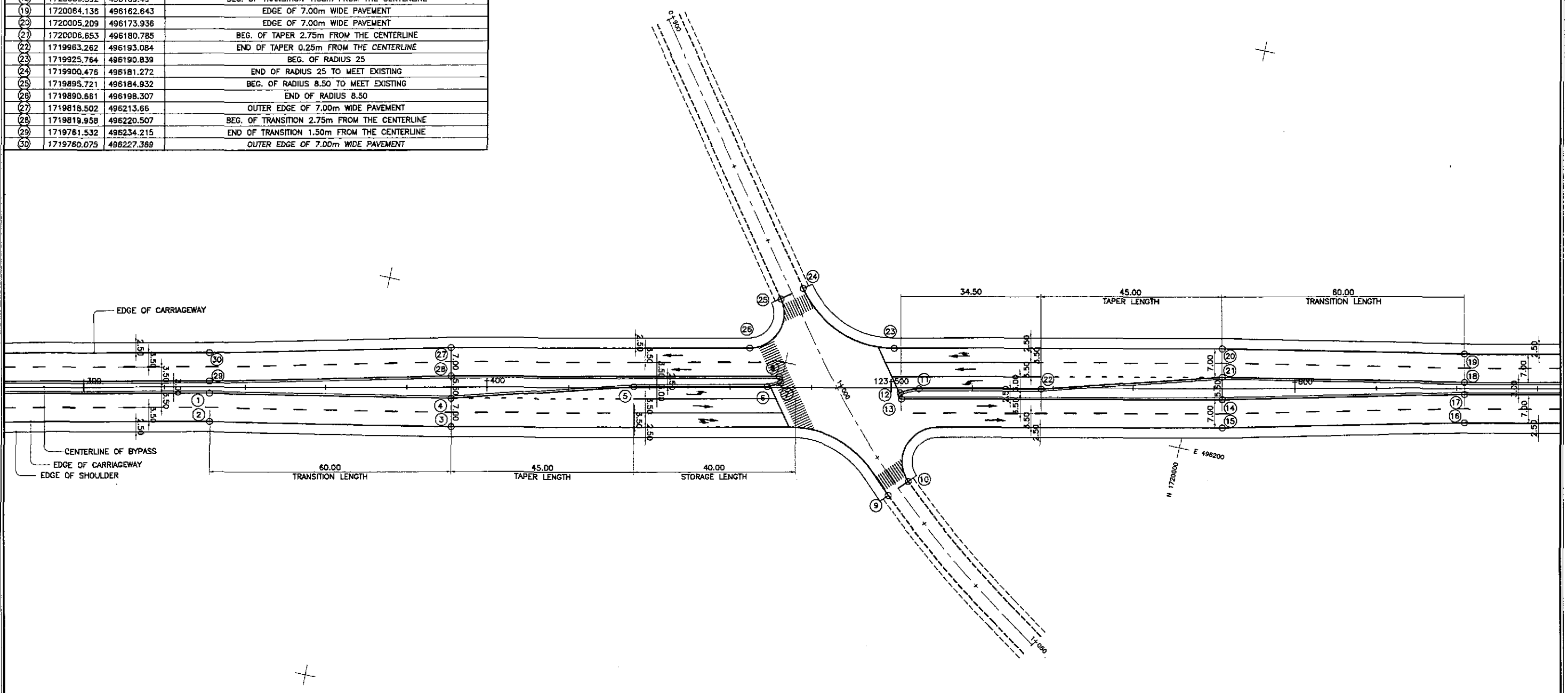


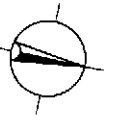
TABLE OF COORDINATES

CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
1	1719762.156	496237.15	INNER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
2	1719763.613	496243.996	OUTER EDGE OF 7.00m WIDE PAVEMENT TO MEET EXISTING
3	1719822.546	496232.735	OUTER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
4	1719821.103	496225.886	BEG. OF TAPER 2.75m FROM THE CENTERLINE
5	1719864.493	496213.587	END OF TAPER 0.25m FROM THE CENTERLINE TO MEET EXISTING
6	1719895.540	496206.982	BEG. OF ISLAND RADIUS 11.50
7	1719899.854	496205.075	INTERSECTION OF ISLAND RADIUS 11.50 & 0.80
8	1719899.221	496203.643	END OF ISLAND RADIUS 0.80
9	1719931.956	496226.665	LIMIT OF 2.50m WIDE SHOULDER
10	1719936.042	496222.271	LIMIT OF 2.50m WIDE SHOULDER
11	1719933.777	496199.358	BEG. OF ISLAND RADIUS 11.50
12	1719929.463	496201.264	INTERSECTION OF ISLAND RADIUS 11.50 & 0.80
13	1719930.096	496202.647	END OF ISLAND RADIUS 0.80
14	1720007.797	496186.165	OUTER EDGE OF 7.00m WIDE PAVEMENT TO MEET EXISTING
15	1720009.254	496193.012	INNER EDGE OF TWO LANE PAVEMENT 2.75m FROM THE CENTERLINE
16	1720067.673	496179.271	EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
17	1720066.217	496172.424	END OF TRANSITION 1.50m FROM THE CENTERLINE TO MEET EXISTING
18	1720065.592	496169.49	BEG. OF TRANSITION 1.50m FROM THE CENTERLINE
19	1720064.136	496162.843	EDGE OF 7.00m WIDE PAVEMENT
20	1720005.209	496173.936	EDGE OF 7.00m WIDE PAVEMENT
21	1720006.653	496180.785	BEG. OF TAPER 2.75m FROM THE CENTERLINE
22	1719963.262	496193.084	END OF TAPER 0.25m FROM THE CENTERLINE
23	1719925.764	496190.839	BEG. OF RADIUS 25
24	1719900.476	496181.272	END OF RADIUS 25 TO MEET EXISTING
25	1719895.721	496184.932	BEG. OF RADIUS 8.50 TO MEET EXISTING
26	1719890.661	496198.307	END OF RADIUS 8.50
27	1719818.502	496213.66	OUTER EDGE OF 7.00m WIDE PAVEMENT
28	1719819.958	496220.507	BEG. OF TRANSITION 2.75m FROM THE CENTERLINE
29	1719761.532	496234.215	END OF TRANSITION 1.50m FROM THE CENTERLINE
30	1719760.075	496227.369	OUTER EDGE OF 7.00m WIDE PAVEMENT



1 GEOMETRIC DESIGN LAYOUT  
 RI-01 INTERSECTION A-23 (STA. 123+486.434) - ULTIMATE STAGE  
 SCALE 1:500

	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/21/02	[Signature]	PJHL - 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	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	1:500	INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-23 (ULTIMATE STAGE)	RI-01
	SUBMITTED	10/21/02	[Signature]			Approved By: MANUEL M. BONDAN Undersecretary		FULL SIZE A1		



N 1719800  
E 498100

INTERSECTION A-1  
STA. 123+486.434 - BYPASS  
STA. 1+000.000 - ROAD CROSSING

LIMIT OF CONC. SHOULDER

LIMIT OF CONC. SHOULDER

N 1719800  
E 498300

PAVING AND GRADING PLAN

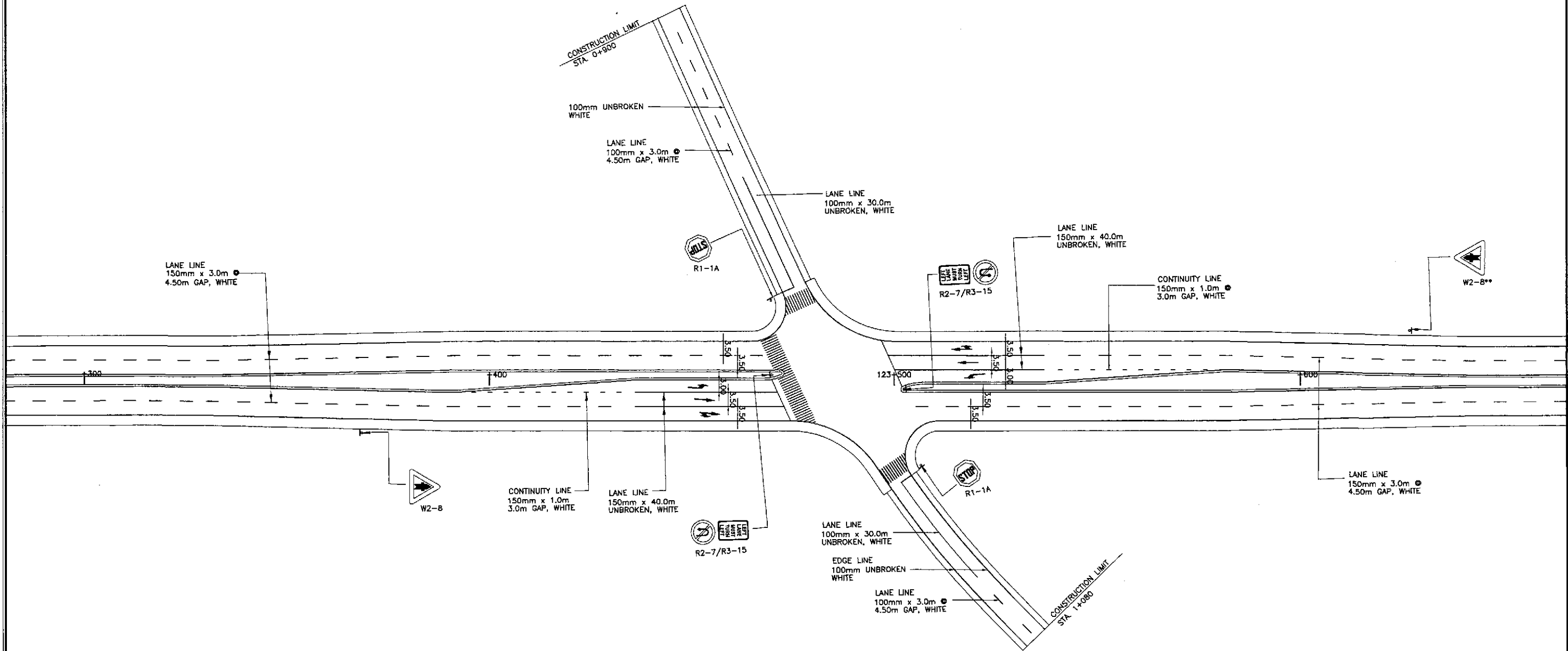
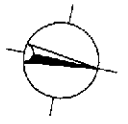
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RI-02

