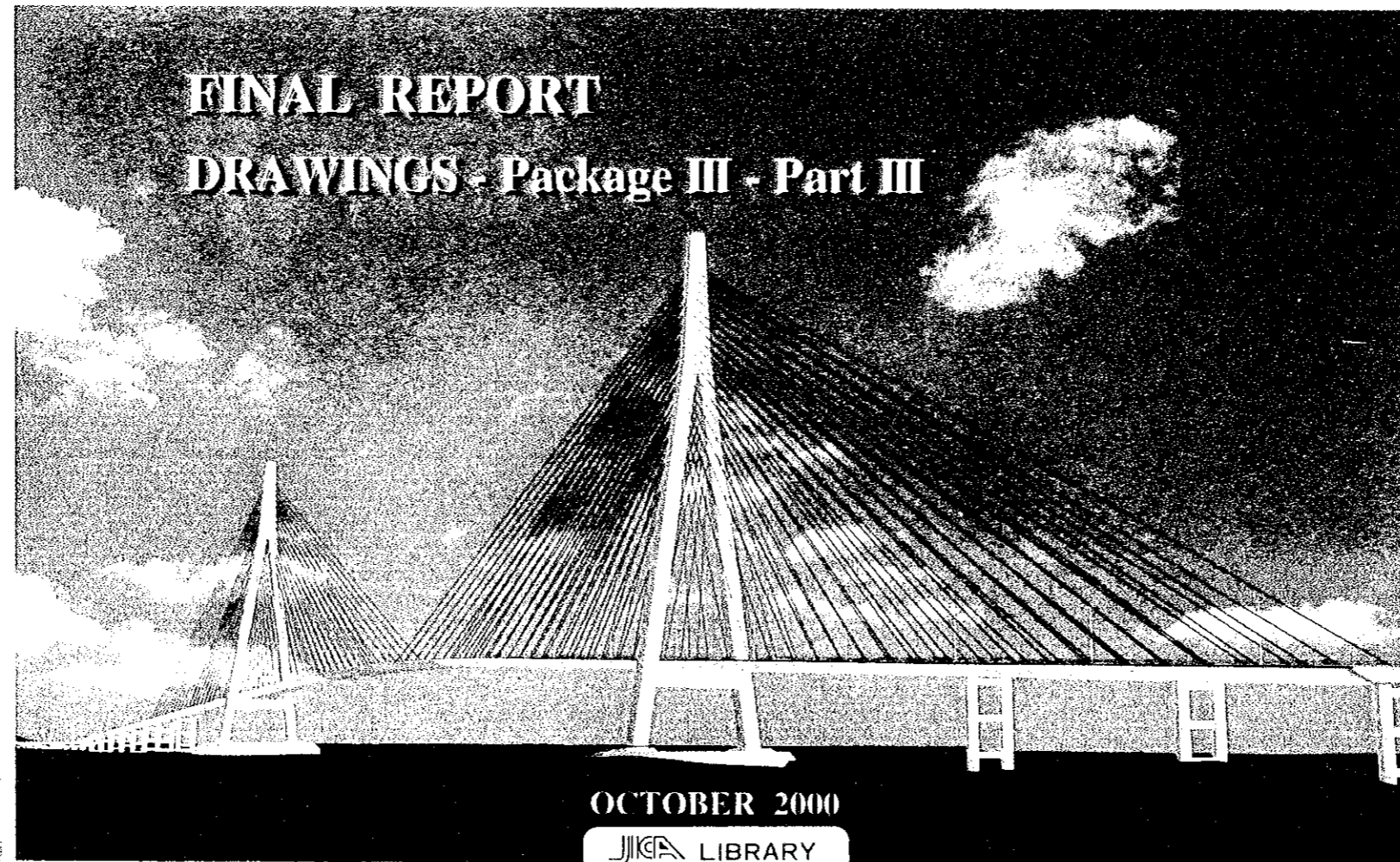


JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
MINISTRY OF TRANSPORT  
SOCIALIST REPUBLIC OF VIET NAM

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



OCTOBER 2000

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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 III - Part III**

**OCTOBER 2000**

**NIPPON KOEI CO., LTD.**



1161228(0)

# PACKAGE III (PART - 3)

P3/BR4

BA MANG BRIDGE

P3/BR5

CAI NAI BRIDGE

P3/BR6

AP MY BRIDGE

## DRAWING LIST (1/2)

DRAWING NO.	DRAWING TITLE	DRAWING NO.	DRAWING TITLE
P3/BR4	<b>BA MANG BRIDGE</b>	P3/BR5/0100	GENERAL VIEW OF "I" GIRDER L=28.0M
	<b>GENERAL</b>	P3/BR5/0110	GENERAL VIEW OF "I" GIRDER L=37.0M
P3/BR4/0010	DRAWING LIST	P3/BR5/0120	TENDONS ARRANGEMENT OF "I" GIRDER L=28.0M
P3/BR4/0020	ABBREVIATIONS AND SYMBOLS	P3/BR5/0130	TENDONS ARRANGEMENT OF "I" GIRDER L=37.0M
P3/BR4/0030	STRUCTURAL NOTES	P3/BR5/0140	TENDONS ARRANGEMENT OF CONNECTION DIAPHRAGMS
P3/BR4/0040	LOCATION MAP	P3/BR5/0150	REINFORCEMENT OF "I" GIRDER L=28.0M
P3/BR4/0050	COORDINATES OF BRIDGE	P3/BR5/0160	REINFORCEMENT OF "I" GIRDER L=37.0M
P3/BR4/0060	GENERAL VIEW - SHEET 1	P3/BR5/0170	REINFORCEMENT OF DIAPHRAGMS
P3/BR4/0070	GENERAL VIEW - SHEET 2	P3/BR5/0180	DECK SLAB REINFORCEMENT - SHEET 1
P3/BR4/0080	QUANTITY TABLE OF BRIDGE <b>SUPERSTRUCTURE</b>	P3/BR5/0190	DECK SLAB REINFORCEMENT - SHEET 2
P3/BR4/0090	GENERAL VIEW OF GIRDER L=25.0M	P3/BR5/0200	DECK SLAB REINFORCEMENT - SHEET 3
P3/BR4/0100	TENDON ARRANGEMENT OF GIRDER L=25.0M	P3/BR5/0210	DECK SLAB REINFORCEMENT - SHEET 4
P3/BR4/0110	REINFORCEMENT OF GIRDER L=25.0M	P3/BR5/0220	DETAILS OF BEARINGS
P3/BR4/0120	REINFORCEMENT OF DIAPHRAGMS	P3/BR5/0230	DETAILS OF EXPANSION JOINTS
P3/BR4/0130	DECK SLAB REINFORCEMENT - SHEET 1	P3/BR5/0240	QUANTITY TABLE OF SUPERSTRUCTURE
P3/BR4/0140	DECK SLAB REINFORCEMENT - SHEET 2		<b>ABUTMENTS</b>
P3/BR4/0150	DETAILS OF BEARINGS	P3/BR5/0250	GENERAL VIEW OF ABUTMENTS A1 & A2
P3/BR4/0160	DETAILS OF EXPANSION JOINTS	P3/BR5/0260	ABUTMENTS A1 & A2 RC PILE □ 450 L=40.0M SHEET 1
P3/BR4/0170	QUANTITY TABLE OF SUPERSTRUCTURE	P3/BR5/0270	ABUTMENTS A1 & A2 RC PILE □ 450 L=40.0M SHEET 2
	<b>ABUTMENTS</b>	P3/BR5/0280	REINFORCEMENT OF ABUTMENTS A1 & A2 - SHEET 1
P3/BR4/0180	GENERAL VIEW OF ABUTMENTS A1 & A2	P3/BR5/0290	REINFORCEMENT OF ABUTMENTS A1 & A2 - SHEET 2
P3/BR4/0190	ABUTMENTS A1 & A2 - RC PILE □ 450 - L=40.0M - SHEET 1	P3/BR5/0300	REINFORCEMENT OF ABUTMENTS A1 & A2 - SHEET 3
P3/BR4/0200	ABUTMENTS A1 & A2 - RC PILE □ 450 - L=40.0M - SHEET 2	P3/BR5/0310	EARTHWORKS SLOPE PROTECTION - SHEET 1
P3/BR4/0210	REINFORCEMENT ABUTMENTS A1 & A2 - SHEET 1	P3/BR5/0320	EARTHWORKS SLOPE PROTECTION - SHEET 2
P3/BR4/0220	REINFORCEMENT ABUTMENTS A1 & A2 - SHEET 2	P3/BR5/0330	DETAILS OF APPROACH SLAB
P3/BR4/0230	REINFORCEMENT ABUTMENTS A1 & A2 - SHEET 3	P3/BR5/0340	QUANTITY TABLE OF ABUTMENTS
P3/BR4/0240	EARTHWORKS SLOPE PROTECTION		<b>PIERS</b>
P3/BR4/0250	DETAILS OF APPROACH SLAB	P3/BR5/0350	GENERAL VIEW OF PIERS P1 & P2
P3/BR4/0260	QUANTITY TABLE OF ABUTMENTS	P3/BR5/0360	PIER P1 - BORED PILE DETAILS, L=66.0M
	<b>MISCELLANEOUS</b>	P3/BR5/0370	PIER P2 - BORED PILE DETAILS, L=55.0M
P3/BR4/0270	DETAILS OF PARAPET AND RAILINGS	P3/BR5/0380	REINFORCEMENT OF PIERS P1 & P2 - SHEET 1
P3/BR4/0280	BRIDGE NAME PLAQUE	P3/BR5/0390	REINFORCEMENT OF PIERS P1 & P2 - SHEET 2
P3/BR4/0290	DRAINAGE LAYOUT	P3/BR5/0400	PIERS PROTECTION
P3/BR4/0300	DETAILS OF DRAINAGE ON BRIDGE	P3/BR5/0410	QUANTITY TABLE OF PIERS
P3/BR4/0310	QUANTITY TABLE OF MISCELLANEOUS WORKS		<b>MISCELLANEOUS</b>
P3/BR5	<b>CAI NAI BRIDGE</b>	P3/BR5/0420	DETAILS OF PARAPET AND RAILINGS
	<b>GENERAL</b>	P3/BR5/0430	BRIDGE NAME PLAQUE
P3/BR5/0010	DRAWING LIST	P3/BR5/0440	DRAINAGE AND LIGHTING POLES LAYOUT
P3/BR5/0020	ABBREVIATIONS AND SYMBOLS	P3/BR5/0450	DETAILS OF DRAINAGE ON BRIDGE
P3/BR5/0030	STRUCTURAL NOTES	P3/BR5/0460	DETAILS OF LIGHTING POLE BASES
P3/BR5/0040	LOCATION MAP	P3/BR5/0470	QUANTITY TABLE OF MISCELLANEOUS WORKS
P3/BR5/0050	COORDINATES OF BRIDGE		
P3/BR5/0060	GENERAL VIEW - SHEET 1	P3/BR6	<b>AP MY BRIDGE</b>
P3/BR5/0070	GENERAL VIEW - SHEET 2		<b>GENERAL</b>
P3/BR5/0080	QUANTITY TABLE OF BRIDGE	P3/BR6/0010	DRAWING LIST
	<b>SUPERSTRUCTURE</b>	P3/BR6/0020	ABBREVIATION AND SYMBOLS
P3/BR5/0090	GIRDER LAYOUT	P3/BR6/0030	STRUCTURAL NOTES
		P3/BR6/0040	LOCATION MAP
		P3/BR6/0050	COORDINATES OF 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 KOEI CO.,LTD.	NAME	T. Kametani	K. Matsumoto	GENERAL DRAWING LIST (PART - 3) (1/2)	P3/PA3/0010
				SIGNATURE				
				DATE	20/9/2000	29/9/2000		

## DRAWING LIST (2/2)

DRAWING NO.	DRAWING TITLE	DRAWING NO.	DRAWING TITLE
P3/BR6/0060	GENERAL VIEW - SHEET 1	P3/BR6/0520	BAR ARRANGEMENT OF PIERS P2 & P3 - SHEET 2
P3/BR6/0070	GENERAL VIEW - SHEET 2	P3/BR6/0530	PIER PROTECTION
P3/BR6/0080	GENERAL VIEW - SHEET 3	P3/BR6/0540	QUANTITY TABLE OF PIERS
P3/BR6/0090	QUANTITY TABLE OF BRIDGE SUPERSTRUCTURE		MISCELLANEOUS
P3/BR6/0100	GIRDER LAYOUT - SHEET 1	P3/BR6/0550	DETAILS OF PARAPET AND RAILINGS
P3/BR6/0110	GIRDER LAYOUT - SHEET 2	P3/BR6/0560	BRIDGE NAME PLAQUE
P3/BR6/0120	GENERAL VIEW OF "I" GIRDER L=25.0M, H=1.45M	P3/BR6/0570	DRAINAGE AND LIGHTING POLE LAYOUT
P3/BR6/0130	GENERAL VIEW OF "I" GIRDER L=25.0M, H=1.65M	P3/BR6/0580	DETAILS OF DRAINAGE ON BRIDGE
P3/BR6/0140	GENERAL VIEW OF "I" GIRDER L=28.0M	P3/BR6/0590	DETAILS OF LIGHTING POLE BASES
P3/BR6/0150	GENERAL VIEW OF "I" GIRDER L=37.0M	P3/BR6/0600	QUANTITY TABLE OF MISCELLANEOUS
P3/BR6/0160	TENDON ARRANGEMENT OF "I" GIRDER L=25.0M, H=1.45M		
P3/BR6/0170	TENDON ARRANGEMENT OF "I" GIRDER L=25.0M, H=1.65M		
P3/BR6/0180	TENDON ARRANGEMENT OF "I" GIRDER L=28.0M		
P3/BR6/0190	TENDON ARRANGEMENT OF "I" GIRDER L=37.0M		
P3/BR6/0200	TENDON ARRANGEMENT OF CONNECTION DIAPHRAGMS		
P3/BR6/0210	REINFORCEMENT OF "I" GIRDER L=25.0M, H=1.45M		
P3/BR6/0220	REINFORCEMENT OF "I" GIRDER L=25.0M, H=1.65M		
P3/BR6/0230	REINFORCEMENT OF "I" GIRDER L=28.0M		
P3/BR6/0240	REINFORCEMENT OF "I" GIRDER L=37.0M		
P3/BR6/0250	REINFORCEMENT OF DIAPHRAGMS - SHEET 1		
P3/BR6/0260	REINFORCEMENT OF DIAPHRAGMS - SHEET 2		
P3/BR6/0270	DECK SLAB REINFORCEMENT - SHEET 1		
P3/BR6/0280	DECK SLAB REINFORCEMENT - SHEET 2		
P3/BR6/0290	DECK SLAB REINFORCEMENT - SHEET 3		
P3/BR6/0300	DECK SLAB REINFORCEMENT - SHEET 4		
P3/BR6/0310	DECK SLAB REINFORCEMENT - SHEET 5		
P3/BR6/0320	DECK SLAB REINFORCEMENT - SHEET 6		
P3/BR6/0330	DETAILS OF BEARINGS		
P3/BR6/0340	DETAILS OF EXPANSION JOINTS		
P3/BR6/0350	QUANTITY TABLES OF SUPERSTRUCTURE		
	<b>ABUTMENTS</b>		
P3/BR6/0360	GENERAL VIEW OF ABUTMENTS A1 & A2		
P3/BR6/0370	ABUTMENTS A1 & A2 - RC PILE □ 450 - L=40.0M - SHEET 1		
P3/BR6/0380	ABUTMENTS A1 & A2 - RC PILE □ 450 - L=40.0M - SHEET 2		
P3/BR6/0390	REINFORCEMENT OF ABUTMENTS A1 & A2 - SHEET 1		
P3/BR6/0400	REINFORCEMENT OF ABUTMENTS A1 & A2 - SHEET 2		
P3/BR6/0410	REINFORCEMENT OF ABUTMENTS A1 & A2 - SHEET 3		
P3/BR6/0420	EARTHWORK SLOPE PROTECTION		
P3/BR6/0430	DETAILS OF APPROACH SLAB		
P3/BR6/0440	QUANTITY TABLE OF ABUTMENTS		
	<b>PIERS</b>		
P3/BR6/0450	GENERAL VIEW OF PIERS P1 & P4		
P3/BR6/0460	GENERAL VIEW OF PIERS P2 & P3		
P3/BR6/0470	PIERS P1 - P4 - RC PILE □ 450 - L=40.0M - SHEET 1		
P3/BR6/0480	PIERS P1 - P4 - RC PILE □ 450 - L=40.0M - SHEET 2		
P3/BR6/0490	BAR ARRANGEMENT OF PIERS P1 & P4 - SHEET 1		
P3/BR6/0500	BAR ARRANGEMENT OF PIERS P1 & P4 - SHEET 2		
P3/BR6/0510	BAR ARRANGEMENT OF PIERS P2 & P3 - SHEET 1		

PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
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**P3/BR4 BA MANG BRIDGE**



# I. GENERAL



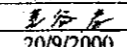
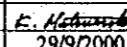
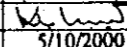
# DRAWING LIST

NO.	CODE	DRAWING NAME
<b>I</b>		<b>GENERAL</b>
1	P3/BR4/0010	DRAWING LIST
2	P3/BR4/0020	ABBREVIATIONS AND SYMBOLS
3	P3/BR4/0030	STRUCTURAL NOTES
4	P3/BR4/0040	LOCATION MAP
5	P3/BR4/0050	COORDINATES OF BRIDGE
6	P3/BR4/0060	GENERAL VIEW - SHEET 1
7	P3/BR4/0070	GENERAL VIEW - SHEET 2
8	P3/BR4/0080	QUANTITY TABLE OF BRIDGE
<b>II</b>		<b>SUPERSTRUCTURE</b>
9	P3/BR4/0090	GENERAL VIEW OF GIRDER L=25.0M.
10	P3/BR4/0100	TENDON ARRANGEMENT OF GIRDER L=25.0M.
11	P3/BR4/0110	REINFORCEMENT OF GIRDER L=25.0M.
12	P3/BR4/0120	REINFORCEMENT OF DIAPHRAGMS
13	P3/BR4/0130	DECK SLAB REINFORCEMENT - SHEET 1
14	P3/BR4/0140	DECK SLAB REINFORCEMENT - SHEET 2
15	P3/BR4/0150	DETAILS OF BEARINGS.
16	P3/BR4/0160	DETAILS OF EXPANSION JOINTS
17	P3/BR4/0170	QUANTITY TABLE OF SUPERSTRUCTURE
<b>III</b>		<b>ABUTMENTS</b>
18	P3/BR4/0180	GENERAL VIEW OF ABUTMENTS A1 & A2
19	P3/BR4/0190	ABUTMENTS A1&A2- RC PILE□450-L=40.0m-SHEET 1
20	P3/BR4/0200	ABUTMENTS A1&A2- RC PILE□450-L=40.0m-SHEET 2
21	P3/BR4/0210	REINFORCEMENT OF ABUTMENTS A1& A2 - SHEET 1
22	P3/BR4/0220	REINFORCEMENT OF ABUTMENTS A1 & A2 - SHEET 2
23	P3/BR4/0230	REINFORCEMENT OF ABUTMENTS A1 & A2 - SHEET 3
24	P3/BR4/0240	EARTHWORKS SLOPE PROTECTION
25	P3/BR4/0250	DETAILS OF APPROACH SLAB
26	P3/BR4/0260	QUANTITY TABLE OF ABUTMENTS
<b>IV</b>		<b>MISCELLANEOUS</b>
27	P3/BR4/0270	DETAILS OF PARAPET AND RAILINGS
28	P3/BR4/0280	BRIDGE NAME PLAQUE
29	P3/BR4/0290	DRAINAGE LAYOUT
30	P3/BR4/0300	DETAILS OF DRAINAGE ON BRIDGE
31	P3/BR4/0310	QUANTITY TABLE OF MISCELLANEOUS WORKS

<b>PROJECT NAME</b>	<b>IMPLEMENTATION AGENCY</b>	<b>EXECUTING AGENCY</b>	<b>JICA STUDY TEAM</b>		<b>PREPARED BY</b>	<b>CHECKED BY</b>	<b>APPROVED BY</b>	<b>DRAWING TITLE</b>	<b>DWG NO.</b>
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 SIGNATURE: DATE: 20/9/2000	K. Matsumoto  29/9/2000	K. Enomoto  5/10/2000	BA MANG BRIDGE GENERAL DRAWING LIST	P3/BR4/0010

## 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	LIN.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 ⌀	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	T <sub>σ</sub>	TANGENT LENGTH OF SPIRAL
HWY	HIGHWAY	V	DESIGN SPEED IN KPH
i	GRADIENT	W	WIDTH
I.C	INTERCHANGE	X	EASTING 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	BA MANG BRIDGE GENERAL ABBREVIATIONS AND SYMBOLS	P3/BR4/0020
				SIGNATURE 				
				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 LRFD 1998
  - BASIC WIND VELOCITY : 160 KM/H - AASHTO LRFD 1998
  - 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

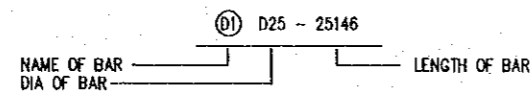
- 3.1. UNLESS OTHERWISE INDICATED CONCRETE SHALL BE OF THE FOLLOWING GRADES BASED ON 28 DAY CYLINDER STRENGTH  $f_c$ :

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:



- 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. REINFORCEMENT (CONTINUED)

- 4.6. REINFORCEMENTS INDICATED 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
- 4.7. UNLESS OTHERWISE INDICATED 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
TRANSVERSE CABLE	3S12.7	1860	1675	415

- 5.2. PRESTRESSED TENDONS SHALL BE FORMED FROM THE STRANDS OF 12.7mm 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. GROUING 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.

