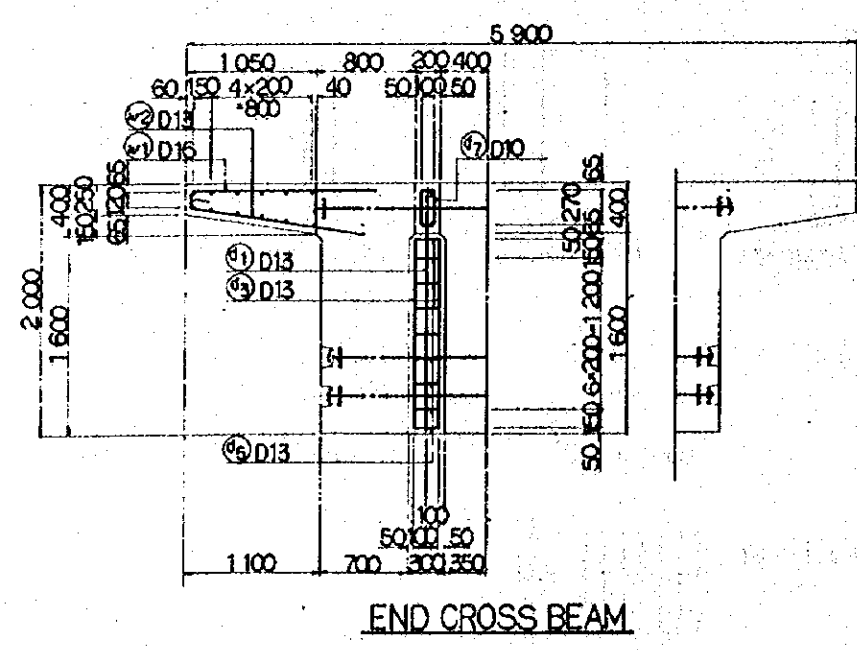
PACKAGE: I CIVIL AND ARCHITECTURAL WORK

SCALE: AS NOTED

DRAWING NO: CS - 040



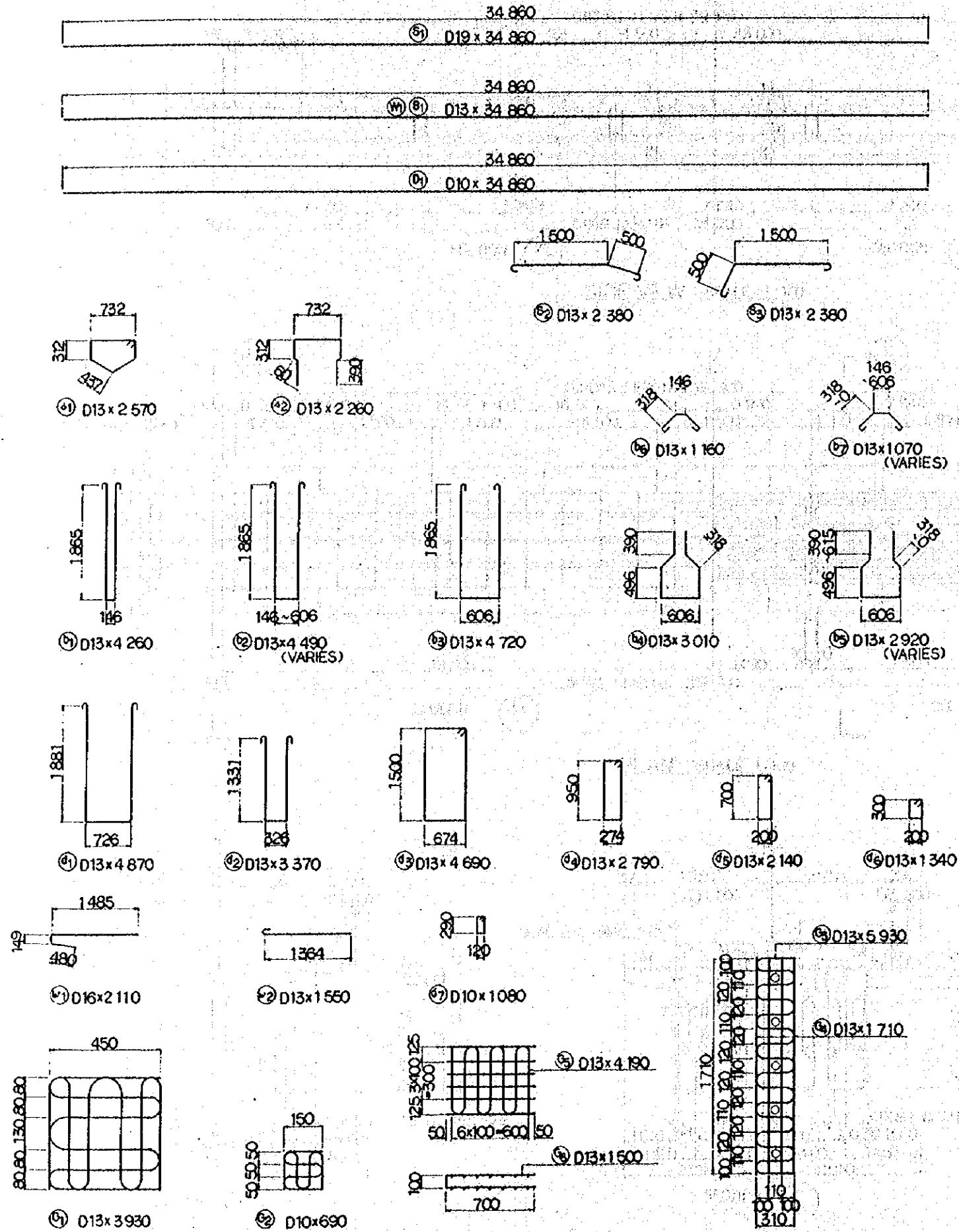
- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETRES UNLESS OTHERWISE INDICATED
  2. REINFORCEMENT OF ANCHORAGE AND RECESS DIMENSION ARE EXAMPLES AND THESE SHALL BE REVIEWED AND, IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS FOR THE SELECTED PRESTRESSING SYSTEM



REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG '84	MY AD	K.R.K.M	AK		
A	15 FEB '84	MY AD	K.R.K.M	AK		
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
P.C. GIRDE PC 15 P.C. CABLE AND REINF. BAR ARRANGEMENT OF LATERAL JOINT						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE	DRAWING NO.					
AS NOTED	CS - 041					

NOTE:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED



BAR SCHEDULE

REINF. No.	DIA. (mm)	LENGTH (mm)	NUMBER/ONE BEAM	TOTAL NUMBER	UWEIGHT (kg/m)	WEIGHT (kg)
			EXTERIOR	INTERIOR		
<b>MAIN BEAM</b>						
S 1	D19	34 860	8	8	32	2509.9
S 2	D13	2 380	4	4	16	0.995 37.9
S 3	"	2 380	4	4	16	" 37.9
A 1	D13	2 570	174	174	696	0.995 1779.8
2	"	2 260	2	2	8	" 18.0
B 1	D13	34 860	14	14	56	0.995 1942.4
b 1	D13	4 260	46	46	184	0.995 779.9
2	"	4 490	54	54	216	" 965.0
3	"	4 720	18	18	72	" 338.1
4	"	3 010	46	46	184	" 551.1
5	"	2 920	54	54	216	" 627.6
6	"	1 160	46	46	184	" 212.4
7	"	1 070	54	54	216	" 230.0
G 1	D13	2 960	24	24	96	0.995 282.7
2	D10	690	72	—	144	0.56 55.6
3	D13	5 930	4	4	16	0.995 94.4
4	"	1 710	16	16	64	" 108.9
5	"	4 190	4	4	16	" 66.7
6	"	1 500	12	12	48	" 71.6

WEIGHT OF BARS FOR MAIN BEAM

D19	2 509.9 kg
D13	8 144.4 kg
D10	55.6 kg
<b>TOTAL WEIGHT</b>	<b>10 709.9 kg</b>

LATERAL JOINT

W 1	D13	34 860	—	—	24	0.995	832.5
v 1	D16	2 110	—	—	352	1.560	1 158.6
2	D13	1 550	—	—	352	0.995	542.9
D 1	D10	34 860	—	—	12	0.56	234.3
d 1	D13	4 870	—	—	6	0.995	29.1
2	"	3 370	—	—	9	"	30.2
3	"	4 690	—	—	12	"	56.0
4	"	2 790	—	—	18	"	50.0
5	"	2 140	—	—	54	"	115.0
6	"	1 340	—	—	54	"	72.0
7	D10	1 080	—	—	528	0.56	319.3

WEIGHT OF BARS FOR LATERAL JOINT

D16	1 158.6 kg
D13	1 727.7 kg
D10	553.6 kg
<b>TOTAL WEIGHT</b>	<b>3 439.9 kg</b>

TOTAL WEIGHT OF BARS

D19	2 509.9 kg
D16	1 158.6 kg
D13	9 872.1 kg
D10	609.2 kg
<b>TOTAL WEIGHT</b>	<b>14 149.8 kg</b>

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT  
 CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY  
 (JICA)

B	1 AUG 84	MYAO	Ka	KM	mk
A	15 FEB 84	MYAO	Ka	KM	mk

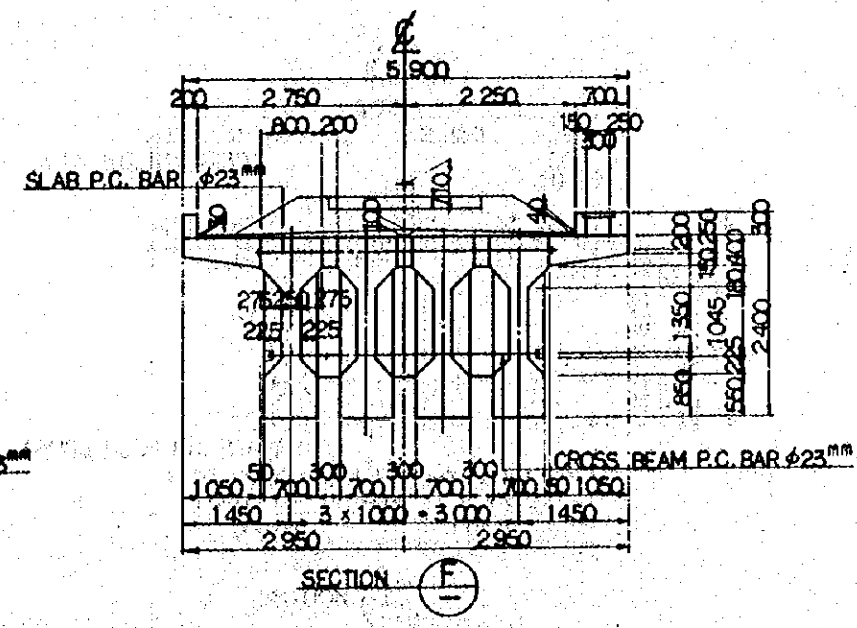
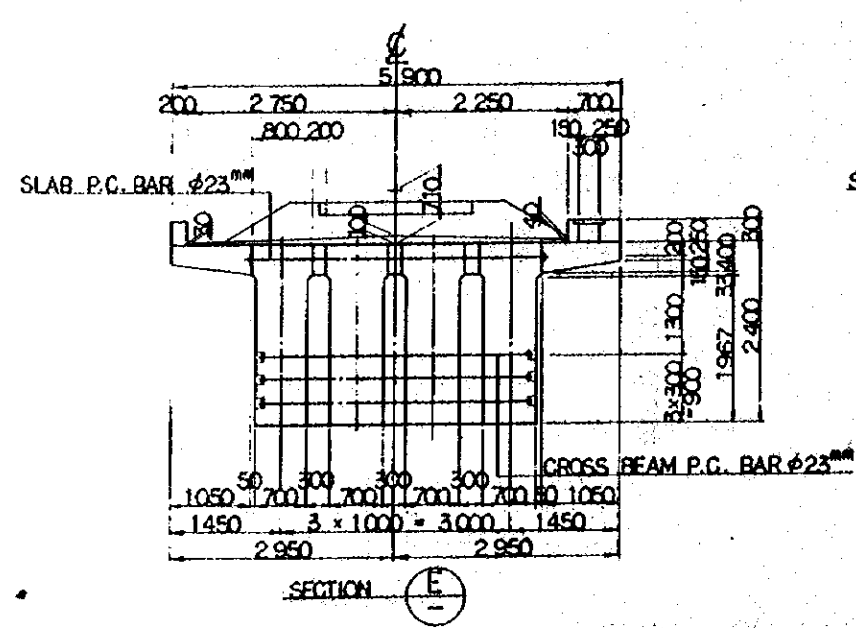
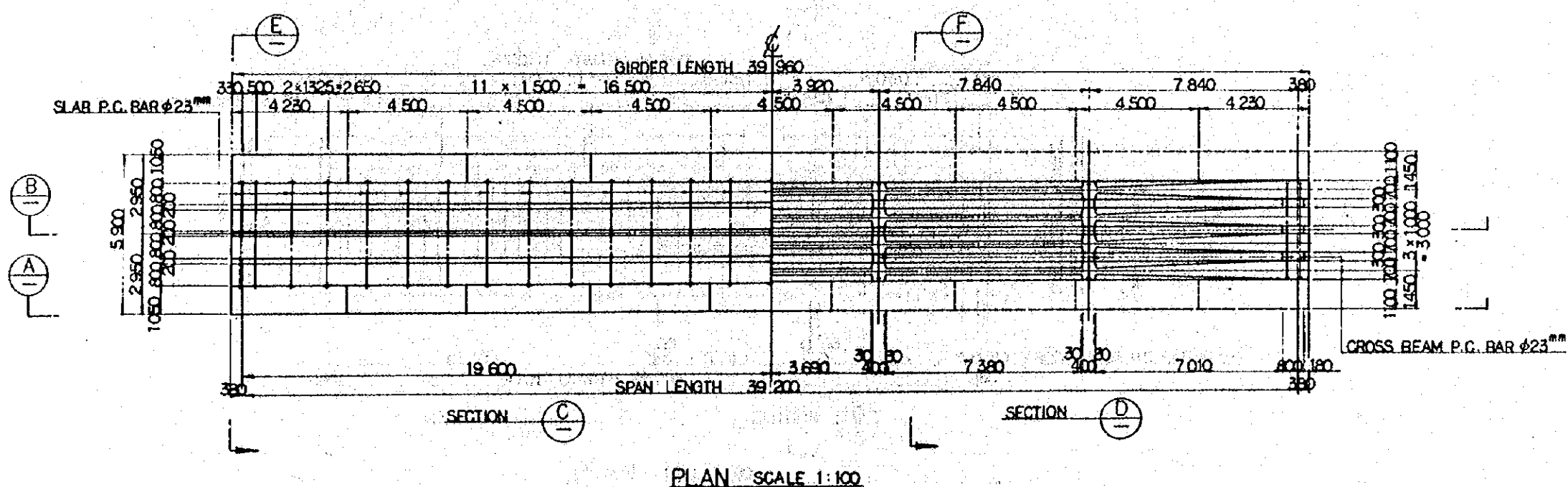
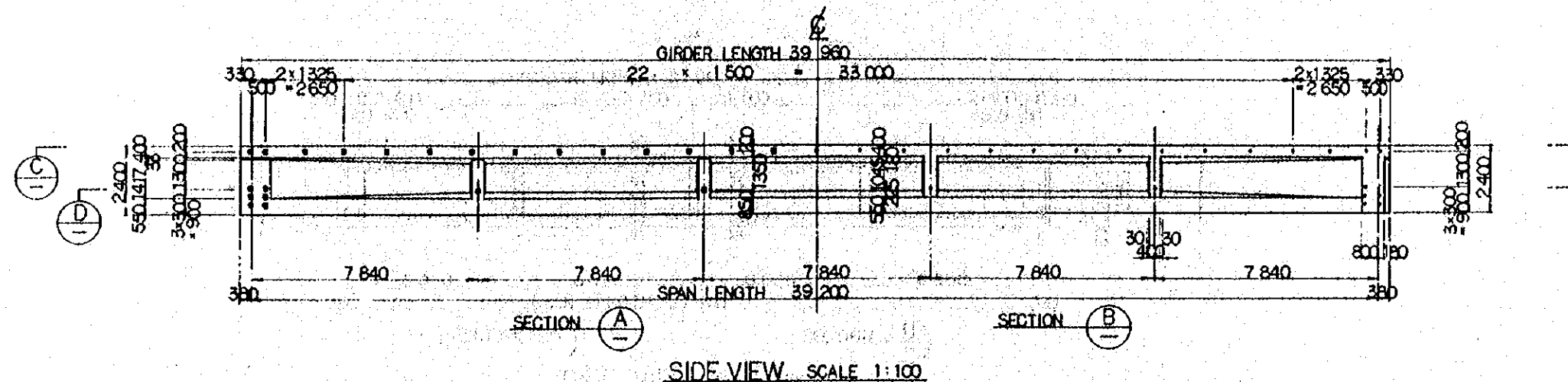
REVISIONS: DATE, DESIGNED, DRAWN, CHECKED, EXTEND, SUBMITTED

P.C. GIRDER  
 PC 15  
 REINF. BAR SCHEDULE

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: AS NOTED  
 DRAWING NO: CS - 042

NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. MAIN BEAM SHALL BE PRECAST AND ALL THE OTHER CONCRETE EXCEPT R.C. COVER SHALL BE CAST IN PLACE
3. P.C. STRAND 12T 15.2 MEANS A GROUP OF 12 NO STRANDS FOR PRESTRESSED CONCRETE OF 15.2 MM DIAMETER EACH AND SHALL CONFORM TO JIS G 3536 SWPR7A 12T 15.2 OR EQUIVALENT
4. P.C. BAR SHALL CONFORM TO THE REQUIREMENTS AS FOLLOWS:  
MINIMUM ULTIMATE TENSILE STRENGTH : 165  $\frac{kg}{mm^2}$   
MINIMUM YIELD STRESS : 140  $\frac{kg}{mm^2}$
5. THIS DRAWING SHALL BE APPLIED TO : B01 - PC02
6. DESIGN TRAIN LOAD : EQUIVALENT TO KS - 16



SUPERSTRUCTURE MATERIAL SCHEDULE (B05 - PC17)

ITEM	TYPE	UNIT	QUANTITY	
MAIN BEAM	CONCRETE CLASS A (16-400 $\frac{kg}{cm^2}$ )	m <sup>3</sup>	210.3	
	P.C. STRAND 12 T 15.2 (165 $\frac{kg}{mm^2}$ )	kg	15,233.9	
	SHEATH $\phi 75$ and $\phi 82$	m	1102.0	
	FORMS	m <sup>2</sup>	967.3	
	ANCHORING DEVICE FOR 15 T 15.2	EACH	56	
	REINFORCING BAR	kg	2869.9	
				19
				16
				13
				10
			696	
			13,521.3	
LATERAL JOINT	CONCRETE CLASS B (16-300 $\frac{kg}{cm^2}$ )	m <sup>3</sup>	14.5	
	P.C. BAR $\phi 23$ (16-110 $\frac{kg}{mm^2}$ )	kg	569.0	
	SHEATH $\phi 35$	m	166.5	
	FORMS	m <sup>2</sup>	43.0	
	ANCHOR PLATE NUT FOR $\phi 23$	EACH	90	
	REINFORCING BAR	kg	1423.6	
			13	
			10	
			649.7	
			4051.7	
SIDEWALK CONCRETE CLASS C (16-240 $\frac{kg}{cm^2}$ )	m <sup>3</sup>	27.3		
BRIDGE RAILING AND DUCT CONCRETE	m <sup>3</sup>	7.8		
FORMS	m <sup>2</sup>	72.3		
MORTAR WITH SLOPE-PROTECTIVE MORTAR DRAINAGE	m <sup>3</sup>	13.4		
ELASTOMERIC BEARING PADS	EACH	8		
			4	
			4	

REPUBLIC OF INDONESIA  
MINISTRY OF COMMUNICATIONS  
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT

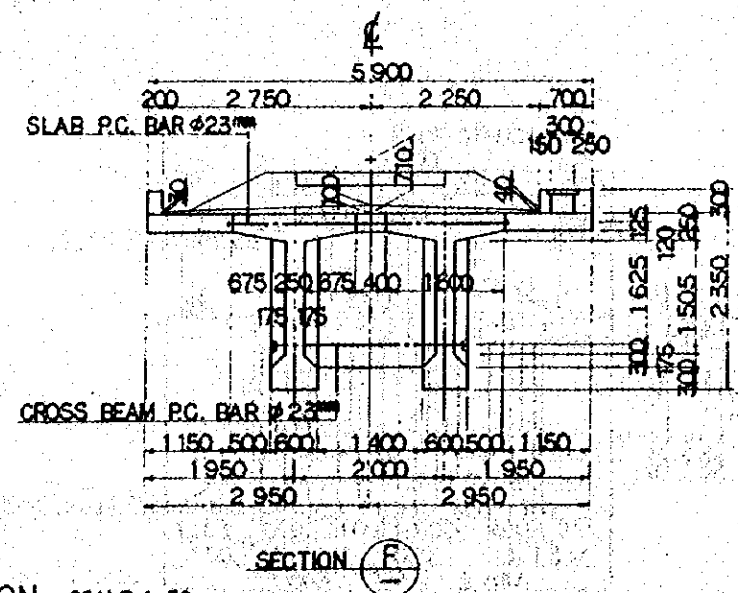
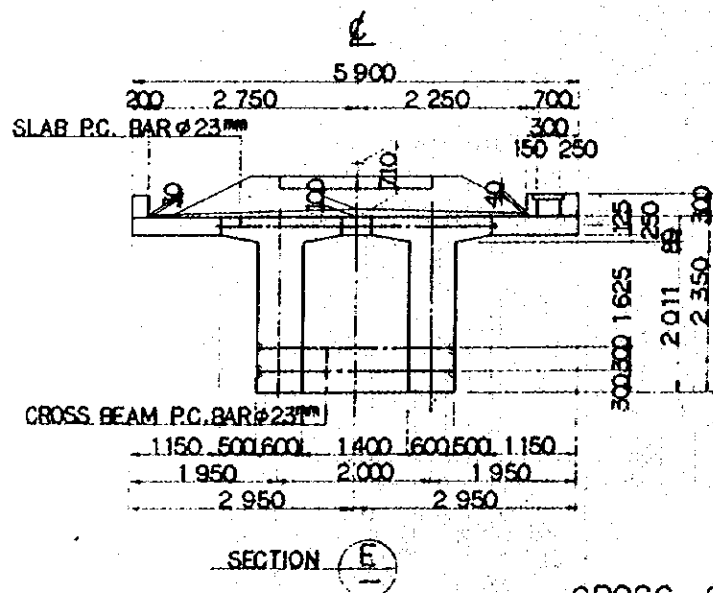
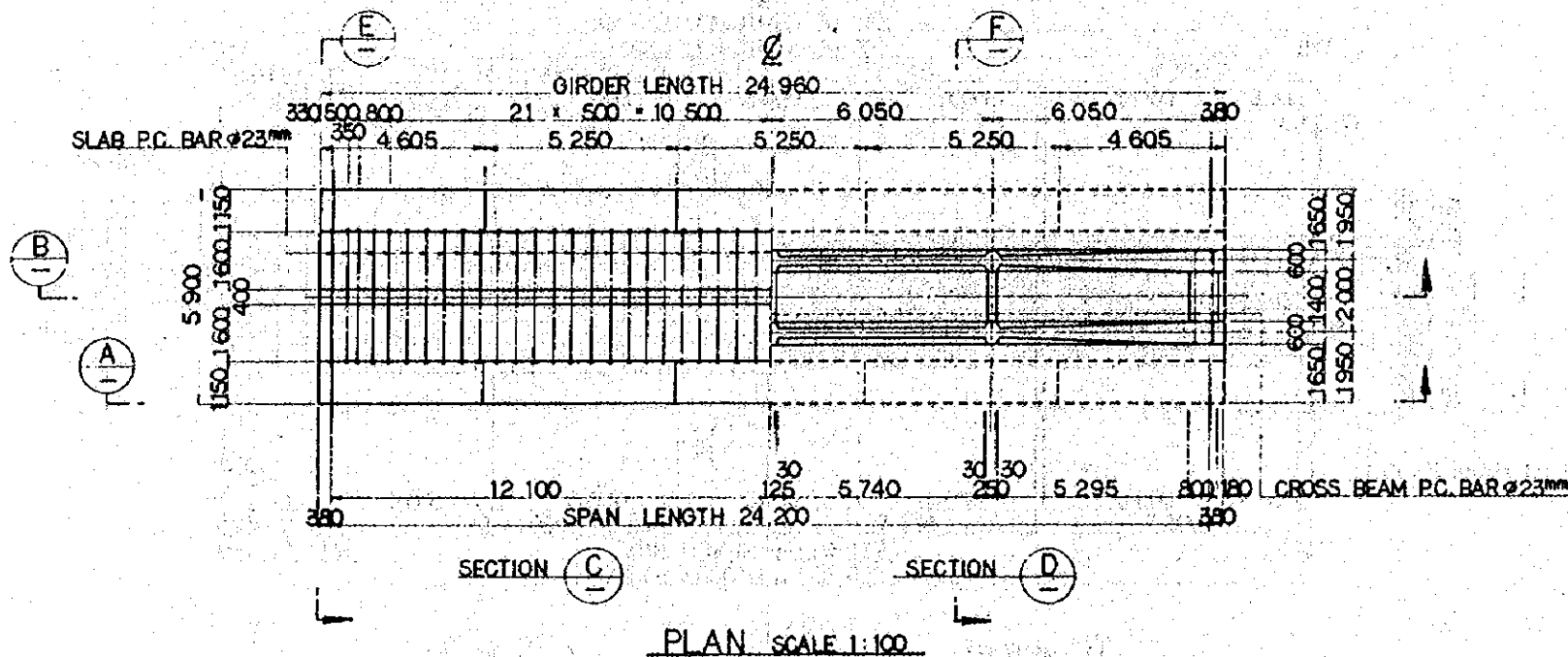
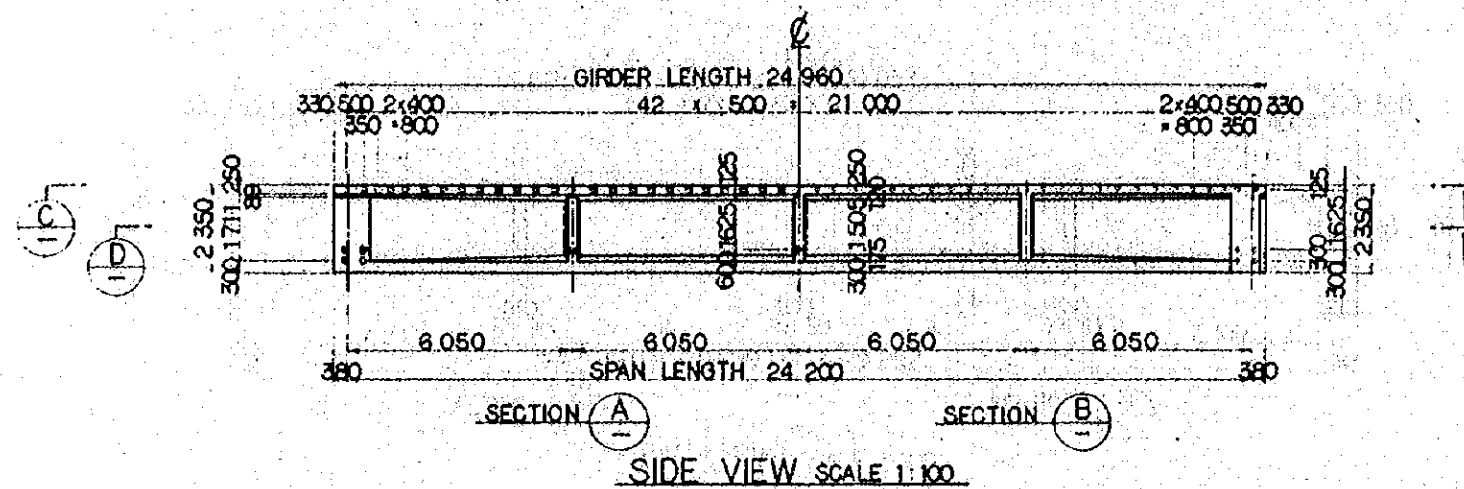
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
B	1 AUG 84	NYAO	KJKM	KJKM		
A	15 FEB 87	NYAO	KJKM	KJKM		

P.C. GIRDER  
PC 17  
GENERAL VIEW

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
SCALE: AS NOTED  
DRAWING NO: CS - 043





CROSS SECTION SCALE 1:50

- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. MAIN BEAM SHALL BE PRECAST AND ALL THE OTHER CONCRETE EXCEPT R.C. COVER SHALL BE CAST IN PLACE
  3. P.C. STRAND 12T 12.7 MEANS A GROUP OF 12 NO STRANDS FOR PRESTRESSED CONCRETE OF 12.7MM DIAMETER EACH AND SHALL CONFORM TO JIS G 3536 SWPR7B 12T 12.7 OR EQUIVALENT
  4. P.C. BAR SHALL CONFORM TO THE REQUIREMENTS AS FOLLOWS:  
 MINIMUM ULTIMATE TENSILE STRENGTH: 190%<sub>f<sub>tm</sub></sub>  
 MINIMUM YIELD STRESS: 160%<sub>f<sub>tm</sub></sub>
  5. THIS DRAWING SHALL BE APPLIED TO  
 : B12 - PC29  
 : B08 - PC25
  6. DESIGN TRAIN LOAD: EQUIVALENT TO  
 KS - 16

SUPERSTRUCTURE MATERIAL SCHEDULE (B08-PC24)

ITEM	TYPE	UNIT	QUANTITY
MAIN BEAM	CONCRETE CLASS A (fc=400 <sup>kg/cm<sup>2</sup></sup> )	m <sup>3</sup>	66.1
	P.C. STRAND 12T 12.7 (fs=190 <sup>kg/mm<sup>2</sup></sup> )	kg	2429.0
	SHEATH $\phi 65$ and $\phi 70$	m	245.9
	FORMS	m <sup>2</sup>	333.7
	ANCHORING DEVICE FOR 12 T 12.7	EACH	20
	REINFORCING BAR	kg	19
		kg	620.5
		kg	3612.2
		kg	95.8
	TOTAL		4328.5
LATERAL JOINT	CONCRETE CLASS B (fc=300 <sup>kg/cm<sup>2</sup></sup> )	m <sup>3</sup>	9.0
	P.C. BAR $\phi 23$ (fs=110 <sup>kg/mm<sup>2</sup></sup> )	kg	721.3
	SHEATH $\phi 35$	m	210.2
	FORMS	m <sup>2</sup>	39.0
	ANCHOR PLATE (MT)	EACH	124
REINFORCING BAR		kg	16
		kg	1937.1
		kg	83.5
	TOTAL		2089.4
SIDEWALK CONCRETE CLASS C (fc=240 <sup>kg/cm<sup>2</sup></sup> )	m <sup>3</sup>	14.4	
BRIDGE RAILING CONCRETE	m <sup>3</sup>	4.9	
AND DUCT FORMS	m <sup>2</sup>	45.3	
MORTAR WITH SLOPE-PROTECTIVE MORTAR	m <sup>3</sup>	8.4	
DRAINAGE	EACH	4	
ELASTOMERIC BEARING PADS	FIX. FOR R=170 ton		2
	MOV. FOR R=170 ton		2

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 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

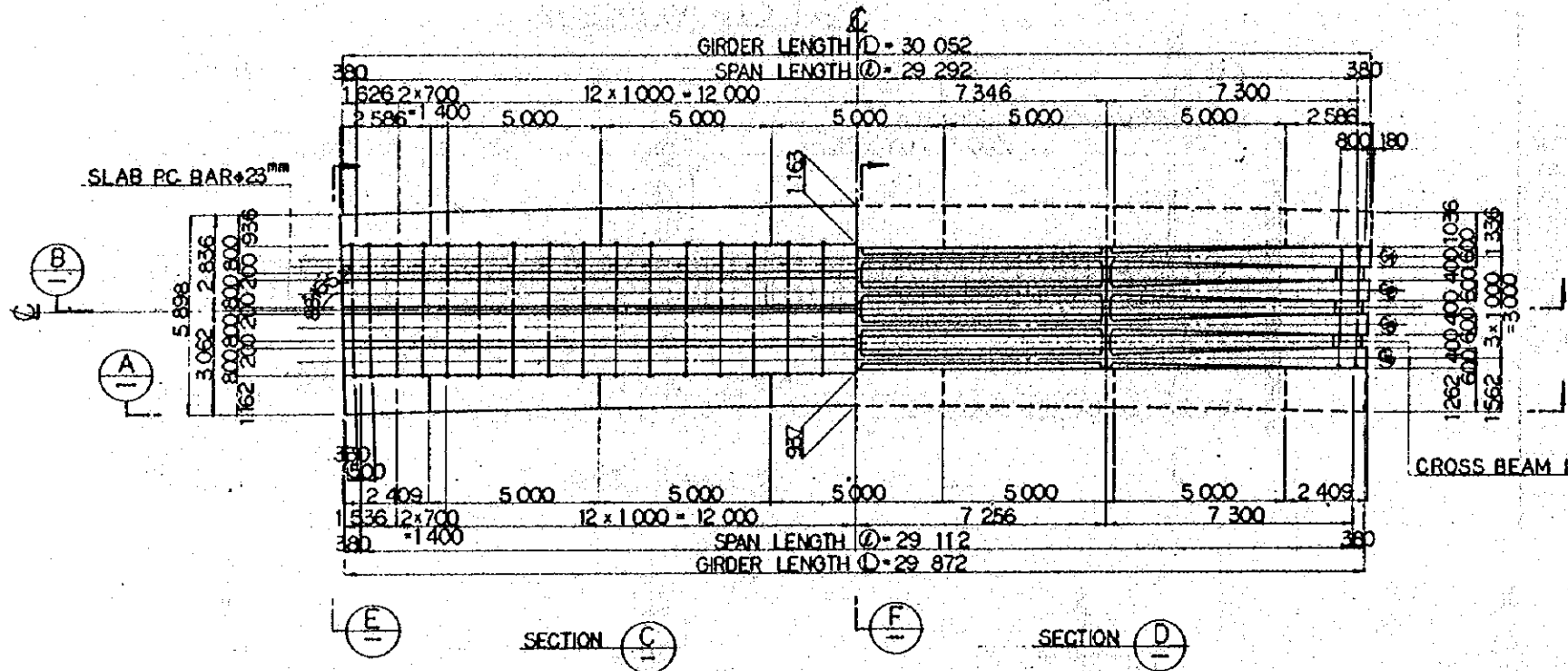
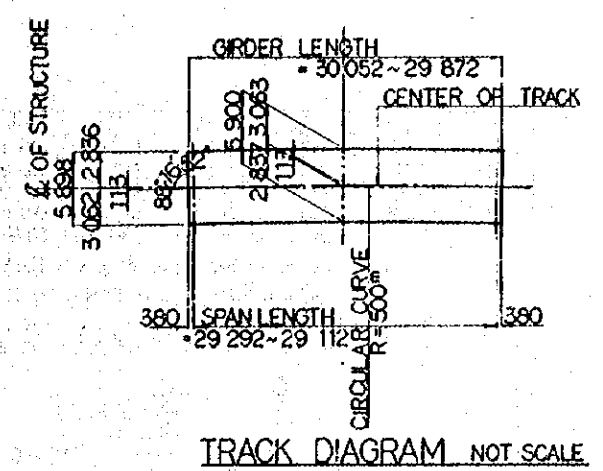
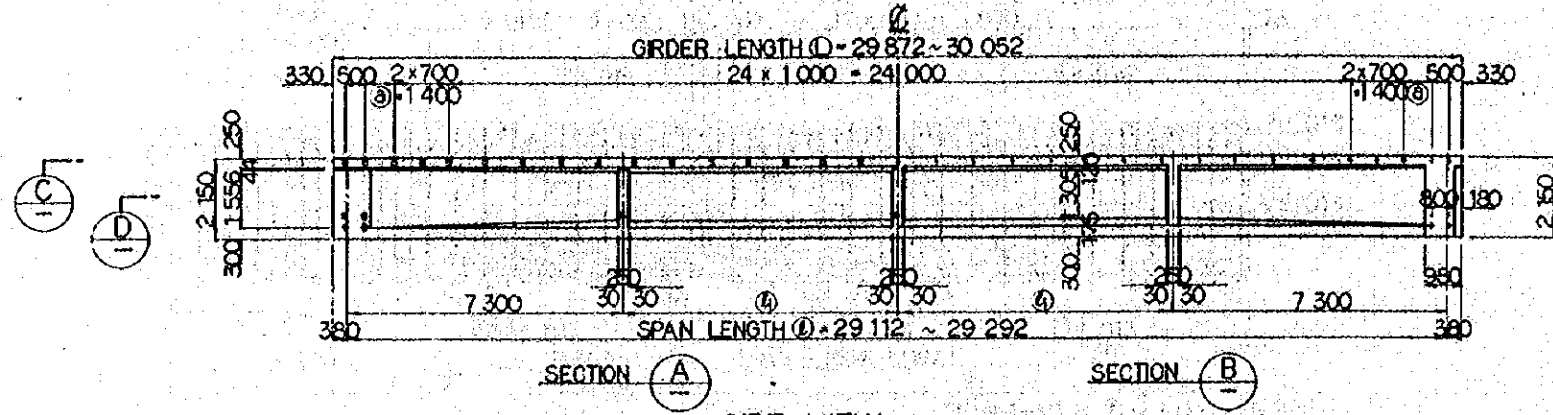
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
B	1 AUG 84	HYAKA	KM	ML		
A	15 FEB 84	HYAKA	KM	ML		

P.C. GIRDER  
 PC 24  
 GENERAL VIEW

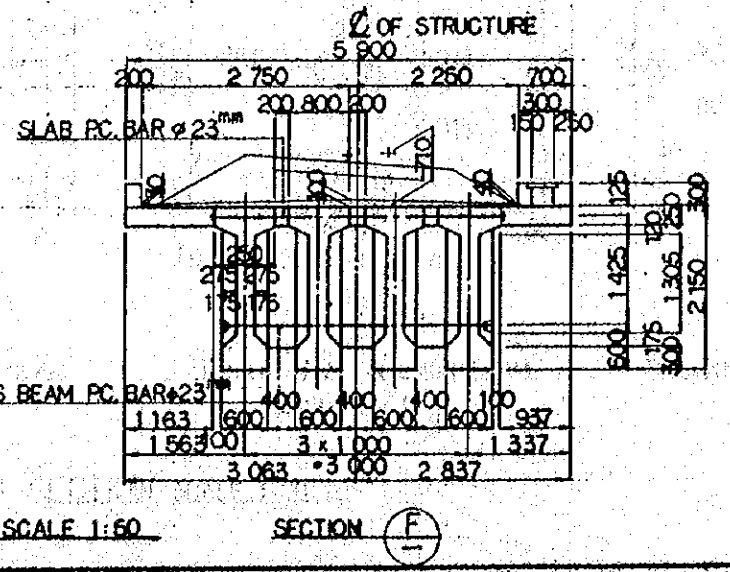
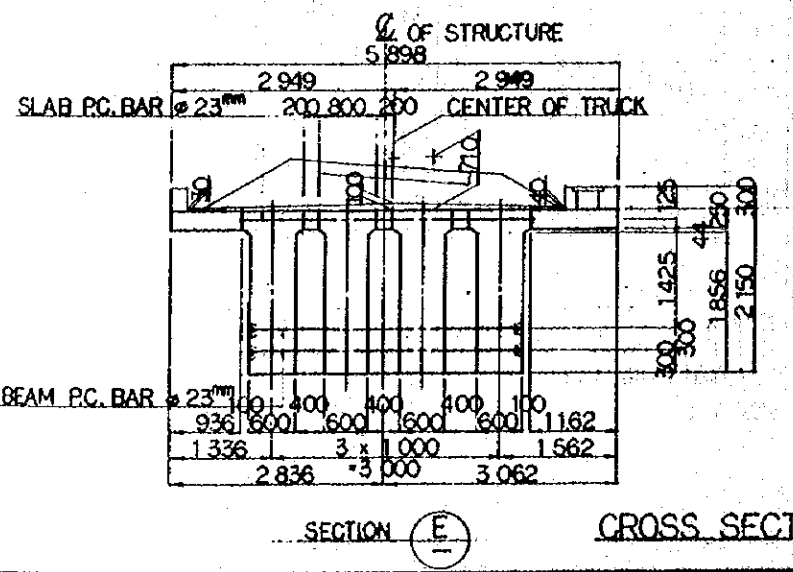
PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: AS NOTED DRAWING NO: CS-044



	(A)	(B)	(C)	(D)
(1)	30.052	29.292	7.346	7.36
(2)	29.992	29.232	7.316	7.56
(3)	29.932	29.172	7.266	7.36
(4)	29.872	29.112	7.256	7.06

(1) (2) (3) AND (4) SHOW GIRDER'S NUMBER.  
 (A) (B) (C) AND (D) SHOW THE VALUE AT THE POINT OF CENTER LINE OF MAIN GIRDER.

- NOTES:
- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  - MAIN BEAM SHALL BE PRECAST AND ALL THE OTHER CONCRETE EXCEPT R.C. COVER SHALL BE CAST IN PLACE
  - P.C. STRAND 12T12.7 MEANS A GROUP OF 12 NO STRANDS FOR PRESTRESSED CONCRETE OF 12.7 MM DIAMETER EACH AND SHALL CONFORM TO JIS G 3536 SWPR7B 12T 12.7 OR EQUIVALENT
  - P.C. BAR SHALL CONFORM TO THE REQUIREMENTS AS FOLLOWS:  
 MINIMUM ULTIMATE TENSILE STRENGTH:  $190 \frac{kg}{mm^2}$   
 MINIMUM YIELD STRESS:  $160 \frac{kg}{mm^2}$
  - THIS DRAWING SHALL BE APPLIED TO:  
 : B12 - PC32  
 : B13 - PC35  
 : B13 - PC36  
 : B13 - PC37  
 : B14 - PC38
  - DESIGN TRAIN LOAD: EQUIVALENT TO  
 KS - 16



SUPERSTRUCTURE MATERIAL SCHEDULE (B11-PC28)

ITEM	TYPE	UNIT	QUANTITY
MAIN BEAM	CONCRETE CLASS A ( $C=400 \frac{kg}{m^3}$ )	$m^3$	119.8
	P.C. STRAND 12T12.7 ( $15=190 \frac{kg}{m^3}$ )	kg	5,794.8
	SHEATH $\phi 65$	m	591.6
	FORMS	$m^2$	670.6
	ANCHORING DEVICE FOR 12T12.7	EACH	40
	REINFORCING BAR	kg	1,490.6
			6,765.4
			68.0
	TOTAL		8,314.0
	LATERAL JOINT	CONCRETE CLASS B ( $C=300 \frac{kg}{m^3}$ )	$m^3$
P.C. BAR $\phi 23$ ( $15=110 \frac{kg}{m^3}$ )		kg	557
SHEATH $\phi 35$		m	16.3
FORMS		$m^2$	40.2
ANCHOR PLATE, NUT FOR $\phi 23$		EACH	88
REINFORCING BAR		kg	994.1
			1,669.5
			397.3
TOTAL			2,070.9
SIDEWALK CONCRETE CLASS C ( $C=240 \frac{kg}{m^3}$ )		$m^3$	15.7
BRIDGE RAILING AND DUCT CONCRETE	$m^3$	5.8	
FORMS	$m^2$	54.3	
MORTAR WITH SLOPE-PROTECTIVE MORTAR	$m^3$	10.1	
DRAINAGE	EACH	8	
ELASTOMERIC BEARING PADS	FIX. FOR R=120 ton		4
	MOV. FOR R=120 ton		4

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 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

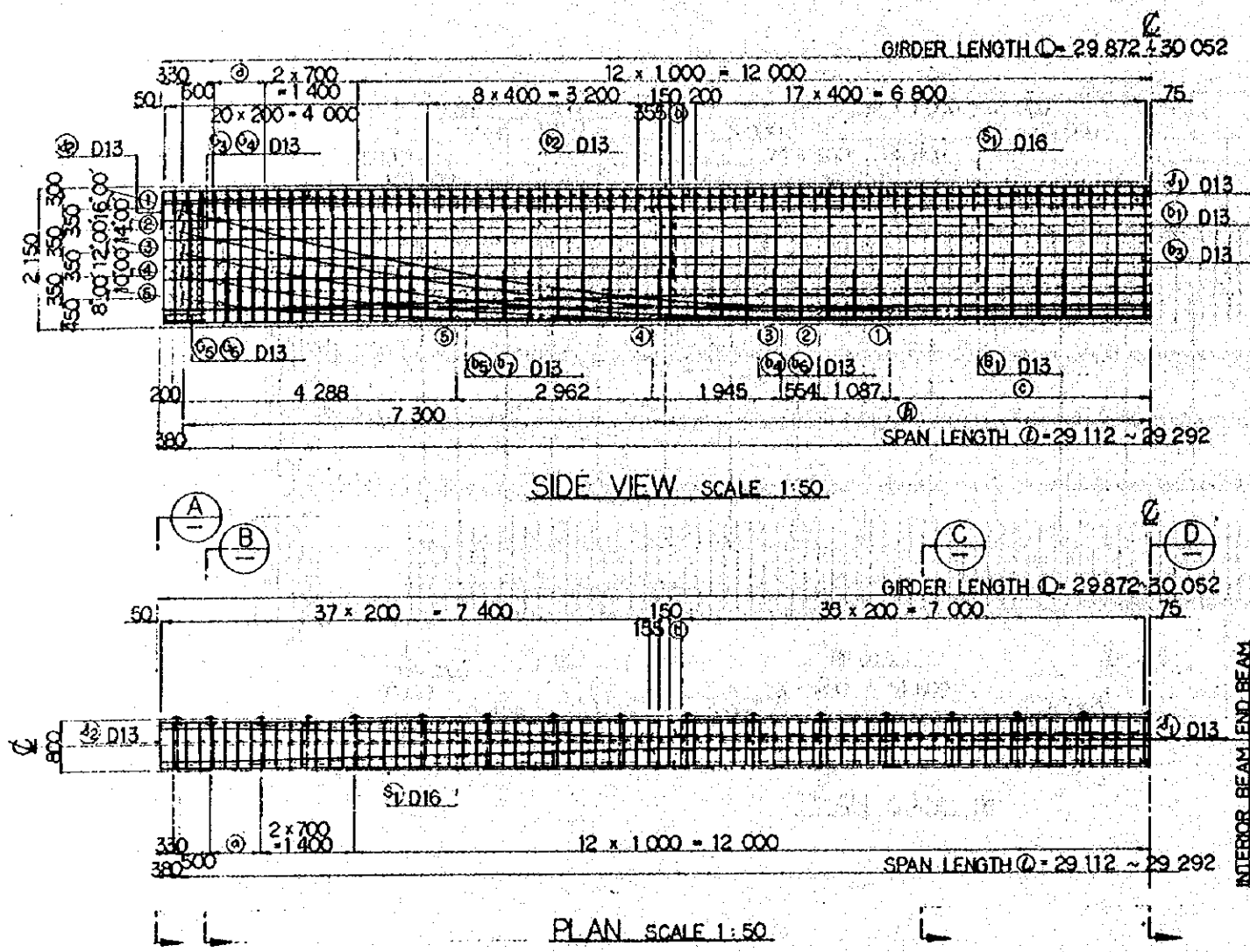
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

REVISION	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
B	1 AUG '84	M.Y.A.O	K.A.	K.M.	M.K.	
A	15 FEB '84	M.Y.A.O	K.A.	K.M.	M.K.	

P.C. GIRDER  
 PC 28  
 GENERAL VIEW

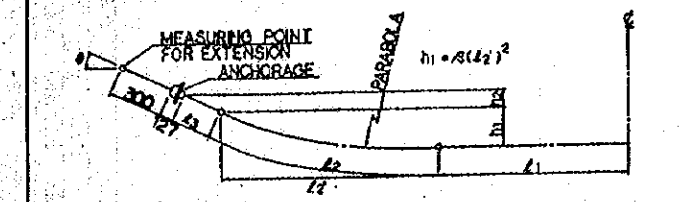
PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: AS NOTED DRAWING NO: CS - 045



	(1)	(2)	(3)	(4)	(5)	(6)
(1)	30 052	29 232	7 346	796	196	3 990
(2)	29 992	29 232	7 316	766	166	3 960
(3)	29 932	29 172	7 286	736	136	3 930
(4)	29 872	29 112	7 256	706	106	3 900

(1) (2) (3) AND (4) SHOW GIRDERS NUMBER.  
 (1) (2) (3) AND (4) SHOW THE VALUE AT THE POINT OF CENTER LINE OF MAIN GIRDER.

**BENDING SCHEDULE OF PC CABLES**

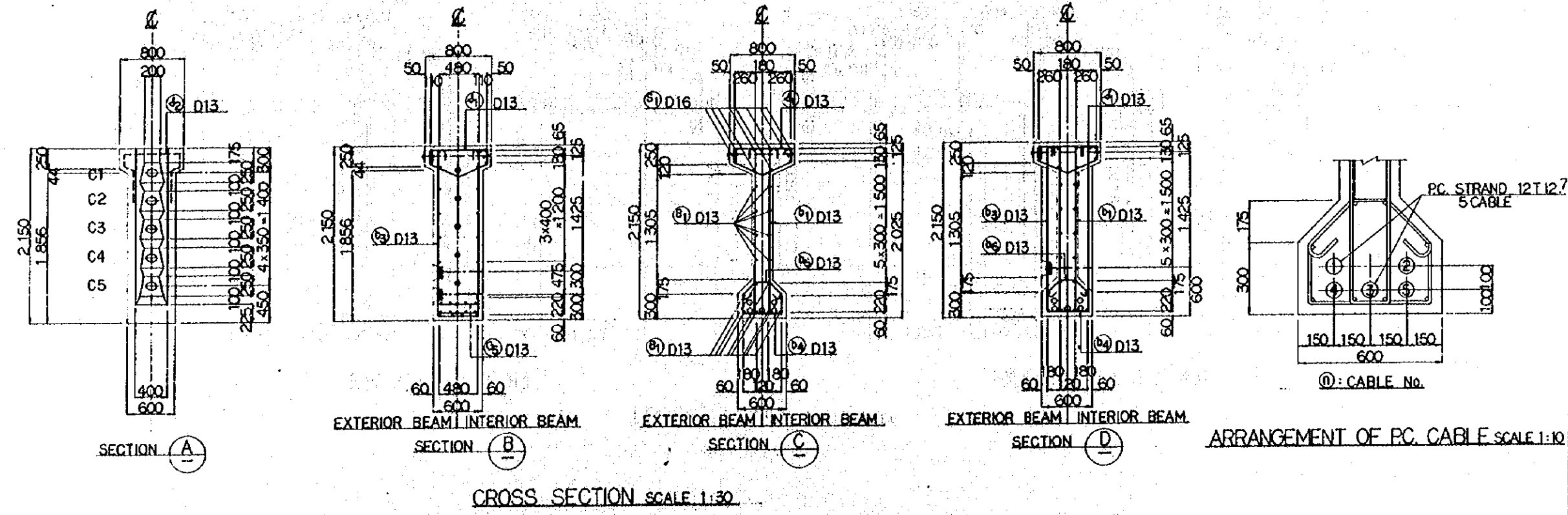


CABLE No.	L1 (m)	L2 (m)	L3 (m)	h1 (m)	h2 (m)	L (m)	A	ANGLE
(1)	5.500	10.301	10.163	0.625	1.457	0.172	14.826	0.01411
(2)	4.887	9.163	9.070	0.625	1.131	0.151	14.775	0.01374
(3)	5.541	8.674	8.511	0.625	0.906	0.130	14.740	0.01249
(4)	7.483	6.694	6.561	0.625	0.678	0.109	14.705	0.01144
(5)	10.448	3.607	3.595	0.625	0.253	0.087	14.660	0.01065

**SCHEDULE OF PC BAR**

	(mm)
ANCHOR PLATE	
SLAB	3 800
CROSS BEAM	3 420

- NOTES:**
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETRES UNLESS OTHERWISE INDICATED
  2. REINFORCEMENT OF ANCHORAGE AND RECESS DIMENSION ARE EXAMPLES AND THESE SHALL BE REVIEWED AND, IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURES INSTRUCTIONS FOR THE SELECTED PRESTRESSING SYSTEM
  3. JACKING LOAD INCLUDE FRICTION IN THE JACK AND ANCHORAGE. EXTENSION SHOWS TOTAL VALUE OF THOSE AT BOTH ENDS MEASURED AT THE POINT 300CM OUTSIDE FROM ANCHORAGE SURFACE. AFTER THE PRESTRESSING SYSTEM IS DETERMINED THESE VALUES SHALL BE REVIEWED ALONG WITH THE OTHER ASSUMED FACTORS AND, IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURES INSTRUCTIONS. INITIAL STRESS DO NOT INCLUDE OTHER FACTORS THAN FRICTION LOSSES.
  4. TENSIONING SEQUENCE OF LATERAL PC. BARS SHALL BE AT EVERY OTHER BAR



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NEW RAILWAY LINE FOR CENGKARENG AIRPORT  
 CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY  
 (JICA)

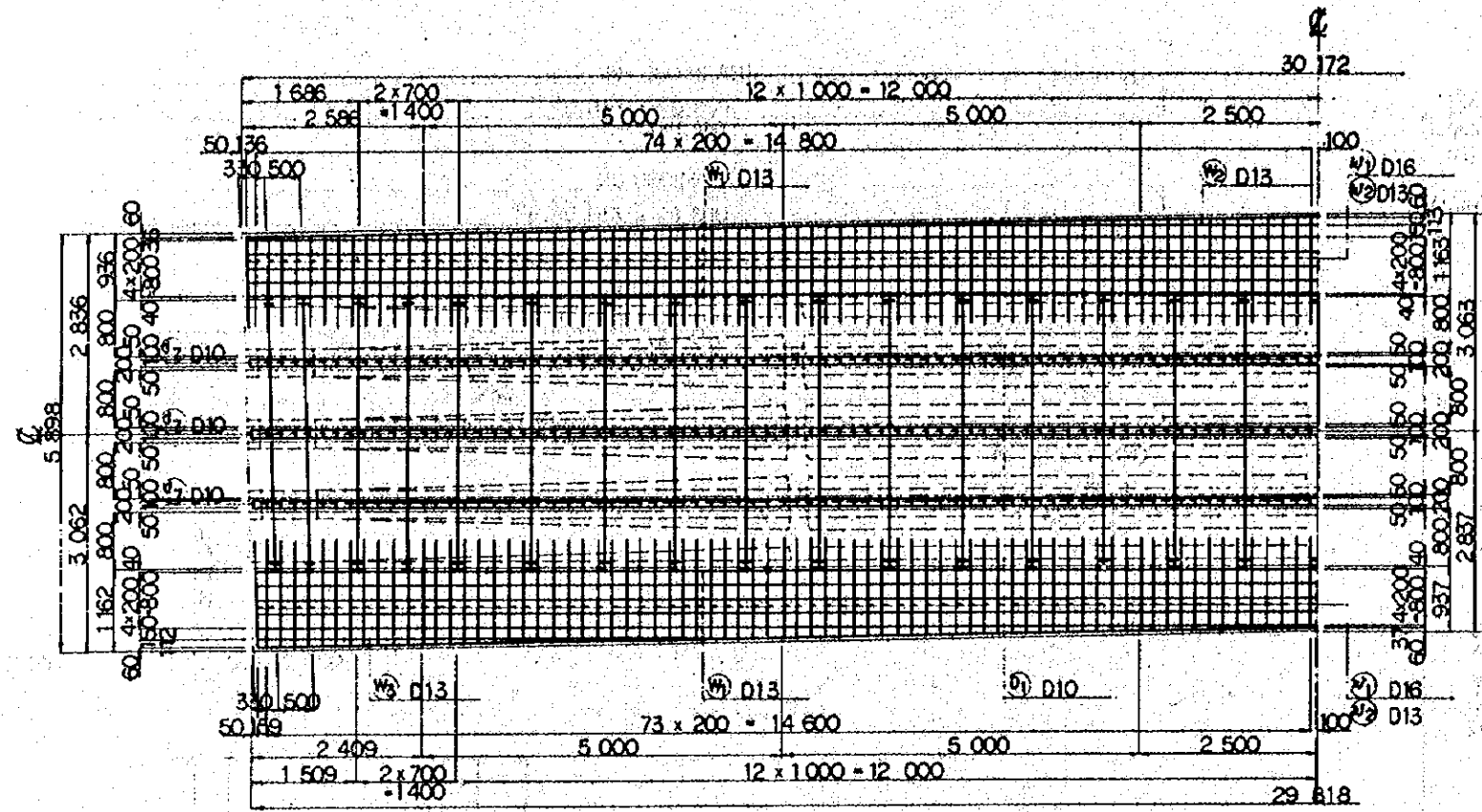
B	1 AUG 84	MYAO	KAKM	mk
A	15 FEB 84	MYAO	KAKM	mk

REVISIONS DATE DESIGNED DRAWN CHECKED REVIEWED SUBMITTED

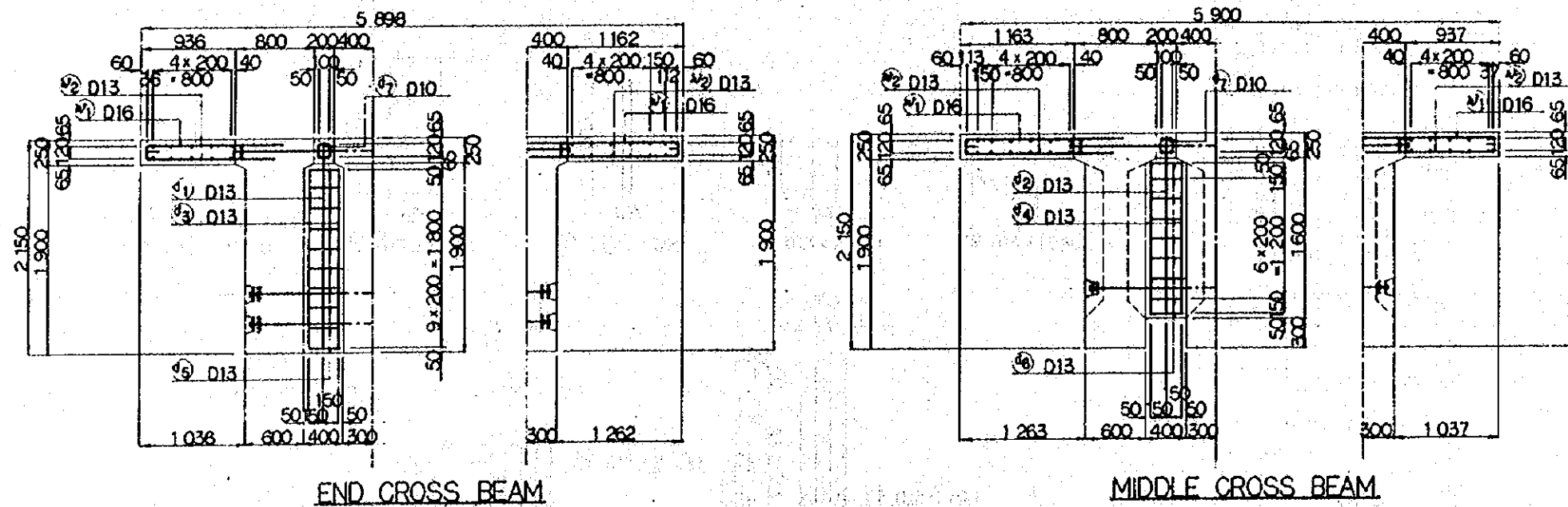
P.C. GIRDER  
 PC 28  
 P.C. CABLE AND REINF. BAR  
 ARRANGEMENT OF MAIN BEAM

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE AS NOTED DRAWING NO. CS - 046

- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REINFORCEMENT OF ANCHORAGE AND RECESS DIMENSION ARE EXAMPLES AND THESE SHALL BE REVIEWED AND IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS FOR THE SELECTED PRESTRESSING SYSTEM



PLAN SCALE 1:50



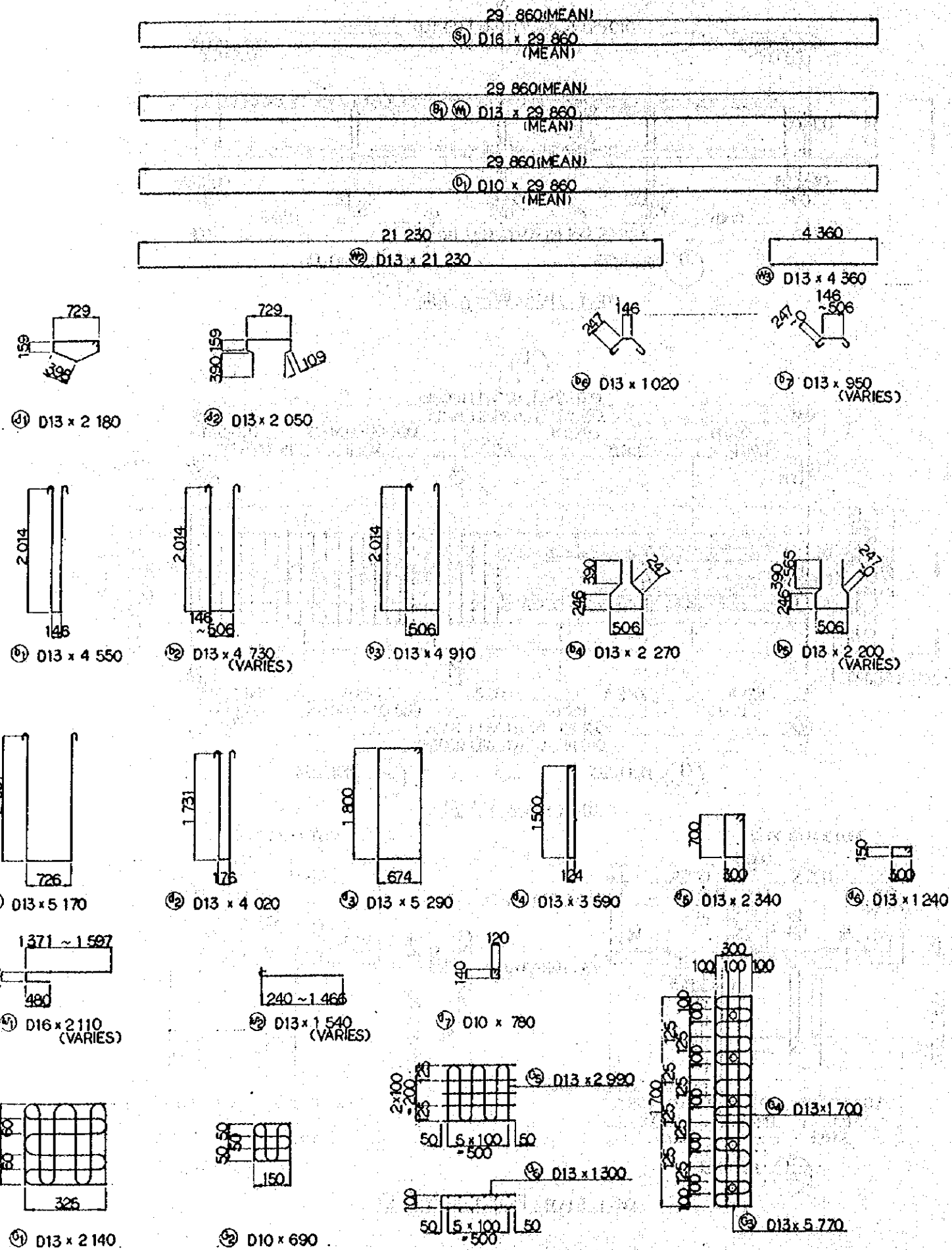
END CROSS BEAM

MIDDLE CROSS BEAM

CROSS SECTION SCALE 1:30

REPUBLIC OF INDONESIA					
MINISTRY OF COMMUNICATIONS					
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1 AUG '84	MY	AD	KA	RM
A	15 FEB '84	MY	AD	KA	RM
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED
P.C. GIRDER PC 28 P.C. CABLE AND REINF. BAR ARRANGEMENT OF LATERAL JOINT					
PACKAGE: 2 CIVIL AND ARCHITECTURAL WORK					
SCALE: AS NOTED		DRAWING NO: CS - 047			

NOTE:  
 1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED



**BAR SCHEDULE**

REINF. No.	DIA. (mm)	LENGTH (mm)	NUMBER / ONE BEAM		TOTAL NUMBER	UWEIGHT (kg/m)	WEIGHT (kg)
			EXTERIOR	INTERIOR			
<b>MAIN BEAM</b>							
S 1	D16	29 860	8	8	32	1.560	1490.6
4 1	D13	2 180	150	150	600	0.995	1301.5
2		2 050	2	2	8		16.3
B 1	D13	29 860	16	16	64	0.995	1901.5
d 1	D13	4 550	40	40	160	0.995	724.4
2		4 730	48	48	192		903.6
3		4 910	16	16	64		312.7
4		2 270	40	40	160		361.4
5		2 200	48	48	192		420.3
6		1 020	40	40	160		162.4
7		950	48	48	192		181.5
G 1	D13	2 140	20	20	80	0.995	170.3
2	D10	690	88		176	0.560	68.0
3	D13	5 770	4	4	16	0.995	91.9
4		1 700	16	16	64		108.3
5		2 990	4	4	16		47.6
6		1 300	10	10	40		51.7
<b>WEIGHT OF BARS FOR MAIN BEAM</b>							
						D16	1490.6 kg
						D13	6755.4 kg
						D10	68.0 kg
						<b>TOTAL WEIGHT</b>	<b>8314.0 kg</b>
<b>LATERAL JOINT</b>							
W 1	D13	29 860			24	0.995	713.1
2		21 230			2		42.2
3		4 360			4		17.4
W 1	D16	2 110			302	1.560	994.1
2	D13	1 540			302	0.995	462.8
D 1	D10	29 860			12	0.560	200.7
d 1	D13	5 170			6	0.995	30.9
2		4 020			9		36.0
3		5 290			12		63.2
4		3 590			18		64.3
5		2 340			60		139.7
6		1 240			81		99.9
7	D10	780			450	0.560	196.6
<b>WEIGHT OF BARS FOR LATERAL JOINT</b>							
						D16	994.1 kg
						D13	1669.5 kg
						D10	397.3 kg
						<b>TOTAL WEIGHT</b>	<b>3060.9 kg</b>
<b>TOTAL WEIGHT OF BARS</b>							
						D16	2484.7 kg
						D13	8425.1 kg
						D10	465.3 kg
						<b>TOTAL WEIGHT</b>	<b>11375.1 kg</b>

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENKARENG AIRPORT  
 CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1 AUG. '84	HY-10	KA	KM	nk
A	5 FEB. '84	HY-10	KA	KM	nk

REVISORS DATE DESIGNED DRAWN CHECKED REVIEWED SUBMITTED

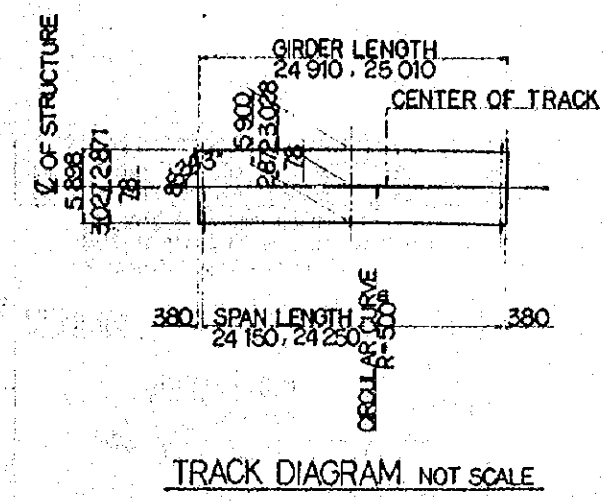
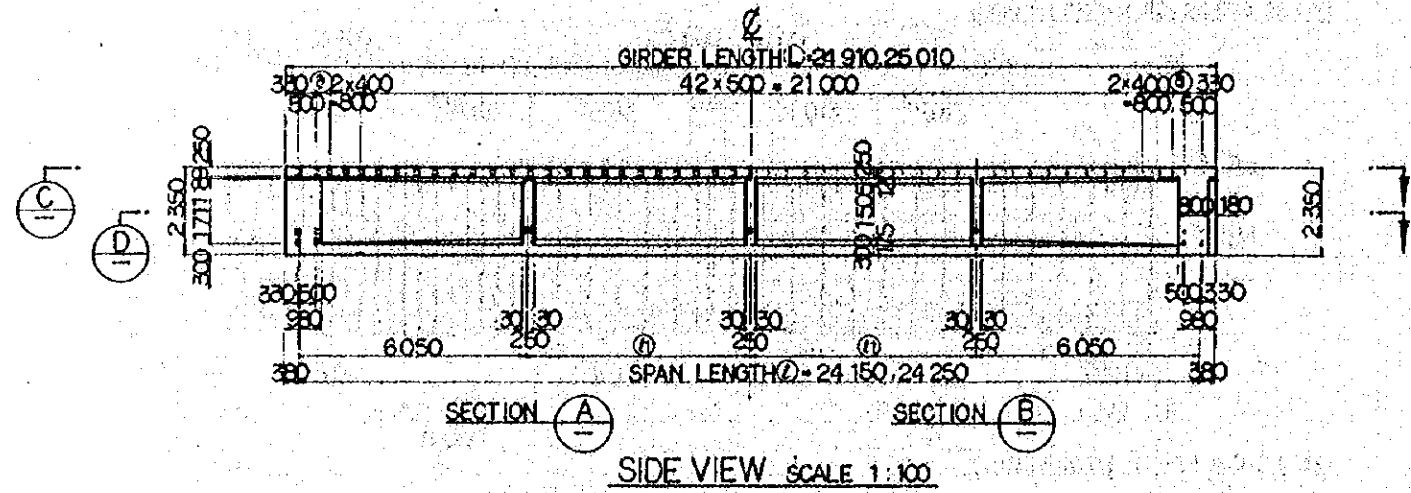
P.C. GIRDER  
 PC 2B  
 REINF. BAR SCHEDULE

PACKAGE: I CIVIL AND ARCHITECTURAL WORK

SCALE: AS NOTED DRAWING NO: CS - 04B

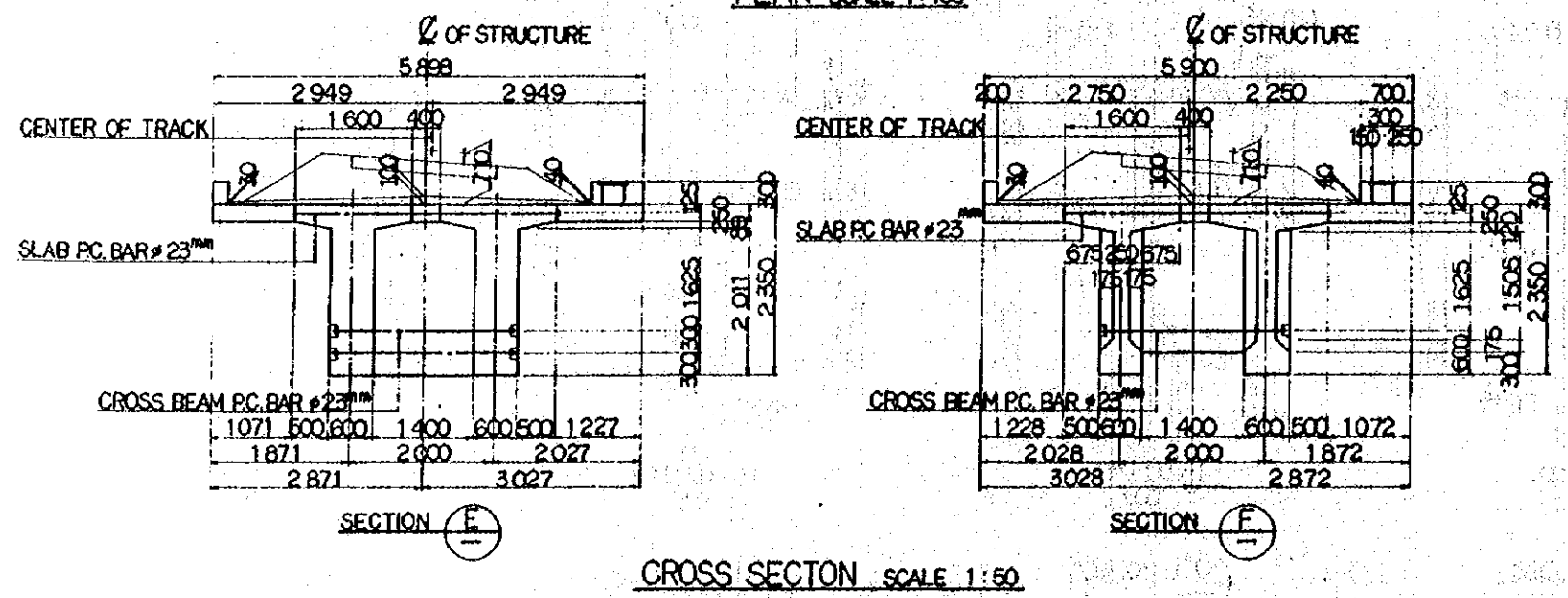
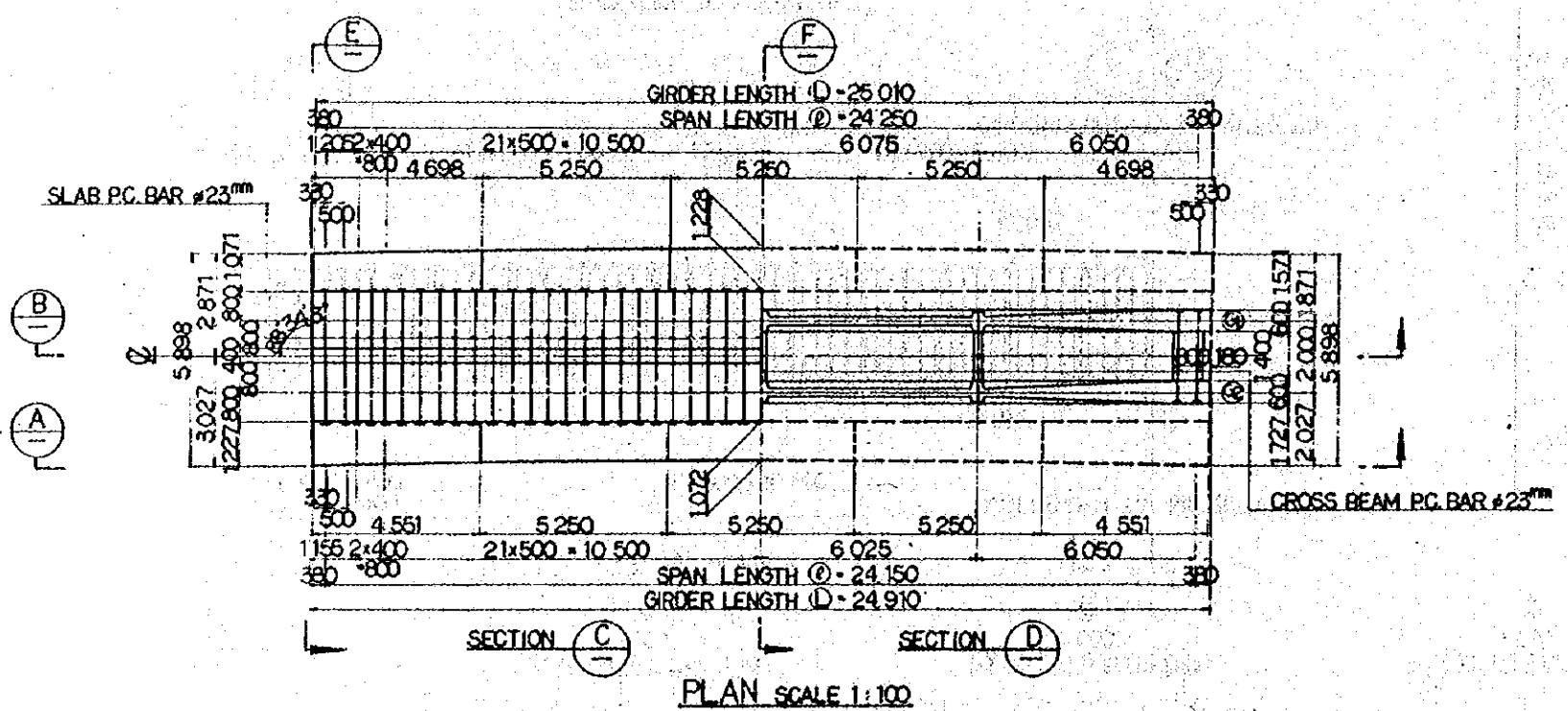
NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. MAIN BEAM SHALL BE PRECAST AND ALL THE OTHER CONCRETE EXCEPT R.C. COVER SHALL BE CAST IN PLACE
3. P.C. STRAND 12T 12.7 MEANS A GROUP OF 12 NO STRANDS FOR PRESTRESSED CONCRETE OF 12.7 MM DIAMETER EACH AND SHALL CONFORM TO JIS G 3536 SWPR7B 12T 12.7 OR EQUIVALENT
4. P.C. BAR SHALL CONFORM TO THE REQUIREMENTS AS FOLLOWS:  
 MINIMUM ULTIMATE TENSILE STRENGTH : 190  $\text{kg/mm}^2$   
 MINIMUM YIELD STRESS : 160  $\text{kg/mm}^2$
5. THIS DRAWING SHALL BE APPLIED TO  
 : B12 - PC30  
 : B12 - PC31
6. DESIGN TRAIN LOAD : EQUIVALENT TO  
 KS - 16



	(D)	(D)	(D)	(D)
(D)	25 010	24 250	6 075	375
(D)	24 910	24 150	6 025	325

(D) AND (D) SHOW GIRDERS NUMBER.  
 (D), (D), (D) AND (D) SHOW THE VALUE AT THE POINT OF CENTER LINE OF MAIN GIRDER.



SUPERSTRUCTURE MATERIAL SCHEDULE (B12 - PC29)

ITEM	TYPE	UNIT	QUANTITY	
MAIN BEAM	CONCRETE CLASS A ( $f_c = 400 \text{ kg/cm}^2$ )	$\text{m}^3$	66.3	
	P.C. STRAND 12T 12.7 ( $f_s = 190 \text{ kg/mm}^2$ )	kg	2 429.2	
	SHEATH #35	m	245.9	
	FORMS	$\text{m}^2$	333.7	
	ANCHORING DEVICE FOR 12T 12.7	EACH	20	
	REINFORCING BAR			
	19	kg	—	
	16		620.8	
	13		3612.2	
	10		95.8	
	TOTAL		4329.6	
LATERAL JOINT	CONCRETE CLASS B ( $f_c = 300 \text{ kg/cm}^2$ )	$\text{m}^3$	9.0	
	P.C. BAR #23 ( $f_s = 110 \text{ kg/mm}^2$ )	kg	721.3	
	SHEATH #35	m	210.2	
	FORMS	$\text{m}^2$	39.0	
ANCHOR PLATE NUT	FOR #23	EACH	124	
	REINFORCING BAR			
		16	kg	868.8
		13		1 937.1
	10		83.6	
	TOTAL		2 889.4	
SIDEWALK CONCRETE CLASS C ( $f_c = 240 \text{ kg/cm}^2$ )	$\text{m}^3$	14.3		
BRIDGE RAILING AND DUCT CONCRETE	$\text{m}^3$	4.9		
FORMS	$\text{m}^2$	45.3		
MORTAR WITH SLOPE PROTECTIVE MORTAR	$\text{m}^3$	8.3		
DRAINAGE	EACH	4		
ELASTOMERIC BEARING PADS	FIX. FOR R-170 ton		2	
	MOV. FOR R-170 ton		2	

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 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

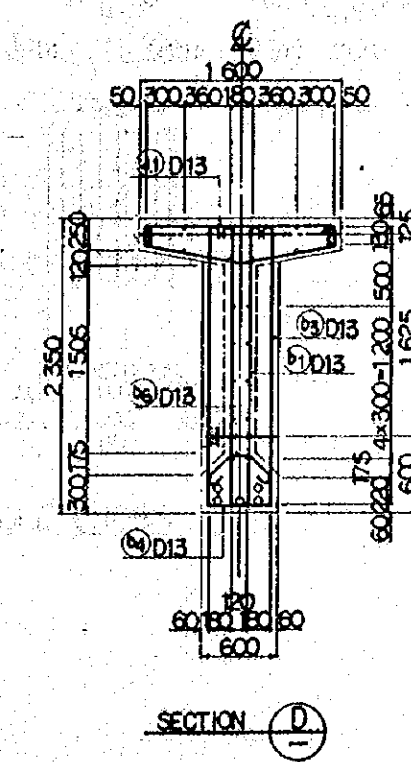
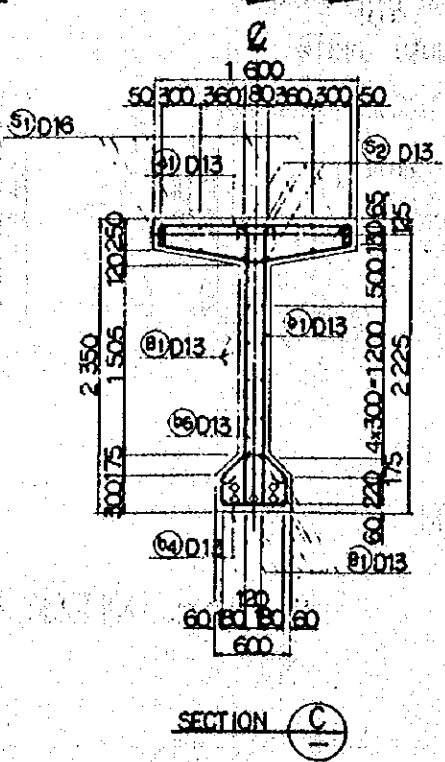
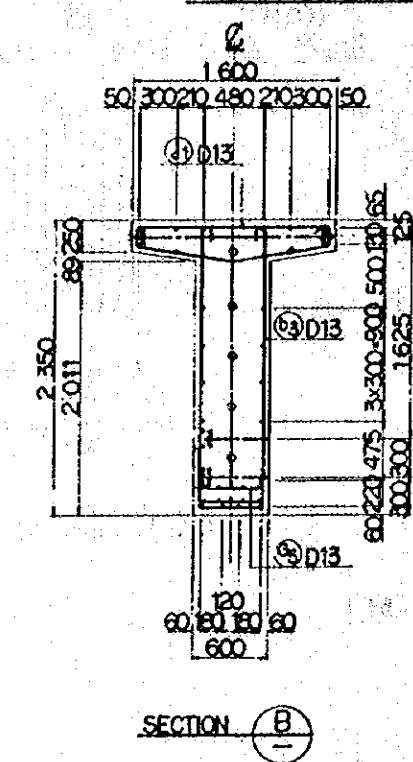
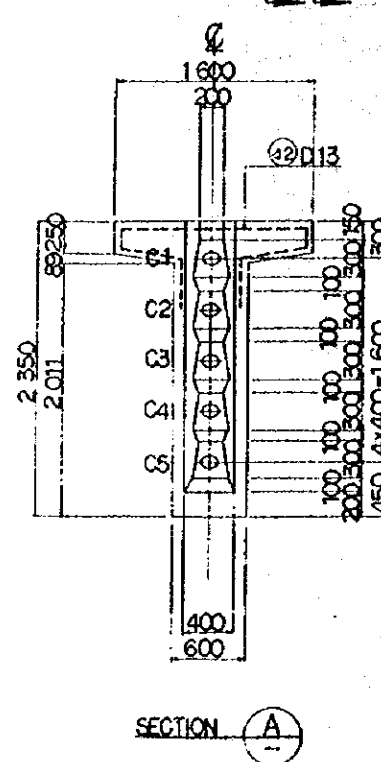
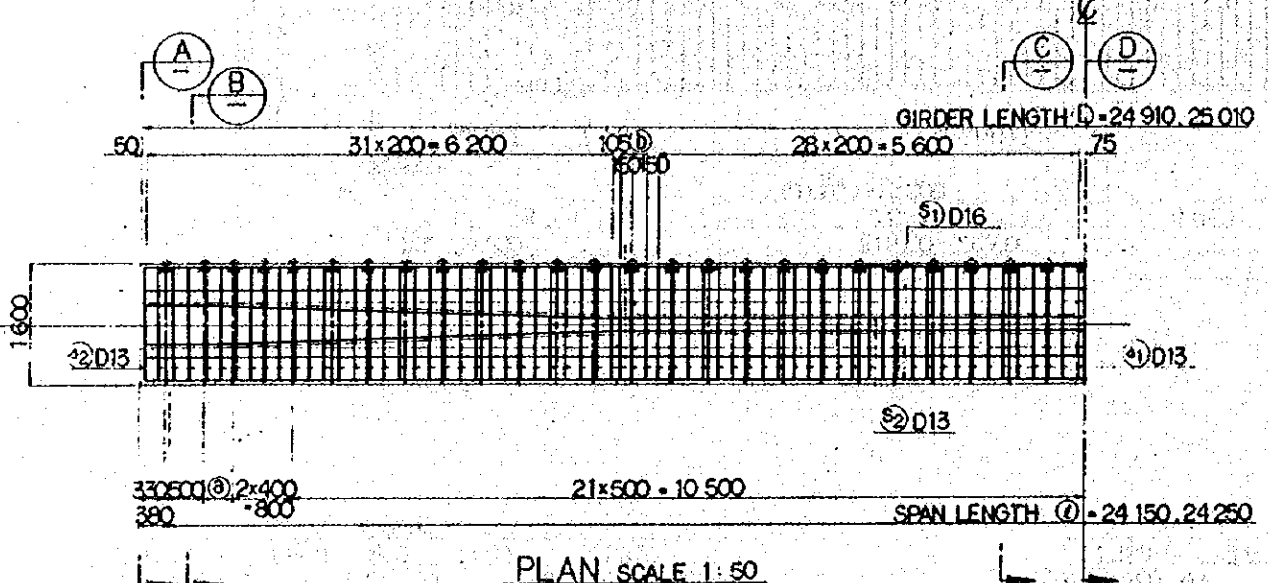
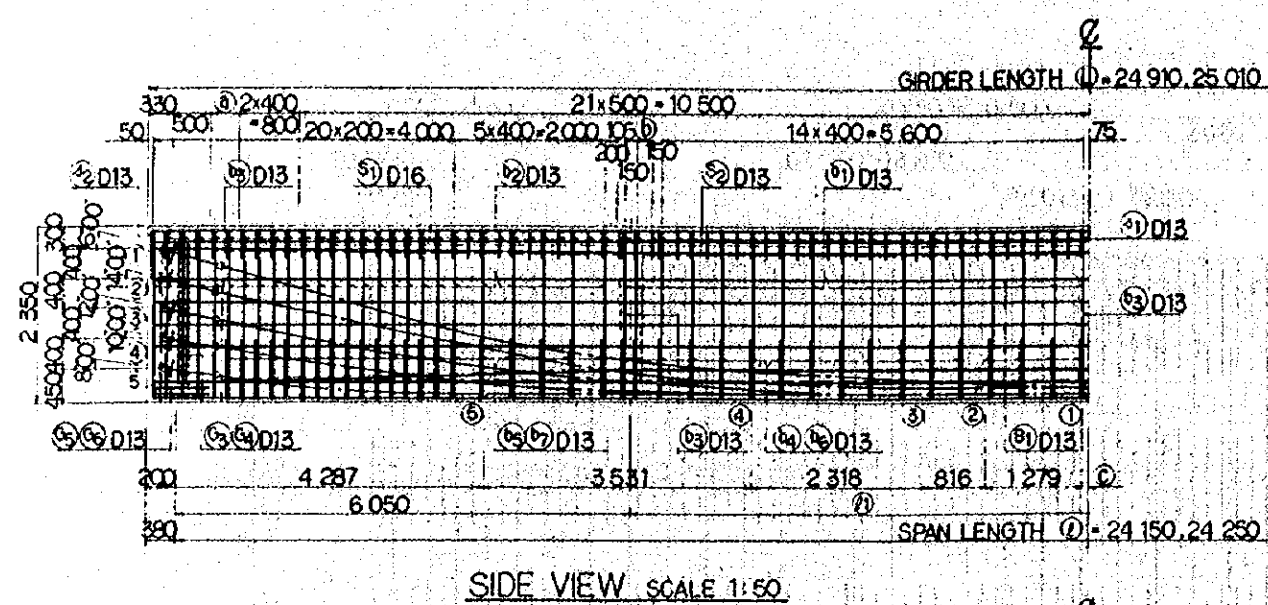
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1/AUG/84	HY	AO	KA	KM	AK
A	1/SEP/84	HY	AO	KA	KM	AK

REVISIONS DATE DESIGN DRAWN CHECKED REVIEWED SUBMITTED

P.C. GIRDER  
 PC 29  
 GENERAL VIEW

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE AS NOTED DRAWING NO. CS - 049

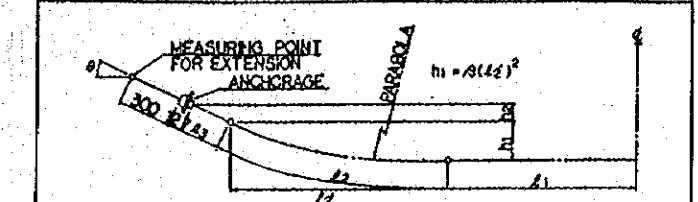


CROSS SECTION SCALE 1:30

	(1)	(2)	(3)	(4)	(5)	(6)
(1)	25.010	24.250	6.075	375	175	74
(2)	24.910	24.150	6.025	325	125	24

(1) AND (2) SHOW GIRDER'S NUMBER.  
 (1), (2), (3), (4) AND (5) SHOW THE VALUE AT THE POINT OF CENTER LINE OF MAIN GIRDER.

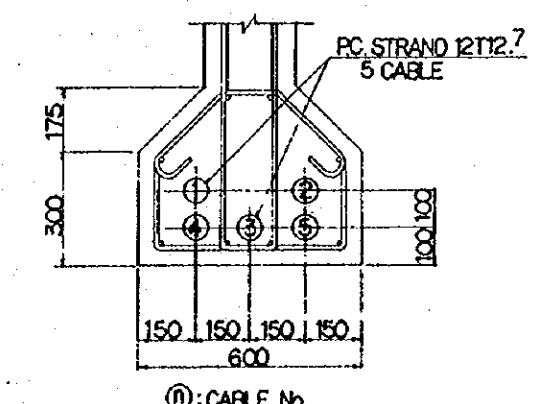
BENDING SCHEDULE OF PC CABLES



CABLE No.	L1 (m)	L2 (m)	L3 (m)	h1 (m)	h2 (m)	L (m)	A	ANGLE $\theta$
(1)	0.024	11.714	11.558	0.625	1.657	0.172	12.363	0.01241 16' 00"
(2)	1.303	10.378	10.279	0.625	1.281	0.151	12.306	0.01214 14' 00"
(3)	2.119	9.522	9.451	0.625	1.004	0.130	12.266	0.01125 12' 00"
(4)	4.437	7.166	7.128	0.625	0.628	0.109	12.227	0.01237 10' 00"
(5)	7.958	3.606	3.594	0.625	0.253	0.087	12.193	0.01935 8' 00"

SCHEDULE OF PC BAR

	(mm)
ANCHOR PLATE	
SLAB	3 600
CROSS BEAM	2 420



- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETRES UNLESS OTHERWISE INDICATED
  2. REINFORCEMENT OF ANCHORAGE AND RECESS DIMENSION ARE EXAMPLES AND THESE SHALL BE REVIEWED AND, IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURE'S INSTRUCTIONS FOR THE SELECTED PRESTRESSING SYSTEM
  3. JACKING LOAD INCLUDE FRICTION IN THE JACK AND ANCHORAGE. EXTENSION SHOWS TOTAL VALUE OF THOSE AT BOTH ENDS MEASURED AT THE POINT 300CM OUTSIDE FROM ANCHORAGE SURFACE. AFTER THE PRESTRESSING SYSTEM IS DETERMINED THESE VALUES SHALL BE REVIEWED ALONG WITH THE OTHER ASSUMED FACTORS AND, IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURE'S INSTRUCTIONS. INITIAL STRESS DO NOT INCLUDE OTHER FACTORS THAN FRICTION LOSSES.
  4. TENSIONING SEQUENCE OF LATERAL PC BARS SHALL BE AT EVERY OTHER BAR

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NEW RAILWAY LINE FOR CENGKARENG AIRPORT  
 CONSTRUCTION PROJECT

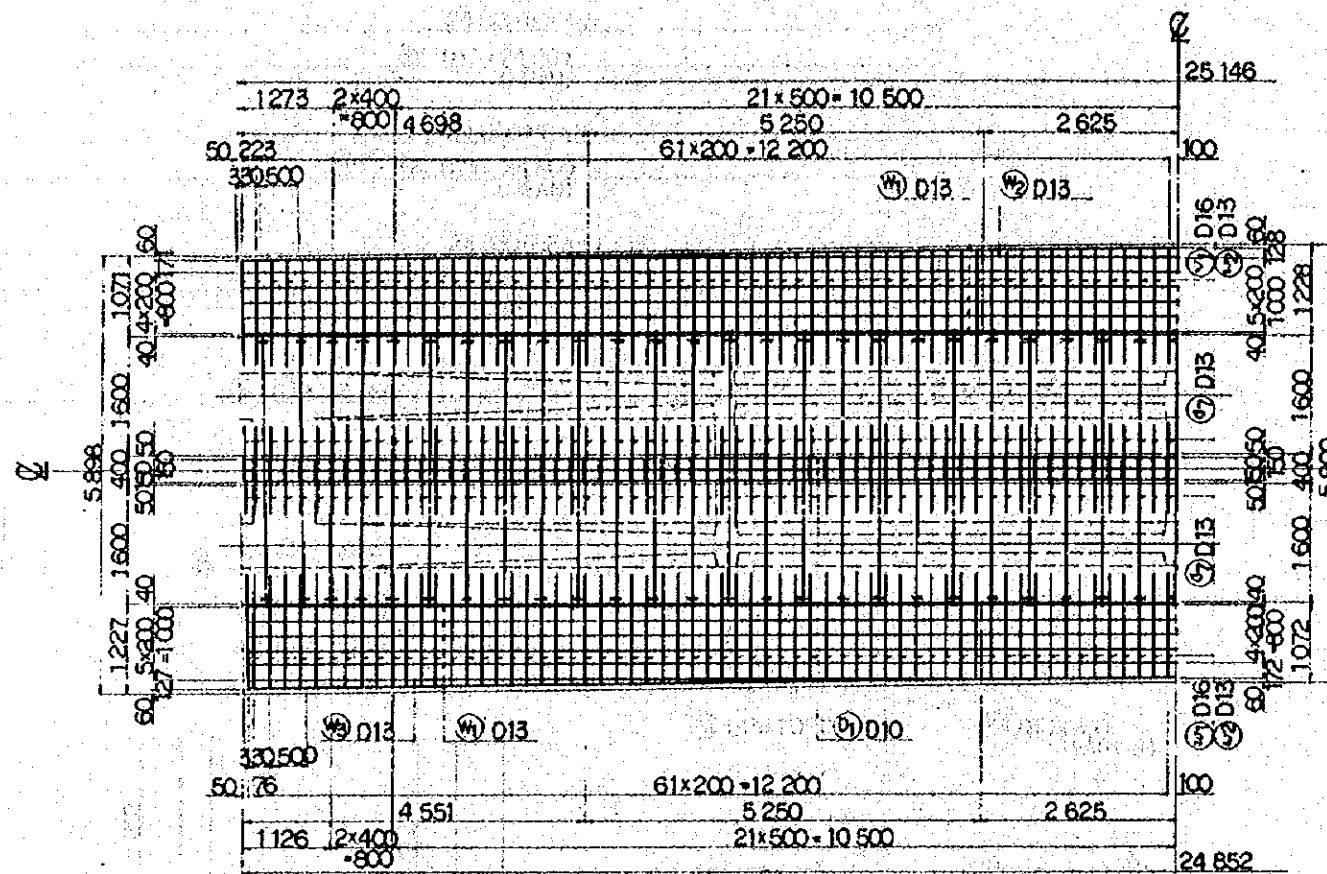
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1 AUG '84	MYAOKAWA	M.K.
A	15 FEB '84	MYAOKAWA	M.K.

