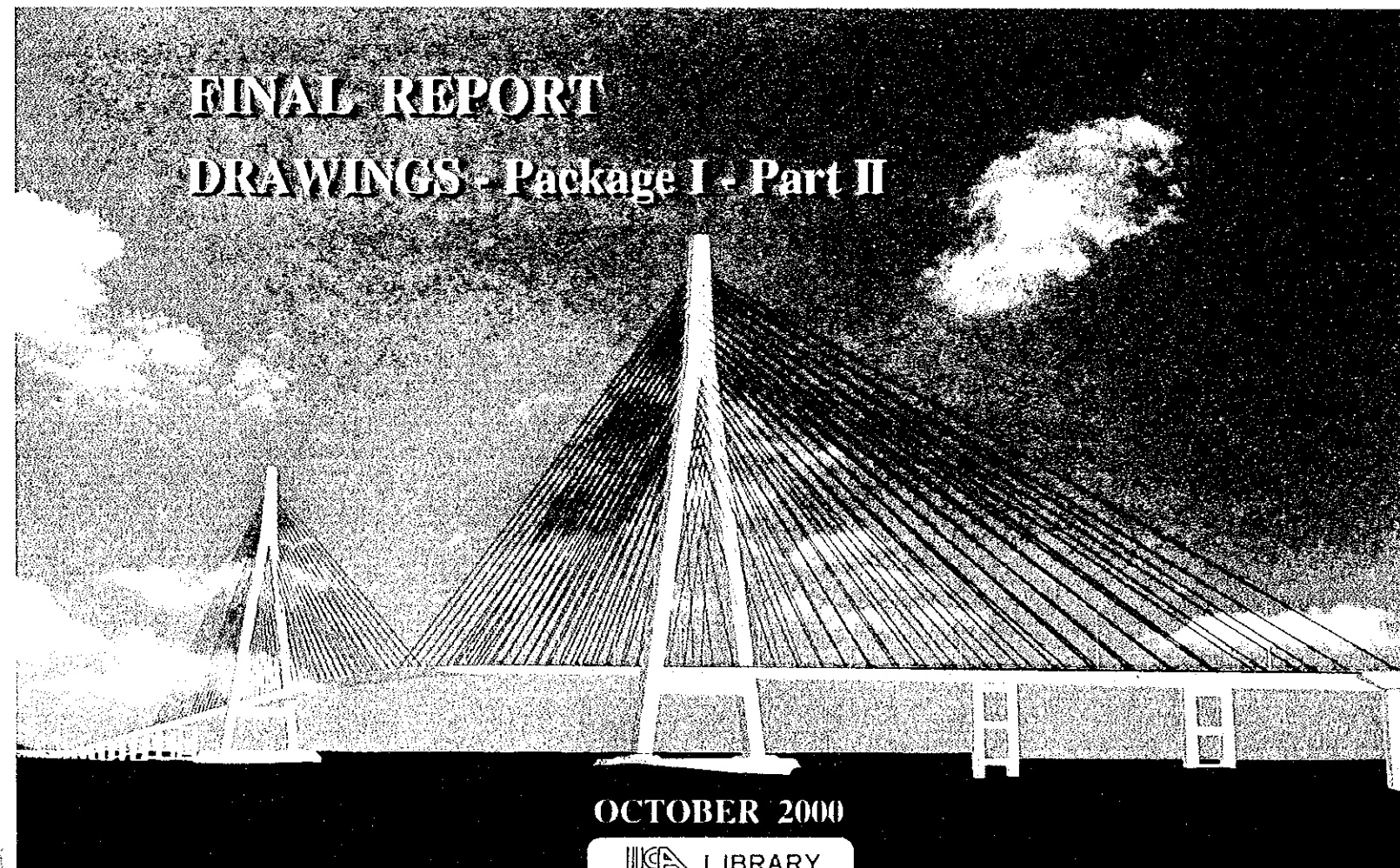


JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
MINISTRY OF TRANSPORT  
SOCIALIST REPUBLIC OF VIET NAM

**THE DETAILED DESIGN  
ON  
THE CAN THO BRIDGE CONSTRUCTION  
IN  
SOCIALIST REPUBLIC OF VIET NAM**



**FINAL REPORT**  
**DRAWINGS - Package I - Part II**

OCTOBER 2000

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**FINAL REPORT**

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**NIPPON KOEI CO., LTD.**



# PACKAGE I (PART - 2)

P1/BR1

LARGE TRA VA BRIDGE

P1/BR2

SMALL TRA VA BRIDGE

## DRAWING LIST (1/2)

DRAWING NO.	DRAWING TITLE	DRAWING NO.	DRAWING TITLE
P1/BR1	<b>LARGE TRA VA BRIDGE</b>	P1/BR1/0450	PIER P1 - P4 & P7 REINFORCEMENT - SHEET 1
	<b>GENERAL</b>	P1/BR1/0460	PIER P1 - P4 & P7 REINFORCEMENT - SHEET 2
P1/BR1/0010	DRAWING LIST	P1/BR1/0470	PIER P5, P6 REINFORCEMENT - SHEET 1
P1/BR1/0020	ABBREVIATIONS AND SYMBOLS	P1/BR1/0480	PIER P5, P6 REINFORCEMENT - SHEET 2
P1/BR1/0030	STRUCTURAL NOTES	P1/BR1/0490	QUANTITY TABLE OF PIERS
P1/BR1/0040	LOCATION MAP		<b>MISCELLANEOUS</b>
P1/BR1/0050	COORDINATES OF BRIDGE	P1/BR1/0500	PARAPET AND RAILING DETAILS
P1/BR1/0060	GENERAL VIEW - SHEET 1	P1/BR1/0510	BRIDGE NAME PLAQUE
P1/BR1/0070	GENERAL VIEW - SHEET 2	P1/BR1/0520	DRAINAGE AND LIGHTING POLES LAYOUT
P1/BR1/0080	GENERAL VIEW - SHEET 3	P1/BR1/0530	DRAINAGE DETAILS - SHEET 1
P1/BR1/0090	QUANTITY TABLE OF BRIDGE	P1/BR1/0540	DRAINAGE DETAILS - SHEET 2
	<b>SUPERSTRUCTURE</b>	P1/BR1/0550	QUANTITY TABLE OF MISCELLANEOUS
P1/BR1/0100	GIRDER LAYOUT - SHEET 1		
P1/BR1/0110	GIRDER LAYOUT - SHEET 2	<b>P1/BR2</b>	<b>SMALL TRA VA BRIDGE</b>
P1/BR1/0120	GIRDER LAYOUT - SHEET 3		<b>GENERAL</b>
P1/BR1/0130	GENERAL VIEW OF GIRDER	P1/BR2/0010	DRAWING LIST
P1/BR1/0140	PC TENDON ARRANGEMENT OF GIRDER	P1/BR2/0020	ABBREVIATIONS AND SYMBOLS
P1/BR1/0150	TENDON ARRANGEMENT OF DIAPHRAGMS	P1/BR2/0030	STRUCTURAL NOTES
P1/BR1/0160	REINFORCEMENT OF GIRDER - SHEET 1	P1/BR2/0040	LOCATION MAP
P1/BR1/0170	REINFORCEMENT OF GIRDER - SHEET 2	P1/BR2/0050	COORDINATES OF BRIDGE
P1/BR1/0180	REINFORCEMENT OF GIRDER - SHEET 3	P1/BR2/0060	GENERAL VIEW - SHEET 1
P1/BR1/0190	REINFORCEMENT OF DIAPHRAGMS	P1/BR2/0070	GENERAL VIEW - SHEET 2
P1/BR1/0200	DECK SLAB REINFORCEMENT - SHEET 1	P1/BR2/0080	QUANTITY TABLES OF BRIDGE
P1/BR1/0210	DECK SLAB REINFORCEMENT - SHEET 2		<b>SUPERSTRUCTURE</b>
P1/BR1/0220	DECK SLAB REINFORCEMENT - SHEET 3	P1/BR2/0090	GIRDER LAYOUT - SHEET 1
P1/BR1/0230	DECK SLAB REINFORCEMENT - SHEET 4	P1/BR2/0100	GIRDER LAYOUT - SHEET 2
P1/BR1/0240	DECK SLAB REINFORCEMENT - SHEET 5	P1/BR2/0110	GENERAL VIEW OF "I" GIRDER L=25.0M
P1/BR1/0250	DETAILS OF EXPANSION JOINT	P1/BR2/0120	GENERAL VIEW OF "I" GIRDER L=37.0M
P1/BR1/0260	DETAILS OF BEARINGS	P1/BR2/0130	TENDON ARRANGEMENT OF "I" GIRDER L=25.0M
P1/BR1/0270	QUANTITY TABLE OF SUPERSTRUCTURE	P1/BR2/0140	TENDON ARRANGEMENT OF "I" GIRDER L=37.0M
	<b>ABUTMENTS</b>	P1/BR2/0150	TENDON ARRANGEMENT OF CONNECTION DIAPHRAGMS
P1/BR1/0280	ABUTMENT A1 GENERAL VIEW	P1/BR2/0160	REINFORCEMENT OF "I" GIRDER L=25.0M
P1/BR1/0290	ABUTMENT A2 GENERAL VIEW	P1/BR2/0170	REINFORCEMENT OF "I" GIRDER L=37.0M
P1/BR1/0300	A1 & A2 - BORED CAST IN SITU PILE DETAILS - L=70M	P1/BR2/0180	REINFORCEMENT OF DIAPHRAGMS - SHEET 1
P1/BR1/0310	ABUTMENT A1 REINFORCEMENT - SHEET 1	P1/BR2/0181	REINFORCEMENT OF DIAPHRAGMS - SHEET 2
P1/BR1/0320	ABUTMENT A1 REINFORCEMENT - SHEET 2	P1/BR2/0190	DECK SLAB REINFORCEMENT - SHEET 1
P1/BR1/0330	ABUTMENT A1 REINFORCEMENT - SHEET 3	P1/BR2/0200	DECK SLAB REINFORCEMENT - SHEET 2
P1/BR1/0340	ABUTMENT A2 REINFORCEMENT - SHEET 1	P1/BR2/0210	DECK SLAB REINFORCEMENT - SHEET 3
P1/BR1/0350	ABUTMENT A2 REINFORCEMENT - SHEET 2	P1/BR2/0220	DECK SLAB REINFORCEMENT - SHEET 4
P1/BR1/0360	ABUTMENT A2 REINFORCEMENT - SHEET 3	P1/BR2/0230	DETAILS OF BEARINGS
P1/BR1/0370	ABUTMENT A1 EARTHWORKS SLOPE PROTECTION	P1/BR2/0240	DETAILS OF EXPANSION JOINTS
P1/BR1/0380	ABUTMENT A2 EARTHWORKS SLOPE PROTECTION	P1/BR2/0250	QUANTITY TABLES OF SUPERSTRUCTURE
P1/BR1/0390	DETAILS OF APPROACH SLAB		<b>ABUTMENTS</b>
P1/BR1/0400	QUANTITY TABLE OF ABUTMENTS	P1/BR2/0260	ABUTMENTS A1 & A2 - GENERAL VIEW
	<b>PIERS</b>	P1/BR2/0270	ABUTMENTS A1 & A2 - BORED PILE DETAILS L=66M
P1/BR1/0410	PIER P1 - P4 & P7 GENERAL VIEW	P1/BR2/0280	REINFORCEMENT OF ABUTMENTS A1 & A2 - SHEET 1
P1/BR1/0420	PIER P5, P6 GENERAL VIEW	P1/BR2/0290	REINFORCEMENT OF ABUTMENTS A1 & A2 - SHEET 2
P1/BR1/0430	PIER P1 - P4 & P7 - BORED CAST IN SITU PILE DETAILS L=70M	P1/BR2/0300	REINFORCEMENT OF ABUTMENTS A1 & A2 - SHEET 3
P1/BR1/0440	PIER P5, P6 - BORED CAST IN SITU PILE DETAILS L=74M	P1/BR2/0310	EARTHWORKS SLOPE PROTECTION

PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	NIPPON KOEI CO.,LTD.	NAME	T. Kametani	K. Matsumoto	GENERAL DRAWING LIST (PART - 2) (1/2)	P1/PA2/0010
				SIGNATURE	<i>T. Kametani</i>	<i>K. Matsumoto</i>		
				DATE	20/9/2000	29/9/2000		





**P1/BR1 LARGE TRA VA BRIDGE**



### DRAWING LIST OF LARGE TRA VA BRIDGE

No.	CODE	DRAWING NAME
<b>I</b>		
<b>GENERAL</b>		
1	P1/BR1/0010	DRAWING LIST
2	P1/BR1/0020	ABBREVIATIONS AND SYMBOLS
3	P1/BR1/0030	STRUCTURAL NOTES
4	P1/BR1/0040	LOCATION MAP
5	P1/BR1/0050	COORDINATES OF BRIDGE
6	P1/BR1/0060	GENERAL VIEW-SHEET 1
7	P1/BR1/0070	GENERAL VIEW-SHEET 2
8	P1/BR1/0080	GENERAL VIEW-SHEET 3
9	P1/BR1/0090	QUANTITY TABLE OF BRIDGE
<b>II</b>		
<b>SUPERSTRUCTURE</b>		
10	P1/BR1/0100	GIRDER LAYOUT-SHEET 1
11	P1/BR1/0110	GIRDER LAYOUT-SHEET 2
12	P1/BR1/0120	GIRDER LAYOUT-SHEET 3
13	P1/BR1/0130	GENERAL VIEW OF GIRDER
14	P1/BR1/0140	PC TENDON ARRANGEMENT OF GIRDER
15	P1/BR1/0150	TENDON ARRANGEMENT OF DIAPHRAGMS
16	P1/BR1/0160	REINFORCEMENT OF GIRDER -SHEET 1
17	P1/BR1/0170	REINFORCEMENT OF GIRDER -SHEET 2
18	P1/BR1/0180	REINFORCEMENT OF GIRDER -SHEET 3
19	P1/BR1/0190	REINFORCEMENT OF DIAPHRAGMS
20	P1/BR1/0200	DECK SLAB REINFORCEMENT-SHEET 1
21	P1/BR1/0210	DECK SLAB REINFORCEMENT-SHEET 2
22	P1/BR1/0220	DECK SLAB REINFORCEMENT-SHEET 3
23	P1/BR1/0230	DECK SLAB REINFORCEMENT-SHEET 4
24	P1/BR1/0240	DECK SLAB REINFORCEMENT-SHEET 5
25	P1/BR1/0250	DETAILS OF EXPANSION JOINT
26	P1/BR1/0260	DETAILS OF BEARINGS
27	P1/BR1/0270	QUANTITY TABLE OF SUPERSTRUCTURE



No.	CODE	DRAWING NAME
<b>III</b>		
<b>ABUTMENTS</b>		
28	P1/BR1/0280	ABUTMENT A1 GENERAL VIEW
29	P1/BR1/0290	ABUTMENT A2 GENERAL VIEW
30	P1/BR1/0300	A1&A2-BORED CAST IN-SITU PILE DETAILS-L=70M
31	P1/BR1/0310	ABUTMENT A1 REINFORCEMENT-SHEET 1
32	P1/BR1/0320	ABUTMENT A1 REINFORCEMENT-SHEET 2
33	P1/BR1/0330	ABUTMENT A1 REINFORCEMENT-SHEET 3
34	P1/BR1/0340	ABUTMENT A2 REINFORCEMENT-SHEET 1
35	P1/BR1/0350	ABUTMENT A2 REINFORCEMENT-SHEET 2
36	P1/BR1/0360	ABUTMENT A2 REINFORCEMENT-SHEET 3
37	P1/BR1/0370	ABUTMENT A1 EARTHWORKS SLOPE PROTECTION
38	P1/BR1/0380	ABUTMENT A2 EARTHWORKS SLOPE PROTECTION
39	P1/BR1/0390	DETAILS OF APPROACH SLAB
40	P1/BR1/0400	QUANTITY TABLE OF ABUTMENTS
<b>IV</b>		
<b>PIERS</b>		
41	P1/BR1/0410	PIER P1-P4&P7 GENERAL VIEW
42	P1/BR1/0420	PIER P5, P6 GENERAL VIEW
43	P1/BR1/0430	PIER P1-P4 & P7 -BORED PILE DETAILS-L=70M
44	P1/BR1/0440	PIER P5& P6 -BORED PILE DETAILS-L=74M
45	P1/BR1/0450	PIER P1-P4 & P7 REINFORCEMENT-SHEET1
46	P1/BR1/0460	PIER P1-P4 & P7 REINFORCEMENT-SHEET2
47	P1/BR1/0470	PIER P5, P6 REINFORCEMENT-SHEET1
48	P1/BR1/0480	PIER P5, P6 REINFORCEMENT-SHEET2
49	P1/BR1/0490	QUANTITY TABLE OF PIERS
<b>V</b>		
<b>MISCELLANEOUS</b>		
50	P1/BR1/0500	PARAPET AND RAILING DETAILS
51	P1/BR1/0510	BRIDGE NAME PLAQUE
52	P1/BR1/0520	DRAINAGE AND LIGHTING POLES LAYOUT
53	P1/BR1/0530	DRAINAGE DETAILS-SHEET 1
54	P1/BR1/0540	DRAINAGE DETAILS-SHEET 2
55	P1/BR1/0550	QUANTITY TABLE OF MISCELLANEOUS BRIDGE

PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	 NIPPON KOBEL CO.,LTD.	NAME T. Kametani SIGNATURE <i>T. Kametani</i> DATE 20/9/2000	NAME K. Matsumoto SIGNATURE <i>K. Matsumoto</i> DATE 29/9/2000	NAME K. Enomoto SIGNATURE <i>K. Enomoto</i> DATE 5/10/2000	LARGE TRA VA BRIDGE GENERAL DRAWING LIST	P1/BR1/0010

# I. GENERAL

## ABBREVIATIONS AND SYMBOLS

A	PARAMETER OF CLOTHOID CURVE	I.P	POINT OF INTERSECTION
@	AT	KG	KILOGRAM
ABUT	ABUTMENT	KM	KILOMETER
AC	ASPHALT CONCRETE	KPH	KILOMETER PER HOUR
APPR	APPROACH	L	LENGTH OF CURVE WITH SPIRAL
ASPH	ASPHALT	LC	LENGTH OF CIRCULAR CURVE
&	AND	LS	LENGTH OF SPIRAL CURVE
A > B	A IS LARGER THAN B	LVC	LENGTH OF VERTICAL CURVE
BOR	BORING	LN.M	LINEAR METER
BR	BRIDGE	M	METER
BX	BOX CULVERT	M <sup>2</sup>	SQUARE METER
C	CUT	M <sup>3</sup>	CUBIC METER
CTC	CENTER TO CENTER	MAX	MAXIMUM
¢	CENTERLINE	MIN	MINIMUM
CM	CENTIMETER	MOV	MOVABLE
CONC	CONCRETE	N.G.L	NATURAL GROUND LEVEL
CONST	CONSTRUCTION	OV	OVER BRIDGE
CONT	CONTINUOUS	%	PERCENT
C.S	CIRCULAR CURVE TO SPIRAL CURVE	P	PIPE CULVERT
CU.M	CUBIC METER	PC	BEGINNING POINT OF SIMPLE CURVE
DIA or Ø	DIAMETER	PE.W	PARAPET WALL
DC	DRAINAGE CATCHBASIN	P.C	PRESTRESSED CONCRETE
DI	DRAINAGE INLET	P/C	PRE - CAST
DL	DATUM LINE	PH	PLAN HEIGHT
DO	DRAINAGE OUTLET	P.I	POINT OF INTERSECTION FOR HORIZONTAL ALIGNMENT
DS	DRAINAGE SIDEDITCH	PT	END OF POINT OF SIMPLE CURVE
DW	MORTARED RUBBLE PAVED WATERWAY	PC	PLATE COVER
E.P	END POINT	R	RADIUS OF CIRCULAR CURVE
E.V	MIDDLE ORDINATE VERTICAL CURVE	R.C	REINFORCED CONCRETE
EL	ELEVATION	R.O.W	RIGHT OF WAY
EQ	EQUAL	RW	RETAINING WALL
EXC	EXCAVATION	S.C	SPIRAL CURVE TO CIRCULAR CURVE
EXP	EXPANSION	S.P	SLOPE PROTECTION
F	FILL	S.P.P	STEEL PIPE PILE
FG	FINISHED GRADE	SQ	SQUARE
FIX	FIXED	SQ.M	SQUARE METER
FR	FRONTAGE ROAD	S.T	SPIRAL CURVE TO TANGENT
FTOF	FACE TO FACE	STA	STATION
G.F	GUARD FENCE	SM	STONE MASONRY
GR	GUARD RAIL	T	THICKNESS
GIR	GIRDER	T.S	TANGENT TO SPIRAL
H	HEIGHT	T.L	TANGENT LENGTH OF CIRCULAR CURVE
D.F.W.L	DATUM FLOODED WATER LEVEL	To	TANGENT LENGTH OF SPIRAL
HWY	HIGHWAY	V	DESIGN SPEED IN KPH
i	GRADIENT	W	WIDTH
I.C	INTERCHANGE	X	EASTING COORDINATE IN METERS
		Y	NORTHING COORDINATE IN METERS

PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.	
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	 NIPPON KOEI CO.,LTD.	NAME	T. Kametani	K. Matsumoto	K. Enomoto	LARGE TRA VA BRIDGE GENERAL ABBREVIATIONS AND SYMBOLS	P1/BR1/0020
				SIGNATURE	<i>T. Kametani</i>	<i>K. Matsumoto</i>	<i>K. Enomoto</i>		
				DATE	20/9/2000	29/9/2000	5/10/2000		

# STRUCTURAL NOTES

## 1. GENERAL

- 1.1. UNLESS OTHERWISE NOTED THESE NOTES ARE APPLIED TO ALL DRAWINGS.
- 1.2. THE SCALE INDICATED IN DRAWINGS IS FOR 'A3' SIZE.
- 1.3. ALL CHAINAGES, COORDINATES, ELEVATIONS ARE IN METRES. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE INDICATED.
- 1.4. THE ELEVATION SYSTEM IS REFERRED TO THE MEAN SEA DATUM ELEVATION AT HONDAU - DO SON. COORDINATE REFER TO THE NATIONAL GRID SYSTEM.