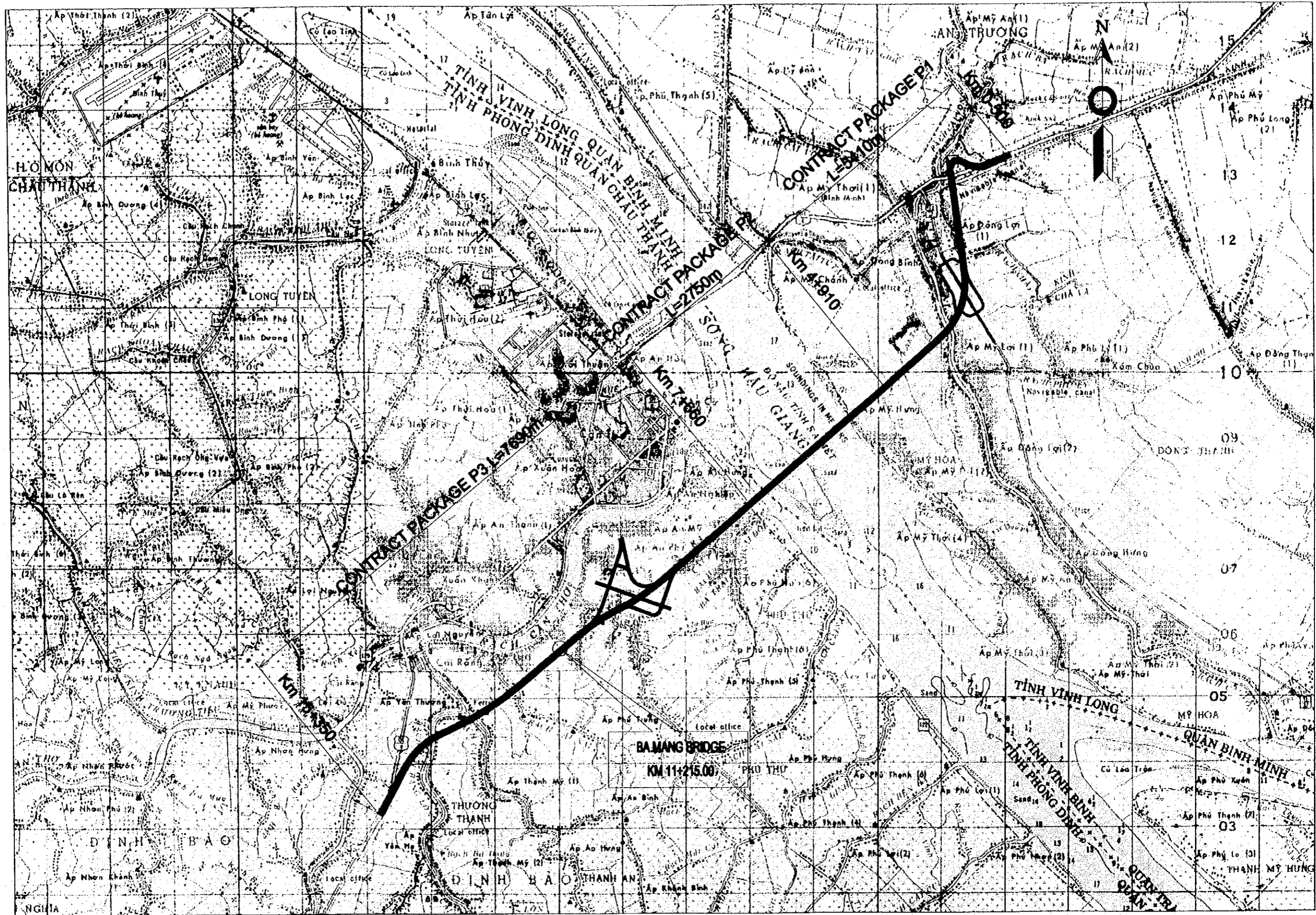
## 7. SUPERSTRUCTURE

- 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 INTERNAL PRESTRESSING WITH THE FOLLOWING PARAMETERS:

COEFFICIENT OF FRICTION - 1/RAD	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 JIS G3101.

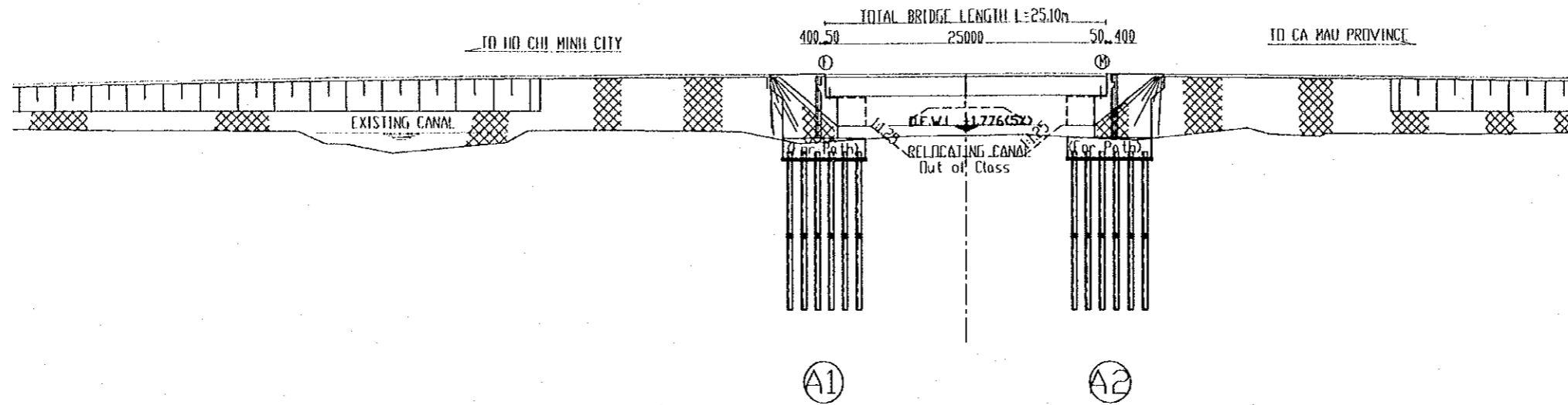
PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT 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	BA MANG BRIDGE GENERAL STRUCTURAL NOTES	P3/BR4/0030



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 KOEI CO.,LTD.	NAME: T. Kametani SIGNATURE: DATE: 20/9/2000	K. Matsumoto  29/9/2000	K. Enomoto  5/10/2000	BA MANG BRIDGE LOCATION MAP	P3BR40040

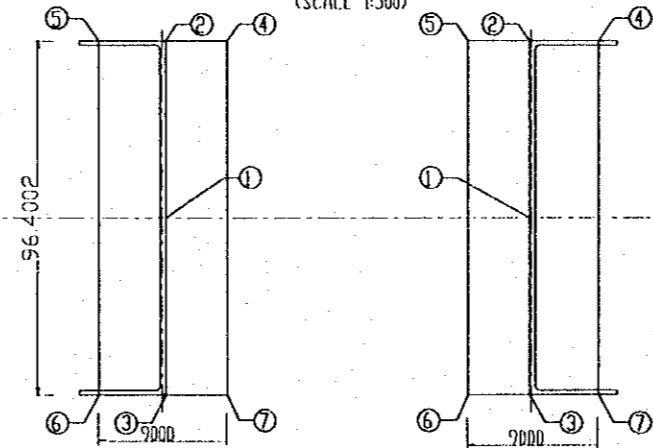
**SIDE ELEVATION**

(SCALE 1:500)



**PLAN**

(SCALE 1:500)



**COORDINATES TABLE**

POINT	A 1		A 2	
	N	E	N	E
1	1106737.592	584842.916	1106721.878	584823.344
2	1106728.196	584850.460	1106712.482	584830.888
3	1106746.988	584835.371	1106731.274	584815.799
4	1106725.942	584847.653	1106710.040	584827.847
5	1106730.638	584853.501	1106714.735	584833.695
6	1106749.430	584838.412	1106733.528	584818.607
7	1106744.734	584832.564	1106728.832	584812.758

**NOTES**

1. FOR STANDARD STRUCTURAL NOTES SEE DRAWING No. P3/BR4/0030.  
2. SYMBOLS :

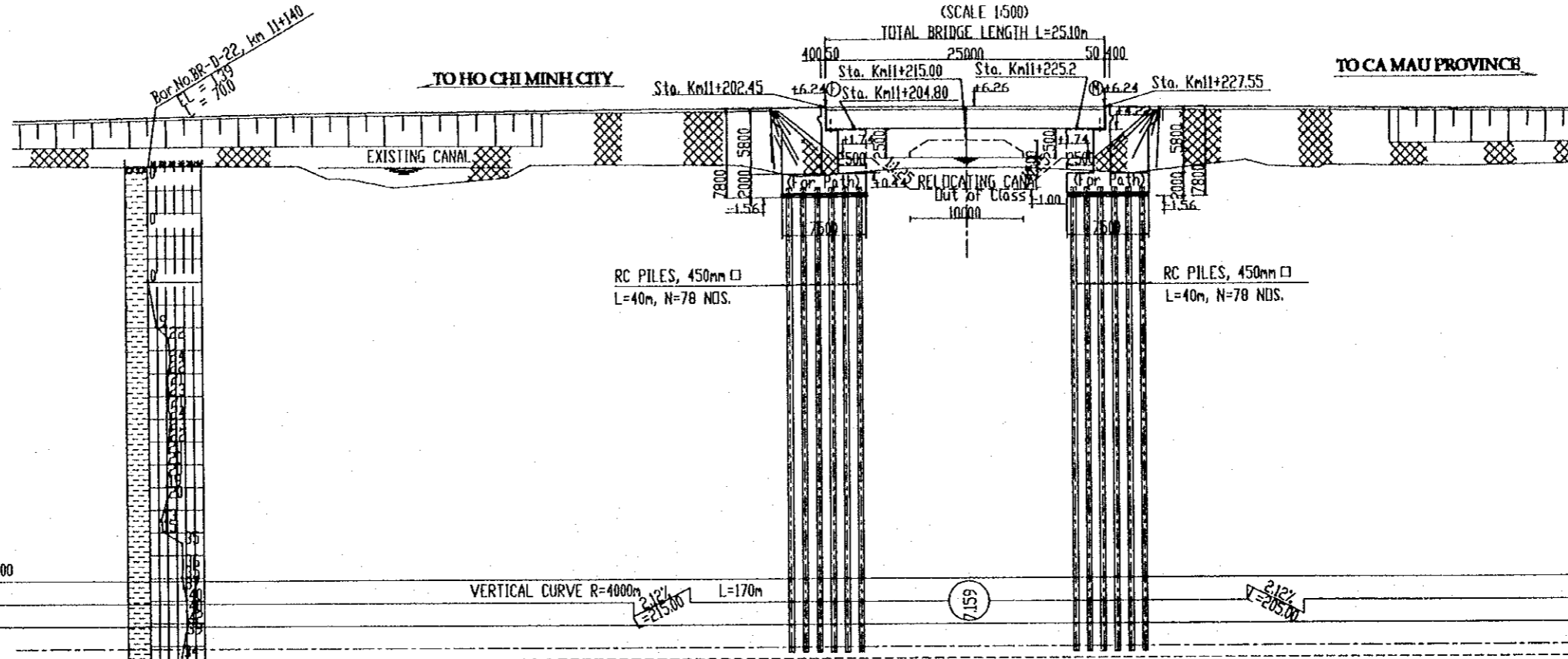
- ⊙ FIXED BEARING
- ⊕ MOVABLE BEARING

PROJECT NAME DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	IMPLEMENTATION AGENCY <b>JICA</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	EXECUTING AGENCY SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	JICA STUDY TEAM <b>NK</b> NIPPON KOEI CO.,LTD.	NAME T. Kametani	CHECKED BY K. Matsumoto	APPROVED BY K. Enomoto	DRAWING TITLE BA MANG BRIDGE GENERAL COORDINATES OF BRIDGE	DWG NO. P3/BR4/0050
				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		

**SIDE ELEVATION**

(SCALE 1/500)

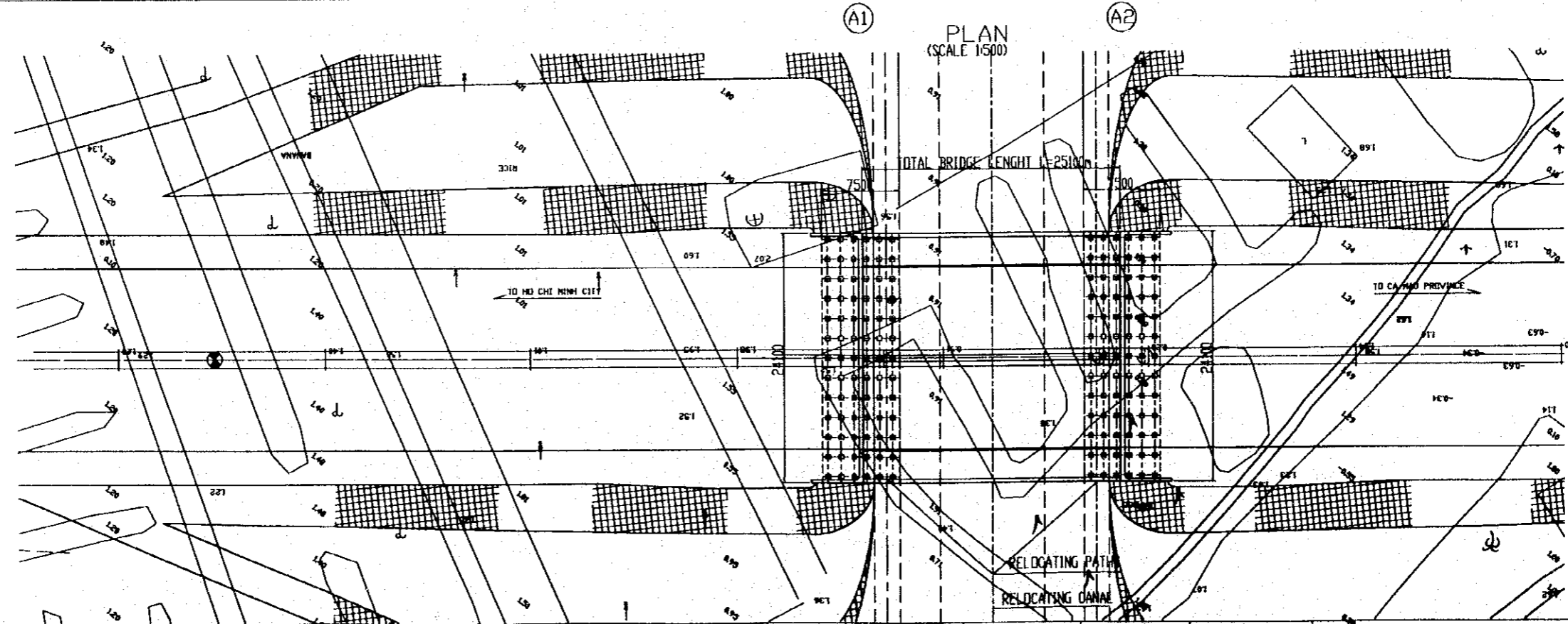
TOTAL BRIDGE LENGTH L=251.0m



DATUM LEVEL -35.00

GRADIENT	VERTICAL CURVE R=4000m L=170m																			
SUPERELEVATION	2%																			
DESIGN LEVELS (m)	6.244, 6.264, 6.244																			
EXISTING LEVELS (m)	1.420	1.310	1.250	1.150	0.100	-0.630	0.250	1.300	1.200	0.200	0.850	0.910	0.450	1.550	1.000	0.650	1.010	1.150		
CHAINAGE	11130.00	11140.00	11155.50	11158.00	11160.00	11164.00	11174.00	11176.00	11180.00	11190.00	11195.00	11200.00	11210.00	11220.00	11230.00	11240.00	11242.00	11245.00	11260.00	11270.00

**PLAN**  
(SCALE 1/500)

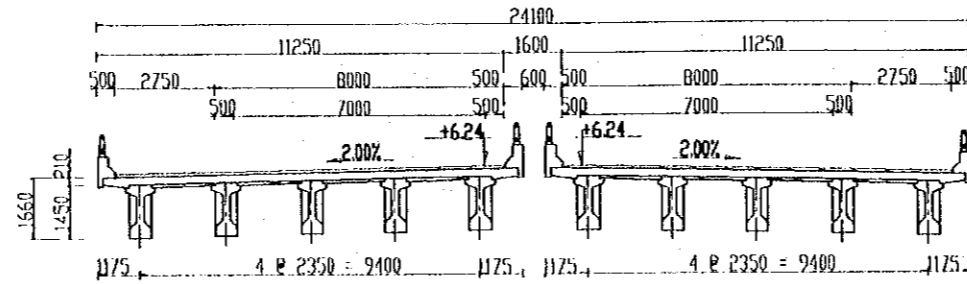


PROJECT NAME DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	IMPLEMENTATION AGENCY JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	EXECUTING AGENCY SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	JICA STUDY TEAM NIPPON KOEI CO.,LTD.	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE BAMANG BRIDGE GENERAL VIEW SHEET 1	DWG NO. P3/BBA/0060	
				NAME	T. Kametani	K. Matsumoto			K. Enomoto
				SIGNATURE	<i>T. Kametani</i>	<i>K. Matsumoto</i>			<i>K. Enomoto</i>
				DATE	20/9/2000	29/9/2000	5/10/2000		

