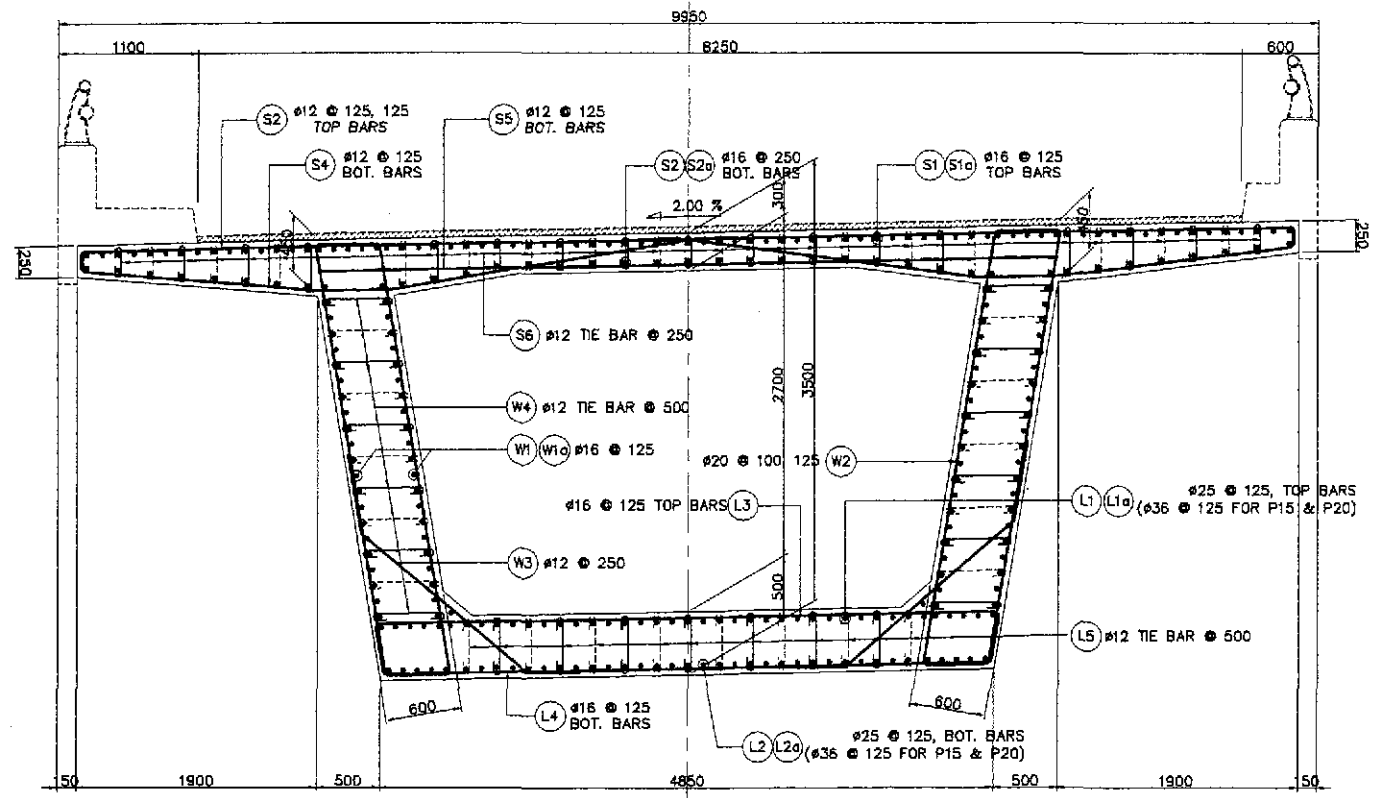
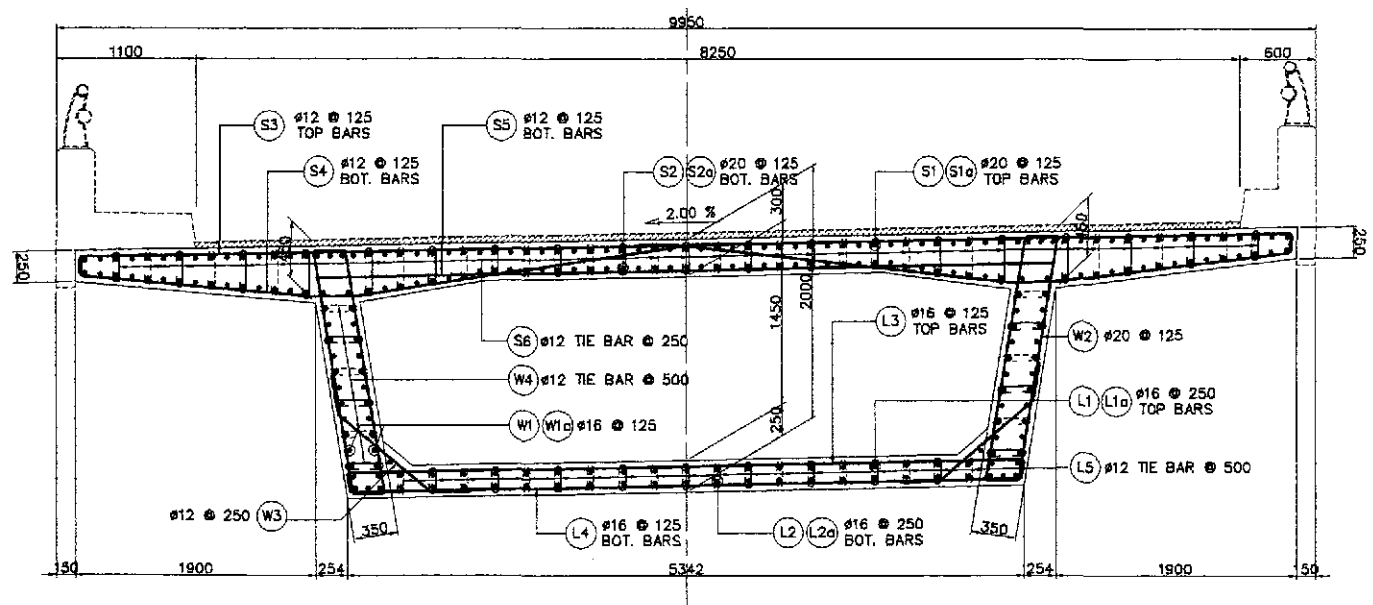


SUPERSTRUCTURE REINFORCING BARS

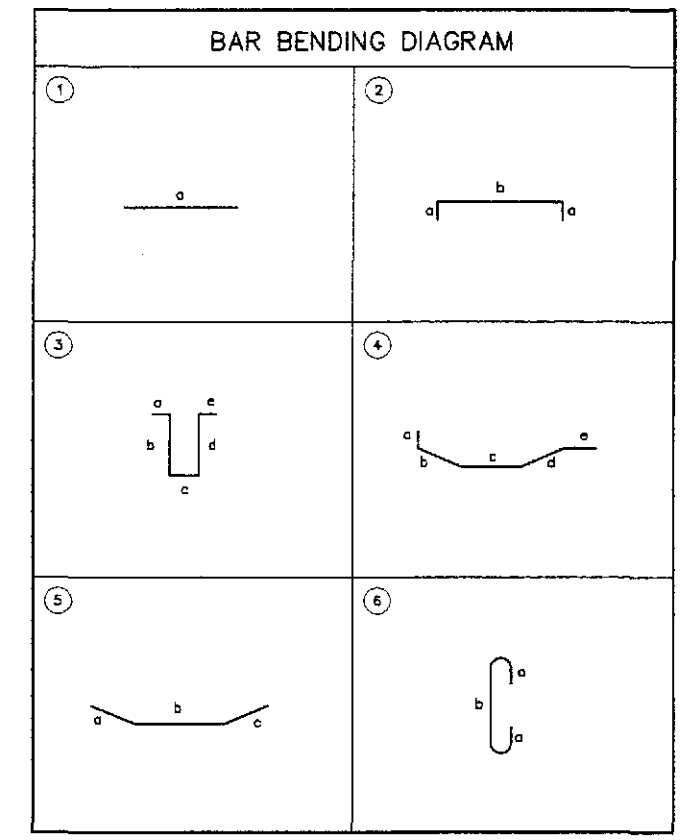


A TYPICAL SECTION @ SUPPORT
SCALE 1:30

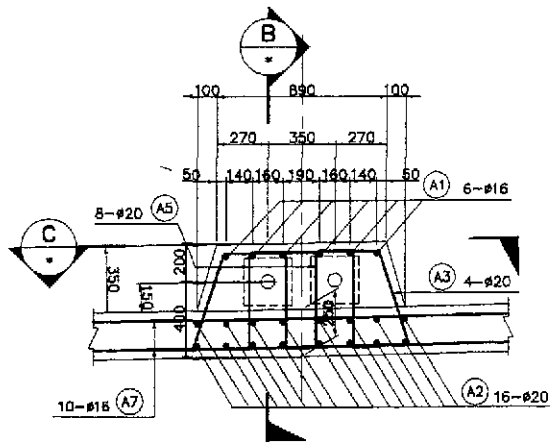


B TYPICAL SECTION @ MID-SPAN
SCALE 1:30

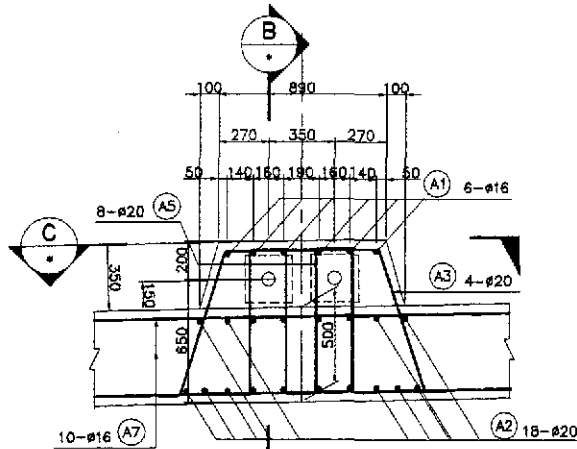
1 TYPICAL SECTIONS FOR SUPERSTRUCTURE (SHOWING REINFORCEMENT)
SCALE AS SHOWN



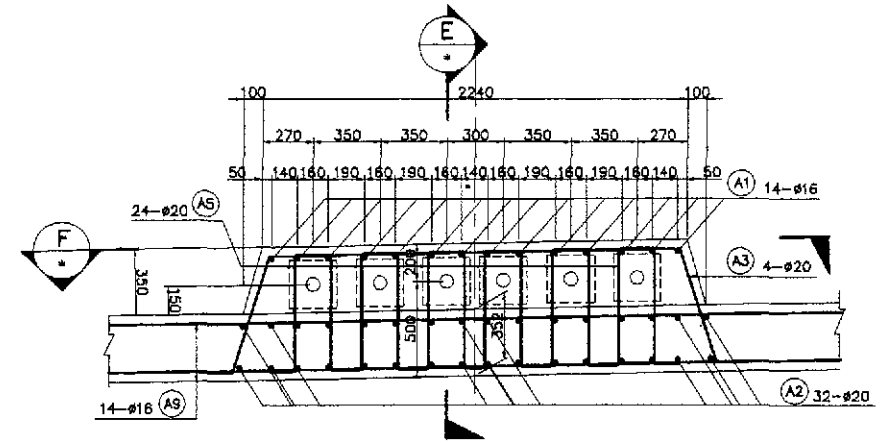
	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE III	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO. 8 ANGAT RIVER BRIDGE TYPICAL SUPERSTRUCTURE REINFORCEMENT DETAILS (ULTIMATE STAGE)	SHEET NO. : B8M-21
	CHECKED	7/27/12	C. SANTOS		BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO Project Director	OFFICE OF THE SECRETARY Reviewed By: ADRIANO M. DOROY Chief, Bridges Division	Recommended By: GILBERTO S. REYES Director IV (CIC)				
	SUBMITTED	7/30/12	TEAM LEADER (Signature)								



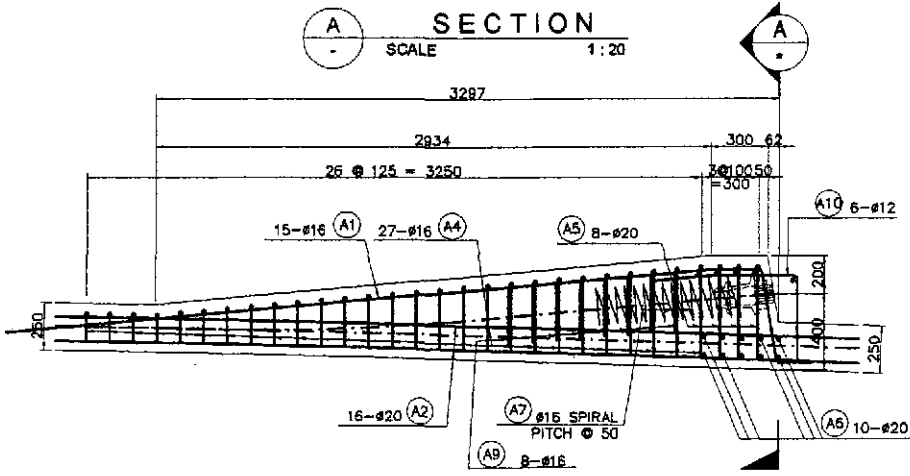
A SECTION
SCALE 1:20



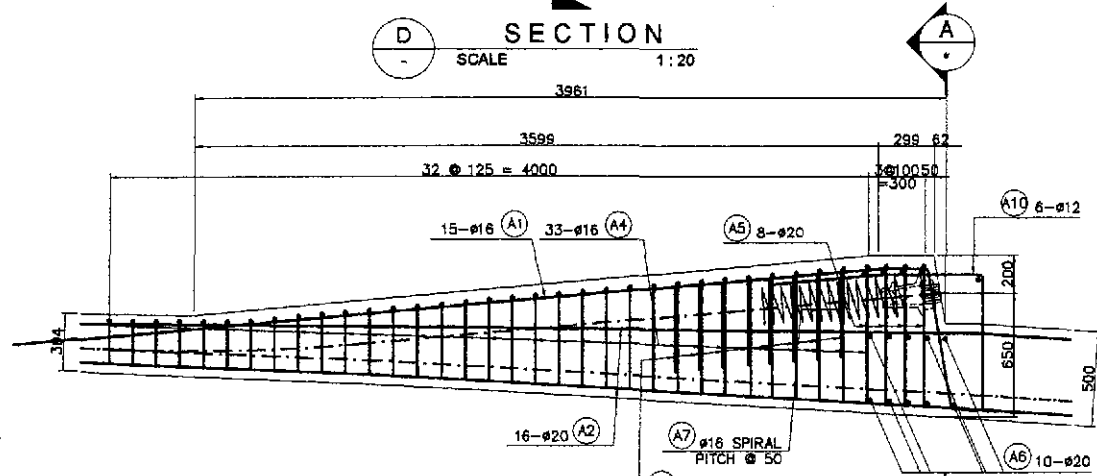
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SCALE 1:20



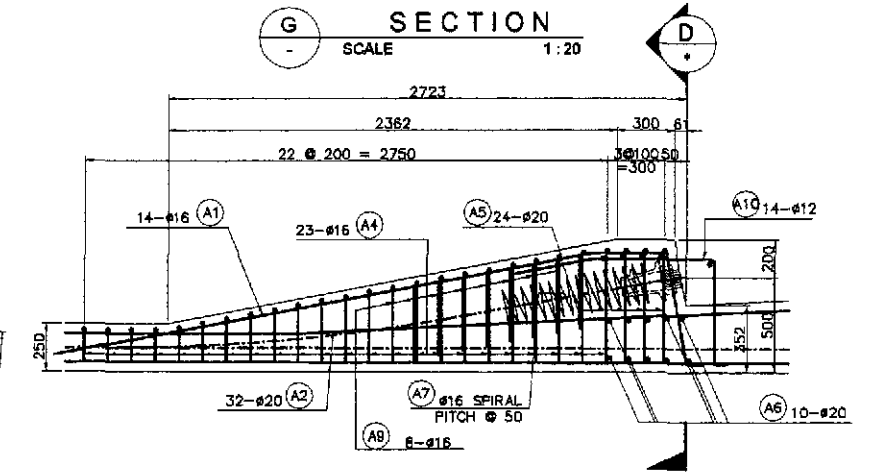
G SECTION
SCALE 1:20



B SECTION
SCALE 1:20

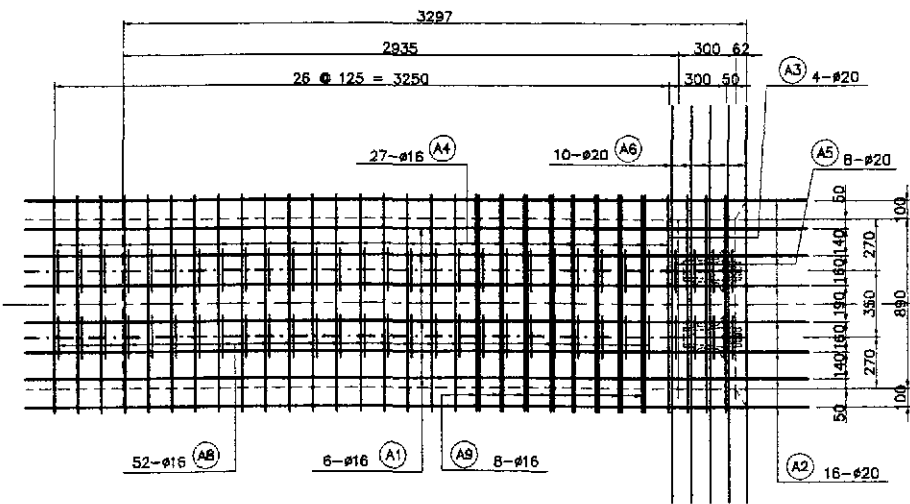


E SECTION
SCALE 1:20



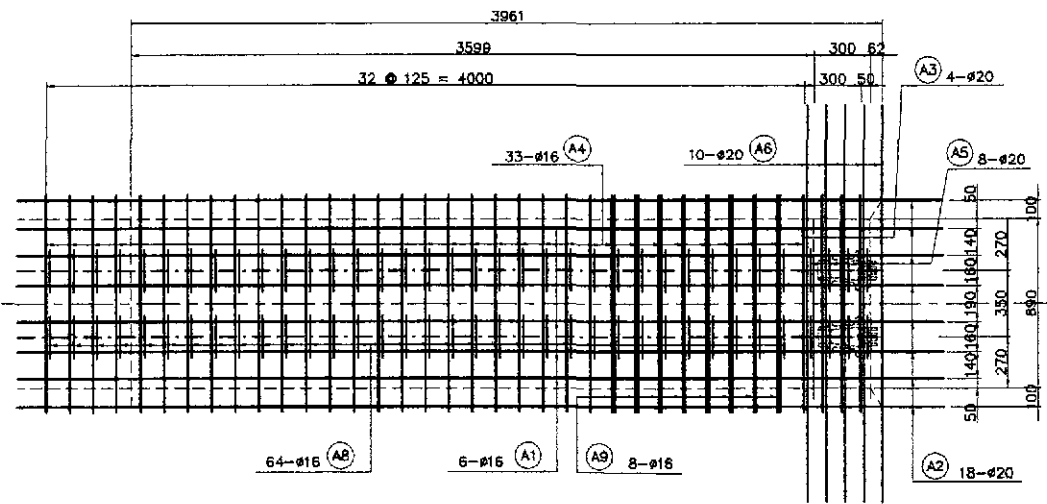
H SECTION
SCALE 1:20

NOTE: DOWEL BARS SHOULD BE PROVIDED FOR CONCRETE COVER IN ANCHOR HEADS.



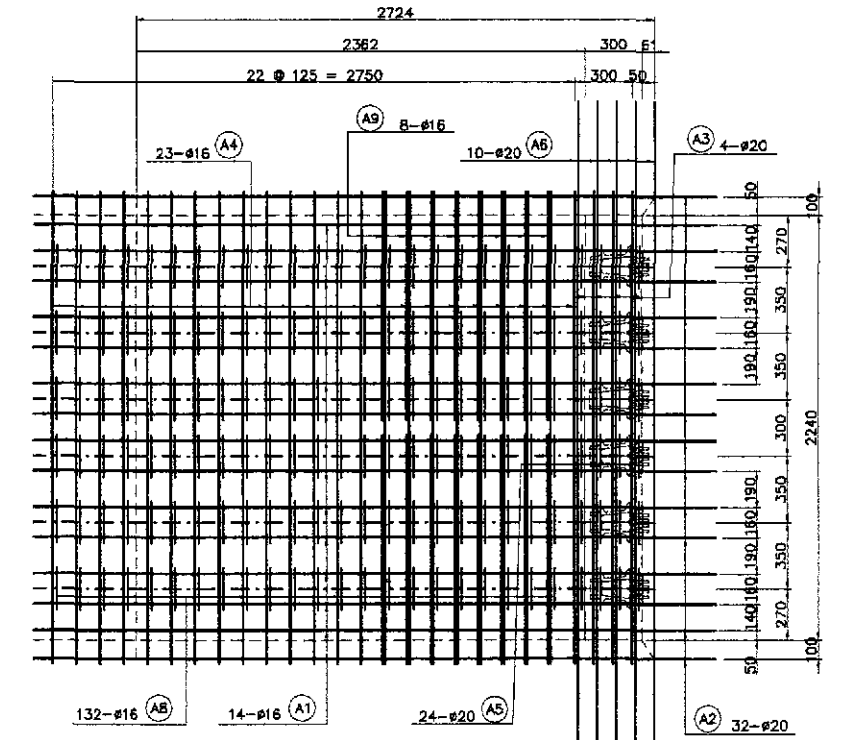
C SECTION
SCALE 1:20

1 DETAIL OF LOCAL ANCHORAGE (TYPE 1)
SCALE AS SHOWN



F SECTION
SCALE 1:20

2 DETAIL OF LOCAL ANCHORAGE (TYPE 1A)
SCALE AS SHOWN



I SECTION
SCALE 1:20

3 DETAIL OF LOCAL ANCHORAGE (TYPE 2)
SCALE AS SHOWN

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

DESIGNED	DATE	SIGNATURE
CHECKED		
SUBMITTED		

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

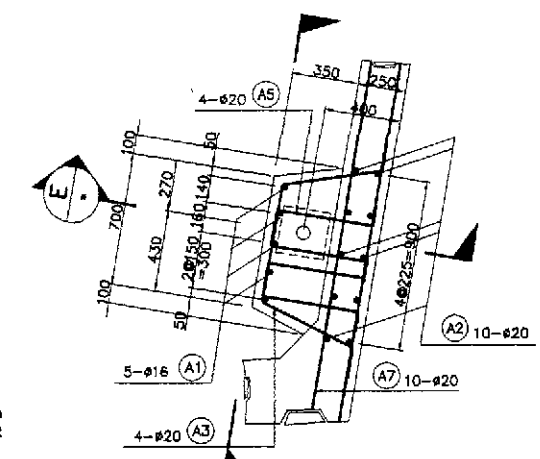
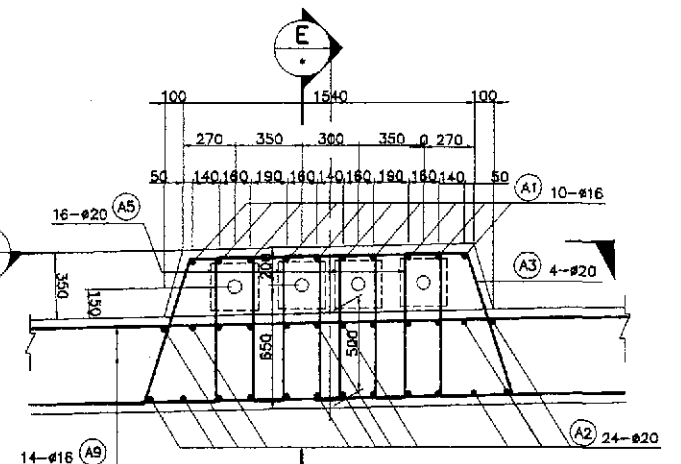
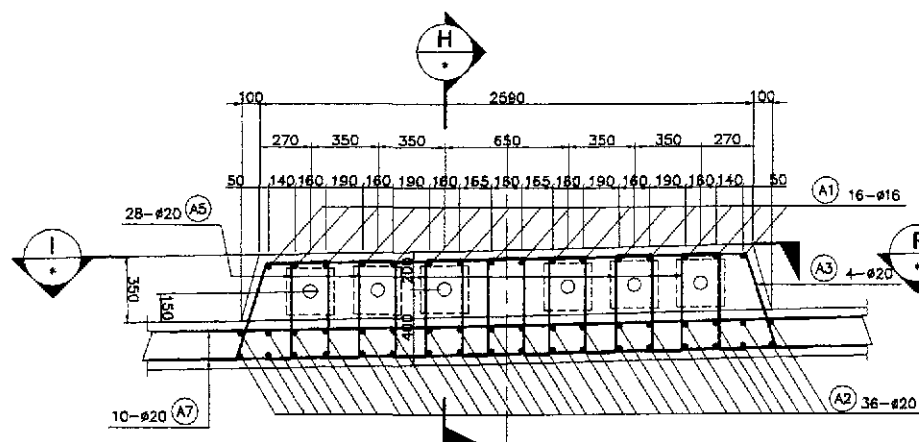
Submitted By:	Reviewed By:	Recommended By:	Approved By:
DANILO C. TRAJANO Project Director	ADRIANO M. DOROY Chief, Bridges Division	GILBERTO S. REYES Director IV (CIC)	MANUEL M. BONDAN Undersecretary

