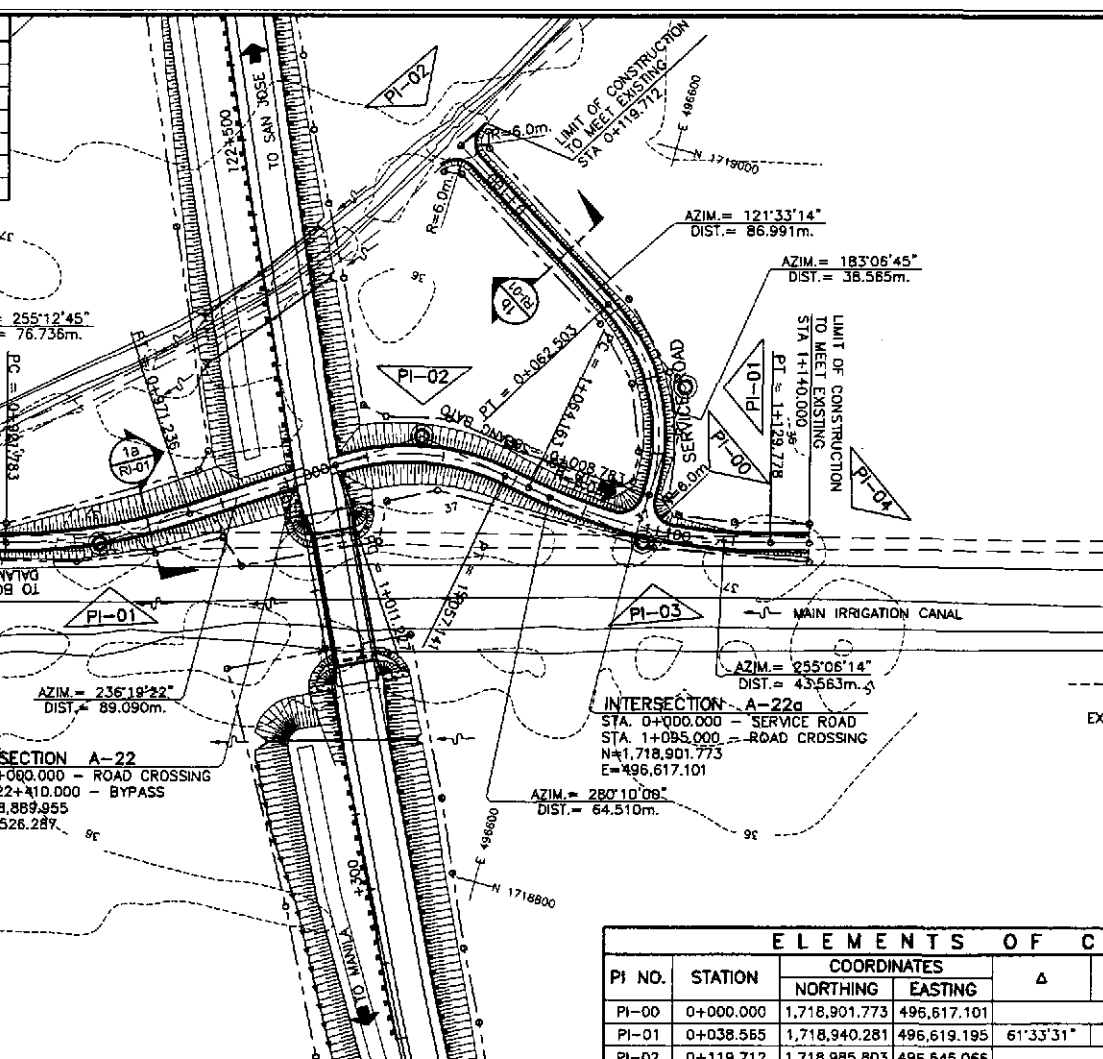
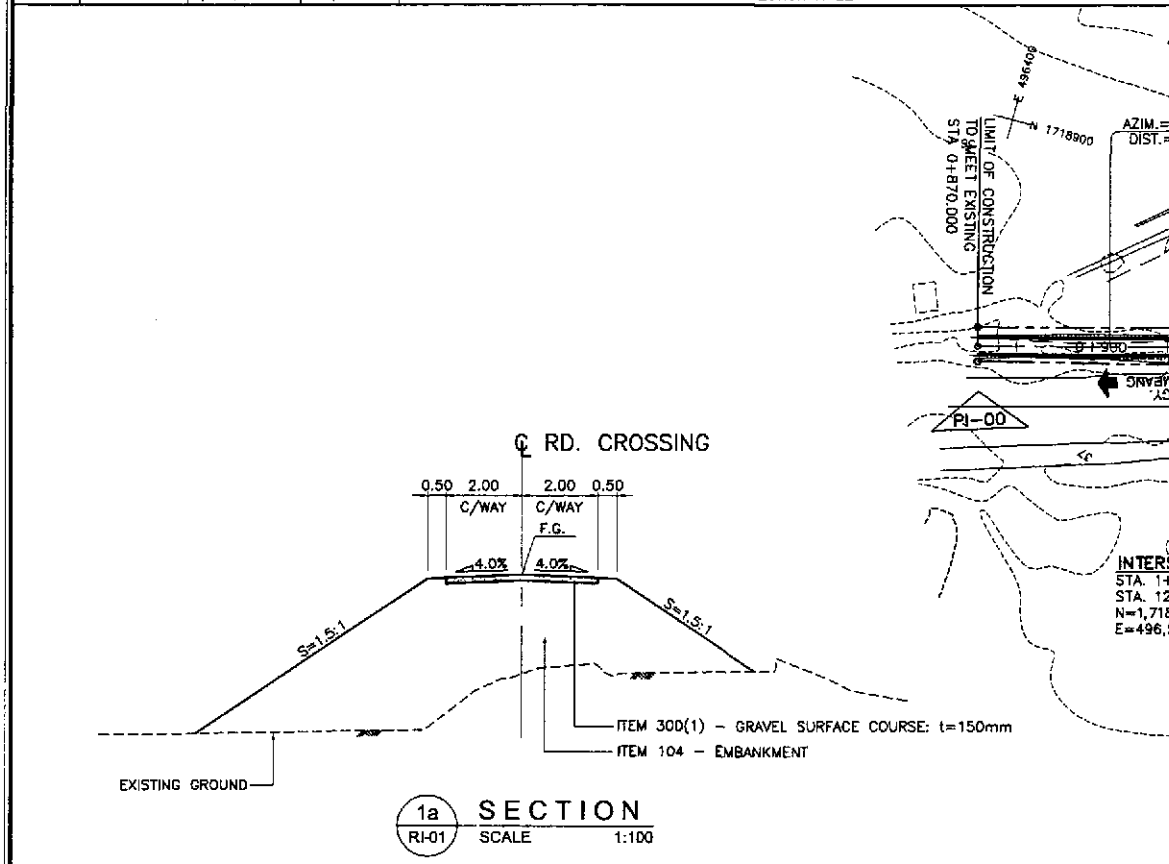
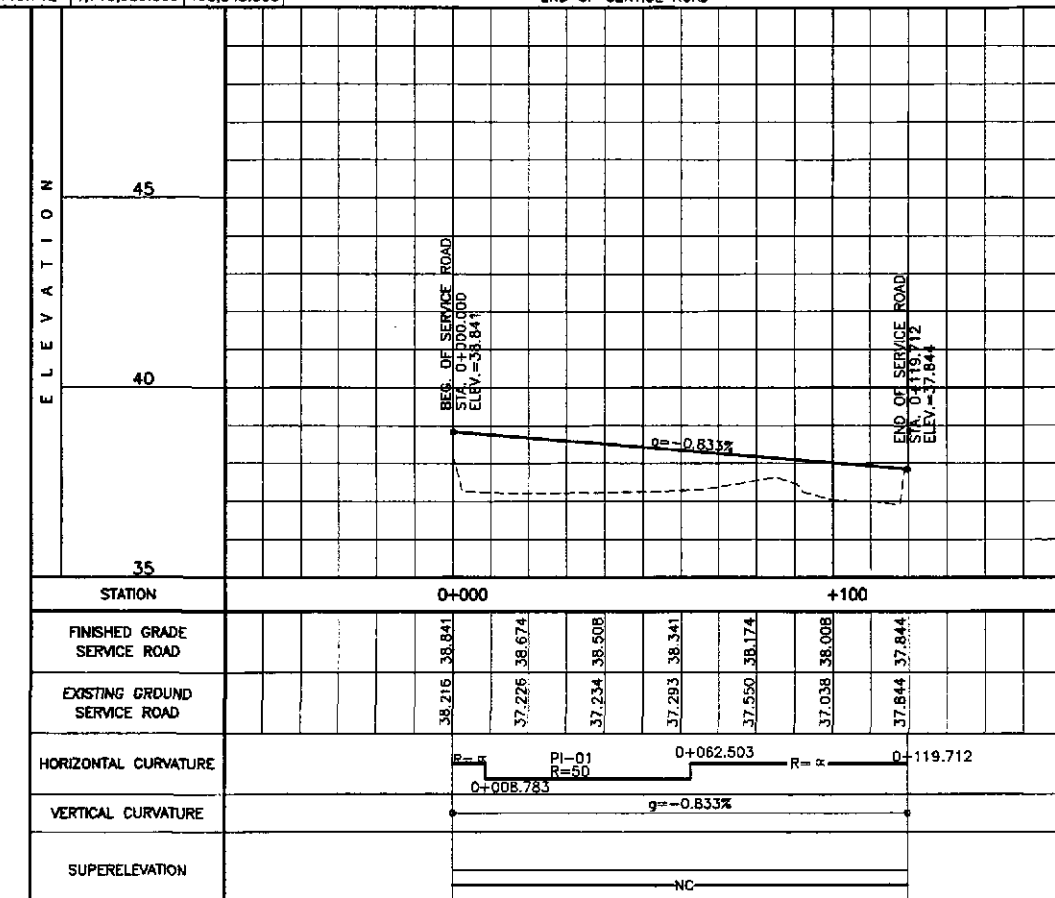
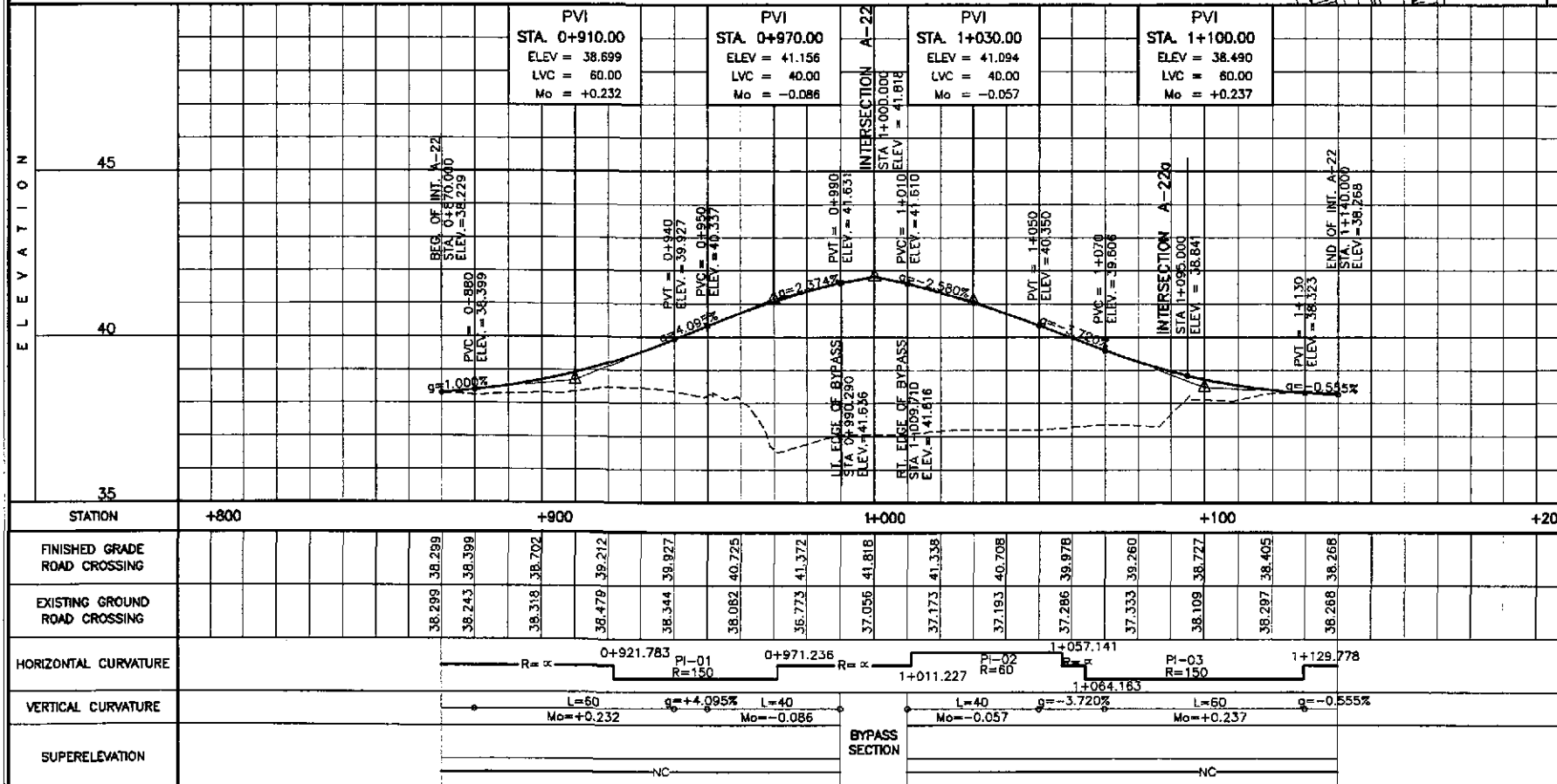


ELEMENTS OF CURVE													
PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION		
		NORTHING	EASTING								PC	PT	
PI-00	0+870.000	1,718,840.583	496,407.391	BEG. OF INTERSECTION A-22									
PI-01	0+946.736	1,718,860.169	496,481.586	18°53'23"	150	24.953	49.453	2.061	--	--	0+921.783	0+971.236	
PI-02	1+035.374	1,718,909.571	496,555.724	43°50'38"	60	24.147	45.913	4.677	--	--	1+011.227	4+057.141	
PI-03	1+097.504	1,718,898.184	496,619.221	25°03'46"	150	33.340	65.614	3.661	--	--	1+064.163	1+129.778	
PI-04	1+140.000	1,718,909.382	496,651.320	END OF INTERSECTION A-22									

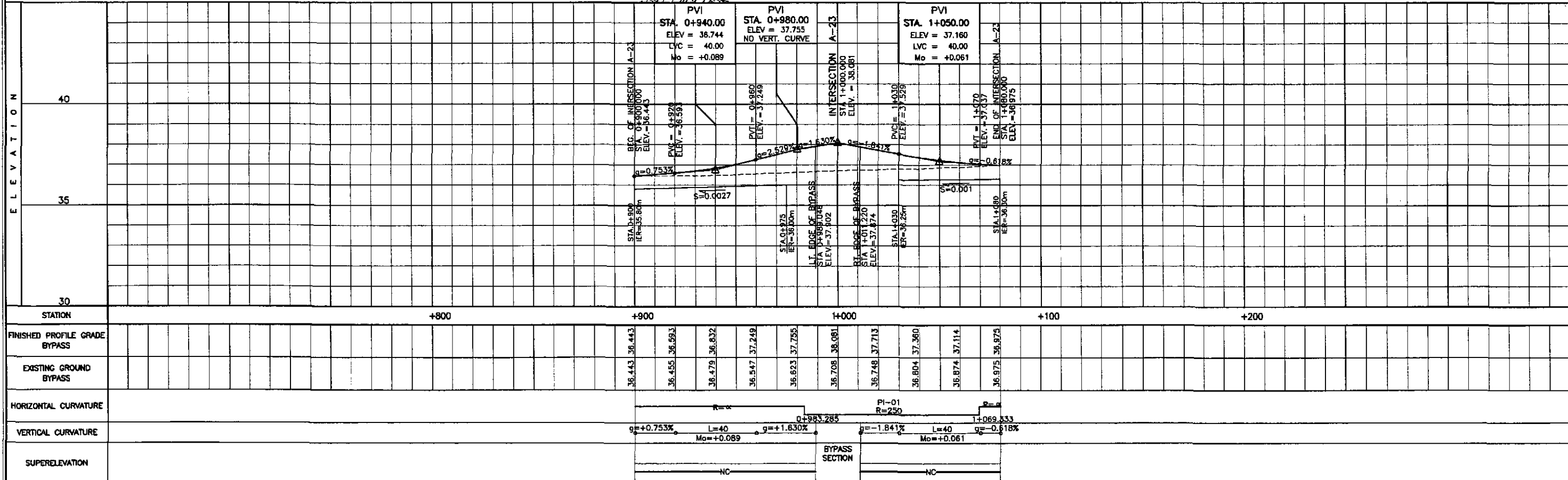
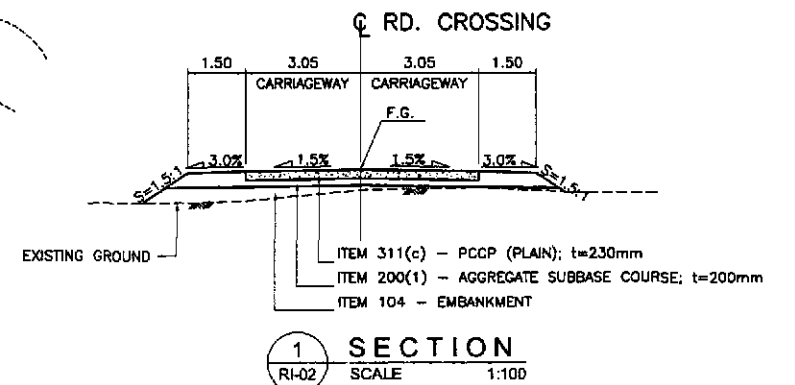
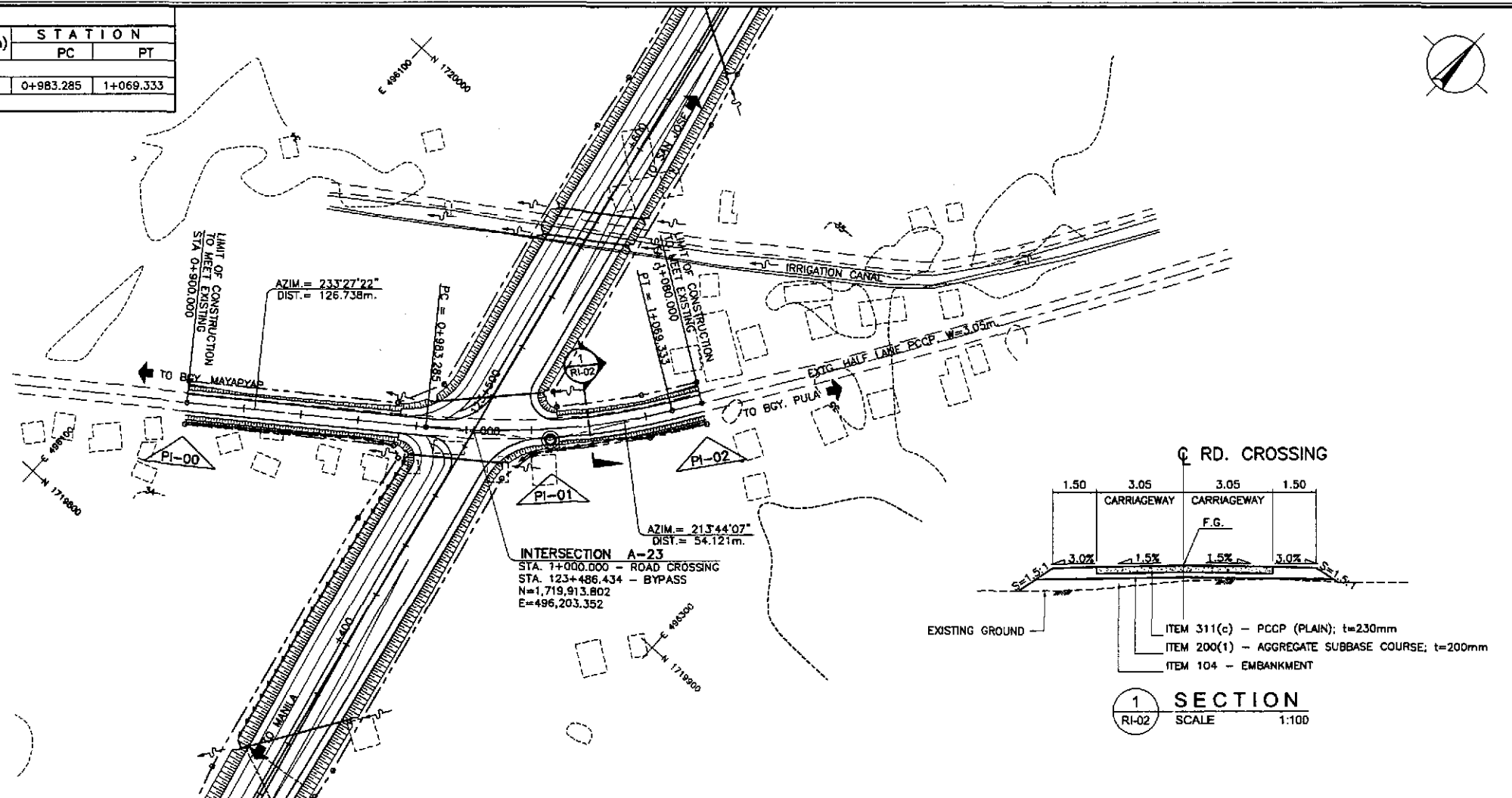


ELEMENTS OF CURVE (SERVICE ROAD)													
PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION		
		NORTHING	EASTING								PC	PT	
PI-00	0+000.000	1,718,901.773	496,617.101	BEGINNING OF SERVICE ROAD									
PI-01	0+038.565	1,718,940.281	496,619.195	61°33'31"	50	29.782	53.720	8.197	-	-	0+008.783	0+062.503	
PI-02	0+119.712	1,718,985.803	496,545.066	END OF SERVICE ROAD									



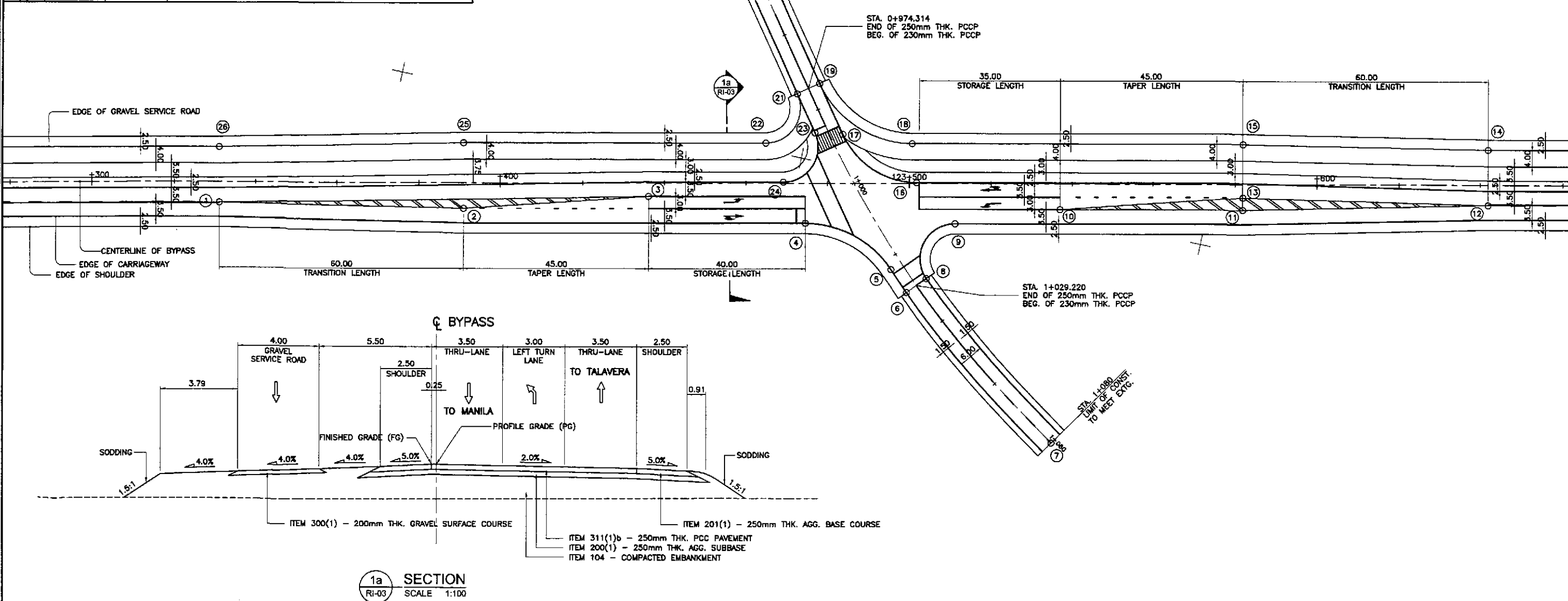
 JAPAN INTERNATIONAL COOPERATION AGENCY		 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS		PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV		SCALE : HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1	SHEET CONTENTS : PLAN, CROSS-SECTION AND PROFILE INTERSECTION A-22 STA. 0+870 - STA. 1+140 SERVICE ROAD STA 0+000 - STA 0+119.712	SHEET NO. : RI-01
DESIGNED	DATE 10/12/02	SIGNATURE	SUBMITTED BY: DANILLO C. TRAJANO PROJECT DIRECTOR		REVIEWED BY: JOSEFINA M. ALAGAR CHIEF, HIGHWAYS DIVISION	RECOMMENDED BY: GILBERTO S. REYES OIC, DIRECTOR IV	RECOMMENDED BY: MANUEL M. BONGAON UNDERSECRETARY	APPROVED BY: SIMON A. DATUMANONG SECRETARY
CHECKED	DATE 10/19/02	SIGNATURE	SUBMITTED BY: DANILLO C. TRAJANO PROJECT DIRECTOR		REVIEWED BY: JOSEFINA M. ALAGAR CHIEF, HIGHWAYS DIVISION	RECOMMENDED BY: GILBERTO S. REYES OIC, DIRECTOR IV	RECOMMENDED BY: MANUEL M. BONGAON UNDERSECRETARY	APPROVED BY: SIMON A. DATUMANONG SECRETARY
SUBMITTED	DATE 10/21/02	SIGNATURE	SUBMITTED BY: DANILLO C. TRAJANO PROJECT DIRECTOR		REVIEWED BY: JOSEFINA M. ALAGAR CHIEF, HIGHWAYS DIVISION	RECOMMENDED BY: GILBERTO S. REYES OIC, DIRECTOR IV	RECOMMENDED BY: MANUEL M. BONGAON UNDERSECRETARY	APPROVED BY: SIMON A. DATUMANONG SECRETARY