**TYPICAL SECTION FOR SUPERSTRUCTURE**

**AT ABUTMENT A1 & A2**

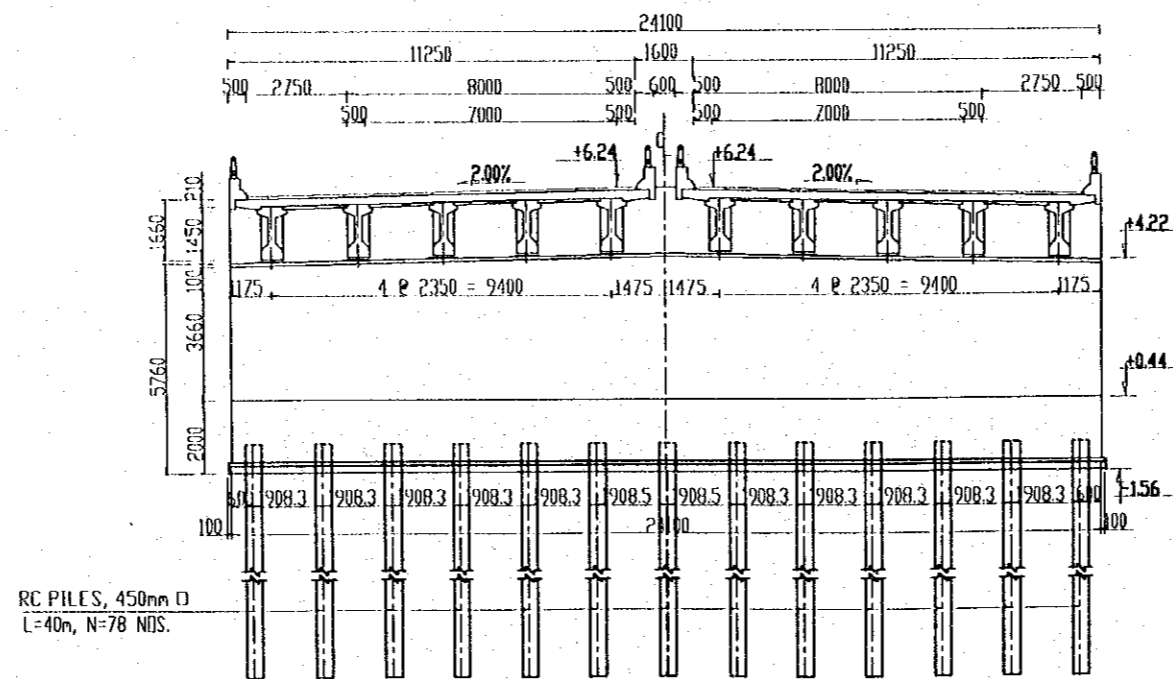
(SCALE 1:200)



**CROSS SECTION**

**(ABUTMENT A1&A2)**

(SCALE 1:200)



RC PILES, 450mm D  
L=40m, N=78 NOS.

**NOTES**

FOR STANDARD STRUCTURAL NOTES SEE DRAWING No. P3/BR4/0030

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 KOHI CO.,LTD.	T. Kametani	K. Matsumoto	K. Enomoto	BA MANG BRIDGE GENERAL VIEW SHEET 2	P3/BR4/0070
				NAME				
				SIGNATURE				
				DATE	20/9/2000	29/9/2000	5/10/2000	



## QUANTITY TABLE OF BA MANG BRIDGE

ITEMS		UNIT	ABUTMENTS	SUPERSTRUCTURE	MISCELLANEOUS WORKS		TOTAL
					DRAINAGE	RAILING	
CONCRETE	CLASS B	M3		158.8			158.8
	CLASS D	M3	1700.0	174.6			1874.6
	CLASS E	M3	1175.7			26	1201.2
	CLASS G	M3	60.5				60.5
PC - CABLE	12 S12.7	TON		6.9			6.9
SHEATHING	∅ 80/85	M		742.6			742.6
	CEMENT GROUT IN SHEATHING	M3		3.7			3.7
ANCHORAGE	CABLES 12S12.7	DEAD	SET				
		LIVE	SET		16		16.0
STEEL SHEAR KEY		SET		60			60.0
REINFORCEMENT	D32	KG	796				796.0
	D28	KG					
	D25	KG	9173	1711			41054
	D22	KG	15161	4447			187834
	D20	KG	22407	18285			40692
	D18	KG					
	D16	KG	10374	2298			30068
	D14	KG	7329	34019		3960	45208
	D12	KG		2095			2095
	D10	KG		68			718
	D8	KG					
	D6	KG	28688	3360			32048
TOTAL		KG	222565	66283		3960	266741.2
EXPANSION JOINT	50MM	M		43.00			43.0
BEARING	500x250x50	SET		20			20.0
ANCHORAGE BAR	F 75, L=1500	SET		16			16.0
STEEL RAILING		M				119.60	119.6
DRAINAGE	POT	SET			6		6.0
	PIPE ∅ 180	M			10.44		10.4
PAVEMENT	WATER PROOFING 5MM	M2		539.65			539.7
	ASPHALT CONCRETE 70 MM	M2		539.65			539.7
GEOTEXTILE		M2	1157.44				1157.4
STONE MANSORY		M3	961.11				961.1
BLINDING AGGREGATE		M3	320.28				320.3
RIP RAP		M3					
BLINDING STONE		M3	67.78				67.8
WOODEN PILE L = 3M		M	11862.16				11862.2
EXCAVATION		M3	5024.61				5024.6
EXCAVATION		M3	5024.61				5024.6
BACK FILL		M3	1530.35				1530.3
RC PILE □ 450MM		M	8240				8240

### NOTES

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO P3/BR4/0030.

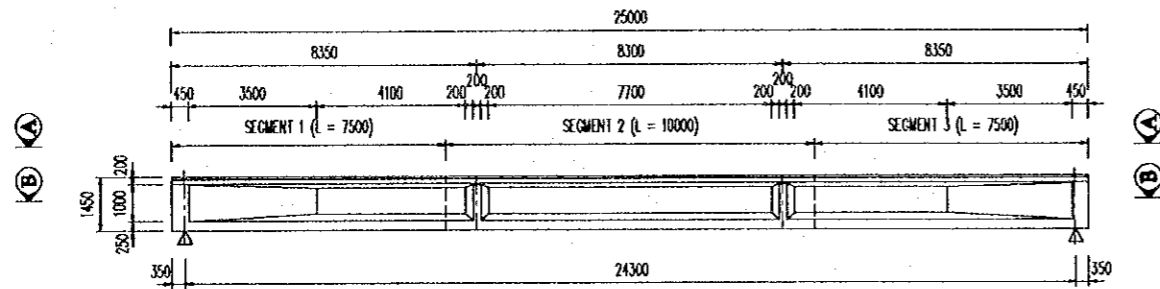
PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	NIPPON KOEI 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	BA MANG BRIDGE GENERAL QUANTITY TABLE OF BRIDGE	P3/BR4/0080

## **II. SUPERSTRUCTURE**

**DETAIL OF SUPER STRUCTURE FOR BA MANG BRIDGE**  
(Ls = 24.3M)

**ELEVATION**

(SCALE : 1:200)



**1/2 SECTION A - A**

(SCALE : 1:200)

**1/2 SECTION B - B**

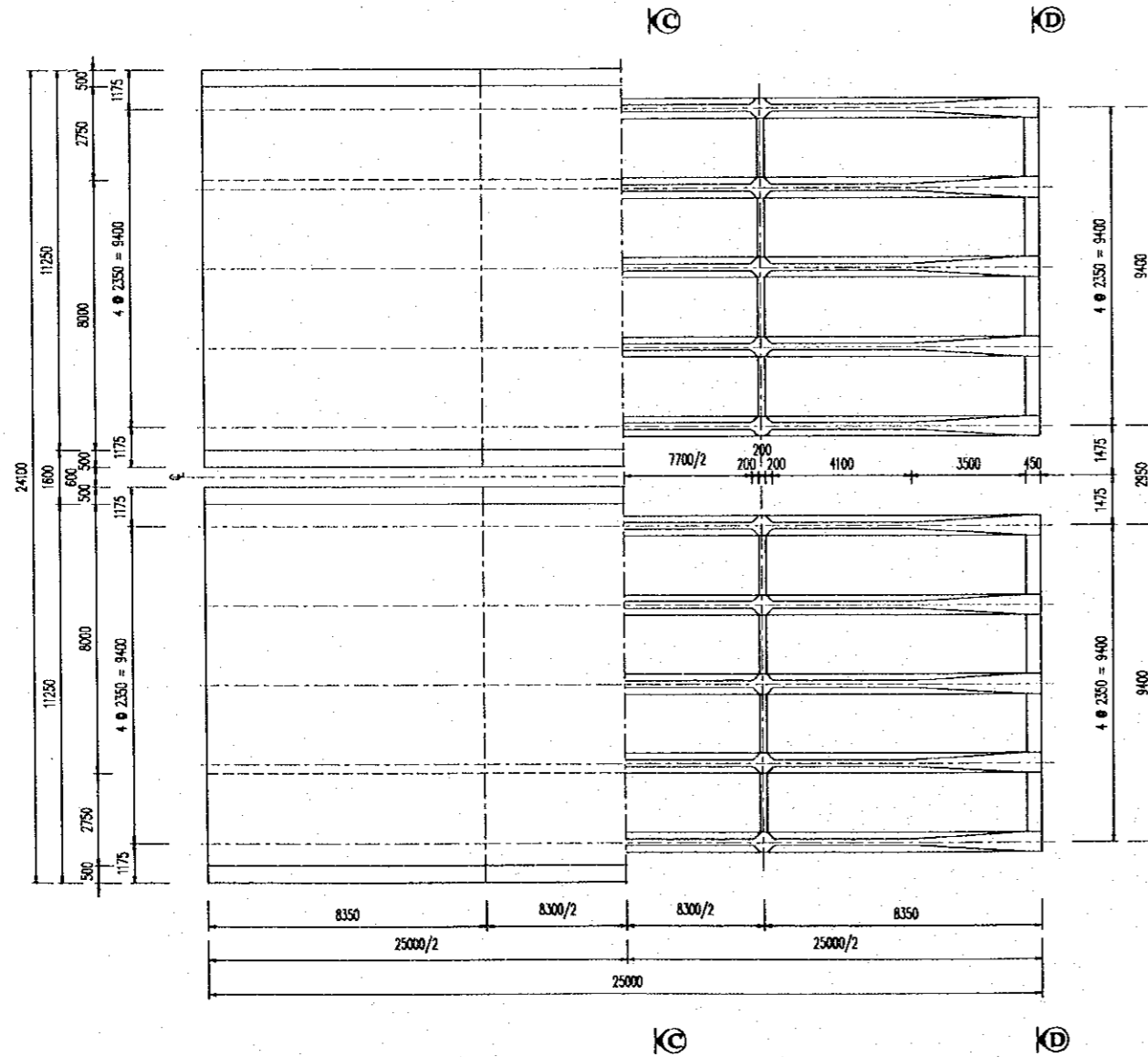
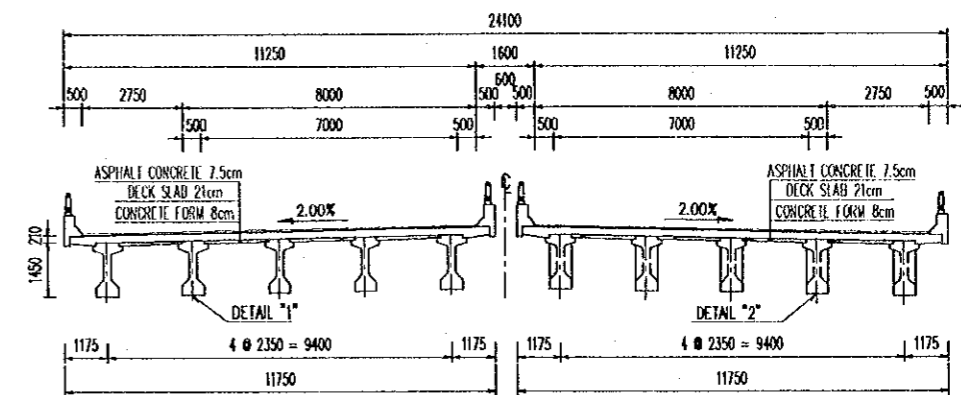
(SCALE : 1:200)

**1/2 SECTION C - C**

(SCALE : 1:200)

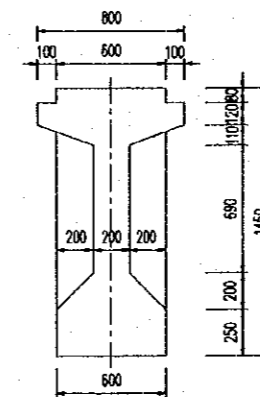
**1/2 SECTION D - D**

(SCALE : 1:200)



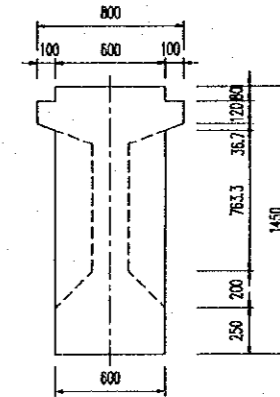
**DETAIL "1"**

(SCALE : 1:40)



**DETAIL "2"**

(SCALE : 1:40)

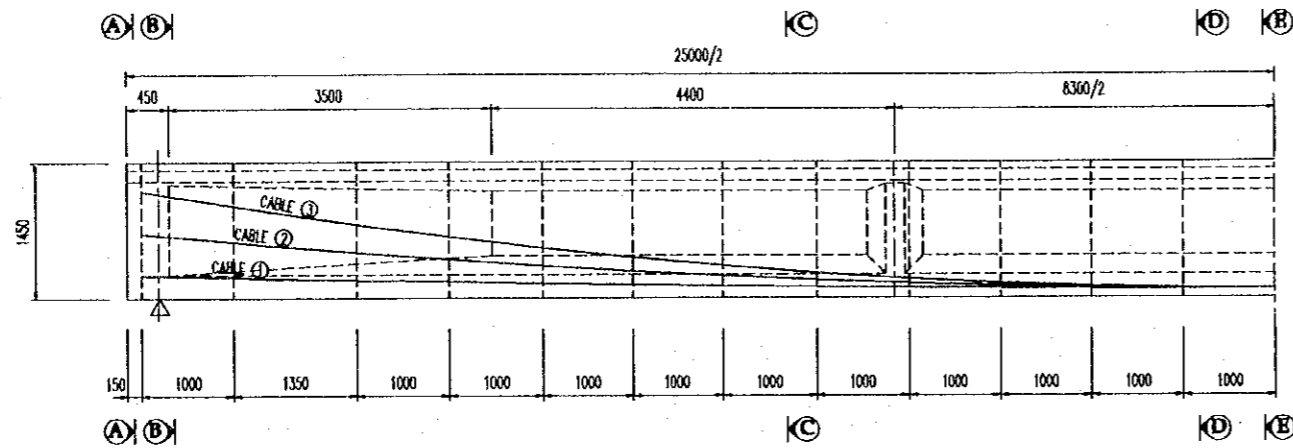


**NOTES :**

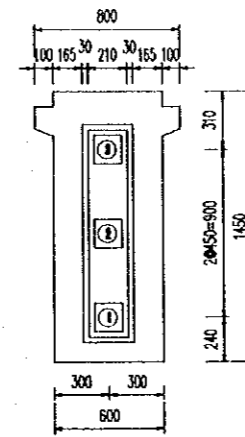
FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO. P3/BR4/0030.

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	BA MANG BRIDGE SUPERSTRUCTURE GENERAL VIEW OF "T" GIRDER L = 25M	P3/BR4/0090
				NAME				
				SIGNATURE				
				DATE	20/9/2000	29/9/2000	5/10/2000	

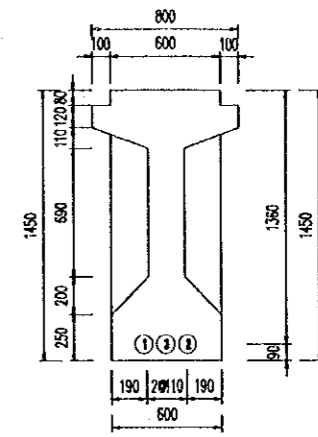
# PC CABLE ARRANGEMENT OF GIRDER FOR BA MANG BRIDGE (Ls = 24.30M)



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



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



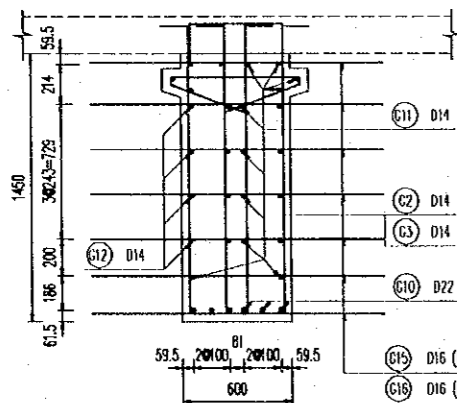
**POSITION OF CABLE CENTER FROM BOTTOM OF GIRDER**

L	12550	11350	10000	9000	8000	7000	6000	5000	4000	3000	2000	1000
CABLE ①	240	218	189	170	153	139	126	115	106	99	94	91
CABLE ②	690	600	486	411	343	284	233	189	153	126	106	94
CABLE ③	1140	983	783	651	533	430	359	263	201	152	118	97

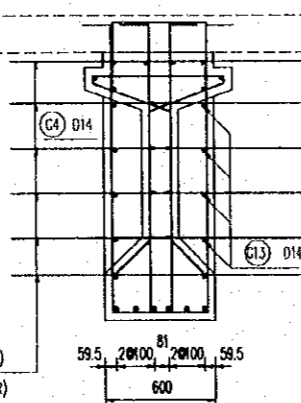
PC CABLE 12 S 12.7 (UNIT : MM)				
CABLE No	L1	L2	2 x Σ Li	■
①	1000	11351	24702	117'
②	1004	11365	24738	5'8"
③	1012	11397	24818	8'56"

WEIGHT = 74.258 x 9.29 kg/m = 689.9 kg  
 SHEATHING Ø 80/85 : 74.258 M  
 ANCHORAGE : (1ØR11 GIRDER)  
 CEMENT GROUT IN SHEATHING : 0.373 M3  
 CONCRETE : 15.88 M3

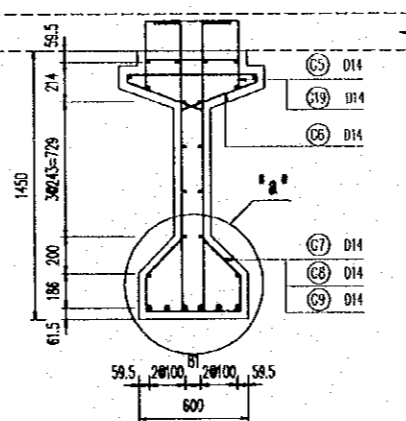
**SECTION B - B**  
(SCALE : 1:40)