INTERSECTION A-23 (STA. 123+486.434) - ULTIMATE STAGE

SCALE

1:500

	DESIGNED	10/17/02		<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/14/02			BUREAU OF DESIGN			1:500	INTERSECTION DETAIL PAVING AND GRADING PLAN INTERSECTION A-23 (ULTIMATE STAGE)	RI-02
	SUBMITTED	10/21/02			Submitted By:	Reviewed By:	Recommended By:			
			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			



1
**TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT**  
**INTERSECTION A-23 (STA. 123+486.434) - ULTIMATE STAGE**  
 RI-03 SCALE 1:500

					REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : <b>THE DETAILED DESIGN STUDY ON          UPGRADING INTER-URBAN HIGHWAY SYSTEM          ALONG THE PAN-PHILIPPINE HIGHWAY          (Plaridel, Cabanatuan and San Jose Bypasses)</b>	SCALE : 1:500 FULL SIZE A1	SHEET CONTENTS : <b>TRAFFIC SIGNS AND PAVEMENT          MARKINGS LAYOUT          INTERSECTION A-23 (ULTIMATE STAGE)</b>	SHEET NO. : <b>RI-03</b>	
	DESIGNED	10/17/02	SIGNATURE	<i>[Signature]</i>	BUREAU OF DESIGN	OFFICE OF THE SECRETARY	Submitted By:	Reviewed By:	Recommended By:	Approved By:		
	CHECKED	10/19/02	SIGNATURE	<i>[Signature]</i>	PJHL - PMO	DANILO C. TRAJANO Project Director	JOSEFINA M. ALADAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary		
SUBMITTED	10/21/02	SIGNATURE	<i>[Signature]</i>	TEAM LEADER								

TABLE OF COORDINATES			
CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
1	1721971.895	495441.013	OUTER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
2	1721987.849	495435.301	INNER EDGE OF TWO LANE PAVEMENT 2.60m FROM THE CENTERLINE/TO MEET EXISTING
3	1722016.540	495400.498	END OF TRANSITION 2.75m FROM THE CENTERLINE
4	1722020.618	495406.187	BEG. OF TAPER, PAVEMENT WIDTH 7.00m
5	1722058.935	495382.388	END OF TAPER 0.25m FROM THE CENTERLINE
6	1722051.356	495371.825	END OF TAPER, PAVEMENT WIDTH 13.00m
7	1722098.649	495334.816	BEG. OF ISLAND RADIUS 20.00
7a	1722103.285	495332.340	INTERSECTION OF ISLAND RADIUS 20.00 & 0.80
8	1722101.997	495335.491	END OF ISLAND RADIUS 16.00
8a	1722104.139	495333.647	INTERSECTION OF ISLAND RADIUS 0.80 & 16.00
9	1722104.102	495346.289	ISLAND INTERSECTION
10	1722115.814	495337.885	ISLAND INTERSECTION
11	1722123.601	495346.281	ISLAND INTERSECTION
12	1722096.375	495355.524	BEG. OF RADIUS 30
13	1722135.860	495359.499	END OF RADIUS 30 TO MEET EXISTING
14	1722144.758	495348.505	BEG. OF RADIUS 20 TO MEET EXISTING
14a	1722145.986	495350.107	LIMIT OF 2.50m WIDE SHOULDER
15	1722147.763	495318.655	END OF RADIUS 20
16	1722134.000	495336.907	ISLAND INTERSECTION
17	1722127.279	495329.659	ISLAND INTERSECTION
18	1722137.067	495322.636	ISLAND INTERSECTION
19	1722129.621	495316.287	BEG. OF RADIUS 1.25
20	1722131.078	495318.318	END OF MEDIAN RADIUS 1.25
21	1722179.828	495283.34	INNER EDGE OF 10.00m PAVEMENT 2.75m FROM THE CENTERLINE
22	1722185.858	495291.465	OUTER EDGE OF 10.00m WIDE PAVEMENT
23	1722220.472	495262.795	END OF TAPER TO MEET EXISTING
24	1722216.391	495257.107	INNER EDGE OF TWO LANE PAVEMENT 2.75m FROM THE CENTERLINE
25	1722264.412	495221.114	END OF TRANSITION 1.50m FROM THE CENTERLINE

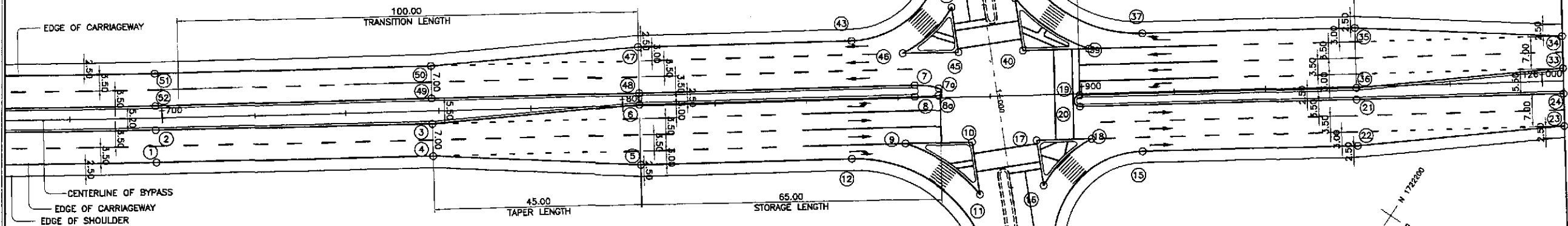
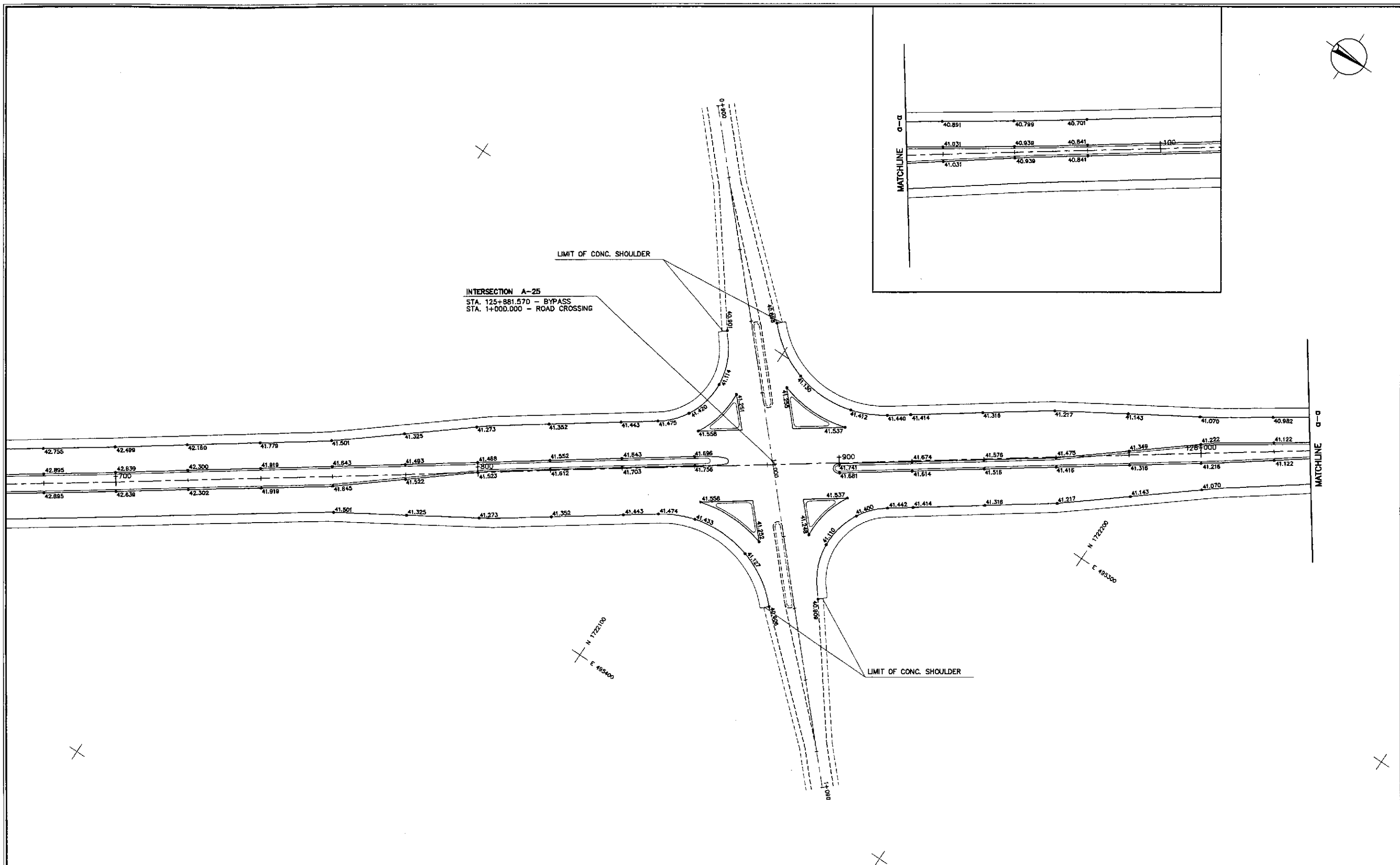
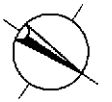