ELEMENTS OF CURVE												
PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION	
		NORTHING	EASTING								PC	PT
PI-00	0+900.000	1,719,853.817	496,123.354	BEG. OF INTERSECTION A-23								
PI-01	1+026.738	1,719,929.282	496,225.176	19°43'15"	250	43.454	86.048	3.748	—	—	0+983.285	1+069.333
PI-02	1+080.000	1,719,974.290	496,255.233	END OF INTERSECTION A-23								



 JAPAN INTERNATIONAL COOPERATION AGENCY		 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 : HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1	SHEET CONTENTS : PLAN, CROSS-SECTION AND PROFILE INTERSECTION A-23 STA. 0+900 - STA. 1+080	SHEET NO. : RI-02
DESIGNED	DATE	SIGNATURE	SUBMITTED BY		REVIEWED BY	RECOMMENDED BY		APPROVED BY
CHECKED	10/19/02	S. JOSE	DANILO C. TRAJANO		JOSEFINA M. ALAGAR	GILBERTO S. REYES		MANUEL M. BONGAN
SUBMITTED	10/21/02	Mr. K. K. K.	Project Director		Chief, Highways Division	Director IV		Undersecretary

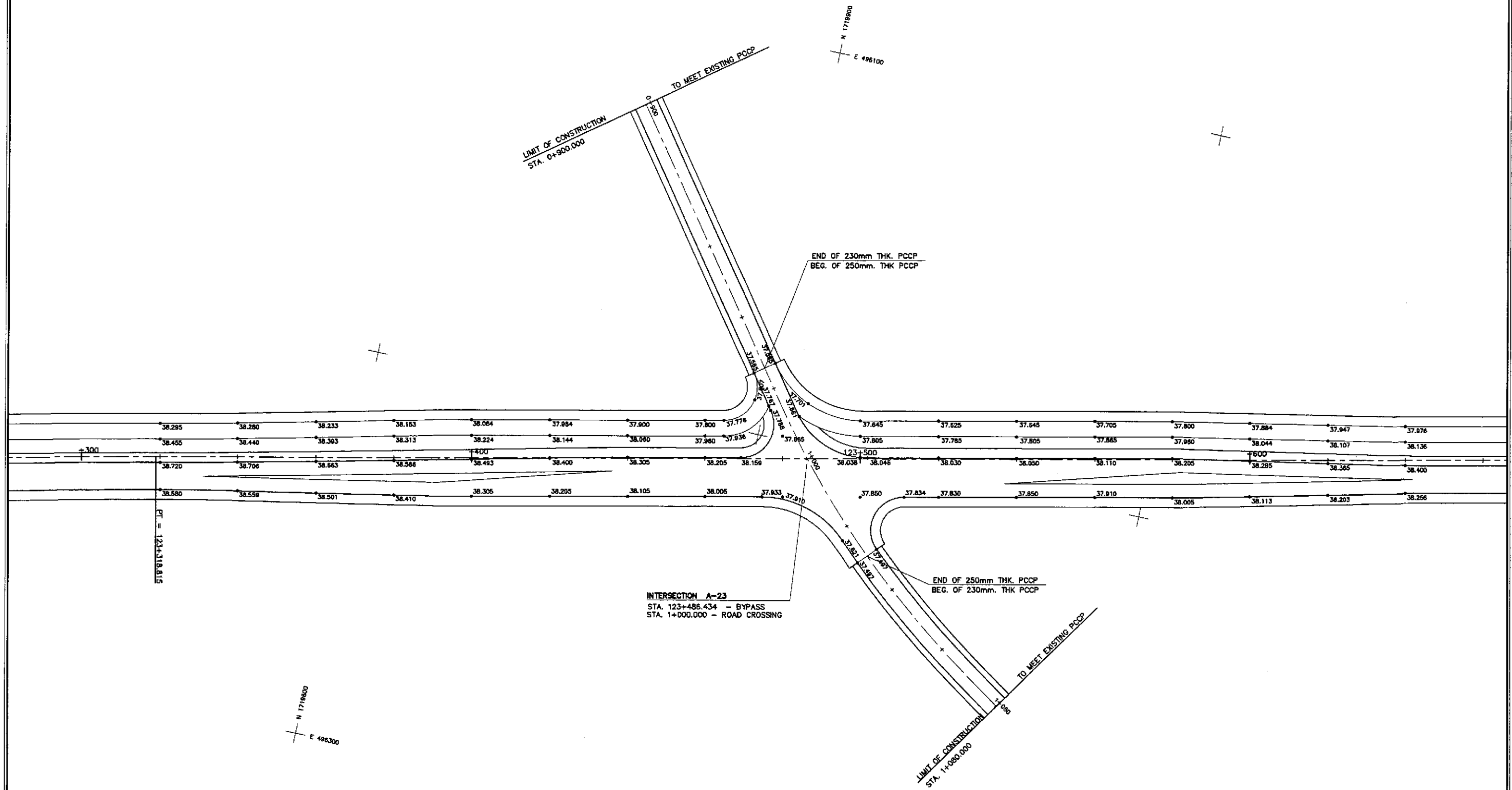
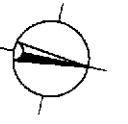
TABLE OF COORDINATES		
CONTROL POINT	COORDINATES	
	NORTHING	EASTING
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3	1719865.217	496217.011
4	1719904.308	496215.34
5	1719927.024	496221.952
6	1719931.956	496226.665
7	1719974.290	496255.233
8	1719936.042	496222.271
9	1719940.062	496207.733
10	1719954.513	496198.952
11	1720008.453	496189.805
12	1720066.945	496175.847
13	1720007.901	496186.654
14	1720064.136	496162.643
15	1720005.196	496173.939
16	1719928.836	496199.897
17	1719908.608	496192.244
18	1719925.764	496190.839
19	1719900.476	496181.272
20	1719853.817	496123.354
21	1719895.721	496184.932
22	1719890.661	496198.307
23	1719901.939	496193.322
24	1719896.879	496208.697
25	1719818.502	496213.66
26	1719750.075	496227.369



1
RI-03
SCALE 1:500

GEOMETRIC DESIGN LAYOUT
INTERSECTION A-23 (STA. 123+486.434) - INITIAL STAGE
1:500

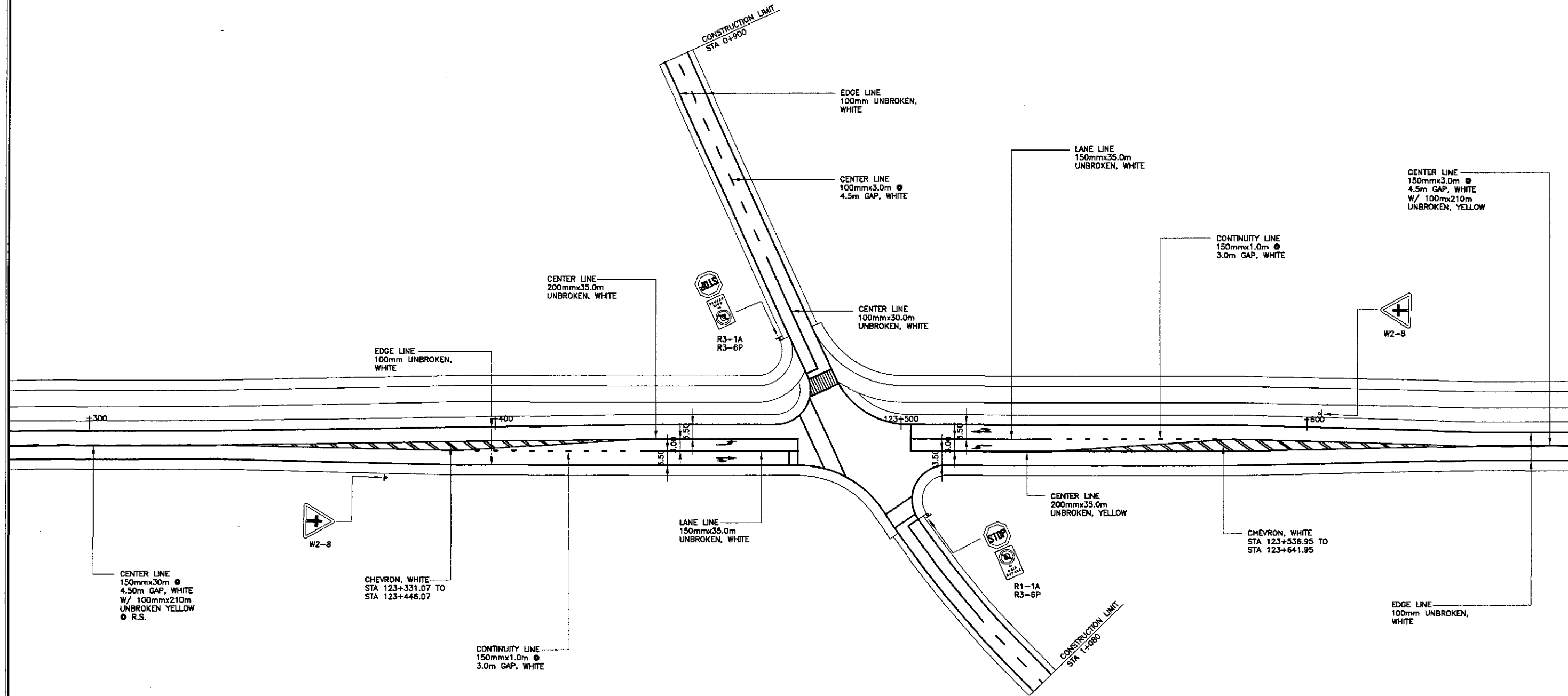
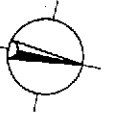
JICA JAPAN INTERNATIONAL COOPERATION AGENCY KATEHIRA & ENGINEERS INTERNATIONAL YEC YACHIYO ENGINEERING CO., LTD.		DATE: 10/12/02 DESIGNED: J. ORTIZ CHECKED: S. GOMEZ SUBMITTED: 10/21/02 TEAM LEADER:	SIGNATURE: [Signature] SUBMITTED BY: DANILLO C. TRAJANO Project Director	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN REVIEWED BY: JOSEFINA M. ALAGAR Chief, Highways Division	OFFICE OF THE SECRETARY RECOMMENDED BY: GILBERTO S. REYES OC, Director IV MANUEL M. BONDAN 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 IV	SCALE : 1:500 FULL SIZE A1	SHEET CONTENTS : INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-23 (INITIAL STAGE)	SHEET NO. : RI-03
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1
RI-04

PAVING AND GRADING PLAN
INTERSECTION A-23 (STA. 123+486.434) - INITIAL STAGE
SCALE 1:500







JICA JAPAN INTERNATIONAL COOPERATION AGENCY		DESIGNED 10/12/02 R. 150	SIGNATURE <i>[Signature]</i>	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 (Piradid, Cabanatuan and San Jose Bypasses)	SCALE : 1:500	SHEET CONTENTS : INTERSECTION DETAIL PAVING AND GRADING PLAN INTERSECTION A-23 (INITIAL STAGE)	SHEET NO. : RI-04
KEI KATAHIRA & ENGINEERS INTERNATIONAL		CHECKED 10/19/02 5.9000	SIGNATURE <i>[Signature]</i>	BUREAU OF DESIGN				CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1		
YEC YACHIYO ENGINEERING CO., LTD.		SUBMITTED 10/31/02	SIGNATURE <i>[Signature]</i>	Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES Dir. Director IV	Approved By: (See cover sheet for Signature/Approval) MANUEL M. BONGAN Undersecretary				



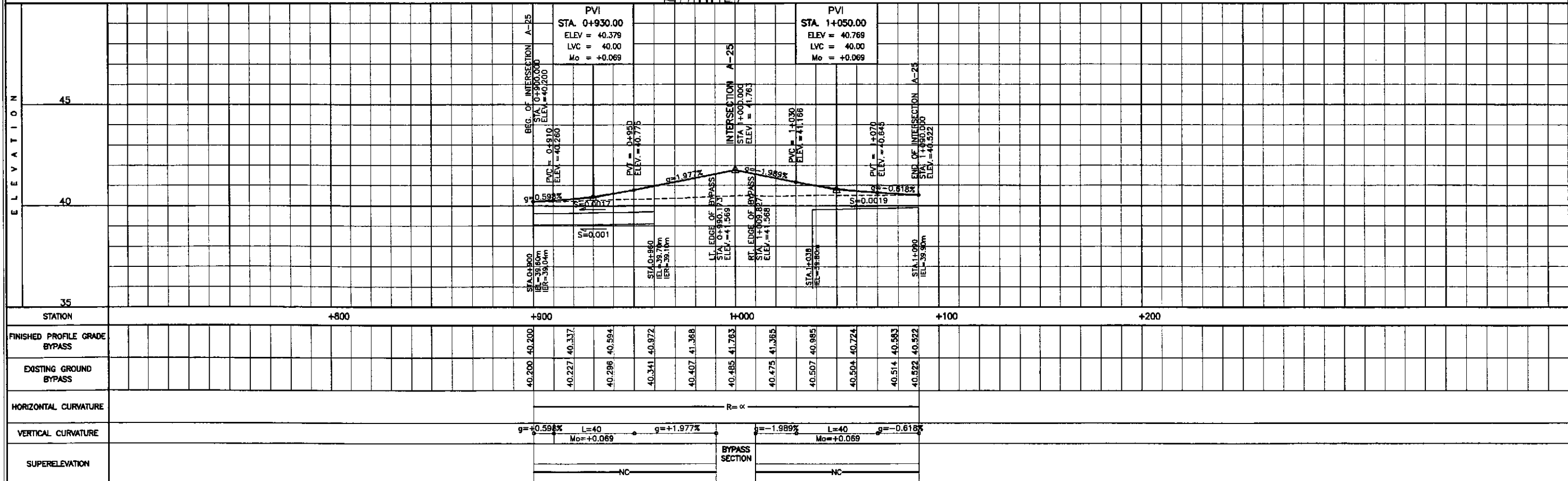
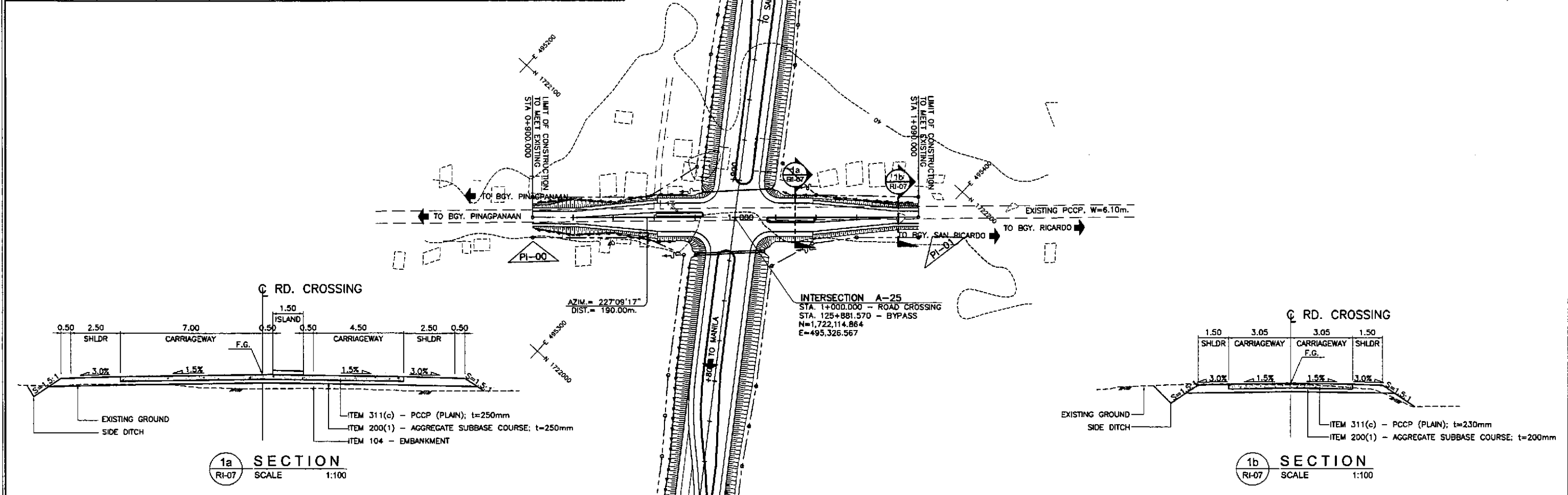
1
RI-05

TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT
INTERSECTION A-23 (STA. 123+486.434) - INITIAL STAGE

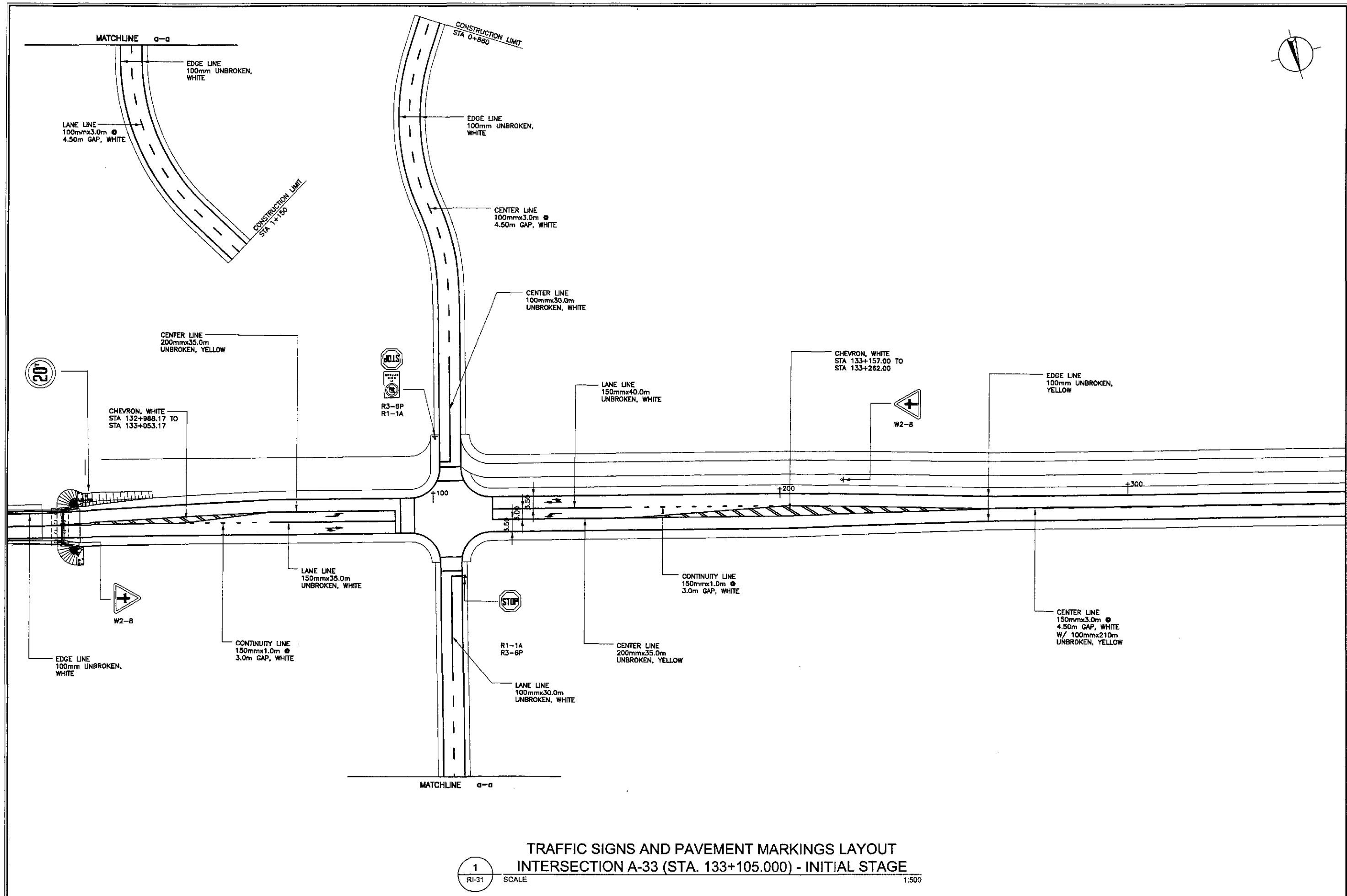
SCALE 1:500

<div> JICA JAPAN INTERNATIONAL COOPERATION AGENCY</div> <div> KATAHIRA & ENGINEERS INTERNATIONAL</div> <div> YACHIO ENGINEERING CO., LTD.</div>			DATE	SIGNATURE	<div> REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</div> <div><div>PJHL - PMD</div><div>Submitted By:</div><div>DANILO C. TRAJANO Project Director</div></div> <div><div>BUREAU OF DESIGN</div><div>Reviewed By:</div><div>JOSEFINA M. ALAGAR Chief, Highway Division</div></div> <div><div>OFFICE OF THE SECRETARY</div><div>Recommended By:</div><div>GILBERTO S. REYES OIC, Director IV</div></div> <div><div>Recommended By:</div><div>(See cover sheet for Signature)</div><div>MANUEL M. BONGAN Undersecretary</div></div> <div><div>Approved By:</div><div>(See cover sheet for Signature/Approved)</div><div>SIMON A. DATUMANONG Secretary</div></div>				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Paridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV		SCALE : 1:500 FULL SIZE A1	SHEET CONTENTS : TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT INTERSECTION A-23 (INITIAL STAGE)	SHEET NO. : RI-05
DESIGNED	10/12/02	S. LUNA											
CHECKED	10/19/02												
SUBMITTED	10/21/02												

ELEMENTS OF CURVE												
PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION	
		NORTHING	EASTING								PC	PT
PI-00	0+900.000	1,722,046.861	495,253.248	BEGINNING OF INTERSECTION A-25								
PI-01	1+090.000	1,722,176.065	495,392.554	END OF INTERSECTION A-25								

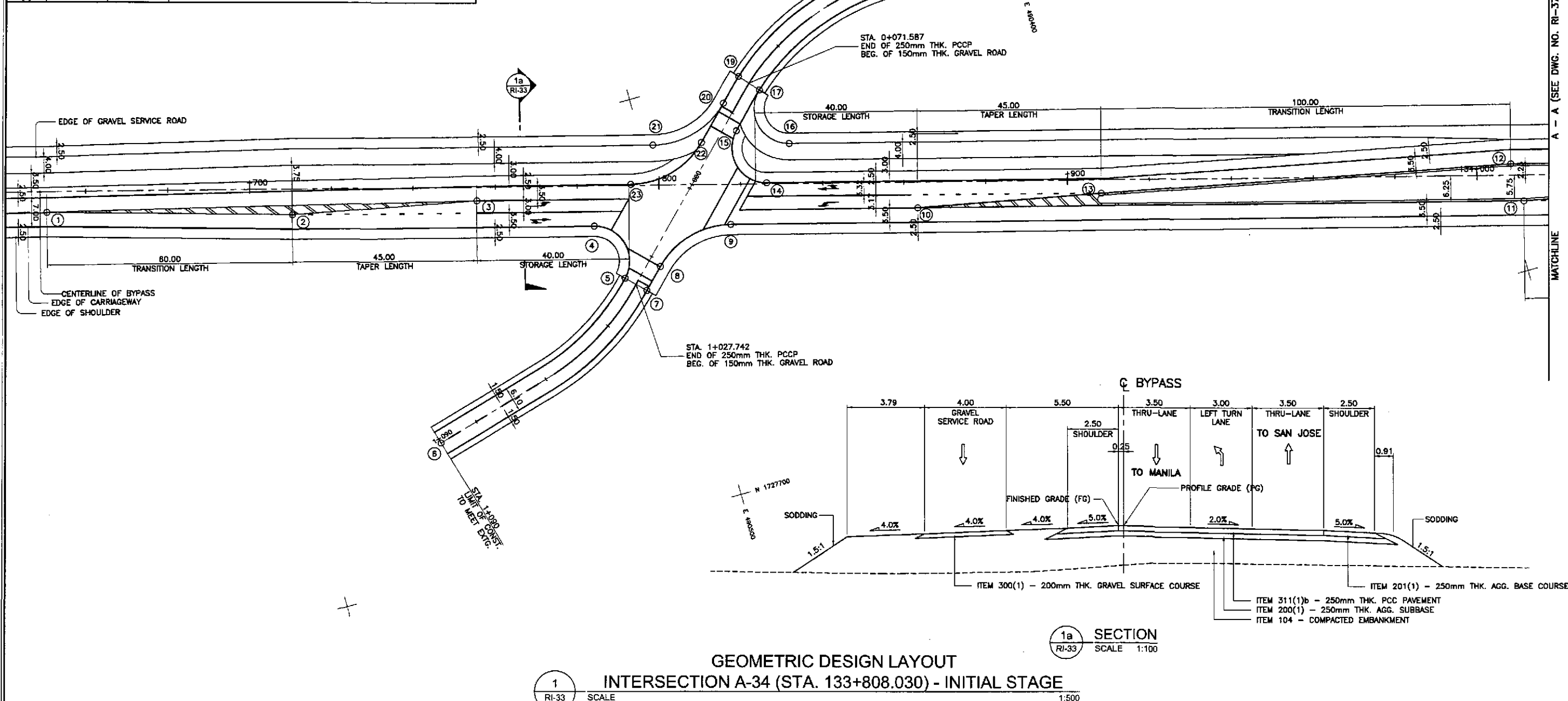


JICA JAPAN INTERNATIONAL COOPERATION AGENCY		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS		PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV		SCALE : HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1	SHEET CONTENTS : PLAN, CROSS-SECTION AND PROFILE INTERSECTION A-25 STA. 0+900 - STA. 1+090	SHEET NO. : RI-07
DESIGNED	DATE 10/12/02	SIGNATURE	PJHL - PMO	BUREAU OF DESIGN	OFFICE OF THE SECRETARY			
CHECKED	10/19/02	SIGNATURE	Submitted By:	Reviewed By:	Recommended By:			
SUBMITTED	10/21/02	SIGNATURE	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary	