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

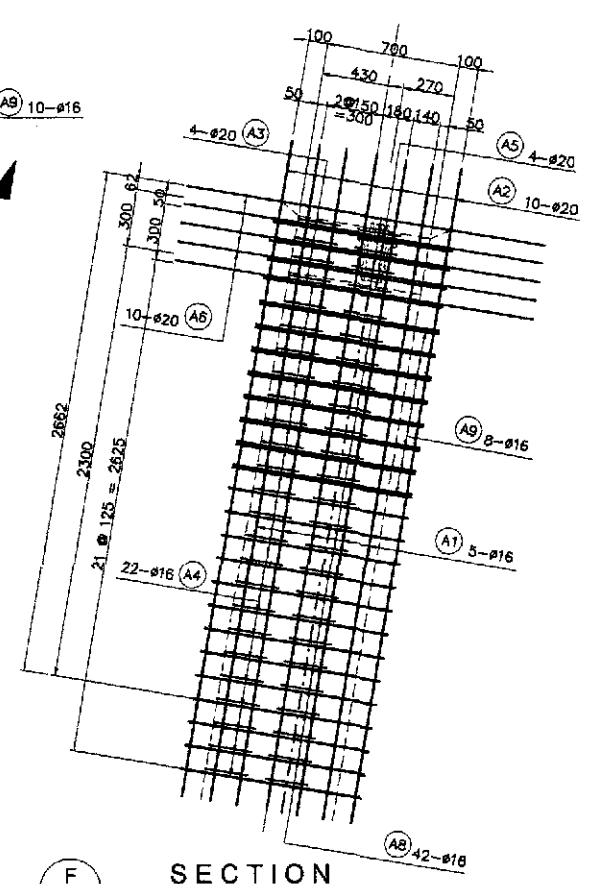
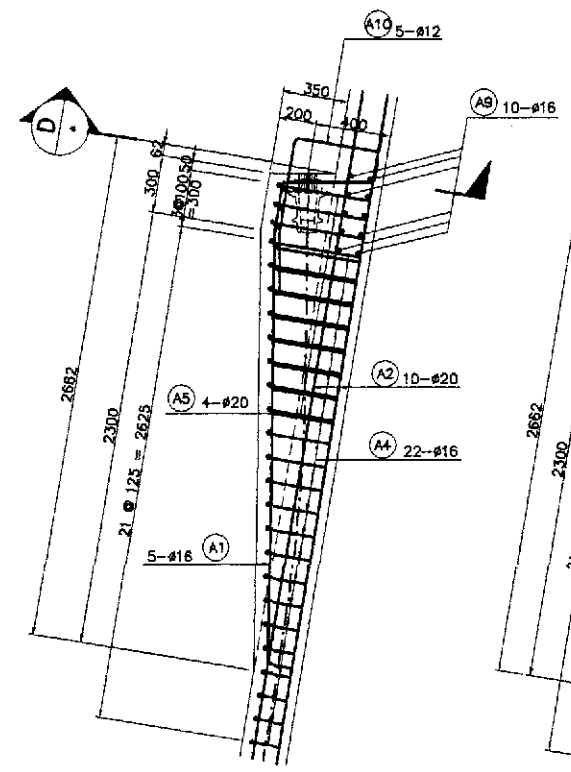
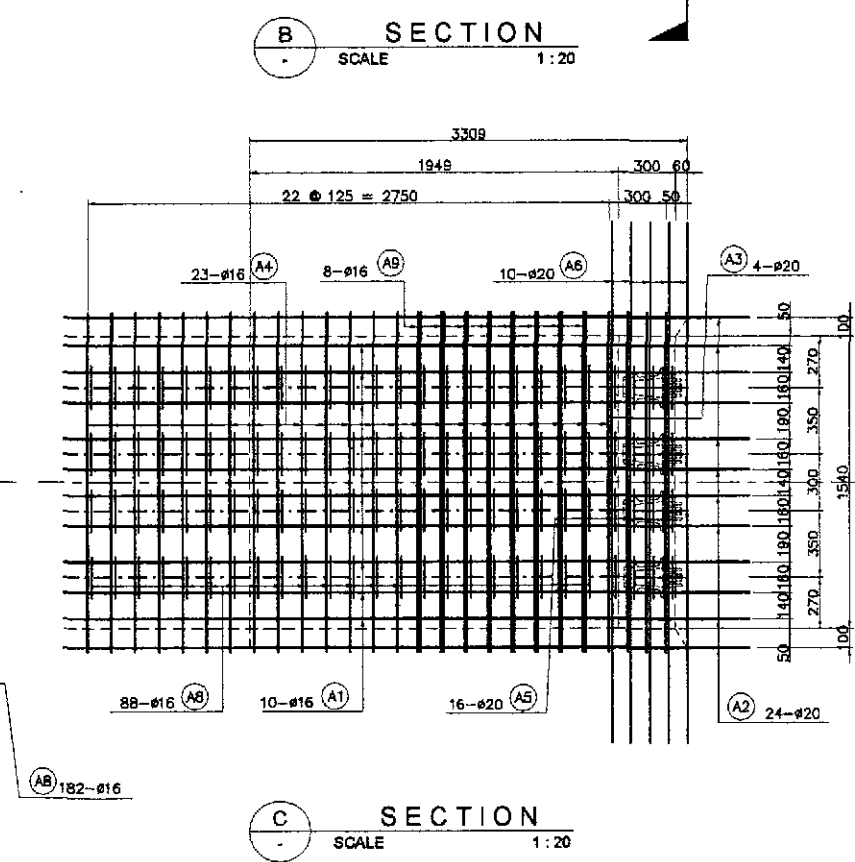
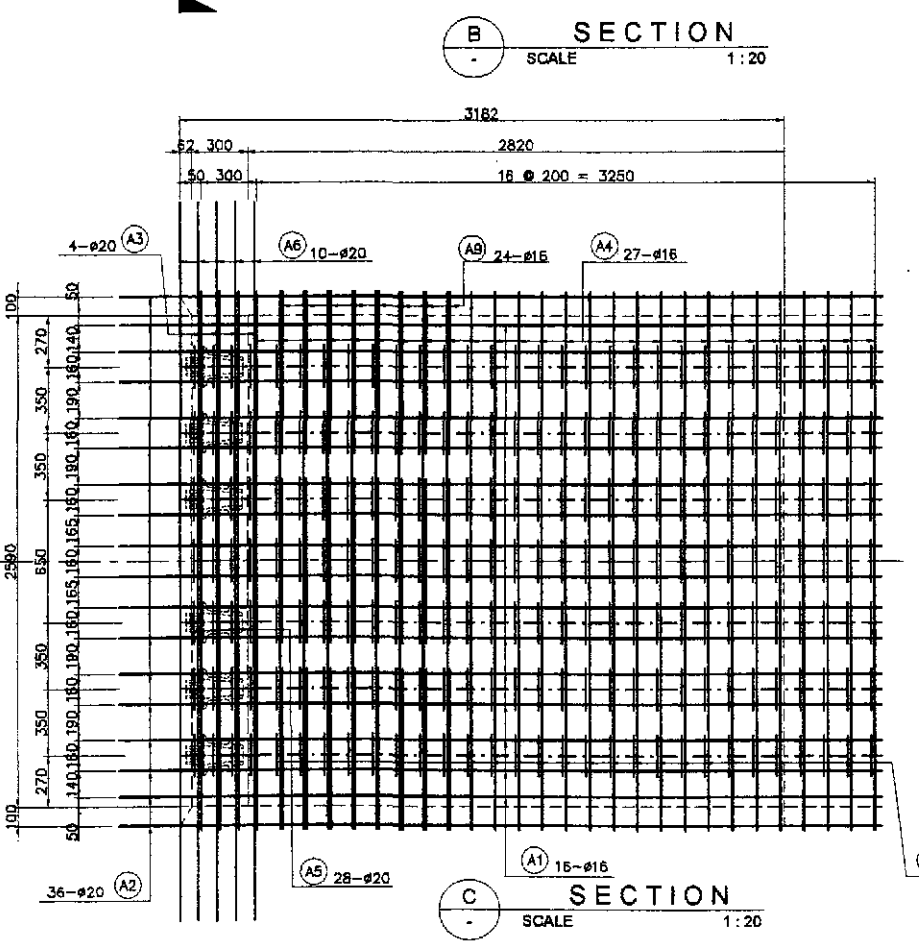
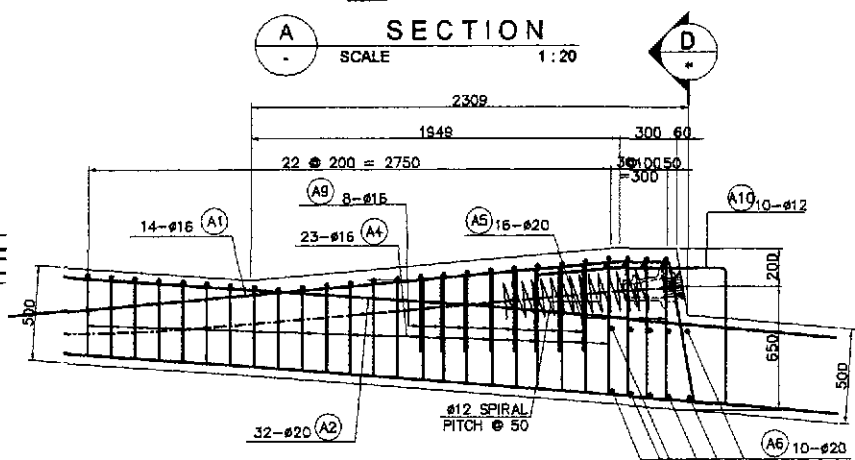
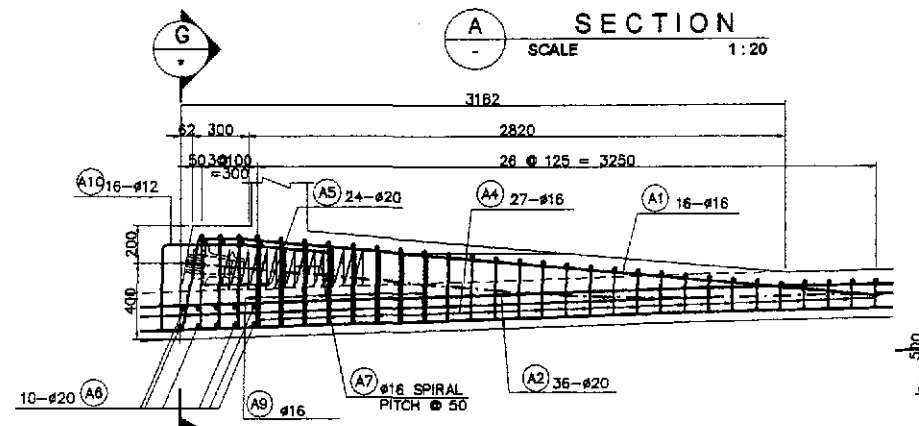
SCALE :
AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 8 ANGAT RIVER BRIDGE
DETAIL OF LOCAL ANCHORAGES (1 OF 2)
(ULTIMATE STAGE)

SHEET NO. :
B8M-22



NOTE:
DOWEL BARS SHOULD BE PROVIDED FOR CONCRETE CENTER IN ANCHOR HEADS.



SECTION E SCALE 1:20

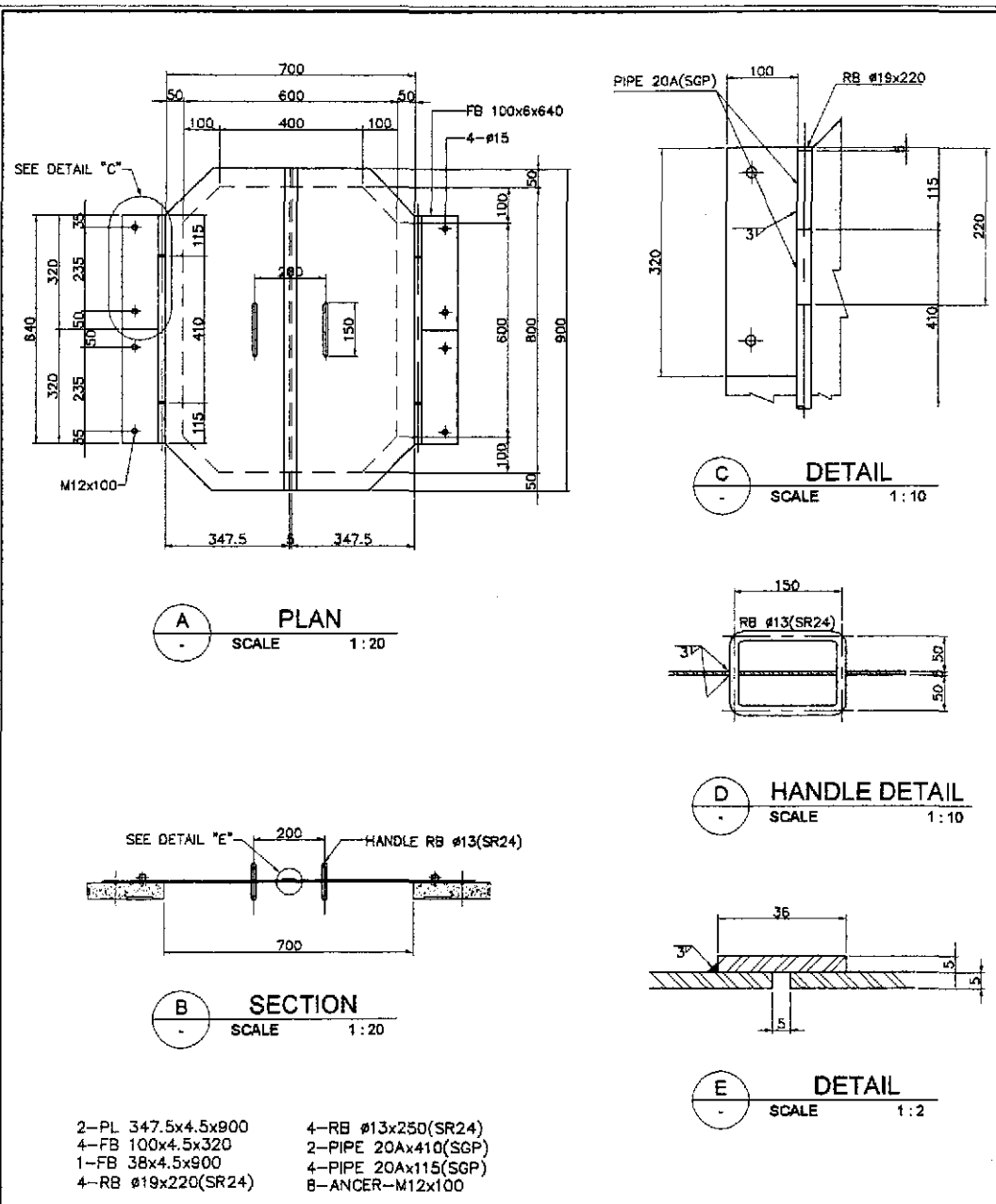
SECTION F SCALE 1:20

4 DETAIL OF LOCAL ANCHORAGE (TYPE 5) SCALE AS SHOWN

4 DETAIL OF LOCAL ANCHORAGE (TYPE 3) SCALE AS SHOWN

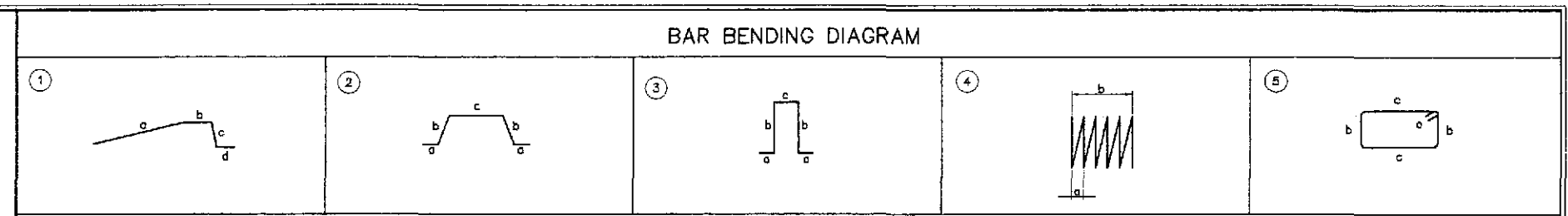
4 DETAIL OF LOCAL ANCHORAGE (TYPE 4) SCALE AS SHOWN

	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	7/27/02	<i>[Signature]</i>	BUREAU OF DESIGN			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. 8 ANGAT RIVER BRIDGE DETAIL OF LOCAL ANCHORAGES (2 OF 2) (ULTIMATE STAGE)	B8M-23
	SUBMITTED	7/30/02	<i>[Signature]</i>	Submitted By:	Reviewed By:	Recommended By:	PLARIDEL BYPASS - CONTRACT PACKAGE III	FULL SIZE A1		
			<i>[Signature]</i>	DANILO C. TRAJANO Project Director	ADRIANO M. DOROY Chief, Bridges Division	GILBERTO S. REYES Director IV (DIC)	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary		



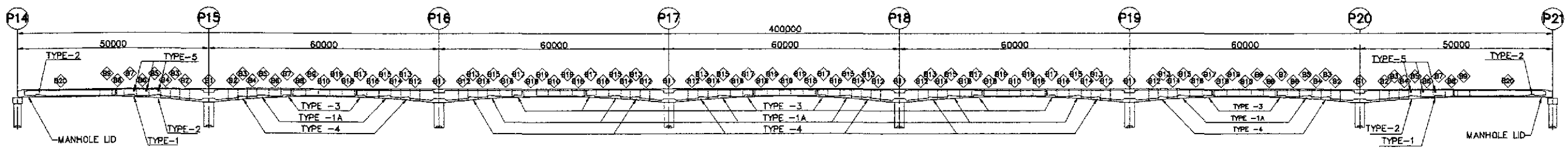
SCHEDULE OF PC LOCAL ANCHORAGE	
TYPE	NO. OF QUANTITIES
1	4
1A	10
2	6
3	10
4	10
5	6

1 MANHOLE LID DETAILS
SCALE AS SHOWN

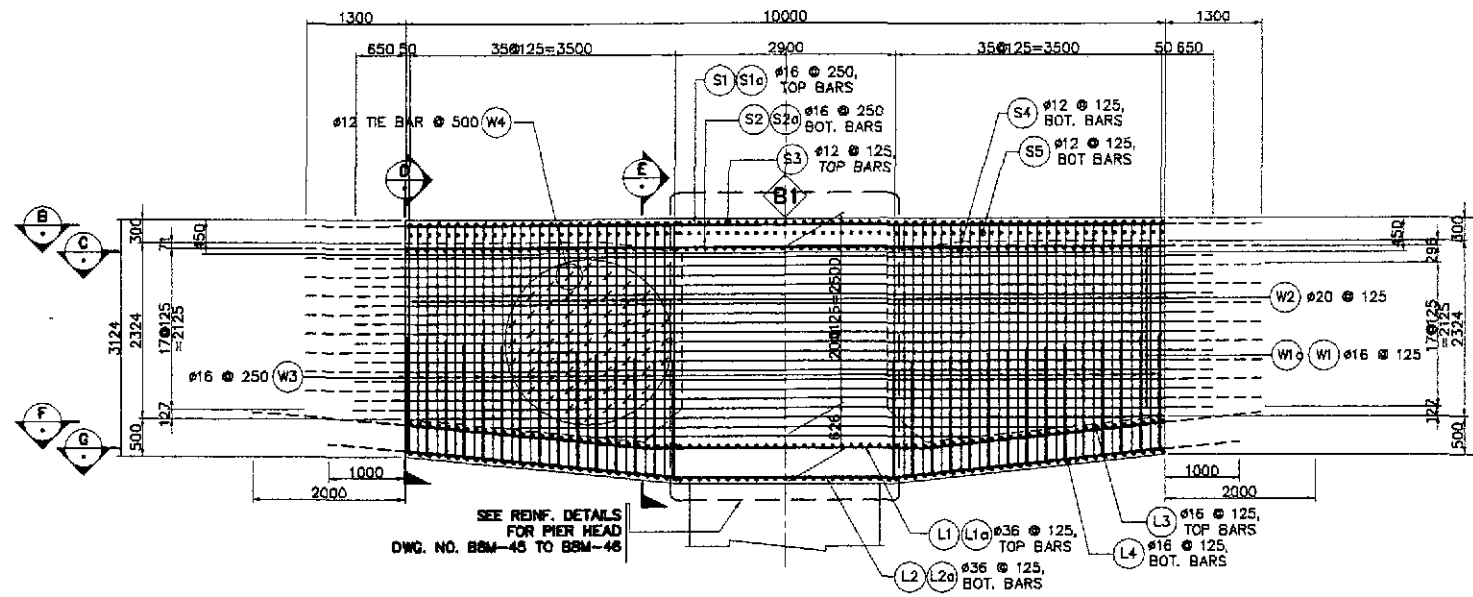


SCHEDULE OF REINFORCEMENT																											
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT				LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)		LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT				LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)			
				a	b	c	d				GRADE 40	GRADE 60					a	b	c	d				GRADE 40	GRADE 60		
TYPE 1	A1	20	1	3700	300	500	300	4800	6	2.466		71.02	TYPE 3	A1	20	1	3250	300	500	300	4350	16	2.466		171.63		
	A2	20	str	5150				5150	16	2.466		203.20		A2	20	str	4800			4800	36	2.466		426.12			
	A3	20	2	300	520	790		2430	4	2.466		23.97		A3	20	2	300	520	2490		4130	4	2.466		40.74		
	A4	16	2	300	520 (max)	790		2060	27	1.579	87.82				A4	16	2	300	520 (max)	2490		3760	27	1.579	160.30		
	A5	20	3	300	500	220		1820	16	2.466		71.81		A5	20	3	300	500	220		1820	28	2.466		125.67		
	A6	16	str	2100				2100	10	1.579	33.16				A6	16	3	250	500	220		1720	4	1.579	10.86		
	A7	16	4	50	250			3935	2	1.579	12.43				A7	16	4	50	250			3935	6	1.579	37.28		
	A8	16	3	150	500 (max)	220		1170	52	1.579	96.07				A8	16	3	150	500 (max)	220		1280	182	1.579	387.84		
	A9	16	5	100	575 (max)	790		2530	8	1.579	31.96				A9	16	5	100	575 (max)	900		2750	24	1.579	104.21		
	A10	12	1	300	500	500	150	1450	6	0.888	7.73				A10	12	1	300	500	500	150	1450	16	0.888	20.60		
WEIGHT FOR GRADE 60											370.00		WEIGHT FOR GRADE 60											764.16			
WEIGHT FOR GRADE 40											269.17		WEIGHT FOR GRADE 40											701.09			
TOTAL WEIGHT FOR 4 SETS											1479.99		TOTAL WEIGHT FOR 10 SETS											7641.64			
GRADE 60											1076.68		GRADE 60											7010.80			
GRADE 40													GRADE 40														
TYPE 1A	A1	20	1	4800	300	750	300	6150	6	2.466		91.00	TYPE 4	A1	20	1	3300	300	750	300	4650	10	2.466		114.67		
	A2	20	str	6200				6200	18	2.466		275.21		A2	20	str	3500			3500	24	2.466		207.14			
	A3	20	2	300	810	790		3010	4	2.466		29.69		A3	20	2	300	800	1440		3640	4	2.466		35.90		
	A4	16	2	300	730 (max)	790		2270	33	1.579	118.28				A4	16	2	300	800 (max)	1440		7640	23	1.579	159.43		
	A5	20	3	300	750	220		2320	16	2.466		91.54		A5	20	3	300	750	220		2320	16	2.466		91.54		
	A6	16	str	2100				2100	4	1.579	13.26				A6	16	str	2800			2800	10	1.579	44.21			
	A7	16	4	50	250			3935	2	1.579	12.43				A7	16	4	50	250			3935	4	1.579	24.85		
	A8	16	3	150	500 (max)	220		1420	84	1.579	143.50				A8	16	3	150	500 (max)	220		1420	88	1.579	197.31		
	A9	16	5	100	575 (max)	790		2530	8	1.579	31.96				A9	16	5	100	575 (max)	1440		3830	8	1.579	48.38		
	A10	12	1	300	500	750	150	1700	14	0.888	9.06				A10	12	1	300	500	750	150	1700	10	0.888	15.10		
WEIGHT FOR GRADE 60											487.43		WEIGHT FOR GRADE 60											449.26			
WEIGHT FOR GRADE 40											328.49		WEIGHT FOR GRADE 40											489.28			
TOTAL WEIGHT FOR 10 SETS											4874.30		TOTAL WEIGHT FOR 10 SETS											4492.56			
GRADE 60											3284.90		GRADE 60											4892.80			
GRADE 40													GRADE 40														
TYPE 2	A1	20	1	3000	300	600	300	4200	14	2.466		145.00	TYPE 5	A1	20	1	2900	300	500	300	4000	5	2.466		49.32		
	A2	20	str	4200				4200	32	2.466		331.43		A2	20	str	4000			4000	10	2.466		98.64			
	A3	20	2	300	610	2140		3960	4	2.466		39.06		A3	20	2	300	520	600		2240	4	2.466		22.10		
	A4	16	2	300	510 (max)	2140		3500	23	1.579	127.11				A4	16	2	300	520 (max)	600		1870	22	1.579	64.96		
	A5	20	3	300	610	220		2040	24	2.466		120.74		A5	20	3	250	500	220		1720	4	2.466		16.97		
	A6	16	str	3500				3500	10	1.579	55.27				A6	16	str	1900			1900	10	1.579	30.00			
	A7	16	4	50	250			3935	6	1.579	37.28				A7	16	4	50	250			3935	4	1.579	24.85		
	A8	16	3	150	510 (max)	220		1280	132	1.579	266.79				A8	16	3	150	500 (max)	220		1170	42	1.579	77.99		
	A9	16	5	100	575 (max)	1200		3350	16	1.579	84.63				A9	16	5	100	575 (max)	600		2150	8	1.579	27.16		
	A10	12	1	300	500	600	150	1550	6	0.888	12.27				A10	12	1	300	500	500	150	1450	5	0.888	8.44		
WEIGHT FOR GRADE 60											636.23		WEIGHT FOR GRADE 60											187.02			
WEIGHT FOR GRADE 40											583.15		WEIGHT FOR GRADE 40											231.00			
TOTAL WEIGHT FOR 4 SETS											2544.91		TOTAL WEIGHT FOR 6 SETS											1122.13			
GRADE 60											2332.60		GRADE 60											1386.00			
GRADE 40													GRADE 40														

