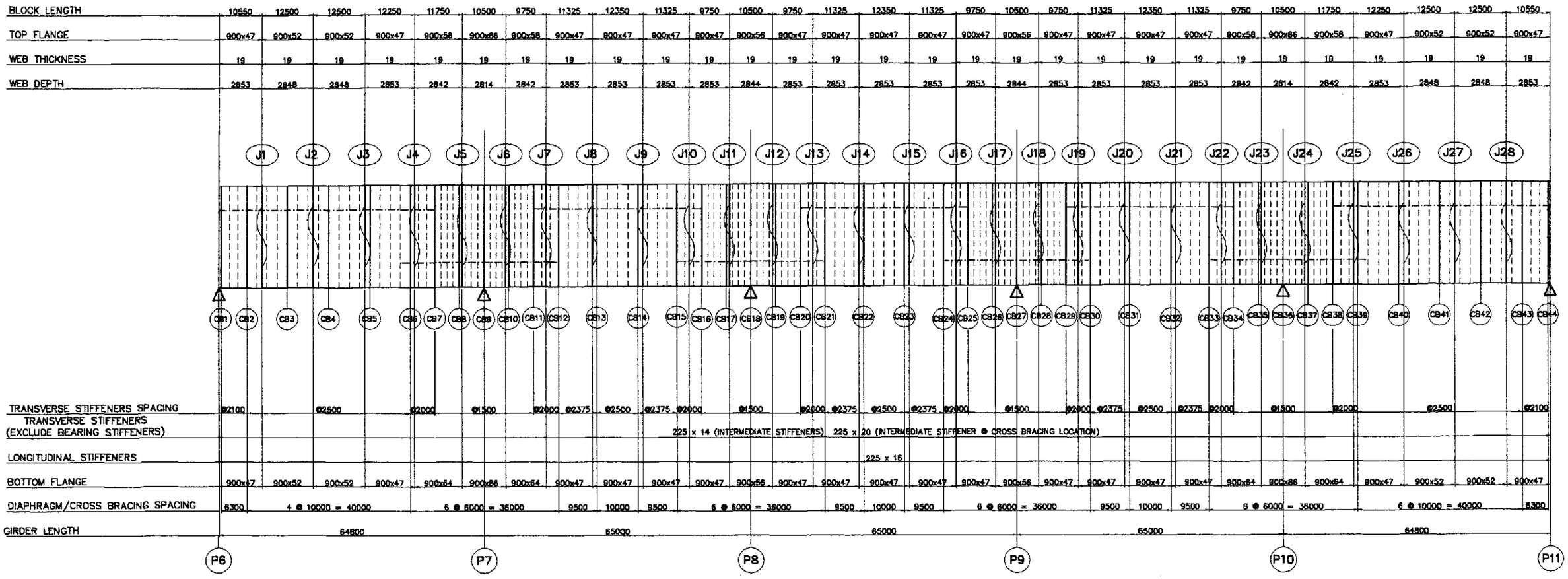
MAIN BRIDGE

SUPERSTRUCTURE - PLATE GIRDERS



NOTE :

1. ALL STEEL SHALL BE SMA 490W/GRADE 50W CONFORMING TO ASTM A709M UNLESS OTHERWISE NOTED.

(1) / (-) MAIN GIRDER COMPONENT (PIER 6 to PIER 11)

SCALE 1 : 500

JAPAN INTERNATIONAL COOPERATION AGENCY

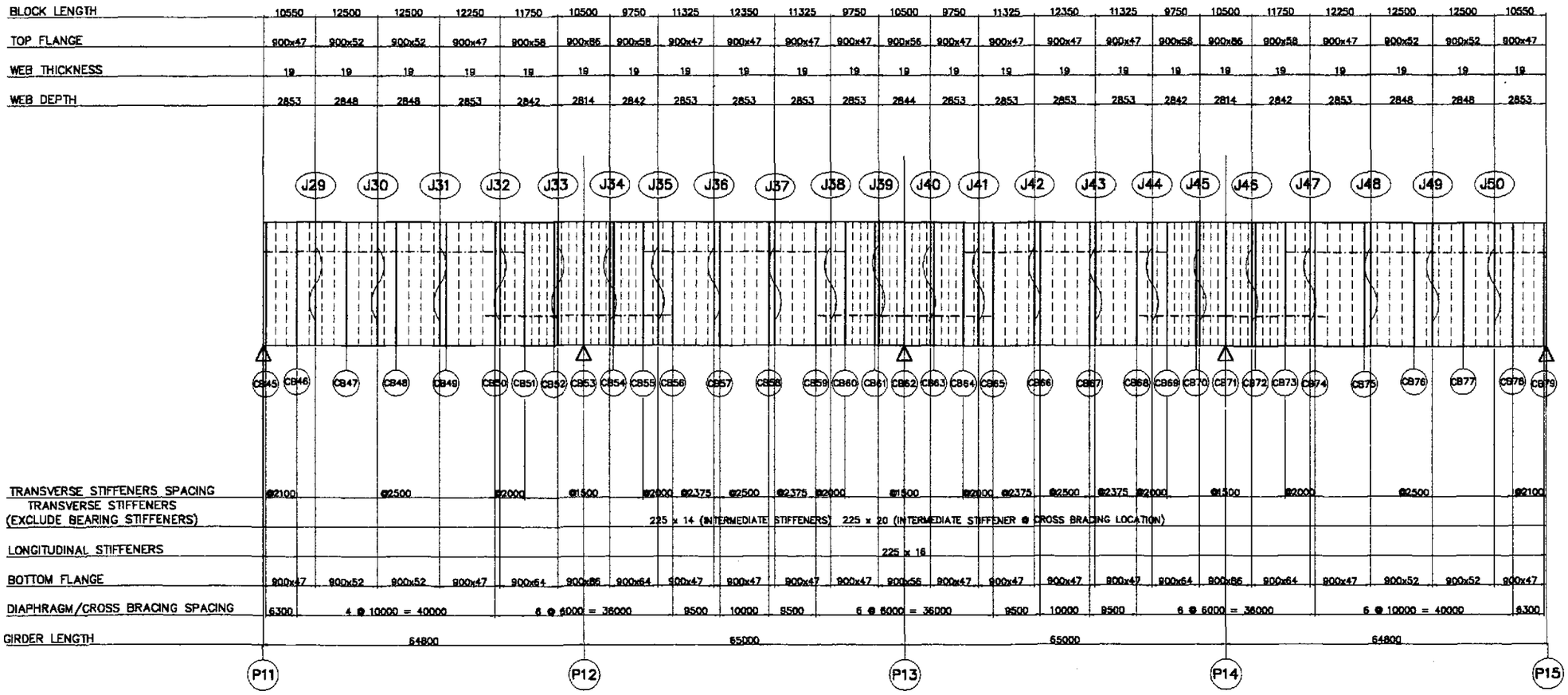
KATAHIRA & ENGINEERS INTERNATIONAL — YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SALAS
CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/17/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PUHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO, Project Director	ADRIANO M. DOROY, Chief, Bridges Division	GILBERTO S. REYES, Director IV (OIC)	MANUEL M. BONOAN, Undersecretary	SIMEON A. DATUMANONG, Secretary

PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE III	AS SHOWN FULL SIZE A1	BRIDGE NO. 10 PAMPANGA RIVER BRIDGE MAIN GIRDER COMPONENT (PIER 6 to PIER 11) (INITIAL STAGE)	B10M-01



NOTE :

1. ALL STEEL SHALL BE SMA 490W/GRADE 50W CONFORMING TO ASTM A709M UNLESS OTHERWISE NOTED.

1 / - MAIN GIRDER COMPONENT (PIER 11 to PIER 15)

SCALE 1 : 500

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL — YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SILAS
CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	11/19/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

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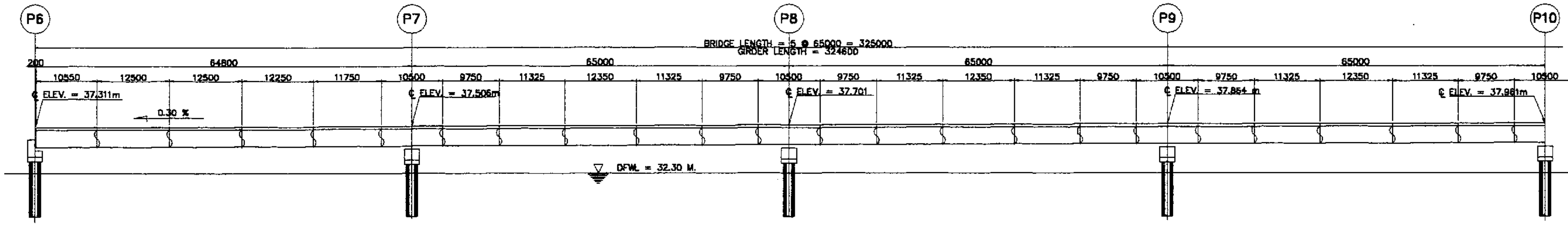
Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

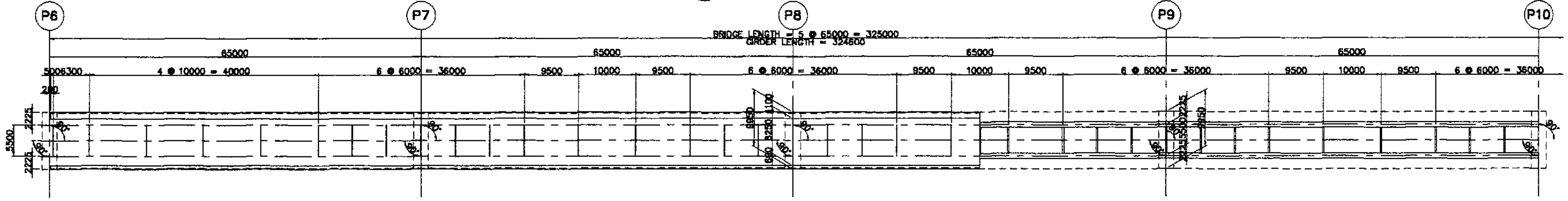
SCALE : AS SHOWN FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
MAIN GIRDER COMPONENT
(PIER 11 to PIER 15)
(INITIAL STAGE)

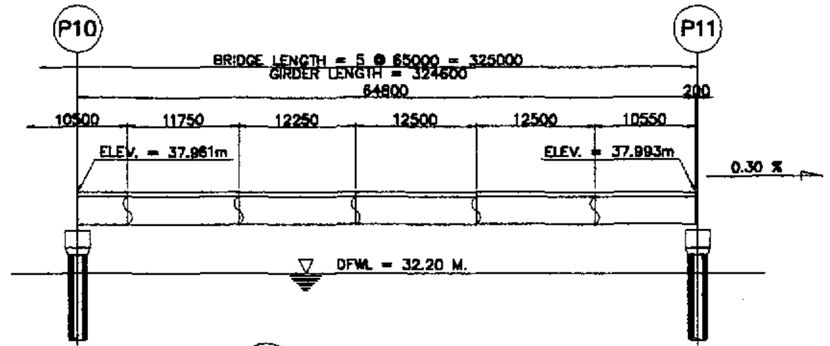
SHEET NO. : B10M-02



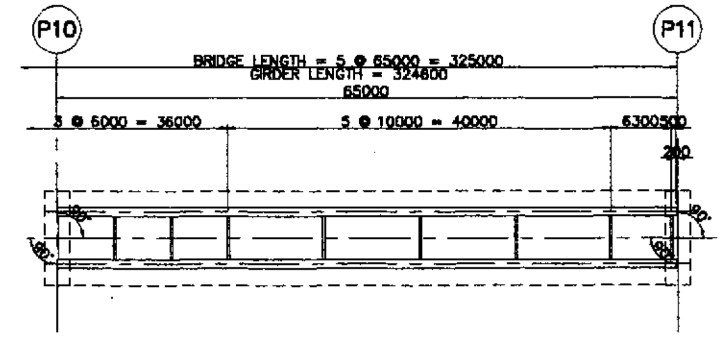
A ELEVATION
SCALE 1 : 400



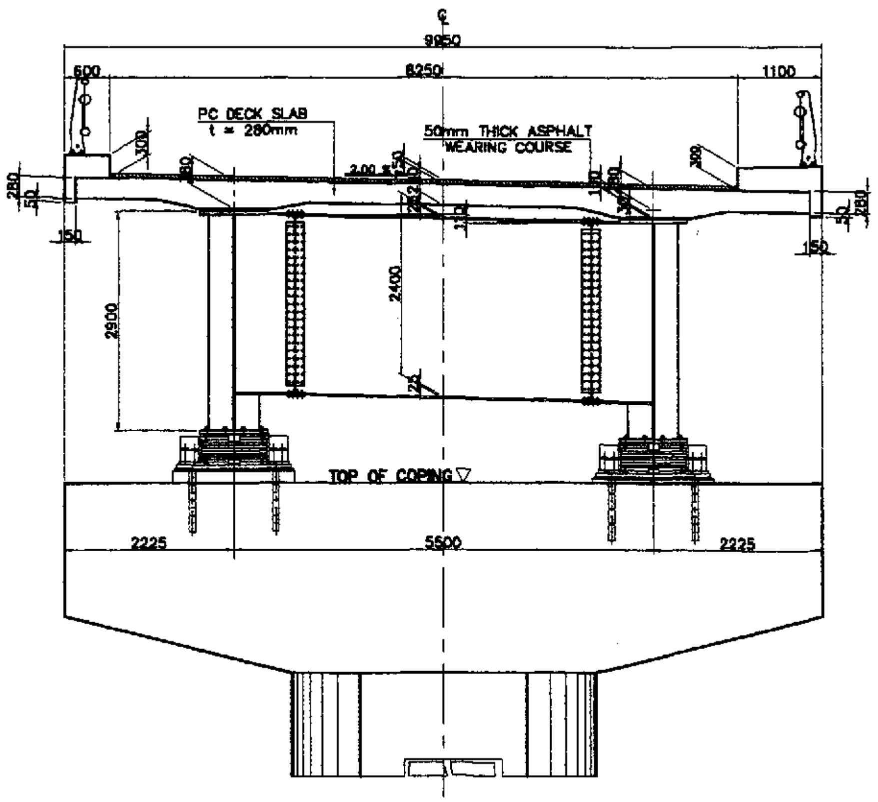
B PLAN
SCALE 1 : 400



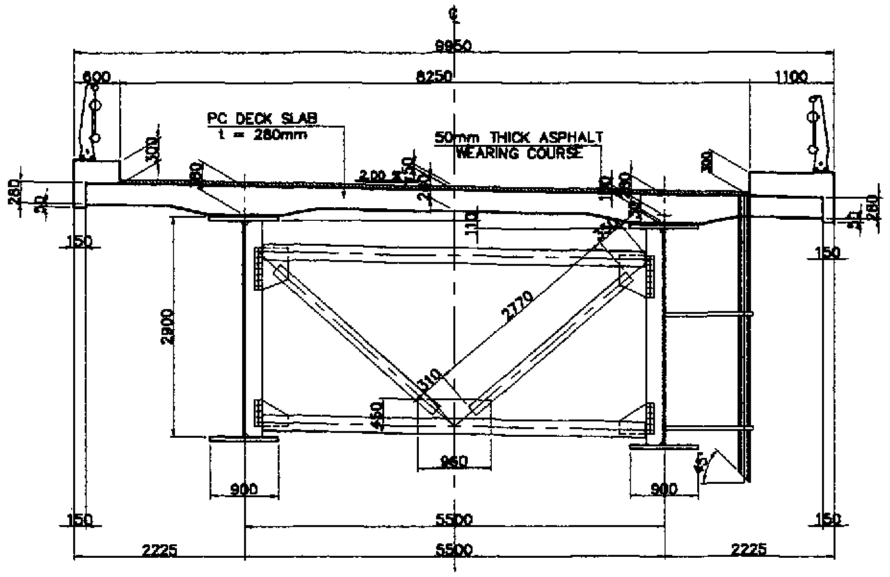
A-1 PLAN
SCALE 1 : 400



B-1 PLAN
SCALE 1 : 400



C SECTION @ END SUPPORT
SCALE 1 : 50



D SECTION @ INTERMEDIATE CROSS BRACING
SCALE 1 : 50

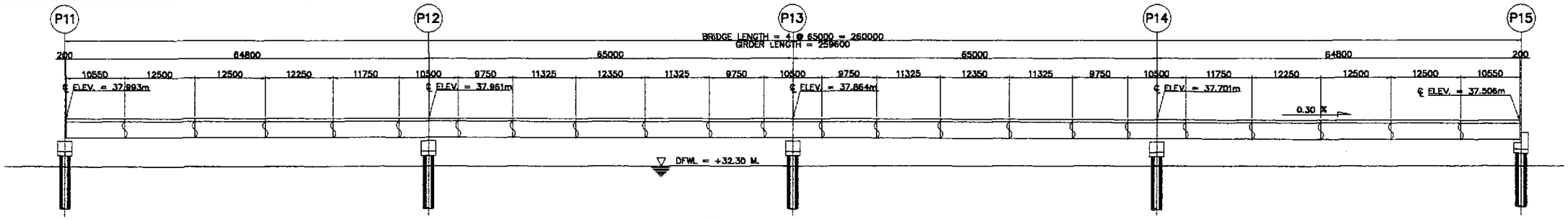
1 MAIN GIRDER ARRANGEMENT (PIER 6 to PIER 11)
SCALE AS SHOWN

JICA JAPAN INTERNATIONAL COOPERATION AGENCY		DATE	SIGNATURE
KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED	10/8/02	F. M. SALAS
YACHIYO ENGINEERING CO., LTD.	CHECKED	10/17/02	J. C. SANTOS
	SUBMITTED	10/19/02	M. KOUCHI TEAM LEADER

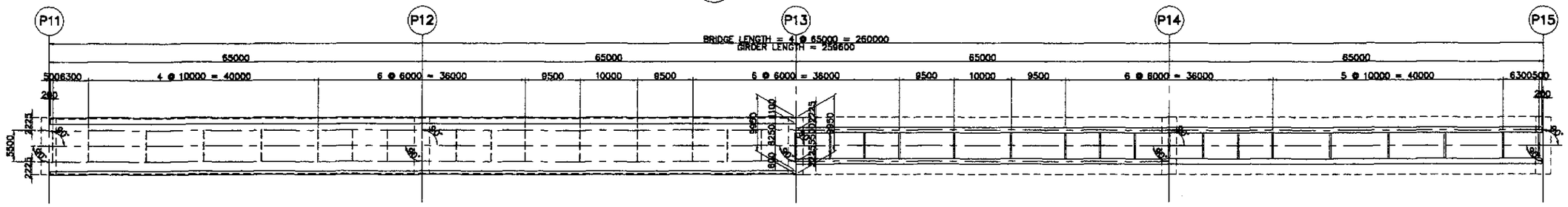
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PJHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO Project Director	ADRIANO M. DOROY Chief, Bridges Division	GILBERTO S. REYES Director IV (OIC)	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary

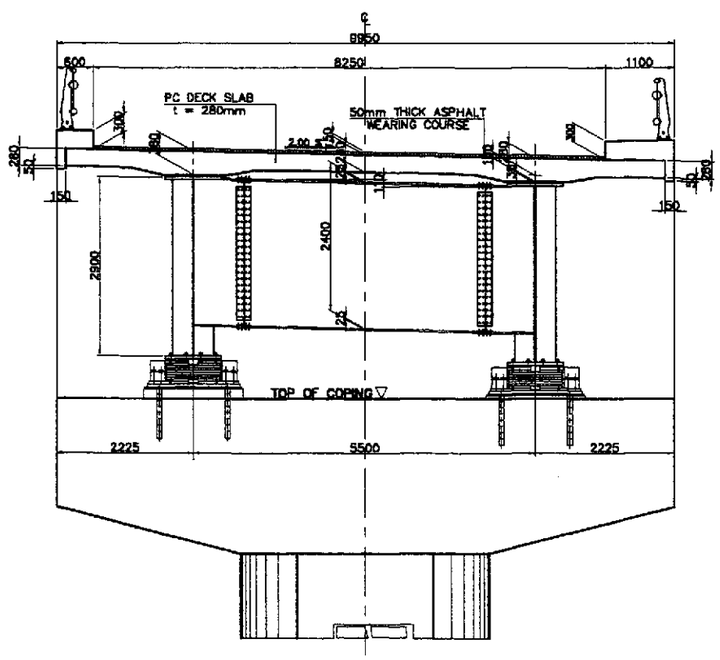
PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	BRIDGE NO. 10 PAMPANGA RIVER BRIDGE MAIN GIRDER ARRANGEMENT (PIER 6 to PIER 11) (INITIAL STAGE)	B10M-03
CABANATUAN BYPASS - CONTRACT PACKAGE III	FULL SIZE A1		



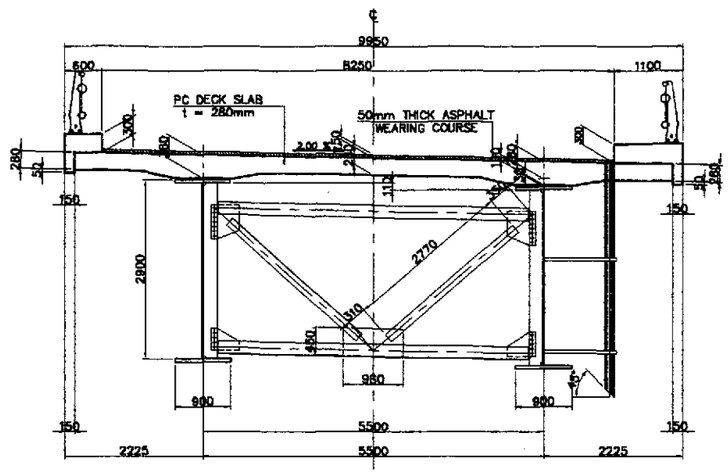
A — ELEVATION
SCALE 1 : 400



B — P L A N
SCALE 1 : 400



C — SECTION @ END SUPPORT
SCALE 1 : 50



D — SECTION @ INTERMEDIATE CROSS BRACING
SCALE 1 : 50

1 — MAIN GIRDER ARRANGEMENT (PIER 11 to PIER 15)
SCALE AS SHOWN

JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL — YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SALAS
CHECKED	10/17/02	J. O. SANTOS
SUBMITTED	10/19/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

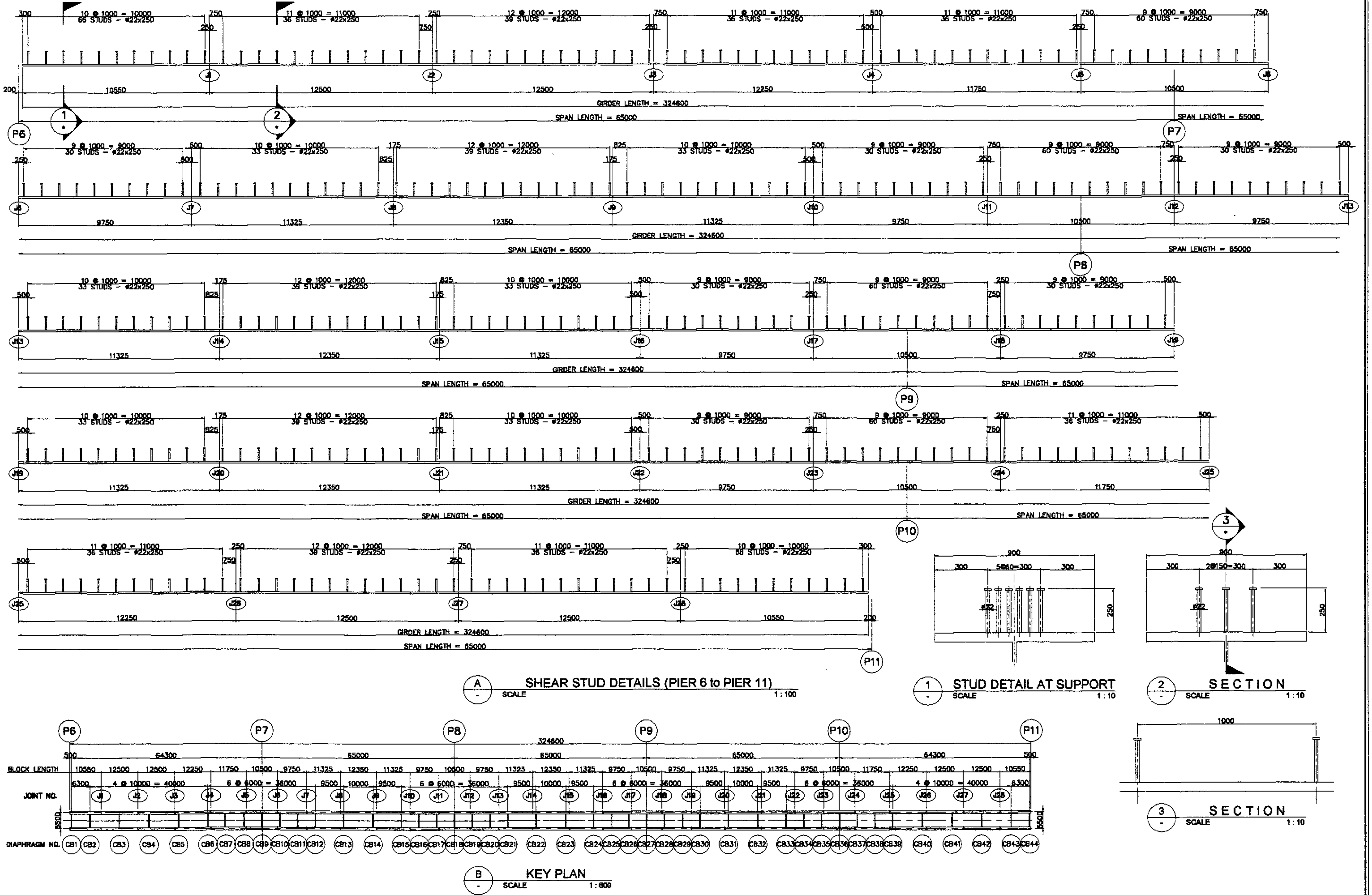
PUHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO	ADRIANO M. DOROY	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANONG
Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

SCALE : AS SHOWN — FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
MAIN GIRDER ARRANGEMENT
(PIER 11 to PIER 15)
(INITIAL STAGE)

SHEET NO. : B10M-04



JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL

YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SALAS
CHECKED	10/7/02	J. C. SANTOS
SUBMITTED	10/10/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PJHL - PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO Project Director	ADRIANO M. DOROY Chief, Bridges Division	GILBERTO S. REYES Director IV (OIC)	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)