## 2. DESIGN CRITERIA & LOADS

- 2.1. DESIGN STANDARDS:
  - AASHTO 1998 - LRFD BRIDGE DESIGN SPECIFICATIONS
  - AASHTO GUIDE SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF SEGMENTAL CONCRETE BRIDGES
  - JAPANESE HIGHWAY AND BRIDGE STANDARDS 1996
  - VIETNAMESE HIGHWAY BRIDGES STANDARDS 1979
- 2.2. DESIGN LOADS:
  - B\_LOADING IN ACCORDANCE WITH JAPANESE CODE
  - PEDESTRIAN LOAD : 3.6 kN/M<sup>2</sup> - AASHTO LRFD98
  - BASIC WIND VELOCITY : 160 KM/H - AASHTO LRFD 98
  - LATERAL SEISMIC RESPONSE COEFFICIENT : 0.12
  - VESSEL IMPACT : VIETNAMESE HIGHWAY BRIDGES STANDARDS 1979
  - TEMPERATURE RANGE : 17.7°C TO 36.7°C
  - UNIFORM TEMPERATURE : ±10°C
  - TEMPERATURE DIFFERENTIAL : 5°C

## 3. CONCRETE

- 3.1. UNLESS OTHERWISE INDECATED CONCRETE SHALL BE OF THE FOLLOWING GRADES BASED ON 28 DAY CYLINDER STRENGTH  $f_c$ :

CONCRETE CLASS	STRENGTH $f_c$ MPa	KIND OF STRUCTURE IN USE
B	40	PC BOX GIRDER, I-GIRDER
C	35	HOLLOW SLAB
D	30	IN-SITU DECK SLAB, BORED PILE
E	24	PIER, ABUTMENT, PILE CAP, RETAINING WALL, PARAPET, BARRIER, KERB
G	15	LEAN CONCRETE

- 3.2. WHEREVER FORMS ARE NOT USED REINFORCED CONCRETE SHALL BE PLACED AGAINST 100mm MINIMUM THICKNESS LEAN CONCRETE.
- 3.3. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 20x20mm UNLESS OTHERWISE NOTED.
- 3.4. ALL CONSTRUCTION JOINTS ARE TO BE LOCATED AS SHOWN ON THE DRAWINGS OR AS ENGINEER'S APPROVAL.

## 4. REINFORCEMENT

- 4.1. REINFORCEMENT SHALL BE DEFORMED, EXCEPT THAT PLAIN BARS OR PLAIN WIRE MAY BE USED FOR SPIRALS, HOOPS, AND WIRE FABRIC.
- 4.2. REINFORCEMENT SHALL BE SD390 OR EQUIVALENT. PLAIN ROUND BAR WITH  $f_y(\min)$  250 MPa AND HIGH YIELD DEFORMED BARS WITH YIELD STRENGTH NOT LESS THAN  $f_y(\min)$  390 MPa SHALL BE USED.
- 4.3. REINFORCEMENT IS NOTED ON THE DRAWINGS AS FOLLOWS:
 

① D25 - 25146

NAME OF BAR \_\_\_\_\_ LENGTH OF BAR \_\_\_\_\_

DIA OF BAR \_\_\_\_\_
- 4.4. ALL REINFORCEMENTS ARE SHOWN AS \_\_\_\_\_
- 4.5. SPLICES IN ADJACENT BARS SHALL BE STAGGERED EXCEPT WHERE NOTED ON THE DRAWINGS. SPLICES OTHER THAN THOSE SHOWN ON THE DRAWINGS MAY ONLY BE MADE WITH THE ENGINEER'S APPROVAL.
- 4.6. MINIMUM SPLICE LENGTH SHALL BE IN ACCORDANCE WITH AASHTO LRFD 1998.
- 4.7. STANDARD HOOKS AND MINIMUM BEND DIAMETER SHALL BE IN ACCORDANCE WITH AASHTO LRFD 1998.

## 4. REINFORCEMENT (CONTINUED)

- 4.8. REINFORCEMENTS INDECATED AS RANDOM LENGTH MAY BE LAP SPLICED AS NECESSARY SUBJECT TO THE FOLLOWING CONDITIONS:
  - A) LAP SPLICES IN ADJACENT BARS SHALL BE STAGGERED
  - B) MINIMUM LAP LENGTHS SHALL BE IN ACCORDANCE WITH AASHTO LRFD 1998, EXCEPT BORED PILE SHALL BE 40 BAR DIAMETERS
  - C) NOT MORE THAN ONE BAR PER LINE IS TO BE SHORTER THAN 12 METRES FOR ANY DIAMETER
- 4.9. UNLESS OTHERWISE INDECATED ON THE DRAWINGS, THE MINIMUM COVER TO ANY REINFORCEMENT SHALL BE AS FOLLOWS:
  - 75mm BORED PILE, RETAINING WALL & ABUTMENT
  - 50mm PILE CAP, DECK SLAB, PIER & ABUTMENT, PARAPET, KERB, APPROACH SLAB, etc...
  - TOLERANCE ON COVER IS +/-5MM

## 5. PRESTRESSING

- 5.1. NOMINAL DIAMETER, YIELD AND TENSILE STRENGTH OF PRESTRESSED TENDON ARE SPECIFIED AS FOLLOWS:

UTILIZATION	NOMINAL DIAMETER (mm)	TENSILE STRENGTH (MPa)	YIELD STRENGTH (MPa)	JACKING FORCE (kN)
INTERNAL CABLE	12S12.7	1860	1675	1650
EXTERNAL CABLE	12S15.2	1860	1675	2320
TOP SLAB CABLE	3S12.7	1860	1675	415



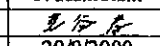
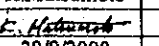
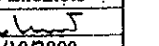
- 5.2. PRESTRESSED TENDONS SHALL BE FORMED FROM THE STRANDS OF 12.7mm OR 15.2mm DIAMETER MADE BY 7 LOW RELAXATION WIRES GRADE 270 CORRESPONDING WITH ASTM A416M. THE ACTUAL TENDON SIZES AND INITIAL PRESTRESSED FORCE ARE GIVEN ON THE DETAIL DRAWINGS.
  - 5.3. PRESTRESSED SYSTEMS TO BE ADOPTED SHALL BE IN ACCORDANCE WITH THE ENGINEER'S APPROVAL.
  - 5.4. DUCTS FOR INTERNAL TENDONS SHALL BE SEMI-RIGID GALVANISED SHEATHING UNLESS OTHERWISE NOTED AND SHALL BE RIGIDLY SUPPORTED AT NOT MORE THAN 750mm FROM CENTRES.
  - 5.5. THE METHOD TO FIX THE DUCTS AND THE METHOD OF JOINTING AND SEALING OF DUCTS AT CONSTRUCTION JOINTS SHALL BE IN ACCORDANCE WITH THE ENGINEER'S APPROVAL.
  - 5.6. TENDON PROFILES ARE SPECIFIED TO THE CENTER OF SHEATHING. THE TENDON ARE TO BE PLACED TO SMOOTH PROFILES PASSING THROUGH THE SPECIFIED POINTS.
  - 5.7. EACH TENDON SHALL BE KEPT STRAIGHT FOR A MINIMUM LENGTH OF 1000mm FROM ANCHORAGE FACES.
  - 5.8. GROUTING POINTS SHALL BE PROVIDED AT ALL CROWN POINTS, SAG POINTS, ANCHORAGES AND DEVIATORS.
- ## 6. WATERPROOF
- 6.1. ALL REINFORCED CONCRETE SURFACES IN CONTACT WITH BACKFILL SHALL BE COATED WITH TWO COATS OF BITUMINOUS MEMBRANE.
  - 6.2. THE BRIDGE DECK SHALL BE WATERPROOFED WITH APPROVED PROPRIETARY WATERPROOFING SYSTEM IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.

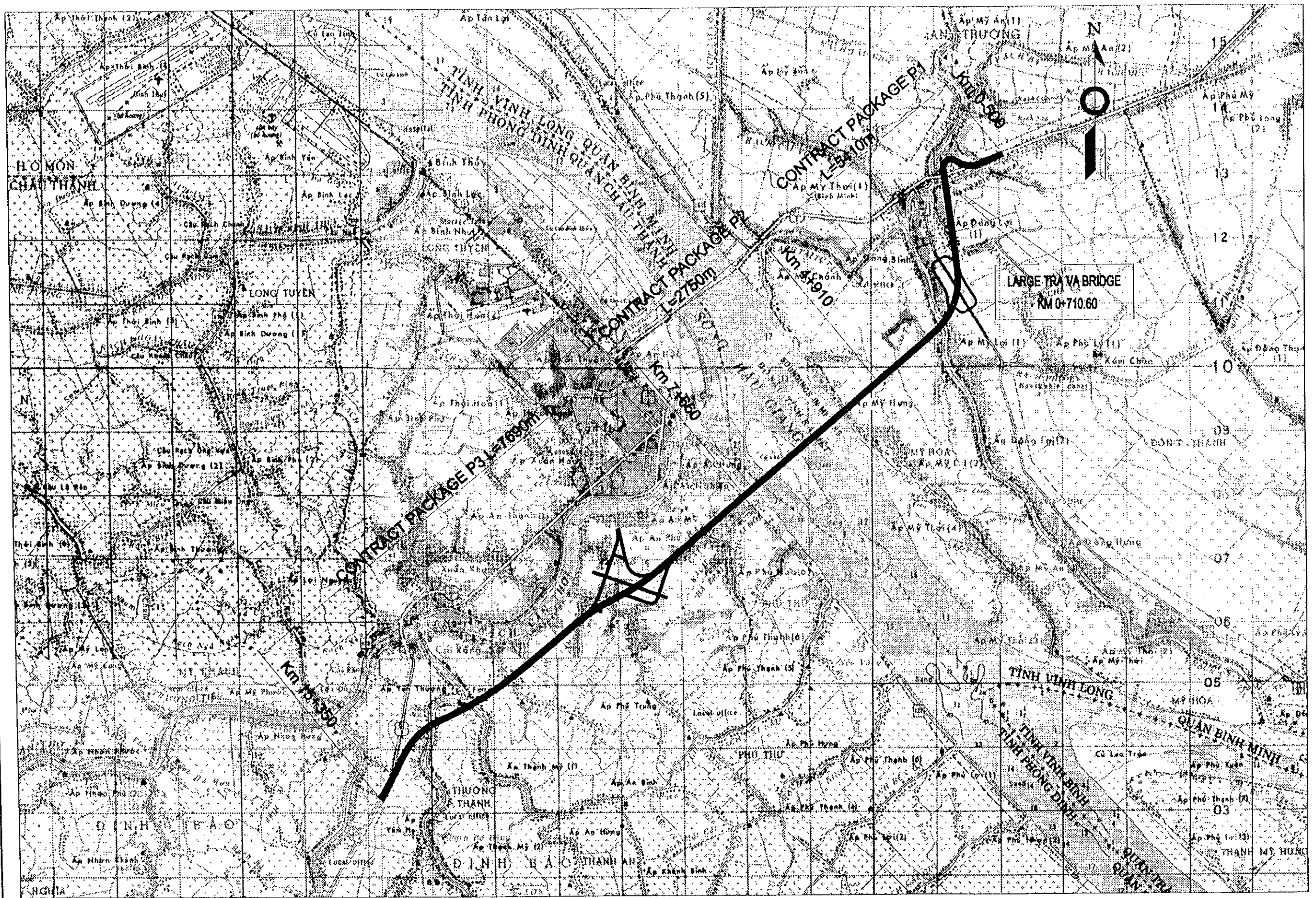
## 7. SUPERSTRUCTURE

- 7.1. SUPERSTRUCTURE IS DESIGNED ON THE BASIS OF CONSTRUCTION SEQUENCE DETAILED ON THE DRAWINGS. ANY CHANGES TO THE CONSTRUCTION SEQUENCE WILL REQUIRE A RE-DESIGN OF THE BRIDGE.
- 7.2. THE SUPERSTRUCTURE DESIGN IS BASED ON THE USE OF BOTH INTERNAL & EXTERNAL PRESTRESSING WITH THE FOLLOWING PARAMETERS:

COEFFICIENT OF FRICTION PER RADIAN	0.25
WOBBLE FACTOR K - 1/m (FOR INTERNAL ONLY)	0.004
DRAW-IN	5 mm
RELATIVE HUMIDITY	85%

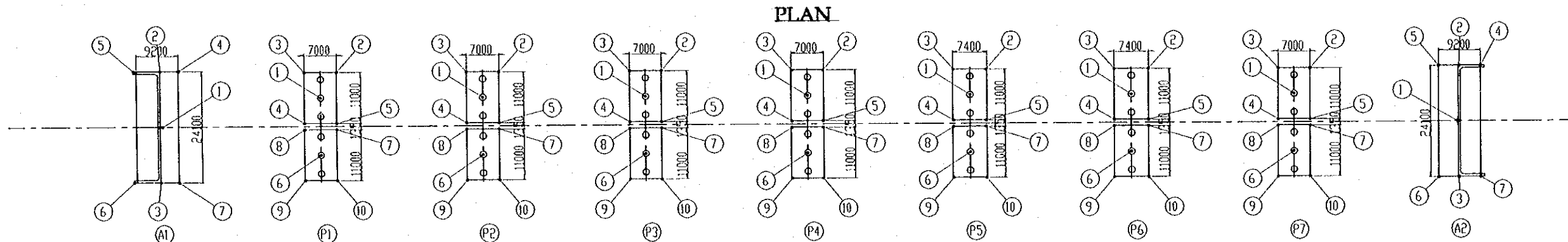
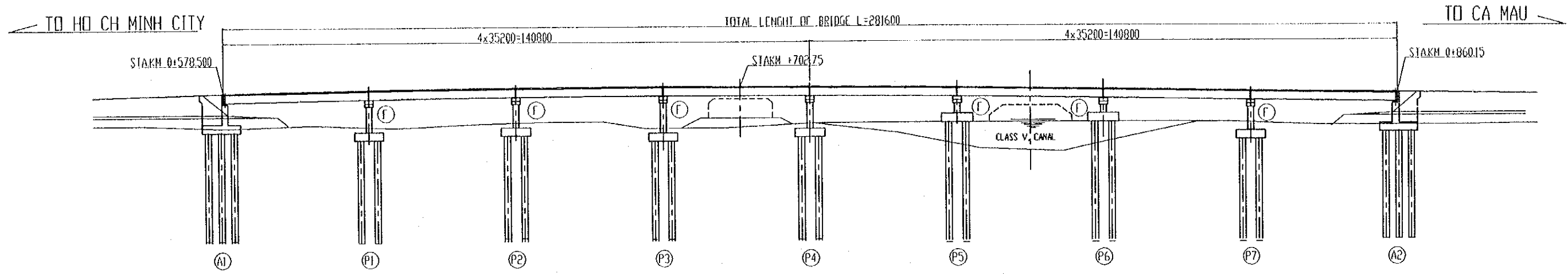
- 7.3. ANCHOR BAR SHALL BE CONFORMING TO THE REQUIREMENTS OF SS400 OF JS G3101.

PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	 NIPPON KOBI CO.,LTD.	NAME: T. Kametani SIGNATURE:  DATE: 20/9/2000	NAME: K. Matsumoto SIGNATURE:  DATE: 29/9/2000	NAME: K. Enomoto SIGNATURE:  DATE: 5/10/2000	LARGE TRA VA BRIDGE GENERAL STRUCTURAL NOTES	P1/BR1/0030



PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	(NK) NIPPON KOEI CO.,LTD.	NAME: T. Kametani SIGNATURE: [Signature] DATE: 20/9/2000	NAME: K. Matsumoto SIGNATURE: [Signature] DATE: 29/9/2000	NAME: K. Enomoto SIGNATURE: [Signature] DATE: 5/10/2000	LARGE TRA VA BRIDGE GENERAL LOCATION MAP	P1/BR1/0040

# SIDE ELEVATION



**COORDINATES TABLE**

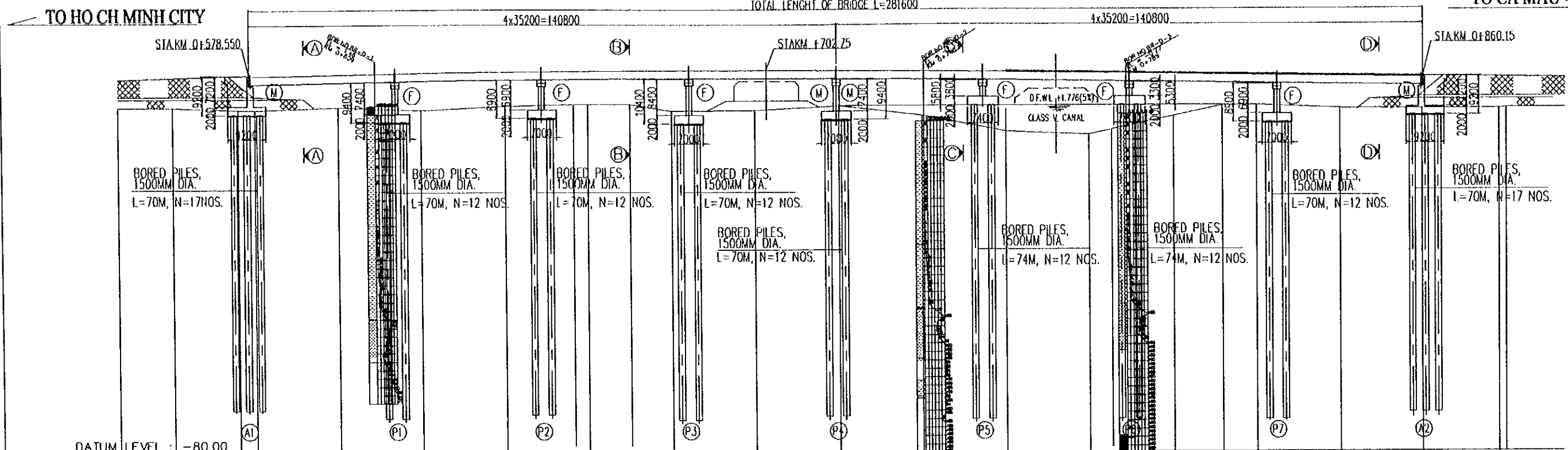
POINT	A1		P1		P2		P3		P4		P5		P6		P7		A2	
	N	E	N	E	N	E	N	E	N	E	N	E	N	E	N	E	N	E
1	1114141.344	591335.866	1114105.754	591333.219	1114070.728	591336.721	1114035.703	591340.224	1114000.678	591343.726	1113965.653	591347.229	1113930.627	591350.731	1113895.602	591354.234	1113861.291	591363.871
2	1114140.182	591324.249	1114101.724	591328.094	1114066.699	591331.597	1114031.673	591335.099	1113996.648	591338.602	1113961.424	591342.124	1113926.398	591345.627	1113891.572	591349.110	1113860.129	591352.254
3	1114142.505	591347.483	1114108.689	591327.398	1114073.664	591330.900	1114038.638	591334.403	1114003.613	591337.905	1113968.787	591341.388	1113933.762	591344.891	1113898.537	591348.413	1113862.452	591375.488
4	1114136.152	591324.652	1114109.784	591338.343	1114074.758	591341.846	1114039.733	591345.348	1114004.708	591348.851	1113969.881	591352.333	1113934.856	591355.836	1113899.632	591359.358	1113855.154	591352.751
5	1114145.306	591323.736	1114102.818	591339.040	1114067.793	591342.542	1114032.768	591346.045	1113997.742	591349.547	1113962.518	591353.070	1113927.493	591356.572	1113892.667	591360.055	1113864.308	591351.836
6	1114147.630	591346.970	1114106.983	591345.508	1114071.957	591349.010	1114036.932	591352.513	1114001.907	591356.015	1113966.881	591359.518	1113931.856	591363.020	1113896.831	591366.523	1113866.631	591375.070
7	1114138.476	591347.886	1114102.953	591340.383	1114067.927	591343.886	1114032.902	591347.388	1113997.877	591350.891	1113962.652	591354.413	1113927.627	591357.916	1113892.801	591361.398	1113857.477	591375.986
8			1114109.918	591339.687	1114074.893	591343.189	1114039.867	591346.692	1114004.842	591350.194	1113970.016	591353.677	1113934.990	591357.179	1113899.766	591360.702		
9			1114111.013	591350.632	1114075.987	591354.135	1114040.962	591357.637	1114005.937	591361.140	1113971.110	591364.622	1113936.085	591368.125	1113900.861	591371.647		
10			1114104.047	591351.329	1114069.022	591354.831	1114033.997	591358.334	1113998.971	591361.836	1113963.747	591365.359	1113928.722	591368.861	1113893.895	591372.344		

**NOTES:**

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO. P1/BR1/0030.