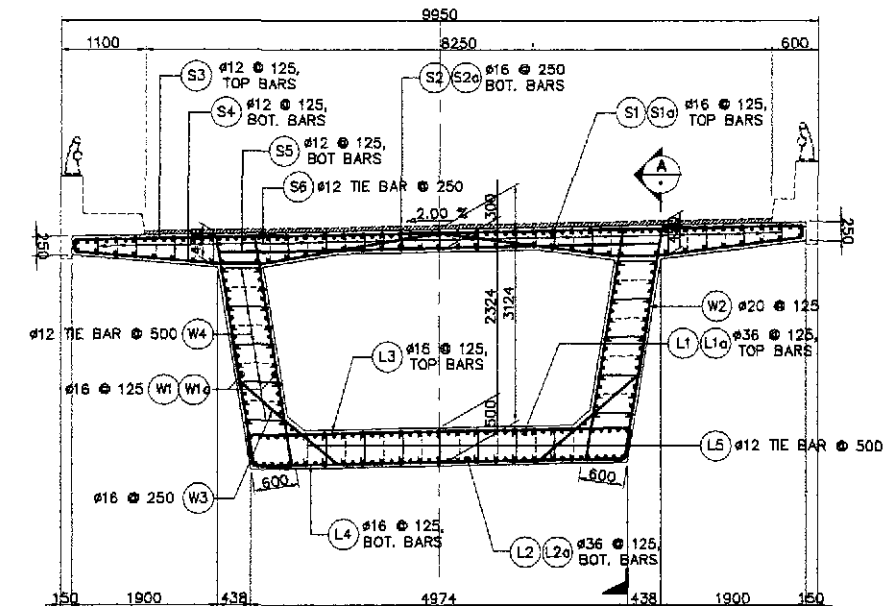
2 LOCAL ANCHORAGE LOCATIONS AND MANHOLE LIDS DETAILS
SCALE 1:1200



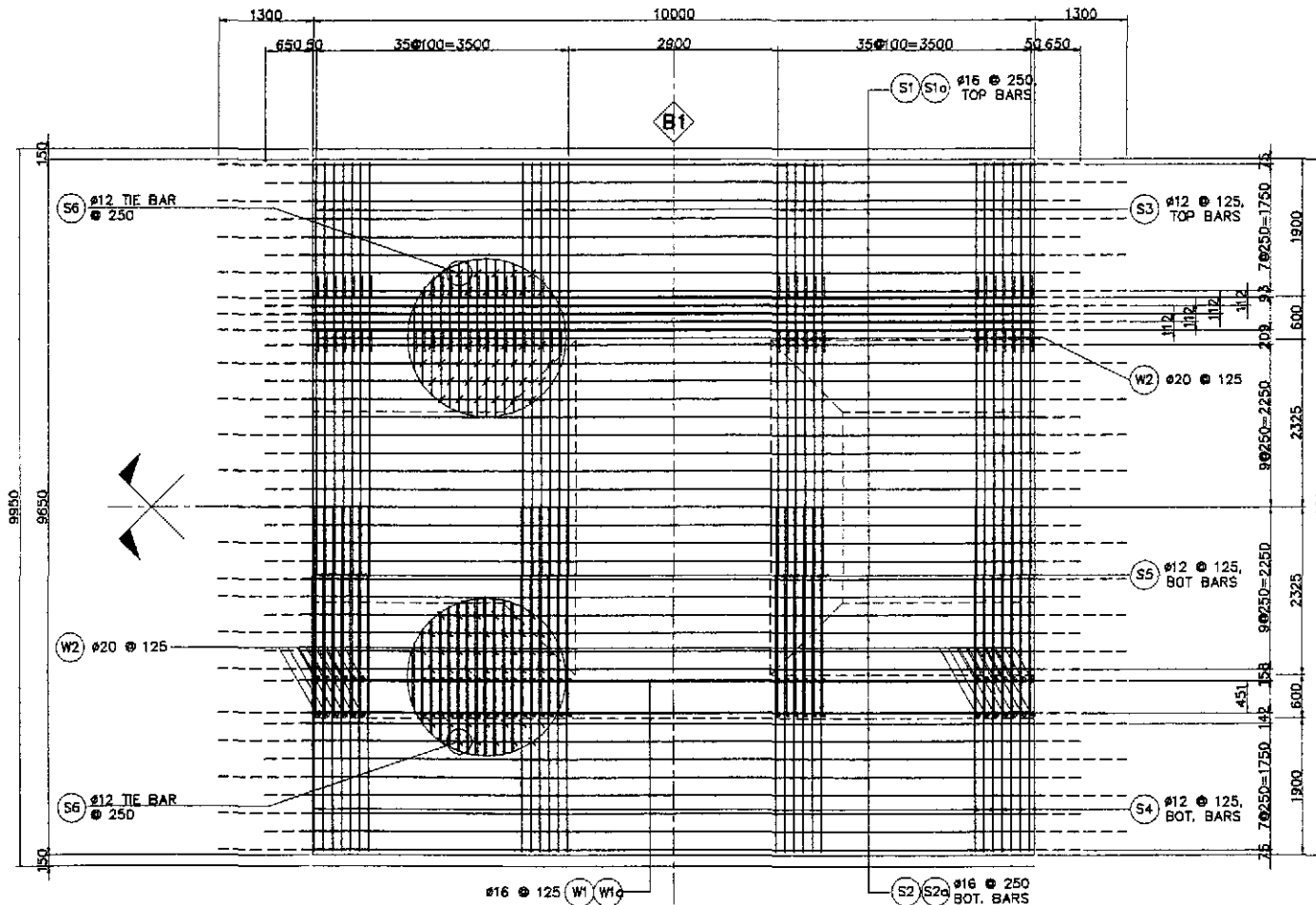
	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO. 8 ANGAT RIVER BRIDGE LOCAL ANCHORAGE LOCATIONS & MANHOLE LIDS DETAILS (ULTIMATE STAGE)	SHEET NO. : B8M-24
	CHECKED	DATE	SIGNATURE		BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO Project Director	OFFICE OF THE SECRETARY Reviewed By: ADRIANO M. DORCY Chief, Bridge Division	Recommended By: GILBERTO S. REYES Director IV (OIC)	Approved By: MANUEL M. BONDAN Undersecretary				



A SECTION
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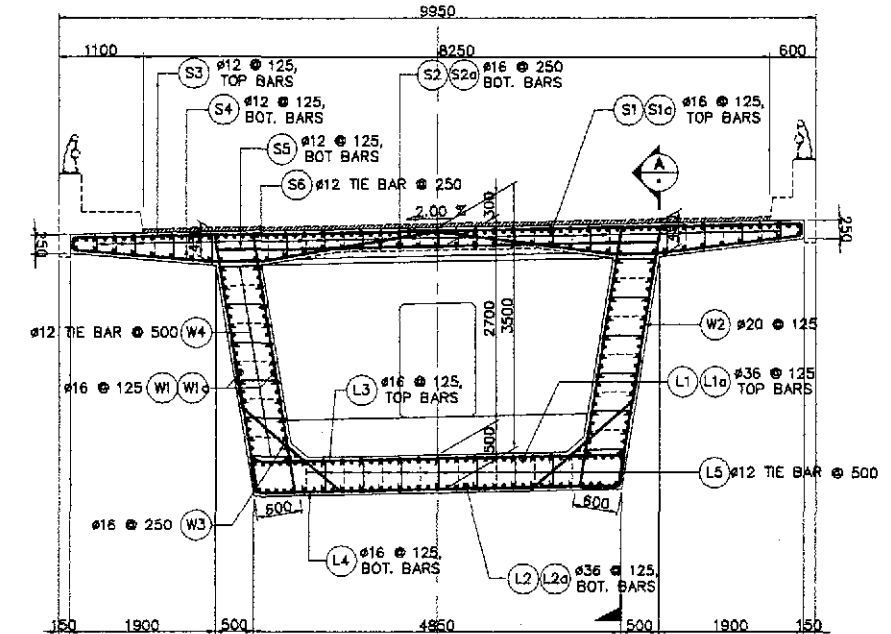


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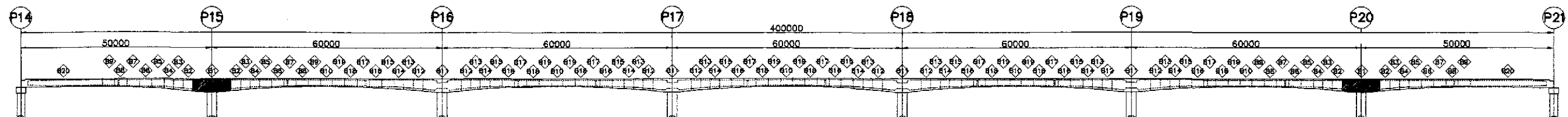


B SECTION
SCALE 1:100

C SECTION
SCALE 1:100

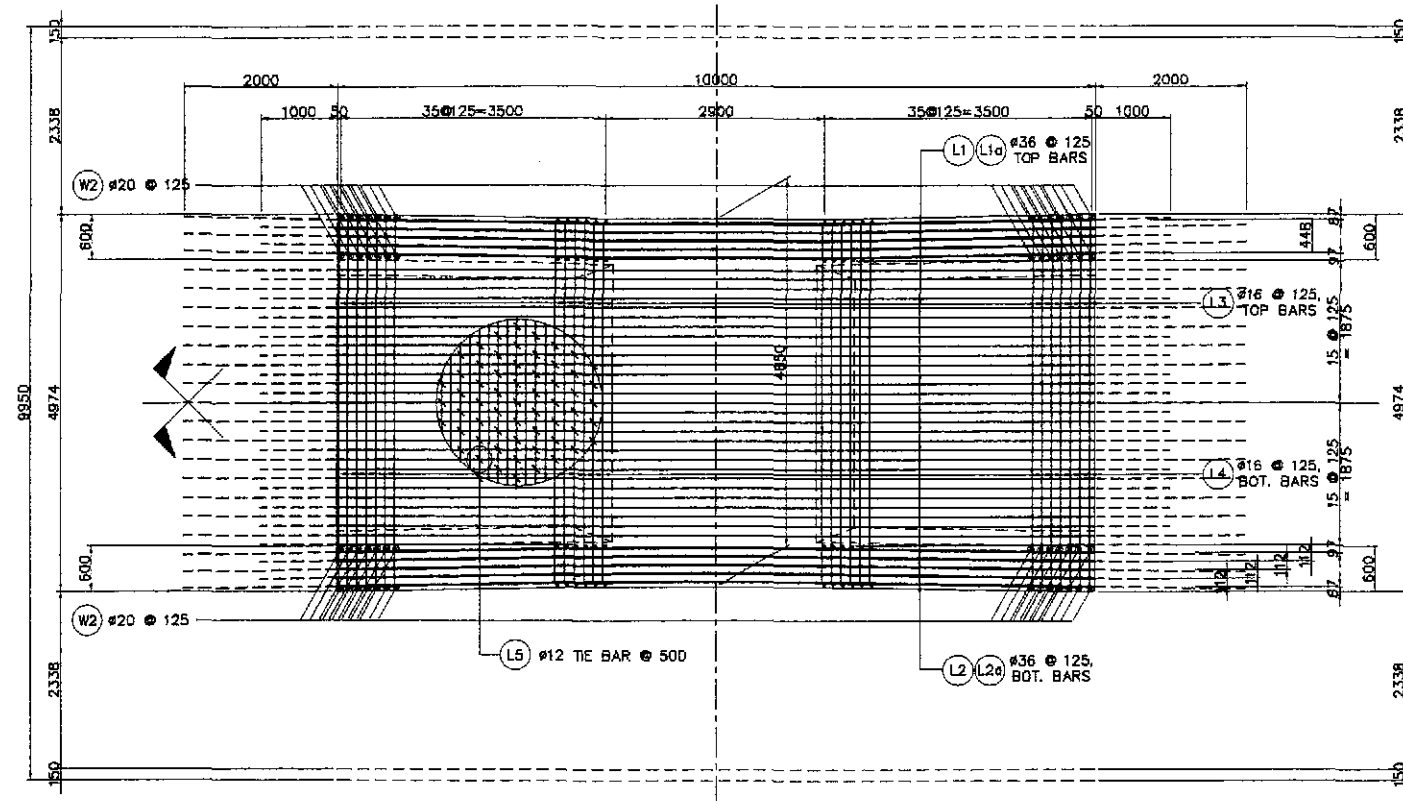


E SECTION
SCALE 1:100



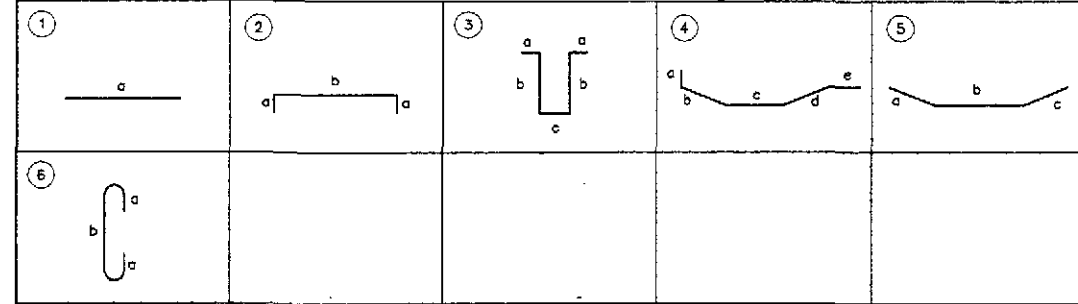
1 SLAB REINFORCEMENT DETAILS
SCALE AS SHOWN

	DATE: 9/15/02 DESIGNED: [Signature] CHECKED: 9/27/02 [Signature] SUBMITTED: 9/30/02 [Signature]	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN Submitted By: DANILO C. TRAJANO Reviewed By: ADRIANO M. DOROY Recommended By: GILBERTO S. REYES Office of the Secretary Recommended By: MANUEL M. BONDAN Approved By: SIMON A. DATUMANONG	PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE III	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS AT PIER TABLE-B1 (1 OF 2) (ULTIMATE STAGE)	SHEET NO. : B8M-25	
	JICA JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL YEO YACHIYO ENGINEERING CO., LTD.		DEPARTMENT OF THE SECRETARY (See cover sheet for Signature/Approval)	PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE III	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS AT PIER TABLE-B1 (1 OF 2) (ULTIMATE STAGE)	SHEET NO. : B8M-25
	JICA JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL YEO YACHIYO ENGINEERING CO., LTD.		DEPARTMENT OF THE SECRETARY (See cover sheet for Signature/Approval)	PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE III	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS AT PIER TABLE-B1 (1 OF 2) (ULTIMATE STAGE)	SHEET NO. : B8M-25



SECTION SCALE 1:100
 SECTION SCALE 1:100

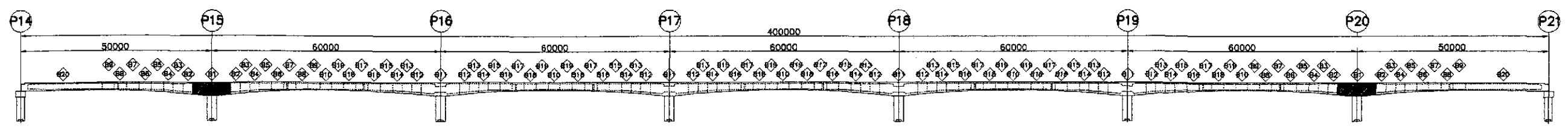
BAR BENDING DIAGRAM



SCHEDULE OF REINFORCEMENT

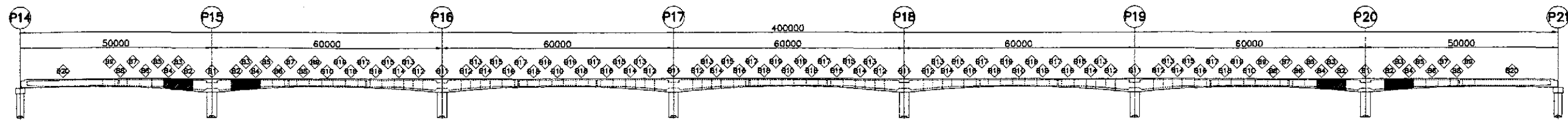
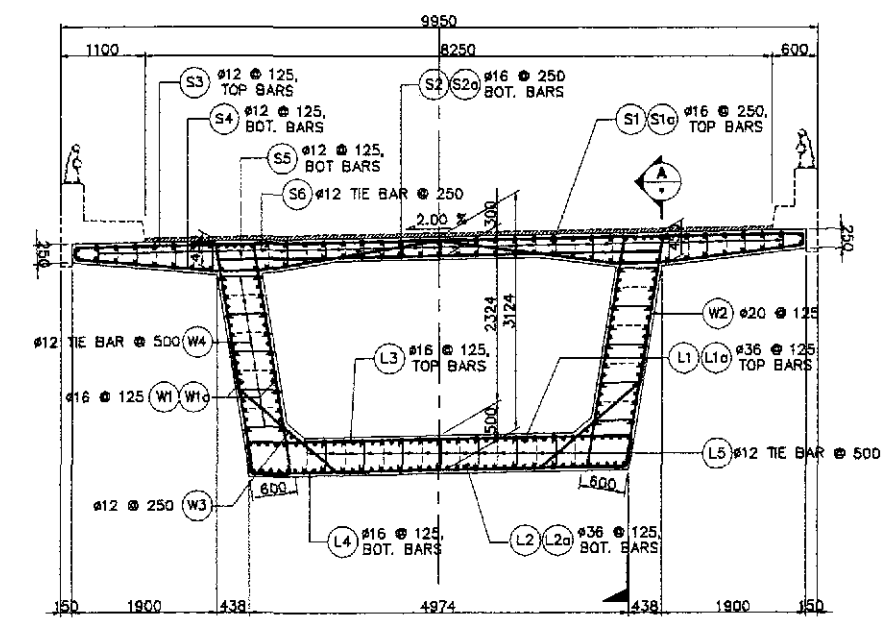
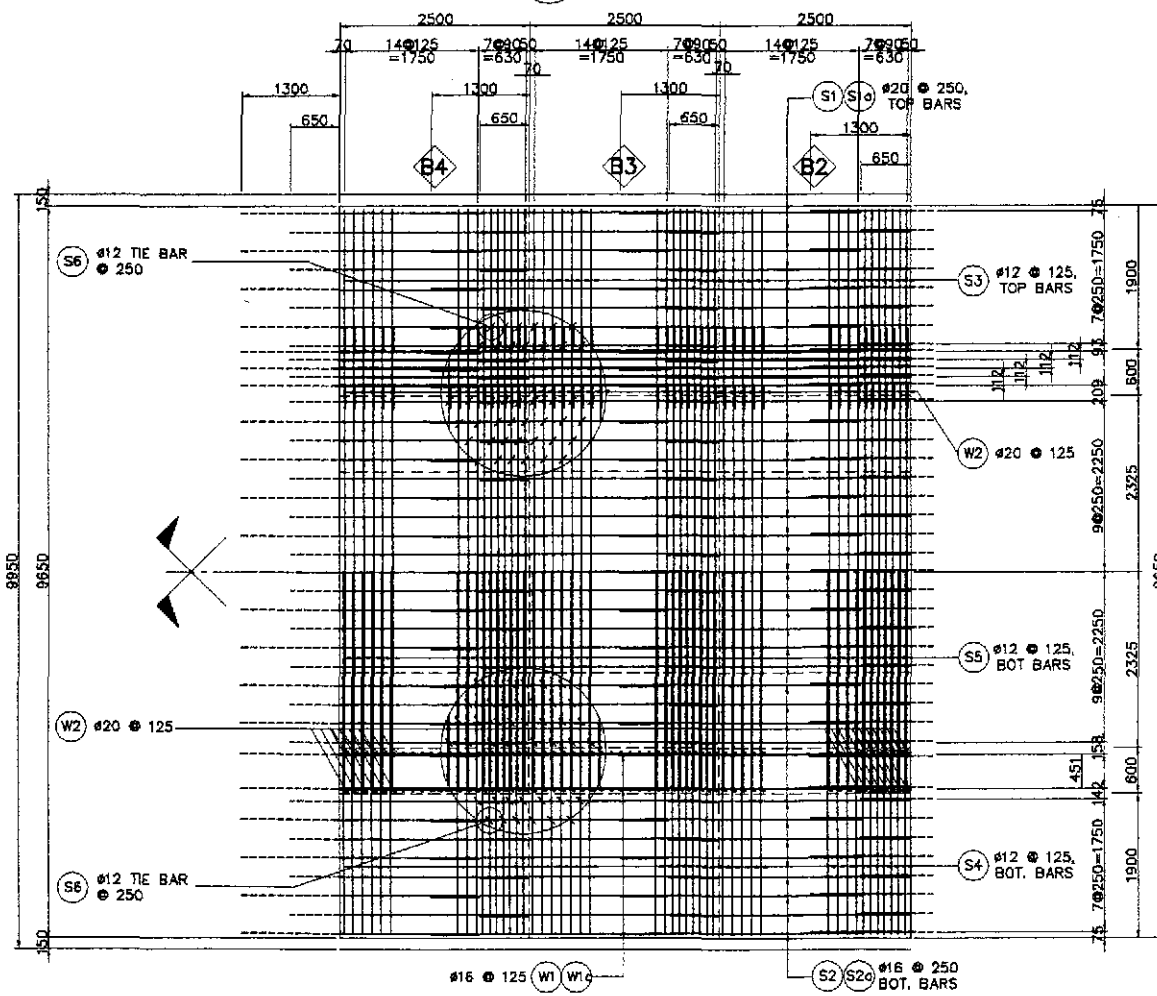
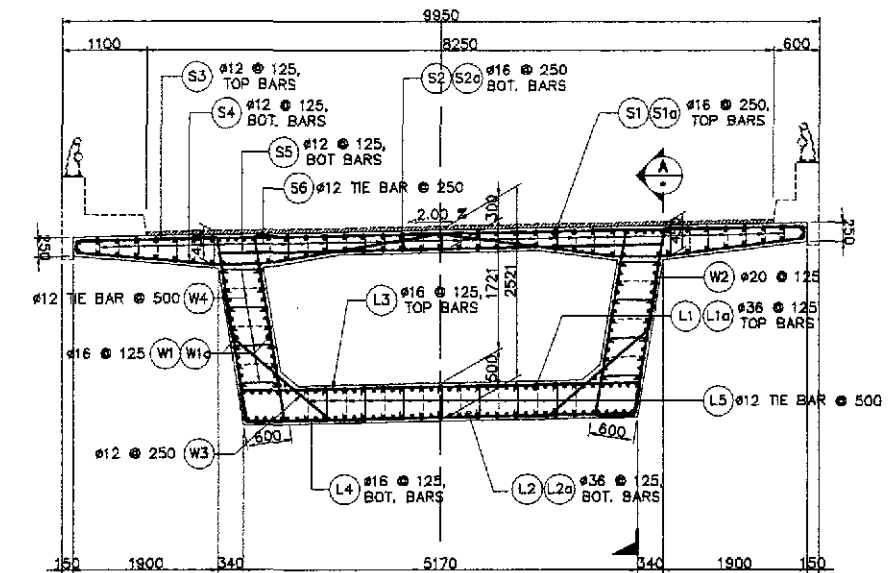
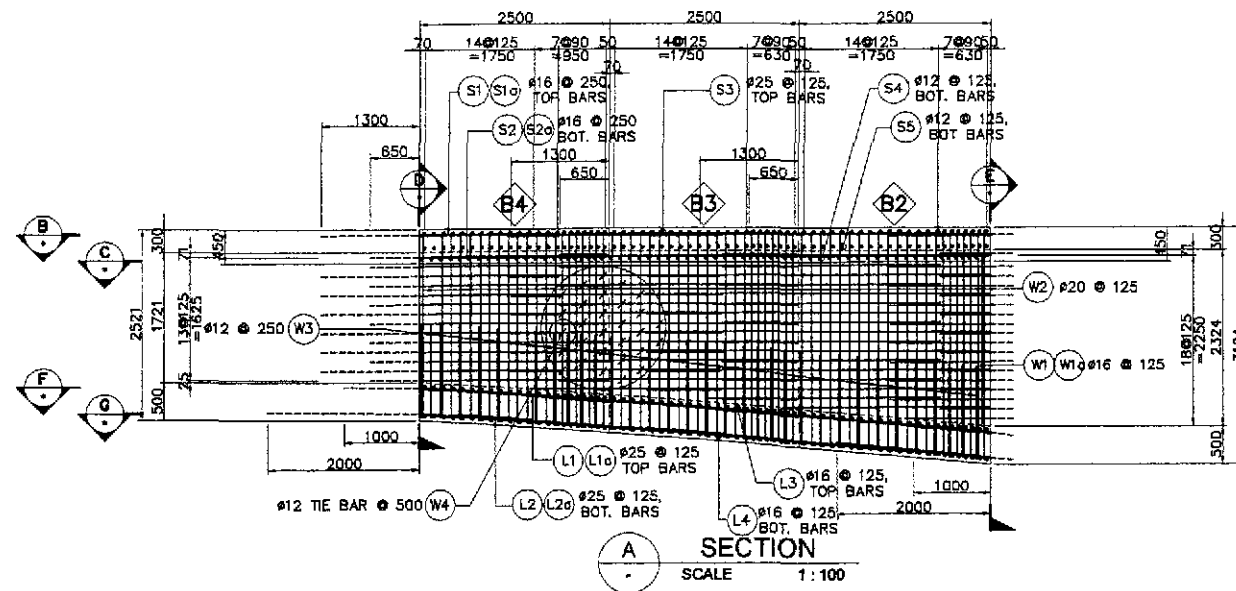
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (Kg)		
				a	b	c	d	e	f				GRADE 60	GRADE 40	
B1	S1	16	str	12600						12600	40	1.579		795.82	
	S1a	16	atr	11300						11300	39	1.579		695.87	
	S2	16	str	12600						12600	20	1.579		367.81	
	S2a	16	atr	11300						11300	19	1.579		339.01	
	S3	12	2	9550	125					9800	72	0.818		577.18	
	S4	12	5	150	1875	595	2050	150		4820	144	0.818		567.76	
	S5	12	atr	5835						5835	72	0.818		343.66	
	S6	12	6	125	390 (max)					541	1368	0.818		605.39	
					192 (min)										
	L1	36	5	5170	3730	5170				14070	21	7.991	2361.10		
	L1a	36	5	4170	3730	4170				12070	20	7.991	1929.03		
	L2	36	5	5670	2780	5670				14120	21	7.991	2369.49		
	L2a	36	5	4670	2780	4670				12120	20	7.991	1937.02		
	L3	16	2	400	4900					5700	72	1.579		648.02	
	L4	16	2	400	4760					5560	72	1.579		632.11	
	L5	12	6	250	500					1000	504	0.818		412.27	
	W1	16	str	12600						12600	36	1.579		716.23	
	W1a	16	atr	11300						11300	36	1.579		642.34	
	W2	20	3	300	3400 (max)	500				7525	180	2.466	3340.20		
					3025 (min)										
W3	12	5	250	1740	250				2240	36	0.818		65.96		
W4	12	6	250	400					900	720	0.818		530.06		
												WEIGHT FOR GRADE 60	=	11836.80	
												WEIGHT FOR GRADE 40	=	7969.60	
												TOTAL WEIGHT FOR 2 PIERS :			
												WEIGHT FOR GRADE 60	=	23873.67	
												WEIGHT FOR GRADE 40	=	15839.17	