TABLE OF COORDINATES			
CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
26	1722268.493	495226.801	EDGE OF 7.00m WIDE PAVEMENT
27	1722300.993	495203.483	EDGE OF 7.00m WIDE PAVEMENT TO MEET EXISTING
28	1722296.912	495197.796	INNER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
29	1722295.163	495195.358	INNER EDGE OF PAVEMENT 1.50m FROM THE CENTERLINE
30	1722291.083	495189.671	OUTER EDGE OF 7.00m WIDE PAVEMENT
31	1722258.583	495212.989	OUTER EDGE OF 7.00m WIDE PAVEMENT
32	1722262.663	495218.676	BEG. OF TRANSITION 1.50m FROM THE CENTERLINE
33	1722213.185	495252.638	BEG. OF TAPER 2.75m FROM THE CENTERLINE
34	1722209.104	495246.951	BEG. OF TAPER, PAVEMENT WIDTH 7.00m
35	1722170.792	495270.747	END OF TAPER, PAVEMENT WIDTH 13.00m
36	1722178.371	495281.309	END OF TAPER 0.25m FROM THE CENTERLINE
37	1722133.352	495297.610	BEG. OF RADIUS 30
38	1722093.867	495293.635	END OF RADIUS 30 TO MEET EXISTING
39	1722125.625	495306.846	ISLAND INTERSECTION
40	1722113.913	495315.249	ISLAND INTERSECTION
41	1722106.127	495306.853	ISLAND INTERSECTION
42	1722084.969	495304.629	BEG. OF RADIUS 20 TO MEET EXISTING
42a	1722083.741	495303.027	LIMIT OF 2.50m WIDE SHOULDER
43	1722081.985	495334.479	END OF RADIUS 20
44	1722095.727	495316.228	ISLAND INTERSECTION
45	1722102.448	495323.475	ISLAND INTERSECTION
46	1722092.660	495330.498	ISLAND INTERSECTION
47	1722044.069	495361.669	BEG. OF TAPER, PAVEMENT WIDTH 10.00m
48	1722049.910	495369.786	EDGE OF THREE LANE PAVEMENT 2.75m FROM THE CENTERLINE
49	1722013.336	495396.027	BEG. OF TRANSITION 2.75m FROM THE CENTERLINE
50	1722009.249	495390.345	END OF TAPER, PAVEMENT WIDTH 7.00m
51	1721960.597	495425.345	OUTER EDGE OF 7.00m WIDE PAVEMENT
52	1721964.644	495431.057	END OF TRANSITION 2.60m FROM THE CENTERLINE

**GEOMETRIC DESIGN LAYOUT  
INTERSECTION A-25 (STA. 125+881.570) - ULTIMATE STAGE**

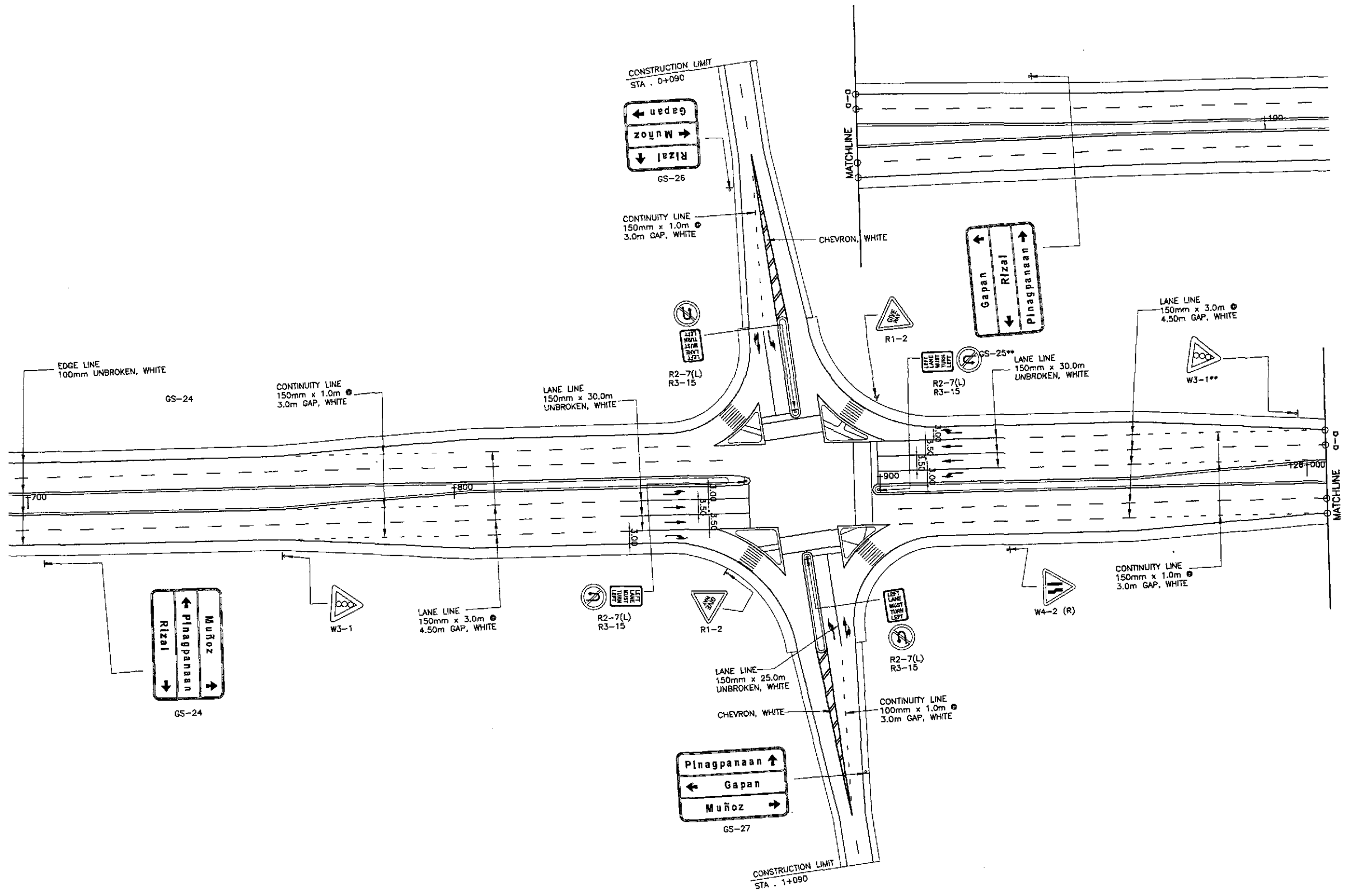
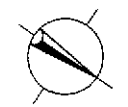
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RI-04 SCALE 1:500

	DESIGNED	10/17/02			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 (Pinarid, Cabanatuan and San Jose Bypasses)	SCALE : 1:500	SHEET CONTENTS : INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-25 (ULTIMATE STAGE)	SHEET NO. : RI-04
	CHECKED	10/19/02			BUREAU OF DESIGN OFFICE OF THE SECRETARY	PROJECT DIRECTOR Chief, Highway Division	REVIEWED BY: Chief, Highway Division				

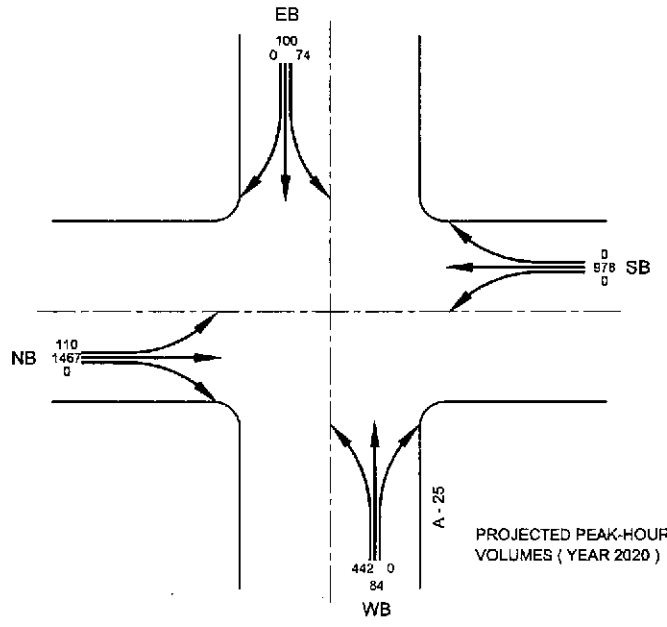


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**PAVING AND GRADING PLAN**  
**INTERSECTION A-25 (STA. 125+881.570) - ULTIMATE STAGE**  
 RI-05 SCALE 1:500

	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :		
	CHECKED	10/14/02	<i>[Signature]</i>						BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO Project Director	OFFICE OF THE SECRETARY Recommended By: GILBERTO S. REYES OIC, Director IV
	SUBMITTED	10/21/02	<i>[Signature]</i>			FULL SIZE A1				