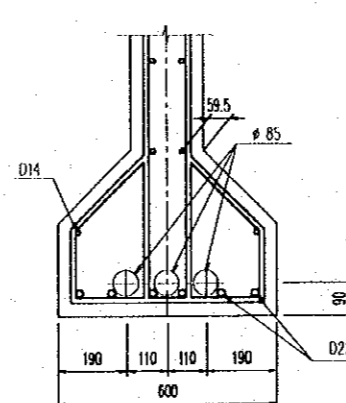
**SECTION C - C**  
(SCALE : 1:40)



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



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

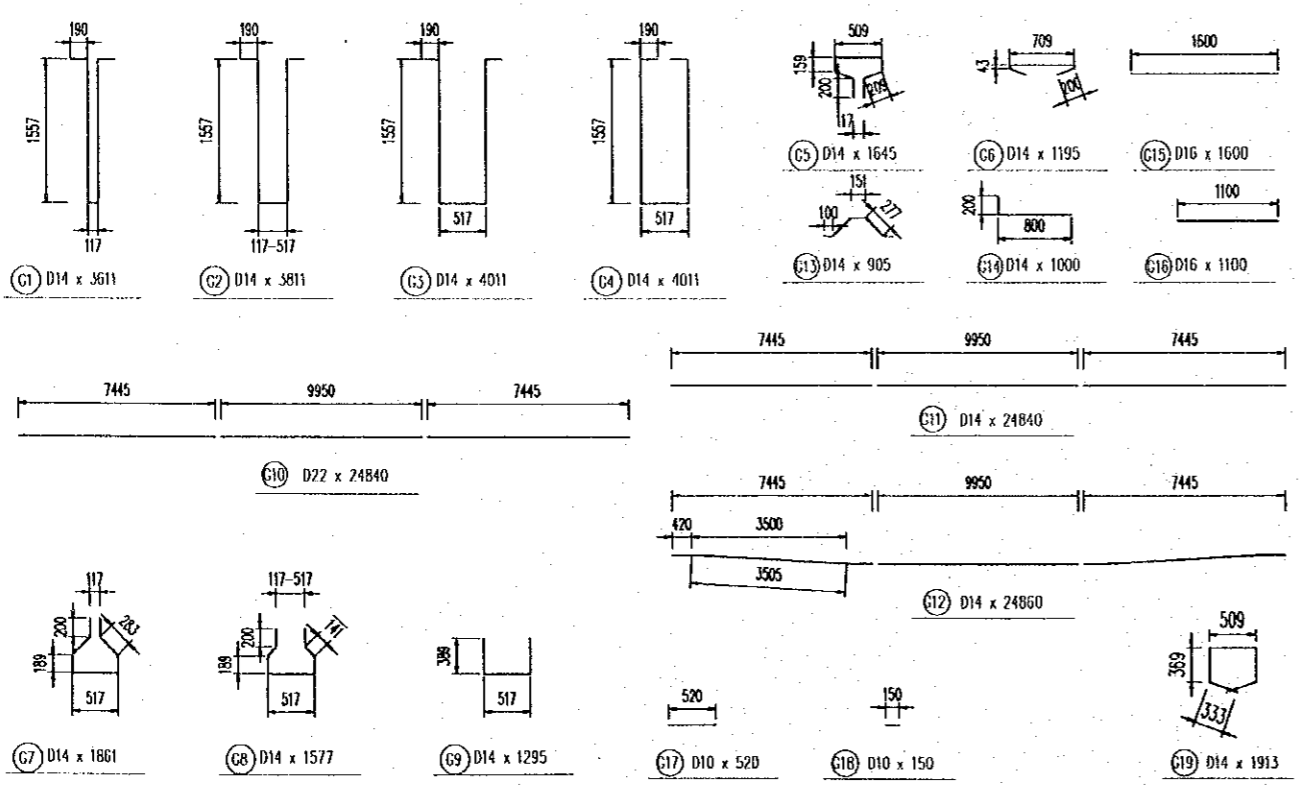
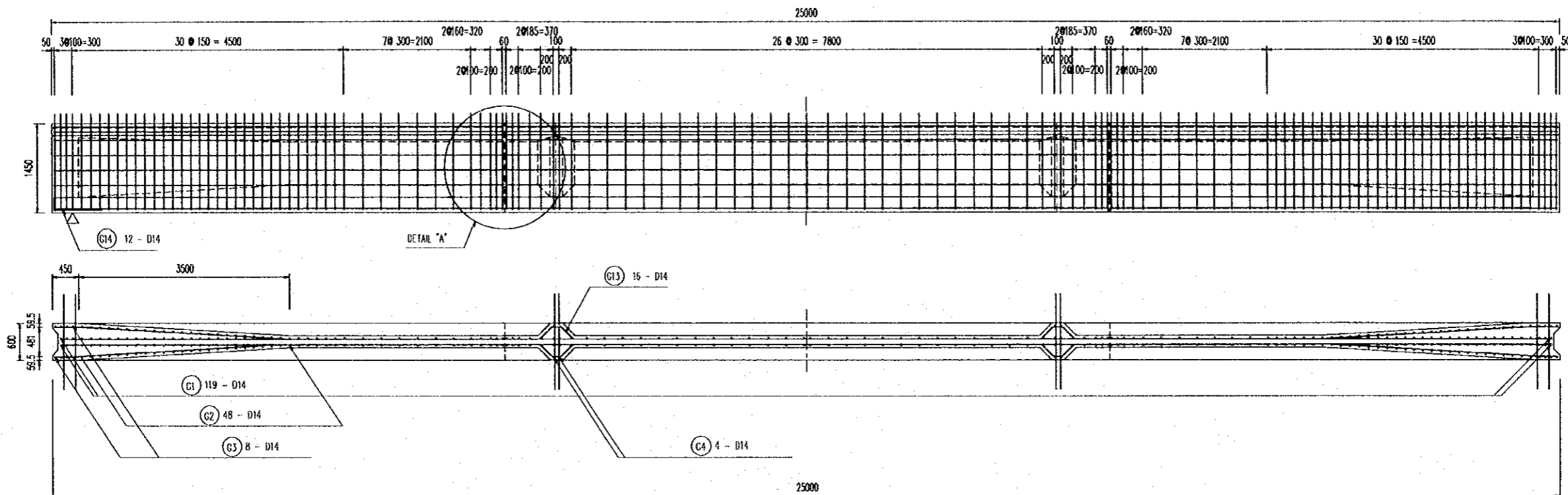


**NOTES :**

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO. P3/BR4/0030.

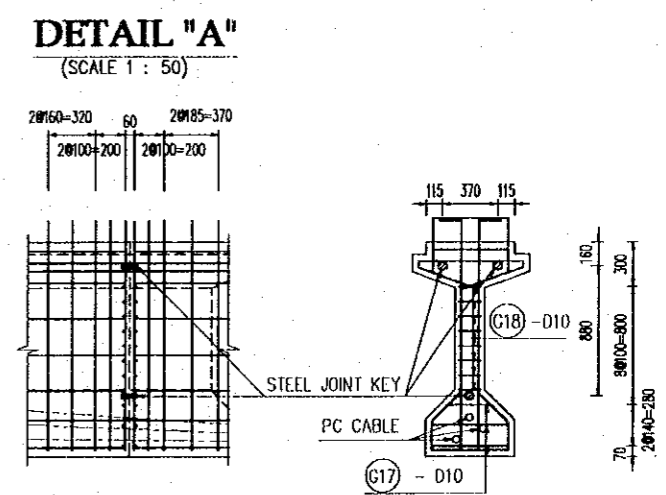
PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
				NAME	T. Kametani	K. Matsumoto		
SIGNATURE	<i>T. Kametani</i>	<i>K. Matsumoto</i>	<i>K. Enomoto</i>	TENDON ARRANGEMENT OF 'T' GIRDER L=25M				
DATE	20/9/2000	29/9/2000	5/10/2000					

# BAR ARRANGEMENT OF GIRDER FOR BA MANG BRIDGE (Ls = 24.30M)



BAR LIST (FOR 1 GIRDER)						
REF. No	DIA (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARKS
G1	14	3611	119	1.208	519.1	
G2	14	3811	48	1.208	221.0	AVERAGE
G3	14	4011	8	1.208	38.8	
G4	14	4011	4	1.208	19.4	
G5	14	1645	131	1.208	260.3	
G6	14	1195	131	1.208	189.1	
G7	14	1861	75	1.208	168.6	
G8	14	1577	48	1.208	91.4	AVERAGE
G9	14	1295	8	1.208	12.5	
G10	22	24840	6	2.984	444.7	
G11	14	24840	18	1.208	540.1	
G12	14	24860	8	1.208	240.2	
G13	14	905	16	1.208	17.5	
G14	14	1000	12	1.208	14.5	
G15	15	1600	52	1.578	131.3	INTERIOR GIRDER
G16	15	1100	52	1.578	90.5	EXTERIOR GIRDER
G17	10	520	12	0.617	3.9	
G18	10	150	32	0.617	3.0	
G19	14	1913	119	1.208	275	
TOTAL			3190.2		(3149.17)	
	D10		6.8		(6.8)	
	D14		2607.4		(2607.4)	
	D16		131.3		(90.3)	
	D22		444.7		(444.7)	

STEEL JOINT KEY : 6 SET

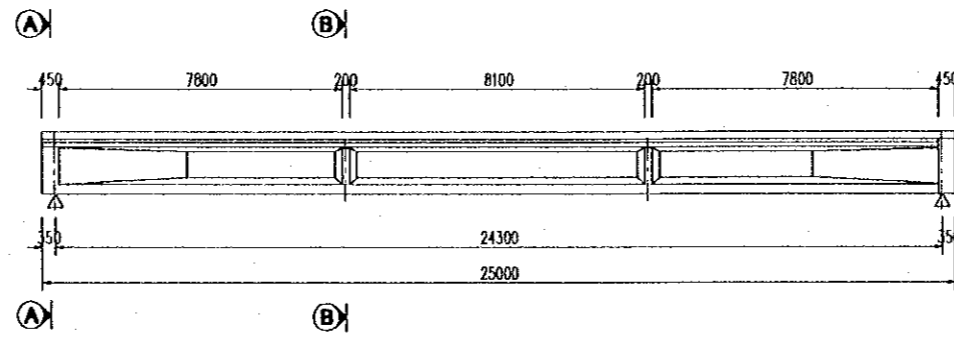


**NOTES :**

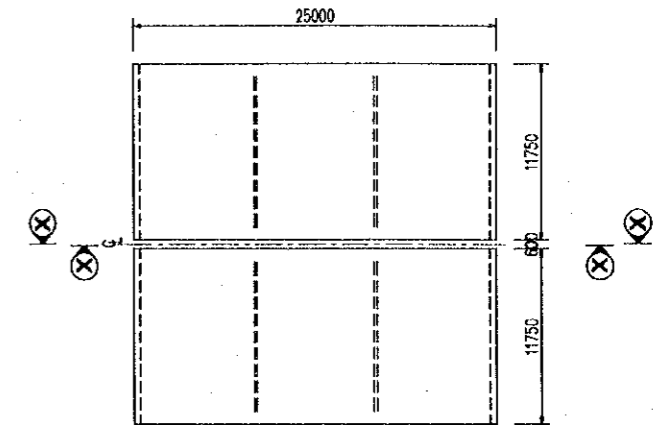
- FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO. P3/BR4/0030.
- THE VALUE OF INSIDE ( ) ARE FOR EXTERIOR GIRDER.

<b>PROJECT NAME</b> DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	<b>IMPLEMENTATION AGENCY</b> 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> NAME: T. Kametani SIGNATURE: DATE: 20/9/2000	<b>CHECKED BY</b> K. Matsumoto SIGNATURE: DATE: 29/9/2000	<b>APPROVED BY</b> K. Enomoto SIGNATURE: DATE: 5/10/2000	<b>DRAWING TITLE</b> BA MANG BRIDGE SUPERSTRUCTURE REINFORCEMENT OF "T" GIRDER L = 25M	<b>DWG NO.</b> P3/BR4/0110
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### PROFILE X-X



### KEY PLAN

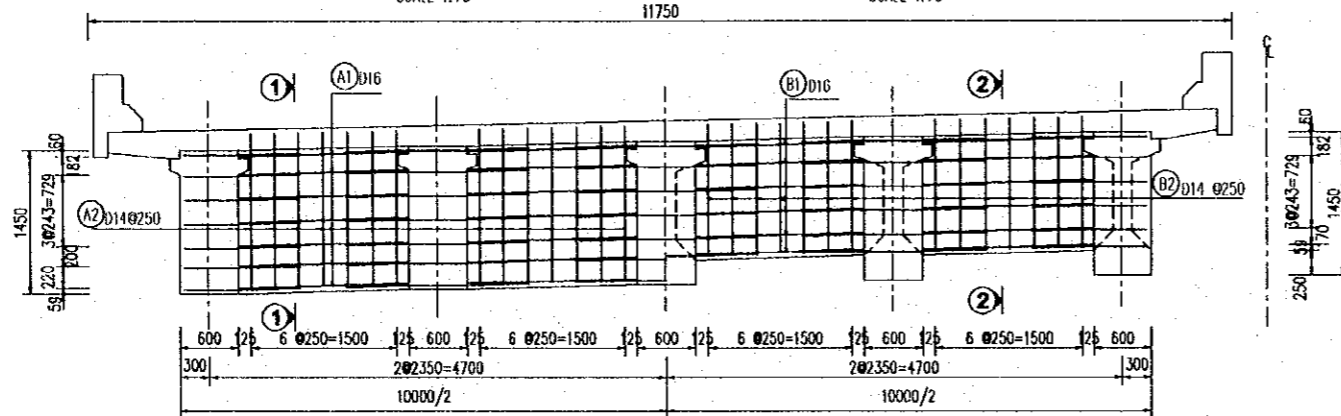


### HALF SECTION A-A

SCALE 1:75

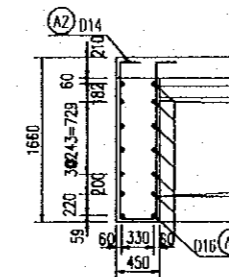
### HALF SECTION B-B

SCALE 1:75



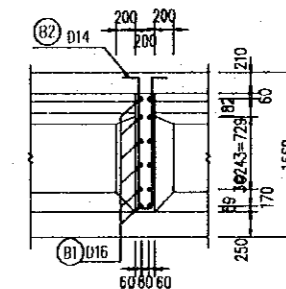
### SECTION 1-1

SCALE 1:75



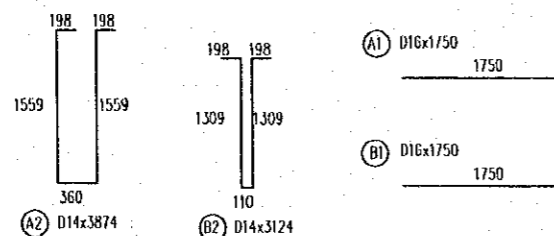
### SECTION 2-2

SCALE 1:75



### LIST OF REINFORCEMENT

REIN. No	DIAMETER (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)
A1	16	1750	224	1.578	618.6
A2	14	3874	112	1.208	524.1
B1	16	1750	192	1.578	530.2
B2	14	3124	112	1.208	422.7
CONCRETE				TOTAL	2095.6 KC
23.25 M3				D16	1148.8 KC
				D14	946.8 KC



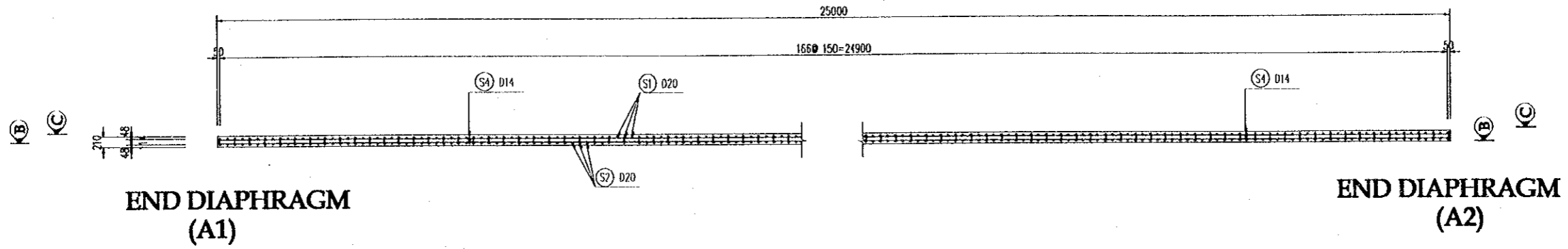
### NOTES:

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO. P3/BR4/0030

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	BAMANG BRIDGE SUPERSTRUCTURE REINFORCEMENT OF DIAPHRAGMS	P3/BR4/0120

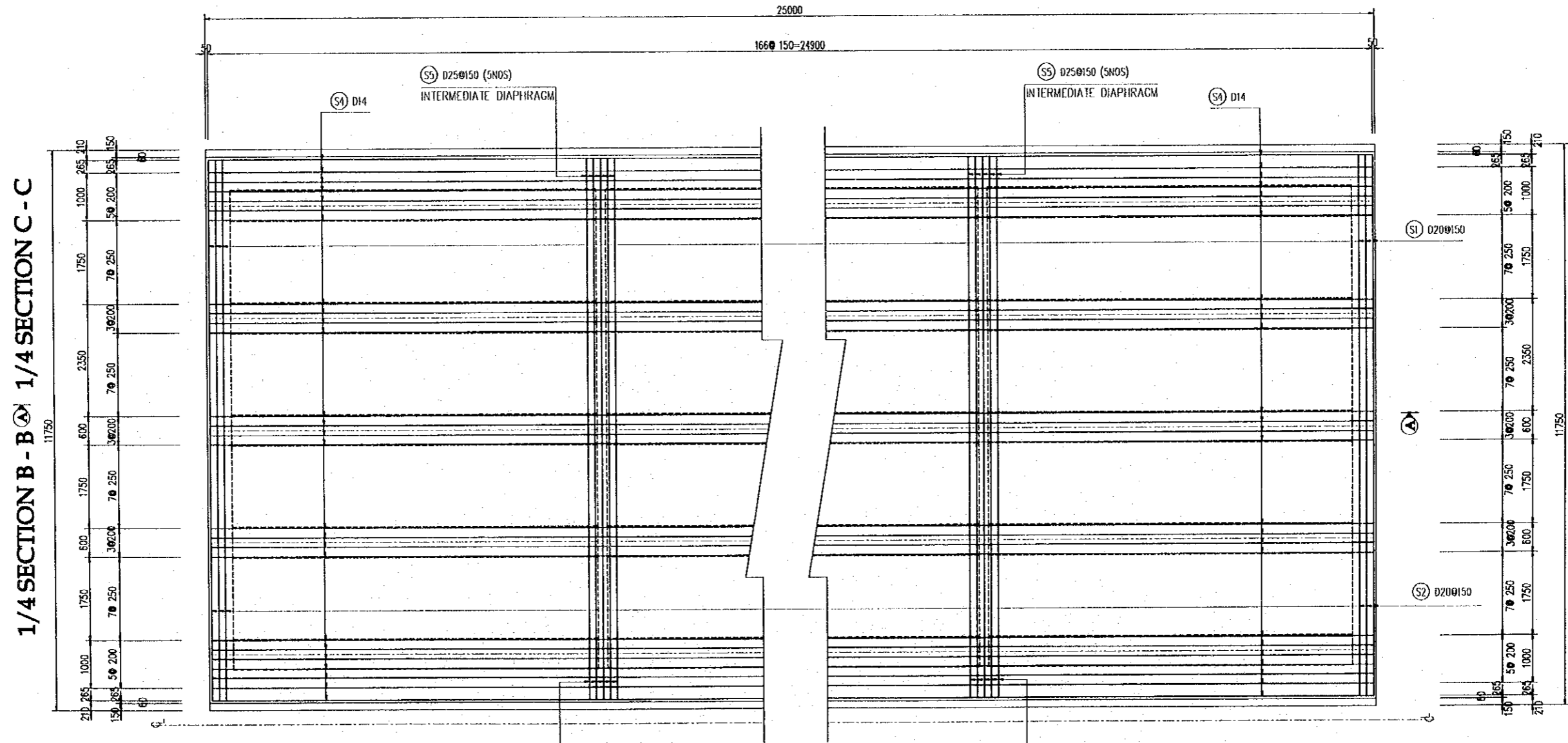
SECTION A - A

SCALE : 1:100



END DIAPHRAGM (A1)