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



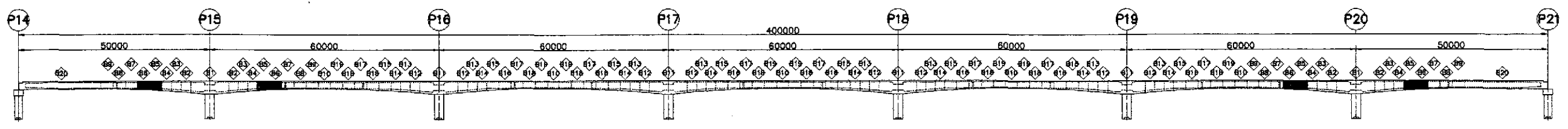
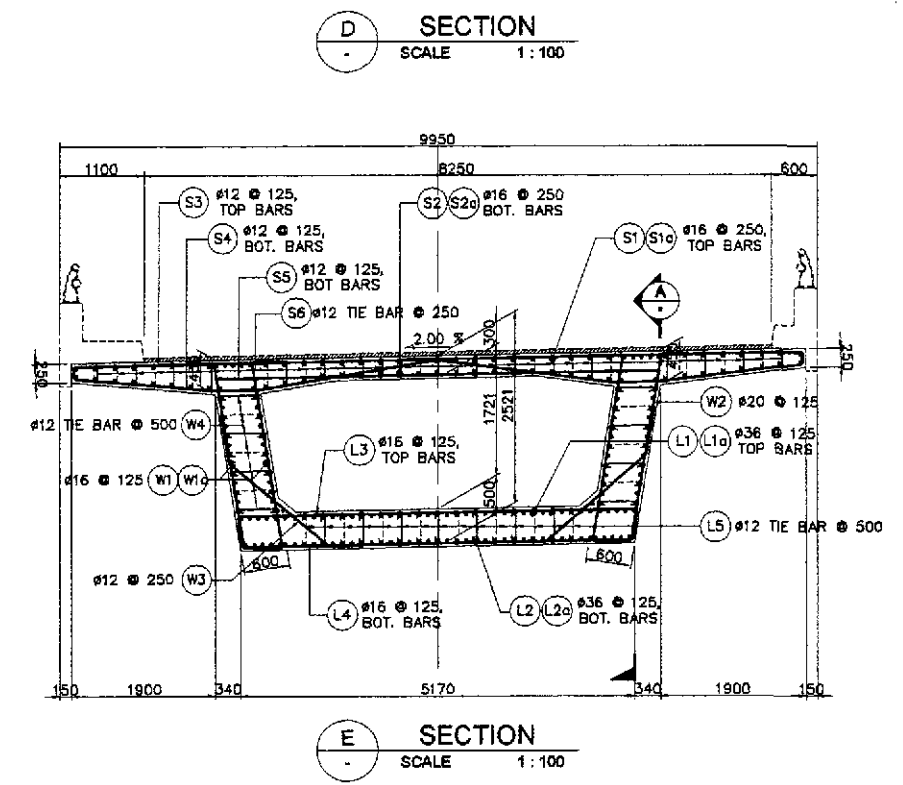
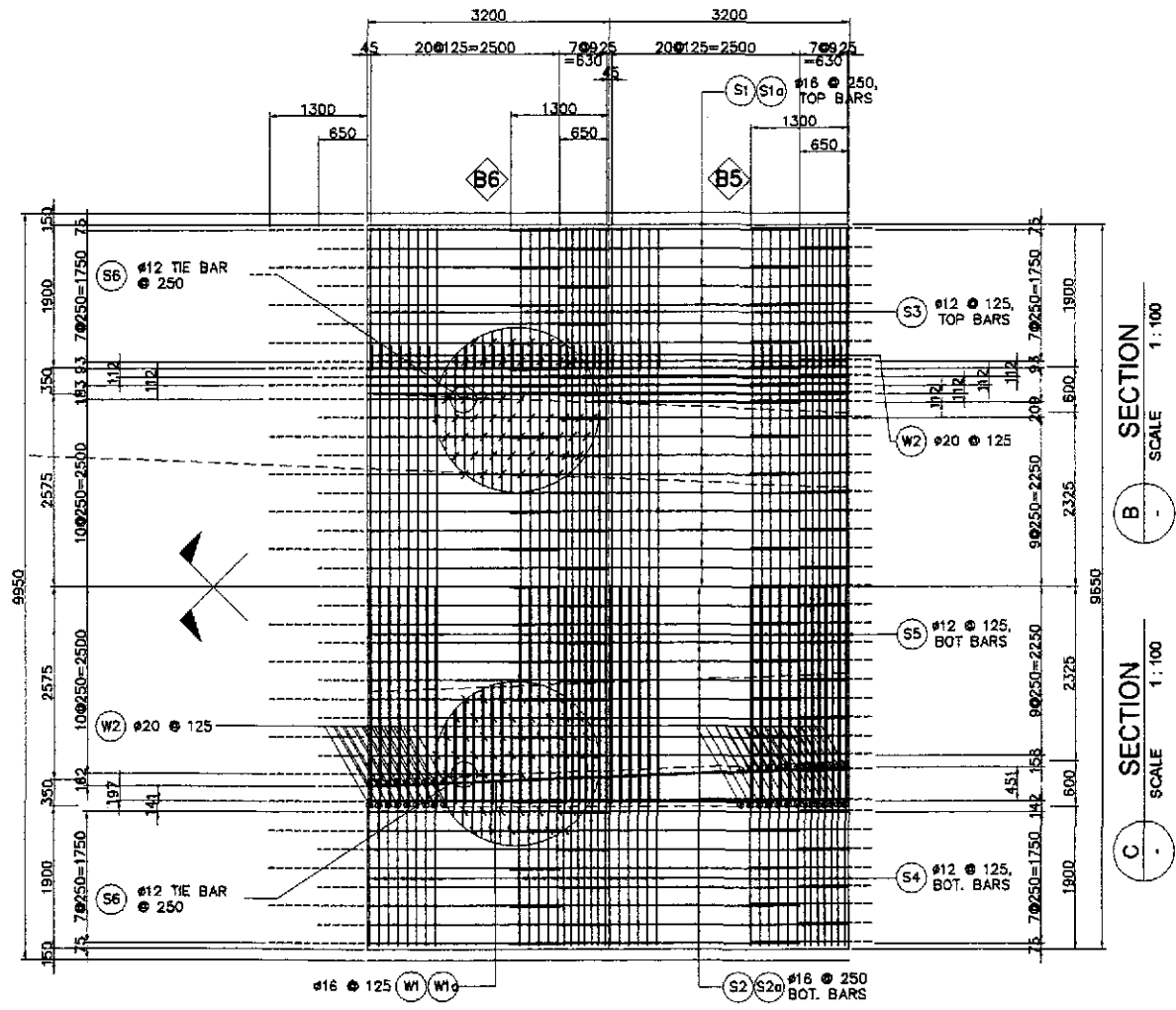
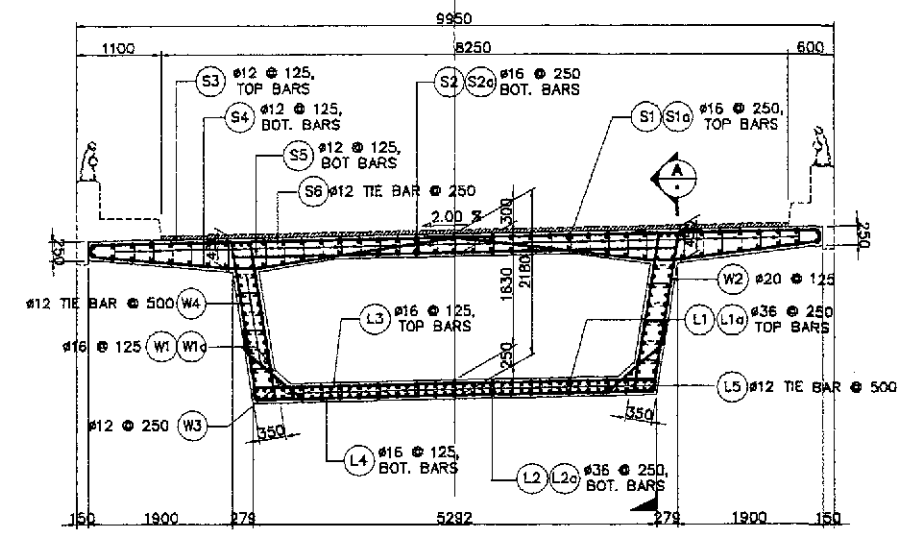
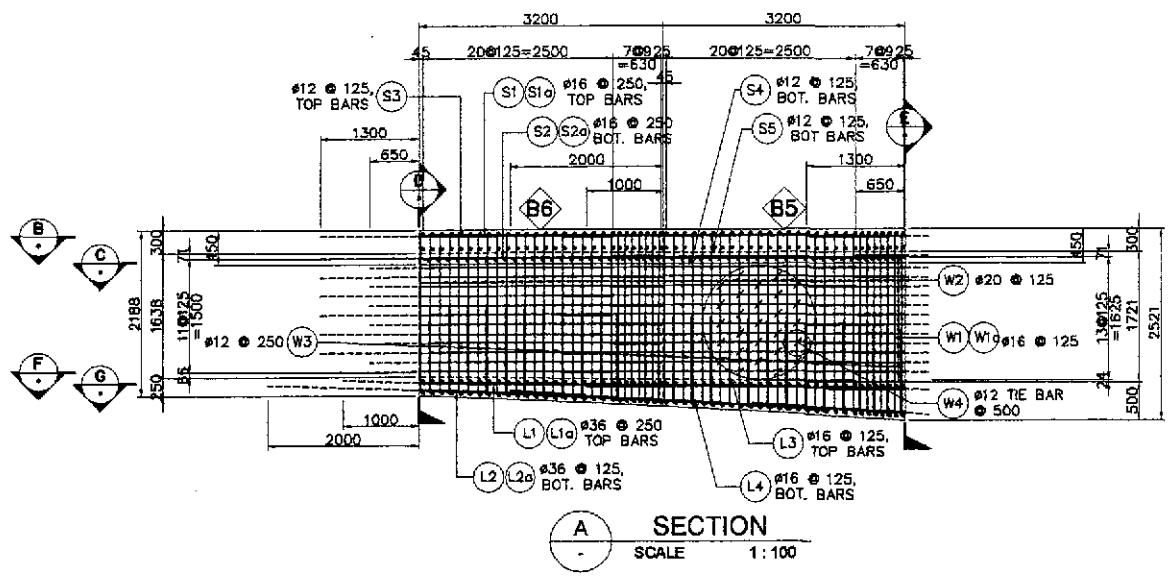
1 SLAB REINFORCEMENT DETAILS
 SCALE AS SHOWN

	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE III	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS AT PIER TABLE -B1 (2 OF 2) (ULTIMATE STAGE)	SHEET NO. : B8M-26
	CHECKED	9/27/02	M. S. SANVAL		BUREAU OF DESIGN						
	SUBMITTED	9/23/02	D. C. SANTOS		Submitted By:	Reviewed By:	Recommended By:				
				DANILO C. TRAJANO Project Director	ADRIANO M. DOROY Chief, Bridges Division	GILBERTO S. REYES Director IV (D/C)	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary			



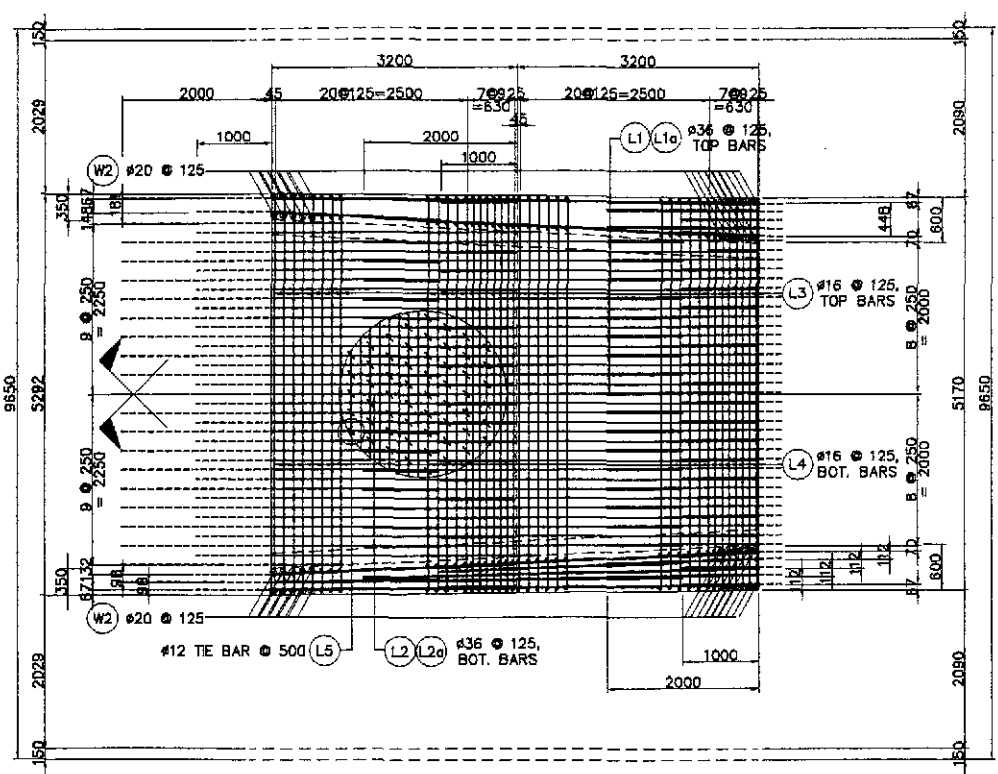
1 SLAB REINFORCEMENT DETAILS
SCALE AS SHOWN

	DESIGNED	DATE	SIGNATURE	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :	
	CHECKED	9/27/02	J. C. SANTOS		Submitted By:	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. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS FOR SEGMENT-B2 TO B4 (1 OF 2) (ULTIMATE STAGE)	B8M-27
	SUBMITTED	9/27/02	M. M. BONDAN		Reviewed By:	PLARIDEL BYPASS - CONTRACT PACKAGE III			FULL SIZE A1		
				Project Director	Chief, Bridges Division	Director IV (DIC)	Undersecretary	Secretary			



1 SLAB REINFORCEMENT DETAILS
SCALE AS SHOWN

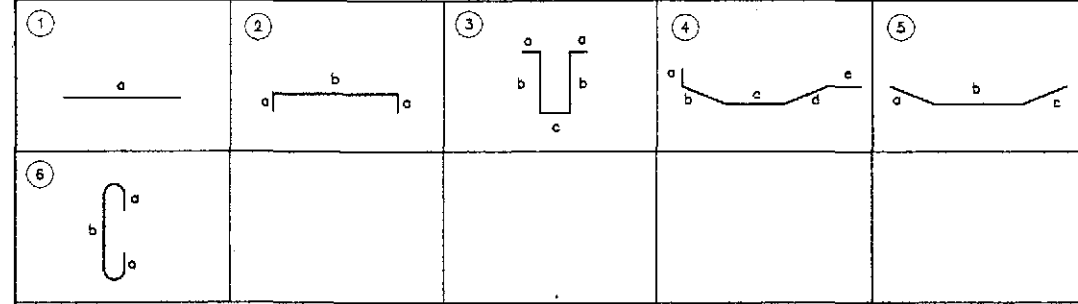
	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/27/14	[Signature]	BUREAU OF DESIGN OFFICE OF THE SECRETARY			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	BRIDGE NO. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS FOR SEGMENT-B5 TO B6 (1 OF 2) (ULTIMATE STAGE)	B8M-29
SUBMITTED	9/27/14	[Signature]	DANILLO C. TRAJANO Project Director			Recommended By: ADRIANO M. DOROY Chief, Bridges Division	PLARIDEL BYPASS - CONTRACT PACKAGE III	FULL SIZE A1		



F SECTION
SCALE 1:100

G SECTION
SCALE 1:100

BAR BENDING DIAGRAM

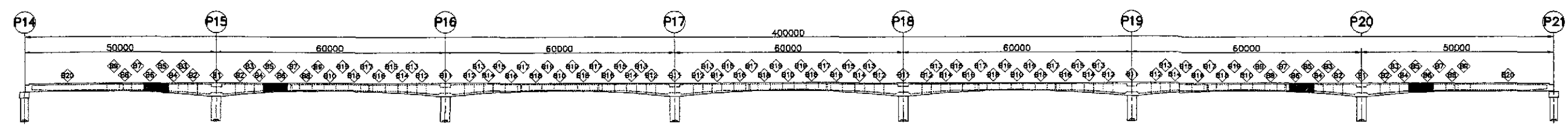


SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (Kg)	
				a	b	c	d	e	f				GRADE 60	GRADE 40
B5 TO B6	S1	16	str	4500						4500	88	1.579		625.28
	S1a	16	str	3850						3850	84	1.579		510.65
	S2	16	str	4500						4500	88	1.579		625.28
	S2a	16	str	3850						3850	84	1.579		510.65
	S3	12	2	9550	125					9800	112	0.818		897.84
	S4	12	5	150	1875	595	2050	150		4820	224	0.818		883.18
	S5	12	str	5835						5835	112	0.818		534.58
	S6	12	6	125						541	2128	0.818		941.72
	L1	36	str	4200						4200	92	7.991	3087.72	
	L1a	36	str	4200						4200	88	7.991	2953.47	
	L2	36	str	4200						4200	92	7.991	3087.72	
	L2a	36	str	4200						4200	88	7.991	2953.47	
	L3	16	2	400						6110	112	1.579		1080.54
	L4	16	2	400						6025	112	1.579		1065.51
	L5	12	6	250						1000	1008	0.818		824.54
	W1	16	str	4500						4500	96	1.579		682.13
	W1a	16	str	3850						3850	48	1.579		291.80
	W1b	16	str	6800						6800	4	1.579		42.95
	W2	20	3	300						6425	224	2.466	3549.07	
	W3	12	5	250						2240	56	0.818		102.61
W4	12	6	250						900	448	0.818		329.62	

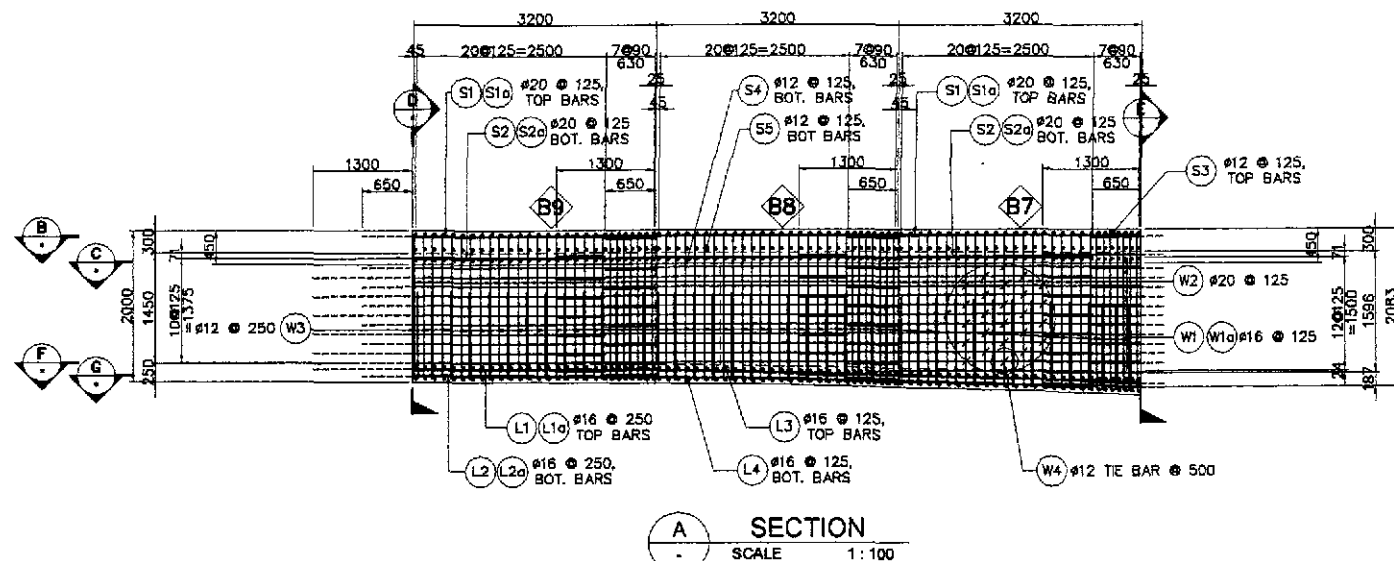
WEIGHT FOR GRADE 60 = 15631.46
 WEIGHT FOR GRADE 40 = 9948.08
 TOTAL WEIGHT FOR 2 PIERS :
 TOTAL WEIGHT FOR GRADE 60 = 31282.92
 TOTAL WEIGHT FOR GRADE 40 = 19896.16