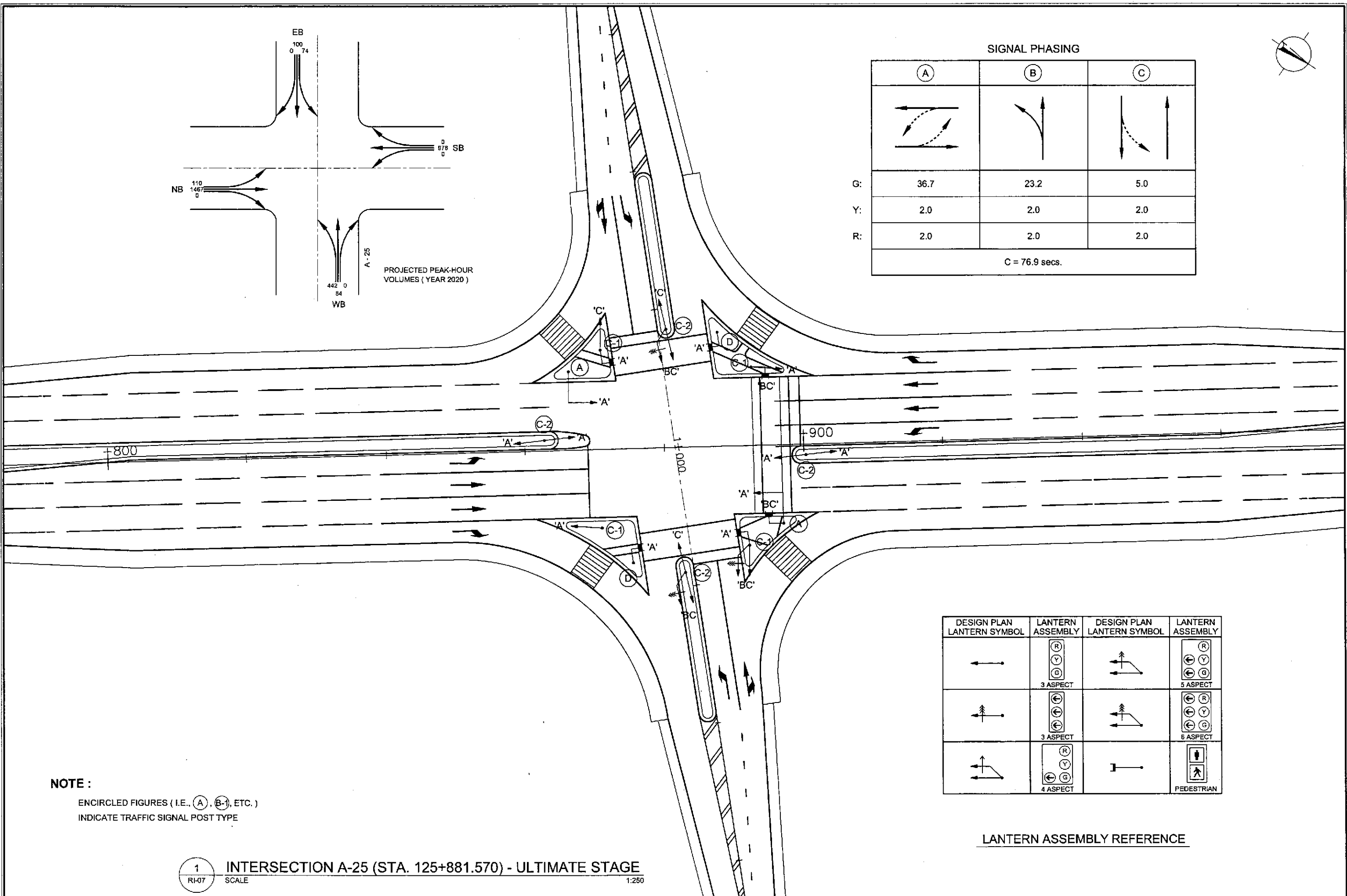


		DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	DESIGNED	10/17/02	<i>[Signature]</i>		PJHL - PMO	BUREAU OF DESIGN	OFFICE OF THE SECRETARY	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)		1:500	TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT INTERSECTION A-25 (ULTIMATE STAGE)	RI-06
	CHECKED	10/19/02	<i>[Signature]</i>		Submitted By:	Reviewed By:	Recommended By:	CABANATUAN BYPASS - CONTRACT PACKAGE IV		FULL SIZE A1		
SUBMITTED	10/21/02	<i>[Signature]</i>	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES DIC, Director IV	MANUEL M. BONOAN Undersecretary	SIMEDON A. DATUMANONG Secretary					



**SIGNAL PHASING**

	(A)	(B)	(C)
G:	36.7	23.2	5.0
Y:	2.0	2.0	2.0
R:	2.0	2.0	2.0
C = 76.9 secs.			



**NOTE :**  
ENCIRCLED FIGURES ( I.E., (A), (B), ETC. )  
INDICATE TRAFFIC SIGNAL POST TYPE

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

1 INTERSECTION A-25 (STA. 125+881.570) - ULTIMATE STAGE  
RI-07 SCALE 1:250

	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : <b>THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</b>	SCALE : 1:250 FULL SIZE A1	SHEET CONTENTS : <b>TRAFFIC SIGNAL LIGHT LAYOUT INTERSECTION A-25 (ULTIMATE STAGE)</b>	SHEET NO. : <b>RI-07</b>	
	CHECKED	10/10/02			PJHL - PMD Submitted By:	BUREAU OF DESIGN Reviewed By:	OFFICE OF THE SECRETARY Recommended By:					CABANATUAN BYPASS - CONTRACT PACKAGE IV
	SUBMITTED	10/21/02			DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES DIC, Director IV					