END DIAPHRAGM (A2)



1/4 SECTION B - B @ 1/4 SECTION C - C

END DIAPHRAGM (A1)

S6 D25@150 (5NOS) INTERMEDIATE DIAPHRAGM

PLAN SCALE 1:100

D25@150 (5NOS) S6 INTERMEDIATE DIAPHRAGM

END DIAPHRAGM (A2)

NOTES

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO.P3/BR4/003D

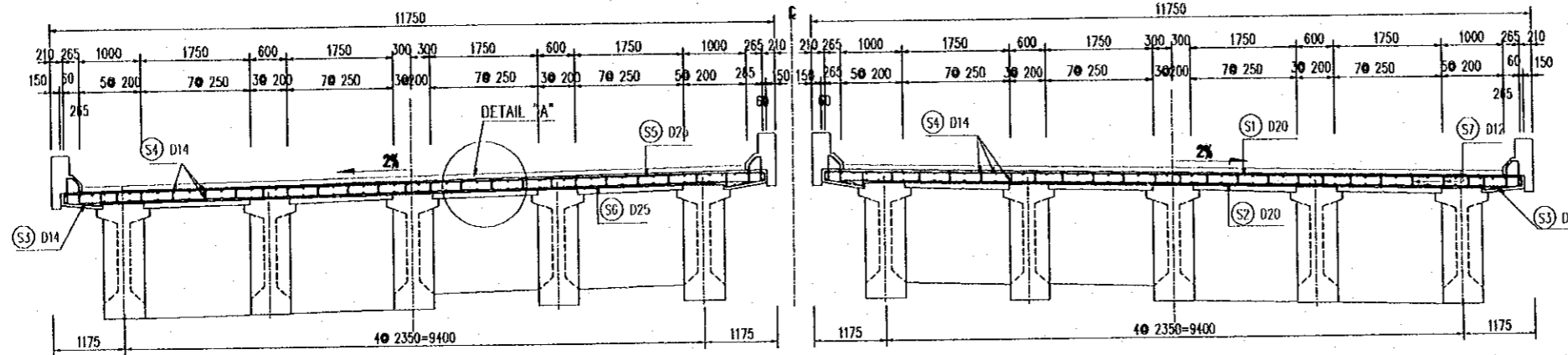
PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN 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	BA MANG BRIDGE SUPERSTRUCTURE DECK SLAB REINFORCEMENT - SHEET 1	P3/BR40130

1/4 SECTION  
AT END DIAPHRAGM

1/4 SECTION AT  
INTERMEDIATE DIAPHRAGM

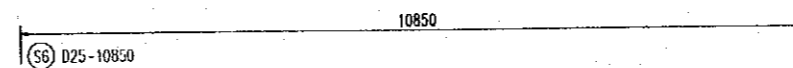
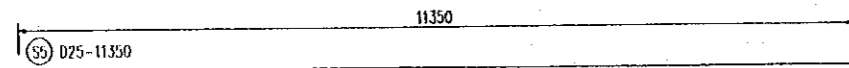
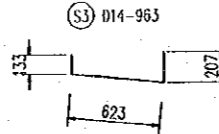
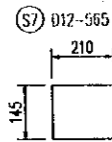
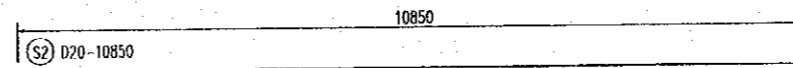
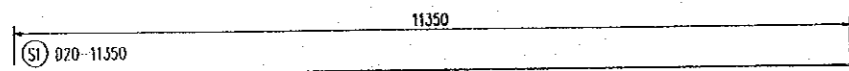
1/4 SECTION AT  
INTERMEDIATE DIAPHRAGM

1/4 SECTION  
AT END DIAPHRAGM

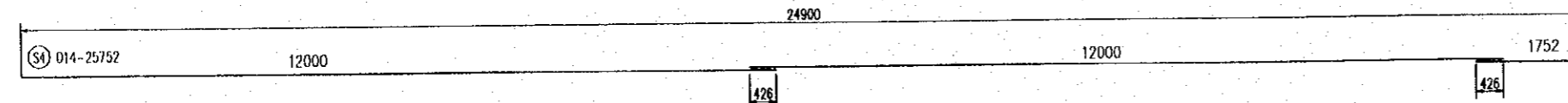
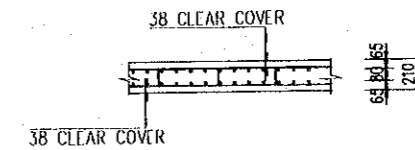


LIST OF REINFORCEMENT

TYPE	DIAMETER (mm)	LENGTH (mm)	NUMBER	UNITWEIGHT (kg/m)	WEIGHT (kg)
S1	20	11350	334	2.466	9348.4
S2	20	10850	334	2.466	8936.5
S3	14	963	668	1.208	777.1
S4	14	25752	200	1.208	6221.7
S5	25	11350	20	3.853	874.6
S6	25	10850	20	3.853	836.1
S7	12	565	4175	0.888	2094.7
TOTAL		29089.1	(KG)		
D25		1710.7	(KG)		
D20		18284.9	(KG)		
D14		6998.8	(KG)		
D12		2094.7	(KG)		
				CONCRETE :	123.4(M3)



DETAIL "A"  
SCALE 1:50



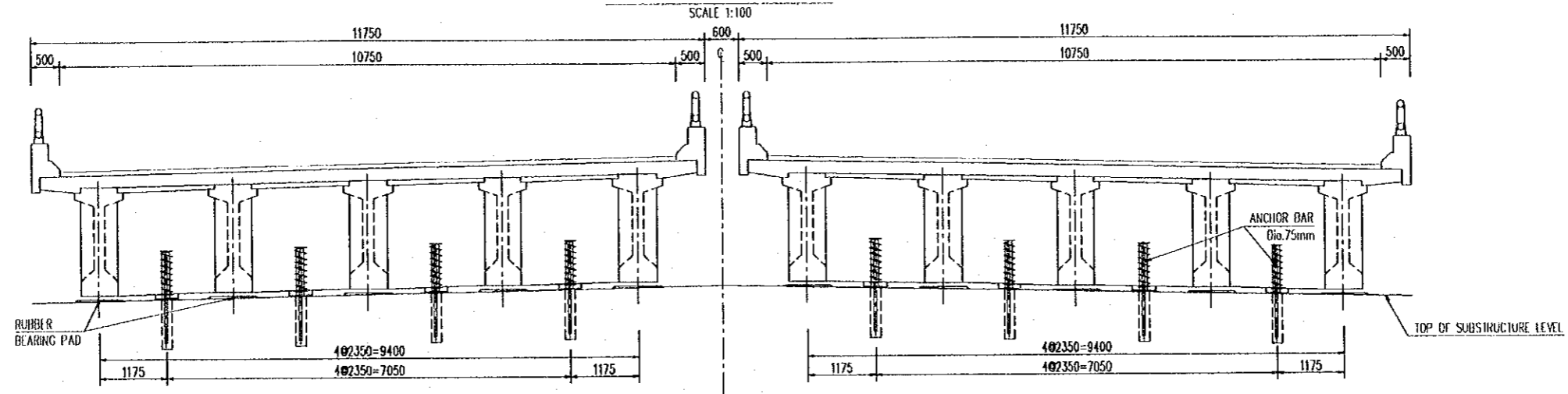
NOTES

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO.P3/BR4/0030

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	BA MANG BRIDGE SUPERSTRUCTURE DECK SLAB REINFORCEMENT - SHEET 2	P3/BR4/0140
				DATE: 20/9/2000	DATE: 29/9/2000	DATE: 5/10/2000		



### CROSS SECTION



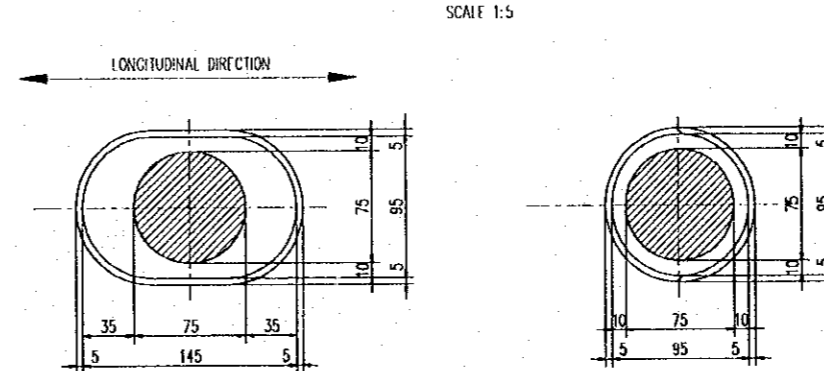
### BEARING PERFORMANCE REQUIREMENTS

LOCATION	VERTICAL LOAD (kN)	
	MAXIMUM	MINIMUM
MOVABLE BEARINGS	1 180	535

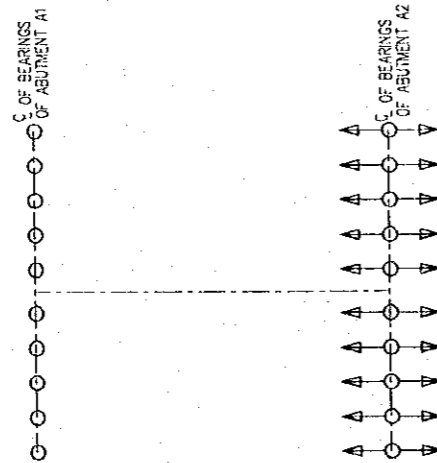
### QUANTITY TABLE (FOR ENTIRE BRIDGE)

ITEMS	UNIT	SERVICEABILITY
BEARINGS 500x250x50(mm)	SET	20
ANCHOR BAR Dia. 75mm	SET	16

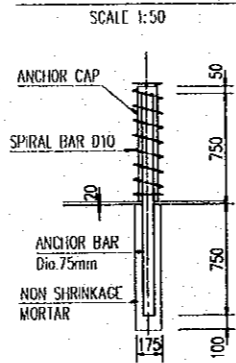
### ANCHOR CAP



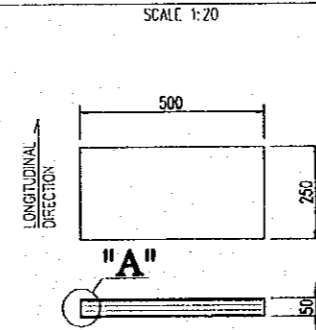
### BEARING LAYOUT



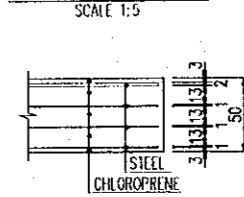
### ANCHOR BAR



### ELASTOMERIC BEARING



### DETAIL "A"



KEY:

← ○ → DENOTES GUIDE SLIDING BEARING (IN THE DIRECTION GIVEN BY THE ARROWS)

○ DENOTES GUIDE SLIDING FIXED BEARING

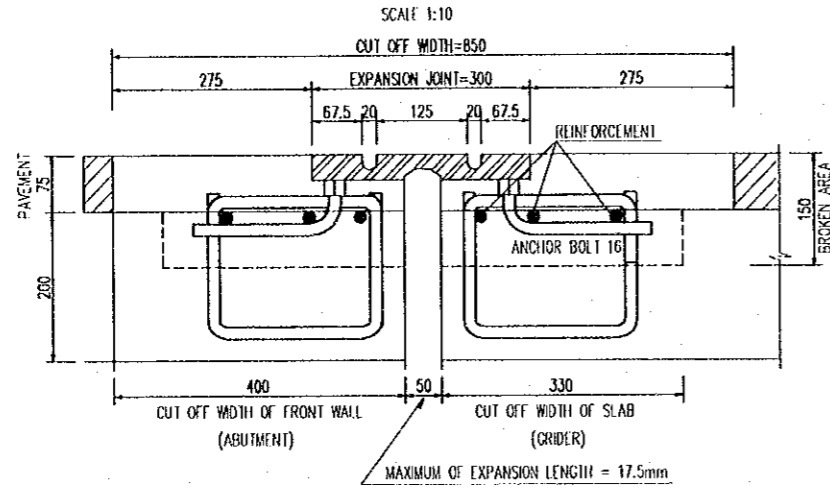
### NOTES

1. FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO P3/BR4/0030.

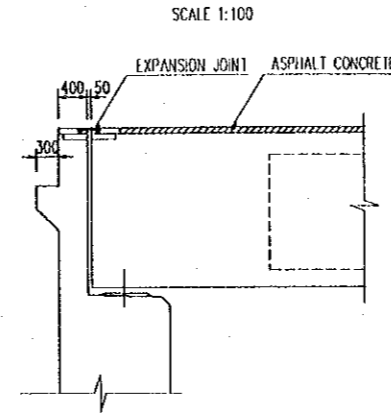
PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	NIPPON KOEI CO.,LTD.	T. Kametani	K. Matsumoto	K. Enomoto	BA MANG BRIDGE SUPERSTRUCTURE DETAILS OF BEARINGS	P3/BR4/0150
				NAME				
				SIGNATURE				
				DATE	20/9/2000	29/9/2000	5/10/2000	

# DETAILS OF EXPANSION JOINTS AT ABUTMENT A1&A2

## FOR ATBUTMENT



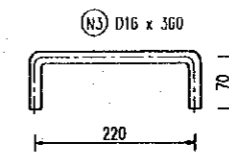
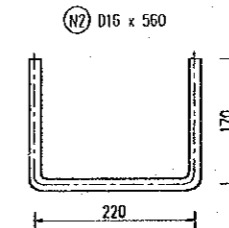
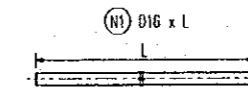
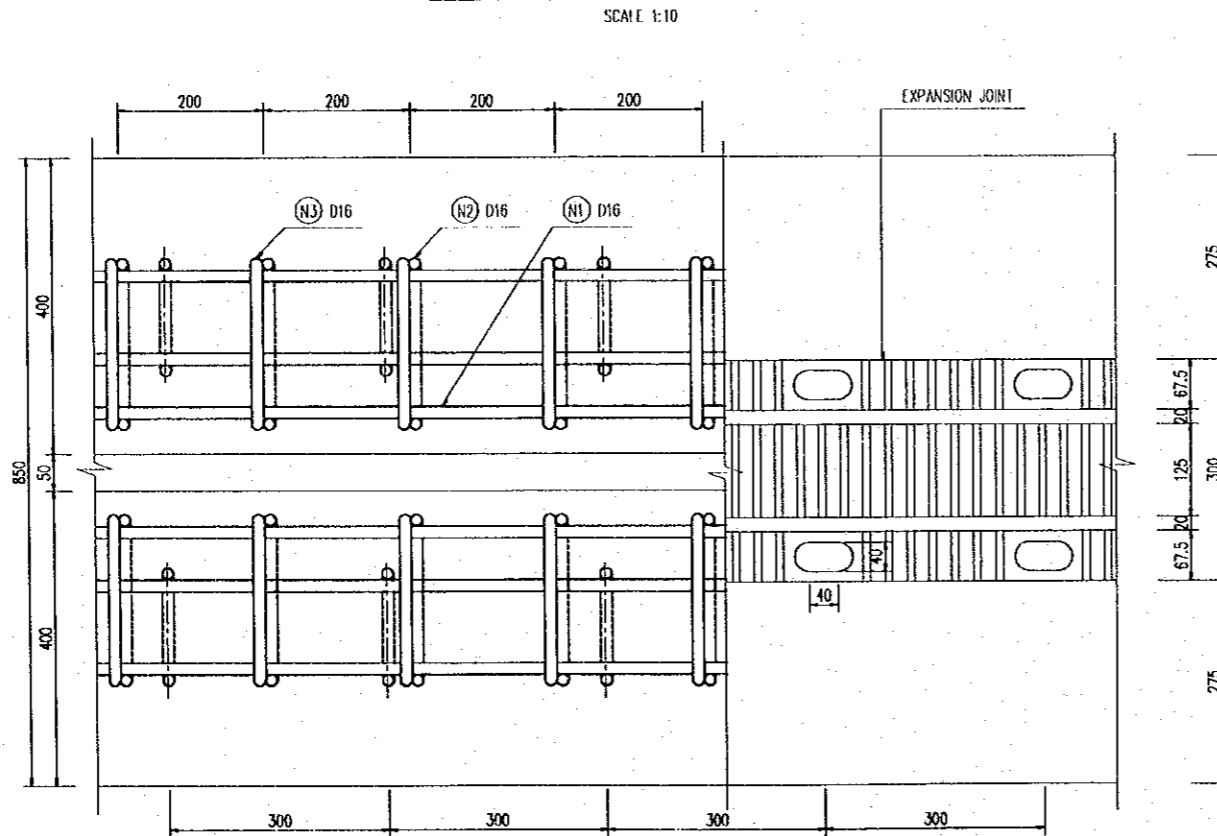
## DETAIL AT ABUTMENT



## QUANTITY TABLE (Per m)

	KIND OR SIZE	QUANTITY	REMARKS
EXPANSION JOINT	NEOPRENE RUBBER	1 M	J5-K-6301
ANCHOR BOLT	D16 L=272 mm	1/30 CM	Ø300
NUT	NEOPRENE RUBBER		
WASHER	NEOPRENE RUBBER		
REINFORCEMENT	(N1) 3 - D16	4.72 kg	L=11.45 m, N=3
	(N2) 5 - D16	4.42 kg	Ø200
	(N3) 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

## PLAN OF EXPANSION JOINT



## NOTES

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO P3/BR4/0030.