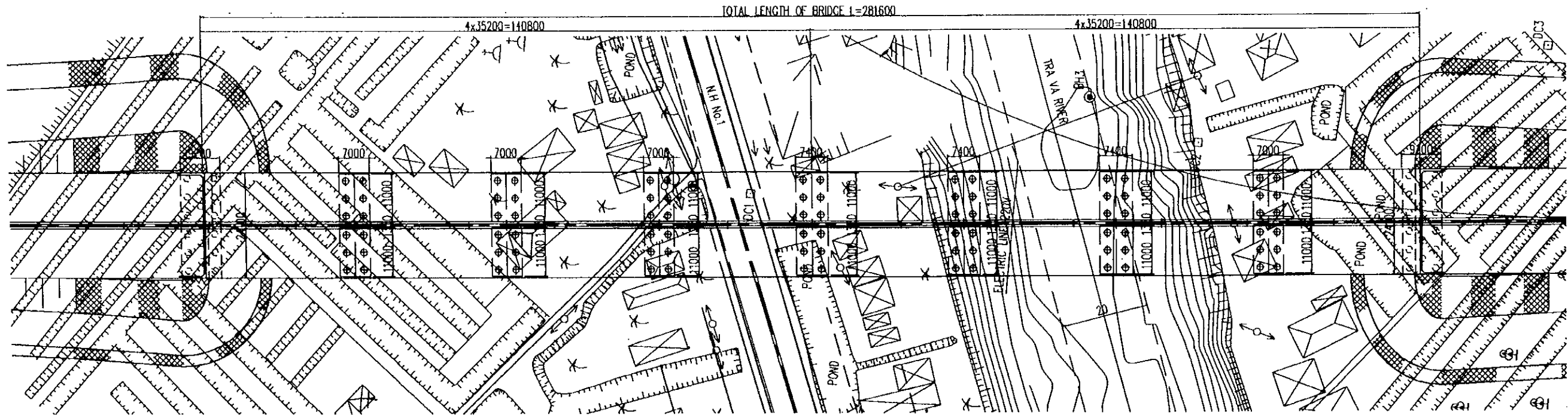
<b>PROJECT NAME</b> DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	<b>IMPLEMENTATION AGENCY</b> JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	<b>EXECUTING AGENCY</b> SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	<b>JICA STUDY TEAM</b> NIPPON KOEI CO.,LTD.	<b>PREPARED BY</b> T. Kametani	<b>CHECKED BY</b> K. Matsumoto	<b>APPROVED BY</b> K. Enomoto	<b>DRAWING TITLE</b> LARGE TRA VA BRIDGE GENERAL COORDINATES OF BRIDGE	<b>DWG NO.</b> P1/BR1/0050
				<b>SIGNATURE</b>	<b>SIGNATURE</b>	<b>SIGNATURE</b>		
				<b>DATE</b> 20/9/2000	<b>DATE</b> 29/9/2000	<b>DATE</b> 5/10/2000		

**SIDE ELEVATION  
(HO CHI MINH CITY - CA MAU DIRECTION)** (SCALE 1:1000)



DATUM LEVEL :	-80.00																
GRADIENT	$i = 3.067\%$ $L = 270.000$																
SUPERELEVATION	-2%																
DESIGN LEVELS(m)	9.160	9.559	9.897	10.142	10.235	10.306	10.389	10.369	10.308	10.146	9.901	9.616	9.351	9.046	8.751	8.475	8.190
EXISTING LEVELS(m)	0.13	1.26	1.20	1.36	1.34	1.08	1.30	1.78	1.32	1.37	2.34	4.75	3.25	1.20	1.21	1.36	0.67
CHAINAGE	0+580	0+600	0+620	0+640	0+660	0+680	0+700	0+720	0+740	0+760	0+780	0+800	0+820	0+840	0+860	0+880	0+900

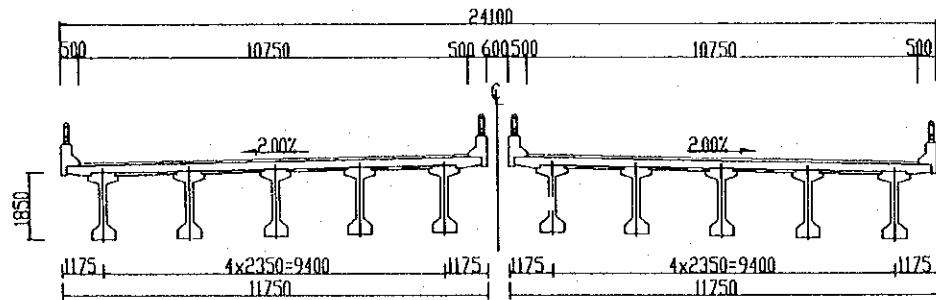
**PLAN (SCALE 1:1000)**



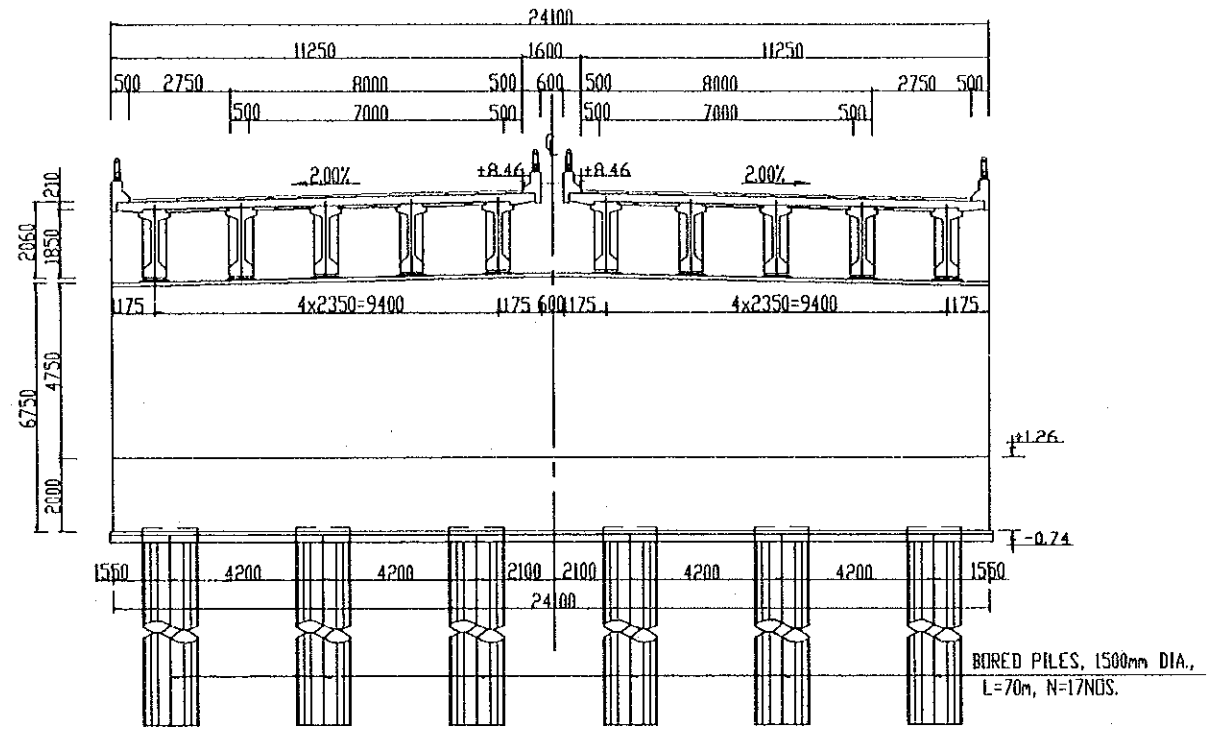
PROJECT NAME DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	IMPLEMENTATION AGENCY JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	EXECUTING AGENCY SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	JICA STUDY TEAM NIPPON KOEI CO.,LTD.	PREPARED BY T. Kametani	CHECKED BY K. Matsumoto	APPROVED BY K. Enomoto	DRAWING TITLE LARGE TRA VA BRIDGE GENERAL GENERAL VIEW-SHEET 1	DWG NO. PT/BR1/0060
				SIGNATURE	SIGNATURE	SIGNATURE		
				DATE 20/9/2000	DATE 29/9/2000	DATE 5/10/2000		

**TYPICAL SECTIONS FOR SUPERSTRUCTURE**

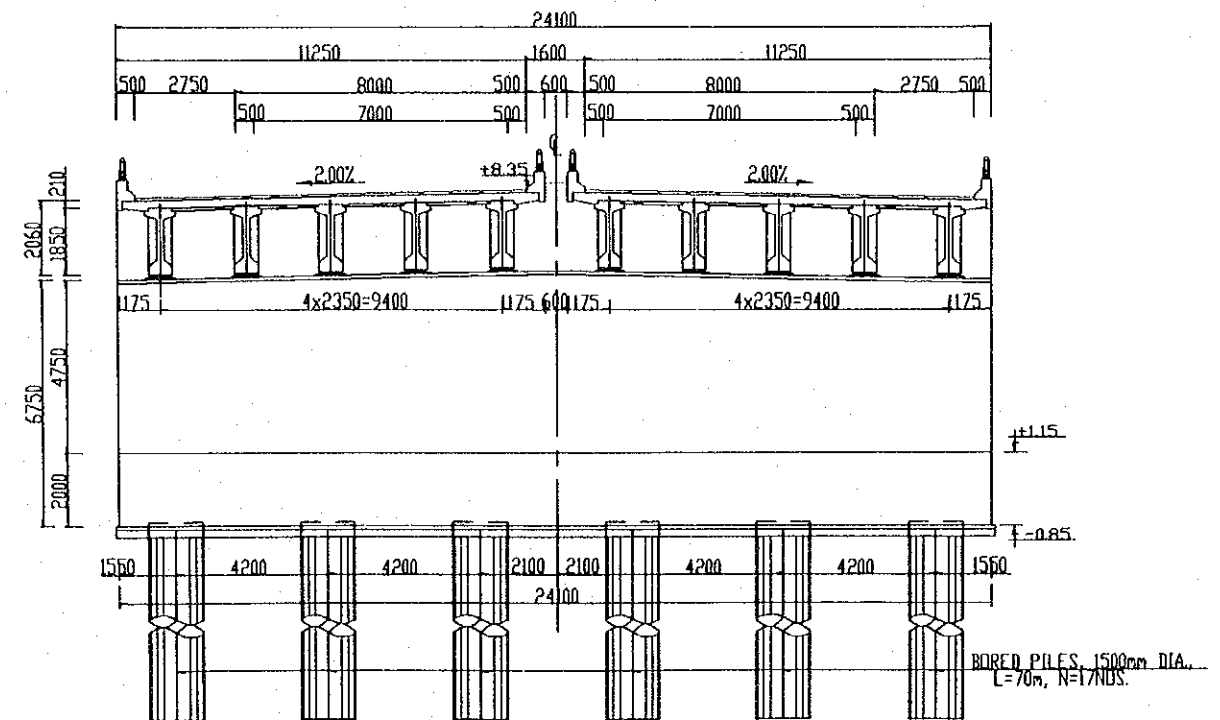
(SCALE 1:200)



**A-A (ABUTMENT A1)**



**D-D (ABUTMENT A2)**



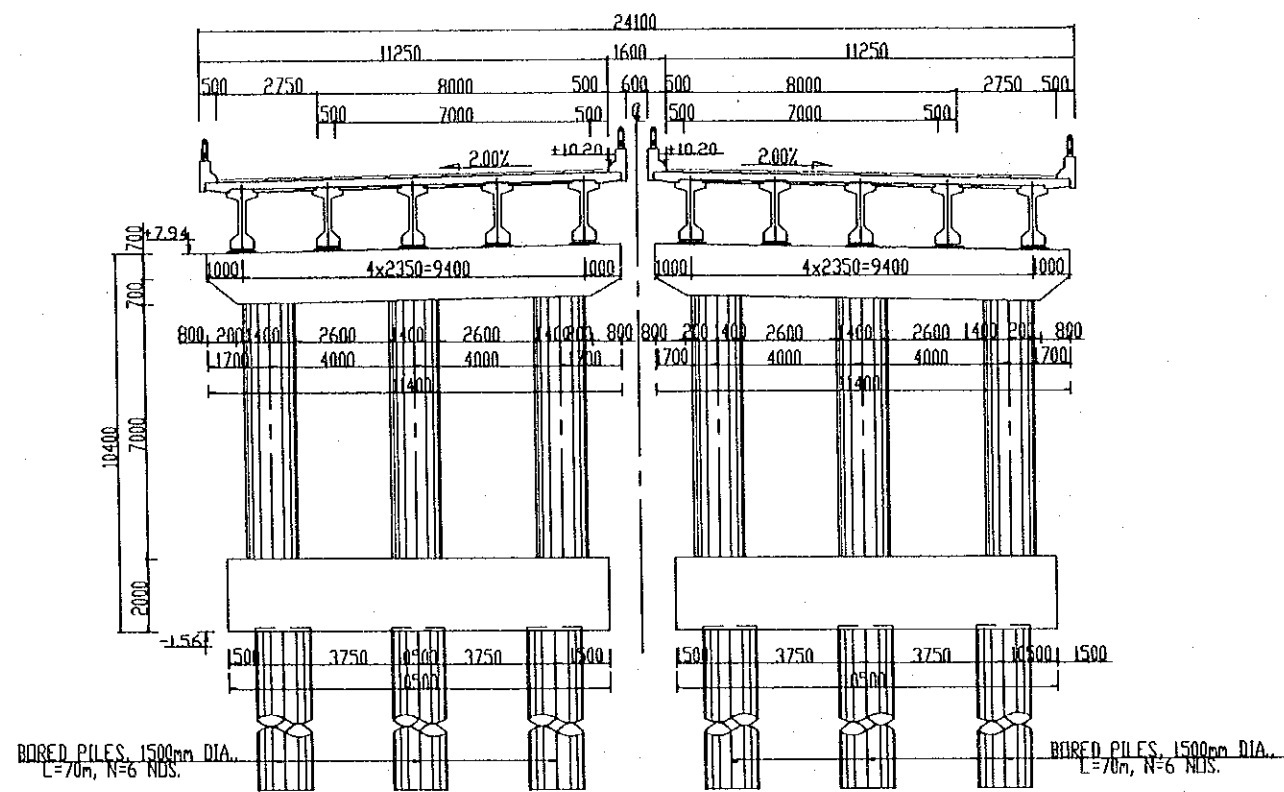
PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	(NK) NIPPON KOEI CO., LTD.	T. Kametani	K. Matsumoto	K. Enomoto	LARGE TRA VA BRIDGE GENERAL GENERAL VIEW-SHEET 2	P1/BR1/0070
				SIGNATURE	SIGNATURE	SIGNATURE		
				DATE	DATE	DATE		



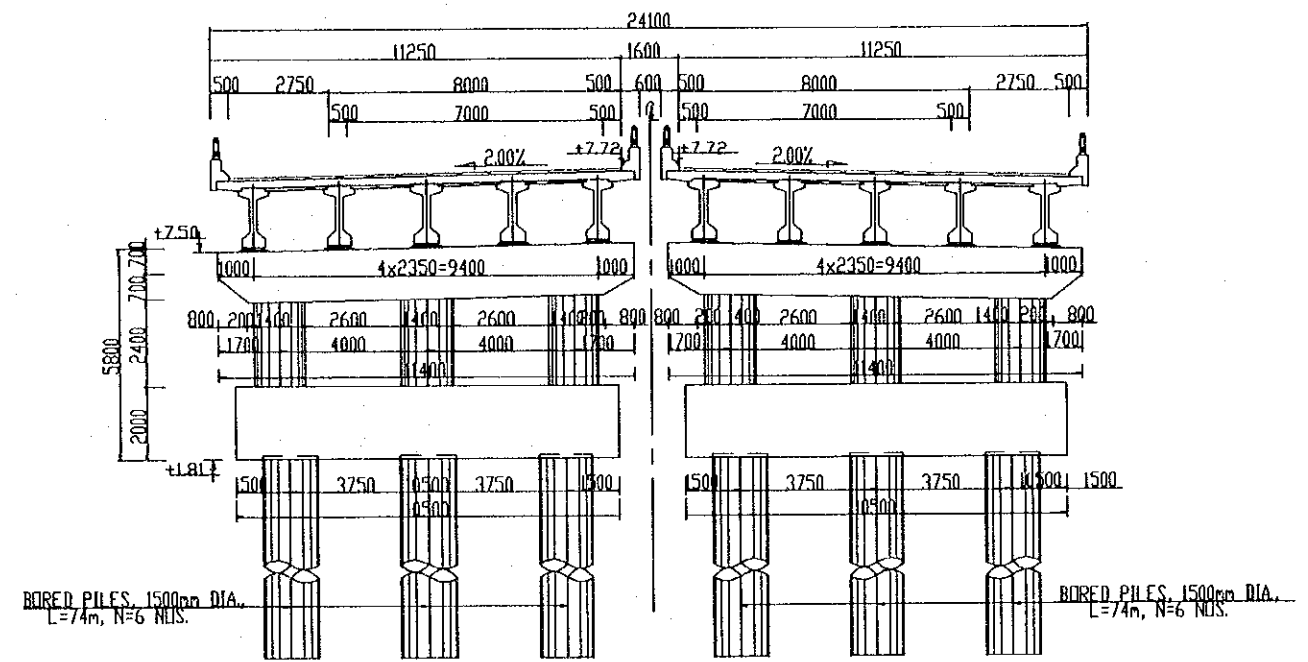
CROSS SECTIONS(CONTINUED)

(SCALE 1:200)

B-B(PIER P3)





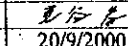
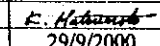

C-C(PIER P5)



PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	NIPPON KOEI CO.,LTD.	T. Kametani	K. Matsumoto	K. Enomoto	LARGE TRA VA BRIDGE GENERAL GENERAL VIEW-SHEET 3	P1/BR1/0080
				NAME SIGNATURE DATE	NAME SIGNATURE DATE	NAME SIGNATURE DATE		
				T. Kametani 20/9/2000	K. Matsumoto 29/9/2000	K. Enomoto 5/10/2000		