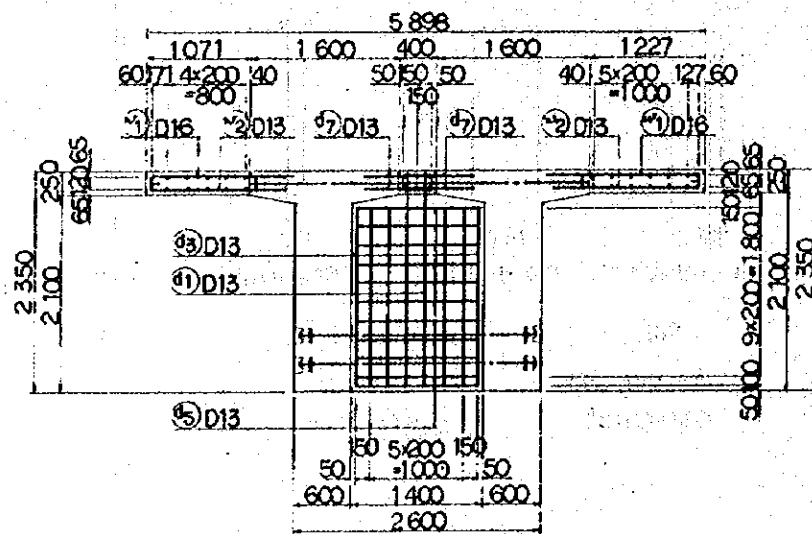
REVISIONS: DATE, DESIGNED, CHECKED, REVIEWED, SUBMITTED

P.C. GIRDER  
 PC 29  
 P.C. CABLE AND REINF. BAR  
 ARRANGEMENT OF MAIN BEAM

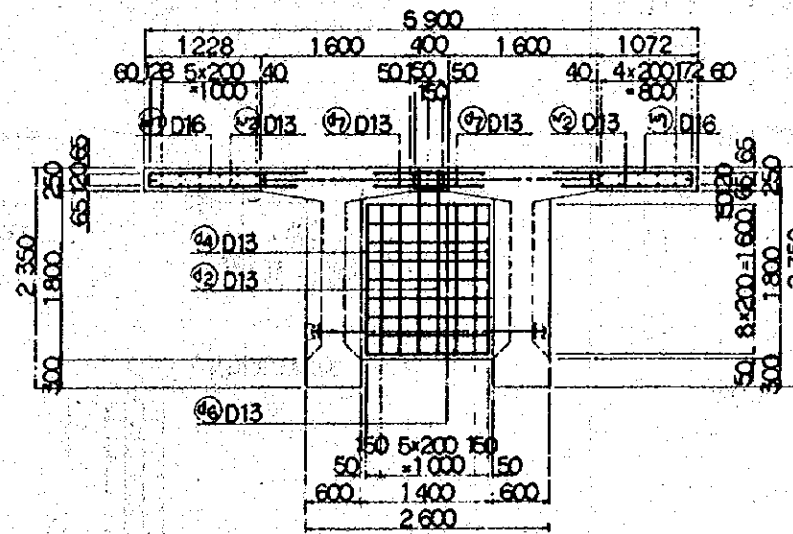
PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: AS NOTED  
 DRAWING NO: CS-050



PLAN SCALE 1:50



END CROSS BEAM



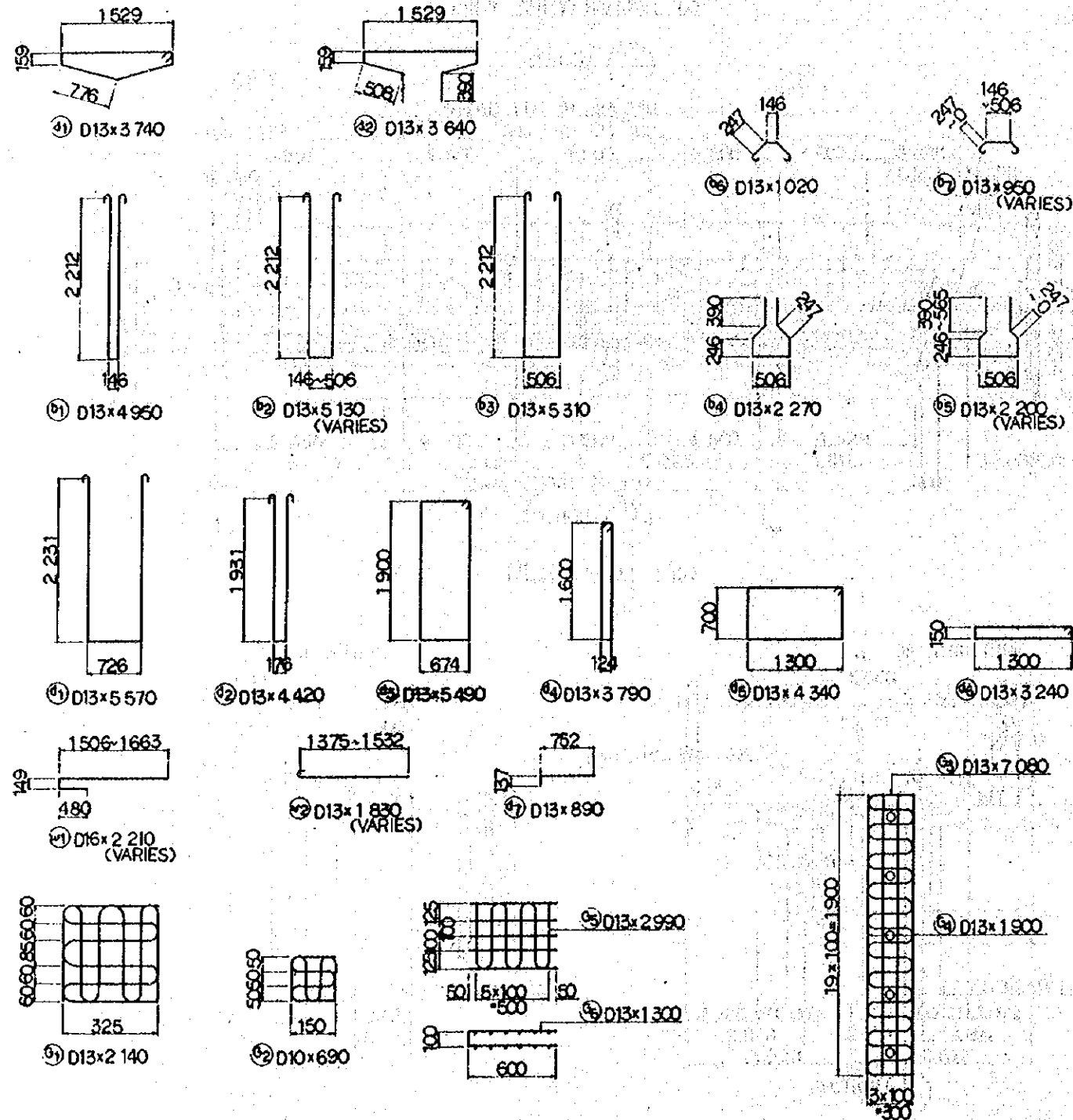
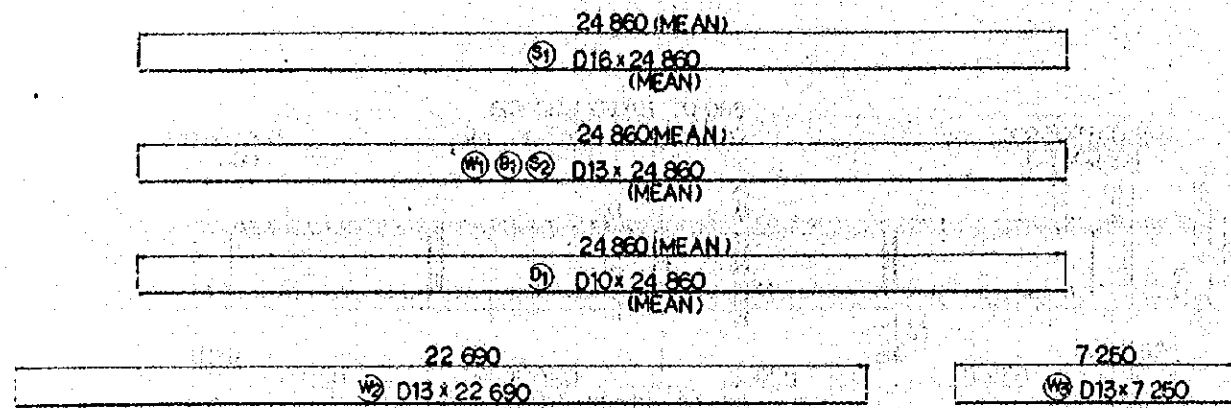
MIDDLE CROSS BEAM

CROSS SECTION SCALE 1:40

- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REINFORCEMENT OF ANCHORAGE AND RECESS DIMENSION ARE EXAMPLES AND THESE SHALL BE REVIEWED AND IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS FOR THE SELECTED PRESTRESSING SYSTEM

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG '84	MYAO	KAK	KM	HK	
A	15 FEB '84	MYAO	KAK	KM	HK	
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
P.C. GIRDER PC 29 P.C. CABLE AND REINF. BAR ARRANGEMENT OF LATERAL JOINT						
PACKAGE: 1 CIVIL AND ARCHITECTURAL WORK						
SCALE	DRAWING NO.					
AS NOTED	CS - 051					





**BAR SCHEDULE**

REINF. No.	DIA. (mm)	LENGTH (mm)	NUMBER/ ONE BEAM	TOTAL NUMBER	UWEIGHT (kg/m)	WEIGHT (kg)
<b>MAIN BEAM</b>						
S 1	D16	24 860	8	16	1.56	620.5
2	D13	24 860	4	8	0.995	197.9
4 1	D13	3 740	126	252	0.995	937.8
2	"	3 640	2	4	"	14.5
B 1	D13	24 860	16	32	0.995	791.5
b 1	D13	4 950	34	68	0.995	334.9
2	"	5 130	42	84	"	428.8
3	"	5 310	16	32	"	169.1
4	"	2 270	34	68	"	153.6
5	"	2 200	42	84	"	183.9
6	"	1 020	34	68	"	69.0
7	"	950	42	84	"	79.4
0 1	D13	2 140	20	40	0.995	85.2
2	D10	690	124	248	0.56	95.8
3	D13	7 080	4	8	0.995	56.4
4	"	1 900	16	32	"	60.5
5	"	2 990	4	8	"	23.8
6	"	1 300	10	20	"	25.9

**WEIGHT OF BARS FOR MAIN BEAM**

D16	620.5 kg
D13	3 612.2 kg
D10	95.8 kg
<b>TOTAL WEIGHT</b>	<b>4 328.5 kg</b>

**LATERAL JOINT**

W 1	D13	24 860	—	24	0.995	593.7
2	"	22 690	—	2	"	45.2
3	"	7 250	—	4	"	28.9
w 1	D16	2 210	—	252	1.56	868.8
2	D13	1 830	—	252	0.995	458.9
D 1	D10	24 860	—	6	0.56	83.5
d 1	D13	5 570	—	4	0.995	22.2
2	"	4 420	—	6	"	26.4
3	"	5 490	—	12	"	65.6
4	"	3 790	—	18	"	67.9
5	"	4 340	—	22	"	95.0
6	"	3 240	—	27	"	87.0
7	"	890	—	504	"	446.3

**WEIGHT OF BARS FOR LATERAL JOINT**

D16	868.8
D13	1 937.1 kg
D10	83.5 kg
<b>TOTAL WEIGHT</b>	<b>2 889.4 kg</b>

**TOTAL WEIGHT OF BARS**

D16	1 489.3 kg
D13	5 549.3 kg
D10	179.3 kg
<b>TOTAL WEIGHT</b>	<b>7 217.9 kg</b>

NOTE:  
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED

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CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

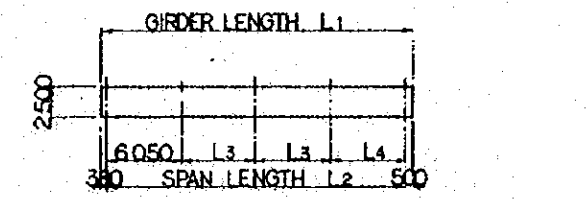
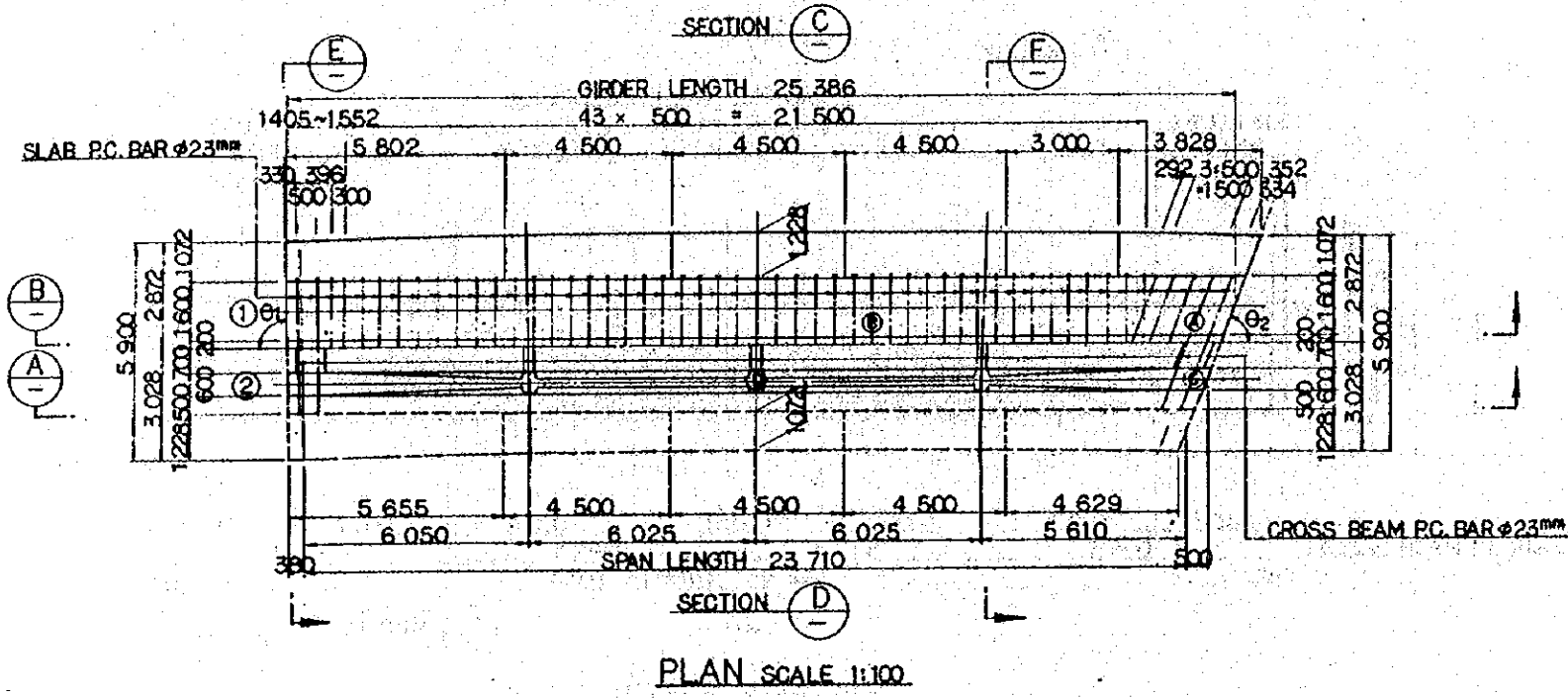
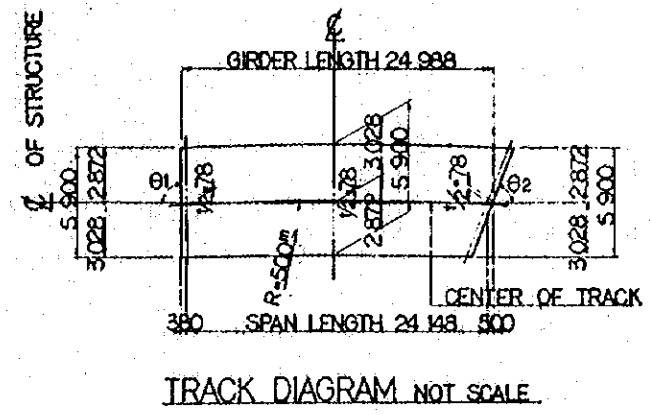
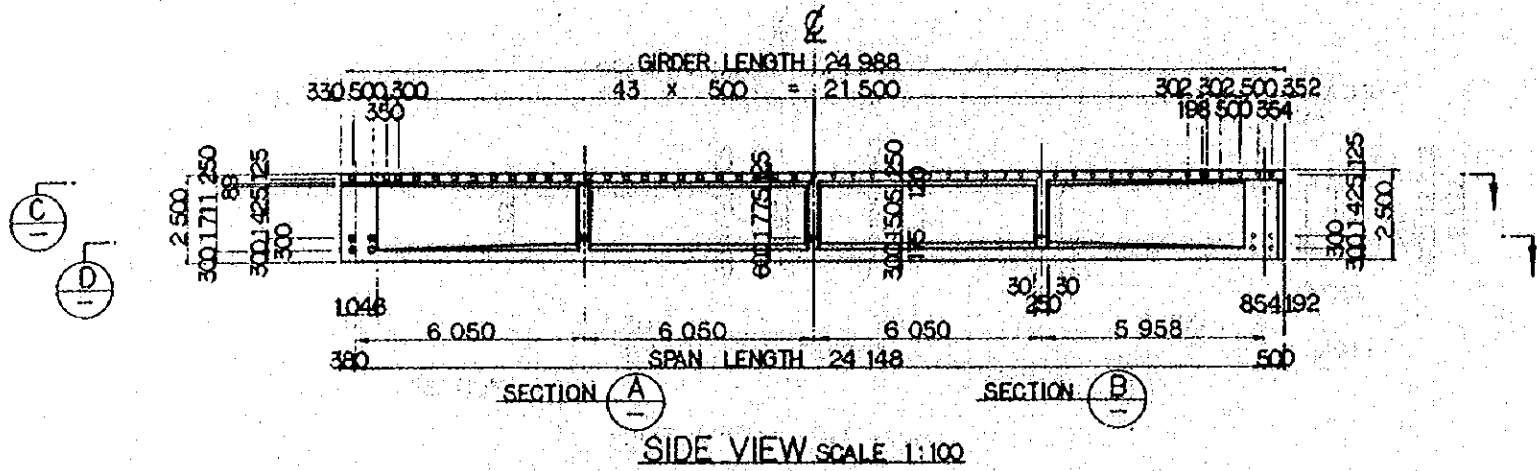
B	1 AUG '84	MYAO	KA	KM	mk
A	15 FEB '84	MYAO	KA	KM	mk

REVISIONS DATE DESIGNED DRAWN CHECKED REVIEWED SUBMITTED

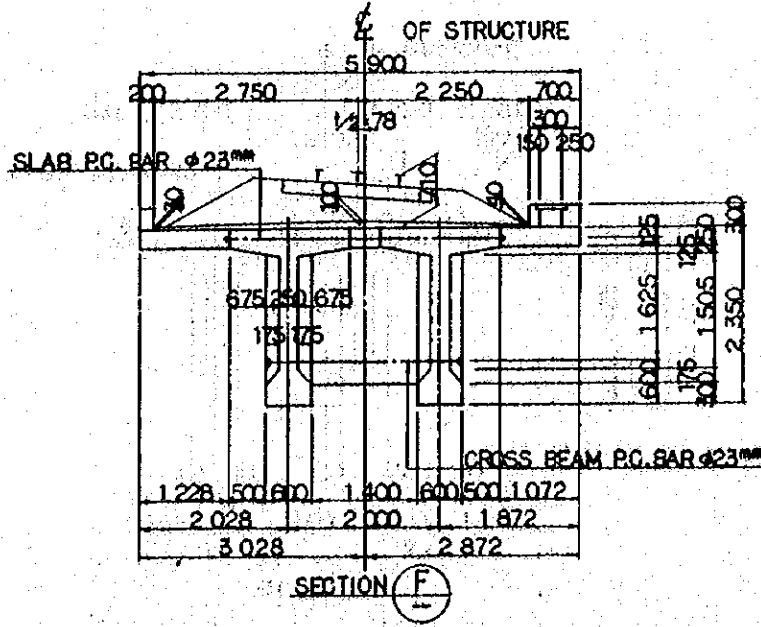
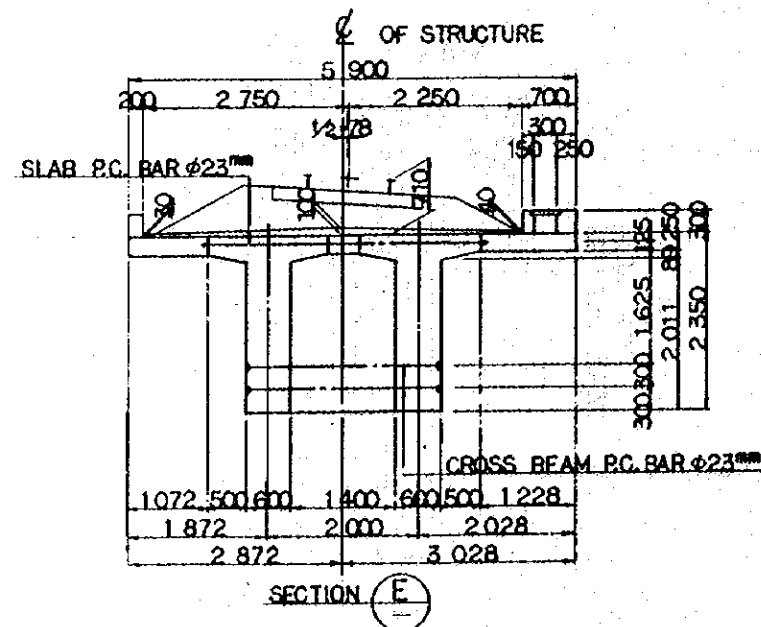
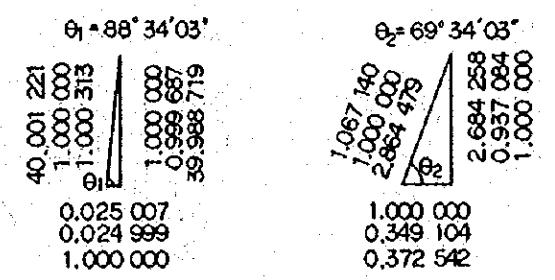
P.C. GIRDER  
PC 29  
REINF. BAR SCHEDULE

PACKAGE: I CIVIL AND ARCHITECTURAL WORK

SCALE: AS NOTED DRAWING NO: CS - 052



GIRDER NO	L1	L2	L3	L4
①	25 386	24 506	6 075	6 306
②	24 590	23 710	6 025	5 610



CROSS SECTION SCALE 1:50

SUPERSTRUCTURE MATERIAL SCHEDULE (B12 - PC33)

ITEM	TYPE	UNIT	QUANTITY
MAIN BEAM	CONCRETE CLASS A ( $16-400 \text{ kg/m}^3$ )	m <sup>3</sup>	66.2
	P.C. STRAND 12 T 12.7 ( $15-190 \text{ kg/m}^2$ )	kg	2429.2
	SHEATH $\phi 65$ and $\phi 70$	m	245.9
	FORMS	m <sup>2</sup>	334.3
	ANCHORING DEVICE FOR 12 T 12.7	EACH	20
LATERAL JOINT	REINFORCING BAR 19	kg	—
	16	kg	620.5
	13	kg	361.22
	10	kg	95.8
	TOTAL	kg	4 328.5
CONCRETE CLASS B ( $16-300 \text{ kg/m}^3$ )	PC BAR $\phi 23$ ( $16-110 \text{ kg/m}^2$ )	kg	9.1
	SHEATH $\phi 35$	m	211.7
	FORMS	m <sup>2</sup>	39.7
	ANCHOR PLATE, NUT FOR $\phi 23$	EACH	124
	REINFORCING BAR 16	kg	868.8
SIDEWALK CONCRETE CLASS C ( $16-240 \text{ kg/m}^3$ )	13	kg	1937.1
	10	kg	83.5
	TOTAL	kg	2 889.4
	BRIDGE RAILING AND DUCT CONCRETE	m <sup>3</sup>	14.4
	FORMS	m <sup>2</sup>	44.6
MORTAR WITH SLOPE PROTECTIVE MORTAR DRAINAGE	m <sup>3</sup>	8.4	
ELASTOMERIC BEARING PADS	FIX. FOR R=170 ton	—	4
	MOV. FOR R=170 ton	—	2

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 MINISTRY OF COMMUNICATIONS  
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NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

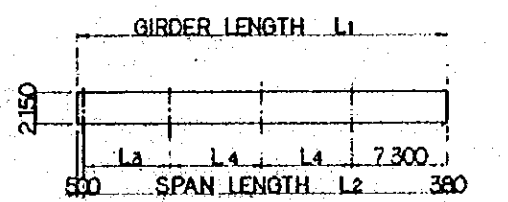
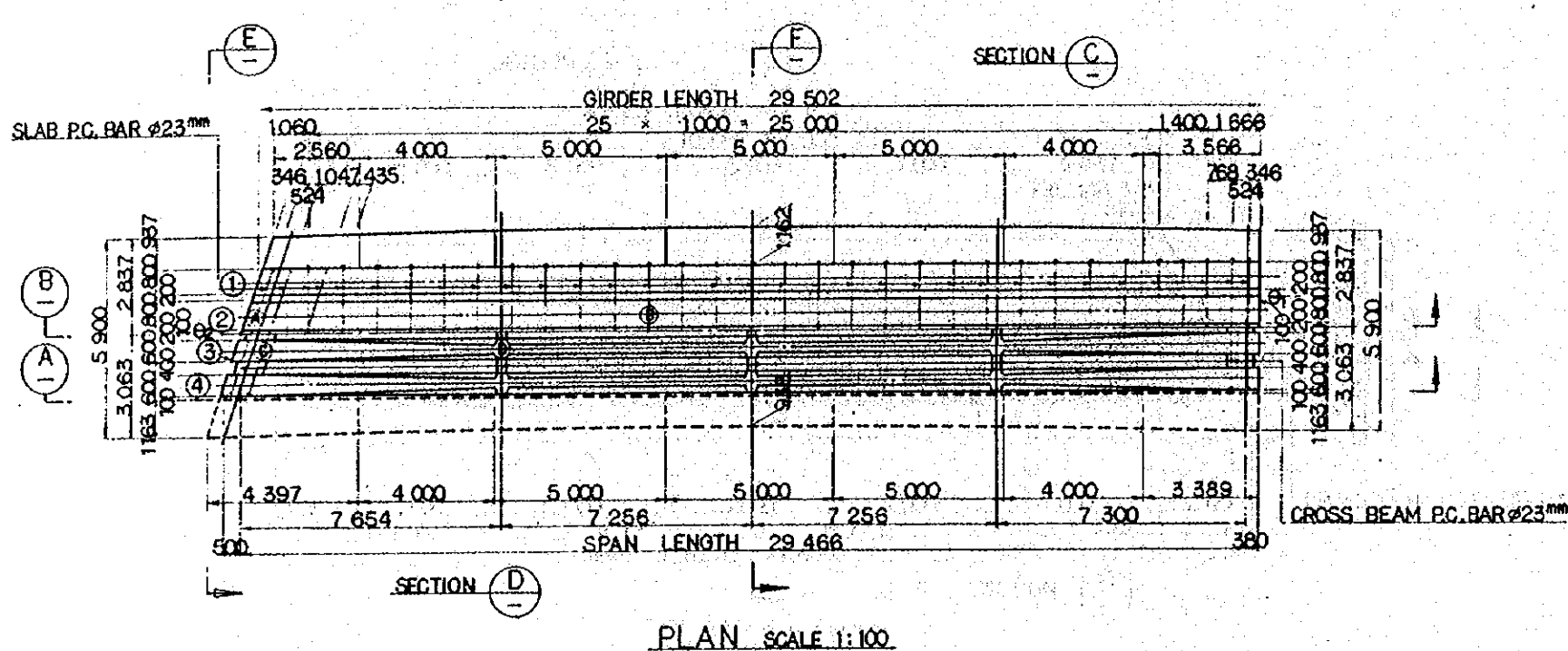
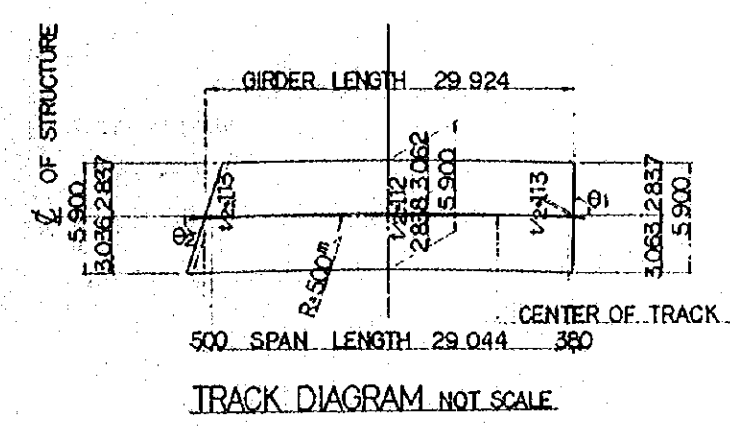
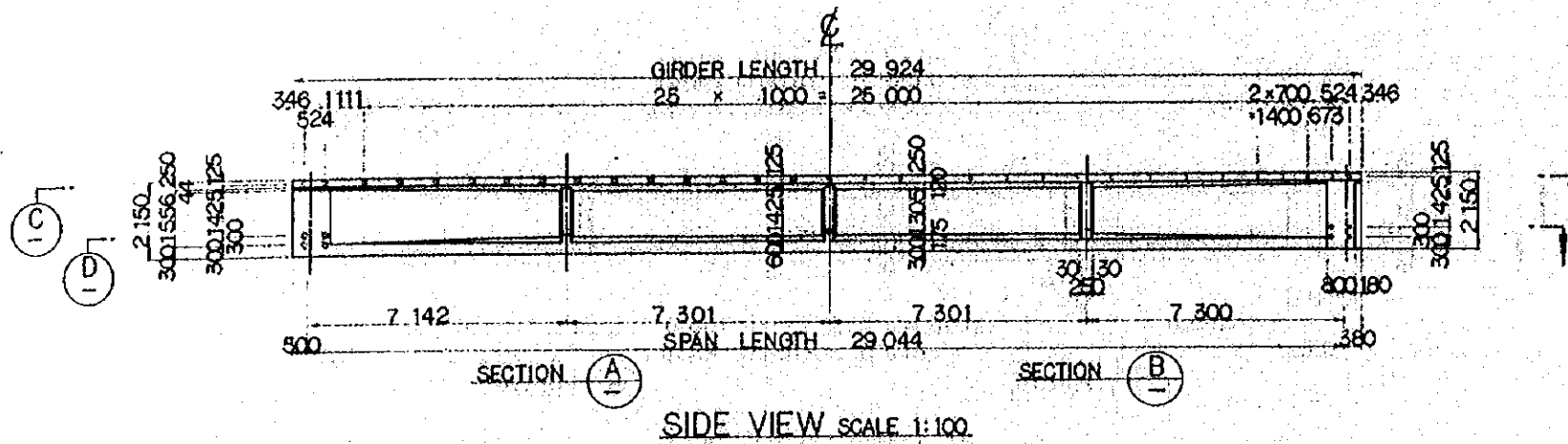
REVISIONS	DATE	DESIGNED	CHECKED	APPROVED	SUBMITTED
B	1 AUG '84	M.Y.A.O	K.A.K.M	M.K.	
A	15 FEB '84	M.Y.A.O	K.A.K.M	M.K.	

P.C. GIRDER  
 PC 33  
 GENERAL VIEW

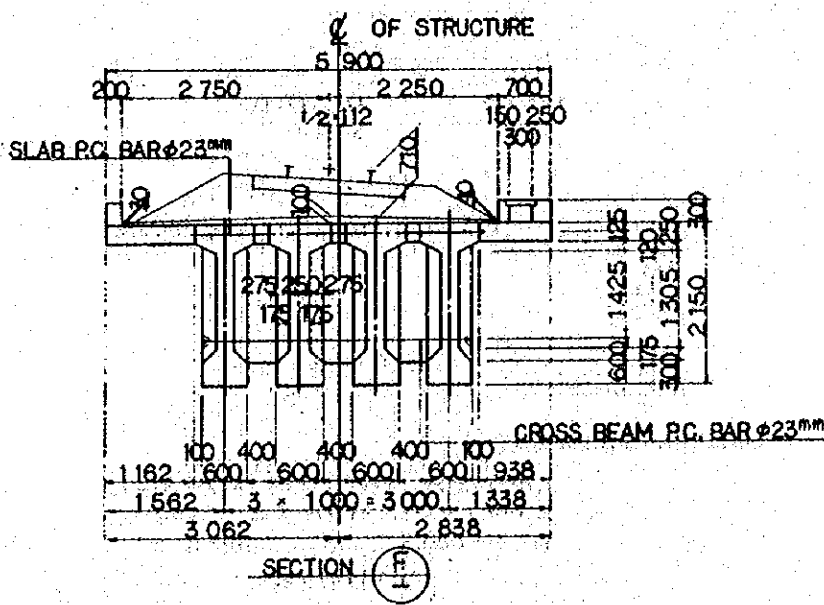
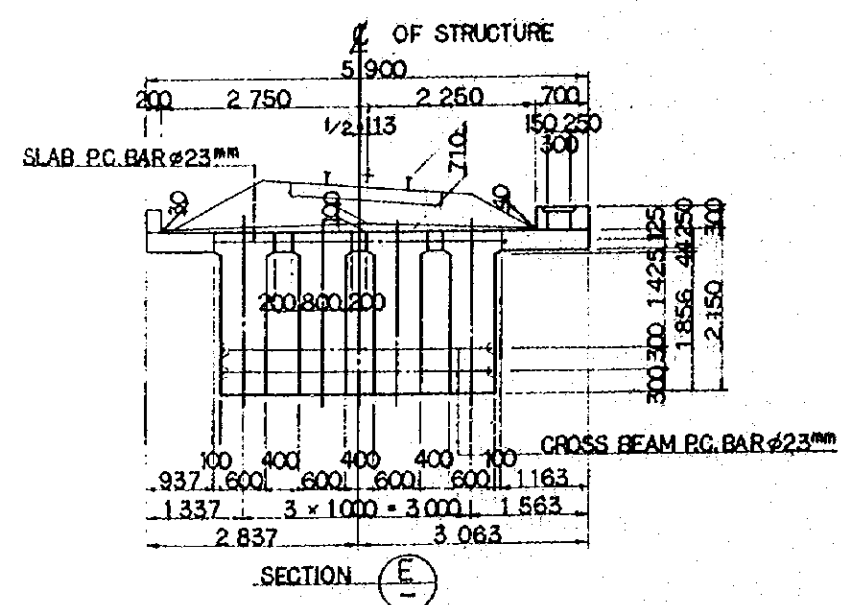
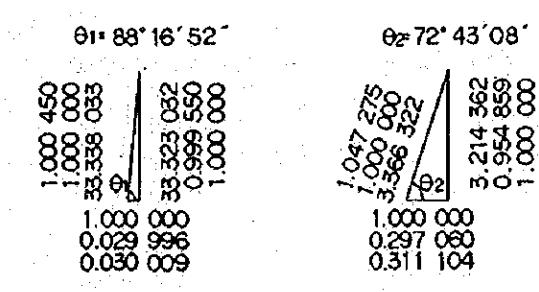
PACKAGE: I CIVIL AND ARCHITECTURAL WORK

SCALE: AS NOTED DRAWING NO: CS - 053

- NOTES:
- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  - MAIN BEAM SHALL BE PRECAST AND ALL THE OTHER CONCRETE EXCEPT R.C. COVER SHALL BE CAST IN PLACE
  - P.C. STRAND 12T 12.7 MEANS A GROUP OF 12 NO STRANDS FOR PRESTRESSED CONCRETE OF 12.7 MM DIAMETER EACH AND SHALL CONFORM TO JIS G 3536 SWPR7B 12T 12.7 OR EQUIVALENT
  - P.C. BAR SHALL CONFORM TO THE REQUIREMENTS AS FOLLOWS:  
 MINIMUM ULTIMATE TENSILE STRENGTH: 190 kg/mm<sup>2</sup>  
 MINIMUM YIELD STRESS: 160 kg/mm<sup>2</sup>
  - THIS DRAWING SHALL BE APPLIED TO : B12 - PC29
  - DESIGN TRAIN LOAD: EQUIVALENT TO KS - 16



GIRDER	L1	L2	L3	L4
1)	29.502	28.622	6.630	7.346
2)	29.784	28.904	6.972	7.316
3)	30.064	29.184	7.312	7.286
4)	30.346	29.466	7.654	7.256



CROSS SECTION SCALE 1:50

SUPERSTRUCTURE MATERIAL SCHEDULE (812-PC34)

ITEM	TYPE	UNIT	QUANTITY
MAIN BEAM	CONCRETE CLASS A (16-400 <sup>kg/m<sup>3</sup></sup> )	m <sup>3</sup>	119.7
	P.C. STRAND 12 T12.7 (15-190 <sup>kg/m<sup>2</sup></sup> )	kg	5784.8
	SHEATH $\phi 65$ and $\phi 70$	m <sup>2</sup>	591.6
	FORMS	m <sup>2</sup>	654.1
	ANCHORING DEVICE FOR 12 T 12.7	EACH	40
	REINFORCING BAR	kg	1490.6
	19	kg	6755.4
	13	kg	68.0
	10	kg	8314.0
	TOTAL		
LATERAL JOINT	CONCRETE CLASS B (16-300 <sup>kg/m<sup>3</sup></sup> )	m <sup>3</sup>	9.6
	P.C. BAR $\phi 23$ (15-110 <sup>kg/m<sup>2</sup></sup> )	kg	560.2
	SHEATH $\phi 35$	m <sup>2</sup>	164.0
	FORMS	m <sup>2</sup>	40.4
ANCHOR PLATE, NUT	EACH	88	
REINFORCING BAR	kg	994.1	
16	kg	1669.5	
13	kg	397.3	
10	kg	3060.9	
TOTAL			
SIDEWALK CONCRETE CLASS C (16-240 <sup>kg/m<sup>3</sup></sup> )	m <sup>3</sup>	15.7	
BRIDGE RAILING AND DUCT CONCRETE	m <sup>3</sup>	5.9	
FORMS	m <sup>2</sup>	54.8	
MORTAR WITH SLOPE PROTECTIVE MORTAR	m <sup>3</sup>	10.1	
DRAINAGE	EACH	8	
ELASTOMERIC BEARING PADS	FIX. FOR R=20 ton	kg	4
MOV. FOR R=20 ton	kg	4	

- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. MAIN BEAM SHALL BE PRECAST AND ALL THE OTHER CONCRETE EXCEPT R.C. COVER SHALL BE CAST IN PLACE
  3. P.C. STRAND 12T12.7 MEANS A GROUP OF 12 NO STRANDS FOR PRESTRESSED CONCRETE OF 12.7 MM DIAMETER EACH AND SHALL CONFORM TO JIS G 3536 SWPR7B 12T12.7 OR EQUIVALENT
  4. P.C. BAR SHALL CONFORM TO THE REQUIREMENTS AS FOLLOWS:  
 MINIMUM ULTIMATE TENSILE STRENGTH : 190 <sup>kg/mm<sup>2</sup></sup>  
 MINIMUM YIELD STRESS : 160 <sup>kg/mm<sup>2</sup></sup>
  5. THIS DRAWING SHALL BE APPLIED TO : B11-PC28
  6. DESIGN TRAIN LOAD : EQUIVALENT TO KS-16

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

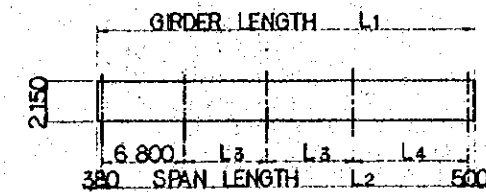
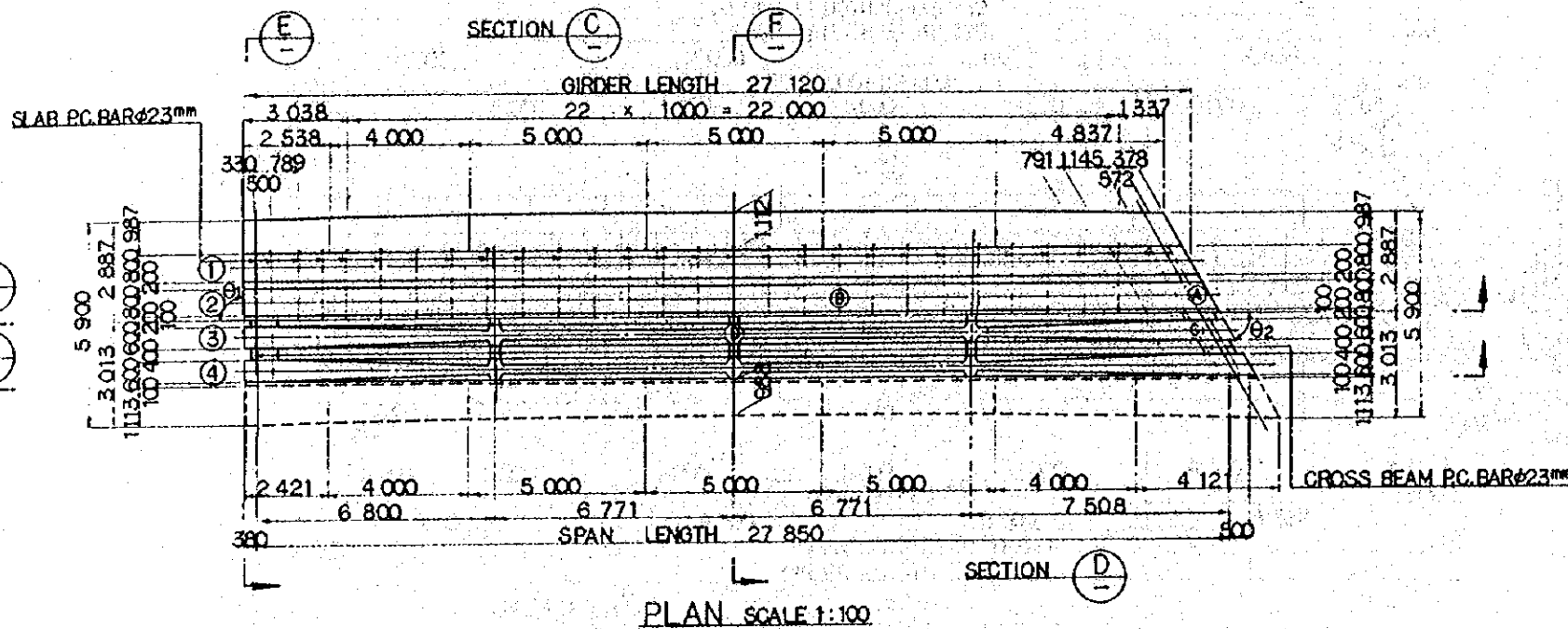
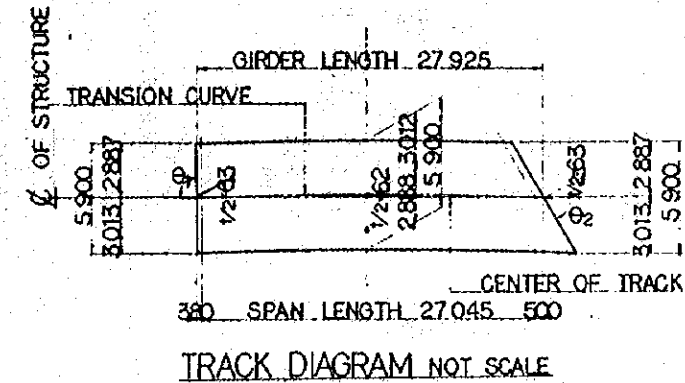
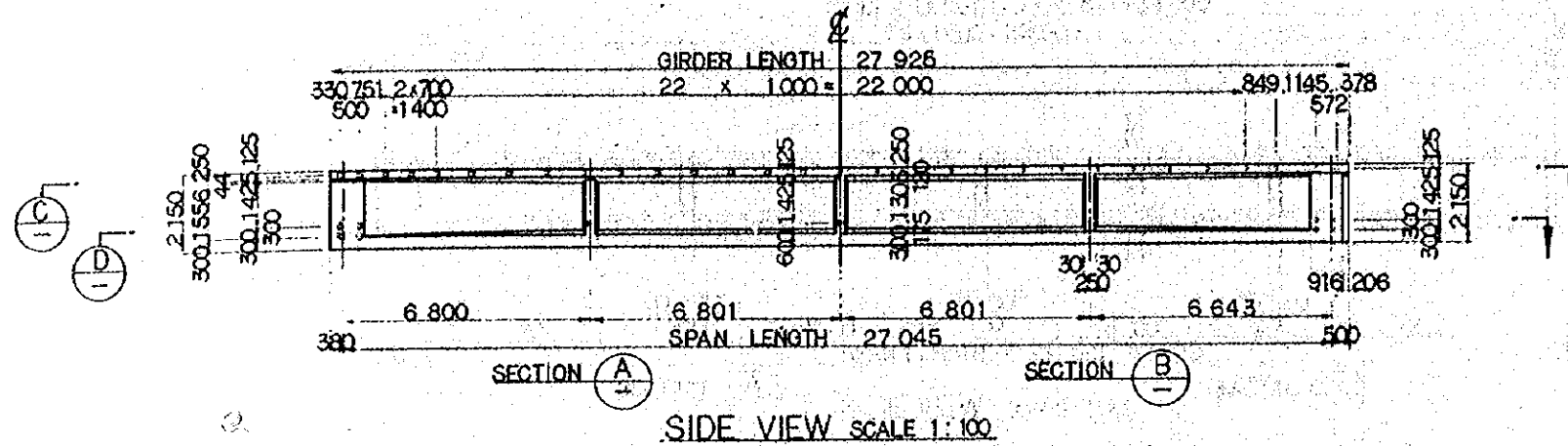
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

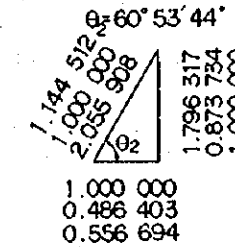
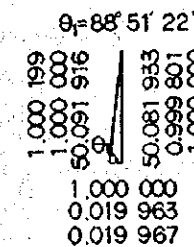
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
B	1 AUG '84	HYAO	KJ	UM	MK	
A	15 FEB '84	HYAO	KA	KM	MK	

P.C. GIRDER  
 PC 34  
 GENERAL VIEW

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: AS NOTED DRAWING NO: CS-054



GIRDER NO.	L1	L2	L3	L4
1)	27 120	26 240	6 831	5 778
2)	27 656	26 776	6 811	6 354
3)	28 194	27 314	6 791	6 932
4)	28 730	27 850	6 771	7 508



- NOTES:
- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  - MAIN BEAM SHALL BE PRECAST AND ALL THE OTHER CONCRETE EXCEPT R.C. COVER SHALL BE CAST IN PLACE
  - P.C. STRAND 12T12.7 MEANS A GROUP OF 12 NO STRANDS FOR PRESTRESSED CONCRETE OF 12.7 MM DIAMETER EACH AND SHALL CONFORM TO JIS G 3536 SWPR7B 12T12.7 OR EQUIVALENT
  - P.C. BAR SHALL CONFORM TO THE REQUIREMENTS AS FOLLOWS:  
 MINIMUM ULTIMATE TENSILE STRENGTH : 190  $\frac{kg}{mm^2}$   
 MINIMUM YIELD STRESS : 160  $\frac{kg}{mm^2}$
  - THIS DRAWING SHALL BE APPLIED TO : B11 - PC28
  - DESIGN TRAIN LOAD : EQUIVALENT TO KS - 16

SUPERSTRUCTURE MATERIAL SCHEDULE (B14 - PC39)

ITEM	TYPE	UNIT	QUANTITY
MAIN BEAM	CONCRETE CLASS A (16-400 $\frac{kg}{m^3}$ )	m <sup>3</sup>	112.1
	P.C. STRAND 12 T12.7 (15-190 $\frac{kg}{m^2}$ )	kg	5413.2
	SHEATH #65 and #70	m	551.6
	FORMS	m <sup>2</sup>	612.1
	ANCHORING DEVICE FOR 12 T12.7	EACH	40
	REINFORCING BAR	19, 16, 13, 10	kg
LATERAL JOINT	CONCRETE CLASS B (16-300 $\frac{kg}{m^3}$ )	m <sup>3</sup>	9.3
	P.C. BAR #23 (15-110 $\frac{kg}{m^2}$ )	kg	490.5
	SHEATH #35	m	143.7
	FORMS	m <sup>2</sup>	39.7
	ANCHOR PLATE/NUT FOR #23	EACH	76
SIDEWALK CONCRETE	CONCRETE CLASS C (16-240 $\frac{kg}{m^3}$ )	m <sup>3</sup>	14.7
	BRIDGE RAILING AND DUCT FORMS	m <sup>2</sup>	51.7
MORTAR WITH SLOPE PROTECTIVE MORTAR	MORTAR WITH SLOPE	m <sup>3</sup>	9.4
	DRAINAGE	EACH	8
ELASTOMERIC BEARING PADS	FIX. FOR R=120 ton		4
	MOV. FOR R=120 ton		4

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NEW RAILWAY LINE FOR CEMKARENG AIRPORT CONSTRUCTION PROJECT

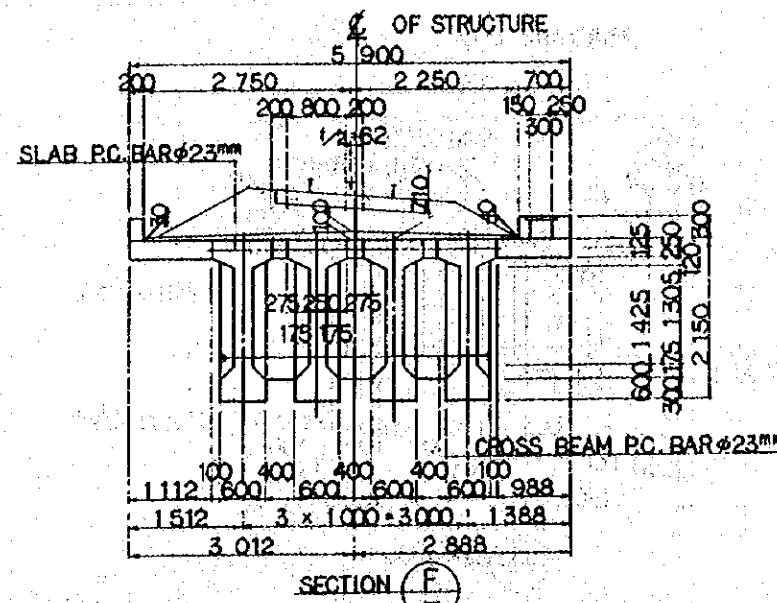
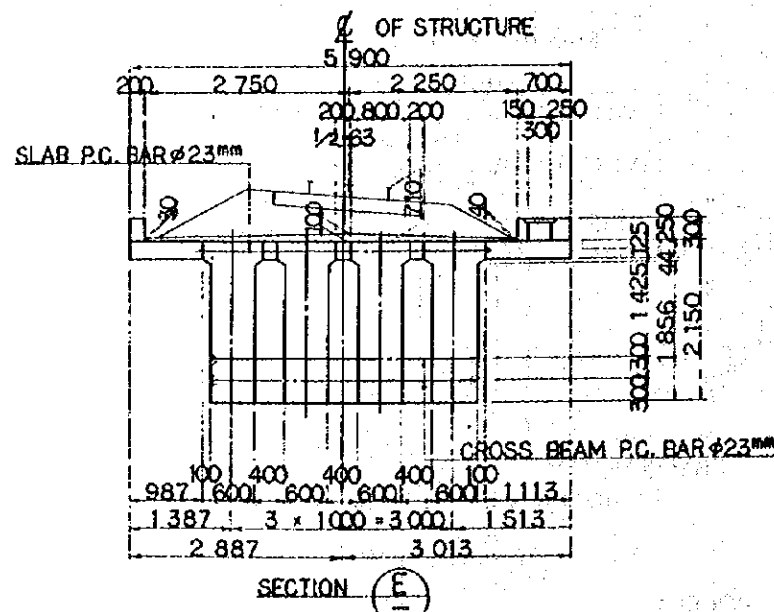
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

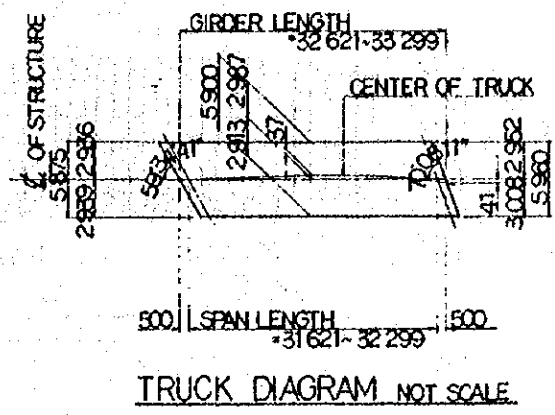
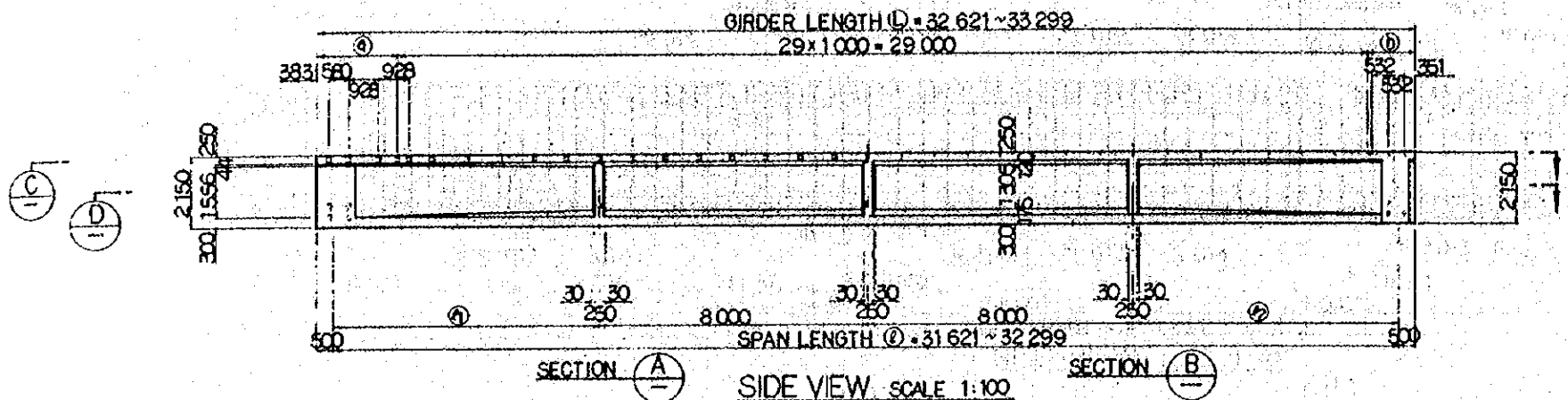
B 1 AUG 84 HY AO KG KM mK  
 A 15 FEB 84 HY AO KG KM mK

REVISORS DATE REASON DRAWN CHECKED REVIEWED SUBMITTED

P.C. GIRDER.  
 PC 39  
 GENERAL VIEW

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: AS NOTED DRAWING NO: CS - 055

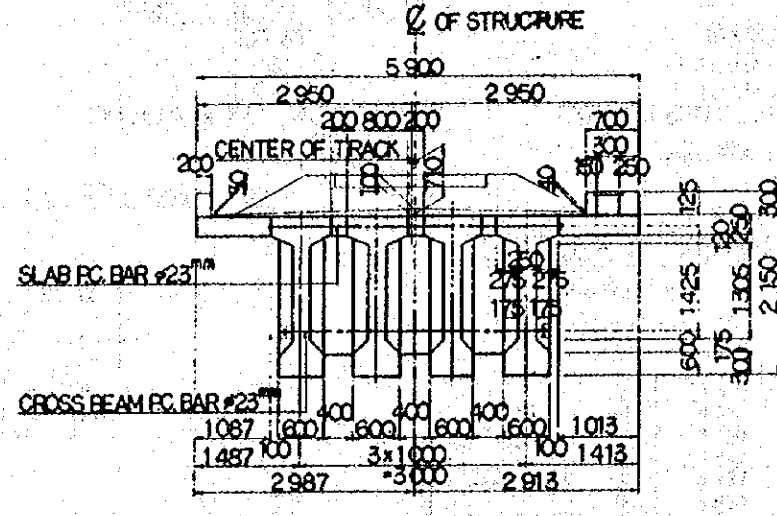
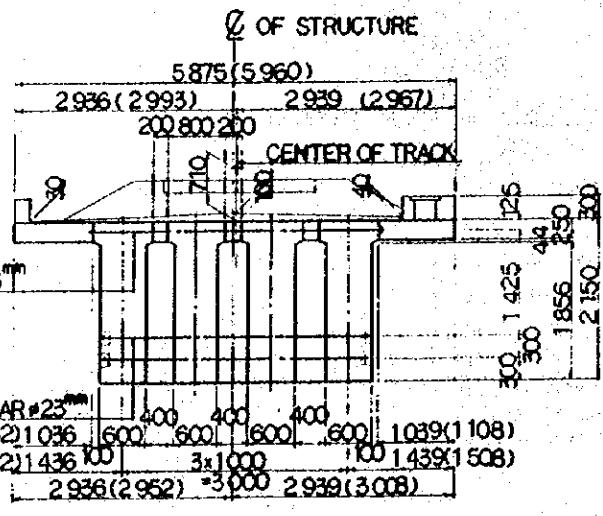
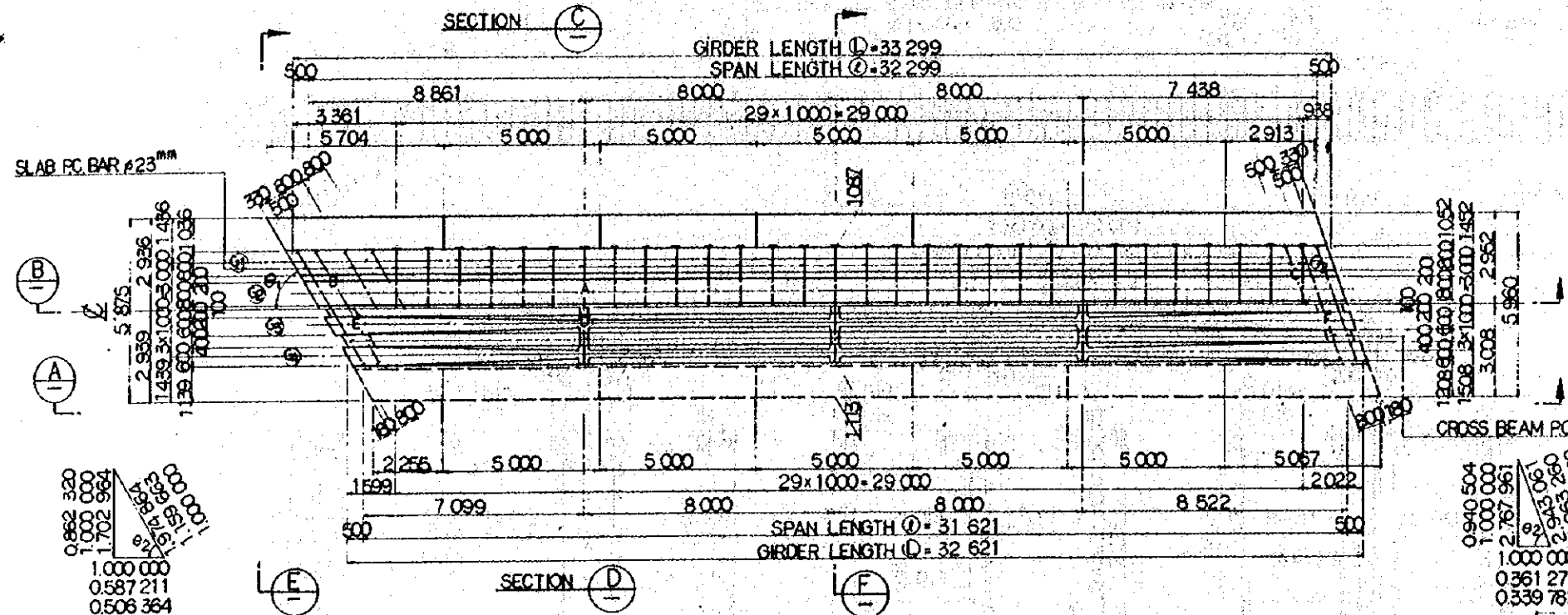




- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. MAIN BEAM SHALL BE PRECAST AND ALL THE OTHER CONCRETE EXCEPT R.C. COVER SHALL BE CAST IN PLACE
  3. P.C. STRAND 12T12.7 MEANS A GROUP OF 12 NO STRANDS FOR PRESTRESSED CONCRETE OF 12.7MM DIAMETER EACH AND SHALL CONFORM TO JIS G 3536 SWPR7B 12T12.7 OR EQUIVALENT
  4. P.C. BAR SHALL CONFORM TO THE REQUIREMENTS AS FOLLOWS:  
MINIMUM ULTIMATE TENSILE STRENGTH : 190  $\text{kg/mm}^2$   
MINIMUM YIELD STRESS : 160  $\text{kg/mm}^2$
  5. DESIGN TRAIN LOAD: EQUIVALENT TO KS - 16

	(L)	(e)	(f)	(g)	(h)	(i)
(1)	33 299	32 299	8 861	7 438	3 361	938
(2)	33 073	32 073	8 274	7 799	2 774	1 299
(3)	32 848	31 848	7 687	8 161	2 187	1 661
(4)	32 621	31 621	7 099	8 522	1 599	2 022

(1), (2), (3) AND (4) SHOW GIRDER'S NUMBER.  
(L), (e), (f), (g), (h) AND (i) SHOW THE VALUE AT THE POINT OF CENTER LINE OF MAIN GIRDER.



CROSS SECTION SCALE 1:50

SUPERSTRUCTURE MATERIAL SCHEDULE (B14 - PC40)

ITEM	TYPE	UNIT	QUANTITY
MAIN BEAM	CONCRETE CLASS A (16-400 $\text{kg/m}^3$ )	m <sup>3</sup>	131.8
	P.C. STRAND 12T12.7 (15-190 $\text{kg/mm}^2$ )	kg	7 601.1
	SHEATH $\phi$ 65	m	780.9
	FORMS	m <sup>2</sup>	715.0
	ANCHORING DEVICE FOR 12T12.7	EACH	48
	REINFORCING BAR	kg	2 429.2
		kg	16
		kg	13
		kg	10
	TOTAL	kg	9 958.0
LATERAL JOINT	CONCRETE CLASS B (16-300 $\text{kg/m}^3$ )	m <sup>3</sup>	10.6
	P.C. BAR $\phi$ 23 (15-110 $\text{kg/mm}^2$ )	kg	635.8
	SHEATH $\phi$ 35	m	186.5
	FORMS	m <sup>2</sup>	42.8
ANCHOR PLATE/NUT	ANCHOR PLATE/NUT FOR $\phi$ 23	EACH	96
	REINFORCING BAR	kg	1 122.1
		kg	13
		kg	10
TOTAL	kg	3 335.4	
SIDEWALK CONCRETE	CLASS C (16-240 $\text{kg/m}^3$ )	m <sup>3</sup>	17.4
BRIDGE RAILING AND GUT	CONCRETE	m <sup>3</sup>	6.4
	FORMS	m <sup>2</sup>	59.8
MORTAR WITH SLOPE-PROTECTIVE MORTAR		m <sup>3</sup>	11.1
ORAINAGE		EACH	8
BLASTOMERIC BEARING PADS	FIX. FOR R=190 100		4
	MOV. FOR R=190 100		4

REPUBLIC OF INDONESIA  
MINISTRY OF COMMUNICATIONS  
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

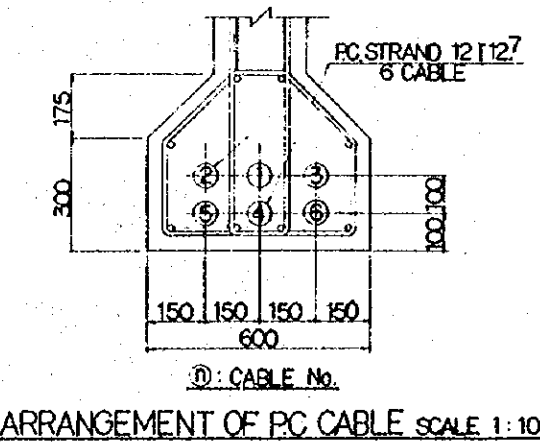
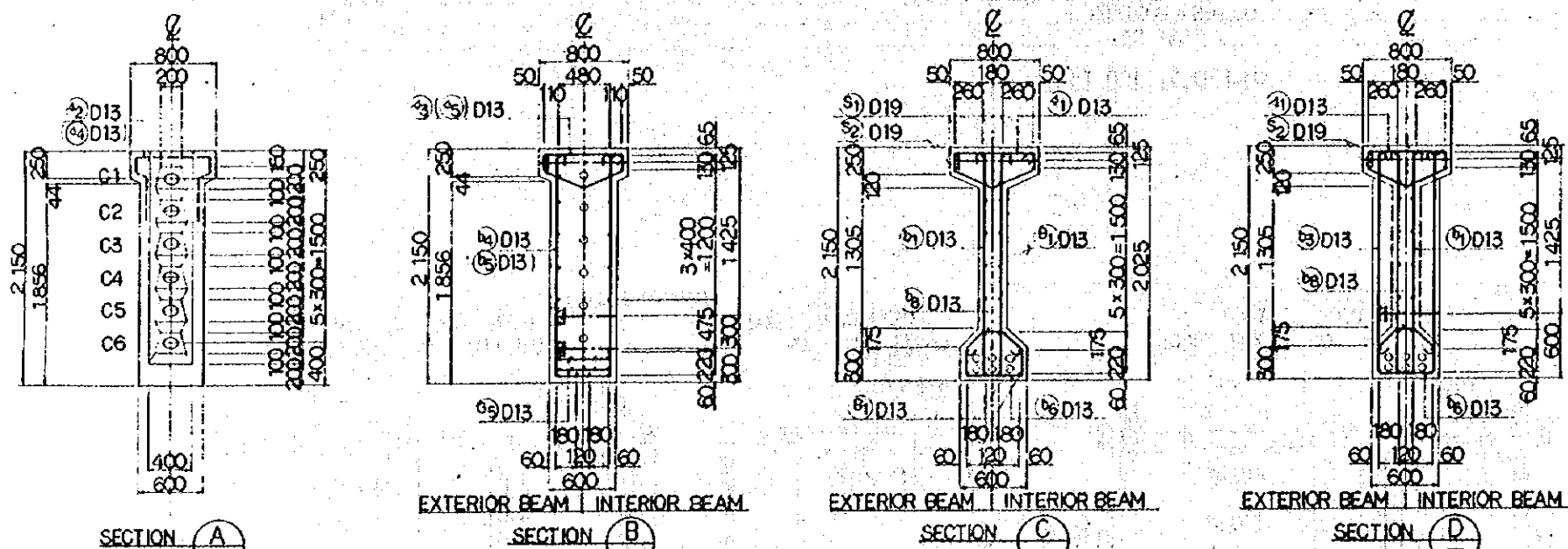
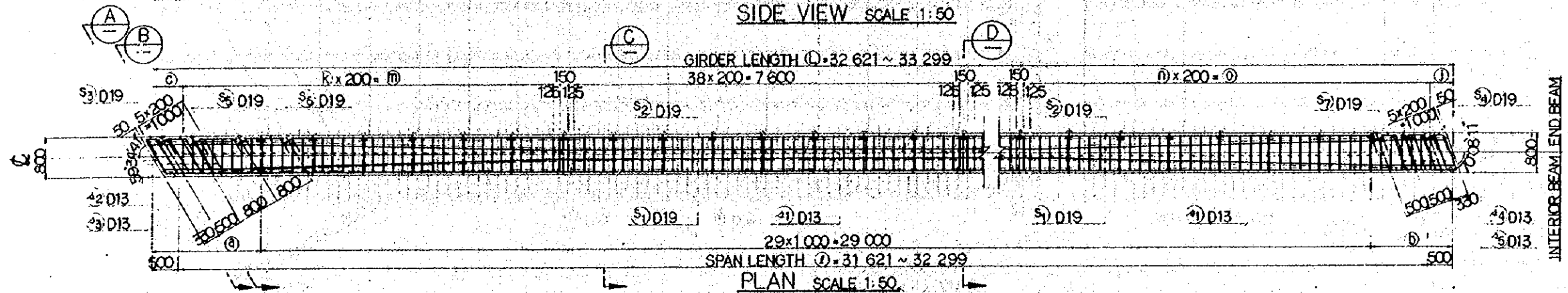
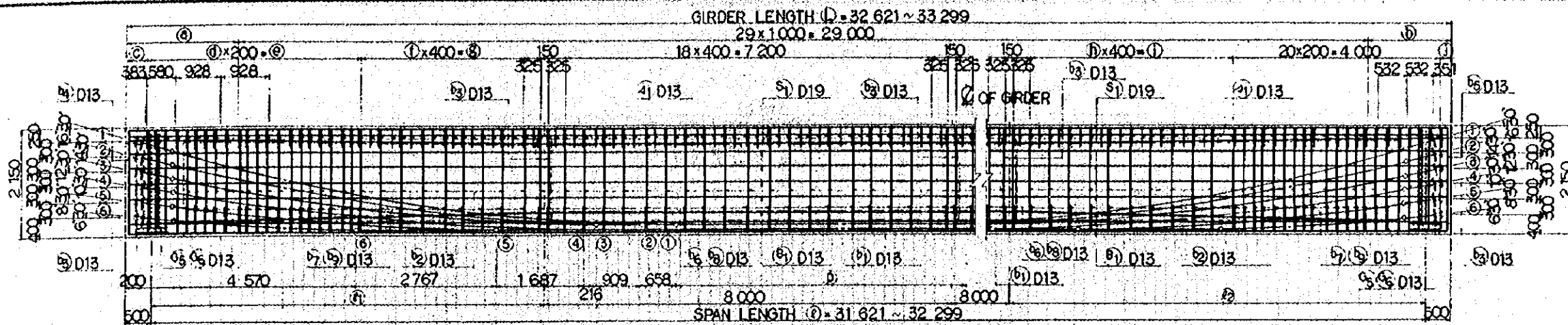
NEW RAILWAY LINE FOR CEMKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

REVISED	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
B	1AUG'84	MYAO	KYU	KH	MK	
A	15FEB'84	MYAO	KA	KH	IK	

P.C. GIRDER  
PC 40  
GENERAL VIEW

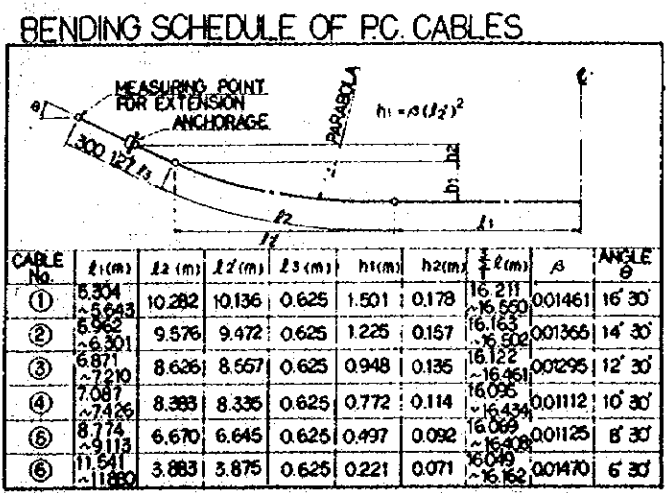
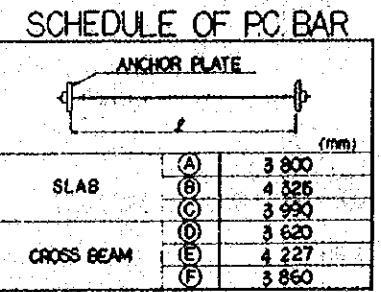
PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
SCALE: AS NOTED DRAWING NO: CS - 056



(L)	33 299	33 073	32 848	32 621
(L)	32 299	32 073	31 848	31 621
(L)	8 861	8 274	7 687	7 099
(L)	7 438	7 799	8 161	8 522
(L)	3 361	2 774	2 187	1 599
(L)	938	1 299	1 661	2 022
(L)	361	374	387	399
(L)	21	20	21	20
(L)	4 200	4 000	4 200	4 000
(L)	11	10	8	7
(L)	4 400	4 000	3 200	2 800
(L)	8	9	10	11
(L)	3 200	3 600	4 000	4 200
(L)	338	299	261	222
(L)	44	41	38	35

(m)	8 800	8 200	7 600	7 000
(n)	37	39	41	43
(o)	7 400	7 800	8 200	8 600
(p)	5 643	5 530	5 417	5 304

(m), (n), (o), (p) SHOW GIRDERS NUMBER.  
(L) ~ (P) SHOW THE VALUE AT THE POINT OF CENTER LINE OF MAIN GIRDER.



- NOTES:
- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  - REINFORCEMENT OF ANCHORAGE AND RECESS DIMENSION ARE EXAMPLES AND THESE SHALL BE REVIEWED AND, IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURE INSTRUCTIONS FOR THE SELECTED PRESTRESSING SYSTEM
  - JACKING LOAD INCLUDE FRICTION IN THE JACK AND ANCHORAGE. EXTENSION SHOWS TOTAL VALUE OF THOSE AT BOTH ENDS MEASURED AT THE POINT 30CM OUTSIDE FROM ANCHORAGE SURFACE. AFTER THE PRESTRESSING SYSTEM IS DETERMINED THESE VALUES SHALL BE REVIEWED ALONG WITH THE OTHER ASSUMED FACTORS AND, IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURE INSTRUCTIONS. INITIAL STRESS DO NOT INCLUDE OTHER FACTORS THAN FRICTION LOSSES.
  - TENSIONING SEQUENCE OF LATERAL PC. BARS SHALL BE AT EVERY OTHER BAR

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DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

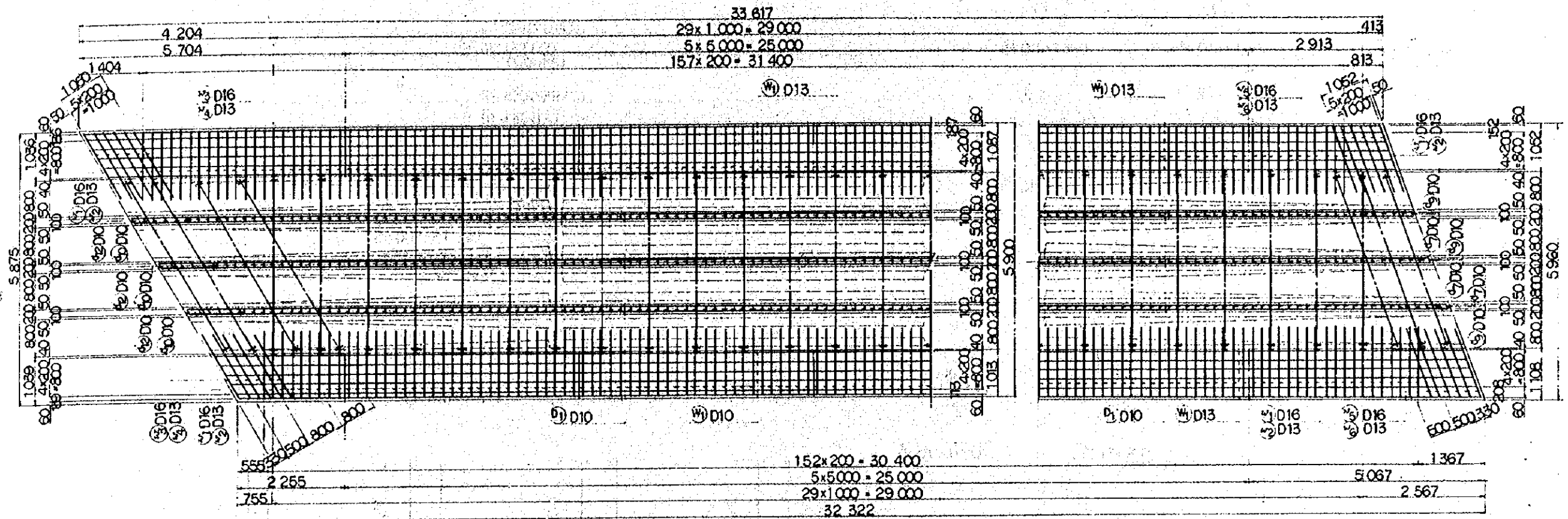
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A	15FEB'84	MY AD	KA	KM	MC

REVISIONS DATE DESIGNED CHECKED REVIEWED SUBMITTED

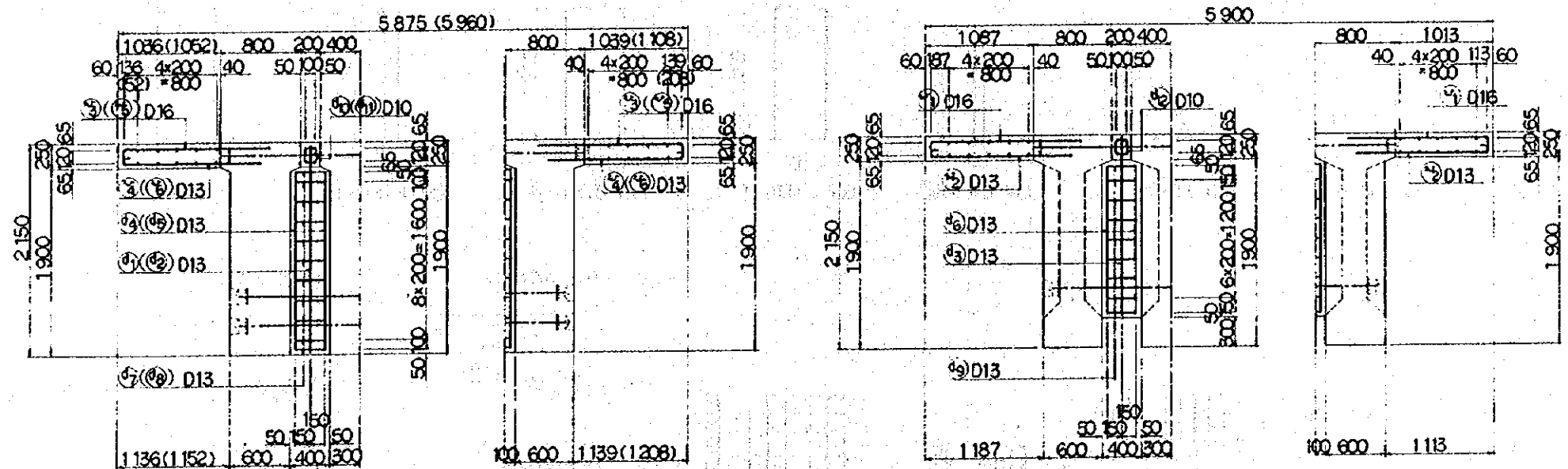
PC. GIRDER  
PC 40  
PC. CABLE AND REINF. BAR  
ARRANGEMENT OF MAIN BEAM

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
SCALE: AS NOTED  
CS - 057

- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REINFORCEMENT OF ANCHORAGE AND RECESS DIMENSION ARE EXAMPLES AND THESE SHALL BE REVIEWED AND IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS FOR THE SELECTED PRESTRESSING SYSTEM



PLAN SCALE 1:50

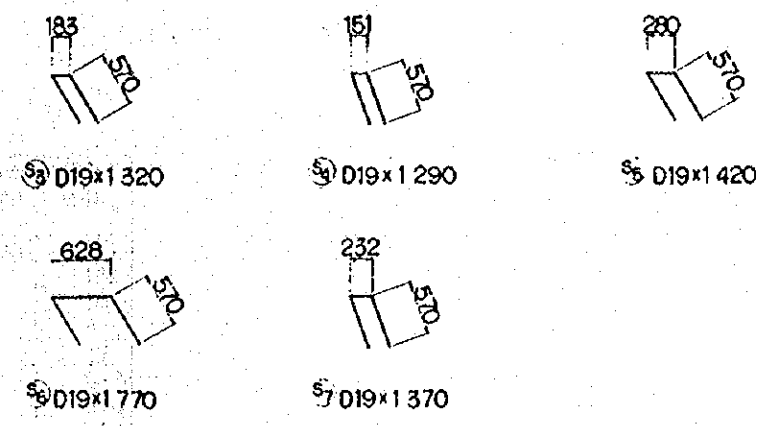
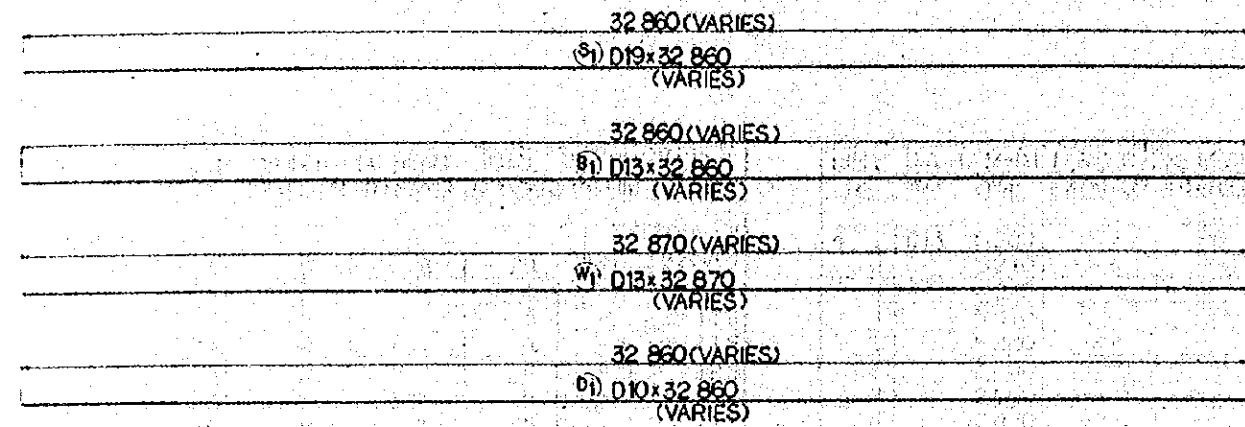


END CROSS BEAM

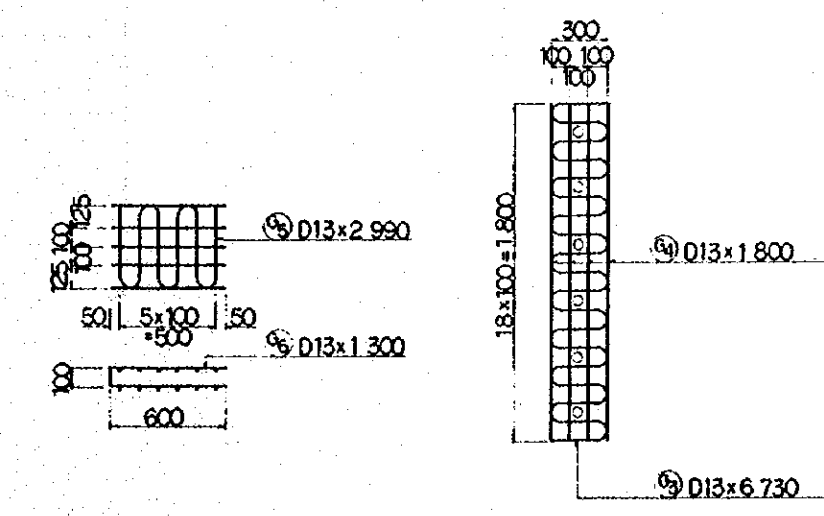
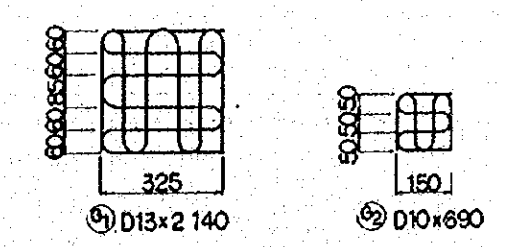
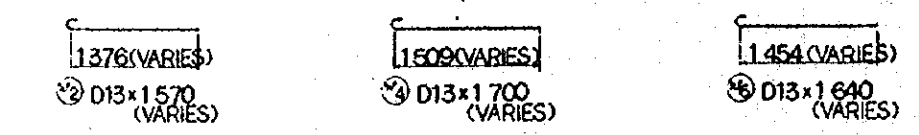
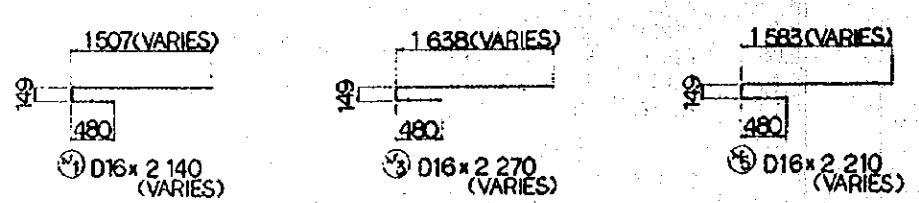
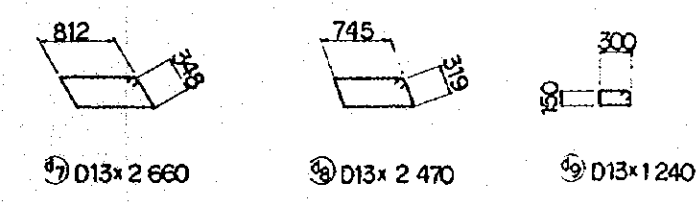
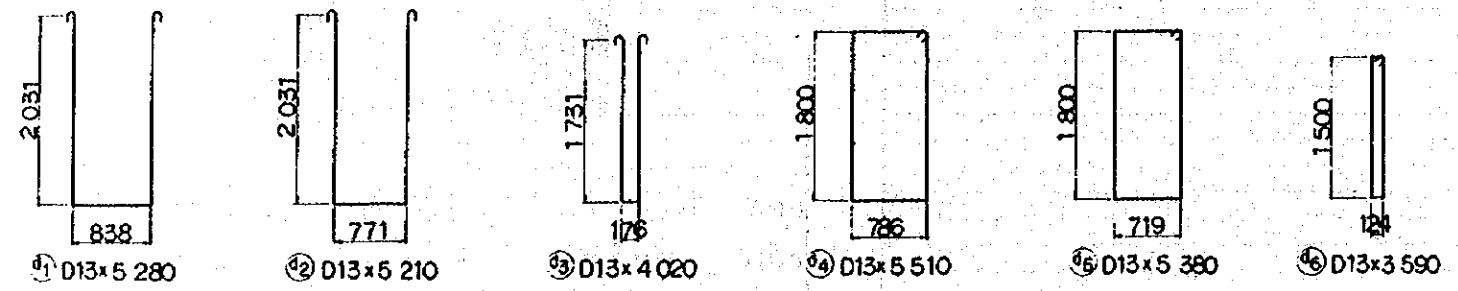
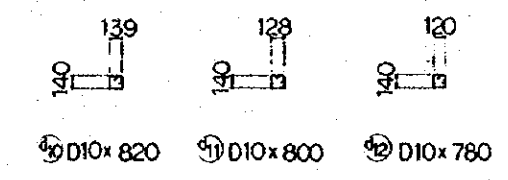
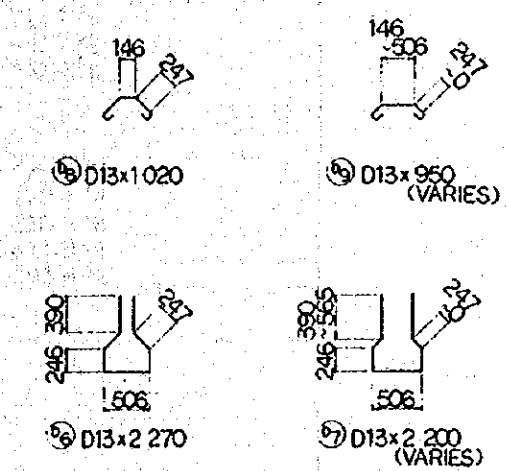
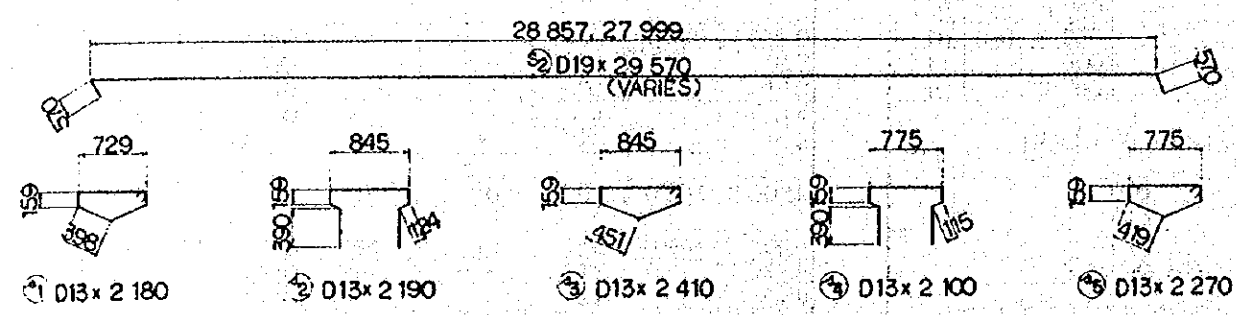
MIDDLE CROSS BEAM

CROSS SECTION SCALE 1:30

REPUBLIC OF INDONESIA					
MINISTRY OF COMMUNICATIONS					
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1 AUG '84	HY	AO	KA	KM
A	5 FEB '84	TY	AO	KA	KM
REVISORS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED
P.C. GIRDER PC 40 P.C. CABLE AND REINF. BAR ARRANGEMENT OF LATERAL JOINT					
PACKAGE: I CIVIL AND ARCHITECTURAL WORK					
SCALE	DRAWING NO.				
AS NOTED	CS - 058				



NOTE:  
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED



REPUBLIC OF INDONESIA						
MINISTRY OF COMMUNICATIONS						
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG 84	HYAO	KA	UM	mk	
A	15 FEB 84	HYAO	KA	UM	mk	
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
PC GIRDER PC 40 BENDING DIAGRAM						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE	DRAWING NO:					
AS NOTED	CS - 059					

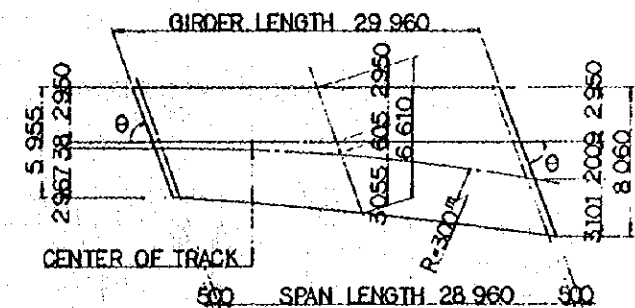
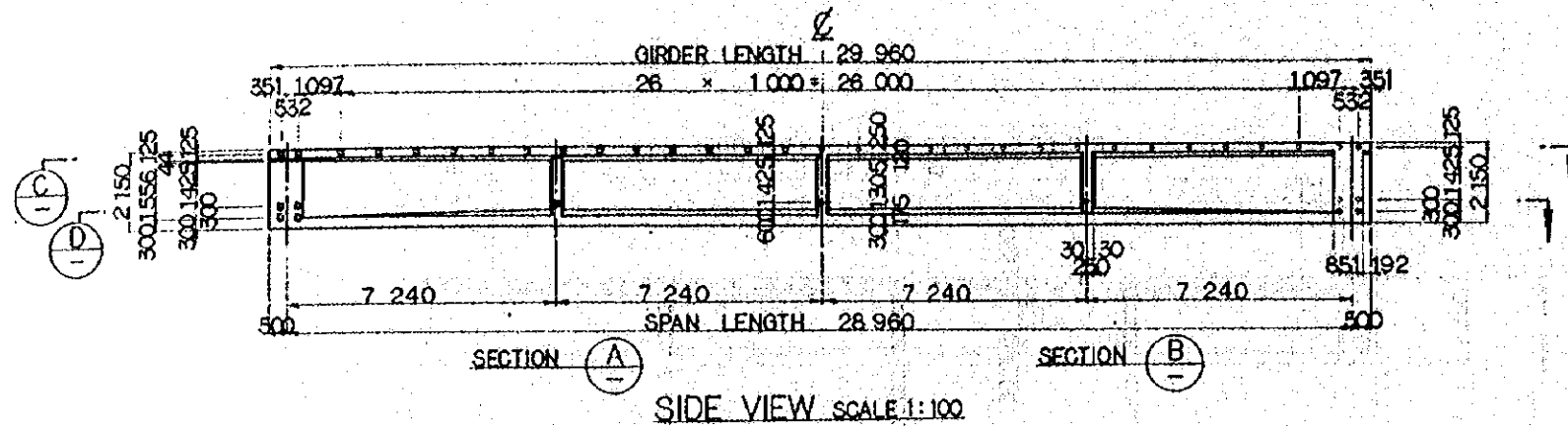


BAR SCHEDULE

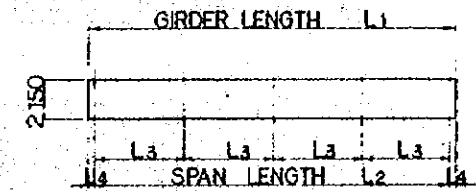
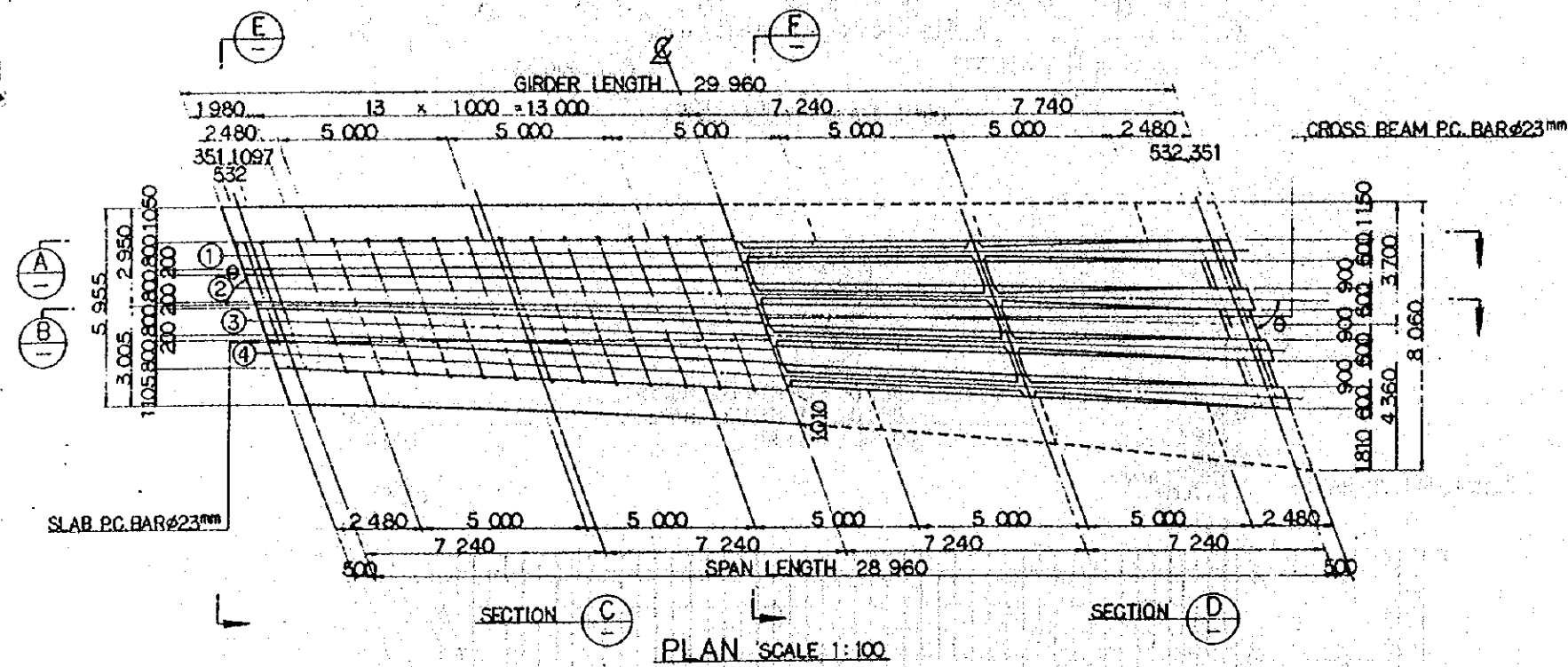
REINF. No.	DIA. (mm)	LENGTH (mm)	NUMBER/ONE BEAM		TOTAL NUMBER	U.WEIGHT (kg/m)	WEIGHT (kg)
			EXTERIOR	INTERIOR			
<b>MAIN BEAM</b>							
S 1	D19	32 860	6	8	28	2.25	2 070.2
2	"	29 570	2	---	4	"	266.1
3	"	1 320	2	---	4	"	11.9
4	"	1 290	2	---	4	"	11.6
5	"	1 420	2	---	4	"	12.8
6	"	1 770	4	---	8	"	31.9
7	"	1 370	4	---	8	"	24.7
<b>MAIN BEAM</b>							
A 1	D13	2 180	---	---	662	0.995	1 435.9
2	"	2 190	---	---	4	"	8.7
3	"	2 410	---	---	20	"	48.0
4	"	2 100	---	---	4	"	8.4
5	"	2 270	---	---	20	"	45.2
B 1	D13	32 860	16	16	64	0.995	2 092.5
<b>MAIN BEAM</b>							
b 1	D13	4 550	44	44	176	0.995	796.8
2	"	4 730	---	---	217	"	1 021.3
3	"	4 910	---	---	27	"	131.9
4	"	5 000	6	6	24	"	119.4
5	"	4 950	6	6	24	"	116.2
6	"	2 270	44	44	176	"	397.5
7	"	2 200	---	---	217	"	475.0
8	"	1 020	44	44	176	"	178.6
9	"	950	---	---	217	"	205.1
<b>MAIN BEAM</b>							
G 1	D13	2 140	6	6	24	0.995	51.1
2	D10	690	---	---	192	0.56	74.2
3	D13	6 730	4	4	16	0.995	107.1
4	"	1 800	16	16	64	"	114.6
5	"	2 990	4	4	16	"	47.6
6	"	1 300	10	10	40	"	51.7
<b>WEIGHT OF BARS FOR MAIN BEAM</b>							
		D19			2 429.2 kg		
		D13			7 454.6 kg		
		D10			74.2 kg		
		TOTAL WEIGHT			9 958.0 kg		
<b>LATERAL JOINT</b>							
W 1	D13	32 870	---	---	24	0.995	784.9
D 1	D10	32 860	---	---	12	0.56	2 208
<b>LATERAL JOINT</b>							
W 1	D16	2 140	---	---	311	1.56	1 038.2
2	D13	1 570	---	---	311	0.995	485.8
3	D16	2 270	---	---	12	1.56	42.5
4	D13	1 700	---	---	12	0.995	20.3
5	D16	2 210	---	---	12	1.56	41.4
6	D13	1 640	---	---	12	0.995	19.6

REINF. No.	DIA. (mm)	LENGTH (mm)	NUMBER/ONE BEAM		TOTAL NUMBER	U.WEIGHT (kg/m)	WEIGHT (kg)
			EXTERIOR	INTERIOR			
d 1	D13	5 280	---	---	3	0.995	158
2	"	5 210	---	---	3	"	156
3	"	4 020	---	---	9	"	360
4	"	5 510	---	---	6	"	329
5	"	5 380	---	---	6	"	321
6	"	3 590	---	---	18	"	64.3
7	"	2 660	---	---	33	"	87.3
8	"	2 470	---	---	33	"	81.1
9	"	1 240	---	---	81	"	99.9
10	D10	820	---	---	18	0.56	8.3
11	"	800	---	---	18	"	8.1
12	"	780	---	---	459	"	2 005
<b>WEIGHT OF BARS FOR LATERAL JOINT</b>							
		D16			1 122.1 kg		
		D13			1 775.6 kg		
		D10			437.7 kg		
		TOTAL WEIGHT			3 335.4 kg		
<b>TOTAL WEIGHT OF BARS</b>							
		D19			2 429.2 kg		
		D16			1 122.1 kg		
		D13			9 230.2 kg		
		D10			511.9 kg		
		TOTAL WEIGHT			13 293.4 kg		

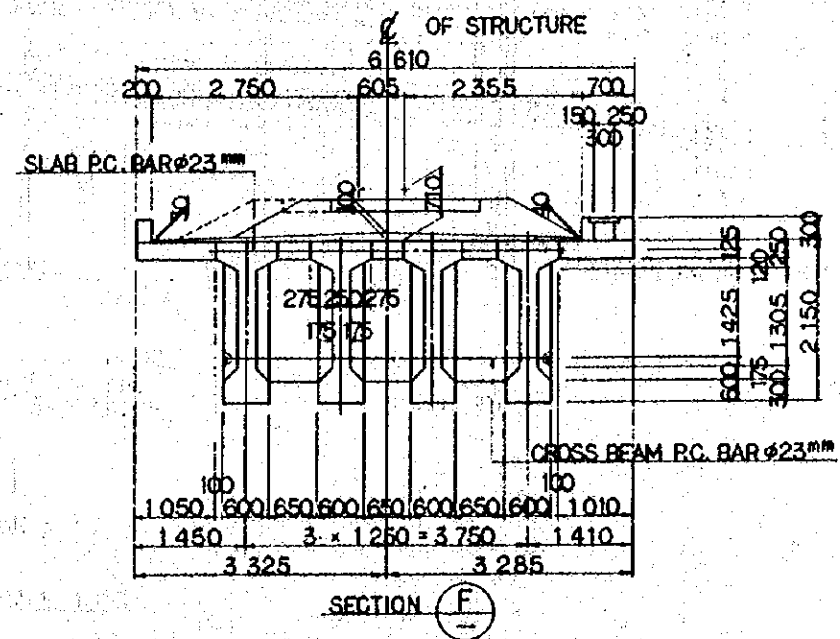
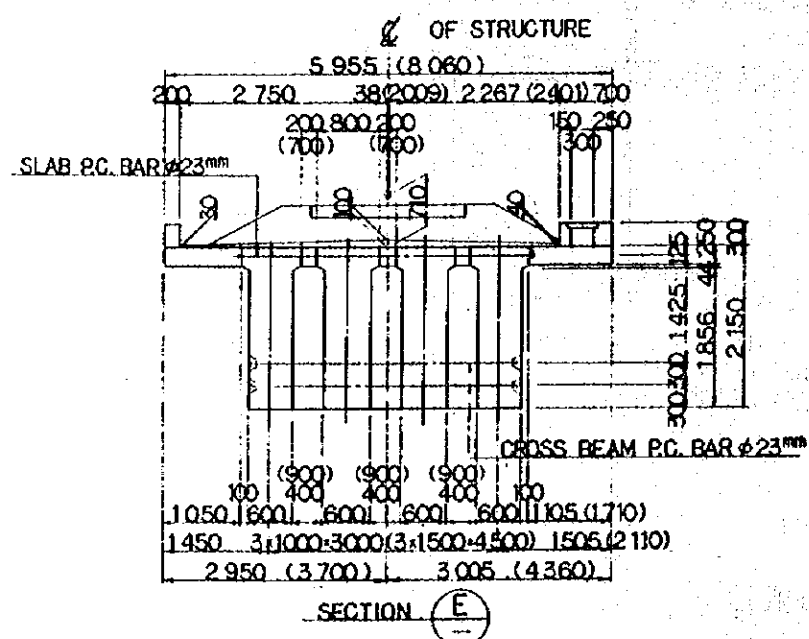
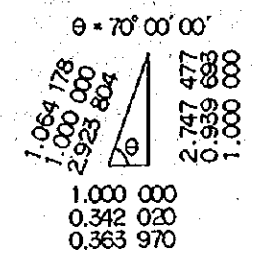
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG 84	NY	AO	KA	KM	AK
A	15 FEB 84	NY	AO	KA	KM	AK
REVISIONS	DATE	ISSUED	BY	CHECKED	REVIEWED	SUBMITTED
P.C. GIRDER PC 40 REINF. BAR SCHEDULE						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE: Drawing No. CS - 060						



- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. MAIN BEAM SHALL BE PRECAST AND ALL THE OTHER CONCRETE EXCEPT RC. COVER SHALL BE CAST IN PLACE
  3. P.C. STRAND 12T12.7 MEANS A GROUP OF 12 NO STRANDS FOR PRESTRESSED CONCRETE OF 12.7 MM DIAMETER EACH AND SHALL CONFORM TO JIS G 3536 SWPR7B 12T12.7 OR EQUIVALENT
  4. P.C. BAR SHALL CONFORM TO THE REQUIREMENTS AS FOLLOWS:  
 MINIMUM ULTIMATE TENSILE STRENGTH :  $190 \text{ kg/mm}^2$   
 MINIMUM YIELD STRESS :  $160 \text{ kg/mm}^2$
  5. THIS DRAWING SHALL BE APPLIED TO : B01-PC40
  6. DESIGN TRAIN LOAD : EQUIVALENT TO KS - 16



GIRDER NO	L1	L2	L3	L4	BEAM ANGLE
①	29.960	28.960	7.240	500	70°
②	30.142	29.136	7.284	503	70°57'01"
③	30.324	29.312	7.328	506	71°53'20"
④	30.506	29.488	7.372	509	72°48'54"



CROSS SECTION SCALE 1:50

SUPERSTRUCTURE MATERIAL SCHEDULE (B14-PC41)

ITEM	TYPE	UNIT	QUANTITY
MAIN BEAM	CONCRETE CLASS A ( $16-400 \text{ kg/m}^3$ )	$\text{m}^3$	121.2
	P.C. STRAND 12T12.7 ( $15-190 \text{ kg/m}^2$ )	kg	6982.2
	SHEATH $\phi 65$ and $\phi 70$	m	708.9
	FORMS	$\text{m}^2$	657.4
	ANCHORING DEVICE FOR	EACH	48
LATERAL JOINT	REINFORCING BAR 19	kg	2240.2
	16	"	-
	13	"	7166.6
	10	"	74.2
	TOTAL	"	9481.0
SIDEWALK CONCRETE	CONCRETE CLASS B ( $16-300 \text{ kg/m}^3$ )	$\text{m}^3$	19.0
	P.C. BAR $\phi 23$ ( $15-110 \text{ kg/m}^2$ )	kg	665.2
	SHEATH $\phi 35$	m	196.6
	FORMS	$\text{m}^2$	78.2
	ANCHOR PLATE, NUT FOR $\phi 23$	EACH	84
BRIDGE RAILING AND DUCT	REINFORCING BAR 16	kg	1122.1
	13	"	1775.6
	10	"	437.7
	TOTAL	"	3335.4
	CONCRETE	$\text{m}^3$	16.9
MORTAR WITH SLOPE PROTECTIVE MORTAR	CONCRETE	$\text{m}^3$	6.0
	FORMS	$\text{m}^2$	55.4
	MORTAR	$\text{m}^3$	12.3
ELASTOMERIC BEARING PADS	DRAINAGE	EACH	8
	FIX. FOR R=190 ton	"	4
	MOV. FOR R=190 ton	"	4

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NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1AUG/84	MYAO	KAKM	mk
A	15FEB/84	MYAO	KAKM	mk

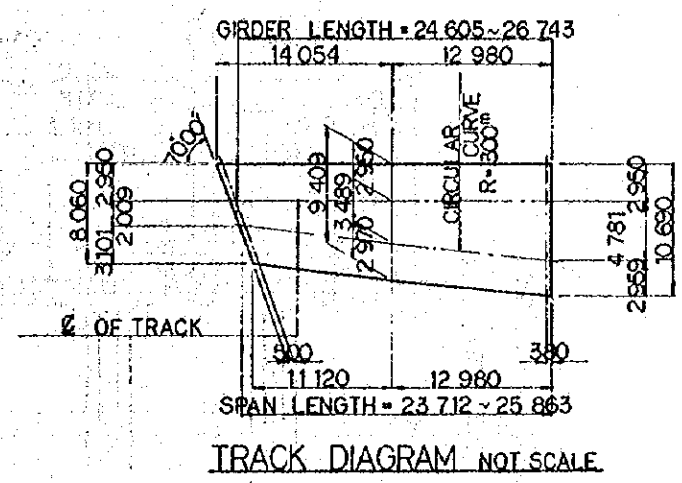
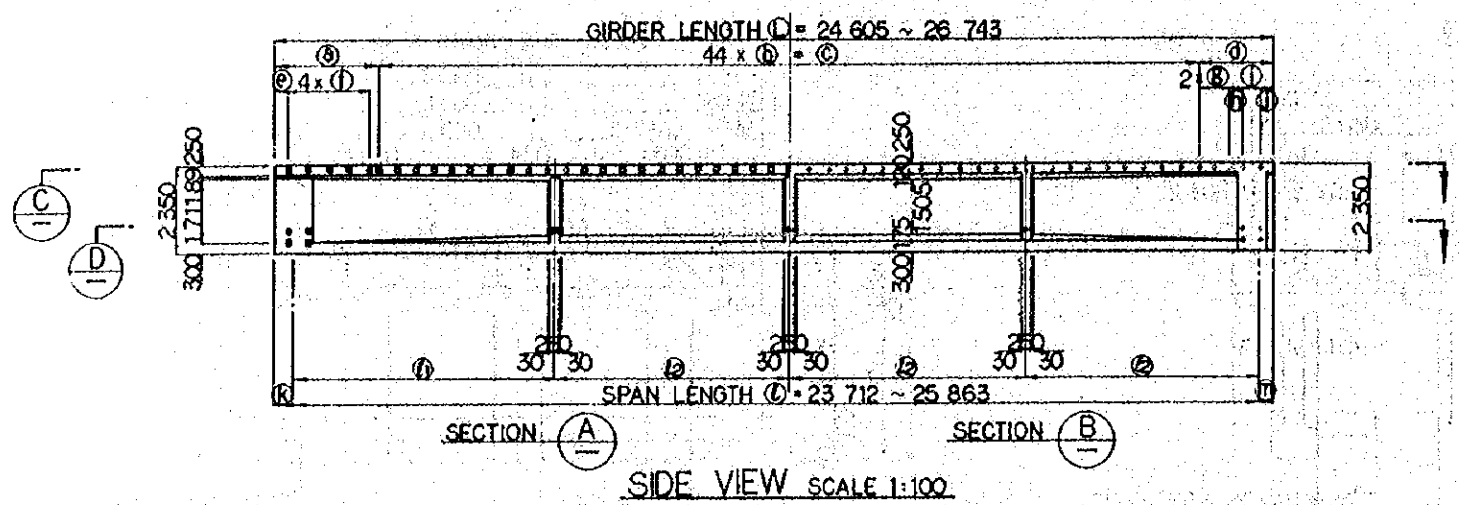
REVISIONS

P.C. GIRDER  
 PC 41  
 GENERAL VIEW

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: AS NOTED  
 DRAWING NO: CS - 061

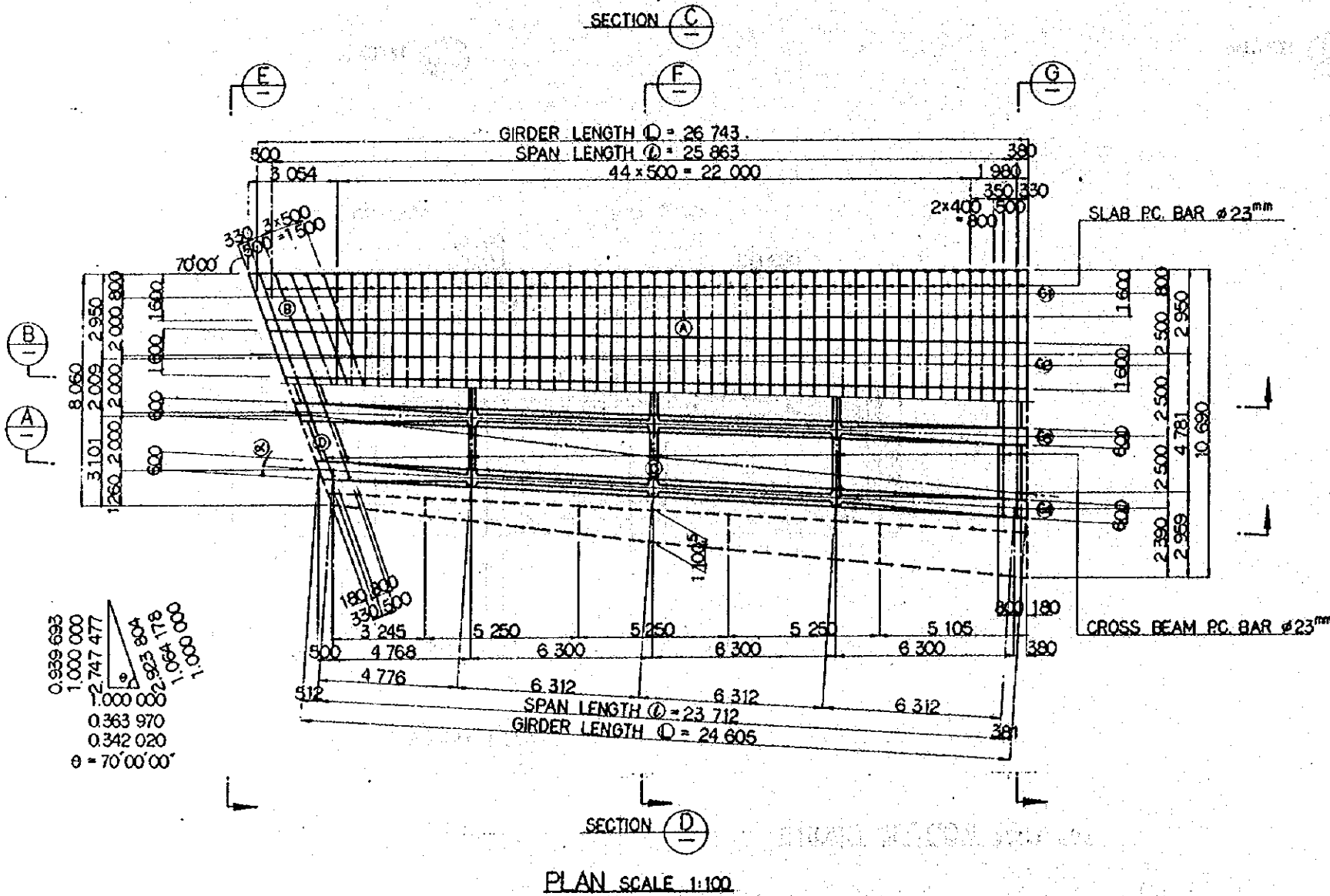
NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. MAIN BEAM SHALL BE PRECAST AND ALL THE OTHER CONCRETE EXCEPT R.C. COVER SHALL BE CAST IN PLACE
3. P.C. STRAND 12T 12.7 MEANS A GROUP OF 12 NO STRANDS FOR PRESTRESSED CONCRETE OF 12.7MM DIAMETER EACH AND SHALL CONFORM TO JIS G 3536 SWPR7B 12T 12.7 OR EQUIVALENT
4. P.C. BAR SHALL CONFORM TO THE REQUIREMENTS AS FOLLOWS:  
 MINIMUM ULTIMATE TENSILE STRENGTH: 190 kg/mm<sup>2</sup>  
 MINIMUM YIELD STRESS: 160 kg/mm<sup>2</sup>
5. DESIGN TRAIN LOAD: EQUIVALENT TO KS-16



	(1)	(2)	(3)	(4)
(C)	26 743	26 020	25 307	24 605
(D)	25 863	25 136	24 419	23 712
(E)	6 968	6 233	5 504	4 776
(F)	6 300	6 301	6 305	6 312
(G)	2 763	2 035.2	1 307.9	581.7
(H)	500	500.1	500.4	500.9
(I)	22 000	22 004.4	22 017.6	22 039.6
(J)	1 988	1 980.4	1 981.5	1 983.7
(K)	351.2	353.7	356.6	359.8
(L)	532.1	535.9	540.3	545.2
(M)	400	400.1	400.3	400.7
(N)	350	350.1	350.3	350.7
(O)	500	500.1	500.4	500.9
(P)	330	330.1	330.3	330.6
(Q)	500	503.6	507.7	512.3
(R)	390	380.1	380.3	380.7
(S)	0' 00' 00"	1' 06' 04"	2' 15' 53"	3' 29' 42"

(E), (F), (G) AND (H) SHOW GIRDERS NUMBER.  
 (C) ~ (S) SHOW THE VALUE AT THE POINT OF CENTER LINE OF MAIN GIRDER.