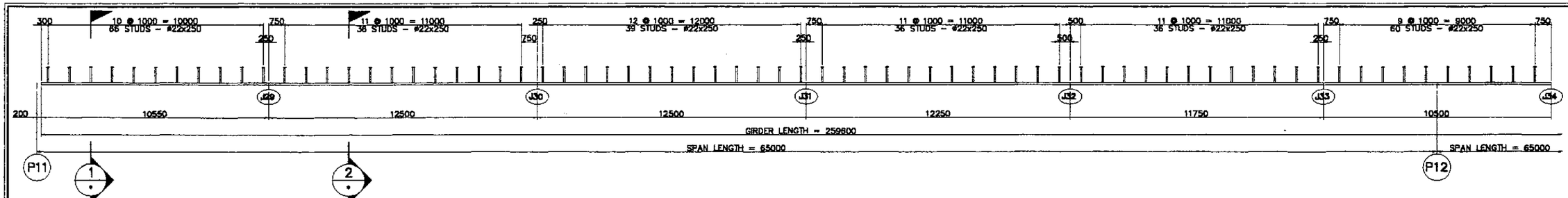
CABANATUAN BYPASS - CONTRACT PACKAGE III

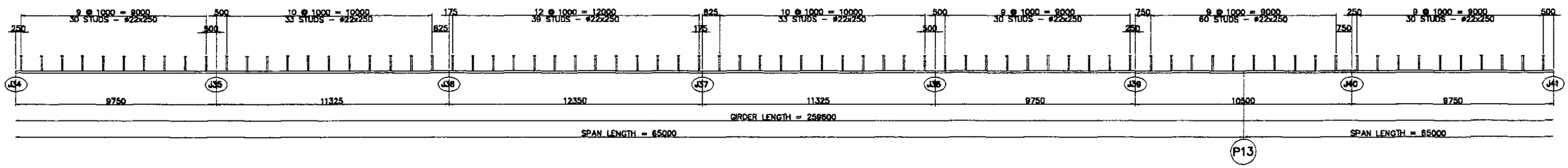
SCALE : AS SHOWN

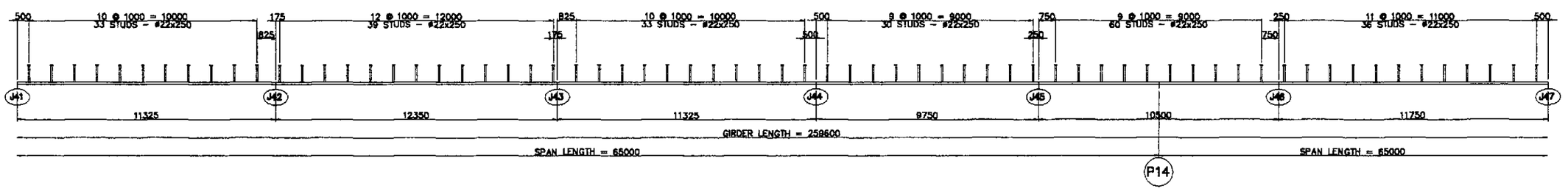
FULL SIZE A1

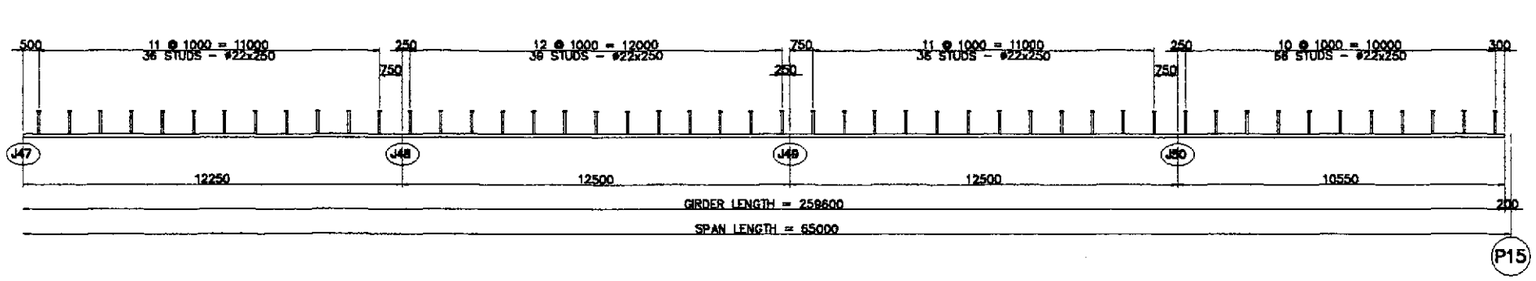
SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
SHEAR STUD DETAILS
(PIER 6 to PIER 11)
(INITIAL STAGE)

SHEET NO. : B10M-05

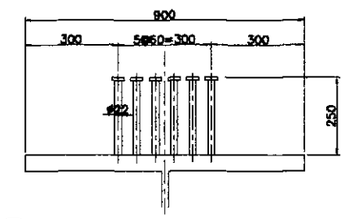




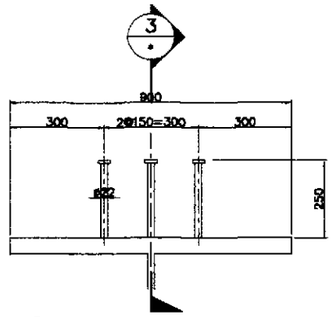




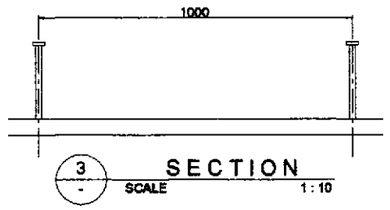
A — SHEAR STUD DETAILS (PIER 11 to PIER 15)
SCALE 1 : 100



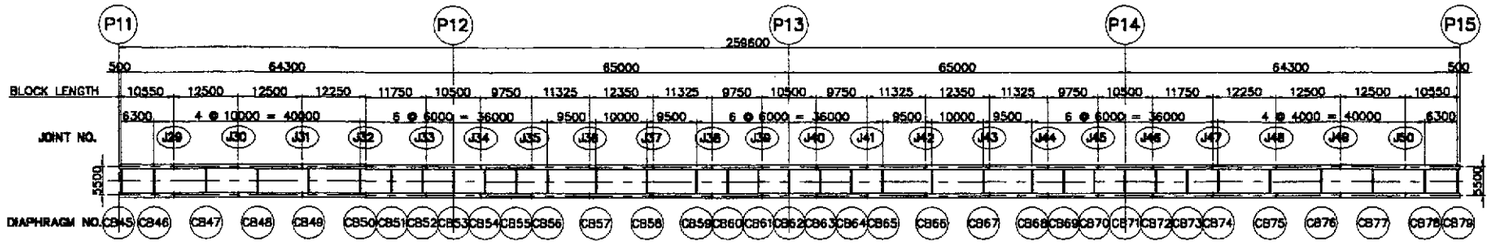
1 — STUD DETAIL AT SUPPORT
SCALE 1 : 10



2 — SECTION
SCALE 1 : 10



3 — SECTION
SCALE 1 : 10



B — KEY PLAN
SCALE 1 : 600

JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL — YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SALAS
CHECKED	10/7/02	J. SANTOS
SUBMITTED	10/9/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

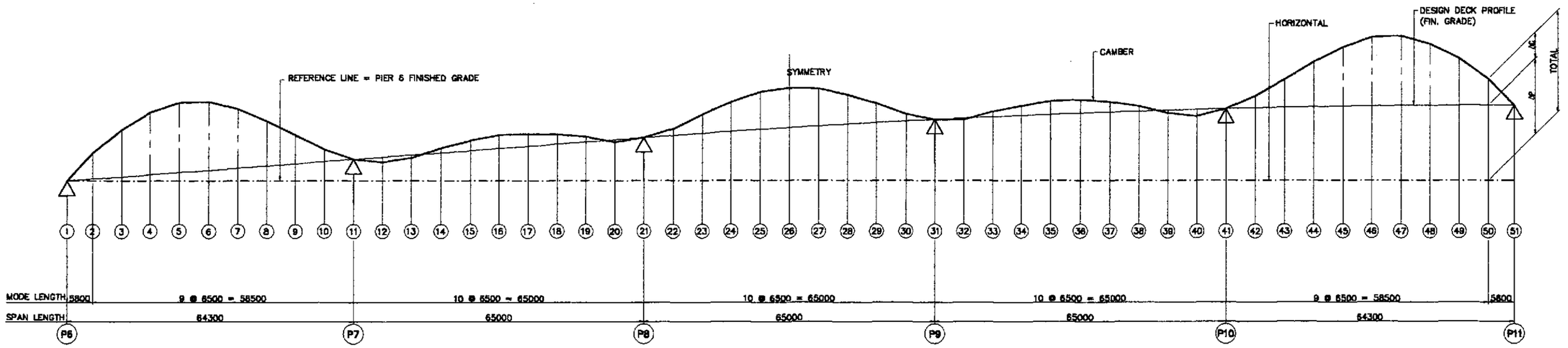
FJHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO	ADRIANO M. DOROY	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANONG
Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

SCALE : AS SHOWN — FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
SHEAR STUD DETAILS
(PIER 11 to PIER 15)
(INITIAL STAGE)

SHEET NO. : B10M-06



1 / - MAIN GIRDER CAMBER DIAGRAM

SECTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
STEEL	0	11	20	26	29	29	25	19	12	5	0	−2	−1	2	4	5	5	4	2	−1	0	3	8	12	15	16	15	12	8	3	0	−1	2	4	5	5	4	2	−1	−2	0	5	12	19	25	29	29	26	20	11	0
DECK SLAB AND HAUNCH	0	33	60	79	89	88	76	57	35	15	0	−5	−2	5	12	17	16	12	6	−1	0	9	24	37	48	51	48	37	24	9	0	−1	6	12	16	17	12	5	−2	−5	0	15	35	57	76	88	89	79	60	33	0
SIDEWALK SLAB	0	9	15	20	23	22	19	15	9	4	0	−2	−1	2	4	5	4	3	2	−1	0	3	6	10	12	13	12	10	6	3	0	−1	2	3	4	5	4	2	−1	−2	0	4	9	15	19	22	23	20	15	9	0
RAILING	0	2	4	5	5	5	4	3	2	1	0	−1	−1	1	1	1	1	1	1	−1	0	1	2	2	3	3	3	2	2	1	0	−1	1	1	1	1	1	1	−1	−1	0	1	2	3	4	5	5	5	4	2	0
ADJUSTING ASPHALT	0	4	7	10	11	11	9	7	5	2	0	−1	−1	1	2	2	2	2	1	−1	0	2	3	5	6	6	6	5	3	2	0	−1	1	2	2	2	2	1	−1	−1	0	2	5	7	9	11	11	10	7	4	0
SUB TOTAL (ΔC)	0	59	106	140	157	155	133	101	63	27	0	−11	−6	11	23	30	28	22	12	−5	0	15	43	68	84	89	84	66	43	15	0	−5	12	22	28	30	23	11	−6	−11	0	27	63	101	133	155	157	140	106	59	0
ΔP	0	18	37	57	76	96	115	135	154	174	193	213	232	252	271	291	310	330	349	369	388	407	426	444	461	478	493	509	523	537	551	563	575	587	597	608	617	626	634	641	648	654	660	665	669	672	675	678	679	680	681
TOTAL (ΔP + ΔC)	0	77	143	197	233	251	248	236	217	201	193	202	226	263	294	321	338	352	361	364	388	422	468	510	545	567	577	575	566	552	551	558	587	609	625	638	640	637	628	630	648	681	723	766	802	827	832	818	785	739	681

NOTES:

ΔC = CAMBER (MM)
ΔP = DESIGN DECK PROFILE (FINISHED GRADE) IN MM.

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
KEI KATAHIRA & ENGINEERS INTERNATIONAL
YEC YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SALAS
CHECKED	10/7/02	J. C. SANTOS
SUBMITTED	10/10/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

FUPIL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO G. TRAJANO	ADRIANO M. DOROY	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANONG
Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

PROJECT AND LOCATION :
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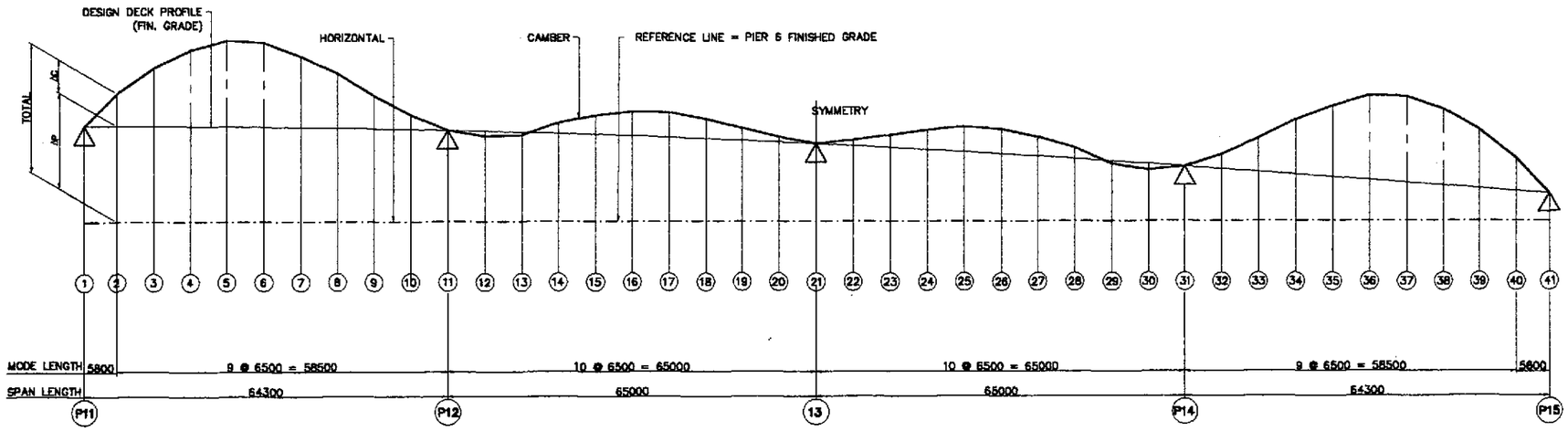
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

SCALE :
AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
MAIN GIRDER CAMBER DIAGRAM
(PIER 6 to PIER 11)
(INITIAL STAGE)

SHEET NO. :
B10M-07



1 / - MAIN GIRDER CAMBER DIAGRAM

SECTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
STEEL	0	11	19	25	28	28	24	18	11	5	0	−2	1	3	6	8	8	6	4	2	0	2	4	6	8	8	6	3	1	−2	0	5	11	18	24	28	28	25	19	11	0
DECK SLAB AND HAUNCH	0	32	59	77	87	85	73	55	33	14	0	−4	2	10	19	24	24	20	12	4	0	4	12	20	24	24	19	10	2	−4	0	14	33	55	73	85	87	77	58	32	0
SIDEWALK SLAB	0	9	15	20	22	22	19	14	9	4	0	−1	1	3	5	6	7	5	3	1	0	1	3	5	7	6	5	3	1	−1	0	4	9	14	19	22	22	20	15	9	0
RAILING	0	2	4	5	5	5	4	3	2	1	0	−1	1	1	1	2	2	1	1	1	0	1	1	1	2	2	1	1	1	−1	0	1	2	3	4	5	5	5	4	2	0
ADJUSTING ASPHALT	0	4	7	9	11	10	9	7	4	2	0	−1	1	2	3	3	3	3	2	1	0	1	2	3	3	3	3	2	1	−1	0	2	4	7	9	10	11	9	7	4	0
SUB TOTAL (ΔC)	0	58	104	136	153	150	129	97	59	26	0	−9	6	19	34	43	44	35	22	9	0	9	22	35	44	43	34	19	6	−9	0	26	59	97	129	150	153	136	104	58	0
ΔP	681	680	679	678	675	672	669	665	660	654	648	641	634	626	617	608	597	587	575	563	551	537	523	509	493	478	461	444	426	407	388	369	349	330	310	291	271	252	232	213	195
TOTAL (ΔP + ΔC)	681	738	783	814	828	822	798	762	719	680	648	632	640	645	651	651	641	622	597	572	551	546	545	544	537	521	495	463	432	398	388	395	408	427	439	441	424	388	336	271	195

N O T E S :

ΔC = CAMBER (MM)
ΔP = DESIGN DECK PROFILE (FINISHED GRADE) IN MM.

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SALAS
CHECKED	10/17/02	J. SANTOS
SUBMITTED	10/19/02	M. KOSHIMIZU TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

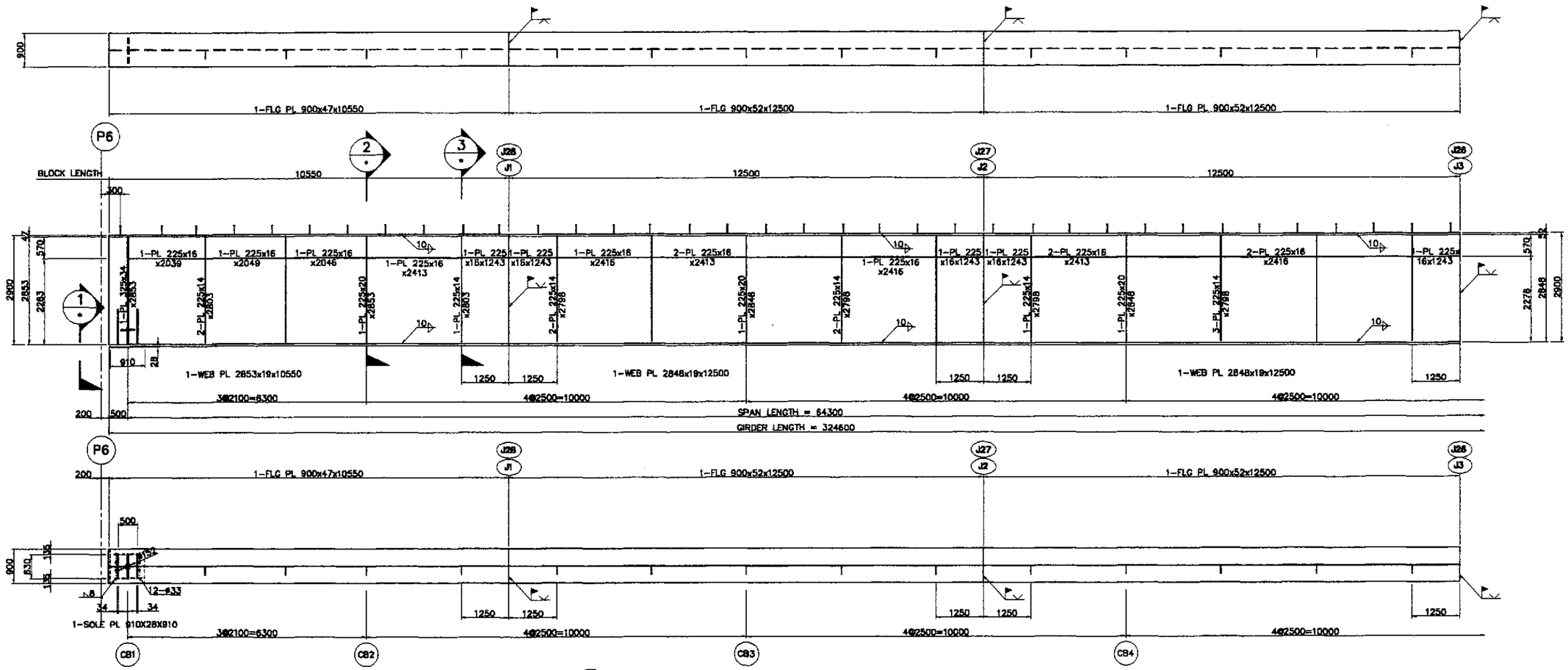
PUH - PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO	ADRIANO M. DOROY	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANONG
Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

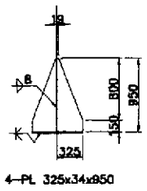
SCALE :
AS SHOWN
FULL SIZE A1

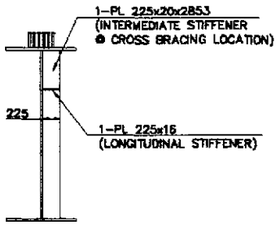
SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
MAIN GIRDER CAMBER DIAGRAM
(PIER 11 to PIER 15)
(INITIAL STAGE)

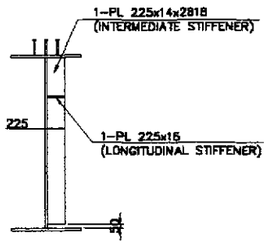
SHEET NO. :
B10M-08



A STIFFENER LAYOUT AND DETAILS (P6-P11)
SCALE 1 : 60







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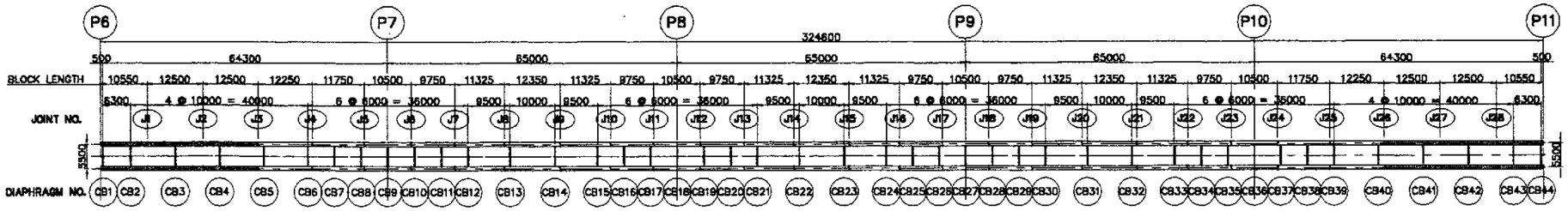
SCALE 1 : 40

2 SECTION
SCALE 1 : 40

3 SECTION
SCALE 1 : 40



B KEY PLAN
SCALE 1 : 600

NOTES:

1. STRUCTURAL STEEL SHALL BE SMA 490W/ GRADE 50W CONFORMING TO ASTM A 709M UNLESS OTHERWISE NOTED.
2. FOR STUD SHEAR DETAILS, SEE DWG. NO. B10M-05

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SUBMITTED	10/19/02	TEAM LEADER

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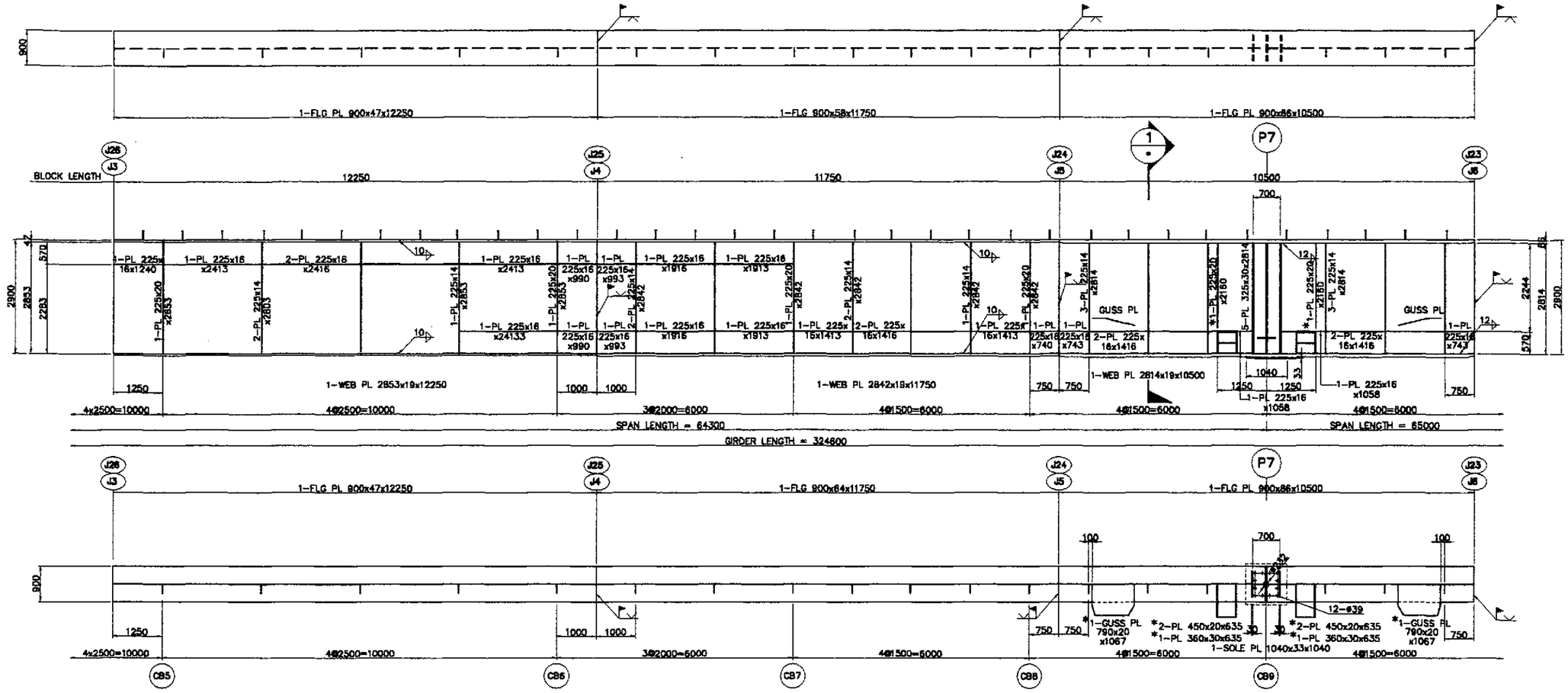
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

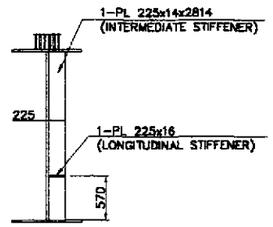
SCALE : AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
STIFFENER LAYOUT AND DETAILS
(PIER 6 to PIER 11) - 1 of 5
(INITIAL STAGE)

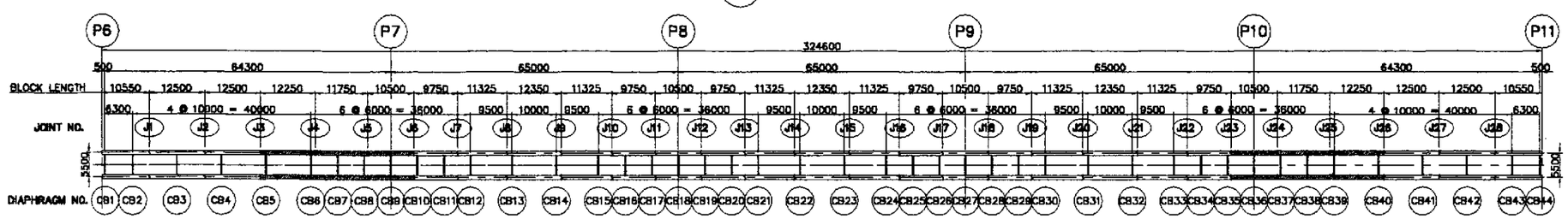
SHEET NO. : B10M-09



A — STIFFENER LAYOUT AND DETAILS (P6-P11)
SCALE 1 : 60



1 — SECTION
SCALE 1 : 40



B — KEY PLAN
SCALE 1 : 600

NOTES:

1. STRUCTURAL STEEL SHALL BE SMA 490W/ GRADE 50W CONFORMING TO ASTM A 709M UNLESS OTHERWISE NOTED.
2. FOR STUD SHEAR DETAILS, SEE DWG. NO. B10M-05

JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL — YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/16/07	F. M. SALAS
CHECKED	10/17/07	J. C. SANTOS
SUBMITTED	10/19/07	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
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PROJECT AND LOCATION :
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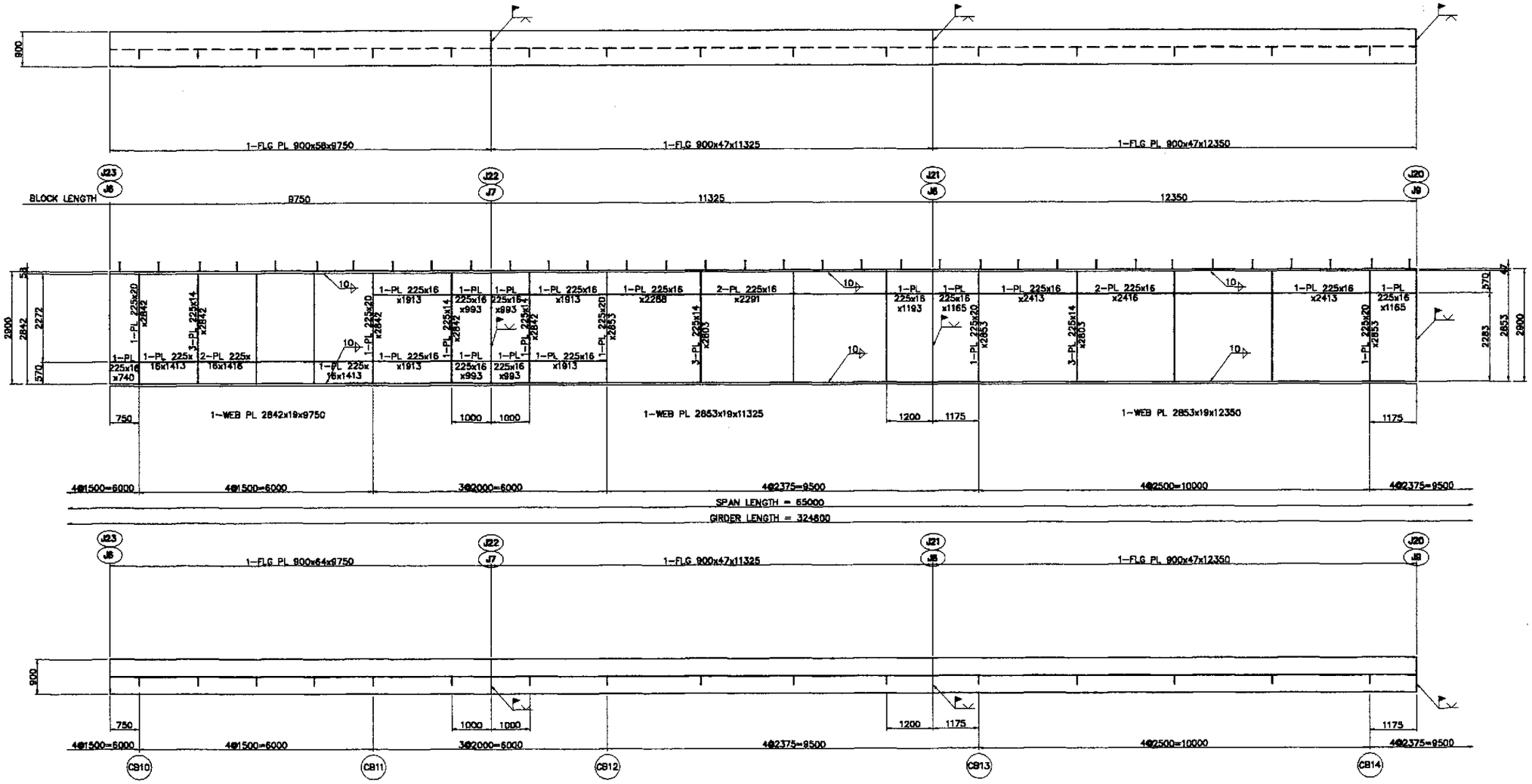
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