QUANTITY TABLE OF BRIDGE

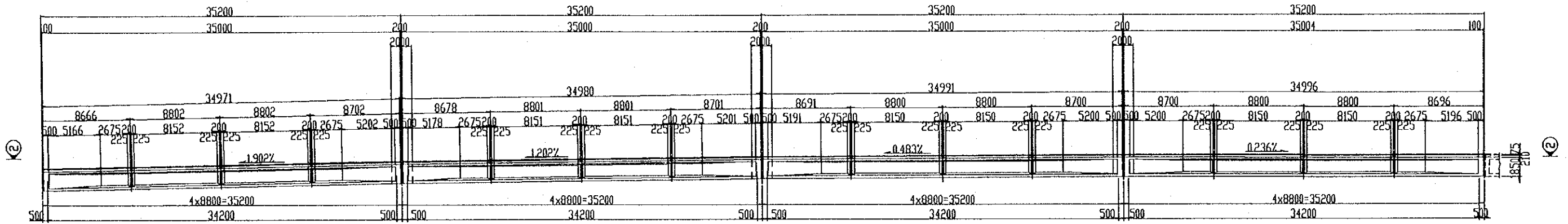
ITEM	UNIT	ABUTMENTS	PIERS	SUPERSTRUCTURE	MISCELLMEOUS			TOTAL
					RAILING	LIGHTING	DRAINAGE	
CONCRETE	CLASS B	m <sup>3</sup>			2172.2			2172.2
	CLASS D	m <sup>3</sup>	4205.8	10560.5	2488.3			17254.6
	CLASS E	m <sup>3</sup>	1432.7	2913.2		289.49	0.70	4636.1
	CLASS G	m <sup>3</sup>	72.0	80.6				152.6
PC-CABLE	12S12.7	ton			129.2			129.2
	3S12.7	ton			5.0			5.0
SHEATHING	\$80/85	m			13902.1			13902.1
	\$50/55	m			723.6			723.6
ANCHORAGE	12S12.7	set			400.0			400.0
	3S12.7	set			432.0			432.0
CEMENT GROUT IN SHEATHING	m <sup>3</sup>				69.8			69.8
STEEL SHEAR KYE	set				960.0			960.0
REINFORCEMENT	D32	kg		50624.0				50624.0
	D28	kg	3248.0	24431.7				27679.7
	D25	kg	39065.0	102742.8	20520.0			162327.8
	D22	kg	10878.4	59614.9	46440.0		61.9	116995.2
	D20	kg	20471.6	10171.8	91954.4			122597.8
	D18	kg	1604.5					1604.5
	D16	kg	16490.2	12635.3	20076.6		32.6	49234.7
	D14	kg	5935.0	23593.7	215159.3	44943.4		289631.4
	D12	kg			10120.3			10120.3
	D10	kg	2985.4	16238.3	720.0			19943.7
	TOTAL	kg	100678.1	300052.4	404990.6	44943.4	94.5	750080.9
EXPANSION JOINT	50mm	m <sup>3</sup>			64.5			64.5
BEARING	500x300x57mm	set			160.0			160.0
ANCHOR BAR	\$75L=1500	set			128.0			128.0
STEEL RAILING		m				1126.40		1126.4
LITING POLE		set					3	3.0
DRAINAGE	POT	set					38.00	38.0
	PIPE \$180	m					63.22	63.2
PAVEMENT	ASPHALT CONCRETE 70mm	m <sup>2</sup>			6017.9			6017.9
	WATER PROOFING 5mm	m <sup>2</sup>			6017.9			6017.9
GEOTEXTILE		m <sup>2</sup>	1786.0					1786.0
STONE MENSORY		m <sup>2</sup>	1785.0					1785.0
BLINDING AGGREGATE		m <sup>3</sup>	563.0					563.0
BLINDING STONE		m <sup>3</sup>	129.5	161.3				290.7
WOODEN PILE L=3m		m	18090.0					18090.0
EXCAVATION		m <sup>3</sup>	2291.4	4736.8				7028.2
FILLING		m <sup>3</sup>	1146.6	2905.1				4051.7
BORED PILES \$1500mm		m	2380.0	5976.0				8356.0
PVC PIPE \$50mm		m	151.0					151.0

PROJECT NAME DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	IMPLEMENTATION AGENCY  JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	EXECUTING AGENCY SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	JICA STUDY TEAM  NIPPON KOEI CO.,LTD.	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE LARGE TRA VA BRIDGE GENERAL DRAWING LIST	DWG NO. P1/BR1/0090	
				NAME	T. Kametani	K. Matsumoto			K. Enomoto
				SIGNATURE					
DATE	20/9/2000	29/9/2000	5/10/2000						

## II. SUPERSTRUCTURE

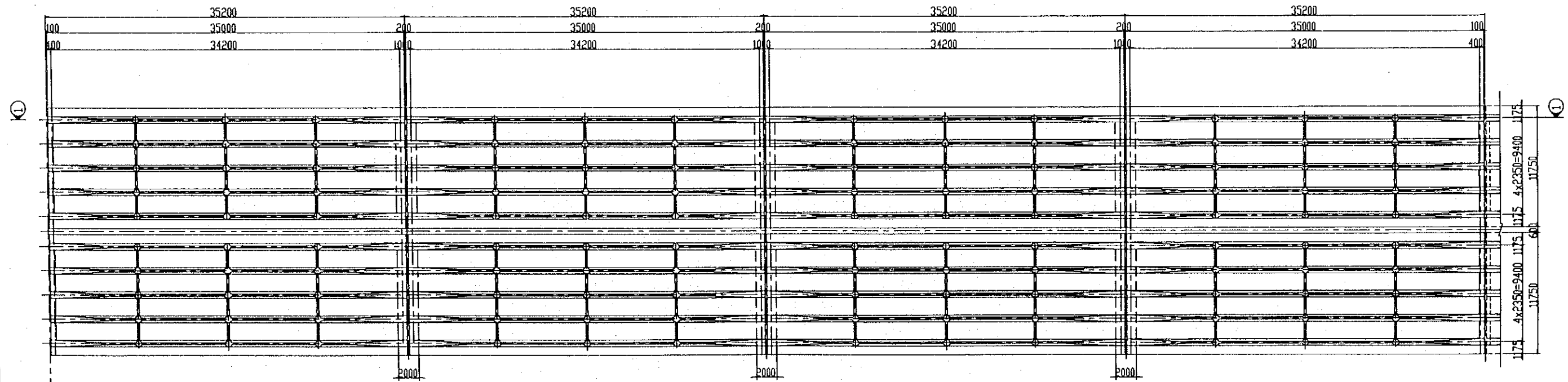
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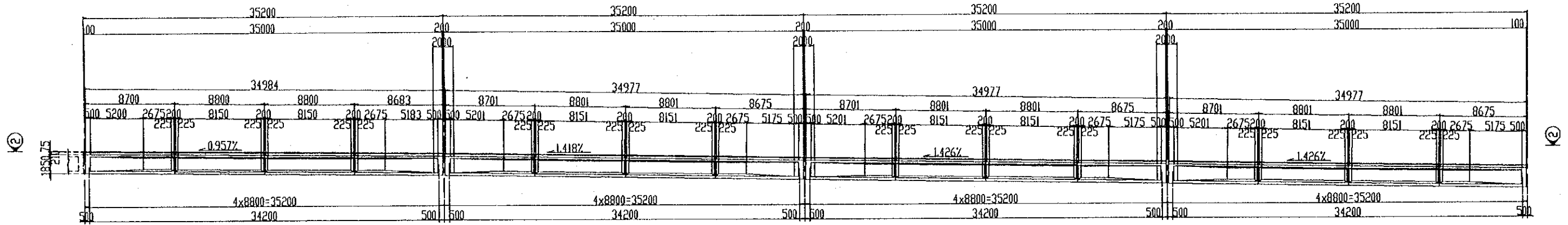
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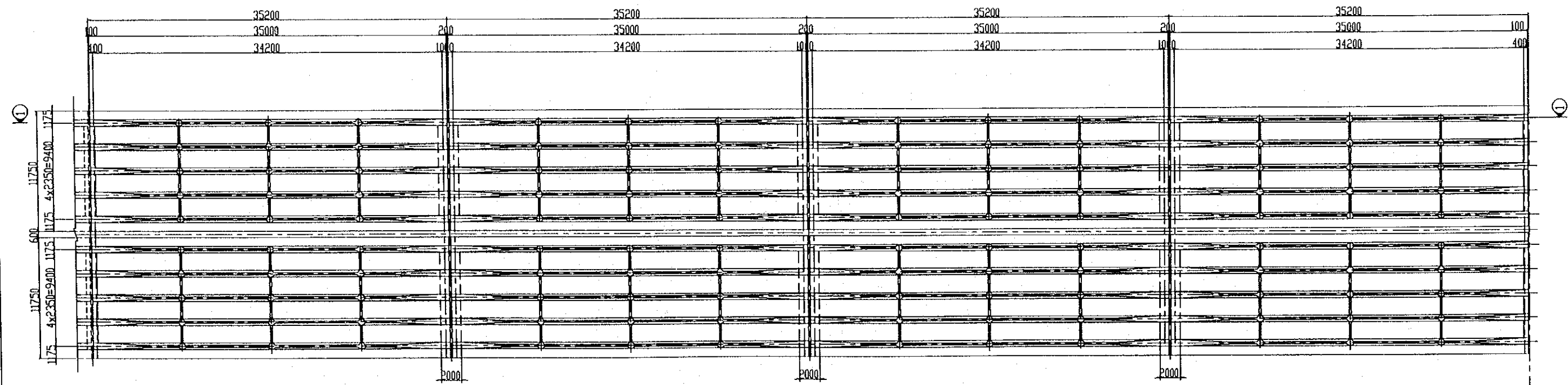


PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	(NK) NIPPON KOEI CO.,LTD.	T. Kamelani	K. Matsumoto	K. Enomoto	LARGE TRA VA BRIDGE SUPERSTRUCTURE GIRDER LAYOUT SHEET-1	PI/BR1/0100
				SIGNATURE	SIGNATURE	SIGNATURE		
				DATE	DATE	DATE		
				20/9/2000	29/9/2000	5/10/2000		

**SECTION 1 - 1**  
(SCALE 1 : 400)

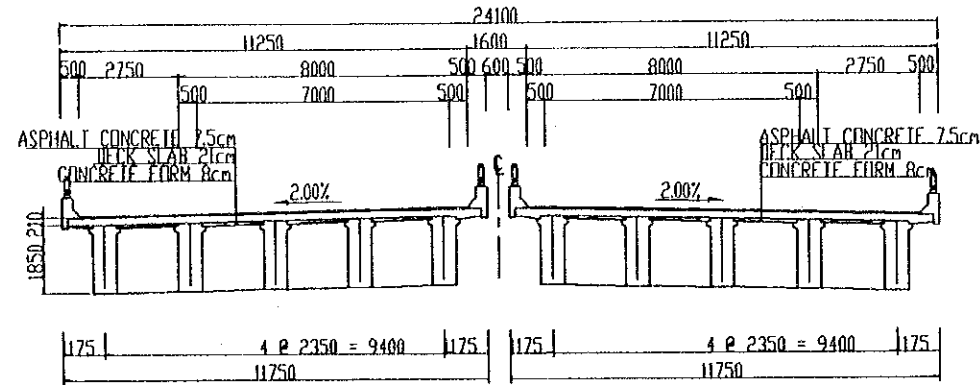


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(SCALE 1 : 400)

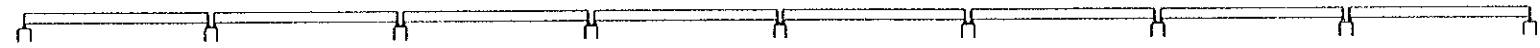
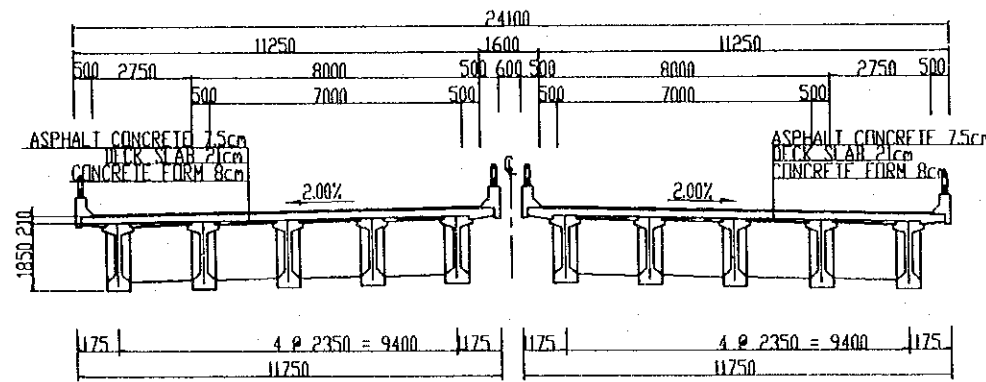


PROJECT NAME DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	IMPLEMENTATION AGENCY JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	EXECUTING AGENCY SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	JICA STUDY TEAM NIPPON KOBİ CO.,LTD.	PREPARED BY NAME T. Kametani	CHECKED BY NAME K. Matsumoto	APPROVED BY NAME K. Enomoto	DRAWING TITLE LARGE TRA VA BRIDGE SUPERSTRUCTURE GIRDER LAYOUT SHEET-2	DWG NO. P1/BR1/0110
				SIGNATURE <i>T. Kametani</i>	SIGNATURE <i>K. Matsumoto</i>	SIGNATURE <i>K. Enomoto</i>		
				DATE 20/9/2000	DATE 29/9/2000	DATE 5/10/2000		

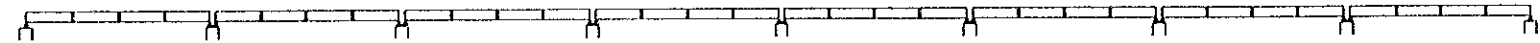
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(SCALE : 1:200)



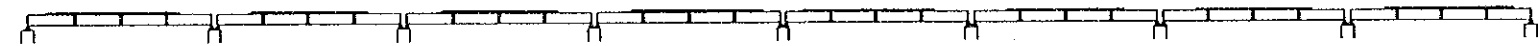
**SECTION 2 - 2**  
(SCALE : 1:200)



STEP - 1 ERECTION I-GIRDER



STEP - 2 CONSTRUCT INTERMEDIATE DIAPHRAGM



STEP - 3 CONSTRUCT SLAB EXCEPT CONNECTION



STEP - 4 CONSTRUCT CONNECTION & END DIAPHRAGM

**CONSTRUCTION SEQUENCE**

**MARKING DIAGRAM**



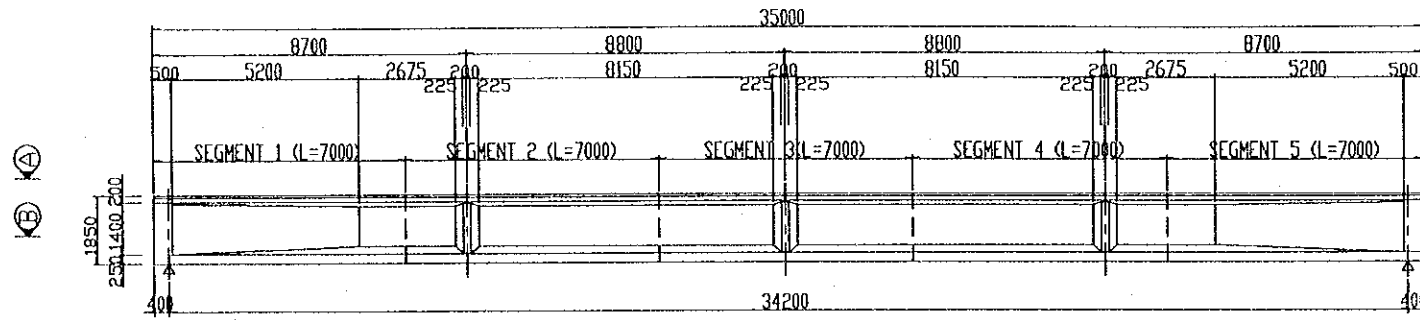
**NOTES:**

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO.P1/BR1/0030

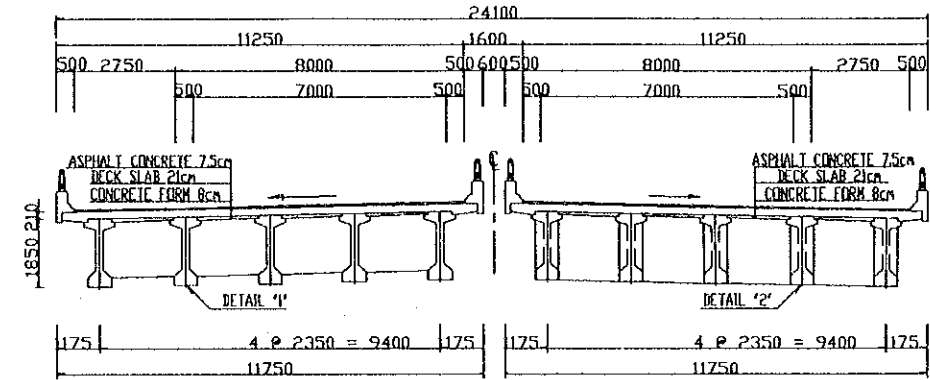
PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	(NK) NIPPON KOEI CO.,LTD.	T. Kametani	K. Matsumoto	K. Enomoto	LARGE TRA VA BRIDGE SUPERSTRUCTURE GIRDER LAYOUT SHEET-3	P1/BR1/0120
				SIGNATURE	SIGNATURE	SIGNATURE		
				DATE	DATE	DATE		
				20/9/2000	29/9/2000	5/10/2000		

**DETAIL OF SUPER STRUCTURE FOR TRA VA BIDGE**  
(Ls=34.2M)

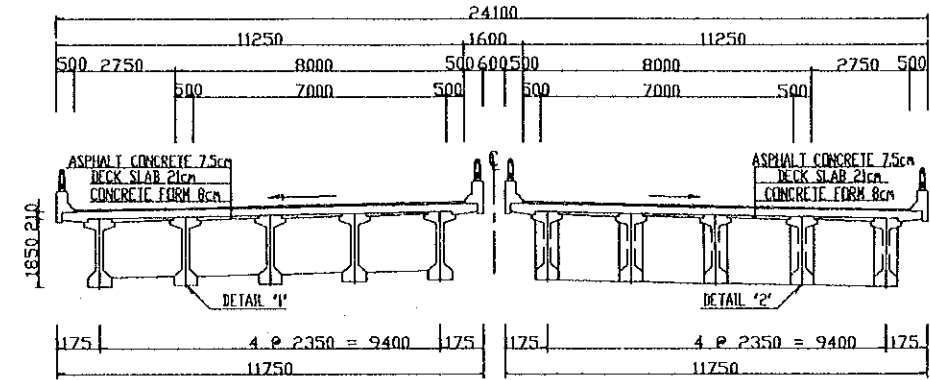
**ELEVATION**  
(SCALE: 1/200)



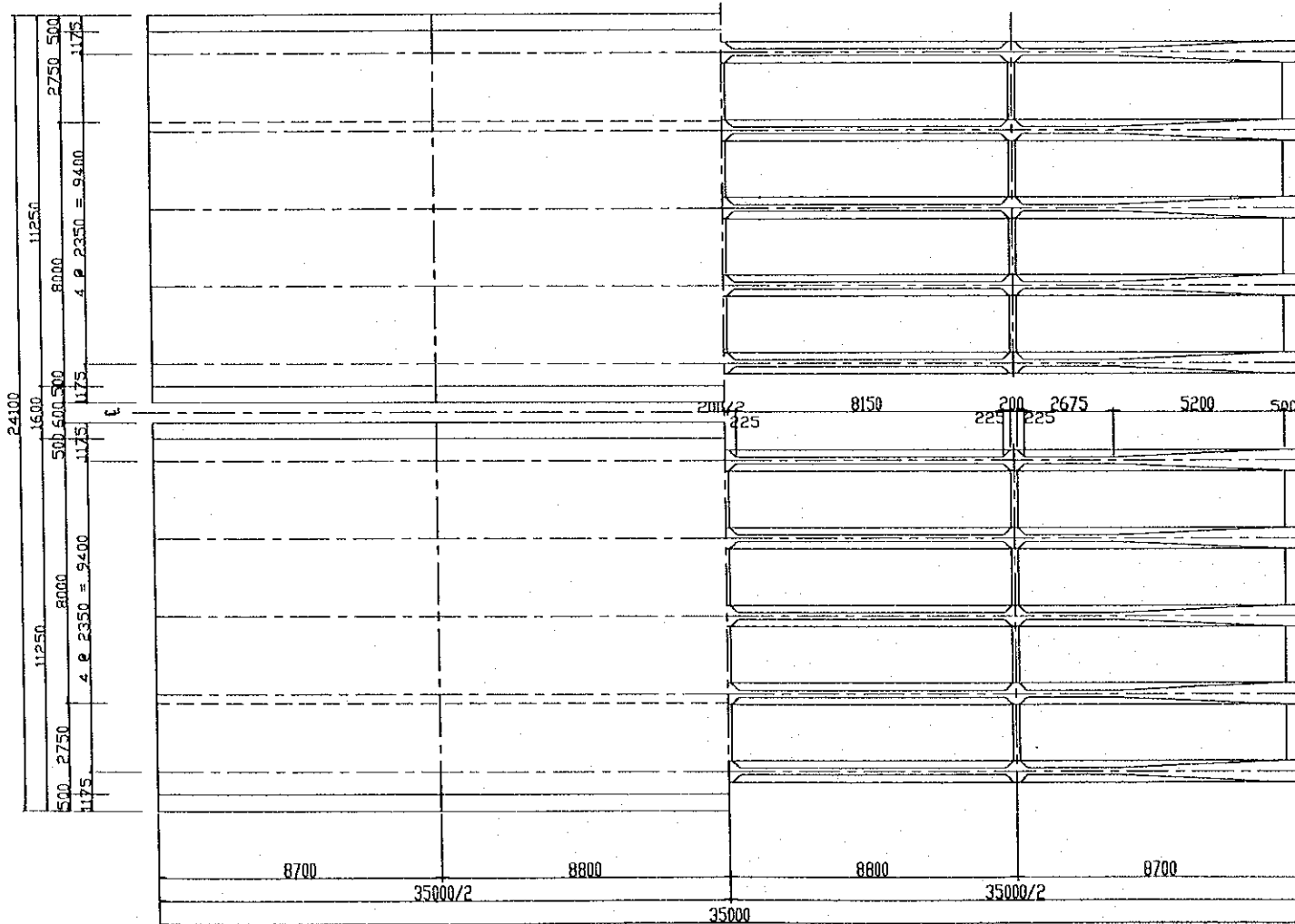
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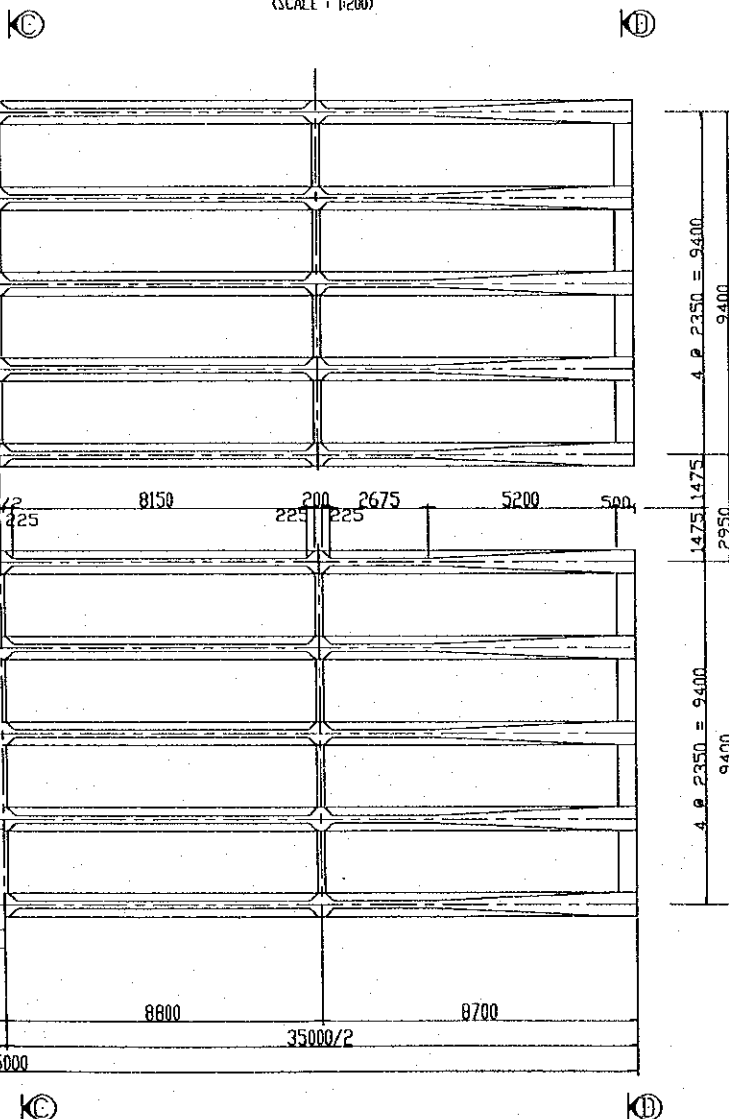
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(SCALE: 1/200)