SUPERSTRUCTURE MATERIAL SCHEDULE (B14 - PC 42)

ITEM	TYPE	UNIT	QUANTITY
MAIN BEAM	CONCRETE CLASS A (1C-400 kg/m <sup>3</sup> )	m <sup>3</sup>	126.6
	P.C. STRAND 12T 12.7 (1S-190 kg/mm <sup>2</sup> )	kg	4 991.6
	SHEATH #66	m <sup>2</sup>	506.2
	FORMS	m <sup>2</sup>	666.3
	ANCHORING DEVICE FOR 12T 12.7	EACH	40
	REINFORCING BAR	kg	—
	19	kg	1 332.1
	16	kg	7 653.7
	13	kg	100.5
	10	kg	9 086.3
TOTAL	kg	—	
LATERAL JOINT	CONCRETE CLASS B (1C-300 kg/m <sup>3</sup> )	m <sup>3</sup>	36.0
	P.C. BAR #23 (1S-110 kg/mm <sup>2</sup> )	kg	1 816.8
	SHEATH #35	m <sup>2</sup>	545.7
	FORMS	m <sup>2</sup>	153.3
	ANCHOR PLATE, NUT FOR #23	EACH	130
REINFORCING BAR	kg	—	
16	kg	3 516.3	
13	kg	345.7	
10	kg	4 255.9	
TOTAL	kg	—	
SIDEWALK CONCRETE CLASS C (1C-240 kg/m <sup>3</sup> )	m <sup>3</sup>	6.2	
BRIDGE RAILING CONCRETE	m <sup>3</sup>	6.9	
AND DUCT FORMS	m <sup>2</sup>	61.9	
MORTAR WITH SLOPE PROTECTIVE MORTAR DRAINAGE	m <sup>3</sup>	14.3	
ELASTOMERIC BEARING PADS	EACH	8	
FIX. FOR R = 190 ton	kg	4	
MOV. FOR R = 190 ton	kg	4	

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NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1 AUG '84	HYAD	KK	KM	mm
A	15 FEB '84	HYAD	KK	KM	mm

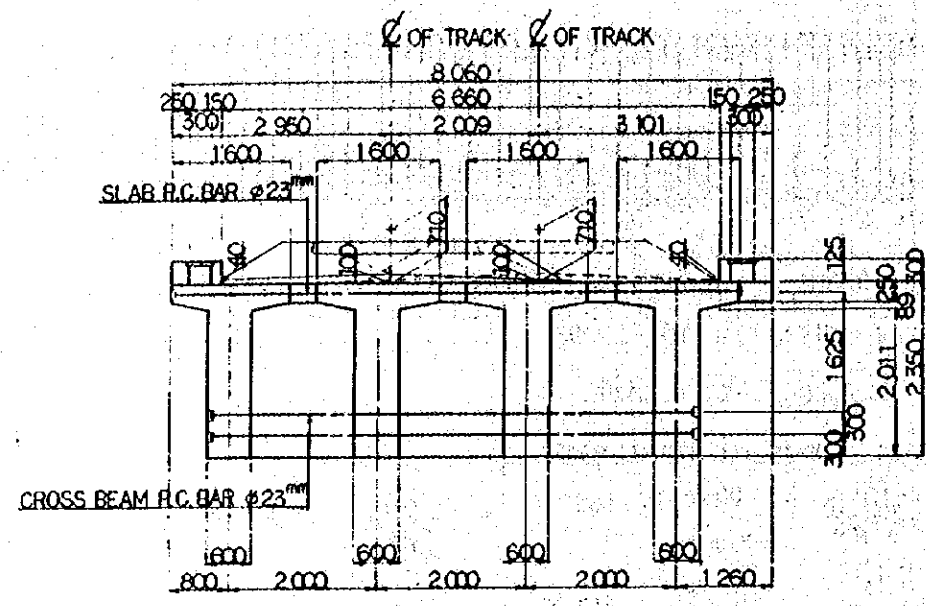
REVISIONS DATE DESIGNED DRAWN CHECKED RETYED SUBMITTED

P.C. GIRDER  
 PC 42  
 GENERAL VIEW (SHEET 1 OF 2)

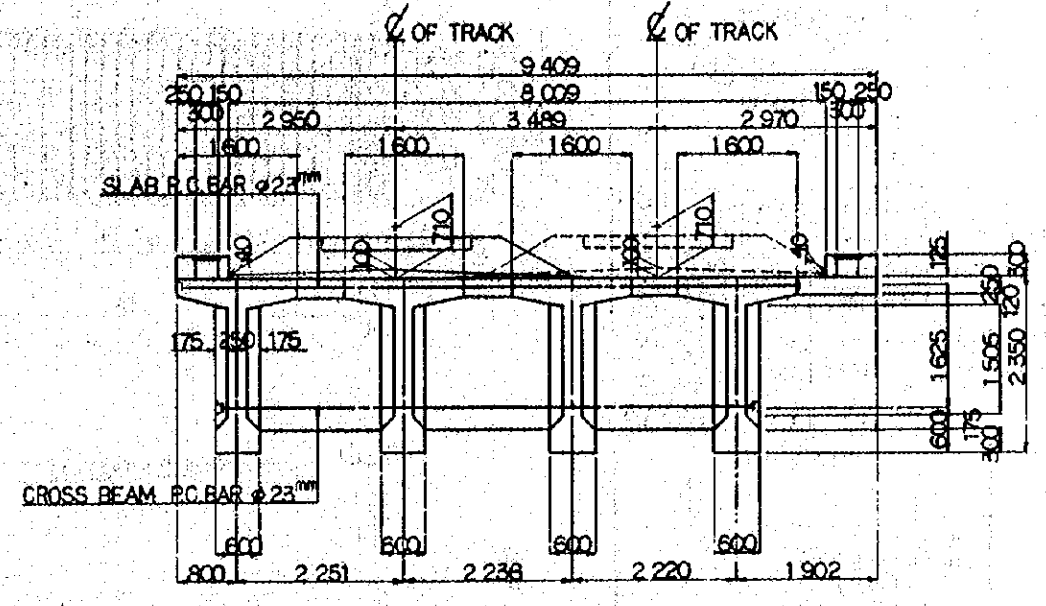
PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: AS NOTED DRAWING NO: CS-062

0.939 693  
 1.000 000  
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 1.000 000  
 0.363 970  
 0.342 020  
 θ = 70°00'00"

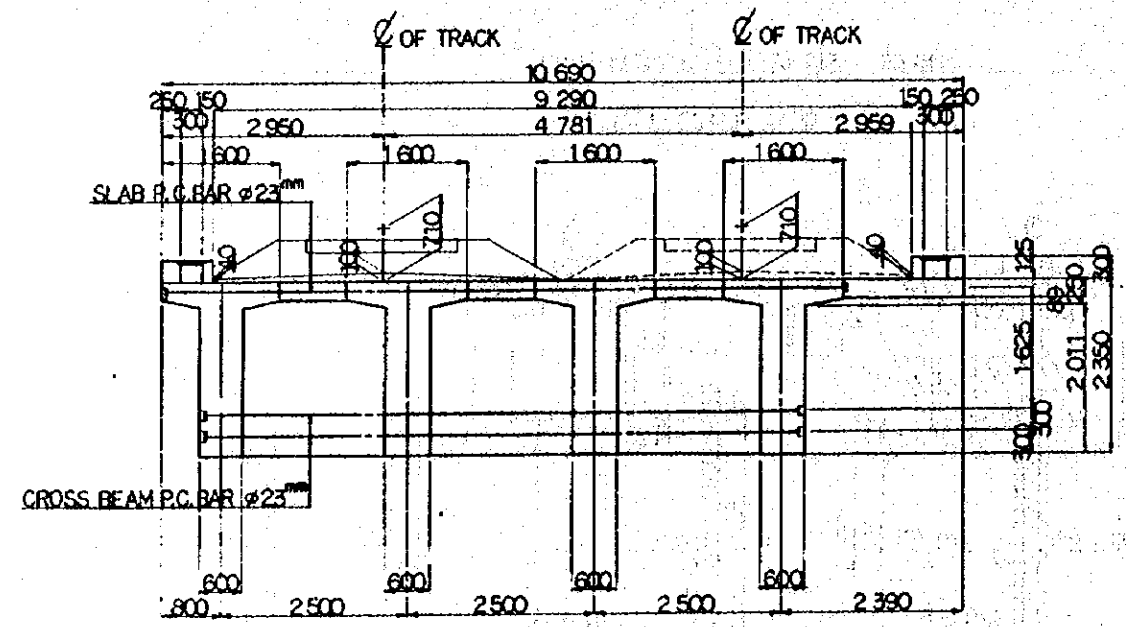
NOTE:  
SEE NOTES 1 TO 4 ON DWG NO CS-062



SECTION E  
CS-063



SECTION F  
CS-062

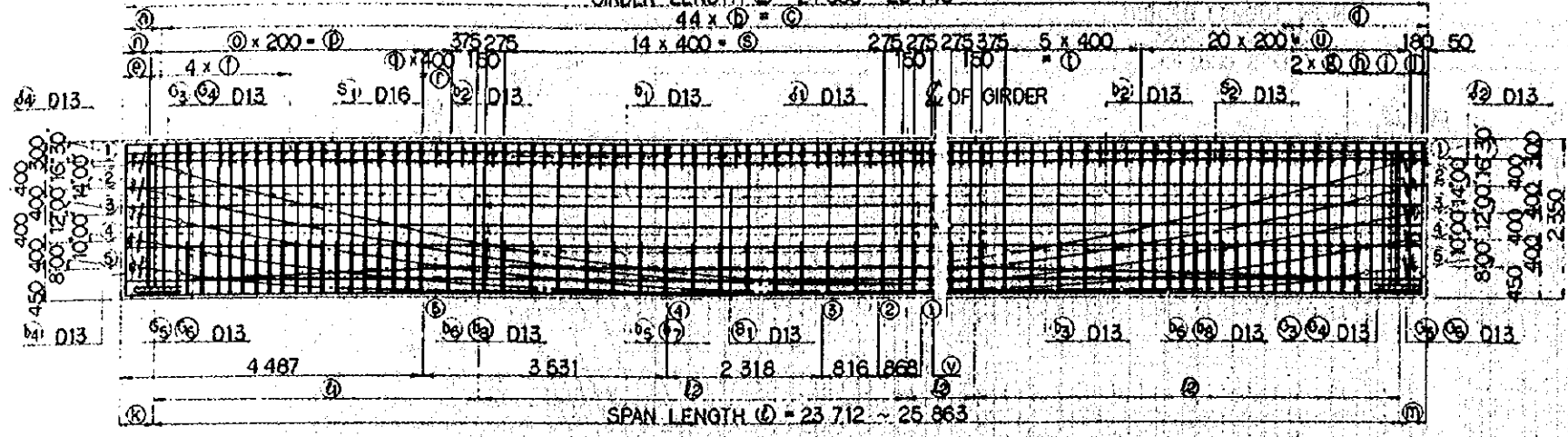


SECTION G  
CS-062

CROSS SECTION SCALE 1:50

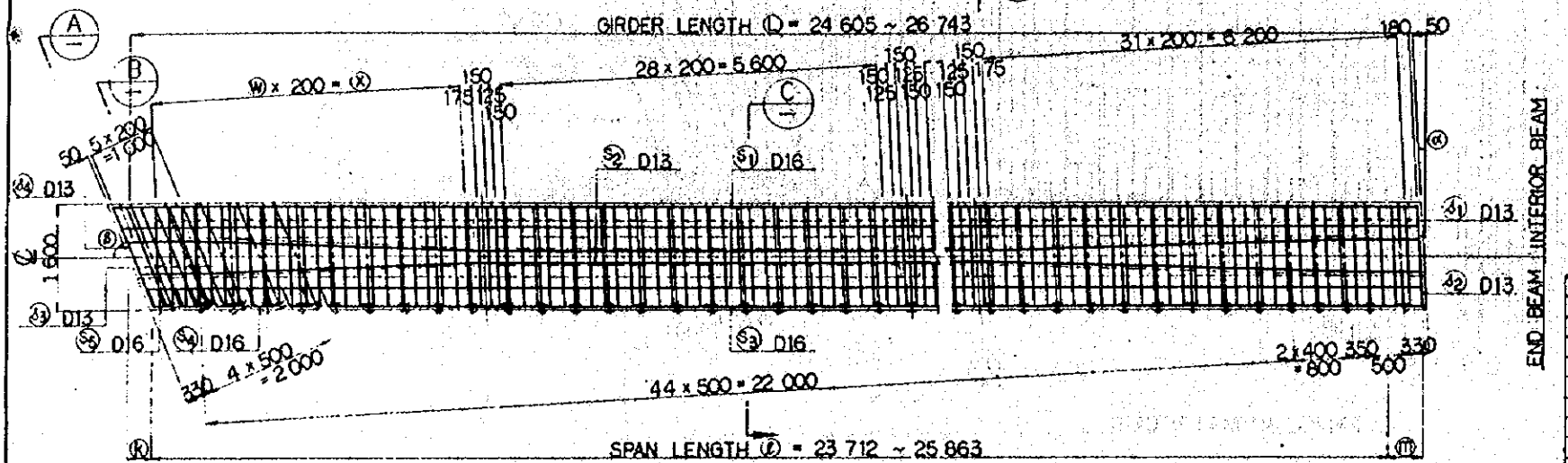
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1 AUG '84	MY	AD	KA	KM, MK
A	15 FEB '84	MY	AD	KA	KM, MK
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED
P.C. GIRDER PC 42 GENERAL VIEW ( SHEET 2 OF 2 )					
PACKAGE: 1 CIVIL AND ARCHITECTURAL WORK					
SCALE: AS NOTED		DRAWING NO: CS - 063			

GIRDER LENGTH  $\text{L} = 24\ 605 \sim 26\ 743$

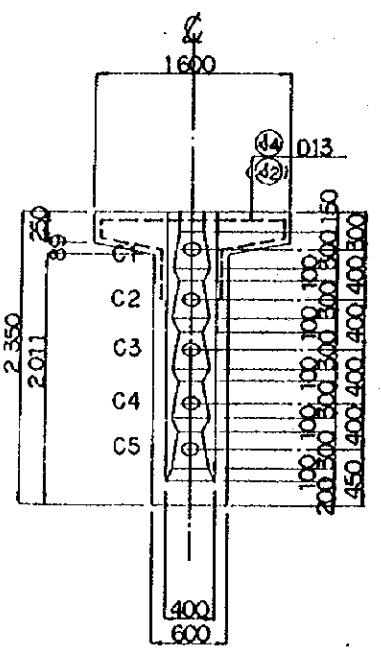


SIDE VIEW SCALE 1:50

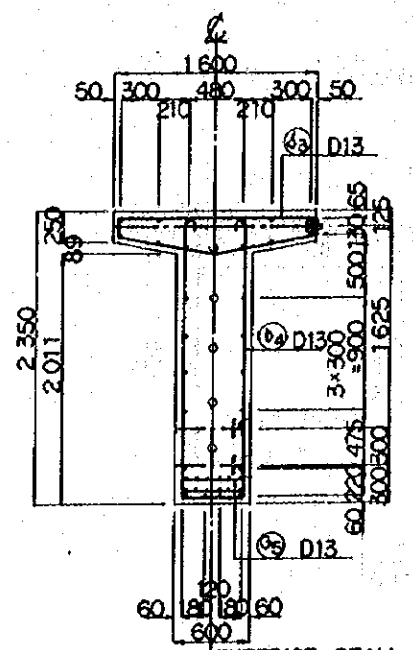
GIRDER LENGTH  $\text{L} = 24\ 605 \sim 26\ 743$



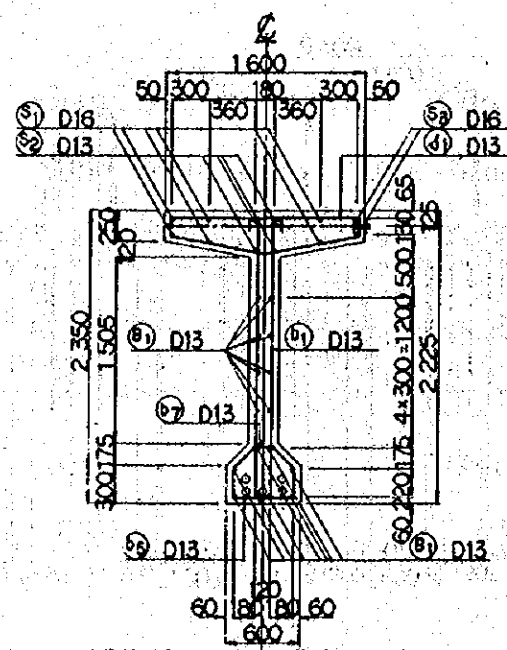
PLAN SCALE 1:50



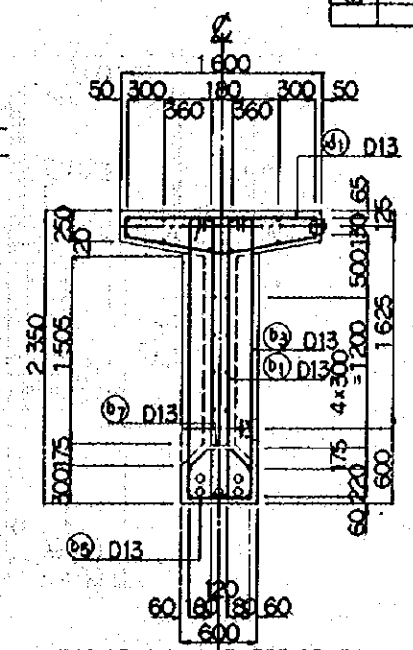
SECTION A



SECTION B



SECTION C



SECTION D

CROSS SECTION SCALE 1:30

BENDING SCHEDULE OF PC CABLES

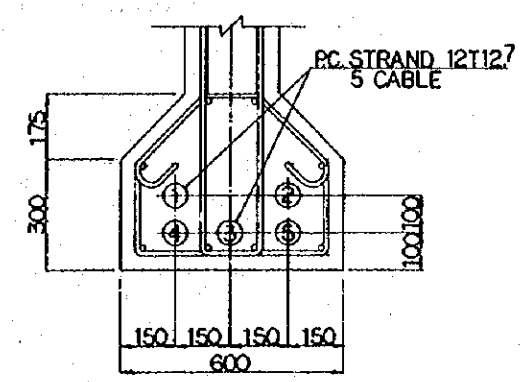
CABLE No.	L1 (m)	L2 (m)	L3 (m)	L4 (m)	h1 (m)	h2 (m)	Σ L (m)	β	ANGLE θ
①	0.282	11.310	11.149	0.625	7.651	0.172	22.217	0.01328	16° 30'
②	1.150	10.378	10.273	0.625	1.261	0.151	12.553	0.01214	14° 00'
③	1.568	9.522	9.451	0.625	1.004	0.130	12.113	0.01125	12° 00'
④	4.284	7.165	7.126	0.625	0.626	0.109	12.074	0.01237	10° 00'
⑤	7.815	3.606	3.594	0.625	0.253	0.087	12.045	0.01565	8° 00'

SCHEDULE OF PC BAR

SLAB	(mm)
(A)	8.539 (MEAN)
(B)	7.668
(C)	8.432
(D)	7.491

①	②	③	④	⑤	⑥	⑦	⑧
26.743	26.020	25.307	24.606	500	503.6	507.7	512.3
25.863	25.136	24.419	23.712	360	360.1	360.3	360.7
6.963	6.233	5.504	4.776	122	192	61	131
6.300	6.301	6.305	6.312	21	21	20	20
2.763	2.035	1.307	581.7	4.200	4.200	4.003	4.007
500	500	500	500	6	4	3	1
22.000	22.004	22.017	22.036	2.400	1.600	1.200	400.7
1.980	1.980	1.981	1.983	5.600	5.601	5.604	5.610
35.12	35.7	35.6	35.8	2.000	2.000	2.001	2.003
532	536	540	545	4.000	4.000	4.003	4.007
400	400	400	400	1.352	990	633	282
350	350	350	350	33	29	26	22
500	500	500	500	6.600	5.800	5.200	4.400
330	330	330	330	0.00.00	1.06.04	2.15.53	3.29.42
				70.00.00	68.53.56	67.44.07	66.30.18

①, ②, ③ AND ④ SHOW GIRDERS NUMBER.  
 (L) ~ (V) SHOW THE VALUE AT THE POINT OF CENTER LINE OF MAIN GIRDER.



ARRANGEMENT OF PC CABLE SCALE 1:10

- NOTES:
- ALL DIMENSIONS ARE SHOWN IN MILLIMETERES UNLESS OTHERWISE INDICATED
  - REINFORCEMENT OF ANCHORAGE AND RECESS DIMENSION ARE EXAMPLES AND THESE SHALL BE REVIEWED AND, IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURES INSTRUCTIONS FOR THE SELECTED PRESTRESSING SYSTEM
  - JACKING LOAD INCLUDE FRICTION IN THE JACK AND ANCHORAGE. EXTENSION SHOWS TOTAL VALUE OF THOSE AT BOTH ENDS MEASURED AT THE POINT 30CM OUTSIDE FROM ANCHORAGE SURFACE. AFTER THE PRESTRESSING SYSTEM IS DETERMINED THESE VALUES SHALL BE REVIEWED ALONG WITH THE OTHER ASSUMED FACTORS AND, IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURES INSTRUCTIONS. INITIAL STRESS DO NOT INCLUDE OTHER FACTORS THAN FRICTION LOSSES.
  - TENSIONING SEQUENCE OF LATERAL PC BARS SHALL BE AT EVERY OTHER BAR

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NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

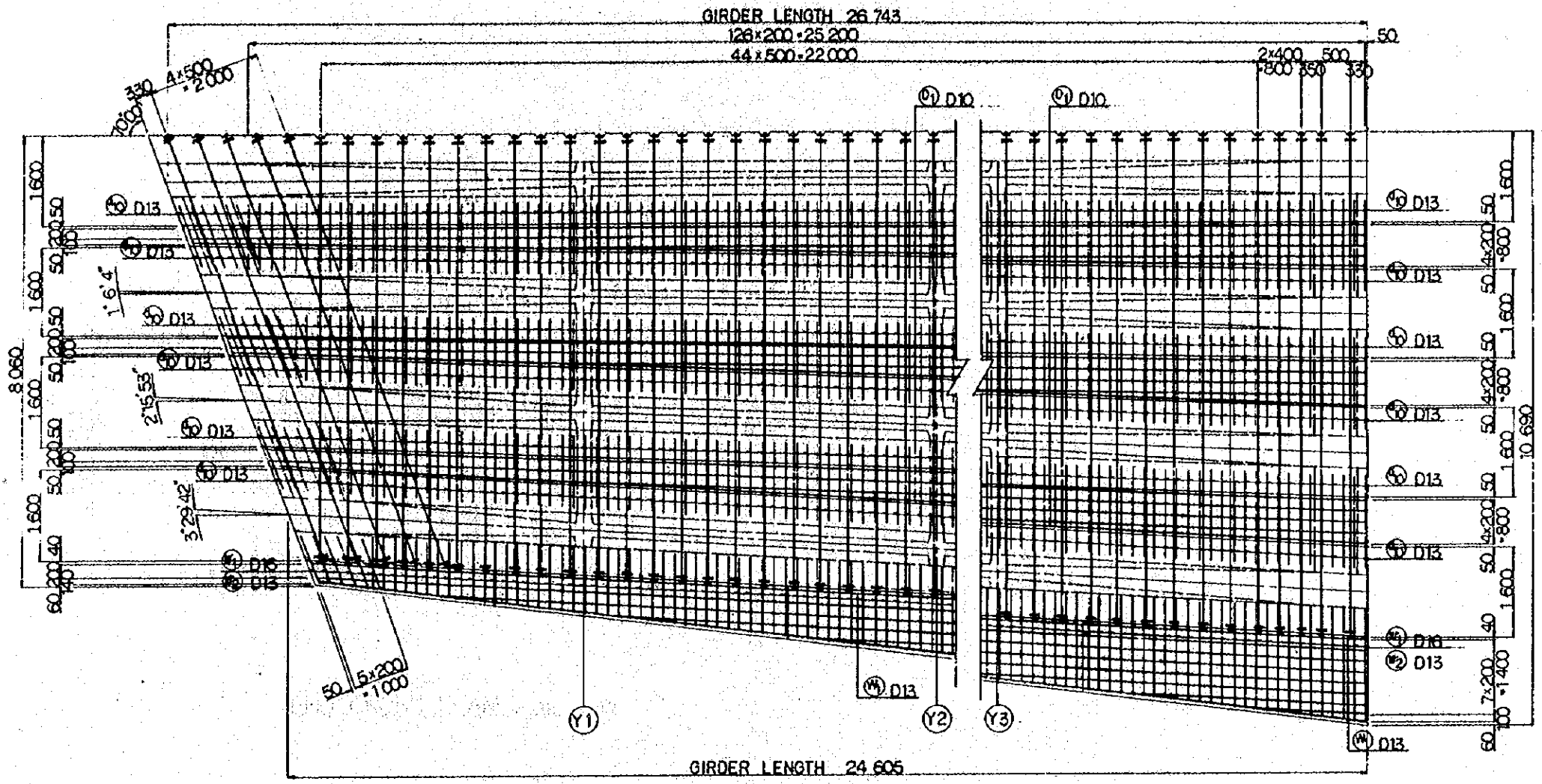
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1AUG/84	HYADOKAKUMAK
A	15FEB/84	HYADOKAKUMAK

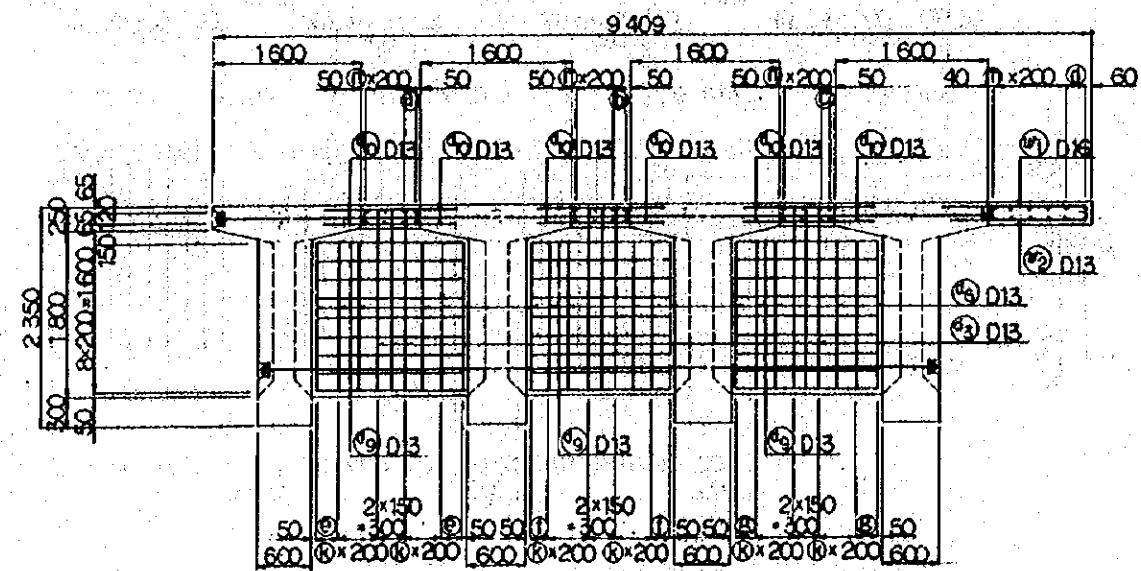
REVISIONS DATE CHECKED DRAWN CHECKED REVIEWED SUBMITTED

P.C. GIRDER  
 PC 42  
 P.C. CABLE AND REINF. BAR  
 ARRANGEMENT OF MAIN BEAM

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE AS NOTED DRAWING NO. CS - 064



PLAN SCALE 1:50



MIDDLE CROSS BEAM SCALE 1:40

DIMENSION SCHEDULE

	Y 1	Y 2	Y 3
Ⓐ	29.0	151.0	72.0
Ⓑ	9.0	136.0	64.0
Ⓒ	0	120.0	56.0
Ⓓ	30.0	0	10.0
Ⓔ	164.5	225.5	86.0
Ⓚ	154.5	218.0	82.0
Ⓛ	142.5	210.0	78.0
Ⓜ	2	2	3
Ⓝ	3	5	6
Ⓗ	2	2	3

- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REINFORCEMENT OF ANCHORAGE AND RECESS DIMENSION ARE EXAMPLES AND THESE SHALL BE REVIEWED AND, IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS FOR THE SELECTED PRESTRESSING SYSTEM

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT  
 CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY  
 (JICA)

B	1 AUG 84	MYAO	K.A.	U.M.	M.K.
A	15 FEB 84	MYAO	K.A.	U.M.	M.K.

REVISIONS DATE DESIGNED DRAWN CHECKED REVIEWED SUBMITTED

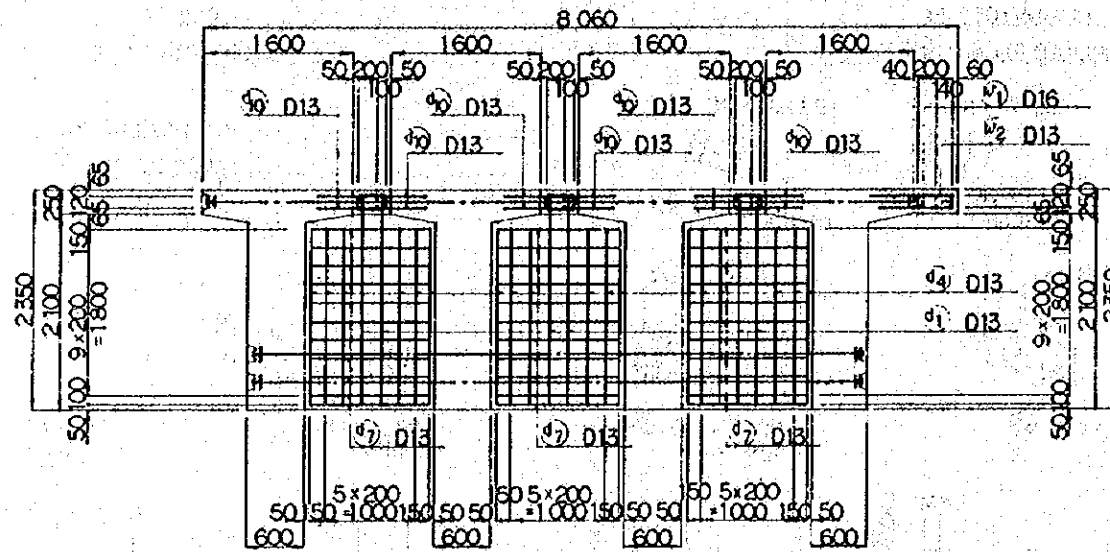
P.C. GIRDER  
 PC 42  
 P.C. CABLE AND REINF. BAR ARRANGEMENT OF LATERAL JOINT(SHEET 1 OF 2)

PACKAGE: 1 CIVIL AND ARCHITECTURAL WORK

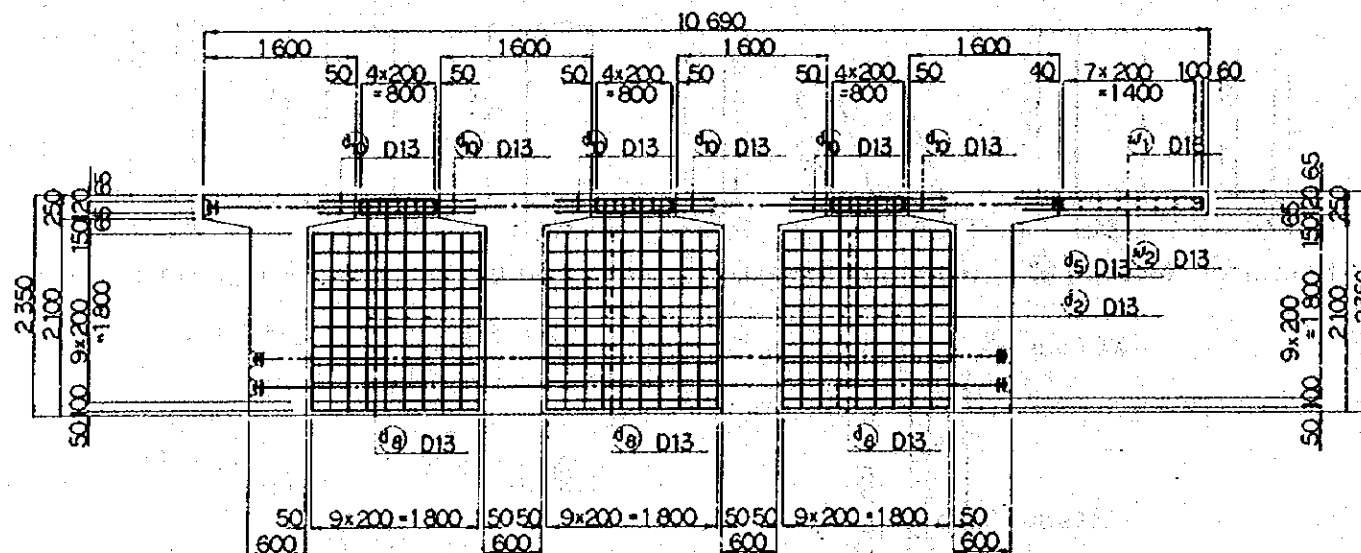
SCALE AS NOTED DRAWING NO. CS - 065

NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. REINFORCEMENT OF ANCHORAGE AND RECESS DIMENSION ARE EXAMPLES AND THESE SHAL BE REVIEWED AND IF NECESSARY, BE ADJUSTED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS FOR THE SELECTED PRESTRESSING SYSTEM

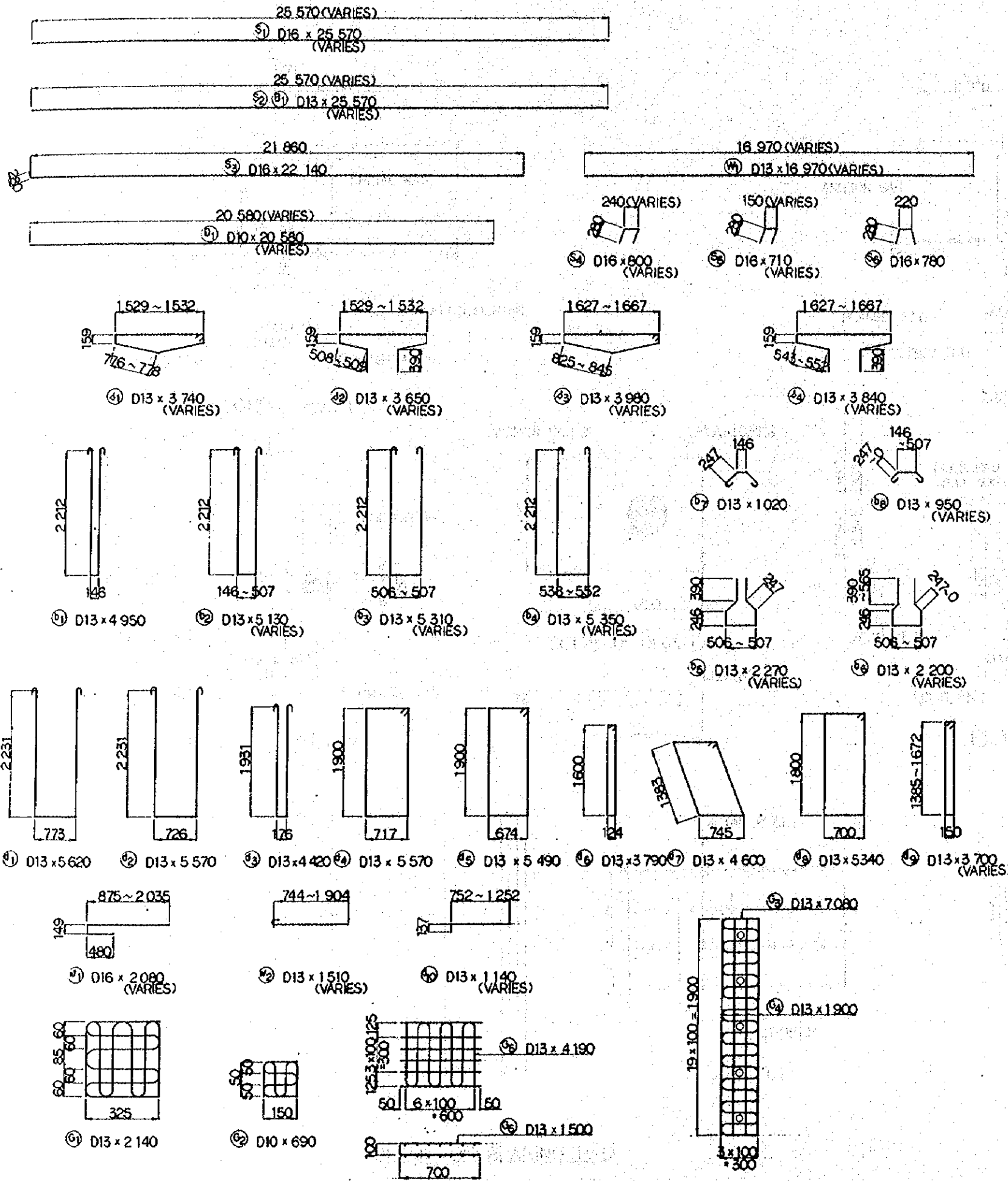


END CROSS BEAM SCALE 1:40



END CROSS BEAM SCALE 1:40

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1 AUG 84	MY	AD	KA	KM
A	15 FEB 84	MY	AD	KA	KM
REVISIONS	DATE	DESIGNED	CHECKED	REVIEWED	SUBMITTED
P.C. GIRDER PC 42 P.C. CABLE AND REINF. BAR ARRANGEMENT OF LATERAL JOINT (SHEET 2 OF 2)					
PACKAGE: I CIVIL AND ARCHITECTURAL WORK					
SCALE	DRAWING NO.				
AS NOTED	CS - 066				



### BAR SCHEDULE

REIN. No.	DIA. (mm)	LENGTH (mm)	NUMBER/ONE BEAM	EXTERIOR	INTERIOR	TOTAL NUMBER	UWEIGHT (kg/m)	WEIGHT (kg)
<b>MAIN BEAM</b>								
S 1	D16	25 570	6	8	28	1 560	1 116.9	
2	D13	25 570	4	4	16	0.995	407.1	
3	D16	22 140	2 (0)	---	2	1.580	69.1	
4	.	800	8 (10)	---	18	.	22.5	
5	.	710	2	---	4	.	4.4	
6	.	780	98 (0)	---	98	.	119.2	
4	D13	3 740	---	---	514	0.995	1 912.7	
2	.	3 650	1	1	4	.	14.5	
3	.	3 980	5	5	20	.	79.2	
4	.	3 840	1	1	4	.	15.3	
B 1	D13	25 570	16	16	64	0.995	1 628.3	
b 1	D13	4 950	36	36	144	0.995	709.2	
2	.	5 130	---	---	176	.	898.4	
3	.	5 310	14	14	56	.	295.9	
4	.	5 350	6	6	24	.	127.8	
5	.	2 270	36	36	144	.	325.2	
6	.	2 200	---	---	176	.	385.3	
7	.	1 020	36	36	144	.	146.1	
8	.	950	---	---	176	.	166.4	
0 1	D13	2 140	20	20	80	0.995	170.3	
2	D10	690	130	---	260	0.560	100.5	
3	D13	7 080	4	4	16	0.995	112.7	
4	.	1 900	16	16	64	.	121.0	
5	.	4 190	4	4	16	.	66.7	
6	.	1 500	12	12	48	.	71.6	
<b>WEIGHT OF BARS FOR MAIN BEAM</b>								
							D16	1 332.1 kg
							D13	7 653.7 kg
							D10	100.5 kg
							<b>TOTAL WEIGHT</b>	<b>9 086.3 kg</b>
<b>LATERAL JOINT</b>								
W 1	D13	16 970	---	---	18	0.995	303.9	
v 1	D16	2 080	---	---	122	1.560	395.9	
2	D13	1 510	---	---	122	0.995	183.3	
0 1	D10	20 580	---	---	30	0.560	345.7	
d 1	D13	5 620	---	---	6	0.995	33.6	
2	.	5 570	---	---	12	.	66.5	
3	.	4 420	---	---	27	.	118.7	
4	.	5 570	---	---	18	.	99.8	
5	.	5 490	---	---	18	.	98.3	
6	.	3 790	---	---	60	.	226.3	
7	.	4 600	---	---	33	.	151.0	
8	.	5 340	---	---	33	.	175.3	
9	.	3 700	---	---	81	.	298.2	
10	.	1 140	---	---	1 552	.	1 760.4	
<b>WEIGHT OF BARS FOR LATERAL JOINT</b>								
							D16	395.9 kg
							D13	3 515.3 kg
							D10	345.7 kg
							<b>TOTAL WEIGHT</b>	<b>4 256.9 kg</b>
<b>TOTAL WEIGHT OF BARS</b>								
							D16	1 728.0 kg
							D13	11 169.0 kg
							D10	446.2 kg
							<b>TOTAL WEIGHT</b>	<b>13 343.2 kg</b>

NOTE:  
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED

REPUBLIC OF INDONESIA  
MINISTRY OF COMMUNICATIONS  
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1 AUG 84	NY	AD	KA	KM	MS
A	5 FEB 84	NY	AD	KA	KM	MS

REVISIONS: DATE, DESIGNED, DRAWN, CHECKED, REVIEWED, SUBMITTED

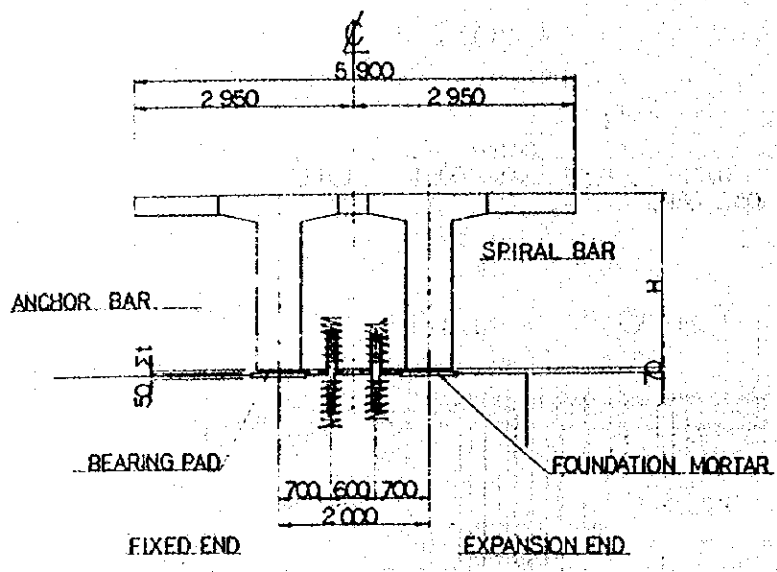
P.C. GIRDER  
PC 42  
REIN. BAR SCHEDULE

PACKAGE: I CIVIL AND ARCHITECTURAL WORK

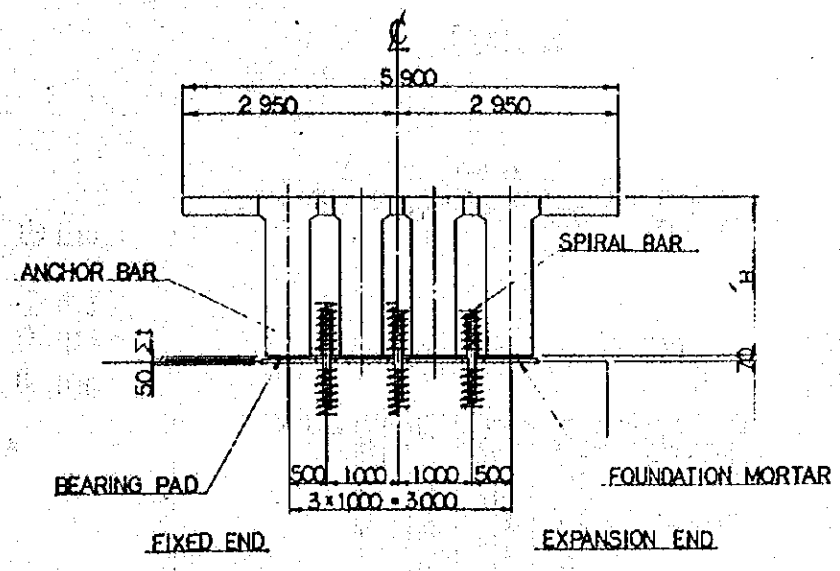
SCALE: AS NOTED DRAWING NO: CS - 067



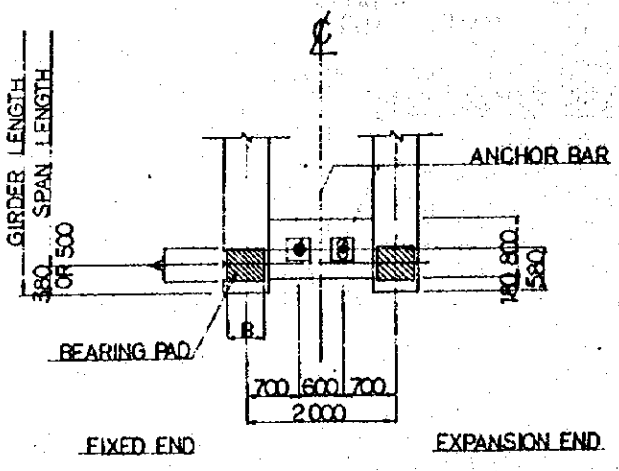
NOTES:  
 1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED  
 2. SEE DRAWING FOR VARIOUS CODES USED IN DIMENSION : CS-072



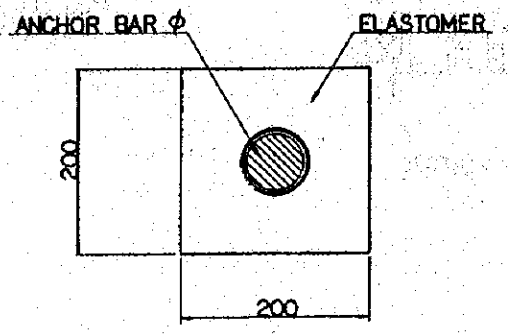
SECTION SCALE 1:50



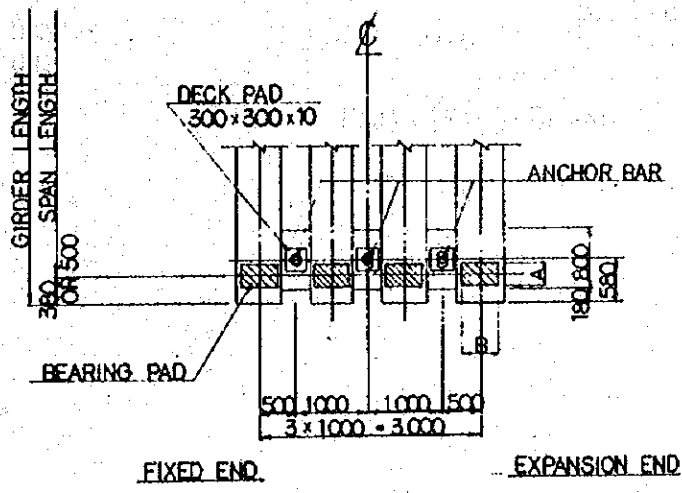
SECTION SCALE 1:50



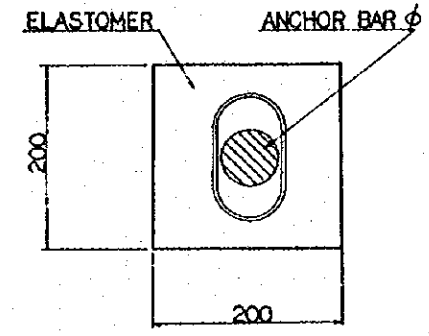
PLAN SCALE 1:50



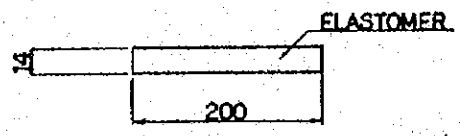
DETAIL OF DECK PAD



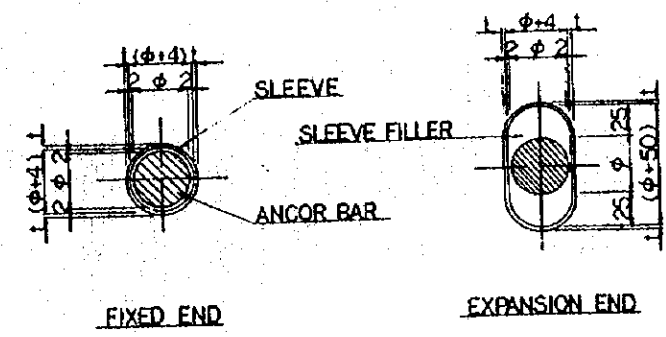
PLAN SCALE 1:50



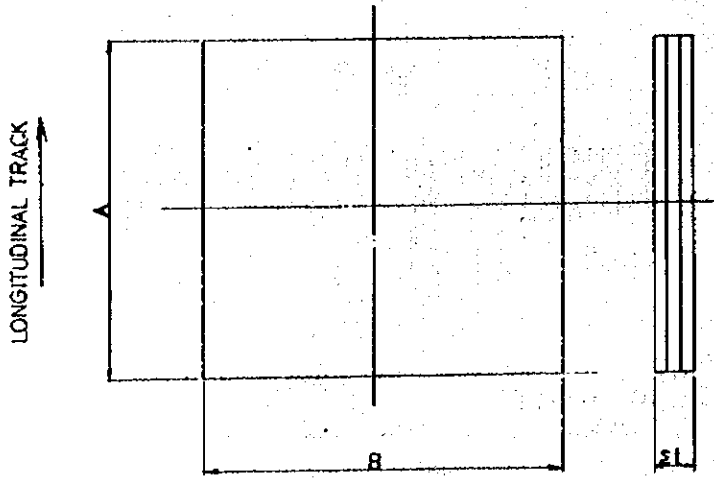
DETAIL OF DECK PAD



SCALE 1:1



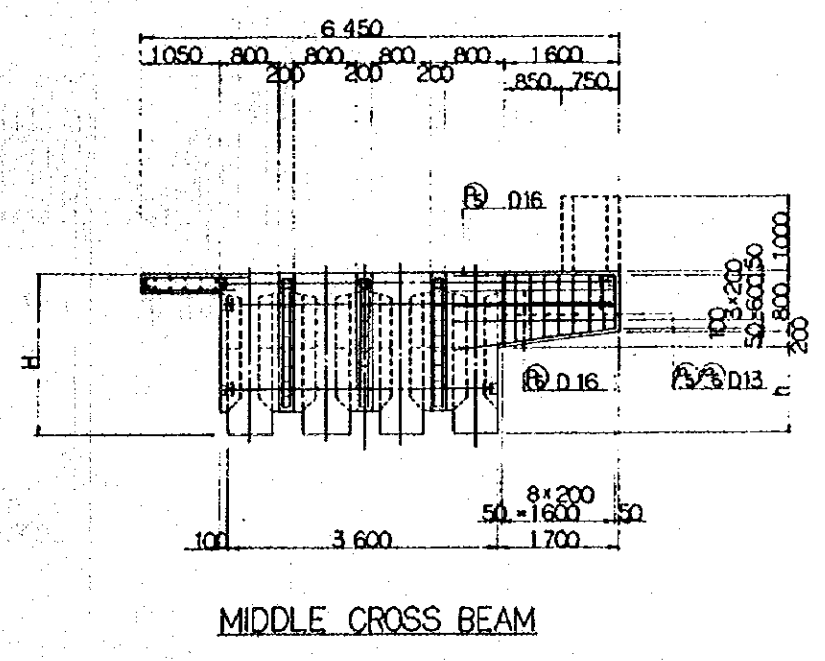
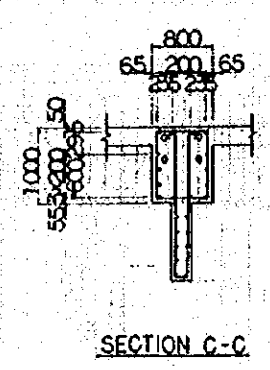
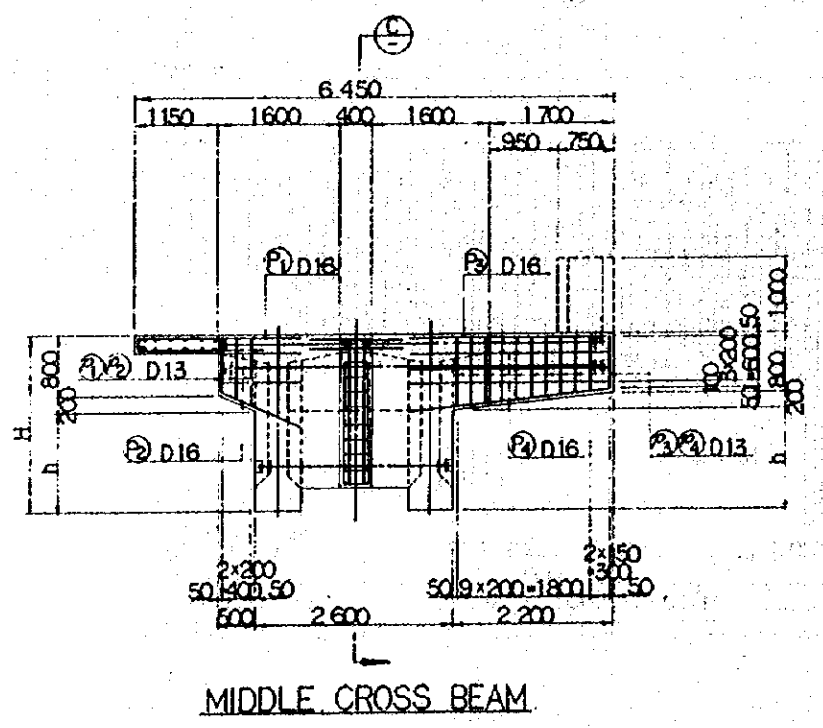
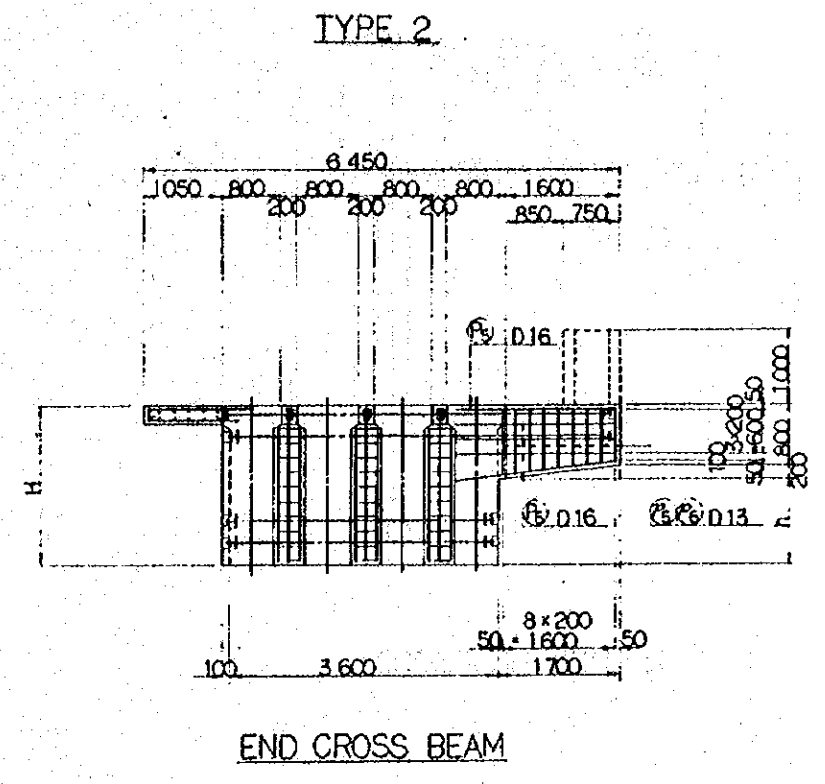
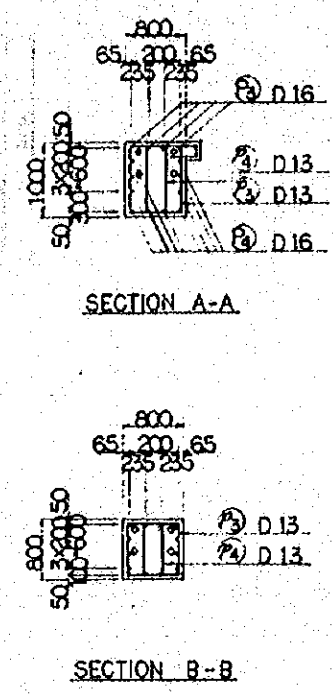
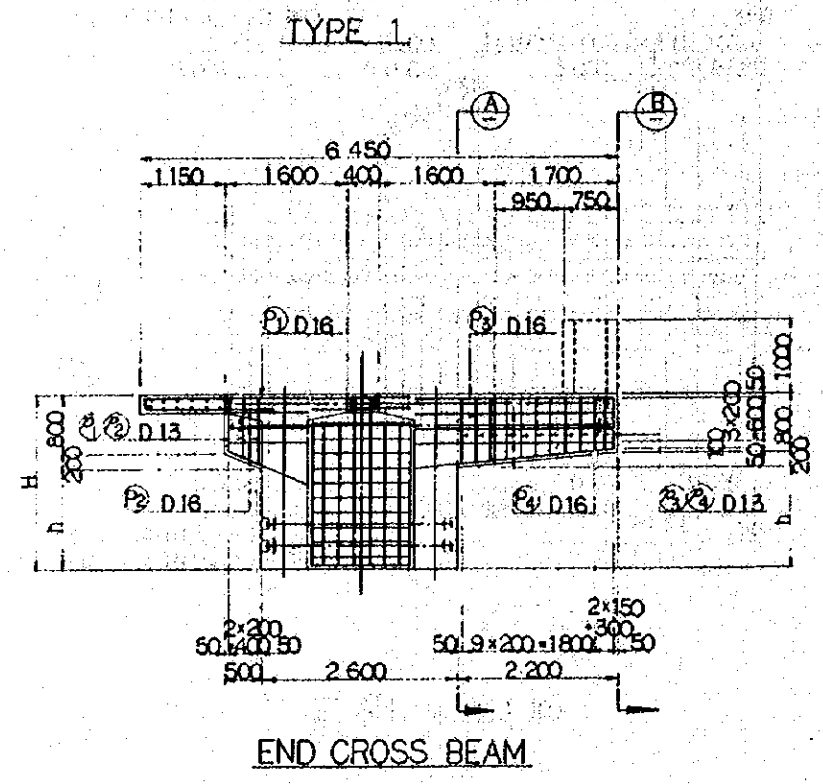
DETAIL OF ANCHORING NOT SCALE



DETAIL OF BEARING PAD

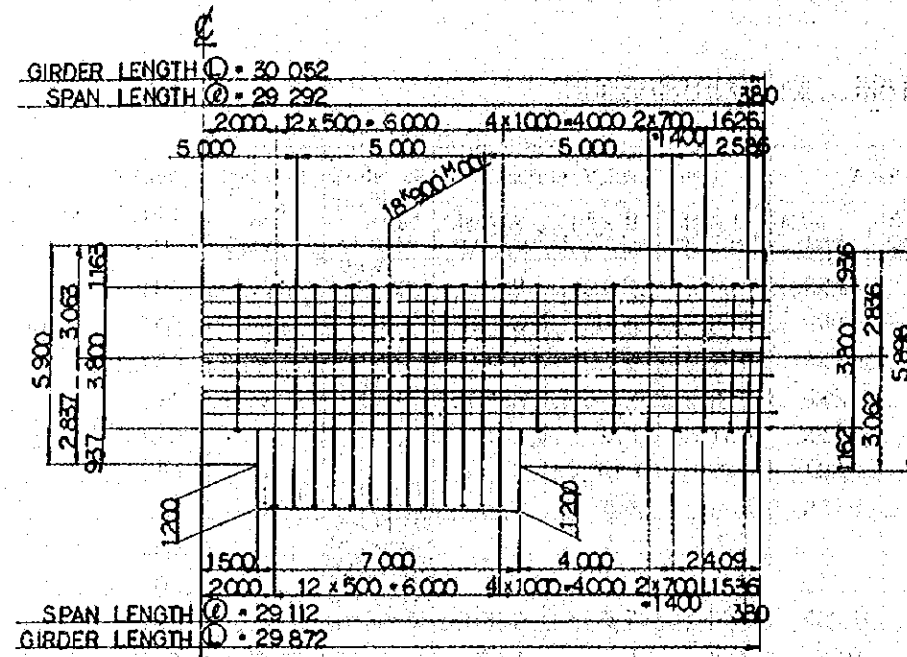
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	APPROVED
B	1 AUG '84	HYAO	KAM	MK	
A	5 FEB '84	HYAO	KAM	MK	
PACKAGE: I CIVIL AND ARCHITECTURAL WORK SCALE: AS NOTED DRAWING NO: CS-068					

NOTE:  
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED

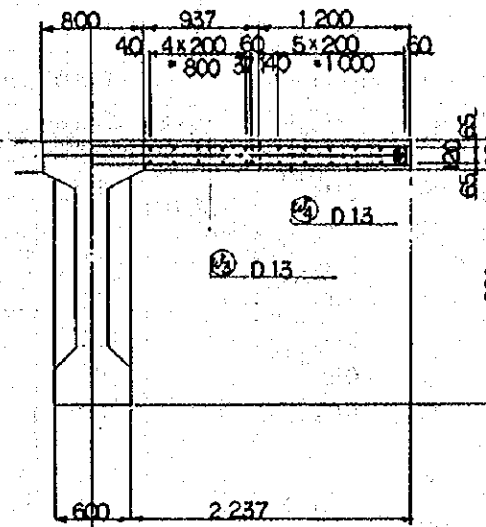


BEAM OF ELECTRIC POLE SCALE 1:50

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1AUG'84	MYAO	KAKM	mk	
A	15FEB'84	MYAO	KAKM	mk	
REVISION	DATE	DESIGNED	CHECKED	REVIEWED	COMMITTED
SUPPORTING BEAM OF CATENARY POLE					
PROGRAM: 1 CIVIL AND ARCHITECTURAL WORK					
SCALE: AS NOTED		DRAWING NO: CS - 069			

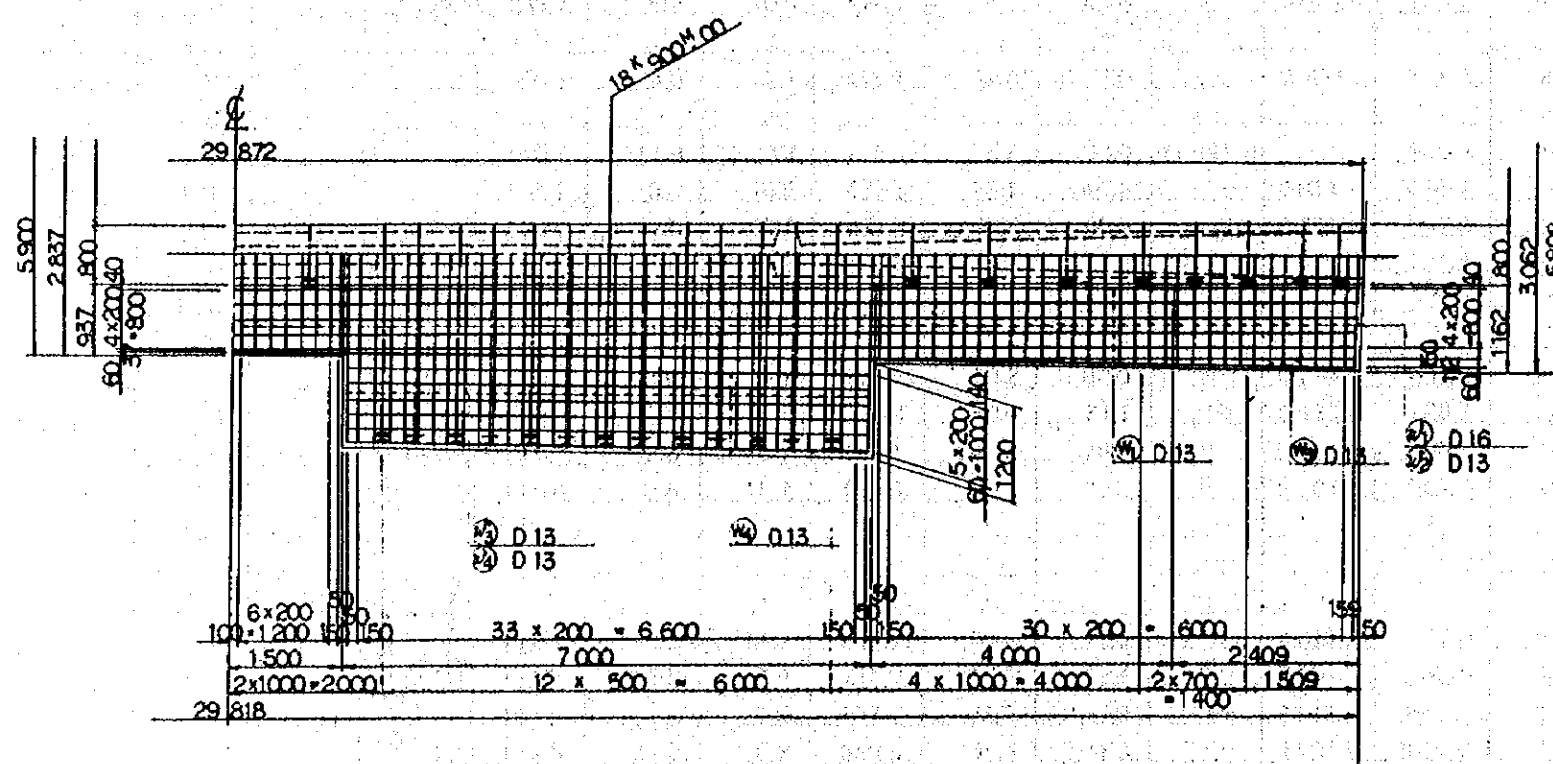


PLAN SCALE 1:100



CROSS SECTION SCALE 1:30

NOTE:  
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED



SLAB OF PLAN SCALE 1:50

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1 AUG 84	MY	AD	KR	KM AK
A	15 FEB 84	MY	AD	KR	KM AK
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED
PC. GIRDER PC 35 SLAB FOR APPARATUS CASE					
PACKAGE: 1 CIVIL AND ARCHITECTURAL WORK					
SCALE: AS NOTED		DRAWING NO: CS - 070			

**SUPERSTRUCTURE MATERIAL LIST NO.1 (P.C.)**

Bridge Number	Girder Number	Girder Length (m)	Girder Depth (m)	Track of Straight or Curve	Girder of Right Angle or Skew	Concrete Volume (m <sup>3</sup> )			Area Form (m <sup>2</sup> )			Prestressing Steel (kg)			Anchoring Devices		Sheath Length (m)			P.C. Grout-Length(m)			
						Class A 400 <sup>#</sup> /cm <sup>2</sup>	Class B 300 <sup>#</sup> /cm <sup>2</sup>	Class C 240 <sup>#</sup> /cm <sup>2</sup>	Main Beam	Slab and Cross Beam	Sidewalk	Strand 12T15 <sup>mm</sup>	Strand 12T12 <sup>mm</sup>	Bar $\phi$ 23 <sup>mm</sup> IS-110 <sup>#</sup> /mm <sup>2</sup>	For Strand	Anchor-Plate, Nut	$\phi$ 75 <sup>mm</sup> and $\phi$ 82 <sup>mm</sup>	$\phi$ 65 <sup>mm</sup> and $\phi$ 70 <sup>mm</sup>	$\phi$ 35 <sup>mm</sup>	Main Beam	Cross Beam		
B 01	P.C. 01	20	1.80	Straight	Skew Left 60°	52.2	5.8	11.5	229.3	26.3	57.2	---	1960.4	692.1	20	104	---	175.5	20.0	203.0	198.0	203.0	
	02	40	2.40	"	"	211.3	15.3	27.3	968.3	46.0	106.4	15 233.9	---	662.5	56	90	1046.0	66.0	---	195.2	1108.4	195.2	
	03	20	1.80	"	"	52.2	5.8	11.5	229.3	26.3	57.2	---	1960.4	692.1	20	104	---	175.5	20.0	203.0	198.0	203.0	
B 02	04	25	1.40	"	Right Angle	106.7	8.7	10.5	426.1	26.1	46.6	---	5814.6	453.7	48	60	---	540.6	48.0	133.8	594.7	133.8	
	05	20	1.80	"	"	49.7	6.3	11.5	227.0	27.0	57.0	---	1960.4	601.7	20	104	---	175.5	20.0	175.3	198.0	175.3	
B 03	06	30	1.80	"	"	127.5	10.3	20.5	582.5	29.7	79.9	---	6936.7	430.9	48	68	---	661.4	48.0	126.1	715.5	126.1	
	07	20	1.80	Transition Curve	90°00'00" to 90°00'09"	49.7	6.3	11.5	227.0	27.0	57.0	---	1960.4	601.7	20	104	---	175.5	20.0	175.3	198.0	175.3	
	08	20	1.80	"	90°00'09" to 90°00'11"	"	"	"	"	"	"	---	"	"	"	"	"	"	"	"	"	"	
	09	20	1.80	"	90°00'11" to 90°00'01"	"	"	"	"	"	"	---	"	"	"	"	"	"	"	"	"	"	
	10	25	1.40	"	90°00'01" to 90°16'30"	"	"	"	"	"	"	---	"	"	"	"	"	"	"	"	"	"	
	11	20	1.80	Curve R=1000 <sup>m</sup>	90°16'30" to 90°20'38"	49.7	6.3	11.5	227.0	27.0	57.0	---	1960.4	601.7	20	104	---	175.5	20.0	175.3	198.0	175.3	
	12	30	2.15	Transition Curve	90°20'38" to 90°40'52"	119.8	9.6	15.7	654.7	40.2	78.9	---	5784.8	557.0	40	88	---	551.6	40.0	163.0	596.7	163.0	
B 04	13	30	2.15	Straight	Right Angle	"	"	"	"	"	"	---	"	"	"	"	"	"	"	"	"		
	14	30	2.15	"	"	"	"	"	"	"	"	---	"	"	"	"	"	"	"	"	"		
	15	35	2.00	"	"	165.7	11.8	23.9	725.4	33.7	93.0	11 441.5	---	456.8	48	72	774.2	48.0	---	133.7	827.7	133.7	
	16	35	2.00	"	"	"	"	"	"	"	"	---	"	"	"	"	"	"	"	"	"		
B 05	17	40	2.40	"	"	210.3	14.5	27.3	987.3	43.0	106.1	15 233.9	---	569.0	56	90	1046.0	66.0	---	166.5	1108.4	166.5	
	18	35	2.00	"	"	165.7	11.8	23.9	725.4	33.7	93.0	11 441.5	---	456.8	48	72	774.2	48.0	---	133.7	827.7	133.7	
	19	40	2.40	"	Skew Left 65°	211.3	15.3	27.3	968.3	46.0	106.4	15 233.9	---	662.5	56	90	1046.0	66.0	---	195.2	1108.4	195.2	
B 06	20	30	1.80	"	Skew Left 85°	127.5	10.3	20.5	582.5	29.7	79.9	---	6936.7	430.9	48	68	---	661.4	48.0	126.1	715.5	126.1	
	21	30	1.80	"	"	"	"	"	"	"	"	---	"	"	"	"	"	"	"	"	"		
B 07	22	25	1.40	"	Right Angle	106.7	8.7	10.5	426.1	26.1	46.6	---	5814.6	453.7	48	60	---	540.6	48.0	133.8	594.7	133.8	
	23	25	1.40	"	"	"	"	"	"	"	"	---	"	"	"	"	"	"	"	"	"		
	24	25	2.35	"	"	66.1	9.0	14.4	333.7	39.0	71.0	---	2429.2	721.3	20	124	---	225.9	20.0	210.2	248.5	210.2	
B 08	25	2.35	"	"	"	"	"	"	"	"	---	"	"	"	"	"	"	"	"	"			
B 09	26	35	2.00	"	"	165.7	11.8	23.9	725.4	33.7	93.0	11 441.5	---	456.8	48	72	774.2	48.0	---	133.7	827.7	133.7	
B 10	27	25	1.40	"	"	106.7	8.7	10.5	426.1	26.1	46.6	---	5814.6	453.7	48	60	---	540.6	48.0	133.8	594.7	133.8	
B 11	28	30	2.15	Curve R=500 <sup>m</sup>	91°43'08"	119.8	9.6	15.7	670.6	40.2	80.0	---	5784.8	557.0	40	88	---	551.6	40.0	163.0	596.7	163.0	
	29	25	2.35	"	91°25'57"	66.3	9.0	14.3	333.7	39.0	71.0	---	2429.2	721.3	20	124	---	225.9	20.0	210.2	248.5	210.2	
B 12	30	25	2.35	"	"	"	"	"	"	"	"	---	"	"	"	"	"	"	"	"	"		
	31	25	2.35	"	"	"	"	"	"	"	"	---	"	"	"	"	"	"	"	"	"		
	32	30	2.15	"	91°43'08"	119.8	9.6	15.7	670.6	40.2	80.0	---	5784.8	557.0	40	88	---	551.6	40.0	163.0	596.7	163.0	
	33	25	2.35	"	Left 69°34'03"	66.2	9.1	14.4	334.3	39.4	71.1	---	2429.2	726.2	20	124	---	225.9	20.0	211.7	248.5	211.7	
	34	30	2.15	"	Left 72°43'08"	119.7	9.6	15.7	654.1	40.4	78.9	---	5784.8	560.2	40	88	---	551.6	40.0	164.0	596.7	164.0	
B 13	35	30	2.15	"	91°43'08"	119.8	9.6	15.7	670.6	40.2	80.0	---	5784.8	557.0	40	88	---	551.6	40.0	163.0	596.7	163.0	
	36	30	2.15	"	"	"	"	"	"	"	"	---	"	"	"	"	"	"	"	"	"		
B 14	37	30	2.15	Transition Curve	91°42'48" to 91°39'45"	"	"	"	"	"	"	---	"	"	"	"	"	"	"	"	"		
	38	30	2.15	"	91°39'45" to 90°53'24"	"	"	"	"	"	"	---	"	"	"	"	"	"	"	"	"		
	39	28	2.15	"	90°53'24" to 70°08'11"	112.1	9.3	14.7	612.1	39.7	73.8	---	5413.2	490.5	"	76	---	511.6	40.0	143.7	556.7	143.7	
	40	33	2.15	"	70°08'11"	131.8	10.5	17.4	715.0	42.8	87.4	---	7601.1	635.8	48	96	---	732.9	48.0	186.5	787.0	186.5	
	41	30	2.15	Straight	Right 70°	121.2	19.0	16.9	657.4	78.2	83.9	---	6932.2	665.2	48	84	---	660.9	48.0	196.0	715.0	196.0	
B 14	42	26	2.35	"	Right 70°	126.5	36.0	6.2	686.3	153.3	31.3	---	4991.6	1816.6	40	130	---	466.2	40.0	545.7	511.3	545.7	
TOTAL	42	1182	-	-	-	4651.4	434.7	670.3	22592.5	1627.6	3061.1	91467.7	160967.7	25189.3	1580	3800	6234.8	360.0	15158.7	1220.0	7387.7	23170.0	7387.7

**REPUBLIC OF INDONESIA**  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT  
 AND INLAND WATERWAYS

**NEW RAILWAY LINE FOR CENGKARENS AIRPORT  
 CONSTRUCTION PROJECT**

JAPAN INTERNATIONAL COOPERATION AGENCY  
 (JICA)

REVISION	DATE	DESIGNED	CHECKED	APPROVED	SUBMITTED
B	1 AUG '84	M.Y. AOKA	U.M.	M.K.	
A	15 FEB '84	M.Y. AOKA	K.M.	M.K.	

**P.C. GIRDER MATERIAL  
 LIST ( SHEET 1 OF 2 )**

DRAWING NO: **I CIVIL AND ARCHITECTURAL WORK**  
 SCALE: **CS - 071**

SUPERSTRUCTURE MATERIAL LIST NO 2 (P.C.)