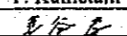
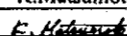
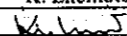
PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	(NK) NIPPON KOEI CO.,LTD.	NAME: T. Kametani SIGNATURE: <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	BA MANG BRIDGE SUPERSTRUCTURE DETAILS OF EXPANSION JOINTS	P3/BR4/0160

### QUANTITY TABLE OF SUPERSTRUCTURE

ITEM		WORK ITEM	UNIT	QUANTITY
CONCRETE	CLASS B	GIRDER	M3	158.79
	CLASS D	PANEL	M3	28.00
		DECK SLAB	M3	123.40
		CROSS BEAM	M3	23.25
		TOTAL	M3	174.65
	TOTAL	M3	333.43	
REINFORCEMENT		GIRDER	TON	31.74
		CROSS BEAM	TON	2.10
		DECK SLAB	TON	29.09
		PANEL	TON	3.36
		TOTAL	TON	66.28
PC CABLE	12S12.7(B)	LONGITUDINAL TENDONS	TON	6.90
ANCHOR	12S12.7(B)		SET	60
STEEL SHEAR KEY			SET	60
SHEATHING	#80/85		M	742.58
CEMENT GROUT IN SHEATHING	#60/85		M3	3.73
EXPANSION JOINT	50MM		M	43
BEARING 500X250X50			SET	20
ANCHORAGE BAR	#75, L=1500		SET	16
PAVEMENT		WATER PROOFING T = 5MM	M2	539.65
		ASPHALT CONCRETE T = 70MM	M2	539.65

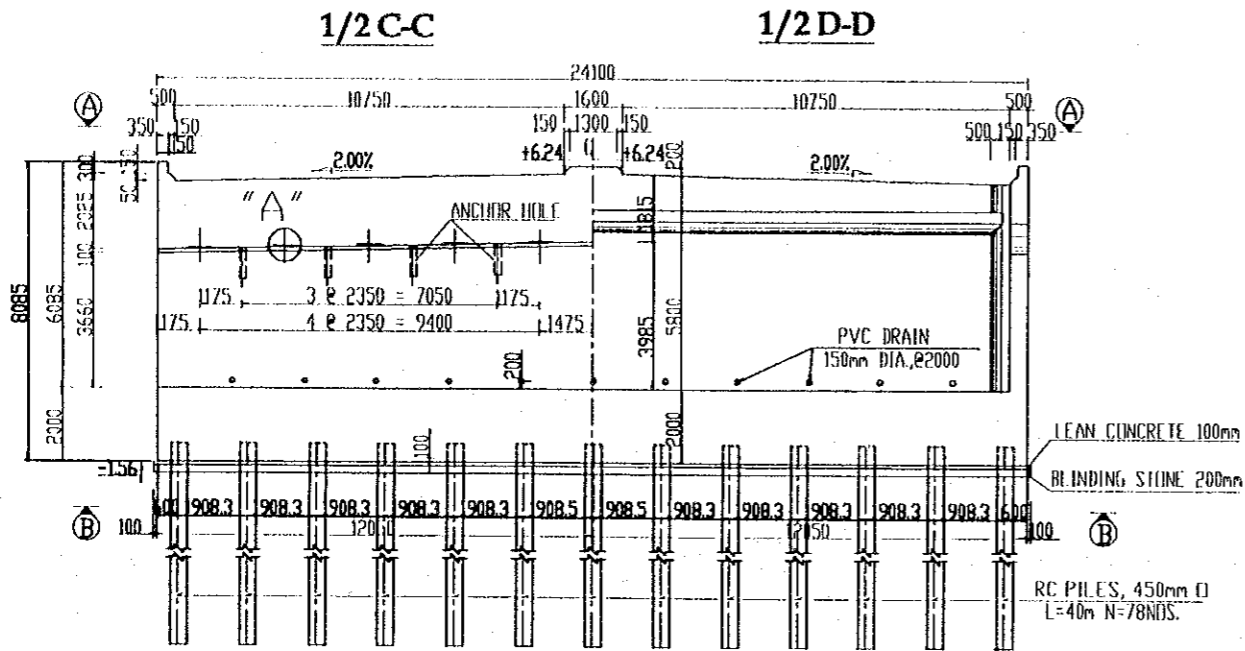
### NOTES

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO. P3/BR4/0030.

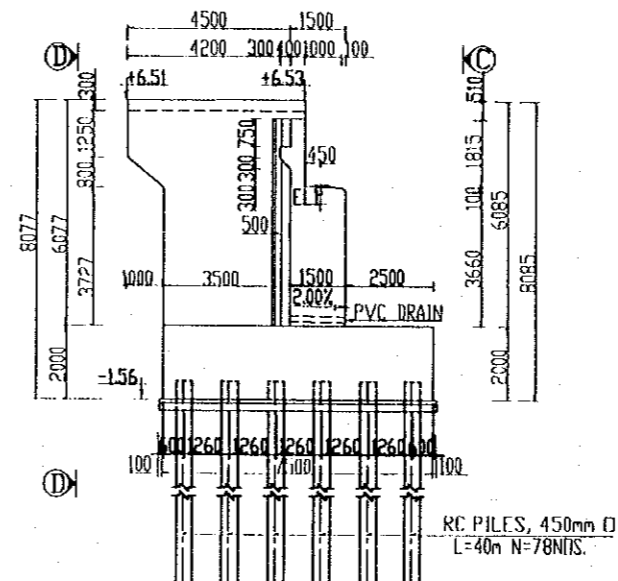
PROJECT NAME	IMPLEMENTATION AGENCY	EXECUTING AGENCY	JICA STUDY TEAM	PREPARED BY	CHECKED BY	APPROVED BY	DRAWING TITLE	DWG NO.
DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT	 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT	 NIPPON 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	BA MANG BRIDGE SUPERSTRUCTURE QUANTITY TABLE OF SUPERSTRUCTURE	P3/BR4/0170

### **III. ABUTMENTS**

**DETAIL OF ABUTMENT**

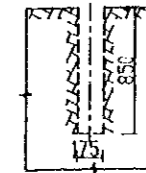


**SIDE ELEVATION**

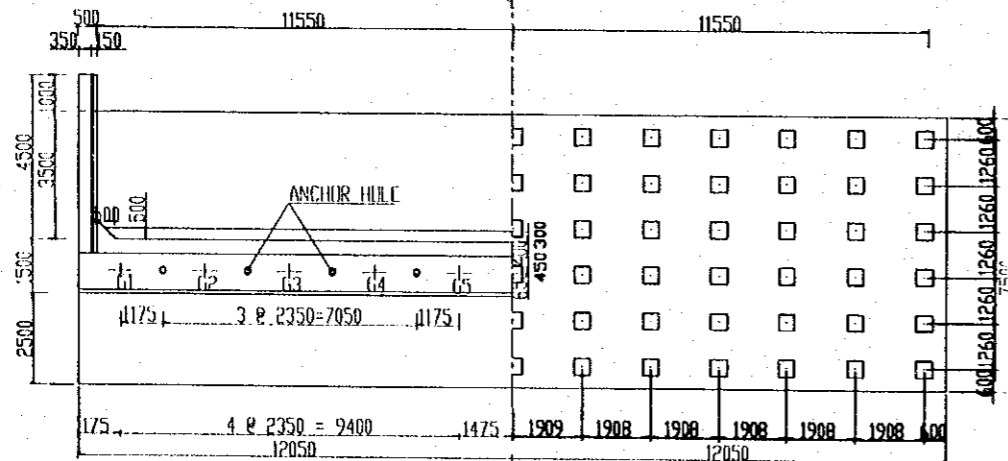


**DETAIL OF ANCHOR HOLE**

(SCALE 1:50)

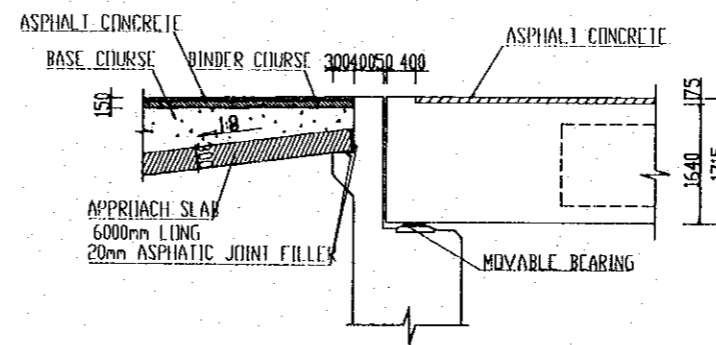


**1/2 A-A**



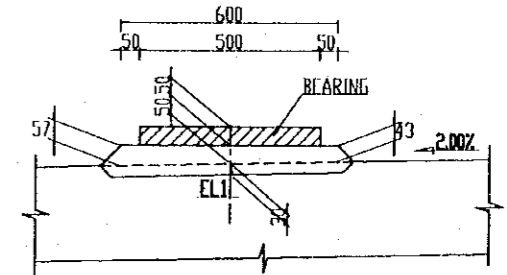
**DETAIL OF BACK WALL**

(SCALE 1:100)



**DETAIL "A"**

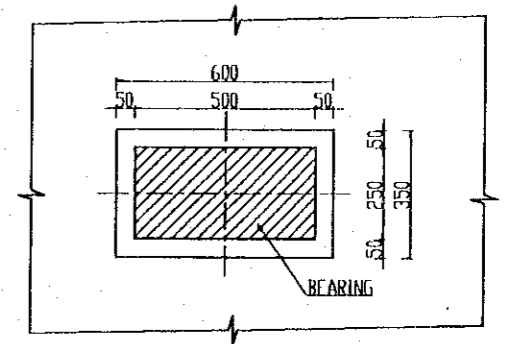
(SCALE 1:20)



**GIRDER BEARING SEAT ELEVATION OF EL1**

GRIND PAV	G1	G2	G3	G4	G5
ABUTMENT					
A1-A2	+4.25	+4.29	+4.34	+4.39	+4.43

**PLAN**



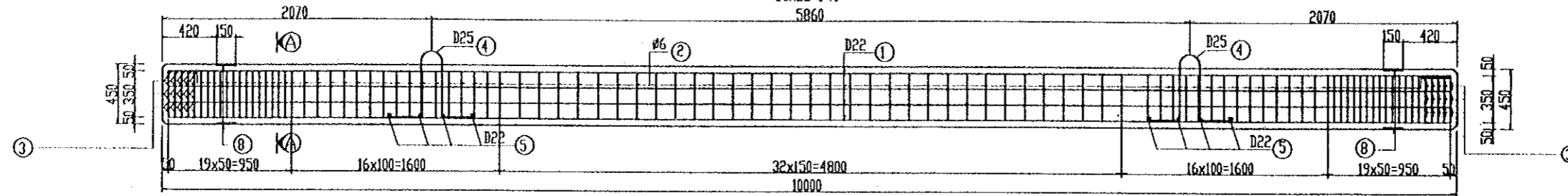
**NOTE**

FOR STANDARD STRUCTURAL NOTES SEE DRAWING No. P3/BR4/0030

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	BA MANG BRIDGE ABUTMENTS GENERAL VIEW OF ABUTMENTS A1&A2	P3/BR4/0180
				NAME				
				SIGNATURE				
				DATE	20/9/2000	29/9/2000	5/10/2000	

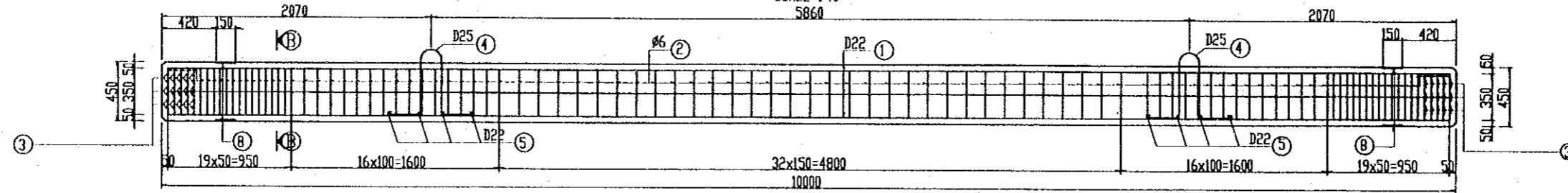
**R.C.PILE-1 L=10M**

SCALE 1:40  
5860



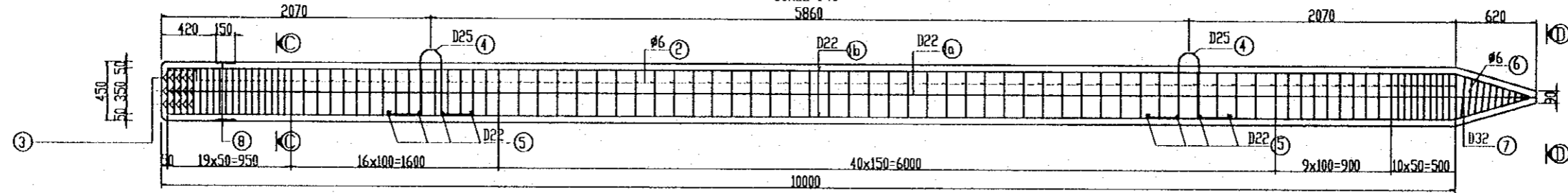
**R.C.PILE-2 L=10M**

SCALE 1:40  
5860

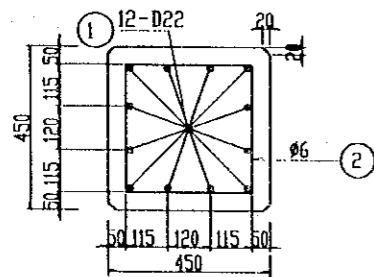


**R.C.PILE-3 L=10M**

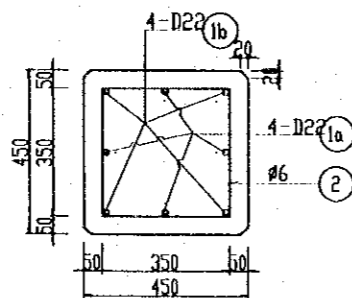
SCALE 1:40  
5860



**A-A**  
SCALE 1:20

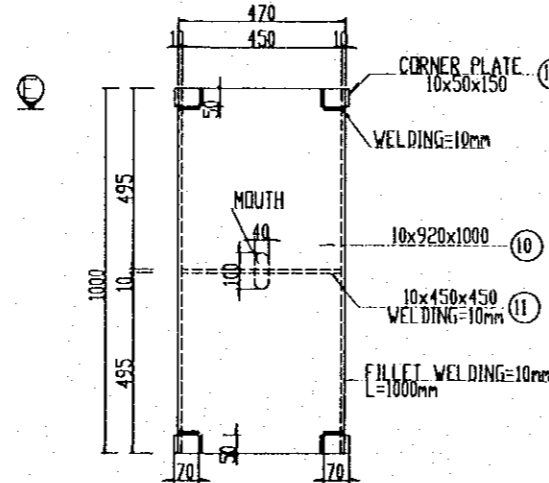


**C-C**  
SCALE 1:20



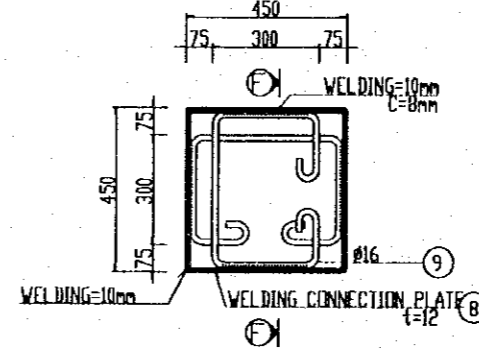
**CONPLING BOX**

SCALE 1:20

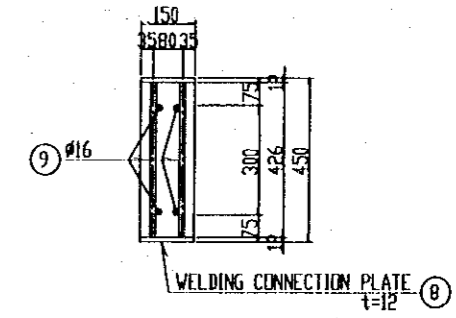


**WELDING CONNECTION PLATE**

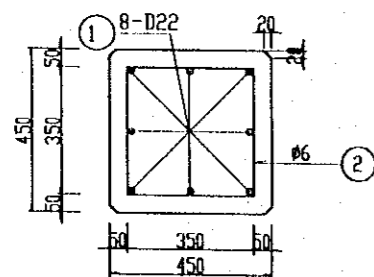
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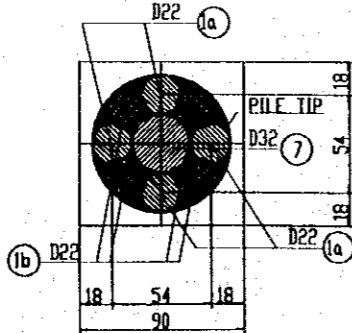
**F-F**  
SCALE 1:20



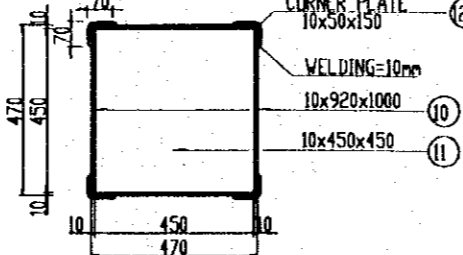
**B-B**  
SCALE 1:20



**D-D**  
SCALE 1:4

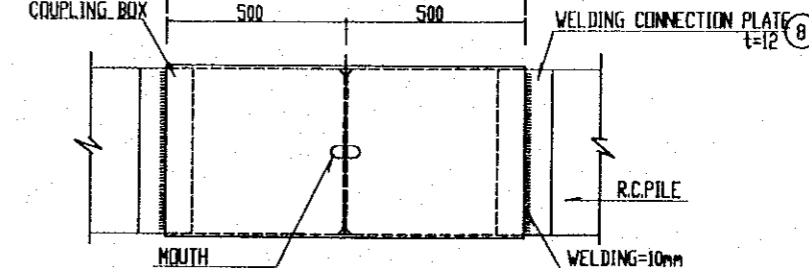


**E-E**  
SCALE 1:20

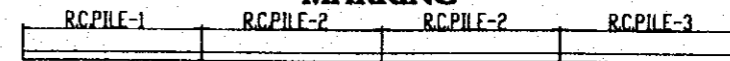


**ELEVATION**

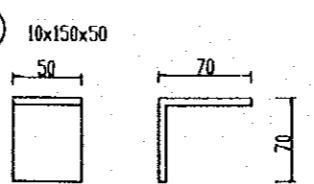
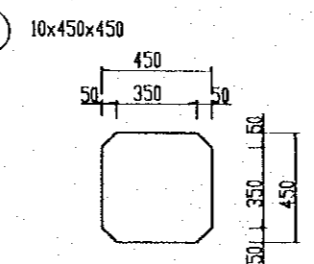
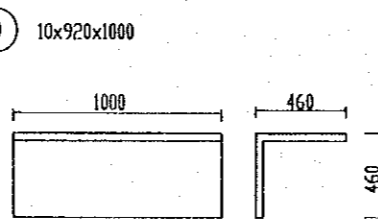
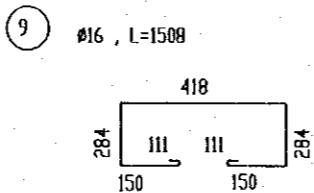
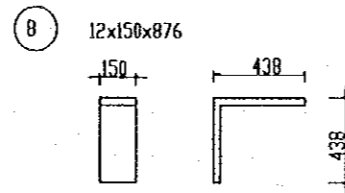
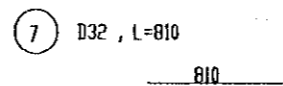
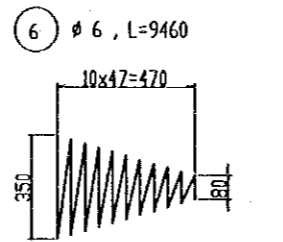
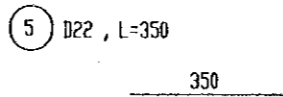
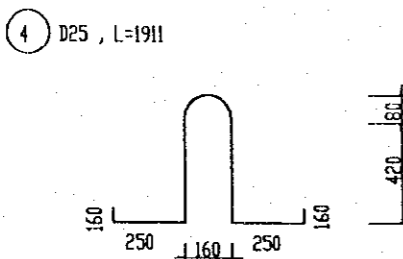
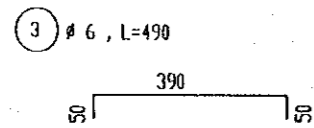
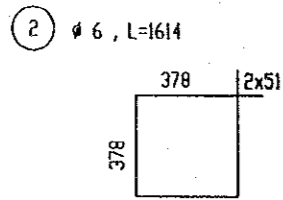
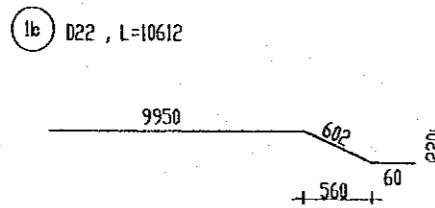
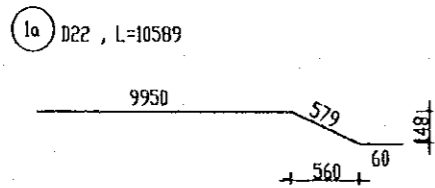
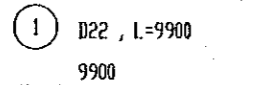
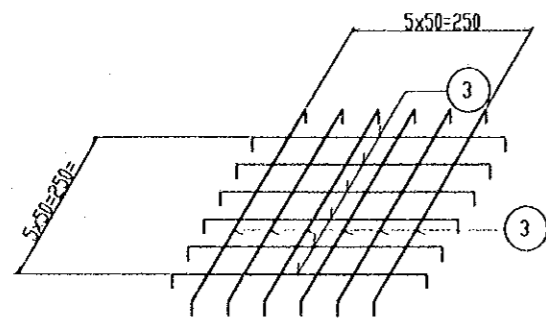
SCALE 1:20  
1000