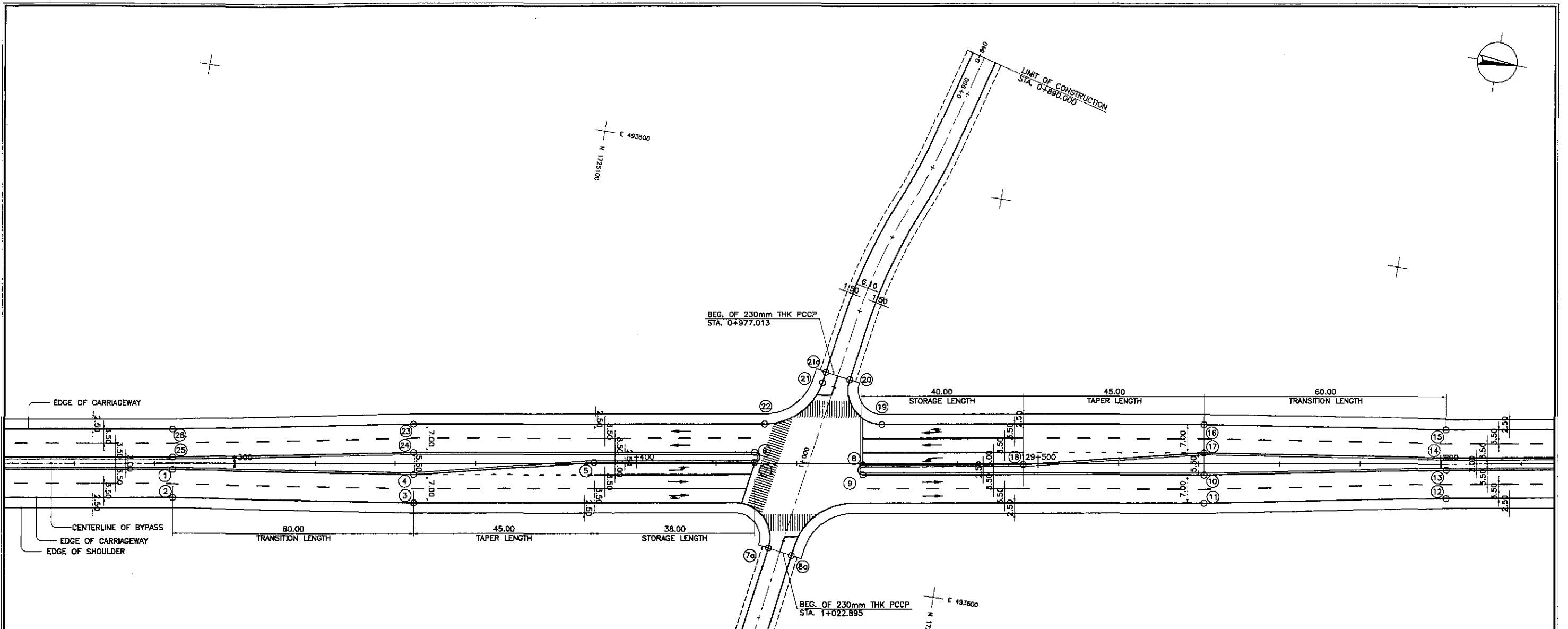


TABLE OF COORDINATES

CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
1	1725008.056	493800.688	INNER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
2	1725009.23	493807.589	OUTER EDGE OF 7.00m WIDE PAVEMENT TO MEET EXISTING
3	1725068.59	493598.76	OUTER EDGE OF 7.00m WIDE PAVEMENT TO MEET EXISTING
4	1725067.415	493591.859	BEG. OF TAPER 2.75m FROM THE CENTERLINE
5	1725111.276	493581.355	END OF TAPER 0.25m FROM THE CENTERLINE
6	1725150.29	493572.183	BEG. OF MEDIAN RADIUS 1.25
7	1725150.71	493574.648	END OF MEDIAN RADIUS 1.25
7a	1725157.578	493594.909	LIMIT OF 2.50m SHOULDER
8a	1725163.612	493595.794	LIMIT OF 2.50m SHOULDER
8	1725177.136	493570.66	BEG. OF MEDIAN RADIUS 1.25
9	1725177.555	493573.124	END OF MEDIAN RADIUS 1.25
10	1725261.352	493558.871	BEG. OF TRANSITION 2.75m FROM THE CENTERLINE
11	1725262.526	493565.772	OUTER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
12	1725321.466	493554.478	OUTER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
13	1725320.393	493547.561	INNER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
14	1725319.775	493544.533	BEG. OF TRANSITION 1.50m FROM THE CENTERLINE
15	1725318.616	493537.719	OUTER EDGE OF 7.00m WIDE PAVEMENT
16	1725259.256	493546.548	OUTER EDGE OF 7.00m WIDE PAVEMENT
17	1725260.43	493553.449	BEG. OF TAPER 2.75m FROM THE CENTERLINE
18	1725216.57	493563.952	END OF TAPER 0.25m FROM THE CENTERLINE
19	1725180.105	493580.011	BEG. OF RADIUS 8.50
20	1725170.269	493550.398	END OF RADIUS 8.50 TO MEET EXISTING
21a	1725164.234	493549.513	LIMIT OF 2.50m SHOULDER
21	1725163.83	493552.265	BEG. OF RADIUS 15 TO MEET EXISTING
22	1725151.504	493564.876	END OF RADIUS 15
23	1725065.32	493579.536	OUTER EDGE OF TWO LANE PAVEMENT
24	1725066.494	493588.437	BEG. OF TRANSITION 2.75m FROM THE CENTERLINE
25	1725007.553	493597.73	END OF TRANSITION 1.50m FROM THE CENTERLINE
26	1725006.379	493590.829	OUTER EDGE OF TWO LANE PAVEMENT

GEOMETRIC DESIGN LAYOUT

1 INTERSECTION A-29 (STA. 129+442.886) - ULTIMATE STAGE

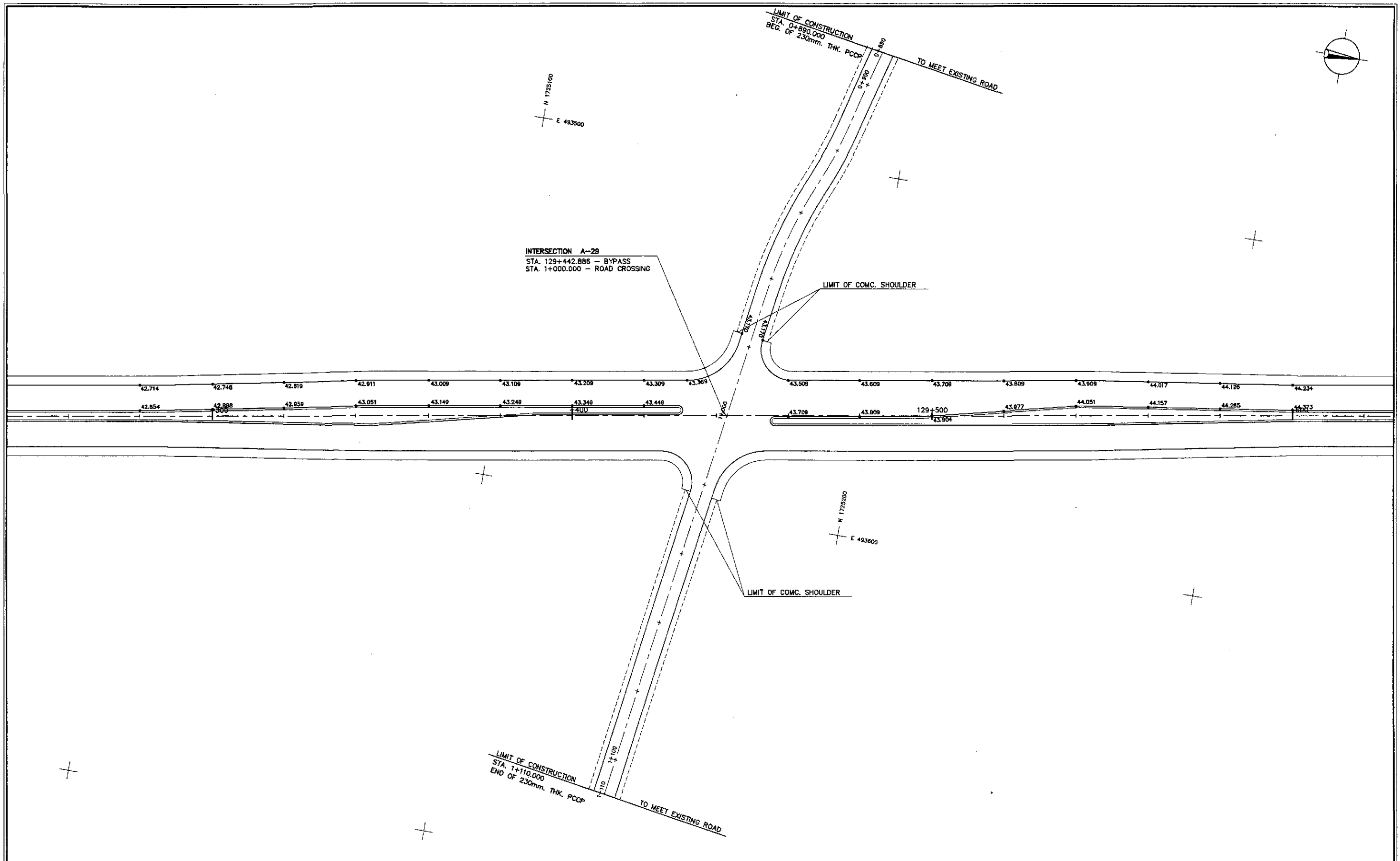
RI-08

SCALE

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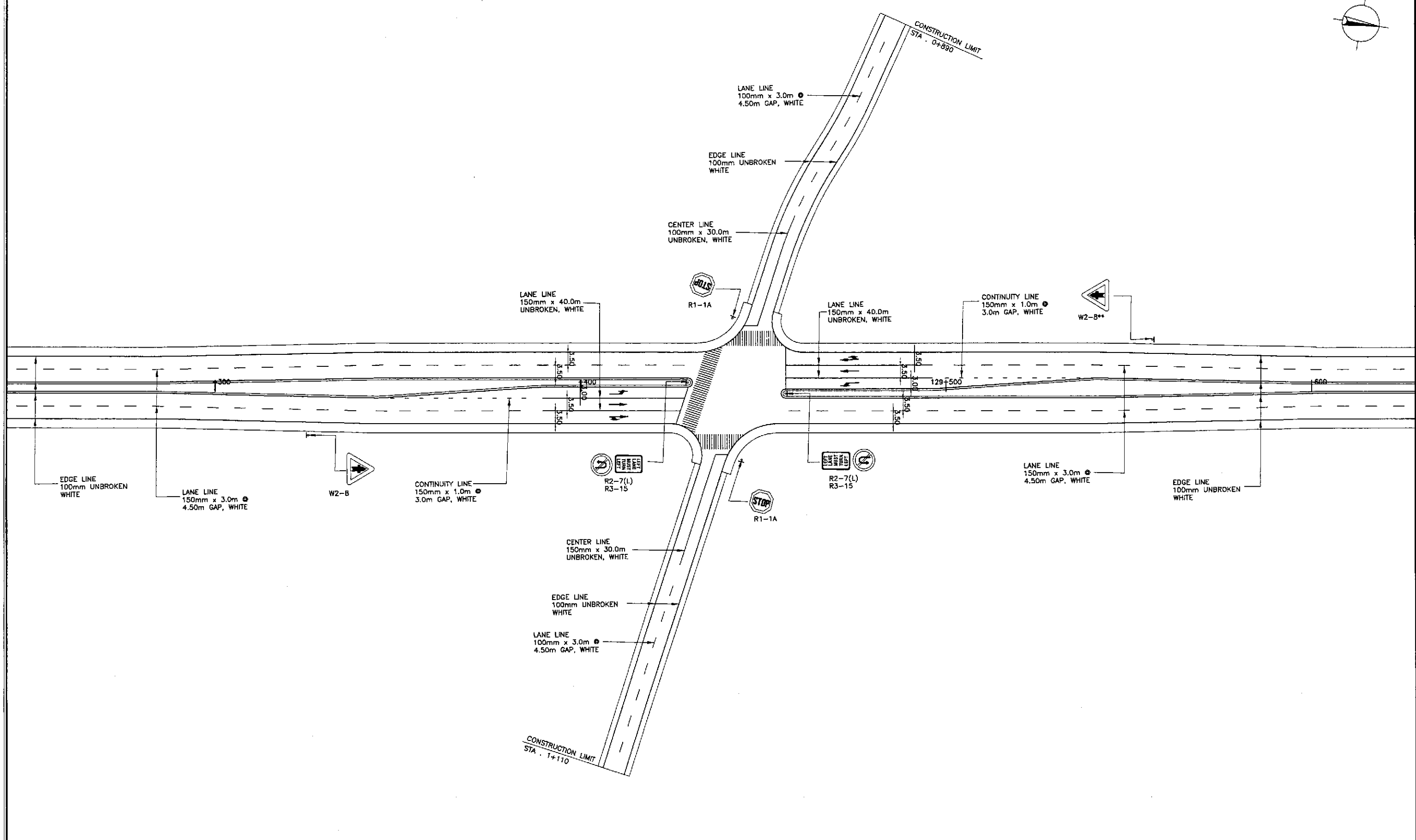
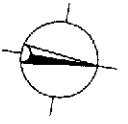
	DESIGNED	10/17/02			REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02				Submitted By:	Reviewed By:	Recommended By:	Approved By:	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	1:500
	SUBMITTED	10/21/02			DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES Dir., Director IV	CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1		