Bridge Number	Girder Number	Girder Length (m)	Girder Depth (m)	Track of Straight or Curve	Girder of Right Angle or Skew	Reinforcing Bar SD 30 (kg)					Bridge Railing and Duct		Mortar With Slope-Protective Mortar (m <sup>3</sup> )	Drainage (each)	Elastomeric Bearing Pads (each)			Anchoring Bar (each)			
						D19	D16	D13	D10	Total	Volume (m <sup>3</sup> )	Form (m <sup>2</sup> )			Fixed Support	Movable Support	A x B x t (mm) (3 pieces)	Fixed Side	Movable Side	Length (mm)	Weight (kg)
B 01	PC01	20	1.80	Straight	Skew Left 60°	—	1314.6	4567.0	140.9	6022.5	3.9	36.4	6.7	4	2	2	350x500x12	φ75 <sup>mm</sup> -2	φ70 <sup>mm</sup> -2	L=970, W=67.3	
	02	40	2.40			2869.9	1423.6	12560.4	719.1	17573.0	7.8	72.3	13.4	8	4	4	400x600x16	φ95 <sup>mm</sup> -3	φ90 <sup>mm</sup> -3	L=970, W=55.0	
	03	20	1.80			—	1314.6	4567.0	140.9	6022.5	3.9	36.4	6.7	4	2	2	350x500x12	φ75 <sup>mm</sup> -2	φ70 <sup>mm</sup> -2	L=970, W=67.3	
B 02	04	25	1.40		Right Angle	—	1913.2	6230.9	442.1	8586.2	4.9	45.3	8.4	4	4	4	200x600x14	φ75 <sup>mm</sup> -3	φ70 <sup>mm</sup> -3	L=970, W=82.4	
	05	20	1.80			—	1314.6	4567.0	140.9	6022.5	3.9	36.3	6.7	4	2	2	350x500x12	φ75 <sup>mm</sup> -2	φ70 <sup>mm</sup> -2	L=970, W=67.3	
B 03	06	30	1.80			—	2478.1	8165.8	525.5	11169.4	5.8	54.3	10.1	8	4	4	250x600x14	φ85 <sup>mm</sup> -3	φ75 <sup>mm</sup> -3	L=970, W=101.0	
	07	20	1.80	Transition Curve	90°00'00" to 90°00'09"	—	1314.6	4567.0	140.9	6022.5	3.9	36.3	6.7	4	2	2	350x500x12	φ75 <sup>mm</sup> -2	φ70 <sup>mm</sup> -2	L=970, W=67.3	
	08	20	1.80		90°00'09" to 90°09'01"	—	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
	09	20	1.80		90°09'01" to 90°16'39"	—	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
	10	25	1.40		90°16'39" to 90°36'08"	—	1913.2	6230.9	442.1	8586.2	4.9	45.3	8.4	4	4	4	200x600x14	φ75 <sup>mm</sup> -3	φ70 <sup>mm</sup> -3	L=970, W=82.4	
B 04	11	20	1.80	Curve R=1000m	90°34'23" to 90°47'42"	—	1314.6	4567.0	140.9	6022.5	3.9	36.3	6.7	4	2	2	350x500x12	φ75 <sup>mm</sup> -2	φ70 <sup>mm</sup> -2	L=970, W=67.3	
	12	30	2.15	Transition Curve	90°47'42" to 90°40'18"	—	2484.7	8425.1	465.3	11375.1	5.8	54.3	10.1	8	4	4	300x500x14	φ80 <sup>mm</sup> -3	φ75 <sup>mm</sup> -3	L=1030, W=122.1	
B 05	13	30	2.15	Straight	Right Angle	—	.	.	.	.	.	.	.	.	.	.	.	.	.		
	14	30	2.15			—	.	.	.	.	.	.	.	.	.	.	.	.	.		
	15	3.5	2.00			2509.9	1158.6	9872.1	609.2	14149.8	6.8	63.3	11.8	8	4	4	300x600x16	φ90 <sup>mm</sup> -3	φ80 <sup>mm</sup> -3	L=1150, W=172.2	
	16	3.5	2.00			—	.	.	.	.	.	.	.	.	.	.	.	.	.		
	17	40	2.40			2869.9	1423.6	12560.4	719.1	17573.0	7.8	72.3	13.4	8	4	4	400x600x16	φ95 <sup>mm</sup> -3	φ90 <sup>mm</sup> -3	L=150, W=172.2	
B 06	18	35	2.00			2509.9	1158.6	9872.1	609.2	14149.8	6.8	63.3	11.8	8	4	4	300x600x16	φ85 <sup>mm</sup> -3	φ75 <sup>mm</sup> -3	L=150, W=172.2	
	19	40	2.40		Skew Left 65°	2869.9	1423.6	12560.4	719.1	17573.0	7.8	72.3	13.4	8	4	4	400x600x16	φ95 <sup>mm</sup> -3	φ90 <sup>mm</sup> -3	L=150, W=172.2	
B 07	20	30	1.80		Skew Left 85°	—	2478.1	8165.8	525.5	11169.4	5.8	54.3	10.1	8	4	4	250x600x14	φ85 <sup>mm</sup> -3	φ75 <sup>mm</sup> -3	L=1090, W=145.5	
	21	30	1.80			—	.	.	.	.	.	.	.	.	.	.	.	.	.		
B 08	22	25	1.40		Right Angle	—	1913.2	6230.9	442.1	8586.2	4.9	45.3	8.4	4	4	4	200x600x14	φ75 <sup>mm</sup> -3	φ70 <sup>mm</sup> -3	L=970, W=82.4	
	23	25	1.40			—	.	.	.	.	.	.	.	.	.	.	.	.	.		
	24	25	2.35			—	1489.3	5549.3	179.3	7217.9	4.9	45.3	8.4	4	2	2	450x500x14	φ85 <sup>mm</sup> -2	φ75 <sup>mm</sup> -2	L=1090, W=97.0	
B 09	25	25	2.35			—	.	.	.	.	.	.	.	.	.	.	.	.	.		
	26	3.5	2.00			2509.9	1158.6	9872.1	609.2	14149.8	6.8	63.3	11.8	8	4	4	300x600x16	φ90 <sup>mm</sup> -3	φ80 <sup>mm</sup> -3	L=1030, W=122.1	
B 10	27	25	1.40			—	1913.2	6230.9	442.1	8586.2	4.9	45.3	8.4	4	4	4	200x600x14	φ75 <sup>mm</sup> -3	φ70 <sup>mm</sup> -3	L=970, W=82.4	
B 11	28	30	2.15	Curve R=500m	91°43'08"	—	2484.7	8425.1	465.3	11375.1	5.8	54.3	10.1	8	4	4	300x500x14	φ80 <sup>mm</sup> -3	φ75 <sup>mm</sup> -3	L=1030, W=122.1	
	29	25	2.35		91°25'57"	—	1489.3	5549.3	179.3	7217.9	4.9	45.3	8.4	4	2	2	450x500x14	φ85 <sup>mm</sup> -2	φ75 <sup>mm</sup> -2	L=970, W=67.3	
B 12	30	25	2.35			—	.	.	.	.	.	.	.	.	.	.	.	.	.		
	31	25	2.35			—	.	.	.	.	.	.	.	.	.	.	.	.	.		
	32	30	2.15		91°43'08"	—	2484.7	8425.1	465.3	11375.1	5.8	54.3	10.1	8	4	4	300x500x14	φ80 <sup>mm</sup> -3	φ75 <sup>mm</sup> -3	L=1030, W=122.1	
	33	25	2.35		Left 69°34'05"	—	1489.3	5549.3	179.3	7217.9	4.8	44.6	8.4	4	2	2	450x500x14	φ85 <sup>mm</sup> -2	φ75 <sup>mm</sup> -2	L=1090, W=97.0	
	34	30	2.15		Left 72°43'06"	—	2484.7	8425.1	465.3	11375.1	5.9	54.8	10.1	8	4	4	300x500x14	φ80 <sup>mm</sup> -3	φ75 <sup>mm</sup> -3	L=1030, W=122.1	
B 13	35	30	2.15		91°43'08"	—	.	.	.	.	.	.	.	.	.	.	.	.	.		
	36	30	2.15			—	.	.	.	.	.	.	.	.	.	.	.	.	.		
	37	30	2.15			—	.	.	.	.	.	.	.	.	.	.	.	.			
B 14	38	30	2.15	Transition Curve	91°42'48" to 91°39'45"	—	.	.	.	.	.	.	.	.	.	.	.	.	.		
	39	28	2.15		91°08'38" to 60°53'44"	—	2351.9	7956.3	438.7	10746.9	5.6	51.7	9.4	.	.	.	.	.	.		
	40	33	2.15		60°53'44" to 70°08'11"	—	2429.2	1122.1	9230.2	511.9	13293.4	6.4	69.8	11.1	8	4	4	450x550x14	φ80 <sup>mm</sup> -3	φ75 <sup>mm</sup> -3	L=1030, W=122.1
	41	30	2.15	Straight	Right 70°	—	2240.2	1122.1	8942.2	511.9	12816.4	6.0	55.4	12.3	8	4	4	450x550x14	φ80 <sup>mm</sup> -3	φ75 <sup>mm</sup> -3	L=970, W=67.3
	42	26	2.35		Right 70°	—	1728.0	11169.0	446.2	13343.2	6.9	61.9	14.3	6	4	4	450x550x14	φ80 <sup>mm</sup> -3	φ75 <sup>mm</sup> -3	L=1030, W=122.1	
TOTAL	42	1182	—	—	—	23318.7	75214.6	319635.0	17004.9	435173.2	232.1	2111.9	405.1	262	142	142		113	113	8921.0 <sup>kg</sup>	

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

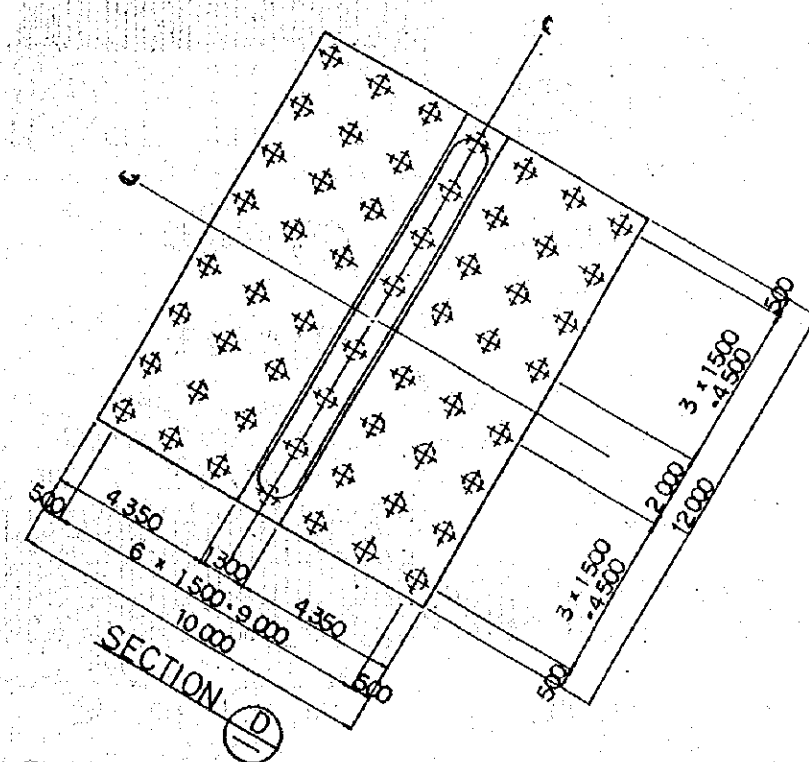
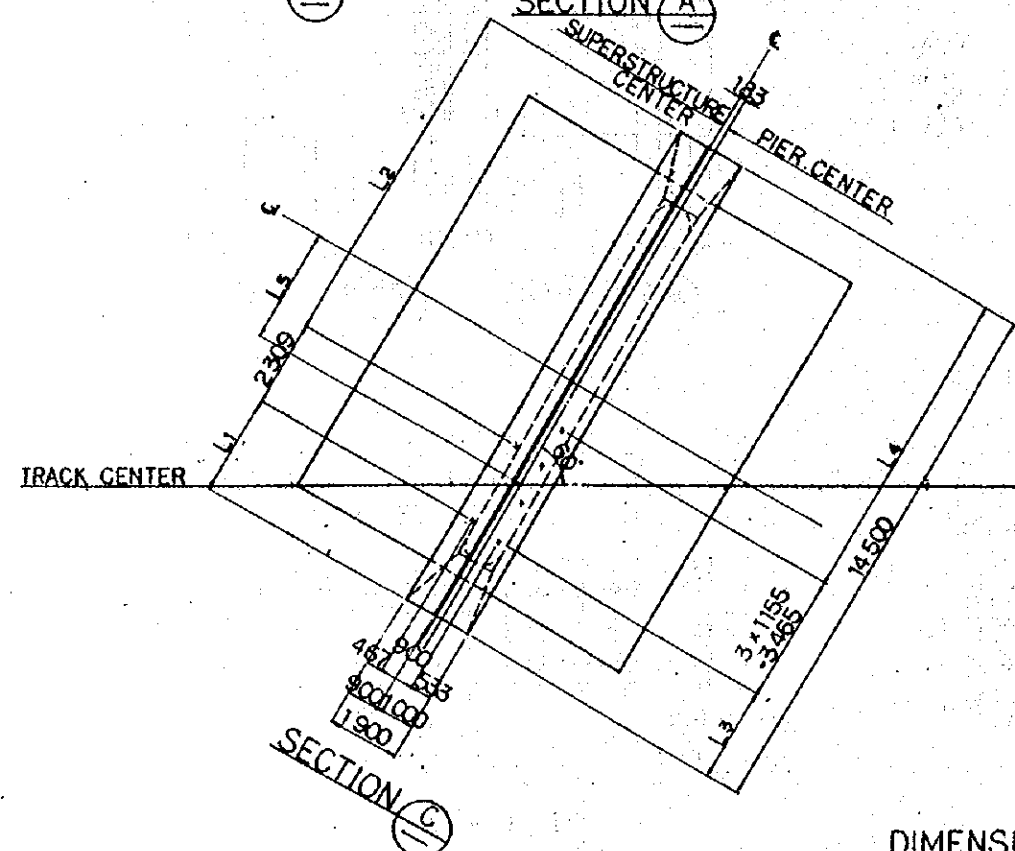
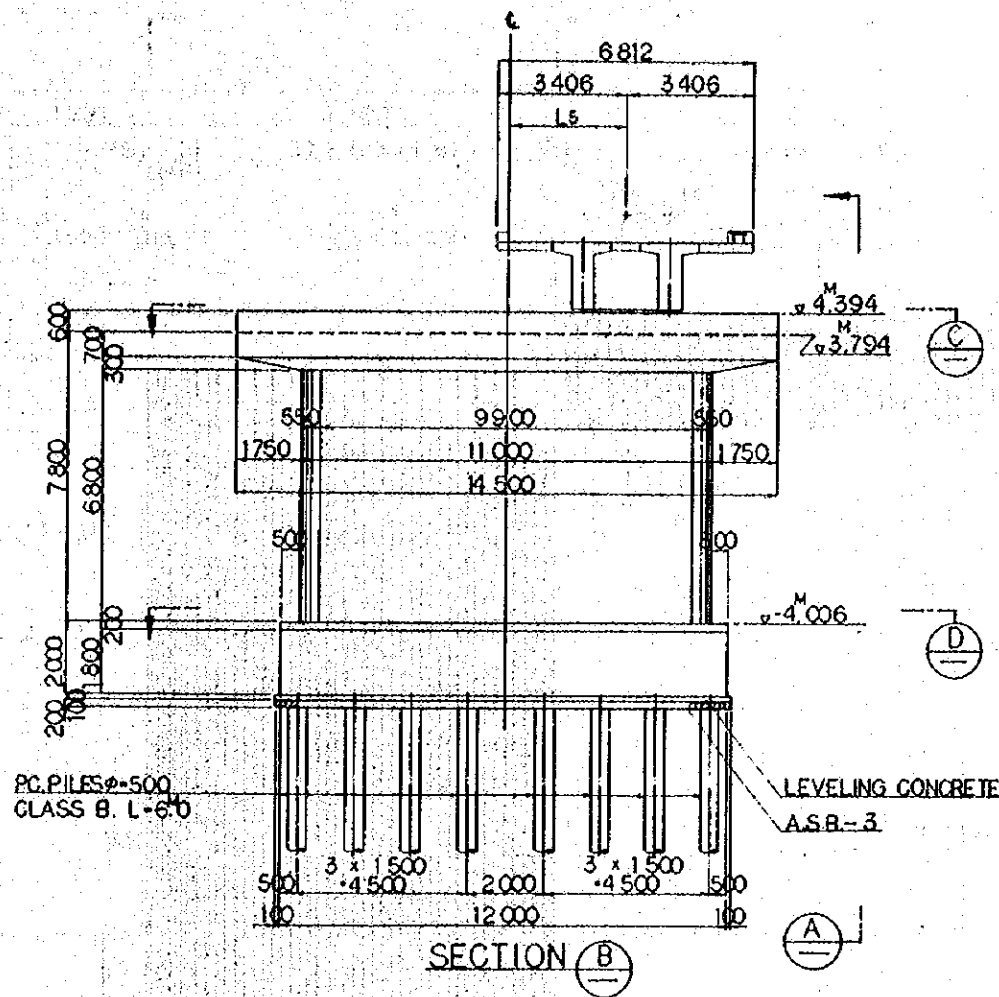
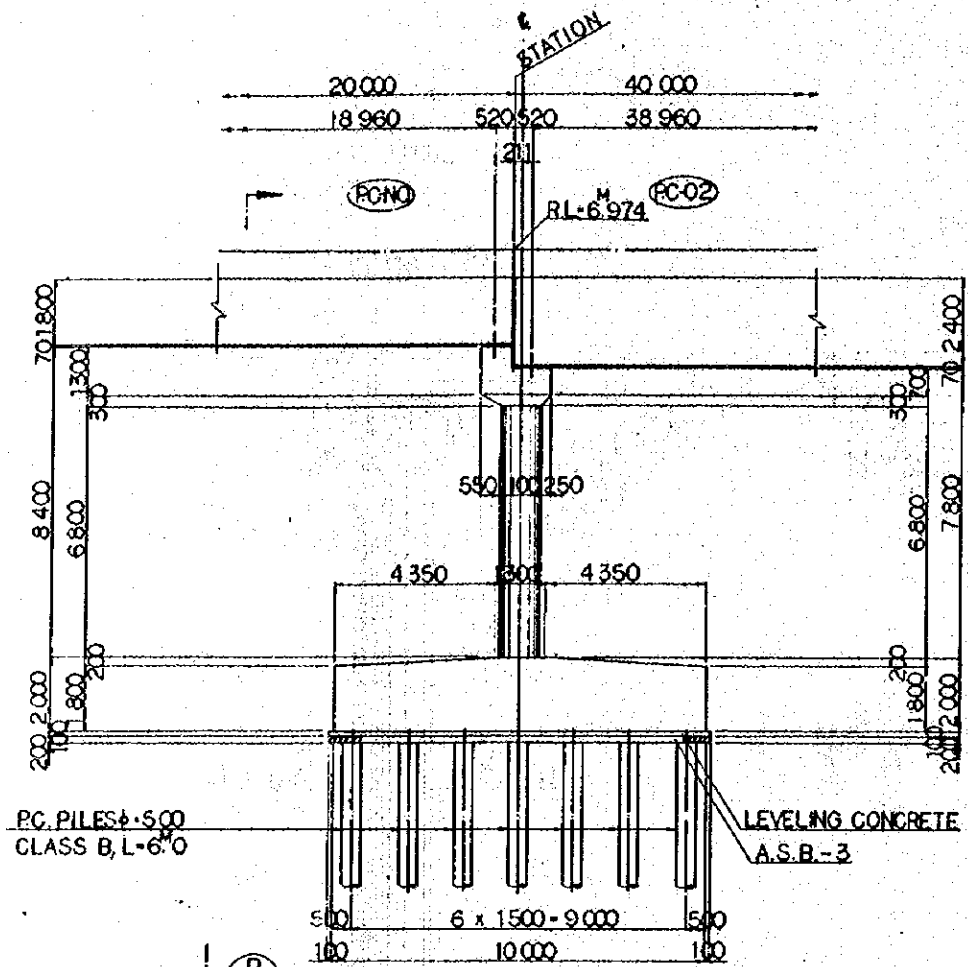
B	1 AUG 84	MYAO	KR	KM	JK
A	15 FEB 84	MYAO	KR	KM	JK

REVISIONS: DATE, CHECKED, DRAWN, QUANTITY, REVISION, SUBMITTED

P.C. GIRDER MATERIAL LIST ( SHEET 2 OF 2 )

PACKAGE: I CIVIL AND ARCHITECTURAL WORK

SCALE: DRAWING NO. CS - 072



DIMENSION SCHEDULE

PIER NO	STATION	PC-NO	L1	L2	L3	L4	L5
P - 01	10 999.00	01	2554	9637	2496	8539	3281
P - 02	11 039.00	03	3180	8905	2188	8847	3069

GENERAL VIEW OF P-01 & 02

- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR BAR ARRANGEMENT: CS-074, CS-075, CS-076.

DESIGN CRITERIA

DESIGN LOAD	TRAIN LOAD	EQUIVALENT TO KS-14
	SEISMIC EFFECT	IN HORIZONTAL DIRECTION $K_h=0.1$
ALLOWABLE STRESS	REINFORCING BAR	ALLOWABLE TENSILE STRESS 1800 kg/cm <sup>2</sup>
	CONCRETE	ALLOWABLE COMPRESSIVE STRESS 80 kg/cm <sup>2</sup>
MATERIAL	TYPE OF REINFORCING BAR	SD-30
	CONCRETE OF DESIGN CRITERIA STRENGTH	$\sigma_{ck}=110 \text{ kg/cm}^2$
	MAX SIZE OF COARSE AGGREGATE	25 mm

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

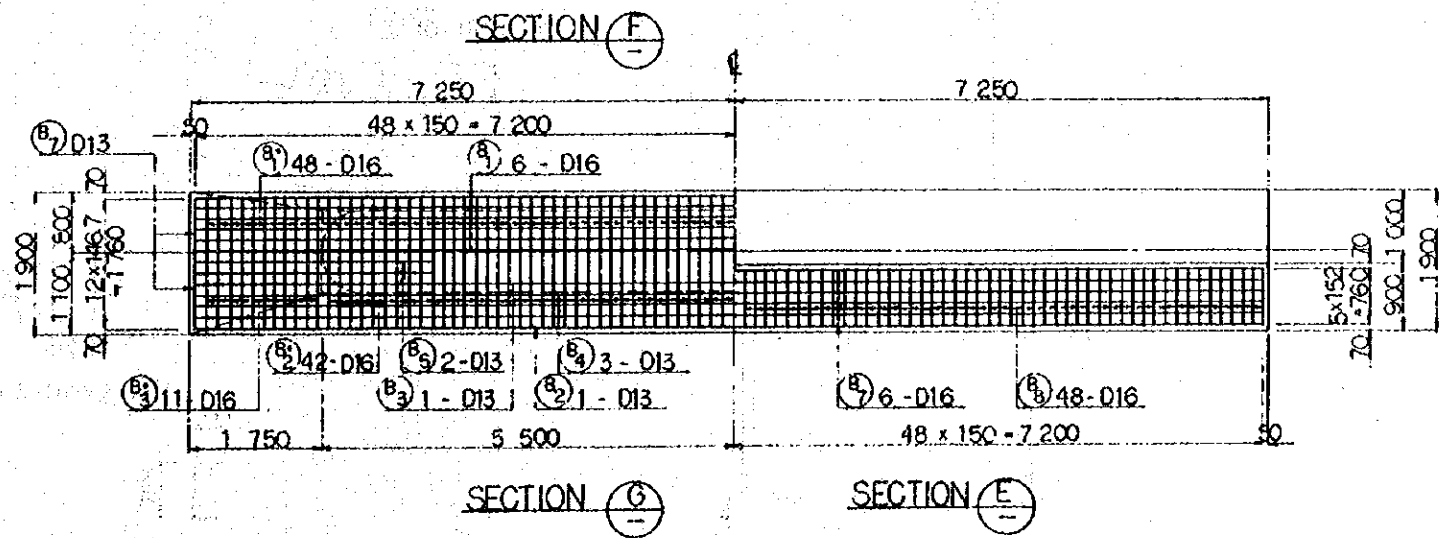
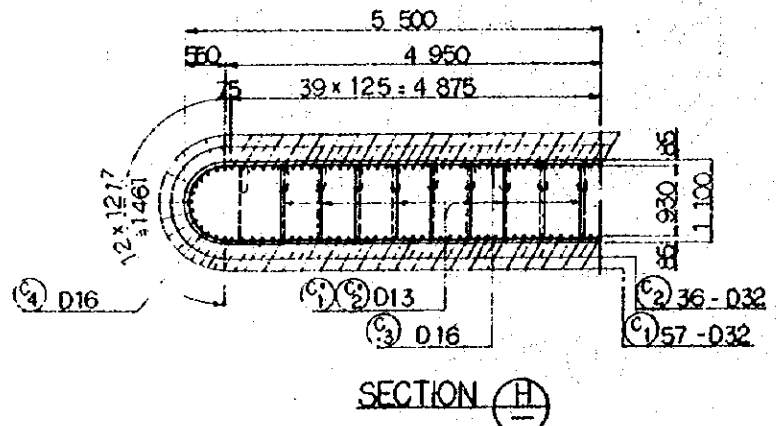
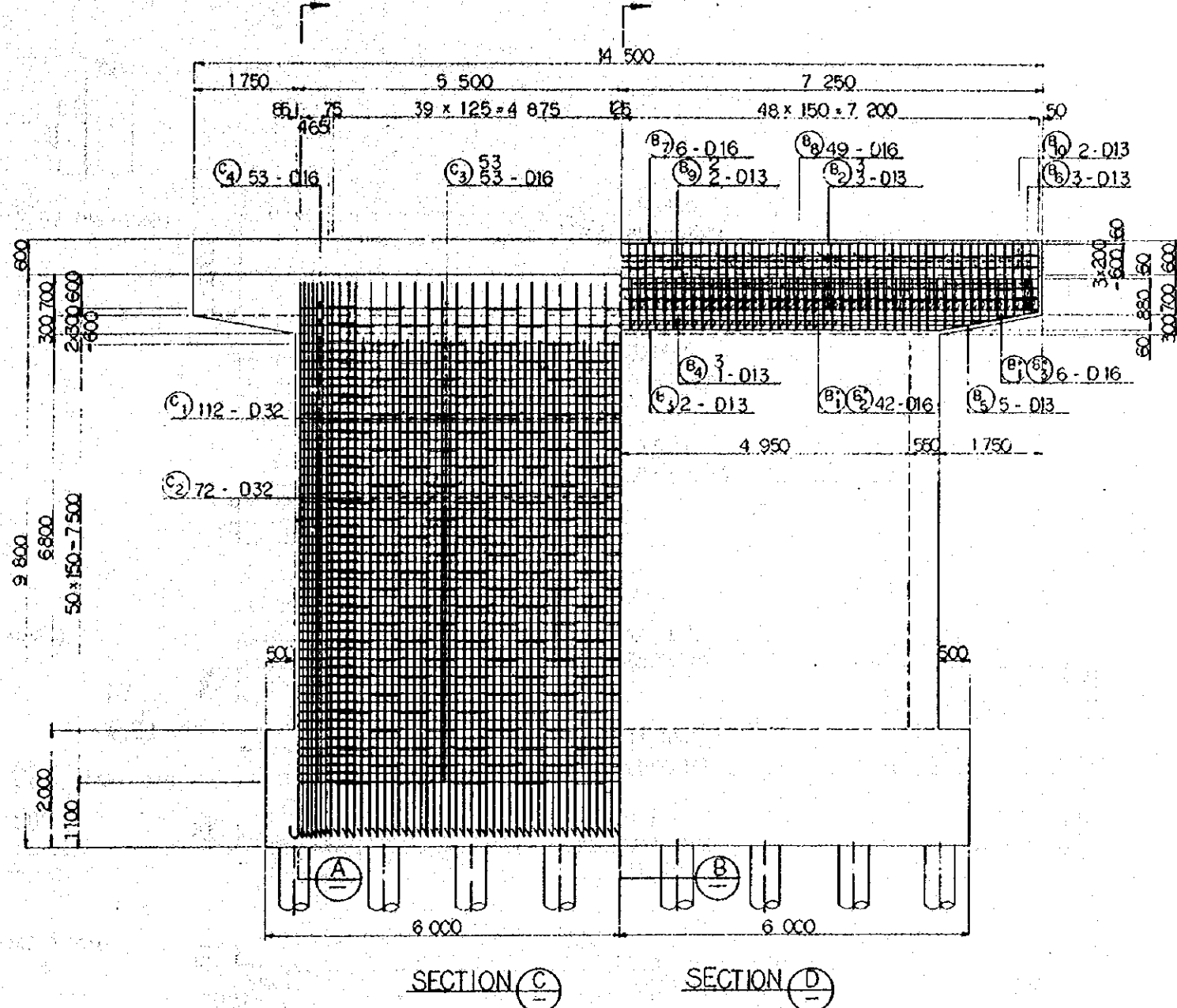
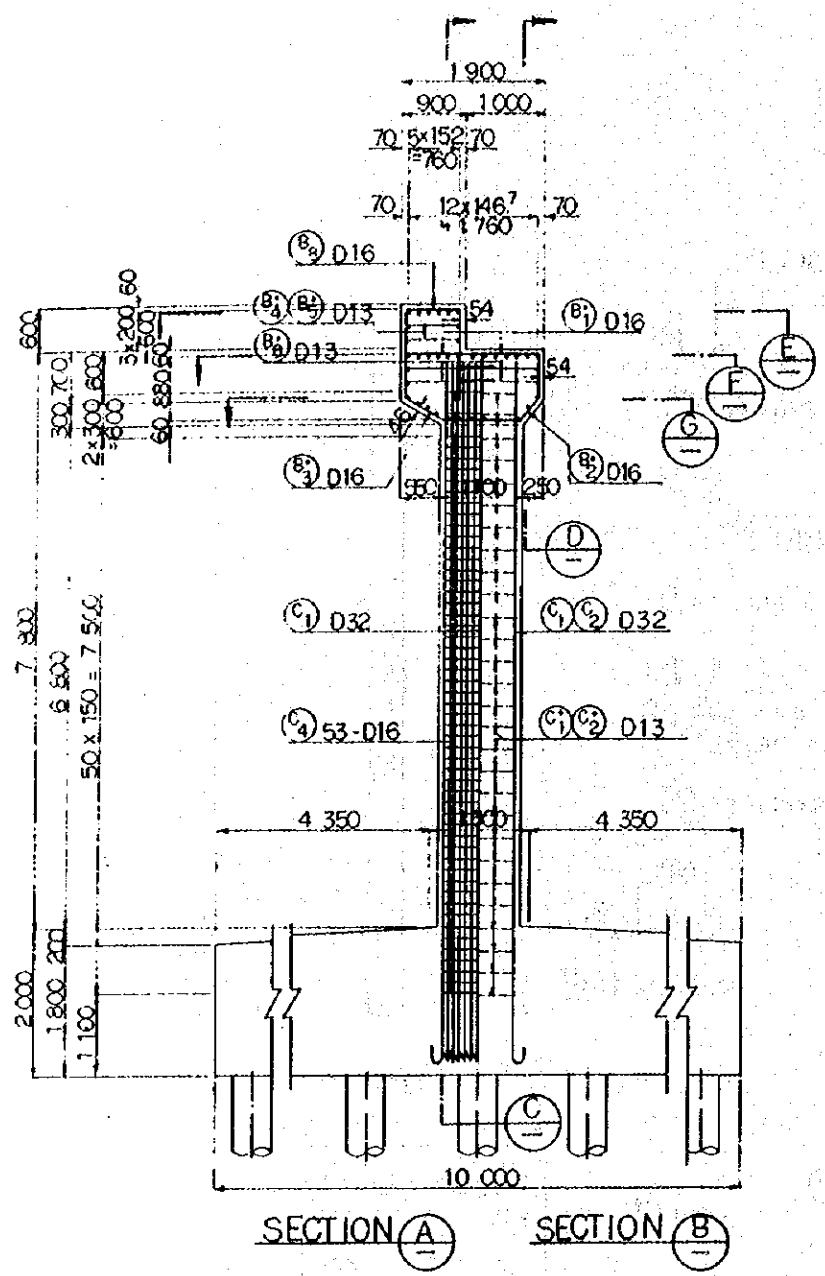
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1 AUG '84	S.S	m.y	K.A	K.M	m.k
A	15 FEB '84	S.S	m.y	K.A	K.M	m.k

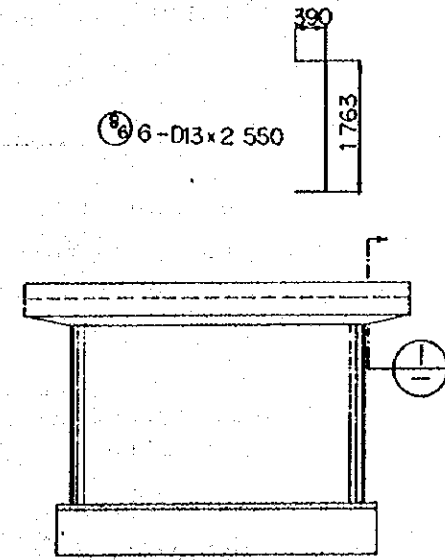
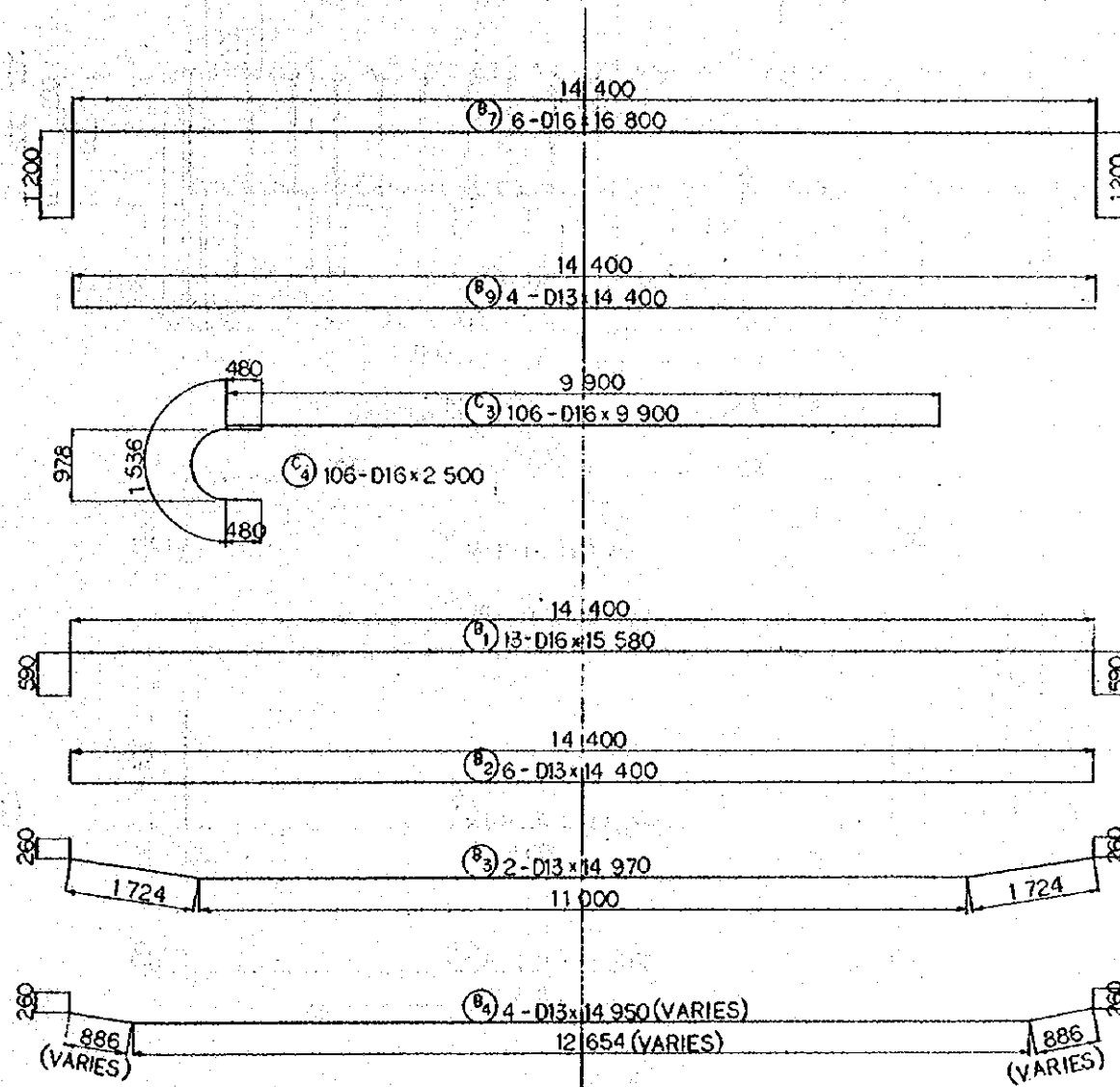
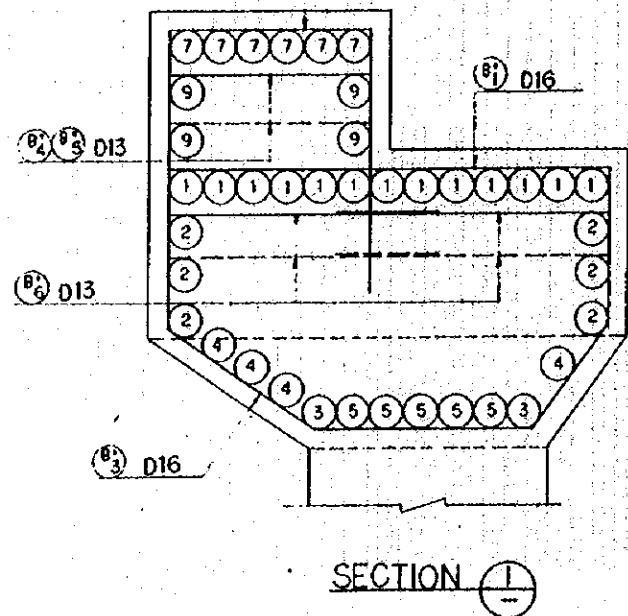
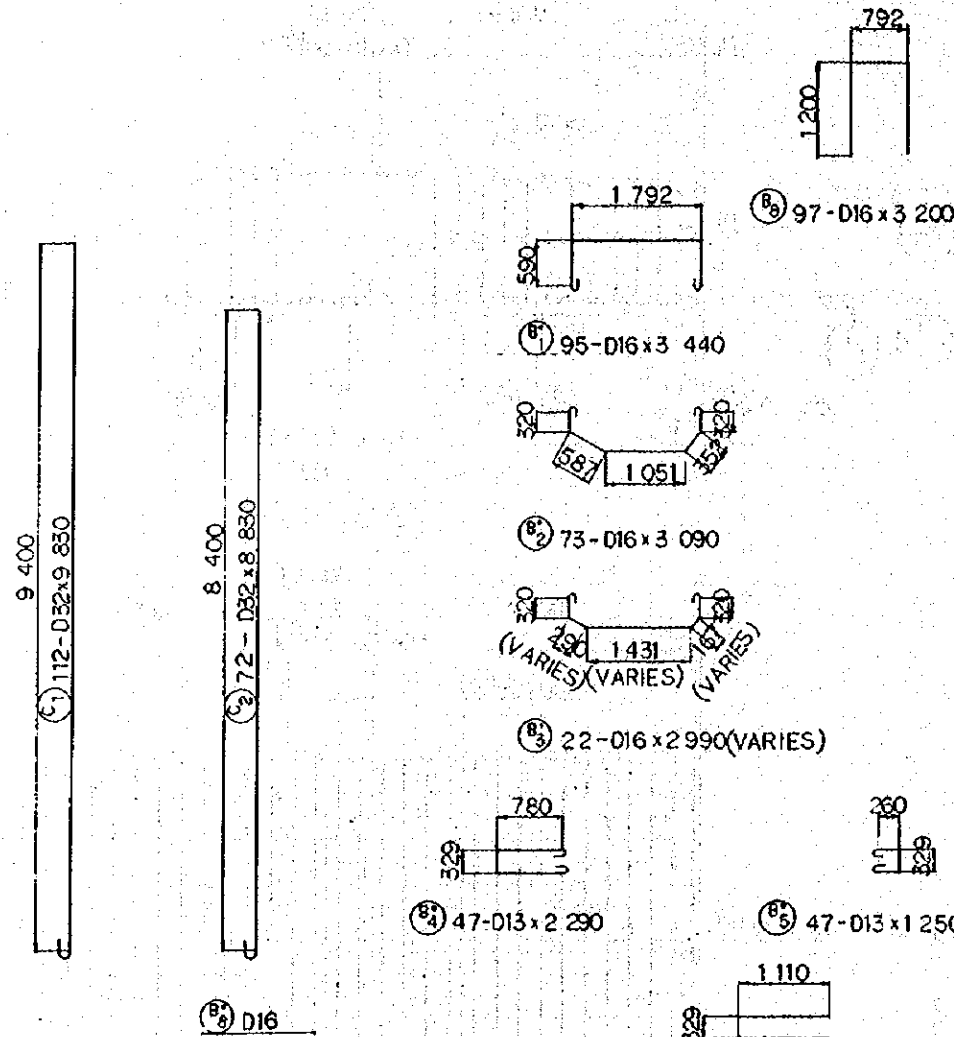
PIER P01, P02  
 GENERAL VIEW

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: 1:100  
 DRAWING NO: CS-073



- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR GENERAL VIEW: CS-073

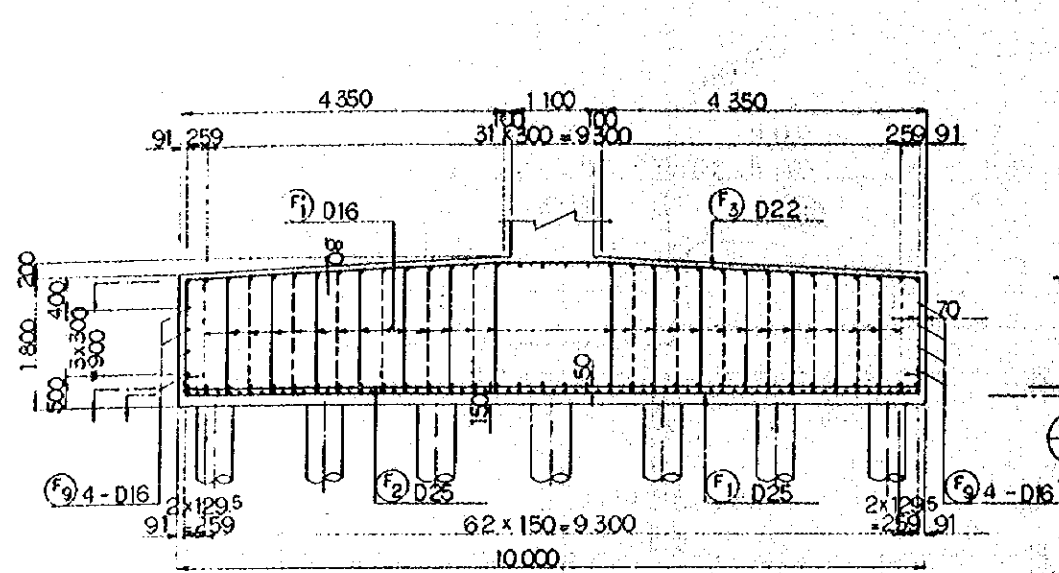
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1 AUG. '84	SS	m.y.	K.A.	K.M.
A	15 FEB. '84	SS	m.y.	K.A.	K.M.
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	APPROVED
PIER POI BAR ARRANGEMENT (SHEET 1 OF 3)					
PACKAGE: 1 CIVIL AND ARCHITECTURAL WORK					
SCALE: 1:50		DRAWING NO: CS-074			



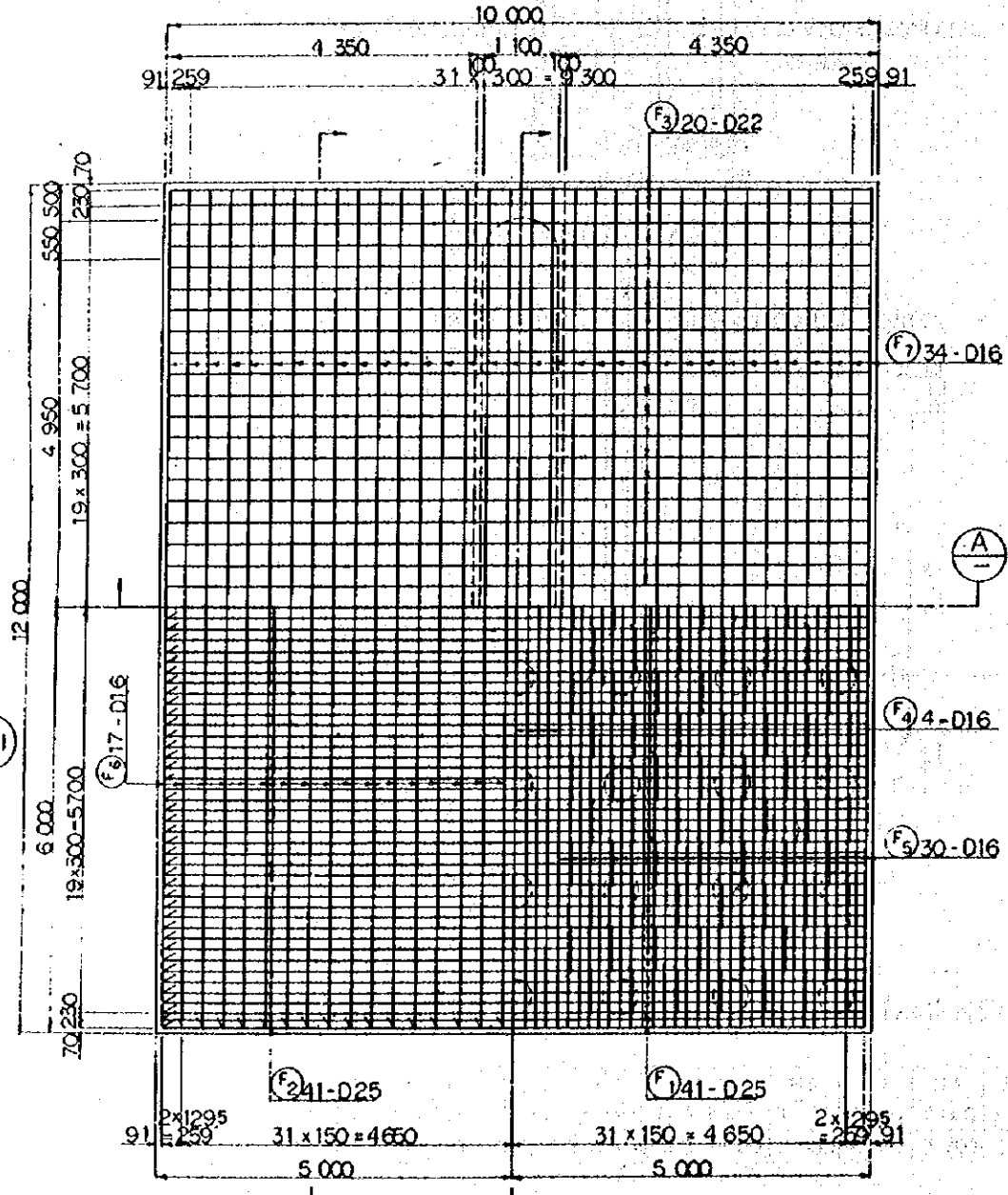
- NOTES:**
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR GENERAL VIEW: CS073

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG. 84	S.S.	m.y.	K.R.	K.M.	m.k.
A	13 FEB. 84	S.S.	m.y.	K.A.	K.M.	m.k.
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
PIER P01 BAR ARRANGEMENT (SHEET 2 OF 3)						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE	DRAWING NO.					
1:50	CS-075					

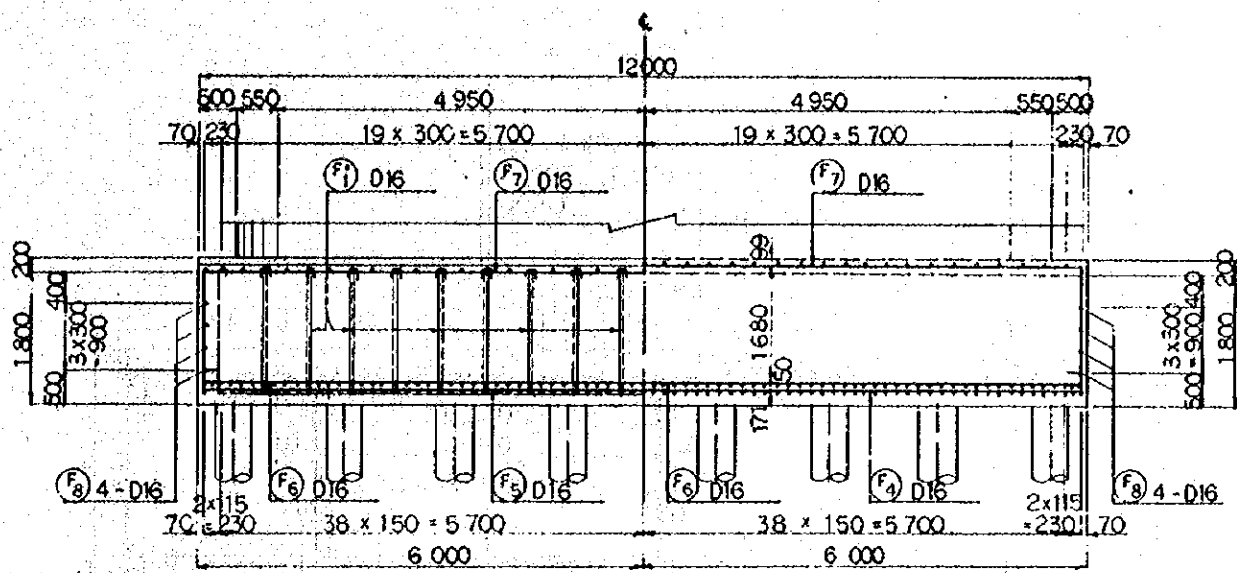




SECTION A

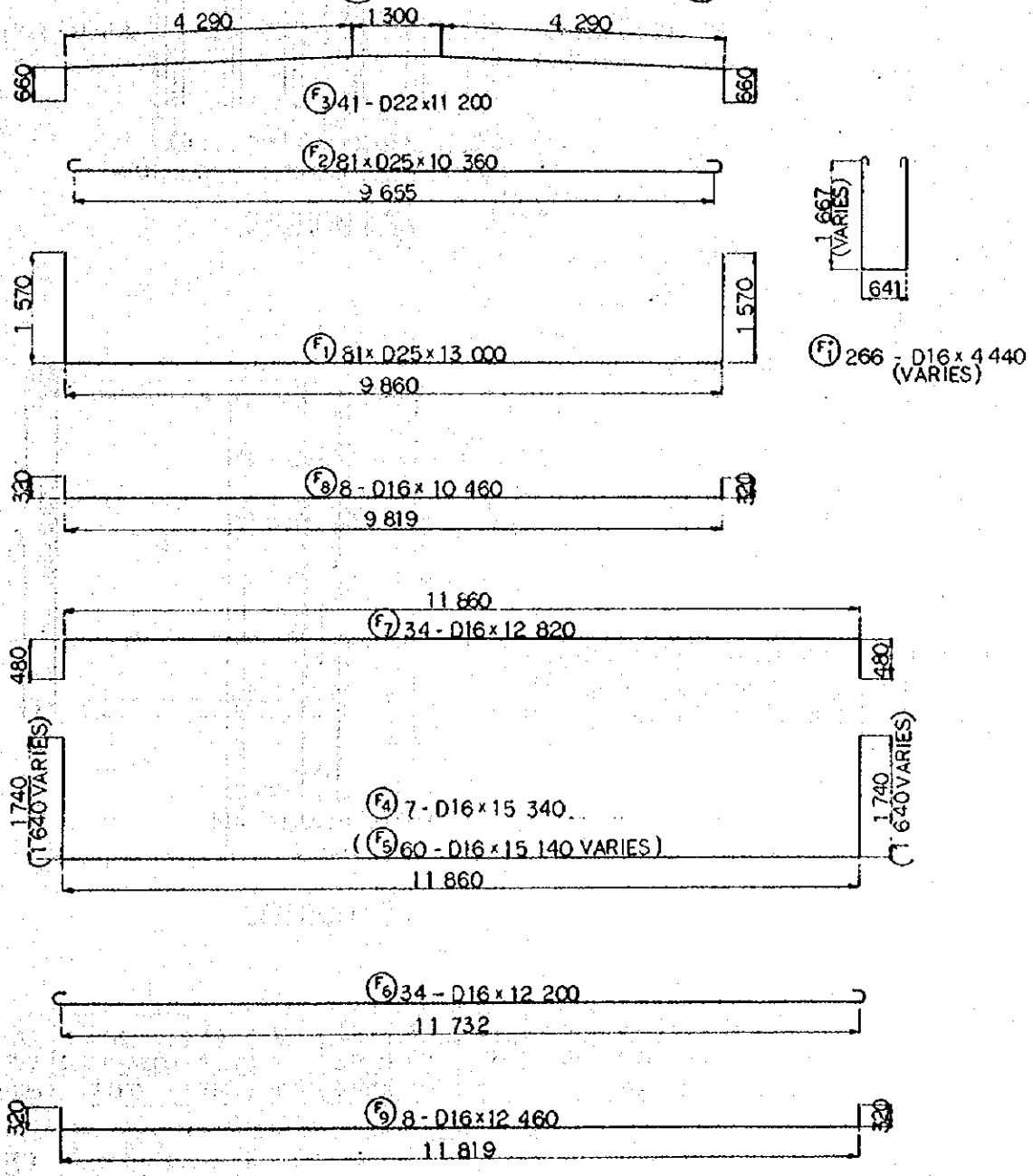


SECTION E



SECTION B

SECTION C

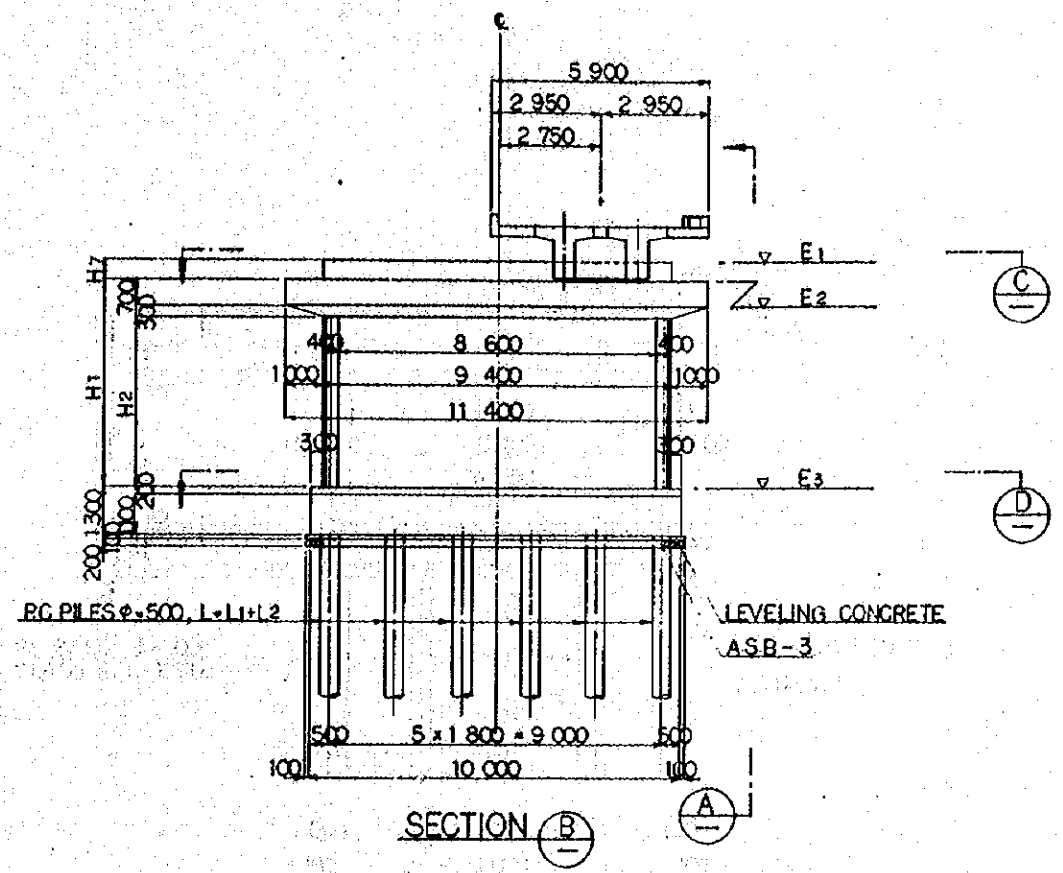
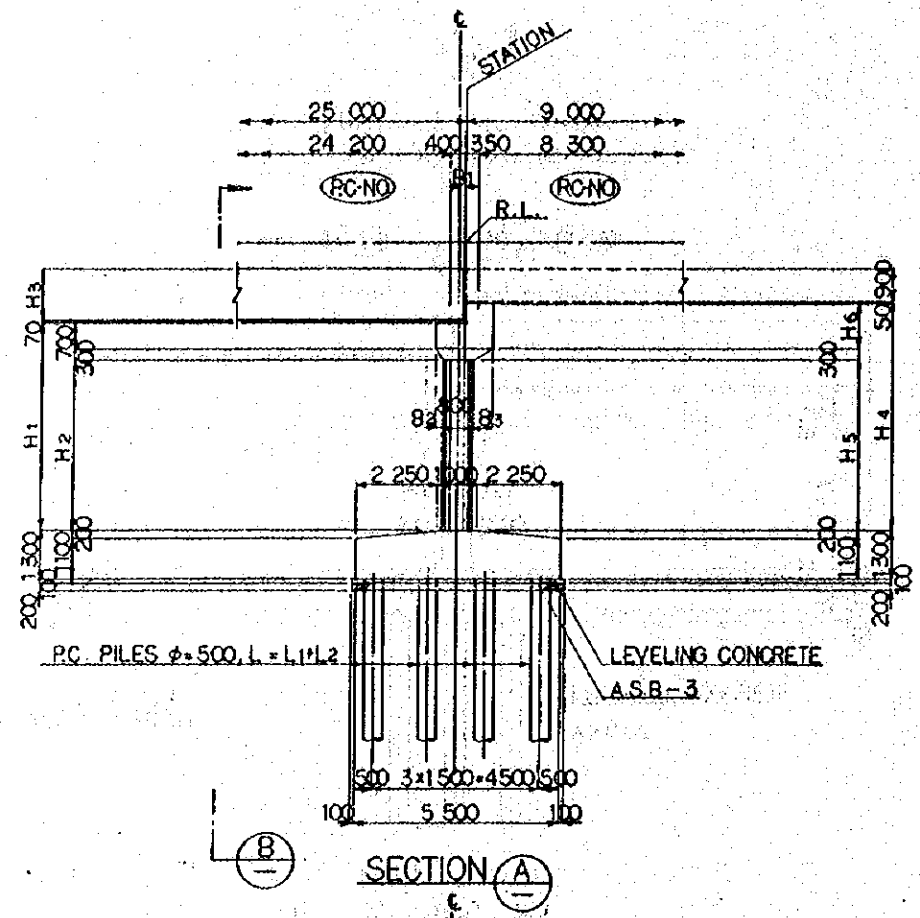


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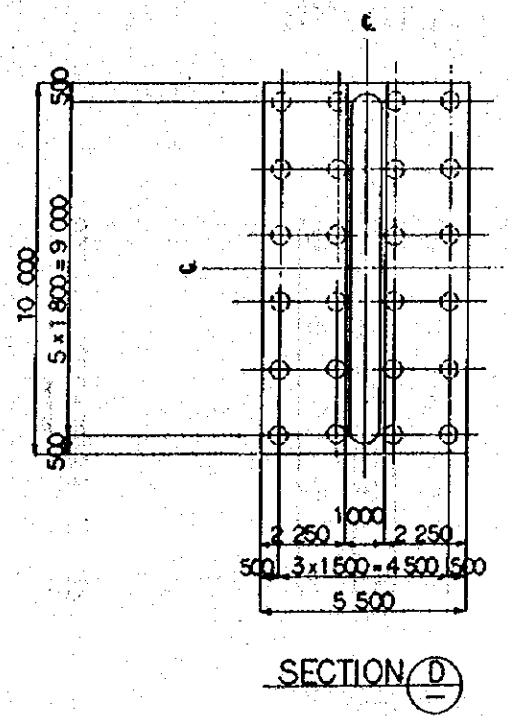
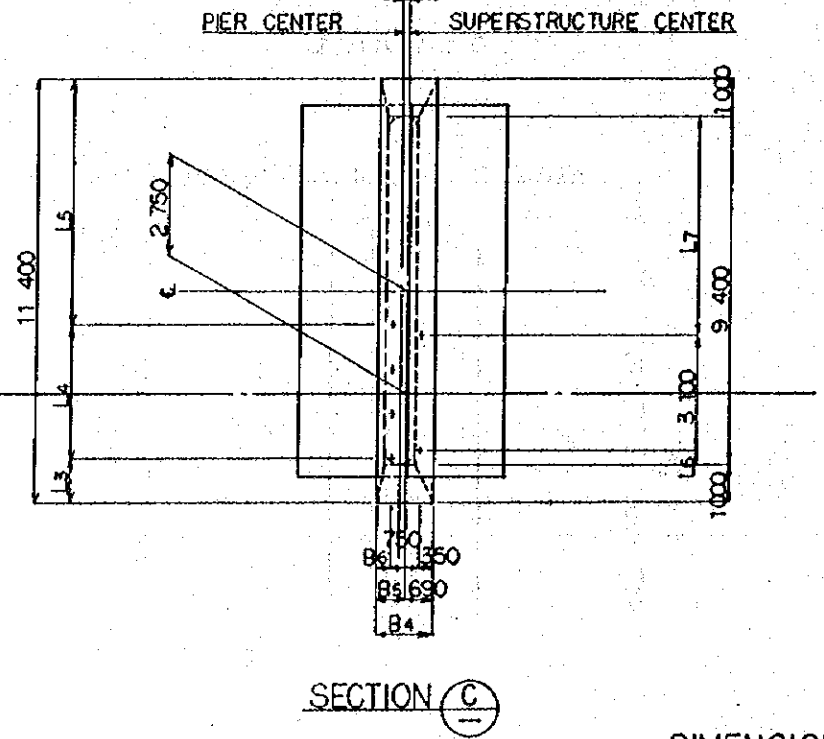
SECTION F

- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR GENERAL VIEW: CS073

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG. 84	SS	m.y	K.A	K.M	m.l
A	15 FEB. 84	SS	m.y	K.A	K.M	m.l
REVISION	DATE	DESIGNED	CHECKED	APPROVED	REVIEWED	SUBMITTED
PIER POI BAR ARRANGEMENT (SHEET 3 OF 3)						
PACKAGE: 1 CIVIL AND ARCHITECTURAL WORK						
SCALE: 1:50		DRAWING NO: CS-076				



- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR BAR ARRANGEMENT: CS-107, CS-108, CS-109.
  3. TYPES OF PC-PILE
    - PC-PILE CLASS B
    - PC-PILE CLASS A



PIER NO.	STATION	ALIGNMENT	PC-NO.	RC-NO.
P-04	13+680.00	STRAIGHT	—	04 03
P-37	18+720.00	CURVED R=500	29	32

DIMENSION SCHEDULE

PIER NO.	R.L.	E1	E2	E3	H1	H2	H3	H4	H5	H6	H7	L1	L2	L3	L4	L5	L6	L7	B1	B2	B3	B4	B5	B6
P-04	8.474	6.314	6.294	6.694	5.600	4.600	1.400	6.120	4.600	1.220	520	0	0	1.150	3x1200+3600	6650	400	5900	200	200	500	1500	810	400
P-37	10.554	8.894	7.424	7.724	6.700	5.700	2.350	8.170	5.700	2.170	1.470	80	70	2.028	2.000	7372	410	5.890	150	350	450	1.600	910	500

GENERAL VIEW OF P-04 & 37

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

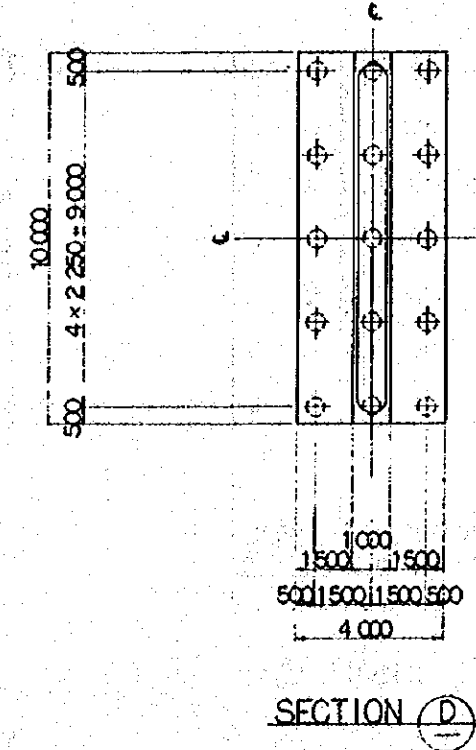
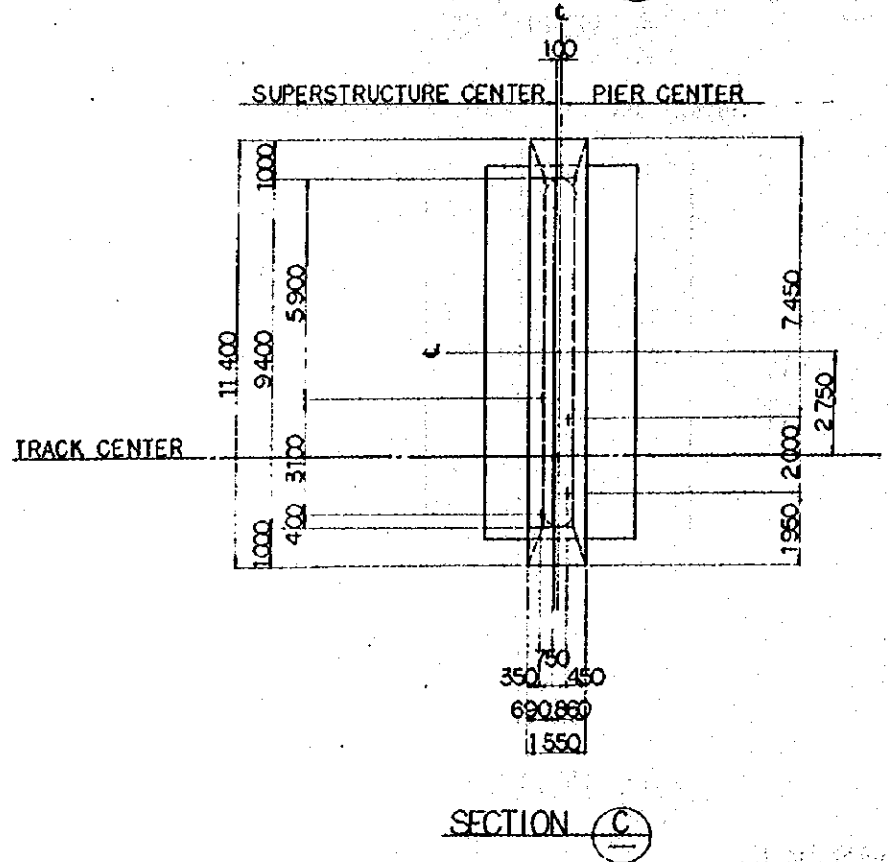
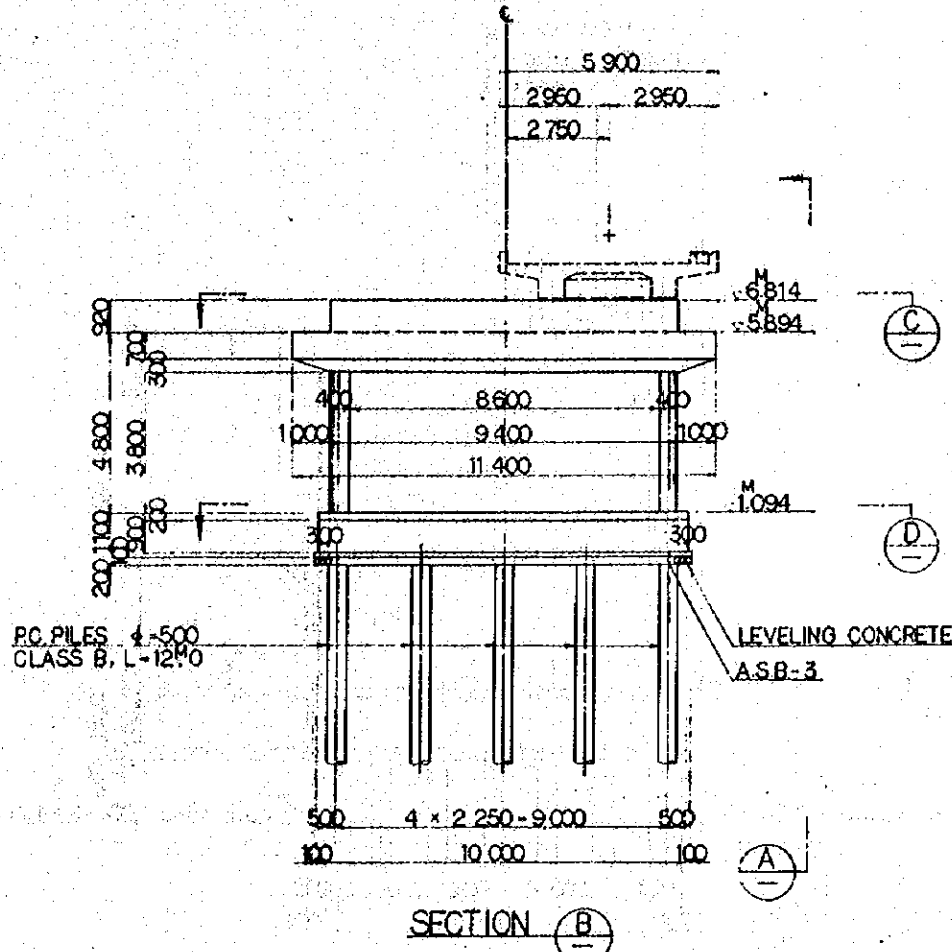
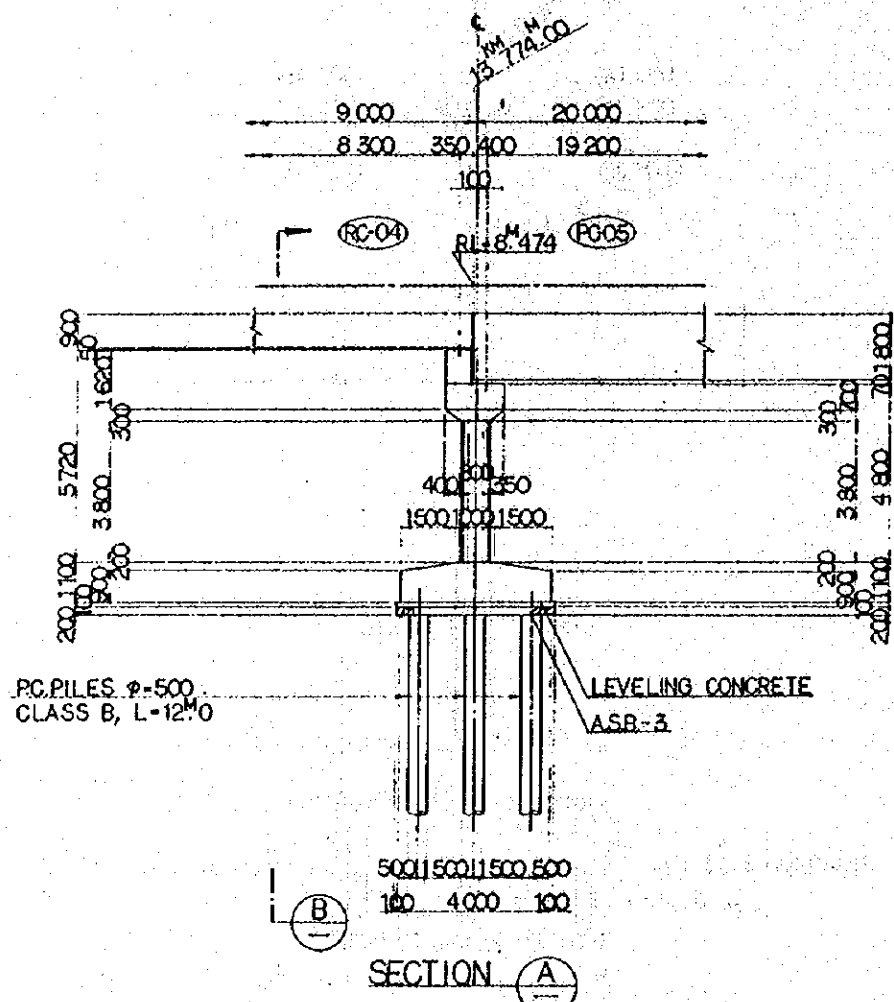
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1 AUG '84	SS	m.y	K.A	K.M	m.l
A	15 FEB. 84	SS	m.y	K.A	K.M	m.l

PIER P04, P37  
 GENERAL VIEW

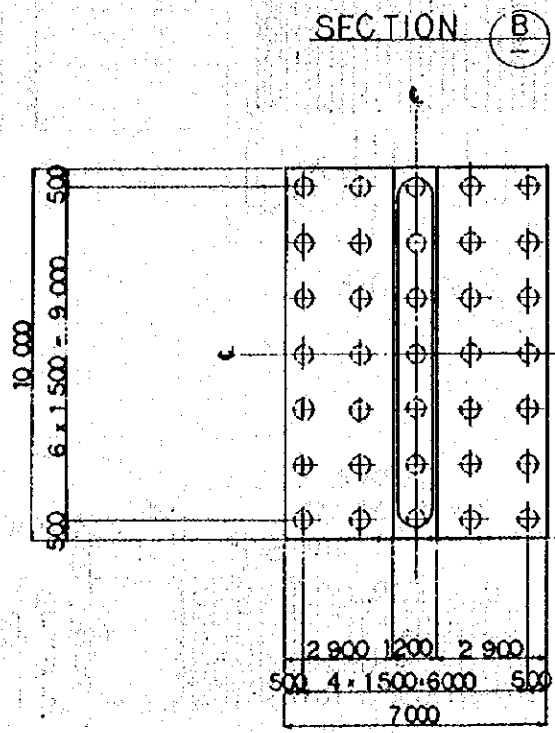
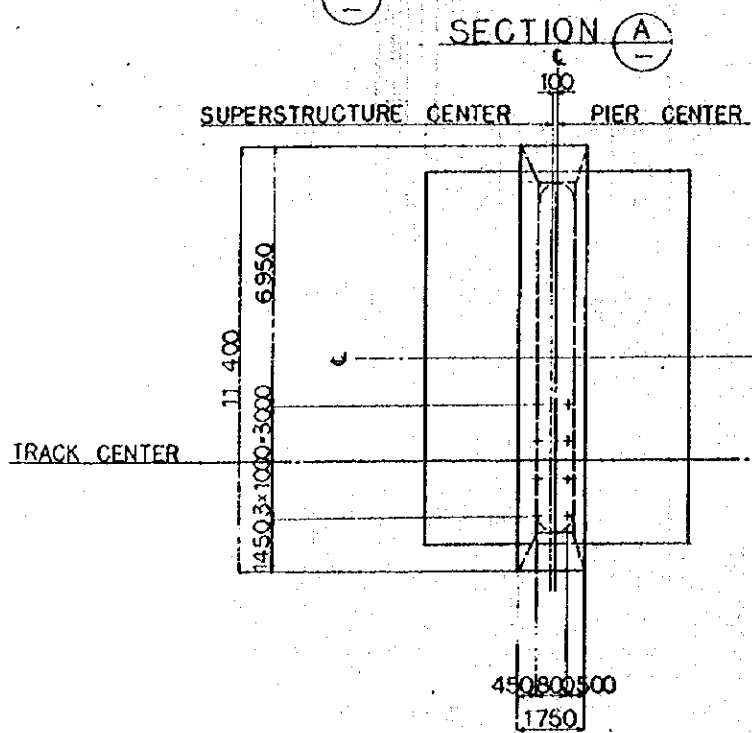
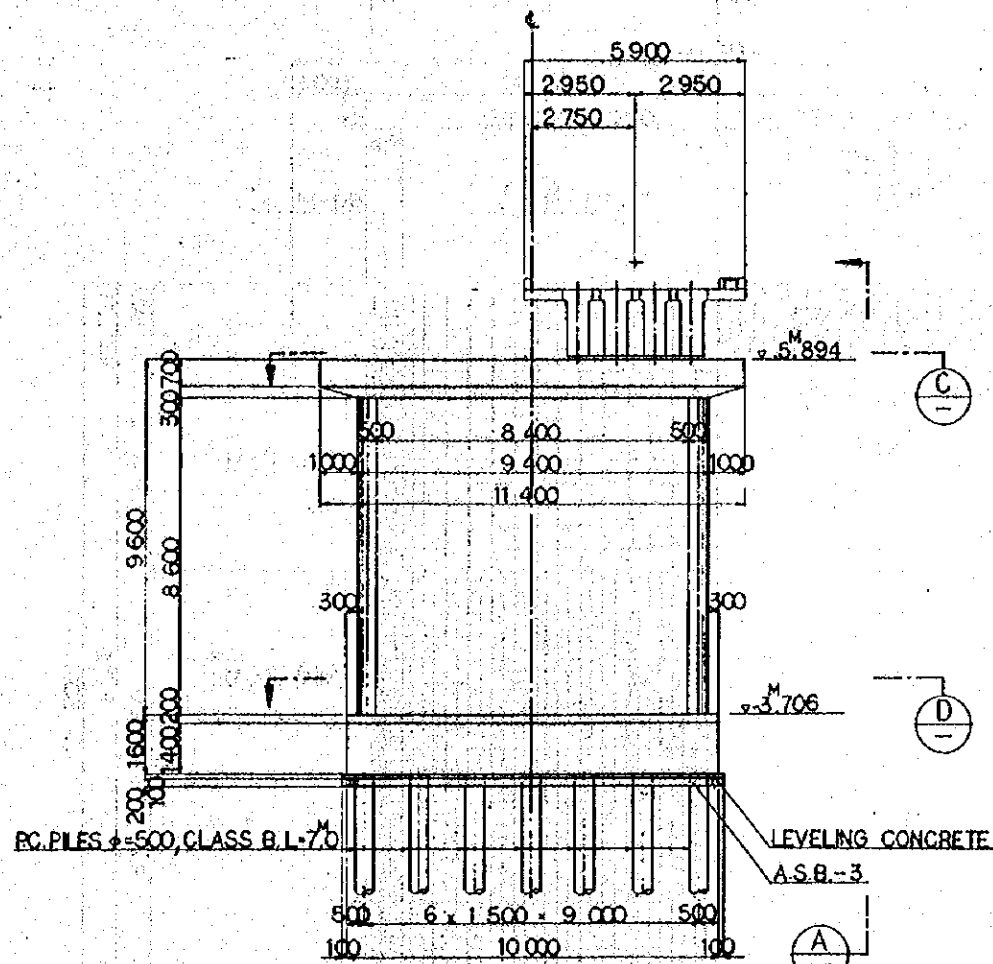
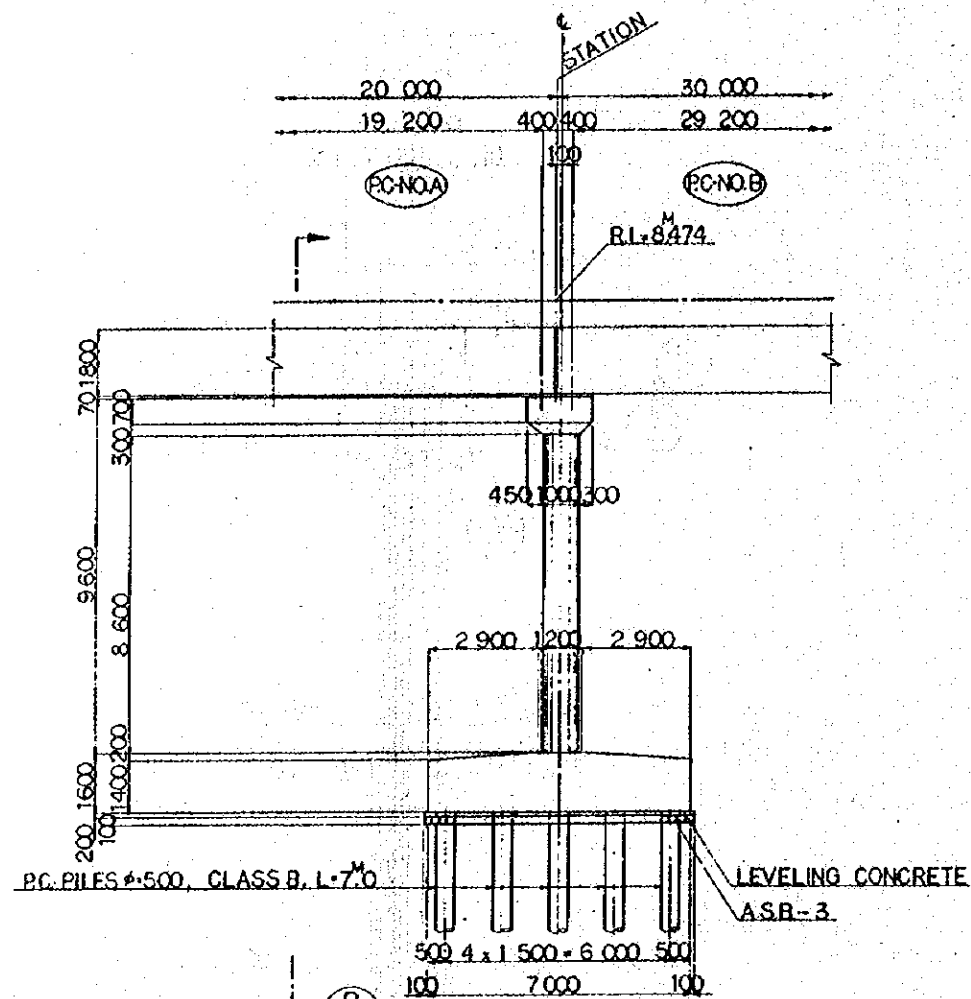
PACKAGE: 1 CIVIL AND ARCHITECTURAL WORK  
 SCALE: 1:100  
 DRAWING NO: CS-077



GENERAL VIEW OF P-05

- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR BAR ARRANGEMENT: CS086.CS-087.

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG '84	S.S.	m.y.	K.H.	K.M.	m.k.
A	15 FEB '84	S.S.	m.y.	K.A.	K.M.	m.k.
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
PIER P05 GENERAL VIEW						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE: 1:100		DRAWING NO: CS-078				



PIER NO	STATION	PC-NO.A	PC-NO.B
P-06	13+794.00	05	06
P-07	13+824.00	07	08

NOTES:

- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
- REFERENCE DRAWING FOR BAR ARRANGEMENT: CS-080, CS-081, CS-082.

DESIGN CRITERIA

DESIGN LOAD	TRAIN LOAD	EQUIVALENT TO KS-14
SEISMIC EFFECT		IN HORIZONTAL DIRECTION $E_k=0.1$
		IN VERTICAL DIRECTION $E_k=0$
ALLOWABLE STRESS	REINFORCING BAR	ALLOWABLE TENSILE STRESS 180 kg/cm <sup>2</sup>
	CONCRETE	ALLOWABLE COMPRESSIVE STRESS 80 kg/cm <sup>2</sup>
MATERIAL	TYPE OF REINFORCING BAR	SD-38
	CONCRETE OF DESIGN CRITERIA STRENGTH	$\sigma_{ck}=210 \text{ kg/cm}^2$
	MAX SIZE OF COARSE AGGREGATE	25mm

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

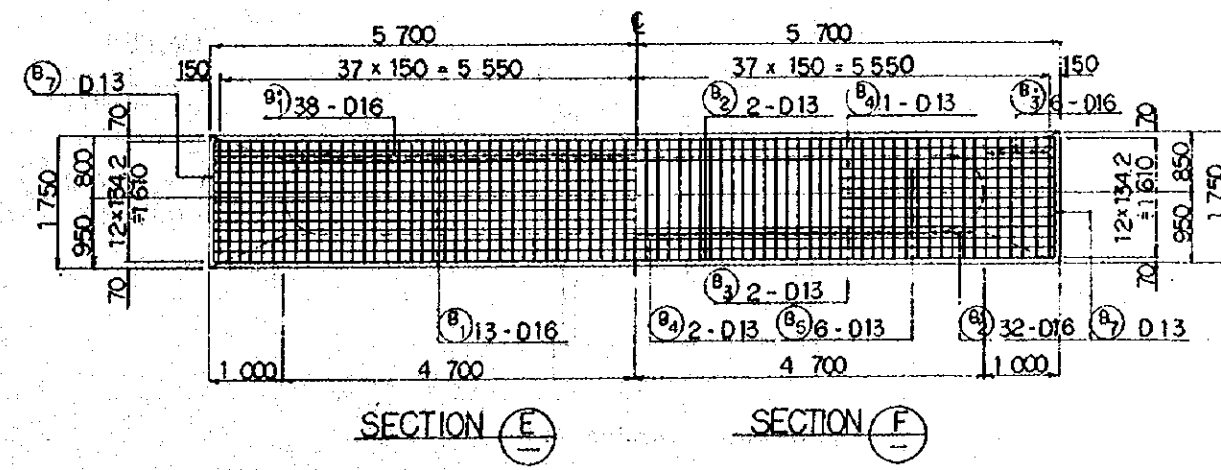
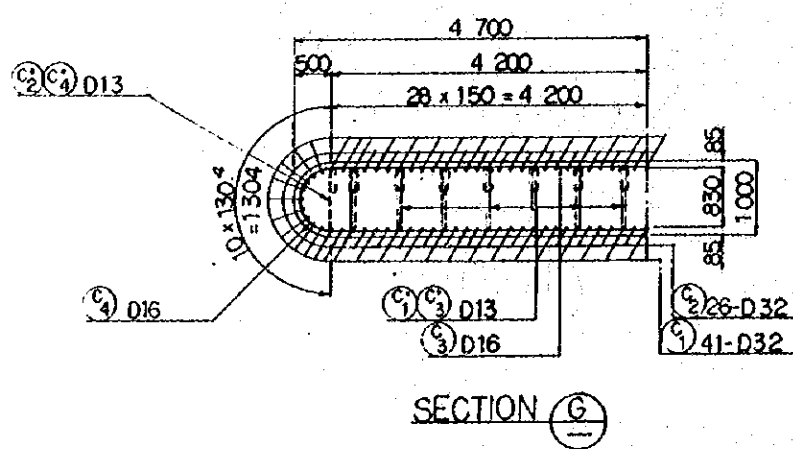
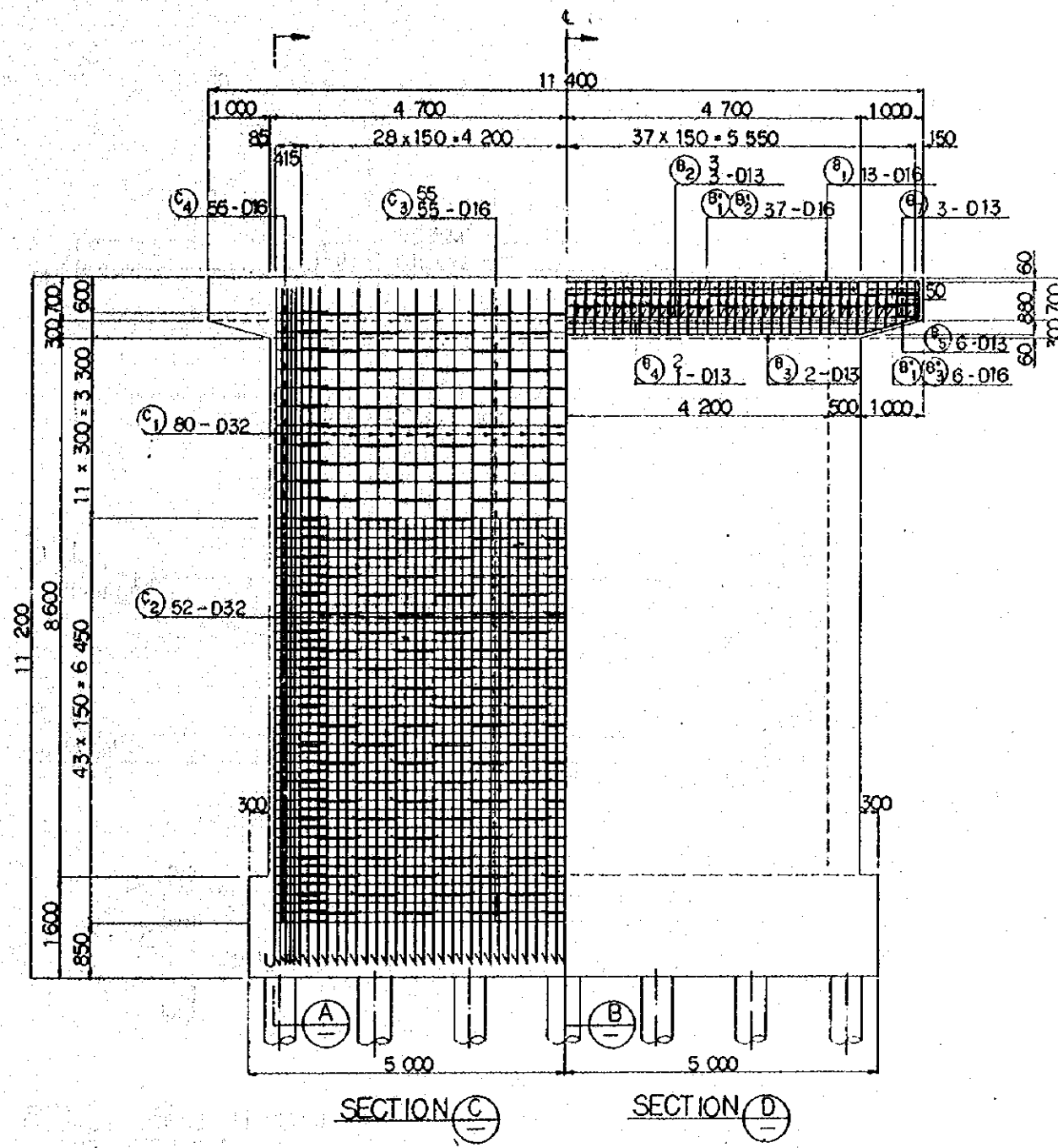
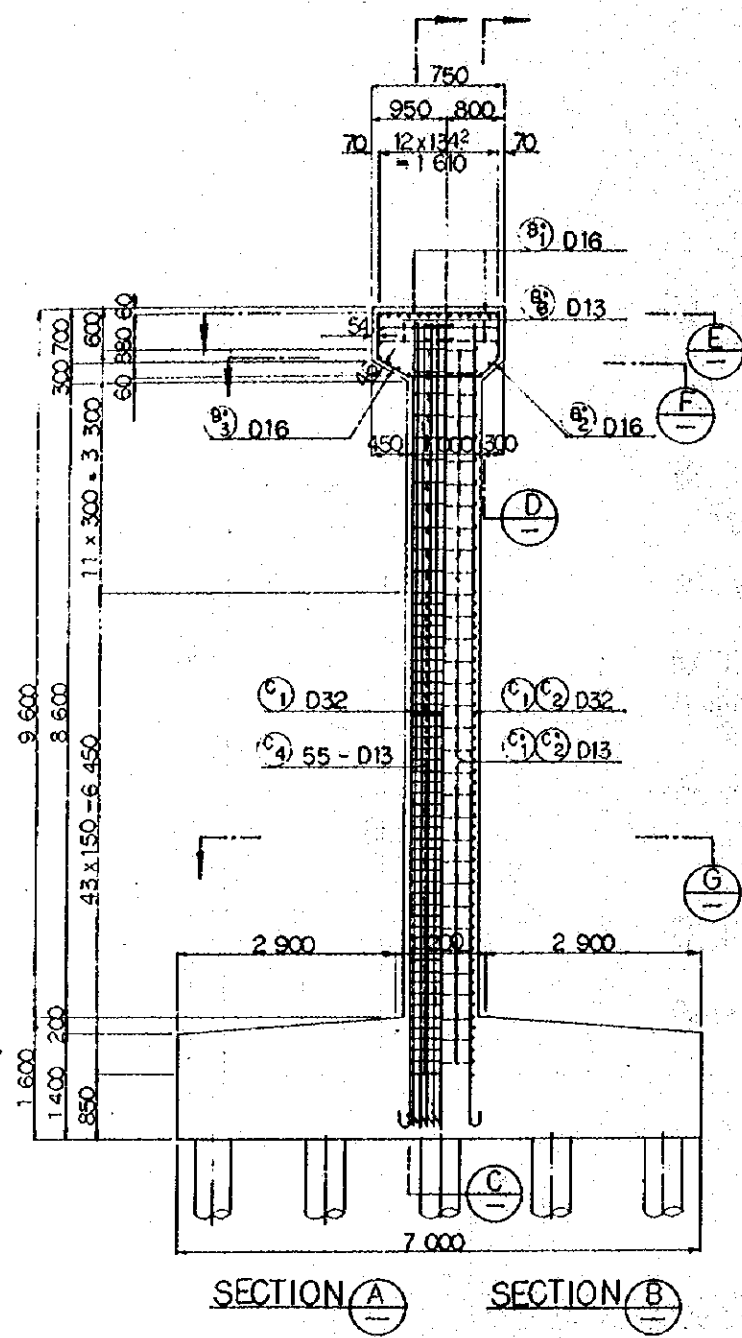
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

REVISOR	DATE	REASON	DESIGNED	CHECKED	REVIEWED	APPROVED
B	1 AUG '84	r.s	m.y	K.A	K.M	K.K
A	15 FEB '84	r.s	m.y	K.A	K.M	K.K

PIER P06, P07  
 GENERAL VIEW

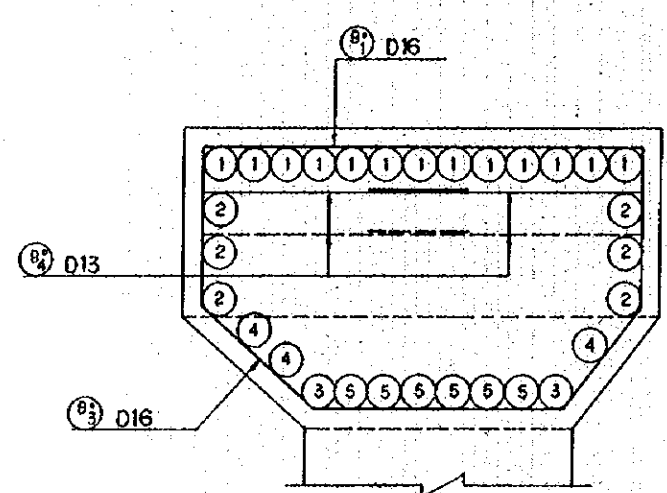
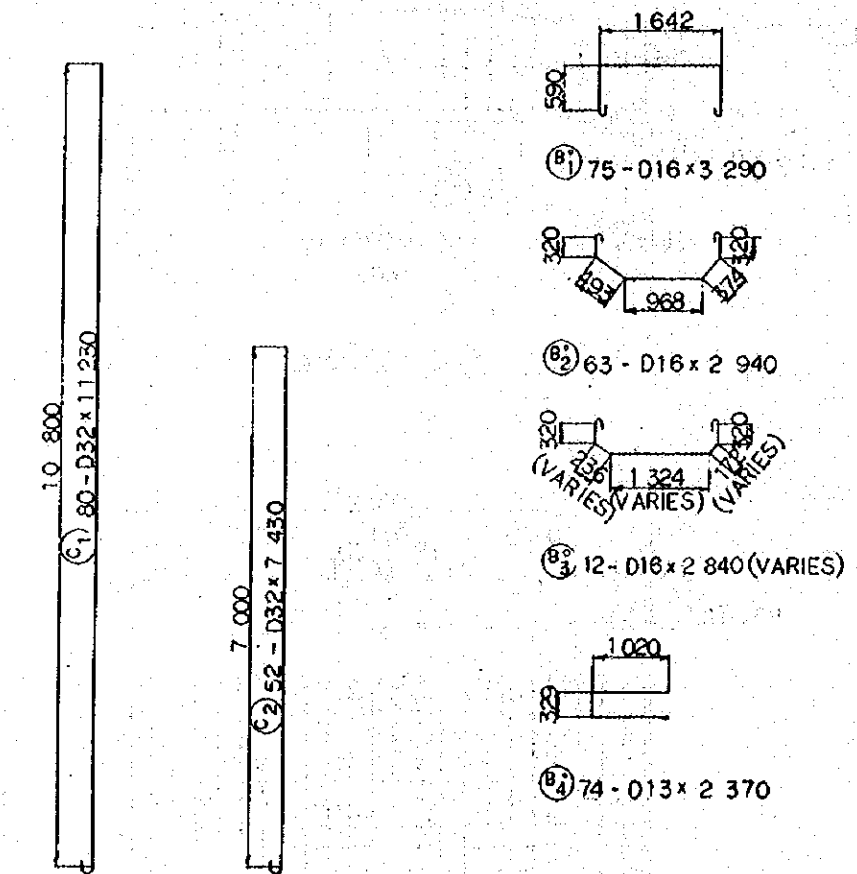
PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: 1:100  
 DRAWING NO: CS-079

GENERAL VIEW OF P06 & 07



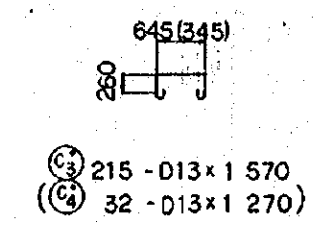
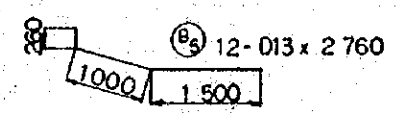
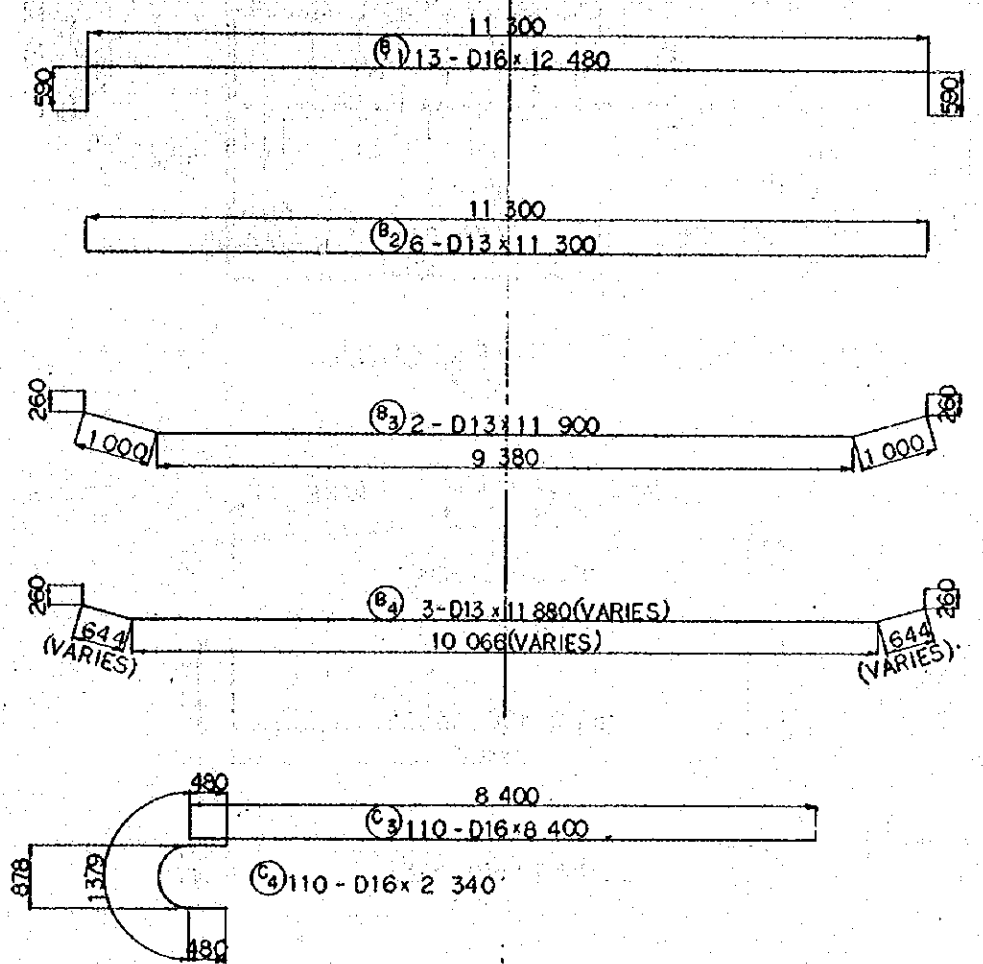
- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR GENERAL VIEW: CS079

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR GENGKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1 AUG. 84	CS	MY	K.A.	K.M.
A	15 FEB. 84	CS	MY	K.A.	K.M.
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED
PIER P06 BAR ARRANGEMENT (SHEET 1 OF 3)					
PACKAGE: I CIVIL AND ARCHITECTURAL WORK					
SCALE	DRAWING NO.				
1:50	CS-080				

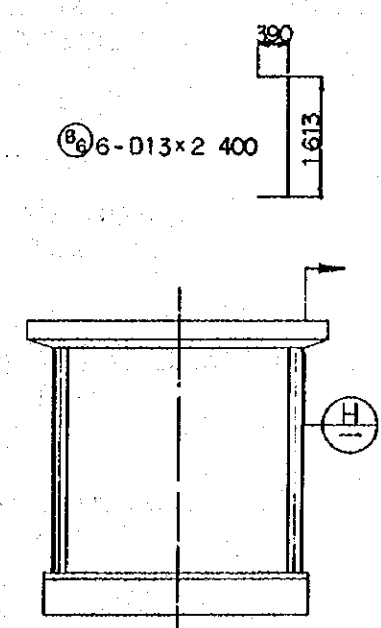


SECTION H

(C1) 215 - D13 x 2 720  
 (C2) 32 - D13 x 2 420



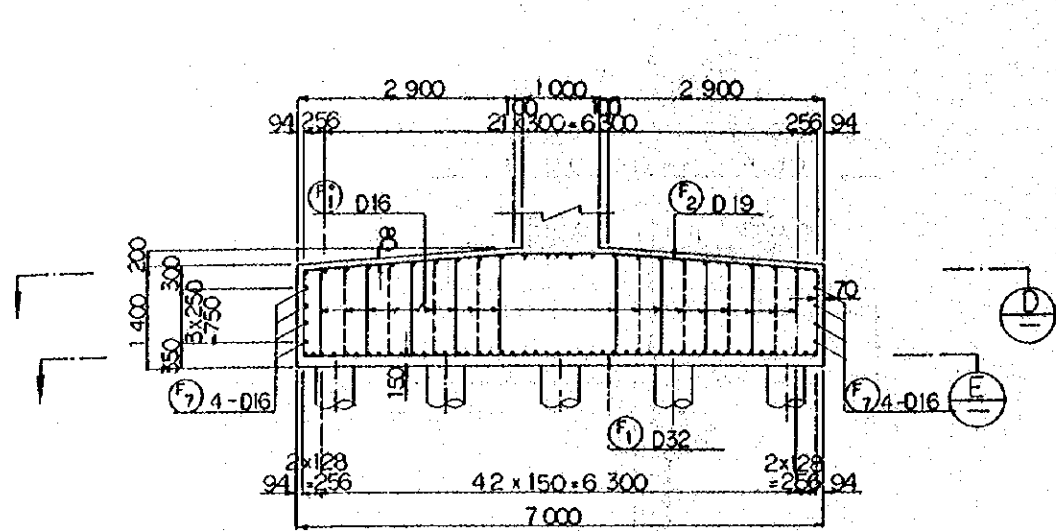
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 (C4) 32 - D13 x 1 270



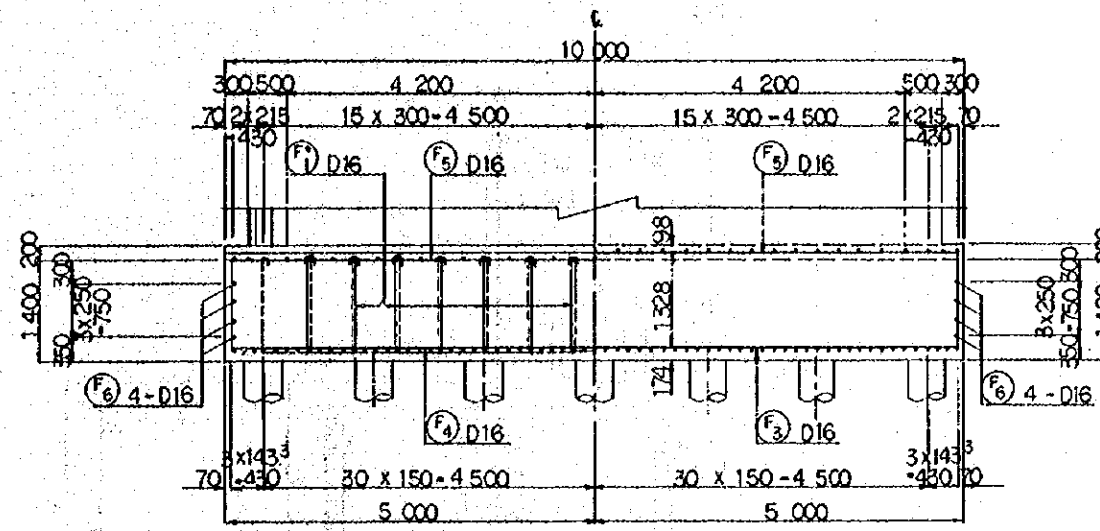
REMARKING DIAGRAM

- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR GENERAL VIEW : CS079

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1AUG.84	SS	m.y	K.A	K.M	K.R
A	15FEB.84	SS	m.y	K.A	K.P	M.K
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
PIER P06 BAR ARRANGEMENT (SHEET 2 OF 3)						
PACKAGE: 1 CIVIL AND ARCHITECTURAL WORK						
SCALE	DRAWING NO.					
1:50	CS-081					