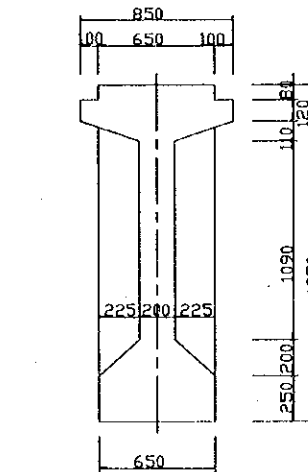
**1/2 SECTION A - A**  
(SCALE: 1/200)



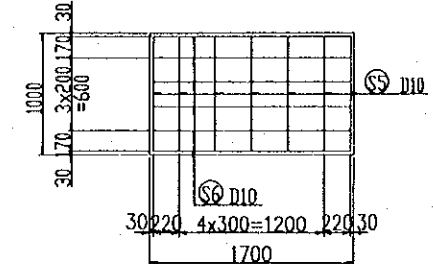
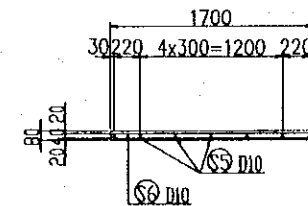
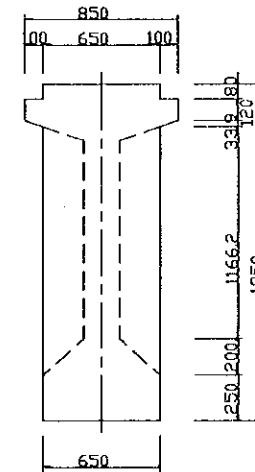
**1/2 SECTION B - B**  
(SCALE: 1/200)



**DETAIL "1"**  
(SCALE: 1/40)

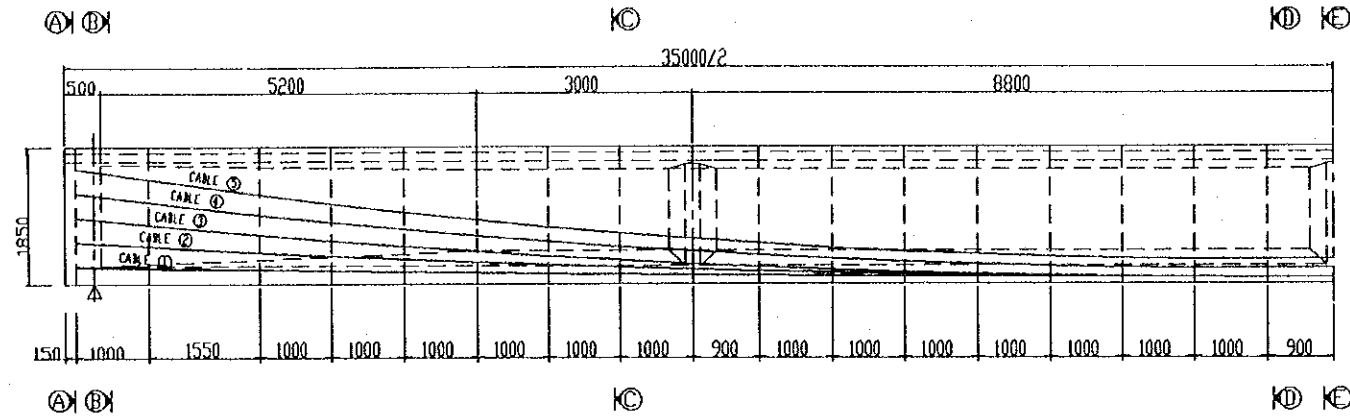


**DETAIL "2"**  
(SCALE: 1/40)

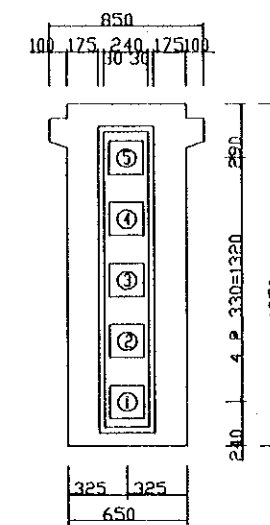


PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	NIPPON KOEI CO.,LTD.	T. Kametani	K. Matsumoto	K. Enomoto	LARGE TRA VA BRIDGE SUPERSTRUCTURE GENERAL VIEW OF GIRDER	P1/BRI/0130
				SIGNATURE				
				DATE	20/9/2000	29/9/2000		

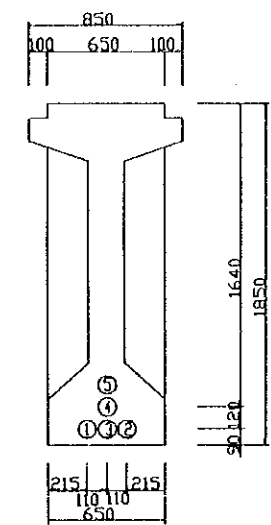
# DETAIL OF SUPER STRUCTURE FOR TRA VA BIDGE (Ls=34.2M)



**SECTION A - A**  
(SCALE 1 : 40)



**SECTION E - E**  
(SCALE 1 : 40)



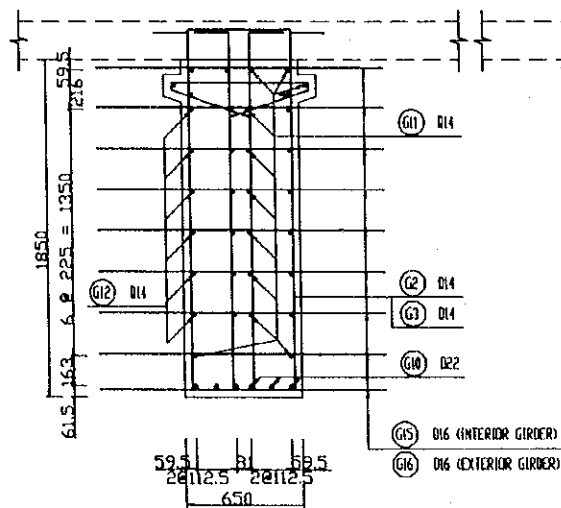
**POSITION OF CABLE CENTER FROM BOTTOM OF GIRDER**

L	17350	16350	14800	13800	12800	11800	10800	9800	8800	7900	6900	5900	4900	3900	2900	1900	900
CABLE ①	240	223	197	182	169	156	144	134	124	117	110	184	99	95	92	91	90
CABLE ②	570	515	434	386	341	301	263	230	200	176	153	133	118	105	97	92	90
CABLE ③	900	807	670	589	514	445	383	326	276	235	196	163	137	116	101	93	90
CABLE ④	1230	1112	940	838	744	657	578	507	444	393	344	302	269	243	224	213	210
CABLE ⑤	1560	1418	1210	1087	974	869	774	688	612	550	491	441	401	369	347	334	330

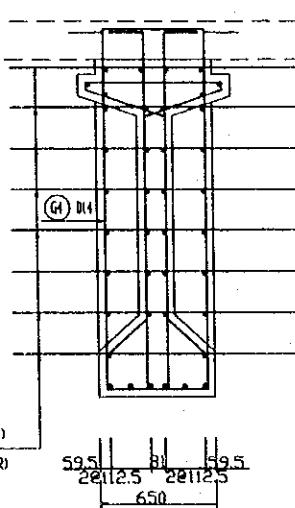
PC CABLE 12 S 12.7					(UNIT : MM)
CABLE No	L1	L2	L3	2x S L1	a
①	1000	15351	1000	34782	0°59'
②	1002	15355	1000	34714	2°52'
③	1004	15373	1000	34754	5°20'
④	1007	15385	1000	34784	6°42'
⑤	1010	15401	1000	34822	8°4'

WEIGHT = 173.78 x 9.29 kg/m = 1614.4 kg  
 SHEATHING # 80/85 : 173.78 M  
 ANCHORAGE : 10 SET  
 CEMENT GROUT IN SHEATHING : 0.847 M3  
 CONCRETE : 27.15 M3

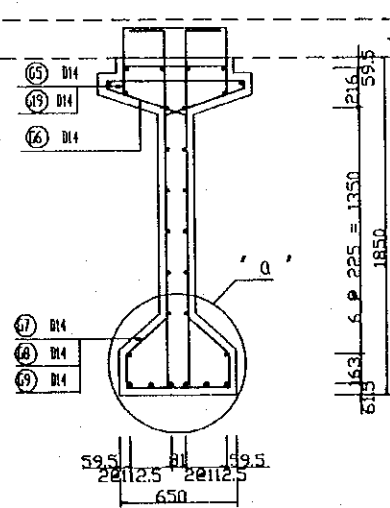
**SECTION B - B**  
(SCALE 1 : 40)



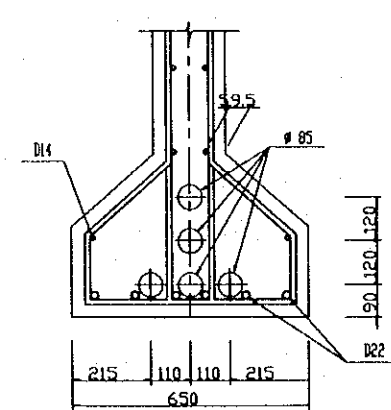
**SECTION C - C**  
(SCALE 1 : 40)



**SECTION D - D**  
(SCALE 1 : 40)



**DETAIL "a"**  
(SCALE 1:20)



**NOTES:**

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO.P1/BR1/0030

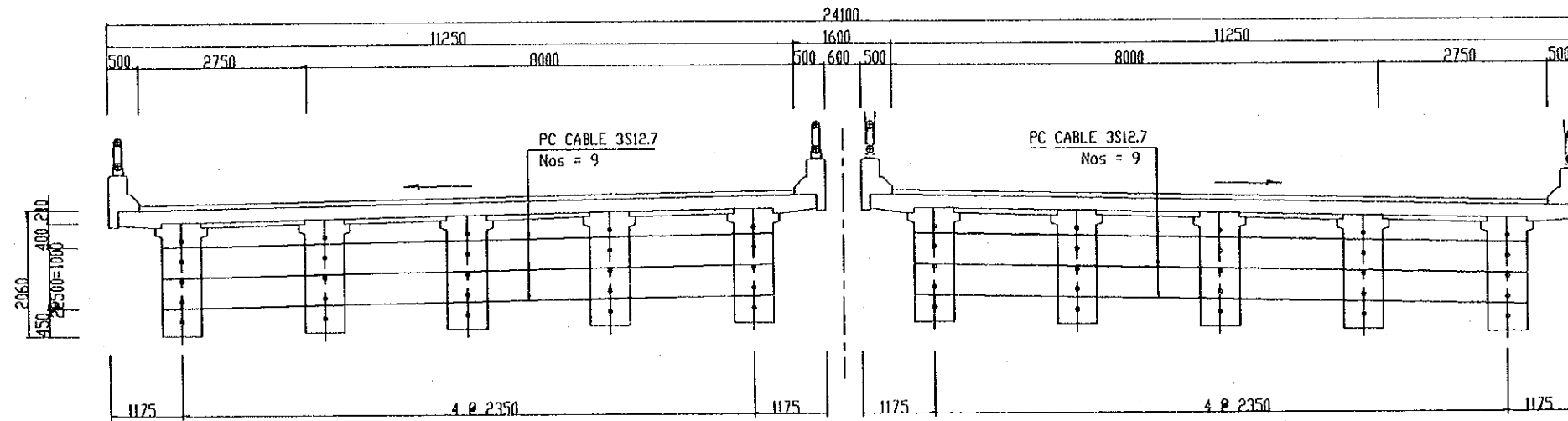
PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	(NK) NIPPON KOEI CO.,LTD.	T. Kametani	K. Matsumoto	K. Enomoto	LARGE TRA VA BRIDGE SUPERSTRUCTURE PC TENDON ARRANGEMENT OF GIRDER	P1/BR1/0140
				DATE 20/9/2000	DATE 29/9/2000	DATE 5/10/2000		



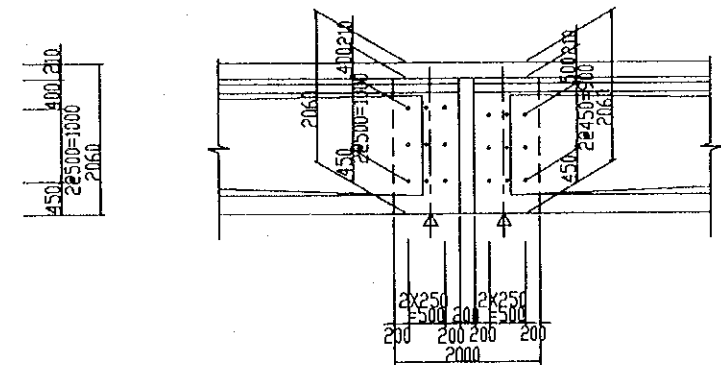
# TENDON ARRANGEMENT OF DIAPHRAGM

(SCALE 1 : 100)

## SECTION OF "I" GIRDER L = 35M



## PROFILE



## TOTAL QUANTITY

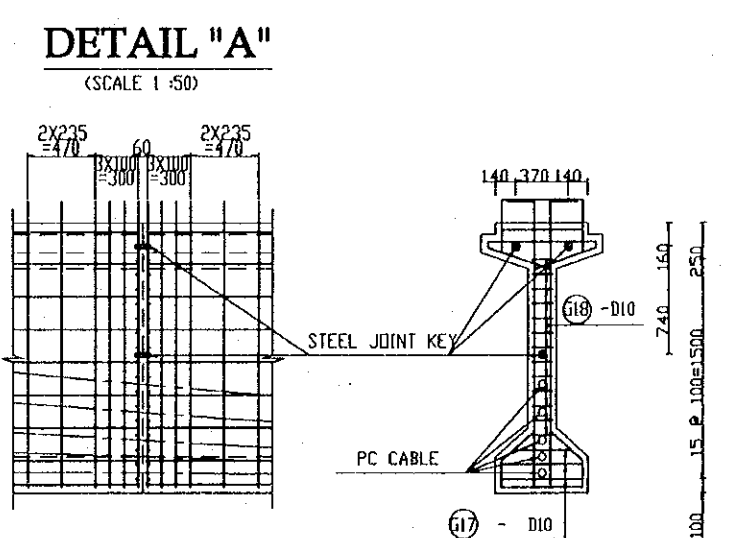
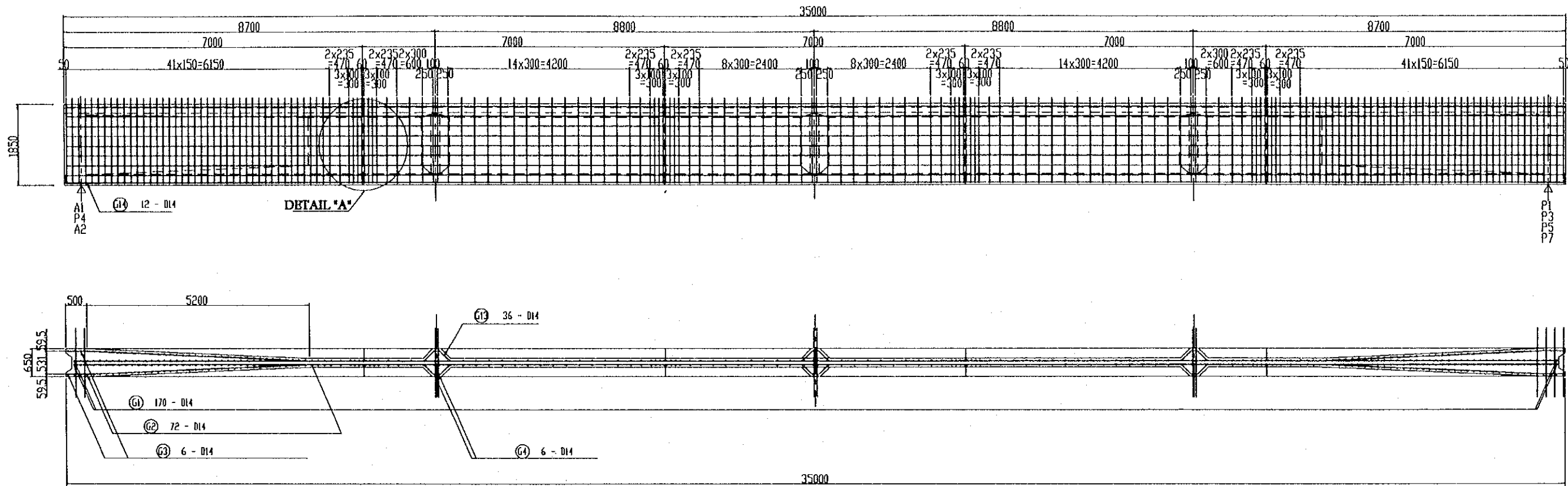
TOTAL WEIGHT OF PC CABLE 3S12.7 = 361.9 x 2.32 kg/n = 839.6 (kg)  
 SHEATHING  $\phi$  50/55 : 361.9 M  
 ANCHORAGE : 72 SET  
 CEMENT GROUT IN SHEATHING : 0.71 M3

## NOTES:

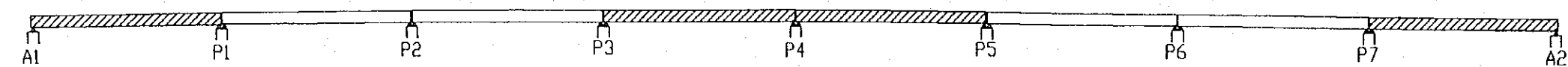
FOR STANDARD STRUCTURAL NOTES SEE DRAWING N0.P1/BRI/0030

PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	NIPON KOEI CO.,LTD.	T. Kametani	K. Matsumoto	K. Enomoto	LARGE TRA VA BRIDGE SUPERSTRUCTURE TENDON ARRANGEMENT OF DIAPHRAGMS	P1/BRI/0150
				SIGNATURE	SIGNATURE	SIGNATURE		
				DATE	DATE	DATE		