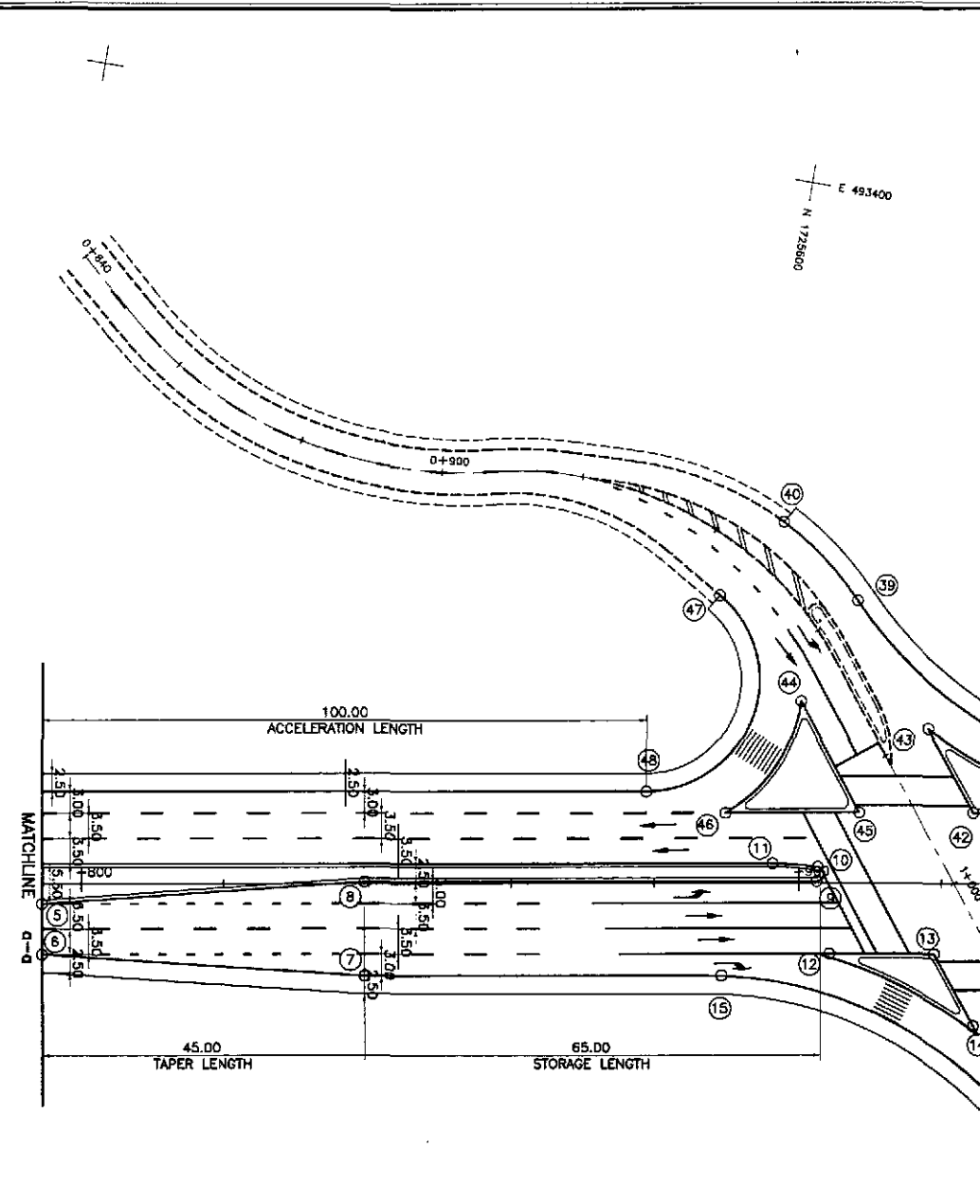
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**PAVING AND GRADING PLAN**  
**INTERSECTION A-29 (STA. 129+442.886) - ULTIMATE STAGE**  
 RI-09 SCALE 1:500

		DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	DESIGNED	10/17/02		P.J.H. - 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)	1:500	<b>INTERSECTION DETAIL</b> PAVING AND GRADING PLAN INTERSECTION A-29 (ULTIMATE STAGE)	<b>RI-09</b>
	CHECKED	10/19/02		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: (See cover sheet for Signature/Approve) MANUEL M. BONGAN Undersecretary	(See cover sheet for Signature/Approve) SIMEON A. DATUMANONG Secretary	FULL SIZE A1
SUBMITTED	10/21/02		TEAM LEADER		CABANATUAN BYPASS - CONTRACT PACKAGE IV				

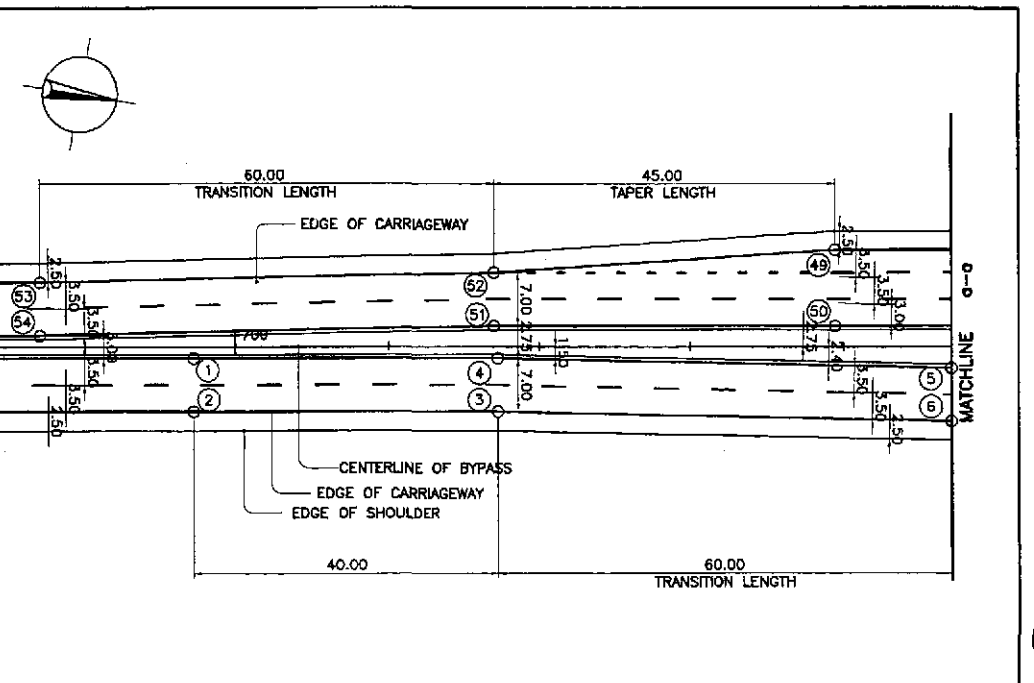


1
**TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT**  
**INTERSECTION A-29 (STA. 129+442.886) - ULTIMATE STAGE**  
 RI-10 SCALE 1:500

					REPUBLIC OF THE PHILIPPINES <b>DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</b>			PROJECT AND LOCATION : <b>THE DETAILED DESIGN STUDY ON          UPGRADING INTER-URBAN HIGHWAY SYSTEM          ALONG THE PAN-PHILIPPINE HIGHWAY          (Plaridel, Cabanatuan and San Jose Bypasses)</b>	SCALE : 1:500 FULL SIZE A1	SHEET CONTENTS : <b>TRAFFIC SIGNS AND PAVEMENT          MARKINGS LAYOUT</b> INTERSECTION A-29 (ULTIMATE STAGE)	SHEET NO. : <b>RI-10</b>
	DESIGNED	10/17/02			BUREAU OF DESIGN OFFICE OF THE SECRETARY	Submitted By: DANILO C. TRAJANO Project Director					
	CHECKED	10/19/02			OFFICE OF THE SECRETARY	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division					
SUBMITTED	10/21/02			OFFICE OF THE SECRETARY	Recommended By: GILBERTO S. REYES OIC, Director IV						
				OFFICE OF THE SECRETARY	Recommended By: MANUEL M. BONDAN Undersecretary						
				OFFICE OF THE SECRETARY	Approved By: SIMEON A. DATUMANONG Secretary						