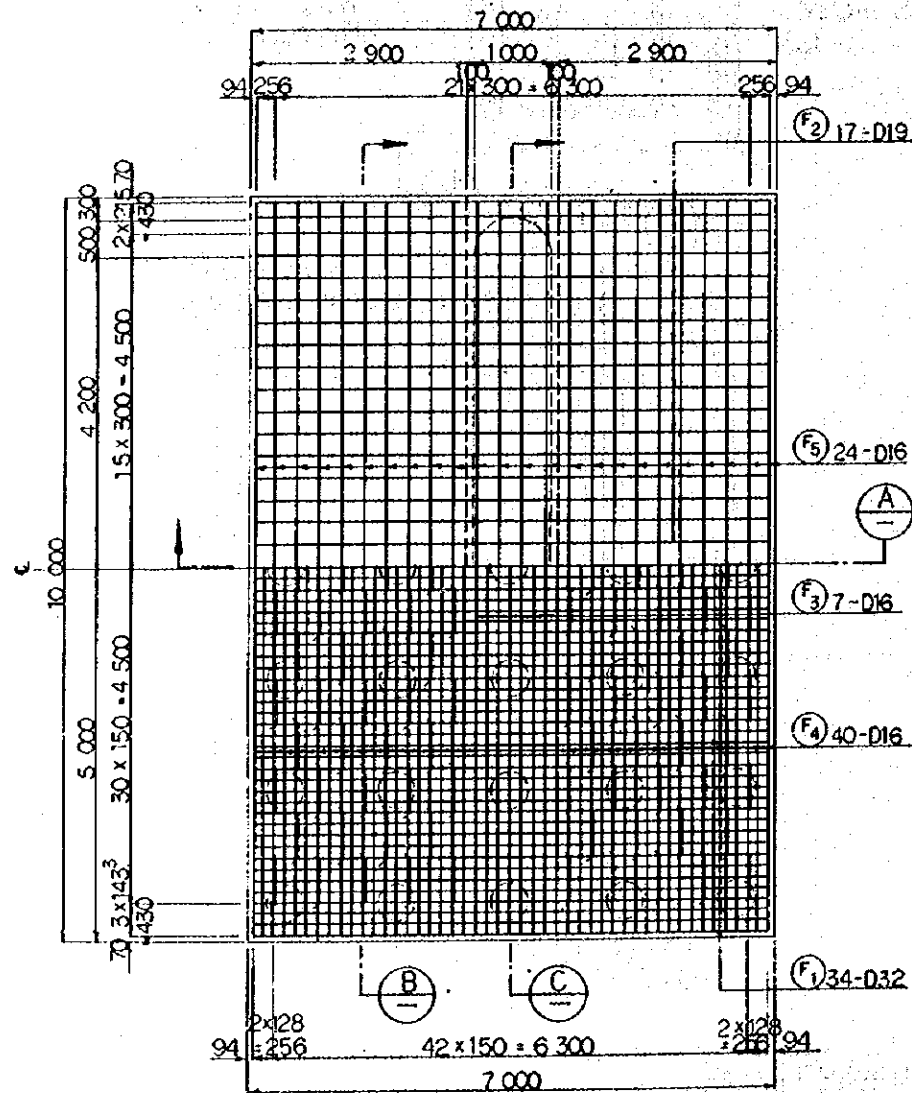


SECTION A



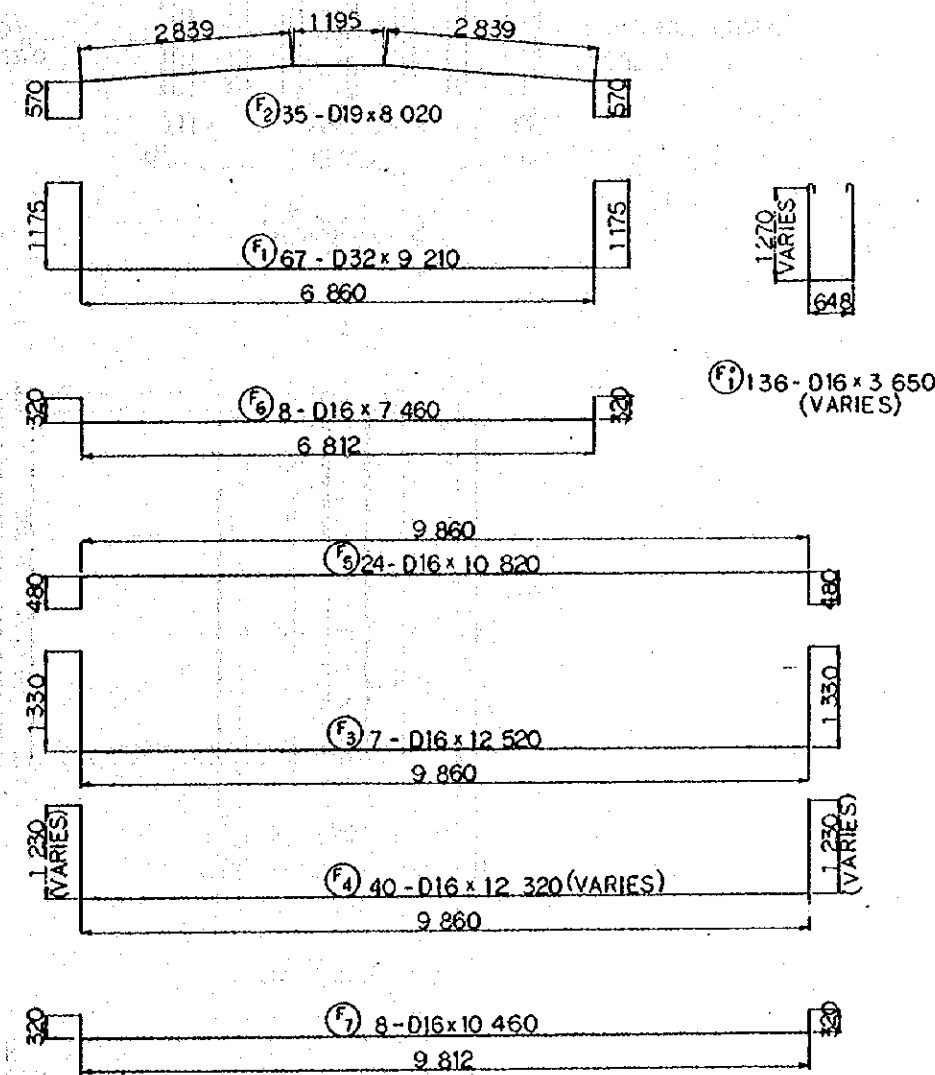
SECTION B

SECTION C



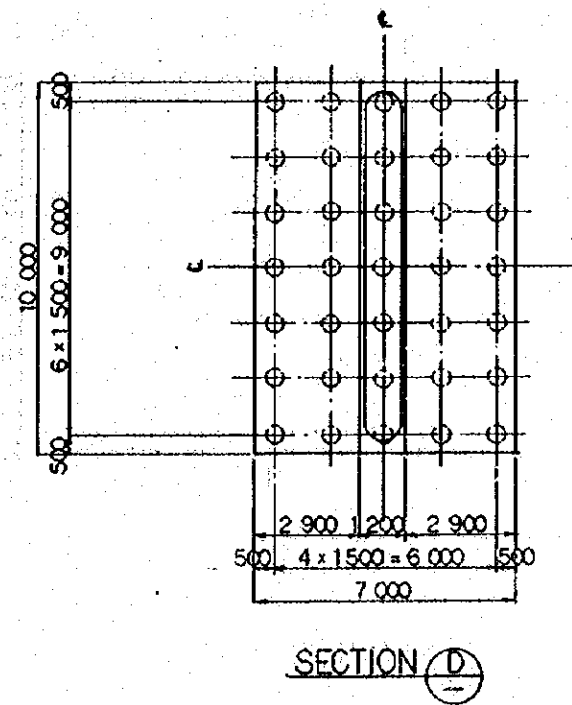
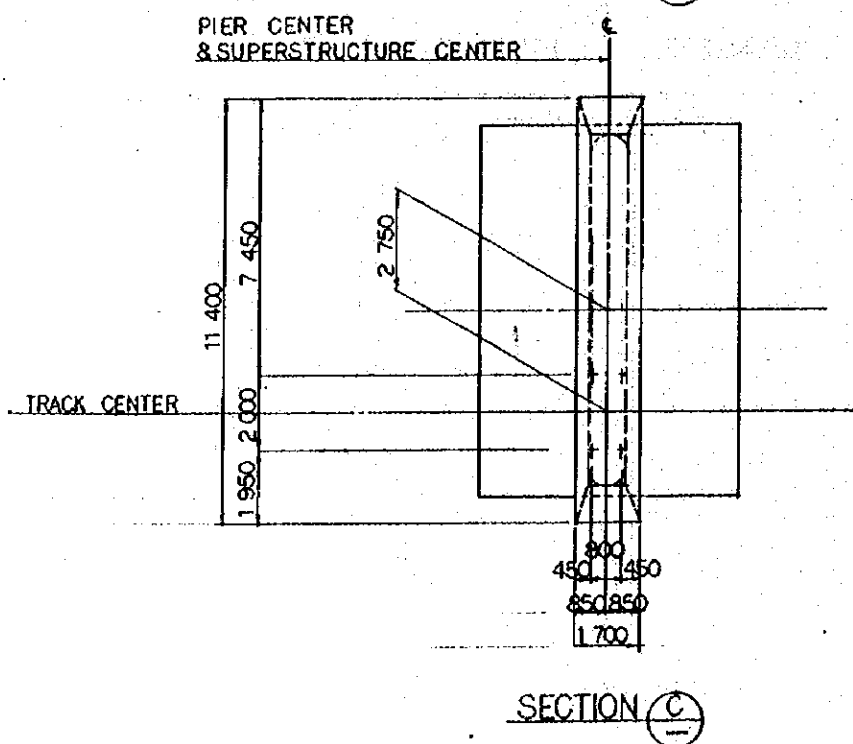
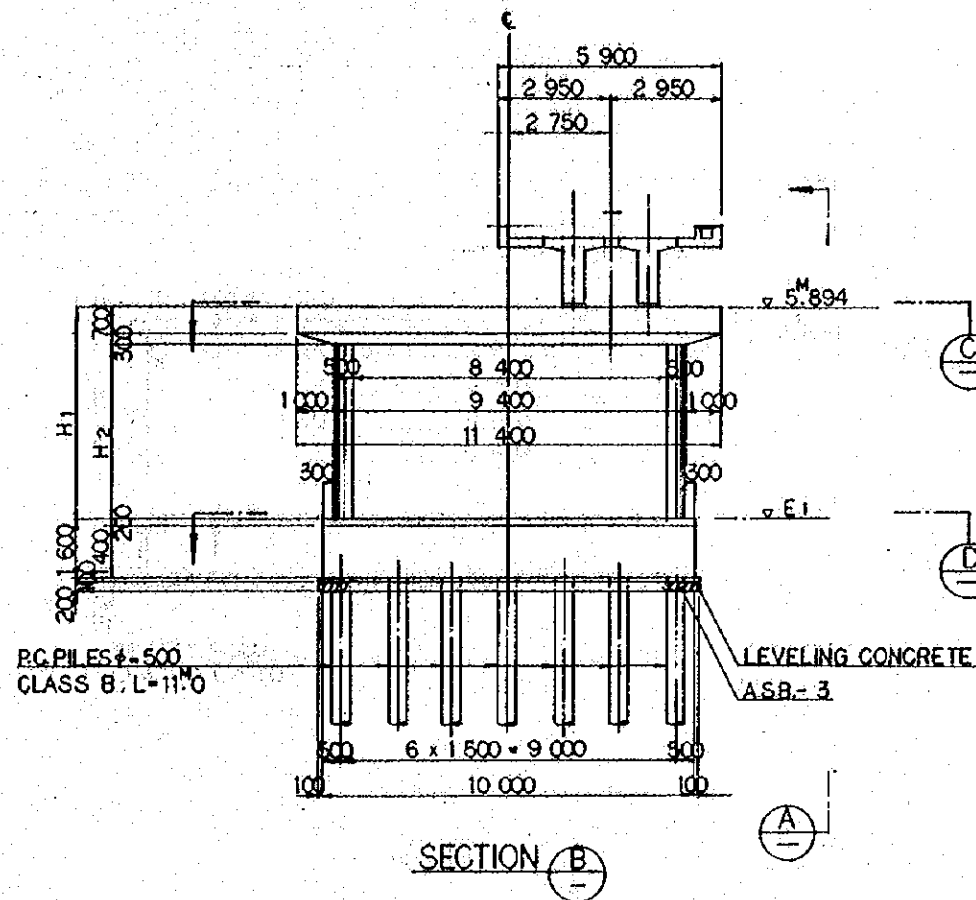
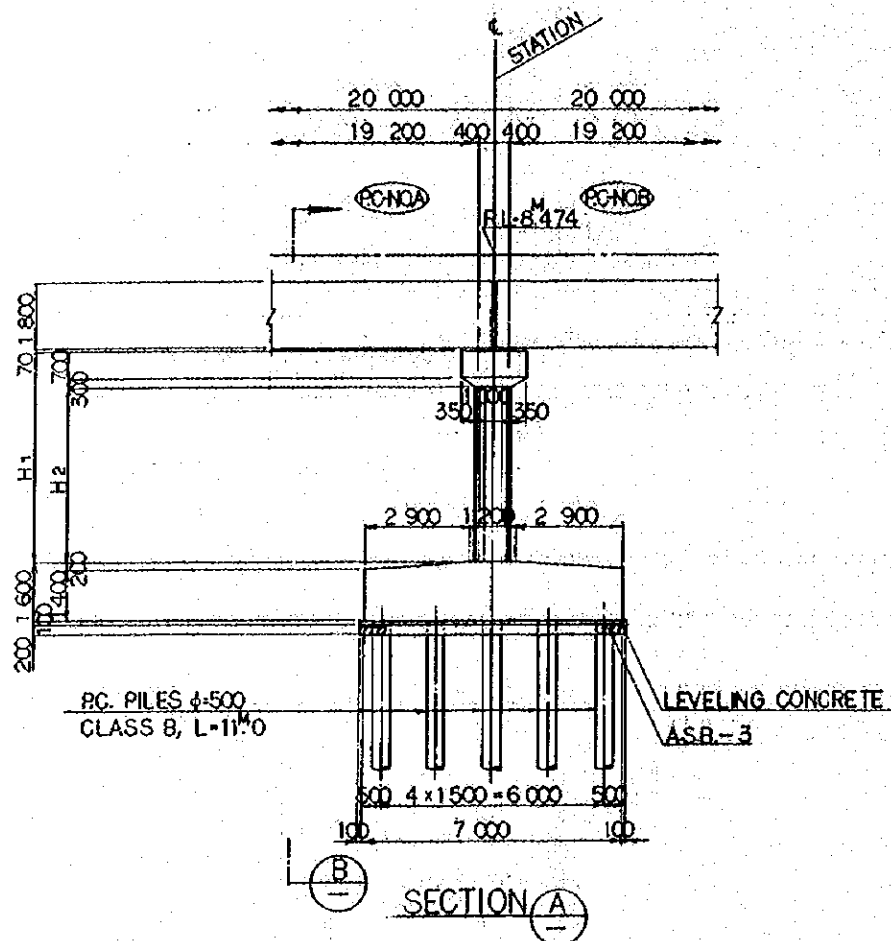
SECTION D

SECTION E



- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR GENERAL VIEW : CS079

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
REVISION	DATE	DESIGNED	CHECKED	APPROVED	SUBMITTED	
B	1 AUG. 84	S.S.	M.Y.	K.H.	K.M.	M.K.
A	15 FEB. 84	S.S.	M.Y.	K.H.	K.M.	M.K.
PIER P06 BAR ARRANGEMENT (SHEET 3 OF 3)						
PROGRAM: I CIVIL AND ARCHITECTURAL WORK						
SCALE: 1:50		DRAWING NO: CS-082				



DIMENSION SCHEDULE

PIER	STATION	ALIGNMENT	PC-NOA	PC-NOB	E1	H1	H2
P-08	13+844.00	TRANSITION	07	08	0.194	5700	4700
P-09	13+864.00	TRANSITION	08	09	0.594	5300	4300

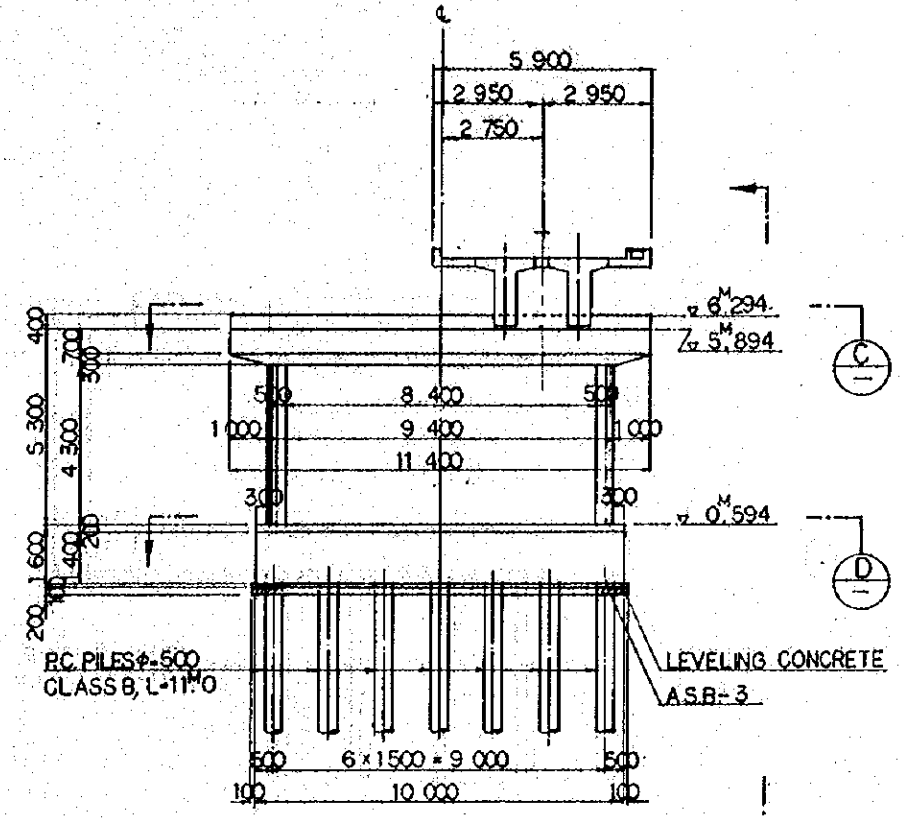
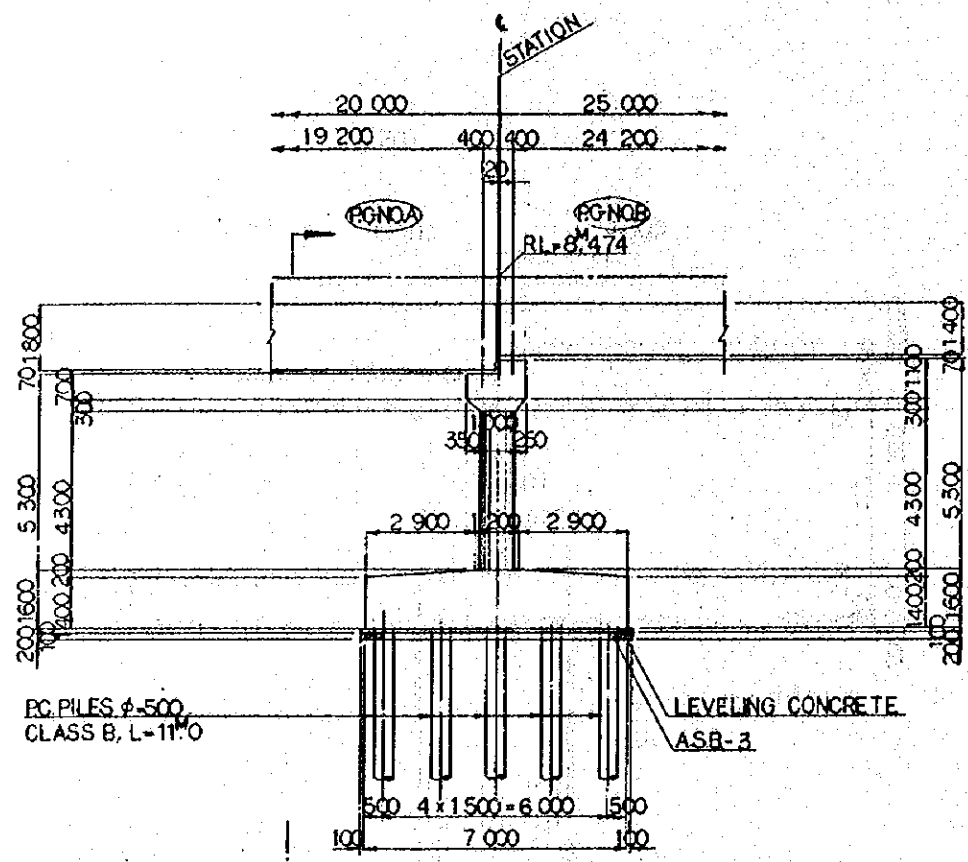
GENERAL VIEW OF P-08 & 09

NOTES:

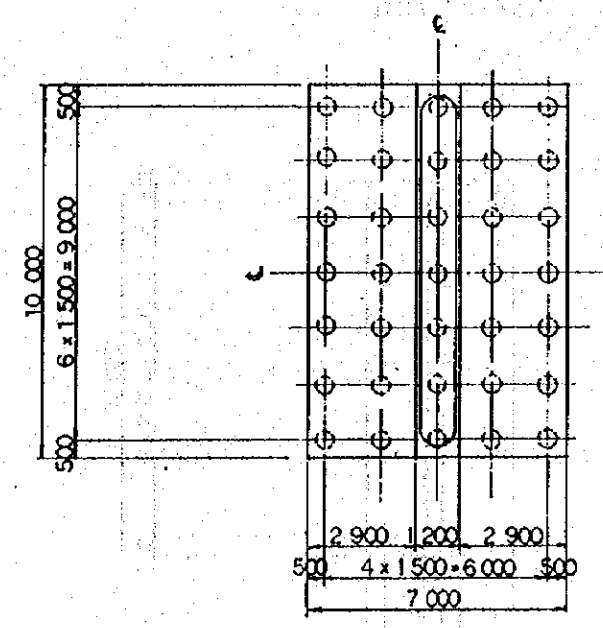
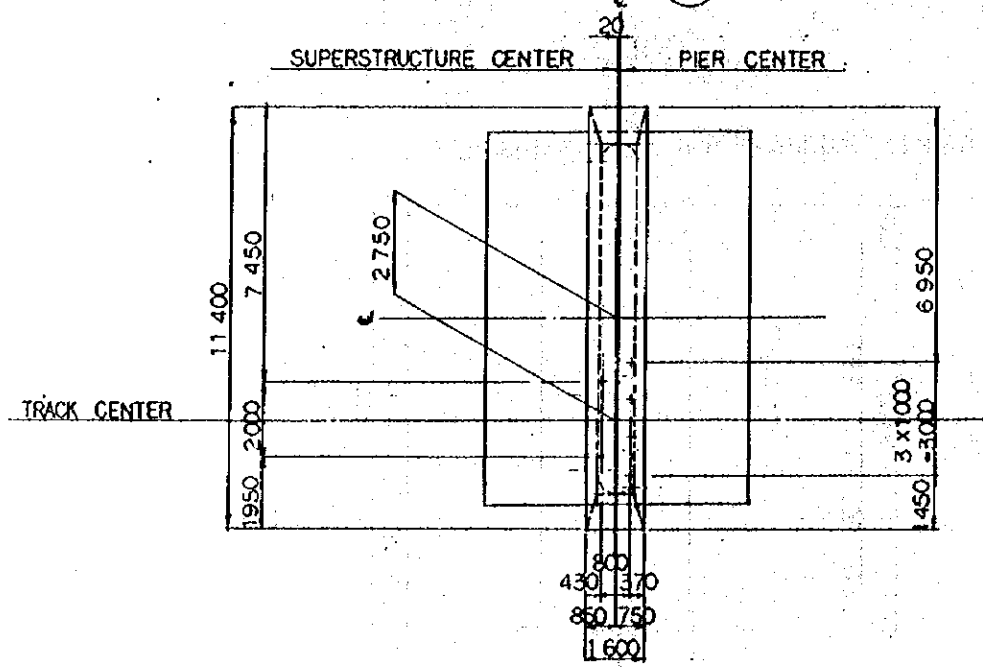
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. REFERENCE DRAWING FOR BAR ARRANGEMENT: CS104, CS105

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
B	1 AUG '84	S.S.	m.y.	K.S.	K.M.	m.k.
A	15 FEB. '84	S.S.	m.y.	K.S.	K.M.	m.k.
PIER P08, P09 GENERAL VIEW						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE		DRAWING NO.				
1:100		CS-083				





- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR BAR ARRANGEMENT: CS-104.CS-105.



SECTION C

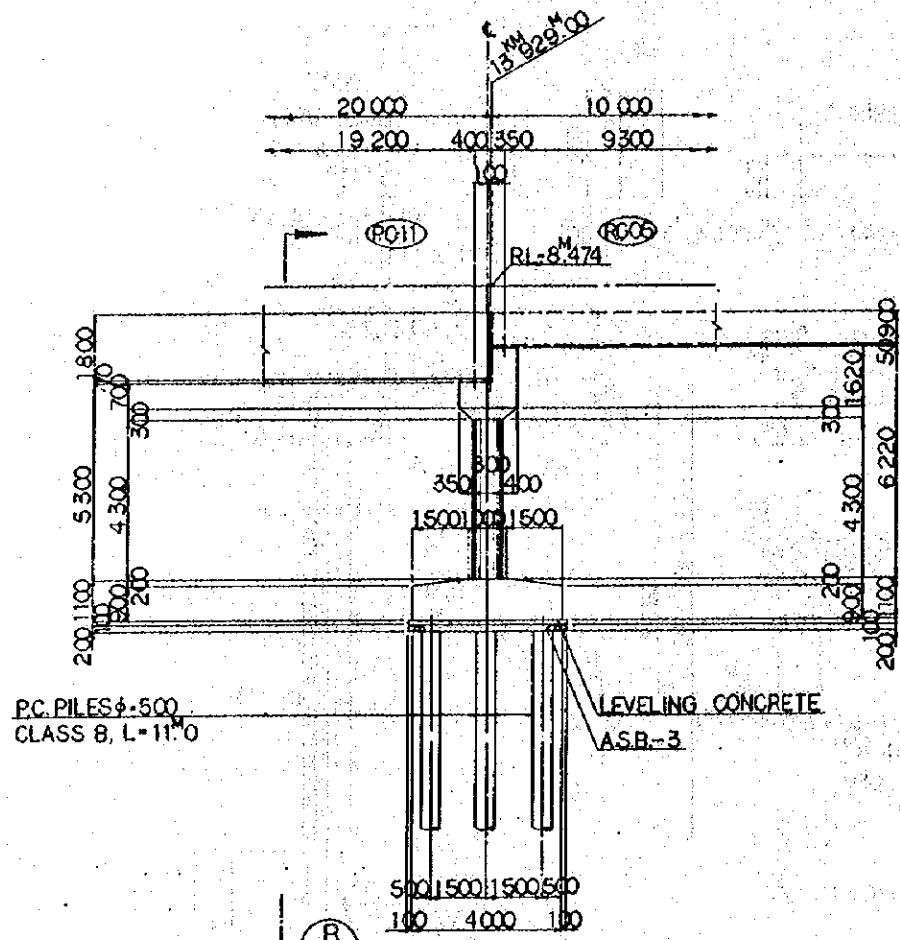
SECTION D

DIMENSION SCHEDULE

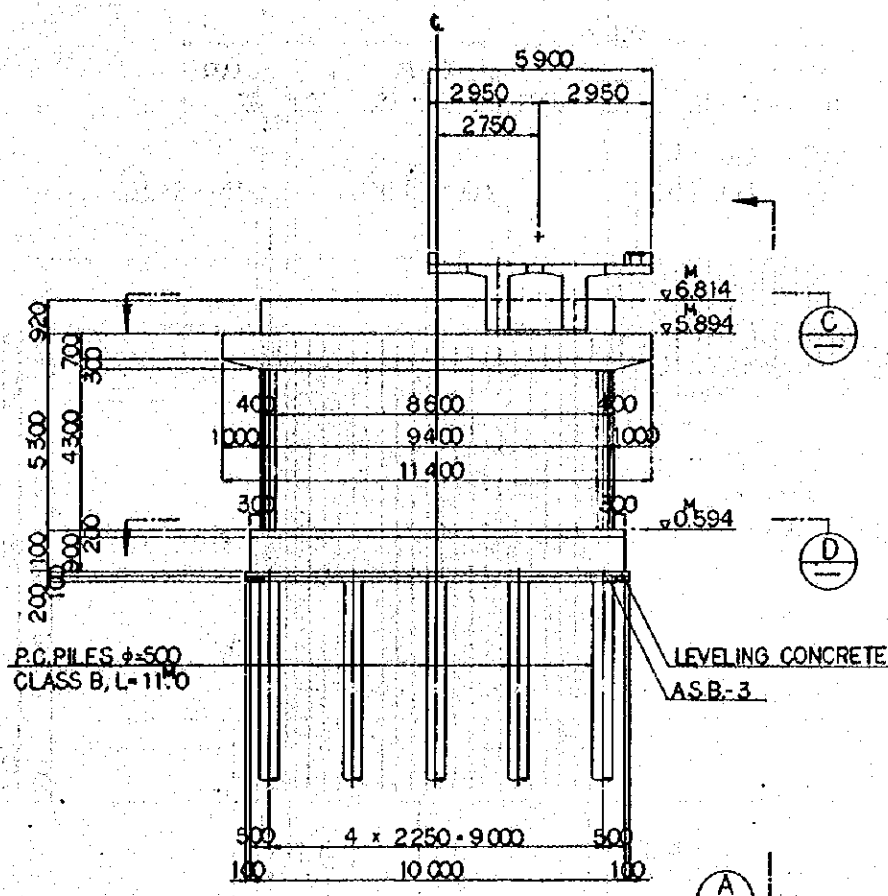
PIER NO.	STATION	PC-NO. A	PC-NO. B	ALINEMENT
P-10	13+884.00	09	10	TRANSITION
P-11	13+909.00	11	10	CURVED R=1000

GENERAL VIEW OF P-10 & 11

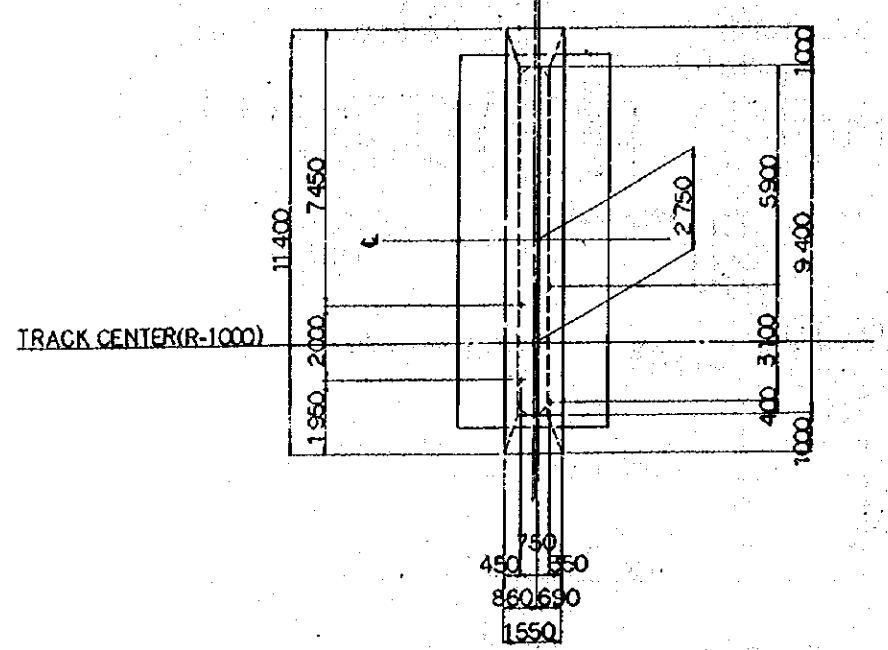
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG '84	S.S	m.y	K.A	K.M	K.K
A	15 FEB '84	S.S	m.y	K.A	K.M	K.K
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
PIER P10, P11 GENERAL VIEW						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE		DRAWING NO.				
1:100		CS-084				



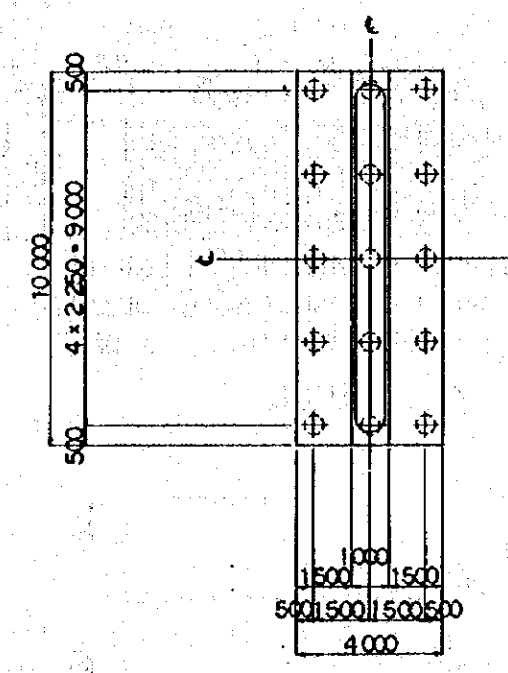
SECTION A



SECTION B



SECTION C



SECTION D

GENERAL VIEW OF P-12.

- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR BAR ARRANGEMENT : CS086.CS087

DESIGN CRITERIA

DESIGN LOAD	TRAIN LOAD	EQUIVALENT TO RS-16
	SEISMIC EFFECT	IN HORIZONTAL DIRECTION $K_h=0.1$ IN VERTICAL DIRECTION $K_v=0$
ALLOWABLE STRESS	REINFORCING BAR	ALLOWABLE TENSILE STRESS 180kg/cm <sup>2</sup>
	CONCRETE	ALLOWABLE COMPRESSIVE STRESS 80kg/cm <sup>2</sup>
MATERIAL	TYPES OF REINFORCING BAR	SD-10
	CONCRETE OF DESIGN CRITERIA STRENGTH	$f'_{ck}=210kg/cm^2$
	MAX SIZE OF COARSE AGGREGATE	25mm

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT  
 CONSTRUCTION PROJECT

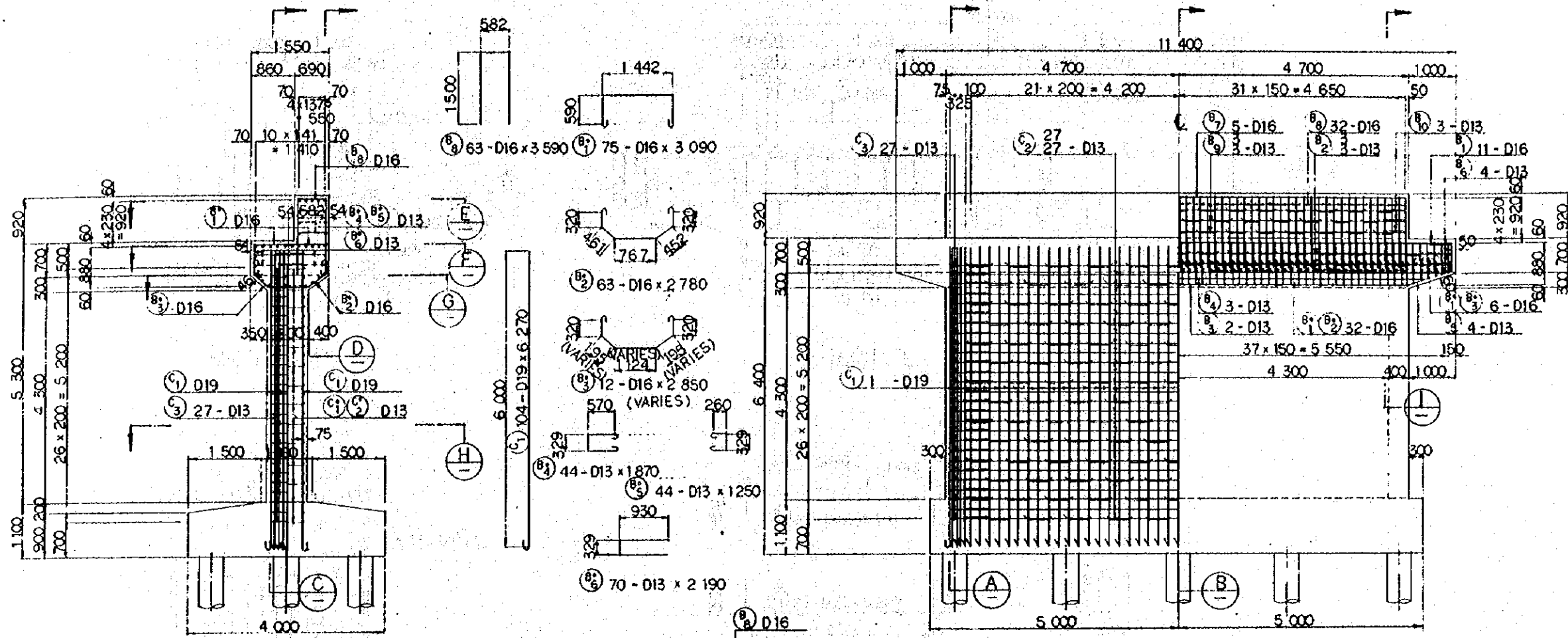
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1AUG'84	S.S.	M.Y.	K.S.	K.M.	M.K.
A	15FEB'84	S.S.	M.Y.	K.S.	K.M.	M.K.

REVISIONS    DATE    DESIGNED    DRAWN    CHECKED    REVIEWED    SUBMITTED

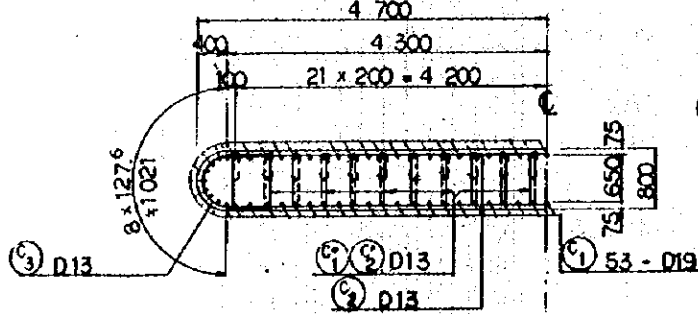
PIER P12  
 GENERAL VIEW

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: 1:100    DRAWING NO: CS-085

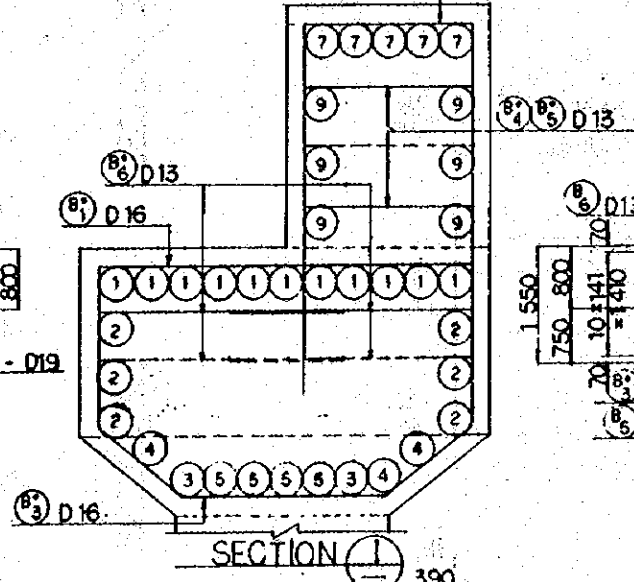


SECTION (A) SECTION (B)

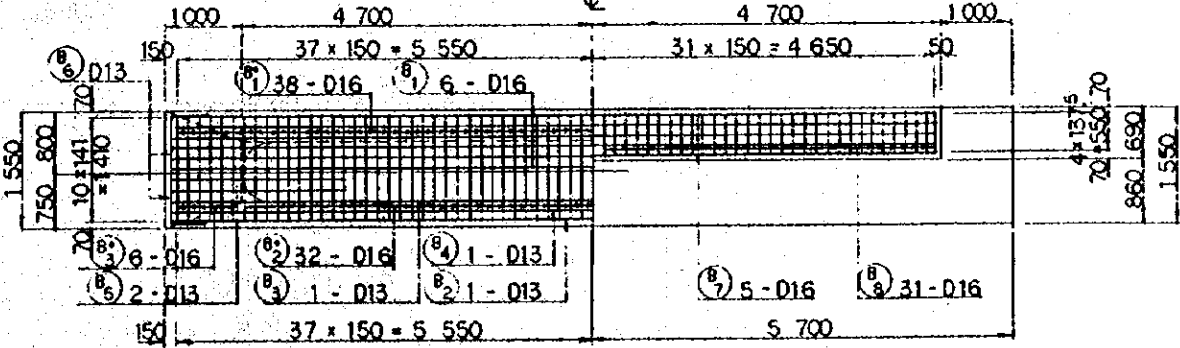
SECTION (C) SECTION (D)  
SECTION (E) SECTION (F)



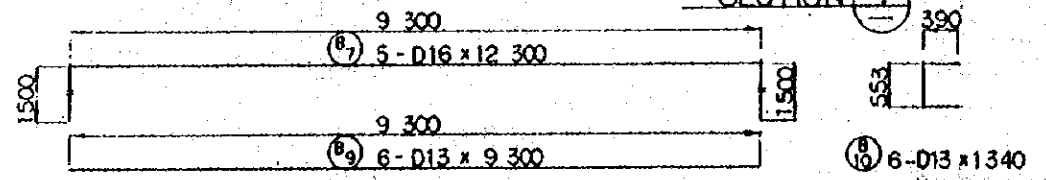
SECTION (H)



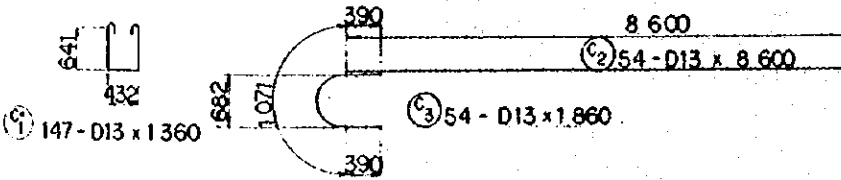
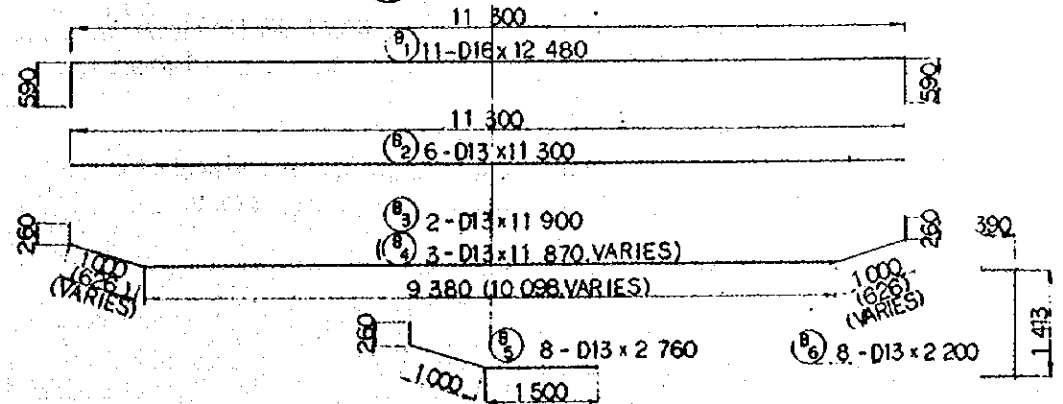
SECTION (I)



SECTION (G) SECTION (E)



SECTION (J)



SECTION (L)

- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR GENERAL VIEW: CS085

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT  
 AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENKARENG AIRPORT  
 CONSTRUCTION PROJECT

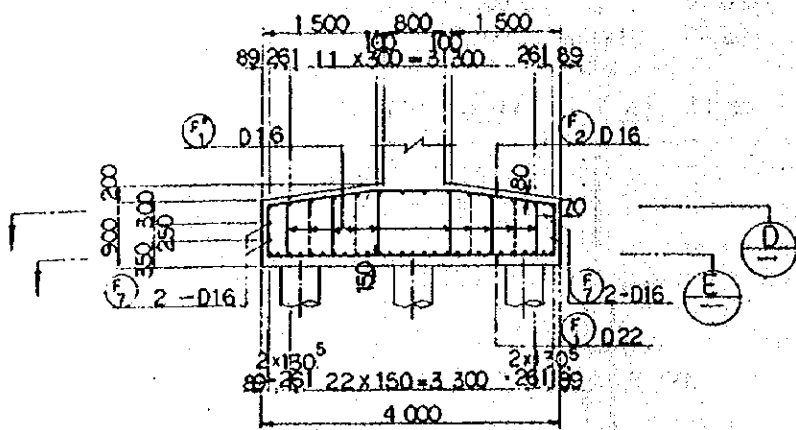
JAPAN INTERNATIONAL COOPERATION AGENCY  
 (JICA)

B	1 AUG '84	S.S.	M.Y.	K.A.	K.M.	M.K.
A	15 FEB '84	S.S.	M.Y.	K.A.	K.M.	M.K.

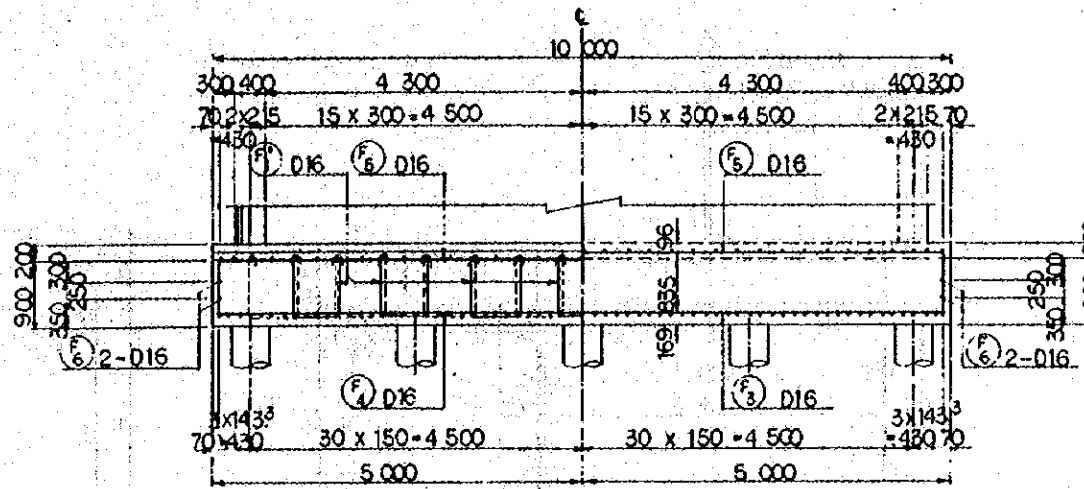
REVISIONS DATE DESIGNED DRAWN CHECKED REVIEWED SUBMITTED

PIER P12  
 BAR ARRANGEMENT  
 (SHEET 1 OF 2)

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: 1:50  
 DRAWING NO: CS-086

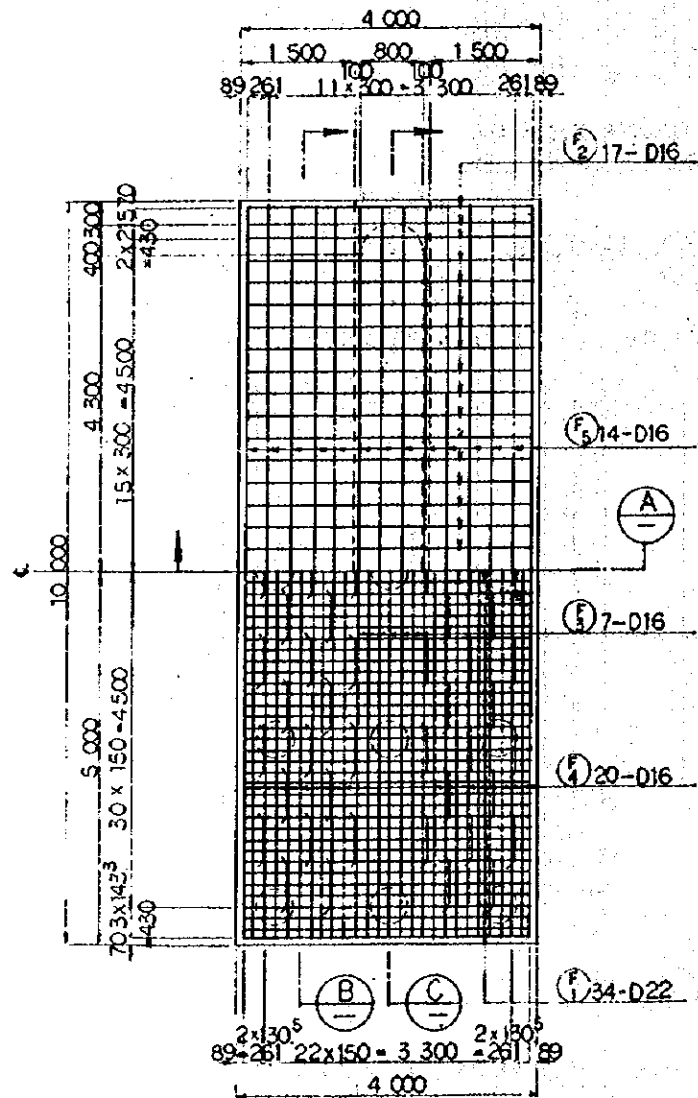


SECTION A



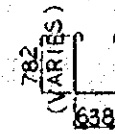
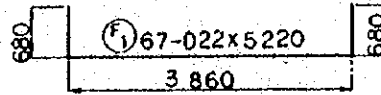
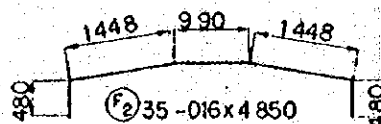
SECTION B

SECTION C

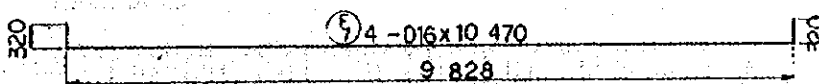
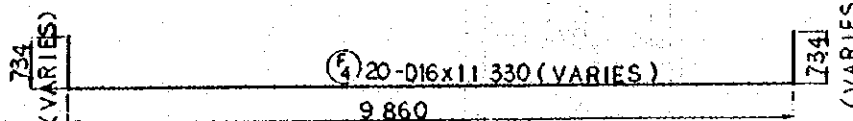
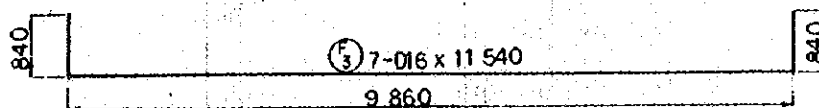
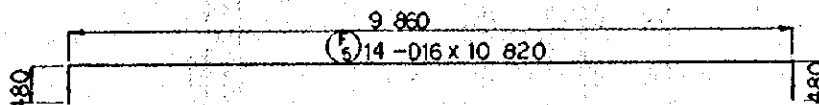
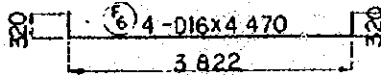


SECTION D

SECTION E



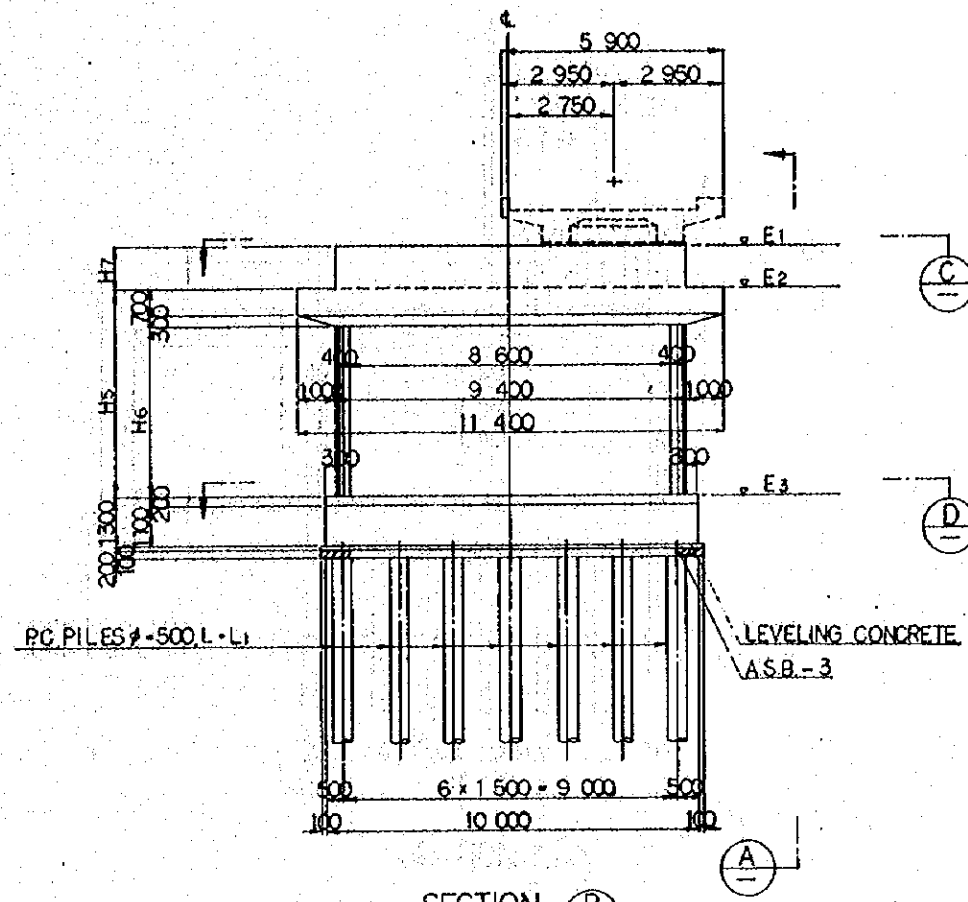
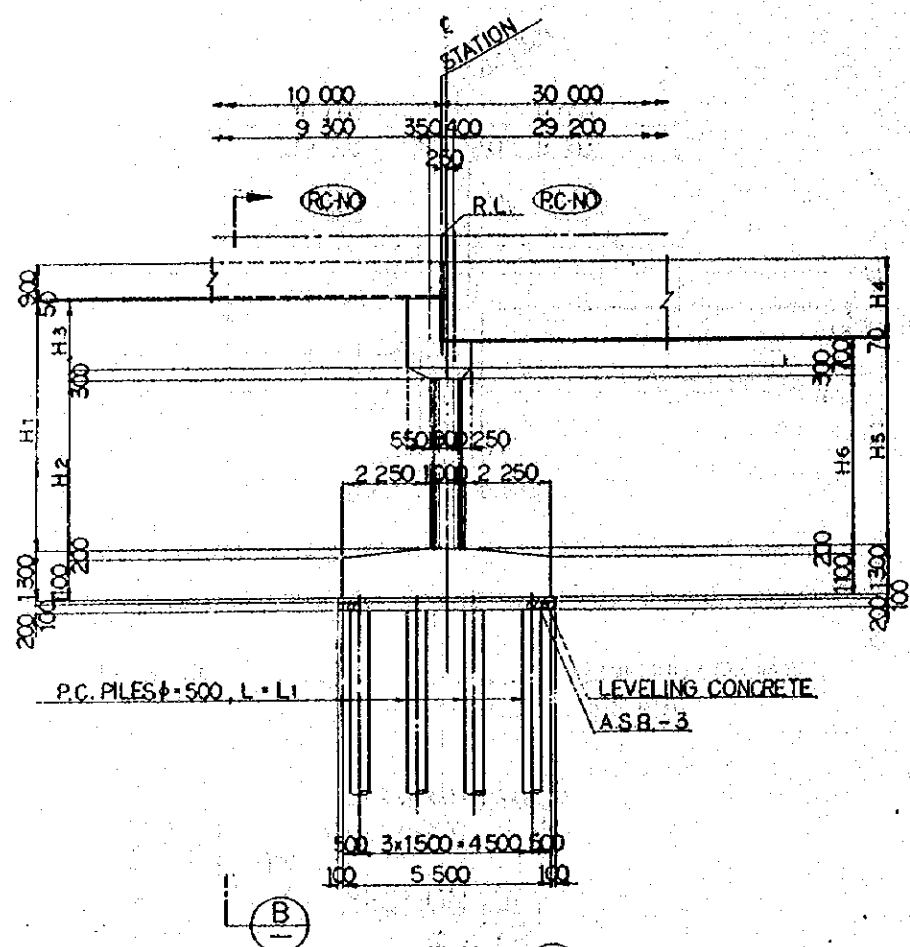
(F7) 74-D16 x 2 670  
(VARIES)



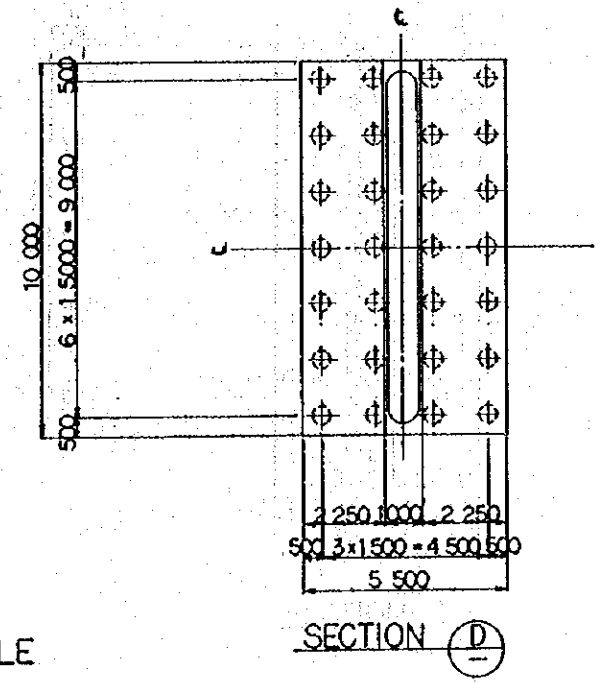
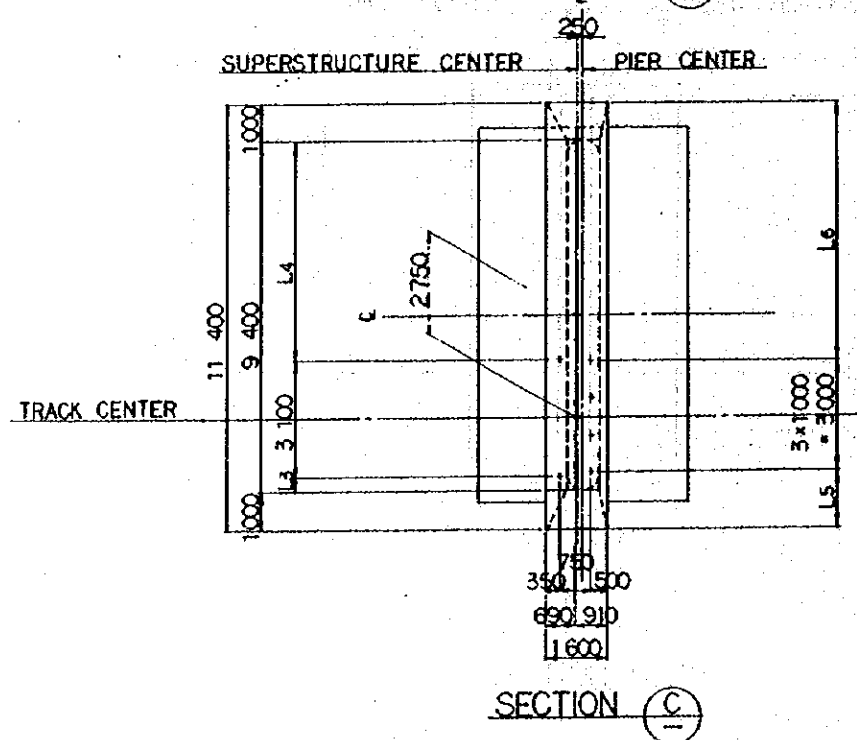
NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. REFERENCE DRAWING FOR GENERAL VIEW: CS-085

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CEMKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG. 84	S.S.	m.y.	K.A.	K.M.	K.
A	15 FEB. 84	S.S.	m.y.	K.A.	K.M.	K.
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
PIER P12 BAR ARRANGEMENT (SHEET 2 OF 2)						
PROGRAM: I CIVIL AND ARCHITECTURAL WORK						
SCALE: 1:50		DRAWING NO: CS-087				



- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR BAR ARRANGEMENT: CS-100, CS101.
  3. TYPES OF PC PILE
    - PC PILE CLASS B
    - PC PILE CLASS A



DIMENSION SCHEDULE

SECTION D

PIER NO	STATION	ALIGNMENT	RC-NO	PC-NO	R.L.	E1	E2	E3	H1	H2	H3	H4	H5	H6	H7	L1	L2	L3	L4	L5	L6
P-13	14 <sup>04</sup> 1 <sup>00</sup>	CURVED	R=1000	06	12	8 <sup>m</sup> 480	6 <sup>m</sup> 320	5 <sup>m</sup> 550	0 <sup>m</sup> 350	6 470	4 200	1 970	2 150	5 200	4 200	1 270	11 <sup>m</sup> 0	400	5 900	1 450	6 950
P-35	18 <sup>06</sup> 1 <sup>00</sup>	CURVED	R=500	30	28	6 <sup>m</sup> 184	4 <sup>m</sup> 524	3 <sup>m</sup> 254	2 <sup>m</sup> 346	6 870	4 600	1 970	2 150	5 600	4 600	1 270	14 <sup>m</sup> 0	1 413	6 887	1 563	6 837

GENERAL VIEW OF P-13 & 35

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

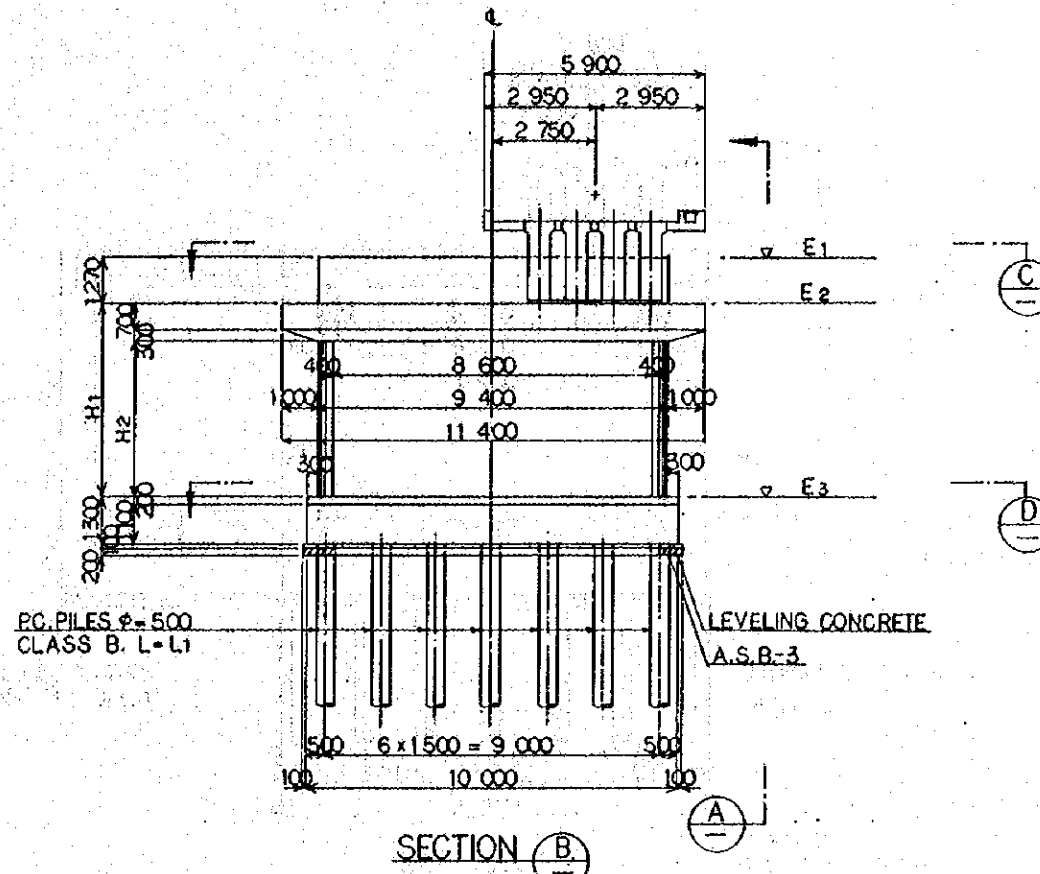
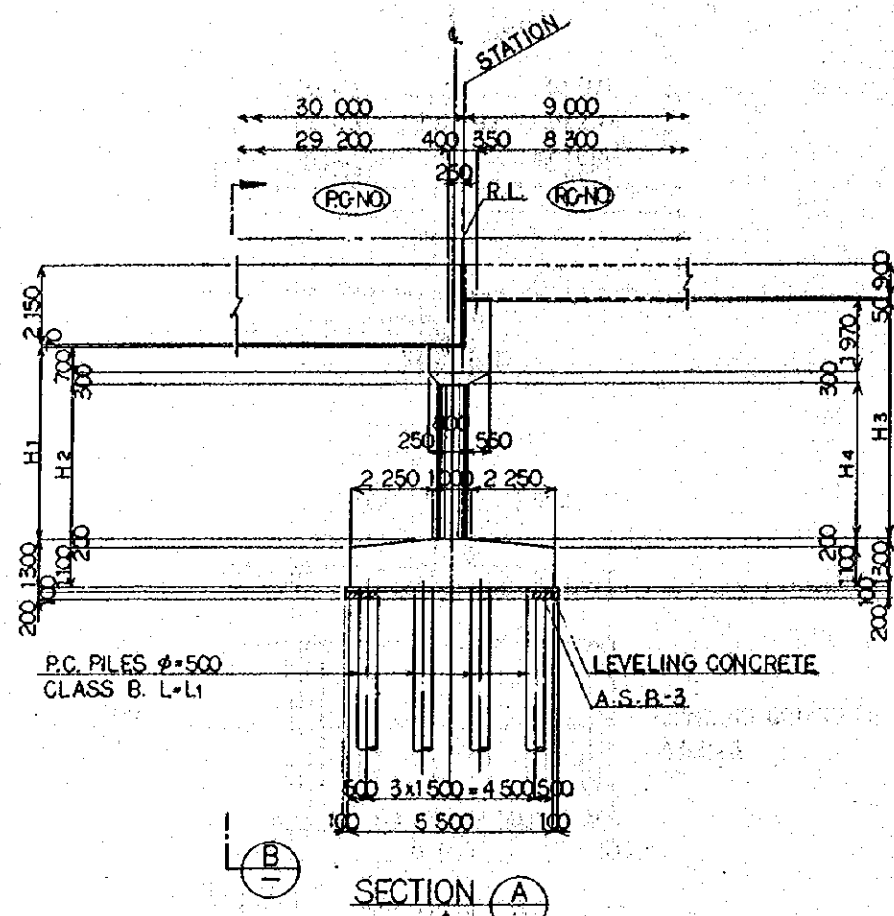
NEW RAILWAY LINE FOR CENKARENG AIRPORT  
 CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

REVISIONS	DATE	REASON	DRAWN	CHECKED	REVIEWED	SUBMITTED
B	1 AUG. 84	SS	m.y	K.A	K.M	M.K
A	15 FEB. 84	SS	m.y	K.A	K.M	M.K

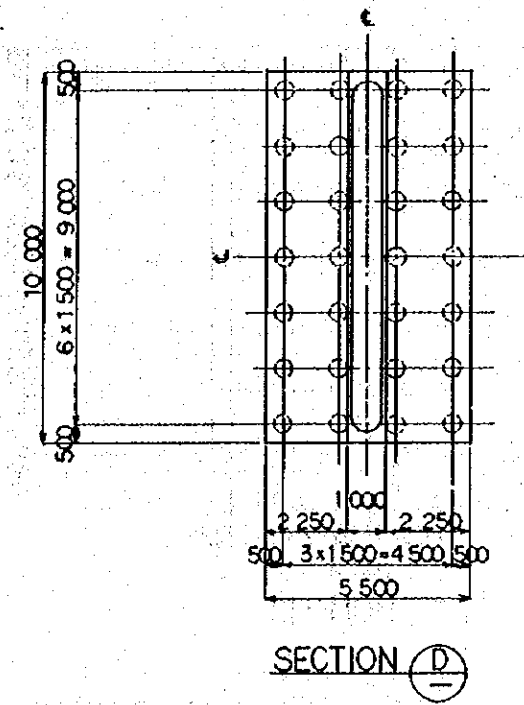
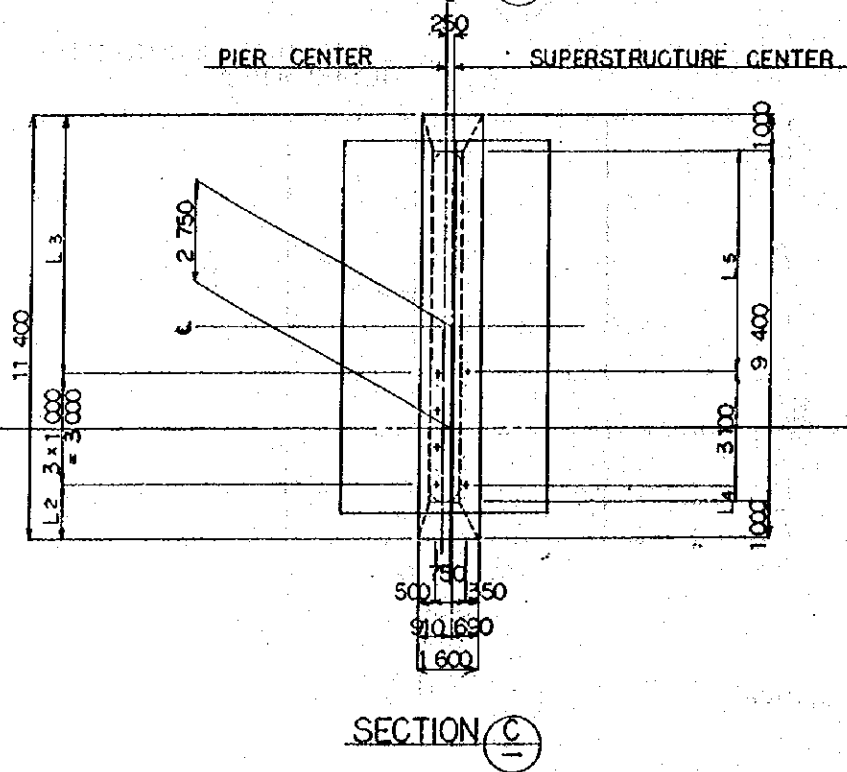
PIER P13, P 35  
 GENERAL VIEW

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: 1:100  
 DRAWING NO: CS-088



NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. REFERENCE DRAWING FOR BAR ARRANGEMENT : CS-100, CS-101

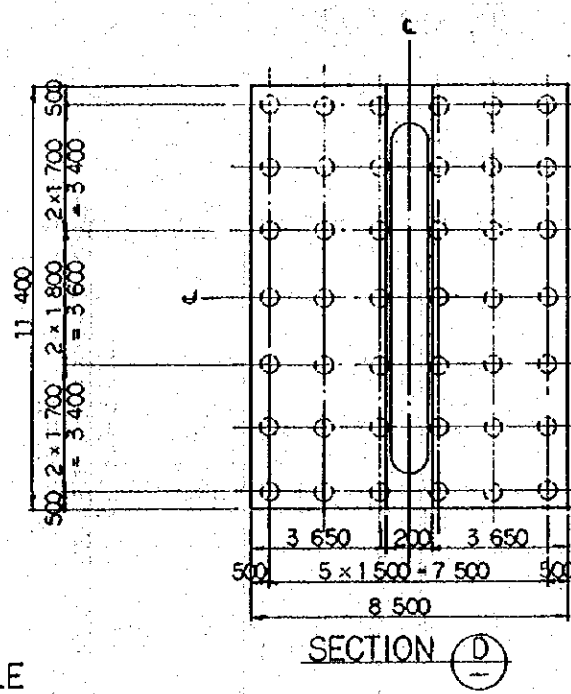
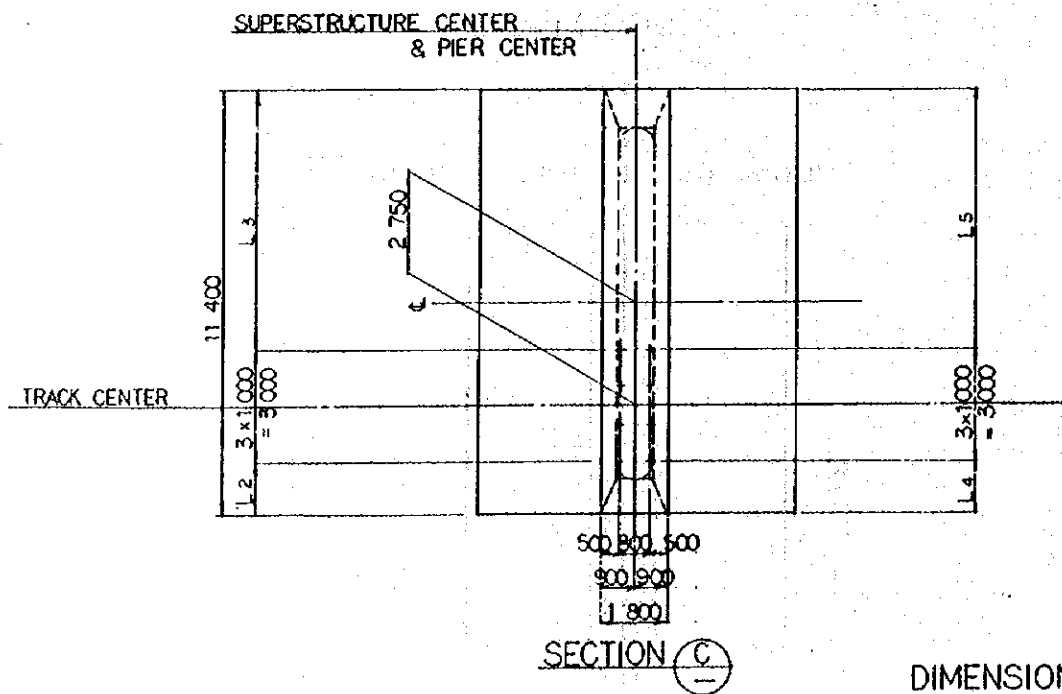
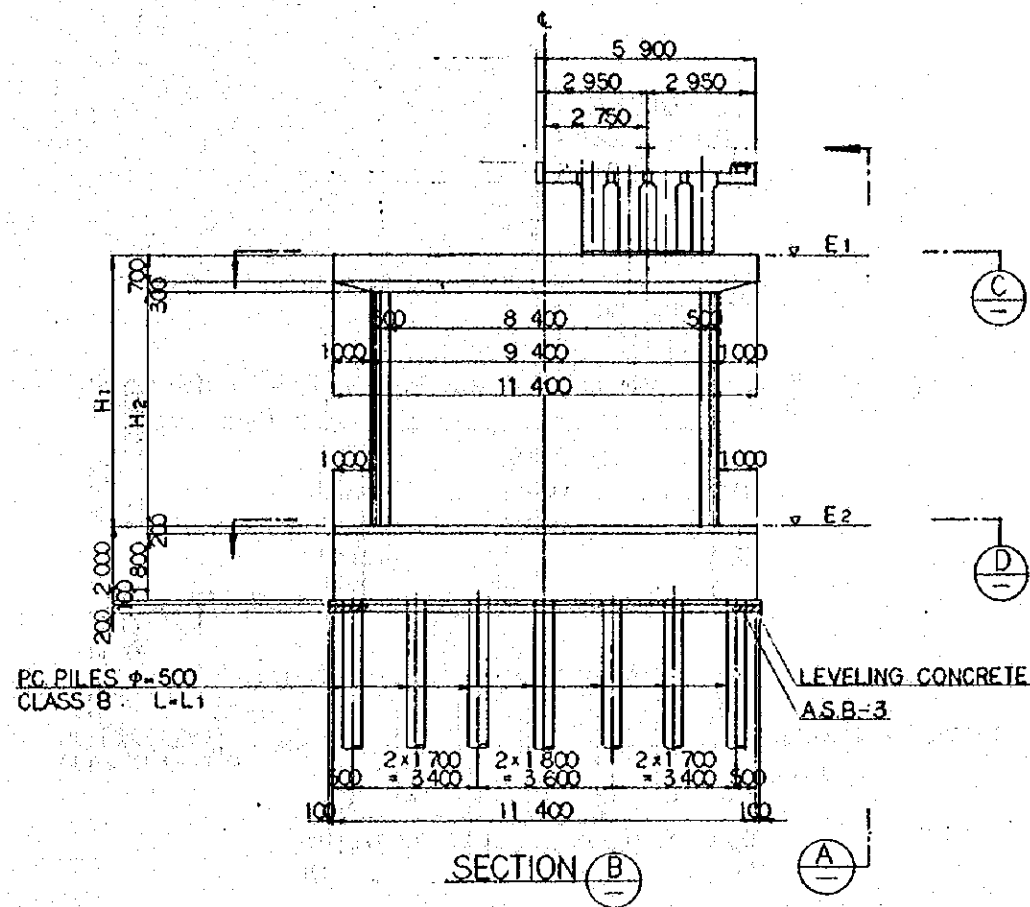
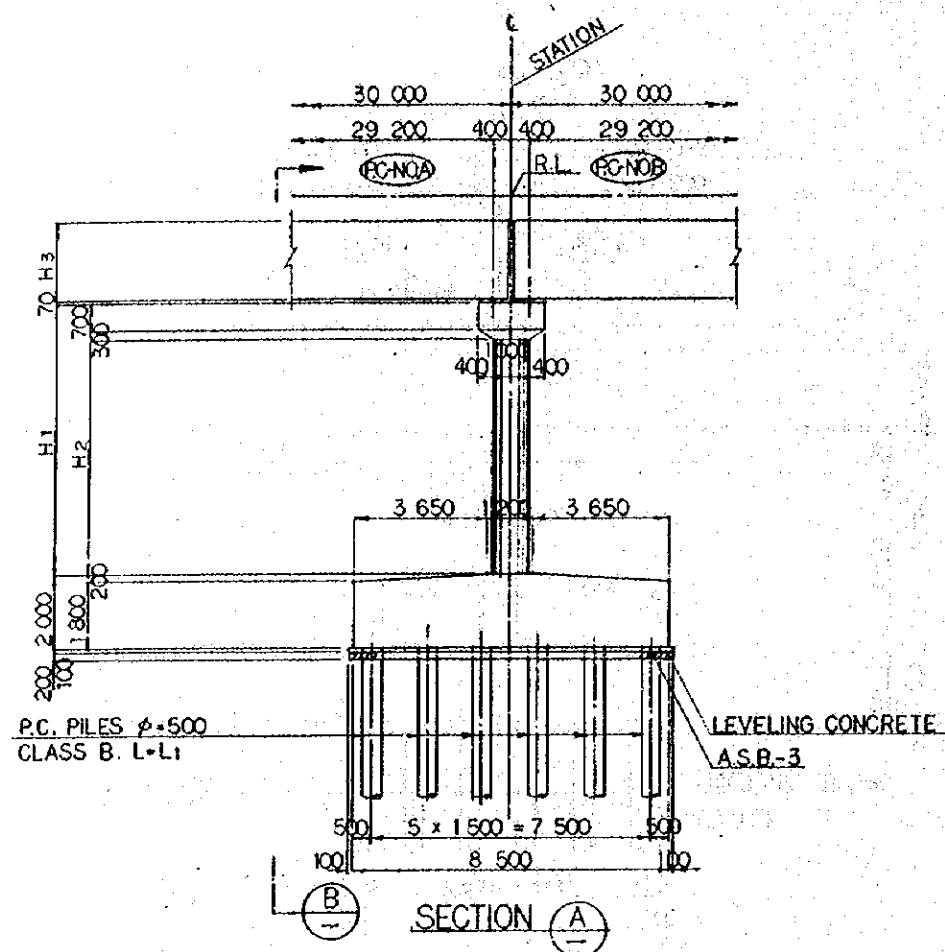


DIMENSION SCHEDULE

PIER NO	STATION	ALIGNMENT	RC-NO.	RC-NO.	R.L.	E1	E2	E3	H1	H2	H3	H4	L1	L2	L3	L4	L5	
P-14	14+071.00	TRANSITION	07	12	8.567	6.907	5.637	0.437	5.200	4.200	6.470	4.200	11.0	1.450	6.950	400	5.900	
P-15	14+211.00	STRAIGHT	08	13	8.987	7.327	6.057	0.357	5.700	4.700	6.970	4.700	11.0	1.450	6.950	400	5.900	
P-36	18+136.00	CURVED	R-500	31	28	6.334	4.674	3.404	2.296	5.700	4.700	6.970	4.700	14.0	1.563	6.837	410	5.890

GENERAL VIEW OF P-14, 15 & 36

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS							
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT							
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)							
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED	
B	1 AUG. 84	S.S.	M.Y.	K.A.	K.M.	M.K.	
A	15 FEB. 84	S.S.	M.Y.	K.A.	K.M.	M.K.	
PIER P14, P15, P36 GENERAL VIEW							
PACKAGE: I CIVIL AND ARCHITECTURAL WORK							
SCALE: 1:100				DRAWING NO: CS-089			



DIMENSION SCHEDULE

PIER NO	STATION	ALIGNMENT	PCNOA	PCNOB	R.L.	E1	E2	H1	H2	H3	L1	L2	L3	L4	L5	
P-16	14+241.00	STRAIGHT	—	13	14	9.071	6.141	0.441	5.700	4.700	2.150	11.0	1.450	6.950	1.450	6.950
P-43	18+880.00	CURVED	R+500	34	35	10.554	7.624	0.324	7.300	6.300	2.150	14.0	1.563	6.837	1.563	6.837
P-44	18+910.00	CURVED	R+500	35	36	10.554	7.624	0.076	7.700	6.700	2.150	14.0	1.563	6.837	1.563	6.837
P-45	18+940.00	CURVED	R+500	36	37	10.554	7.624	0.076	7.700	6.700	2.150	14.0	1.563	6.837	1.563	6.837
P-46	18+970.00	CURVED	R+500	37	38	10.554	7.624	0.076	7.700	6.700	2.150	14.0	1.563	6.837	1.562	6.837

GENERAL VIEW OF P - 16, 43, 44, 45 & 46

NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. REFERENCE DRAWING FOR BAR ARRANGEMENT : CS-092-1 CS-092-2---P16 CS-112, CS-113, CS-114,-----P43~P46

REPUBLIC OF INDONESIA  
MINISTRY OF COMMUNICATIONS  
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

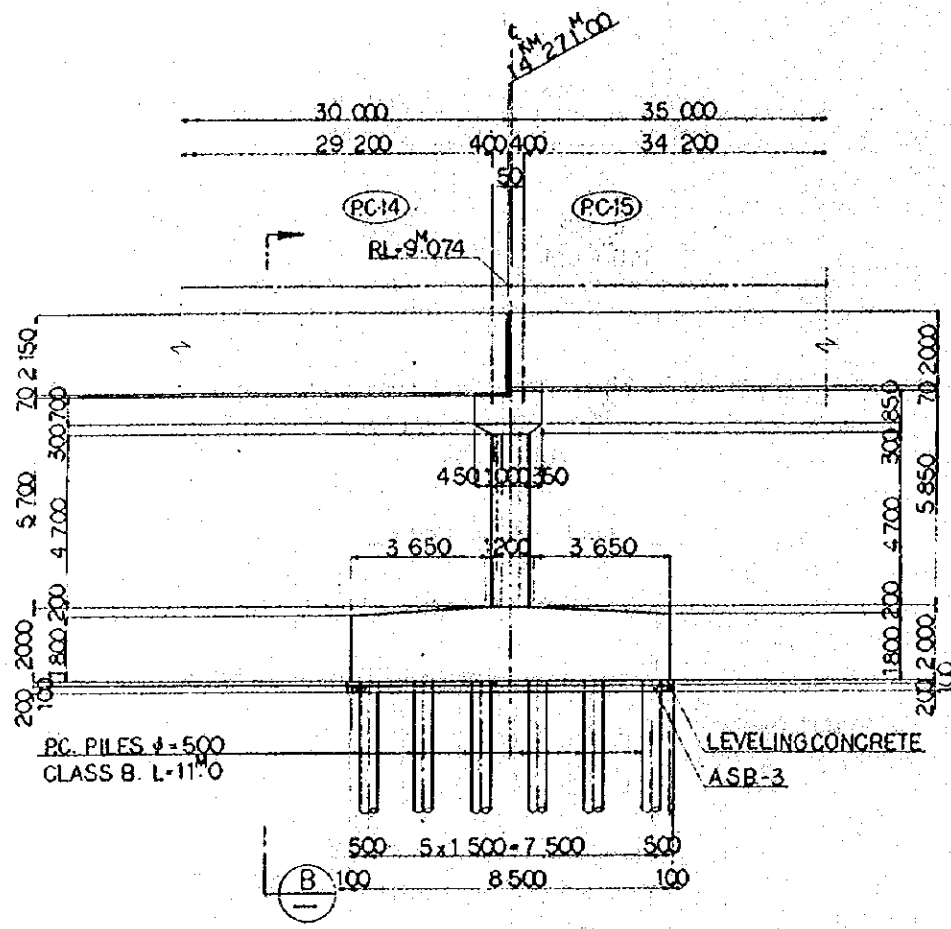
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
B	1 AUG. '84	S.S.	M.Y.	K.A.	K.M.	M.K.
A	15 FEB. '84	S.S.	M.Y.	K.A.	K.M.	M.K.

PIER P16, P43 ~ P46

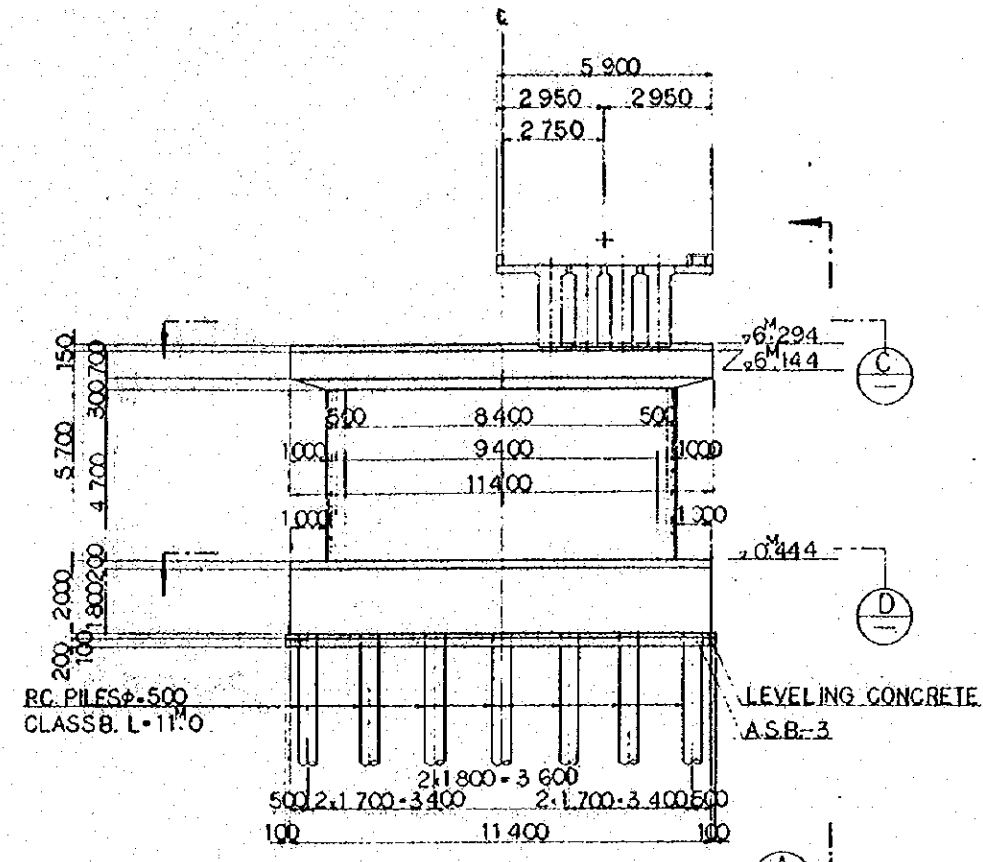
GENERAL VIEW

PACKAGE: I CIVIL AND ARCHITECTURAL WORK

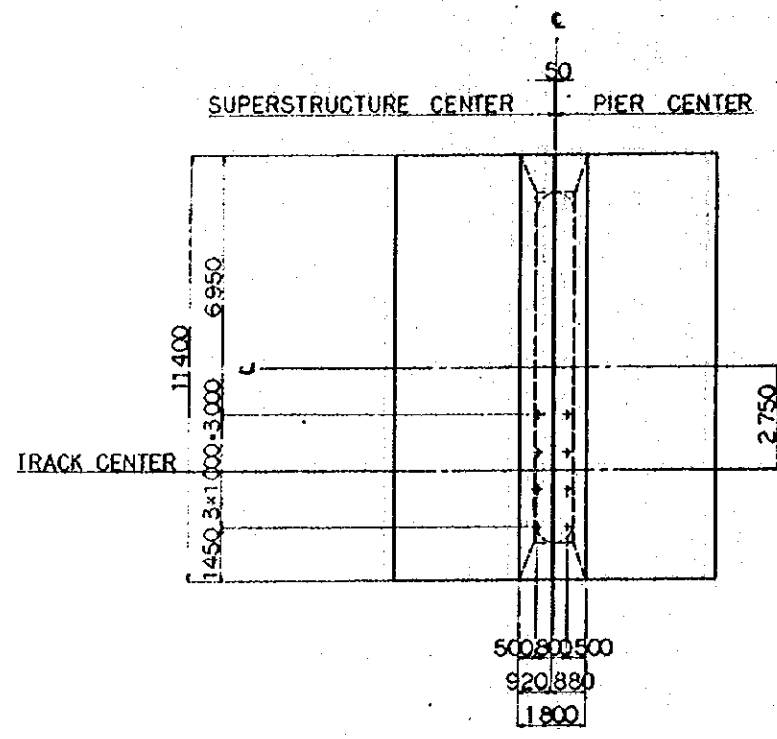
SCALE: 1:100 DRAWING NO: CS-090



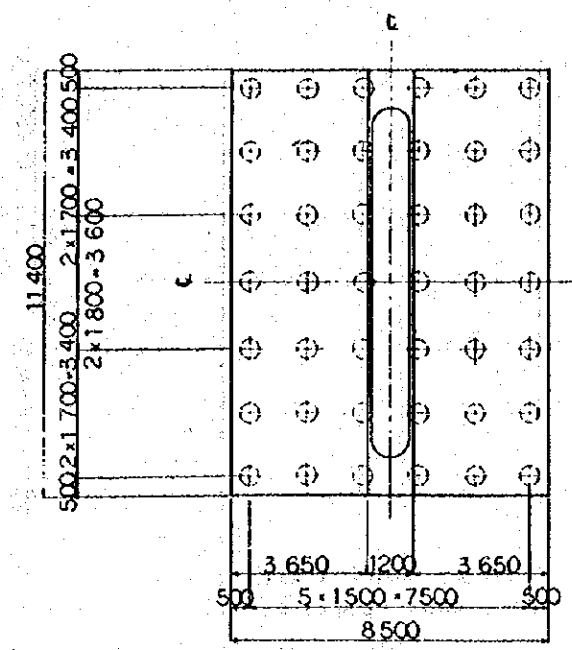
SECTION A



SECTION B



SECTION C



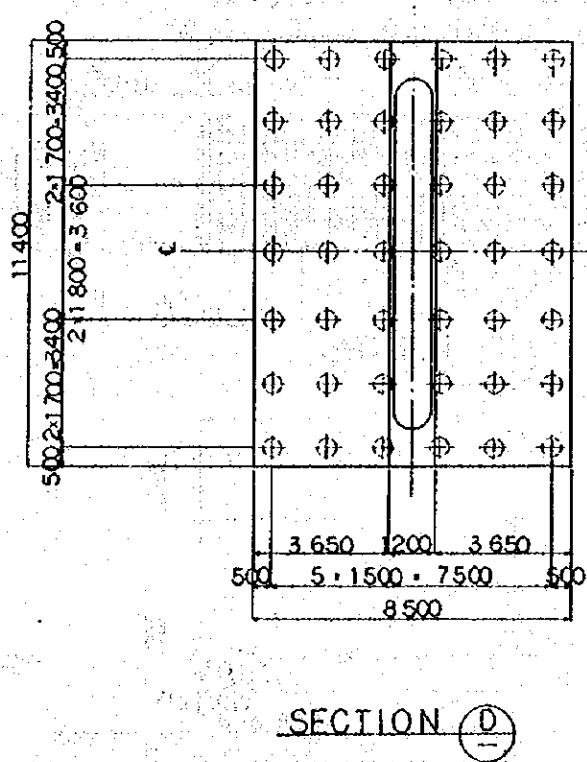
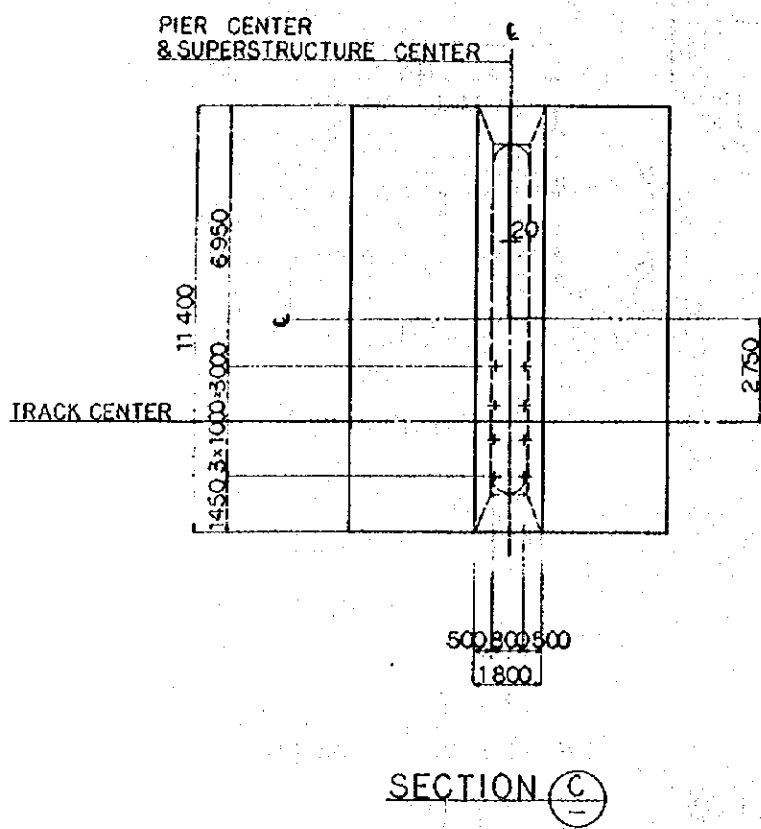
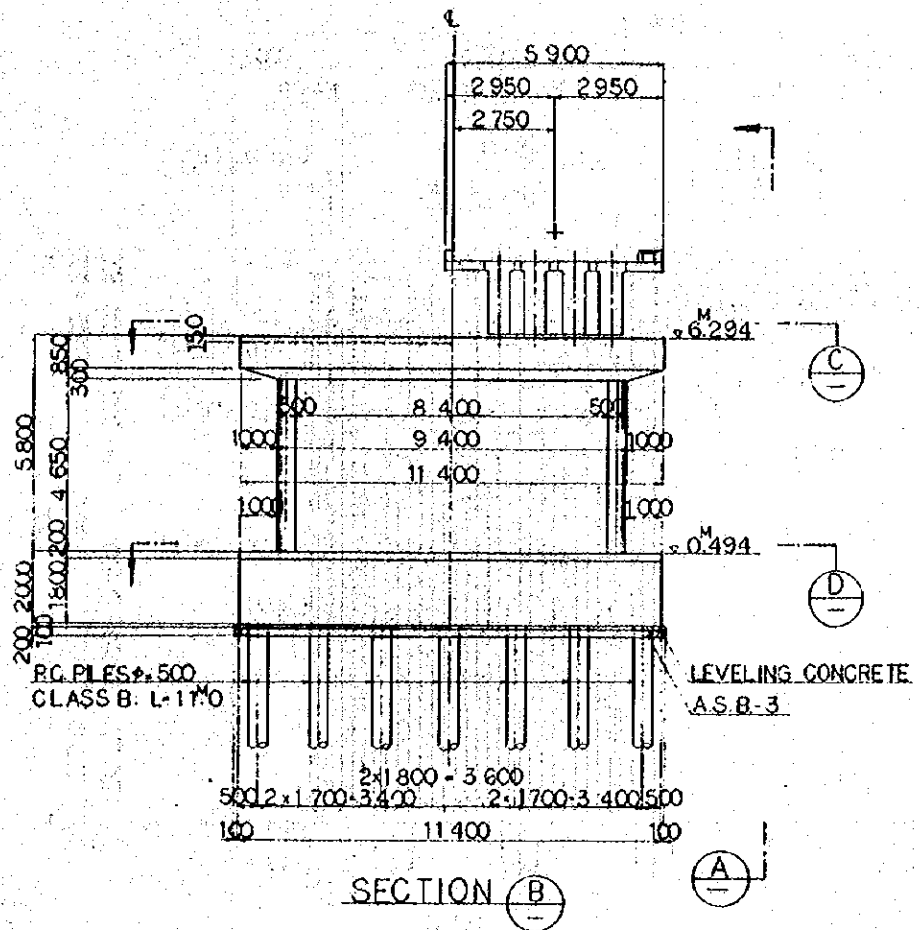
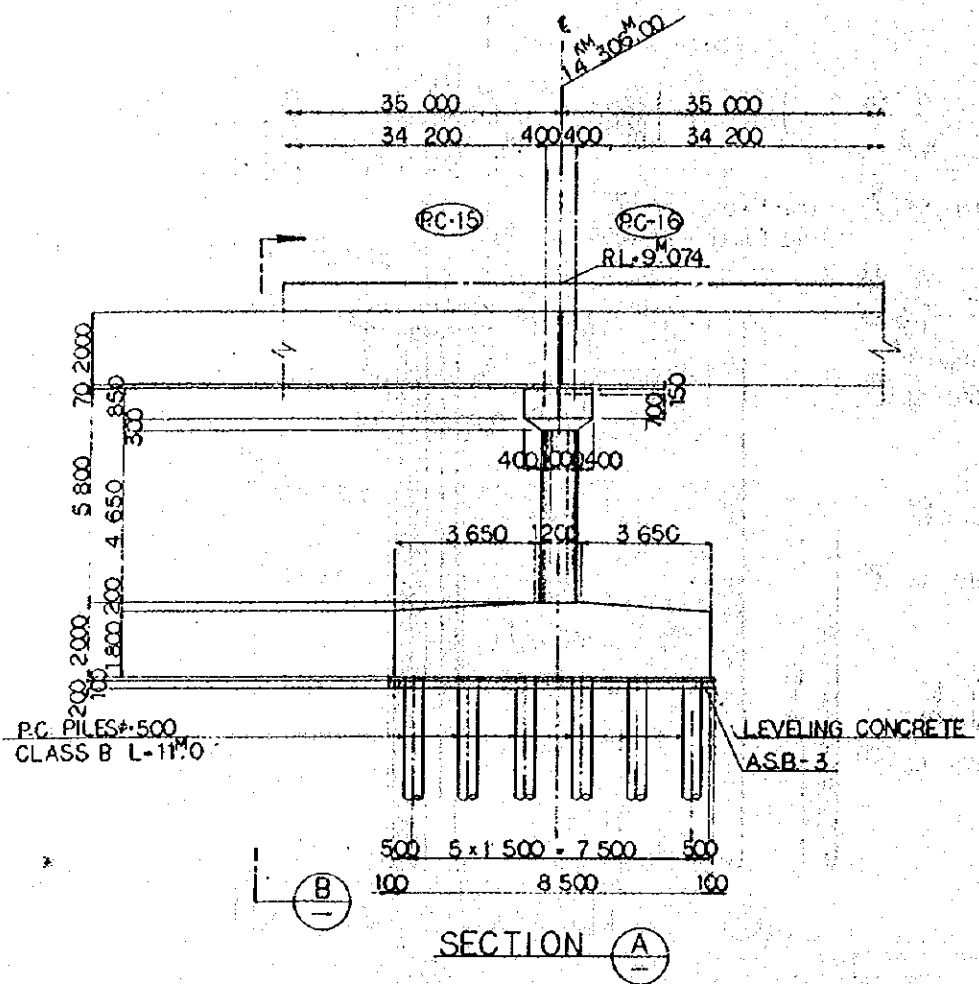
SECTION D

- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR BAR ARRANGEMENT: CS-092-1, CS-092-2

GENERAL VIEW OF P-17

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG 84	S.S.	m.y.	K.S.	K.M.	m.k.
A	15 FEB 84	S.S.	m.y.	S.A.	K.M.	m.k.
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
PIER P17 GENERAL VIEW						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE	1:100		DRAWING NO.	CS-091		





GENERAL VIEW OF P-18

- NOTES:
- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  - REFERENCE DRAWING FOR BAR ARRANGEMENT: CS092-1, CS092-2.