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

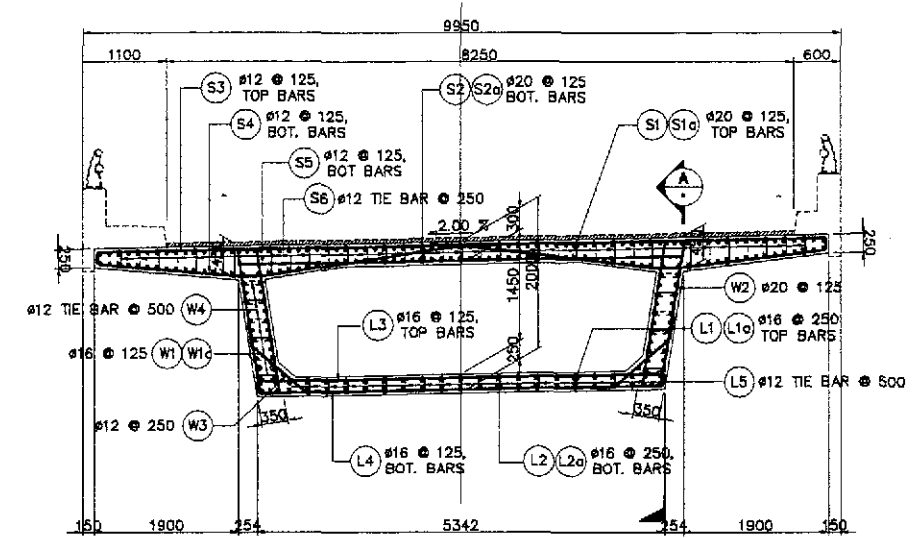


1 SLAB REINFORCEMENT DETAILS
SCALE AS SHOWN

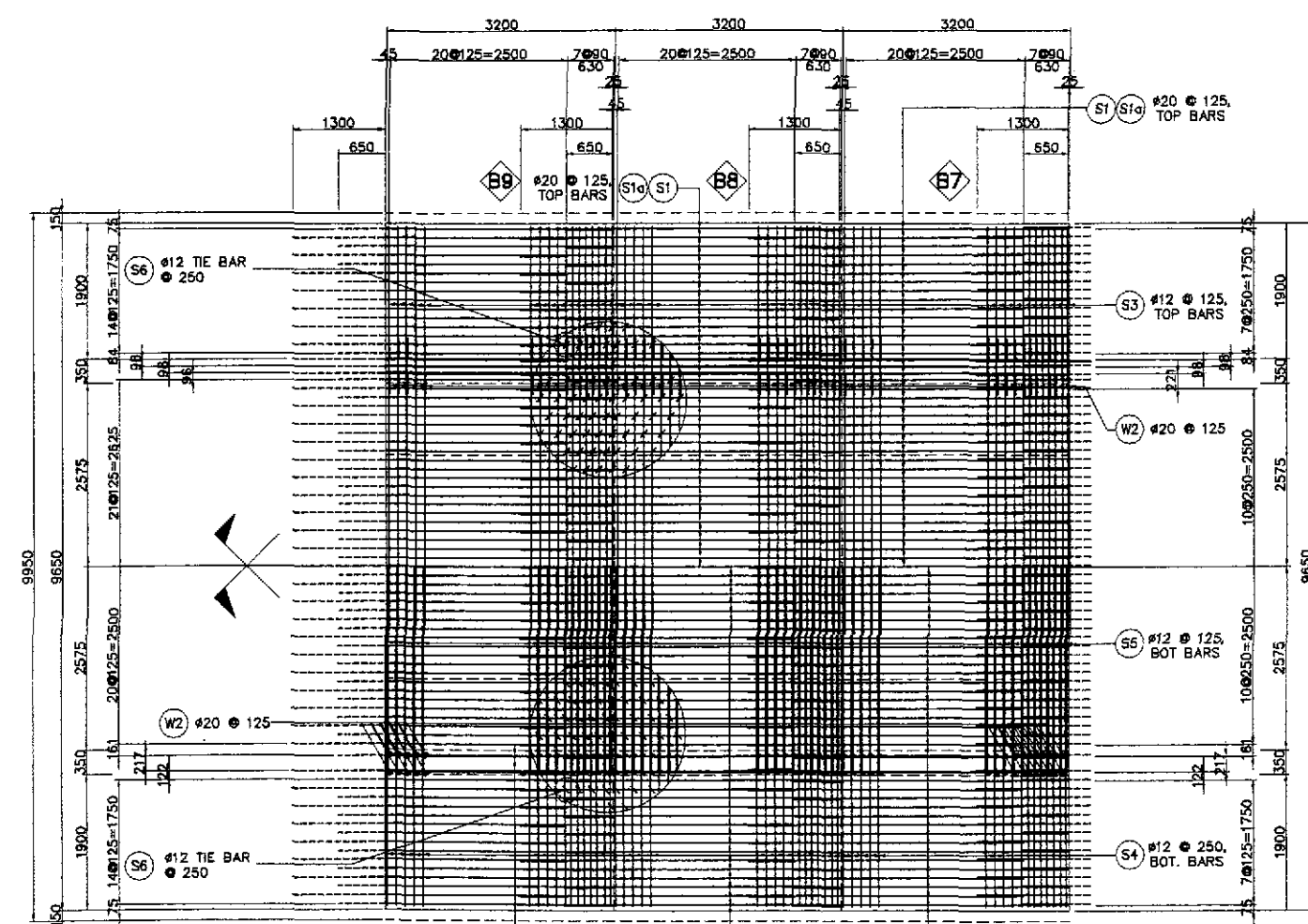
	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE III	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS FOR SEGMENT-B5 TO B6 (2 OF 2) (ULTIMATE STAGE)	SHEET NO. : B8M-30
	CHECKED	9/27/12	M. SANTOS		BUREAU OF DESIGN							
	SUBMITTED	9/27/12	M. Yandi		Submitted By:	Reviewed By:	Recommended By:	Approved By:				
			DANILO C. TRAJANO Project Director	ADRIANO M. DORCY Chief, Bridge Division	GILBERTO S. REYES Director IV (DC)	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary					



A SECTION
SCALE 1:100

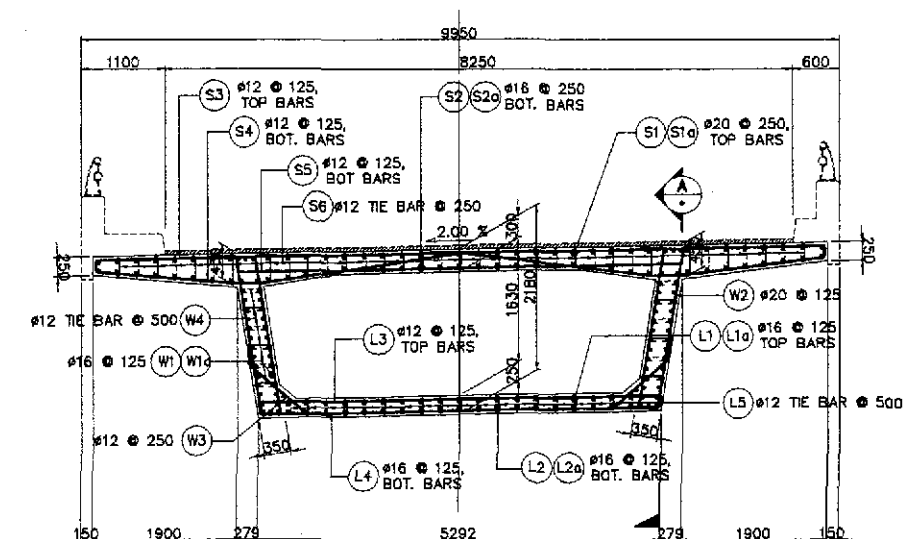


D SECTION
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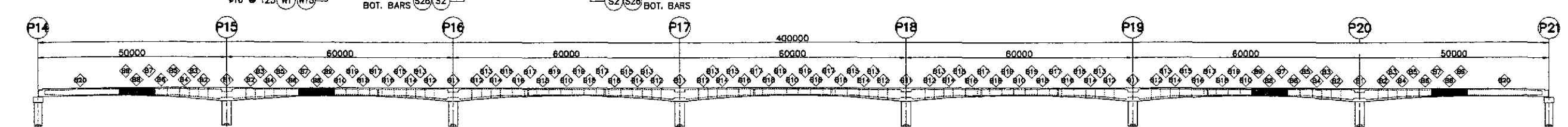


B SECTION
SCALE 1:100

C SECTION
SCALE 1:100

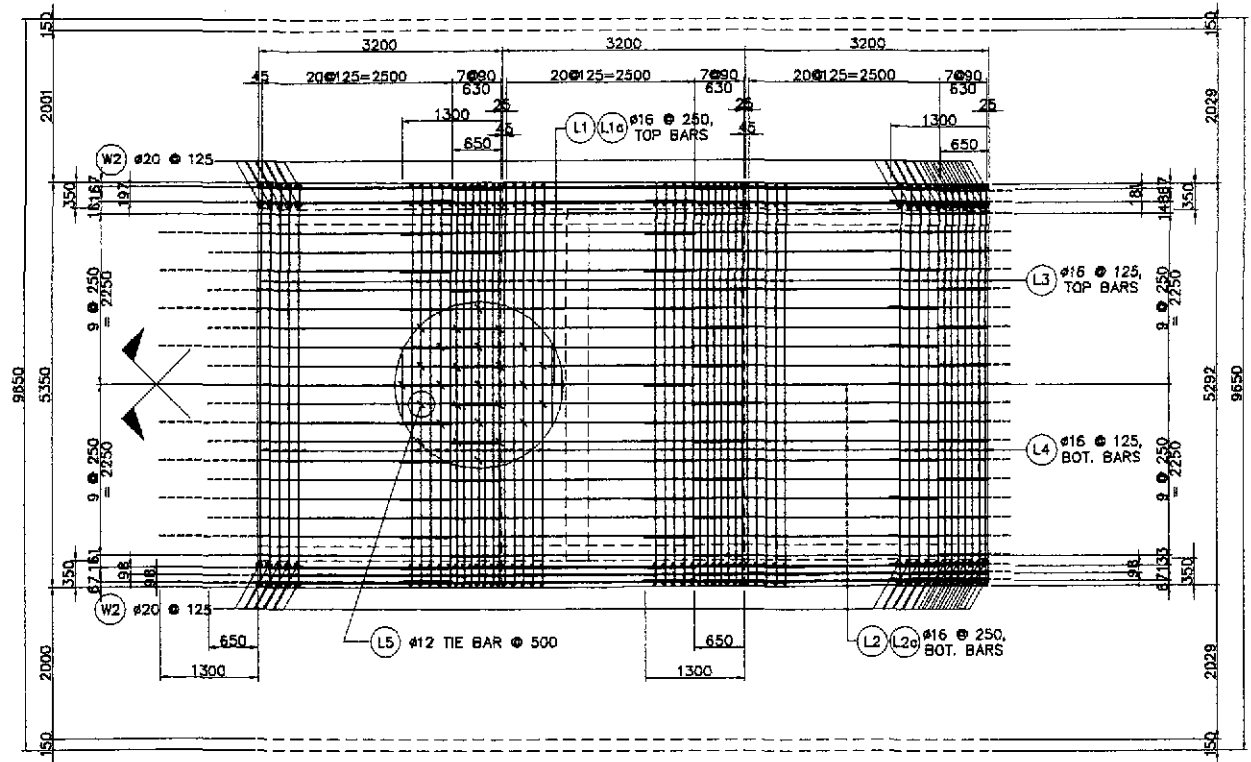


E SECTION
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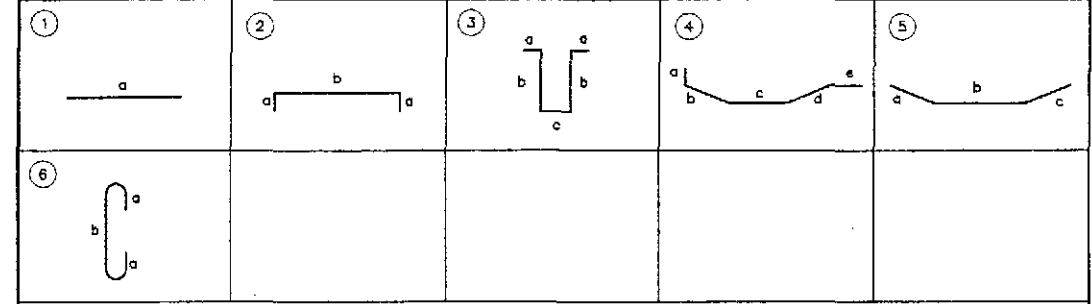
1 SLAB REINFORCEMENT DETAILS
SCALE AS SHOWN

	DESIGNED	DATE	SIGNATURE	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/15/02	J. C. SANTOS		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. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS FOR SEGMENT-B7 TO B9 (1 OF 2) (ULTIMATE STAGE)	B8M-31
	SUBMITTED	9/15/02	MANUEL M. BONOAN		PLARIDEL BYPASS - CONTRACT PACKAGE III			FULL SIZE A1		
Submitted By: DANILLO C. TRAJANO, Project Director Reviewed By: ADRIANO M. DORGY, Chief, Bridges Division Recommended By: GILBERTO S. REYES, Director IV (OIC) Approved By: MANUEL M. BONOAN, Undersecretary Approved By: SIMON A. DATUMANONG, Secretary										



SECTION SCALE 1:100
SECTION SCALE 1:100

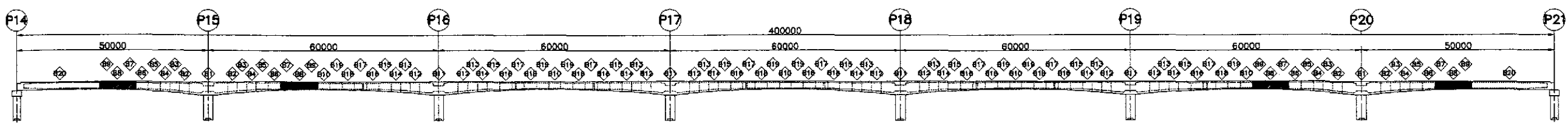
BAR BENDING DIAGRAM



SCHEDULE OF REINFORCEMENT

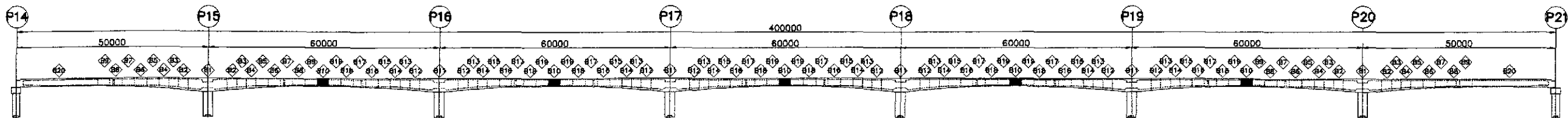
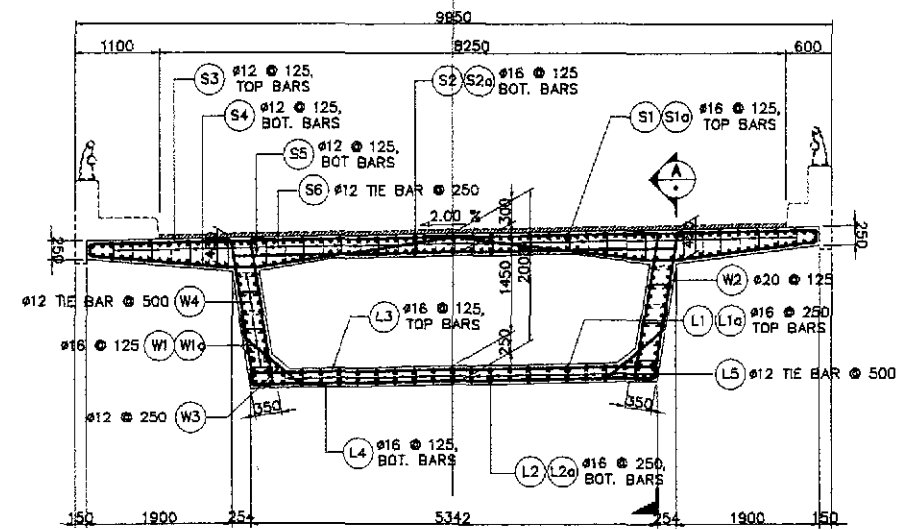
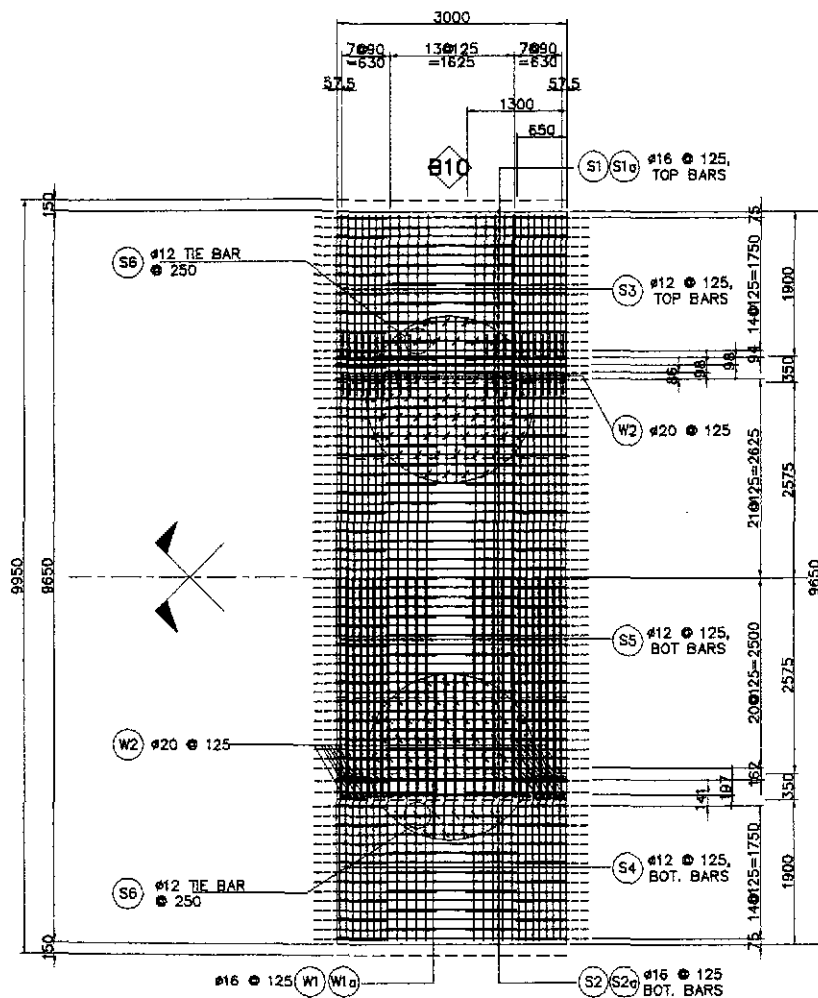
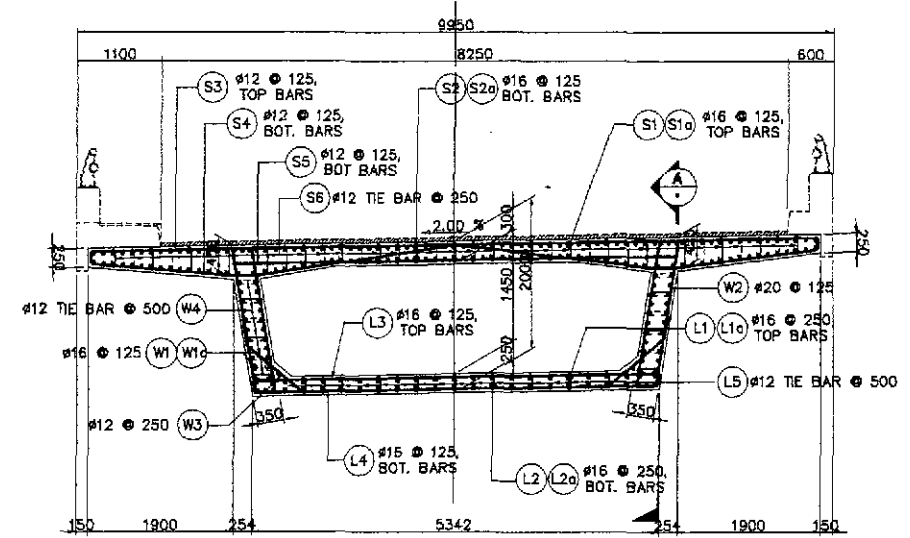
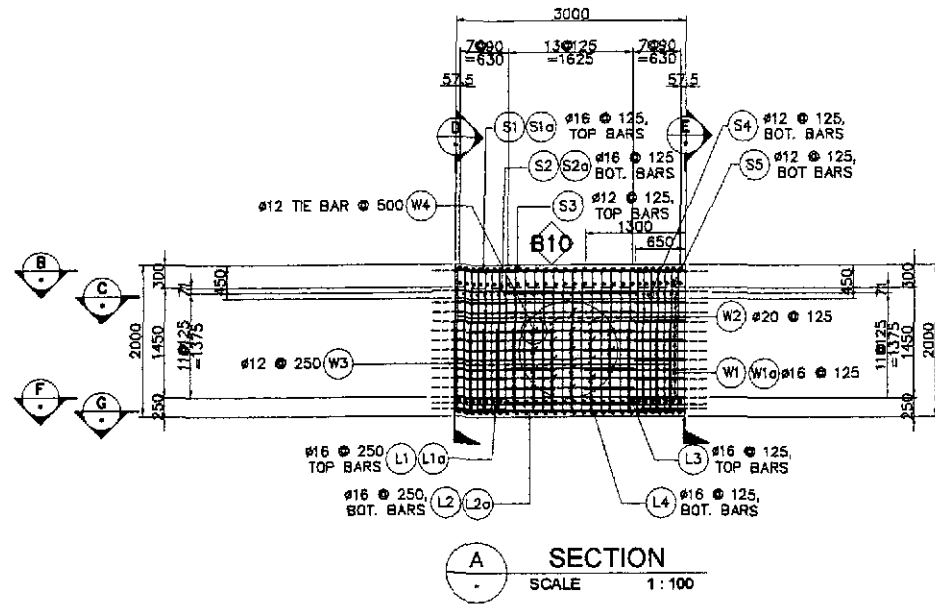
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)				
				a	b	c	d	e	f				GRADE 60	GRADE 40			
B7 TO B9	S1	20	str	4500						4500	240	2.466	2663.28				
	S1a	20	str	3850						3850	234	2.466	2221.62				
	S2	20	str	4500						4500	228	2.466	2530.12				
	S2a	20	str	3850						3850	222	2.466	2107.69				
	S3	12	2	9550	125					9800	168	0.818		1346.76			
	S4	12	5	150	1875	595	2050	150		4820	336	0.818		1324.77			
	S5	12	str	5835						5835	168	0.818		801.87			
	S6	16	6	125	390 (max)					541	3192	1.579		2726.73			
					182 (min)												
	L1	16	str	4500						4500	72	1.579		511.60			
	L1a	16	str	3850						3850	66	1.579		401.22			
	L2	16	str	4500						4500	72	1.579		511.60			
	L2a	16	str	3850						3850	66	1.579		401.22			
	L3	16	2	250	5335 (max)					5835	168	1.579		1547.86			
					5255 (min)												
	L4	16	2	250	5265 (max)					5765	168	1.579		1529.29			
					5210 (min)												
	L5	12	6	250	500					1000	1512	0.818		1236.82			
	W1	16	str	4500						4500	132	1.579		937.93			
	W1a	16	str	3850						3850	132	1.579		802.45			
	W2	20	3	300	2090 (max)	250				4840	336	2.466	4010.31				
					1900 (min)												
	W3	12	5	250	1740	250				2240	84	0.818		153.91			
	W4	12	6	250	250					750	504	0.818		309.20			
												WEIGHT FOR GRADE 60	=	13533.01			
												WEIGHT FOR GRADE 40	=		14543.23		
												TOTAL WEIGHT FOR 2 PIERS :					
												TOTAL WEIGHT FOR GRADE 60	=	27066.03			
												TOTAL WEIGHT FOR GRADE 40	=	29086.45			