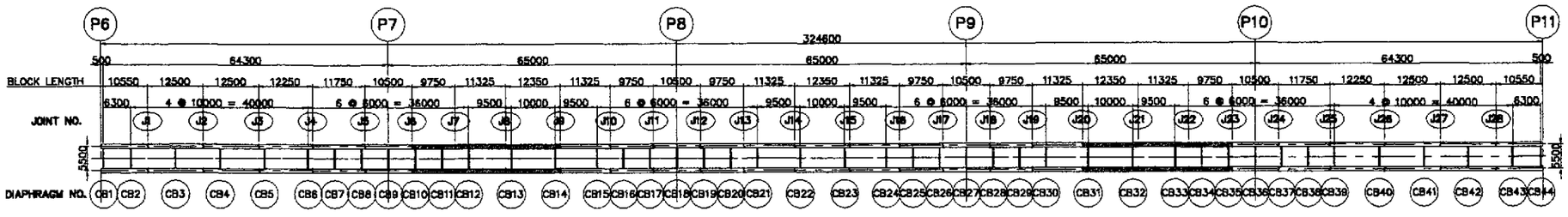
SCALE : AS SHOWN — FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
STIFFENER LAYOUT AND DETAILS
(PIER 6 to PIER 11) - 2 of 5
(INITIAL STAGE)

SHEET NO. : B10M-10



A — STIFFENER LAYOUT AND DETAILS (P6-P11)
SCALE 1 : 60



B — KEY PLAN
SCALE 1 : 600

NOTES:

1. STRUCTURAL STEEL SHALL BE SMA 490W/ GRADE 50W CONFORMING TO ASTM A 709M UNLESS OTHERWISE NOTED.
2. FOR STUD SHEAR DETAILS, SEE DWG. NO. B10M-05

JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SALAS
CHECKED	10/7/02	E. SANTOS
SUBMITTED	10/9/02	M. HOSHINO TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PJHL - PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
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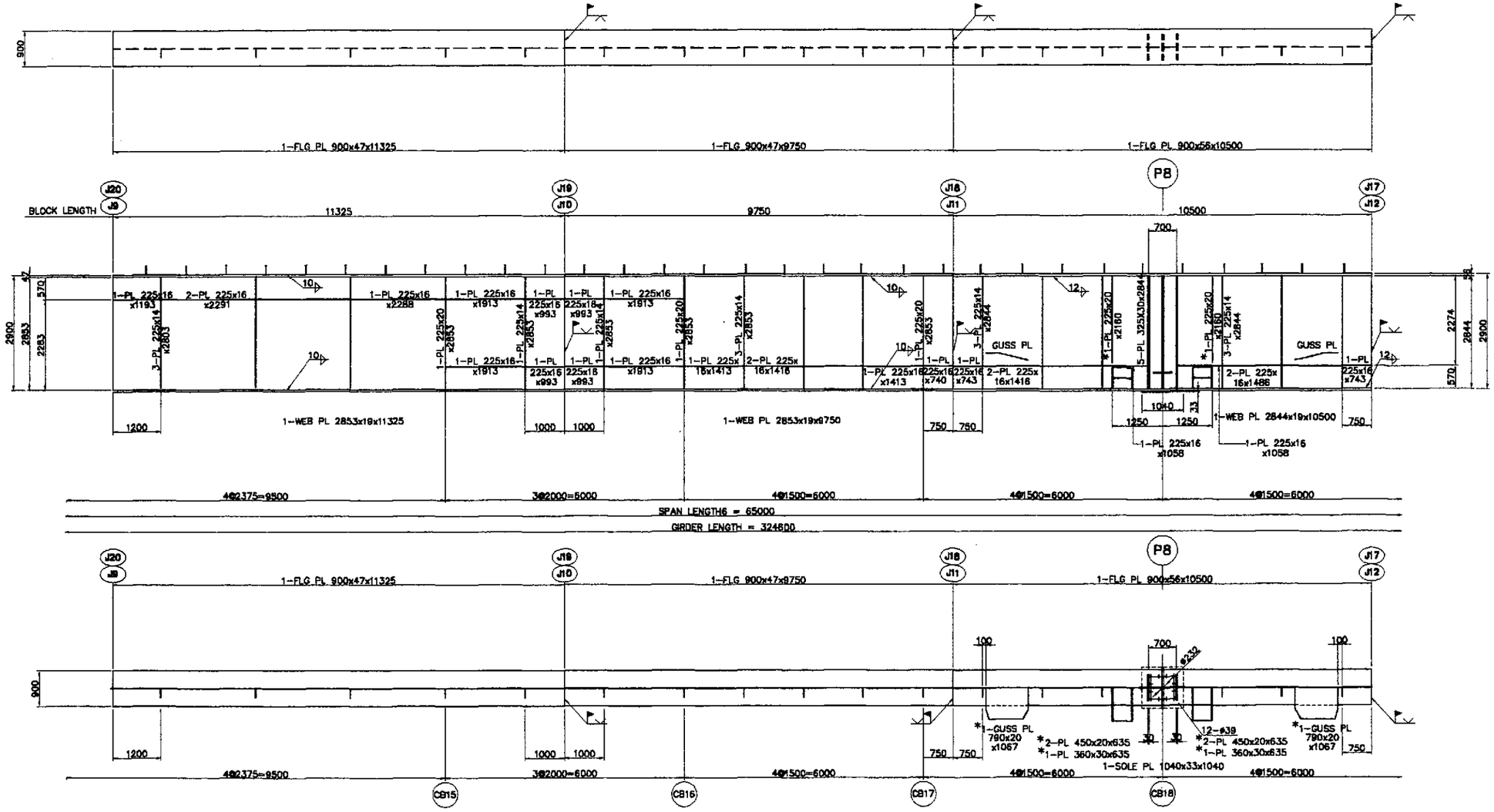
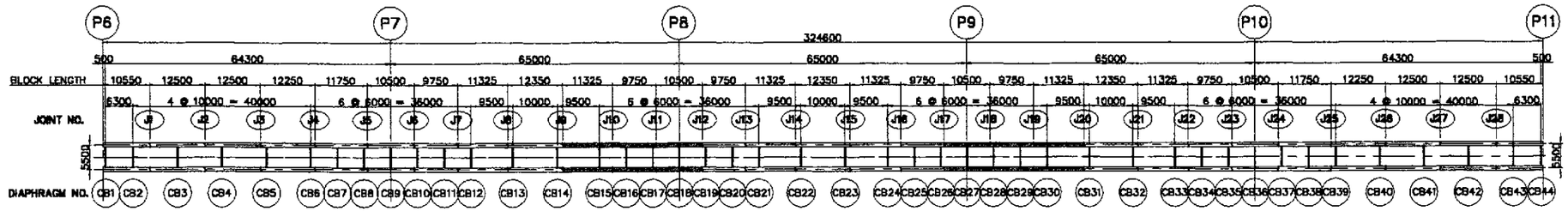
PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE III	AS SHOWN FULL SIZE A1	BRIDGE NO. 10 PAMPANGA RIVER BRIDGE STIFFENER LAYOUT AND DETAILS (PIER 6 to PIER 11) - 3 of 5 (INITIAL STAGE)	B10M-11



A — STIFFENER LAYOUT AND DETAILS (P6-P11)

SCALE 1 : 60



B — KEY PLAN

SCALE 1 : 600

NOTES:

1. STRUCTURAL STEEL SHALL BE SMA 490W/ GRADE 50W CONFORMING TO ASTM A 709M UNLESS OTHERWISE NOTED.
2. FOR STUD SHEAR DETAILS, SEE DWG. NO. B10M-05

JICA — JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL — YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SALAS
CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/19/02	TEAM LEADER

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PROJECT AND LOCATION :
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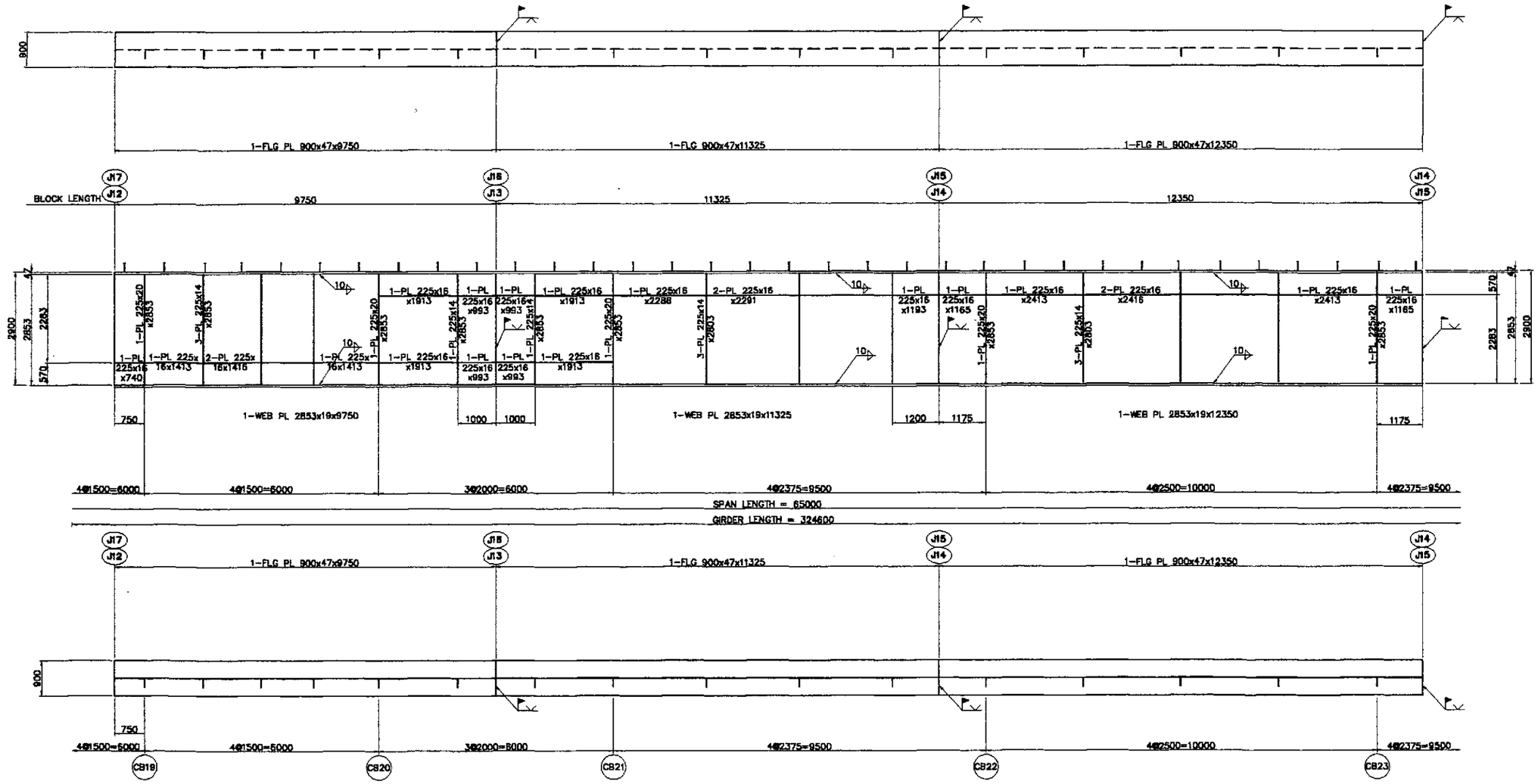
CABANATUAN BYPASS - CONTRACT PACKAGE III

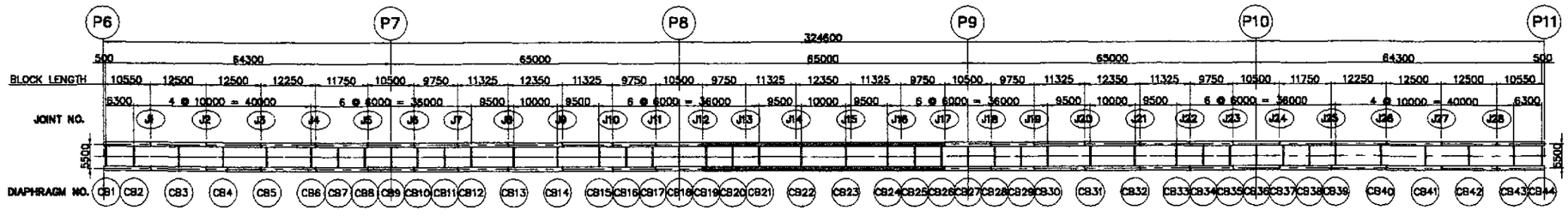
SCALE : AS SHOWN — FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
STIFFENER LAYOUT AND DETAILS (PIER 6 to PIER 11) - 4 of 5 (INITIAL STAGE)

SHEET NO. : B10M-12



A — STIFFENER LAYOUT AND DETAILS (P6-P11)
SCALE 1 : 60



B — KEY PLAN
SCALE 1 : 600

NOTES:

1. STRUCTURAL STEEL SHALL BE SMA 490W/ GRADE 50W CONFORMING TO ASTM A 709M UNLESS OTHERWISE NOTED.
2. FOR STUD SHEAR DETAILS, SEE DWG. NO. B10M-05

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
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CHECKED	10/18/07	J. C. SANTOS
SUBMITTED	10/19/07	TEAM LEADER

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PROJECT AND LOCATION :
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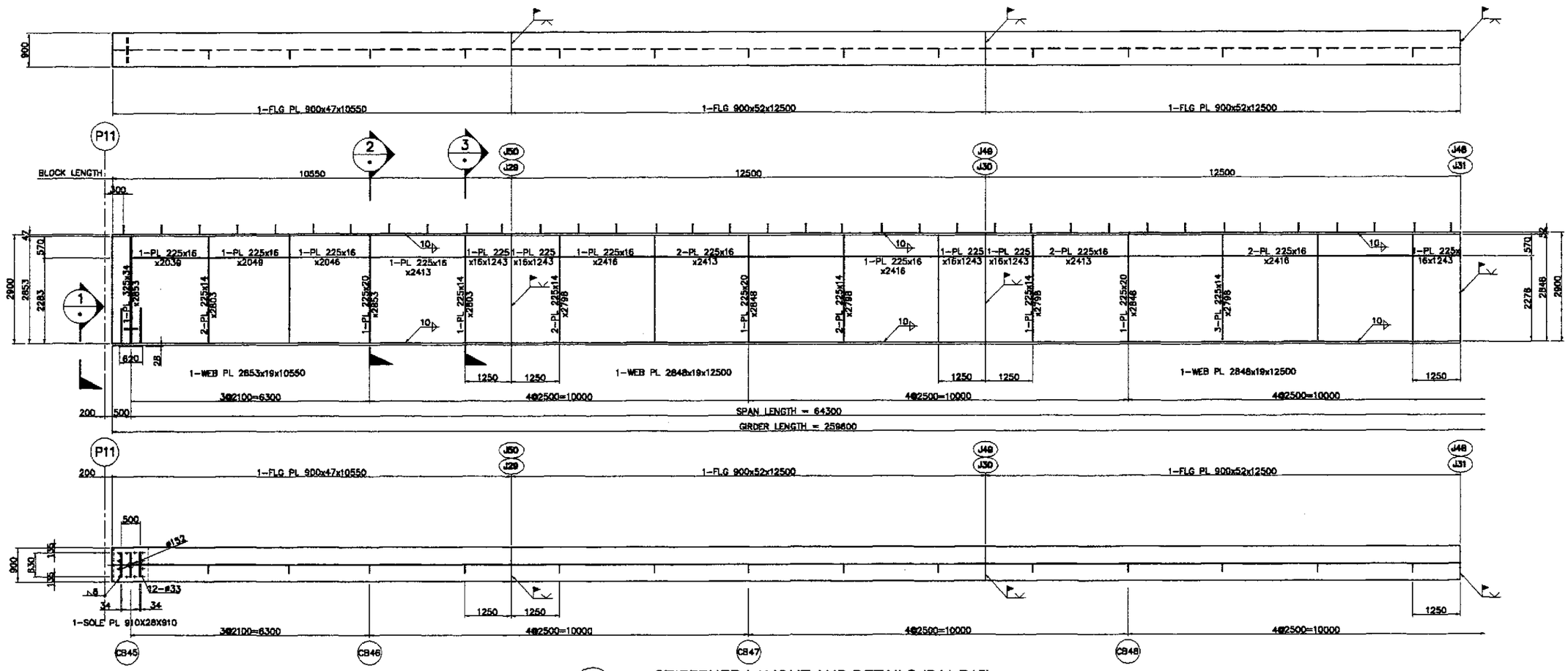
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

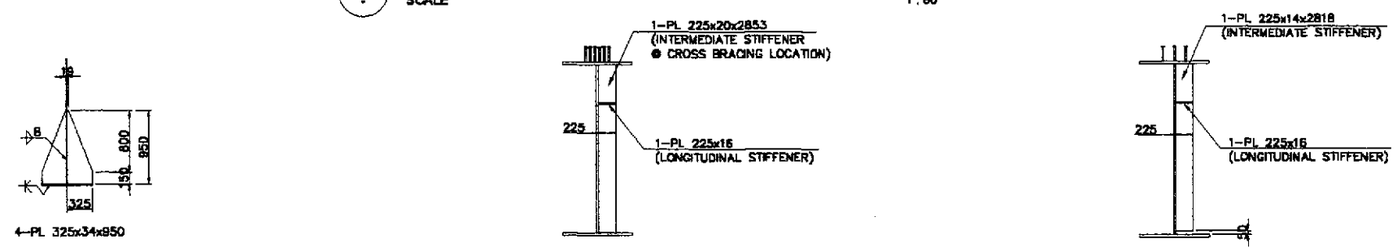
SCALE : AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
STIFFENER LAYOUT AND DETAILS
(PIER 6 to PIER 11) - 5 of 5
(INITIAL STAGE)

SHEET NO. :
B10M-13



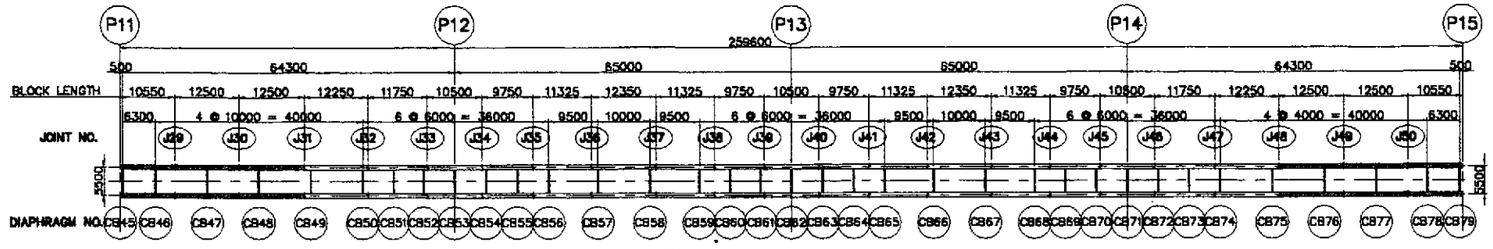
A STIFFENER LAYOUT AND DETAILS (P11-P15)
SCALE 1 : 60



1 SECTION — SCALE 1 : 40

2 SECTION — SCALE 1 : 40

3 SECTION — SCALE 1 : 40



B KEY PLAN
SCALE 1 : 600

NOTES:

1. STRUCTURAL STEEL SHALL BE SMA 490W/ GRADE 50W CONFORMING TO ASTM A 709M UNLESS OTHERWISE NOTED.
2. FOR STUD SHEAR DETAILS, SEE DWG. NO. B10M-06

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JAPAN INTERNATIONAL COOPERATION AGENCY
KEI KATAHIRA & ENGINEERS INTERNATIONAL
YEO YACHIYO ENGINEERING CO., LTD.

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DESIGNED	10/8/07	F. U. SALAS
CHECKED	14/7/07	J. C. SANTOS
SUBMITTED	10/19/07	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
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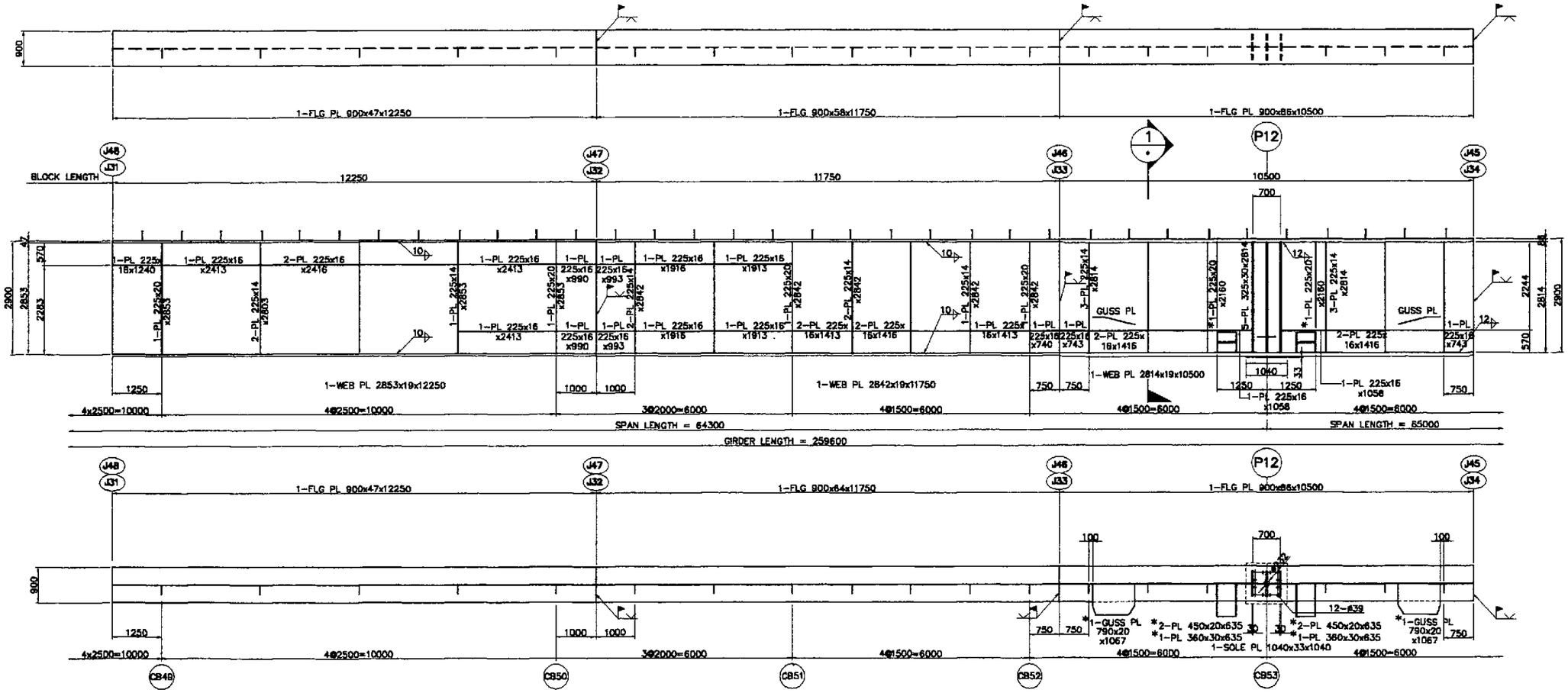
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

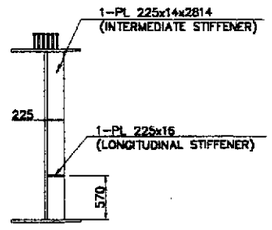
SCALE : AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
STIFFENER LAYOUT AND DETAILS
(PIER 11 to PIER 15) - 1 of 4
(INITIAL STAGE)

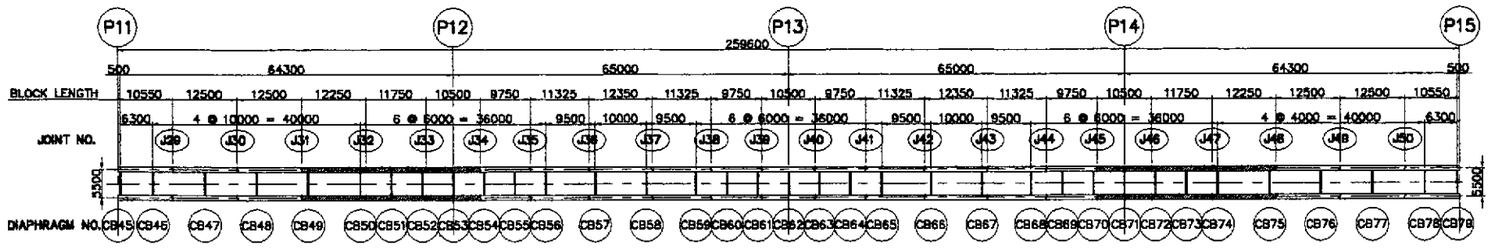
SHEET NO. :
B10M-14



A STIFFENER LAYOUT AND DETAILS (P11-P15)
SCALE 1 : 60



1 SECTION
SCALE 1 : 40



B KEY PLAN
SCALE 1 : 600

NOTES:

1. STRUCTURAL STEEL SHALL BE SMA 490W/ GRADE 50W CONFORMING TO ASTM A 709M UNLESS OTHERWISE NOTED.
2. FOR STUD SHEAR DETAILS, SEE DWG. NO. B10M-06