DESIGN CRITERIA

DESIGN LOAD	TRAIN LOAD	EQUIVALENT TO RS-1E
	SEISMIC EFFECT	IN HORIZONTAL DIRECTION $K_h=0.1$ IN VERTICAL DIRECTION $K_h=0$
ALLOWABLE STRESS	REINFORCING BAR	ALLOWABLE TENSILE STRESS 1800 kg/cm <sup>2</sup>
	CONCRETE	ALLOWABLE COMPRESSIVE STRESS 80 kg/cm <sup>2</sup>
MATERIAL	TYPE OF REINFORCING BAR	SD-38
	CONCRETE OF DESIGN CRITERIA STRENGTH	$\sigma_{ck}=210 \text{ kg/cm}^2$
	MAX SIZE OF COARSE AGGREGATE	25mm

REPUBLIC OF INDONESIA  
MINISTRY OF COMMUNICATIONS  
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

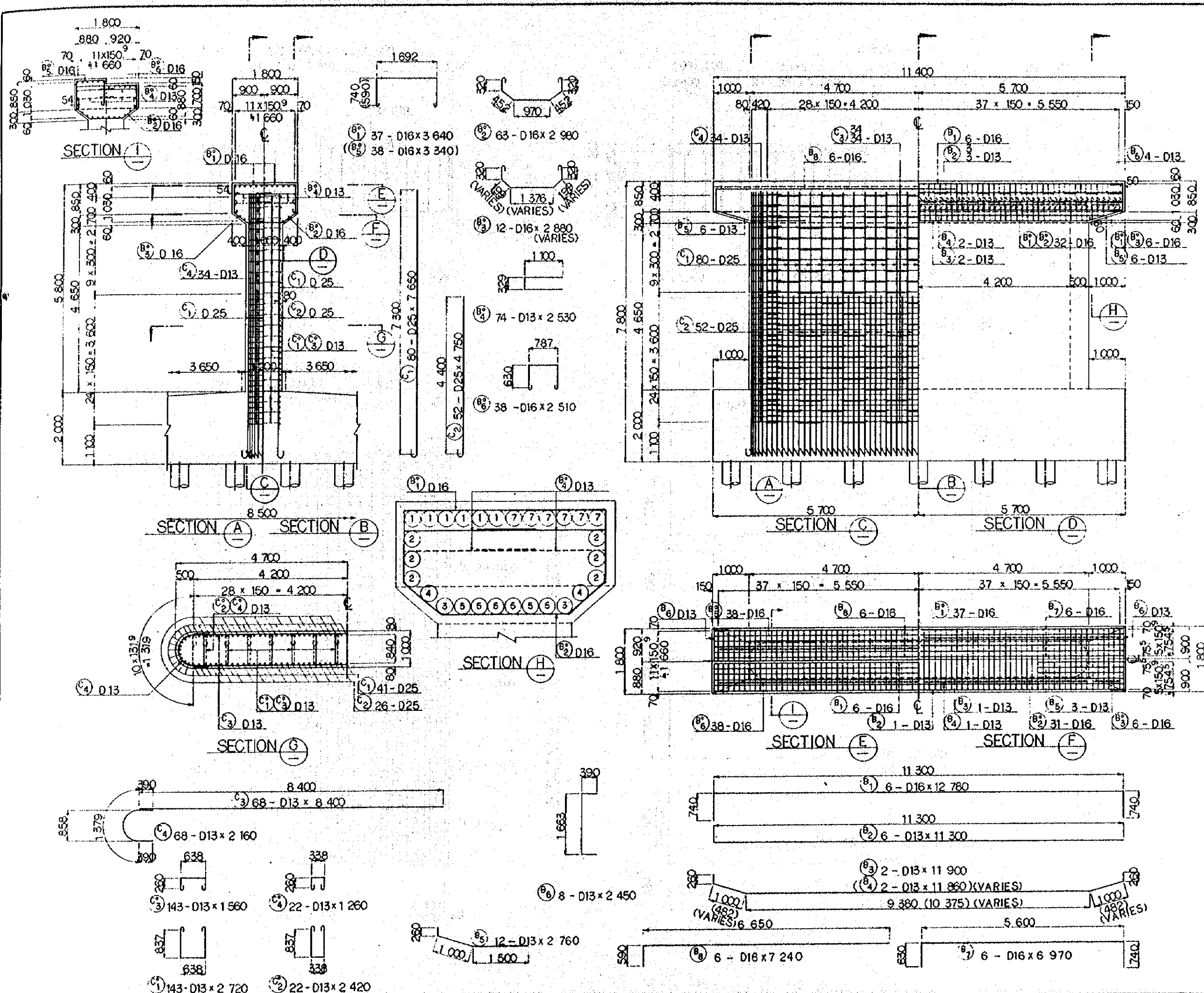
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1 AUG. '84	SS	MY	K.A.	K.M.	M.K.
A	15 FEB. '84	SS	MY	K.A.	K.M.	M.K.

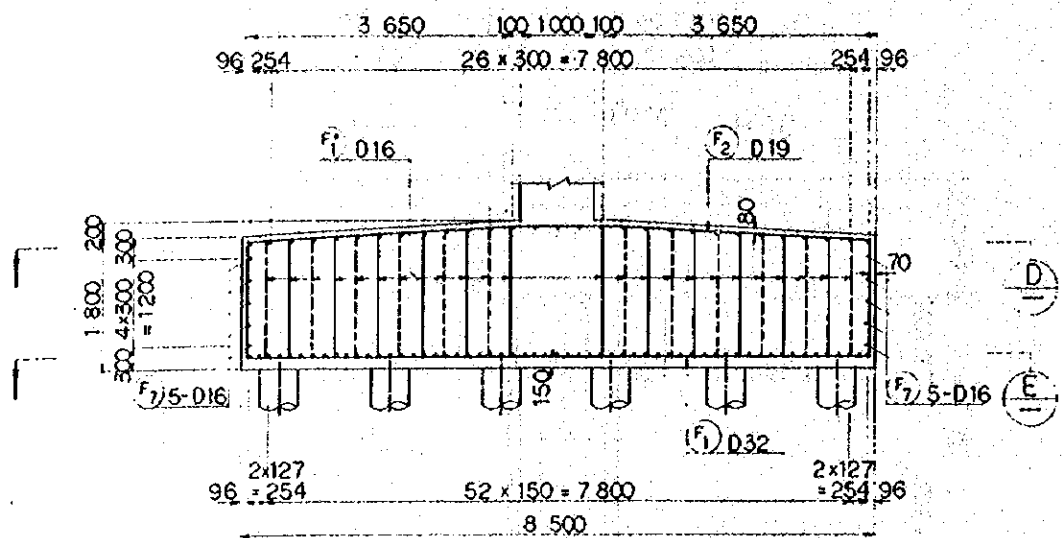
PIER P18  
GENERAL VIEW

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
SCALE: 1:100  
DRAWING NO: CS-092

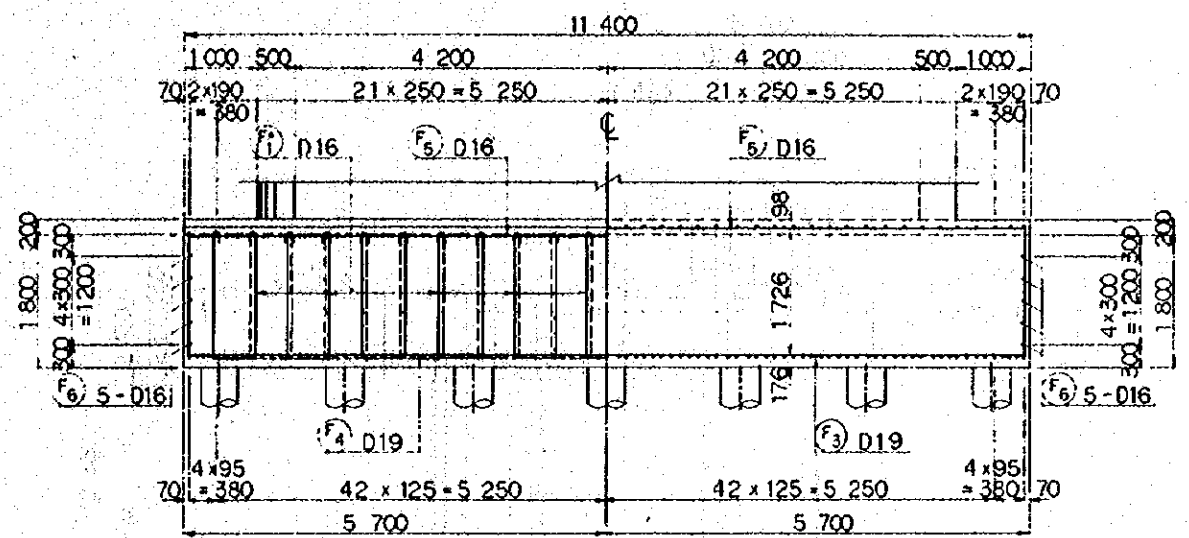


1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. REFERENCE DRAWING FOR GENERAL VIEW: CS-092

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1AUG.84	S.S.	m.y.	K.A.	K.M.	M.K.
A	15FEB.84	S.S.	m.y.	K.A.	K.M.	M.K.
REVISORS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
PIER P18 BAR ARRANGEMENT (SHEET 1 OF 2)						
PACKAGE: 1 CIVIL AND ARCHITECTURAL WORK						
SCALE: 1:50		DRAWING NO. CS-092-1				

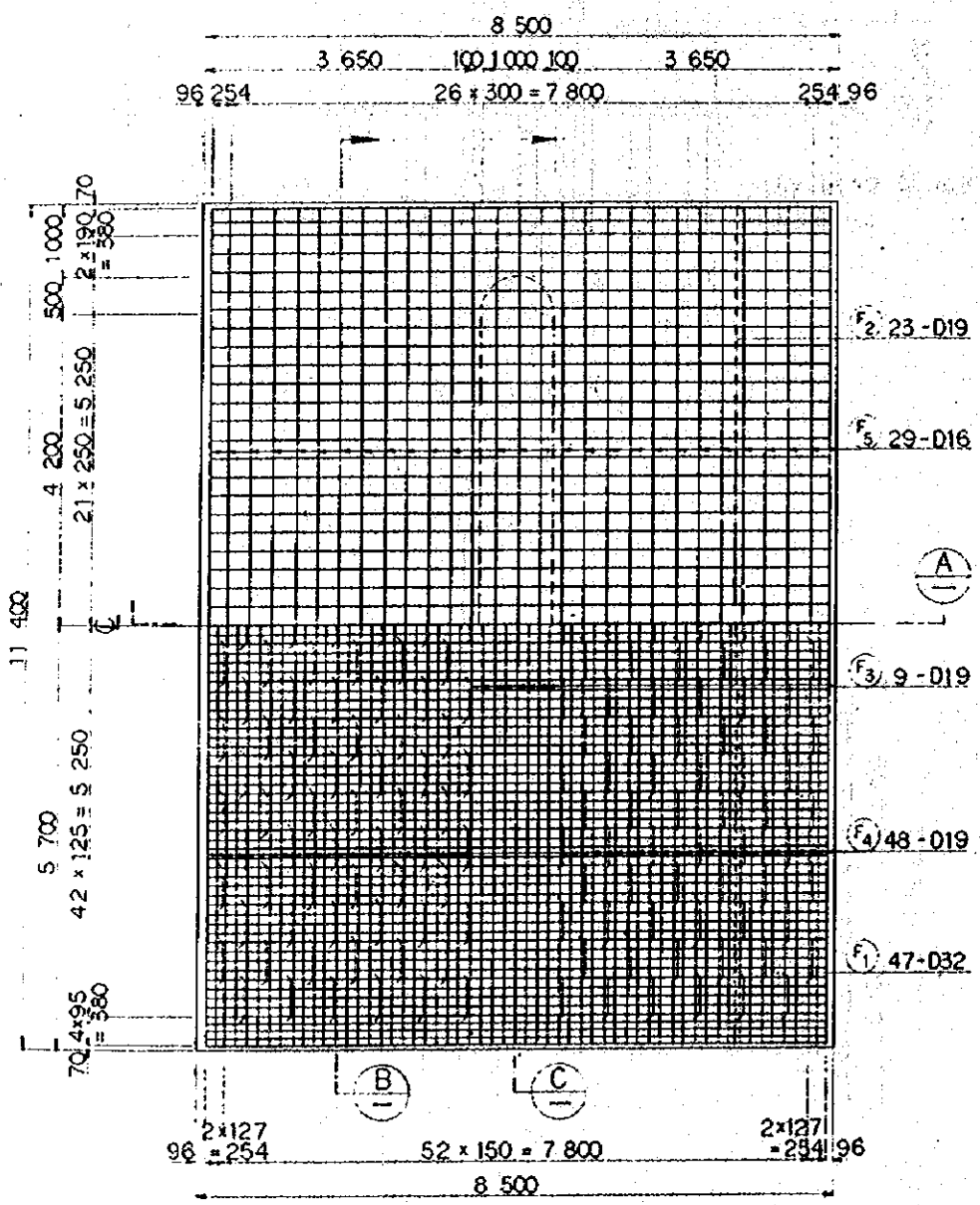


SECTION A



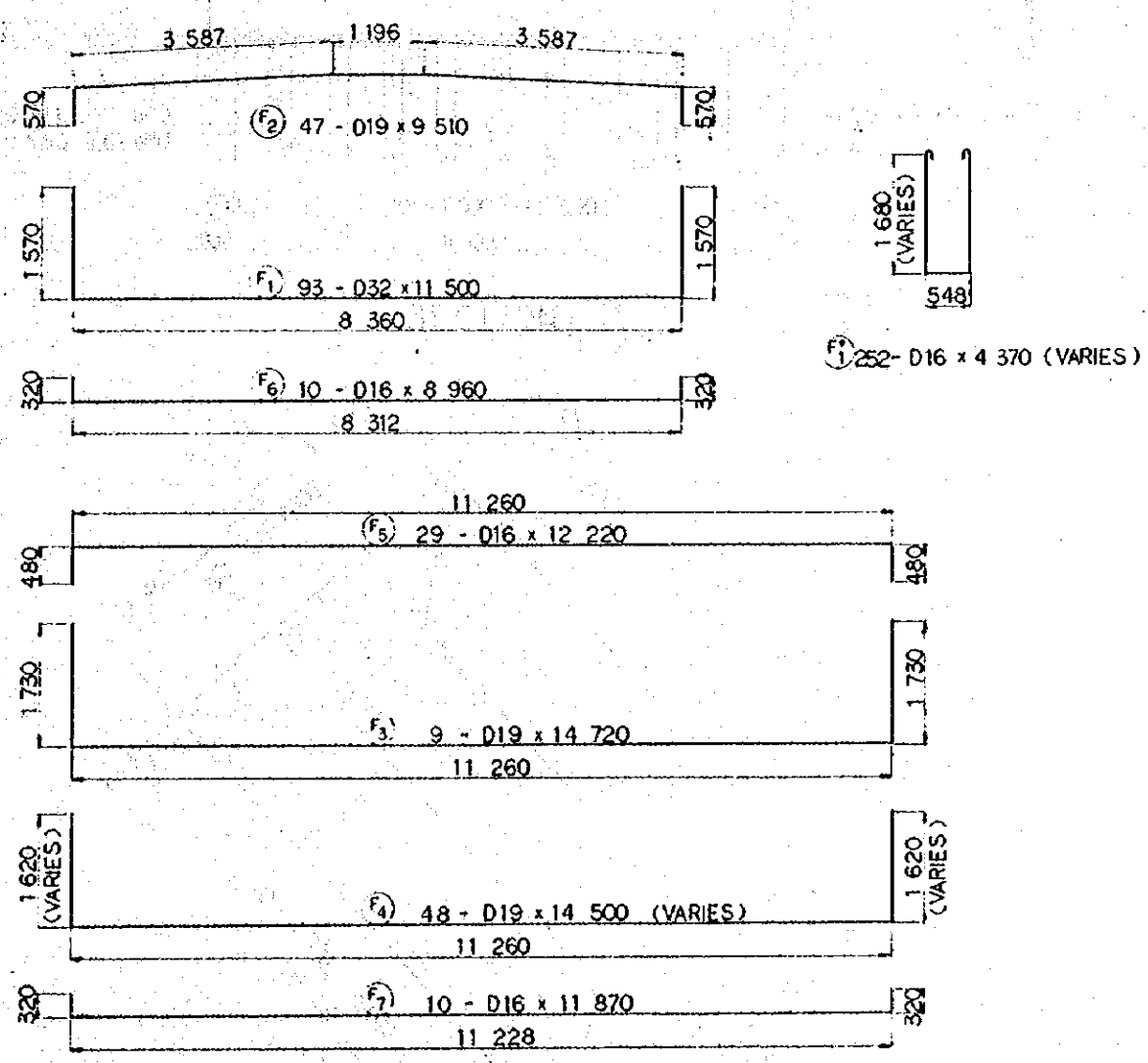
SECTION B

SECTION C



SECTION D

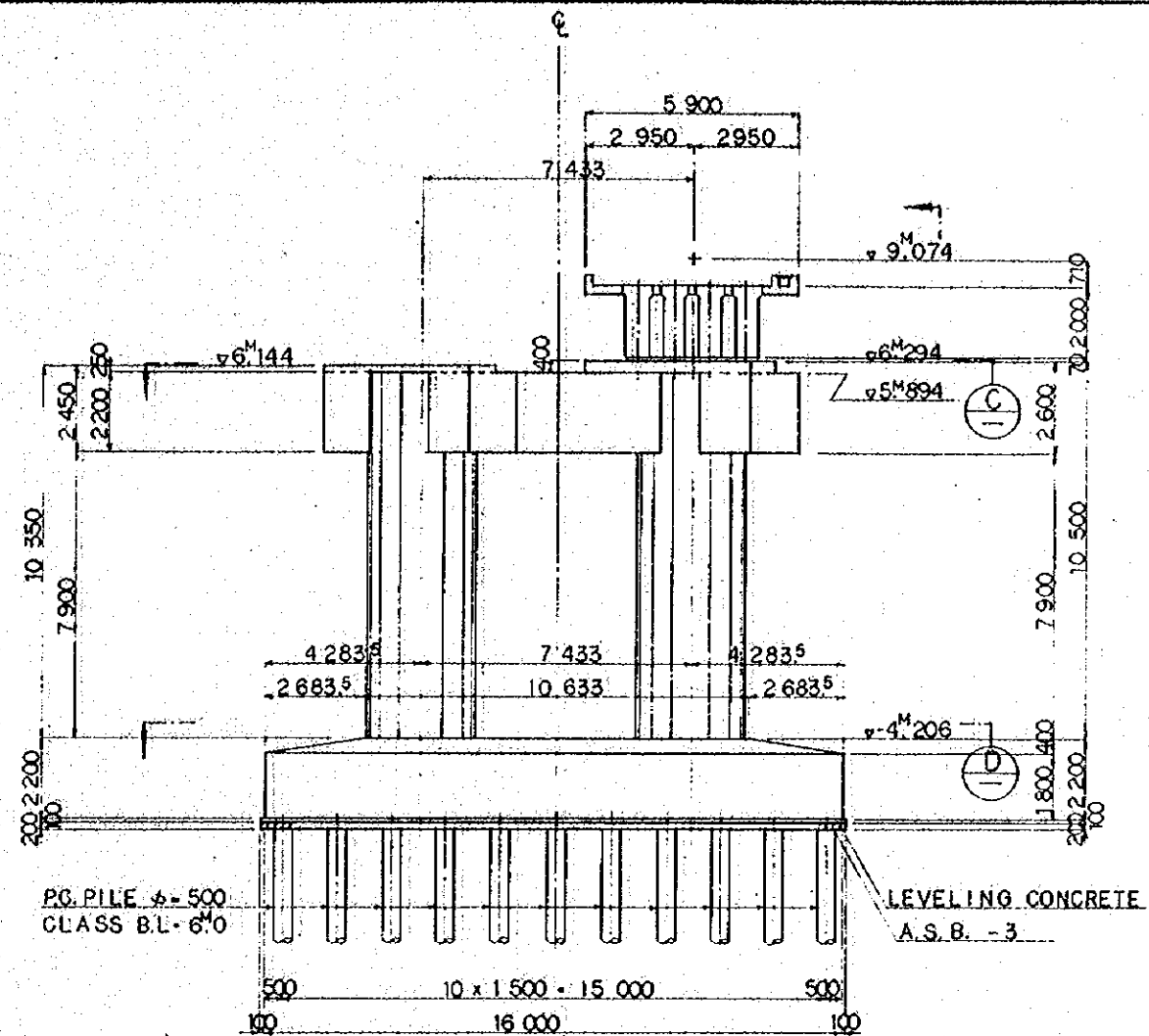
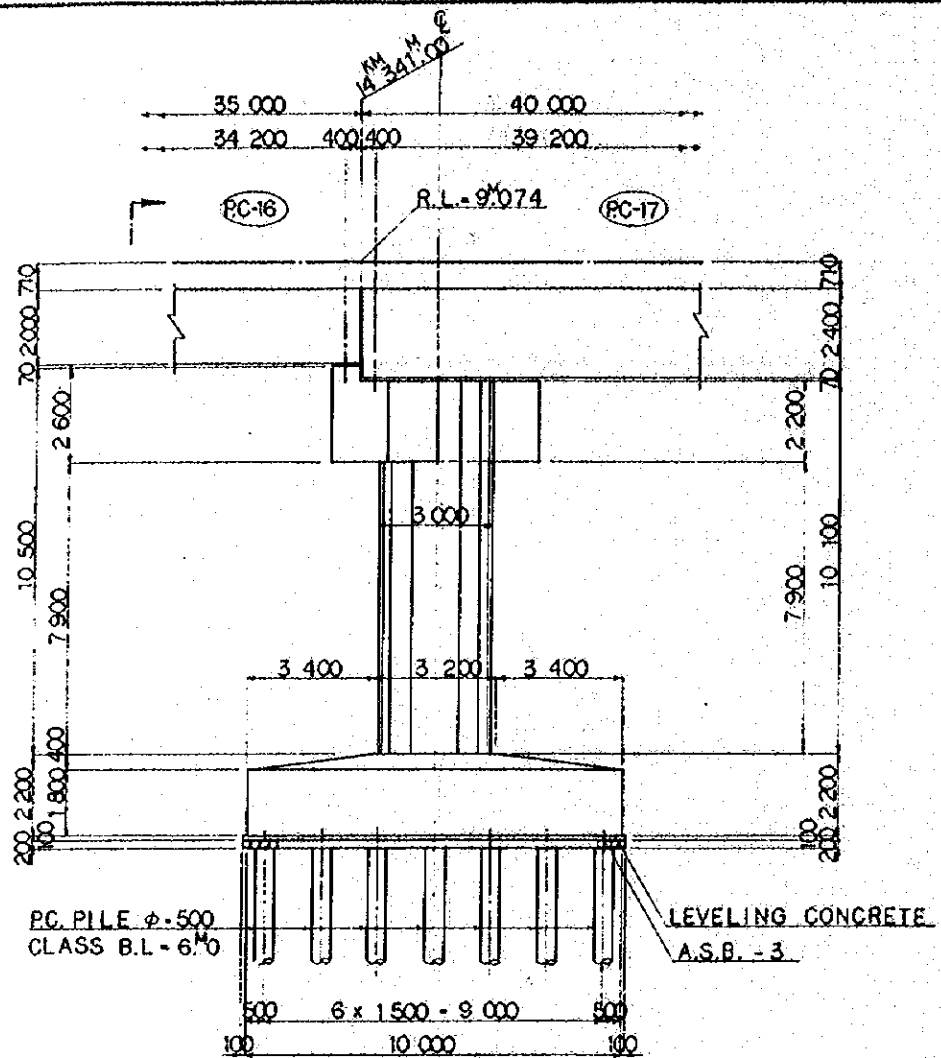
SECTION E



NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. REFERENCE DRAWING FOR GENERAL VIEW : CS092

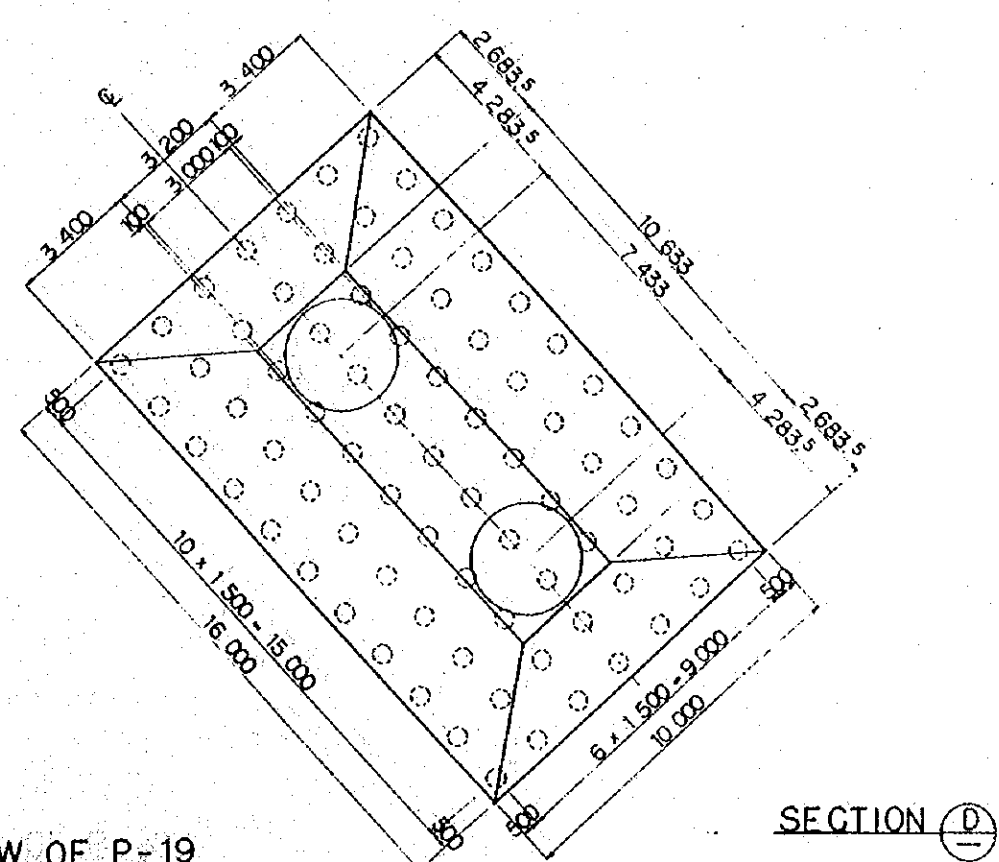
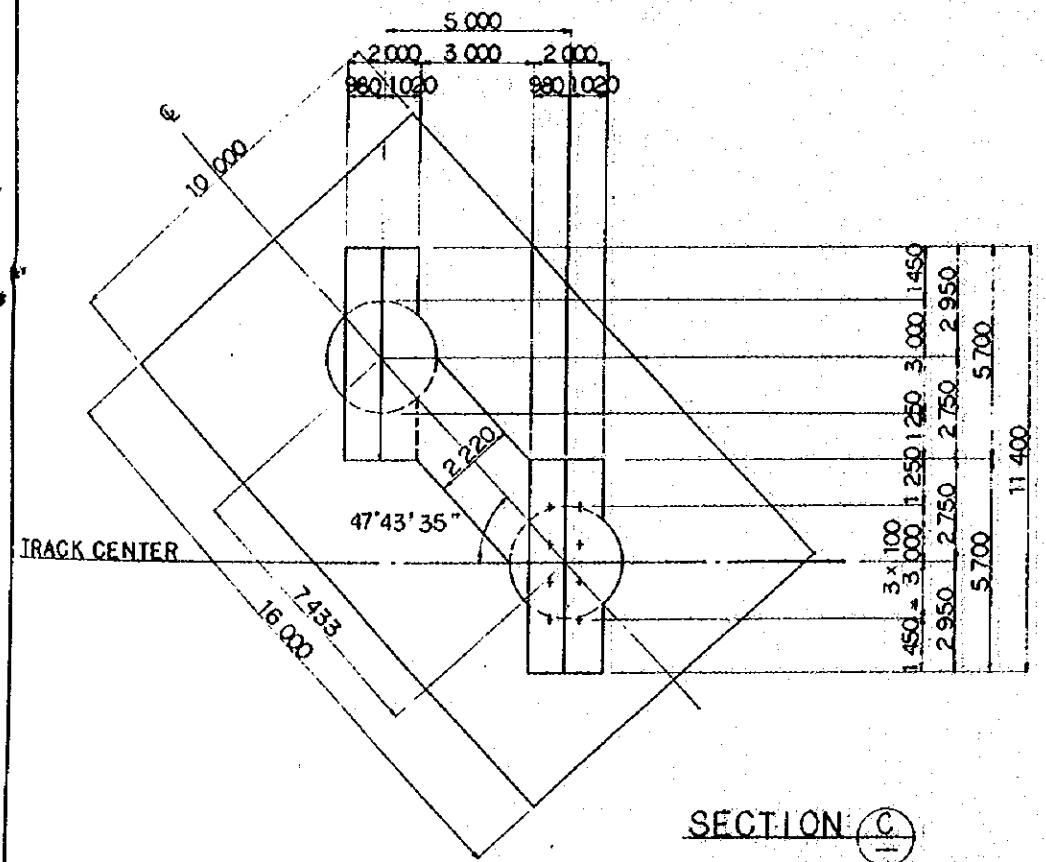
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG '84	SS	MY	KA	KM	AK
A	15 FEB '84	SS	MY	KA	KM	AK
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
PIER P18 BAR ARRANGEMENT (SHEET 2 OF 2)						
PACKAGE : 1 CIVIL AND ARCHITECTURAL WORK						
SCALE	DRAWING NO.					
1:50	CS-092-2					



- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR BAR ARRANGEMENT: CS-095,CS-0951CS-095-2

SECTION A

SECTION B

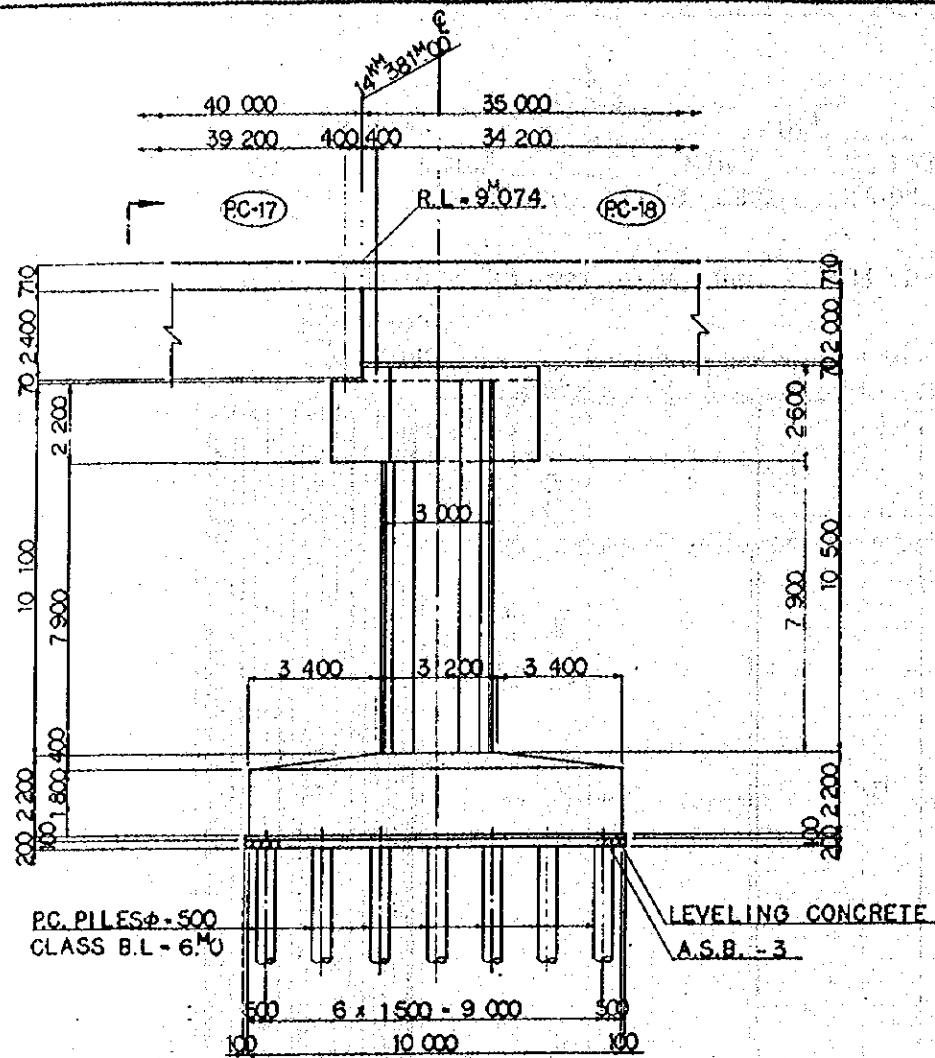


SECTION C

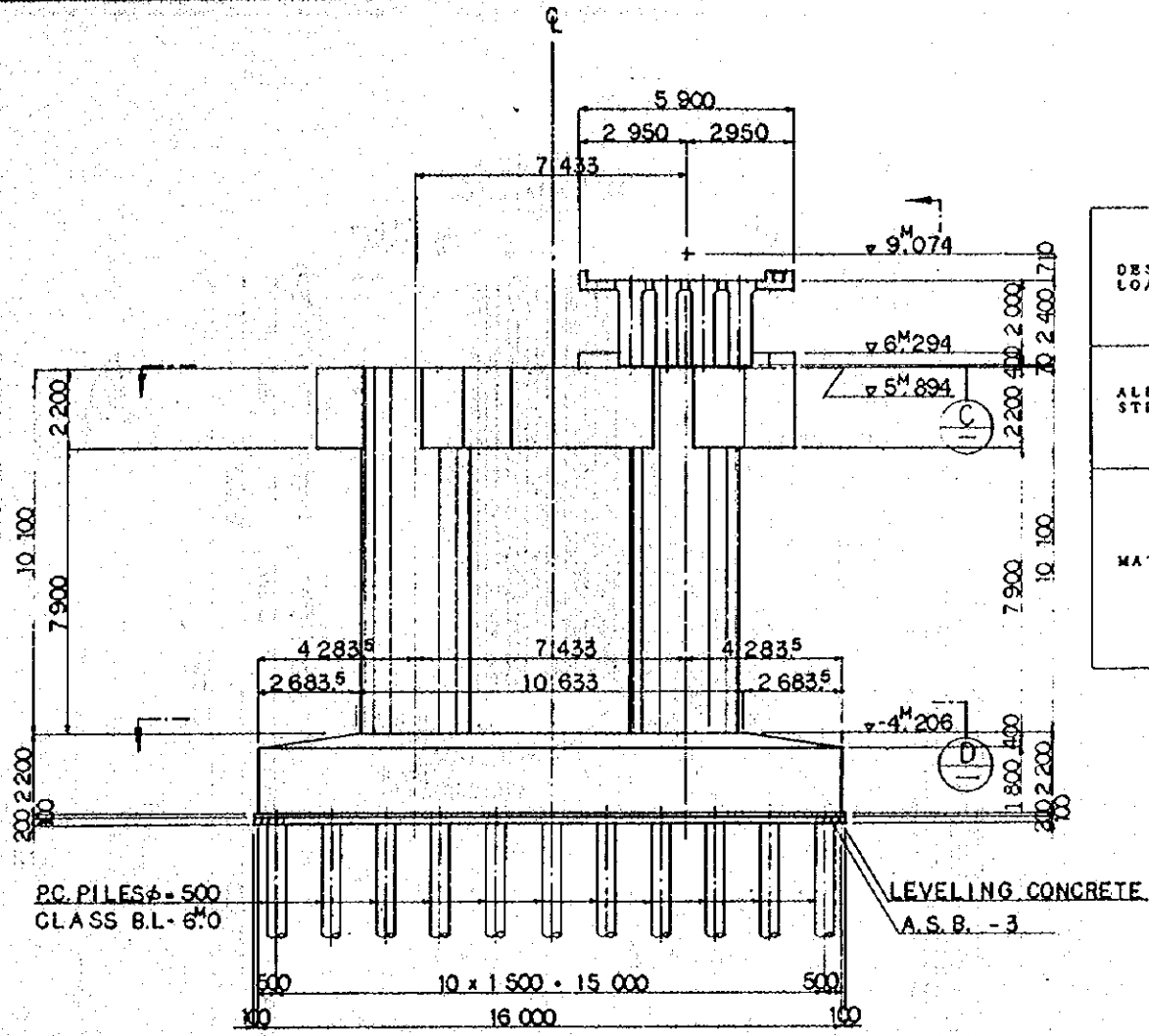
GENERAL VIEW OF P-19

SECTION D

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	SUBMITTED
A	1 AUG '84	SS	m.y	K.R	K.M
PIER P19 GENERAL VIEW					
PACKAGE: I CIVIL AND ARCHITECTURAL WORK					
SCALE: 1:100		DRAWING NO: CS-093			



SECTION A

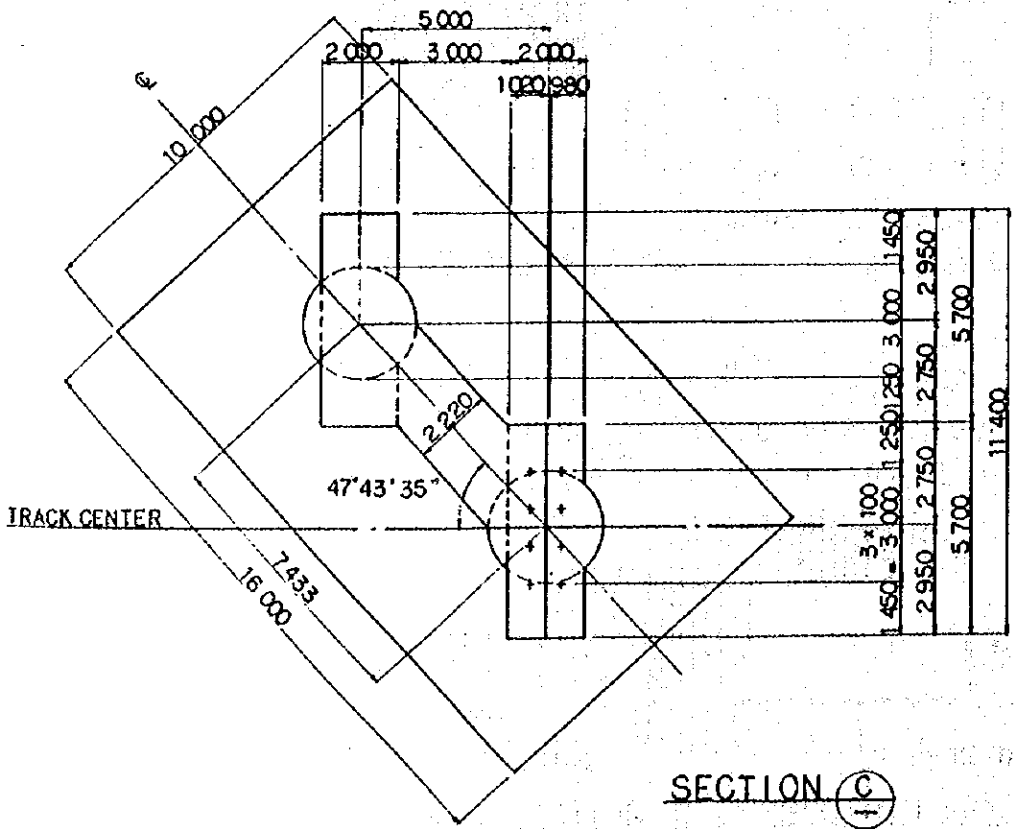


SECTION B

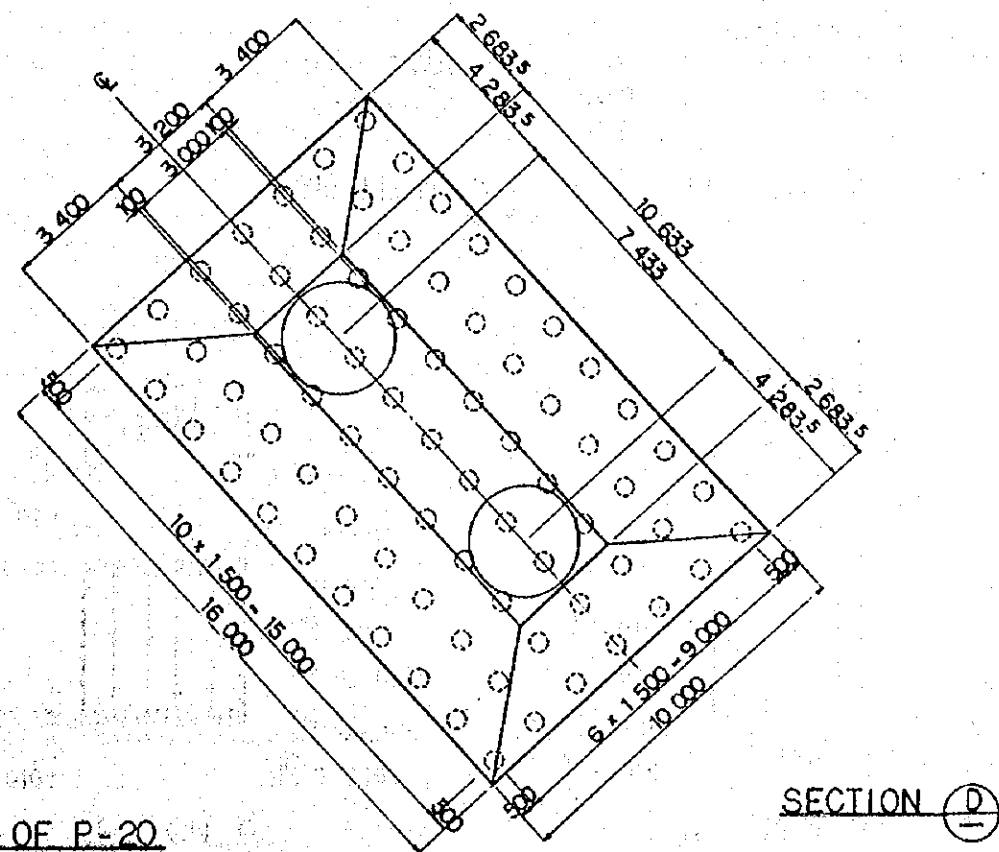
DESIGN CRITERIA

DESIGN LOAD	TRAIN LOAD	EQUIVALENT TO KS-16
DESIGN LOAD	SEISMIC EFFECT	IN HORIZONTAL DIRECTION $K_h=0.1$ IN VERTICAL DIRECTION $K_v=0$
	ALLOWABLE STRESS	ALLOWABLE TENSILE STRESS 180 kg/cm <sup>2</sup> ALLOWABLE COMPRESSIVE STRESS 80 kg/cm <sup>2</sup>
MATERIAL	REINFORCING BAR	SD-39
	CONCRETE OF DESIGN CRITERIA STRENGTH	$f_{ck}=210 \text{ kg/cm}^2$
	MAX SIZE OF COARSE AGGREGATE	25 mm

- NOTES:
- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  - REFERENCE DRAWING FOR BAR ARRANGEMENT: CS-095, CS-0951, CS-0952.



SECTION C



GENERAL VIEW OF P-20

REPUBLIC OF INDONESIA  
MINISTRY OF COMMUNICATIONS  
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

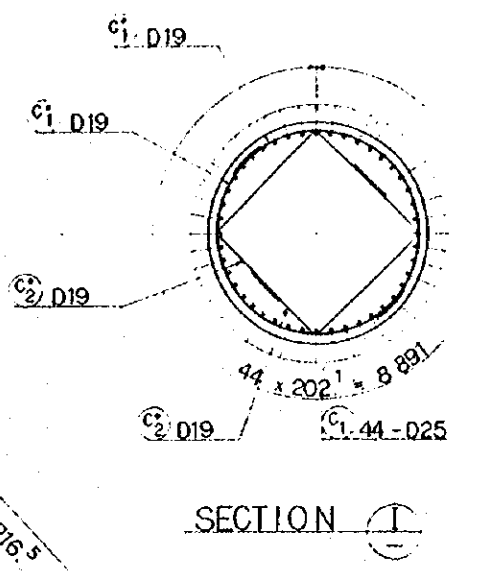
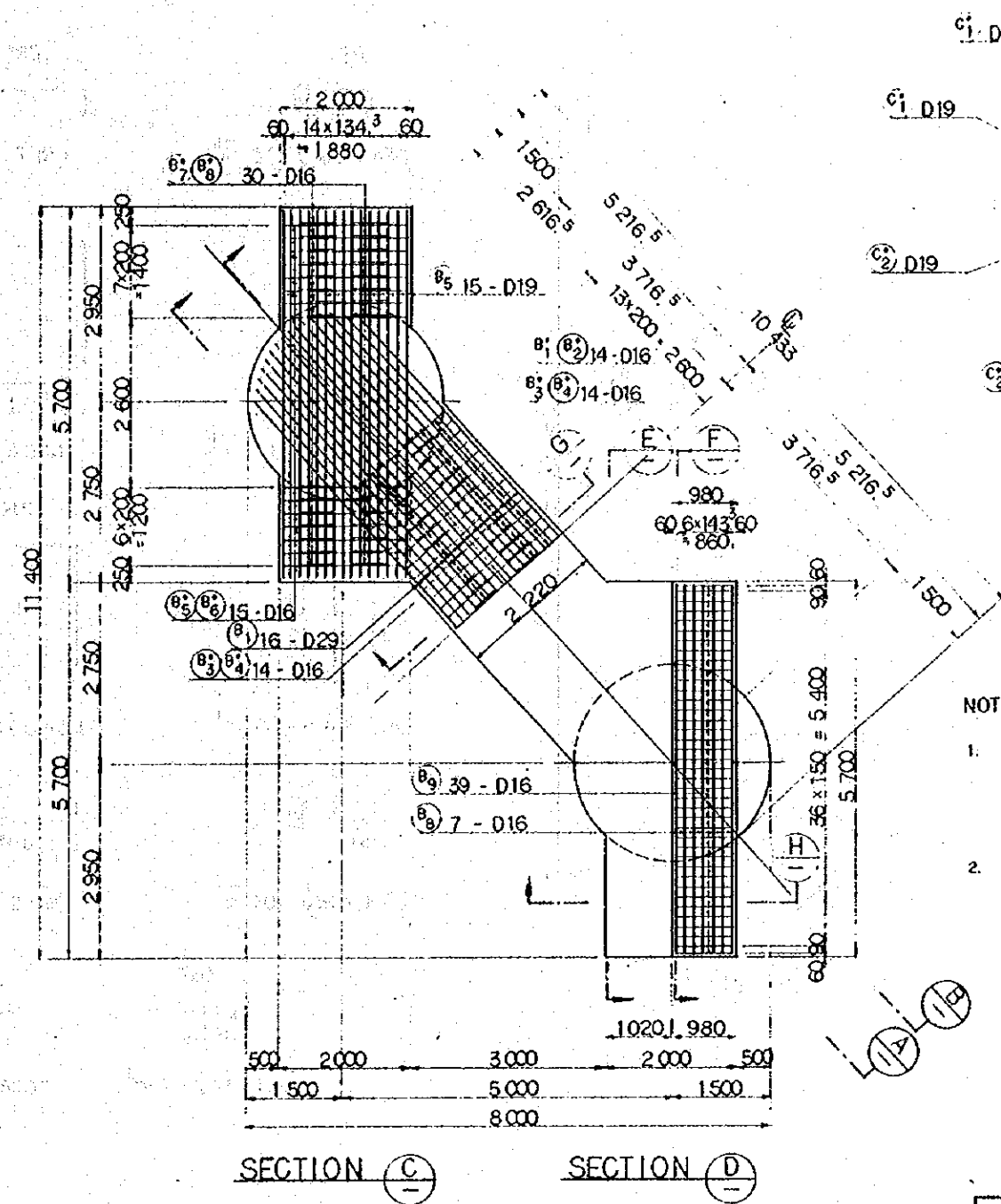
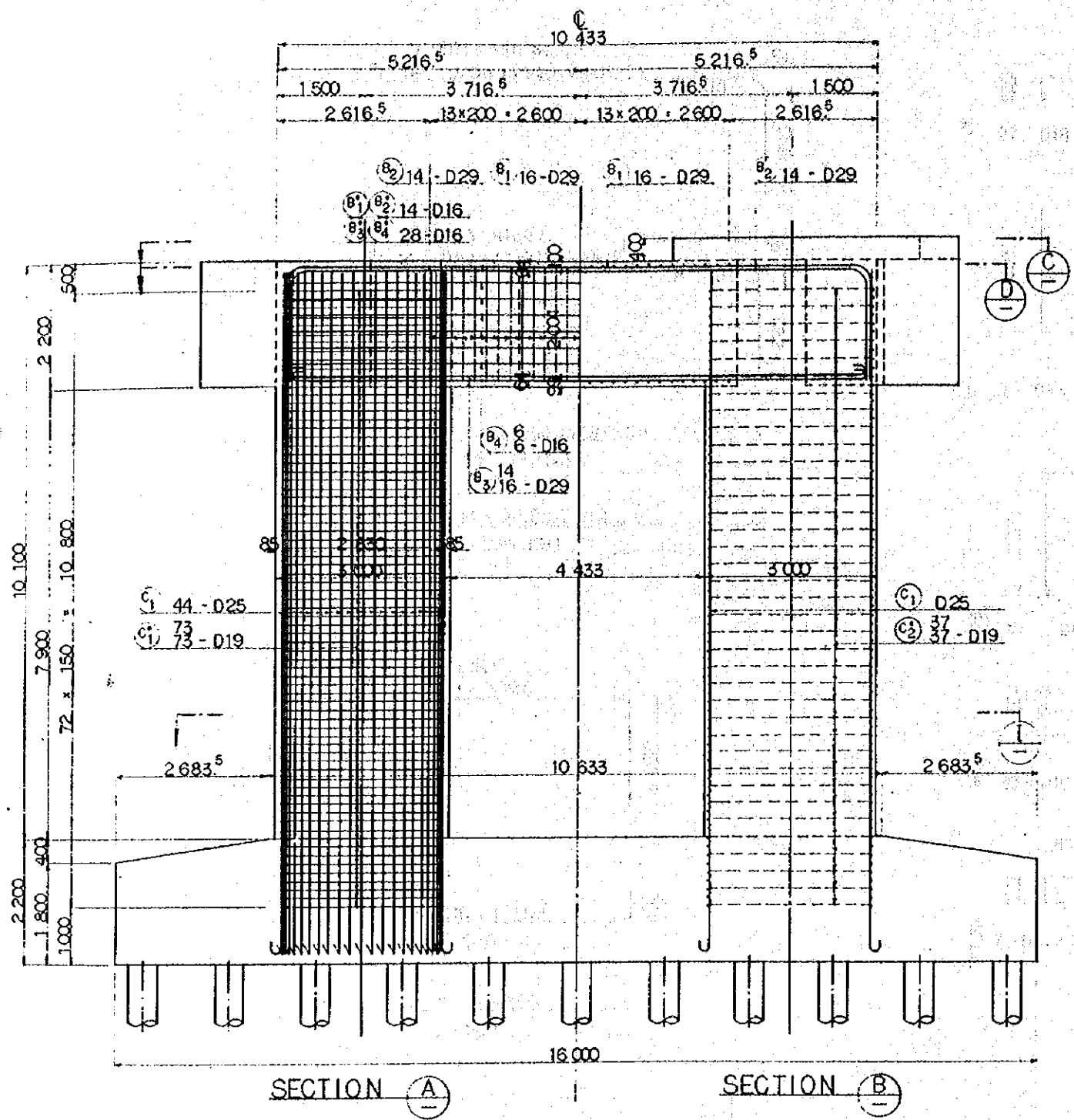
NEW RAILWAY LINE FOR CEMKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

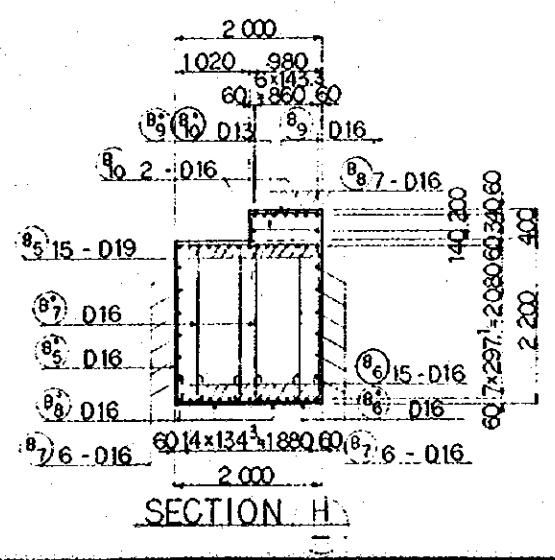
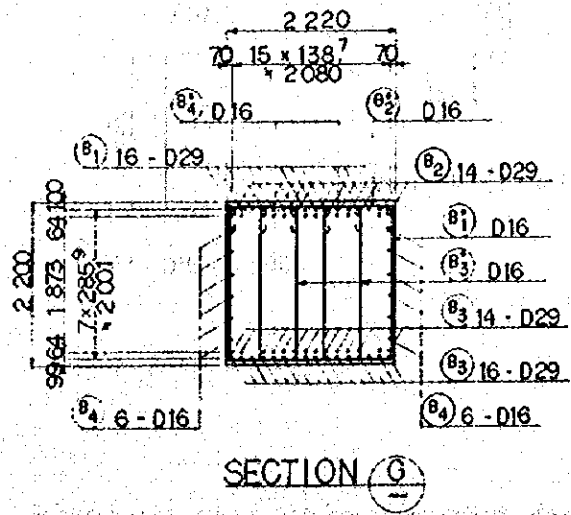
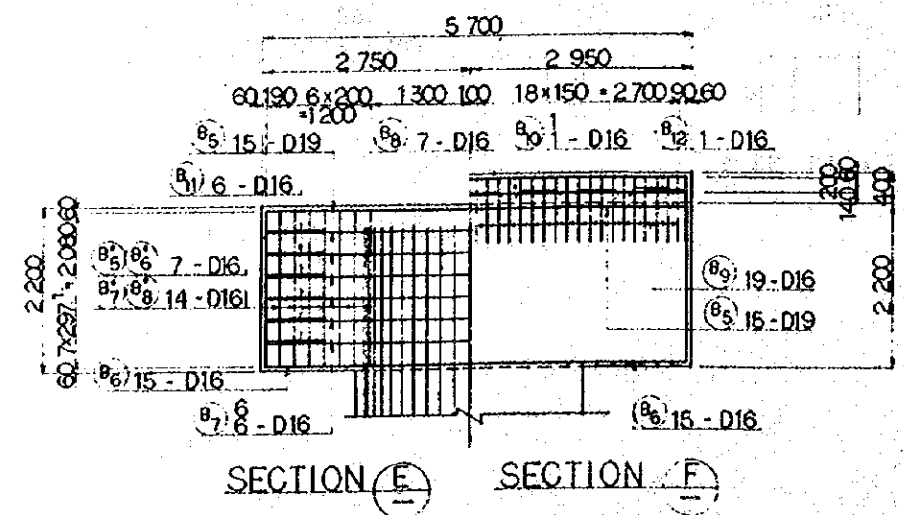
REVISIONS	DATE	REASON	DESIGN	CHECKED	REVIEWED	SUBMITTED
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PIER P20  
GENERAL VIEW

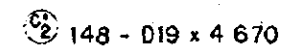
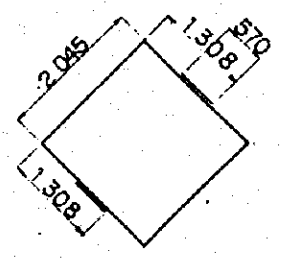
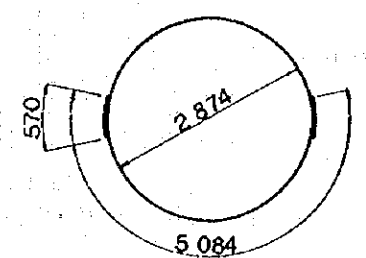
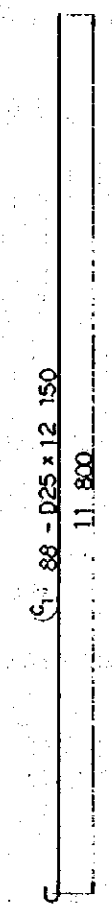
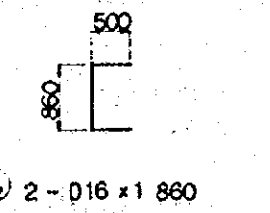
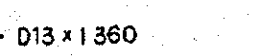
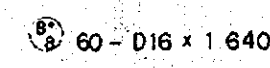
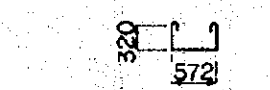
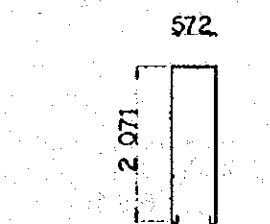
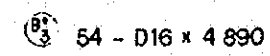
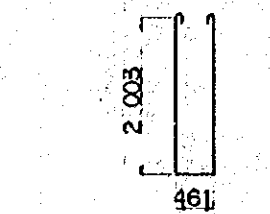
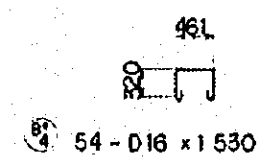
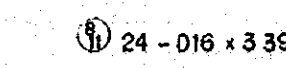
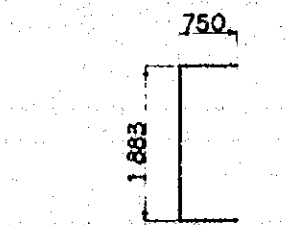
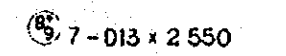
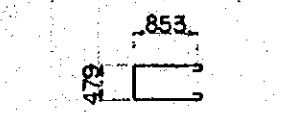
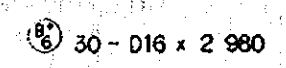
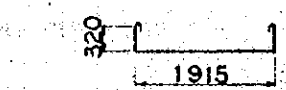
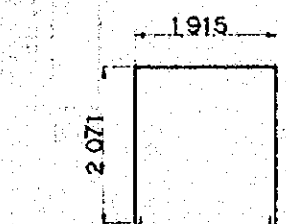
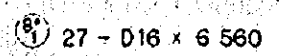
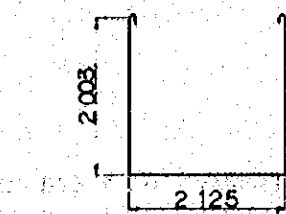
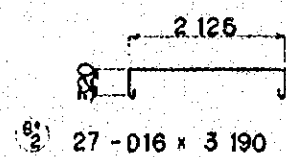
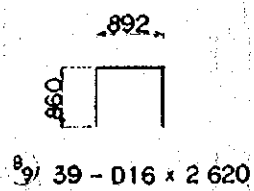
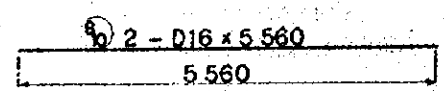
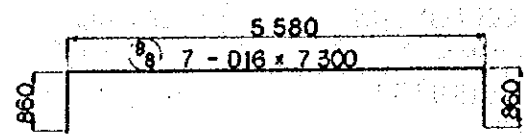
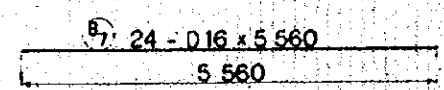
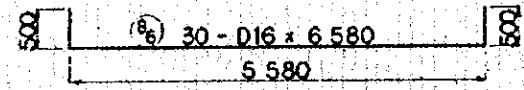
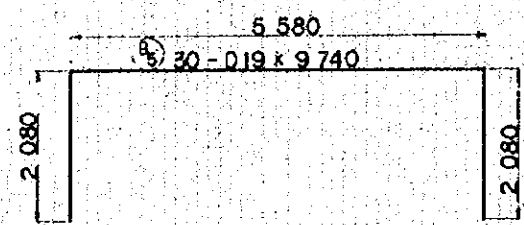
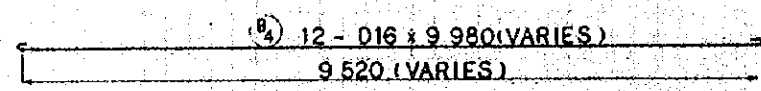
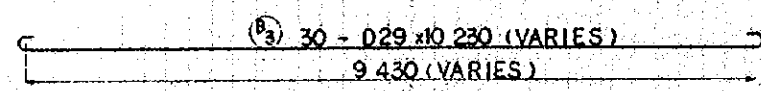
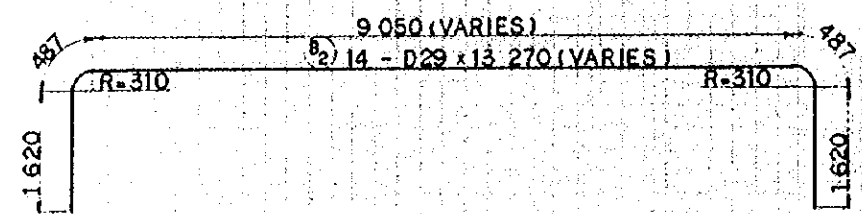
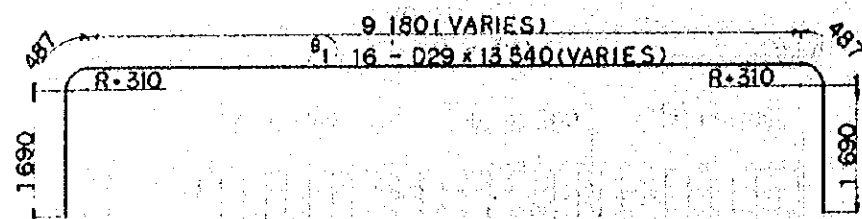
PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
SCALE: 1:100  
DRAWING NO: CS-094



NOTES:  
 1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED.  
 2. REFERENCE DRAWING FOR GENERAL VIEW: CS-094.



REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
REVISIONS	DATE	DESIGNED	CHECKED	REVIEWED	SUBMITTED
A	1 AUG. 84	S.S.	m.y.	K.A.	K.M.
PIER P20 BAR ARRANGEMENT (SHEET 1 OF 3)					
PACKAGE: I CIVIL AND ARCHITECTURAL WORK					
SCALE: 1:50		DRAWING NO.: CS-095			

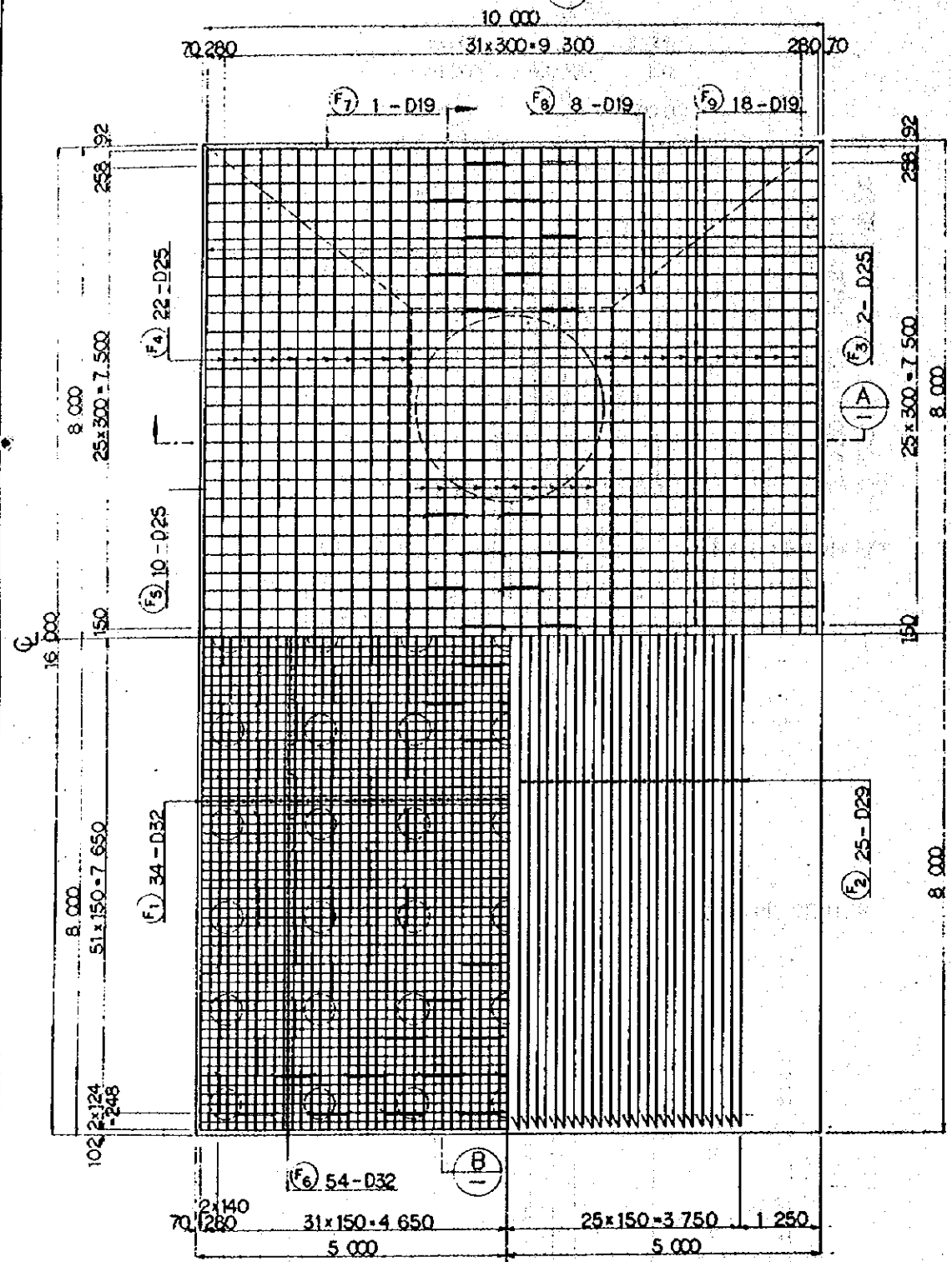


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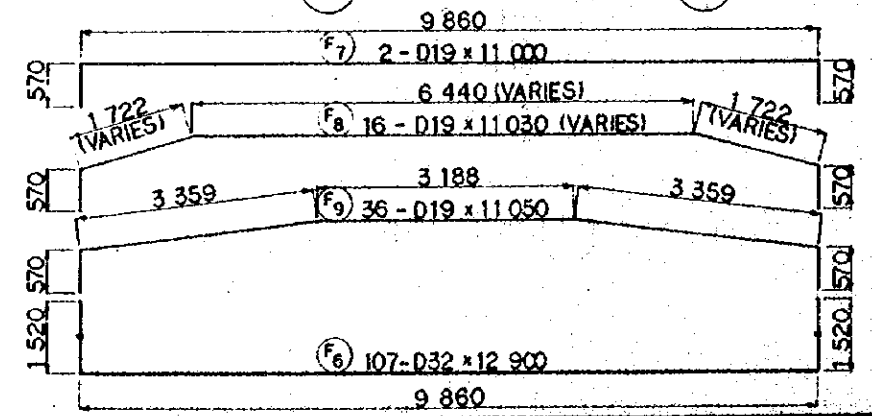
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. REFERENCE DRAWING FOR GENERAL VIEW: CS-094

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR GENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
A	1 AUG '84	S.S.	M.Y.	K.A.	K.M.	M.K.
PIER P20 BAR ARRANGEMENT (SHEET 2 OF 3)						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE: 1:50		DRAWING NO: CS-095-1				

SECTION C



SECTION D SECTION E

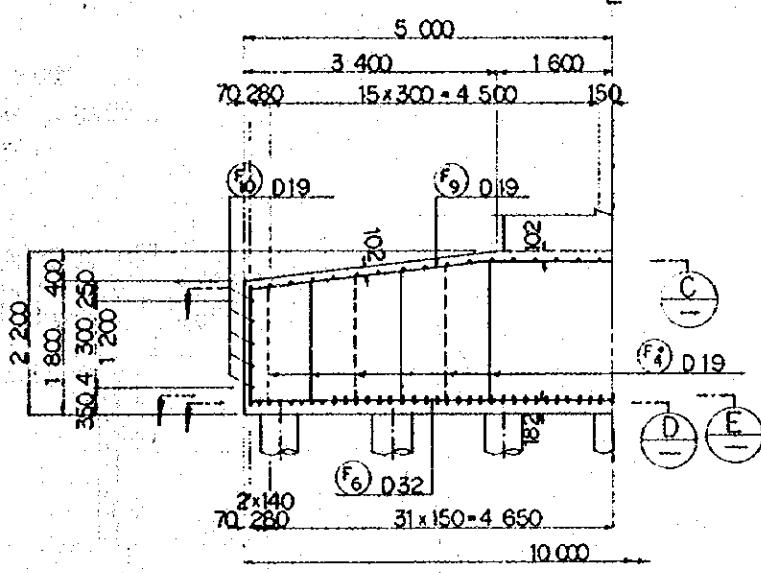
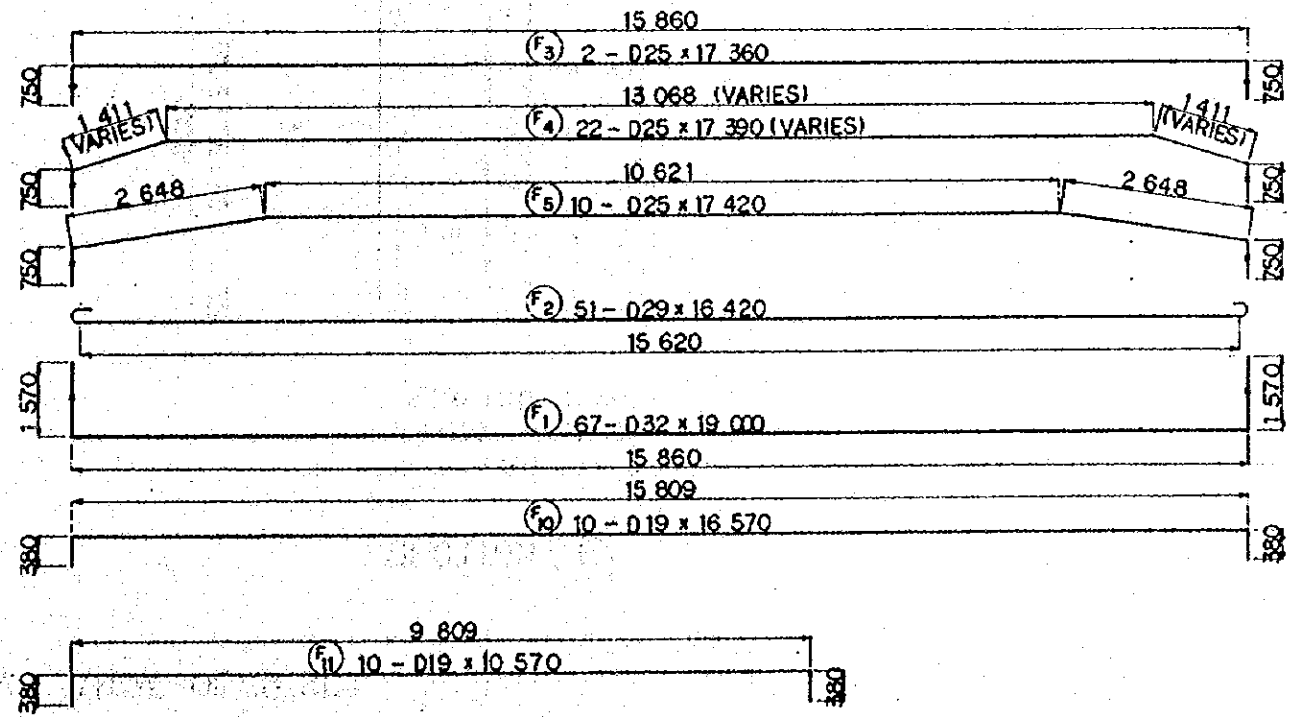


(F10) 40 - D19 x 4 770 (VARIES)  
 126 - D19 x 4 630 (VARIES)  
 (F11) 788 (VARIES)  
 (F12) 718 (VARIES)  
 651

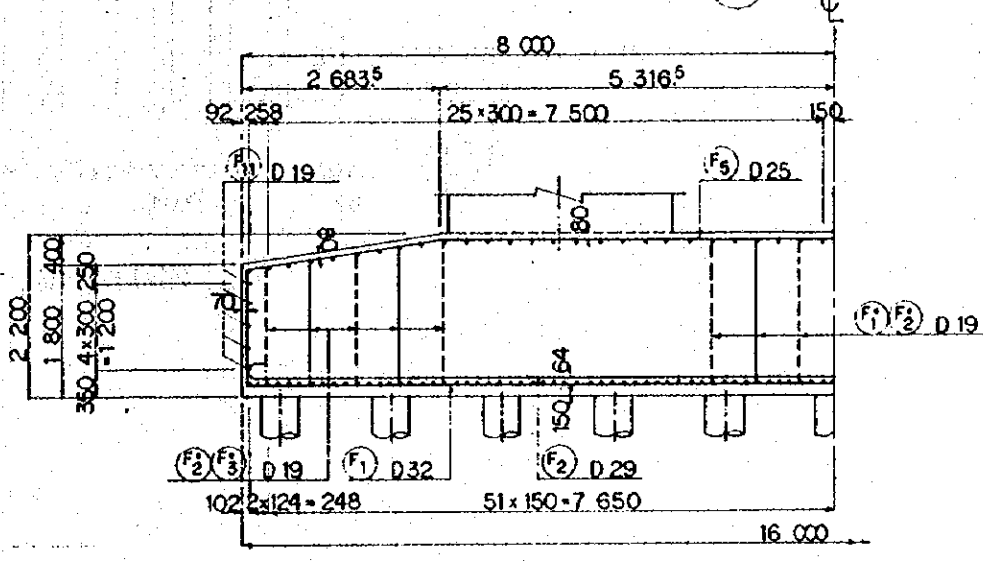
(F13) 380  
 651

(F14) 34 - D19 x 1 960

(F15) 18 - D19 x 5 110  
 1,958  
 651



SECTION A



SECTION B

NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. REFERENCE DRAWING FOR GENERAL VIEW: CS-094

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT  
 CONSTRUCTION PROJECT

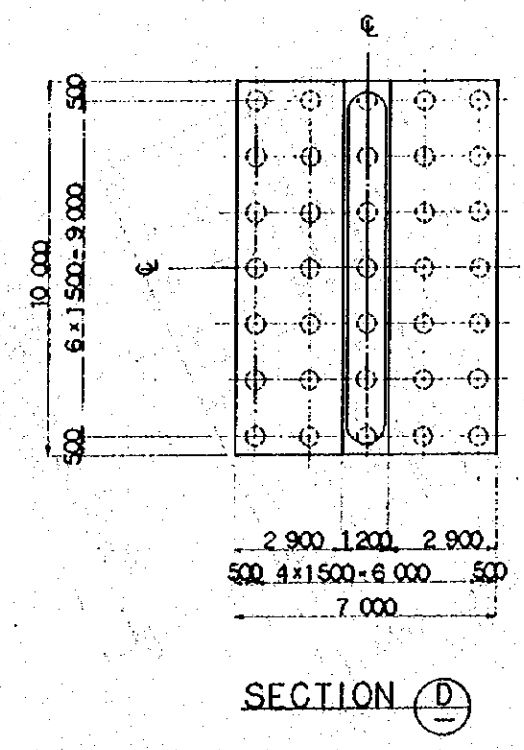
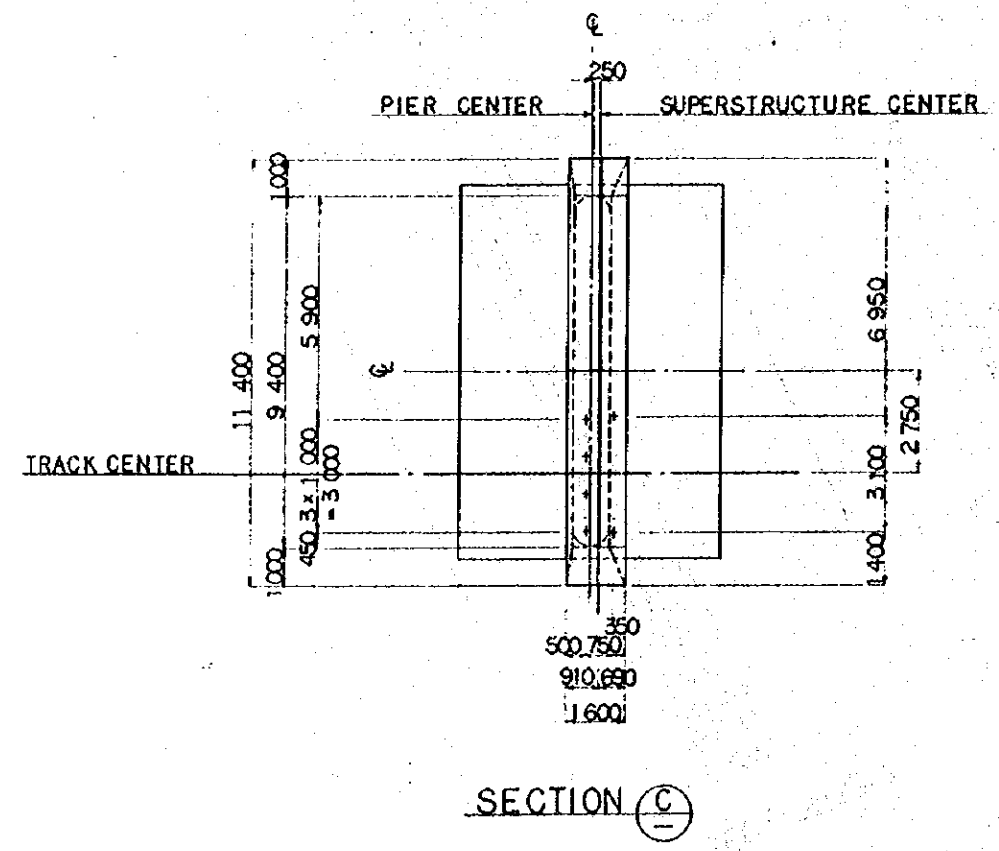
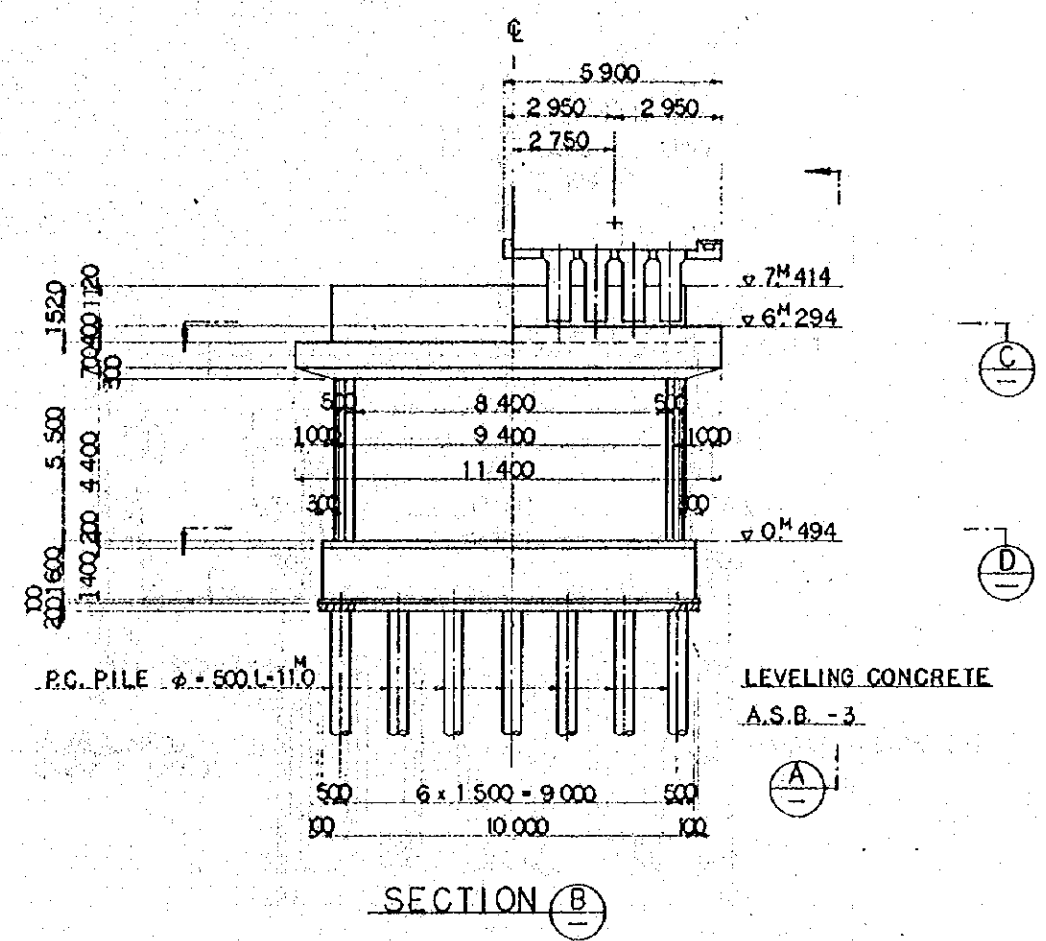
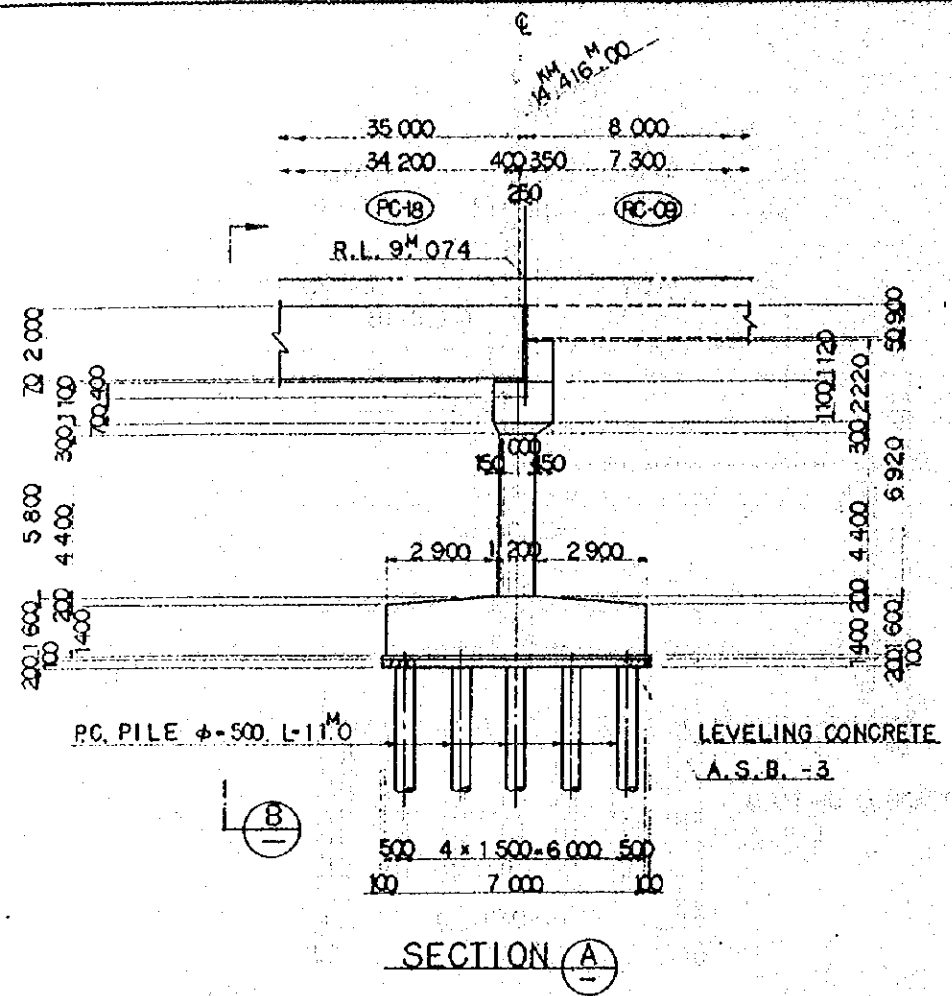
JAPAN INTERNATIONAL COOPERATION AGENCY  
 (JICA)

REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
A	1 AUG. 84	S.S.	M.Y.	K.X.	K.M.	K.K.