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



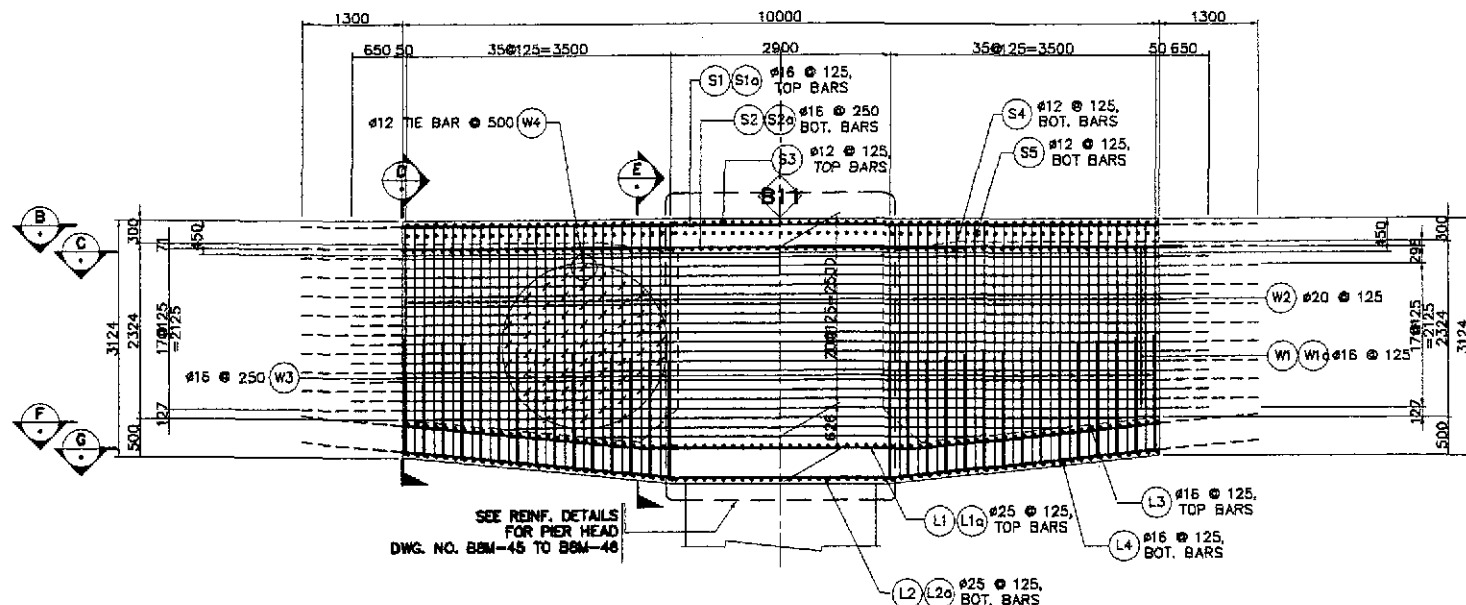
1 SLAB REINFORCEMENT DETAILS
SCALE AS SHOWN

	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE III	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS FOR SEGMENT-B7 TO B9 (2 OF 2) (ULTIMATE STAGE)	SHEET NO. : B8M-32
	CHECKED	9/27/02	J. C. SANTOS		BUREAU OF DESIGN							
	SUBMITTED	9/27/02	MANUEL M. BONDAN		Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: ADRIANO M. DORAY Chief, Bridges Division	Recommended By: GILBERTO S. REYES Director IV (DR)	Office of the Secretary Approved By: SIMEON A. DATUMANONG Secretary				

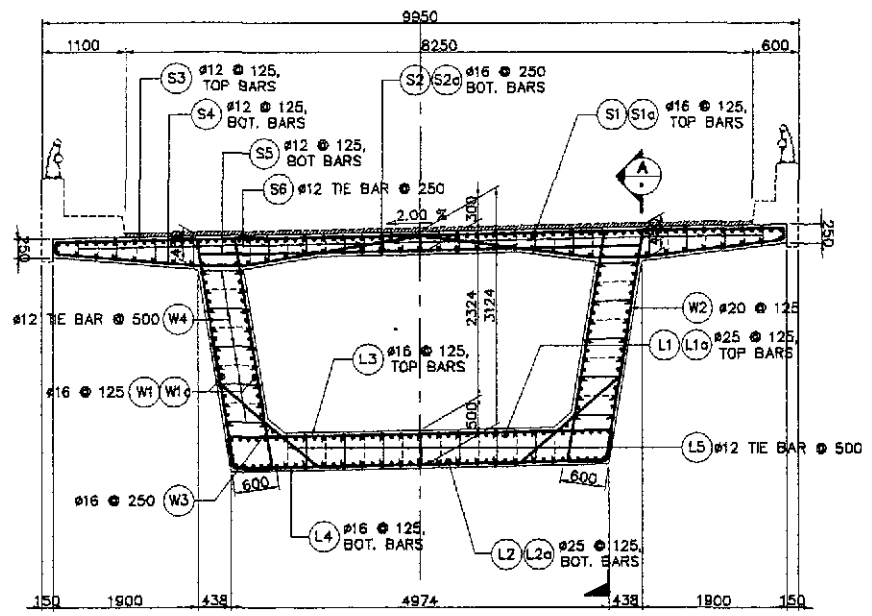


1 SLAB REINFORCEMENT DETAILS
SCALE AS SHOWN

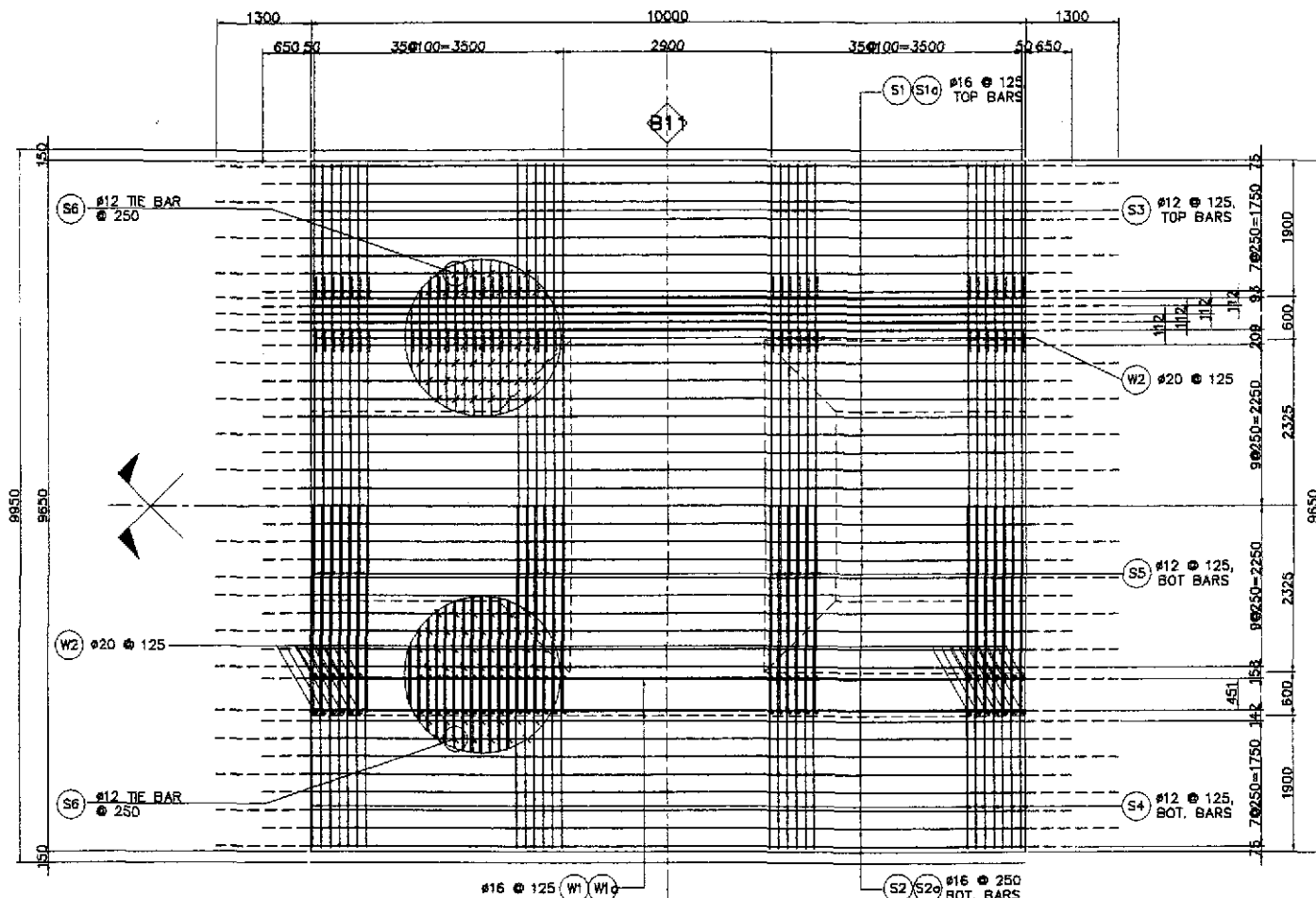
	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE III	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS FOR CENTER CLOSURE-B10 (1 OF 2) (ULTIMATE STAGE)	SHEET NO. : B8M-33
	CHECKED	DATE	SIGNATURE		BUREAU OF DESIGN						
	SUBMITTED	DATE	SIGNATURE	OFFICE OF THE SECRETARY							
				Submitted By:	Reviewed By:	Recommended By:	Approved By:				
				DANILO C. TRAJANO Project Director	ADRIANO M. DOROY Chief, Bridges Division	GILBERTO S. REYES Director IV (GIC)	MANUEL W. BONDAN Undersecretary	SIMEON A. DATUMANDING Secretary			



A SECTION
SCALE 1:100

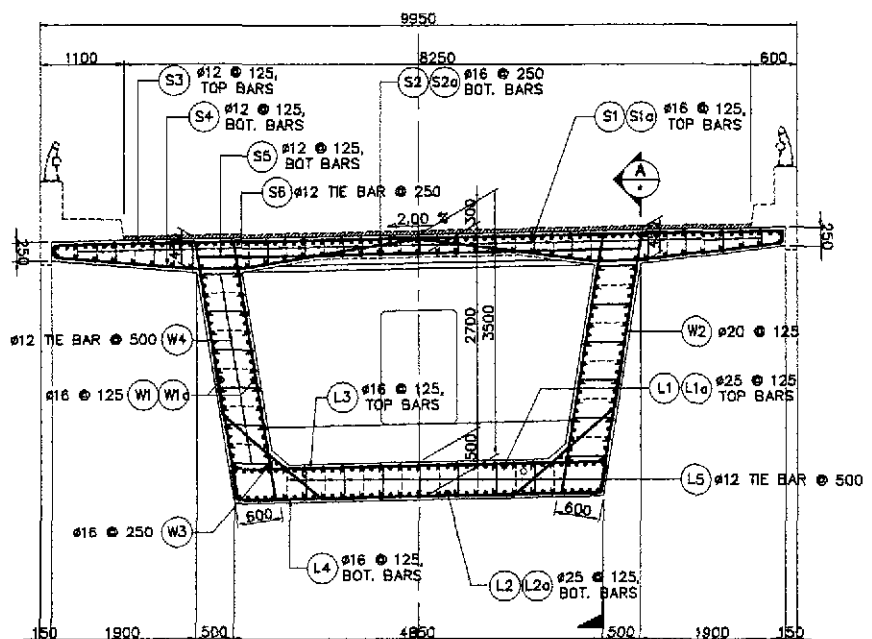


D SECTION
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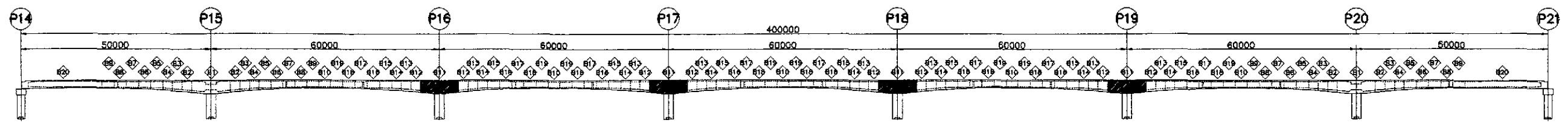


B SECTION
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C SECTION
SCALE 1:100

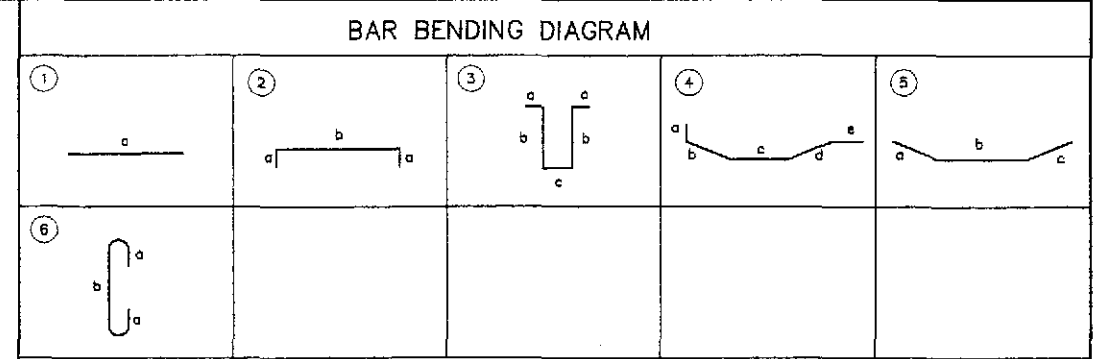
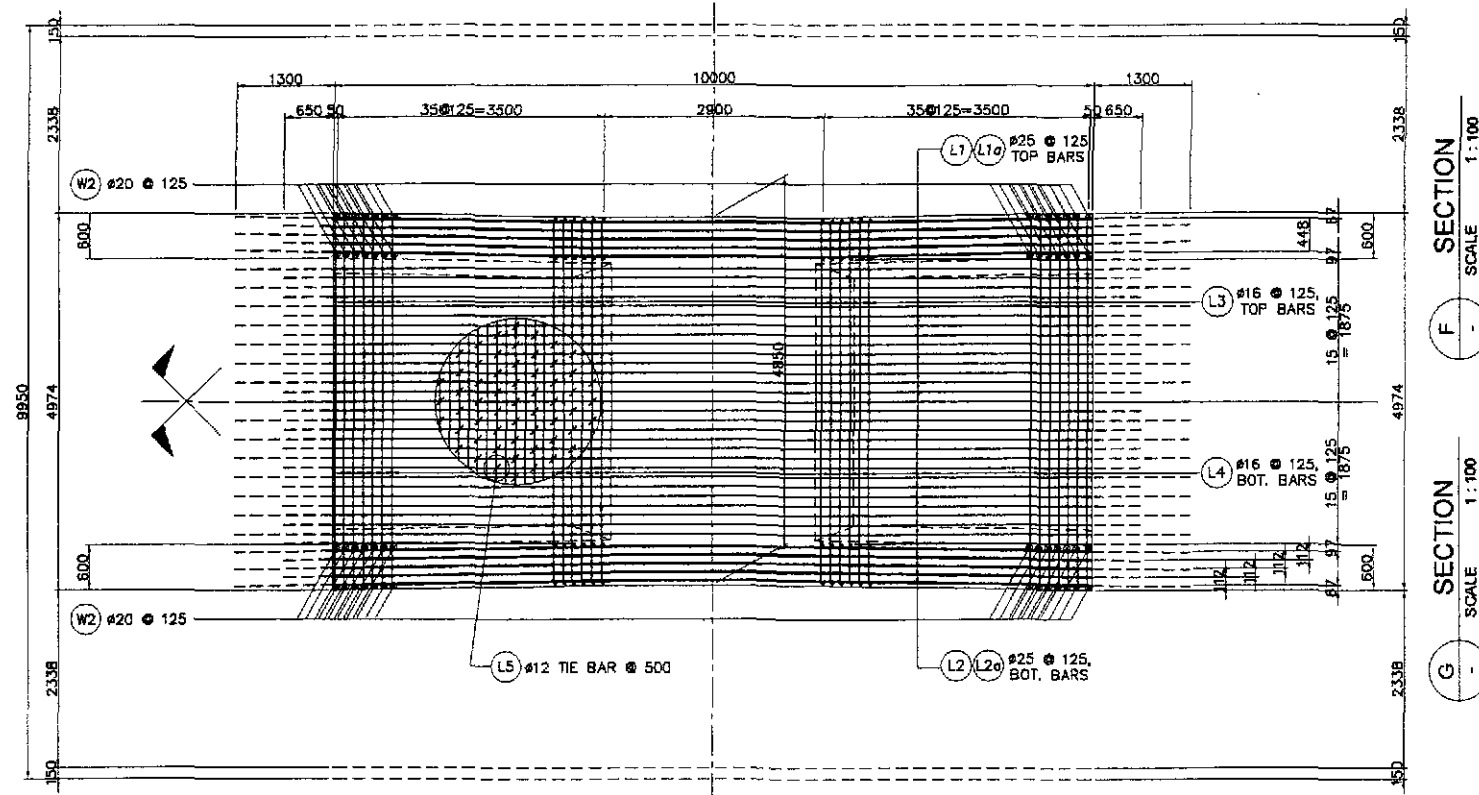


E SECTION
SCALE 1:100



1 SLAB REINFORCEMENT DETAILS
SCALE AS SHOWN

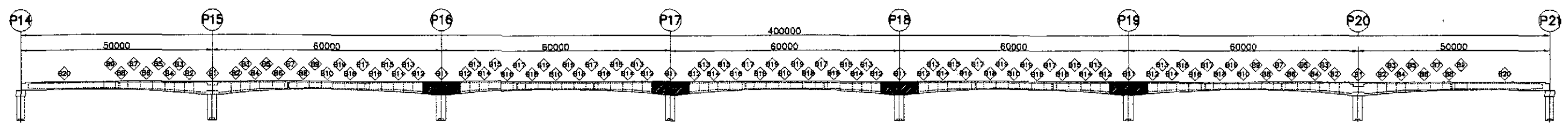
	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :	
	CHECKED	9/21/02	[Signature]		BUREAU OF DESIGN	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)			AS SHOWN	BRIDGE NO. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS FOR PIER TABLE-B11 (1 OF 2) (ULTIMATE STAGE)	B8M-35
	SUBMITTED	9/23/02	[Signature]		OFFICE OF THE SECRETARY	PLARIDEL BYPASS - CONTRACT PACKAGE III			FULL SIZE A1		
				Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: ADRIANO M. DORAY Chief, Bridges Division	Recommended By: GILBERTO S. REYES Director IV (CIC)	Recommended By: MANUEL M. BONDAN Undersecretary	Approved By: SIMON A. DATUMANONG Secretary			



SCHEDULE OF REINFORCEMENT

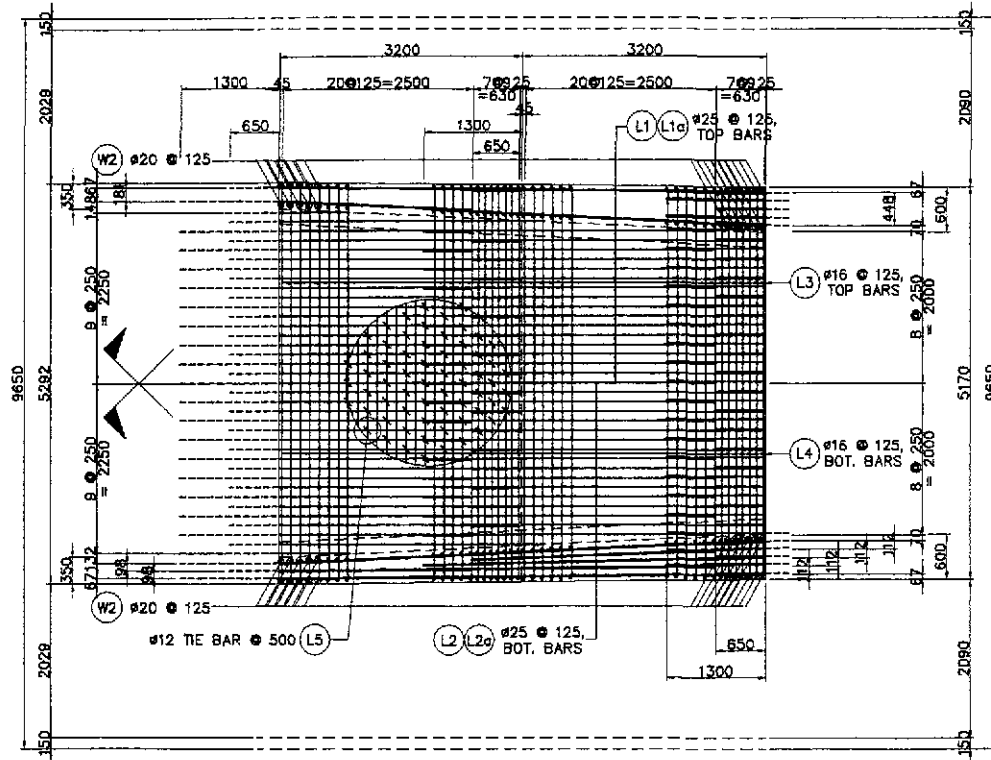
LOCATION	BAR MARK	BAR SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	
				a	b	c	d	e	f				GRADE 60	GRADE 40
B11	S1	16	str	12600						12600	40	1.579		795.82
	S1a	16	str	11300						11300	39	1.579		695.87
	S2	16	str	12600						12600	20	1.579		397.91
	S2a	16	str	11300						11300	19	1.579		339.01
	S3	12	2	9550	125					9800	72	0.818		577.18
	S4	12	5	150	1875	595	2050	150		4820	144	0.818		567.76
	S5	12	str	5835						5835	72	0.818		343.66
	S6	12	6	125						541	1368	0.818		605.39
	L1	25	5	5170	3730	5170				14070	21	3.854	1138.74	
	L1a	25	5	4170	3730	4170				12070	20	3.854	930.36	
	L2	25	5	5670	2780	5670				14120	21	3.854	1142.79	
	L2a	25	5	4670	2780	4670				12120	20	3.854	934.21	
	L3	16	2	400	4900					5700	72	1.579		648.02
	L4	16	2	400	4760					5560	72	1.579		632.11
	L5	12	6	250	500					1000	504	0.818		412.27
	W1	16	str	12600						12600	36	1.579		716.23
	W1a	16	str	11300						11300	36	1.579		642.34
	W2	20	3	300	3400 (max)	500				7525	180	2.466	3340.20	
	W3	12	5	250	3025 (min)	250				2240	36	0.818		65.96
	W4	12	6	250	400					900	720	0.818		530.06
												WEIGHT FOR GRADE 60 =	7486.29	
												WEIGHT FOR GRADE 40 =		7969.56
												TOTAL WEIGHT FOR 4 PIERS :		
												WEIGHT FOR GRADE 60 =	29945.17	
												WEIGHT FOR GRADE 40 =		31678.35

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



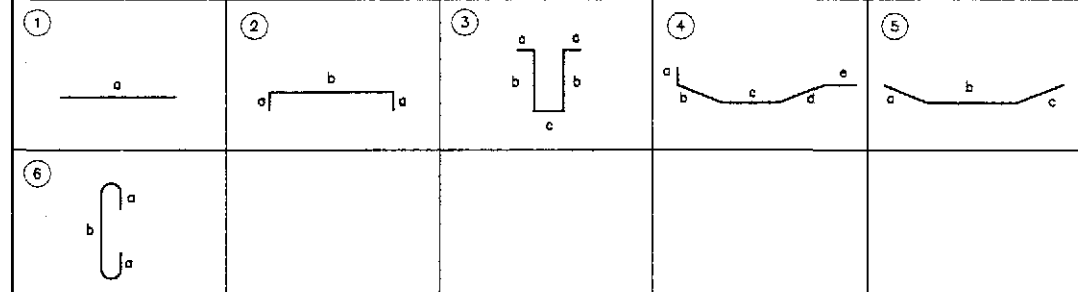
1 SLAB REINFORCEMENT DETAILS
SCALE AS SHOWN

	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/25/03	[Signature]	BUREAU OF DESIGN OFFICE OF THE SECRETARY			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. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS FOR PIER TABLE-B11 (2 OF 2) (ULTIMATE STAGE)	B8M-36
SUBMITTED	9/30/03	[Signature]	DANILLO C. TRAJANO Project Director			ADRIANO M. DORON Chief, Bridges Division	PLARIDEL BYPASS - CONTRACT PACKAGE III	FULL SIZE A1		



F SECTION SCALE 1:100
G SECTION SCALE 1:100

BAR BENDING DIAGRAM

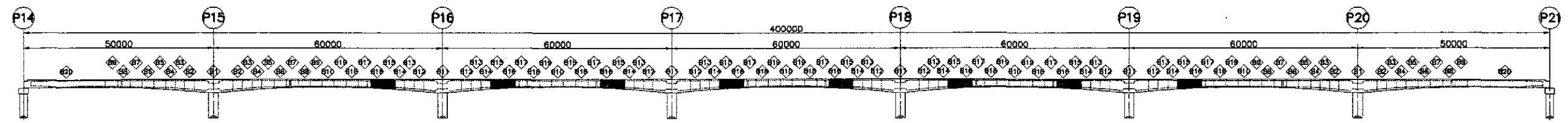


SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (Kg)	
				a	b	c	d	e	f				GRADE 60	GRADE 40
B15 to B16	S1	16	str	4500						4500	88	1.579		625.28
	S1a	16	str	3850						3850	84	1.579		510.65
	S2	16	str	4500						4500	88	1.579		625.28
	S2a	16	str	3850						3850	84	1.579		510.65
	S3	12	2	9550	125					9500	112	0.818		897.84
	S4	12	5	150	1875	595	2050	150		4820	224	0.818		883.18
	S5	12	str	5835						5835	112	0.818		534.58
	S6	12	6	125						541	2128	0.818		941.72
	L1	25	str	5200						5200	92	3.854		1843.75
	L1a	25	str	4200						4200	88	3.854		1424.44
	L2	25	str	5200						5200	92	3.854		1843.75
	L2a	25	str	4200						4200	88	3.854		1424.44
	L3	16	2	400						6110	112	1.579		1080.54
	L4	16	2	400						6025	112	1.579		1065.51
	L5	12	6	250	500					1000	1008	0.818		824.54
	W1	16	str	4500						4500	96	1.579		682.13
W1a	16	str	3850						3850	96	1.579		583.60	
W1b	16	str	6800						6800	4	1.579		42.95	
W2	20	3	300	3025 (max)	500 (max)				6425	224	2.466		3549.07	
W3	12	5	250	1740	250				2240	112	0.818		205.22	
W4	12	6	250	400					900	896	0.818		659.64	