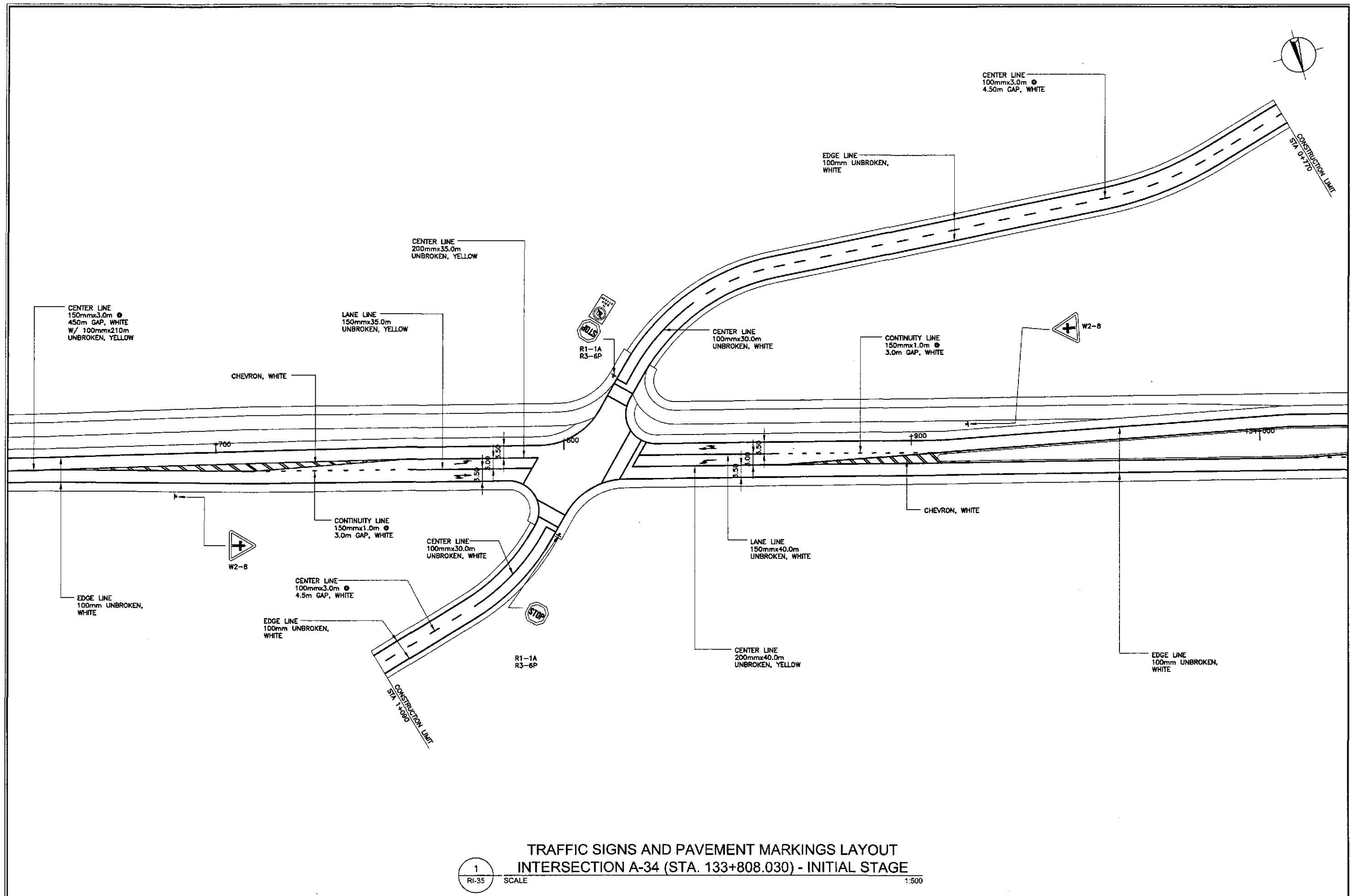


JICA JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL YEC YACHIYO ENGINEERING CO., LTD.		DATE DESIGNED 10/12/02 CHECKED 10/19/02 SUBMITTED 10/22/02	SIGNATURE S. LUNA S. ROSE TEAM LEADER	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN OFFICE OF THE SECRETARY	PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE : 1:500 FULL SIZE A1	SHEET CONTENTS : TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT INTERSECTION A-33 (INITIAL STAGE)	SHEET NO. : RI-31
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TABLE OF COORDINATES		
CONTROL POINT	COORDINATES	
	NORTHING	EASTING
1	1727587.611	490644.443
2	1727604.562	490586.797
3	1727613.455	490542.598
4	1727627.263	490516.558
5	1727641.496	490512.796
6	1727695.295	490666.132
7	1727645.824	490508.497
8	1727641.105	490503.745
9	1727635.994	490484.409
10	1727644.629	490439.256
11	1727683.446	490296.323
12	1727673.946	490296.965
13	1727653.528	490395.042
14	1727628.688	490473.152
15	1727614.455	490476.915
16	1727620.98	490465.289
17	1727606.429	490468.714
18	1727571.689	490219.51
19	1727601.873	490472.771
20	1727607.116	490478.182
21	1727612.227	490497.518
22	1727614.847	490485.965
23	1727619.958	490505.301

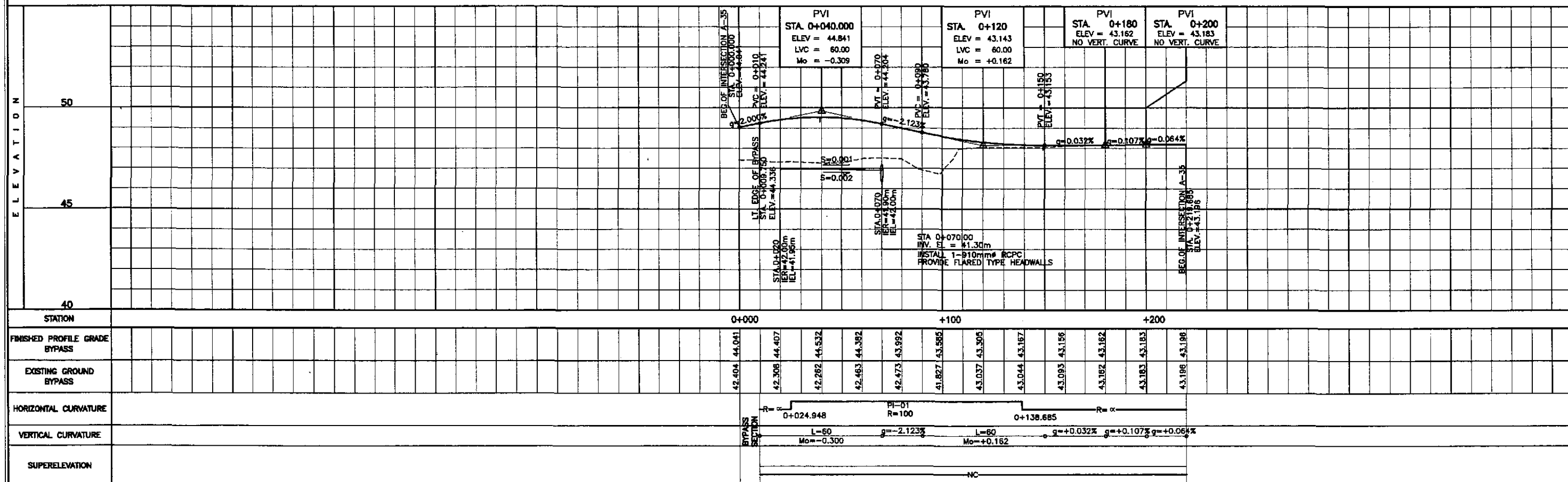
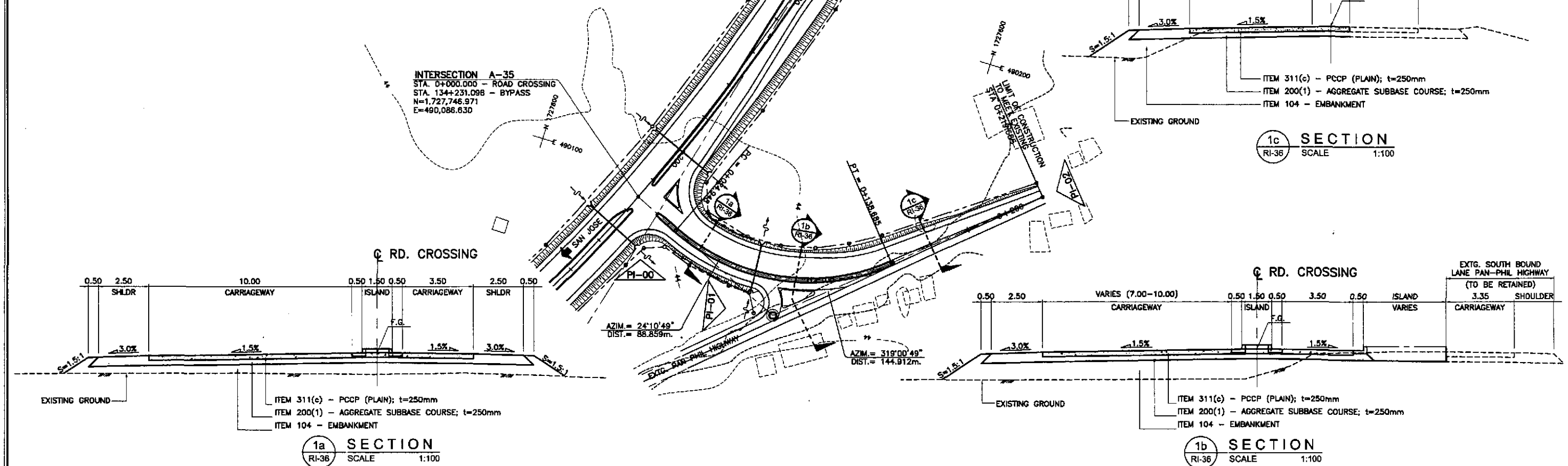


 JAPAN INTERNATIONAL COOPERATION AGENCY		 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS		PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)		SCALE : 1:500 FULL SIZE A1	SHEET CONTENTS : INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-34 (INITIAL STAGE)	SHEET NO. : RI-33
DESIGNED 10/12/02 A. ORONCE	CHECKED 10/19/02 S. GARCIA	SUBMITTED 10/21/02 M. KISHIMOTO	Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES OIC, Director IV	Recommended By: (See cover sheet for Signature/Approval) MANUEL M. BONDAN Undersecretary	Approved By: (See cover sheet for Signature/Approval) SIMEON A. DATUMANONG Secretary	



JICA JAPAN INTERNATIONAL COOPERATION AGENCY		DATE 10/12/02	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 (Palarid, Cabanatuan and San Jose Bypasses)	SCALE : 1:500	SHEET CONTENTS : TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT INTERSECTION A-34 (INITIAL STAGE)	SHEET NO. : RI-35
KEI KATAHIRA & ENGINEERS INTERNATIONAL		CHECKED 10/19/02	SIGNATURE 	SUBMITTED 10/21/02	PUHL - PMO DANILLO C. TRAJANO Project Director	BUREAU OF DESIGN Reviewed By: JOSEFINA M. ALAGAR Chief, Highway Division	Recommended By: GILBERTO S. REYES OIC, Director IV	Recommended By: MANUEL M. BONDAN Undersecretary	Approved By: (See cover sheet for Signature/Approval) SIMON A. DATUMANONG Secretary	CABANATUAN BYPASS - CONTRACT PACKAGE IV

ELEMENTS OF CURVE													
PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION		
		NORTHING	EASTING								PC	PT	
PI-00	0+000.000	1,727,746.971	490,086.630	BEGINNING OF INTERSECTION A-35									
PI-01	0+088.859	1,727,665.908	480,050.232	65°10'00"	100	63.912	113.737	18.679	—	—	0+024.948	0+138.685	
PI-02	0+219.685	1,727,556.519	490,145.277	END OF INTERSECTION A-35									



JICA JAPAN INTERNATIONAL COOPERATION AGENCY		KATAHIRA & ENGINEERS INTERNATIONAL		YEO YACHIYO ENGINEERING CO., LTD.		DATE: 10/12/02 DESIGNED: [Signature] CHECKED: [Signature] SUBMITTED: 10/21/02		P.E. - PMO Submitted By: [Signature] DANILLO C. TRAJANO Project Director		BUREAU OF DESIGN Reviewed By: [Signature] JOSEFINA M. ALAGAR Chief, Highways Division		OFFICE OF THE SECRETARY Recommended By: [Signature] GILBERTO S. REYES O.C., Director IV		Recommended By: [Signature] MANUEL M. BONDAN Undersecretary		Approved By: [Signature] 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 IV		SCALE: HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1		SHEET CONTENTS: PLAN, CROSS-SECTION AND PROFILE INTERSECTION A-35 STA. 0+000 - STA. 0+219.685		SHEET NO.: RI-36	
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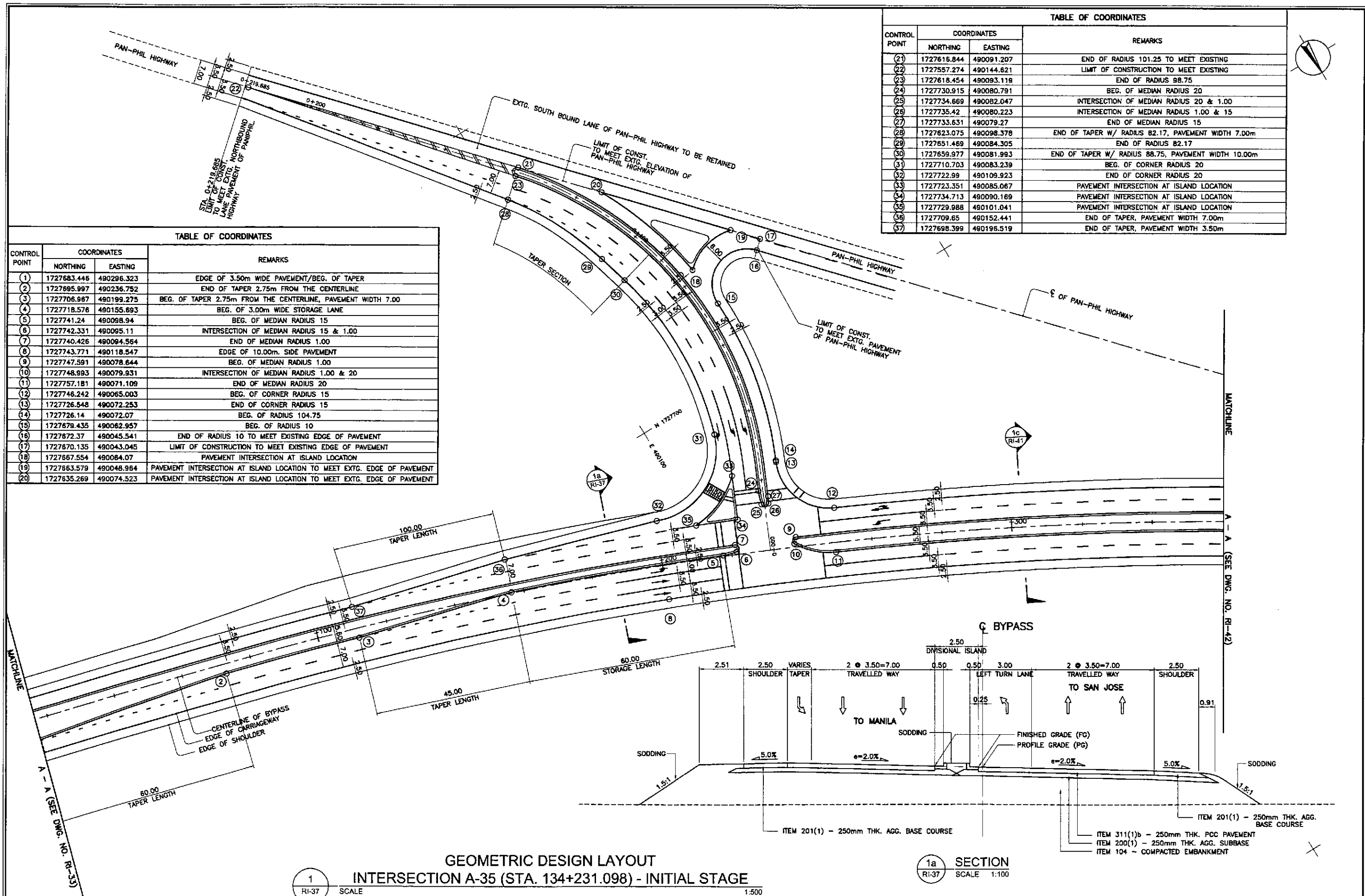


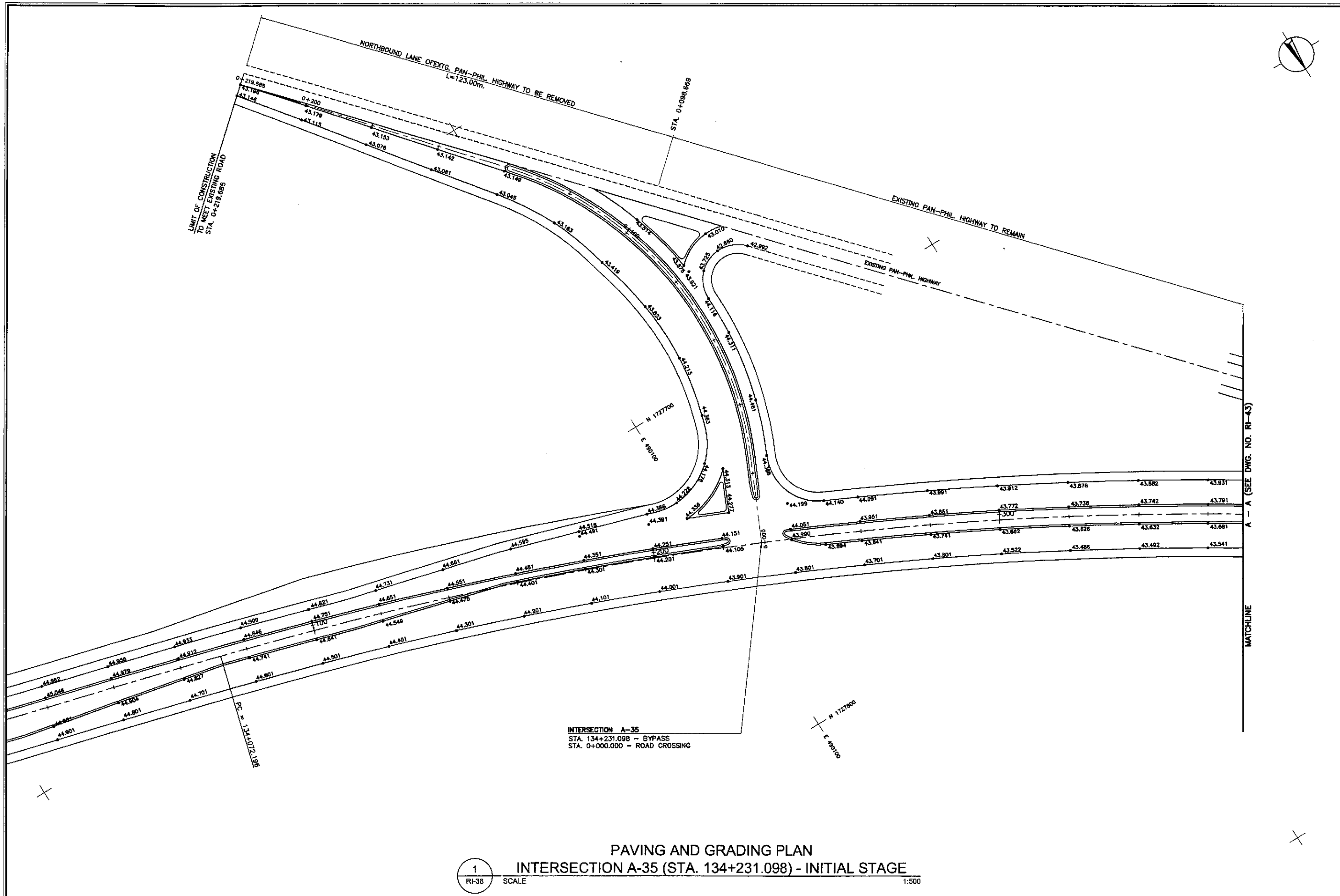
TABLE OF COORDINATES		
CONTROL POINT	COORDINATES	
	NORTHING	EASTING
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(22)	1727557.274	490144.621
(23)	1727618.454	490093.118
(24)	1727730.915	490080.791
(25)	1727734.669	490082.047
(26)	1727735.42	490080.223
(27)	1727733.631	490079.27
(28)	1727623.075	490098.378
(29)	1727651.469	490084.305
(30)	1727659.977	490081.993
(31)	1727710.703	490083.239
(32)	1727722.99	490109.923
(33)	1727723.351	490085.067
(34)	1727734.713	490090.169
(35)	1727729.988	490101.041
(36)	1727709.65	490152.441
(37)	1727698.399	490198.519
REMARKS		
END OF RADIUS 101.25 TO MEET EXISTING		
LIMIT OF CONSTRUCTION TO MEET EXISTING		
END OF RADIUS 98.75		
BEG. OF MEDIAN RADIUS 20		
INTERSECTION OF MEDIAN RADIUS 20 & 1.00		
INTERSECTION OF MEDIAN RADIUS 1.00 & 15		
END OF MEDIAN RADIUS 15		
END OF TAPER W/ RADIUS 82.17, PAVEMENT WIDTH 7.00m		
END OF RADIUS 82.17		
END OF TAPER W/ RADIUS 88.75, PAVEMENT WIDTH 10.00m		
BEG. OF CORNER RADIUS 20		
END OF CORNER RADIUS 20		
PAVEMENT INTERSECTION AT ISLAND LOCATION		
PAVEMENT INTERSECTION AT ISLAND LOCATION		
PAVEMENT INTERSECTION AT ISLAND LOCATION		
END OF TAPER, PAVEMENT WIDTH 7.00m		
END OF TAPER, PAVEMENT WIDTH 3.50m		

TABLE OF COORDINATES		
CONTROL POINT	COORDINATES	
	NORTHING	EASTING
(1)	1727683.445	490296.323
(2)	1727695.997	490236.752
(3)	1727706.987	490199.275
(4)	1727718.576	490155.693
(5)	1727741.24	490098.94
(6)	1727742.331	490095.11
(7)	1727740.426	490094.564
(8)	1727743.771	490118.547
(9)	1727747.591	490078.644
(10)	1727748.993	490079.931
(11)	1727757.181	490071.109
(12)	1727746.242	490065.003
(13)	1727726.548	490072.253
(14)	1727726.14	490072.07
(15)	1727679.435	490062.957
(16)	1727672.37	490045.541
(17)	1727670.135	490043.045
(18)	1727667.554	490084.07
(19)	1727663.579	490048.984
(20)	1727635.269	490074.523
REMARKS		
EDGE OF 3.50m WIDE PAVEMENT/BEG. OF TAPER		
END OF TAPER 2.75m FROM THE CENTERLINE		
BEG. OF TAPER 2.75m FROM THE CENTERLINE, PAVEMENT WIDTH 7.00		
BEG. OF 3.00m WIDE STORAGE LANE		
BEG. OF MEDIAN RADIUS 15		
INTERSECTION OF MEDIAN RADIUS 15 & 1.00		
END OF MEDIAN RADIUS 1.00		
EDGE OF 10.00m. SIDE PAVEMENT		
BEG. OF MEDIAN RADIUS 1.00		
INTERSECTION OF MEDIAN RADIUS 1.00 & 20		
END OF MEDIAN RADIUS 20		
BEG. OF CORNER RADIUS 15		
END OF CORNER RADIUS 15		
BEG. OF RADIUS 104.75		
BEG. OF RADIUS 10		
END OF RADIUS 10 TO MEET EXISTING EDGE OF PAVEMENT		
LIMIT OF CONSTRUCTION TO MEET EXISTING EDGE OF PAVEMENT		
PAVEMENT INTERSECTION AT ISLAND LOCATION		
PAVEMENT INTERSECTION AT ISLAND LOCATION TO MEET EXTG. EDGE OF PAVEMENT		
PAVEMENT INTERSECTION AT ISLAND LOCATION TO MEET EXTG. EDGE OF PAVEMENT		