**MARKING**



<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> NAME: T. Kametani SIGNATURE: [Signature] DATE: 20/9/2000	<b>CHECKED BY</b> NAME: K. Matsumoto SIGNATURE: [Signature] DATE: 29/9/2000	<b>APPROVED BY</b> NAME: K. Enomoto SIGNATURE: [Signature] DATE: 5/10/2000	<b>DRAWING TITLE</b> BA MANG BRIDGE ABUTMENTS ABUTMENTS A1&A2-RC PILE@450-L=40.0m-SHEET 1	<b>DWG NO.</b> PS/BR4/0190
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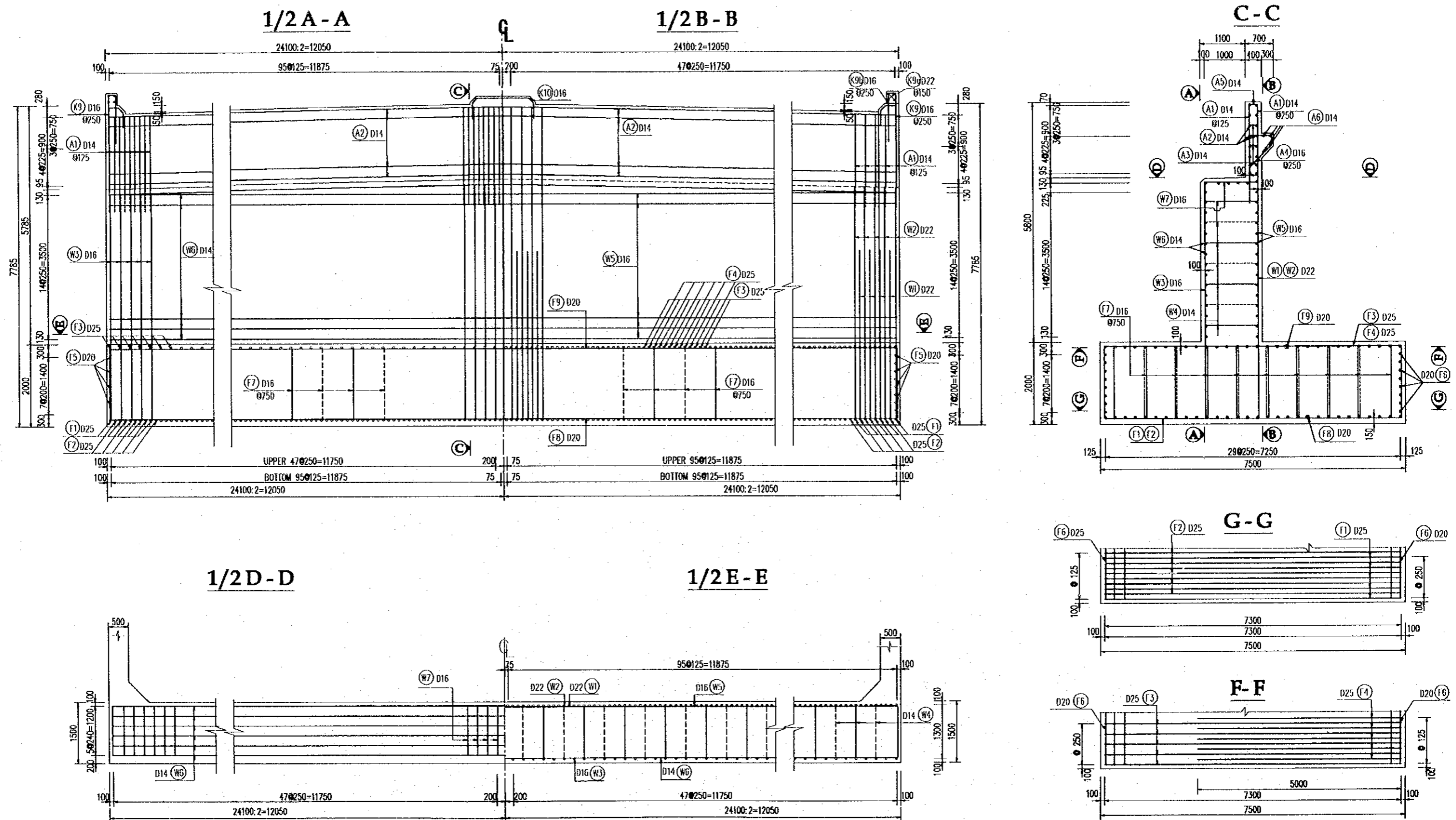
LIST OF REINFORCEMENT

	SIGN	DIACETER mm	UNIT WEIGHT kg/m	LENGTH mm	NOS.	TOTAL LENGTH m	TOTAL WEIGHT kg	
R.C.PILE-1 10M	1	22	2.984	9900	12	118.8	354.0	
	2	6	0.222	1614	95	153.33	34.0	
	3	6	0.222	490	120	44.6	13.1	
	4	25	3.853	1911	2	3.82	14.7	
	5	22	26.25	350	8	2.80	8.3	
	8	12x150x876	12.378		2		24.8	
	9	16	1.579	1508	8	12.06	19.0	
	1. TOTAL				467.9	kg		
	Ø6				47.1	kg		
D16				19.0	kg			
D22				362.3	kg			
D25				14.7	kg			
12x150x876				24.8	kg			
2. CONCRETE M300				2.0	m <sup>3</sup>			
R.C.PILE-2 10M	1	22	2.984	9900	8	79.2	236.0	
	2	6	0.222	1614	95	153.33	34.0	
	3	6	0.222	490	120	44.6	13.1	
	4	25	3.853	1911	2	3.82	14.7	
	5	22	26.25	350	8	2.80	8.3	
	8	12x150x876	12.378		2		24.8	
	9	16	1.579	1508	8	12.06	19.0	
	1. TOTAL				349.9	kg		
	Ø6				47.1	kg		
D16				19.0	kg			
D22				244.3	kg			
D25				14.7	kg			
12x150x876				24.8	kg			
2. CONCRETE M300				2.0	m <sup>3</sup>			
R.C.PILE-3 10M	1a	22	2.984	10589	4	42.36	126.4	
	1b	22	2.984	10612	4	42.45	126.8	
	2	6	0.222	1614	95	153.33	34.0	
	3	6	0.222	490	60	29.40	6.5	
	4	25	3.853	1911	2	3.82	14.7	
	5	22	2.984	350	8	2.80	8.3	
	6	6	0.222	9460	1	9.46	2.1	
	7	32	6.313	810	1	0.81	5.1	
	8	12x150x876	12.378		2		24.8	
	9	16	1.579	1508	4	6.03	9.5	
	1. TOTAL				358.2	kg		
	Ø6				42.6	kg		
D16				9.5	kg			
D22				261.5	kg			
D25				14.7	kg			
D32				5.1	kg			
12x150x876				24.8	kg			
2. CONCRETE M300				2.0	m <sup>3</sup>			
COUPLING BOX	10	10x920x1000	72.220		2		144.4	
	11	10x450x450	15.896		1		15.9	
	12	10x50x150	0.589		8		4.7	
TOTAL							165.0	

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	CHECKED BY	APPROVED BY	DRAWING TITLE BA MANG BRIDGE ABUTMENTS ABUTMENTS A1&A2-RC PILE 0450-L=40.0m-SHEET 2	DWG NO. PS/DRA/0200
				NAME T. Kamelani	K. Matsumoto	K. Enomoto		
				SIGNATURE <i>T. Kamelani</i>	<i>K. Matsumoto</i>	<i>K. Enomoto</i>		
				DATE 20/9/2000	29/9/2000	5/10/2000		

# REINFORCEMENT ARRANGEMENT OF ABUTMENT A2

(SCALE 1:100)



## NOTES

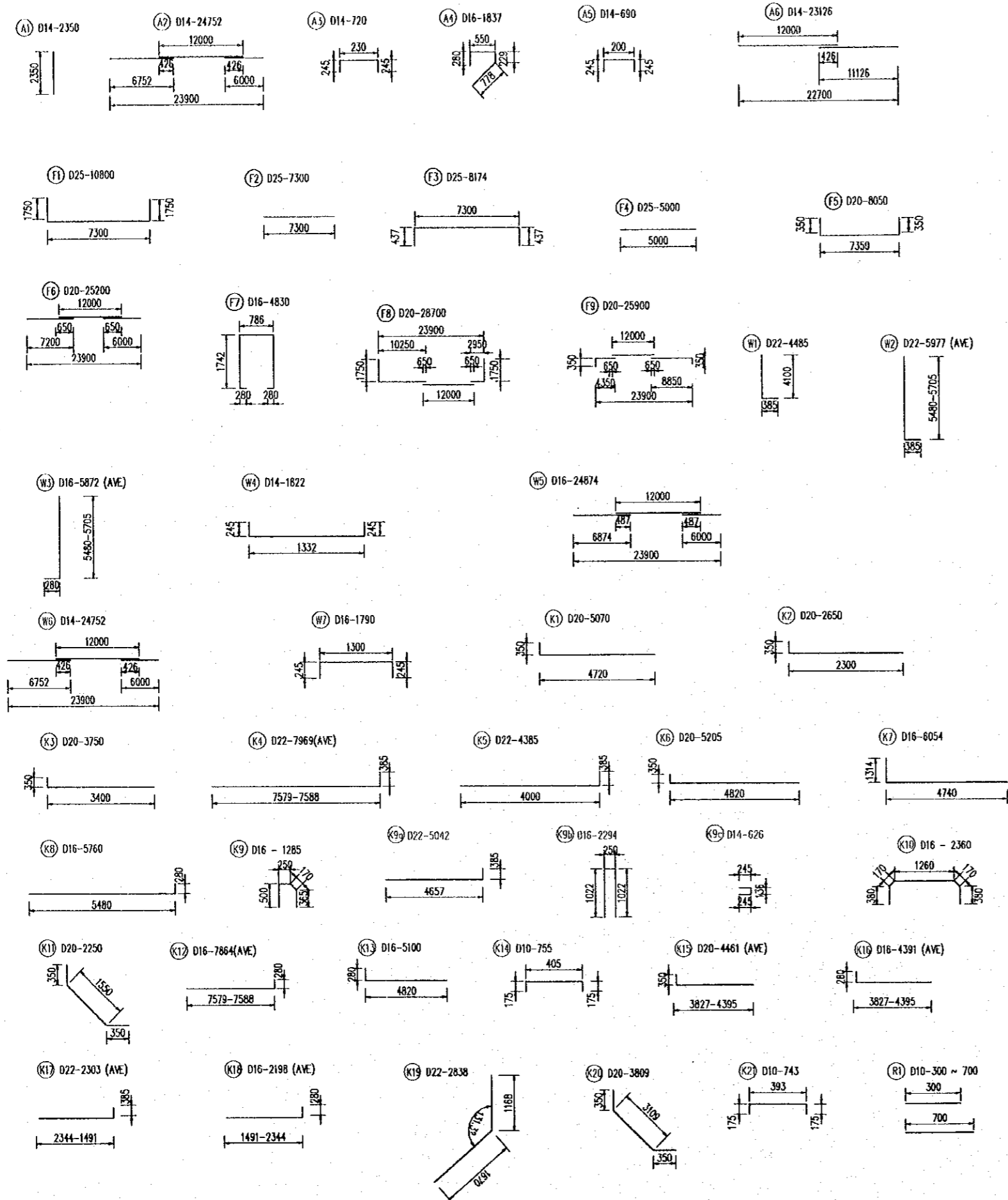
1. FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO. P3/BR4/0030

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	(NY) NIPPON KOEI 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	BAMANG BRIDGE ABUTMENTS REINFORCEMENT OF ABUTMENTS A1&A2- SHEET 1	P3/BR4/0210





# LIST OF REINFORCEMENT (FOR ONE ABUTMENT)



REINF No.	DIA. mm	LENGTH mm	NUMBER	UNIT WEIGHT kg/m	WEIGHT kg	REMARKS
A1	14	2350	289	1.208	820.69	
A2	14	24752	16	1.208	478.57	
A3	14	720	141	1.208	122.68	
A4	16	1837	97	1.578	281.24	
A5	14	690	97	1.208	80.88	
A6	14	23126	4	1.208	111.78	
F1	25	10800	97	3.853	4036.78	
F2	25	7300	95	3.853	2672.30	
F3	25	8174	97	3.853	3055.24	
F4	25	5000	95	3.853	1830.35	
F5	20	8050	16	2.466	317.64	
F6	20	25200	16	2.466	994.35	
F7	16	4830	144	1.578	1097.76	
F8	20	28700	30	2.466	2123.36	
F9	20	25900	30	2.466	1916.20	
W1	22	4485	94	2.984	1258.04	
W2	22	5977	97	2.984	1730.05	AVERAGE
W3	16	5872	97	1.578	899.00	AVERAGE
W4	14	1822	165	1.208	363.29	
W5	16	24874	16	1.578	628.15	
W6	14	24752	20	1.208	598.21	
W7	16	1790	97	1.578	274.05	
K1	20	5070	12	2.466	150.04	
K2	20	2650	16	2.466	104.56	
K3	20	3750	16	2.466	147.97	
K4	22	7989	28	2.984	665.84	AVERAGE
K5	22	4385	20	2.984	261.70	
K6	20	5205	30	2.466	385.09	
K7	16	6054	12	1.578	114.66	
K8	16	5760	10	1.578	99.91	
K9	16	1285	40	1.578	81.13	
K9a	22	5042	8	2.984	120.36	
K9b	16	2294	40	1.578	144.83	
K9c	14	626	4	1.208	3.03	
K10	16	2360	2	1.578	7.45	
K11	20	2250	18	2.466	99.88	
K12	16	7864	28	1.578	347.54	AVERAGE
K13	16	5100	30	1.578	241.49	
K14	10	755	188	0.617	87.51	
K15	20	4461	48	2.466	528.07	AVERAGE
K16	16	4391	32	1.578	221.78	AVERAGE
K17	22	2303	6	2.984	41.23	AVERAGE
K18	16	2198	6	1.578	20.82	AVERAGE
K19	22	2838	4	2.984	33.87	
K20	20	3809	32	2.466	300.59	
K21	10	743	48	0.617	21.99	
R1	10	300-700	80-40	0.617	32.10	AVERAGE
TOTAL			29945	kg		
	D10:	142	kg	D20:	7068	kg
	D14:	2579	kg	D22:	4111	kg
	D16:	4451	kg	D25:	11595	kg

## NOTES

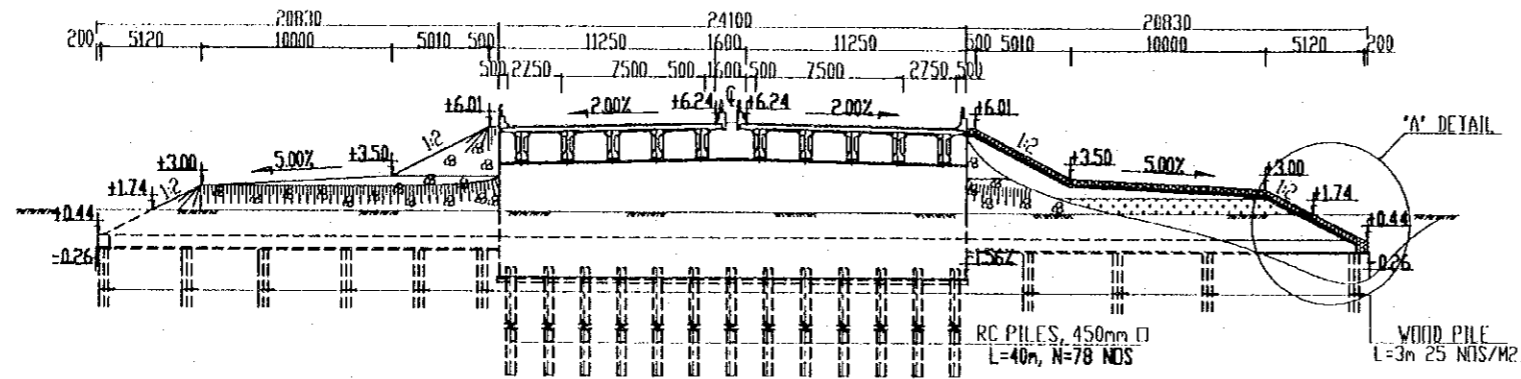
1. FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO. P3/BR4/0030

<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> NAME: T. Kametani SIGNATURE: [Signature] DATE: 20/9/2000	<b>CHECKED BY</b> K. Matsumoto SIGNATURE: [Signature] DATE: 29/9/2000	<b>APPROVED BY</b> K. Enomoto SIGNATURE: [Signature] DATE: 5/10/2000	<b>DRAWING TITLE</b> BAMANG BRIDGE ABUTMENTS REINFORCEMENT OF ABUTMENTS A1/A2-SHEET 3	<b>DWG NO.</b> P3/BR4/0230
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# EARTHWORKS SLOPE PROTECTION

(SCALE 1:375)