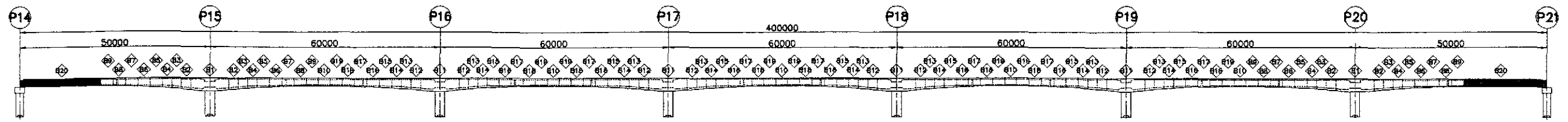
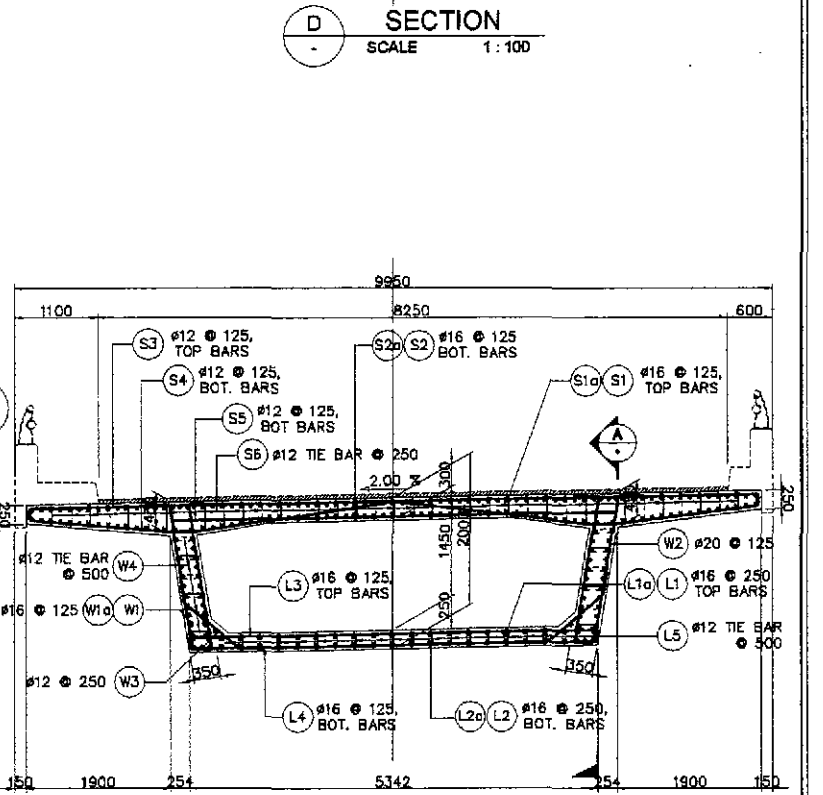
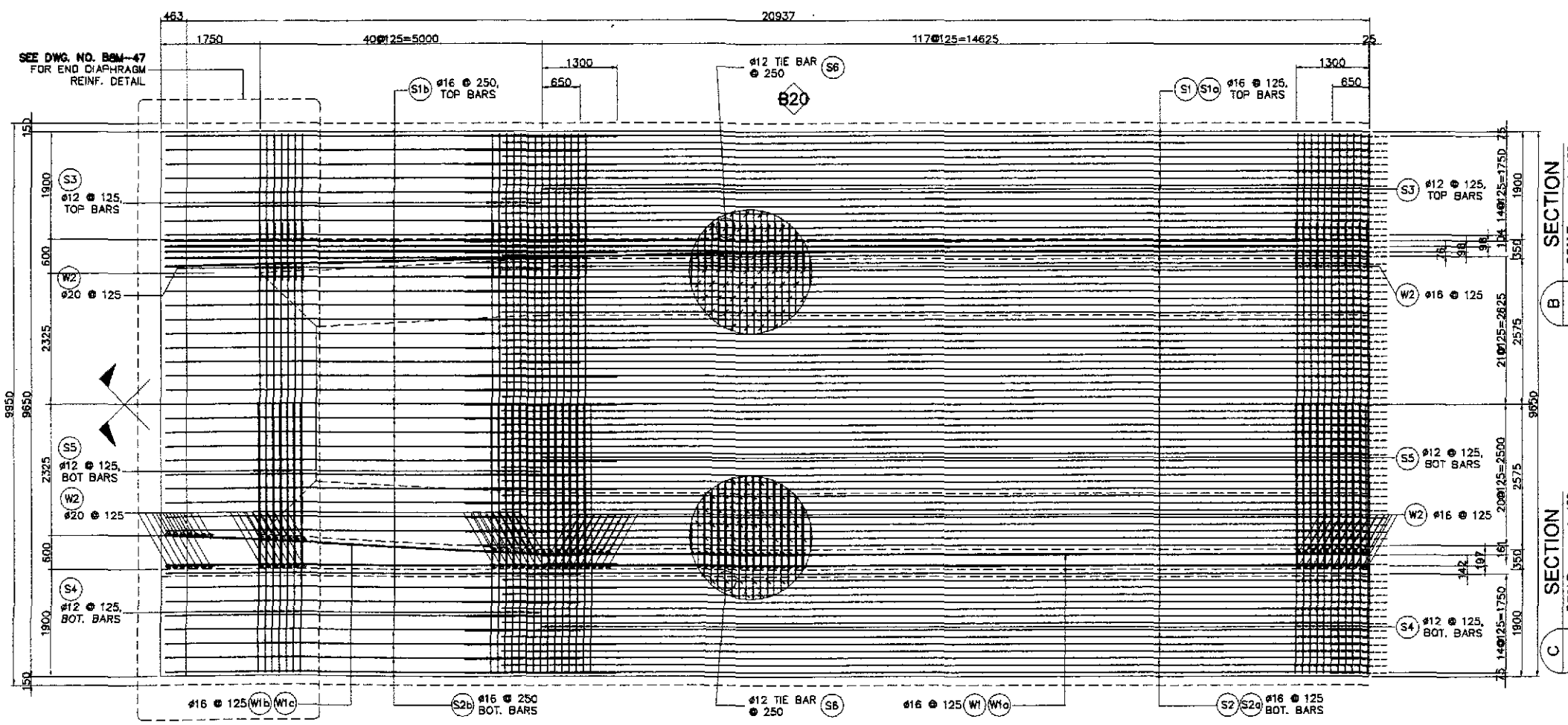
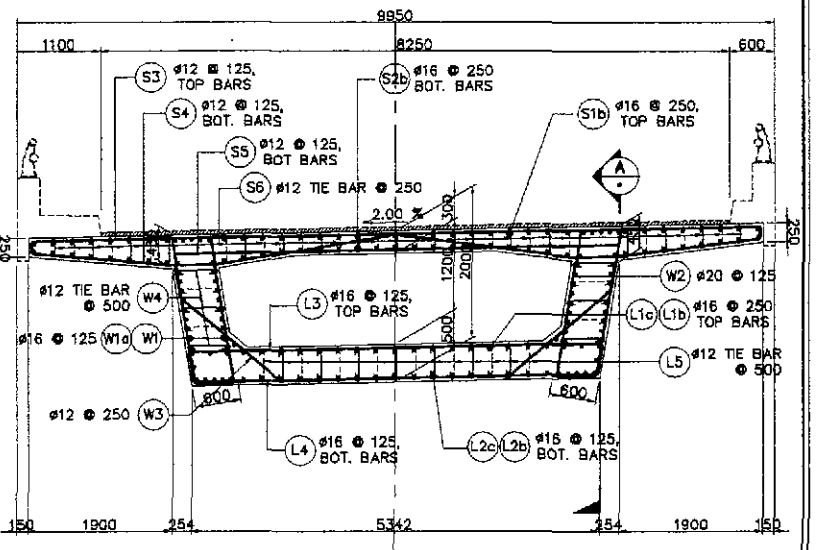
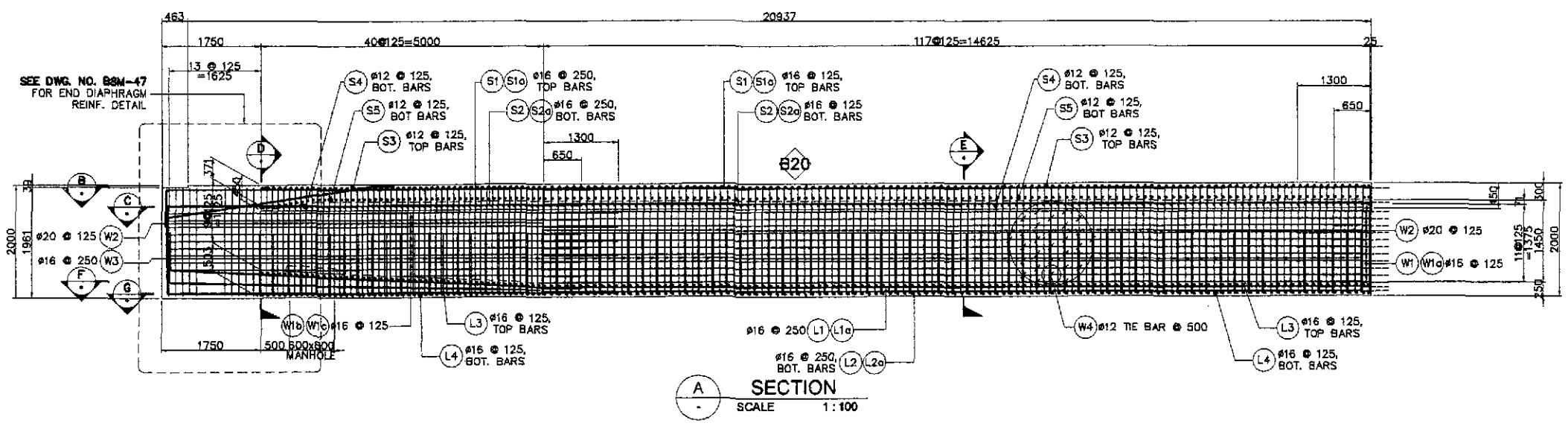
WEIGHT FOR GRADE 60 = 10085.45
 WEIGHT FOR GRADE 40 = 10673.31
 TOTAL WEIGHT FOR 4 PIERS :
 TOTAL WEIGHT FOR GRADE 60 = 40341.80
 TOTAL WEIGHT FOR GRADE 40 = 42693.22

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



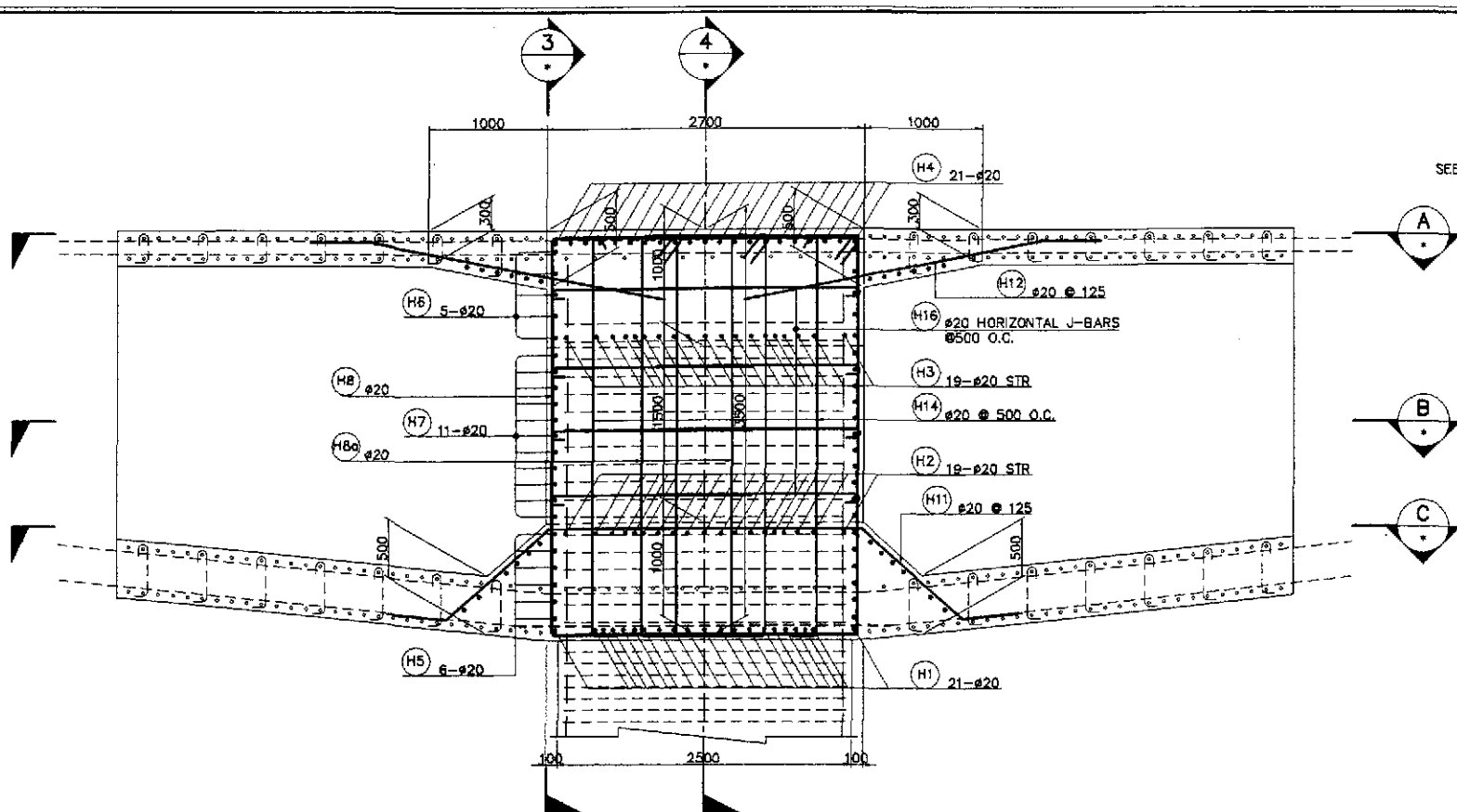
1 SLAB REINFORCEMENT DETAILS
SCALE AS SHOWN

	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/25/12		BUREAU OF DESIGN OFFICE OF THE SECRETARY			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. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS FOR SEGMENT-B15 TO B16 (2 OF 2) (ULTIMATE STAGE)	B8M-40
SUBMITTED	9/25/12		Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: ADRIANO M. DORCY Chief, Bridges Division	Recommended By: GILBERTO S. REYES Director IV (CIC)	Approved By: MANUEL M. BONCAYAN Undersecretary	Approved By: SIMEON A. DATUMANONG Secretary	FULL SIZE A1		

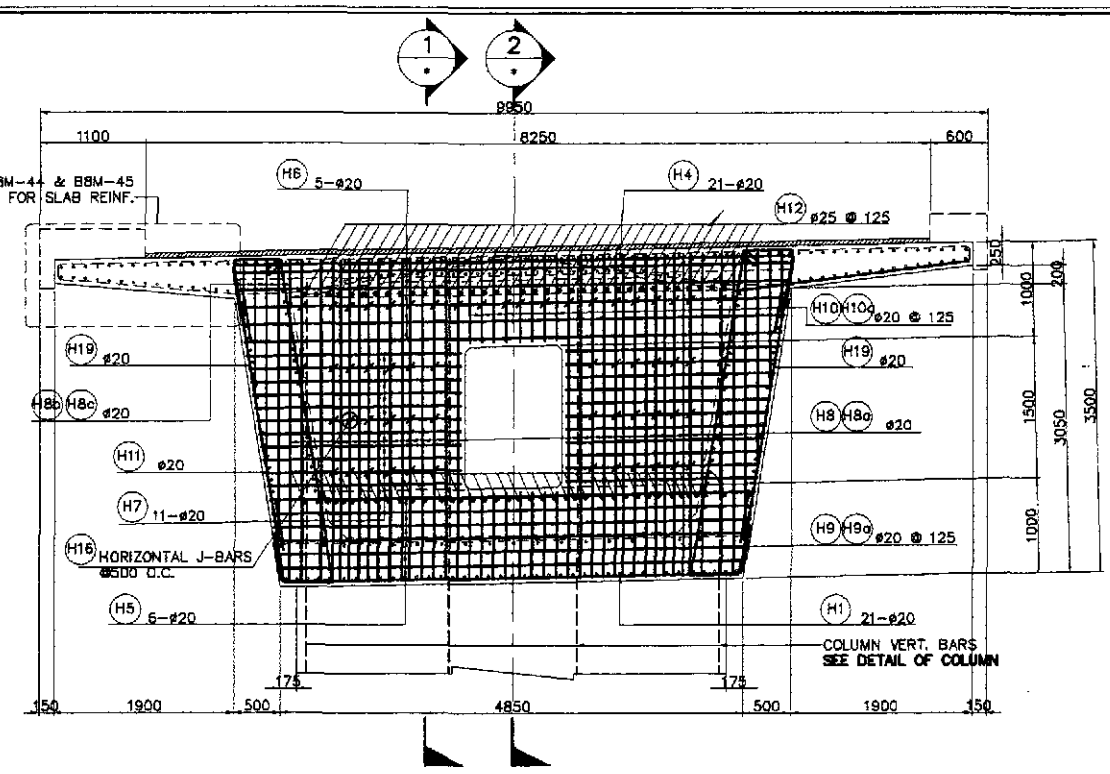


1 SLAB REINFORCEMENT DETAILS
SCALE AS SHOWN

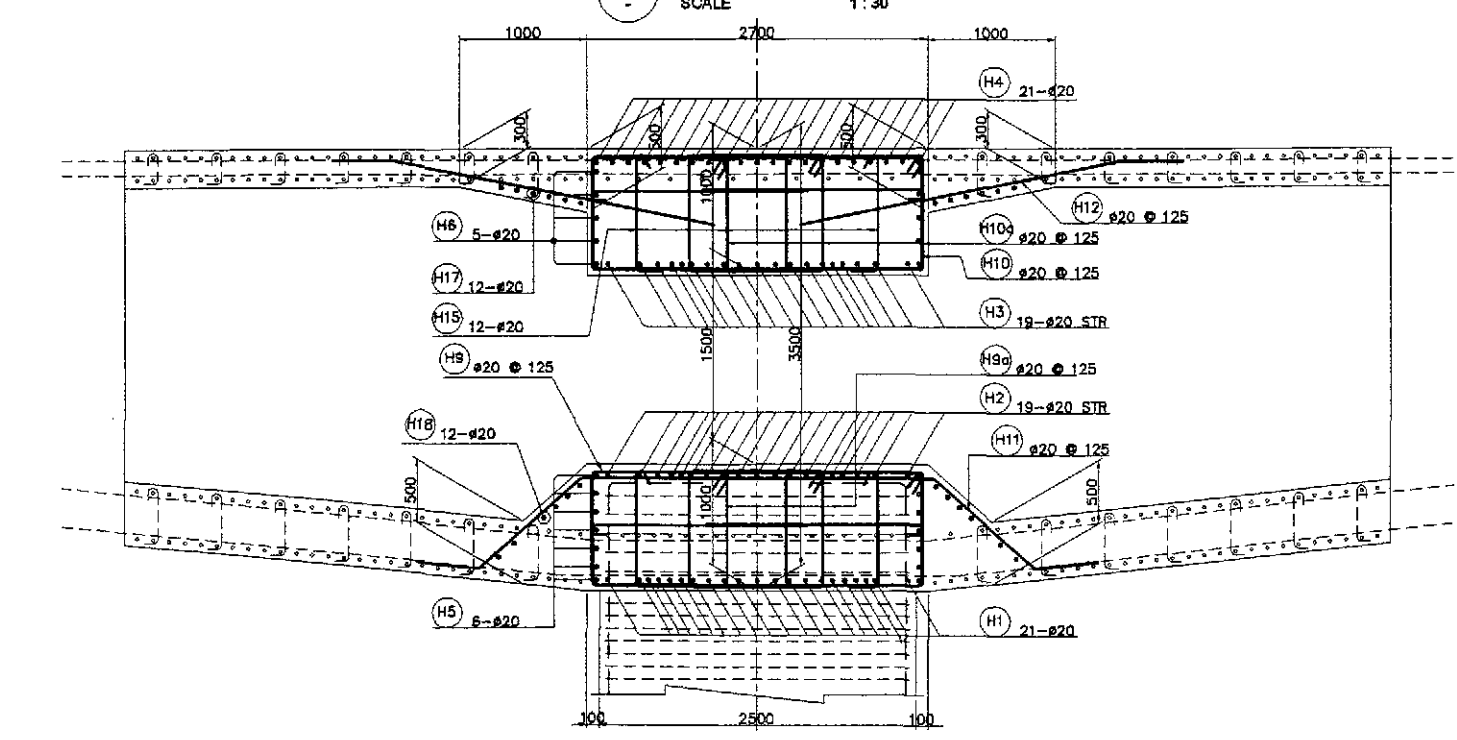
	DESIGNED: <i>[Signature]</i> DATE: 7/25/12		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE III	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS FOR END CLOSURE-B20 (1 OF 2) (ULTIMATE STAGE)	SHEET NO. : B8M-43
	CHECKED: <i>[Signature]</i> DATE: 7/27/12		SUBMITTED: <i>[Signature]</i> DATE: 7/27/12	PUHL - PMO Submitted By: DANILO C. TRAJANO Project Director	BUREAU OF DESIGN Reviewed By: ADRIANO M. DOROY Chief, Bridges Division	OFFICE OF THE SECRETARY Recommended By: GILBERTO S. REYES Director V. (D/C)				