# REINFORCEMENT OF GIRDER (1) (Ls=34.2M)



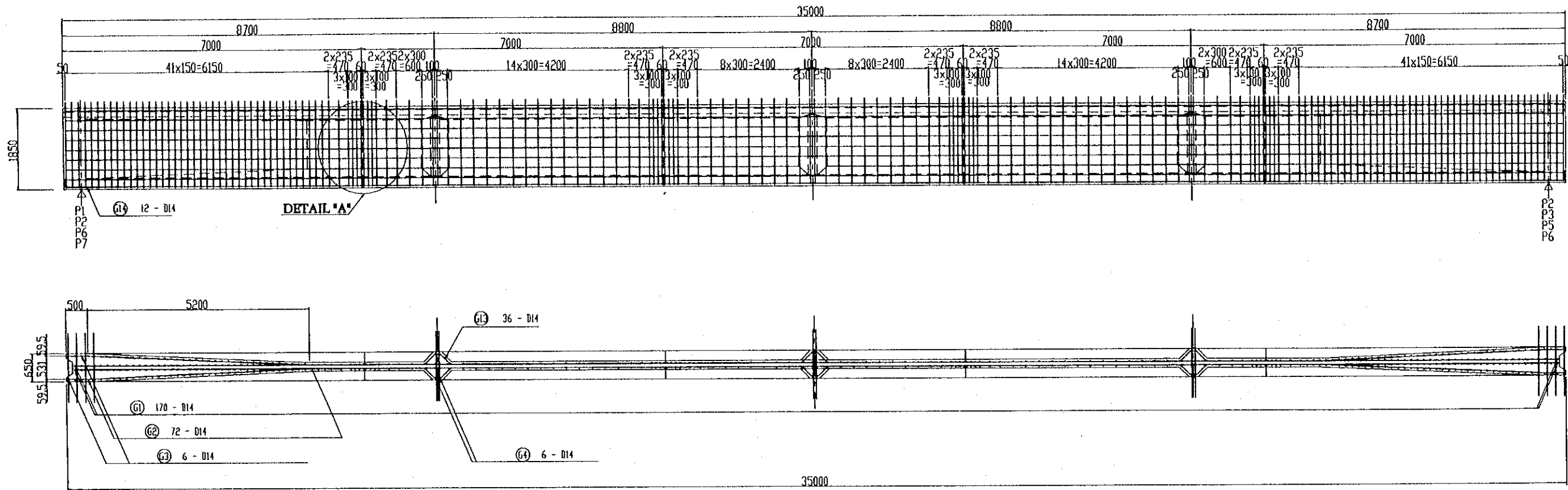
MARKING DIAGRAM



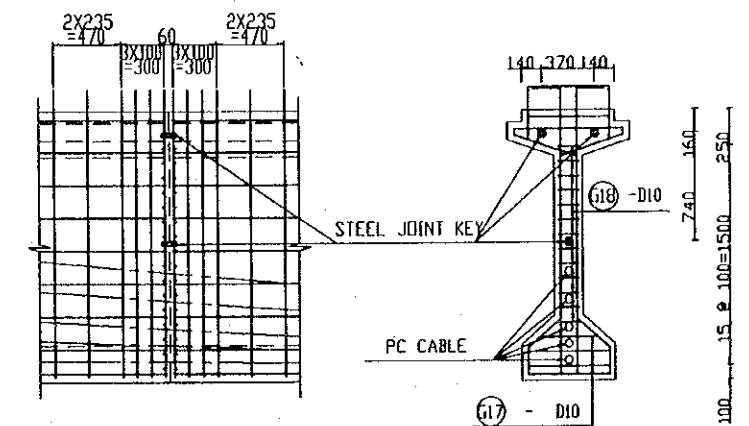
**NOTES:**  
FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO.P1/BRI/0030

PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	NIPPON KORI CO.,LTD.	NAME: T. Kametani SIGNATURE: [Signature] DATE: 20/9/2000	NAME: K. Matsumoto SIGNATURE: [Signature] DATE: 29/9/2000	NAME: K. Enomoto SIGNATURE: [Signature] DATE: 5/10/2000	LARGE TRA VA BRIDGE SUPERSTRUCTURE REINFORCEMENT OF GIRDER (1)	P1/BRI/0160

## REINFORCEMENT OF GIRDER (2) (Ls=34.2M)



**DETAIL "A"**  
(SCALE 1:50)



**MARKING DIAGRAM**

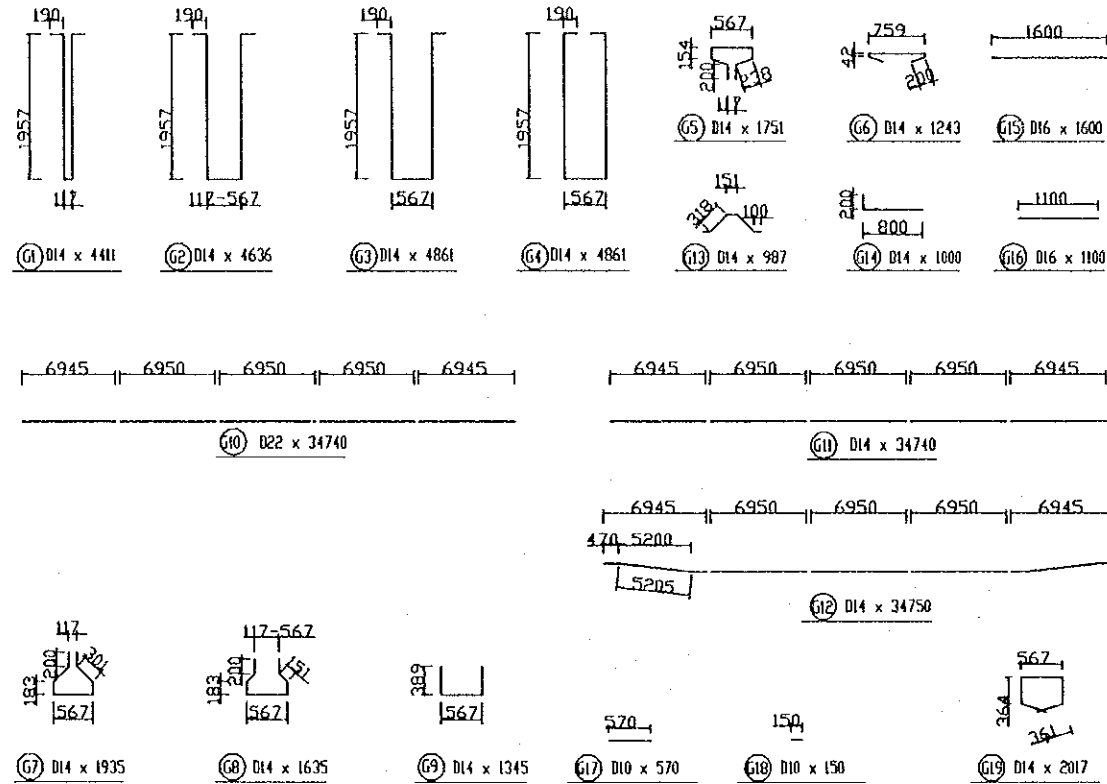


**NOTES:**

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO.P1/BR1/0030

PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	NIPPON KOKI CO., LTD.	NAME: T. Kametani SIGNATURE: DATE: 20/9/2000	NAME: K. Matsumoto SIGNATURE: DATE: 29/9/2000	NAME: K. Enomoto SIGNATURE: DATE: 5/10/2000	LARGE TRA VA BRIDGE SUPERSTRUCTURE REINFORCEMENT OF GIRDER (2)	P1/BR1/0170

## REINFORCEMENT OF GIRDER (3) (Ls=34.2M)



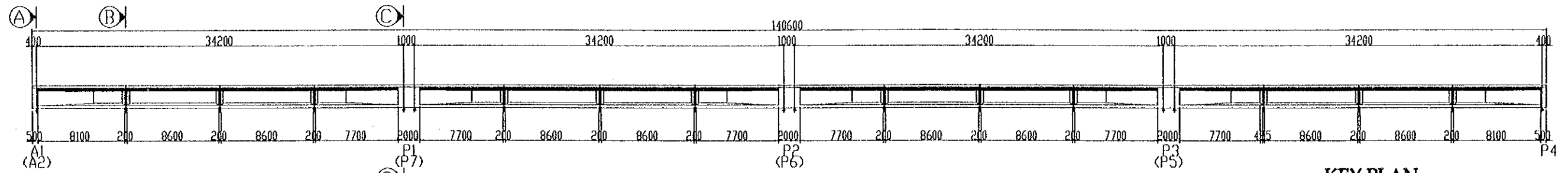
BAR LIST (FOR 1 GIRDER)									
REIN# No	DIA (mm)	LENGTH (mm)	NUMBER		UNIT WEIGHT (kg/m)	WEIGHT (kg)		REMARKS	
			SPAN 1,4,5,8	SPAN 2,3,6,7		SPAN 1,4,5,8	SPAN 2,3,6,7		
G1	14	4111	170	170	1.208	906.1	906.1		
G2	14	4636	72	72	1.208	403.2	403.2	AVERAGE	
G3	14	4861	6	6	1.208	35.2	35.2		
G4	14	4861	6	6	1.208	35.2	35.2		
G5	14	1751	184	184	1.208	390.1	390.1		
G6	14	1243	184	184	1.208	276.0	276.0		
G7	14	1935	112	112	1.208	262.1	262.1		
G8	14	1635	72	72	1.208	142.6	142.6	AVERAGE	
G9	14	1345	6	6	1.208	9.8	9.8		
G10	22	34740	6	6	2.984	624.0	624.0		
G11	14	34740	22	22	1.208	924.0	924.0		
G12	14	34750	12	12	1.208	504.0	504.0		
G13	14	987	36	36	1.208	42.8	42.8		
G14	14	1000	12	12	1.208	14.5	14.5		
G15	16	1600	75	66	1.578	189.8	167.0	INTERIOR GIRDER	
G16	16	1108	75	66	1.578	130.5	114.8	EXTERIOR GIRDER	
G17	10	570	24	24	0.617	8.4	8.4		
G18	10	150	104	104	0.617	9.6	9.6		
G19	14	2017	170	170	1.208	414.8	414.8		
TOTAL			SPAN 1,4,5,8		TOTAL		SPAN 2,3,6,7		
			5192.2	(5132.9)			5169.4	(5117.2)	
D10			18.0	(18.0)	D10		18.0	(18.0)	
D14			4360.4	(4360.4)	D14		4360.4	(4360.4)	
D16			189.8	(130.5)	D16		167.0	(114.8)	
D22			624.0	(624.0)	D22		624.0	(624.0)	
STEEL JOINT KEY : 12 SET									

**NOTES:**

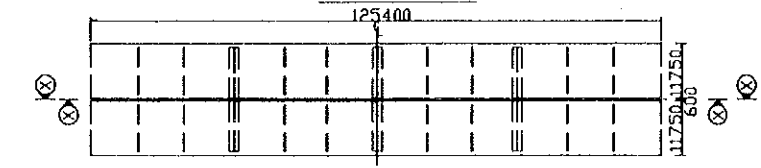
1. FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO. P1/BR1/0030  
2. THE VALUE OF INSIDE ( ) ARE FOR EXTERIOR GIRDER.

PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	NIPPON KORI CO., LTD.	T. Kametani	K. Matsumoto	K. Enomoto	LARGE TRA VA BRIDGE SUPERSTRUCTURE REINFORCEMENT OF GIRDER (3)	P1/BR1/0180
				NAME				
				SIGNATURE	<i>T. Kametani</i>	<i>K. Matsumoto</i>		
				DATE	20/9/2000	29/9/2000	5/10/2000	

PROFILE X-X

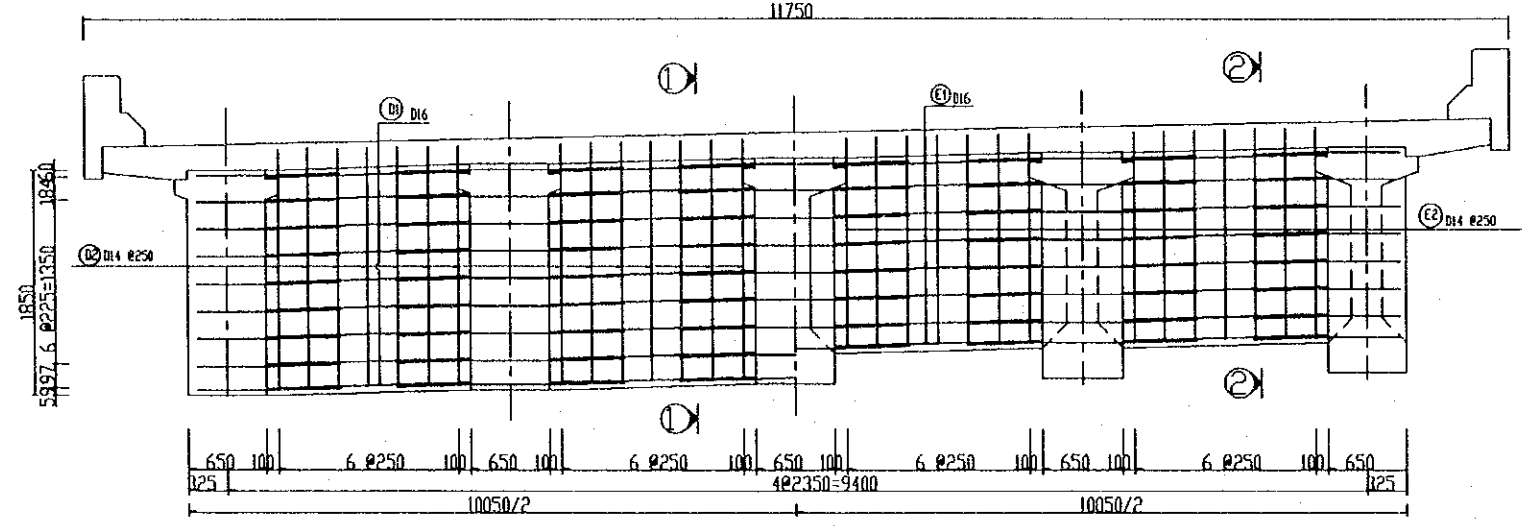


KEY PLAN



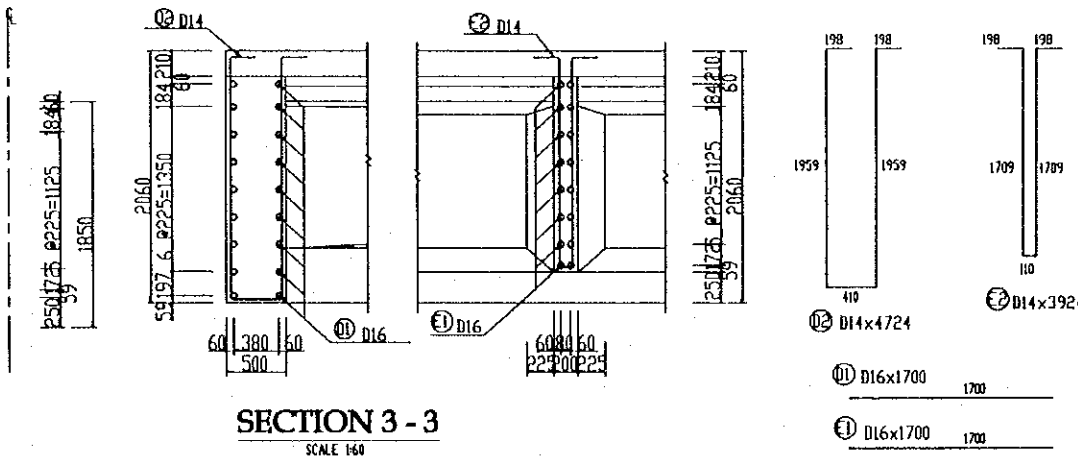
1/2 SECTION A - A

1/2 SECTION B - B



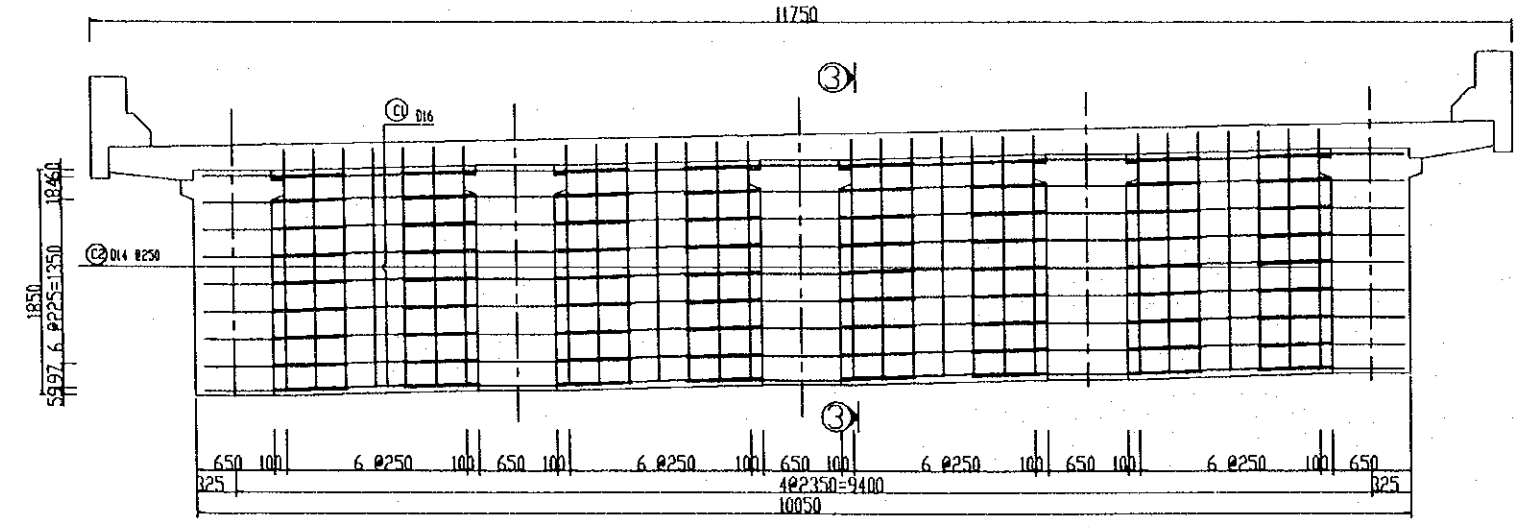
SECTION 1-1

SECTION 2-2



1/2 SECTION A - A

1/2 SECTION B - B



LIST OF REINFORCEMENT

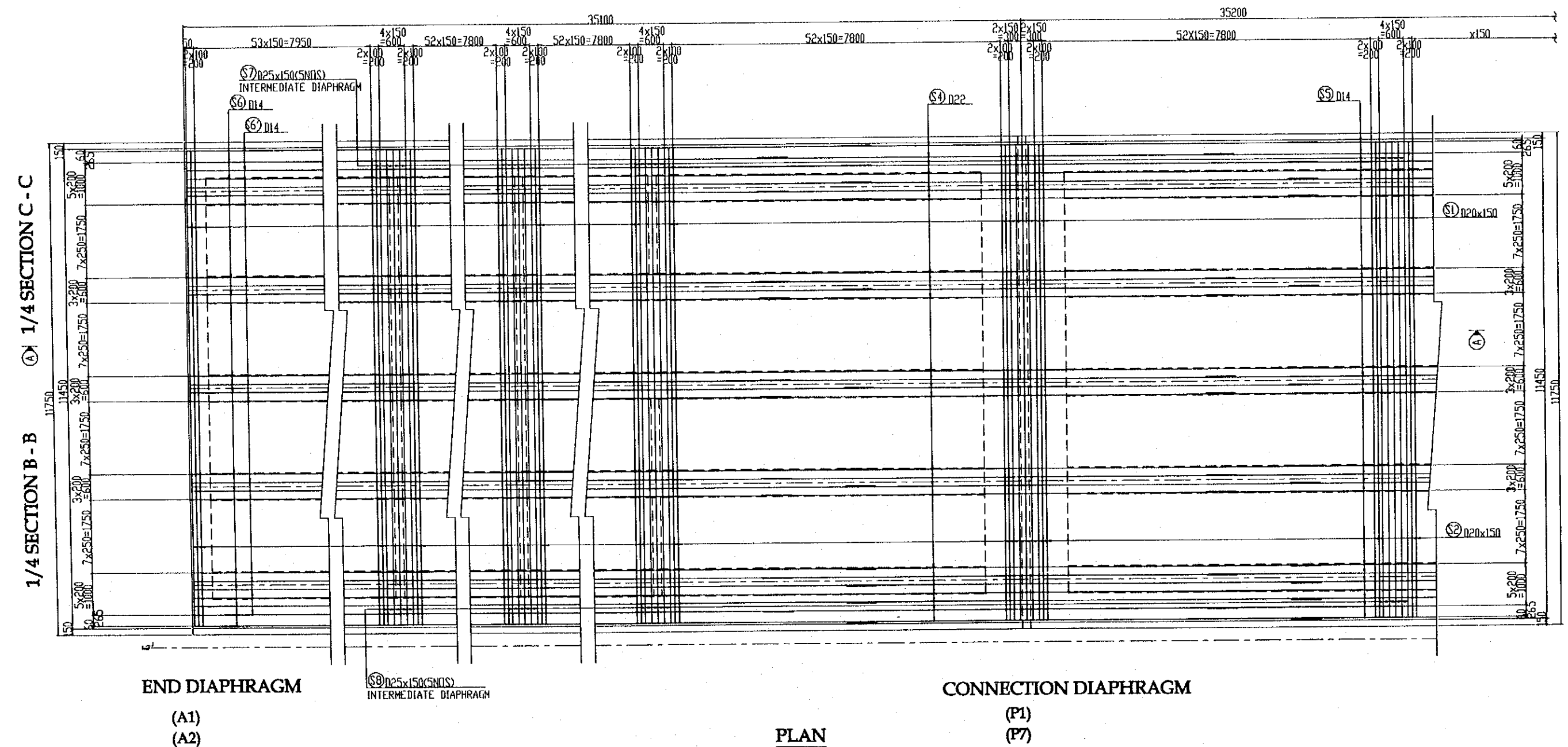
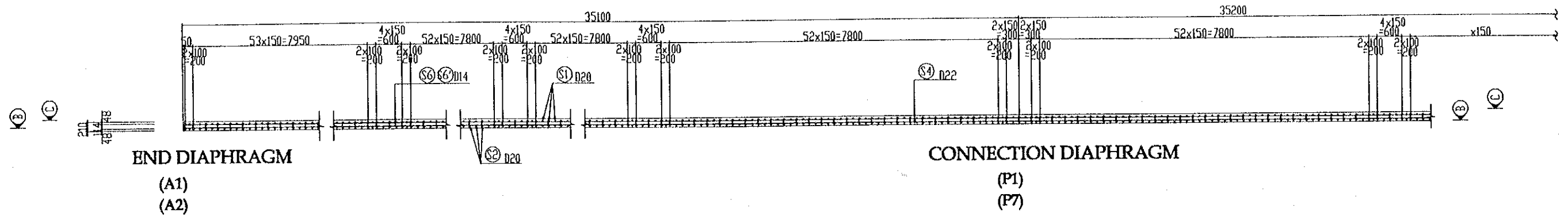
REIN. No	DIAMETER (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)
D1	16	1700	288	1.58	771.8
D2	16	1700	112	1.58	229.6
E1	14	4724	1536	1.21	11458.6
E2	14	3924	672	1.21	3185.3
C1	16	1700	528	1.58	1415.0
C2	14	2400	672	1.21	1948.8
C3	14	5442	336	1.21	2210.9
D4	14	5514	168	1.21	1118.9
D5	16	9900	12	1.58	187.2
TOTAL					22522.7
D16					13832.6
D14					8690.1