1
RI-37
SCALE

GEOMETRIC DESIGN LAYOUT
INTERSECTION A-35 (STA. 134+231.098) - INITIAL STAGE
1:500

1a
RI-37
SECTION
SCALE 1:100



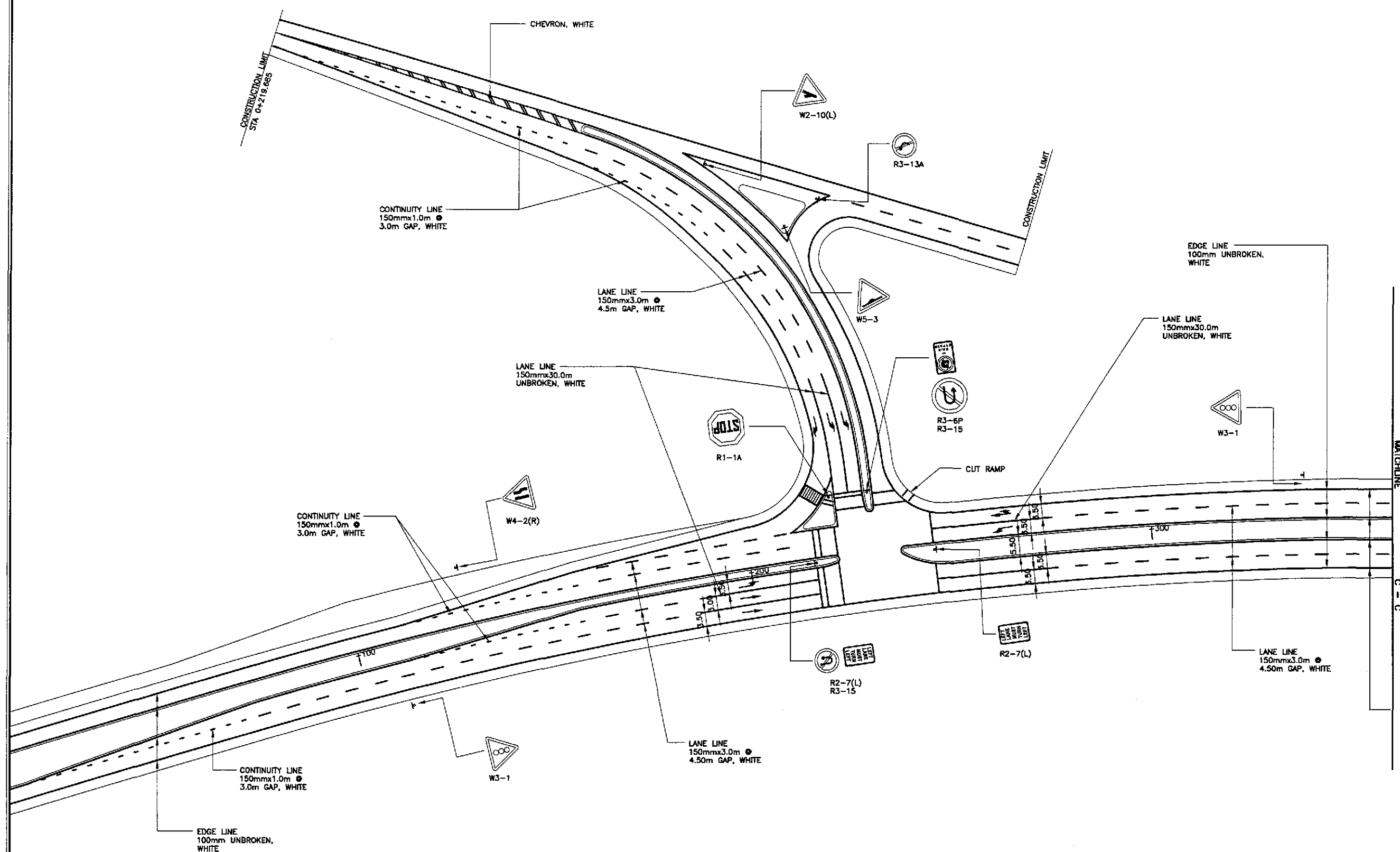
PAVING AND GRADING PLAN
INTERSECTION A-35 (STA. 134+231.098) - INITIAL STAGE

1
RI-38

SCALE

1:500

JICA JAPAN INTERNATIONAL COOPERATION AGENCY		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 : 1:500 FULL SIZE A1	SHEET CONTENTS : INTERSECTION DETAIL PAVING AND GRADING PLAN INTERSECTION A-35 (INITIAL STAGE)	SHEET NO. : RI-38
DESIGNED 10/24/02 S. G. G.	CHECKED 10/19/02 S. G. G.	SUBMITTED 10/21/02 M. R. R.	DATE 10/24/02 SIGNATURE S. G. G.	SUBMITTED BY: DANILO C. TRAJANO Project Director	REVIEWED BY: JOSEFINA M. ALAGAR Chief, Highways Division	RECOMMENDED BY: GILBERTO S. REYES OIC, Director IV	APPROVED BY: MANUEL M. BONDAN Undersecretary	APPROVED BY: SIMEDON A. DATUMANONG Secretary










TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT
INTERSECTION A-35 (STA. 134+231.098) - INITIAL STAGE

1
RI-39

SCALE

1:500

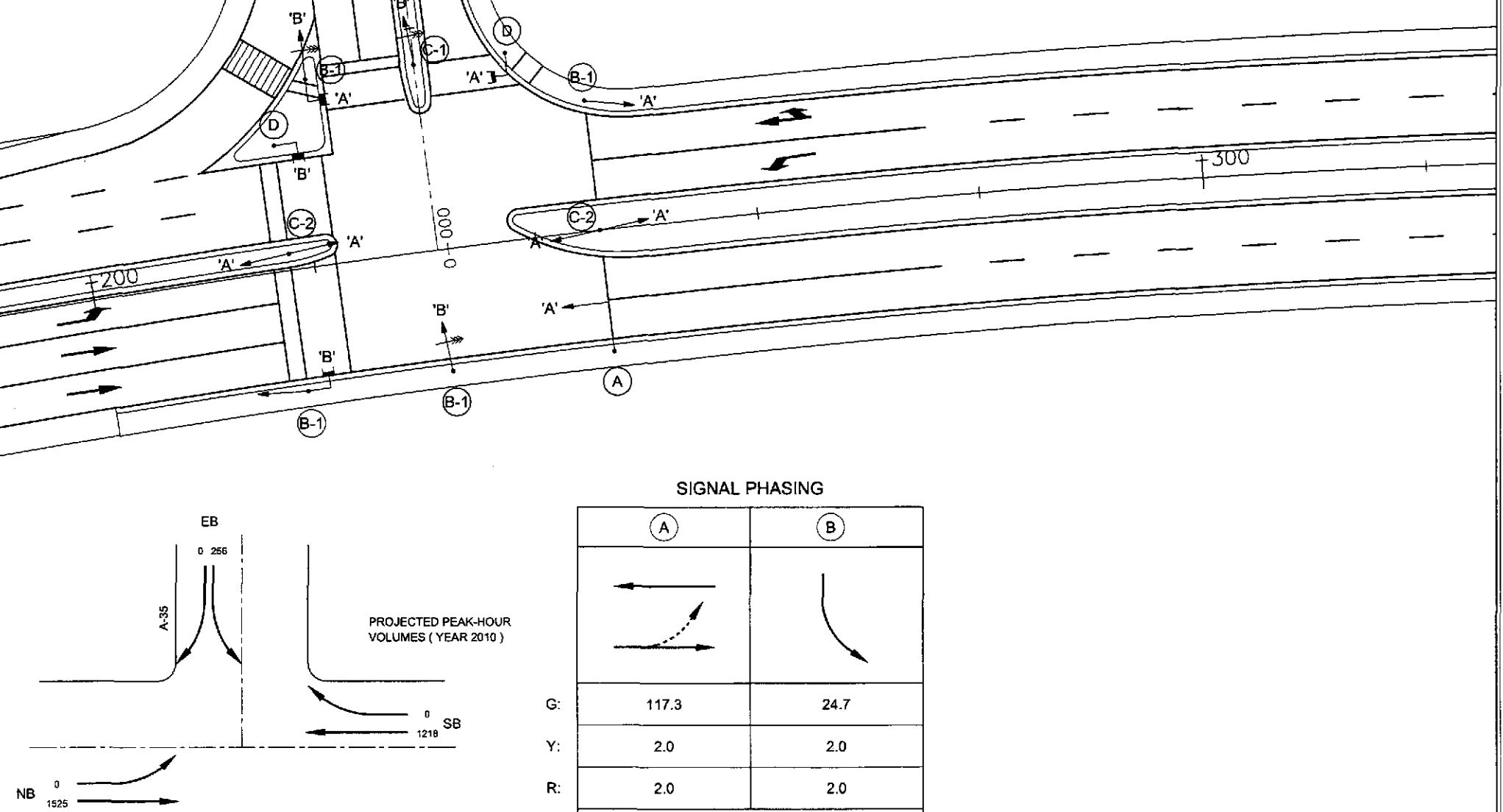
 JAPAN INTERNATIONAL COOPERATION AGENCY		 KATAHIRA & ENGINEERS INTERNATIONAL		 YACHIYO ENGINEERING CO., LTD.	
DESIGNED	10/12/07			REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	
CHECKED	10/19/07		Submitted By:	BUREAU OF DESIGN	OFFICE OF THE SECRETARY
SUBMITTED	10/21/07		DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highway Division	GILBERTO S. REYES OC, Director IV
				MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary
PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Paridel, Cabanatuan and San Jose Bypasses)					
CABANATUAN BYPASS - CONTRACT PACKAGE IV					
SCALE : 1:500 FULL SIZE A1					
SHEET CONTENTS : TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT INTERSECTION A-35 (INITIAL STAGE)					
SHEET NO. : RI-39					

DESIGN PLAN LANTERN SYMBOL	LANTERN ASSEMBLY	DESIGN PLAN LANTERN SYMBOL	LANTERN ASSEMBLY
	 3 ASPECT		 5 ASPECT
	 3 ASPECT		 6 ASPECT
	 4 ASPECT		 PEDESTRIAN

LANTERN ASSEMBLY REFERENCE

NOTE :

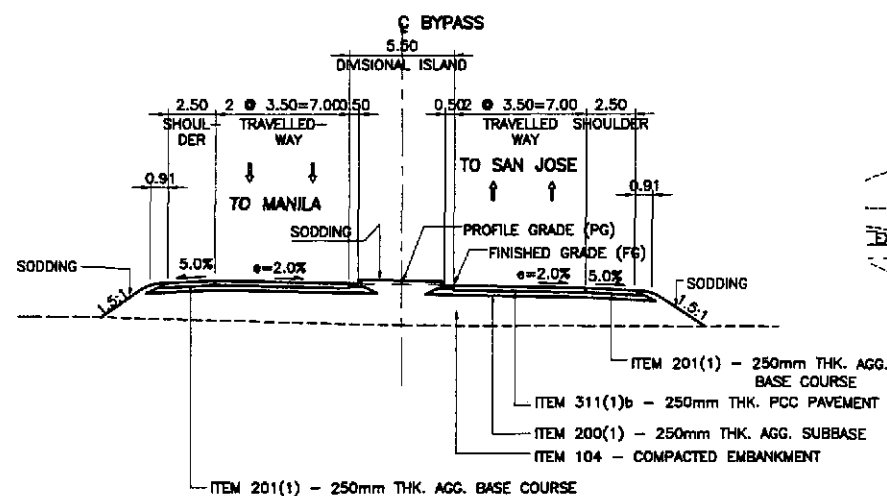
ENCIRCLED FIGURES (I.E., (A), (B-1), ETC.)
INDICATE TRAFFIC SIGNAL POST TYPE



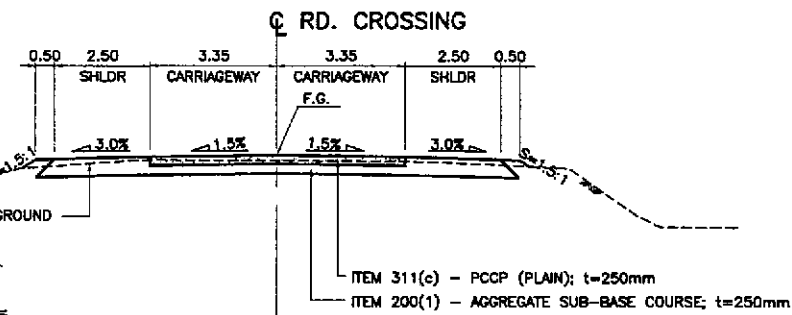
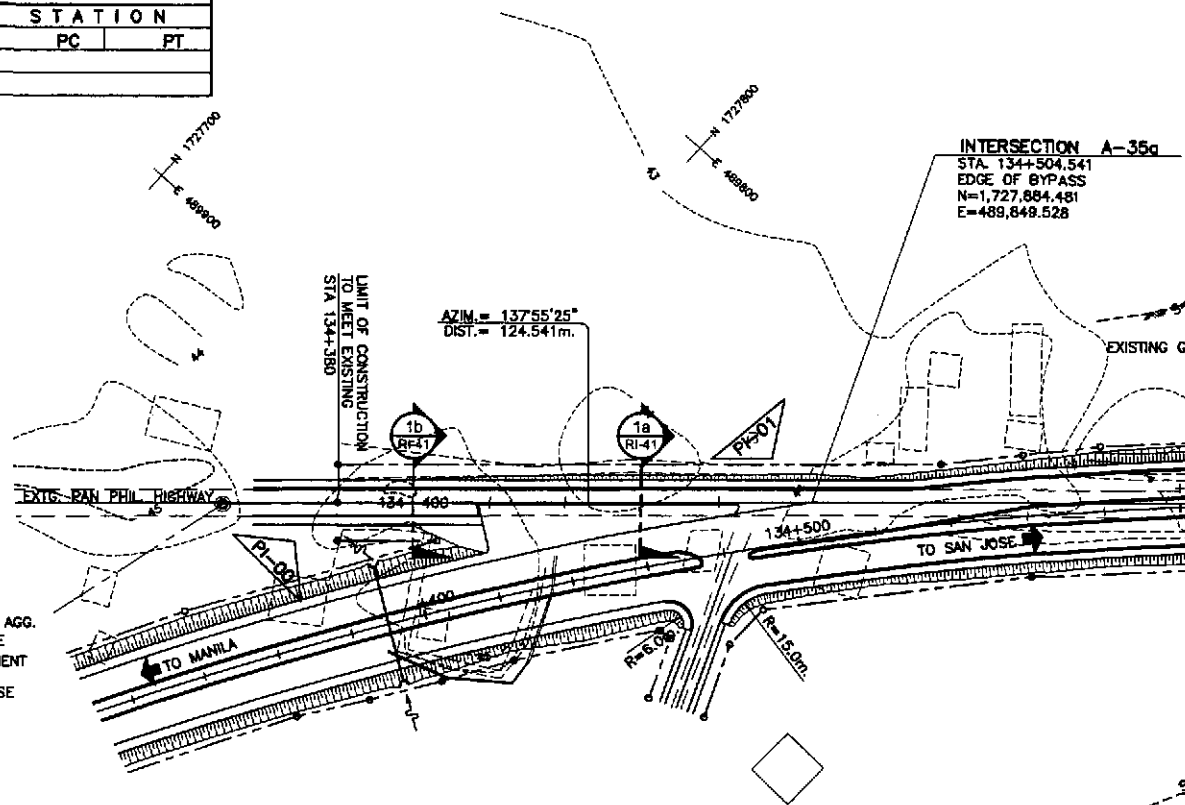
1 INTERSECTION A-35 (STA. 134+231.098) - INITIAL STAGE
RI-40 SCALE 1:250

 JAPAN INTERNATIONAL COOPERATION AGENCY			 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
DESIGNED	10/12/02	Y. L. S.	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) CABANATUAN BYPASS - CONTRACT PACKAGE IV	1:250 FULL SIZE A1	TRAFFIC SIGNAL LIGHT LAYOUT INTERSECTION A-35 (INITIAL STAGE)	RI-40
CHECKED	10/19/02	S. J. S.	Submitted By:	Reviewed By:	Recommended By:	Recommended By:				
SUBMITTED	10/21/02	M. K. S.	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONGAN Undersecretary				

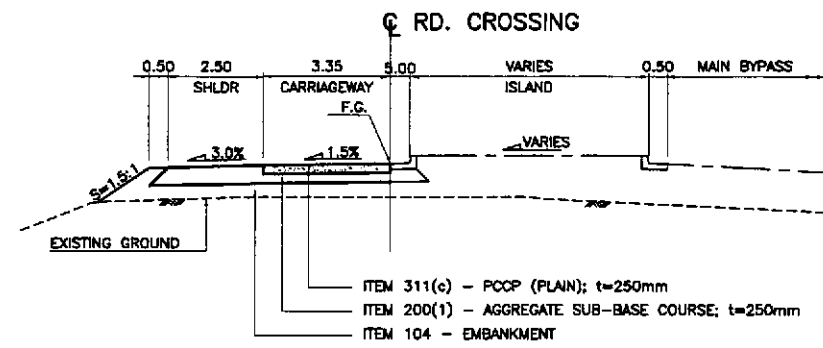
ELEMENTS OF CURVE												
PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION	
		NORTHING	EASTING								PC	PT
PI-00	134+380.000	1,727,792.040	489,932.986	BEGINNING OF INTERSECTION A-35a								
PI-01	134+504.541	1,727,884.481	489,849.528	END OF INTERSECTION A-35a								



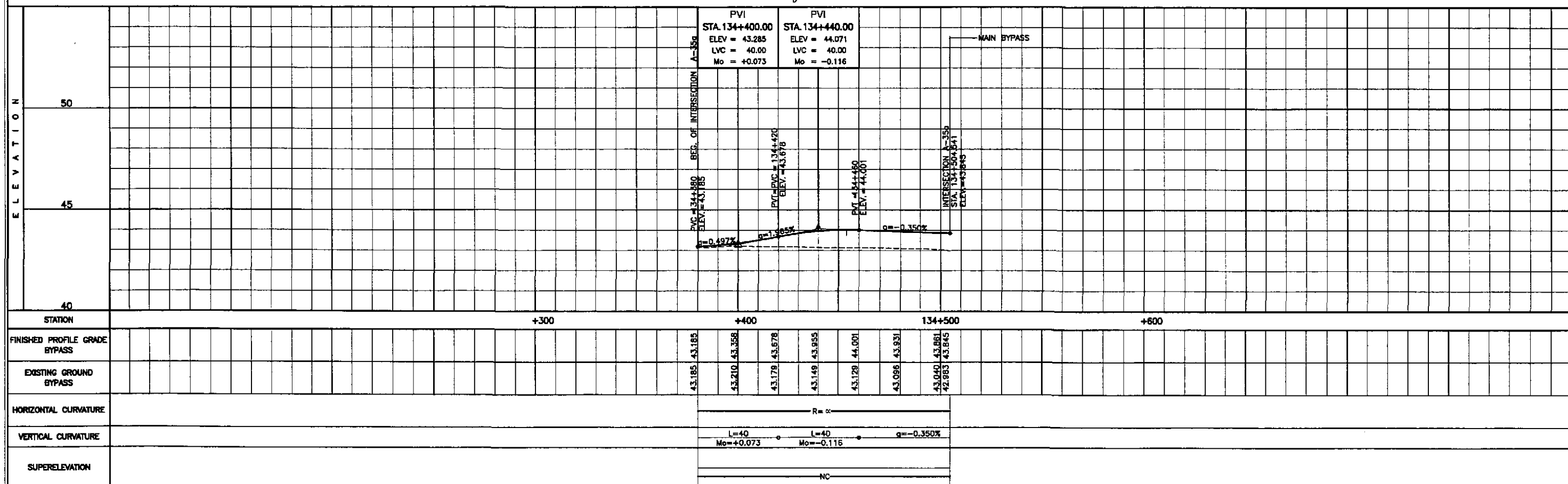
1c SECTION (BYPASS)
 RI-41 SCALE 1:100



1b SECTION
 RI-41 SCALE 1:100

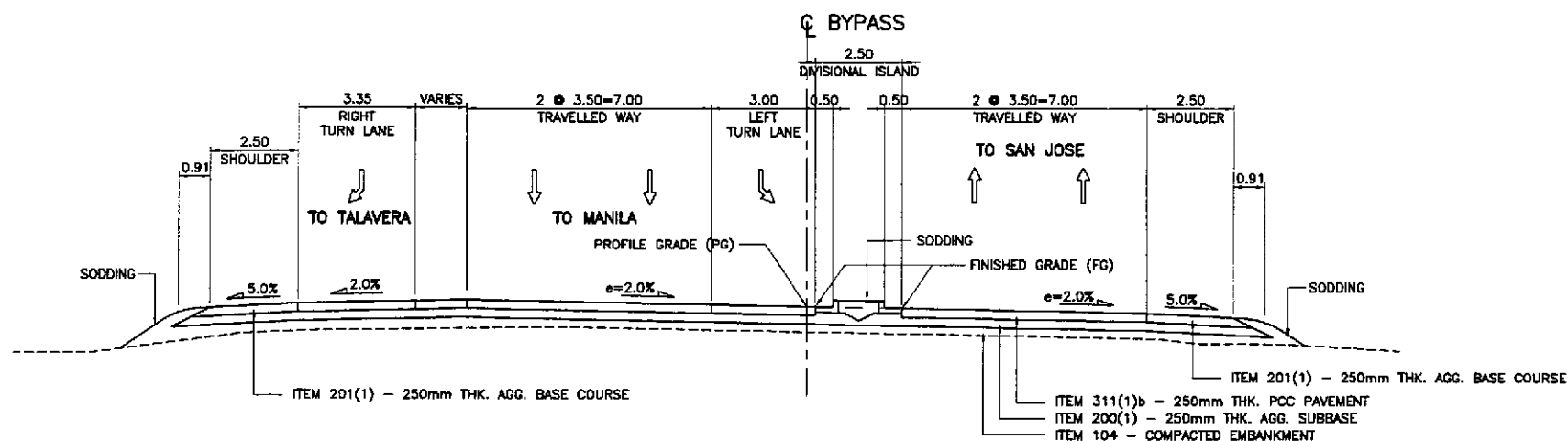


1a SECTION
 RI-41 SCALE 1:100

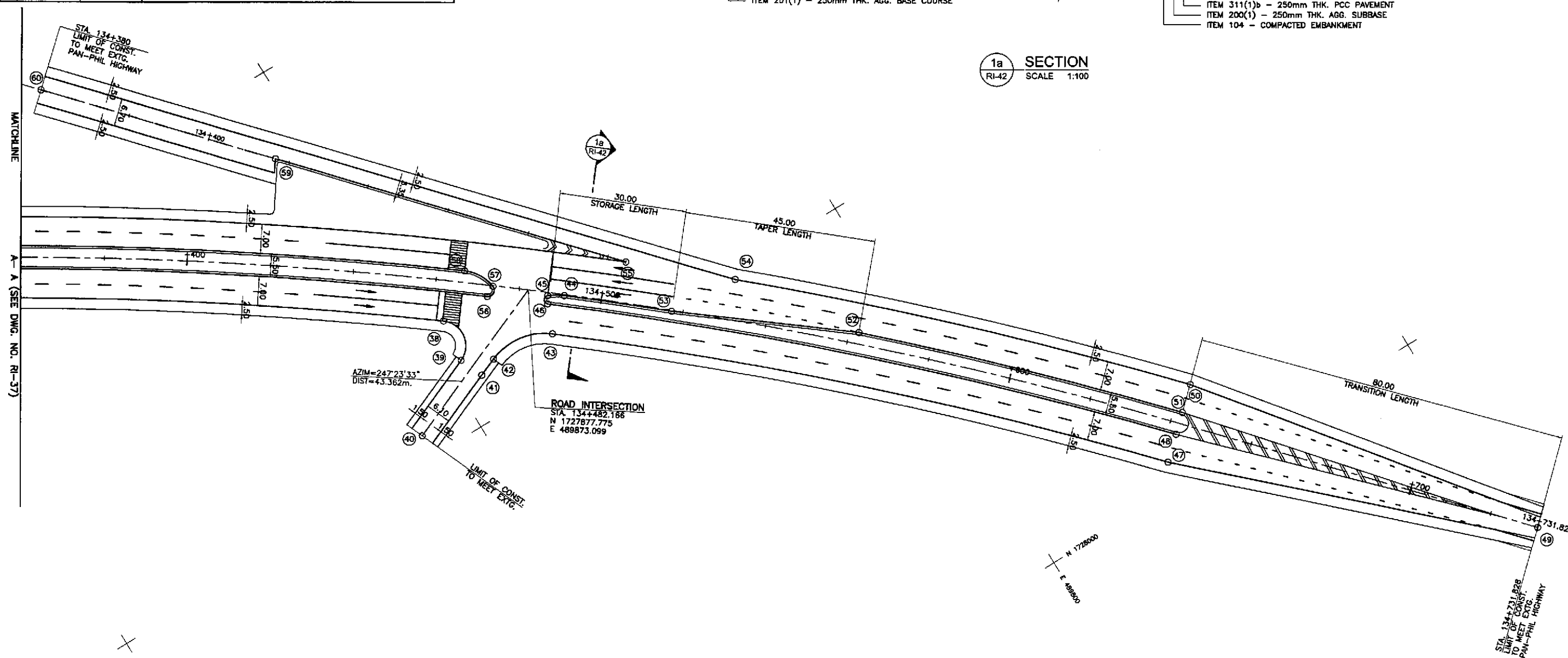


JICA JAPAN INTERNATIONAL COOPERATION AGENCY KATAMURA & ENGINEERS INTERNATIONAL YEO YACHIYO ENGINEERING CO., LTD.		DATE: 10/12/02 DESIGNED: [Signature] CHECKED: 10/19/02 SUBMITTED: 10/21/02	SIGNATURE: [Signature] TEAM LEADER	P.J.H. - PMO Submitted By:	DANILLO C. TRAJANO Project Director	BUREAU OF DESIGN Reviewed By:	JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By:	GILBERTO S. REYES OIC, Director IV	OFFICE OF THE SECRETARY Recommended By:	MANUEL M. BONDAN Undersecretary	Approved By:	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 IV	SCALE : HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1	SHEET CONTENTS : PLAN, CROSS-SECTION AND PROFILE INTERSECTION A-35a STA. 134+380 - STA. 134+504.541	SHEET NO. : RI-41
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TABLE OF COORDINATES			
CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
38	1727873.559	489894.261	BEG. OF ACCESS ROAD RADIUS 6.00
39	1727883.852	489895.611	END OF ACCESS ROAD RADIUS 6.00
40	1727894.455	489913.124	LIMIT OF CONSTRUCTION
41	1727889.483	489893.265	LIMIT OF SIDEWALK
42	1727887.654	489888.877	BEG. OF ACCESS ROAD 15
43	1727889.859	489873.647	END OF ACCESS ROAD 15
44	1727883.541	489866.36	BEG. OF MEDIAN RADIUS 15
45	1727881.434	489869.803	INTERSECTION OF MEDIAN RADIUS 15 & 1.00
46	1727883.127	489870.835	END OF MEDIAN RADIUS 1.00
47	1727993.856	489763.952	LIMIT OF SIDEWALK
48	1727989.158	489758.782	BEG. OF TAPER, PAVEMENT WIDTH 7.00m
49	1728053.796	489696.546	LIMIT OF CONSTRUCTION TO MEET EXISTING
50	1727980.77	489749.495	LIMIT OF SIDEWALK
51	1727985.458	489754.585	END OF TAPER, PAVEMENT WIDTH 7.00m
52	1727928.304	489810.738	BEG. OF TAPER 2.75m FROM THE CENTERLINE
53	1727900.396	489846.232	END OF TAPER 0.25m FROM THE CENTERLINE
54	1727901.919	489829.272	EDGE OF DIVERGING LANE
55	1727884.481	489849.528	BEG. OF DIVERGING LANE
56	1727874.035	489882.242	BEG. OF MEDIAN RADIUS 1.50
57	1727872.674	489879.826	INTERSECTION OF MEDIAN RADIUS 1.50 & 10
58	1727865.979	489883.625	END OF MEDIAN RADIUS 10
59	1727819.200	489908.466	END OF ONE LANE PAVEMENT
60	1727775.625	489947.806	LIMIT OF CONSTRUCTION TO MEET EXISTING