## A-A (ABUTMENT A1, A2)



PLAN

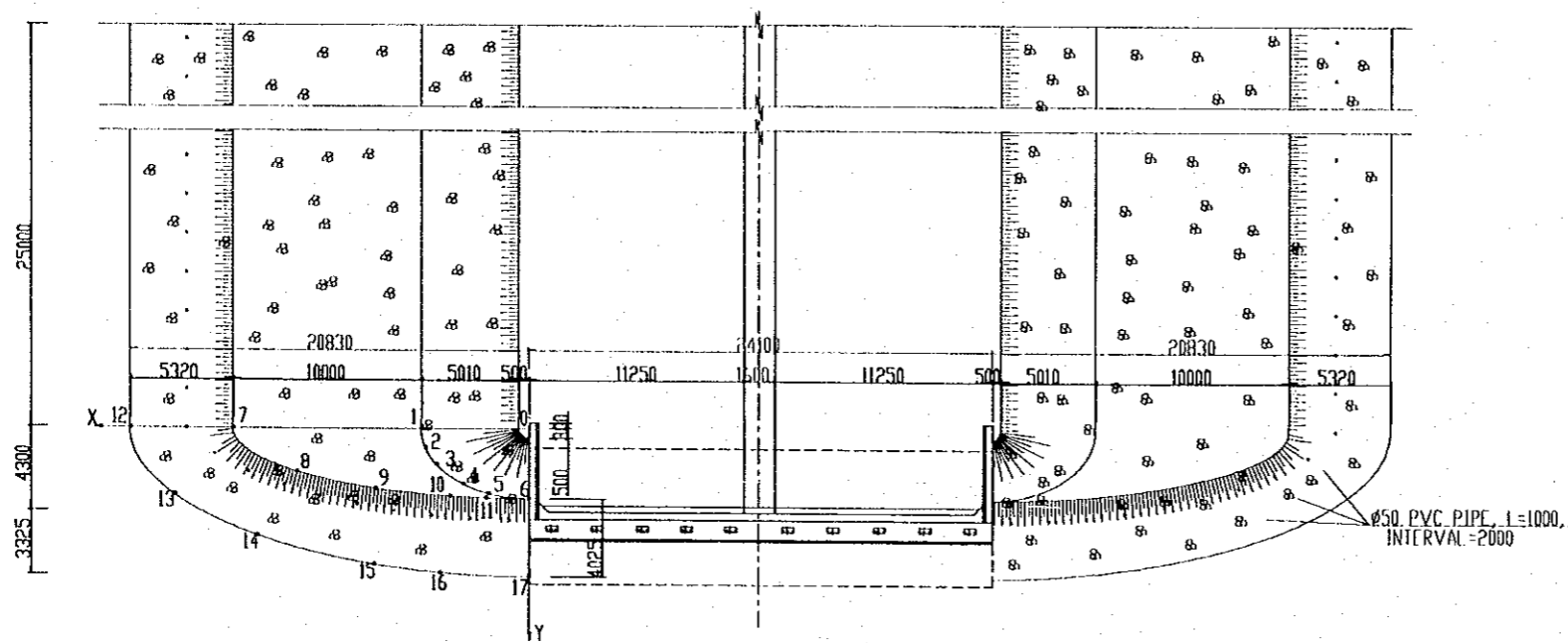
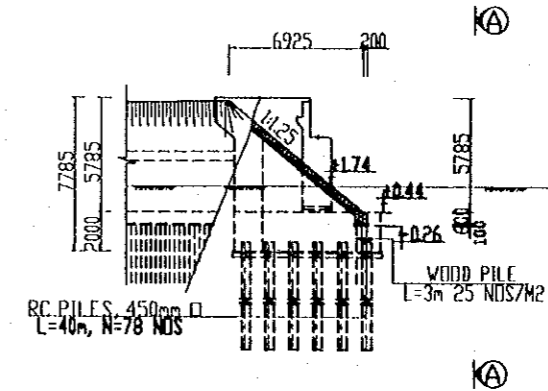


TABLE OF COORDINATES

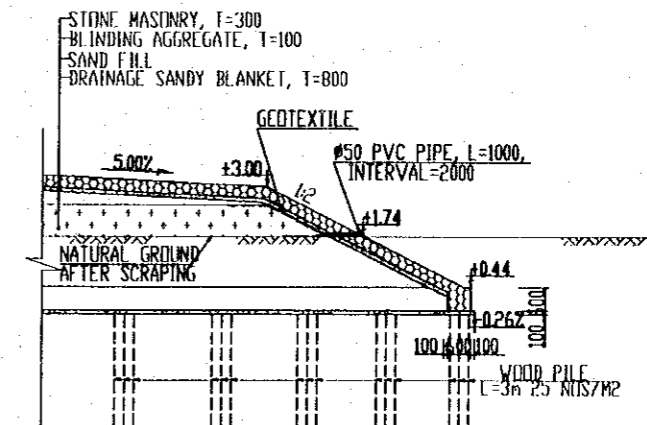
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2	530	98	11	219	356
3	474	184	12	2083	0
4	332	287	13	1853	342
5	205	334	14	1424	551
6	0	360	15	807	699
7	1551	0	16	455	742
8	1214	224	17	0	763

## SIDE ELEVATION



## "A" DETAIL

(SCALE 1:150)



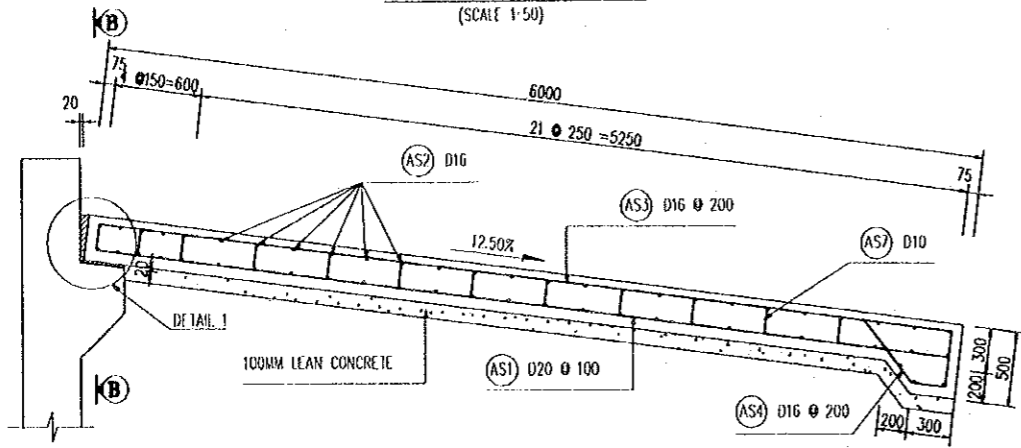
## NOTES

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO. P3/BR4/0030

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	BA MANG BRIDGE ABUTMENTS EARTHWORKS SLOPE PROTECTION	P3/BR4/0240
				SIGNATURE	SIGNATURE	SIGNATURE		
				DATE	DATE	DATE		

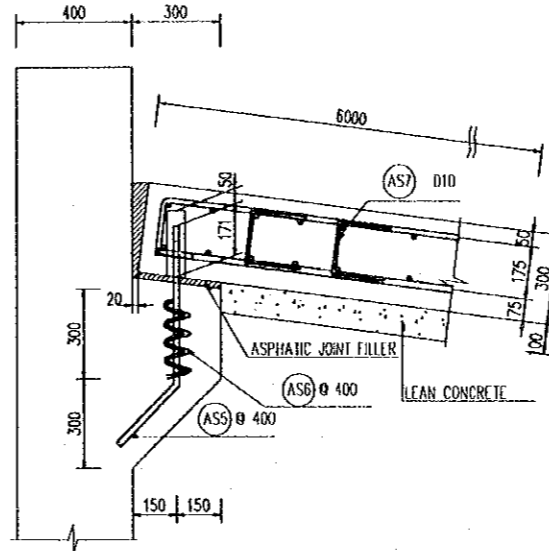
**SECTION A - A**

(SCALE 1:50)



**DETAIL 1**

SCALE 1:25

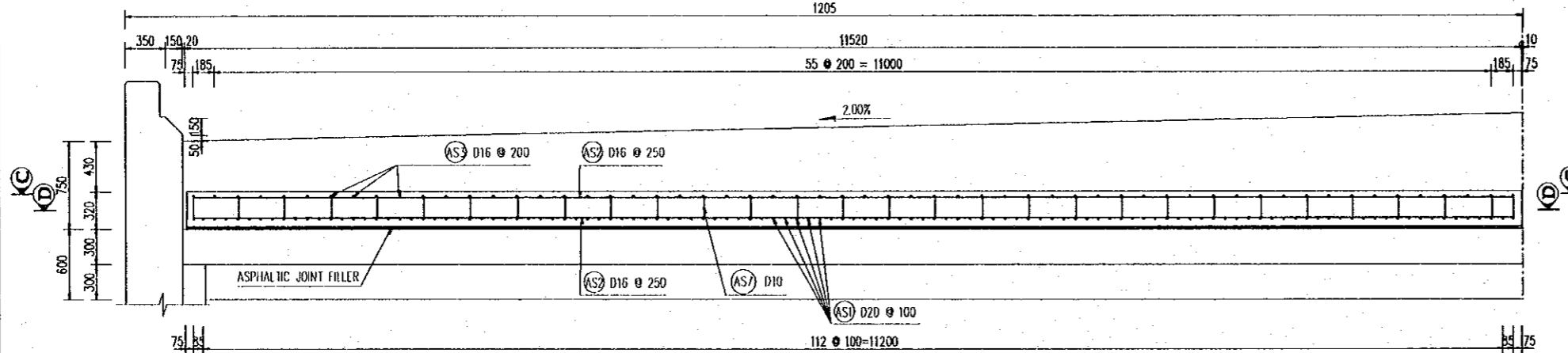


**LIST OF REINFORCEMENT**

TYPE	Ø (mm)	LENGTH OF BAR (mm)	U WEIGHT (kg/m)	NUMBER	WEIGHT (kg)	
AS1	Ø20	5850	2.466	230	3318.0	
AS2	Ø16	11670	1.578	110	2025.7	
AS3	Ø16	6320	1.578	116	1156.9	
AS4	Ø16	1200	1.578	116	219.7	
AS5	Ø20	700	2.466	60	103.6	
AS6	Ø10	1580	0.617	60	58.5	
AS7	Ø10	519	0.617	616	197.3	
					<b>D10</b>	255.8 kg
					<b>D16</b>	3402.3 kg
					<b>D20</b>	3421.6 kg
<b>TOTAL :</b>						<b>7079.7 kg</b>
<b>CONCRETE :</b>						<b>43.4 m<sup>3</sup></b>
<b>LEAN CONCRETE :</b>						<b>13.4 m<sup>3</sup></b>
<b>ASPHATIC JOINT FILLER :</b>						<b>0.6 m<sup>3</sup></b>

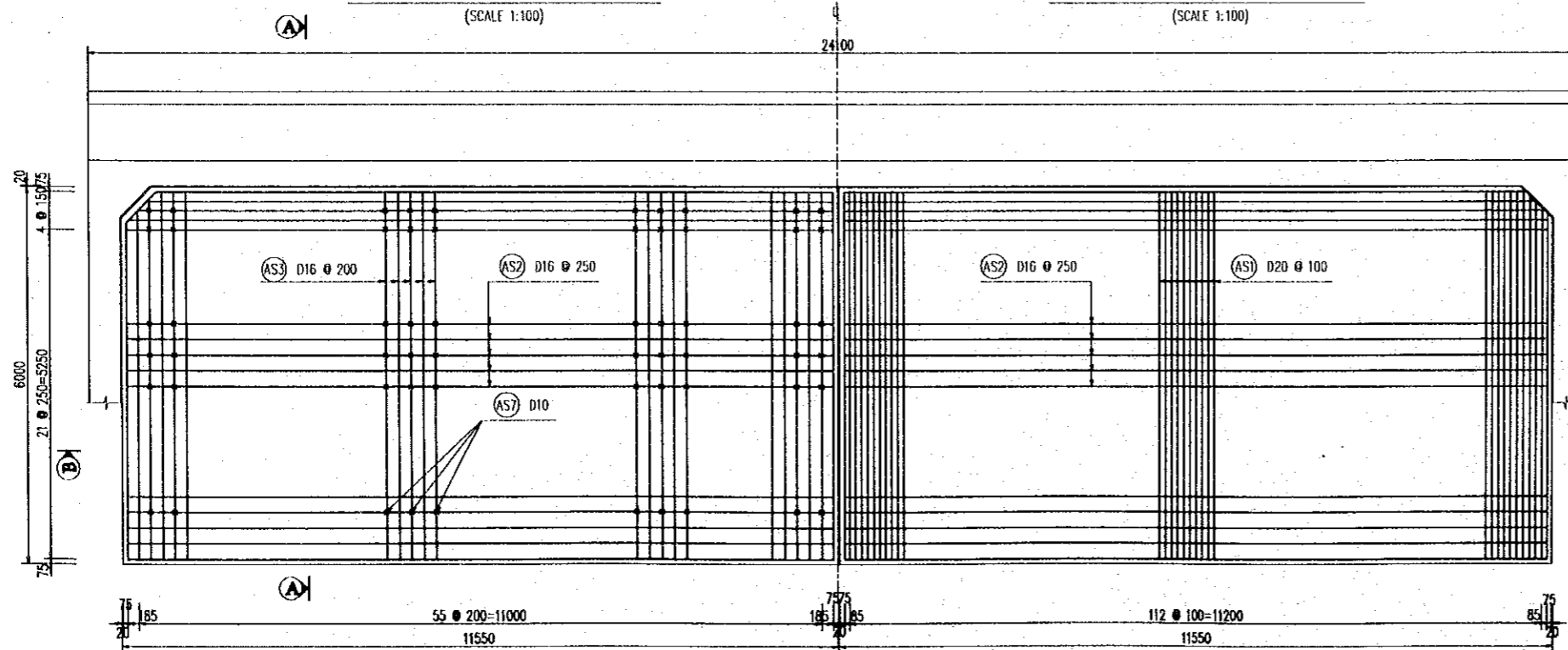
**HALF SECTION B - B**

(SCALE 1:50)



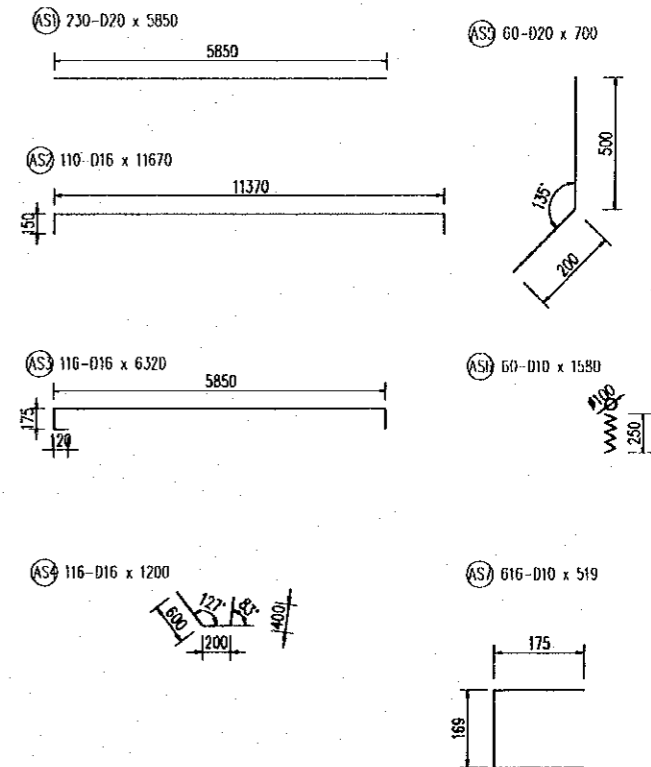
**HALF SECTION C - C**

(SCALE 1:100)



**HALF SECTION D - D**

(SCALE 1:100)



**NOTES:**

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO P1\BR3\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	BA MANG BRIDGE ABUTMENTS DETAILS OF APPROACH SLAB	P3/BR4/0250

## QUANTITY TABLE OF ABUTMENTS

ITEMS		UNIT	ABUTMENT A1	ABUTMENT A2	TOTAL	
<b>A- ABUTMENT</b>						
PILE	NUMBER OF PILES	PILE	78.0	78.0	156.0	
	TOTAL LENGTH OF RC PILES ?????	M	3120.0	3120.0	6240.0	
	CONCRETE CLASS "D "	M3	850.0	850.0	1700.0	
	REINFORCEMENT	D32	KG	397.8	397.8	795.6
		D28	KG	0.0	0.0	0.0
		D25	KG	4586.4	4586.4	9172.8
		D22	KG	86767.2	2654.0	173534.4
		D16	KG	5187.0	5187.0	10374.0
		?6	KG	14344.2	14344.2	28688.4
	TOTAL	KG	111282.6	111282.6	222565.2	
ABUTMENT	CONCRETE CLASS "E "	M3	544.6	544.6	1089	
	REINFORCEMENT	D25	KG	15084.9	15084.9	30170
		D22	KG	4926.3	4926.3	9853
		D20	KG	7782.1	7782.1	15564
		D18	KG	0.0	0.0	0
		D16	KG	5308.4	5282.8	10591
		D14	KG	3664.6	3664.6	7329
		D10	KG	69.2	69.2	138
	TOTAL	KG	36835.5	36809.9	73645	
	LEAN CONCRETE CLASS "G"	M3	16.9	16.9	34	
	FORM	M2	527.8	527.8	1055.6	
	BLINDING STONE	M3	33.9	33.9	68	
	EXCAVATION FOR FOUNDATION	M3	715.1	715.1	1430.2	
BACK FILL	M3	297.5	297.5	594.9		
<b>B- APPROACH SLAB</b>						
	CONCRETE CLASS "E"	M3	43.2	43.2	86	
	LEAN CONCRETE CLASS "G"	M3	13.3	13.3	27	
	ASPHALTIC JOINT FILLER T=20MM	M3	0.4	0.4	0.8	
	FORM	M2	24.2	24.2	48.3	
	REINFORCEMENT	D20	KG	3421.6	3421.6	6843
		D16	KG	3402.3	3402.3	6805
		D10	KG	255.8	255.8	512
		TOTAL	KG	7079.7	7079.7	14159
<b>C- SLOPE PROTECTION</b>						
FOOTING	WOODEN PILE L=3M	M	5931.1	5931.1	11862	
	BLINDING AGGREGATE T=100MM	M3	7.9	7.9	16	
	STONE MASONRY T=300MM	M3	35.6	35.6	71	
	EXCAVATION	M3	949.0	949.0	1898	
	BACK FILL	M3	467.7	467.7	935	
SIDE SLOPE	STONE MASONRY T=300MM	M3	445.0	445.0	890	
	BLINDING AGGREGATE T=100MM	M3	152.2	152.2	304	
	GEOTEXTILE	M2	578.7	578.7	1157	
	PVC PILE $\phi$ 50MM DIA., L=1000MM	M	49.4	49.4	99	

### NOTES

FOR STANDARD STRUCTURAL NOTES SEE DRAWING NO. P3/BR4/0030.

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 KOEI CO.,LTD.	NAME T. Kametani	K. Matsumoto	K. Enomoto	BA MANG BRIDGE ABUTMENTS QUANTITY TABLE OF ABUTMENTS	P3/BR4/0260
				SIGNATURE 				
				DATE 20/9/2000	29/9/2000	5/10/2000		