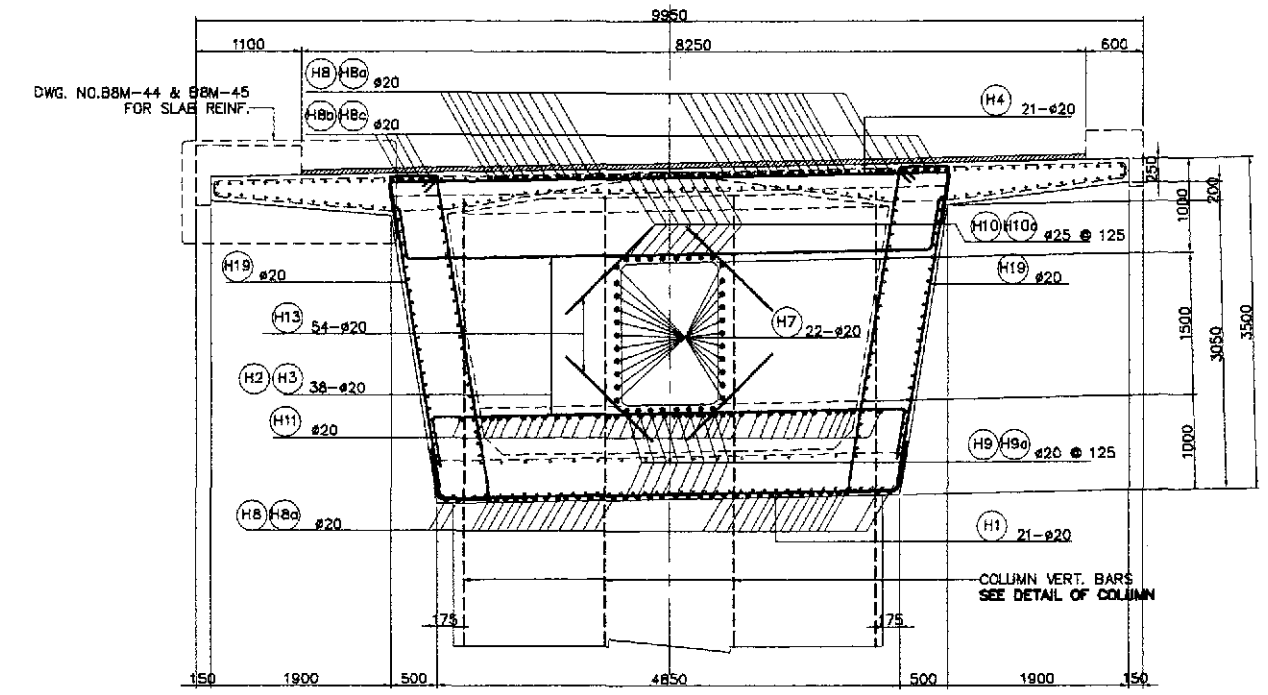
1 SECTION
SCALE 1:30



3 SECTION
SCALE 1:40

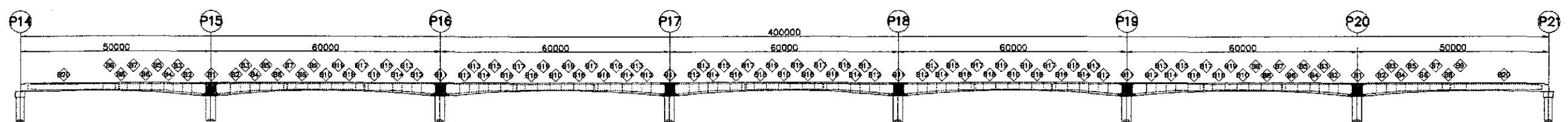


2 SECTION
SCALE 1:30

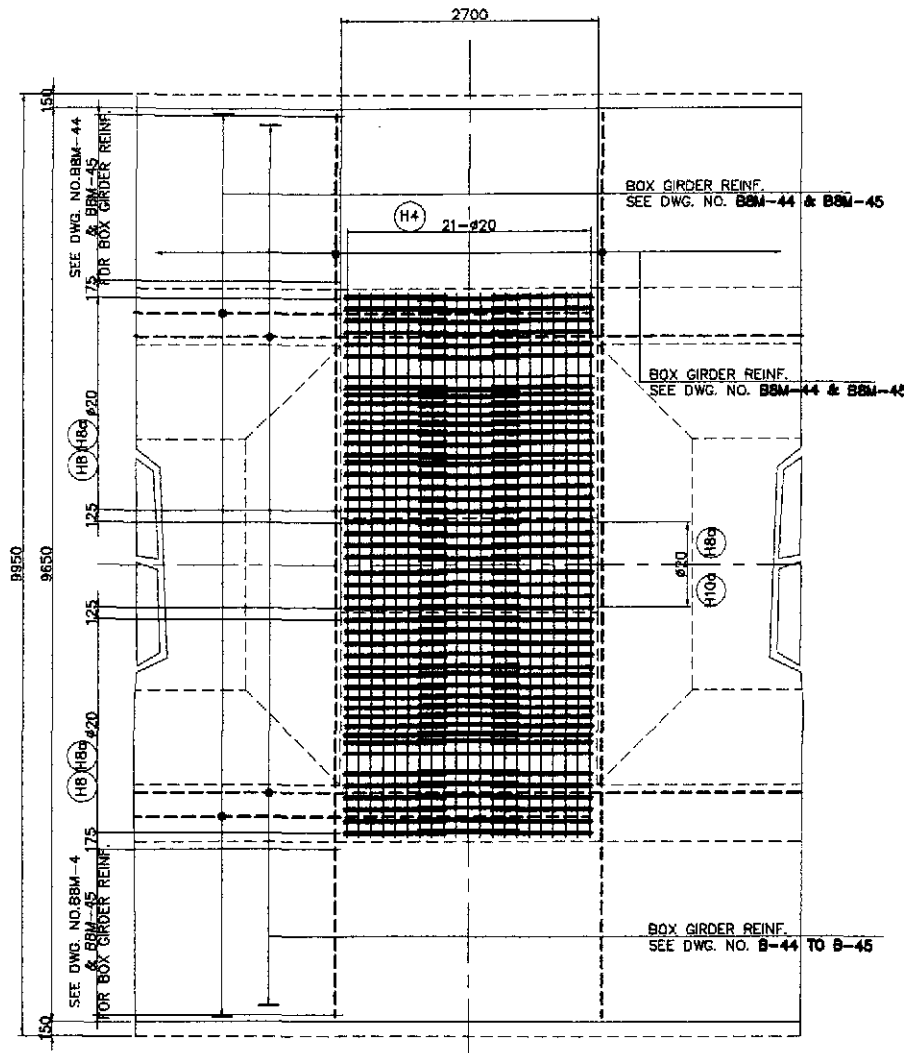


4 SECTION
SCALE 1:40

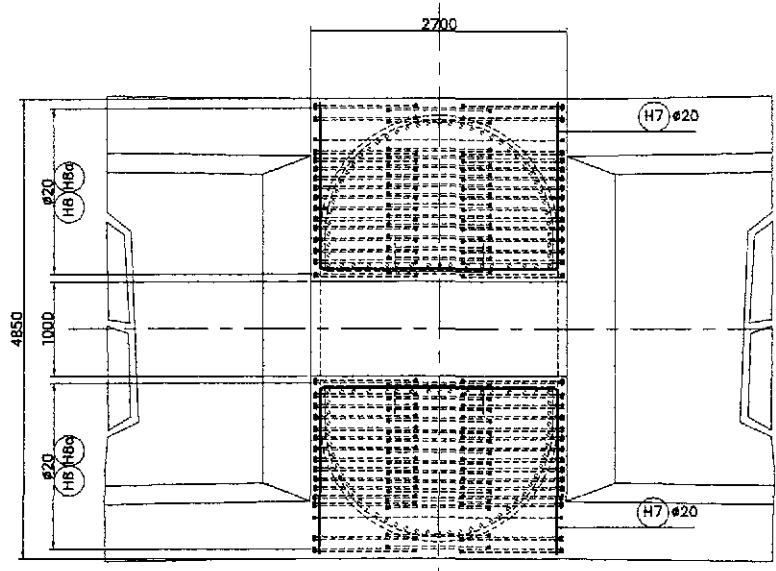
1 REINFORCEMENT DETAILS AT PIER HEAD (P15 TO P20)
SCALE AS SHOWN



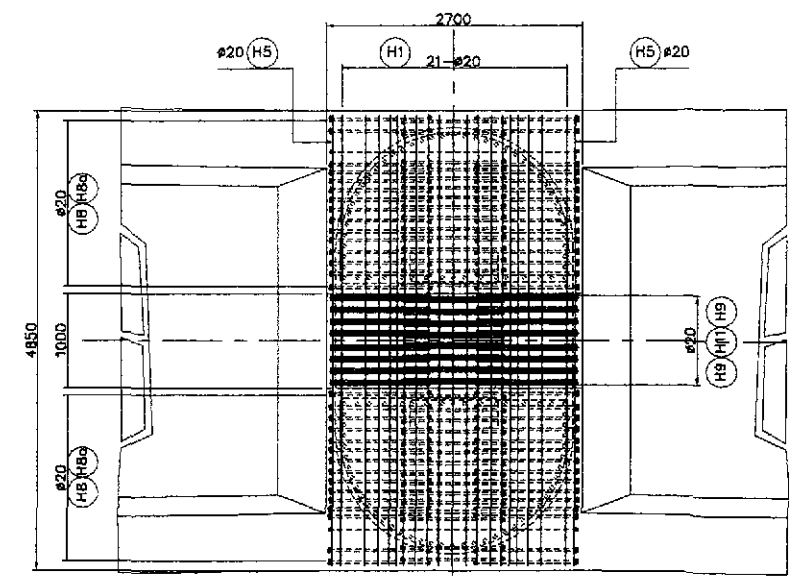
	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE III	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS AT PIER HEAD (P15 TO P20) - 1 OF 2 (ULTIMATE STAGE)	SHEET NO. : B8M-45
	CHECKED	2/25/02	<i>[Signature]</i>		BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: ADRIANO M. DORCY Chief, Bridges Division	Recommended By: GILBERTO S. REYES Director IV (OIC)				



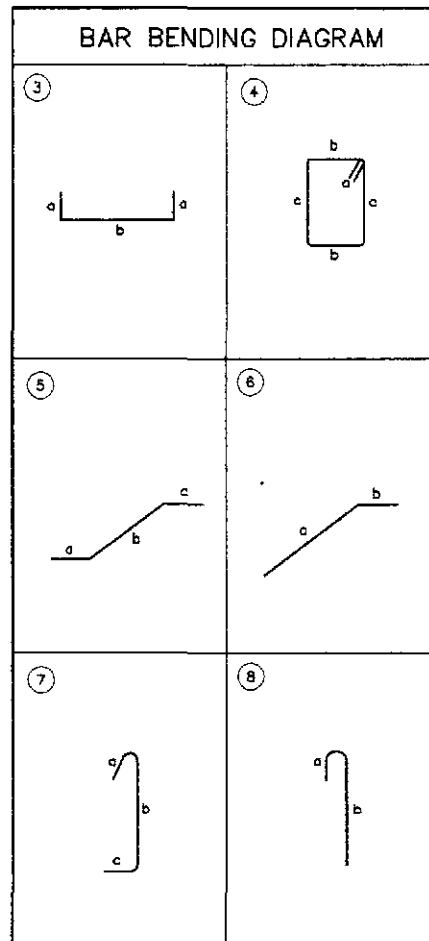
A SECTION
SCALE 1:40



B SECTION
SCALE 1:40



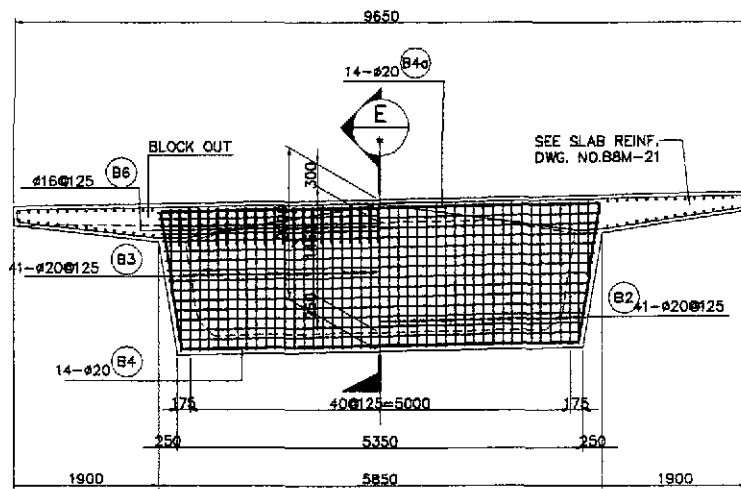
C SECTION
SCALE 1:40



BAR BENDING DIAGRAM				SCHEDULE OF REINFORCEMENT											
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (Kg)		REMARKS
				a	b	c	d	e	f				GRADE 60	GRADE 40	
PIER (P15 TO P20)	H1	20	3	500	5820					6920	21	2.466	358.36		Grade 60
	H2	20	3	500	5570					6570	19	2.466	307.83		Grade 60
	H3	20	3	500	5100					6100	19	2.466	285.81		Grade 60
	H4	20	3	500	4750					5750	21	2.466	287.77		Grade 60
	H5	20	3	1300	4710 (max)					7200	10	2.466	177.55		Grade 60
	H6	20	3	1300	4480 (min)					7970	10	2.466	196.54		Grade 60
					5500 (max)										
	H7	20	3	1300	5240 (min)					4525	22	2.466	245.49		Grade 60
					2040 (max)										
	H8	20	4	200	1165	3400				9530	60	2.466	1410.06		Grade 60
					1245	3400									
	H8a	20	4	200	1165	3000 (max)				8730	16	2.466	344.45		Grade 60
					800 (min)										
	H8b	20	4	200	1245	3000 (max)				8890	8	2.466	175.38		Grade 60
					800 (min)										
	H9	20	4	200	2600	850				7300	8	2.466	144.01		Grade 60
	H9a	20	4	200	460	850				3020	24	2.466	178.74		Grade 60
	H10	20	4	200	2600	980				7560	8	2.466	149.14		Grade 60
	H10a	20	4	200	460	980				3280	24	2.466	194.12		Grade 60
H11	20	5	500	1130	1300				4560	78	2.466	877.11		Grade 60	
H12	20	6	2625	500					3125	78	2.466	601.09		Grade 60	
H13	20	str	1300						1300	56	2.466	179.52		Grade 60	
H14	20	7	300	3400	250				3950	16	2.466	155.85		Grade 60	
H15	20	7	300	900	250				1450	8	2.466	28.61		Grade 60	
H16	20	8	250	1800					2050	92	2.466	465.09		Grade 60	
H17	20	str	5750						5750	12	2.466	170.15		Grade 60	
H18	20	str	4750						4750	12	2.466	140.56		Grade 60	
H19	20	4	250	500	3400				8300	44	2.466	900.58		Grade 60	
TOTAL WEIGHT FOR GRADE 60											=	8700.69			
TOTAL WEIGHT FOR GRADE 40											=				
TOTAL WEIGHT FOR 8 PIERS															
GRADE 60											=	52204.13			

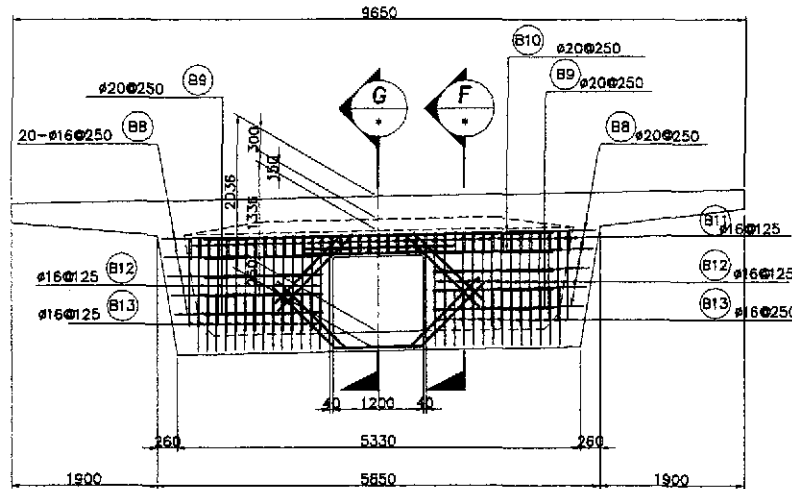
THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/25/02	<i>[Signature]</i>	BUREAU OF DESIGN				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. 8 ANGAT RIVER BRIDGE REINFORCEMENT DETAILS AT PIER HEAD (P15 TO P20) - 2 OF 2 (ULTIMATE STAGE)	B8M-46
	SUBMITTED	9/30/02	<i>[Signature]</i>	OFFICE OF THE SECRETARY				PLARIDEL BYPASS - CONTRACT PACKAGE III	FULL SIZE A1		



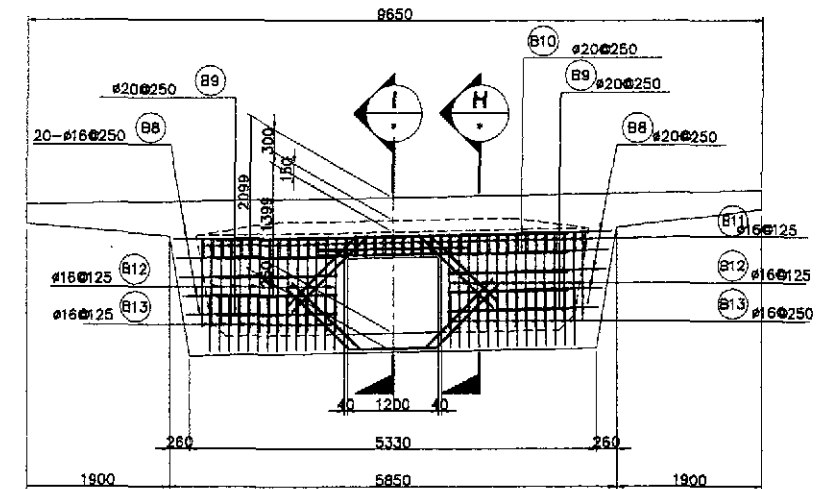
END DIAPHRAGM

SECTION A SCALE 1:50 SECTION B SCALE 1:50



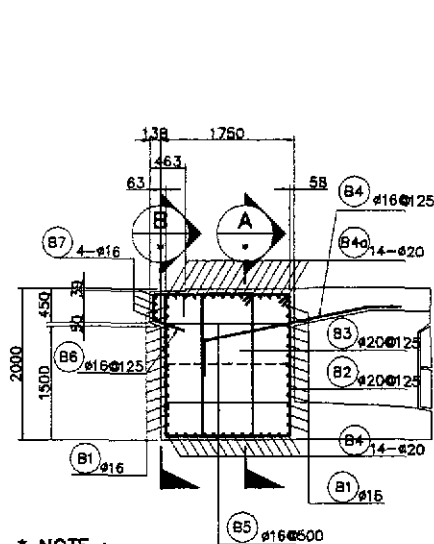
CROSS BEAM A-A

SECTION C SCALE 1:50



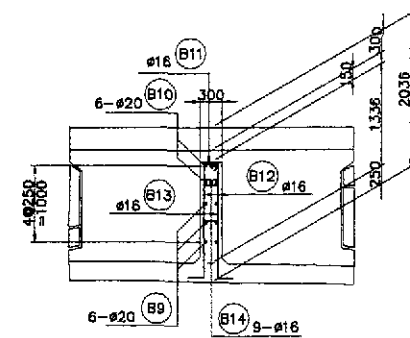
CROSS BEAM B-B

SECTION D SCALE 1:50

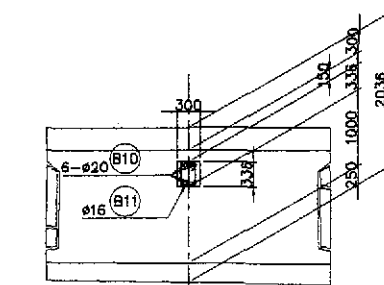


* NOTE :
1. SUPPLEMENTAL REINFORCEMENTS SHOULD BE PROVIDED FOR PRESTRESS ANCHORAGES AT DIAPHRAGM.

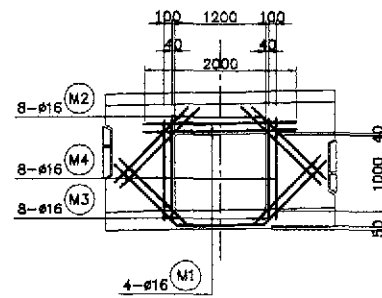
SECTION E SCALE 1:50



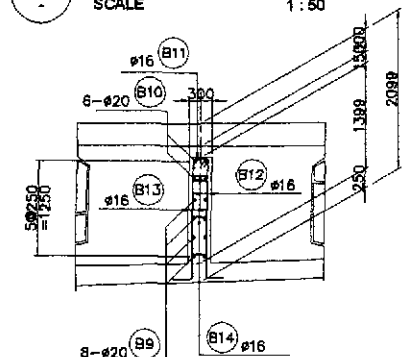
SECTION F SCALE 1:50



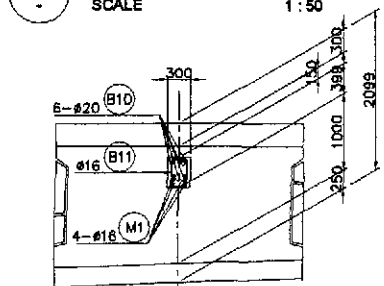
SECTION G SCALE 1:50



SUPPLEMENTAL REINFORCEMENT BAR DIAGRAM FOR MANHOLE

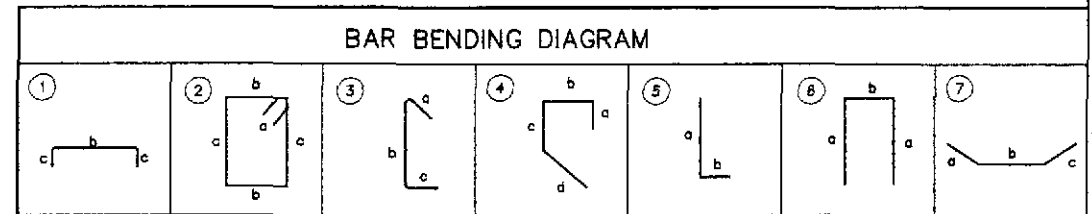
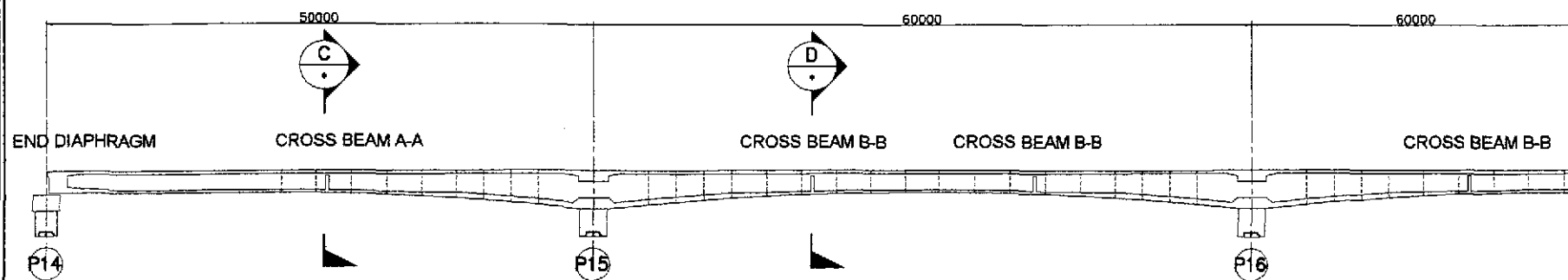


SECTION H SCALE 1:50



SECTION I SCALE 1:50

* NOTE :
1. SUPPLEMENTAL REINFORCEMENTS SHOULD BE PROVIDED FOR PRESTRESS ANCHORAGES AT DIAPHRAGM.



SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARKS
				a	b	c	d	e	f					
END DIAPHRAGM	B1	16	1	1100	5750 (max)					7800	26	1.579	320.22	GRADE 275
	B2	20	2	300	1650	1865				5765	41	2.466	582.88	GRADE 414
	B3	20	2	300	675	1865				3815	41	2.466	385.72	GRADE 414
	B4	20	1	930	5750					7610	14	2.466	282.73	GRADE 414
	B4a	20	1	930	5250					7110	14	2.466	245.47	GRADE 414
	B5	16	3	175	1650	175				2000	33	1.579	104.21	GRADE 275
	B6	16	4	300	480	420	470			1670	41	1.579	108.11	GRADE 275
B7	16	2	250	5750					6250	4	1.579	39.48	GRADE 275	
WEIGHT FOR GRADE 275 = 572.02 / WEIGHT FOR GRADE 414 = 1478.79														
TOTAL WEIGHT FOR 2 END DIAPHRAGMS : TOTAL WEIGHT FOR GRADE 275 = 1144.05														
TOTAL WEIGHT FOR GRADE 414 = 2963.58														
CROSS BEAM A-A	B8	20	5	300	1100					1400	20	2.466	69.05	GRADE 414
	B9	20	5	300	2250					2550	12	2.466	75.46	GRADE 414
	B10	20	str	6000						6000	6	2.466	88.78	GRADE 414
	B11	16	2	150	200	300				1300	11	1.579	22.58	GRADE 275
	B12	20	6	1300	200					2800	30	2.466	207.14	GRADE 414
	B13	20	5	300	1100					1400	60	2.466	207.14	GRADE 414
	M1	16	str	2000						2000	4	1.579	12.63	GRADE 275
	M2	16	str	1200						1200	8	1.579	15.16	GRADE 275
M3	16	7	1200	1200	1200				3600	8	1.579	45.48	GRADE 275	
M4	16	str	1500						1500	8	1.579	18.95	GRADE 275	
WEIGHT FOR GRADE 275 = 647.57 / WEIGHT FOR GRADE 414 = 114.79														
TOTAL WEIGHT FOR 2 CROSS-BEAM A-A TOTAL WEIGHT FOR GRADE 275 = 1295.14														
TOTAL WEIGHT FOR GRADE 414 = 2293.89														
CROSS BEAM B-B	B8	20	5	300	1100					1400	20	2.466	69.05	GRADE 414
	B9	20	5	300	2250					2550	12	2.466	75.46	GRADE 414
	B10	20	str	6000						6000	6	2.466	88.78	GRADE 414
	B11	16	2	150	200	300				1300	11	1.579	22.58	GRADE 275
	B12	20	6	1300	200					2800	30	2.466	207.14	GRADE 414
	B13	20	5	300	1100					1400	60	2.466	207.14	GRADE 414
	M1	16	str	2000						2000	4	1.579	12.63	GRADE 275
	M2	16	str	1200						1200	8	1.579	15.16	GRADE 275
M3	16	7	1200	1200	1200				3600	8	1.579	45.48	GRADE 275	
M4	16	str	1500						1500	8	1.579	18.95	GRADE 275	
WEIGHT FOR GRADE 275 = 647.57 / WEIGHT FOR GRADE 414 = 114.79														
TOTAL WEIGHT FOR 10 CROSS-BEAM B-B TOTAL WEIGHT FOR GRADE 275 = 8475.72														
TOTAL WEIGHT FOR GRADE 414 = 1147.93														

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

	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES			PROJECT AND LOCATION :		SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	2/20/02	M. S. RAVAL		DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			THE DETAILED DESIGN STUDY ON		AS SHOWN	BRIDGE NO. 8 ANGAT RIVER BRIDGE	B8M-47
	SUBMITTED	2/20/02	M. S. RAVAL		BUREAU OF DESIGN			UPGRADING INTER-URBAN HIGHWAY SYSTEM		FULL SIZE A1		
				OFFICE OF THE SECRETARY			ALONG THE PAN-PHILIPPINE HIGHWAY					
				Submitted By: DANILO C. TRAJANO			PLARIDEL BYPASS - CONTRACT PACKAGE III					
				Reviewed By: ADRIANO M. DOROY								
				Recommended By: GILBERTO S. REYES								
				Approved By: MANUEL M. BONCAN								
				Approved By: SIMEON A. DATUMANONG								