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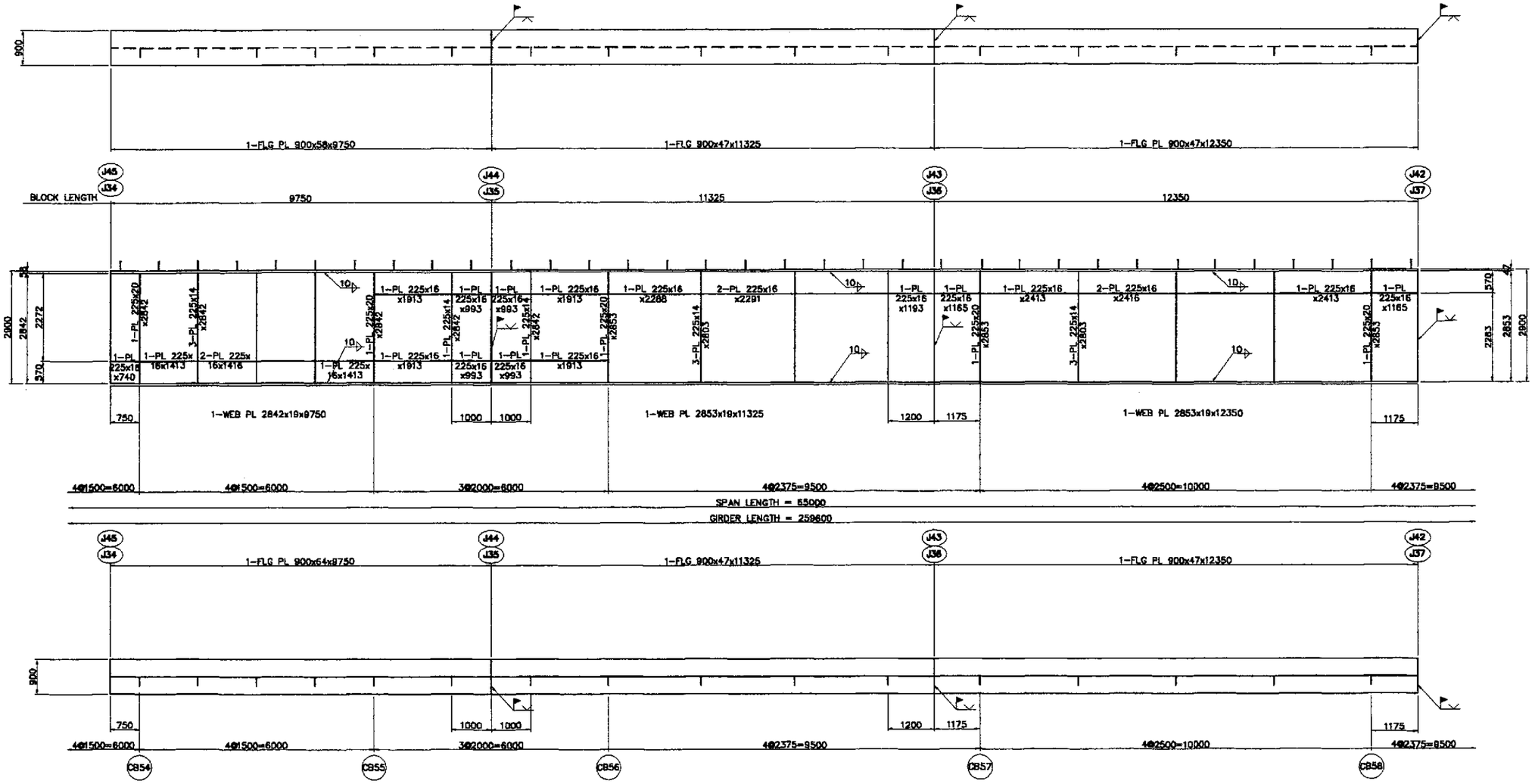
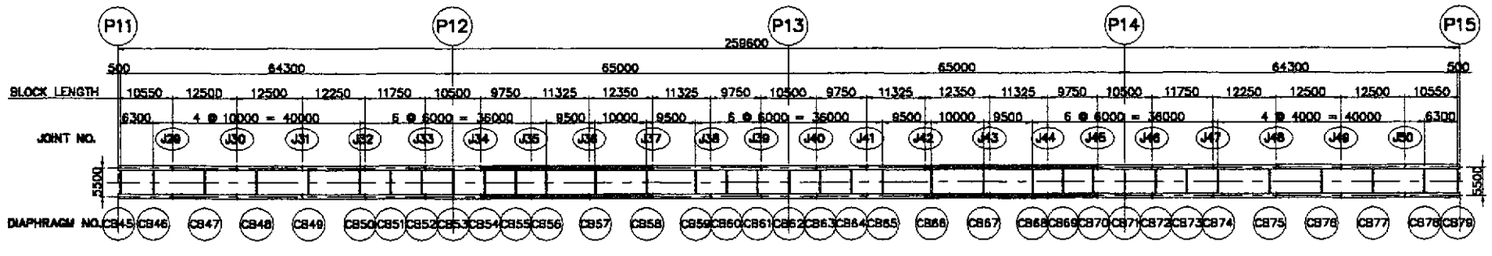
Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE III	AS SHOWN FULL SIZE A1	BRIDGE NO. 10 PAMPANGA RIVER BRIDGE STIFFENER LAYOUT AND DETAILS (PIER 11 to PIER 15) - 2 of 4 (INITIAL STAGE)	B10M-15



A — STIFFENER LAYOUT AND DETAILS (P11-P15)

SCALE 1 : 60



B — KEY PLAN

SCALE 1 : 600

NOTES:

1. STRUCTURAL STEEL SHALL BE SMA 490W/ GRADE 50W CONFORMING TO ASTM A 709M UNLESS OTHERWISE NOTED.
2. FOR STUD SHEAR DETAILS, SEE DWG. NO. B10M-06

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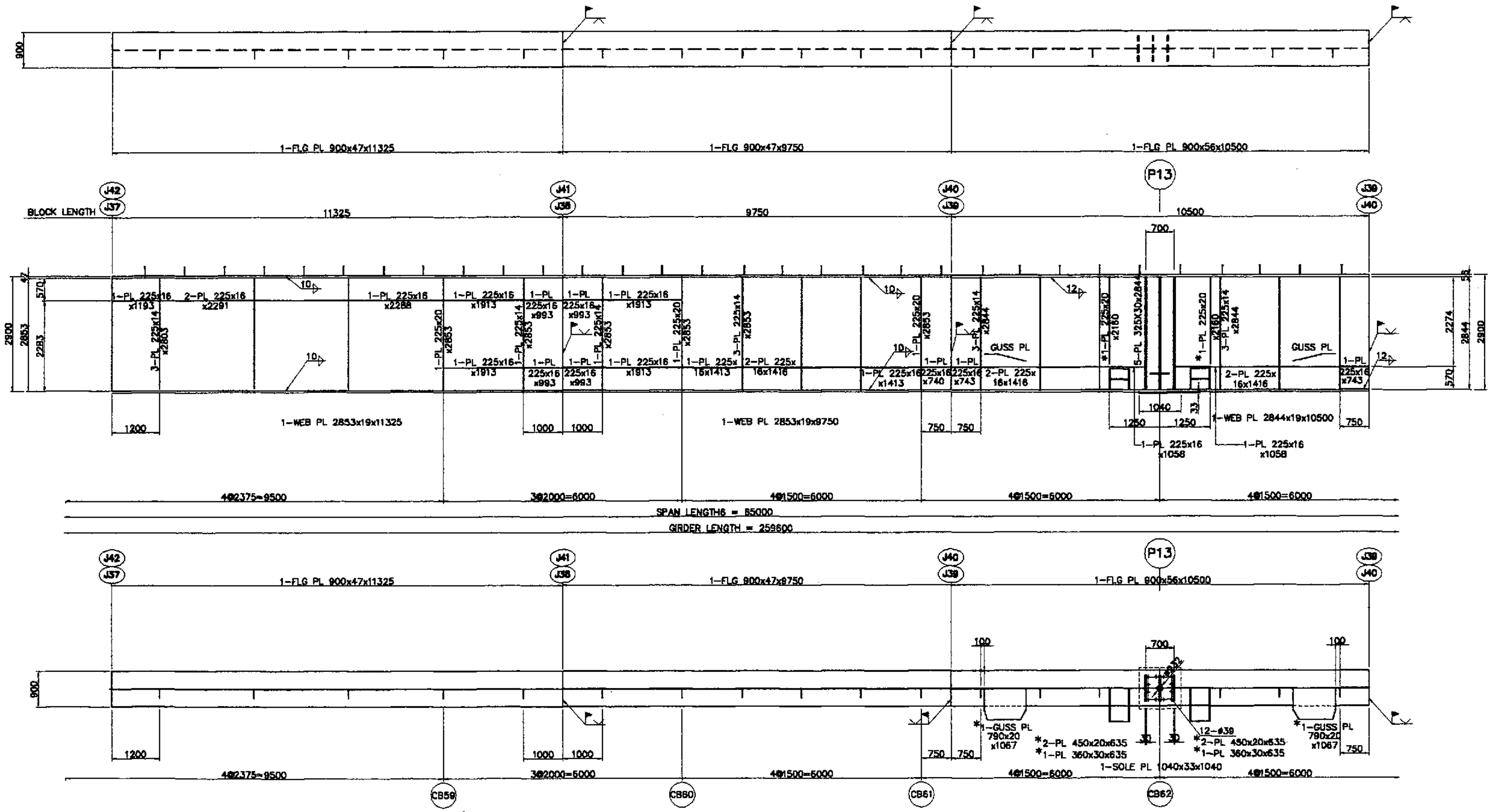
CABANATUAN BYPASS - CONTRACT PACKAGE III

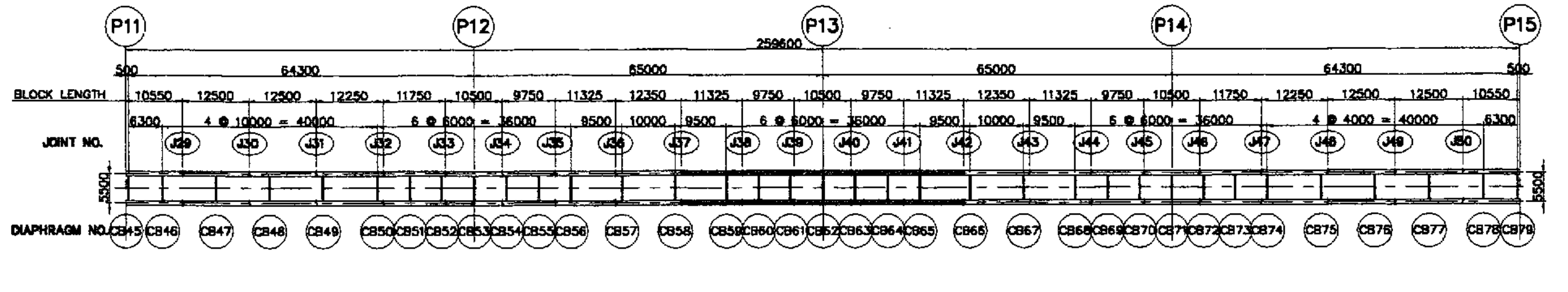
SCALE : AS SHOWN — FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
STIFFENER LAYOUT AND DETAILS (PIER 11 to PIER 15) - 3 of 4 (INITIAL STAGE)

SHEET NO. : B10M-16



A STIFFENER LAYOUT AND DETAILS (P11-P15)
SCALE 1:60



B KEY PLAN
SCALE 1:600

NOTES:

1. STRUCTURAL STEEL SHALL BE SMA 490W/ GRADE 50W CONFORMING TO ASTM A 709M UNLESS OTHERWISE NOTED.
2. FOR STUD SHEAR DETAILS, SEE DWG. NO. B10M-06

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YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/3/02	F. M. SALAS
CHECKED	10/10/02	J. C. SANTOS
SUBMITTED	10/10/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

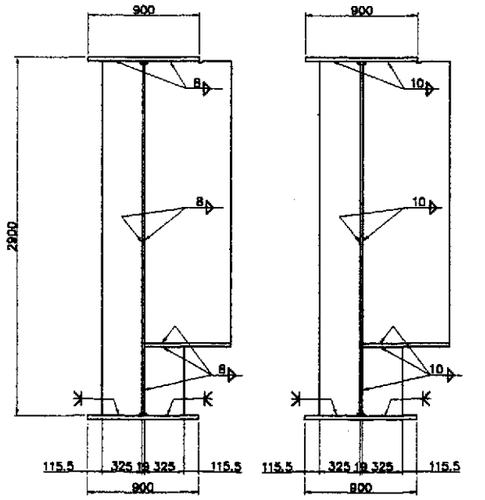
DPWH – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO, Project Director	ADRIANO M. DOROY, Chief, Bridges Division	GILBERTO S. REYES, Director IV (OIC)	MANUEL M. BONOAN, Undersecretary	SIMEON A. DATUMANONG, Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

SCALE : AS SHOWN
FULL SIZE A1

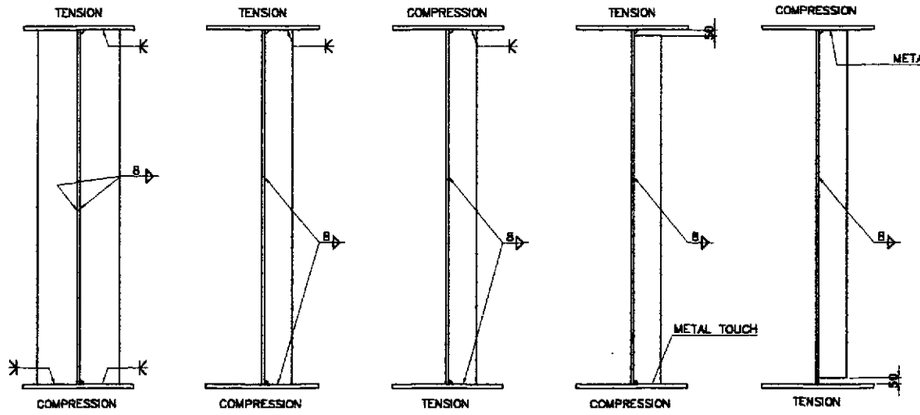
SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
STIFFENER LAYOUT AND DETAILS
(PIER 11 to PIER 15) - 4 of 4
(INITIAL STAGE)

SHEET NO. : B10M-17



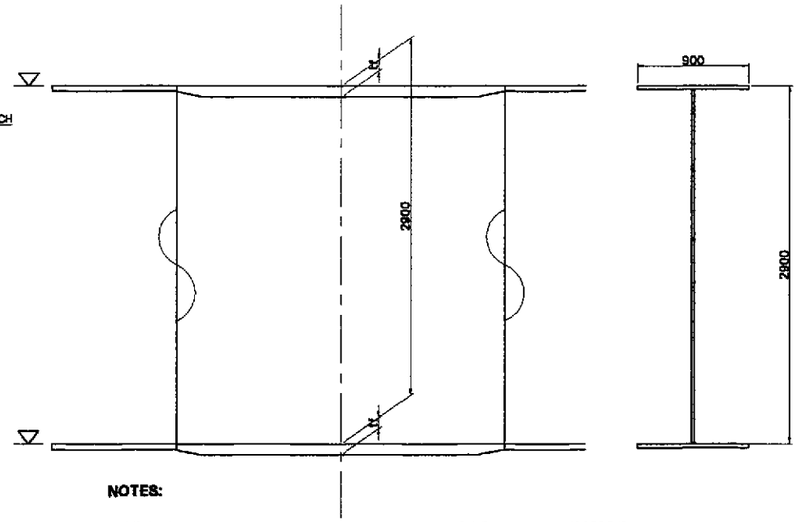
EXTERIOR SUPPORT INTERIOR SUPPORT

1 BEARING STIFFENERS DETAIL
SCALE 1:25



AT BEARING STIFFENER | AT CROSS - BRACING POSITION | AT INTERMEDIATE VERTICAL STIFFENER

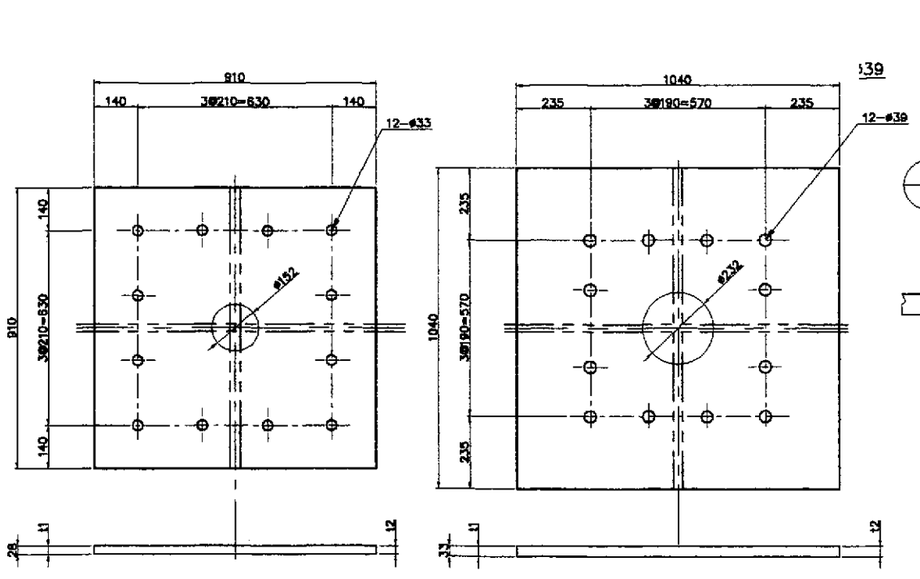
2 TRANSVERSE INTERMEDIATE STIFFENERS DETAIL
SCALE 1:6



NOTES:

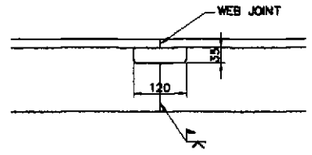
1. THE DEPTH OF MAIN GIRDER, D=2800mm IS MEASURED FROM THE TOP OF TOP FLANGE TO THE TOP OF BOTTOM FLANGE.
2. VARIATION OF THE THICKNESS OF TOP FLANGE SHALL BE DONE ON THE LOWER SIDE. THE TOP OF TOP FLANGE SHALL HAVE ONE CONTINUOUS LINE.
3. VARIATION ON THICKNESS OF BOTTOM FLANGE SHALL ALSO BE DONE ON THE LOWER SIDE.

3 GIRDER WEB DETAIL
SCALE 1:6

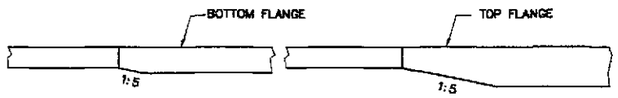


1-SOLE PL 910x28x910 (P5, P11 & P15) | 1-SOLE PL 1040x33x1040 (P7-P10, P12-P14)

4 SOLE PLATE DETAIL
SCALE 1:10



5 LONGITUDINAL STIFFENER CONNECTION DETAIL
SCALE 1:6

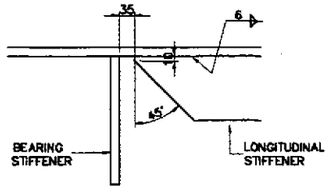


6 FLANGE WELD CONNECTION DETAIL
SCALE 1:6

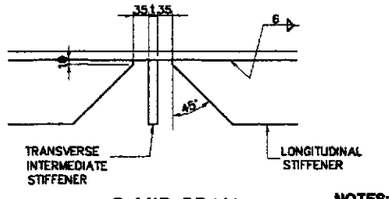
SCHEDULE OF SOLE PLATE THICKNESS

LOCATION	t1	t2
PIER 6	28	30.7
PIER 7	33	36.1
PIER 8	33	36.1
PIER 9	33	36.1
PIER 10	33	36.1
PIER 11	28	28
PIER 12	36.1	33
PIER 13	36.1	33
PIER 14	36.1	33
PIER 15	30.7	28

A STIFFENER DETAILS
SCALE AS SHOWN

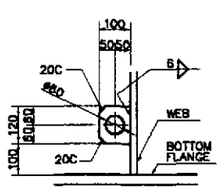


@ BEARING SUPPORT

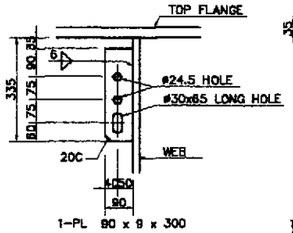


@ MID SPAN

7 END OF LONGITUDINAL STIFFENER DETAIL
SCALE NTS



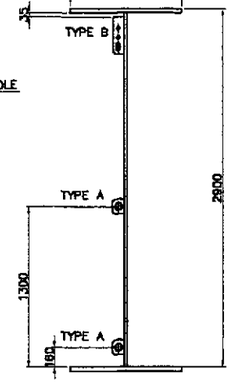
TYPE A



TYPE B

NOTE: THE CONTRACTOR SHALL PREPARE SHOP DRAWINGS OF SUSPENDING PIECE AND SCAFFOLDING SUPPORT FOR THE APPROVAL OF THE ENGINEER.

9 TYPICAL SUSPENDING PIECE DETAILS
SCALE 1:10



8 SUSPENDING PIECE LOCATION
SCALE 1:25

NOTES:

1. MAIN GIRDER STEEL SHALL BE SMA490W/GRADE 50W CONFORMING TO ASTM A 709M UNLESS OTHERWISE NOTED.
2. ALL OTHER STRUCTURAL STEEL SHALL BE SMA400W GRADE 36W CONFORMING TO ASTM A 709M UNLESS OTHERWISE NOTED.

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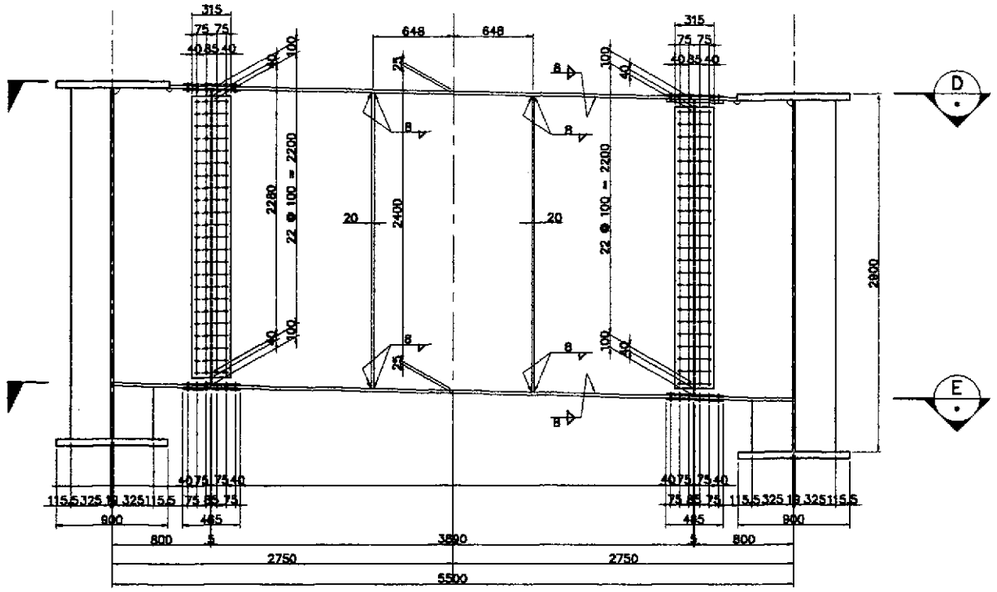
DESIGNED		F. M. SALAS
CHECKED		J. C. SANTOS
SUBMITTED		TEAM LEADER

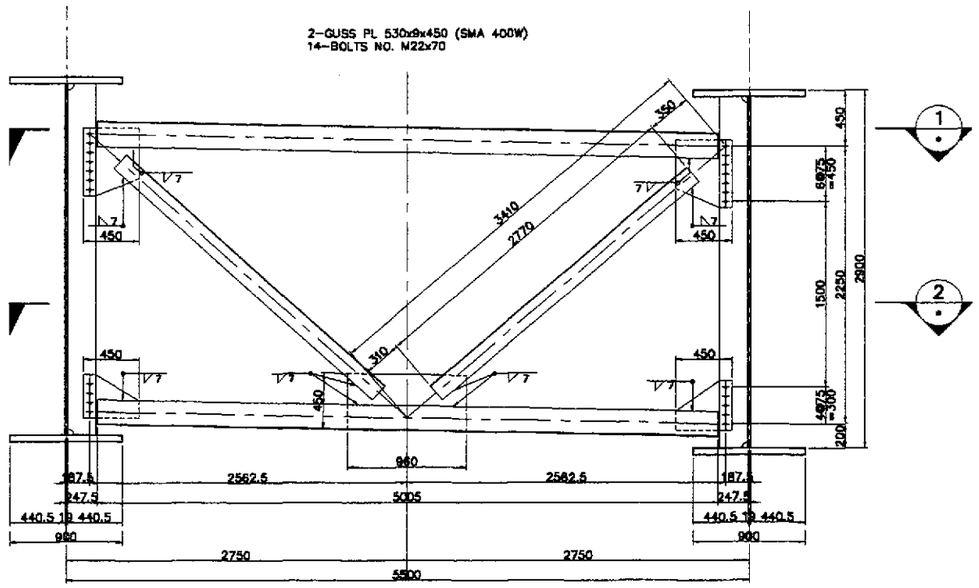
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PUHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO	ADRIANO M. DOROY	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANONG
Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	BRIDGE NO. 10 PAMPANGA RIVER BRIDGE STIFFENER DETAILS (INITIAL STAGE)	B10M-18
CABANATUAN BYPASS - CONTRACT PACKAGE III	FULL SIZE A1		



A EXTERIOR (INTERIOR) SUPPORT DIAPHRAGM DETAILS
SCALE 1 : 25

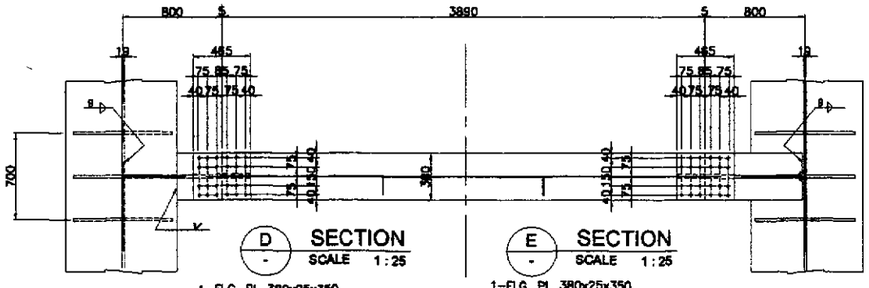


2-L 200x200x22.0x5005 (SMA 400W)
2-L 150x150x18.0x2770 (SMA 400W)
1-GUSS PL 450x9x960 (SMA 400W)

1-GUSS PL 380x9x450 (SMA 400W)
5-BOLTS NO. M22x70

1-GUSS PL 380x9x4500 (SMA 400W)
5-BOLTS NO. M22x70

C INTERMEDIATE CROSS BRACING DETAILS
SCALE 1 : 25



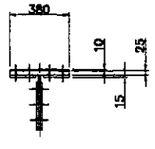
D SECTION
SCALE 1 : 25

1-FLG PL 380x25x350
1-WEB PL 2400x34x790 (2400x30x790)
1-FLG PL 380x25x790
1-RIB PL 325x34x425 (325x30x425)

E SECTION
SCALE 1 : 25

1-FLG PL 380x25x350
1-WEB PL 2400x34x790 (2400x30x790)
1-FLG PL 380x25x790
1-RIB PL 325x34x425 (325x30x425)

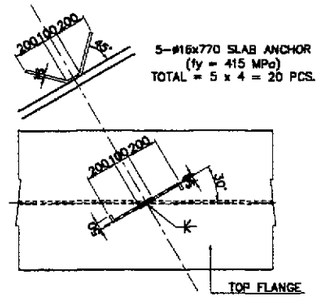
NOTE : VALUES IN PARENTHESIS ARE FOR PIERS P7, P8, P9, P10, P12, P13 & P14.
STANDARD VALUES ARE FOR PIERS P6, P11 & P15.



1-FLG PL 380x25x3890
1-WEB PL 2400x16x3890 (2400x15x3890)
1-FLG PL 380x25x3880
2-V. STIFF PL 170x20x2400

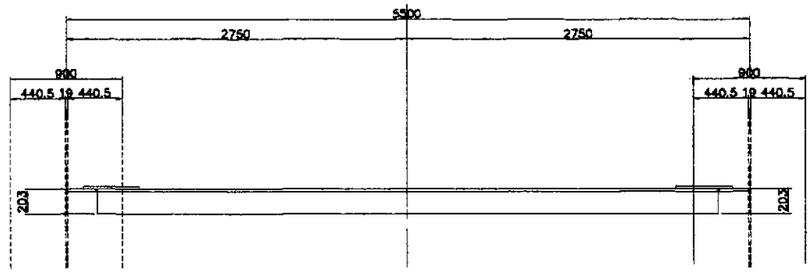
4-SPL PL 380x10x465
8-SPL PL 155x15x465
86-BOLTS M22x95
4-SPL PL 2280x8x315
4-FILL PL 2280x8x155 (2280x8x155)
184-BOLTS M22x90

B TOP & BOTTOM CONNECTION
SCALE 1 : 25



NOTE : PROVIDE 5 PCS. OF SLAB ANCHOR AT TOP FLANGE OF EXTERIOR SUPPORT DIAPHRAGM FOR CAST-IN-PLACE SLAB.