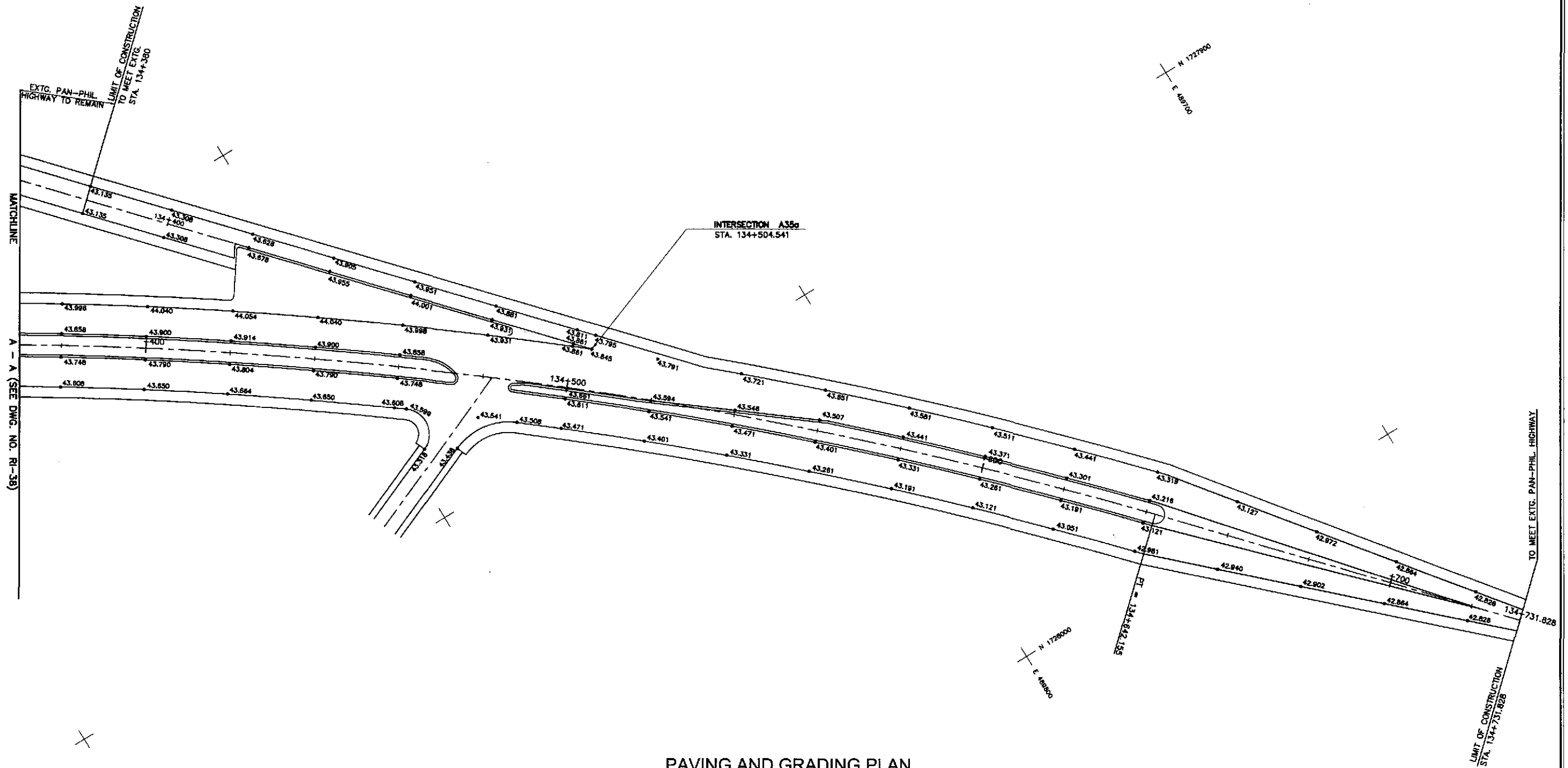


1a SECTION
RI-42 SCALE 1:100



1 GEOMETRIC DESIGN LAYOUT
RI-42 SCALE 1:500
INTERSECTION A-35a (STA. 134+504.541) - INITIAL STAGE

 JAPAN INTERNATIONAL COOPERATION AGENCY		 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 : 1:500 FULL SIZE A1	SHEET CONTENTS : INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-35a (INITIAL STAGE)	SHEET NO. : RI-42
DESIGNED 10/12/02 CHECKED 10/19/02 SUBMITTED 10/23/02	SIGNATURE GRONCE JOSE TEAM LEADER	Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES OIC, Director IV	Recommended By: MANUEL M. BONGAN Undersecretary	Approved By: SIMEDON A. DATUMANONG Secretary	CABANATUAN BYPASS - CONTRACT PACKAGE IV	

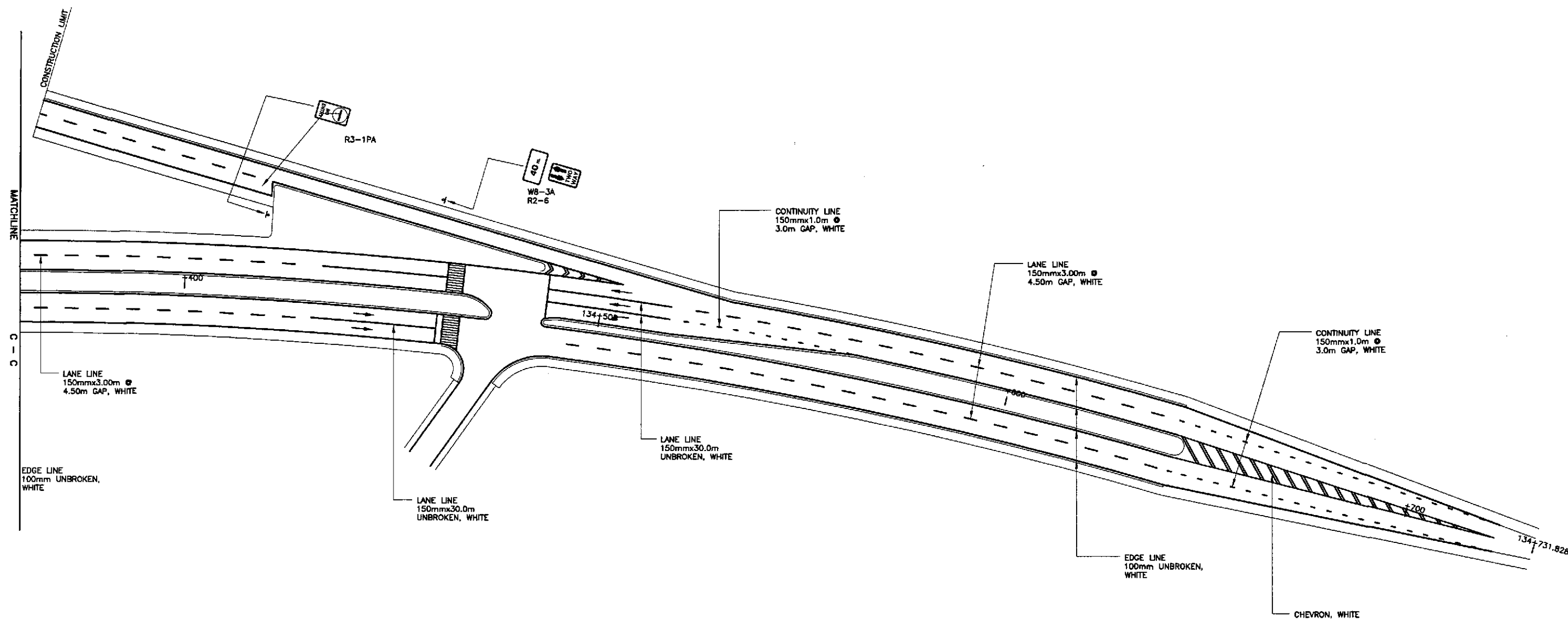
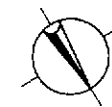


1
RI-43

PAVING AND GRADING PLAN
INTERSECTION A-35a (STA. 134+504.541) - INITIAL STAGE

1:500

JICA JAPAN INTERNATIONAL COOPERATION AGENCY		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 : 1:500 FULL SIZE A1	SHEET CONTENTS : INTERSECTION DETAIL PAVING AND GRADING PLAN INTERSECTION A-35a (INITIAL STAGE)	SHEET NO. : RI-43
DESIGNED	10/12/02	Submitted By:	P.H.E. - P.W.D.	Reviewed By:	BUREAU OF DESIGN	Recommended By:	OFFICE OF THE SECRETARY	
CHECKED	10/17/02							
SUBMITTED	10/31/02							
		DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONGAN Undersecretary	SIMEON A. DATUMANONG Secretary	CABANATUAN BYPASS - CONTRACT PACKAGE IV	



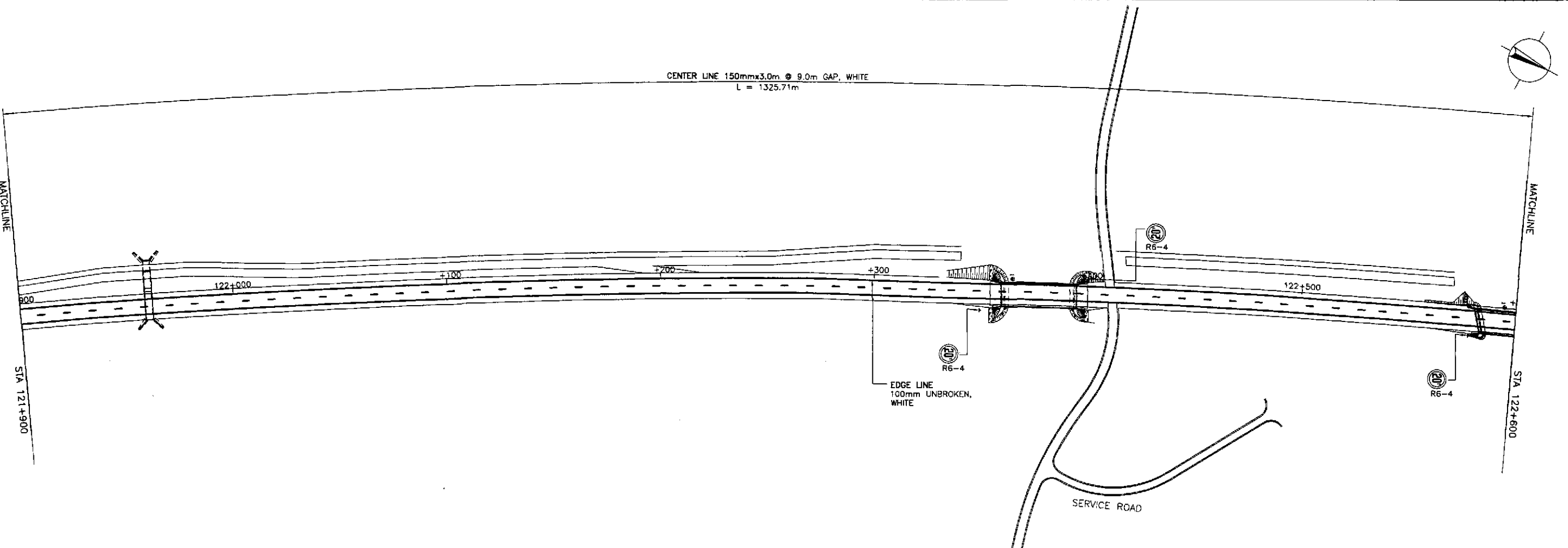
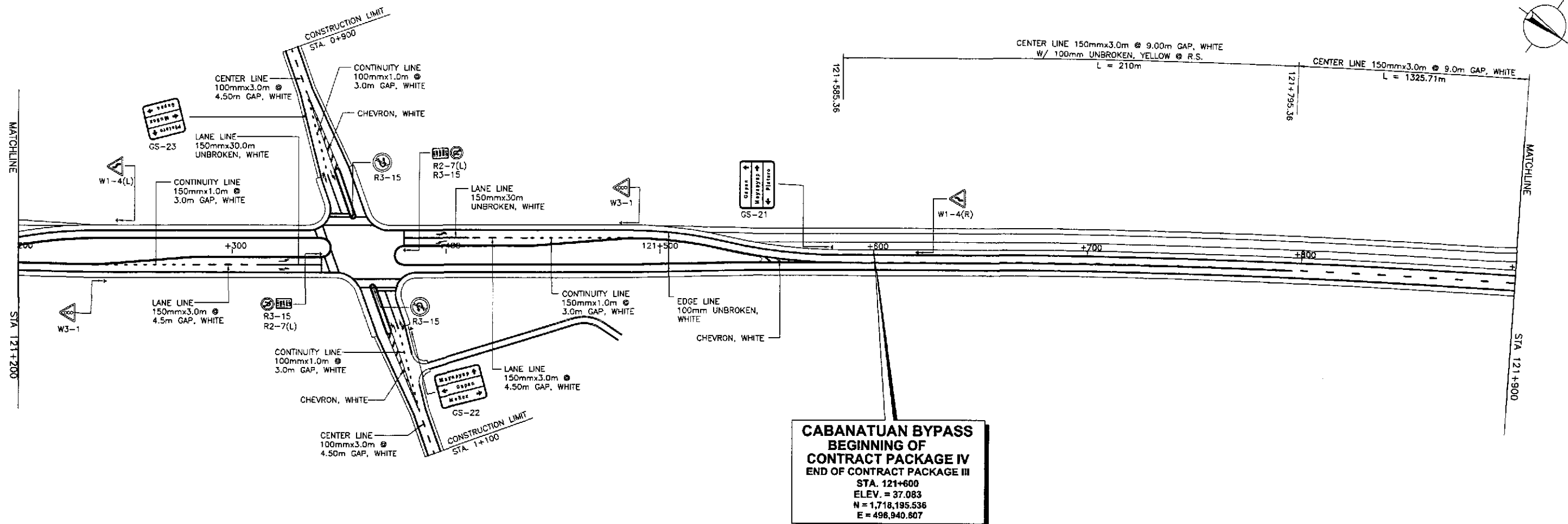
TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT
INTERSECTION A-35a (STA. 134+504.541) - INITIAL STAGE

1
RI-44

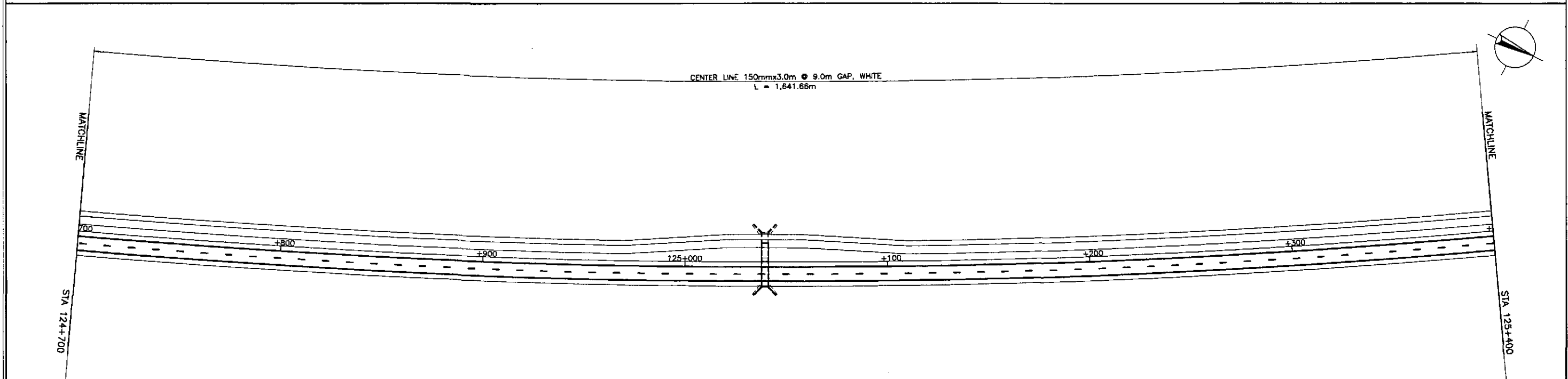
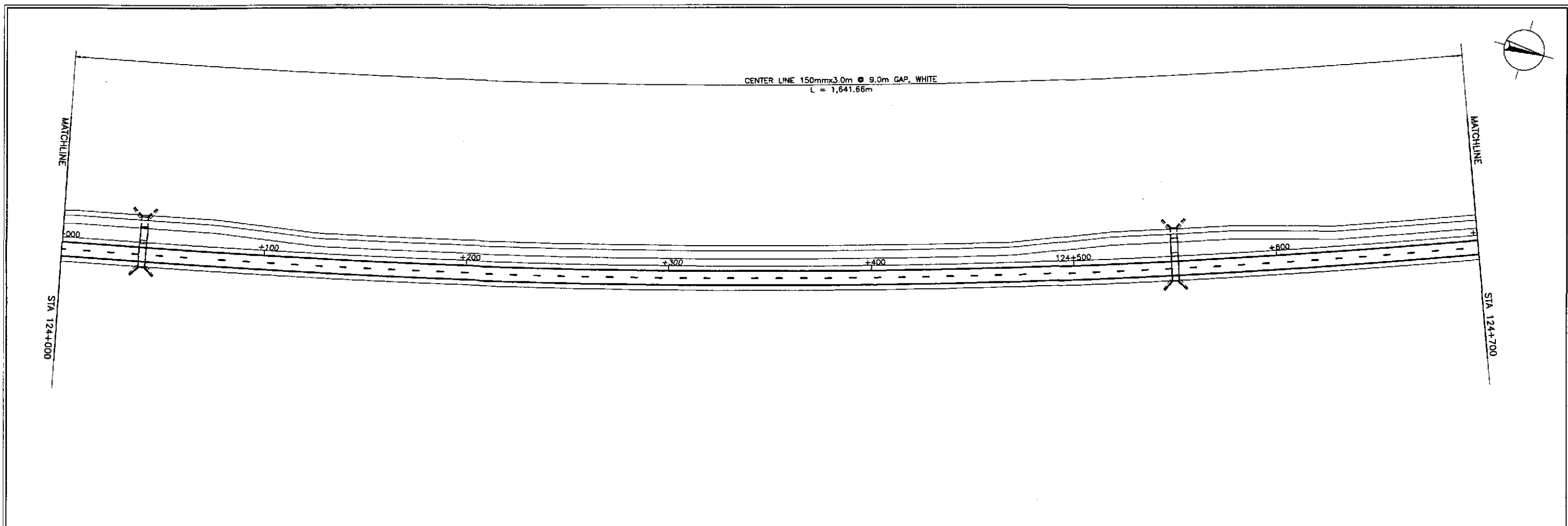
SCALE

1:500

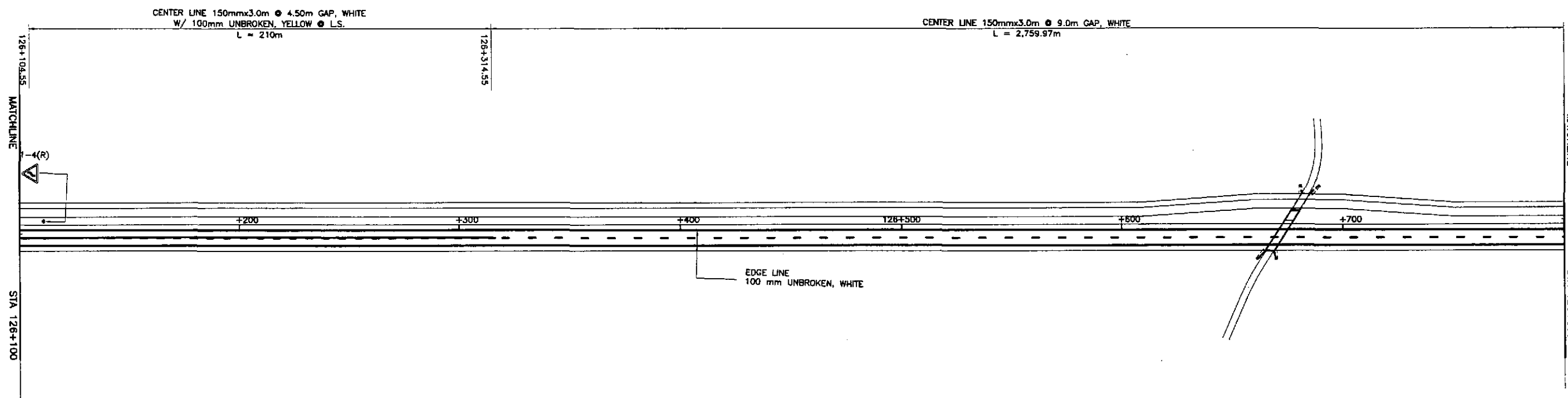
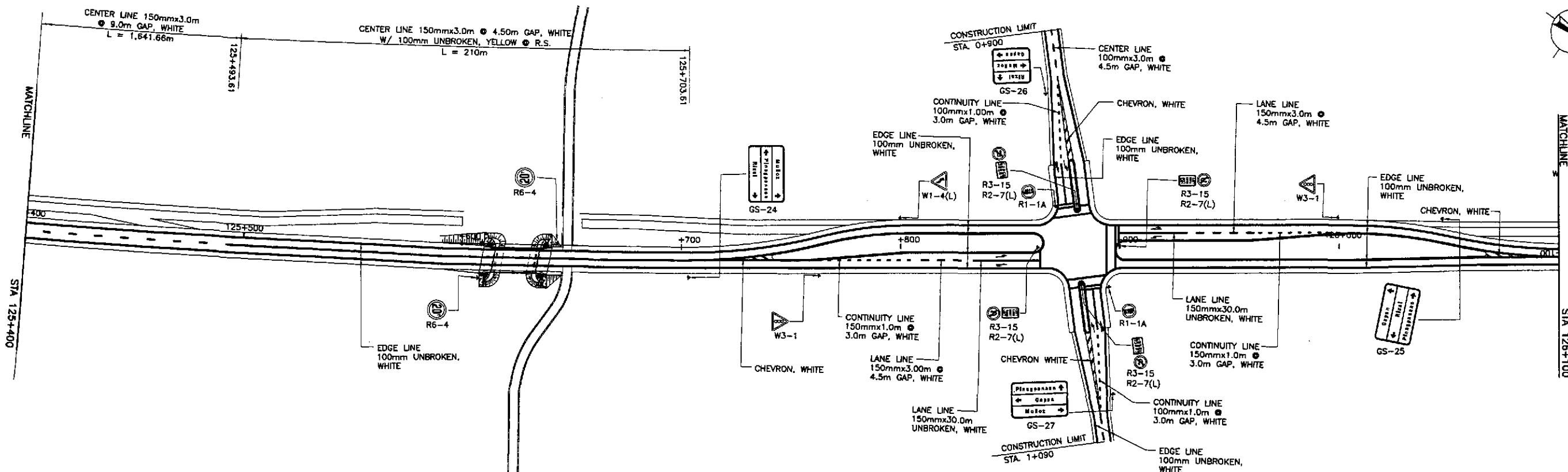
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		DESIGNED 10/12/02 S. LUNA	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	SCALE : 1:500	SHEET CONTENTS : TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT INTERSECTION A-35a (INITIAL STAGE)	SHEET NO. : RI-44
KATAHIRA & ENGINEERS INTERNATIONAL		CHECKED 10/19/02 M. RICHARD	BUREAU OF DESIGN				CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1		
YEO YACHIYO ENGINEERING CO., LTD.		SUBMITTED 10/21/02 M. RICHARD	Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALADAR Chief, Highway Division	Recommended By: GILBERTO S. REYES OC, Director IV	Recommended By: MANUEL M. BONOAN Undersecretary				
			OFFICE OF THE SECRETARY							
			Approved By: SIMEON A. DATUMANONG Secretary							



JICA JAPAN INTERNATIONAL COOPERATION AGENCY K KATAHIRA & ENGINEERS INTERNATIONAL yeo YACHIYO ENGINEERING CO., LTD.		DATE: 10/12/02 DESIGNED: S. LUNA CHECKED: S. ROSE SUBMITTED: 10/21/02 TEAM LEADER	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO Project Director Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division Recommended By: GILBERTO S. REYES OIC, Director IV Office of the Secretary Recommended By: MANUEL M. BONGAN Undersecretary Approved By: SIMEON A. DATUMANONG Secretary	PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT (INITIAL STAGE) STA. 121+600 - STA. 122+600	SHEET NO. : RM-01
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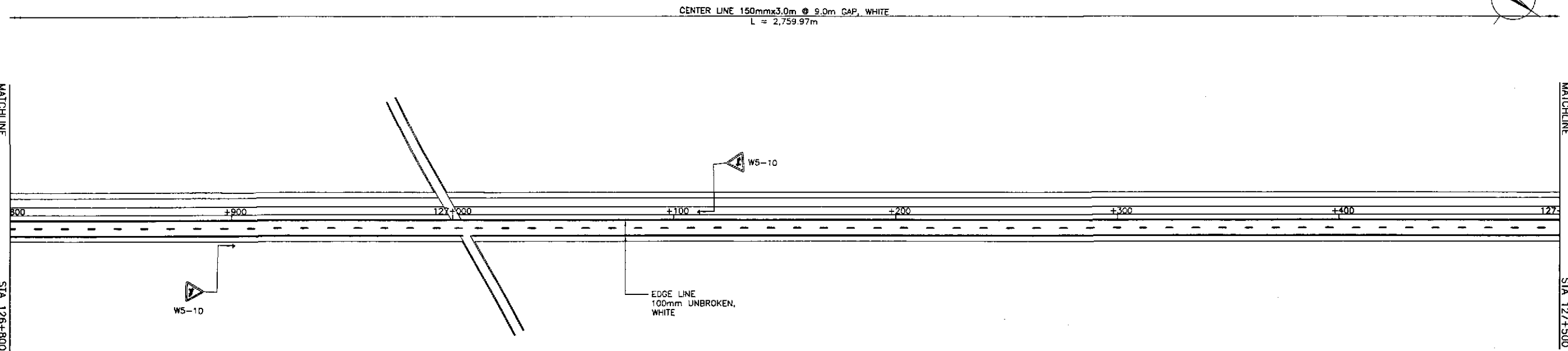


 JAPAN INTERNATIONAL COOPERATION AGENCY		 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS		PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilaridel, Cabanatuan and San Jose Bypasses)		SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT (INITIAL STAGE) STA. 124+000 - STA. 125+400	SHEET NO. : RM-03
DESIGNED	10/12/02	SIGNATURE	P.J.H. - P.M.O.	BUREAU OF DESIGN		OFFICE OF THE SECRETARY		
CHECKED	10/27/02	SIGNATURE	Submitted By:	Reviewed By:	Recommended By:	Recommended By:	Approved By:	
SUBMITTED	10/21/02	SIGNATURE	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary	