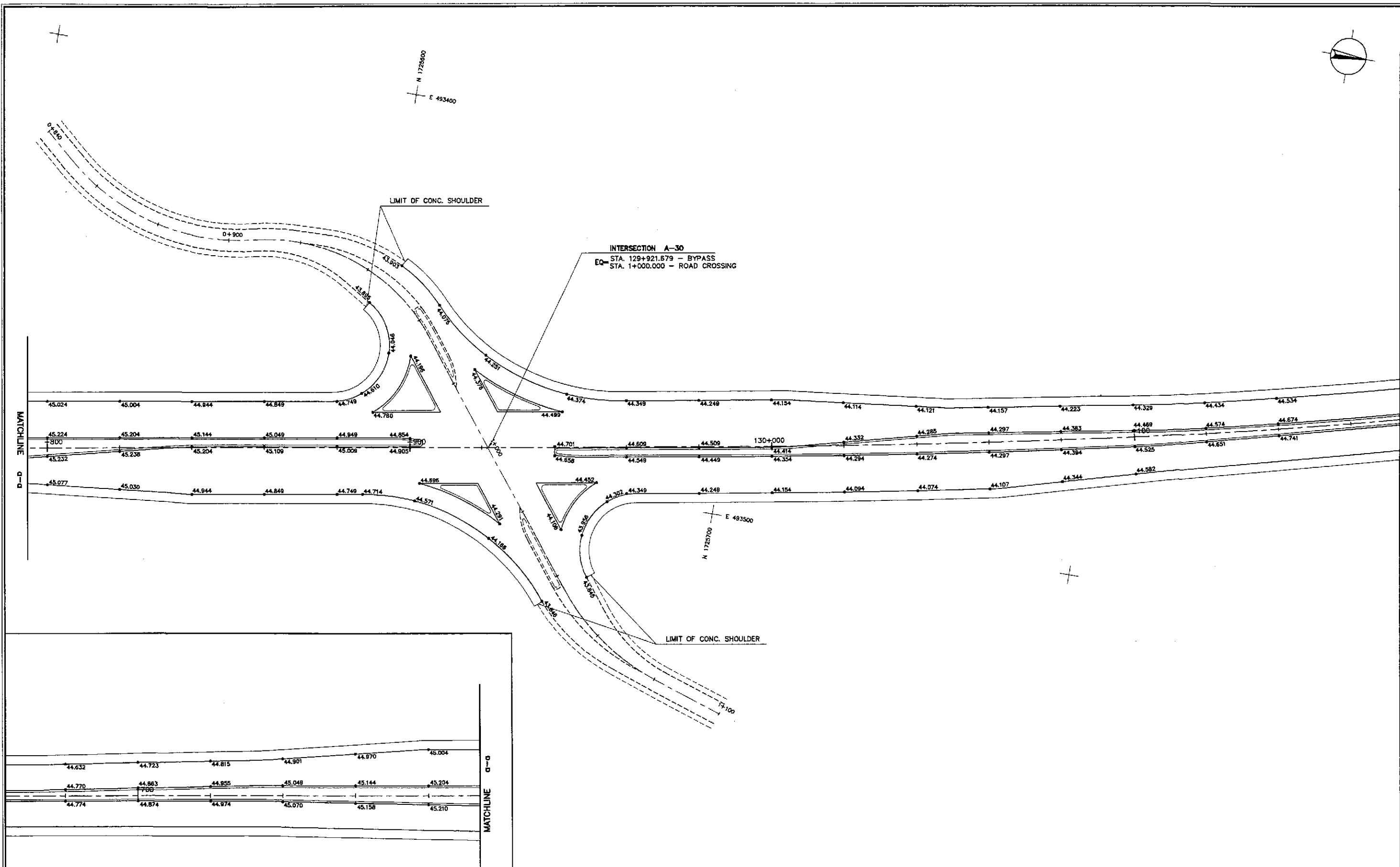
CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
1	1725412.137	493531.954	INNER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
2	1725413.311	493538.855	OUTER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
3	1725452.745	493532.148	OUTER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
4	1725451.571	493525.247	BEG. OF TRANSITION 1.50m FROM THE CENTERLINE
5	1725510.931	493516.418	END OF TRANSITION 2.75m FROM THE CENTERLINE
6	1725512.105	493523.319	BEG. OF TAPER, PAVEMENT WIDTH 7.00m
7	1725556.971	493518.73	END OF TAPER, PAVEMENT WIDTH 13.00m
8	1725554.791	493505.914	END OF TAPER 0.25m FROM THE CENTERLINE
9	1725616.978	493495.336	BEG. OF MEDIAN RADIUS 1.00
10	1725616.802	493493.350	INTERSECTION OF MEDIAN RADIUS 1.00 & 40.00
11	1725610.422	493493.916	END OF MEDIAN RADIUS 40.00
12	1725618.748	493505.179	ISLAND INTERSECTION
13	1725634.895	493502.432	ISLAND INTERSECTION
14	1725642.891	493512.462	ISLAND INTERSECTION
15	1725606.133	493510.368	BEG. OF RADIUS 52.292
16	1725556.156	493529.855	END OF RADIUS 52.292
17	1725657.569	493531.593	LIMIT OF 2.50m SHOULDER
18	1725668.578	493522.955	BEG. OF RADIUS 15.593 TO MEET EXISTING
19	1725678.263	493498.059	END OF RADIUS 15.593
20	1725659.441	493511.2	ISLAND INTERSECTION
21	1725650.544	493499.752	ISLAND INTERSECTION
22	1725666.945	493496.962	ISLAND INTERSECTION
23	1725661.298	493488.29	BEG. OF MEDIAN RADIUS 17
24	1725656.677	493489.783	INTERSECTION OF MEDIAN RADIUS 17 & 0.80
25	1725657.076	493491.3	INTERSECTION OF MEDIAN RADIUS 0.80 & 40



CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
26	1725774.974	493470.105	INNER EDGE OF THREE LANE PAVEMENT 2.75m FROM THE CENTERLINE
27	1725776.933	493479.912	BEG. OF TAPER, PAVEMENT WIDTH 10.00m
28	1725820.581	493467.673	END OF TAPER, PAVEMENT WIDTH 7.00m/TO MEET EXISTING
29	1725819.067	493480.838	BEG. OF TRANSITION 2.75m FROM THE CENTERLINE
30	1725859.268	493450.344	END OF TRANSITION 1.50m FROM THE CENTERLINE/TO MEET EXISTING
31	1725861.035	493457.116	OUTER EDGE OF 7.00m WIDE PAVEMENT TO MEET EXISTING
32	1725819.634	493456.358	BEG. OF TRANSITION 1.50m FROM THE CENTERLINE
33	1725818.114	493449.525	OUTER EDGE OF 7.00m WIDE PAVEMENT
34	1725759.404	493480.434	OUTER EDGE OF 7.00m WIDE PAVEMENT
35	1725760.703	493487.313	END OF TRANSITION 2.75m FROM THE CENTERLINE
36	1725717.025	493478.534	END OF TAPER 0.25m FROM THE CENTERLINE
37	1725714.716	493485.74	OUTER EDGE OF 13.00m WIDE PAVEMENT
38	1725669.728	493473.855	BEG. OF RADIUS 60
39	1725616.110	493455.92	END OF RADIUS 60 TO MEET EXISTING
40	1725603.978	493446.877	LIMIT OF 2.50m SHOULDER
41	1725654.397	493479.322	ISLAND INTERSECTION
42	1725636.951	493482.264	ISLAND INTERSECTION
43	1725628.825	493471.808	ISLAND INTERSECTION
44	1725610.527	493471.08	ISLAND INTERSECTION
45	1725621.317	493484.962	ISLAND INTERSECTION
46	1725602.937	493488.088	ISLAND INTERSECTION
47	1725597.033	493458.409	BEG. OF RADIUS 15.50 TO MEET EXISTING
48	1725591.635	493486.968	END OF RADIUS 15.50
49	1725493.051	493503.737	BEG. OF TAPER, PAVEMENT WIDTH 10.00m
50	1725494.728	493513.595	INNER EDGE OF THREE LANE PAVEMENT 2.75m FROM THE CENTERLINE
51	1725450.365	493521.141	BEG. OF TRANSITION 2.75m FROM THE CENTERLINE
52	1725449.191	493514.24	END OF TAPER, PAVEMENT WIDTH 7.00m
53	1725390.25	493525.534	OUTER EDGE OF TWO LANE PAVEMENT
54	1725391.424	493532.435	END OF TRANSITION 1.50m FROM THE CENTERLINE