F SLAB ANCHOR DETAILS
SCALE 1 : 20



1 SECTION
SCALE 1 : 25

2 SECTION
SCALE 1 : 25

NOTE :
1. ALL STEEL SHALL BE SMA490W OR GRADE 50W CONFORMING TO ASTM A 709M UNLESS OTHERWISE NOTED.
2. ALL BOLTS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO ASTM A490M.
3. ALL "L" SHADED STEEL SHALL BE CONFORMING TO SMA 400W/ASTM A36W (CORROSION RESISTANT) UNLESS OTHERWISE NOTED.
4. STUD SHEAR DETAIL – SEE DRAWINGS "STUD SHEAR LAYOUT" WITH ASTM A 108 FOR STUD SHEAR DETAIL.
5. TRANSVERSE RESTRAINER – SEE DRAWINGS "TRANSVERSE RESTRAINER"

1 DETAIL OF CROSS BEAMS
SCALE AS SHOWN

JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL

YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SALAS
CHECKED	10/11/02	J. E. SANTOS
SUBMITTED	10/19/02	M. M. [illegible] TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PUHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO	ADRIANO M. DOROY	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANONG
Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

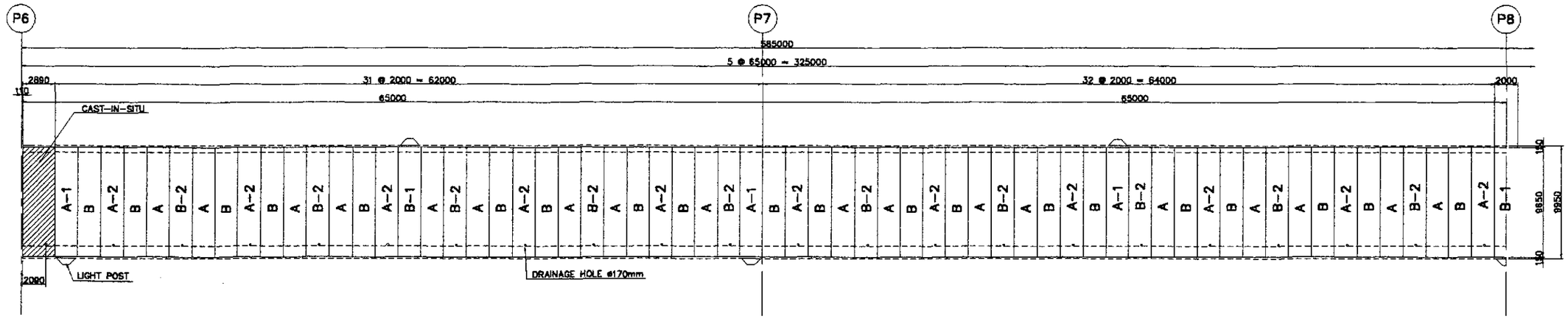
PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

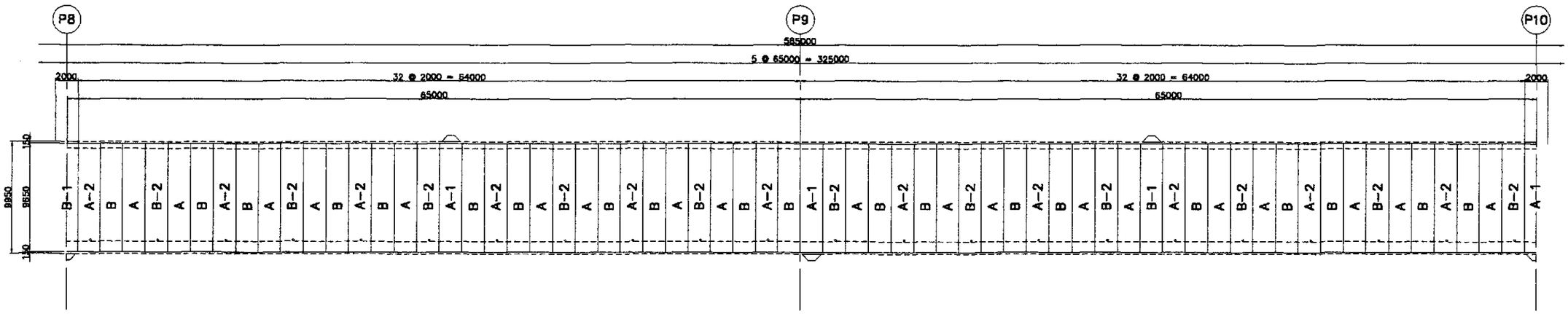
SCALE : AS SHOWN FULL SIZE A1

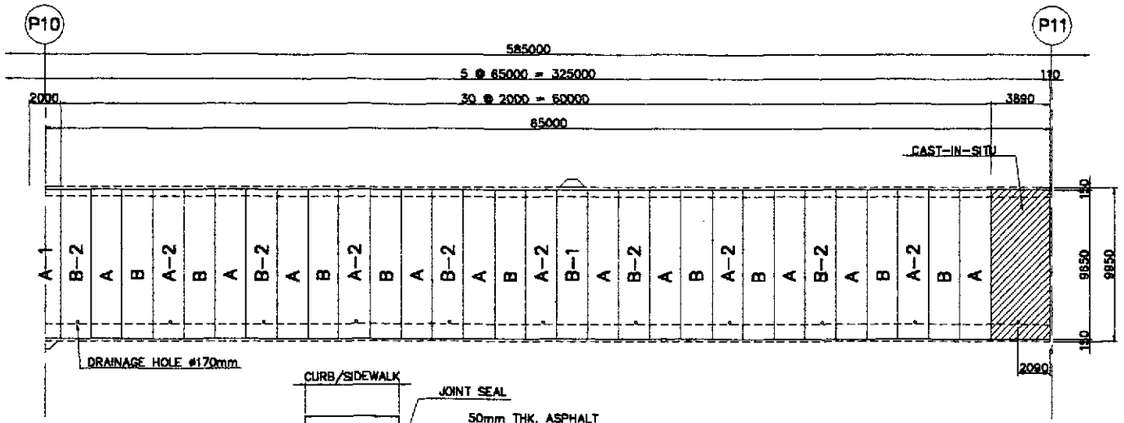
SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
DETAIL OF DIAPHRAGMS OR CROSS BEAMS
(INITIAL STAGE)

SHEET NO. : B10M-19

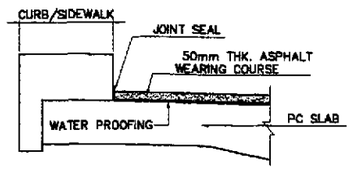
SUPERSTRUCTURE - PC SLAB



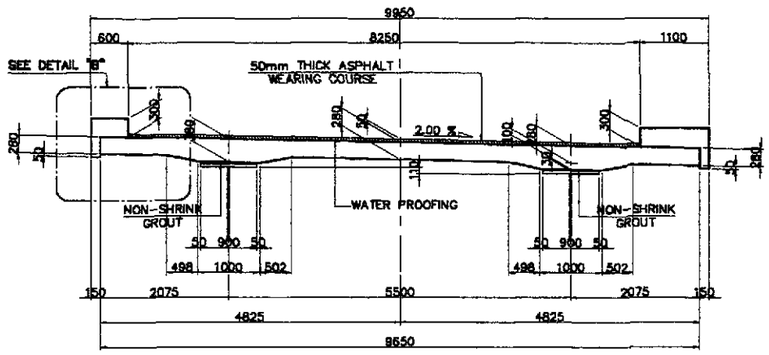




B — DECK WATER PROOFING DETAILS
SCALE 1 : 20



1 — DECK SLAB LAYOUT PLAN (PIER 6 TO PIER 11)
SCALE 1 : 200



A — TYPICAL SECTION
SCALE 1 : 50

TYPE	NO.	REMARKS
A	47	TYPICAL
A–1	6	W/ LIGHT POST
A–2	27	W/ DRAINAGE HOLE
B	49	TYPICAL
B–1	4	W/ LIGHT POST
B–2	26	W/ DRAINAGE HOLE
TOTAL	159	

NOTE :
1. PROVIDE ø170mm HOLES TO FIT ø150mm DRAINAGE PIPES. THE CONTRACTOR SHOULD PROVIDE SEAL TO FIT THE DRAINAGE PIPES TO THE HOLE PROVIDED.
2. DECK SLAB WATER PROOFING AS DISCUSSED IN THE SPECIFICATIONS SHALL BE APPLIED TO THE CONCRETE SLAB FOR THE MAIN BRIDGE PRIOR TO ASPHALT WEARING COURSE.
WATER PROOFING AREA = 2882 Sq.M.

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YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SALAS
CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/19/02	C. KOBAYASHI TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PUHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO Project Director	ADRIANO M. DOROY Chief, Bridges Division	GILBERTO S. REYES Director IV (OIC)	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary

PROJECT AND LOCATION :
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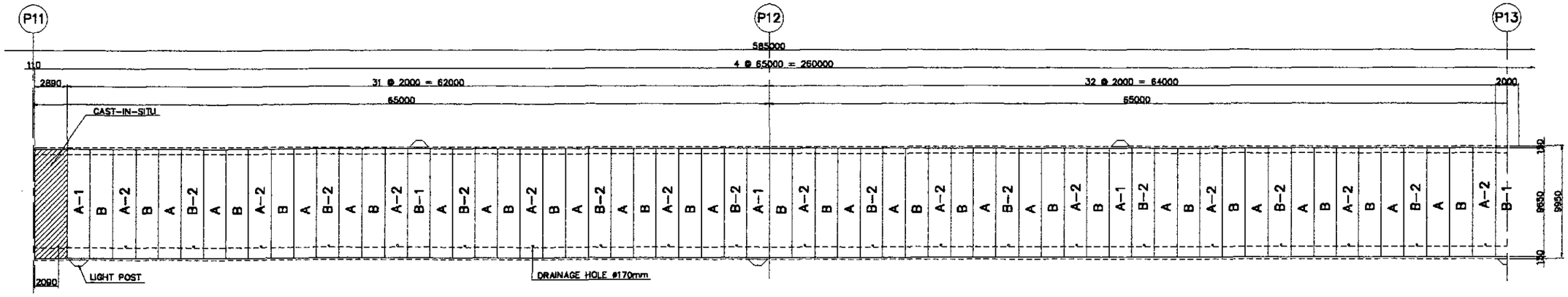
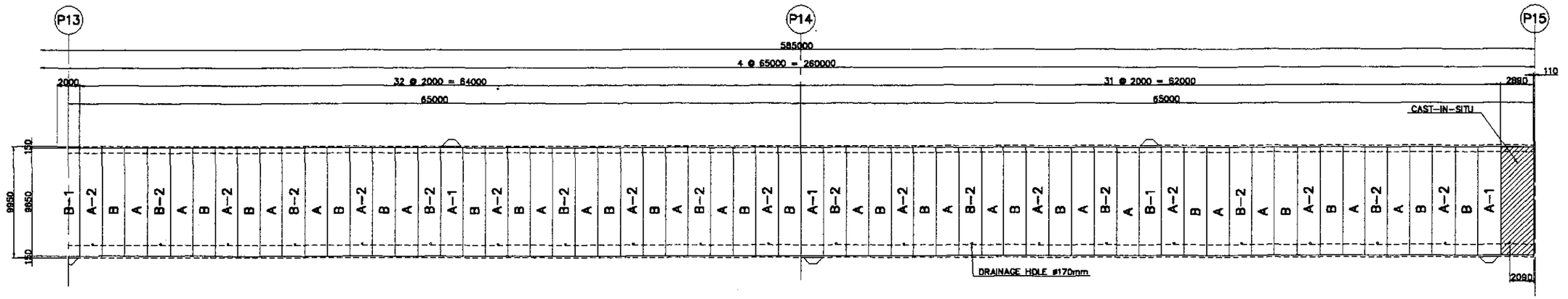
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

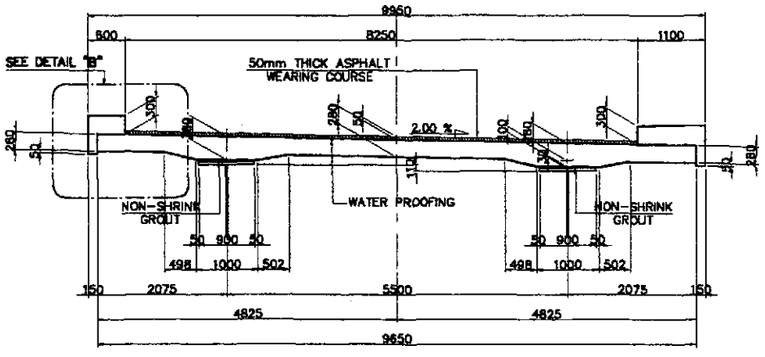
SCALE : AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
PC SLAB LAYOUT PLAN
(PIER 6 to PIER 11)
(INITIAL STAGE)

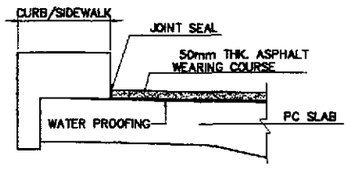
SHEET NO. : B10M-31



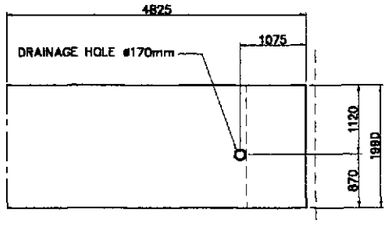


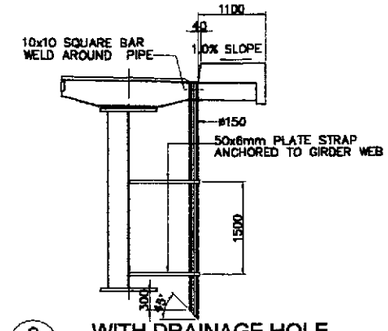


A — TYPICAL SECTION
SCALE 1 : 50

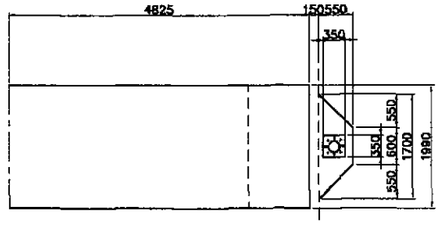


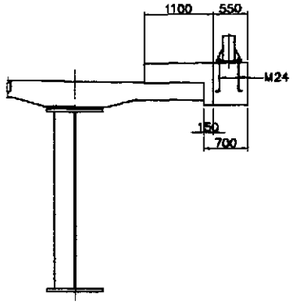
B — DEUCK WATER PROOFING DETAILS
SCALE 1 : 20





C — WITH DRAINAGE HOLE
SCALE 1 : 50





D — WITH LIGHT POST
SCALE 1 : 50

TYPE	NO.	REMARKS
A	36	TYPICAL
A-1	6	W/ LIGHT POST
A-2	22	W/ DRAINAGE HOLE
B	40	TYPICAL
B-1	3	W/ LIGHT POST
B-2	20	W/ DRAINAGE HOLE
TOTAL	127	

1 — DECK SLAB LAYOUT PLAN (PIER 11 TO PIER 15)
SCALE 1 : 200

NOTE :
1. PROVIDE ø170mm HOLES TO FIT ø150mm DRAINAGE PIPES. THE CONTRACTOR SHOULD PROVIDE SEAL TO FIT THE DRAINAGE PIPES TO THE HOLE PROVIDED.
2. DECK SLAB WATER PROOFING AS DISCUSSED IN THE SPECIFICATIONS SHALL BE APPLIED TO THE CONCRETE SLAB FOR THE MAIN BRIDGE PRIOR TO ASPHALT WEARING COURSE.
WATER PROOFING AREA = 2145 Sq.M.

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KEI KATAHIRA & ENGINEERS INTERNATIONAL
YEC YACHIYO ENGINEERING CO., LTD.

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SUBMITTED	10/10/02	TEAM LEADER

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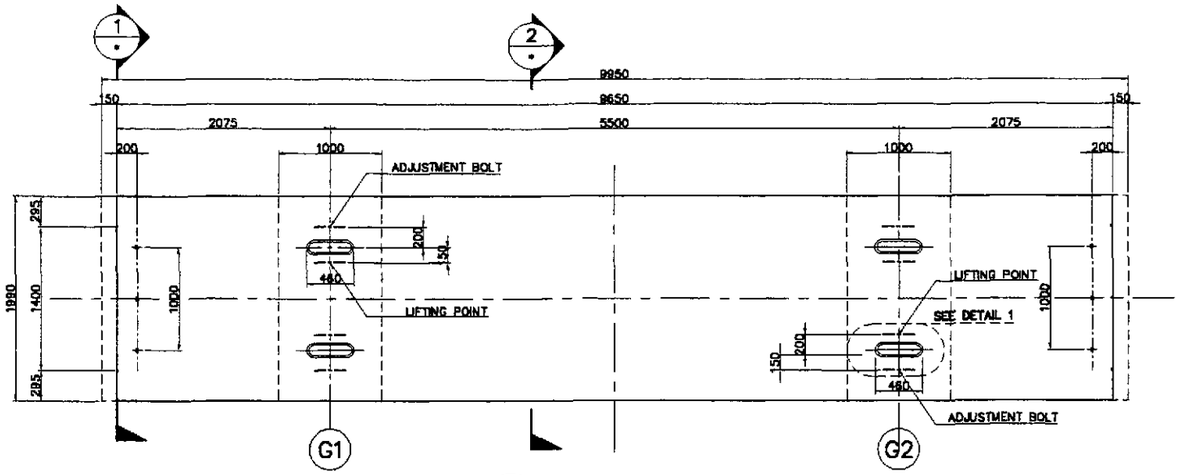
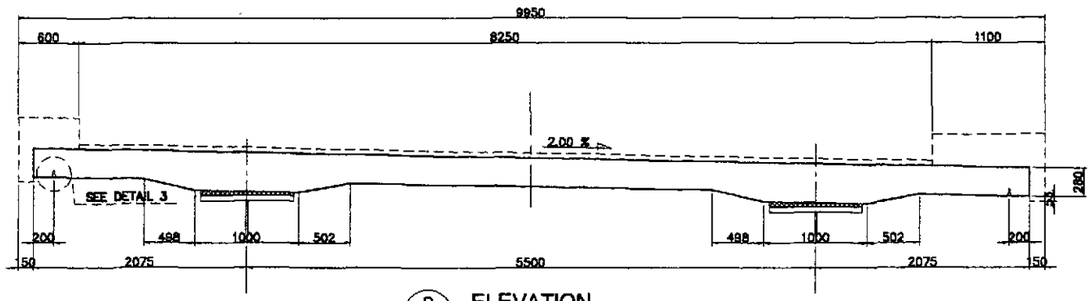
FUPL - PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO, Project Director	ADRIANO M. DOROY, Chief, Bridges Division	GILBERTO S. REYES, Director IV (OIC)	MANUEL M. BONOAN, Undersecretary	SIMEON A. DATUMANONG, Secretary

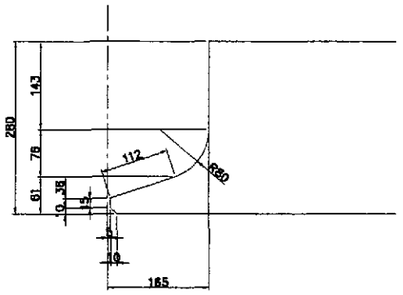
PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE III	AS SHOWN FULL SIZE A1	BRIDGE NO. 10 PAMPANGA RIVER BRIDGE PC SLAB LAYOUT PLAN (PIER 11 to PIER 15) (INITIAL STAGE)	B10M-32



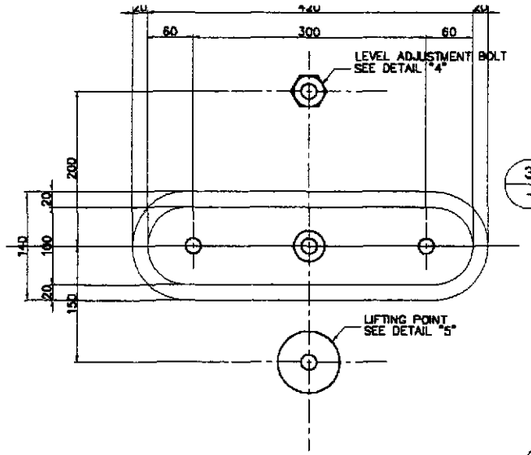
A PLAN
SCALE 1:30



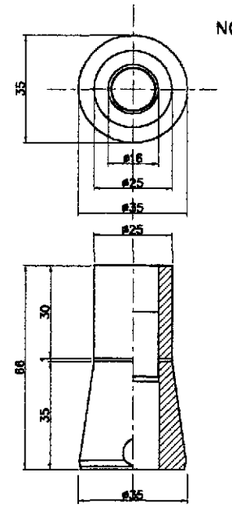
B ELEVATION
SCALE 1:30



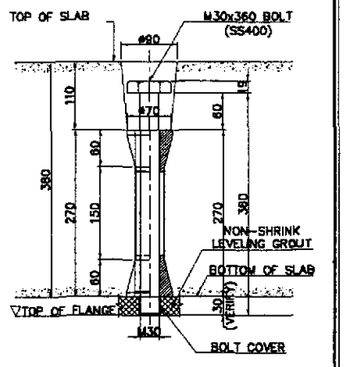
2 DETAIL 2
SCALE 1:30



1 DETAIL 1
SCALE 1:30

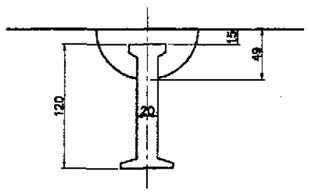


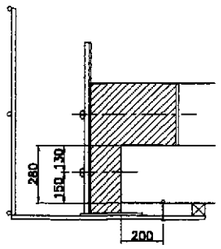
NOTE : THE CONTRACTOR SHOULD ENSURE THAT THE STEEL MEMBERS (INCLUDING TOP FLANGE) WILL NOT BE DAMAGED DURING PC SLAB ERECTION.



4 DETAIL 4 (LEVEL ADJUSTMENT BOLT)
SCALE 1:30

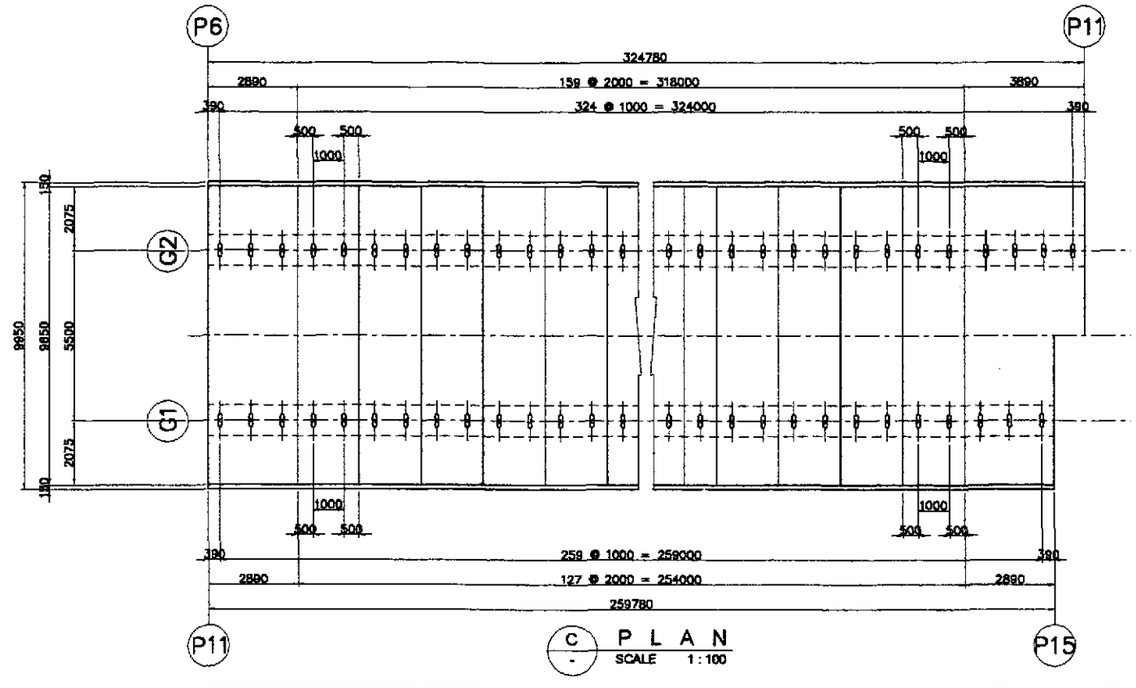
3 DETAIL 3 (FORM HANGER ANCHORAGE-FC1 INSERT)
SCALE 1:30



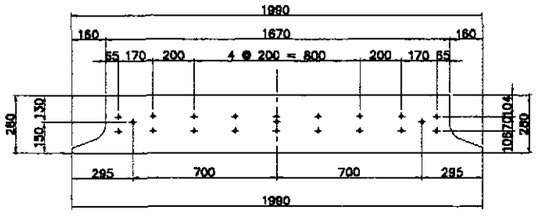


5 DETAIL 5 "LIFT ANCHOR"
SCALE 1:30

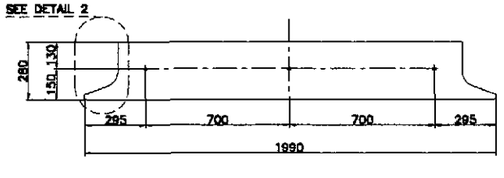
6 DETAIL 6 (HANGING FORM FOR CURB/SIDEWALK)
SCALE 1:30



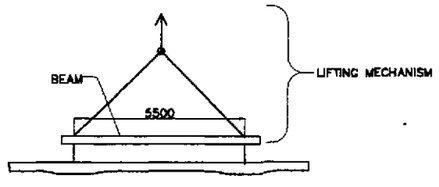
C PLAN
SCALE 1:100

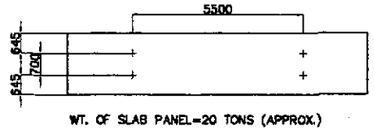


2 SECTION 2
SCALE 1:30



1 SECTION 1
SCALE 1:30





WT. OF SLAB PANEL=20 TONS (APPROX.)

LIFTING SLAB PANEL (SCHEMATIC DIAGRAM)

NOTE :

1. THE DESIGN OF THE LIFTING MECHANISM MUST BE DONE BY THE CONTRACTOR, TO BE APPROVED BY THE ENGINEER.
2. CARE SHOULD BE TAKEN SO AS NOT TO DAMAGE THE PRECAST SLAB DURING STORAGE, TRANSPORTATION AND ERECTION. DAMAGES THAT MAY AFFECT THE STRUCTURAL INTEGRITY OF THE SLAB WILL BE GROUND FOR REJECTION BY THE ENGINEER.