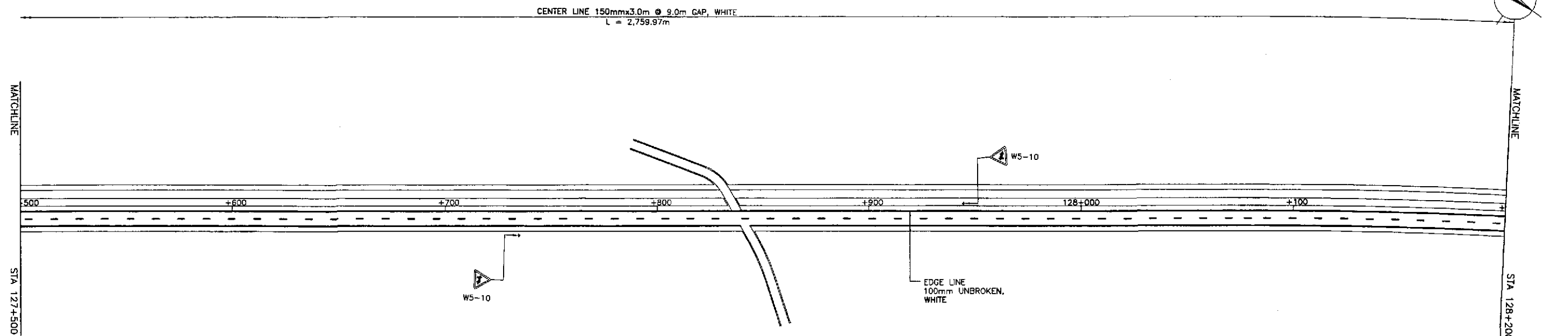
 JAPAN INTERNATIONAL COOPERATION AGENCY		DATE		SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV		SCALE : 1:1000 FULL SIZE A1		SHEET CONTENTS : TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT (INITIAL STAGE) STA. 125+400 - STA. 126+800		SHEET NO. : RM-04			
		DESIGNED		10/12/02														[Signature]	
		CHECKED		10/19/02														[Signature]	
		SUBMITTED		10/21/02														[Signature]	
KATAHIRA & ENGINEERS INTERNATIONAL		YEO YACHIYO ENGINEERING CO., LTD.		DANLO C. TRAJANO Project Director		JOSEFINA M. ALAGAR Chief, Highways Division		GILBERTO S. REYES OIC, Director IV		MANUEL M. BONDAN Undersecretary		SIMEON A. DATUMANONG Secretary							

MATCHLINE
STA 126+800



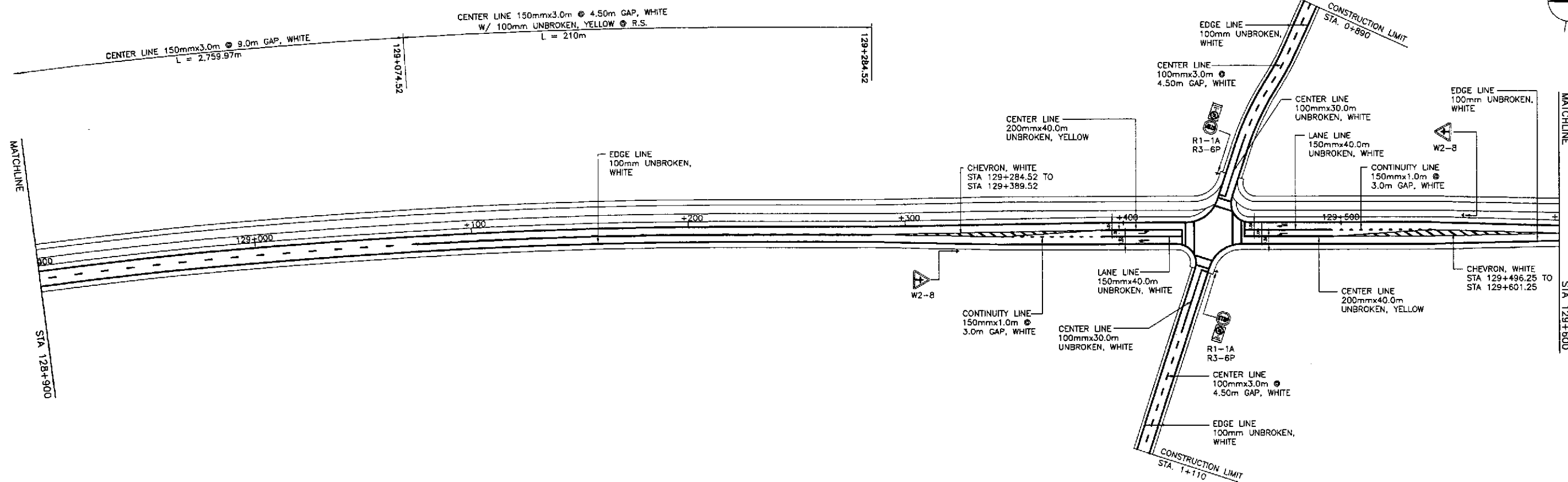
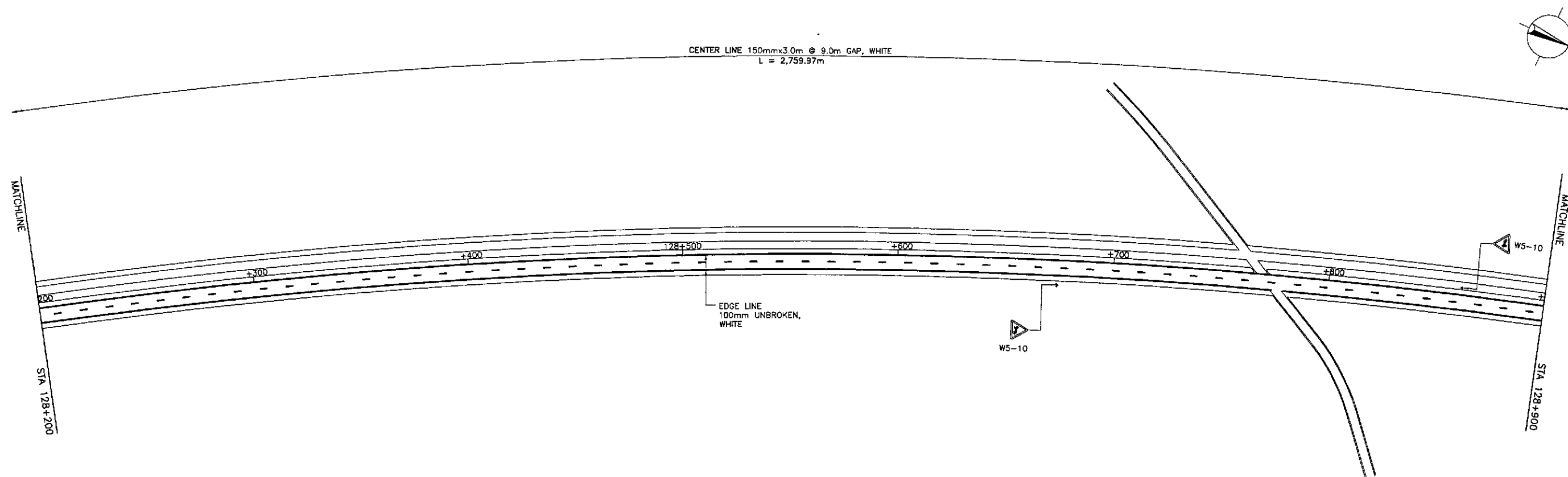
MATCHLINE
STA 127+500














MATCHLINE
STA 127+500

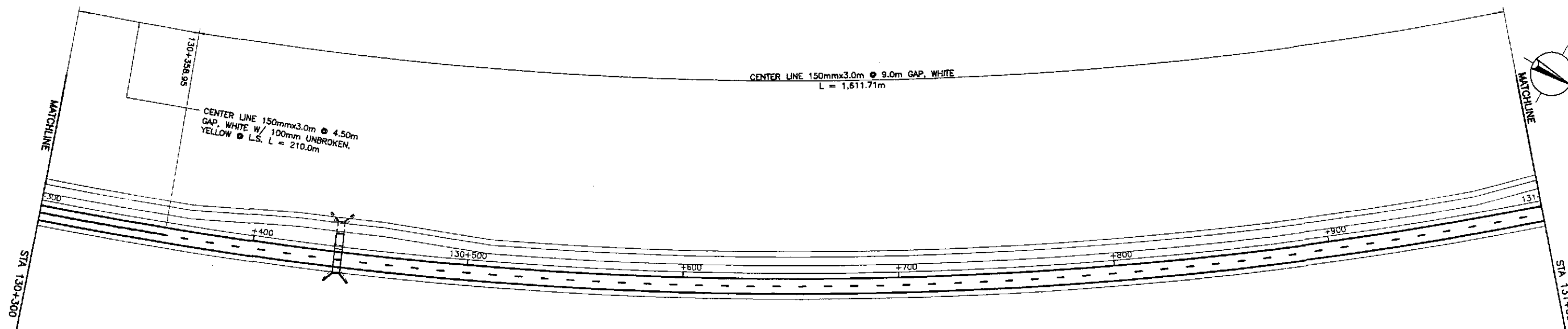
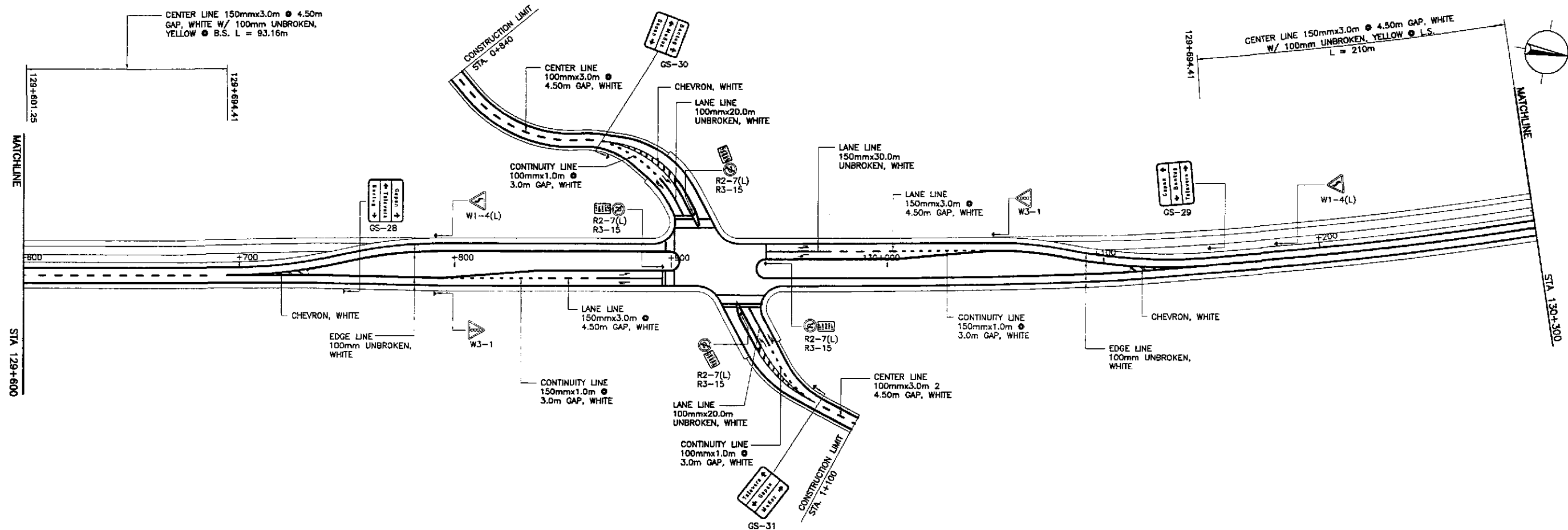


MATCHLINE
STA 128+200

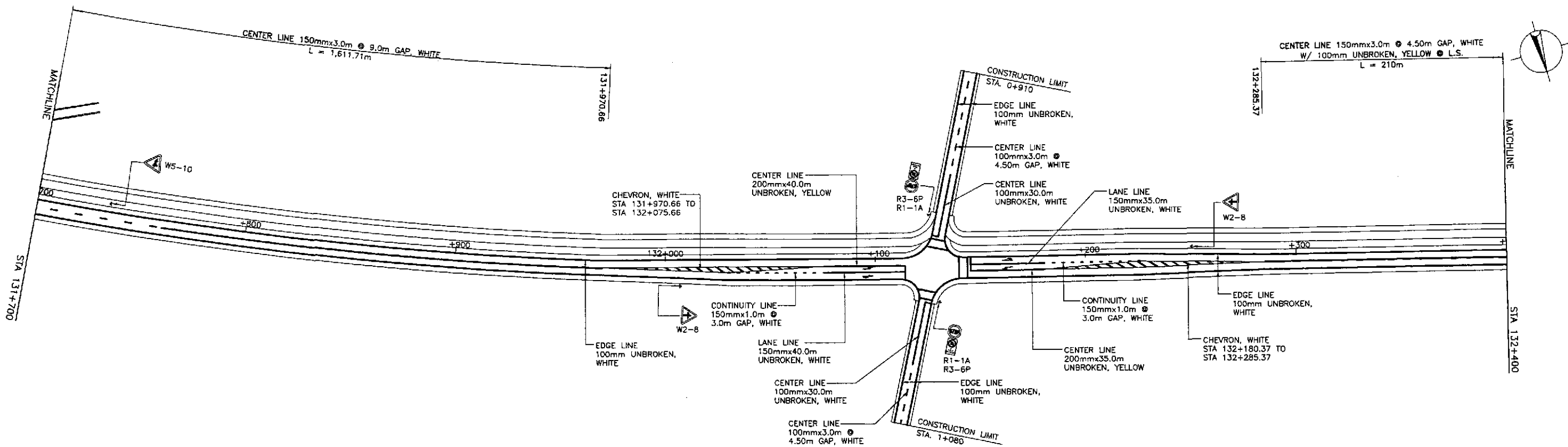
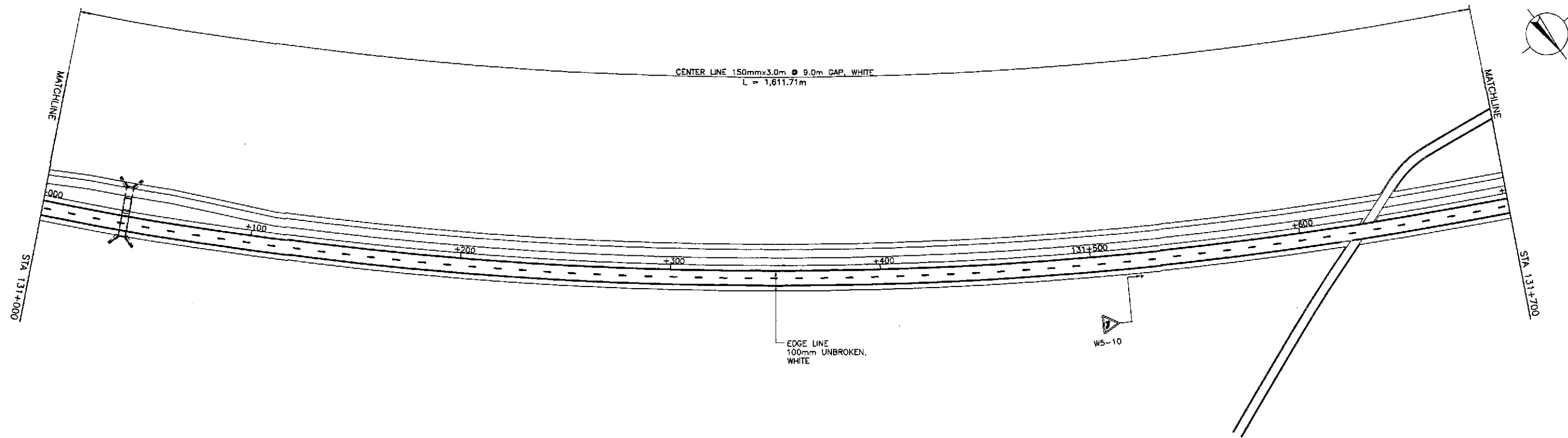
 JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS YEO YACHIYO ENGINEERING CO., LTD.	DESIGNED	10/12/02	S. LUNA	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO, Project Director Reviewed By: JOSEFINA M. ALAGAR, Chief, Highways Division Recommended By: GILBERTO S. REYES, OIC, Director IV Recommended By: MANUEL M. BOYUAN, Undersecretary Approved By: SIMEON A. DATUMANONG, Secretary	PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	JOSE		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	1:1000	TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT (INITIAL STAGE) STA. 126+800 - STA. 128+200	RM-05
	SUBMITTED	10/21/02	M. K. K.		CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1		



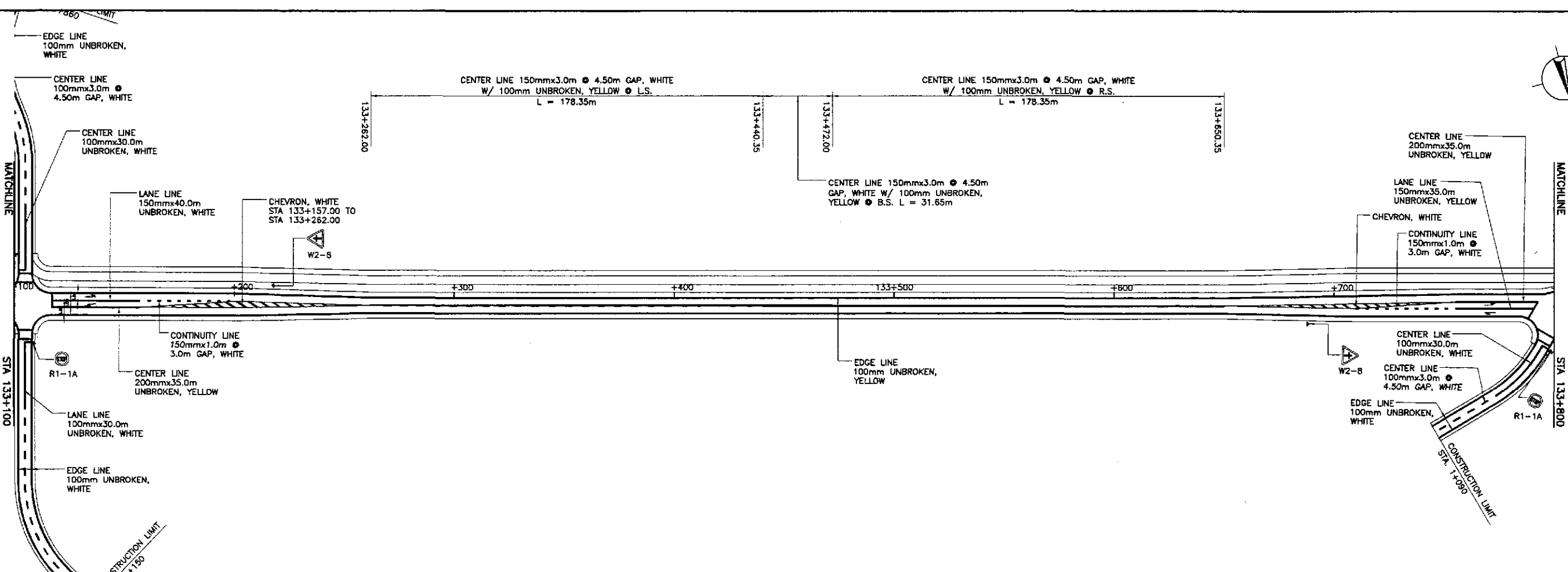
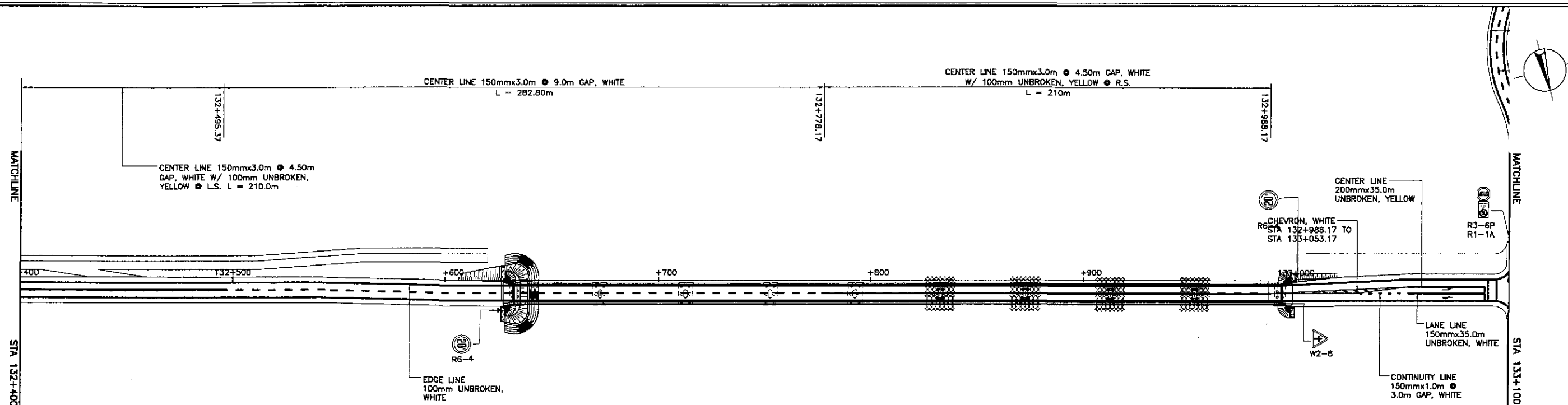
<div> JAPAN INTERNATIONAL COOPERATION AGENCY</div> <div> KATAHIRA & ENGINEERS INTERNATIONAL</div> <div> YACHIYO ENGINEERING CO., LTD.</div>			<table><tr><td>DATE</td><td>SIGNATURE</td></tr><tr><td>DESIGNED</td><td>10/21/07 </td></tr><tr><td>CHECKED</td><td>10/19/07 </td></tr><tr><td>SUBMITTED</td><td>10/21/07 </td></tr></table>		DATE	SIGNATURE	DESIGNED	10/21/07 	CHECKED	10/19/07 	SUBMITTED	10/21/07 	<div> REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</div> <div><table><tr><td colspan="2">BUREAU OF DESIGN</td><td colspan="2">OFFICE OF THE SECRETARY</td></tr><tr><td>Submitted By:</td><td>Reviewed By:</td><td>Recommended By:</td><td>Recommended By:</td></tr><tr><td>DANILLO C. TRAJANO Project Director</td><td>JOSEFINA M. ALACAR Chief, Highways Division</td><td>GILBERTO S. REYES OIC, Director IV</td><td>MANUEL M. BONGAON Undersecretary</td></tr></table></div>				BUREAU OF DESIGN		OFFICE OF THE SECRETARY		Submitted By:	Reviewed By:	Recommended By:	Recommended By:	DANILLO C. TRAJANO Project Director	JOSEFINA M. ALACAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONGAON Undersecretary	<div>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 IV</div>		<div>SCALE : 1:1000 FULL SIZE A1</div>	<div>SHEET CONTENTS : TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT (INITIAL STAGE) STA. 128+200 - STA. 129+600</div>	<div>SHEET NO. : RM-06</div>
DATE	SIGNATURE																																
DESIGNED	10/21/07 																																
CHECKED	10/19/07 																																
SUBMITTED	10/21/07 																																
BUREAU OF DESIGN		OFFICE OF THE SECRETARY																															
Submitted By:	Reviewed By:	Recommended By:	Recommended By:																														
DANILLO C. TRAJANO Project Director	JOSEFINA M. ALACAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONGAON Undersecretary																														