NOTES:  
FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO.P1/BR1/0030

PROJECT NAME DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	IMPLEMENTATION AGENCY JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	EXECUTING AGENCY SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	JICA STUDY TEAM NIPPON KOBİ CO.,LTD.	PREPARED BY T. Kametani	CHECKED BY K. Matsumoto	APPROVED BY K. Enomoto	DRAWING TITLE LARGE TRA VA BRIDGE SUPERSTRUCTURE REINFORCEMENT OF DIAPHRAGMS	DWG NO. P1/BR1/0190
				SIGNATURE T. Kametani	SIGNATURE K. Matsumoto	SIGNATURE K. Enomoto		
				DATE 20/9/2000	DATE 29/9/2000	DATE 5/10/2000		

SECTION A - A

SCALE : 1/100

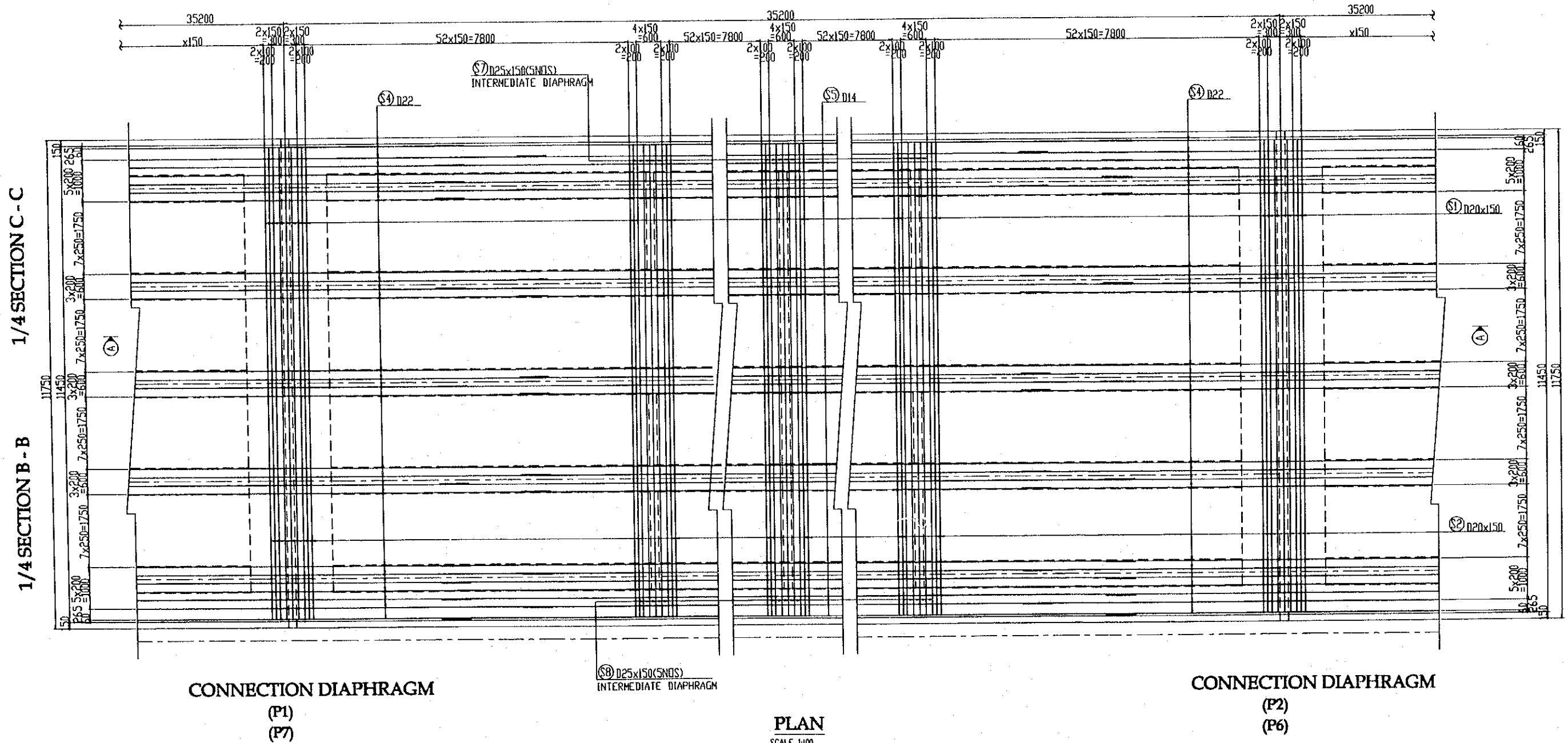
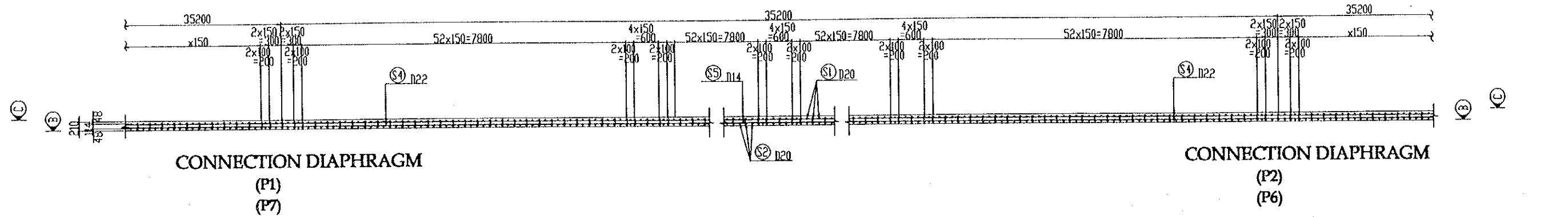


NOTES:  
FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO.P1/BR1/0030

PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	(NK) NIPPON KOBI CO.,LTD.	T. Kametani	K. Matsumoto	K. Enomoto	LARGE TRA VA BRIDGE SUPERSTRUCTURE DECK SLAB REINFORCEMENT-SHEET 1	P1/BR1/0200
				NAME				
				SIGNATURE				
				DATE	20/9/2000	29/9/2000	5/10/2000	

SECTION A - A

SCALE: 1/100



PLAN

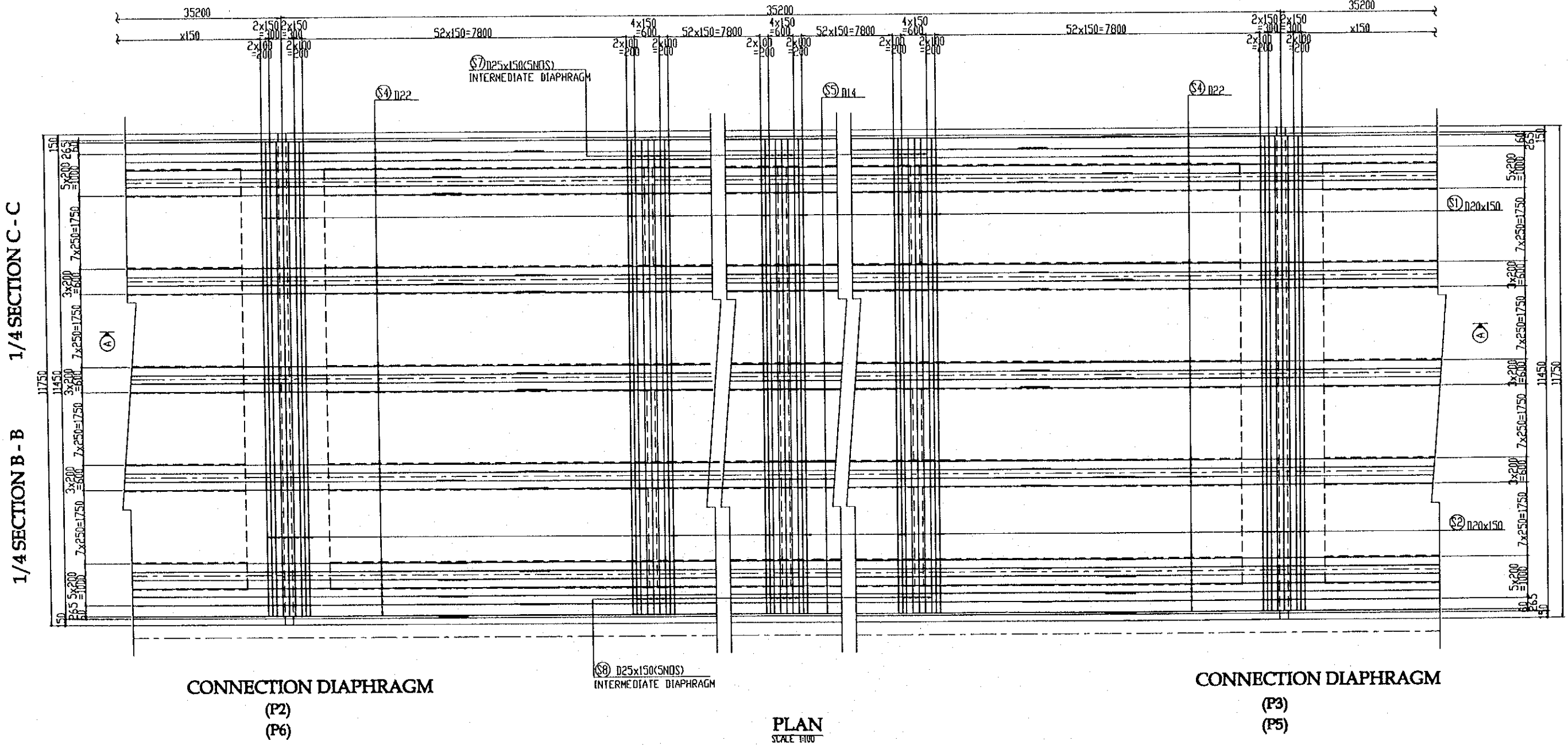
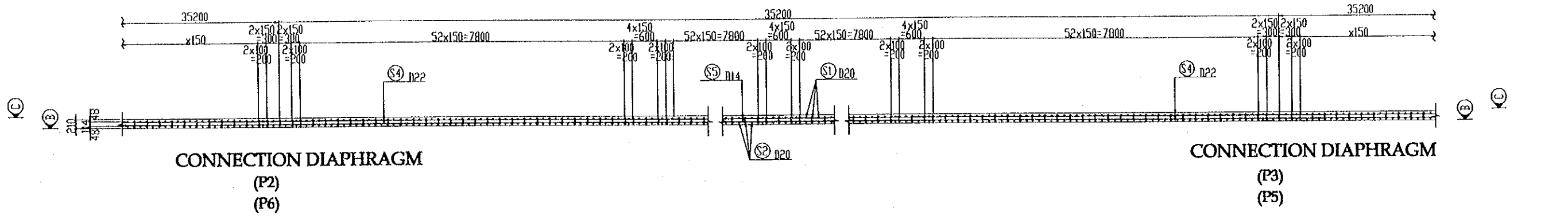
SCALE: 1/100

NOTES:  
FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO. PL/BRI/0030

PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	(NK) NIPPON KOBİ CO., LTD.	T. Kametani	K. Matsumoto	K. Enomoto	LARGE TRA VA BRIDGE SUPERSTRUCTURE DECK SLAB REINFORCEMENT-SHEET 2	P1/BRI/0210
				NAME SIGNATURE DATE	NAME SIGNATURE DATE	NAME SIGNATURE DATE		
				T. Kametani 20/9/2000	K. Matsumoto 29/9/2000	K. Enomoto 3/10/2000		

SECTION A - A

SCALE : 1/100



PLAN  
SCALE 1/100

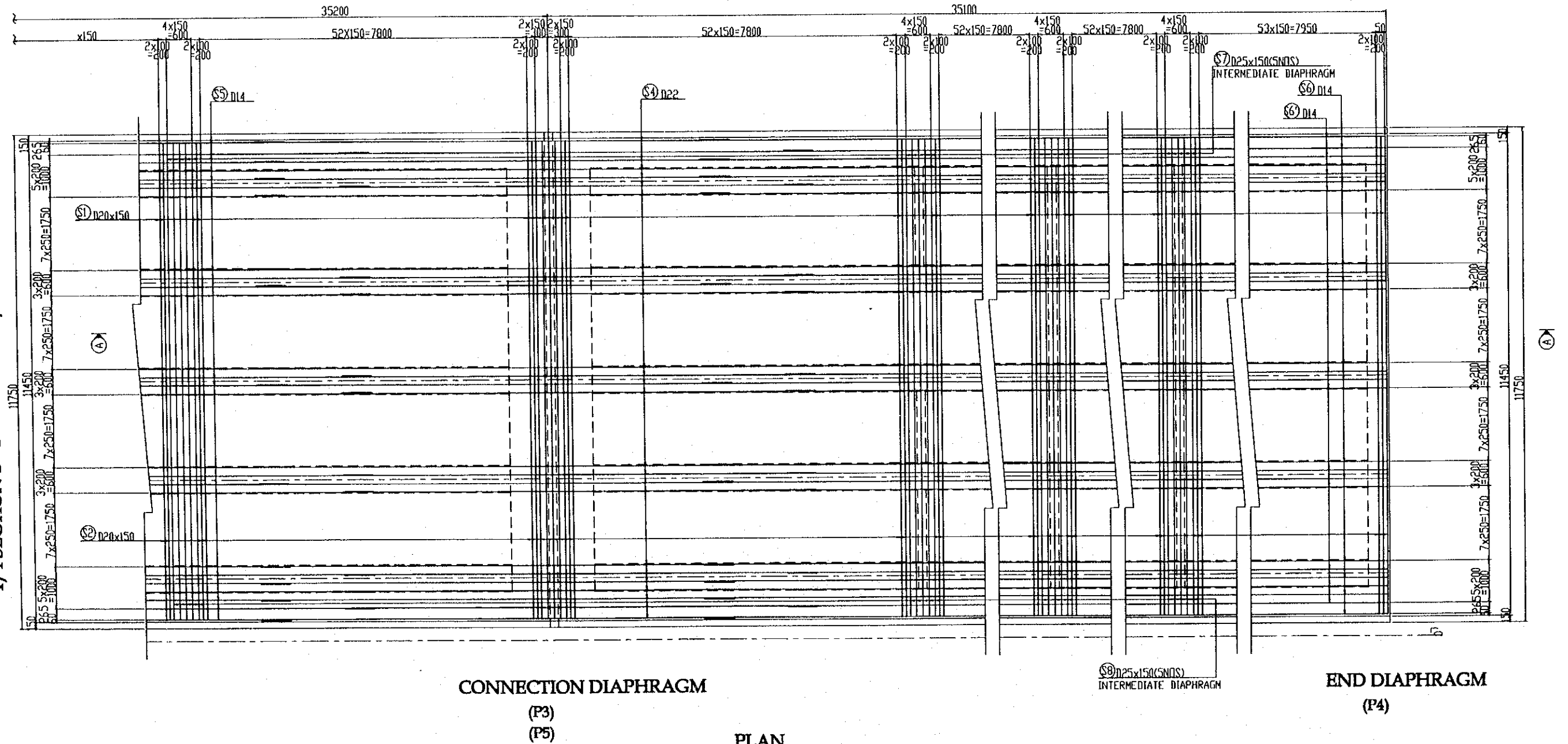
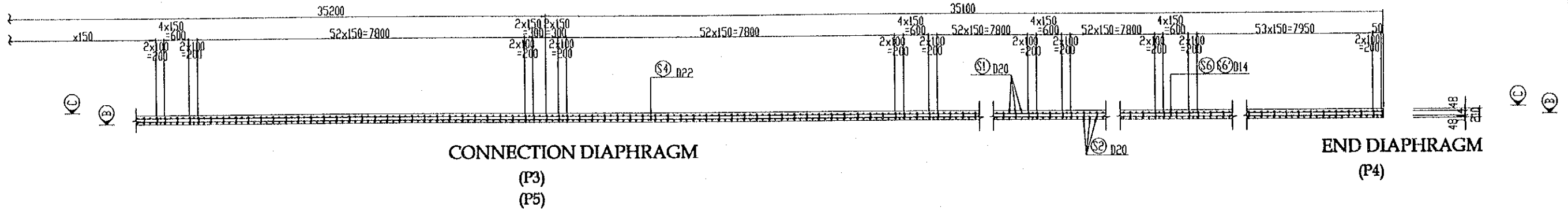
NOTES:  
FOR STANDARD STRUCTURAL NOTES SEE DRAWING HCLP1/BR1/0030

PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	(NK) NIPPON KOKI CO.,LTD.	NAME: T. Kametani SIGNATURE: [Signature] DATE: 20/9/2000	NAME: K. Matsumoto SIGNATURE: [Signature] DATE: 29/9/2000	NAME: K. Enomoto SIGNATURE: [Signature] DATE: 5/10/2000	LARGE TRA VA BRIDGE SUPERSTRUCTURE DECK SLAB REINFORCEMENT-SHEET 3	P1/BR1/0220



SECTION A - A

SCALE: 1/100



PLAN  
SCALE: 1/100

NOTES:  
FOR STANDARD STRUCTURAL NOTES SEE DRAWING NCIPI/BR1/0030

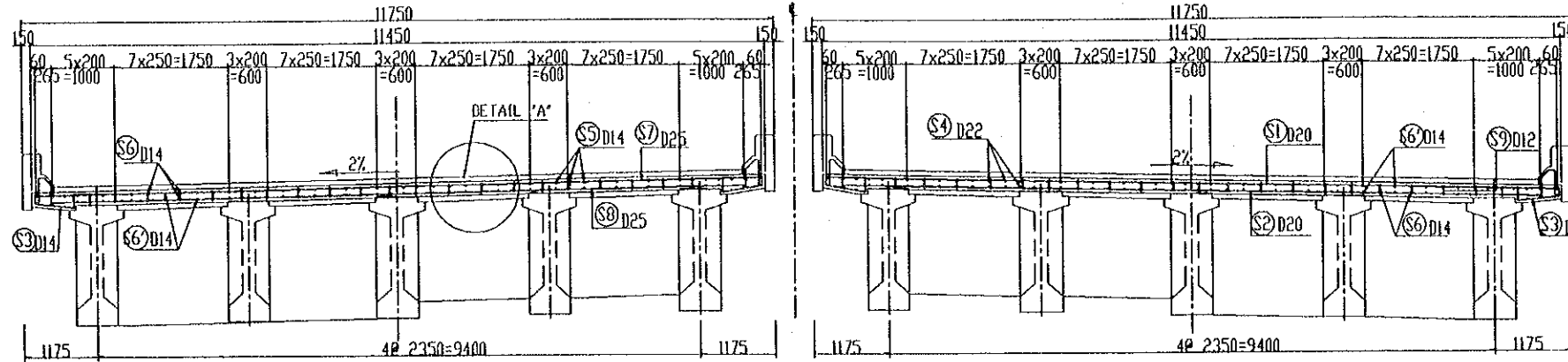
PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	NIPPON KOEI CO., LTD.	T. Kametani	K. Matsumoto	K. Enomoto	LARGE TRA VA BRIDGE SUPERSTRUCTURE DECK SLAB REINFORCEMENT-SHEET 4	P1/BR1/0230
				NAME				
				SIGNATURE				
				DATE	20/9/2000	29/9/2000	5/10/2000	