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SALAS
CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/19/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PMO – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
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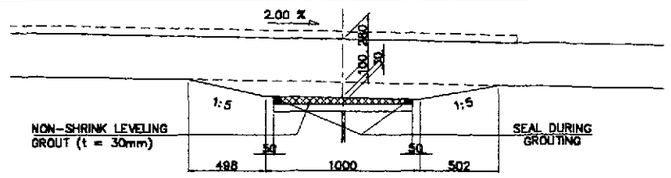
PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pfaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

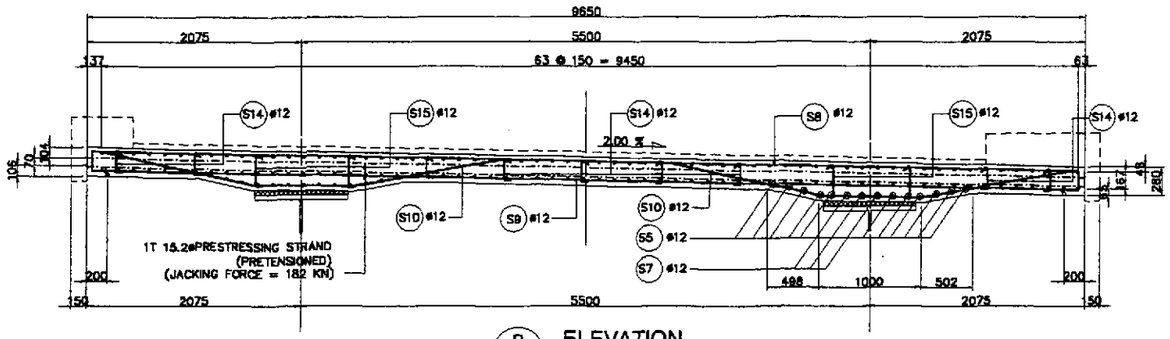
SCALE : AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
DETAILS OF PC SLAB PANEL
(INITIAL STAGE)

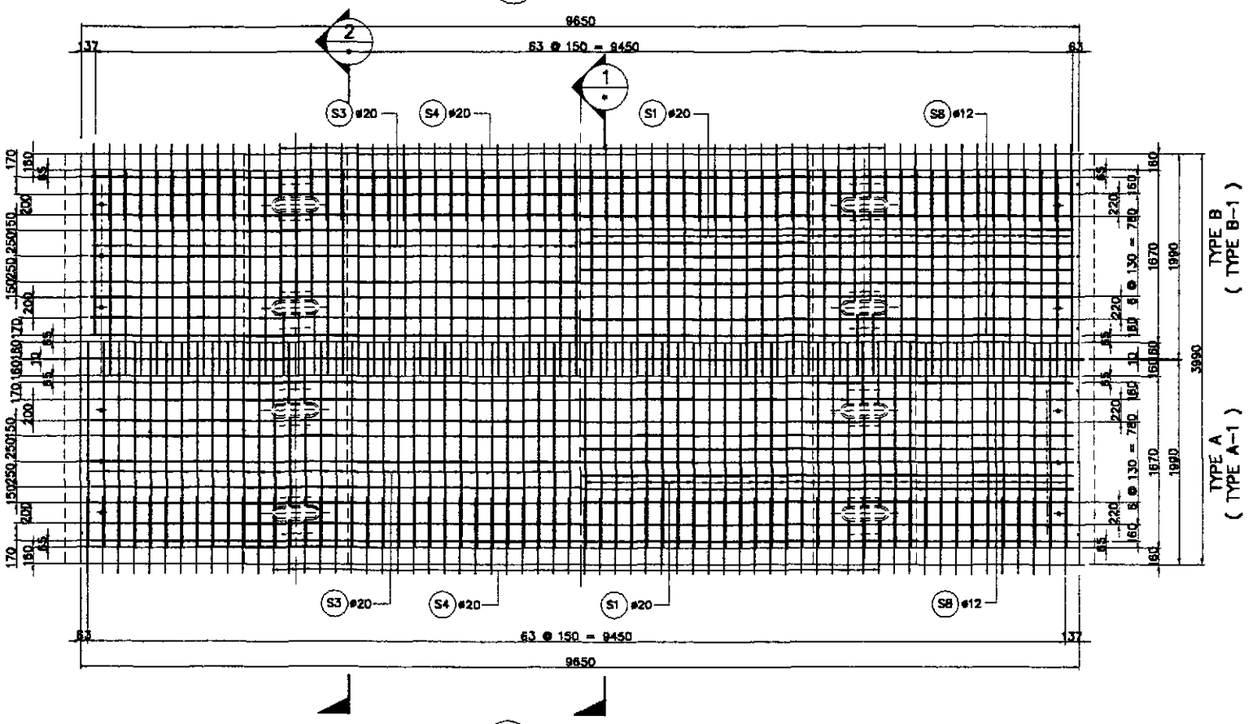
SHEET NO. : B10M-33



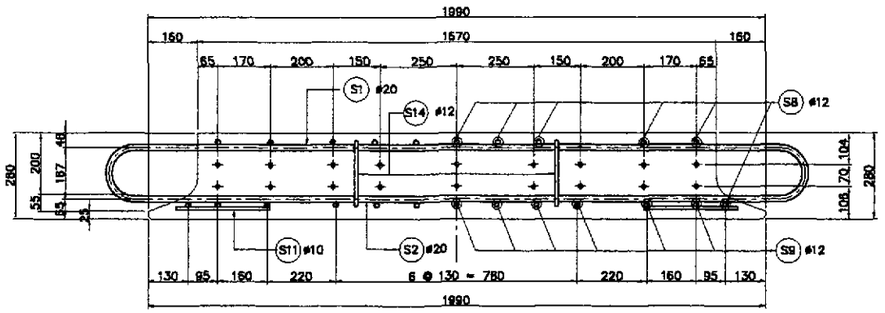
2 DETAIL OF HAUNCH
SCALE 1 : 20



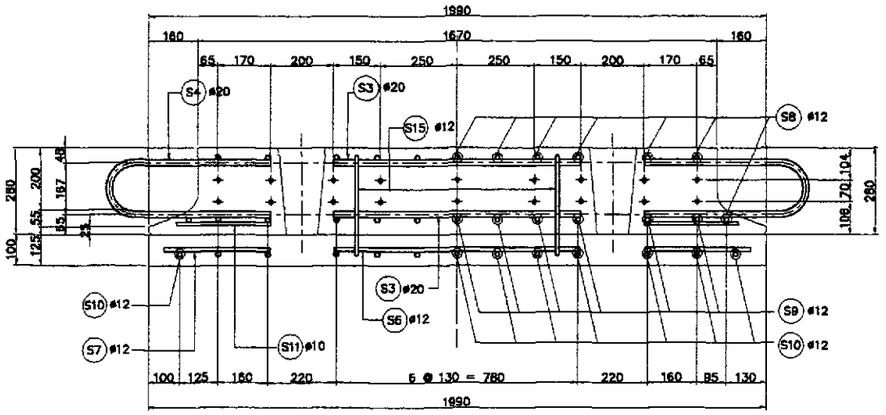
B ELEVATION
SCALE 1 : 30



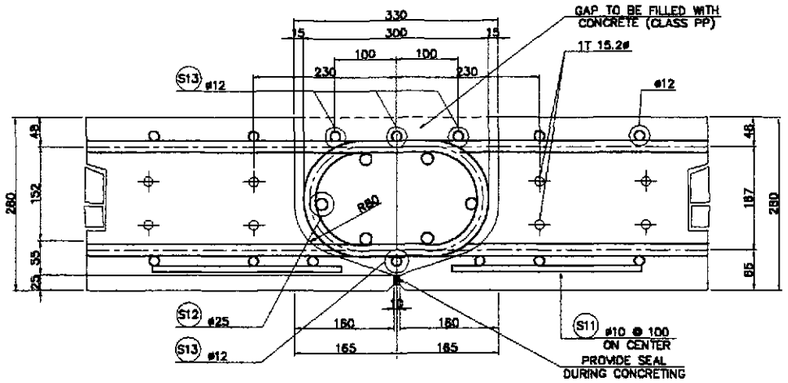
A PLAN
SCALE 1 : 100



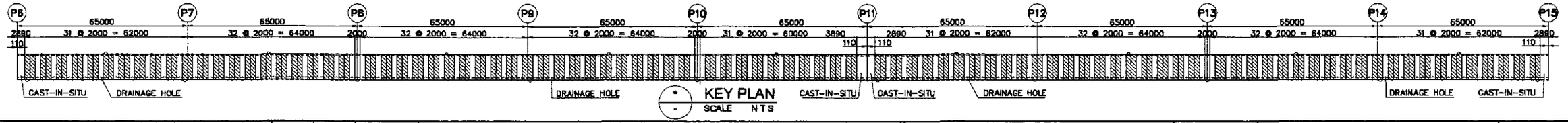
1 SECTION
SCALE 1 : 10



2 SECTION
SCALE 1 : 10



1 DETAIL OF CONNECTION BET. SLAB PANELS
SCALE 1 : 5



KEY PLAN
SCALE NTS

JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL — YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SALAS
CHECKED	10/17/02	A. C. SANTOS
SUBMITTED	10/19/02	M. KOBAYASHI TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
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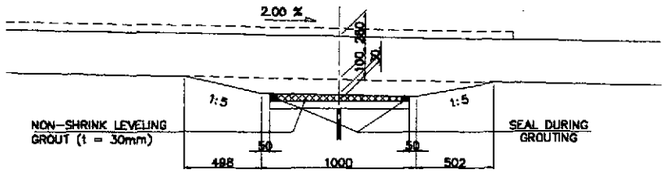
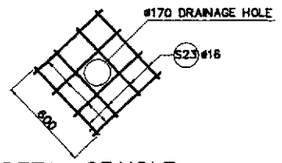
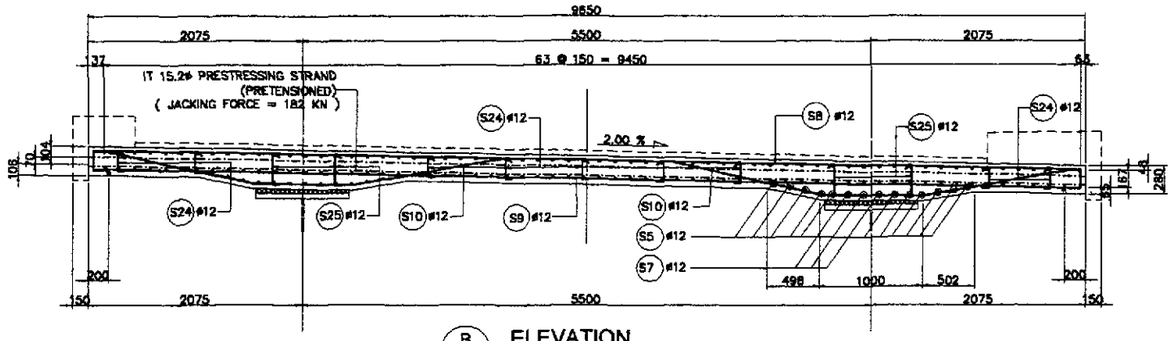
PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE III	AS SHOWN FULL SIZE A1	BRIDGE NO. 10 PAMPANGA RIVER BRIDGE PRECAST PC SLAB DETAILS (TYPE A & B, A-1 & B-1) (INITIAL STAGE)	B10M-34



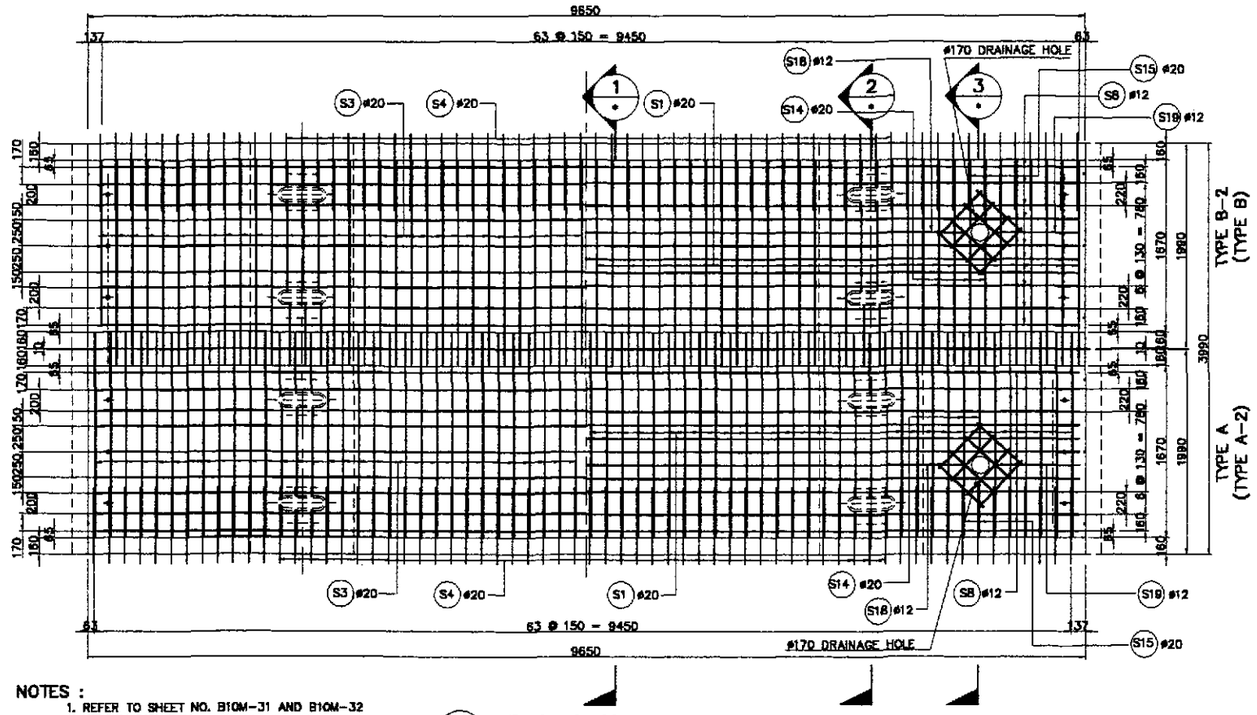
2 - DETAIL OF HAUNCH
SCALE 1:20



3 - DETAIL OF HOLE
SCALE 1:20

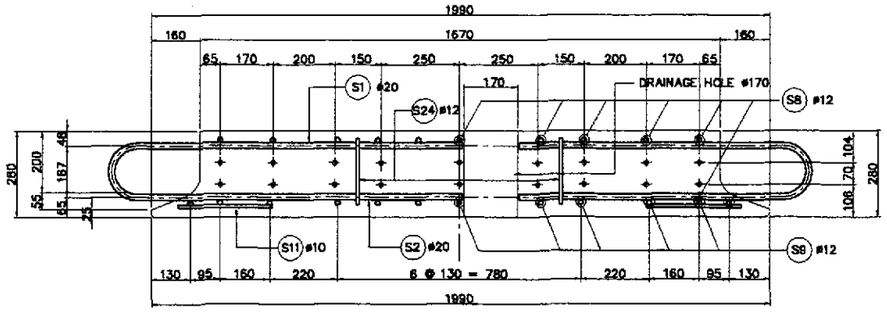


B - ELEVATION
SCALE 1:30

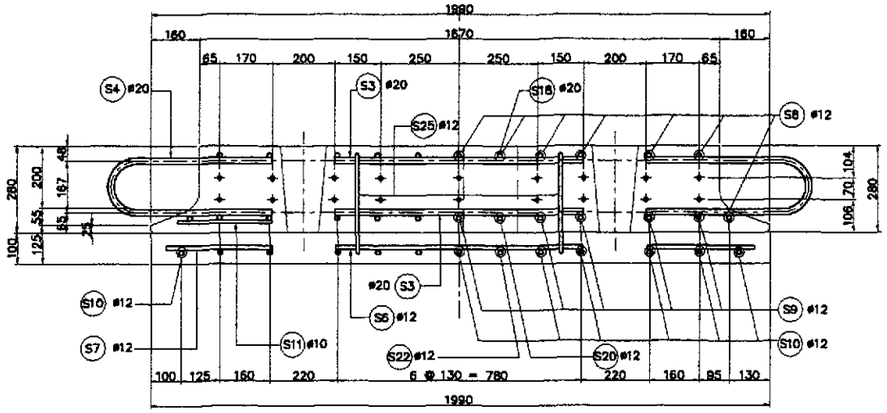


NOTES :
1. REFER TO SHEET NO. B10M-31 AND B10M-32 FOR ACTUAL LAYOUT OF PRECAST SLAB.
2. NO DRAINAGE HOLE FOR TYPE A AND TYPE B.

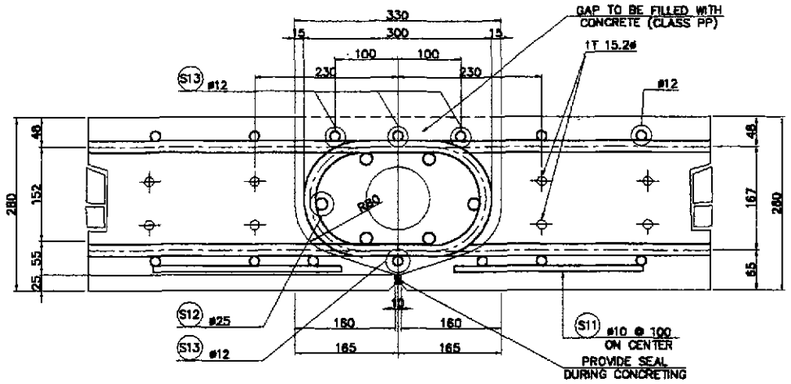
A - PLAN
SCALE 1:100



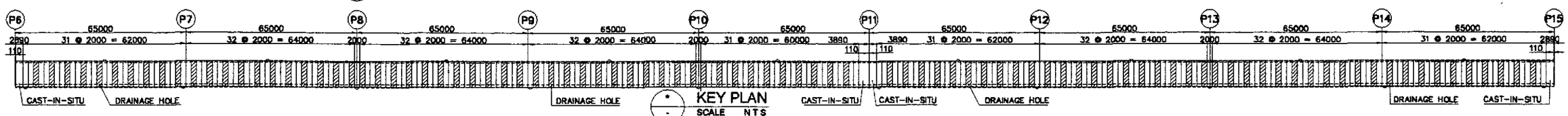
1 - SECTION
SCALE 1:10



2 - SECTION
SCALE 1:10



1 - DETAIL OF CONNECTION BET. SLAB PANELS
SCALE 1:5



* - KEY PLAN
SCALE NTS

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KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SALAS
CHECKED	10/7/02	J. C. SANTOS
SUBMITTED	10/9/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

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Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

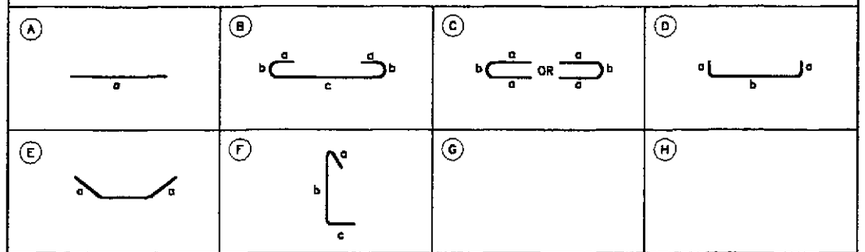
PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

SCALE :
AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
PRECAST PC SLAB DETAILS
(TYPE A-2 & B-2)
(INITIAL STAGE)

SHEET NO. :
B10M-35

BAR BENDING DIAGRAM



SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT a	b	c	d	e	f	LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg.) GRADE 40	GRADE 60
TYPE A & TYPE B TYPE A-1 & TYPE B-1	S1	20	A	1630						1630	58	2.466		238
	S2	20	B	708	262	2084				4030	59	2.466		587
	S3	20	A	793						1600	10	2.466		40
	S4	20	C	429	262					2240	10	2.466		56
	S5	12	A	1890						1890	20	0.888	34	
	S6	12	A	793						800	6	0.888	5	
	S7	12	A	342						350	12	0.888	4	
	S8	12	A	9550						9550	13	0.888	111	
	S9	12	D	165	9550					9880	11	0.888	97	
	S10	12	E	1581	993					4160	26	0.888	97	
	S11	10	A	310						310	192	0.617	37	
	S12	25	A	9550						9550	6	3.854		221
	S13	12	A	9550						9550	4	0.888	34	
	S14	12	F	130	230	110				470	18	0.888	8	
	S15	12	F	130	330	110				570	8	0.888	5	
											TOTAL =		432 kgs.	1,142 kgs.

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

SCHEDULE OF PRESTRESSING STRANDS

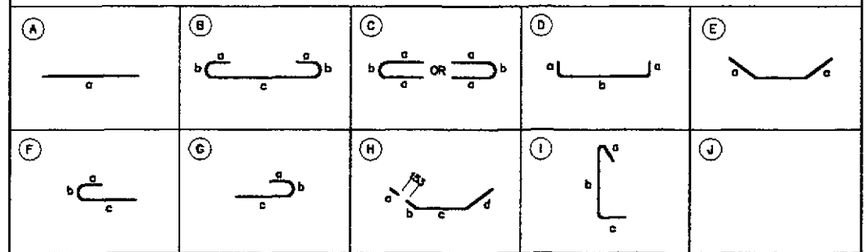
PANEL TYPE	STRAND DIAMETER (mm)	JACKING FORCE PER STRAND (kN)	STRANDS PER PANEL (pcs)	LENGTH OF STRANDS (m)	UNIT WEIGHT PER STRANDS (kg/m)	WEIGHT PER PANEL (kg/panel)	NO. OF PANELS (pcs)	WEIGHT (kg)
A	15.20	182	18	9.650	1.10	191.07	83	15.859
A-1	15.20	182	18	9.650	1.10	191.07	12	2.293
A-2	15.20	182	18	9.650	1.10	191.07	49	9.363
B	15.20	182	18	9.650	1.10	191.07	89	17.006
B-1	15.20	182	18	9.650	1.10	191.07	7	1.338
B-2	15.20	182	18	9.650	1.10	191.07	46	8.790
							TOTAL =	54,848 kgs.

THE PRESTRESSING STRANDS SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF PRESTRESSING STRANDS.

NOTE :

PRESTRESSING STEEL SHALL BE SEVEN-WIRE UNCOATED STRESS-RELIEVED STRANDS AND SHALL CONFORM TO AASTHO M203 (ASTM A 146) WITH MINIMUM ULTIMATE STRENGTH OF Fy = 1860 MPa (270 ksi).

BAR BENDING DIAGRAM



SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT a	b	c	d	e	f	LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg.) GRADE 40	GRADE 60
TYPE A-2 & TYPE B-2	S1	20	A	1630						1630	57	2.466		236
	S2	20	B	708	262	2084				4030	57	2.466		587
	S3	20	A	793						1600	10	2.466		40
	S4	20	A	429	262					2240	10	2.466		56
	S5	12	A	1890						1890	20	0.888	34	
	S6	12	A	793						800	6	0.888	5	
	S7	12	A	342						350	12	0.888	4	
	S8	12	A	9550						9550	12	0.888	111	
	S9	12	D	165	9550					9880	10	0.888	88	
	S10	12	E	1581	993					4160	25	0.888	93	
	S11	10	A	310						310	192	0.617	37	
	S12	25	A	9550						9550	6	3.854		221
	S13	12	A	9550						9550	4	0.888	34	
	S14	20	A	590						590	4	2.466		8
	S15	20	A	790						790	4	2.466		8
	S16	20	F	708	262	1042				2020	2	2.466		10
	S17	20	G	708	262	842				1820	2	2.466		9
	S18	12	A	8475						8480	1	0.888	8	
	S19	12	A	875						880	1	0.888	1	
	S20	12	A	8475						8480	1	0.888	8	
	S21	12	A	875						880	1	0.888	1	
	S22	12	H	1071	357	983	1581			4010	1	0.888	4	
	S23	16	A	600						600	16	1.579	15	
	S24	12	I	130	230	110				470	18	0.888	8	
	S25	12	I	130	230	110				480	8	0.888	5	
											TOTAL =		457 kgs.	1,175 kgs.

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
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CHECKED	10/17/07	J. C. SANTOS
SUBMITTED	10/19/07	TEAM LEADER

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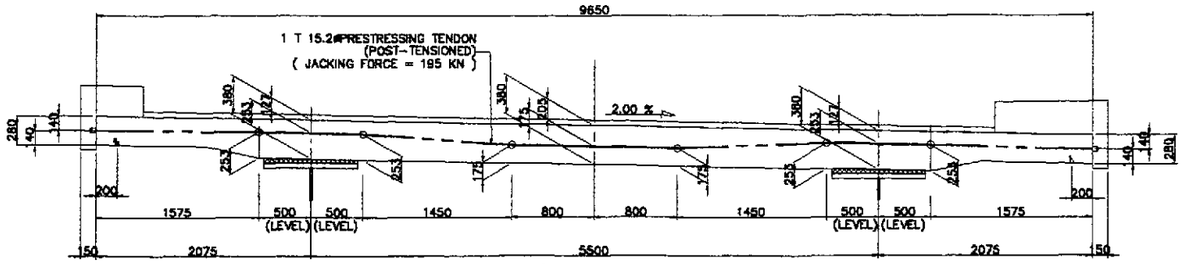
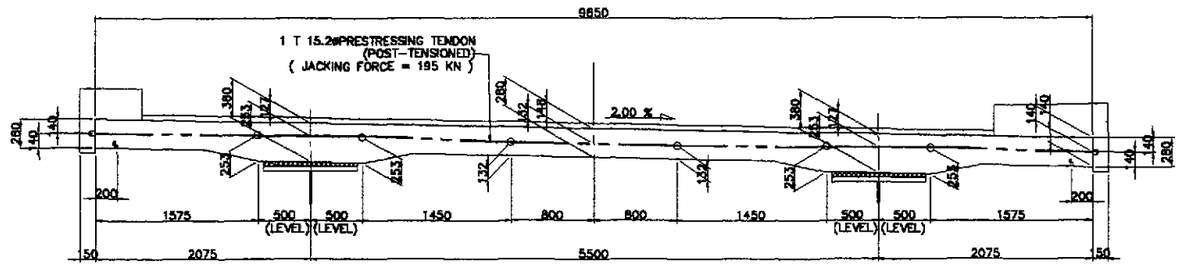
DANILO C. TRAJANO Project Director	ADRIANO M. DOROY Chief, Bridges Division	GILBERTO S. REYES Director IV (OIC)	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary

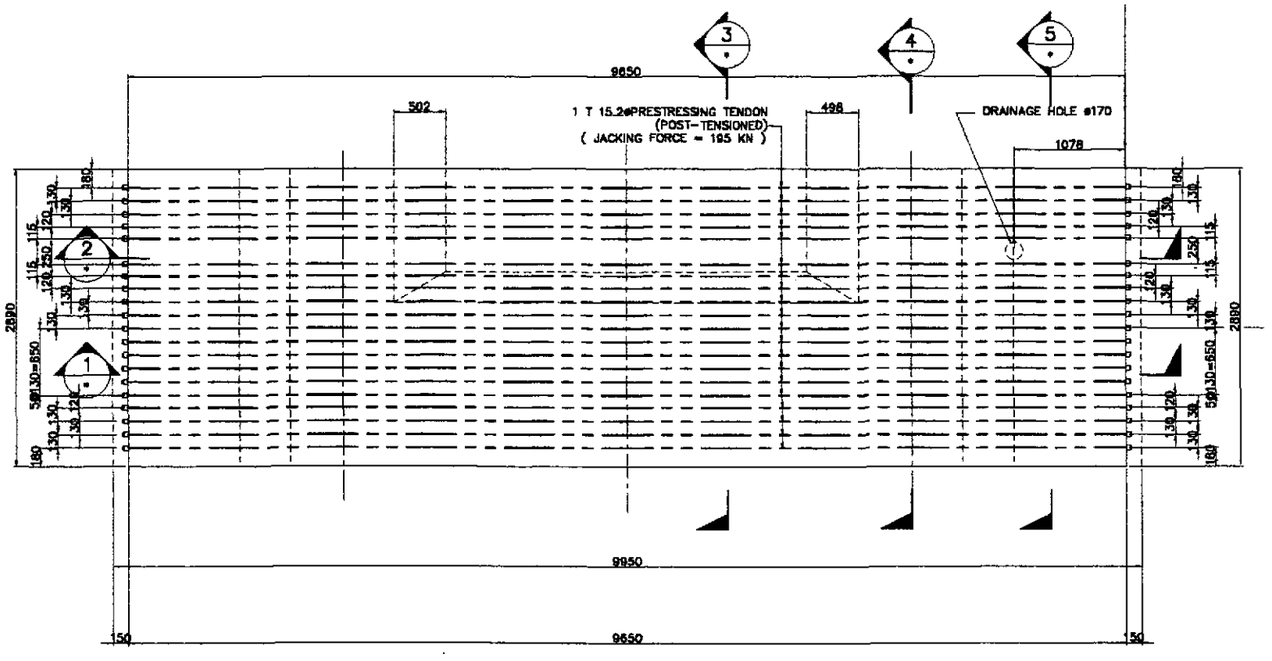
PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE III	AS SHOWN FULL SIZE A1	BRIDGE NO. 10 PAMPANGA RIVER BRIDGE SCHEDULE OF REINFORCEMENT (TYPE A & B, A-1 & B-1, A-2 & B-2) (INITIAL STAGE)	B10M-36