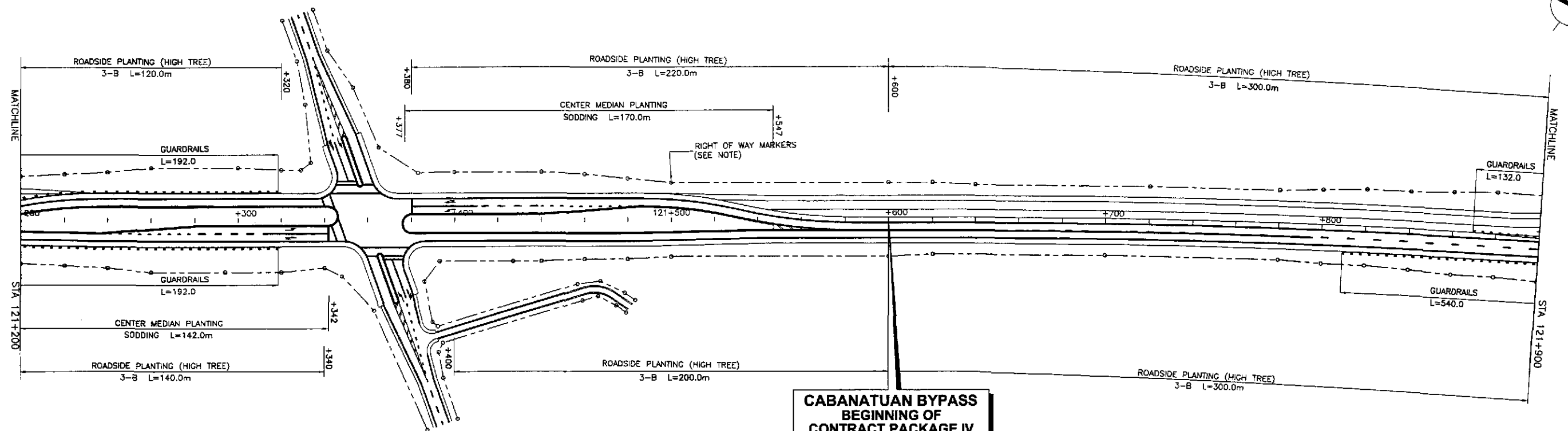
 JAPAN INTERNATIONAL COOPERATION AGENCY		DATE: 10/12/02 DESIGNED: S. LUNA CHECKED: S. GUSE SUBMITTED: 10/21/02 TEAM LEADER	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PUHL - PMO Submitted By: DANILO C. TRAJANO Project Director	BUREAU OF DESIGN Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	OFFICE OF THE SECRETARY Recommended By: GILBERTO S. REYES OK, Director IV	Recommended By: MANUEL M. BONGAN Undersecretary	Approved By: 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)	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT (INITIAL STAGE) STA. 129+600 - STA. 131+000	SHEET NO. : RM-07
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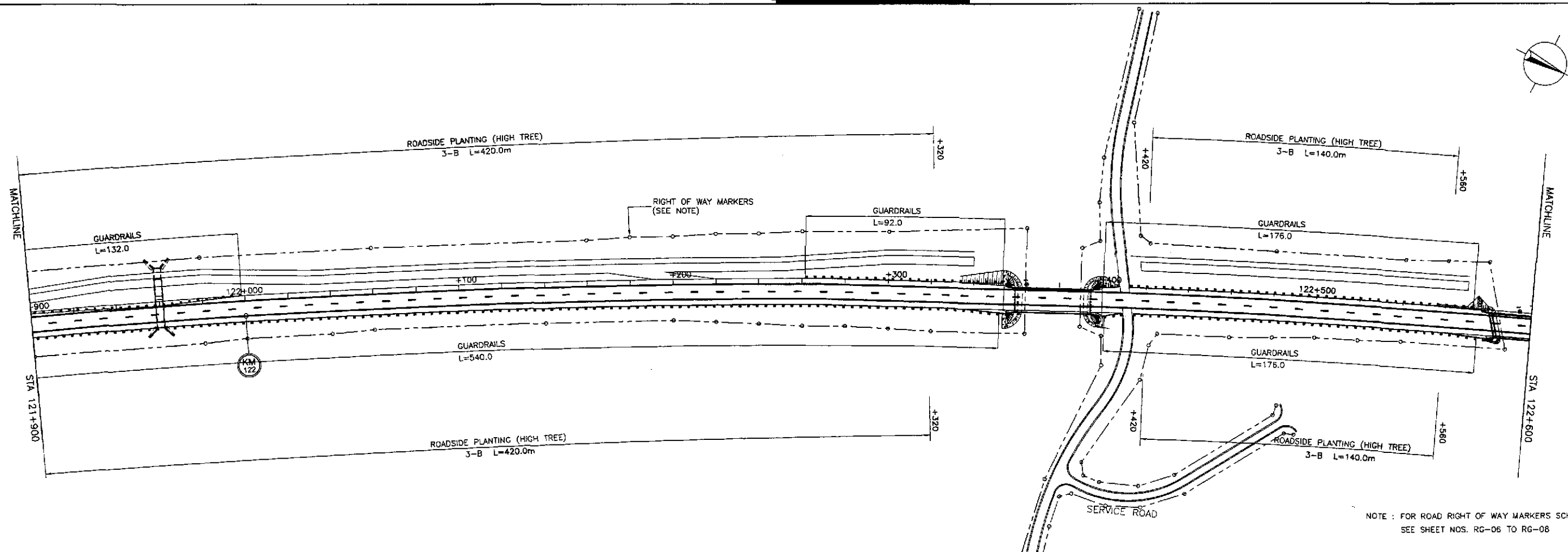
 JAPAN INTERNATIONAL COOPERATION AGENCY		DATE	SIGNATURE	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
DESIGNED	10/12/02	S. LUNA		Submitted By:	Reviewed By:	Recommended By:	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	1:1000	TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT (INITIAL STAGE) STA. 131+000 - STA. 132+400	RM-08
CHECKED	10/19/02	S. LUNA		DANILLO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1		
SUBMITTED	10/21/02	M. RIVERA TEAM LEADER								



JICA JAPAN INTERNATIONAL COOPERATION AGENCY K KATAHIRA & ENGINEERS INTERNATIONAL yeo YACHIYO ENGINEERING CO., LTD.		DATE DESIGNED 10/12/02 CHECKED 10/19/02 SUBMITTED 10/21/02	SIGNATURE S. LUNA S. GOMEZ TEAM LEADER	P.W. - PMO Submitted By: DANILLO C. TRAJANO Project Director	BUREAU OF DESIGN Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	OFFICE OF THE SECRETARY Recommended By: GILBERTO S. REYES OIC, Director IV Approved By: MANUEL M. BONGAN 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 IV	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT (INITIAL STAGE) STA. 132+400 - STA. 133+800	SHEET NO. : RM-09
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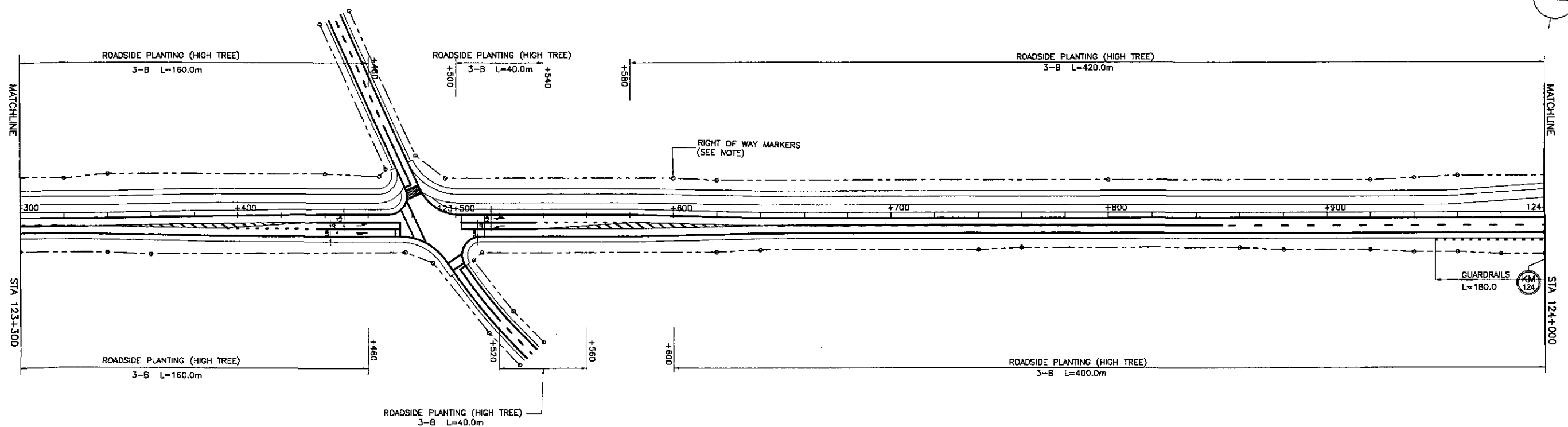
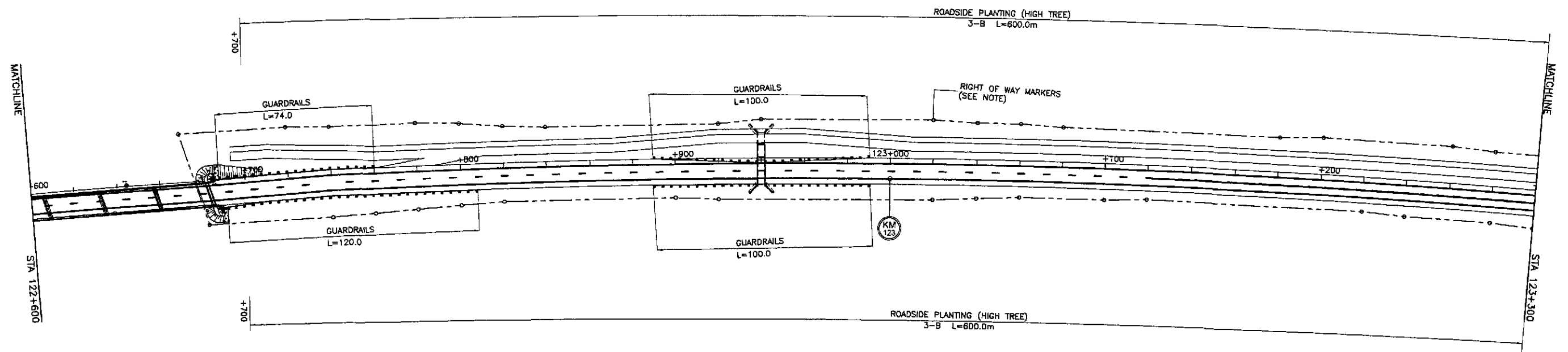


**CABANATUAN BYPASS
BEGINNING OF
CONTRACT PACKAGE IV
END OF CONTRACT PACKAGE III**
STA. 121+600
ELEV. = 37.083
N = 1,718,195.536
E = 496,940.607



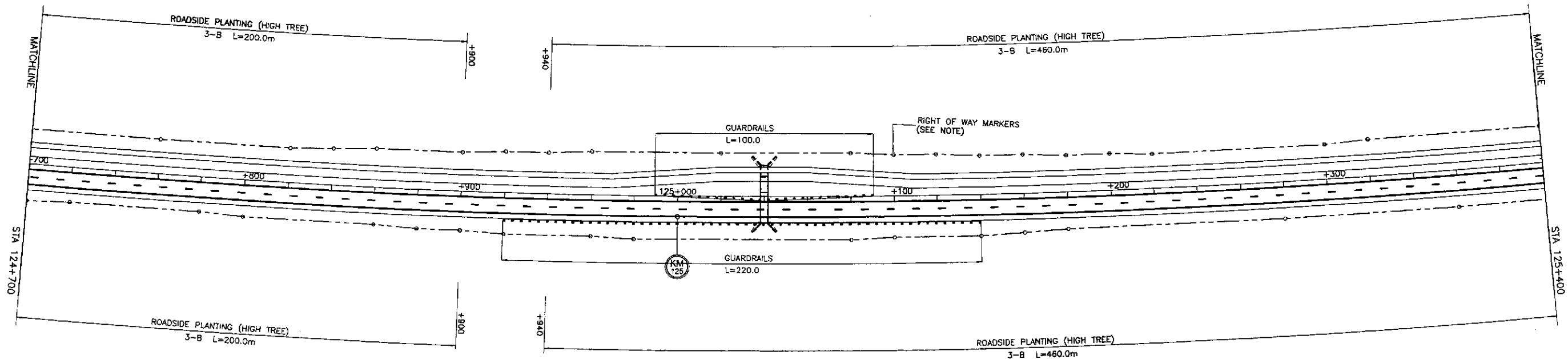
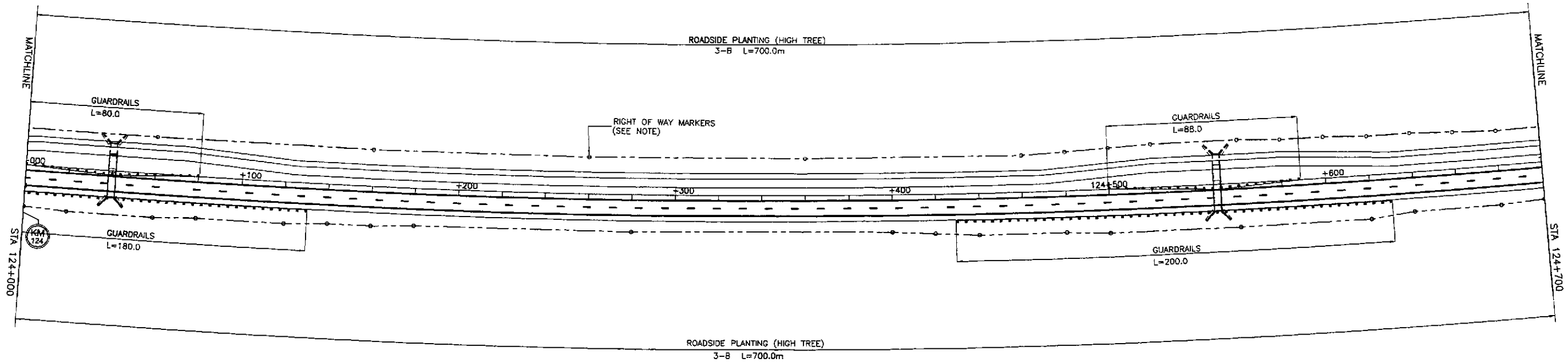
NOTE : FOR ROAD RIGHT OF WAY MARKERS SCHEDULE
SEE SHEET NOS. RG-06 TO RG-08

 JAPAN INTERNATIONAL COOPERATION AGENCY		 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 : 1:1000 FULL SIZE A1	SHEET CONTENTS : PLANTINGS, GUARDRAILS RIGHT-OF-WAY & KM. POSTS LAYOUT (INITIAL STAGE) STA. 121+600 - STA. 122+600	SHEET NO. : RM-11					
DESIGNED	10/12/02	SIGNATURE		Submitted By:	DANILO C. TRAJANO Project Director	Revised By:	JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By:	GILBERTO S. REYES OIC, Director IV	Recommended By:	MANUEL M. BONDAN Undersecretary	Approved By:	SIMEON A. DATUMANONG Secretary
CHECKED	10/19/02	SIGNATURE		Submitted By:	DANILO C. TRAJANO Project Director	Revised By:	JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By:	GILBERTO S. REYES OIC, Director IV	Recommended By:	MANUEL M. BONDAN Undersecretary	Approved By:	SIMEON A. DATUMANONG Secretary
SUBMITTED	10/21/02	SIGNATURE		Submitted By:	DANILO C. TRAJANO Project Director	Revised By:	JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By:	GILBERTO S. REYES OIC, Director IV	Recommended By:	MANUEL M. BONDAN Undersecretary	Approved By:	SIMEON A. DATUMANONG Secretary



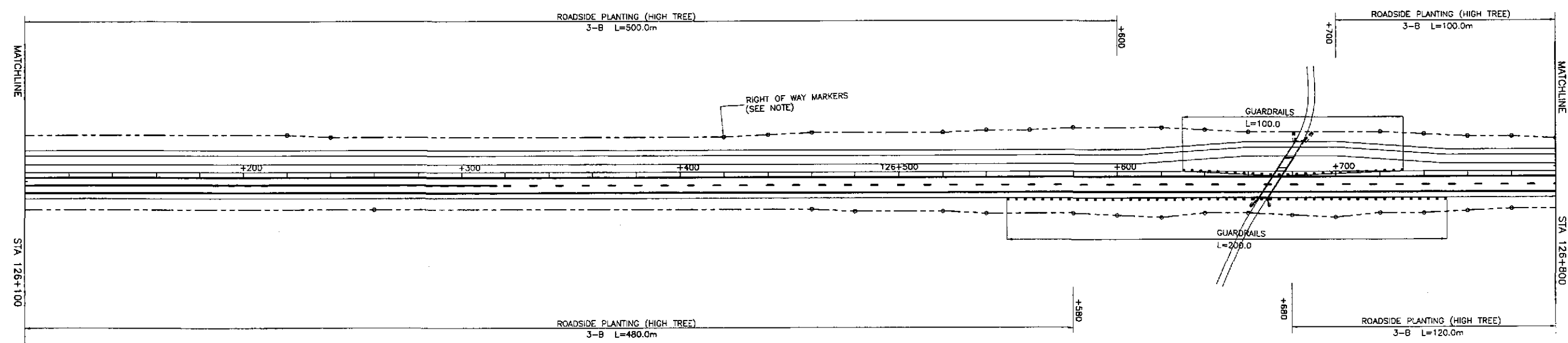
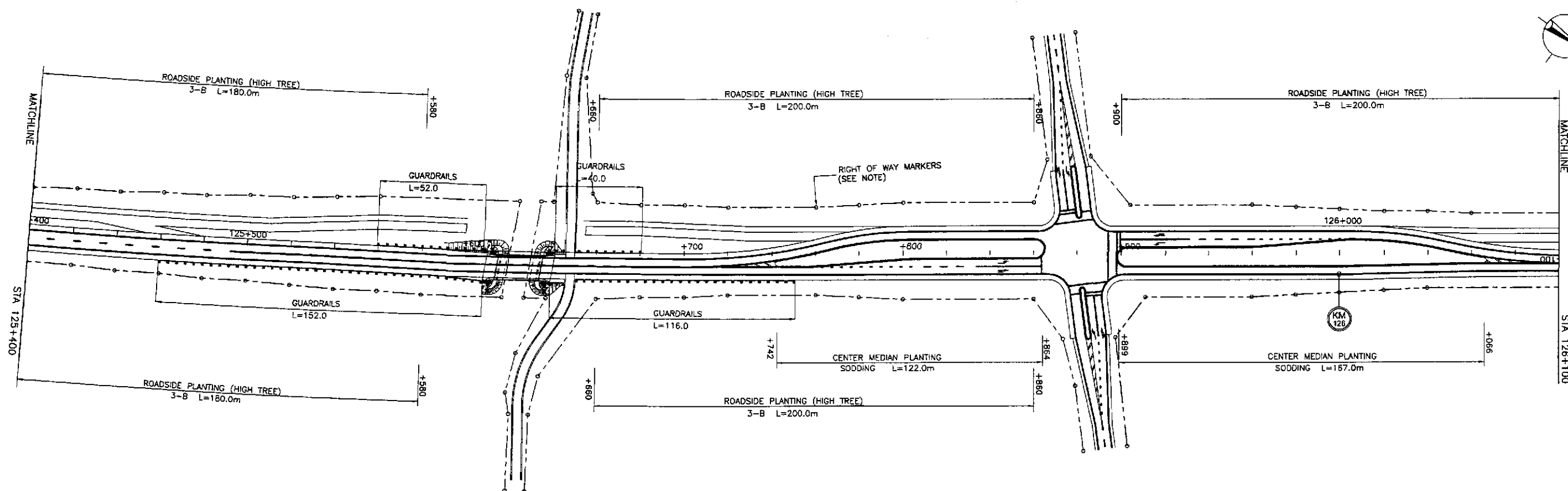
NOTE : FOR ROAD RIGHT OF WAY MARKERS SCHEDULE
SEE SHEET NOS. RG-06 TO RG-08

 JAPAN INTERNATIONAL COOPERATION AGENCY		 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) CABANATUAN BYPASS - CONTRACT PACKAGE IV		SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : PLANTINGS, GUARDRAILS, RIGHT-OF-WAY & KM. POSTS LAYOUT (INITIAL STAGE) STA. 122+600 - STA. 124+000	SHEET NO. : RM-12
DESIGNED	DATE 10/12/02	SIGNATURE	S. LUNA	Submitted By:	Reviewed By:	Recommended By:	Approved By:	
CHECKED	10/19/02	S. CASE		DANILO C. TRAJANO	JOSEFINA M. ALAGAR	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANONG
SUBMITTED	10/21/02	TEAM LEADER		Project Director	Chief, Highways Division	Dir., Director IV	Undersecretary	Secretary



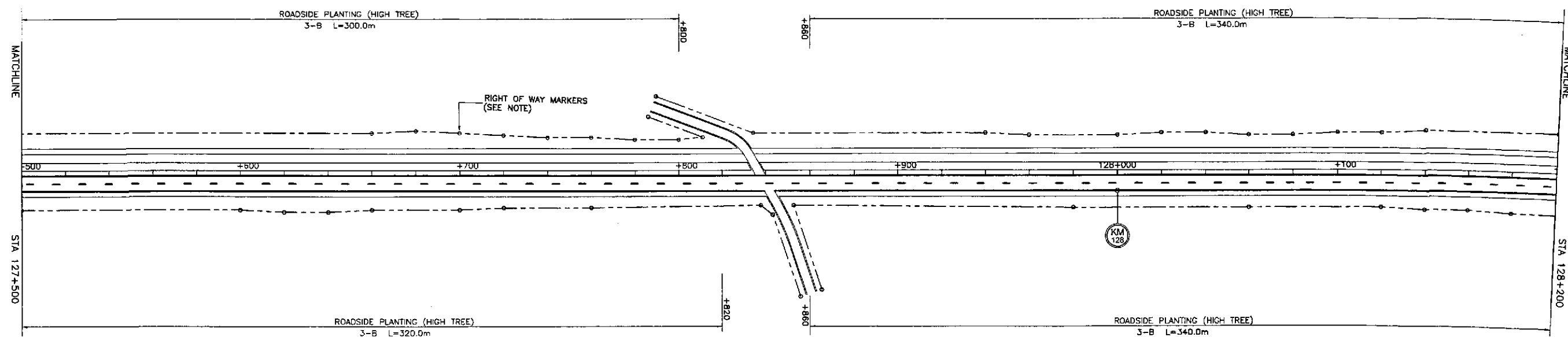
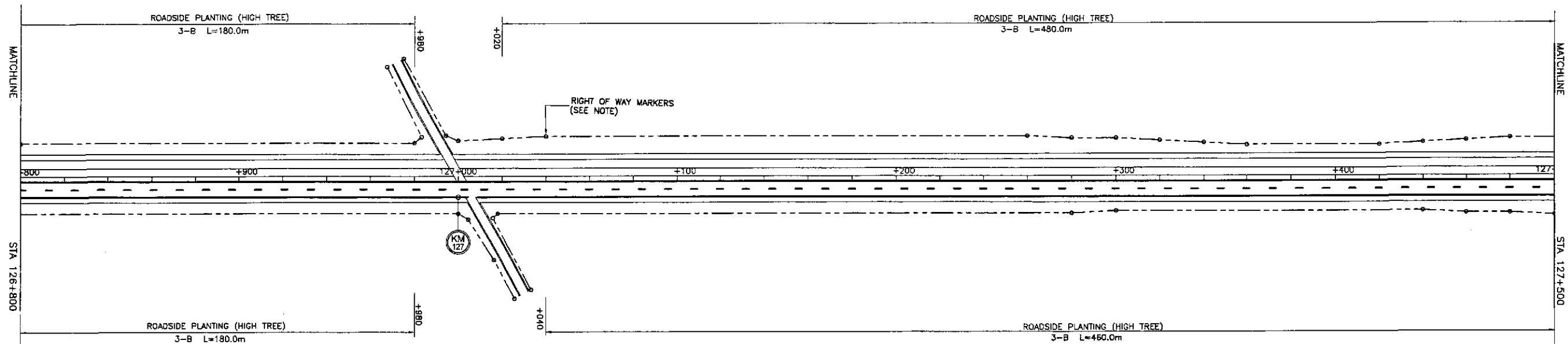
NOTE : FOR ROAD RIGHT OF WAY MARKERS SCHEDULE
SEE SHEET NOS. RG-05 TO RG-08

 JAPAN INTERNATIONAL COOPERATION AGENCY		 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 : 1:1000 FULL SIZE A1	SHEET CONTENTS : PLANTINGS, GUARDRAILS, RIGHT-OF-WAY & KM. POSTS LAYOUT (INITIAL STAGE) STA. 124+000 - STA. 125+400	SHEET NO. : RM-13
DESIGNED	DATE 10/13/02	SIGNATURE	S. LUNA	Submitted By:	Reviewed By:	Recommended By:	Approved By:	
CHECKED	10/19/02	S. ROSE		DANILO C. TRAJANO	JOSEFINA M. ALACAR	GILBERTO S. REYES	MANUEL M. BONDAN	SIMEON A. DATUMANONG
SUBMITTED	10/21/02	TEAM LEADER		Project Director	Chief, Highways Division	QC, Director IV	Undersecretary	Secretary



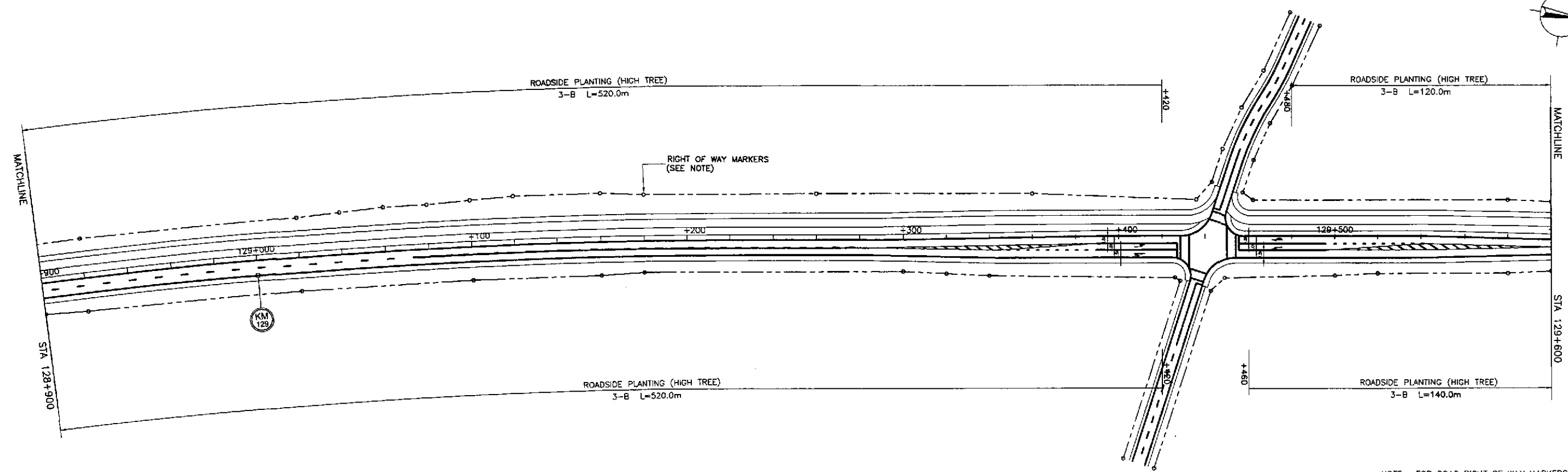
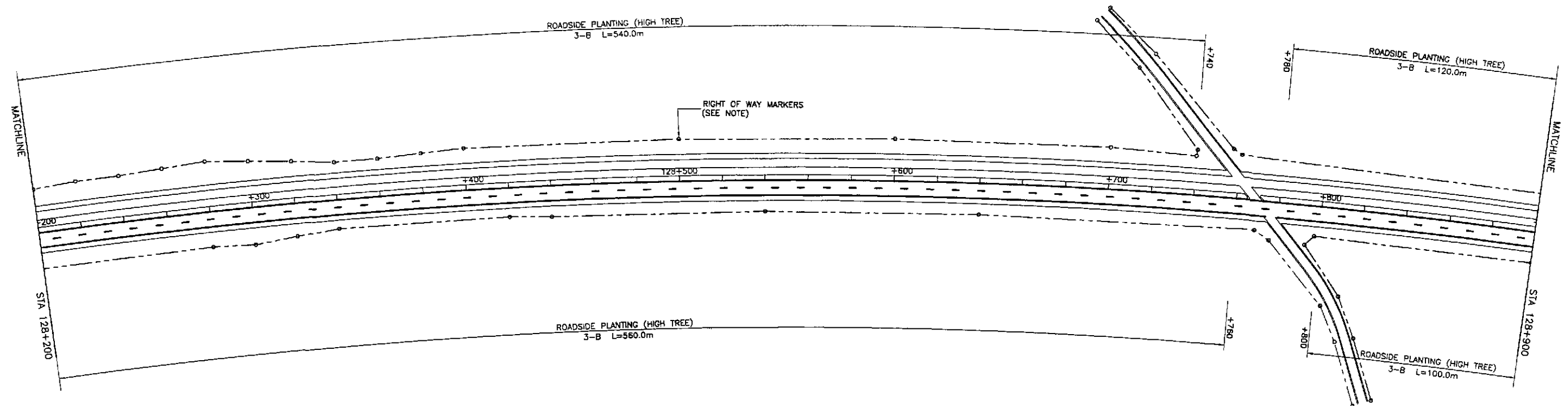
NOTE : FOR ROAD RIGHT OF WAY MARKERS SCHEDULE
SEE SHEET NOS. RG-06 TO RG-08