1/4 SECTION  
AT END DIAPHRAGM

1/4 SECTION AT  
INTERMEDIATE DIAPHRAGM CONNECTION

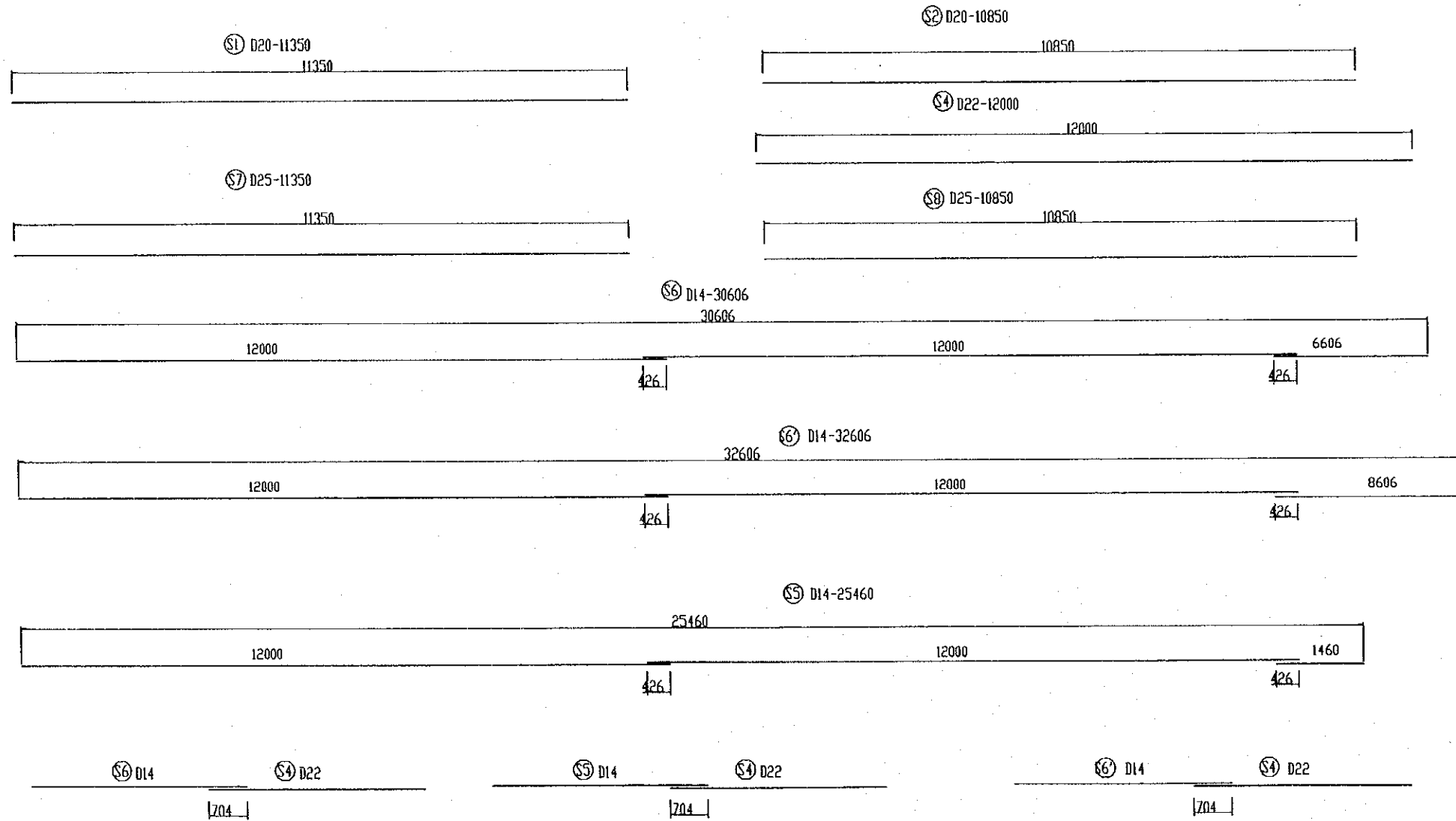
1/4 SECTION AT  
DIAPHRAGM

1/4 SECTION  
AT END DIAPHRAGM

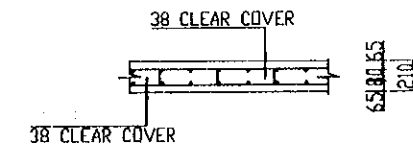


LIST OF REINFORCEMENT

TYPE	DIAMETER (mm)	LENGTH (mm)	NUMBER	UNITWEIGHT (kg/m)	WEIGHT (kg)
S1	20	11350	1678	2.466	46984.0
S2	20	10850	1678	2.466	44970.4
S3	14	963	3836	1.208	4449.8
S4	22	12000	600	2.984	21480.0
S5	14	25406	400	1.208	12320.0
S6	14	30606	200	1.208	7400.0
S6'	14	32606	200	1.208	7880.0
S7	25	11350	240	3.853	10488.0
S8	25	10850	240	3.853	10032.0
S9	12	565	20160	0.888	10120.3
TOTAL		176124.5		(KG)	
		D25	20520.0	(KG)	
		D22	21450.0	(KG)	
		D20	91954.4	(KG)	
		D14	32049.8	(KG)	
		D12	10120.3	(KG)	



DETAIL "A"  
SCALE 1:50



S9 D12-565

S3 D14-963

210  
1201

133  
207  
623

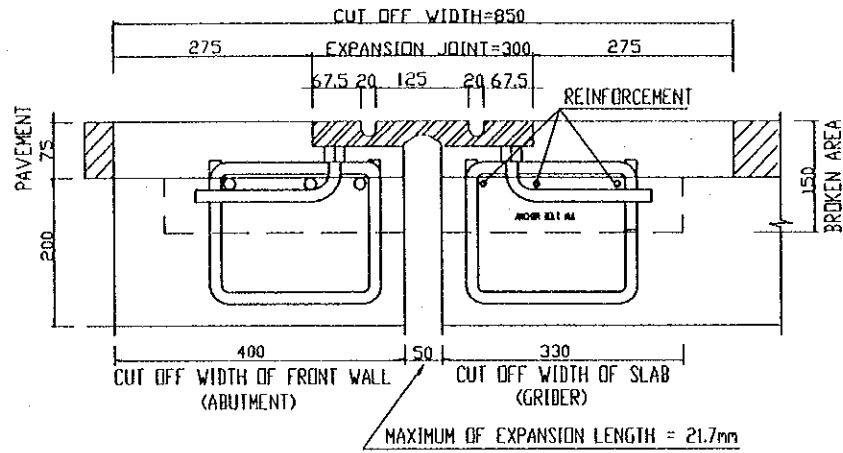
NOTES:  
FOR STANDARD STRUCTURAL NOTES SEE DRAWING N0P1/BR1/0030

PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	(NK) NIPPON KOEI CO., LTD.	I. Kametani	K. Matsumoto	K. Enomoto	LARGE TRA VA BRIDGE SUPERSTRUCTURE DECK SLAB REINFORCEMENT-SHEET 5	P1/BR1/0240
				NAME				
				SIGNATURE				
				DATE	20/9/2000	29/9/2000	5/10/2000	

# DETAIL OF EXPANSION JOINT

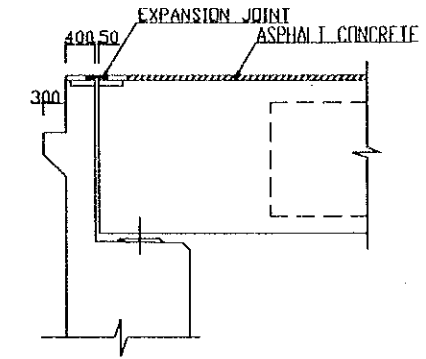
## FOR ABUTMENT

SCALE 1:10



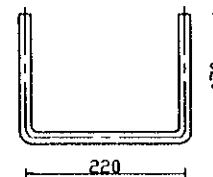
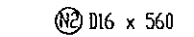
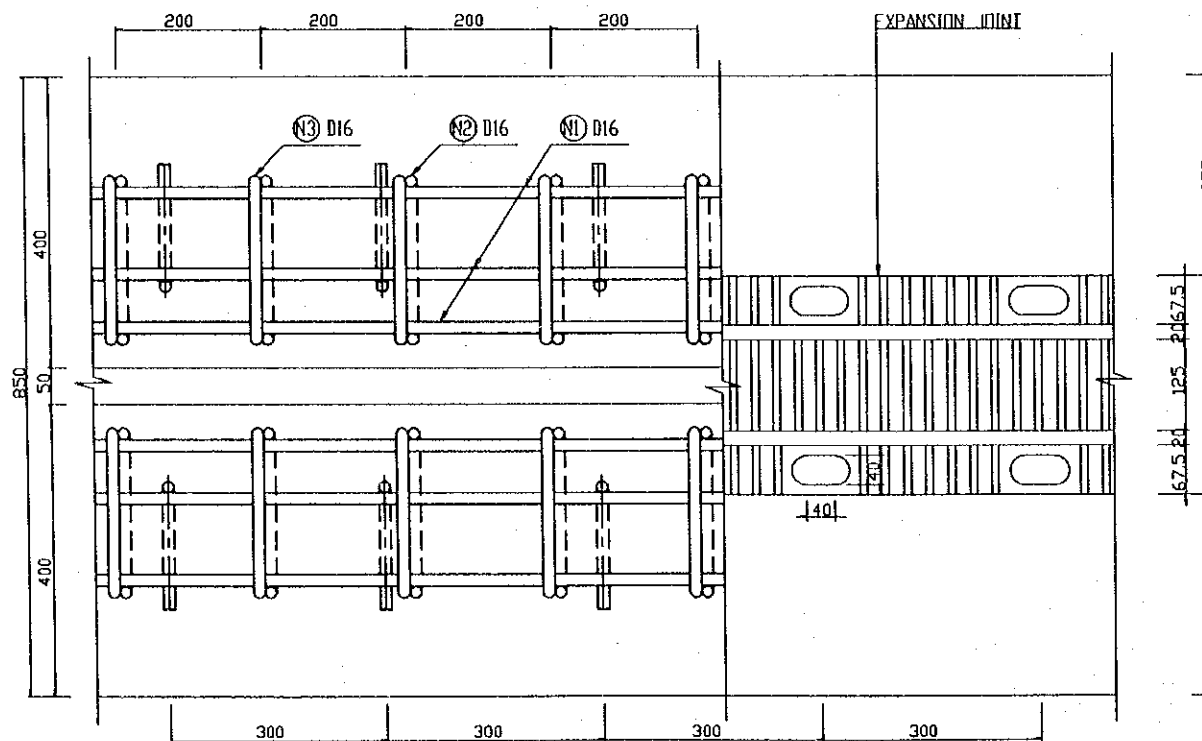
## DETAIL AT ABUTMENT

SCALE 1:100



## PLAN OF EXPANSION JOINT

SCALE 1:10



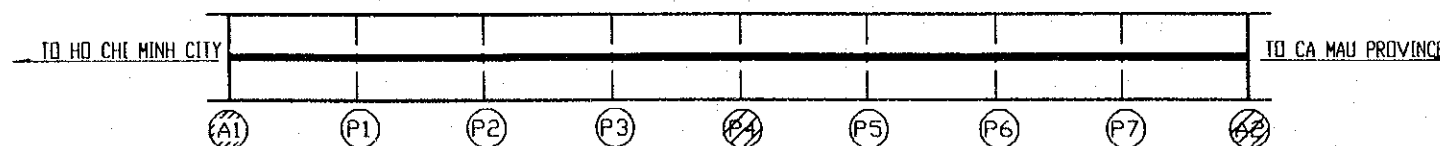
## QUANTITY TABLE(Per m)

ITEMS	KIND OR SIZE	QUANTITY	REMARKS
EXPANSION JOINT	NEOPRENE RUBBER	1M	JIS-K-6301
ANCHOR BOLT	Ø16 L = 272 mm		Ø300
NUT	NEOPRENE RUBBER		
WASHER	NEOPRENE RUBBER		
REINFORCEMENT	① D16	4.72 kg	L=11.6 m, N=6
	② 5 - D16	4.42 kg	Ø200
	③ 5 - D16	2.84 kg	Ø200
CUT OFF	PAVEMENT	0.057 m <sup>3</sup>	
	SLAB	0.050 m <sup>3</sup>	
CONCRETE	B - 1	0.095 m <sup>3</sup>	CAST IN PLACE

### NOTES:

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO. P1/BR1/0030.

## MARKING DIAGRAM

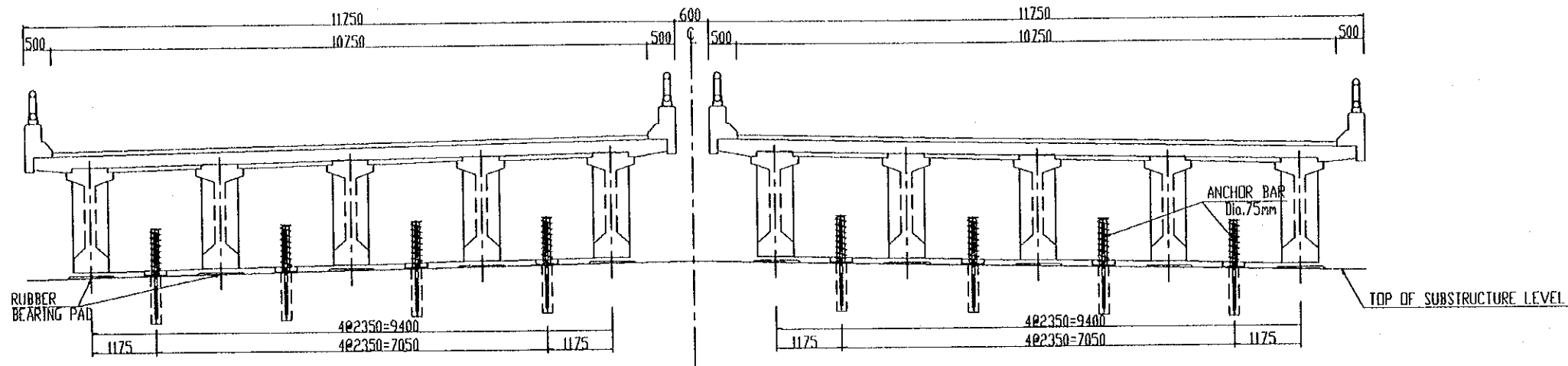


PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	NIPON KOEI CO., LTD.	T. Kametani	K. Matsumoto	K. Enomoto	LARGE TRA VA BRIDGE SUPERSTRUCTURE DETAIL OF EXPANSION JOINT	P1/BR1/0250
				SIGNATURE	SIGNATURE	SIGNATURE		
				DATE	DATE	DATE		

# DETAILS OF BEARING

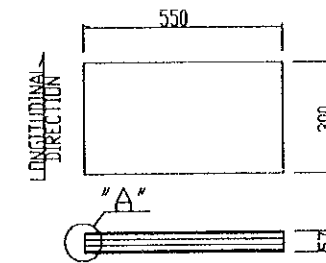
## CROSS SECTION

SCALE 1:100



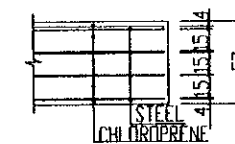
## ELASTOMERIC BEARING

SCALE 1:20



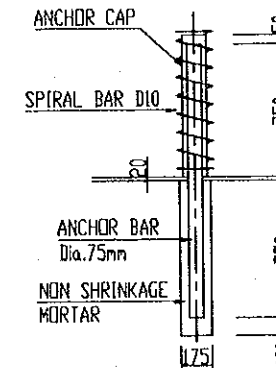
## DETAIL "A"

SCALE 1:5



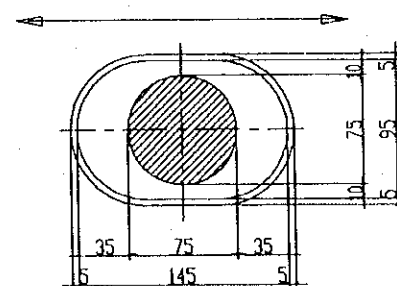
## ANCHOR BAR

SCALE 1:50



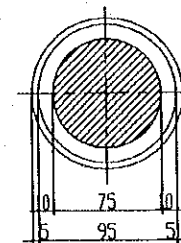
## ANCHOR CAP AT ABUTMENT A1&P4

SCALE 1:5



## ANCHOR CAP AT P1,P2&P3

SCALE 1:5



## QUANTITY TABLE

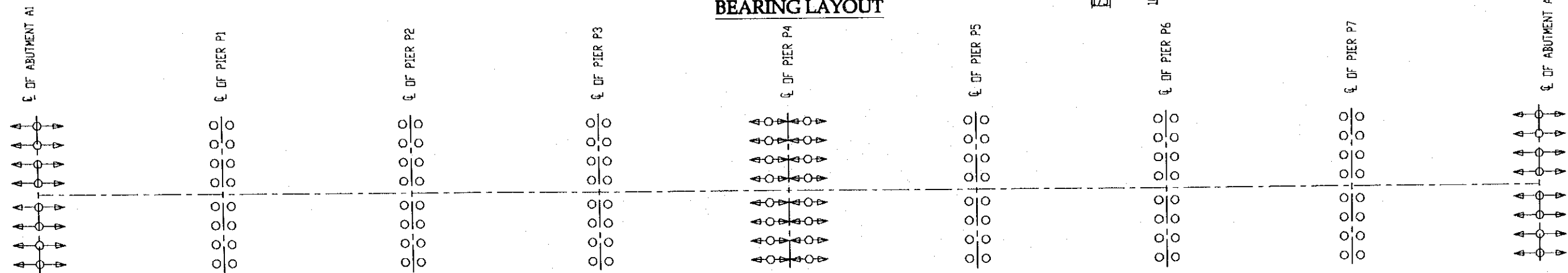
(FOR SUPERSTRUCTURE-APPROACH BRIDGE)

ITEMS	UNIT	QUANTITY
BEARINGS 550x300x57	SET	80
ANCHOR BAR	SET	64

## BEARING PERFORMANCE REQUIREMENT

LOCATION	SERVICEABILITY	
	VERTICAL LOAD (kN)	
	MAXIMUM	MINIMUM
MOVABLE BEARINGS	1 100	535

## BEARING LAYOUT



KEY : DENOTES GUIDE SLIDING BEARING MOVEMENT (IN THE GIVEN BY THE ARROWS)



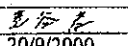
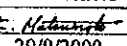

## NOTES:

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO. P1/BR1/0030.

PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	NIPPON KOEI CO.,LTD.	NAME: T. Kametani SIGNATURE: DATE: 20/9/2000	NAME: K. Matsumoto SIGNATURE: DATE: 29/9/2000	NAME: K. Enomoto SIGNATURE: DATE: 5/10/2000	LARGE TRA VA BRIDGE SUPERSTRUCTURE DETAILS OF BEARING	P1/BR1/0260

QUANTITY TABLE OF SUPERSTRUCTURE

ITEM		WORK ITEM	UNIT	QUANTITY	Remarks
CONCRETE	CLASS B	GIRDER	m <sup>3</sup>	2172.2	
	CLASS D	PANEL	m <sup>3</sup>	596.0	
		DECK SLAB	m <sup>3</sup>	1389.0	
		CROSS BEAM	m <sup>3</sup>	503.3	
		TOTAL	m <sup>3</sup>	2488.3	
RE BAR		CROSS BEAMS	ton	22.5	
		DECK SLAB	ton	176.1	
		GIRDER	ton	206.3	
		PANEL	ton	8.3	
		TOTAL	ton	413.3	
PC CABLE	12S12.7	LONGITUDINAL TENDONS	ton	129.2	
	3S12.7	TRANSVERSE TENDONS	ton	5.0	
ANCHOR	12S12.7		SET	400.0	
	3S12.7		SET	432.0	
SHEATHING	\$80/85		m	13902.1	
	\$50/55		m	723.6	
CEMENT GROUT IN SHEATHING			m <sup>3</sup>	69.8	
STEEL SHEAR KYE			SET	960.0	
EXPANSION JOINT		50mm	m	64.5	
BEARING		500x300x57mm	SET	160.0	
ANCHOR BAR			SET	128.0	
PAVEMENT		70mm	m <sup>2</sup>	6017.9	
WATER PROOFING		5mm	m <sup>2</sup>	6017.9	

PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
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