PIER P20  
 BAR ARRANGEMENT  
 (SHEET 3 OF 3)

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: 1:50  
 DRAWING NO: CS-095-2

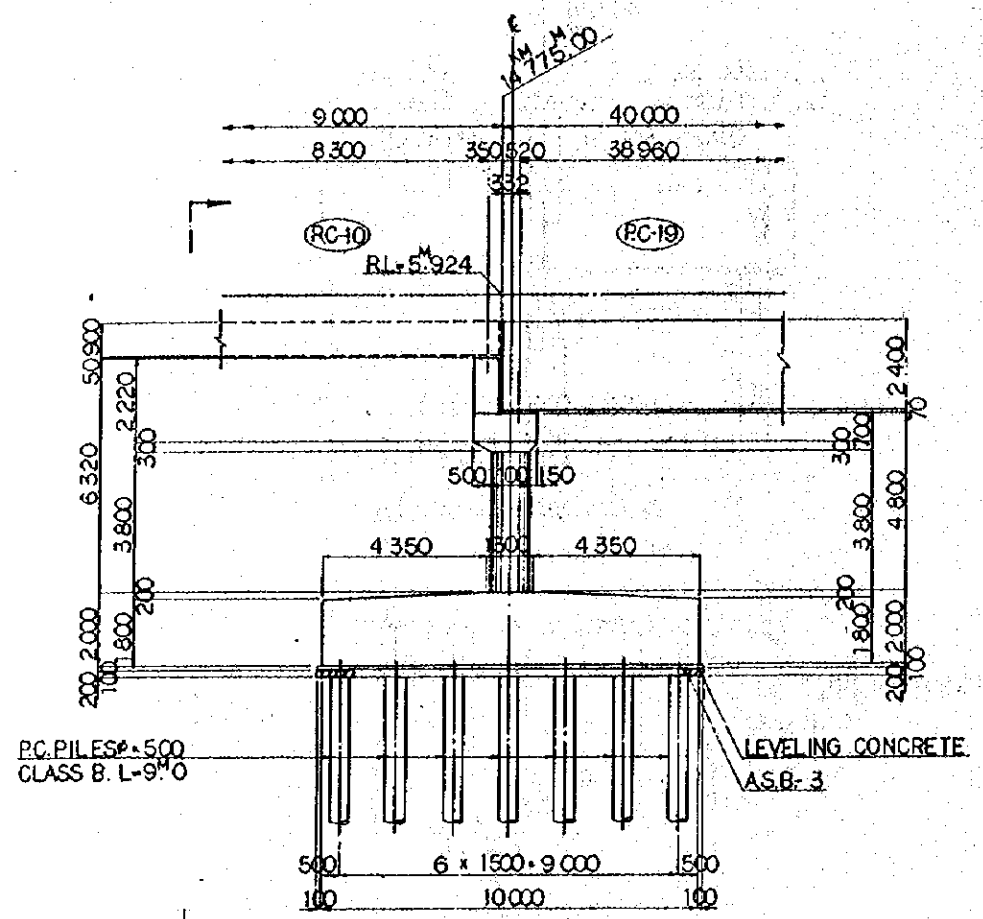




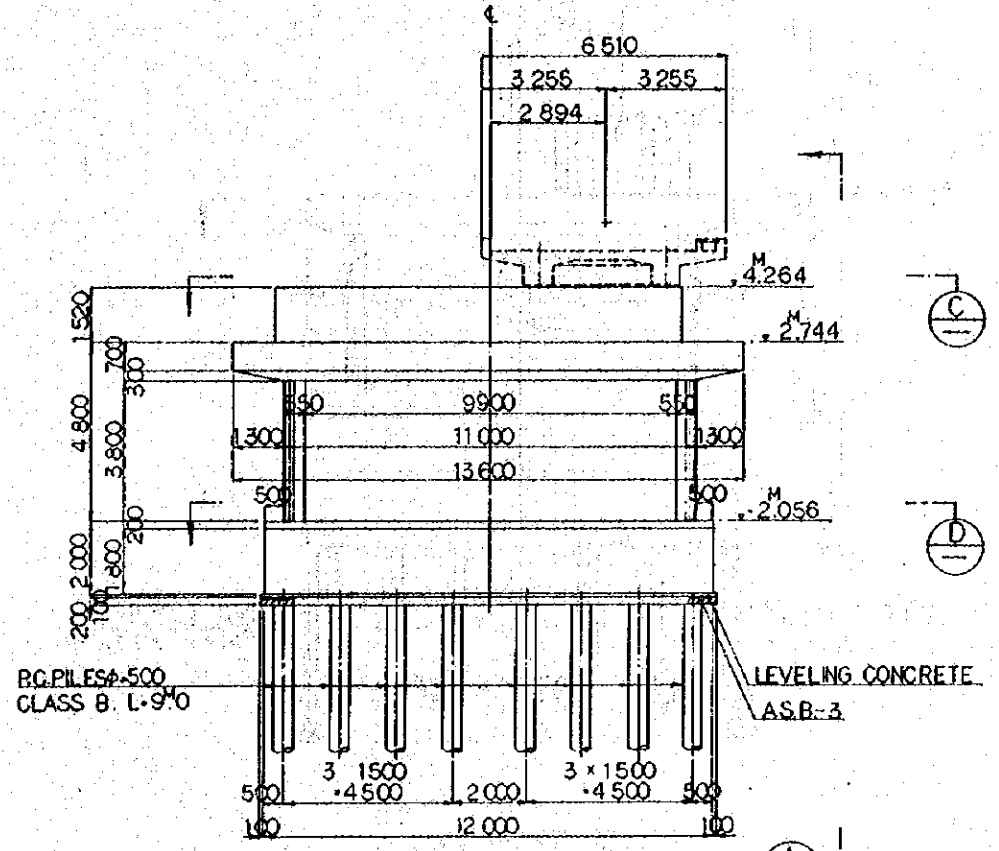
- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR BAR ARRANGEMENT: CS104-CS105

GENERAL VIEW OF P-21

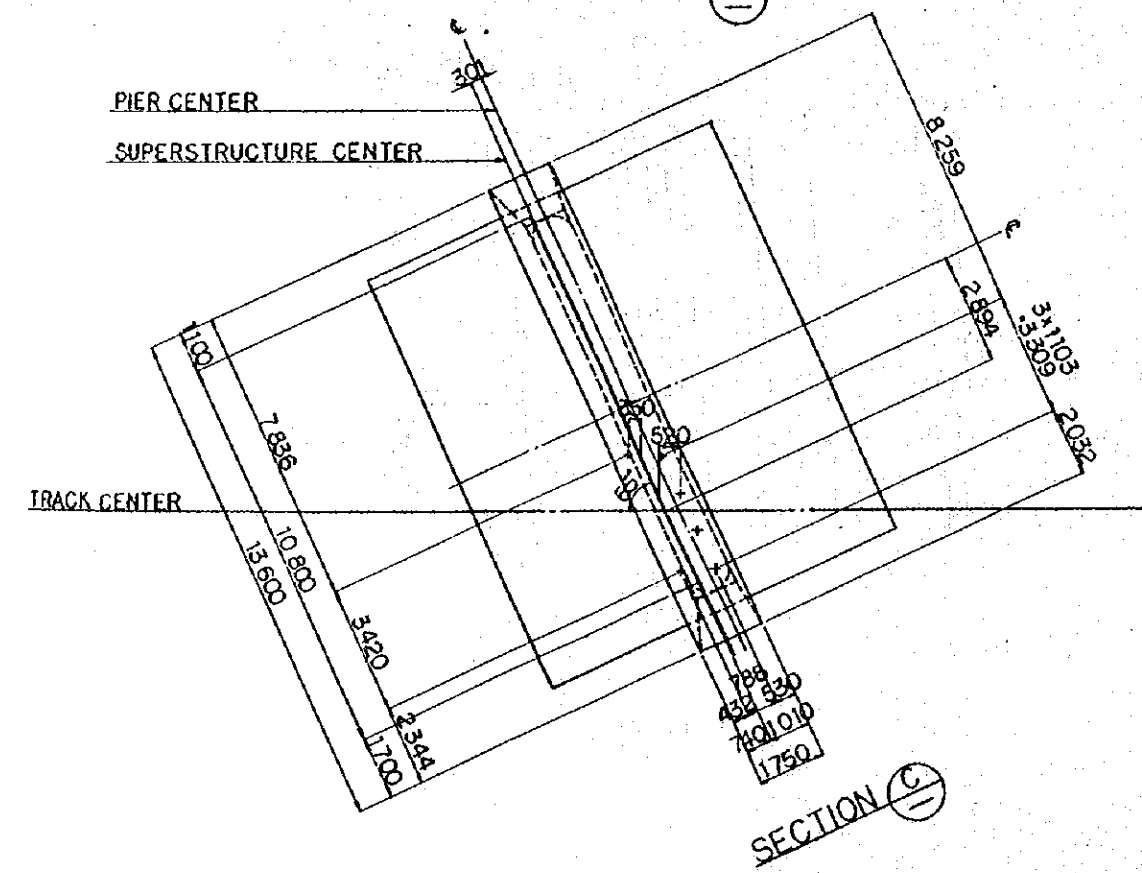
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	SUBMITTED
A	1 AUG 84	S.S.	M.Y.	K.R.	K.M.
PIER P21 GENERAL VIEW					
PACKAGE: 1 CIVIL AND ARCHITECTURAL WORK					
SCALE: 1:100		DRAWING NO: CS-096			



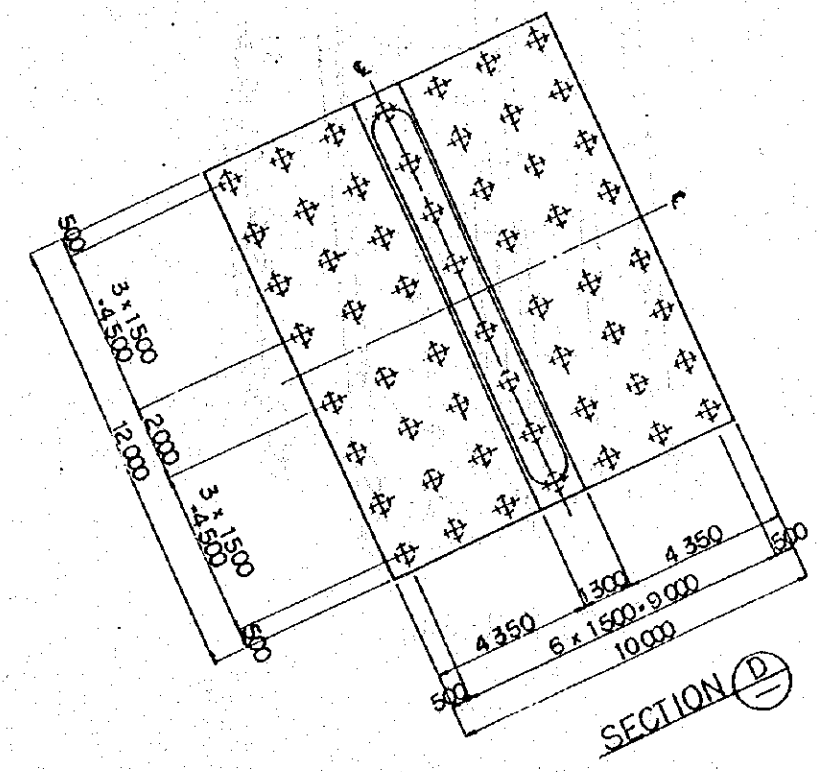
SECTION A



SECTION B



SECTION C

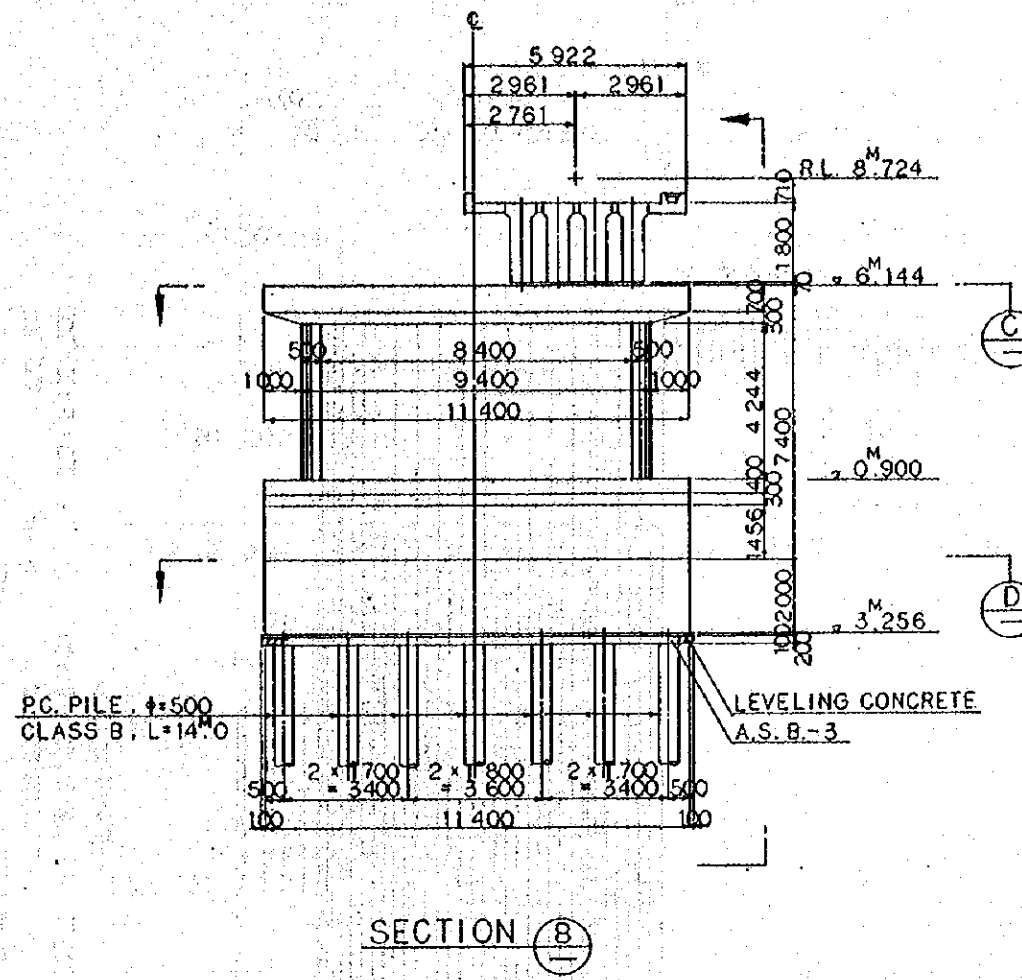
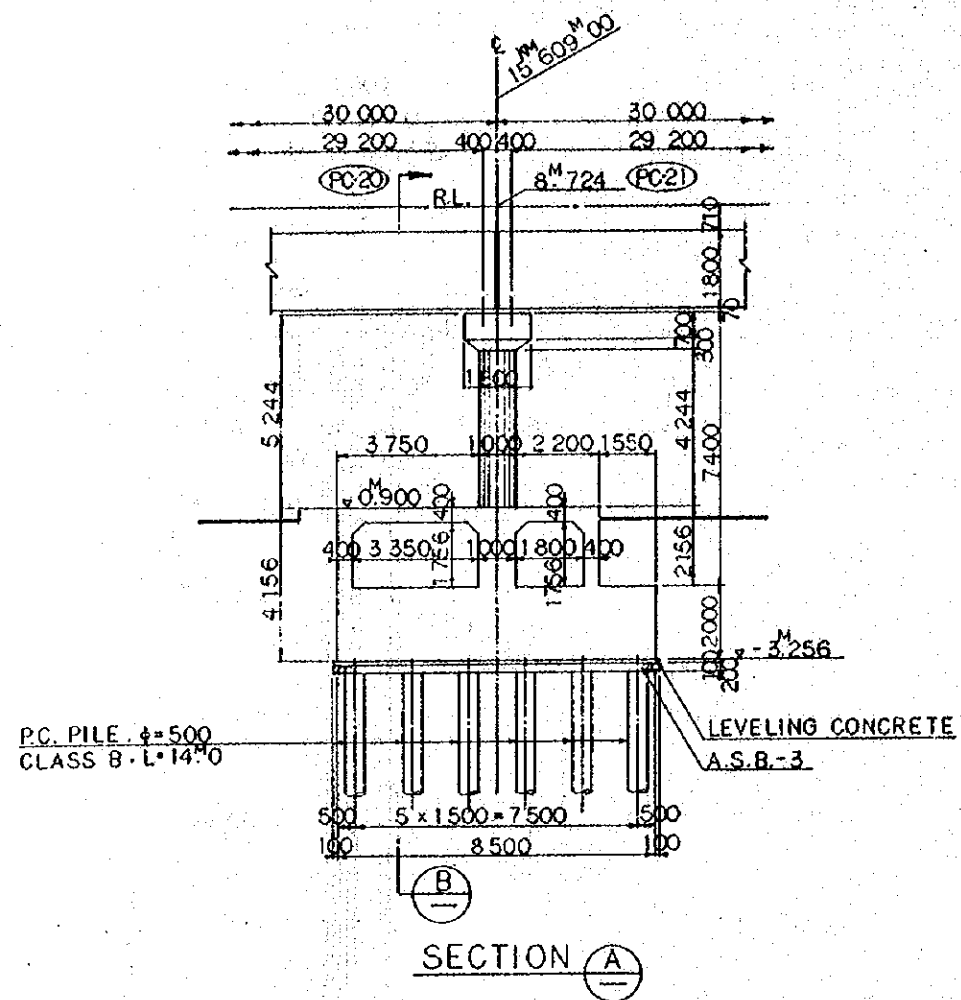


SECTION D

GENERAL VIEW OF P-22

NOTES:  
 1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED  
 2. REFERENCE DRAWING FOR BAR ARRANGEMENT: CS-074, CS-075, CS-076

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG. '84	SS	ML	K.A.	K.M.	K
A	15 FEB. '84	SS	ML	K.A.	K.M.	K
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
PIER P22 GENERAL VIEW						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE	DRAWING NO.					
1:100	CS-097					

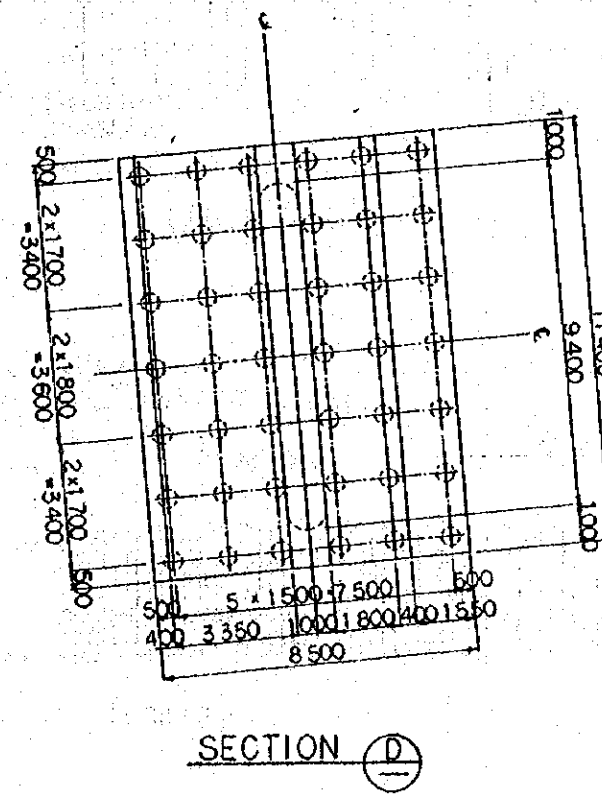
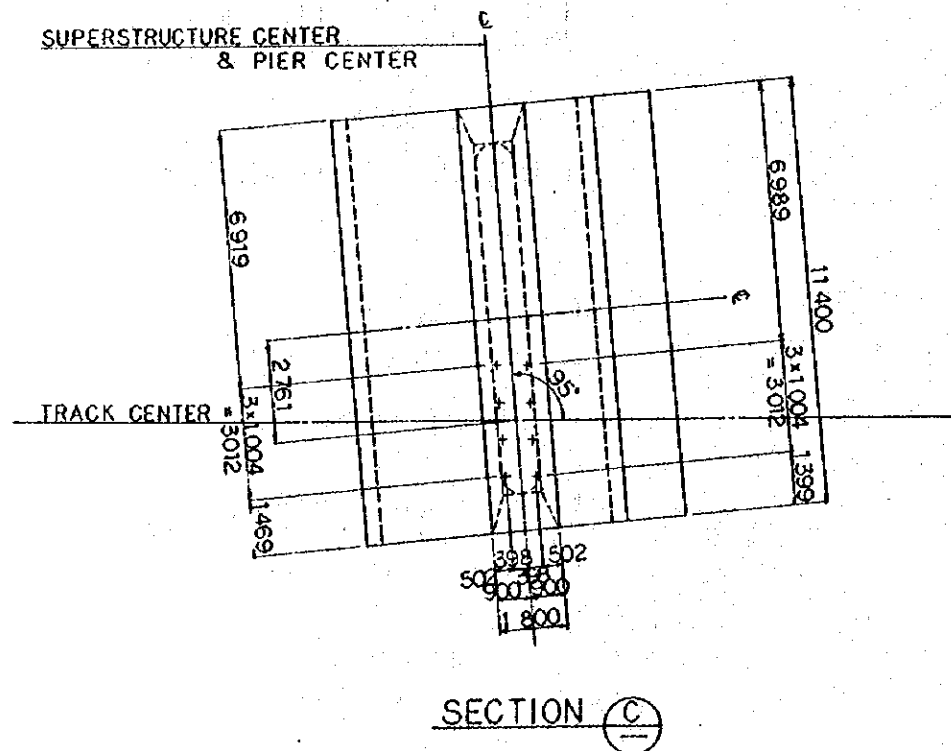


DESIGN CRITERIA

DESIGN LOAD	TRAIN LOAD	EQUIVALENT TO KS-16
ALLOWABLE STRESS	SEISMIC EFFECT	IN HORIZONTAL DIRECTION $K_1=0.1$ IN VERTICAL DIRECTION $K_2=0$
	REINFORCING BAR	ALLOWABLE TENSILE STRESS $1800 \text{ kg/cm}^2$
MATERIAL	CONCRETE	ALLOWABLE COMPRESSIVE STRESS $80 \text{ kg/cm}^2$
	TYPE OF REINFORCING BAR	SD-36
	CONCRETE DESIGN CRITERIA STRENGTH	$\sigma_{ck}=210 \text{ kg/cm}^2$
	MAX SIZE OF COARSE AGGREGATE	25mm

NOTES:

- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
- REFERENCE DRAWING FOR BAR ARRANGEMENT: CS-098-1.CS-098-2  
CS-098-3.CS-098-4



GENERAL VIEW OF P-24

REPUBLIC OF INDONESIA  
MINISTRY OF COMMUNICATIONS  
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

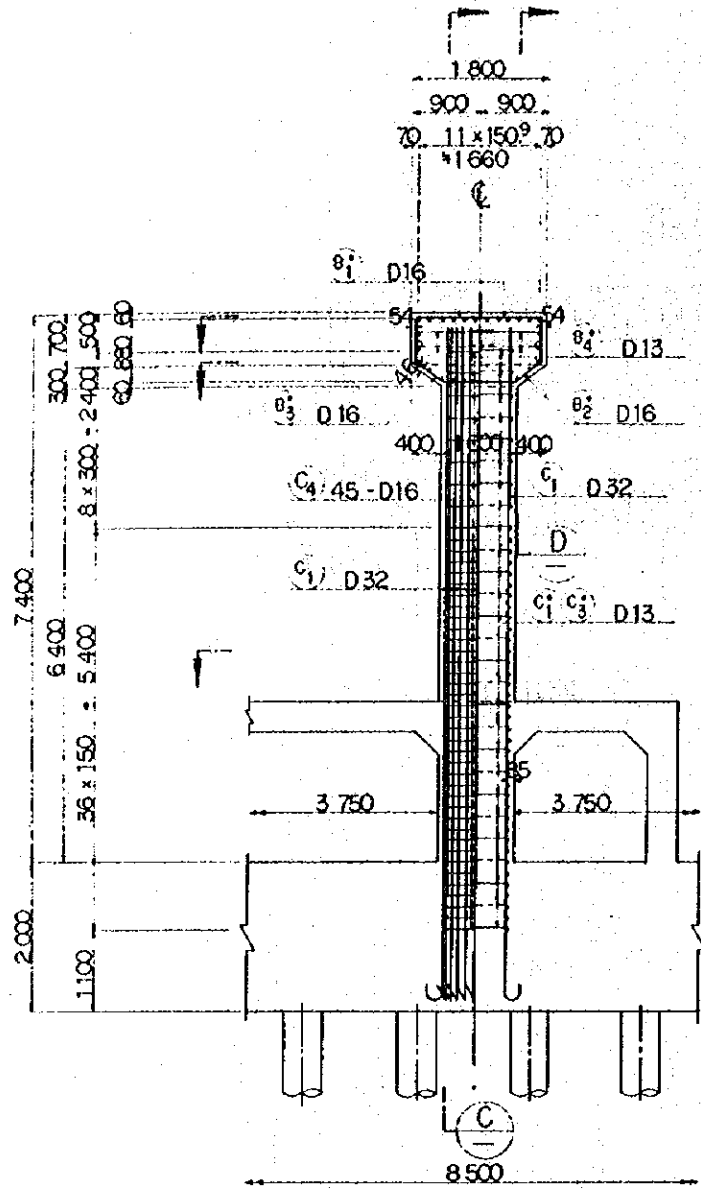
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

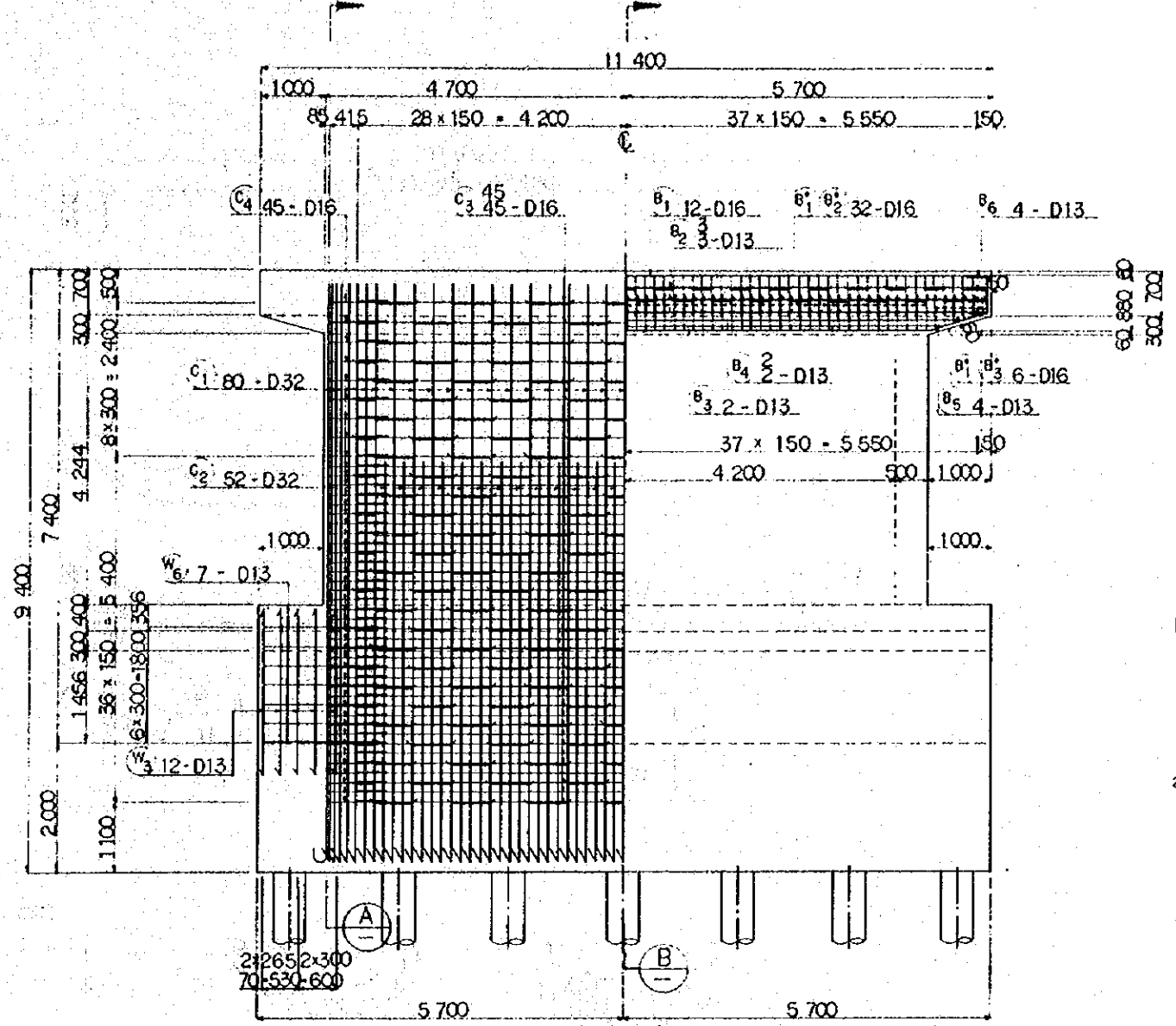
A	1 AUG '84	SS	MY	KJ	K.M	M.R
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED

PIER P24  
GENERAL VIEW

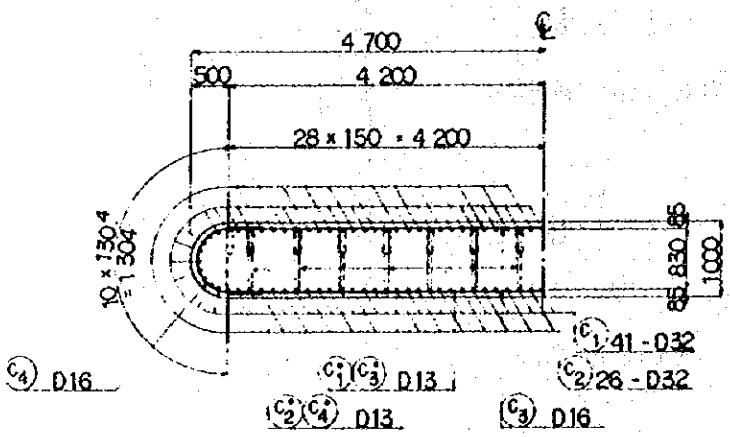
PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
SCALE: 1:100  
DRAWING NO: CS-098



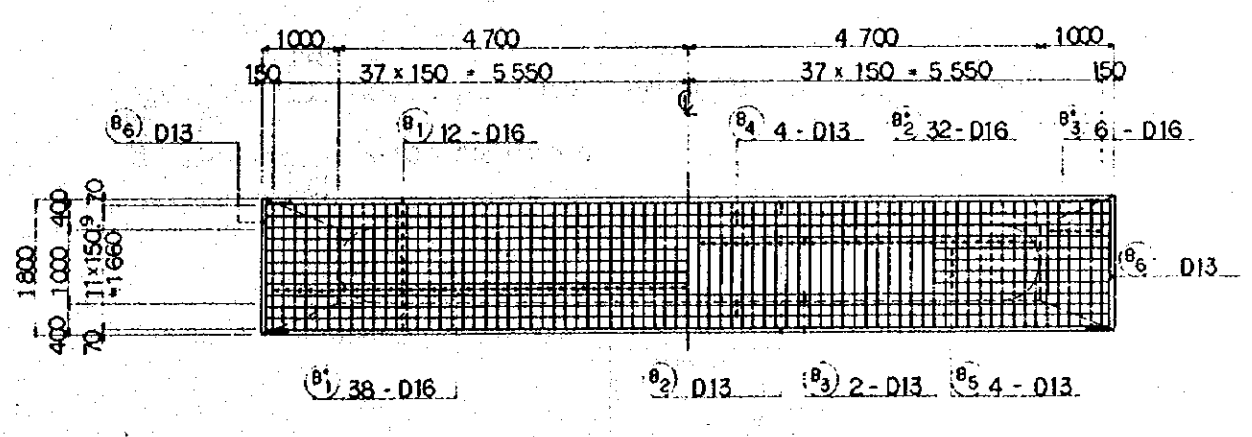
SECTION (A) SECTION (B)



SECTION (C) SECTION (D)



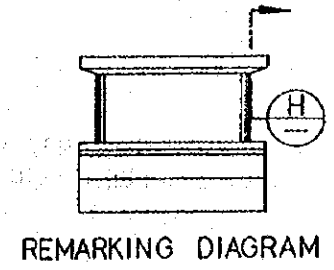
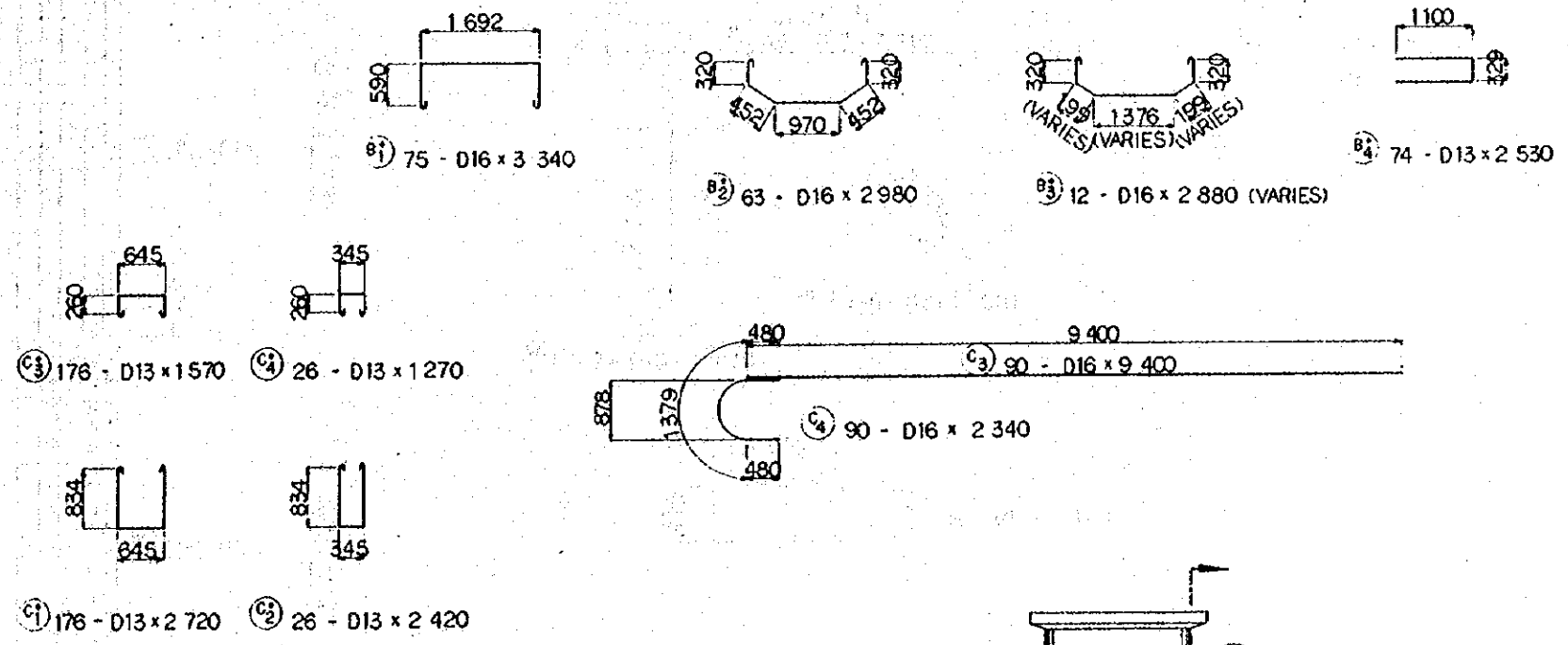
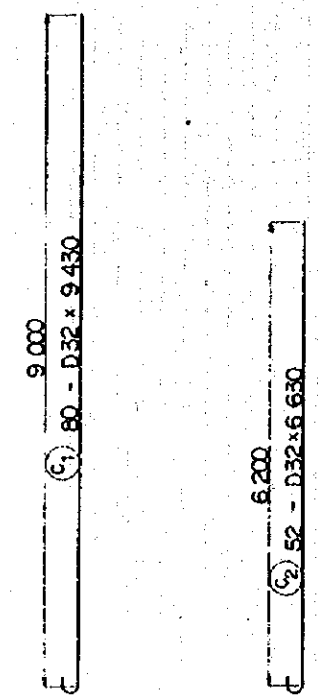
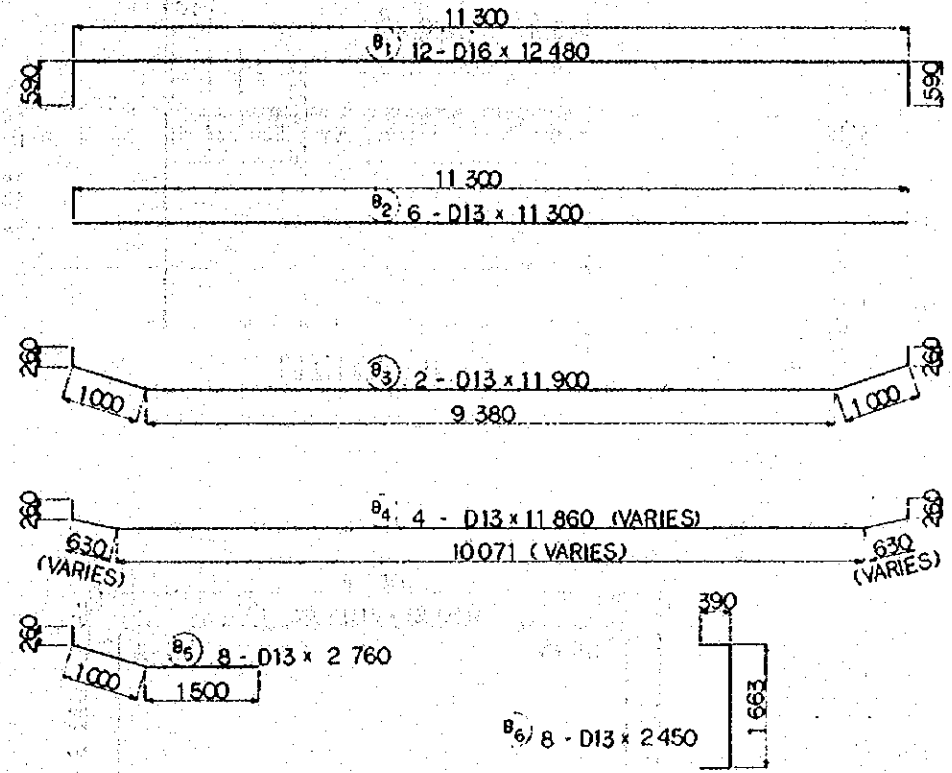
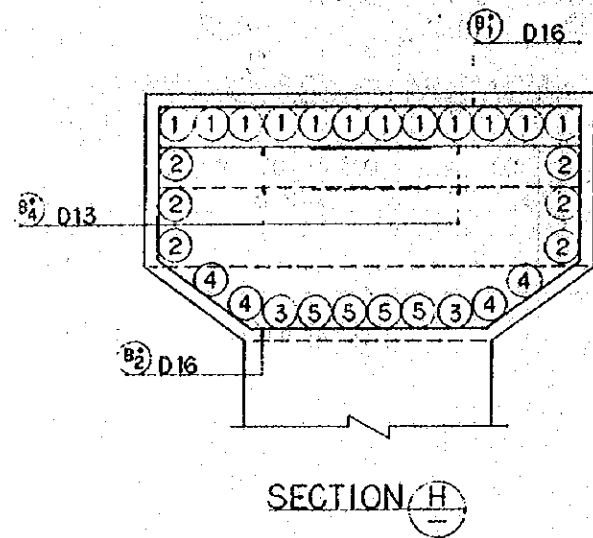
SECTION (G)



SECTION (E) SECTION (F)

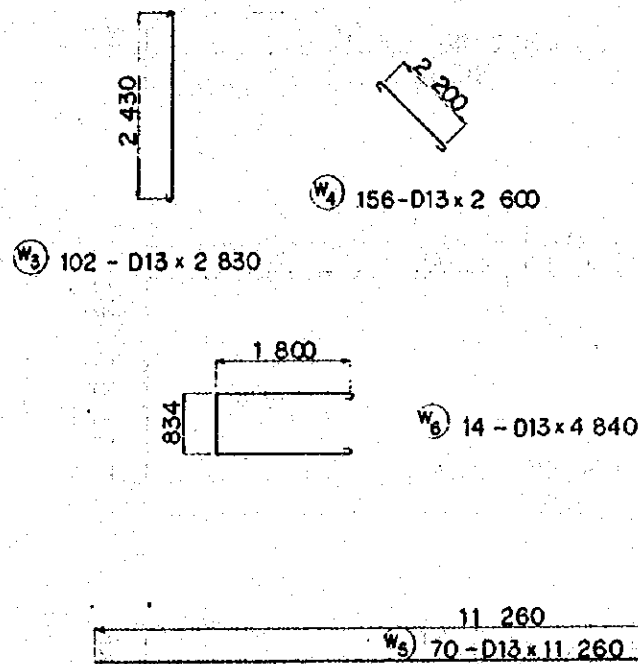
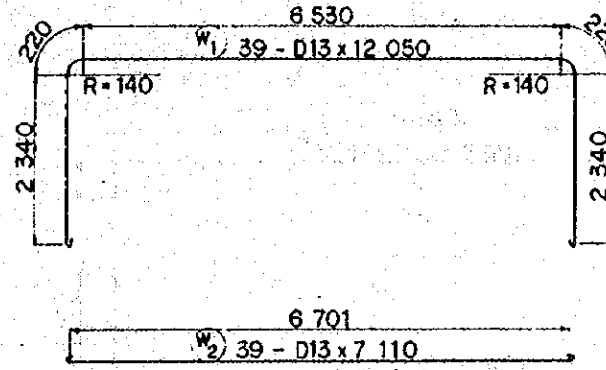
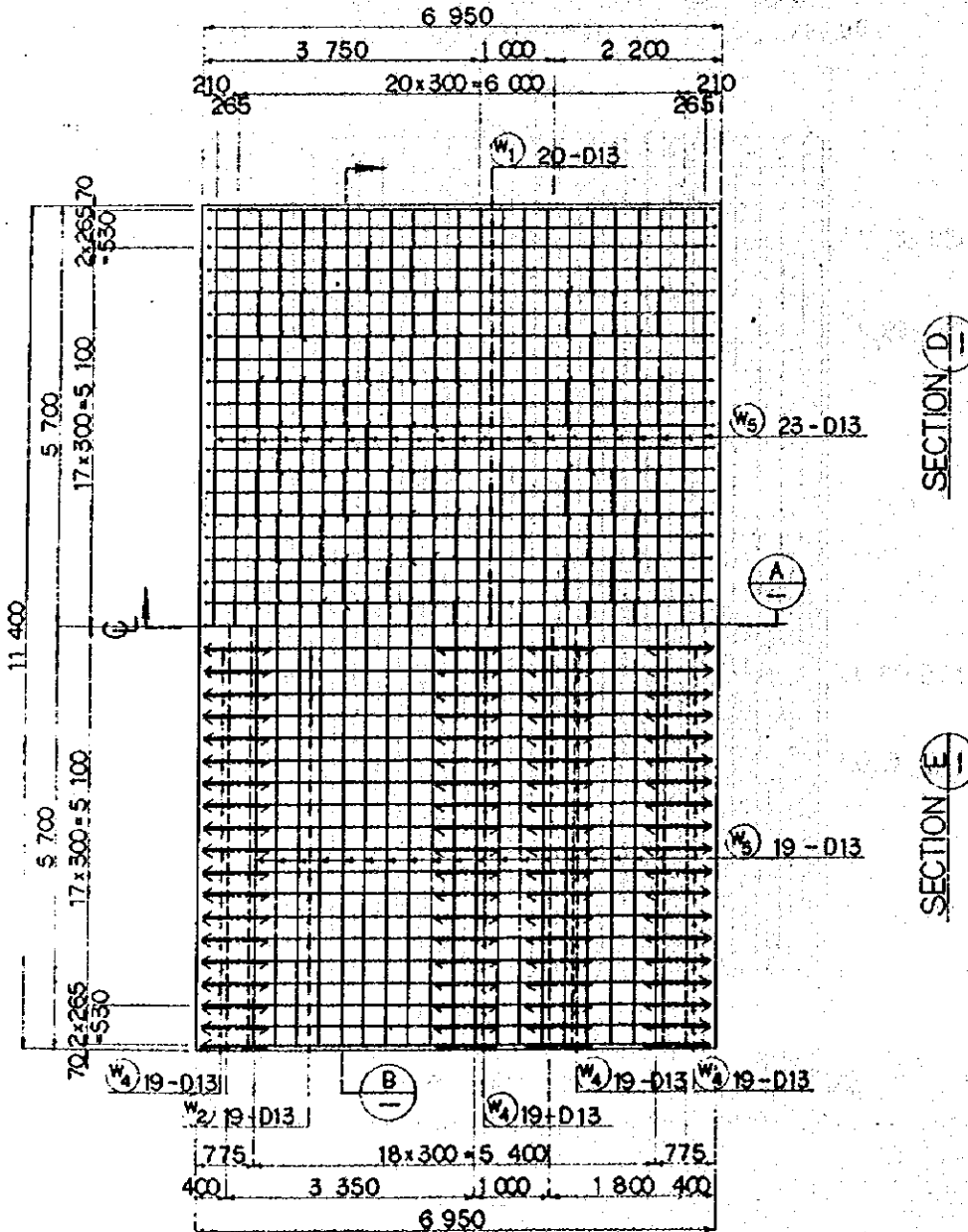
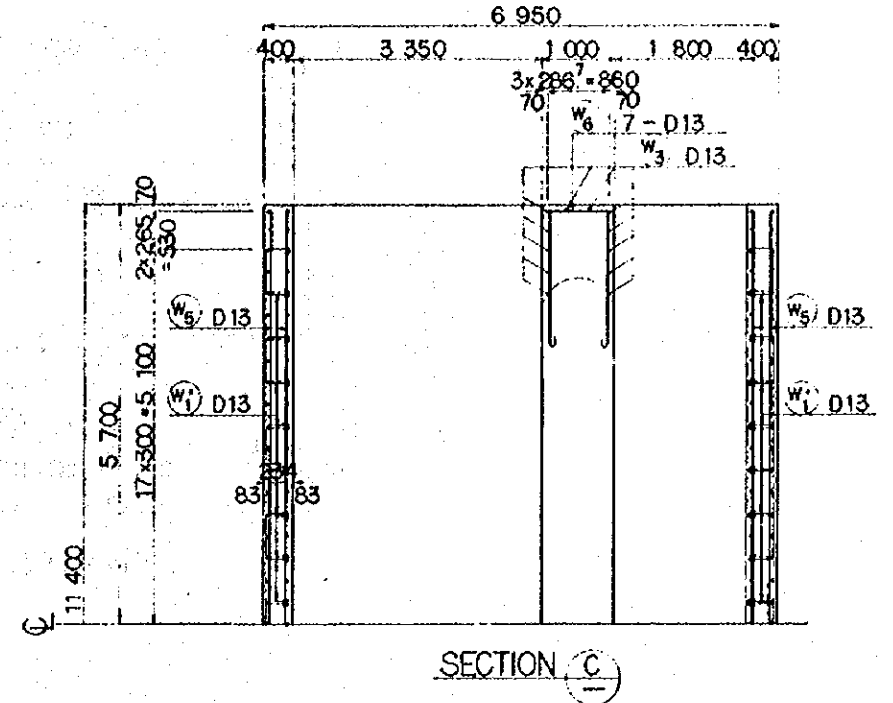
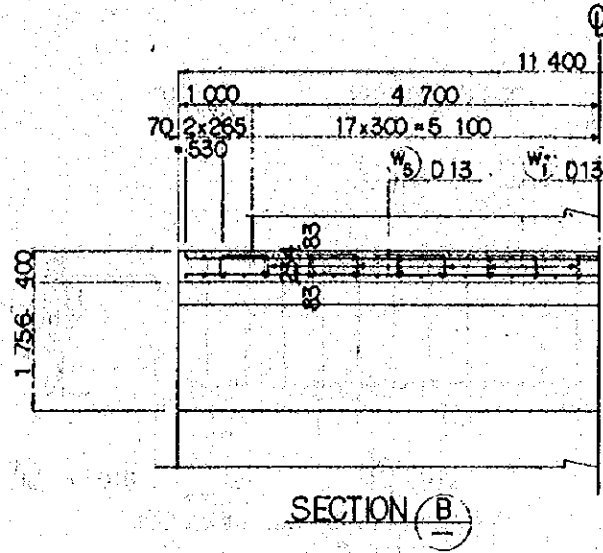
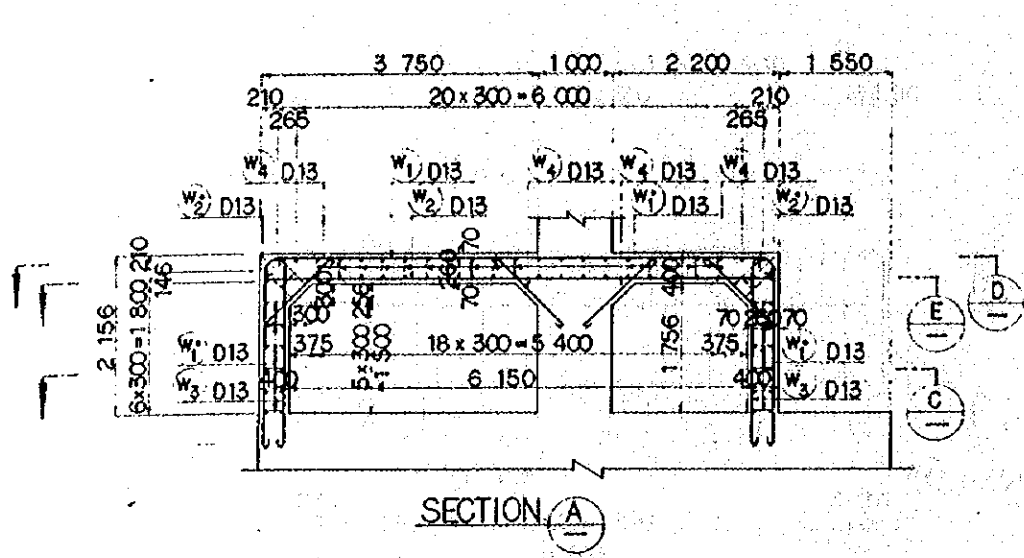
- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR GENERAL VIEW: CS-098

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
A	1 AUG. '84	SS	m.y	K.S.	K.M.	W.K.
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
PIER P24 BAR ARRANGEMENT (SHEET 1 OF 4)						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE		DRAWING NO.				
1:50		CS-098-1				



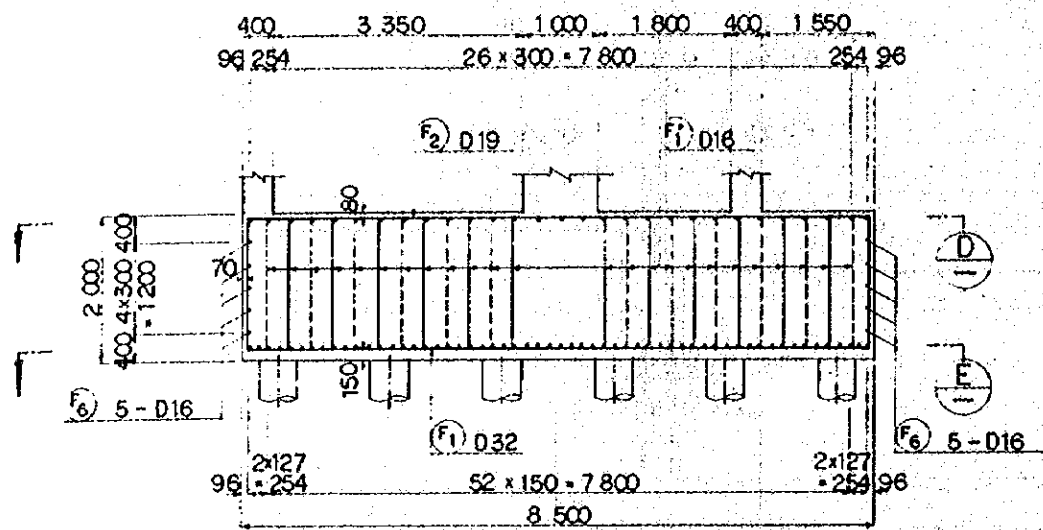
- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR GENERAL VIEW: CS-098

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
A	1 AUG. '84	S.S.	M.H.	K.A.	K.M.	K
PIER P24 BAR ARRANGEMENT ( SHEET 2 OF 4 )						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE	DRAWING NO.					
1:50	CS-098-2					

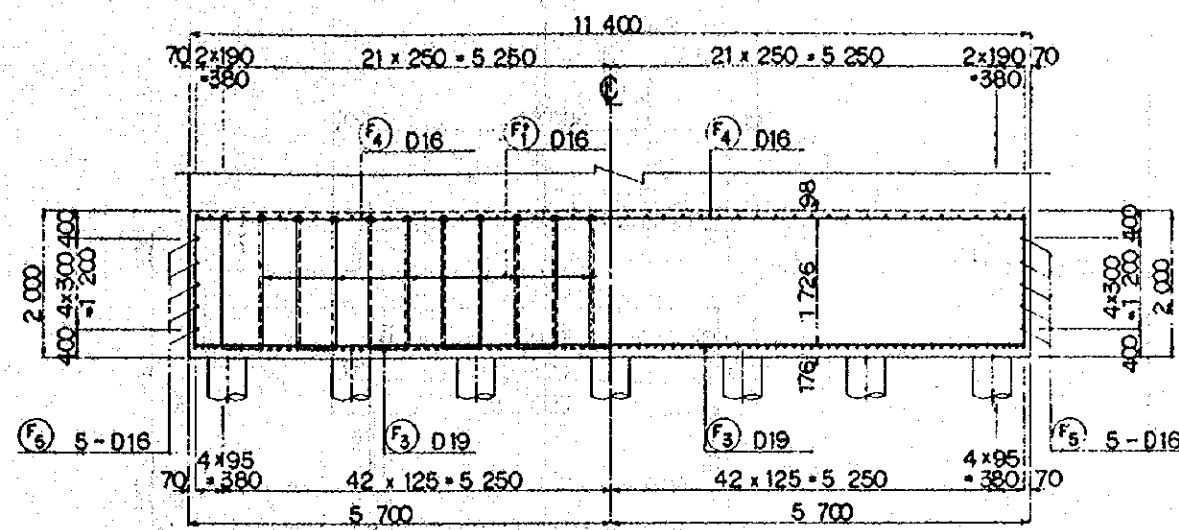


- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR GENERAL VIEW : CS-098

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
A	1 AUG '84	SS	m.y	K.H	K.W	...K
PIER P24 BAR ARRANGEMENT ( SHEET 3 OF 4 )						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE	DRAWING NO.					
1:50	CS-098-3					

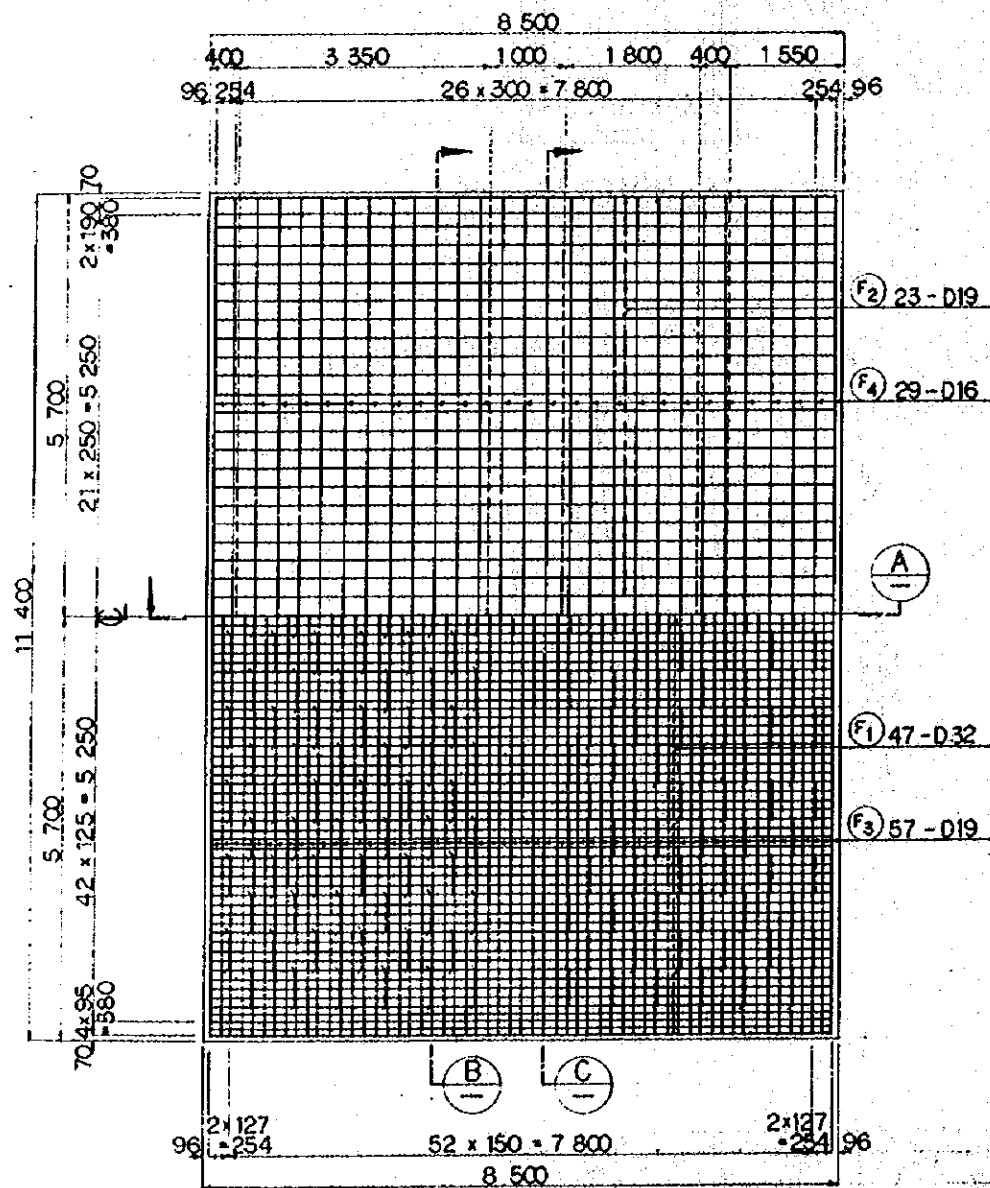


SECTION A



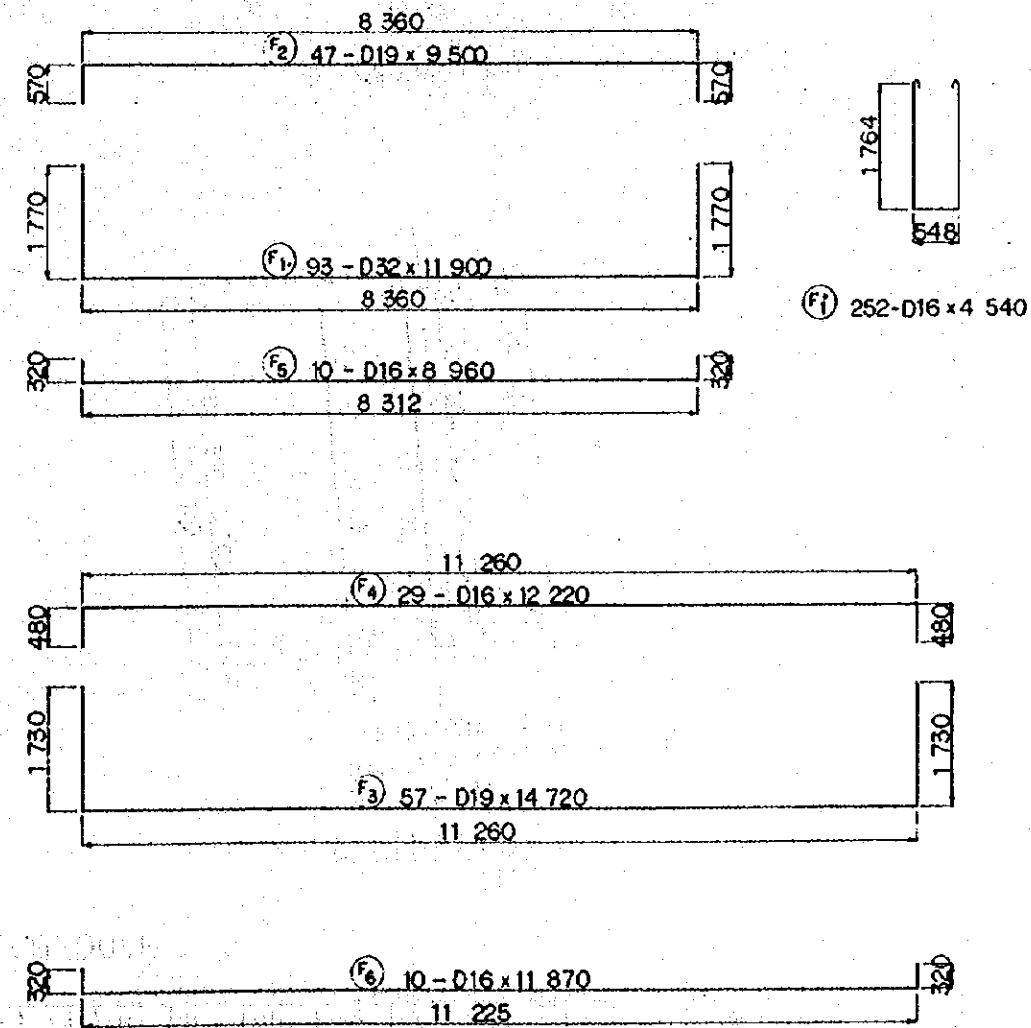
SECTION B

SECTION C



SECTION D

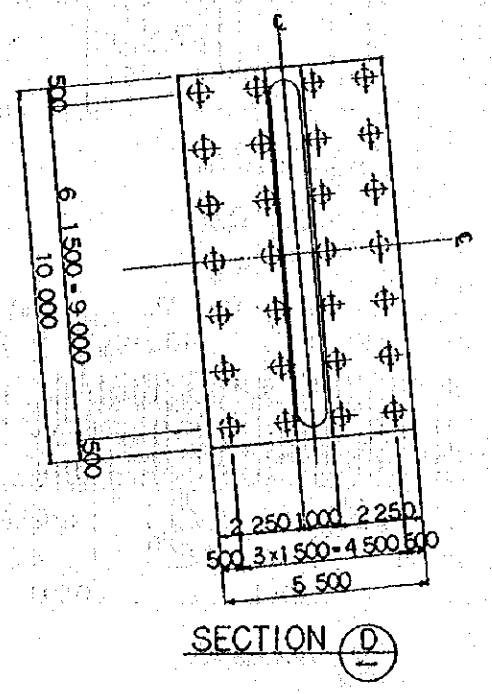
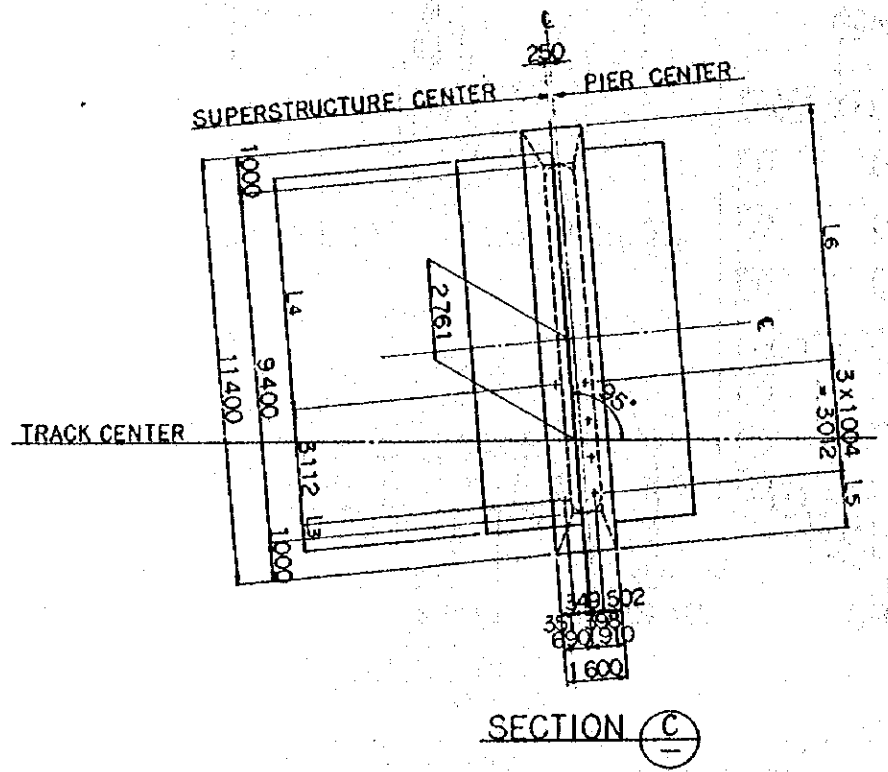
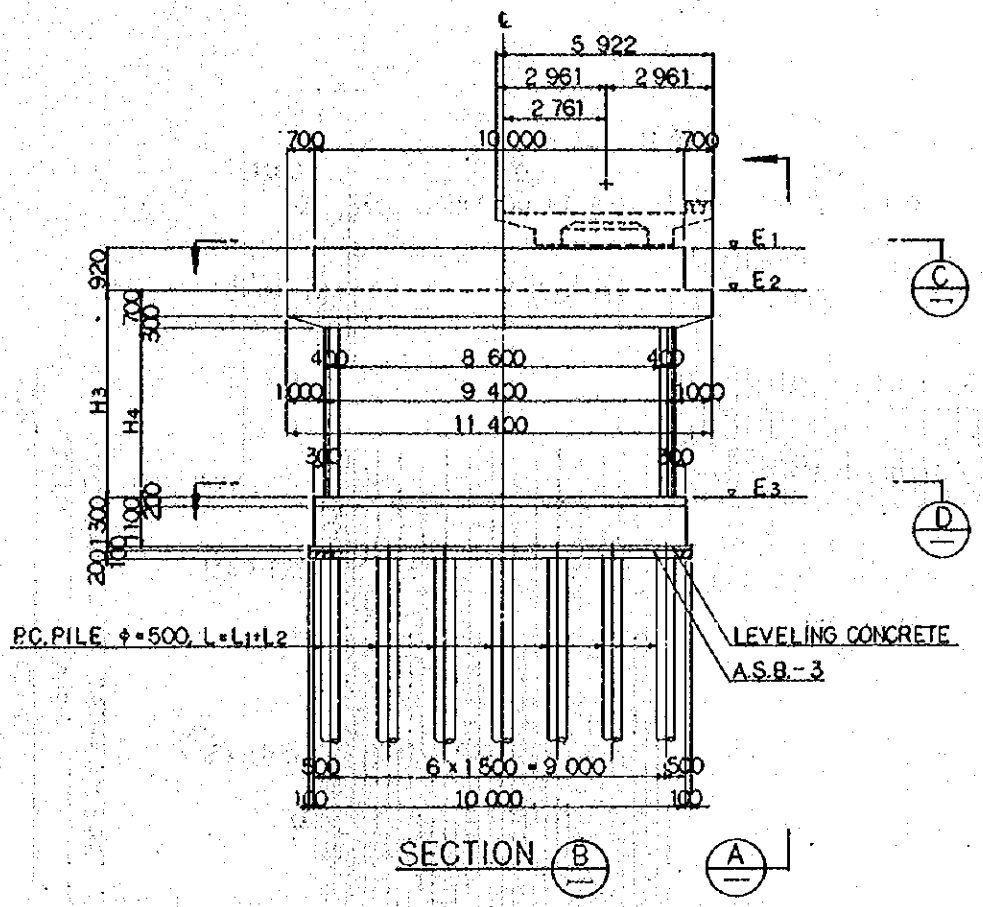
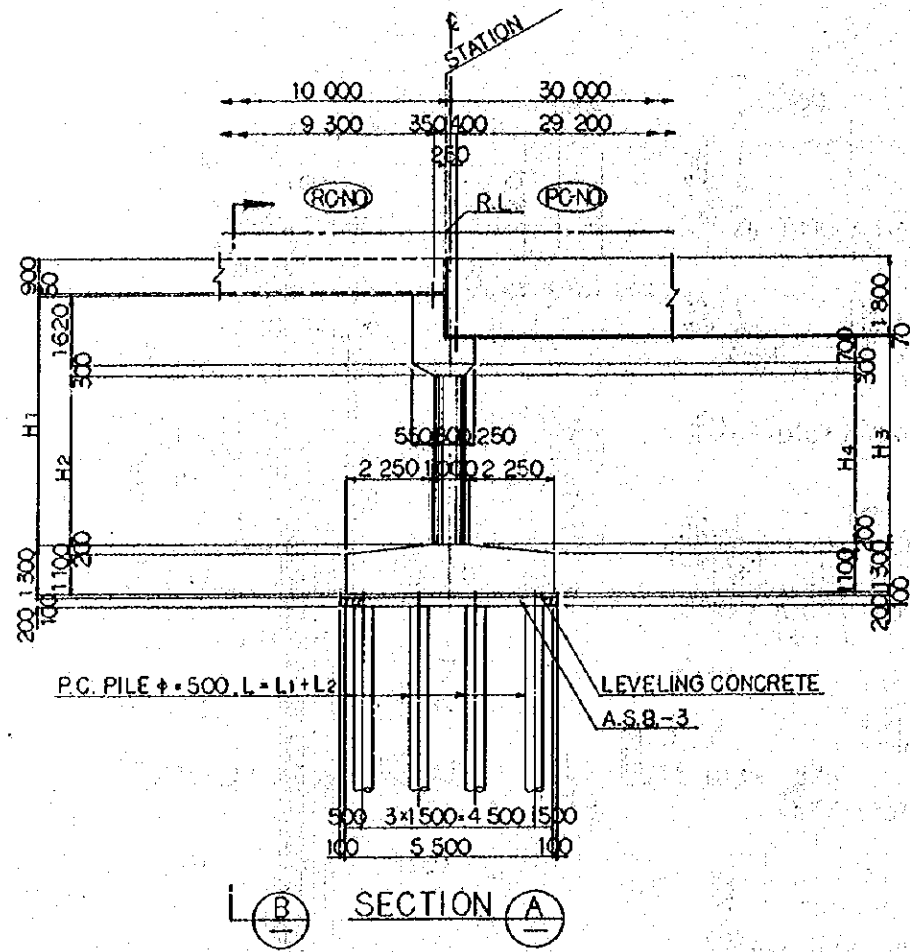
SECTION E



NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. REFERENCE DRAWING FOR GENERAL VIEW : CS-098

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
A	1 AUG '84	S.S.	m.y.	K.S.	K.M.	m.K.
PIER P24 BAR ARRANGEMENT (SHEET 4 OF 4)						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE: 1:50		DRAWING NO: CS-098-4				

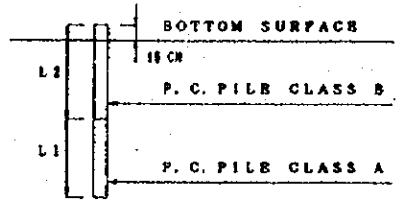


DESIGN CRITERIA

DESIGN LOAD	TRAIN LOAD	EQUIVALENT TO KS-16
	SEISMIC EFFECT	IN HORIZONTAL DIRECTION $K_b=0.1$ IN VERTICAL DIRECTION $K_b=0$
ALLOWABLE STRESS	REINFORCING BAR	ALLOWABLE TENSILE STRESS 1400 kg/cm <sup>2</sup>
	CONCRETE	ALLOWABLE COMPRESSIVE STRESS 20 kg/cm <sup>2</sup>
MATERIAL	TYPE OF REINFORCING BAR	SD-30
	CONCRETE OF DESIGN CRITERIA STRENGTH	$\sigma_{ck}=210 \text{ kg/cm}^2$
	MAX SIZE OF COARSE AGGREGATE	25 mm

NOTES:

- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED.
- REFERENCE DRAWING FOR BAR ARRANGEMENT: CS-100, CS-101
- TYPES OF P. C. PILE .



DIMENSION SCHEDULE

PIER NO	STATION	ALIGNMENT	RC-NO	PC-NO	R.L.	E1	E2	E3	H1	H2	H3	H4	L1	L2	L3	L4	L5	L6
P-23	15+579.00	STRAIGHT	12	20	8.724	7.064	6.144	-0.056	7 120	5 200	6 200	5 200	8'0	8'0	714	6 174	1 399	6 989
P-25	15+639.00	STRAIGHT	13	21	8.724	7.064	6.144	-0.156	7 220	5 300	6 300	5 300	8'0	8'0	654	6 234	1 469	6 919

GENERAL VIEW OF P-23 & P-25

REPUBLIC OF INDONESIA  
MINISTRY OF COMMUNICATIONS  
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

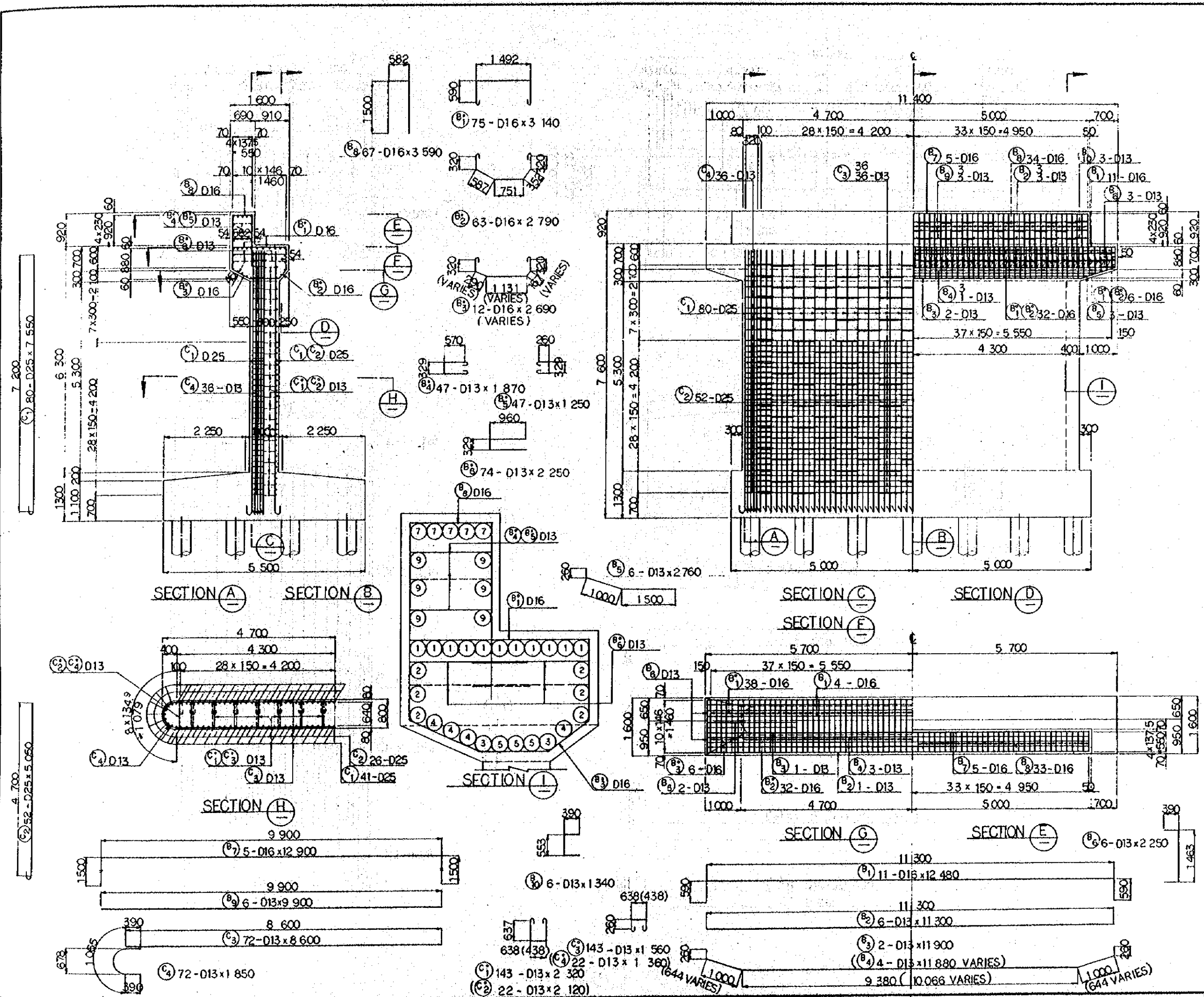
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
A	1 AUG. 84	S.S.	m.y.	K.A.	K.M.	m.k.

PIER P23, P25  
GENERAL VIEW

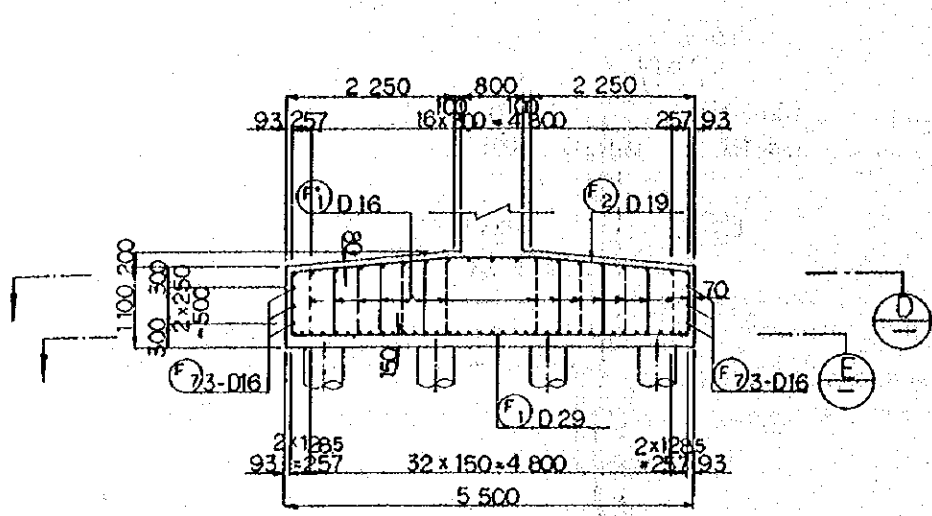
PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
SCALE: 1:100  
DRAWING NO: CS-099



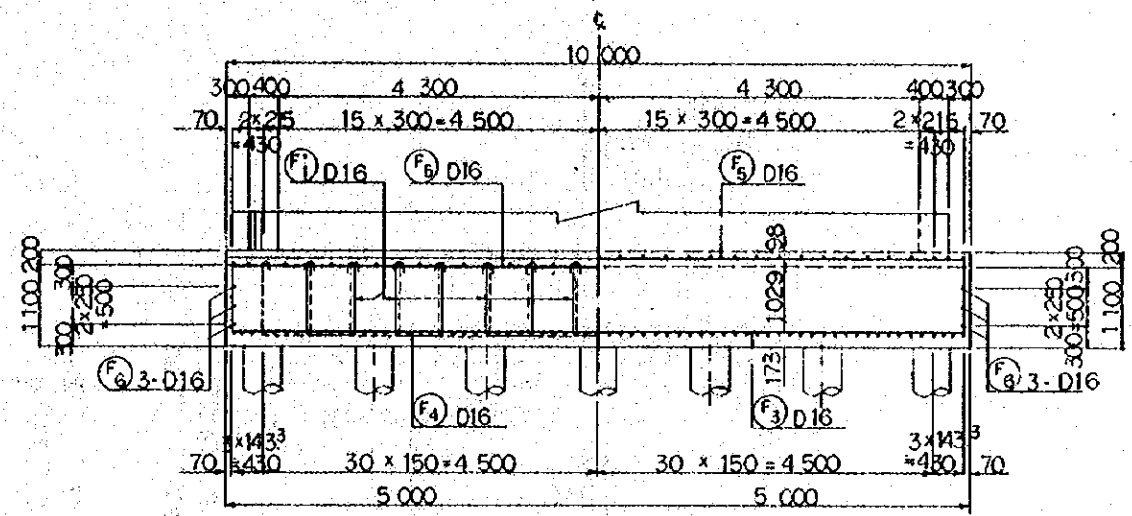


- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR GENERAL VIEW: CS-C99

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG '84	SS	m.y	K.A	K.M	m.K
A	15 FEB '84	SS	m.y	K.A	K.M	m.K
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	APPROVED
<b>PIER P25          BAR ARRANGEMENT          (SHEET 1 OF 2)</b>						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE	DRAWING NO.					
1:50	CS-100					

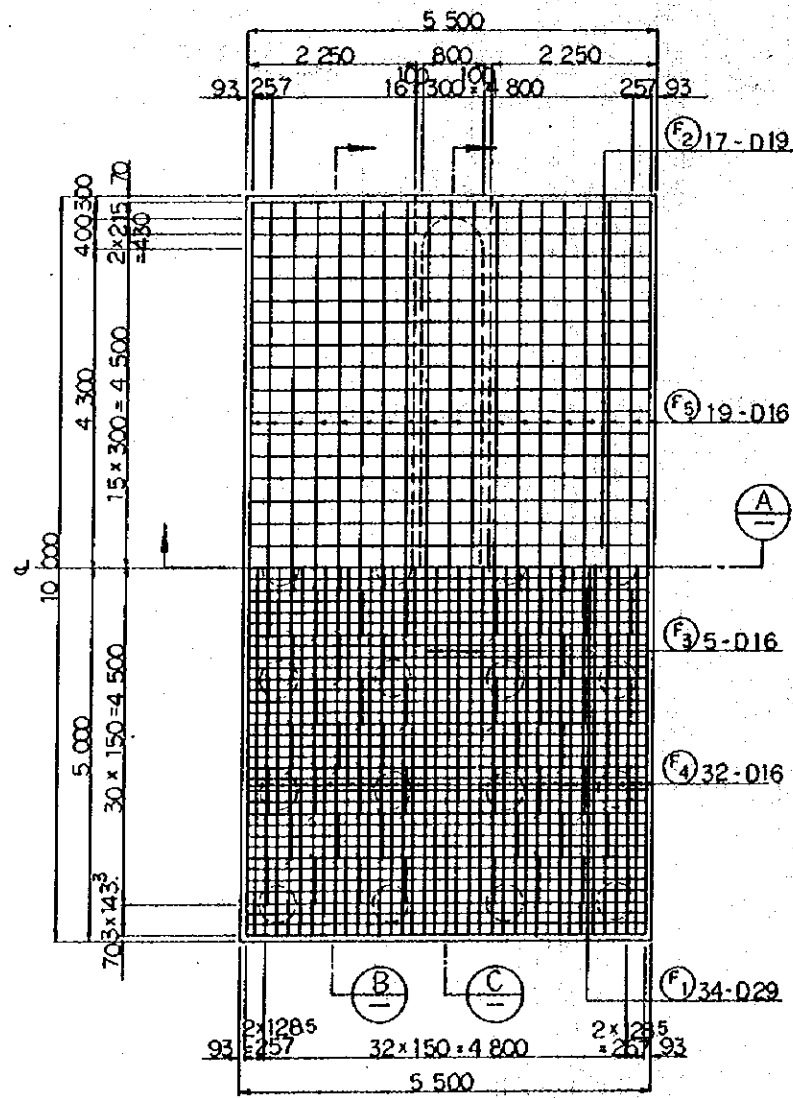


SECTION A



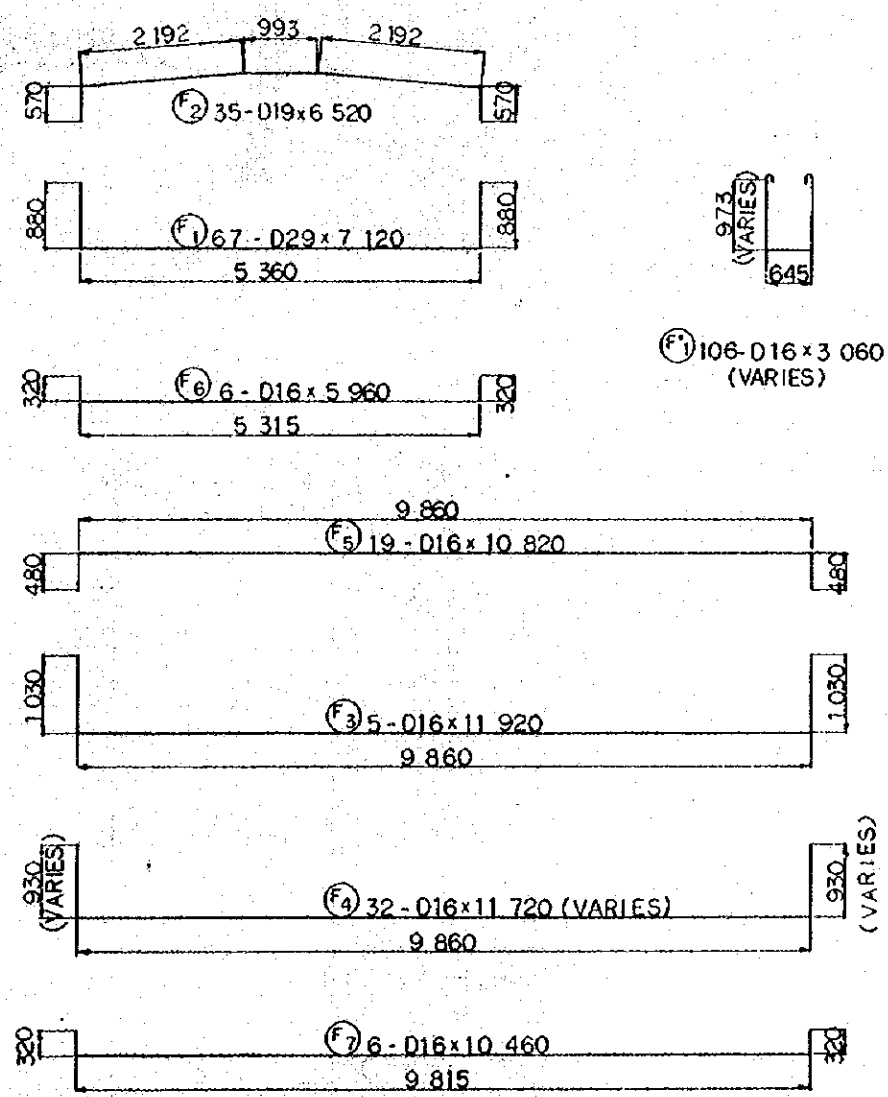
SECTION B

SECTION C



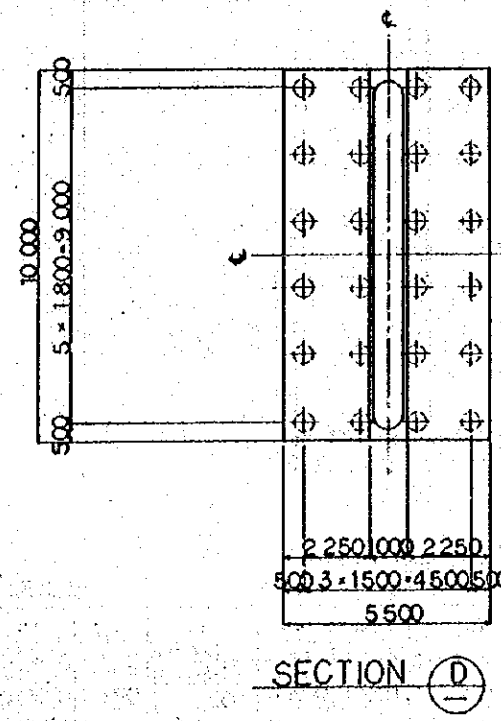
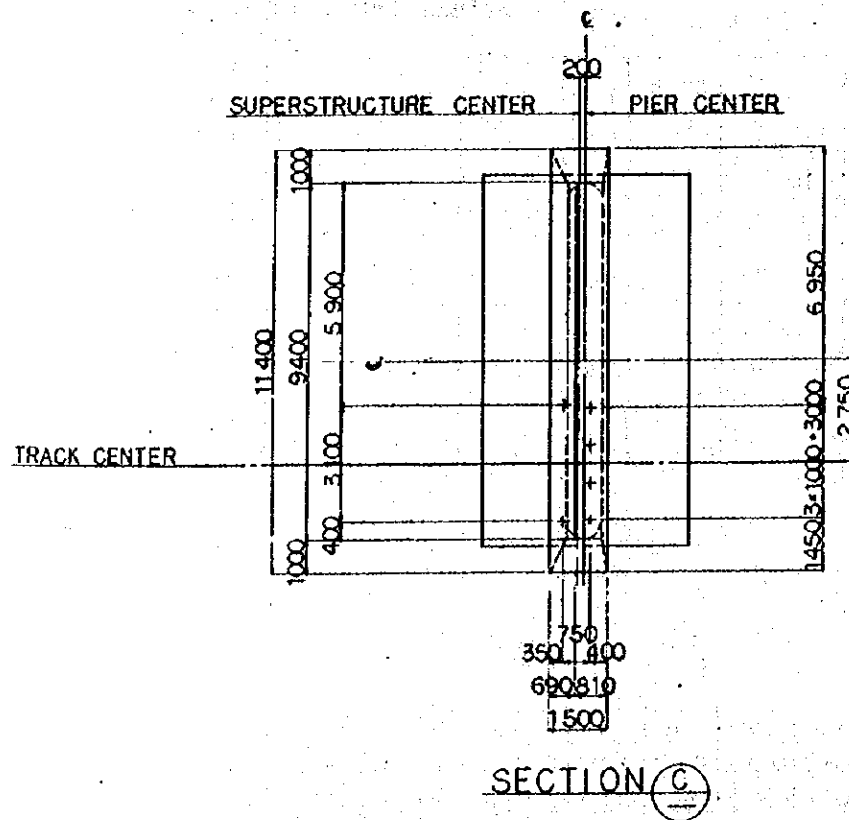
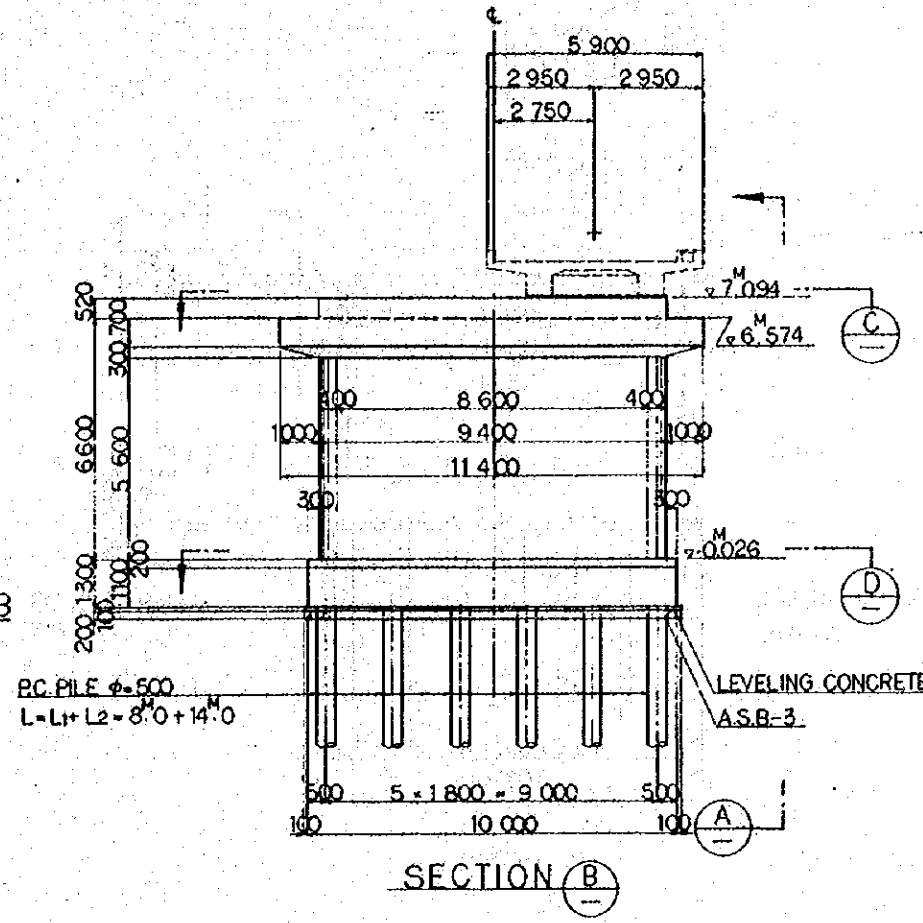
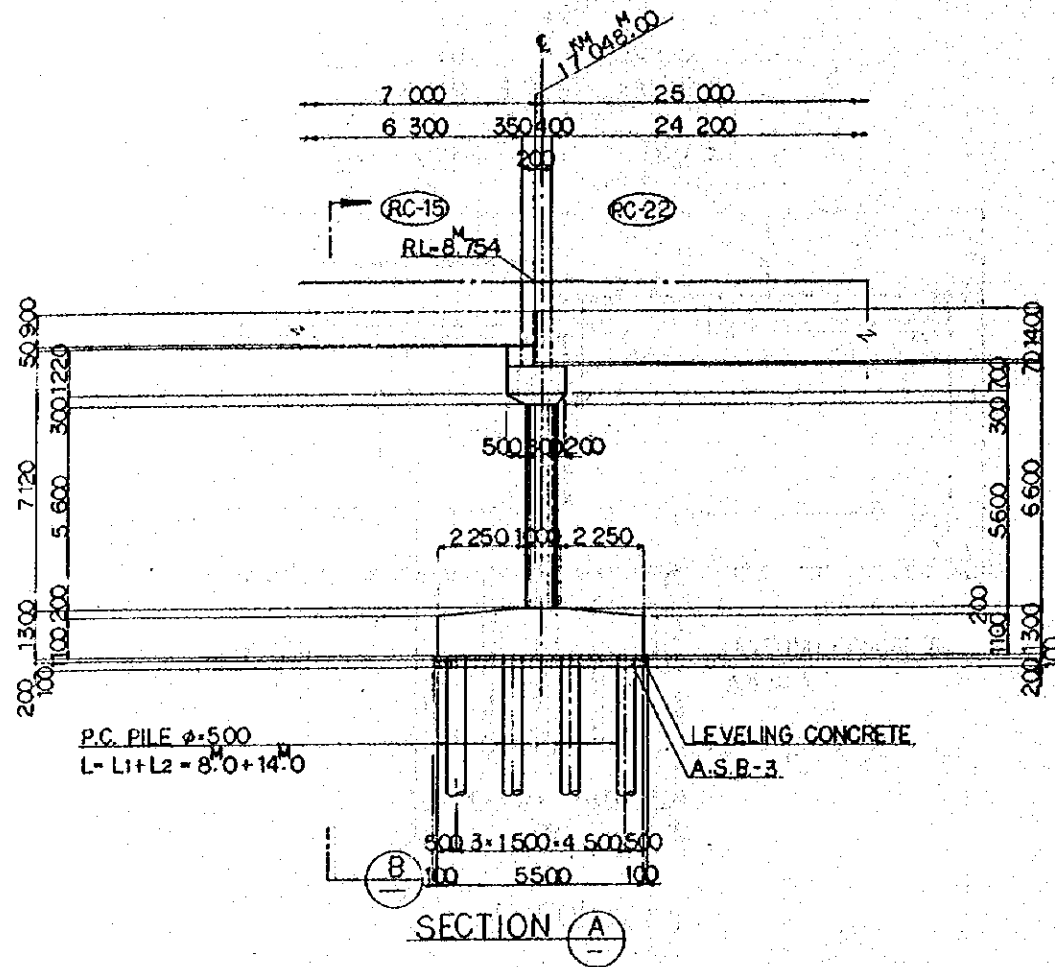
SECTION D

SECTION E



- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED.
  2. REFERENCE DRAWING FOR GENERAL VIEW: CS-099

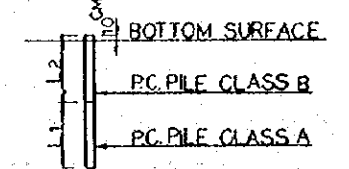
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
B	1 AUG 84	S.S.	M.Y.	K.A.	K.M.	M.K.
A	15 FEB 84	S.S.	M.Y.	K.A.	K.M.	M.K.
PIER P25 BAR ARRANGEMENT (SHEET 2 OF 2)						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE: 1:50		DRAWING NO: CS-101				



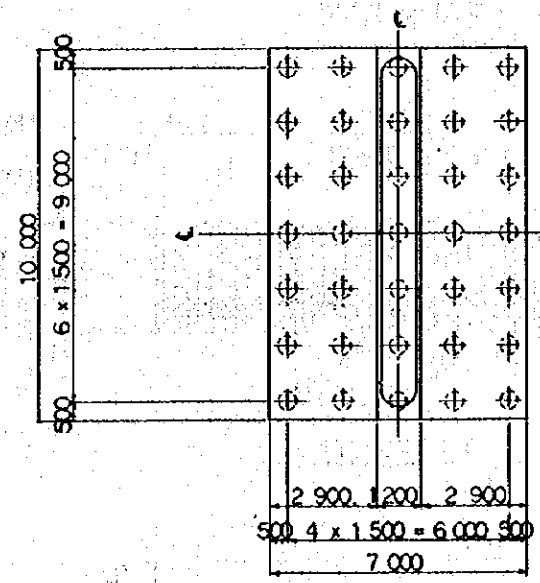
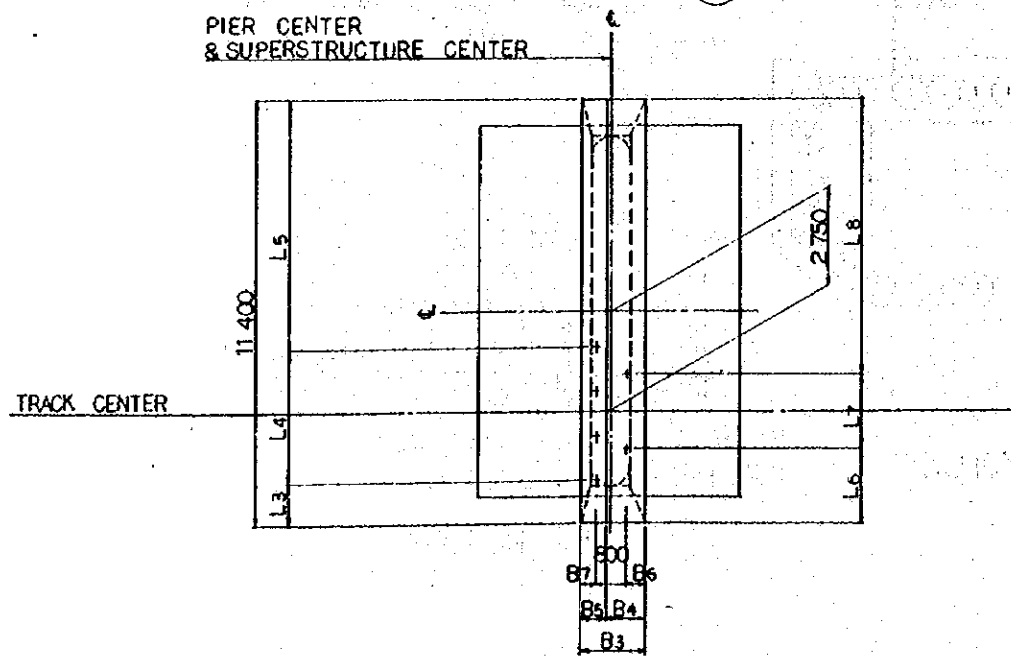
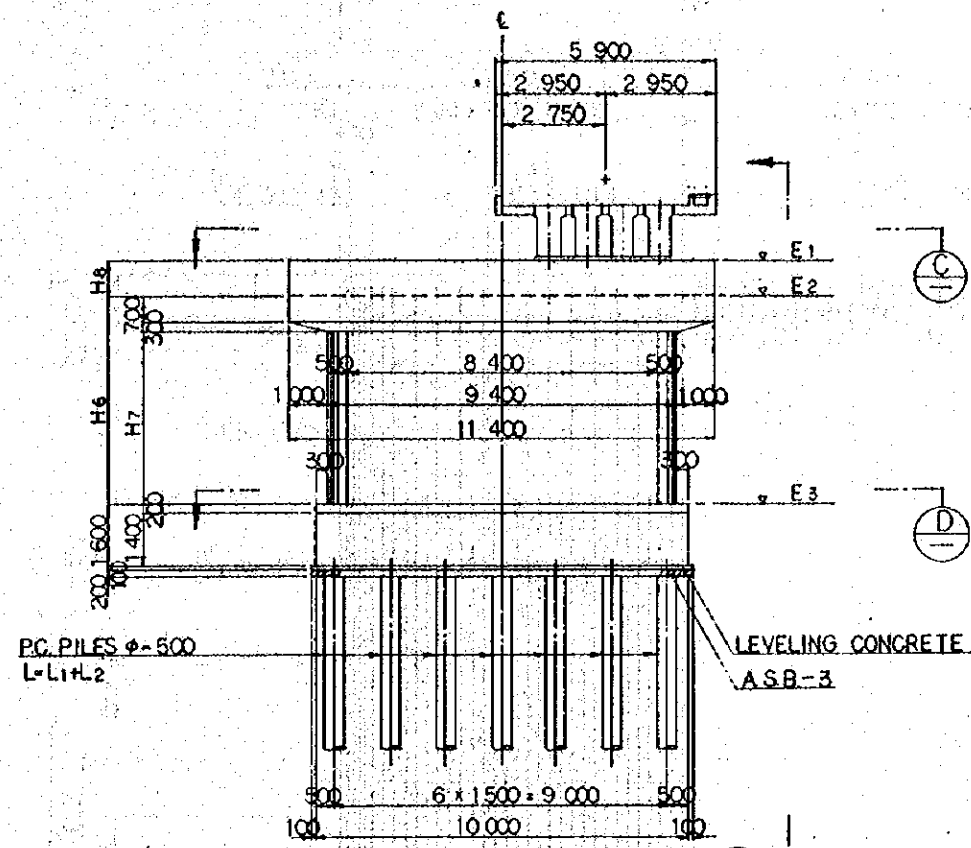
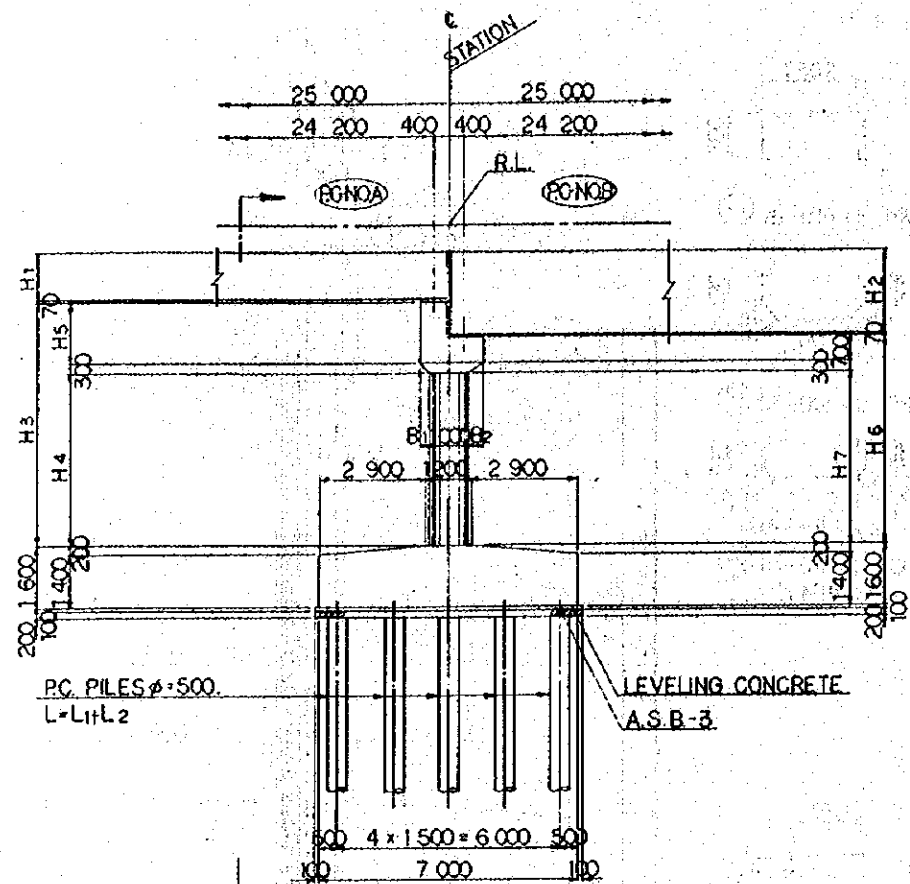
GENERAL VIEW OF P26

NOTES:

- 1 ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
- 2 REFERENCE DRAWING FOR BAR ARRANGEMENT: CS-107, CS-108, CS-109
- 3 TYPES OF PC-PILE



REPUBLIC OF INDONESIA						
MINISTRY OF COMMUNICATIONS						
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG '84	S.S.	M.Y.	K.A.	K.M.	M.K.
A	15 FEB '84	S.S.	M.Y.	K.A.	K.M.	M.K.
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
PIER P26						
GENERAL VIEW						
PACKAGE: 1 CIVIL AND ARCHITECTURAL WORK						
SCALE	DRAWING NO.					
1:100	CS-102					



PIER NO.	STATION	ALIGNMENT	PC-NOA	PC-NOB
P-27	17 <sup>073.00</sup>	STRAIGHT	22	23
P-28	17 <sup>098.00</sup>	STRAIGHT	23	24
P-29	17 <sup>123.00</sup>	STRAIGHT	24	25
P-38	18 <sup>745.00</sup>	CURVED R=500	29	30
P-39	18 <sup>770.00</sup>	CURVED R=500	30	31

DIMENSION SCHEDULE

PIER NO.	R.L.	E1	E2	E3	H1	H2	H3	H4	H5	H6	H7	H8	L1	L2	L3	L4	L6	L6	L7	L8	B1	B2	B3	B4	B5	B6	B7
P-27	8.754	6.574	6.574	-0.026	1 400	1 400	6 600	5 600	700	6 600	5 600	0	8.0	14.0	1 150	3x1200 2.360	6 650	1 150	3x1200x3 600	6 650	250	250	1 500	1 500	0	350	350
P-28	8.754	6.574	5.624	-0.078	1 400	2 350	6 650	4 700	1 650	5 700	4 700	950	8.0	14.0	1 150	3x1200 2.360	6 650	1 950	2 000	7 450	250	400	1 650	920	730	500	350
P-29	8.754	5.624	5.624	-2.978	2 350	2 350	8 600	7 600	700	8 600	7 600	0	8.0	11.0	1 950	2 000	7 450	1 950	2 000	7 450	400	400	1 800	1 800	0	500	500
P-38	10.554	7.424	7.424	0.724	2 350	2 350	6 700	5 700	700	6 700	5 700	0	8.0	7.0	2 028	2 000	7 372	2 028	2 000	7 372	400	400	1 800	1 800	0	500	500
P-39	10.554	7.424	7.424	0.724	2 350	2 350	6 700	5 700	700	6 700	5 700	0	8.0	7.0	2 028	2 000	7 372	2 028	2 000	7 372	400	400	1 800	1 800	0	500	500

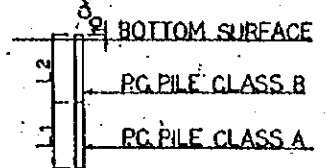
GENERAL VIEW OF P-27, 28, 29, 38 & 39

DESIGN CRITERIA

DESIGN LOAD	TRAIN LOAD	EQUIVALENT TO K3-16
	SEISMIC EFFECT	IN HORIZONTAL DIRECTION $K_h=0.1$ IN VERTICAL DIRECTION $K_v=0$
ALLOWABLE STRESS	REINFORCING BAR	ALLOWABLE TENSILE STRESS 1800 kg/cm <sup>2</sup>
	CONCRETE	ALLOWABLE COMPRESSIVE STRESS 30 kg/cm <sup>2</sup>
MATERIAL	TYPE OF REINFORCING BAR	SD-30
	CONCRETE OF DESIGN CRITERIA STRENGTH	$\sigma_{ck}=210 \text{ kg/cm}^2$
	MAX SIZE OF COARSE AGGREGATE	25mm

NOTES:

- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
- REFERENCE DRAWING FOR BAR ARRANGEMENT: CS104, CS105, P27P28, CS080, CS081, CS082, P29P38P39
- TYPES OF PC PILE



REPUBLIC OF INDONESIA  
MINISTRY OF COMMUNICATIONS  
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

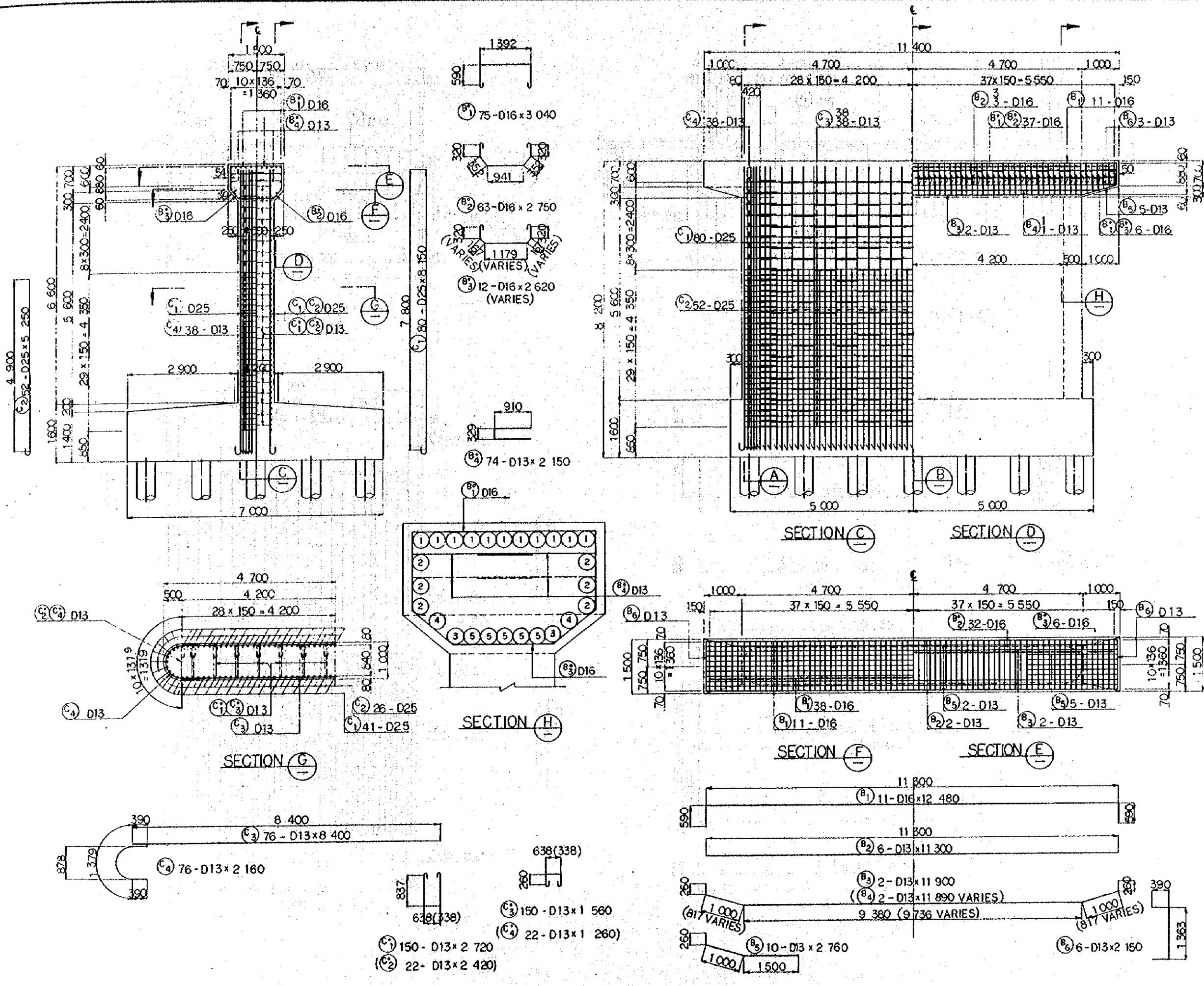
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
B	1 AUG '84	S.S.	M.Y.	K.A.	K.M.	K.K.
A	15 FEB '84	S.S.	M.Y.	K.A.	K.M.	K.K.