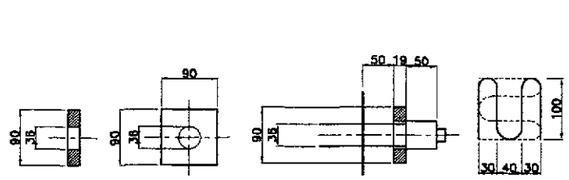
1 SECTION
SCALE 1:30



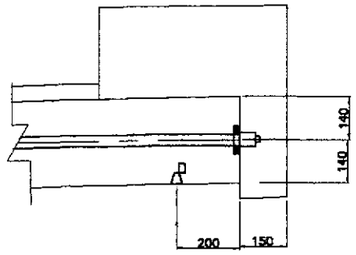
2 SECTION
SCALE 1:30



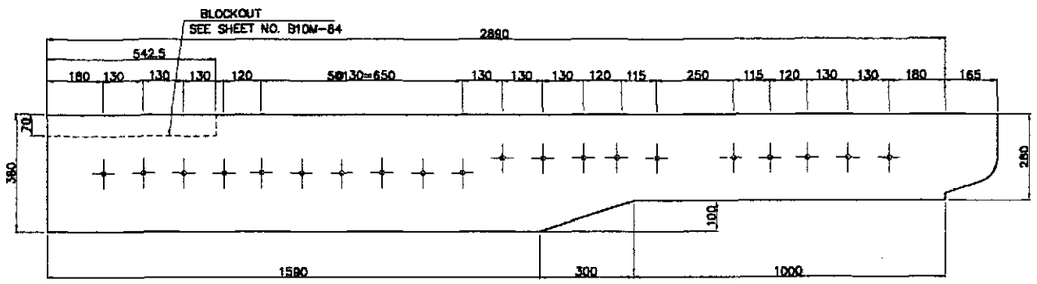
A PLAN
SCALE 1:30



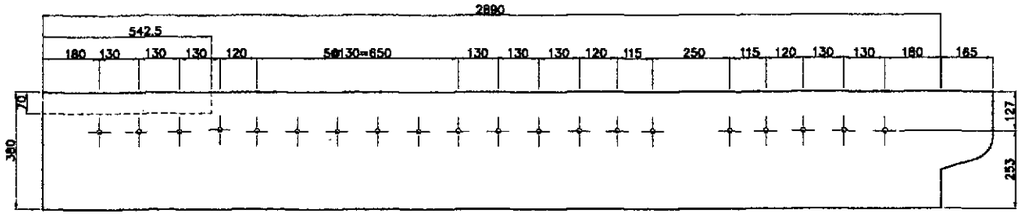
1 DETAILS OF TENDON
SCALE NTS



A DETAIL
SCALE 1:10



3 SECTION
SCALE 1:10



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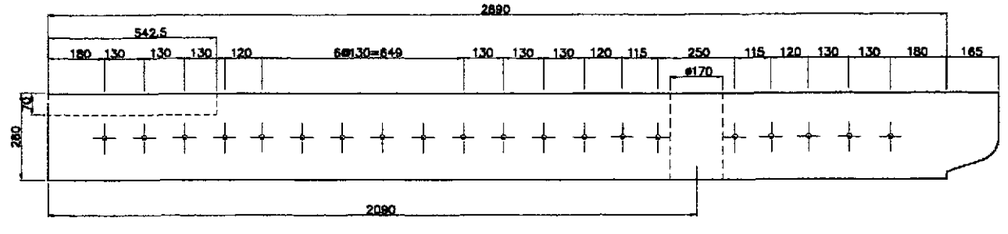
SCALE 1:10



5 SECTION
SCALE 1:10

1 CAST-IN-SITU DECK SLAB AT PIER 6-R & PIER 11-R (TENDON LAYOUT)
SCALE 1:200

JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL — YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SILAS
CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/19/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

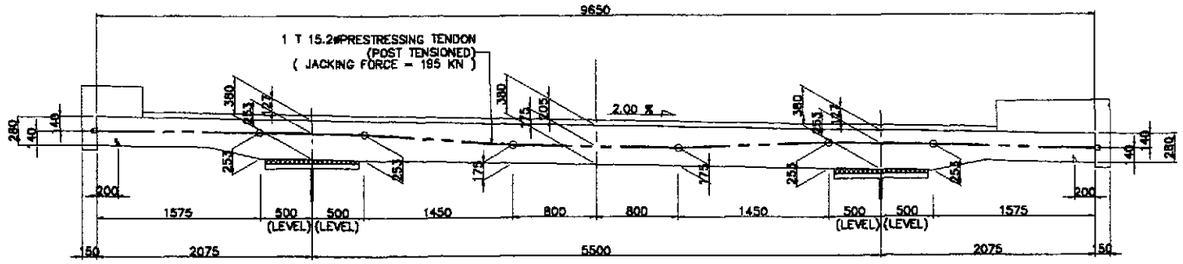
FUHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO, Project Director	ADRIANO M. DOROY, Chief, Bridges Division	GILBERTO S. REYES, Director IV (OIC)	MANUEL M. BONOAN, Undersecretary	SIMEON A. DATUMANONG, Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

SCALE : AS SHOWN — FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
CAST-IN-SITU DECK SLAB AT
PIER 6-R & PIER 11-R (TENDON LAYOUT)
(INITIAL STAGE)

SHEET NO. : B10M-37



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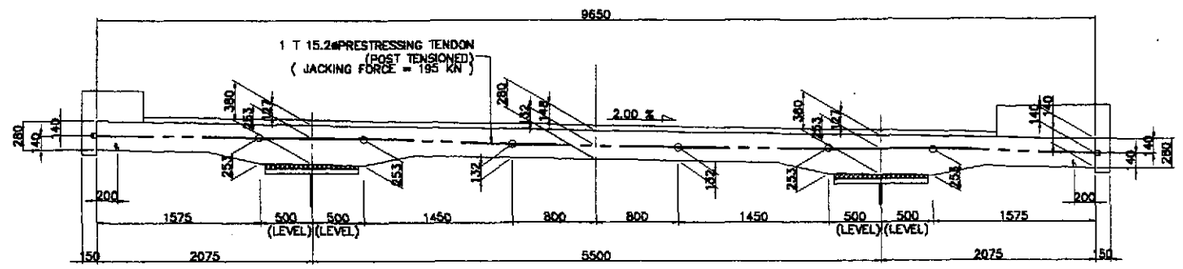
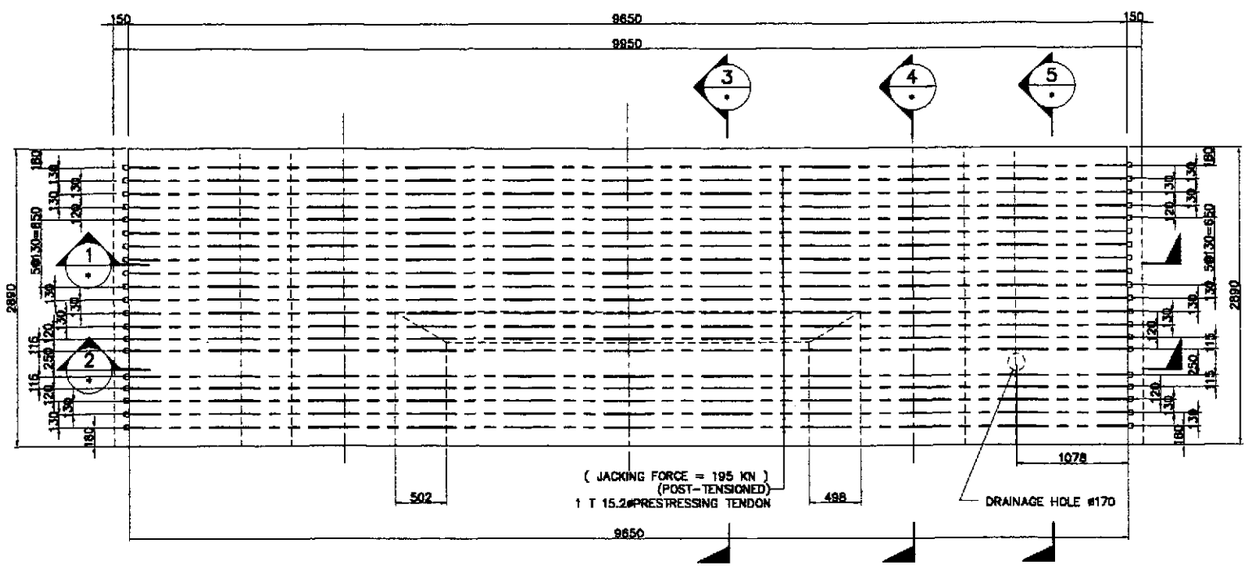
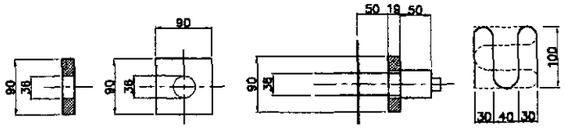
SCALE 1 : 30



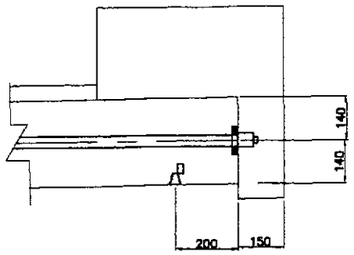
2 SECTION
SCALE 1 : 30



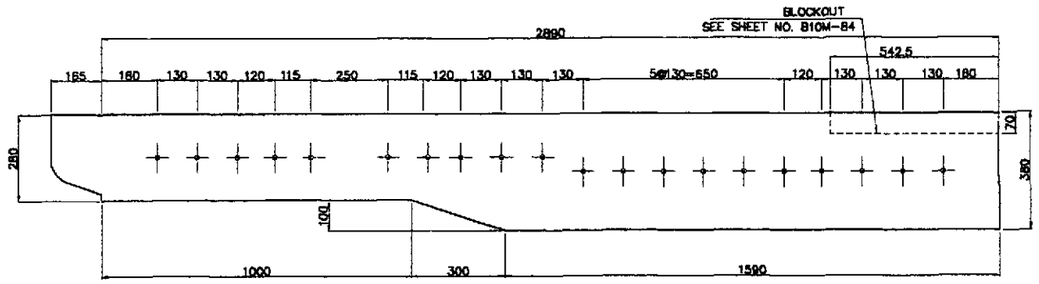
A PLAN
SCALE 1 : 30



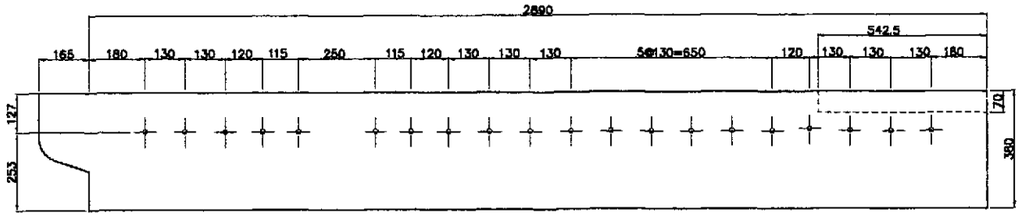
1 DETAILS OF TENDON
SCALE NTS



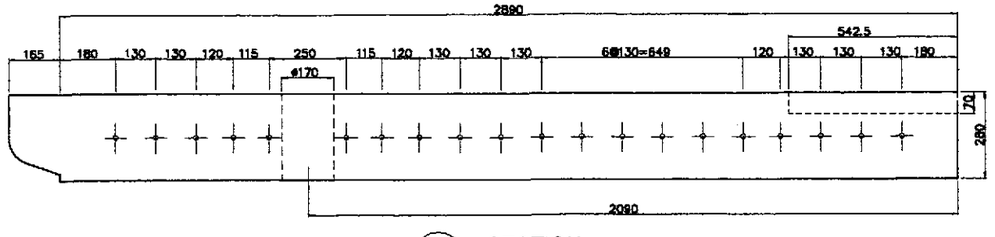
A DETAIL
SCALE 1:10



3 SECTION
SCALE 1 : 10



4 SECTION
SCALE 1 : 10



5 SECTION
SCALE 1 : 10

1 CAST-IN-SITU DECK SLAB AT PIER 15-L (TENDON LAYOUT)
SCALE 1 : 200

JAPAN INTERNATIONAL COOPERATION AGENCY

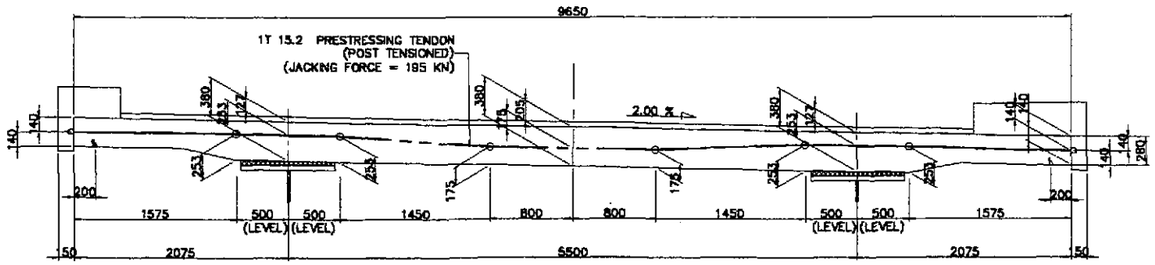
KATAHIRA & ENGINEERS INTERNATIONAL — YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/15/02	F. M. SALAS
CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/19/02	Ma. [illegible] TEAM LEADER

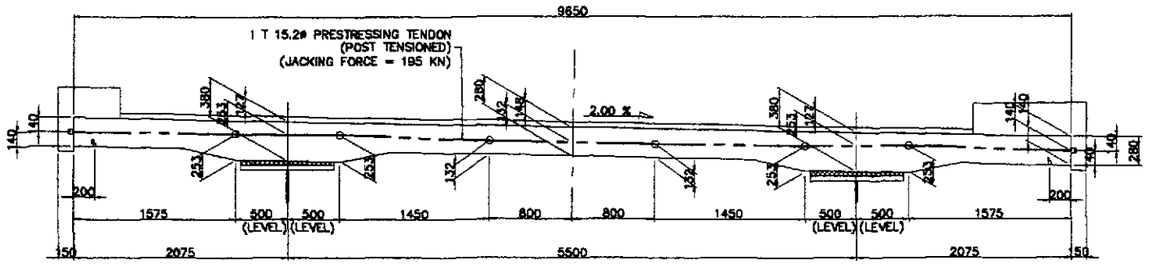
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PJH-L – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO, Project Director	ADRIANO M. DOROY, Chief, Bridges Division	GILBERTO S. REYES, Director IV (OIC)	MANUEL M. BONOAN, Undersecretary	SIMEON A. DATUMANONG, Secretary

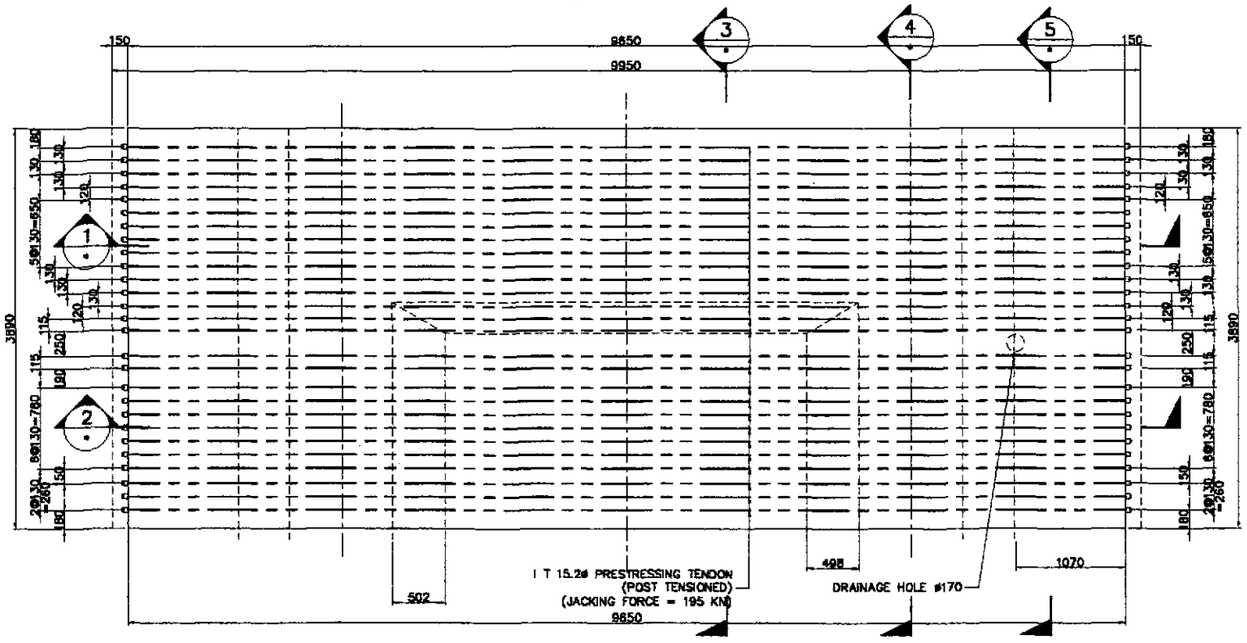
PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE III	AS SHOWN FULL SIZE A1	BRIDGE NO. 10 PAMPANGA RIVER BRIDGE CAST-IN-SITU DECK SLAB AT PIER 15-L (TENDON LAYOUT) (INITIAL STAGE)	B10M-38



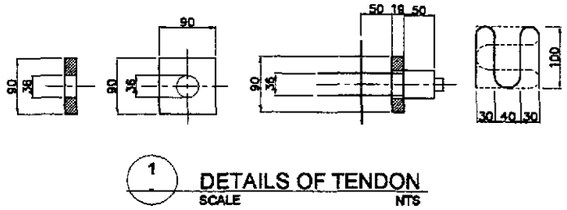
1 SECTION
SCALE 1 : 30



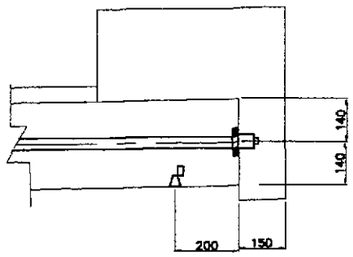
2 SECTION
SCALE 1 : 30



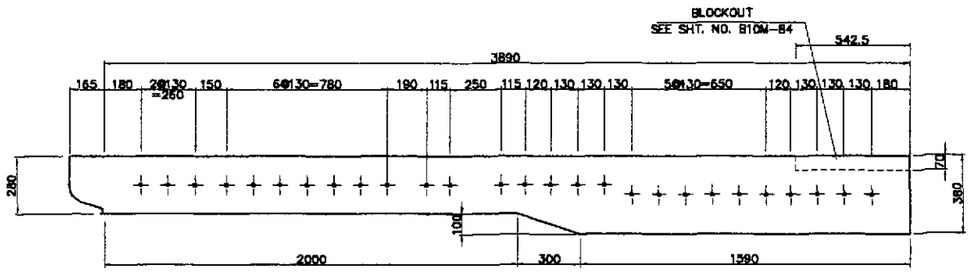
A PLAN
SCALE 1 : 30



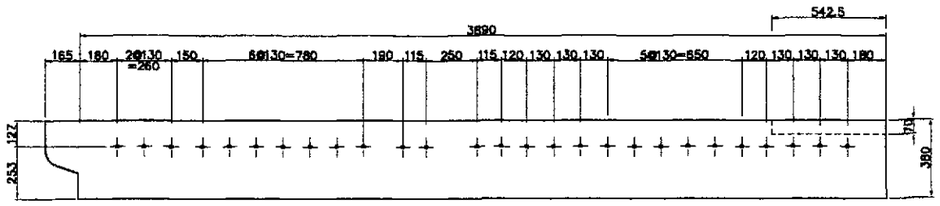
1 DETAILS OF TENDON
SCALE NTS



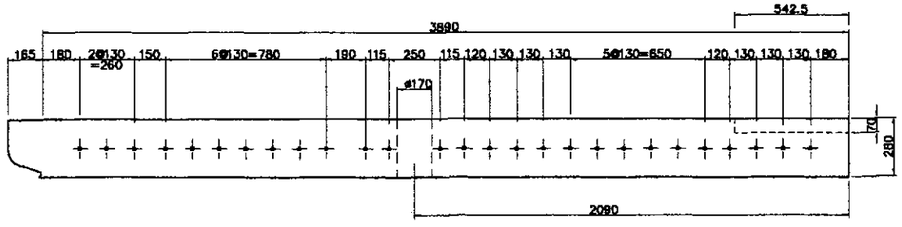
A DETAIL
SCALE 1:10



3 SECTION
SCALE 1 : 15



4 SECTION
SCALE 1 : 15



5 SECTION
SCALE 1 : 15

1 CAST-IN-SITU DECK SLAB AT PIER 11-L (TENDON LAYOUT)
SCALE 1 : 200

JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
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CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/19/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
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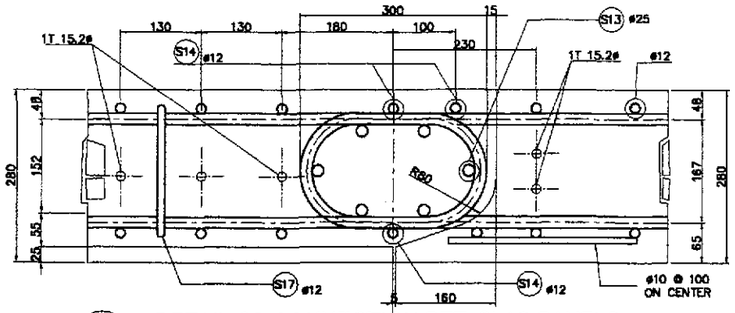
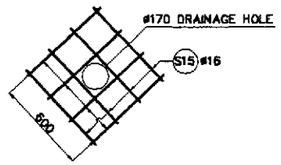
PUH – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO	ADRIANO M. DOROY	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANONG
Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

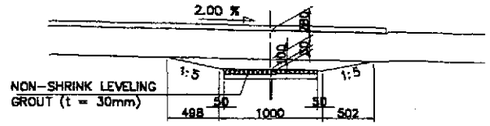
PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE III	AS SHOWN FULL SIZE A1	BRIDGE NO. 10 PAMPANGA RIVER BRIDGE CAST-IN-SITU DECK SLAB AT PIER 11-L (TENDON LAYOUT) (INITIAL STAGE)	B10M-39



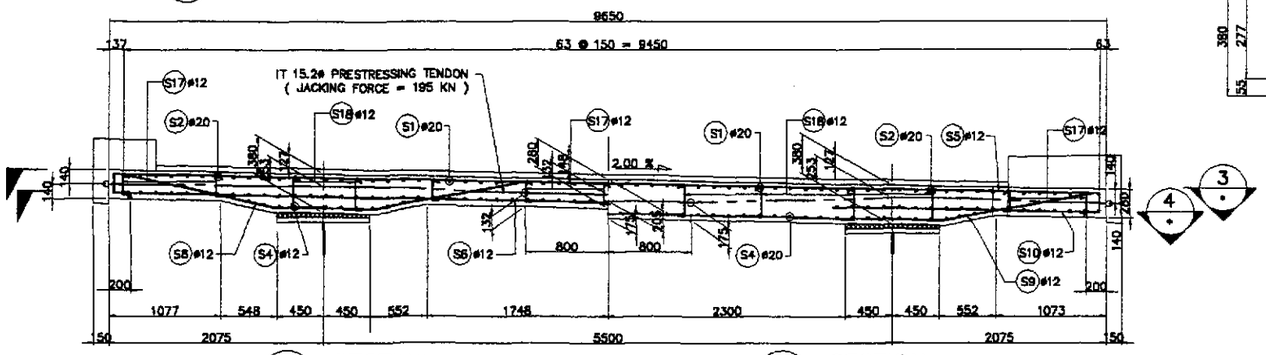
1 — DETAIL OF CONNECTION BET. SLAB PANELS
SCALE 1:5



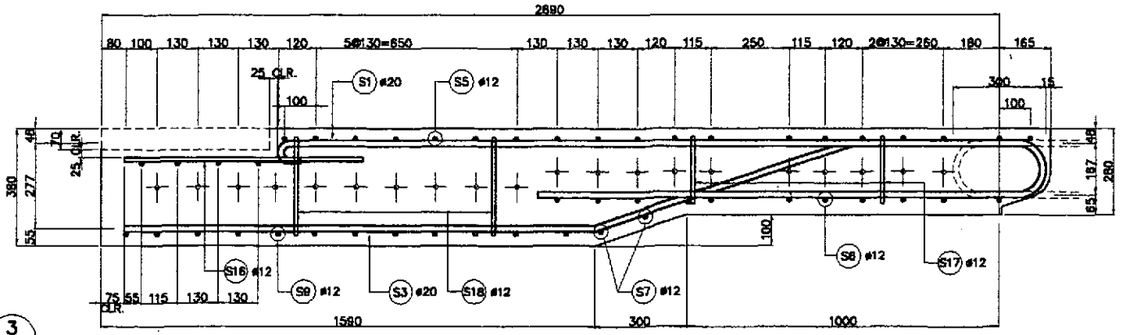
2 — DETAIL OF HOLE
SCALE 1:20



1 — DETAIL OF HAUNCH
SCALE 1:30

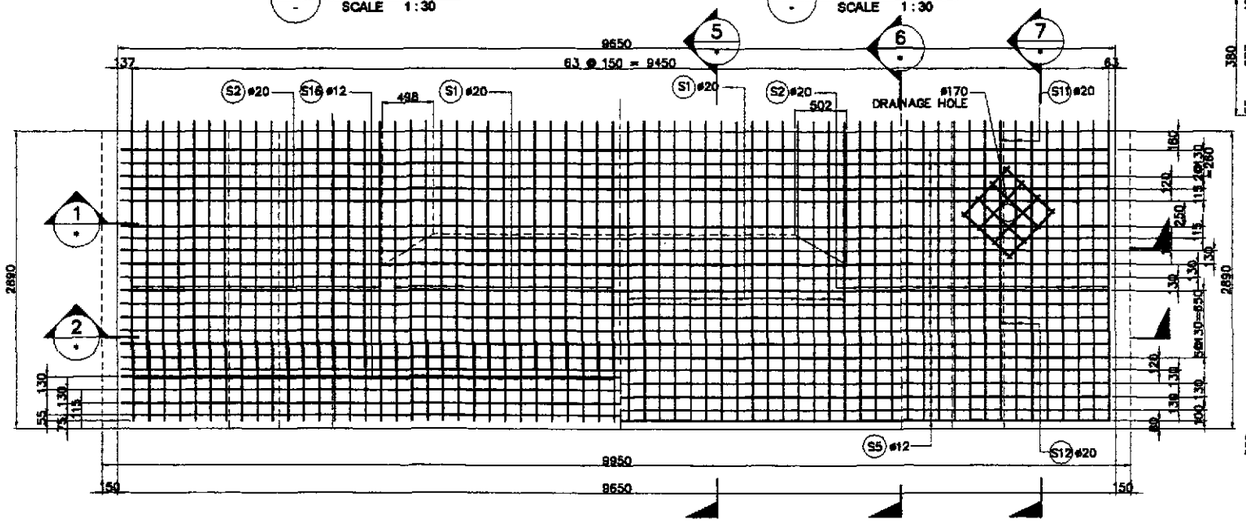


1 — SECTION
SCALE 1:30



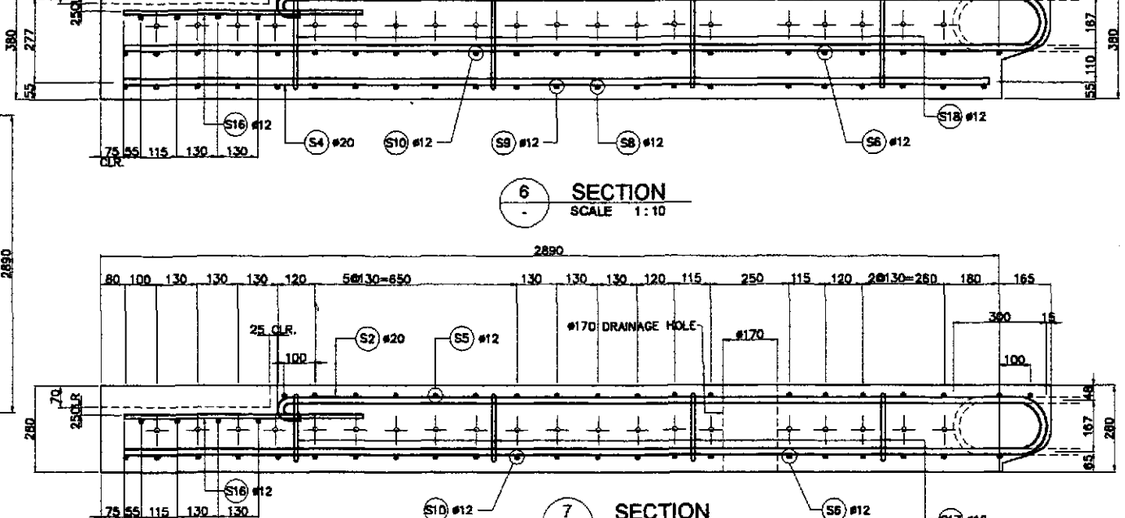
5 — SECTION
SCALE 1:10

2 — SECTION
SCALE 1:30



3 — SECTION
SCALE 1:30

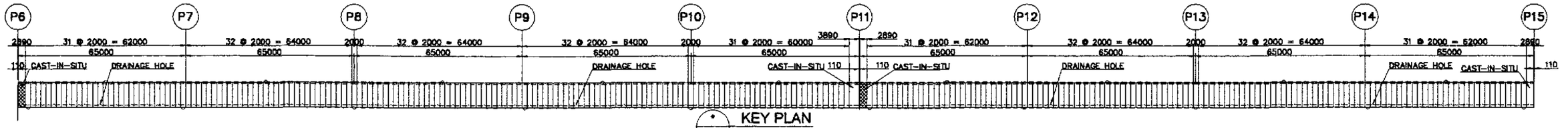
4 — SECTION
SCALE 1:30



6 — SECTION
SCALE 1:10

7 — SECTION
SCALE 1:10

1 — CAST-IN-SITU DECK SLAB REINFORCEMENT (PIER 6-R & PIER 11-R)
SCALE 1:200



KEY PLAN
SCALE NTS

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SALAS
CHECKED	10/17/02	J. C. SANTOS
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PROJECT AND LOCATION :
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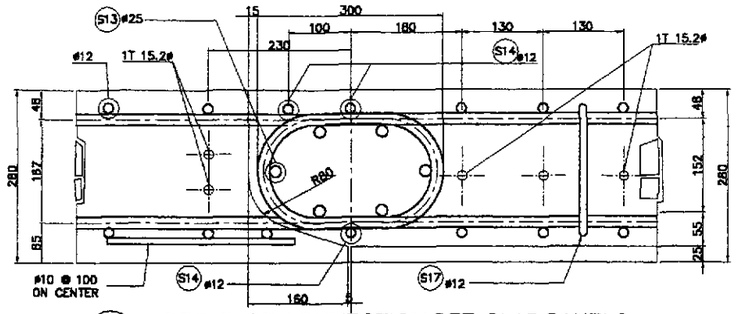
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