 JAPAN INTERNATIONAL COOPERATION AGENCY		 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) CABANATUAN BYPASS - CONTRACT PACKAGE IV		SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : PLANTINGS, GUARDRAILS RIGHT-OF-WAY & KM. POSTS LAYOUT (INITIAL STAGE) STA. 125+400 - STA. 126+800	SHEET NO. : RM-14
DESIGNED	DATE 10/12/02	SIGNATURE <i>S. LUNA</i>	P.H.L. - P.M.O. Submitted By:		Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Approved By: SIMEON A. DATUMANONG Secretary		TEAM LEADER <i>M. RIVERA</i>
CHECKED	10/19/02	5:30 PM <i>JOSE</i>	DANILLO C. TRAJANO Project Director		Recommended By: GILBERTO S. REYES OIC, Director IV	Approved By: (See cover sheet for Signature/Approval)		
SUBMITTED	10/21/02							



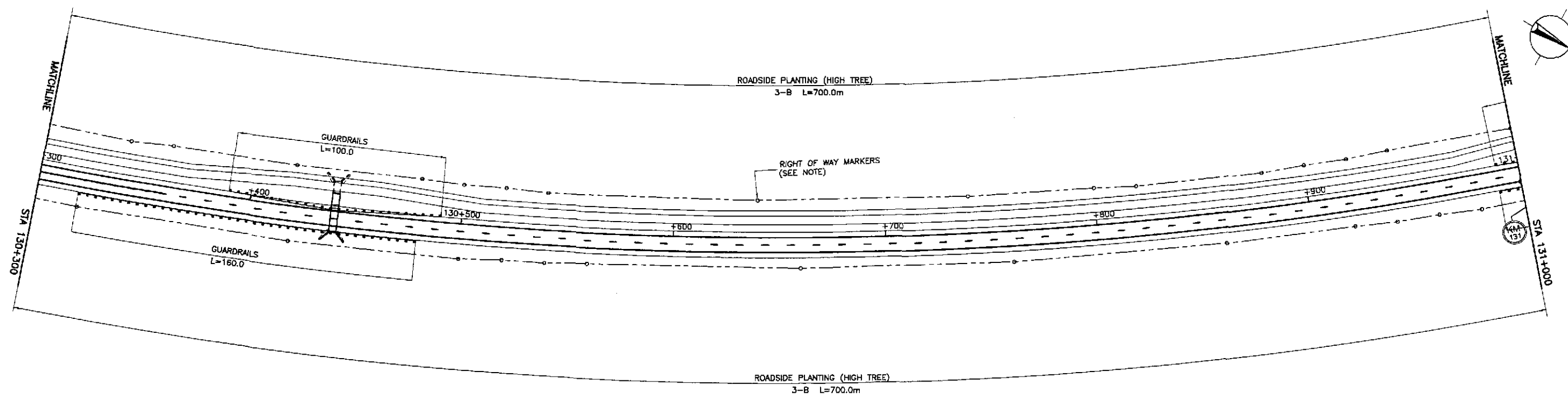
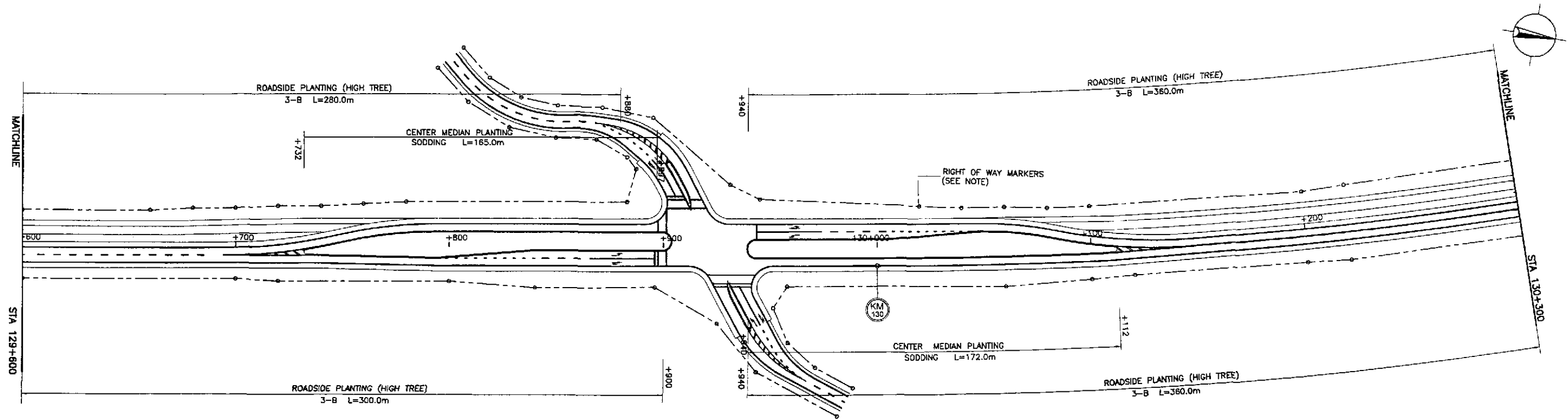
NOTE : FOR ROAD RIGHT OF WAY MARKERS SCHEDULE
SEE SHEET NOS. RG-06 TO RG-08

 JAPAN INTERNATIONAL COOPERATION AGENCY		 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) CABANATUAN BYPASS - CONTRACT PACKAGE IV		SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : PLANTINGS, GUARDRAILS, RIGHT-OF-WAY & KM. POSTS LAYOUT (INITIAL STAGE) STA. 126+800 - STA. 128+200	SHEET NO. : RM-15	
DESIGNED	10/12/02	SIGNATURE	DATE	DESIGNED	10/12/02	CHECKED	10/14/02	SUBMITTED	10/21/02
SUBMITTED BY: DANILLO C. TRAJANO Project Director		REVIEWED BY: JOSEFINA M. ALAGAR Chief, Highways Division		RECOMMENDED BY: GILBERTO S. REYES OIC, Director IV		RECOMMENDED BY: MANUEL M. BONDAN Undersecretary		APPROVED BY: SIMEON A. DATUMANONG Secretary	



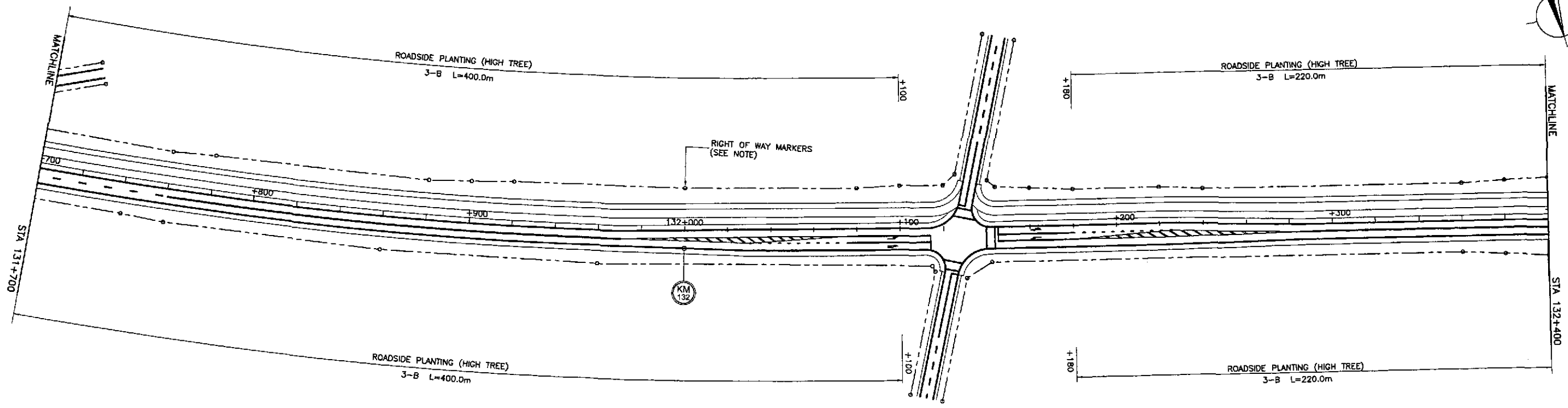
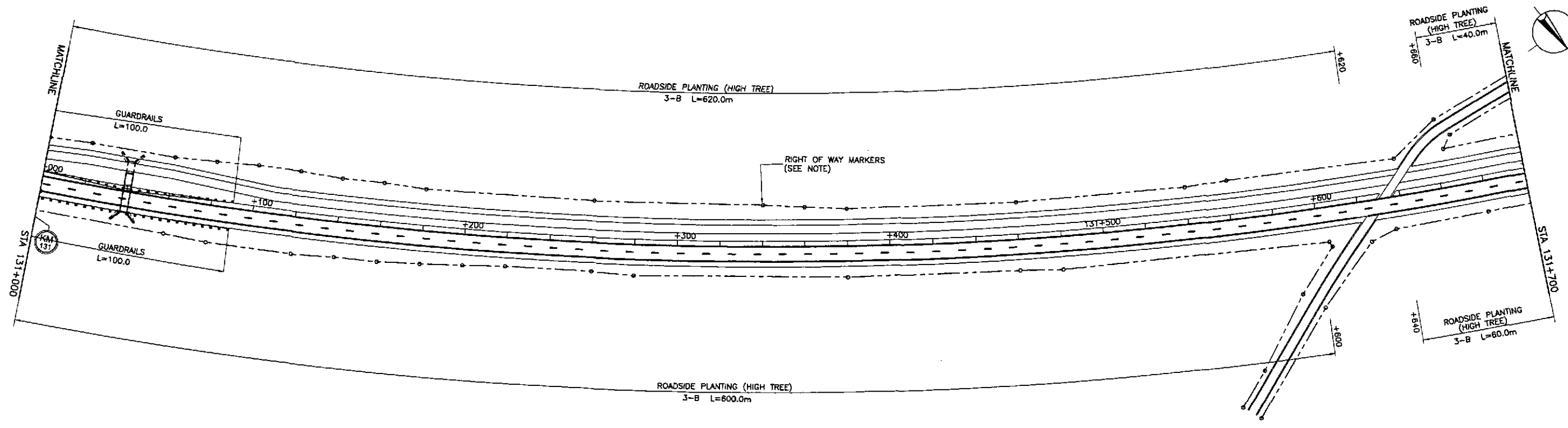
NOTE : FOR ROAD RIGHT OF WAY MARKERS SCHEDULE
SEE SHEET NOS. RG-06 TO RG-08

 JAPAN INTERNATIONAL COOPERATION AGENCY		DATE	SIGNATURE	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
DESIGNED	10/12/02	S. LUNA		PJML - PMO	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)	1:1000	PLANTINGS, GUARDRAILS, RIGHT-OF-WAY & KM. POSTS LAYOUT (INITIAL STAGE)	RM-16
CHECKED	10/11/02	S. CASE		Submitted By:	Reviewed By:	Recommended By:	CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1	STA. 128+200 - STA. 129+600	
SUBMITTED	10/21/02	Team Leader		DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV				



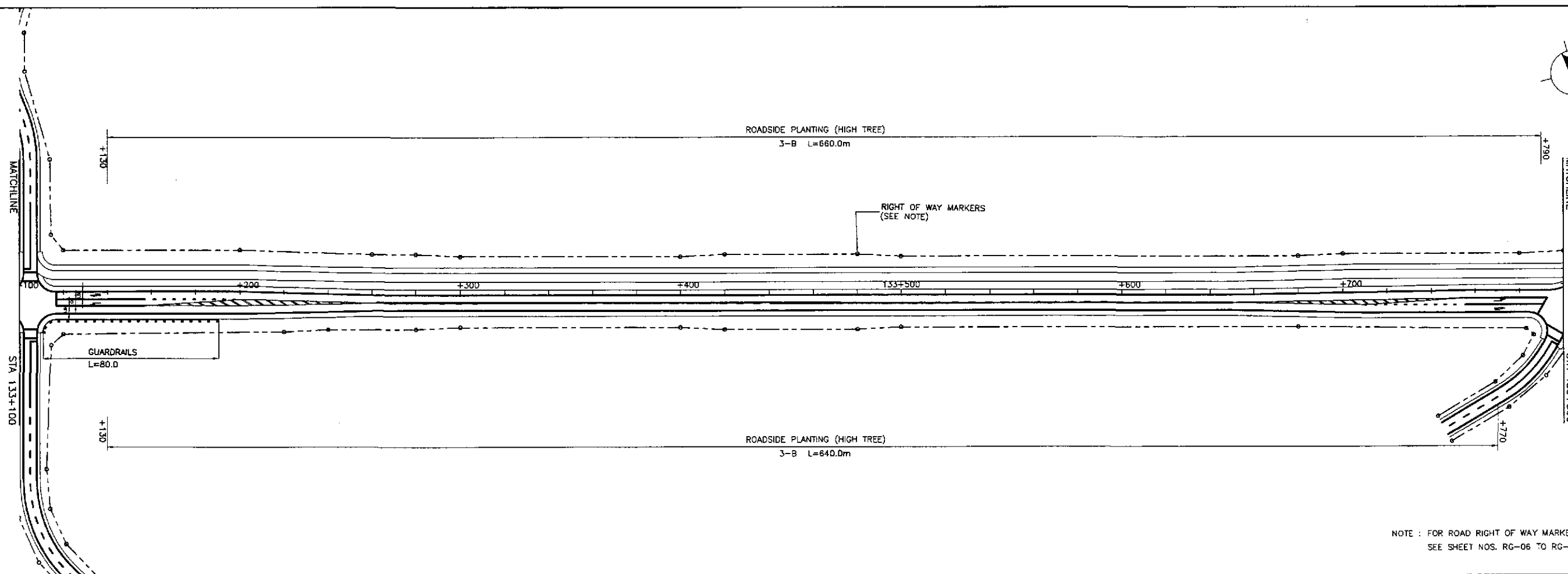
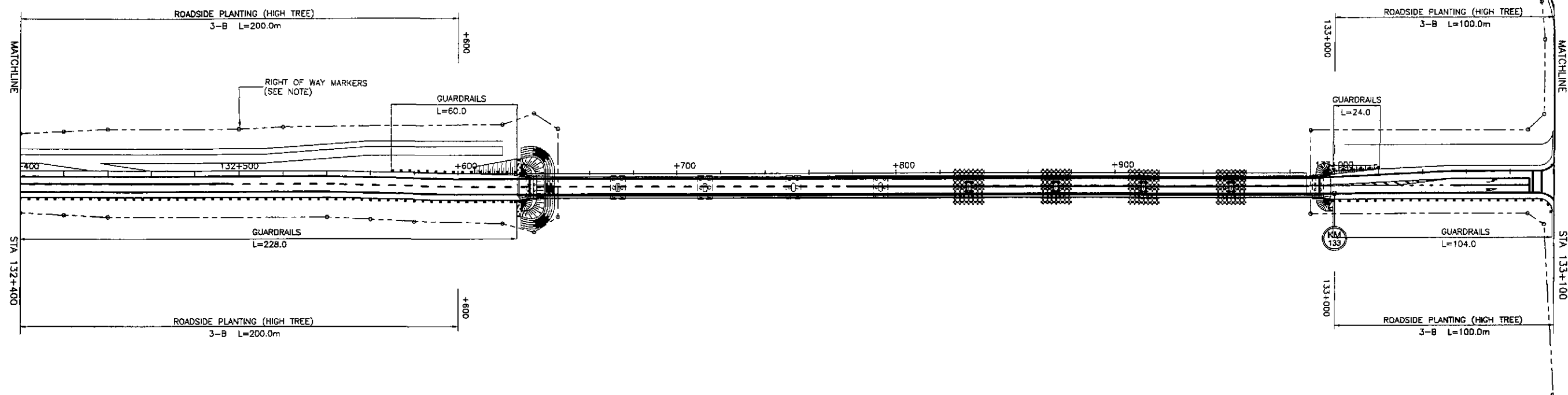
NOTE : FOR ROAD RIGHT OF WAY MARKERS SCHEDULE
SEE SHEET NOS. RG-05 TO RG-08

JICA JAPAN INTERNATIONAL COOPERATION AGENCY		DATE 10/12/02	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 : 1:1000 FULL SIZE A1	SHEET CONTENTS : PLANTINGS, GUARDRAILS, RIGHT-OF-WAY & KM. POSTS LAYOUT (INITIAL STAGE) STA. 129+600 - STA. 131+000	SHEET NO. : RM-17
K&E KATAHIRA & ENGINEERS INTERNATIONAL		CHECKED 10/19/02	SUBMITTED 10/21/02	P.U.H. - PMD Submitted By: DANILLO C. TRAJANO Project Director	BUREAU OF DESIGN Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	OFFICE OF THE SECRETARY Recommended By: GILBERTO S. REYES OIC, Director IV	Approved By: (See cover sheet for Signature/Approval) MANUEL M. BONDAN Undersecretary	Approved By: (See cover sheet for Signature/Approval) SIMON A. DATUMANONG Secretary	CABANATUAN BYPASS - CONTRACT PACKAGE IV	



NOTE : FOR ROAD RIGHT OF WAY MARKERS SCHEDULE
SEE SHEET NOS. RG-06 TO RG-08

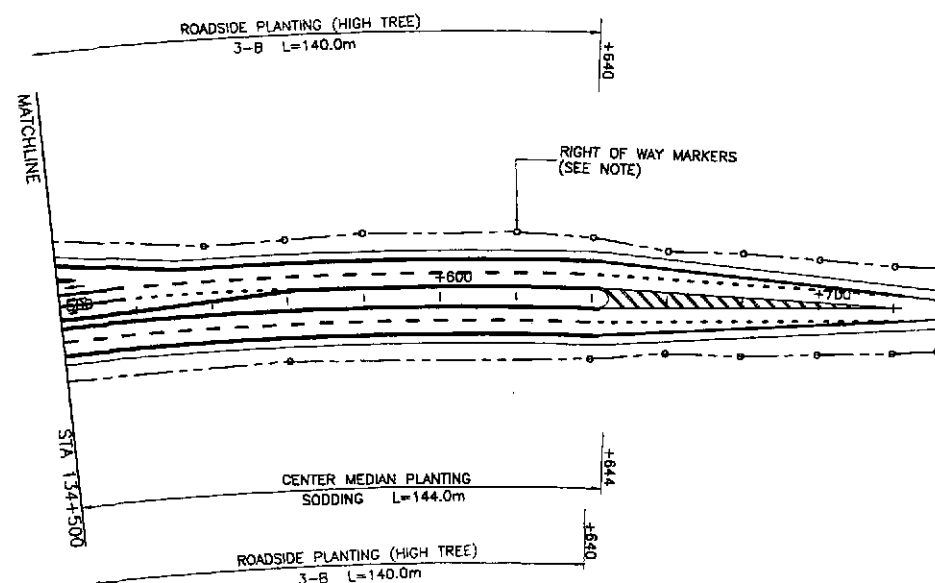
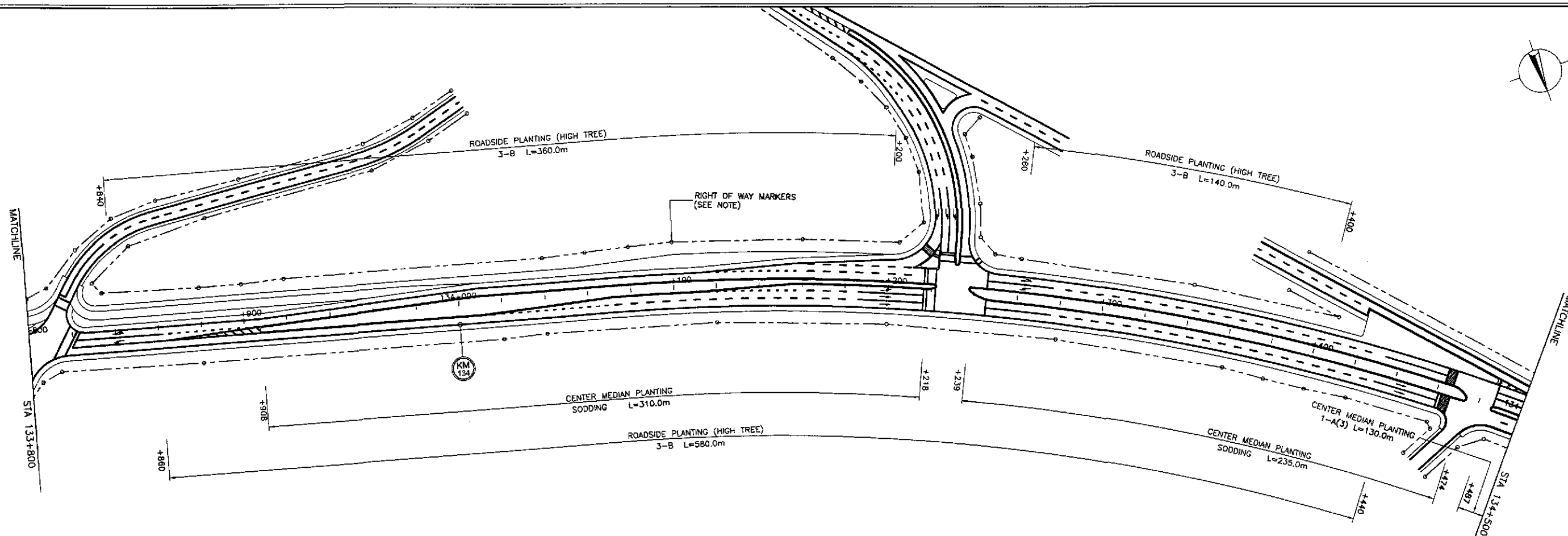
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		DATE 10/12/02	SIGNATURE <i>[Signature]</i>	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : PLANTINGS, GUARDRAILS, RIGHT-OF-WAY & KM. POSTS LAYOUT (INITIAL STAGE) STA. 131+000 - STA. 132+400	SHEET NO. : RM-18
KATAHIRA & ENGINEERS Yachiyo Engineering Co., Ltd.		DESIGNED 10/12/02	CHECKED 10/19/02	SUBMITTED 10/21/02	P.W. - P.W.O. Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES OIC, Director IV	Recommended By: (See cover sheet for Signature) MANUEL M. BONDAN Undersecretary	Approved By: (See cover sheet for Signature/Approval) SIMEON A. DATUMANONG Secretary	CABANATUAN BYPASS - CONTRACT PACKAGE IV	



NOTE : FOR ROAD RIGHT OF WAY MARKERS SCHEDULE
SEE SHEET NOS. RG-06 TO RG-08

 JAPAN INTERNATIONAL COOPERATION AGENCY		 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) CABANATUAN BYPASS - CONTRACT PACKAGE IV		SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : PLANTINGS, GUARDRAIL, RIGHT-OF-WAY & KM. POSTS LAYOUT (INITIAL STAGE) STA. 132+400 - STA. 133+800	SHEET NO. : RM-19					
DESIGNED	10/12/02	SIGNATURE		Submitted By:	PJHL - FMO	Reviewed By:	JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By:	GILBERTO S. REYES OIC, Director IV	Approved By:	MANUEL M. BONOAN Undersecretary	Approved By:	SIMEON A. DATUMANONG Secretary
CHECKED	10/19/02	SIGNATURE		Submitted By:	DANILO C. TRAJANO Project Director	Reviewed By:	JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By:	GILBERTO S. REYES OIC, Director IV	Approved By:	MANUEL M. BONOAN Undersecretary	Approved By:	SIMEON A. DATUMANONG Secretary
SUBMITTED	10/21/02	SIGNATURE		Submitted By:	TEAM LEADER	Reviewed By:	JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By:	GILBERTO S. REYES OIC, Director IV	Approved By:	MANUEL M. BONOAN Undersecretary	Approved By:	SIMEON A. DATUMANONG Secretary

KATAHIRA & ENGINEERS
 YEO YACHYO ENGINEERING CO., LTD.



**CABANATUAN BYPASS
END OF
CONTRACT PACKAGE IV**

STA. 134+731.828
ELEV. = 42.855
N = 1,728,053.796
E = 489,696.546

NOTE : FOR ROAD RIGHT OF WAY MARKERS SCHEDULE
SEE SHEET NOS. RG-06 TO RG-08

<p>JICA JAPAN INTERNATIONAL COOPERATION AGENCY</p>		<p>DATE</p> <p>SIGNATURE</p>	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>				<p>PROJECT AND LOCATION :</p>	<p>SCALE :</p>	<p>SHEET CONTENTS :</p>	<p>SHEET NO. :</p>
<p>DESIGNED</p>		<p>10/12/02</p>	<p>BUREAU OF DESIGN</p>				<p>THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</p>	<p>1:1000</p>	<p>PLANTINGS, GUARDRAIL, RIGHT-OF-WAY & KM. POSTS LAYOUT (INITIAL STAGE) STA. 133+800 - STA. 134+731.828</p>	<p>RM-20</p>
<p>CHECKED</p>		<p>10/19/02</p>	<p>OFFICE OF THE SECRETARY</p>				<p>CABANATUAN BYPASS - CONTRACT PACKAGE IV</p>	<p>FULL SIZE A1</p>		
<p>SUBMITTED</p>		<p>10/24/02</p>	<p>Submitted By: DANILLO C. TRAJANO Project Director</p>							
			<p>Reviewed By: JOSEFINA M. ALAGAR Chief, Highway Division</p>							
			<p>Recommended By: GILBERTO S. REYES DIC, Director IV</p>							
			<p>Recommended By: MANUEL M. BONDAN Undersecretary</p>							
			<p>Approved By: SIMEON A. DATUMANONG Secretary</p>							