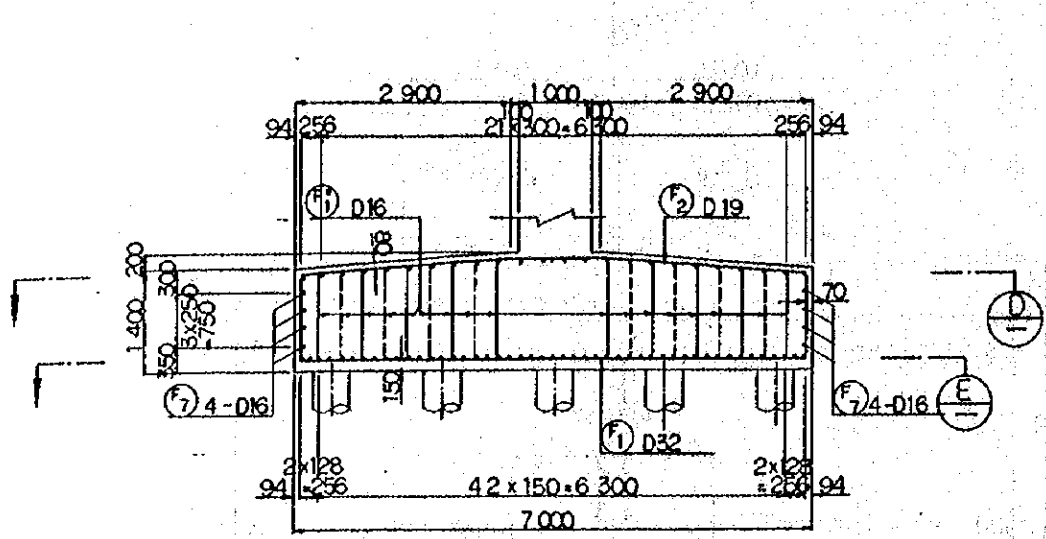
PIER P27~P29, P38, P39  
GENERAL VIEW

PACKAGE: 1 CIVIL AND ARCHITECTURAL WORK  
SCALE: 1:100  
DRAWING NO.: CS-103

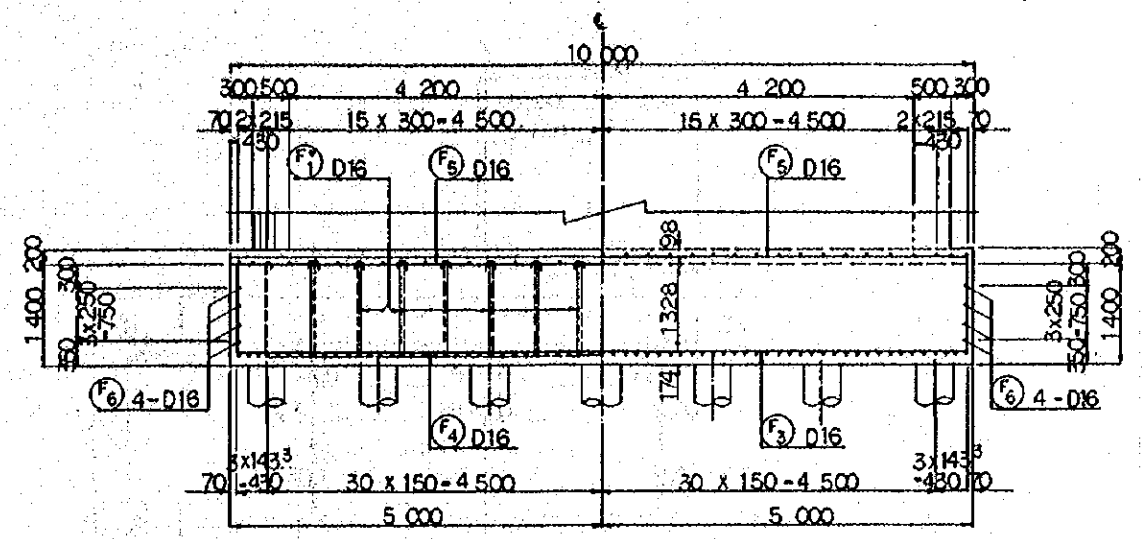


- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR GENERAL VIEW: CS103

REPUBLIC OF INDONESIA					
MINISTRY OF COMMUNICATIONS					
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1 AUG '84	SS	m.y	K.A	K.V
A	15 FEB '84	SS	m.y	K.A	K.M
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	SUBMITTED
PIER P27 BAR ARRANGEMENT (SHEET 1 OF 2)					
PACKAGE: 1 CIVIL AND ARCHITECTURAL WORK					
SCALE: 1:50		DRAWING NO: CS-104			

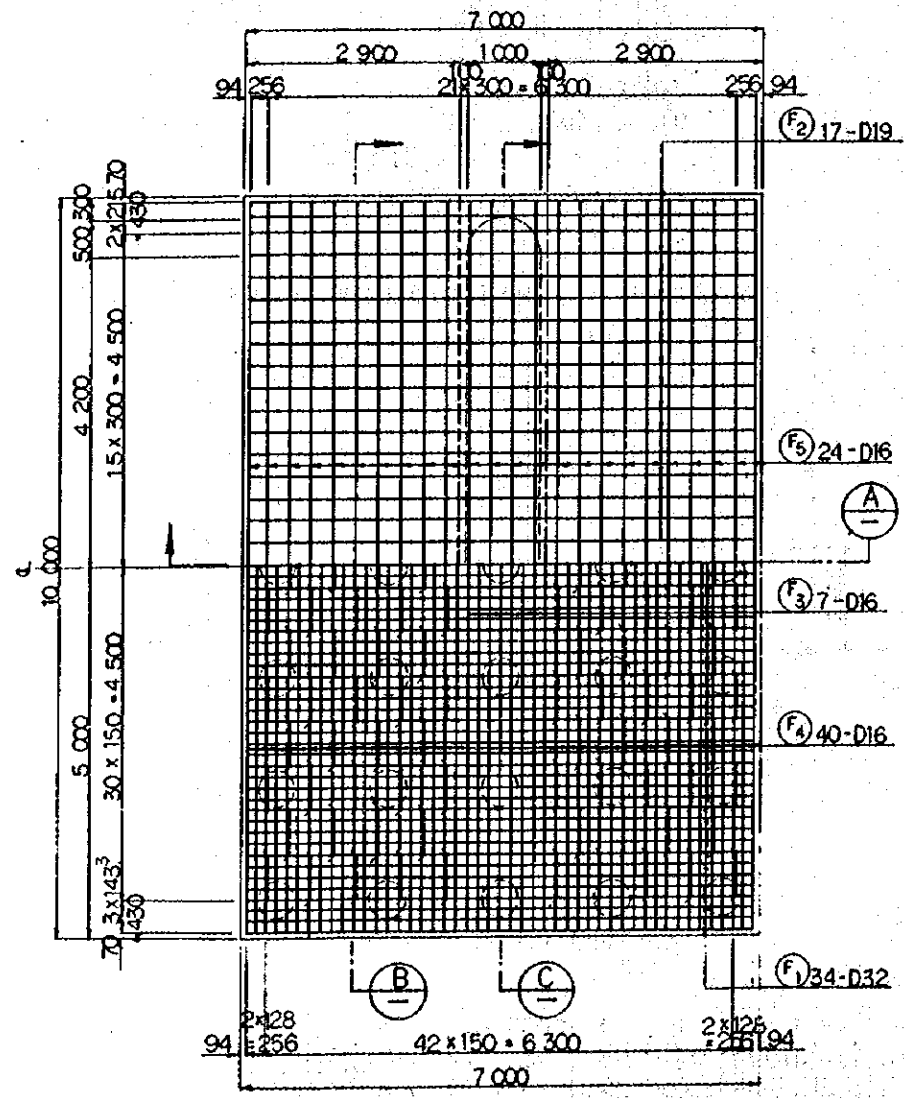


SECTION A



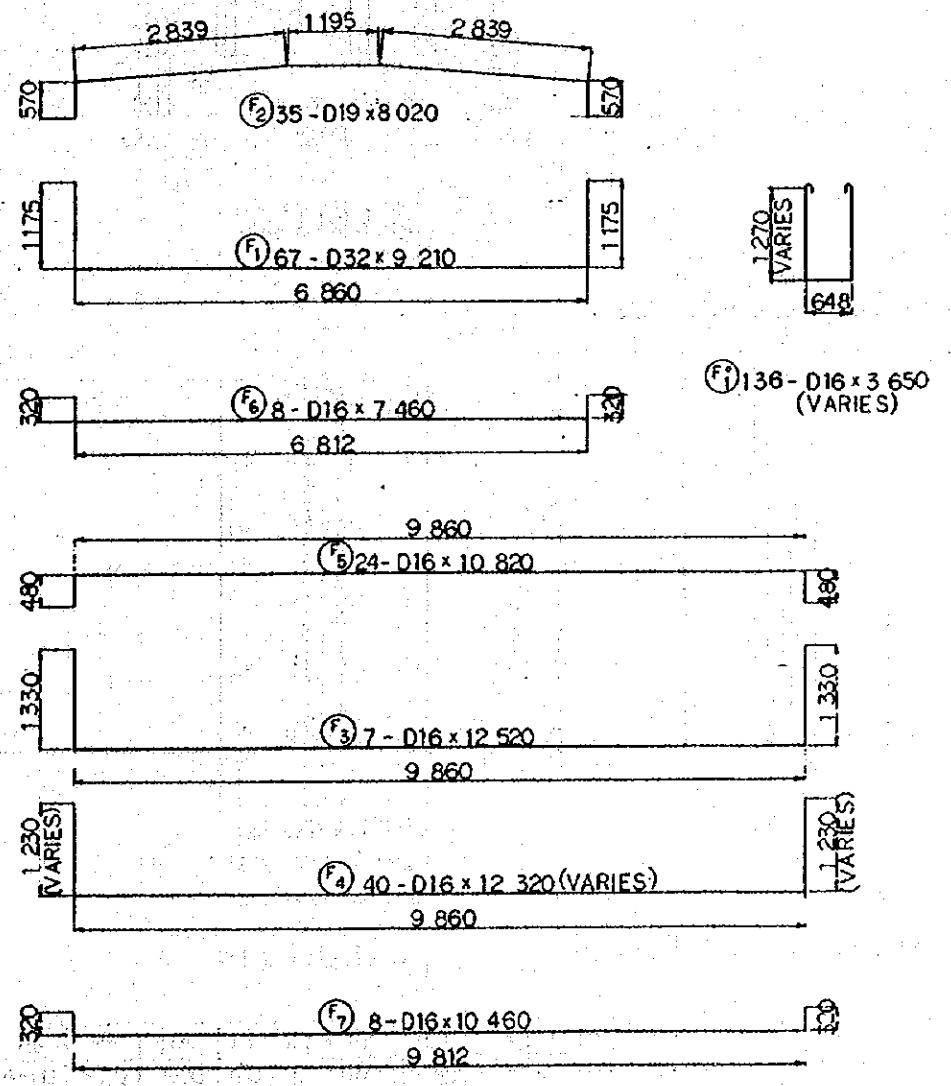
SECTION B

SECTION C



SECTION D

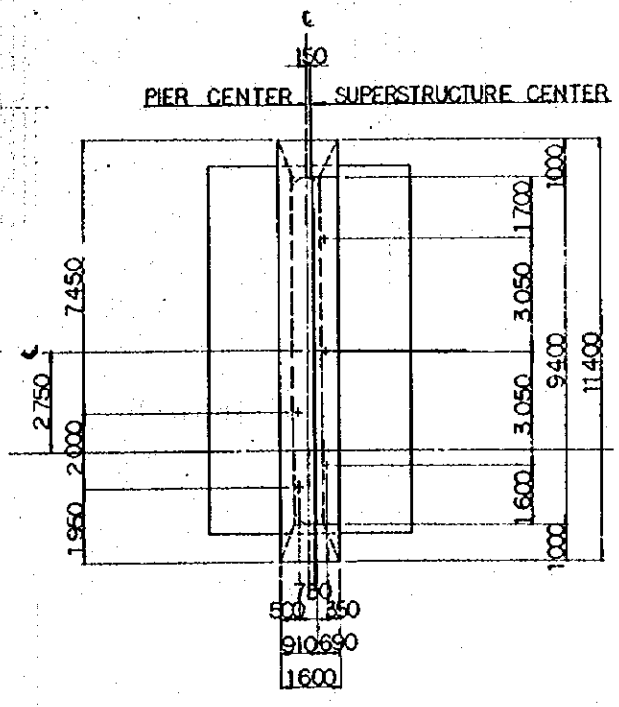
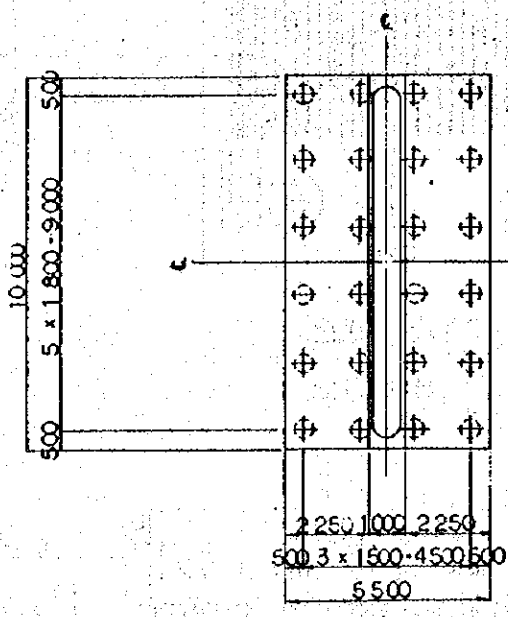
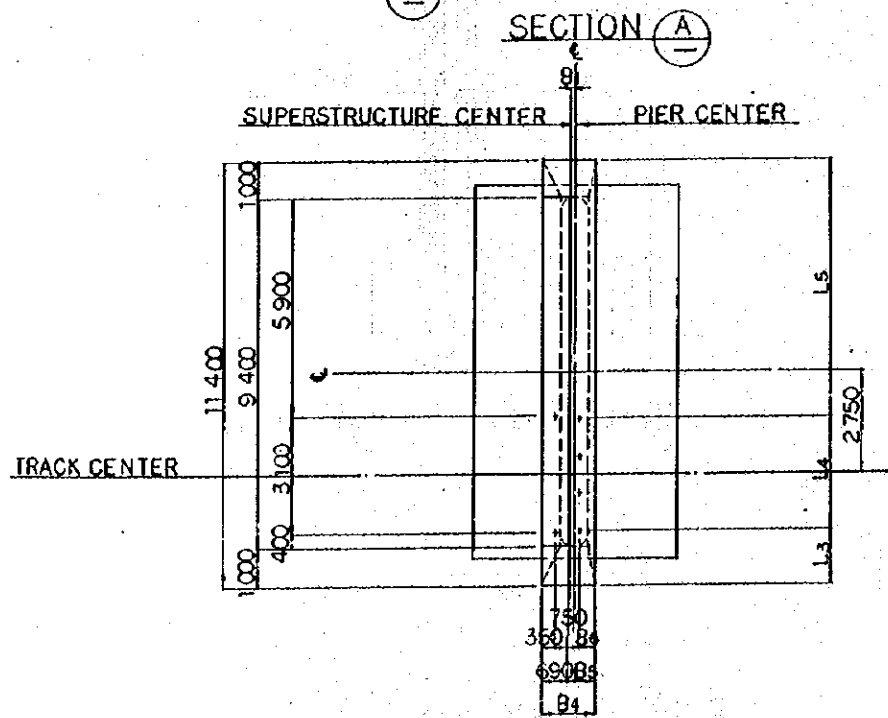
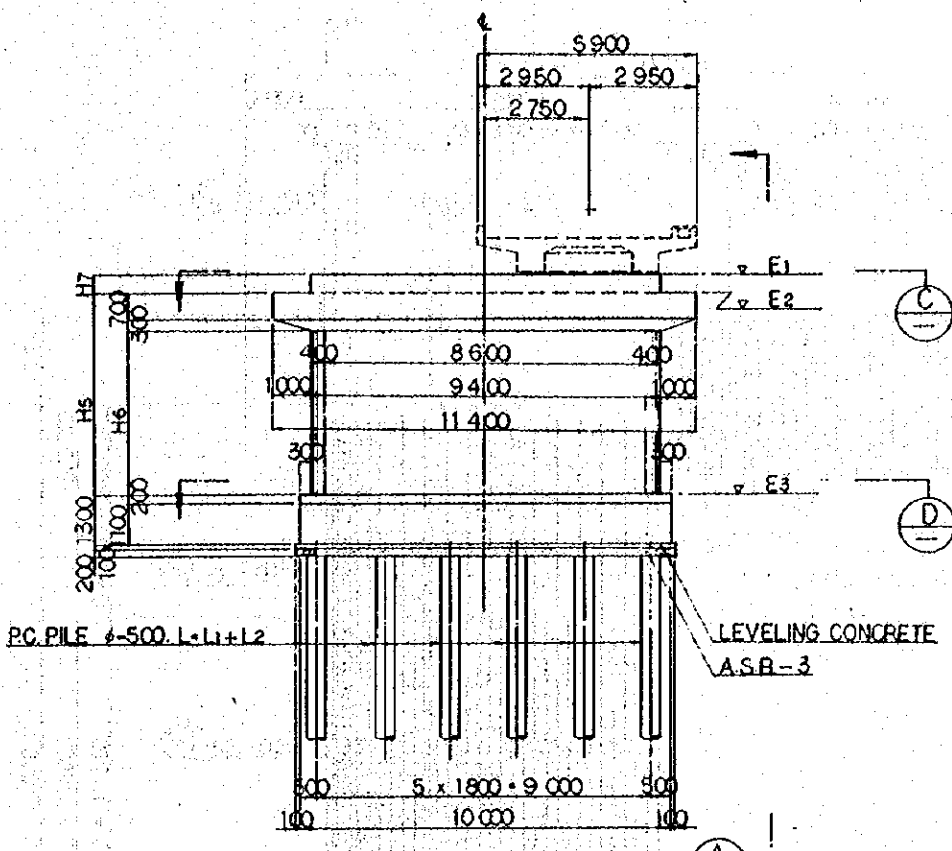
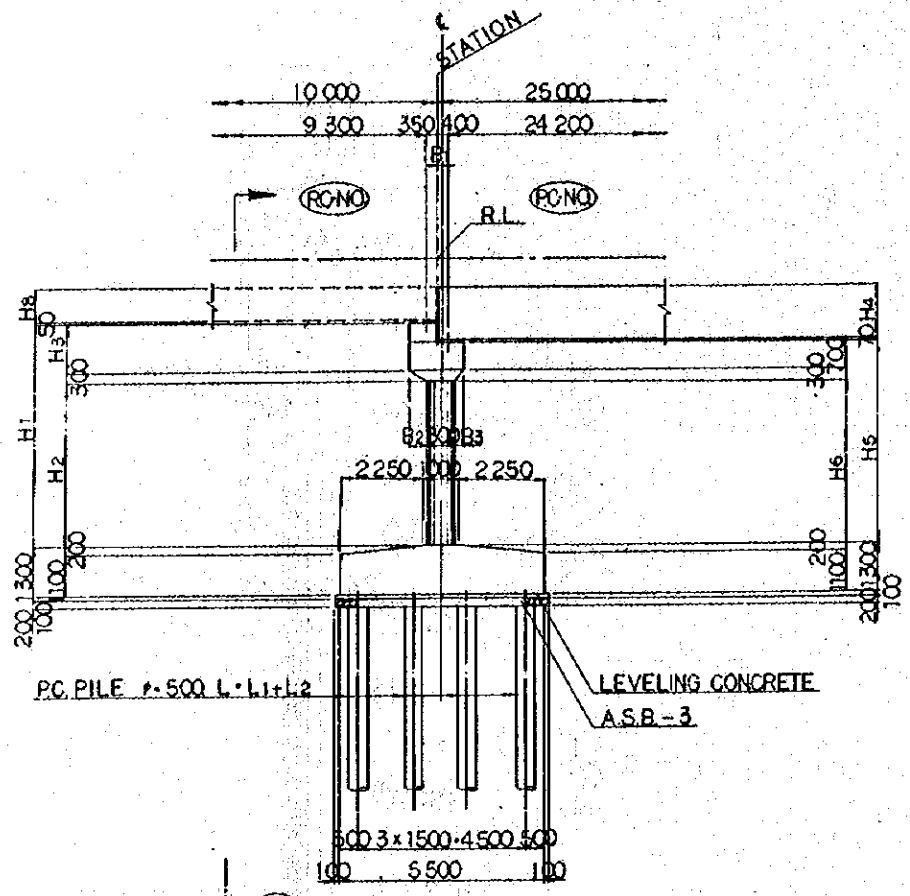
SECTION E



NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. REFERENCE DRAWING FOR GENERAL VIEW : CS-103.

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG. 84	LS	m-y	K.A.	K.M.	M.K.
A	15 FEB. 84	CS	m-y	K.A.	K.M.	M.K.
REVISION	DATE	DESIGNED	DRAWN	CHECKED	EXTEND	SUBMITTED
PIER P27 BAR ARRANGEMENT (SHEET 2 OF 2)						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE: 1:50		DRAWING NO: CS-105				



DESIGN CRITERIA		
DESIGN LOAD	TRAIN LOAD	EQUIVALENT TO KS-16
	SEISMIC EFFECT	IN HORIZONTAL DIRECTION $K_h=0.1$ IN VERTICAL DIRECTION $K_h=0$
ALLOWABLE STRESS	REINFORCING BAR	ALLOWABLE TENSILE STRESS 1800 kg/cm <sup>2</sup>
	CONCRETE	ALLOWABLE COMPRESSIVE STRESS 80 kg/cm <sup>2</sup>
MATERIAL	TYPE OF REINFORCING BAR	SD-36
	CONCRETE OF DESIGN CRITERIA STRENGTH	$\sigma_{ck}=210 \text{ kg/cm}^2$
	MAX SIZE OF COARSE AGGREGATE	25 mm

- NOTES:
- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  - REFERENCE DRAWING FOR BAR ARRANGEMENT: CS-107, CS-108, CS-109.
  - TYPES OF PC PILE
    - 1.2 BOTTOM SURFACE
    - PC PILE CLASS B
    - PC PILE CLASS A

DIMENSION SCHEDULE

PIER NO	STATION	IRONO	PCNO	R.L.	E1	E2	E3	H1	H2	H3	H4	H5	H6	H7	H8	L1	L2	L3	L4	L5	B1	B2	B3	B4	B5	B6
P-03	13 655.00	02	04	8.474	6.814	6.294	6.694	6.120	4.600	1.220	1.400	5.600	4.600	5.20	900	11.0	0	1150	3x1200 -3.600	6.650	200	500	200	1500	810	400
P-30	17 148.00	16	25	8.754	6.794	5.624	2.976	9.770	7.600	1.870	2.350	8.600	7.600	1170	1200	8.0	11.0	—	—	—	—	450	350	—	—	—
P-33	17 759.00	28	27	7.094	6.574	6.574	6.574	6.720	5.200	1.220	1.400	6.200	5.200	5.20	900	·	·	1150	3x1200 -3.600	6.650	200	500	200	1500	810	400
P-34	17 784.00	29	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·

GENERAL VIEW OF P-03 30, 33 & 34

REPUBLIC OF INDONESIA  
MINISTRY OF COMMUNICATIONS  
DIRECTORATE GENERAL OF LAND TRANSPORT  
AND INLAND WATERWAYS

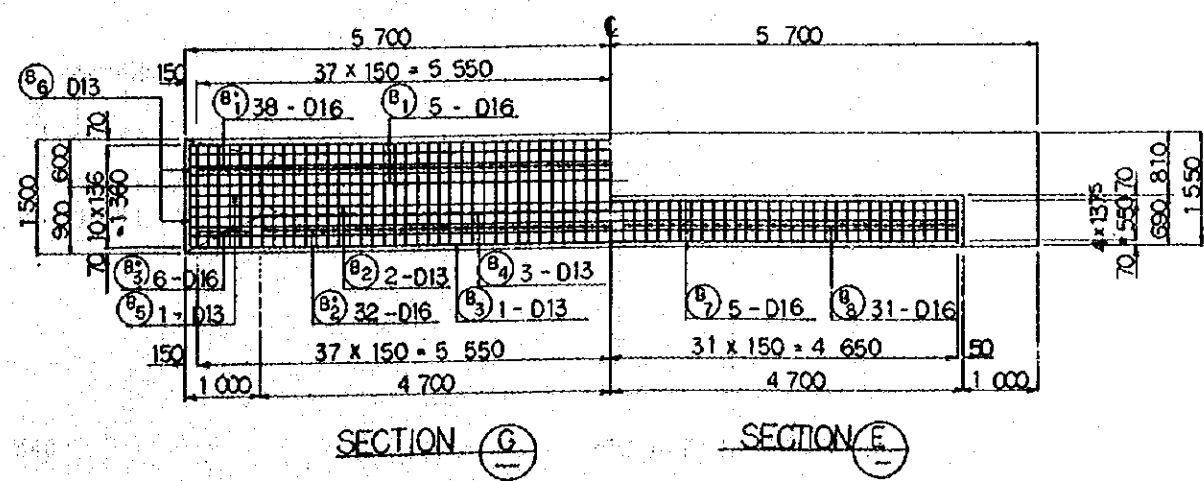
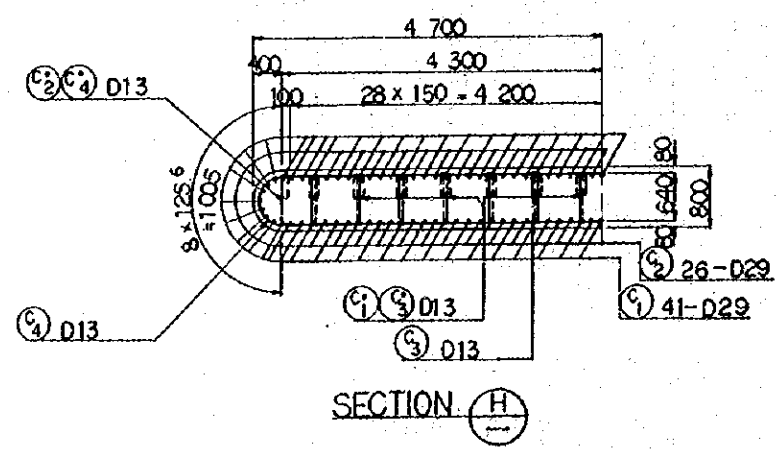
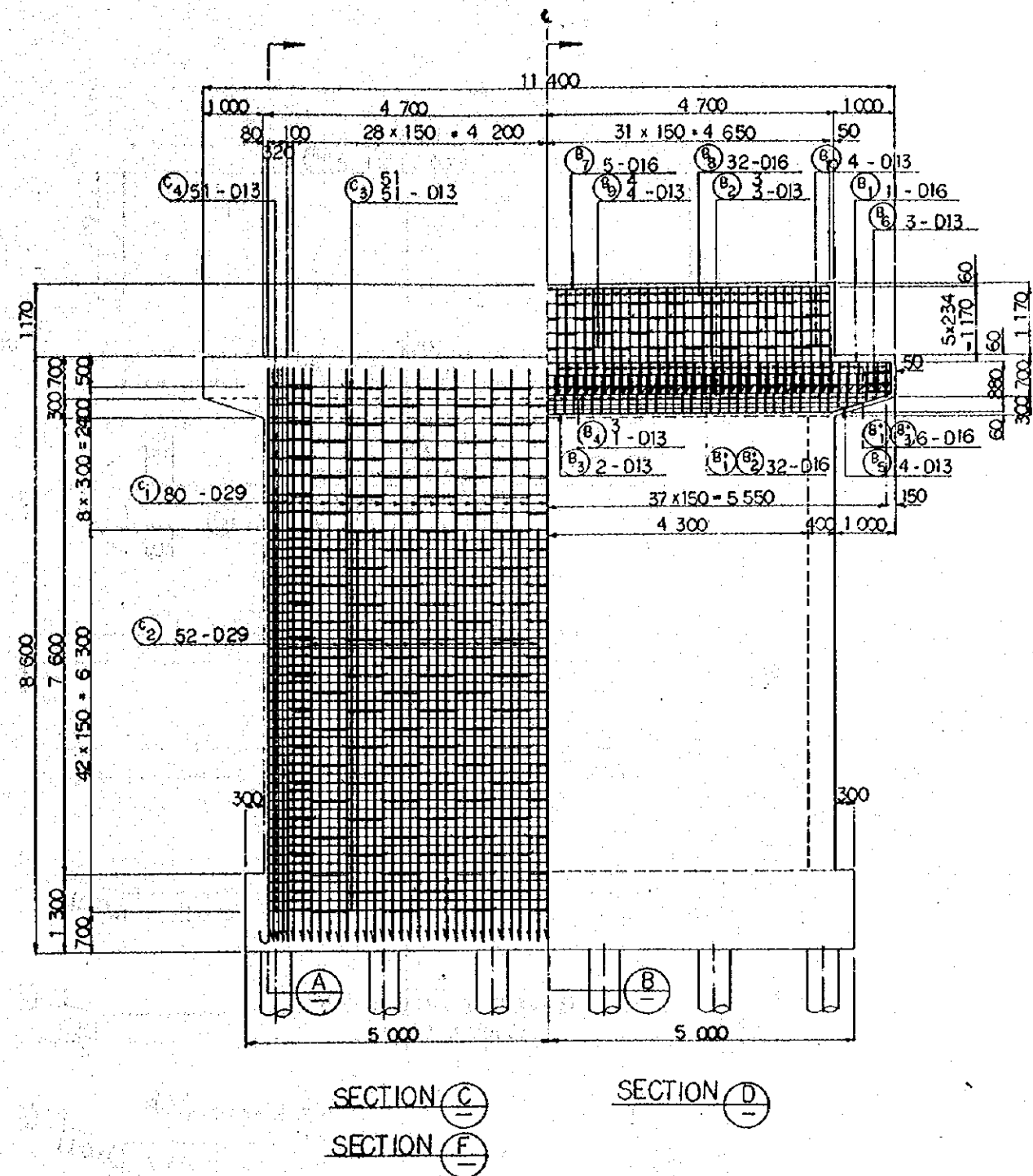
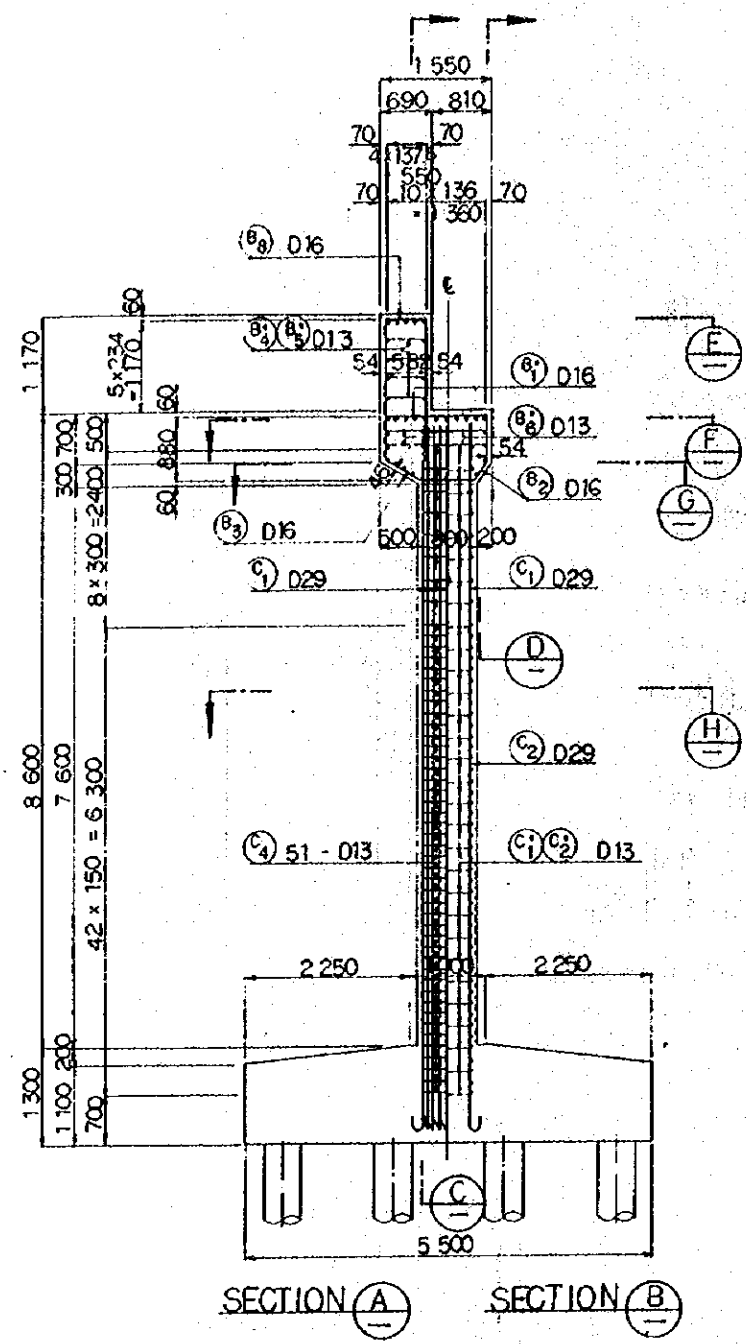
NEW RAILWAY LINE FOR CENGKARENG AIRPORT  
CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY  
(JICA)

REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
B	1 AUG. 84	SS	MY	K.S.	K.M.	M.K.
A	15 FEB. 84	SS	MY	K.S.	K.M.	M.K.

PIER P03, P30, P33, P34  
GENERAL VIEW

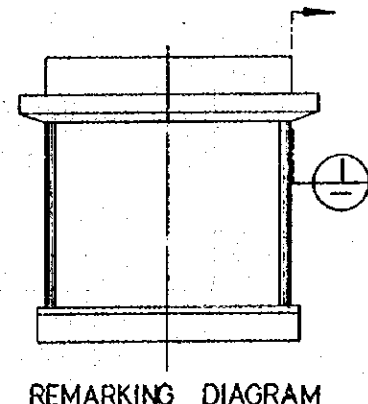
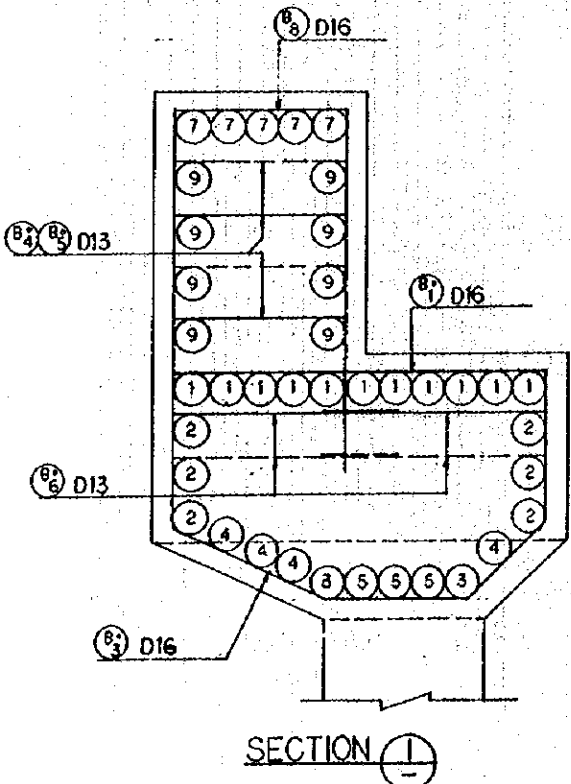
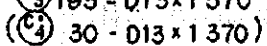
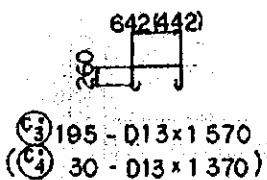
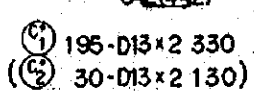
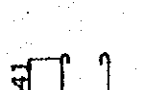
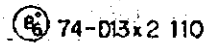
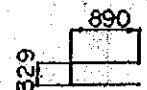
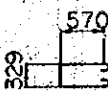
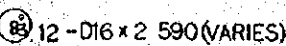
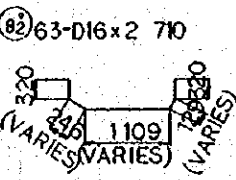
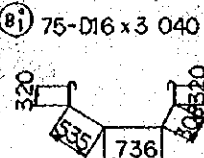
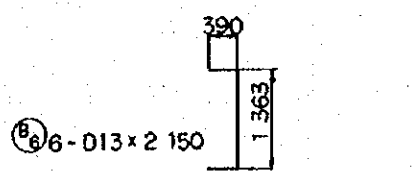
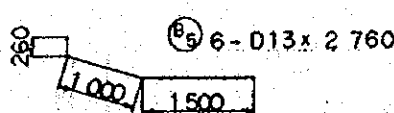
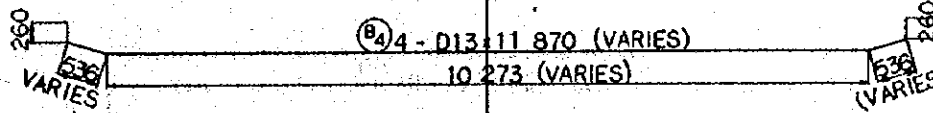
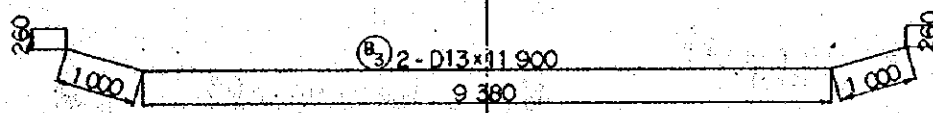
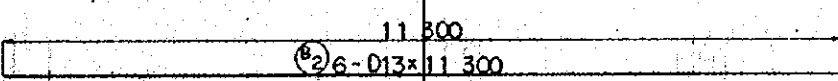
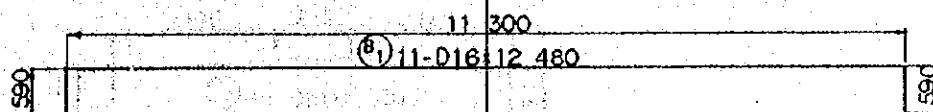
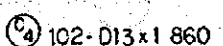
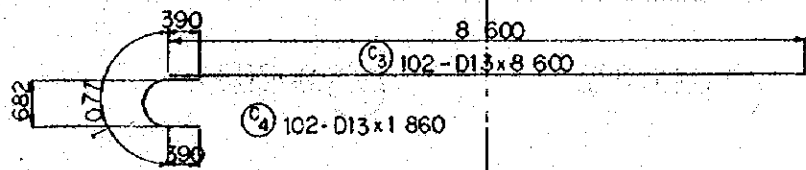
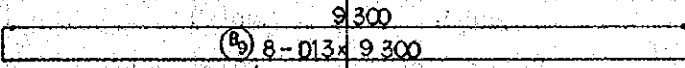
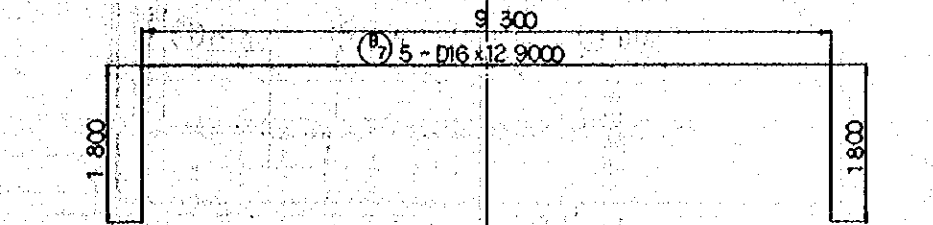
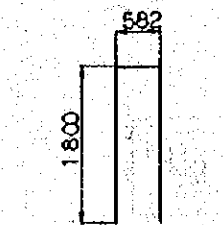
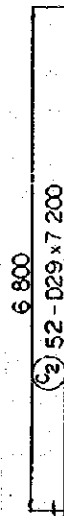
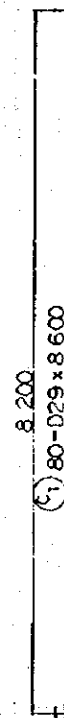
PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
SCALE: 1:100      DRAWING NO: CS-106



- NOTES:
- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  - REFERENCE DRAWING FOR GENERAL VIEW : CS-106

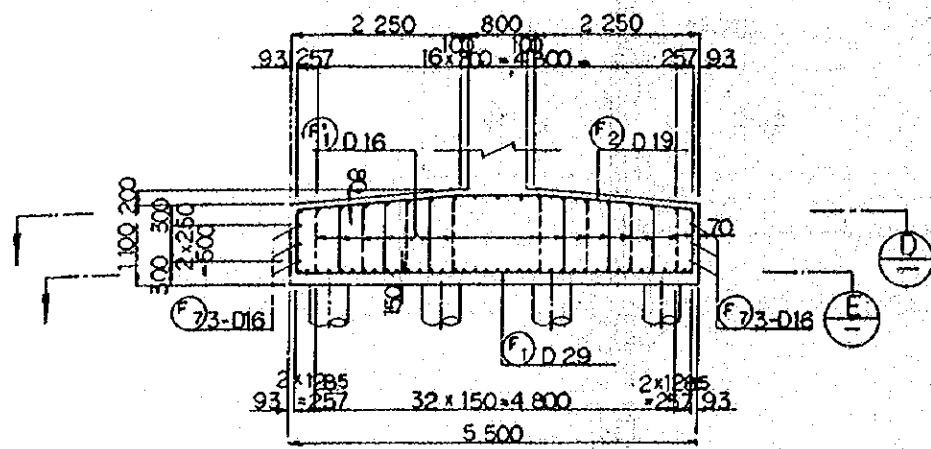
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
REVISION	DATE	DESIGNED	DRAWN	CHECKED	APPROVED	SUBMITTED
B	1 AUG. 84	S.S.	M.Y.	K.A.	K.H.	M.K.
A	15 FEB. 84	S.S.	M.Y.	K.A.	K.H.	M.K.
<b>PIER P30          BAR ARRANGEMENT          (SHEET 1 OF 3)</b>						
PROGRAM: I CIVIL AND ARCHITECTURAL WORK						
SCALE: 1:50	DRAWING NO: CS-107					



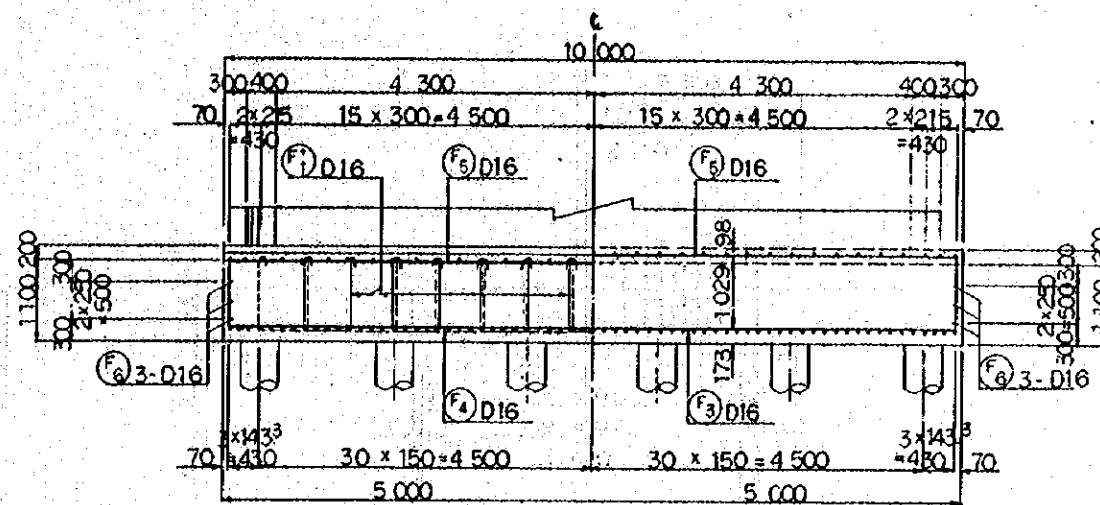


- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR GENERAL VIEW: CS-106

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG '84	S.S.	M.Y.	K.K.	K.M.	M.K.
A	15 FEB '84	S.S.	M.Y.	K.K.	K.M.	M.K.
REVISIONS	DATE	DESIGNED	DRAWN	ORDERED	EXTENDED	SUBMITTED
PIER P30 BAR ARRANGEMENT (SHEET 2 OF 3)						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE:	1:50	DRAWING NO: CS-108				

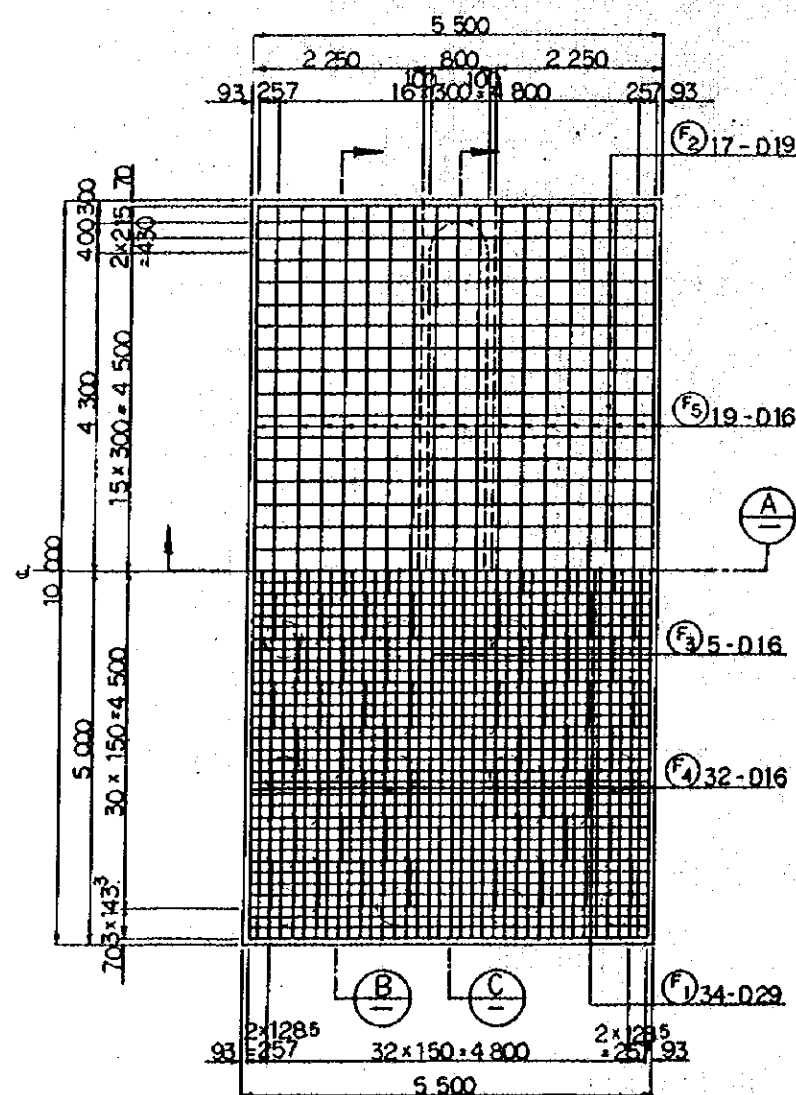


SECTION A



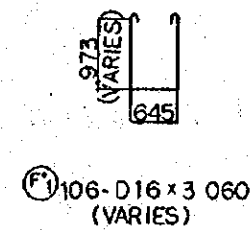
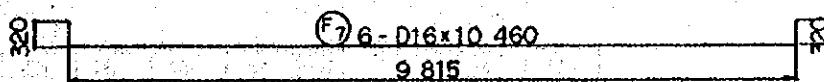
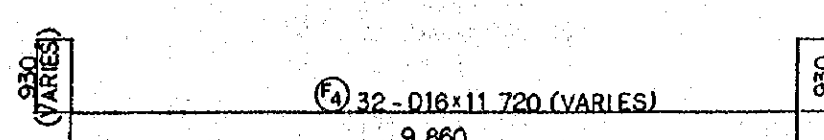
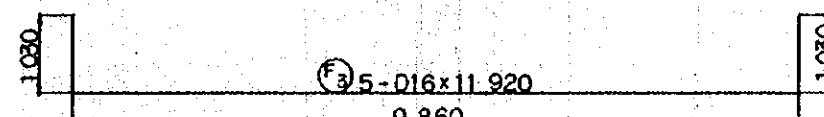
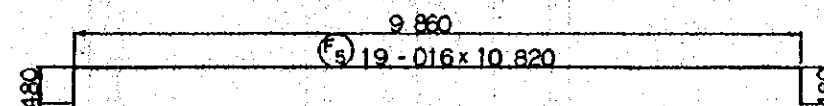
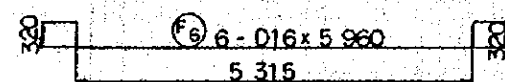
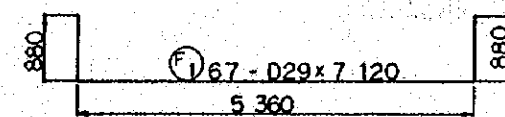
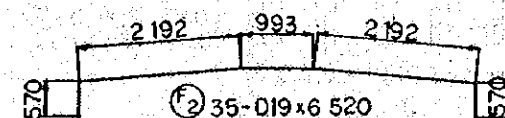
SECTION B

SECTION C



SECTION D

SECTION E



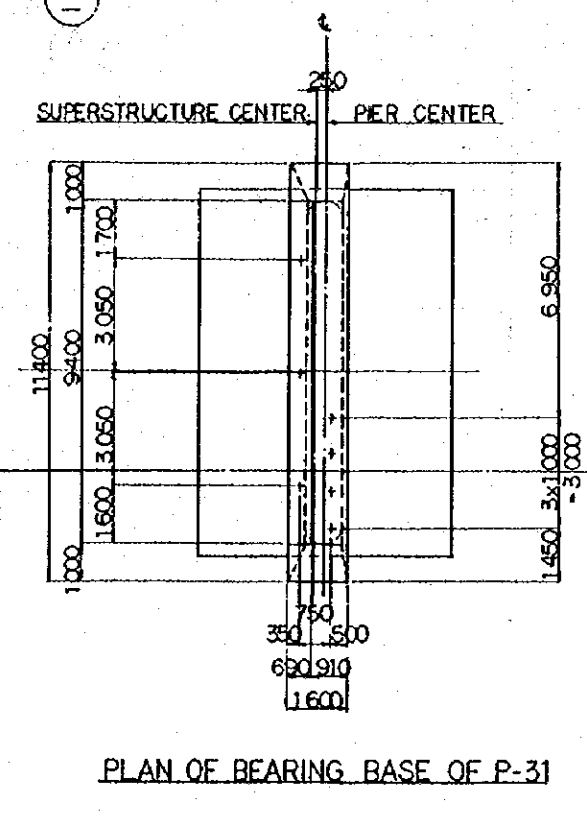
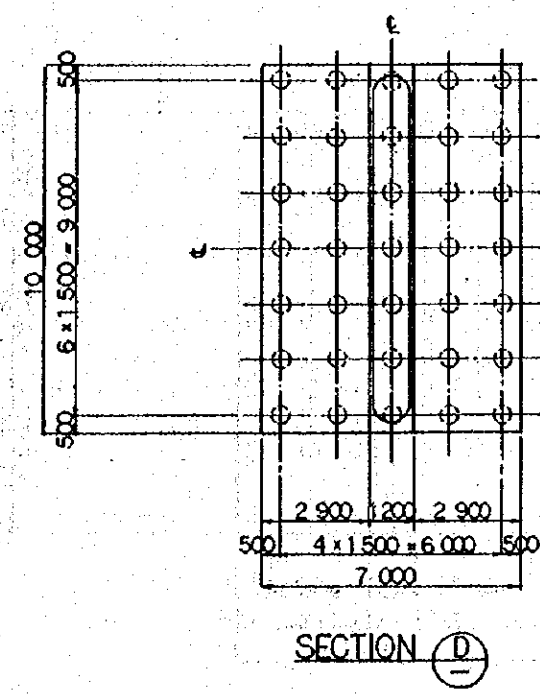
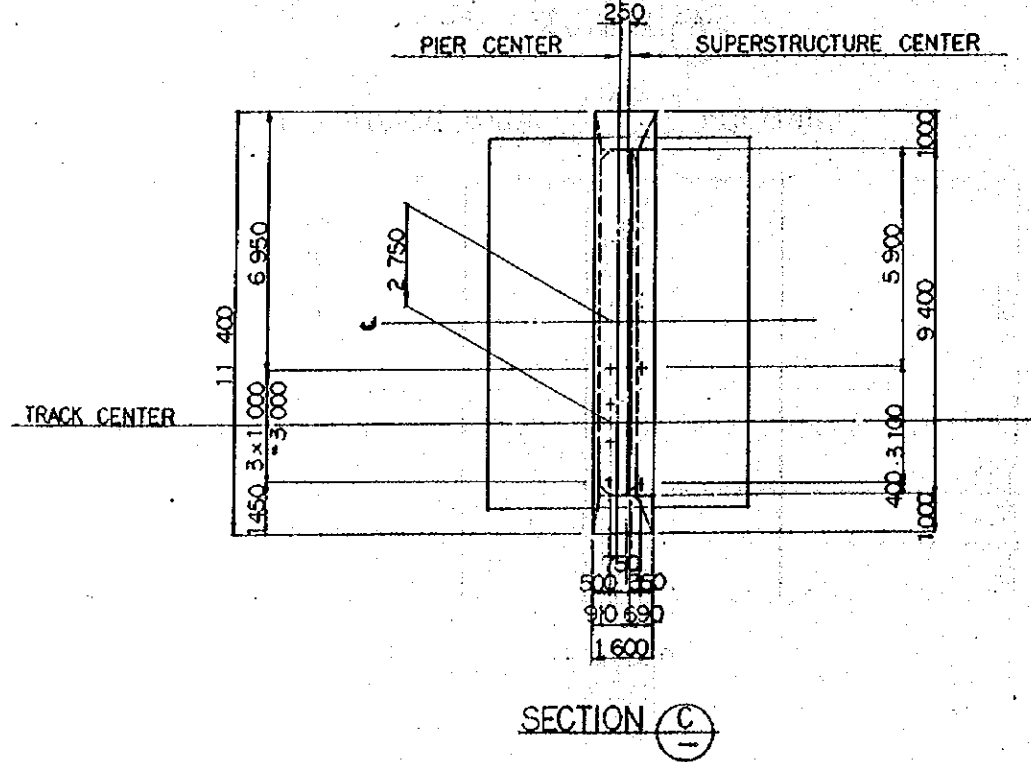
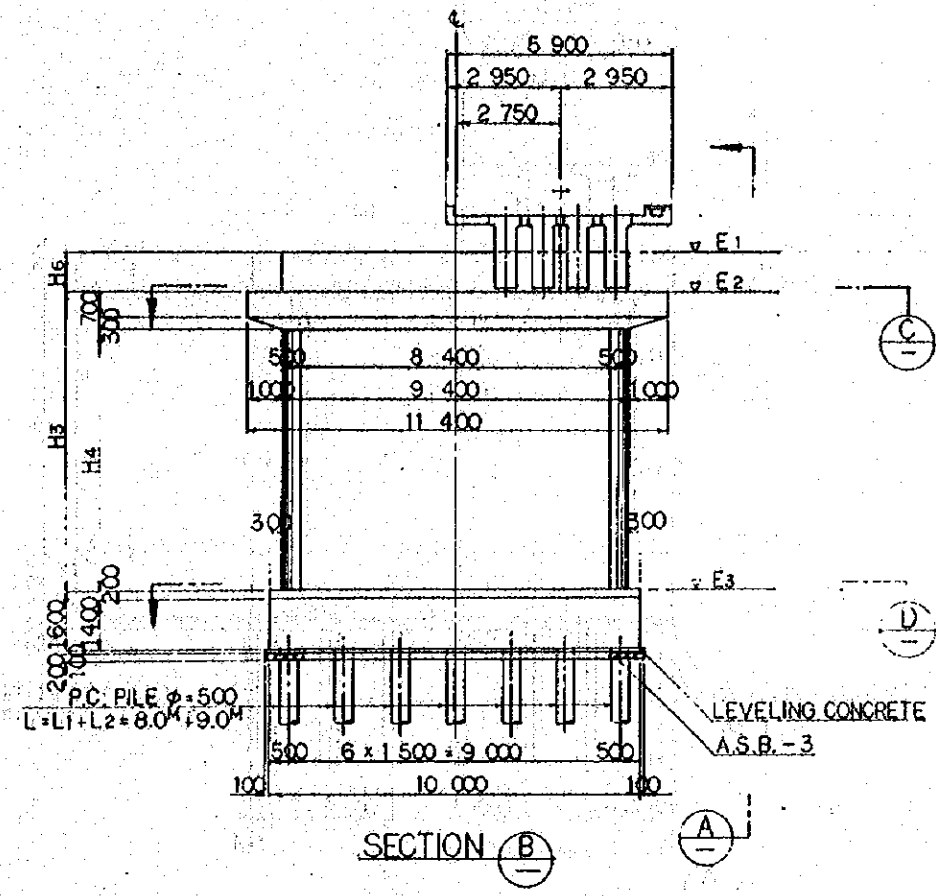
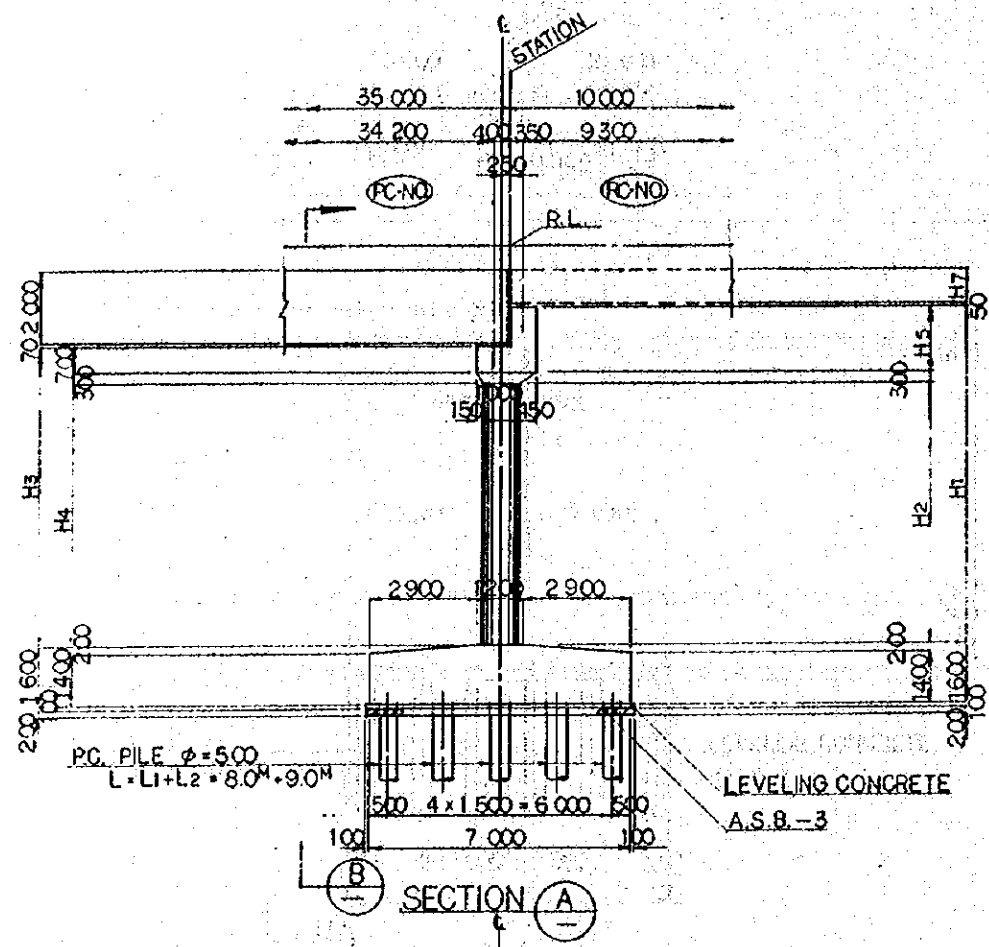
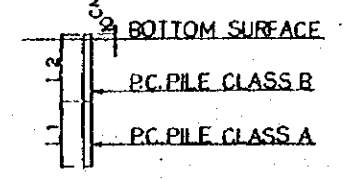
NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. REFERENCE DRAWING FOR GENERAL VIEW: CS106

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
8	1 AUG. 84	S.S.	M.Y.	K.A.	K.M.	M.K.
A	15 FEB. 84	S.S.	M.Y.	K.A.	K.M.	M.K.
REVISION	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	APPROVED
PIER P30 BAR ARRANGEMENT (SHEET 3 OF 3)						
PROGRAM: 1 CIVIL AND ARCHITECTURAL WORK						
SCALE: 1:50		DRAWING NO: CS-109				

NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. REFERENCE DRAWING FOR BAR ARRANGEMENT: CS-080, CS-081, CS-082.
3. TYPES OF PC PILE



DIMENSION SCHEDULE

PIER NO	STATION	RC-NO	PC-NO	R.L.	E1	E2	E3	H1	H2	H3	H4	H5	H6	H7
P-31	17 590.00	26	26	8.754	6.794	5.974	2.126	8 920	7 100	8 100	7 100	1 520	820	1200
P-32	17 625.00	27	26	8.754	7.094	5.974	2.126	9 220	7 100	8 100	7 100	1 820	1120	900

GENERAL VIEW OF P-31 & 32

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT  
 AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT  
 CONSTRUCTION PROJECT

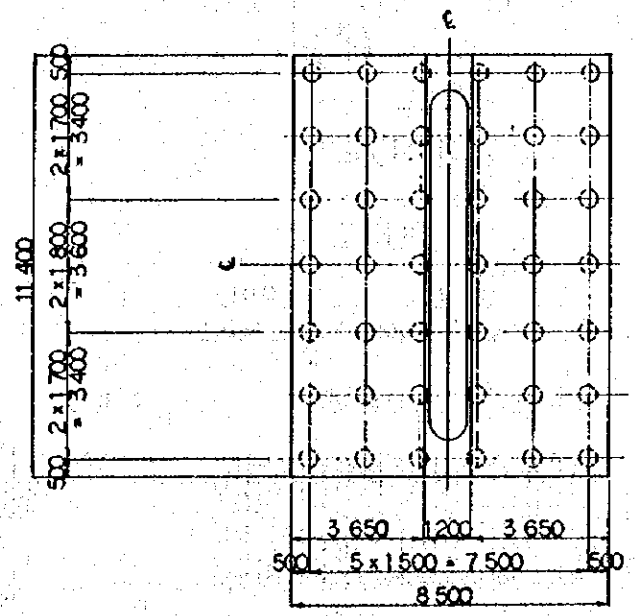
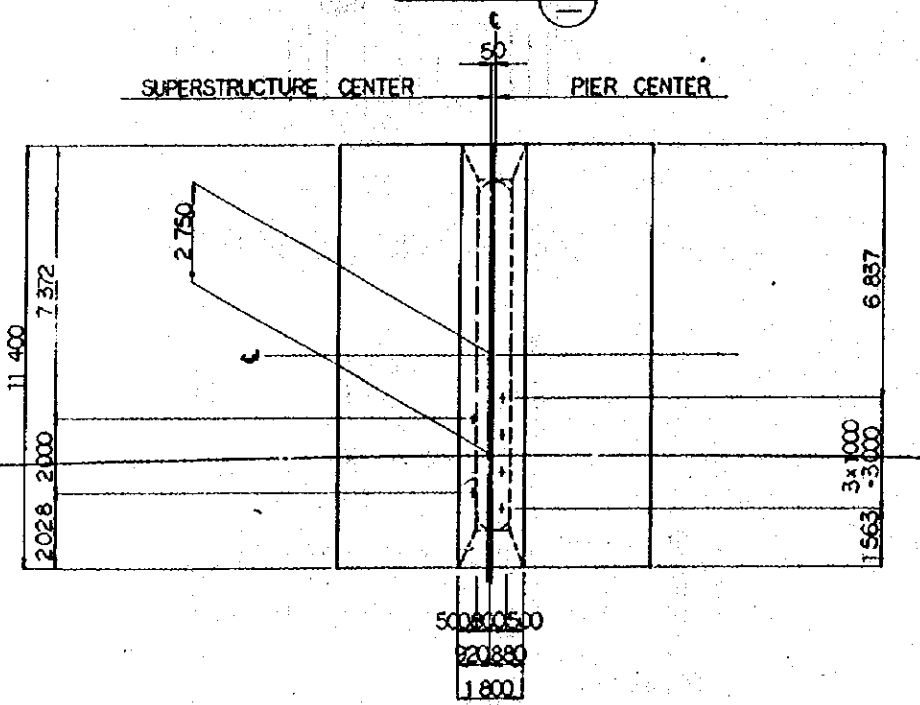
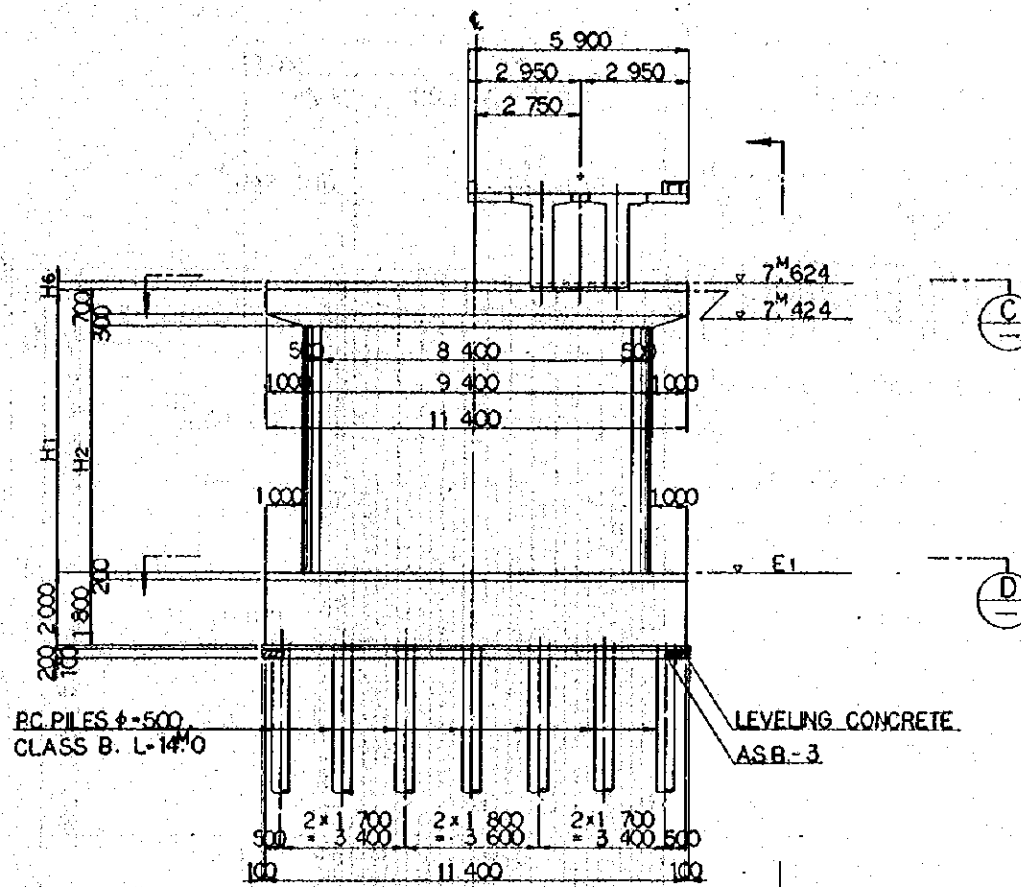
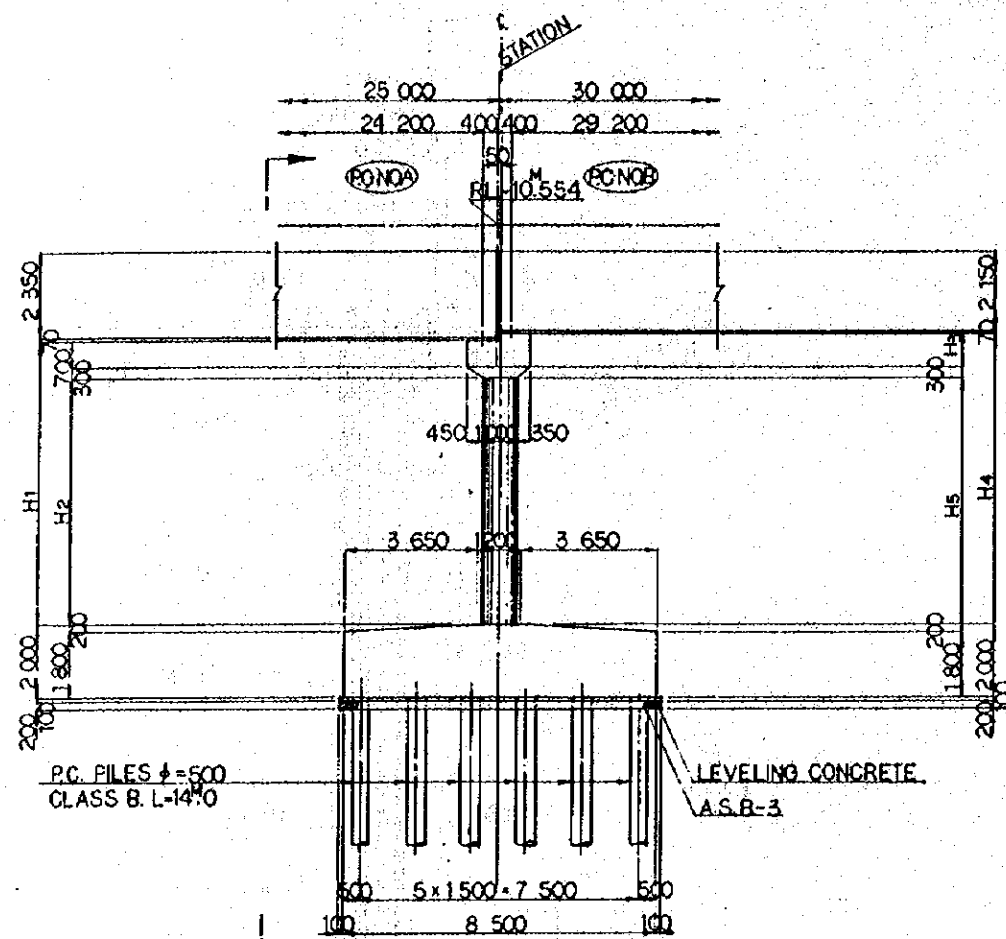
JAPAN INTERNATIONAL COOPERATION AGENCY  
 (JICA)

B	1AUG.84	S.S	M.Y	K.A	K.M	K
A	15FEB.84	S.S	M.Y	K.A	K.M	K

REVISIONS: DATE, DESIGNED, DRAWN, CHECKED, REVIEWED, SUBMITTED

PIER P31, P32  
 GENERAL VIEW

PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: 1:100  
 DRAWING NO: CS-110



SECTION C

SECTION D

DIMENSION SCHEDULE

PIER NO	STATION	PC NOA	PC NOB	E1	H1	H2	H3	H4	H5	H6
P-40	18+795.00	31	32	-0.278	7.700	6.700	900	7.900	6.700	200
P-41	18+825.00	33	32	-0.376	7.800	6.800	900	8.000	6.800	200

GENERAL VIEW OF P-40 & 41

- NOTES:
- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  - REFERENCE DRAWING FOR BAR ARRANGEMENT: CS-112, CS-113, CS-114

DESIGN CRITERIA

DESIGN LOAD	TRAIN LOAD	EQUIVALENT TO K5-14
	SEISMIC EFFECT	
ALLOWABLE STRESS	REINFORCING BAR	ALLOWABLE TENSILE STRESS 1890 kg/cm <sup>2</sup>
	CONCRETE	ALLOWABLE COMPRESSIVE STRESS 20 kg/cm <sup>2</sup>
MATERIAL	TYPE OF REINFORCING BAR	SD-39
	CONCRETE OF DESIGN CRITERIA STRENGTH	σ <sub>ck</sub> = 210 kg/cm <sup>2</sup>
	MAX SIZE OF COARSE AGGREGATE	25mm

REPUBLIC OF INDONESIA  
 MINISTRY OF COMMUNICATIONS  
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

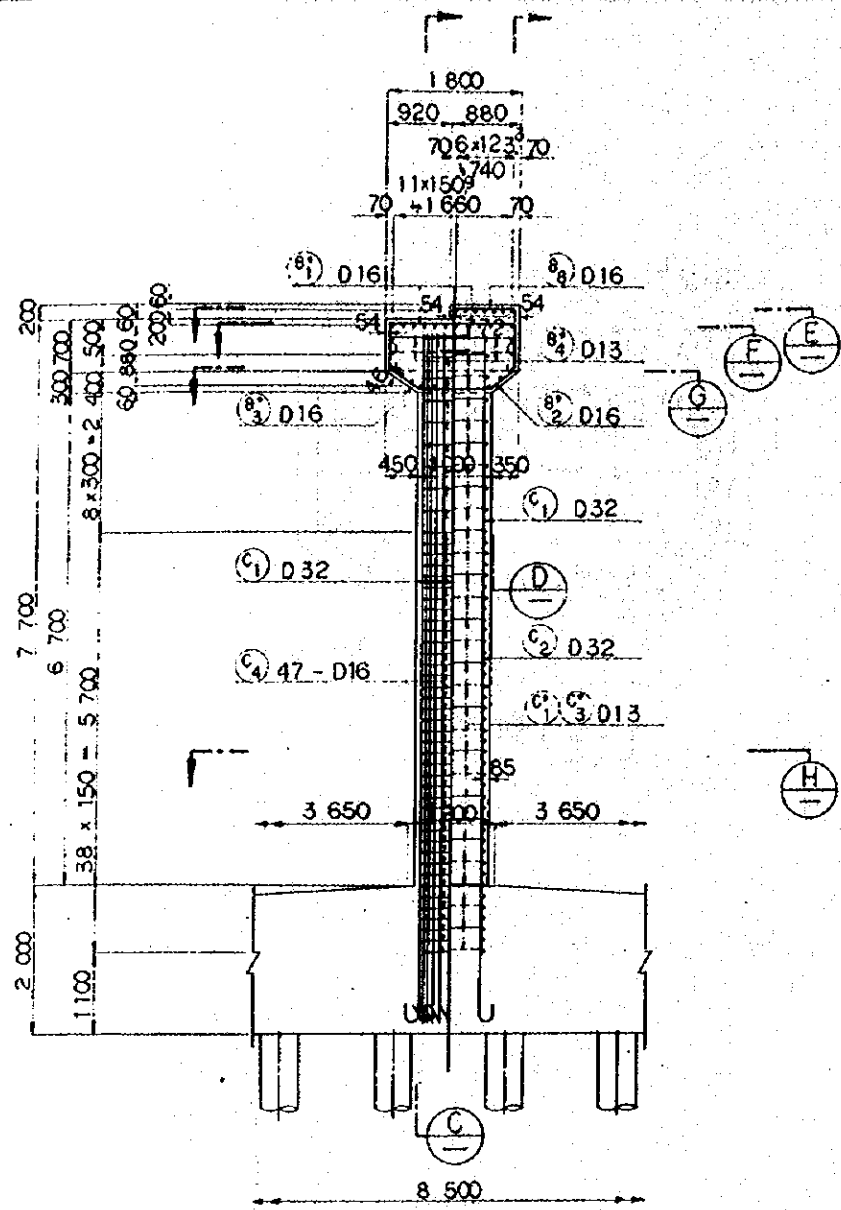
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

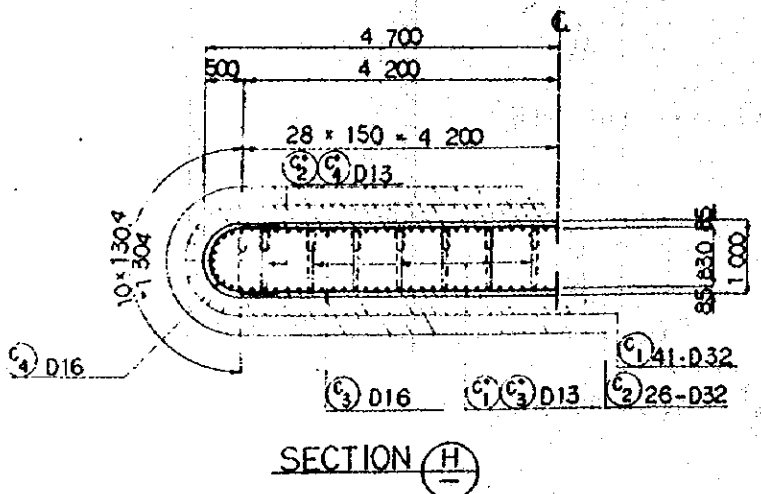
B	1 AUG. '94	SS	MLY	K.R.	K.M.	M.K.
A	15 FEB. '89	SS	MLY	K.R.	K.M.	M.K.

PIER P40, P41  
 GENERAL VIEW

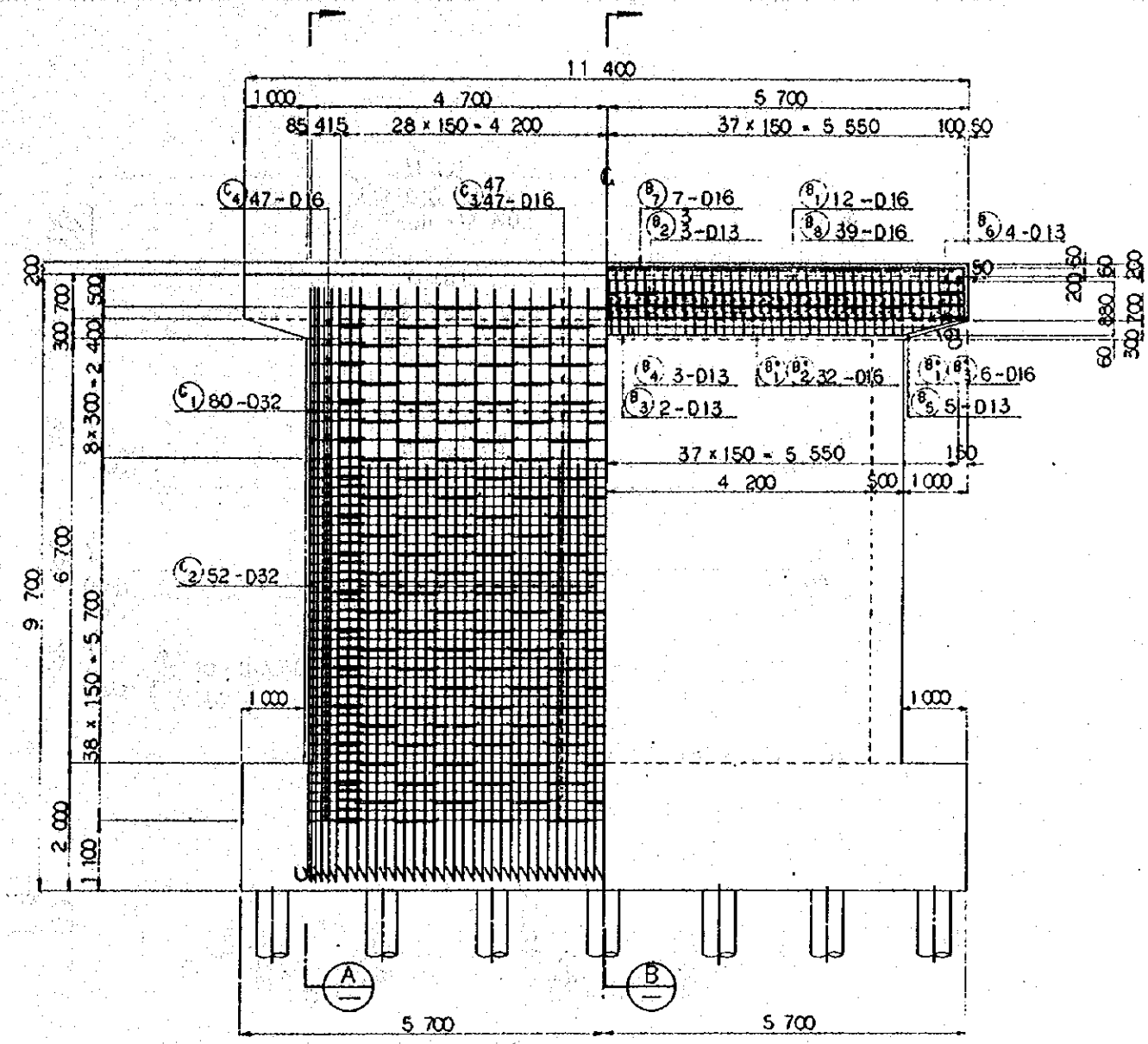
PACKAGE: I CIVIL AND ARCHITECTURAL WORK  
 SCALE: 1:100  
 DRAWING NO: CS-111



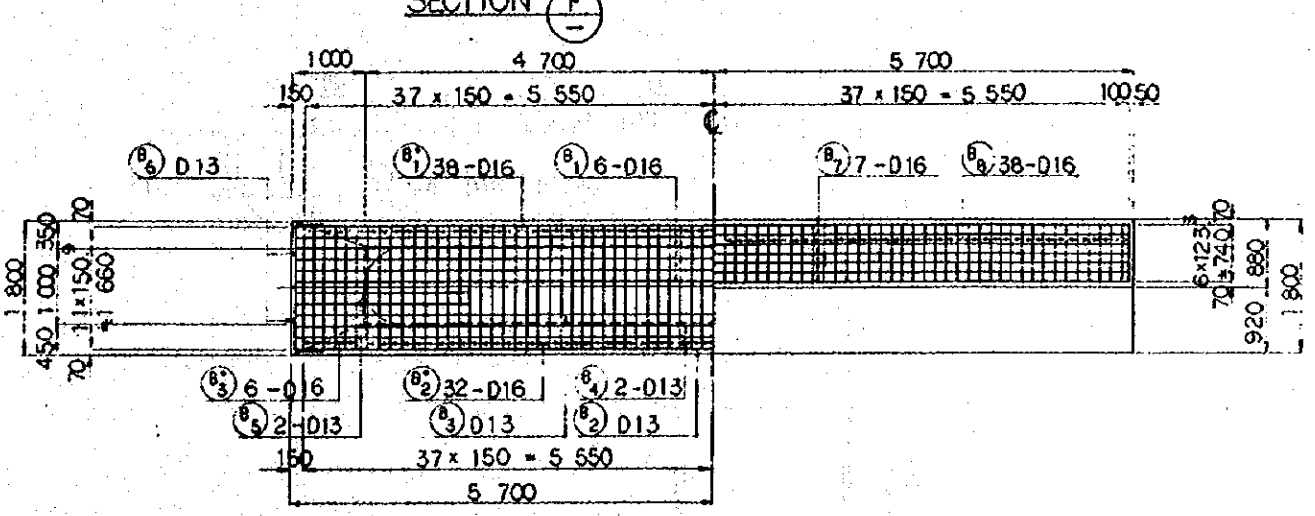
SECTION A SECTION B



SECTION H



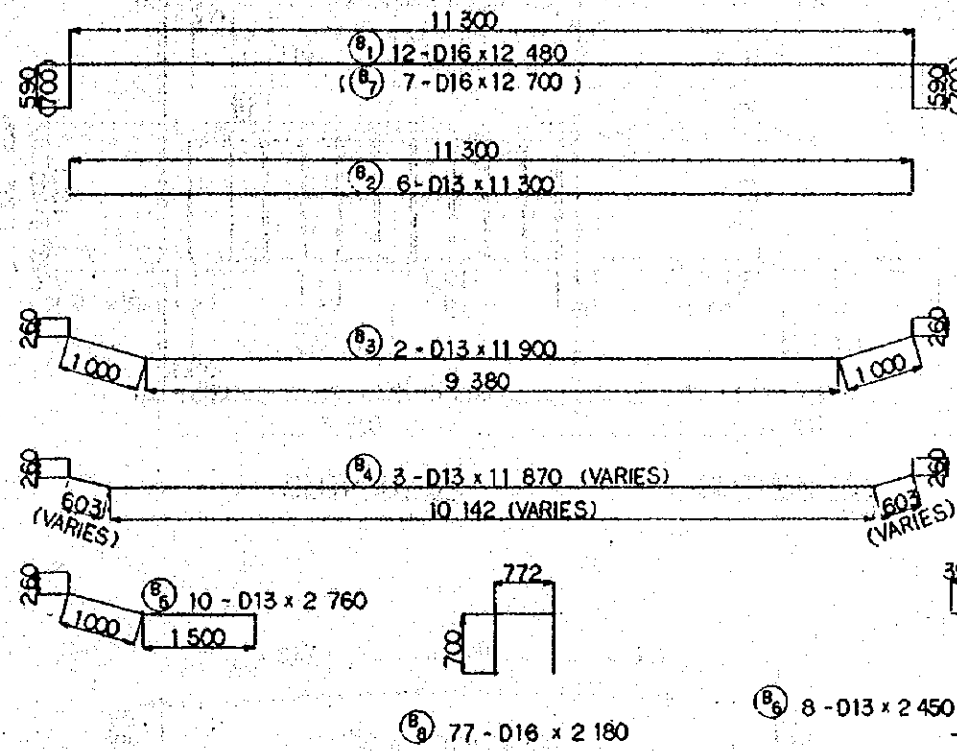
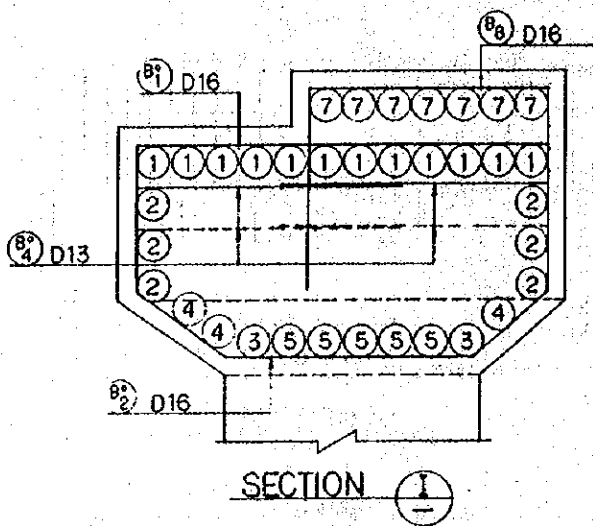
SECTION C SECTION D



SECTION E SECTION F

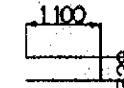
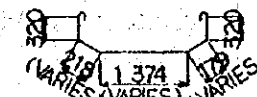
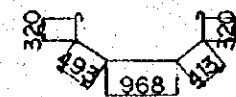
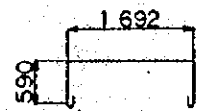
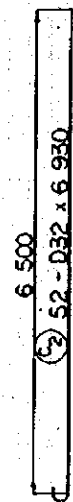
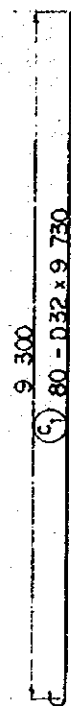
- NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  2. REFERENCE DRAWING FOR GENERAL VIEW: CS-111

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
8	1 AUG '84	S.S	m-y	K.A	K.M	m.K
A	15 FEB '84	S.S	m-y	K.A	K.M	m.K
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
PIER P40 BAR ARRANGEMENT (SHEET 1 OF 3)						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE: 1:50		DRAWING NO: CS-112				



NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. REFERENCE DRAWING FOR GENERAL VIEW : CS-111

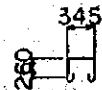
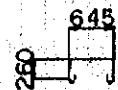


(B1) 75 - D16 x 3 340

(B2) 63 - D16 x 2 920

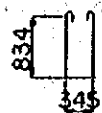
(B3) 12 - D16 x 2 880 (VARIES)

(B4) 74 - D13 x 2 530



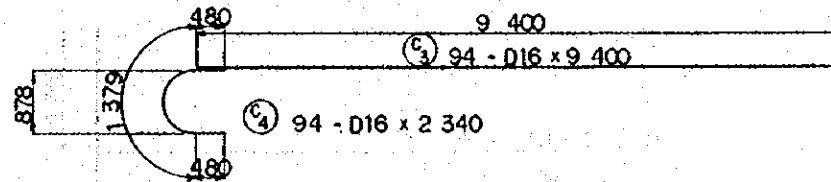
(C3) 182 - D13 x 1 570

(C4) 28 - D13 x 1 270

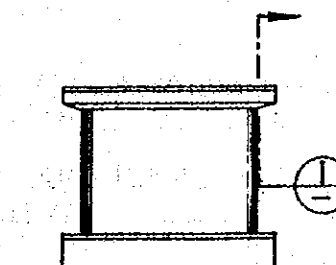


(C5) 182 - D13 x 2 720

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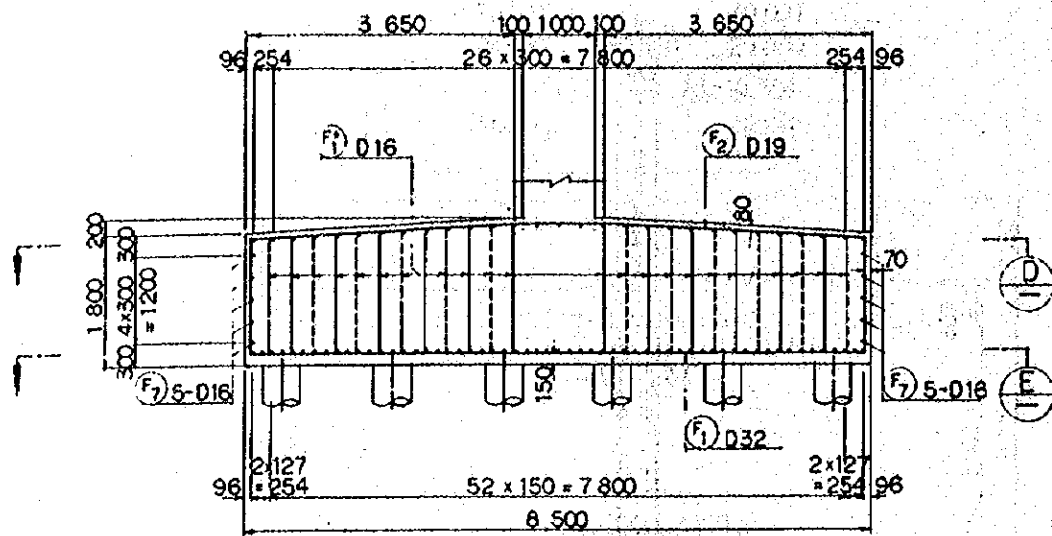


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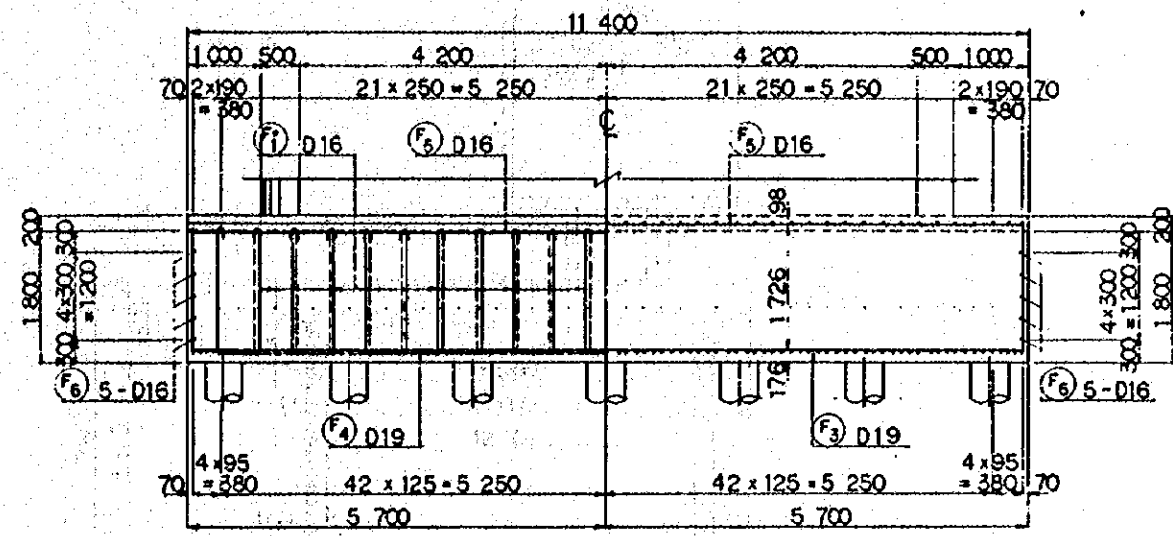


REMARKING DIAGRAM

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG '84	S.S.	M.Y.	K.A.	K.M.	M.K.
A	15 FEB '84	S.S.	M.Y.	K.A.	K.M.	M.K.
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
PIER P40 BAR ARRANGEMENT (SHEET 2 OF 3)						
PACKAGE: 2 CIVIL AND ARCHITECTURAL WORK						
SCALE	DRAWING NO.					
1:50	CS-113					

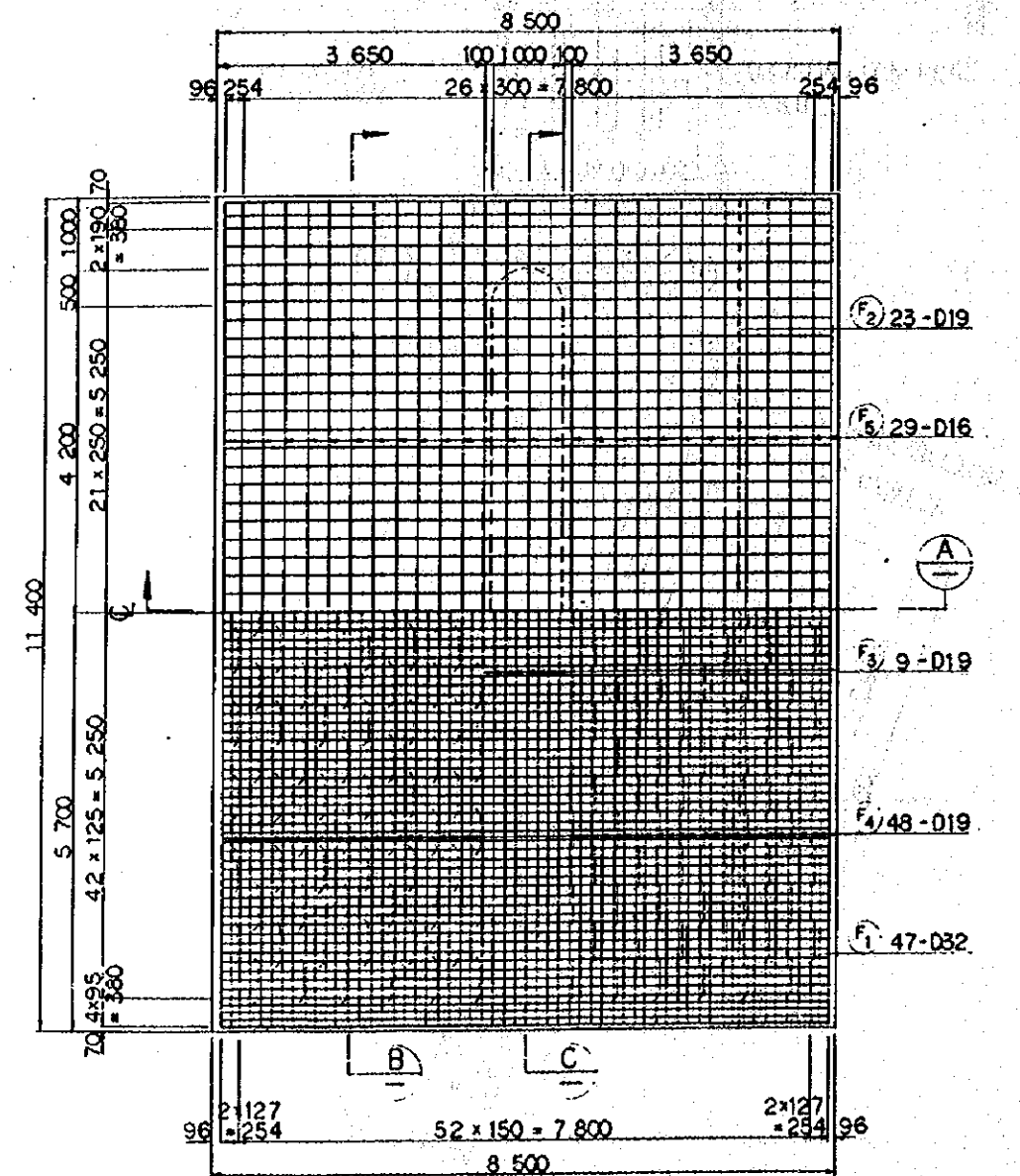


SECTION A



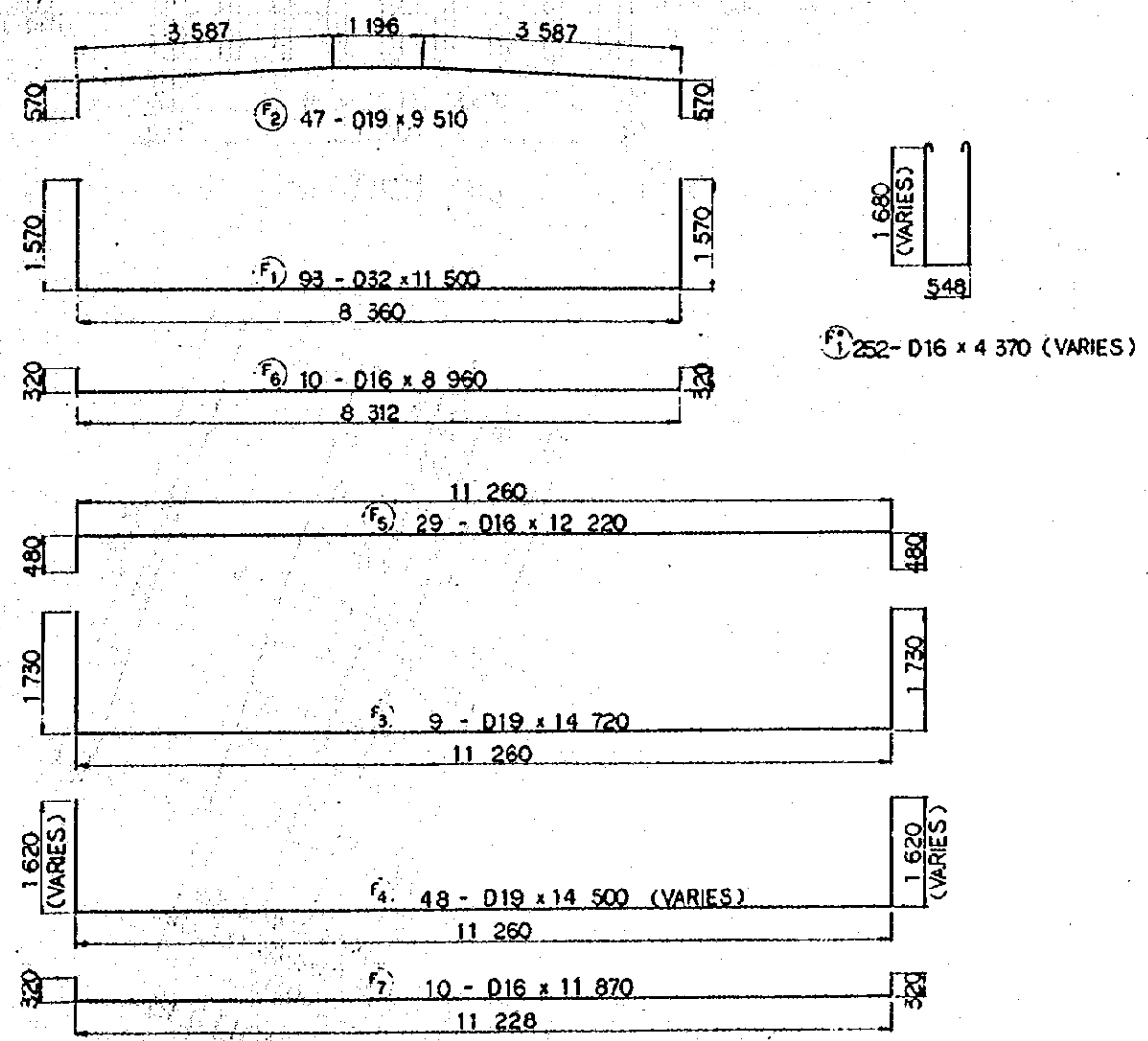
SECTION B

SECTION C



SECTION D

SECTION E



- NOTES:
- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED
  - REFERENCE DRAWING FOR GENERAL VIEW: CS-111

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG. 84	SS	my	K.A.	K.M.	mk
A	15 FEB. 84	SS	my	K.A.	K.M.	mk
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
PIER P40 BAR ARRANGEMENT (SHEET 3 OF 3)						
PACKAGE: I CIVIL AND ARCHITECTURAL WORK						
SCALE: 1:50		DRAWING NO: CS-114				