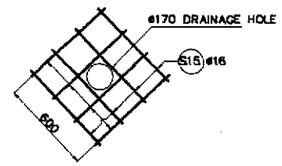
SCALE :
AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
CAST-IN-SITU DECK SLAB REINF.
(PIER 6-R & PIER 11-R)
(INITIAL STAGE)

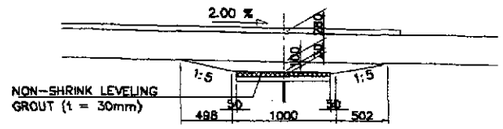
SHEET NO. :
B10M-40



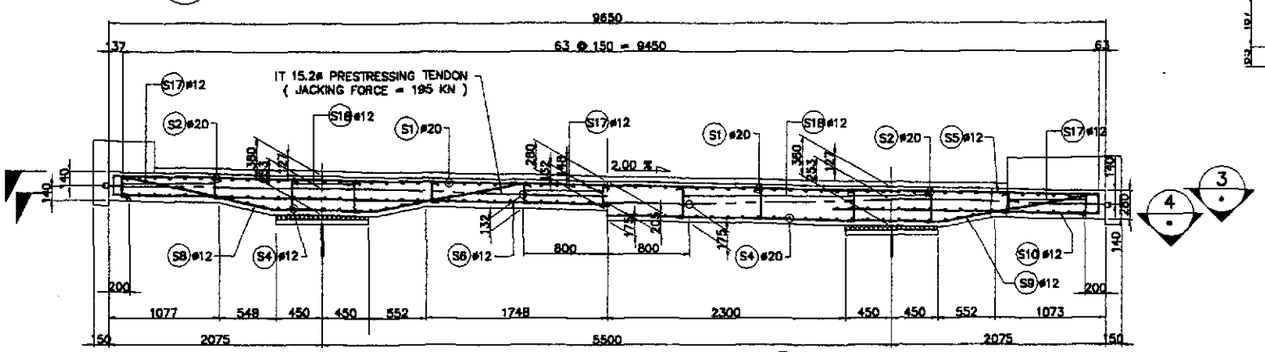
1 DETAIL OF CONNECTION BET. SLAB PANELS
SCALE 1:5



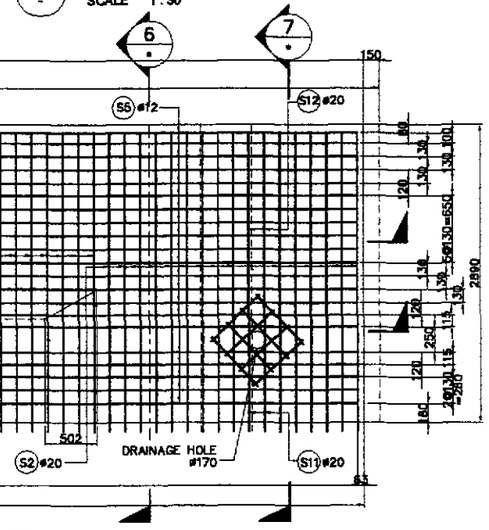
2 DETAIL OF HOLE
SCALE 1:20



1 DETAIL OF HAUNCH
SCALE 1:30



1 SECTION
SCALE 1:30



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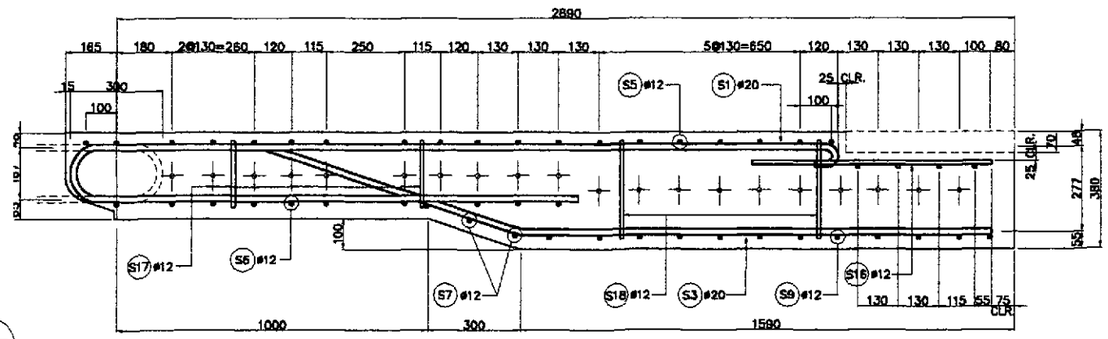
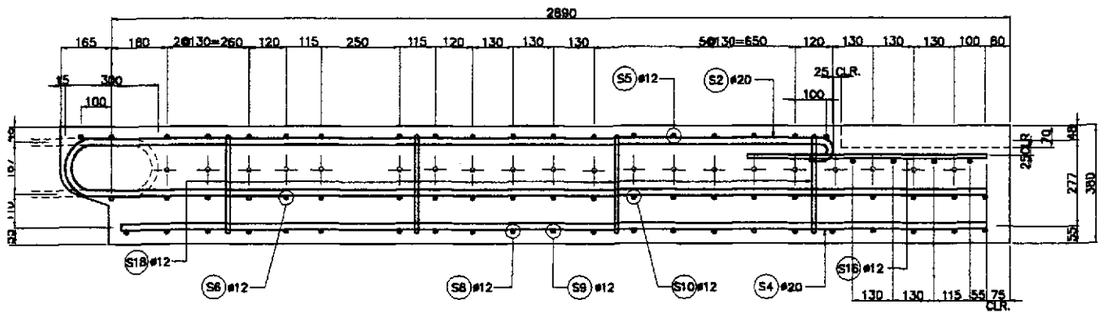
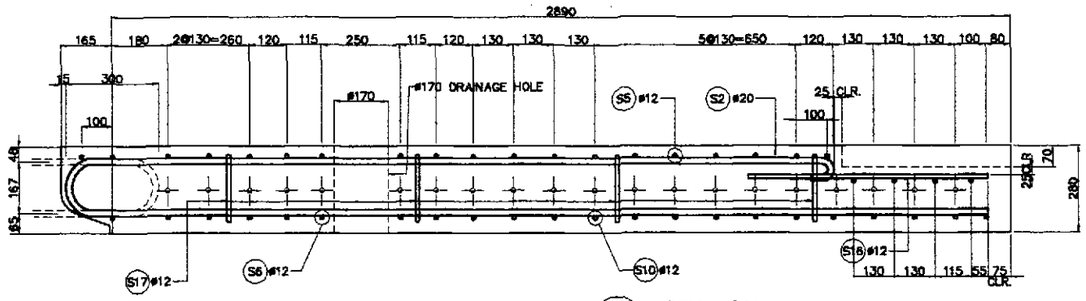
SCALE 1:30



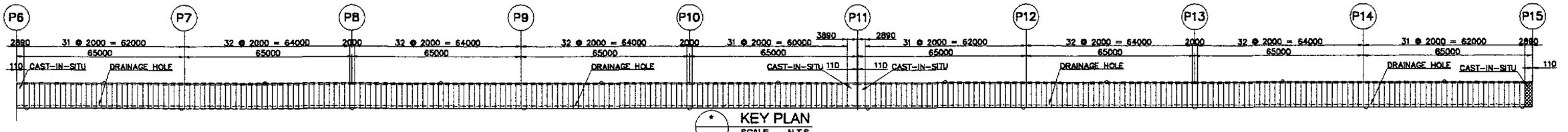
5 SECTION
SCALE 1:10



6 SECTION
SCALE 1:10



7 SECTION
SCALE 1:10



KEY PLAN
SCALE NTS

3 SECTION
SCALE 1:30

4 SECTION
SCALE 1:30

1 CAST-IN-SITU DECK SLAB REINFORCEMENT (PIER 15-L)
SCALE 1:200

JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL

YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
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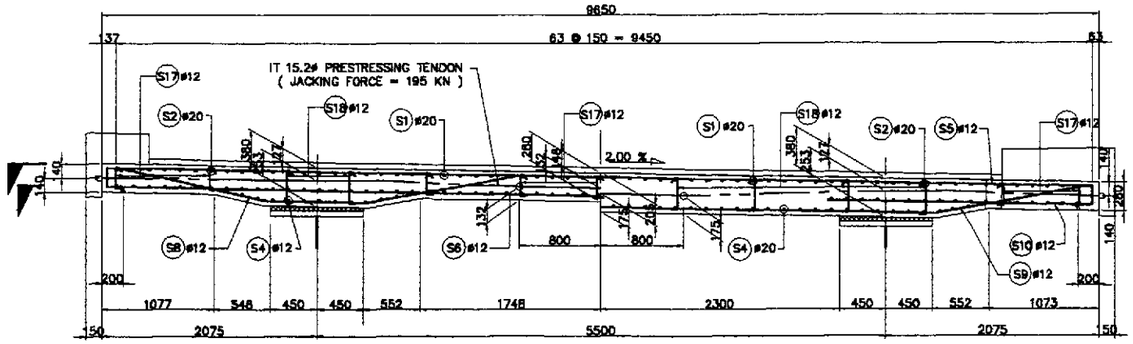
CHECKED	10/7/07	J. C. SANTOS
SUBMITTED	10/9/07	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PUHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO, Project Director	ADRIANO M. DOROY, Chief, Bridges Division	GILBERTO S. REYES, Director IV (OIC)	MANUEL M. BONOAN, Undersecretary	SIMEON A. DATUMANONG, Secretary

PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE III	AS SHOWN FULL SIZE A1	BRIDGE NO. 10 PAMPANGA RIVER BRIDGE CAST-IN-SITU DECK SLAB REINF. (PIER 15-L) (INITIAL STAGE)	B10M-41



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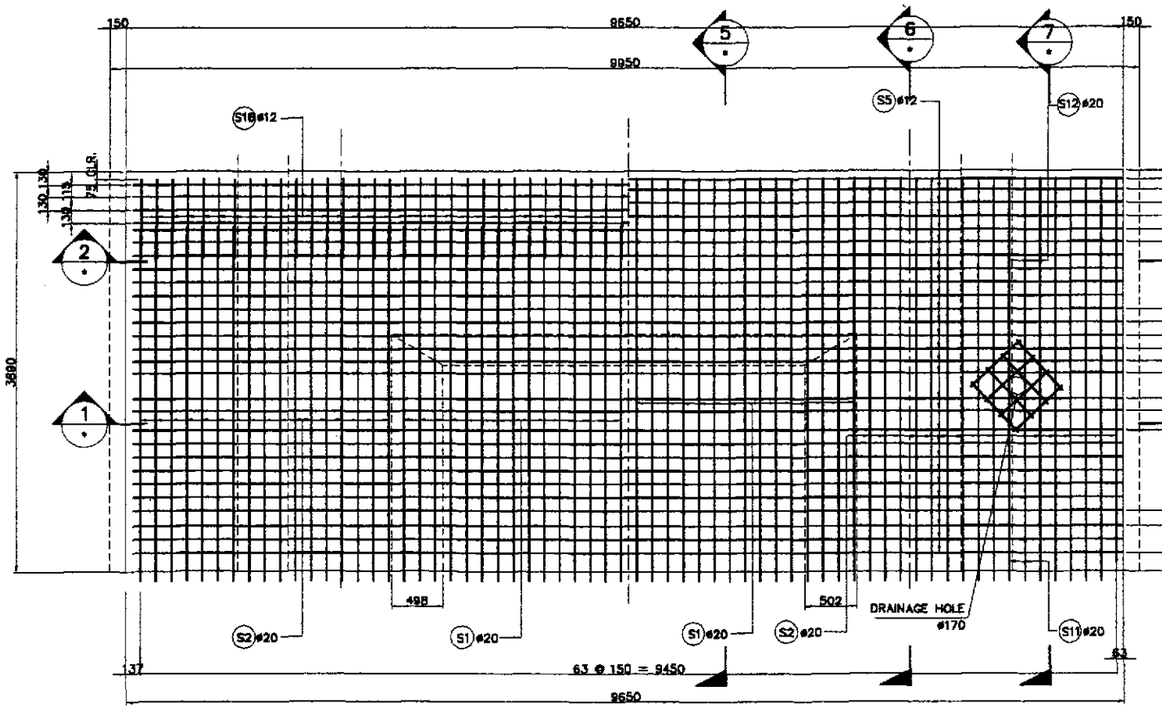
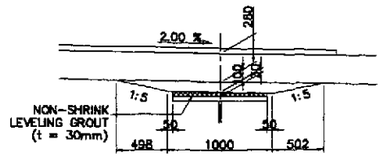
SCALE 1 : 30



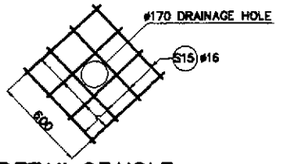
2 - SECTION
SCALE 1 : 30

3 - SECTION
SCALE 1 : 30

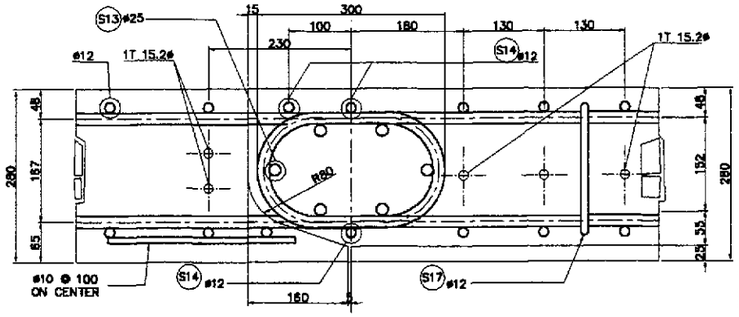
4 - SECTION
SCALE 1 : 30



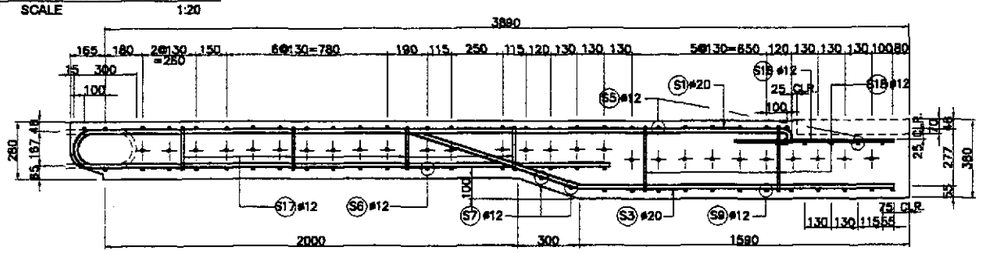
2 - DETAIL OF HAUNCH
SCALE NTS



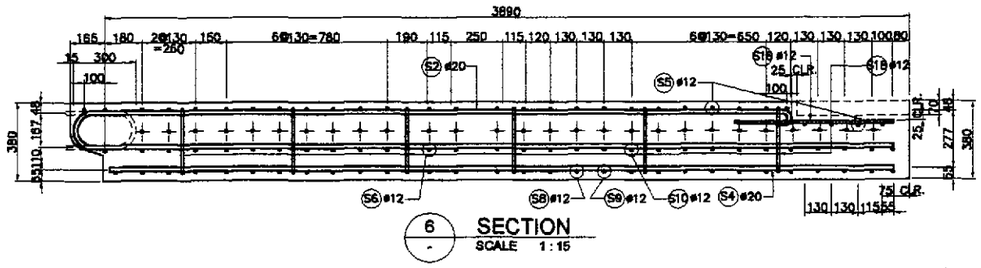
3 - DETAIL OF HOLE
SCALE 1:20



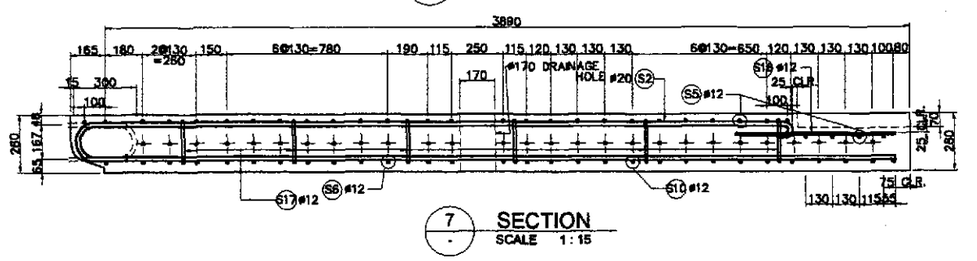
1 - DETAIL OF CONNECTION BET. SLAB PANELS
SCALE 1 : 5



5 - SECTION
SCALE 1 : 15

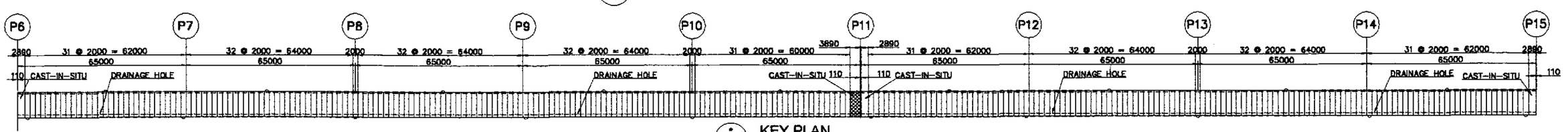


6 - SECTION
SCALE 1 : 15



7 - SECTION
SCALE 1 : 15

1 - CAST-IN-SITU DECK SLAB REINFORCEMENT (PIER 11 - L)
SCALE AS SHOWN



* - KEY PLAN
SCALE NTS

JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL

YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/8/02	F. M. SALAS
CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/19/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

FUNL. - PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO, Project Director	ADRIANO M. DOROY, Chief, Bridges Division	GILBERTO S. REYES, Director IV (OIC)	MANUEL M. BONOAN, Undersecretary	SIMEON A. DATUMANONG, Secretary

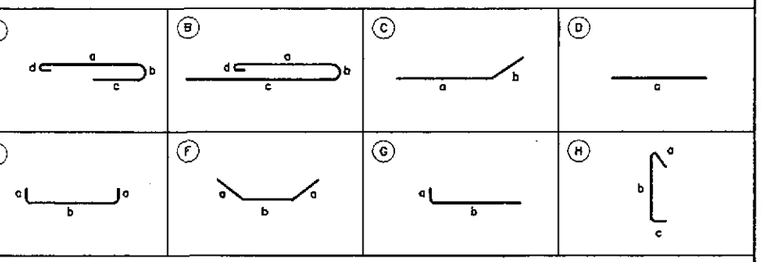
PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

SCALE :
AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
CAST-IN-SITU DECK SLAB REINF.
(PIER 11-L)
(INITIAL STAGE)

SHEET NO. :
B10M-42

BAR BENDING DIAGRAM

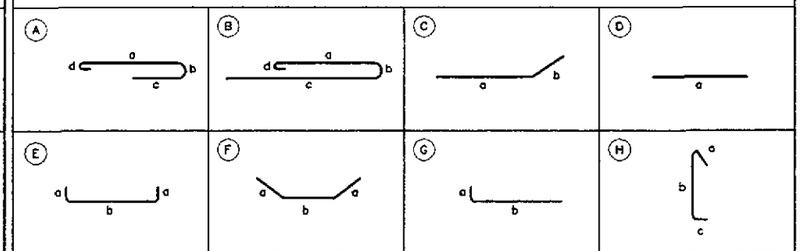


SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT a	b	c	d	e	LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg) GRADE 40	GRADE 60
CAST-IN-SITU DECK SLAB (L = 2890) PIER 6-R & PIER 11-R	S1	20	A	2298	262	1557	270		4390	30	2.466		325
	S2	20	B	2298	262	2872	270		5710	32	2.466		451
	S3	20	C	1515	980				2500	30	2.466		185
	S4	12	D	2850					2850	48	0.888	122	
	S5	12	D	9550					9550	21	0.888	179	
	S6	12	E	165	9550				9880	10	0.888	88	
	S7	12	D	9550					9550	2	0.888	17	
	S8	12	F	1581	993				4160	20	0.888	74	
	S9	12	F	1581	6500				9670	12	0.888	104	
	S10	12	G	165	2525				2690	22	0.888	53	
	S11	20	B	757	262				1780	2	2.466		9
	S12	20	D	2000					2000	4	2.466		20
	S13	25	D	9550					9550	6	3.854		221
	S14	12	D	9550					9550	3	0.888	26	
	S15	16	D	600					600	16	1.579	16	
	S16	12	D	770					770	30	0.888	21	
	S17	12	H	130	230	110			470	26	0.888	11	
	S18	12	H	130	330	110			570	26	0.888	14	
											TOTAL =	725 kgs.	1,211 kgs.

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

BAR BENDING DIAGRAM

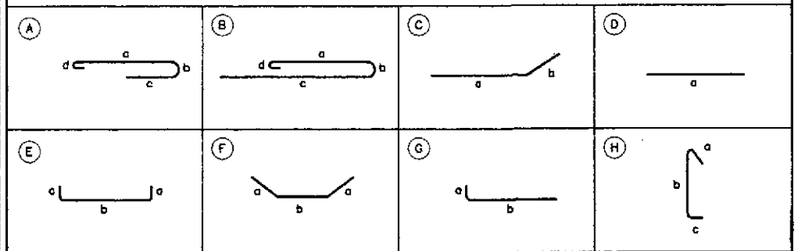


SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT a	b	c	d	e	LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg) GRADE 40	GRADE 60
CAST-IN-SITU DECK SLAB (L = 2890) PIER 15-L	S1	20	A	2298	262	1557	270		4390	30	2.466		325
	S2	20	B	2298	262	2872	270		5710	32	2.466		451
	S3	20	C	1515	980				2500	30	2.466		185
	S4	12	D	2850					2850	48	0.888	122	
	S5	12	D	9550					9550	21	0.888	179	
	S6	12	E	165	9550				9880	10	0.888	88	
	S7	12	D	9550					9550	2	0.888	17	
	S8	12	F	1581	993				4160	20	0.888	74	
	S9	12	F	1581	6500				9670	12	0.888	104	
	S10	12	G	165	2525				2690	22	0.888	53	
	S11	20	B	757	262				1780	2	2.466		9
	S12	20	D	2000					2000	4	2.466		20
	S13	25	D	9550					9550	6	3.854		221
	S14	12	D	9550					9550	3	0.888	26	
	S15	16	D	600					600	16	1.579	16	
	S16	12	D	770					770	30	0.888	21	
	S17	12	H	130	230	110			470	26	0.888	11	
	S18	12	H	130	330	110			570	26	0.888	14	
											TOTAL =	725 kgs.	1,211 kgs.

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

BAR BENDING DIAGRAM



SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT a	b	c	d	e	LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg) GRADE 40	GRADE 60
CAST-IN-SITU DECK SLAB (L = 3890) PIER 11-L	S1	20	A	3298	262	2507	270		6340	30	2.466		470
	S2	20	B	3298	262	3872	270		7710	32	2.466		609
	S3	20	C	1515	980				2500	30	2.466		185
	S4	12	D	3850					3850	48	0.888	165	
	S5	12	D	9550					9550	28	0.888	238	
	S6	12	E	165	9550				9880	17	0.888	150	
	S7	12	D	9550					9550	2	0.888	17	
	S8	12	F	1581	993				4160	34	0.888	126	
	S9	12	F	1581	6500				9670	12	0.888	104	
	S10	12	G	165	2525				2690	22	0.888	53	
	S11	20	B	1757	262				3780	2	2.466		19
	S12	20	D	2000					2000	4	2.466		20
	S13	25	D	9550					9550	6	3.854		221
	S14	12	D	9550					9550	3	0.888	26	
	S15	16	D	600					600	16	1.579	16	
	S16	12	D	770					770	30	0.888	21	
	S17	12	H	130	230	110			470	44	0.888	19	
	S18	12	H	130	330	110			570	34	0.888	18	
											TOTAL =	953 kgs.	1,524 kgs.

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

SCHEDULE OF PRESTRESSING TENDONS

CAST-IN-SITU DECK SLAB	TYPE-SIZE	JACKING FORCE PER TENDON (kN)	ELONGATION OF TENDON LEFT (mm)	ELONGATION OF TENDON RIGHT (mm)	NO. OF TENDONS (pcs.)	LENGTH OF TENDON (m)	UNIT WEIGHT PER TENDON (kg/m)	WEIGHT (kg)
6-R (2890)	1-15.2ø	195	35	35	20	12.362	1.10	272
11-L (3890)	1-15.2ø	195	35	35	27	12.362	1.10	368
11-R (2890)	1-15.2ø	195	35	35	20	12.362	1.10	272
15-L (2890)	1-15.2ø	195	35	35	20	12.362	1.10	272
							TOTAL =	1,184 kgs.

THE PRESTRESSING TENDONS SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF PRESTRESSING TENDONS.

NOTE :

1. PRESTRESSING STEEL SHALL BE SEVEN-WIRE UNCOATED STRESS-RELIEVED STRANDS AND SHALL CONFORM TO AASTHO M203 (ASTM A 146) WITH MINIMUM ULTIMATE STRENGTH OF Fy = 1860 MPa (270 ksi).
2. FORCES IN TENDONS AND ELONGATIONS OF TENDONS SHALL BE CALCULATED ASSUMING THE FOLLOWING CHARACTERISTICS :

   ANCHORAGE SLIP = 6 MM (AFTER LOCK-OFF)
   WOBBLE COEFFICIENT = 0.002/METER GALVANIZED STEEL SHEATING
   CURVATURE COEFFICIENT = 0.30 PER RADIAN

3. AN ADDITIONAL 1.35 M IS ADDED AT BOTH ENDS OF JACKING FOR TENDON LENGTH.
4. THE ELONGATION SHOWN IN THE TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD SUBMIT CALCULATION OF ELONGATIONS BASED ON THE PARAMETERS GIVEN.

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
KEI KATAHIRA & ENGINEERS INTERNATIONAL
YEO YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/5/02	F. M. BALAS
CHECKED	10/7/02	J.C. SANTOS
SUBMITTED	10/9/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

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Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

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ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

SCALE : AS SHOWN FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
SCHEDULE OF REINFORCEMENT
(CAST-IN-SITU DECK SLAB)
(INITIAL STAGE)

SHEET NO. : B10M-43