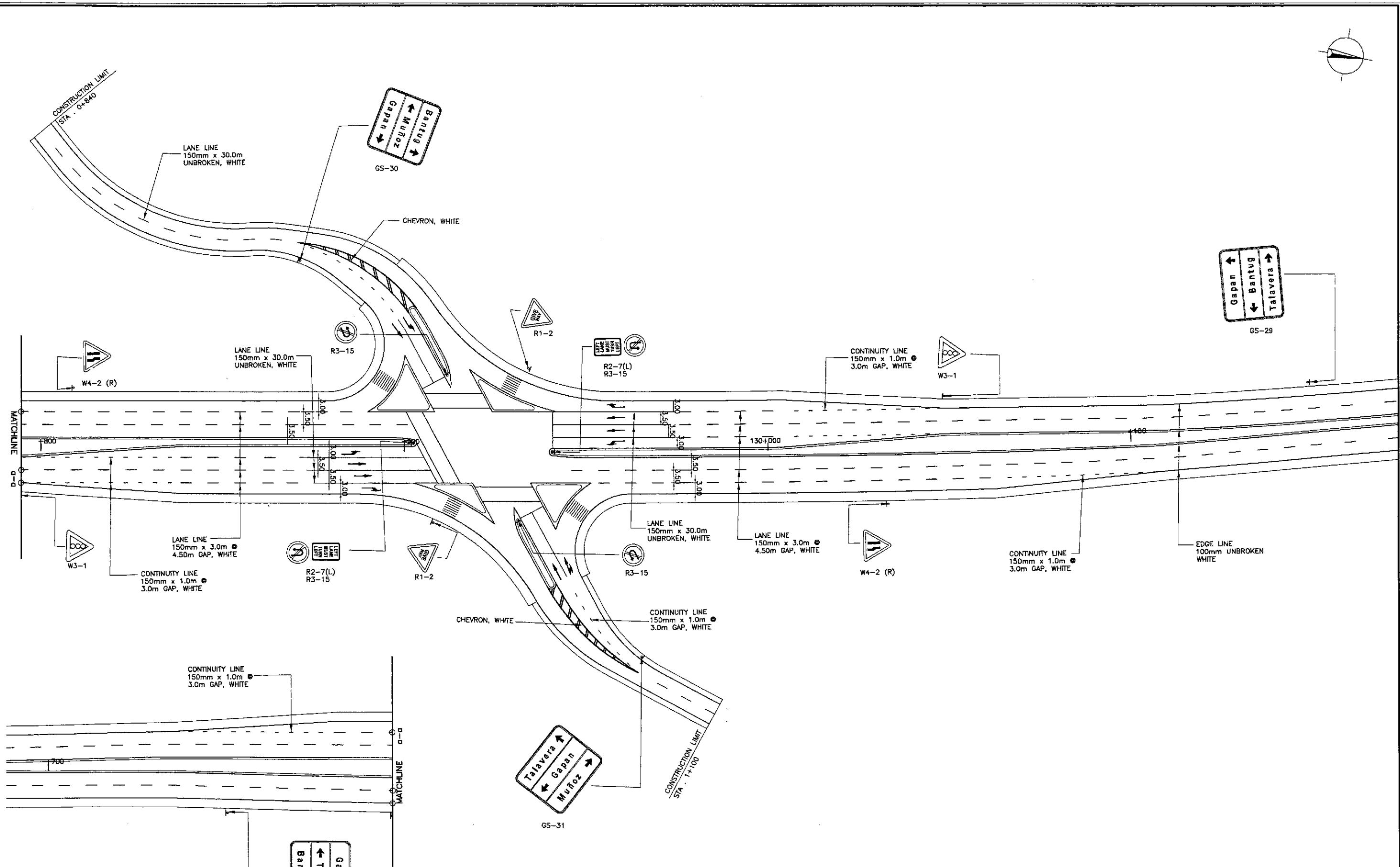
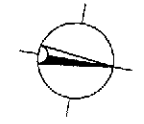
**GEOMETRIC DESIGN LAYOUT**  
**1 INTERSECTION A-30 (STA. 129+921.679) - ULTIMATE STAGE**  
 SCALE 1:500

	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 : 1:500 FULL SIZE A1	SHEET CONTENTS : INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-30 (ULTIMATE STAGE)	SHEET NO. : RI-11
	CHECKED	10/29/02	S. GONZALES		BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO Project Director	OFFICE OF THE SECRETARY Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES Dir. Director IV	Approved By: MANUEL M. BONDAN Undersecretary				
SUBMITTED		10/21/02	 S. GONZALES TEAM LEADER									



1 INTERSECTION A-30 (STA. 129+921.679) - ULTIMATE STAGE  
 RI-12 SCALE 1:500

	DESIGNED	10/17/02	<i>[Signature]</i>		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	<i>[Signature]</i>		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) CABANATUAN BYPASS - CONTRACT PACKAGE IV	1:500	INTERSECTION DETAIL PAVING AND GRADING PLAN INTERSECTION A-30 (ULTIMATE STAGE)	RI-12
	SUBMITTED	10/21/02	<i>[Signature]</i>		DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director N				



**TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT**  
**INTERSECTION A-30 (STA. 129+921.679) - ULTIMATE STAGE**

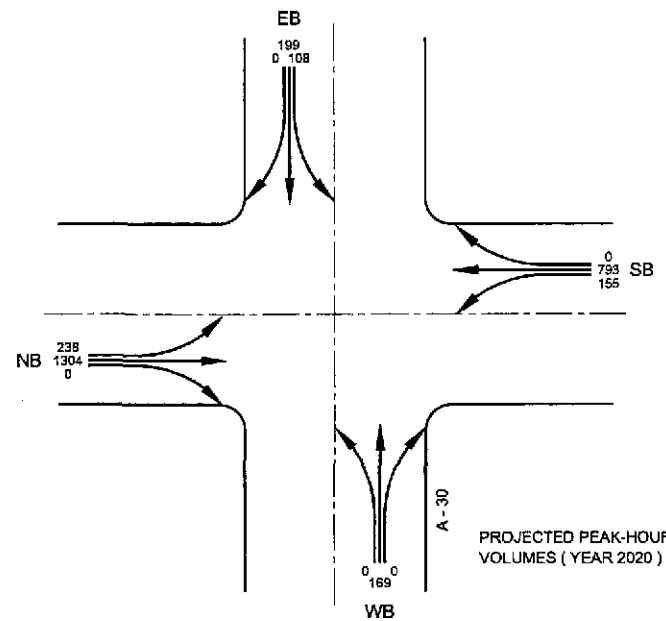
1  
RI-13

SCALE 1:500

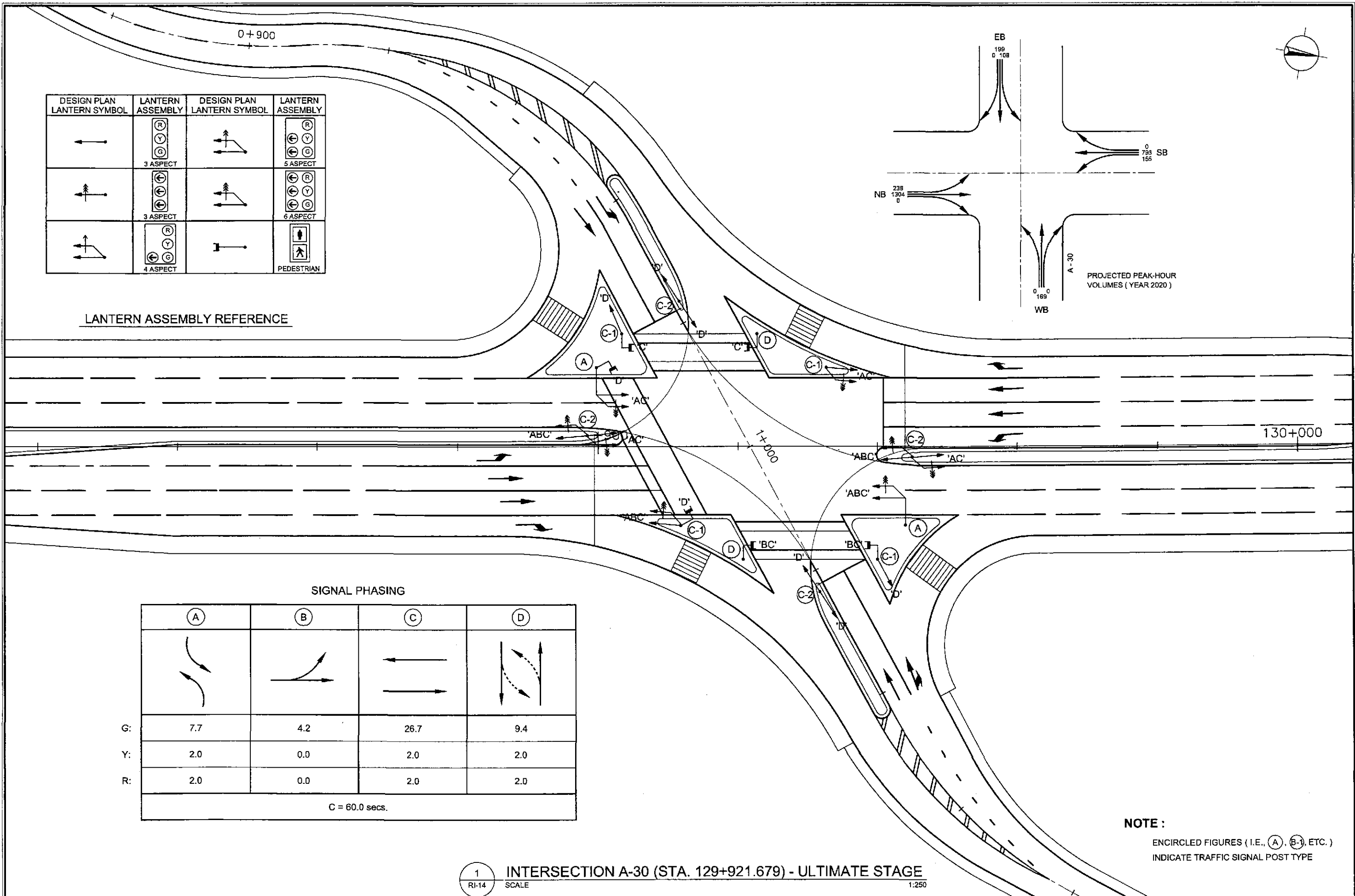
	DESIGNED	10/17/02	<i>hl</i>		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS					PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	<i>gou</i>		P.W.H. - PMD Submitted By:	BUREAU OF DESIGN Reviewed By:	OFFICE OF THE SECRETARY Recommended By:	Recommended By:	Approved By:	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	1:500	TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT INTERSECTION A-30 (ULTIMATE STAGE)	RI-13
	SUBMITTED	10/21/02	<i>gou</i>		DANILLO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMFON A. DATUMANONG Secretary	CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1		

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



PROJECTED PEAK-HOUR VOLUMES ( YEAR 2020 )



SIGNAL PHASING

	(A)	(B)	(C)	(D)
G:	7.7	4.2	26.7	9.4
Y:	2.0	0.0	2.0	2.0
R:	2.0	0.0	2.0	2.0
C = 60.0 secs.				

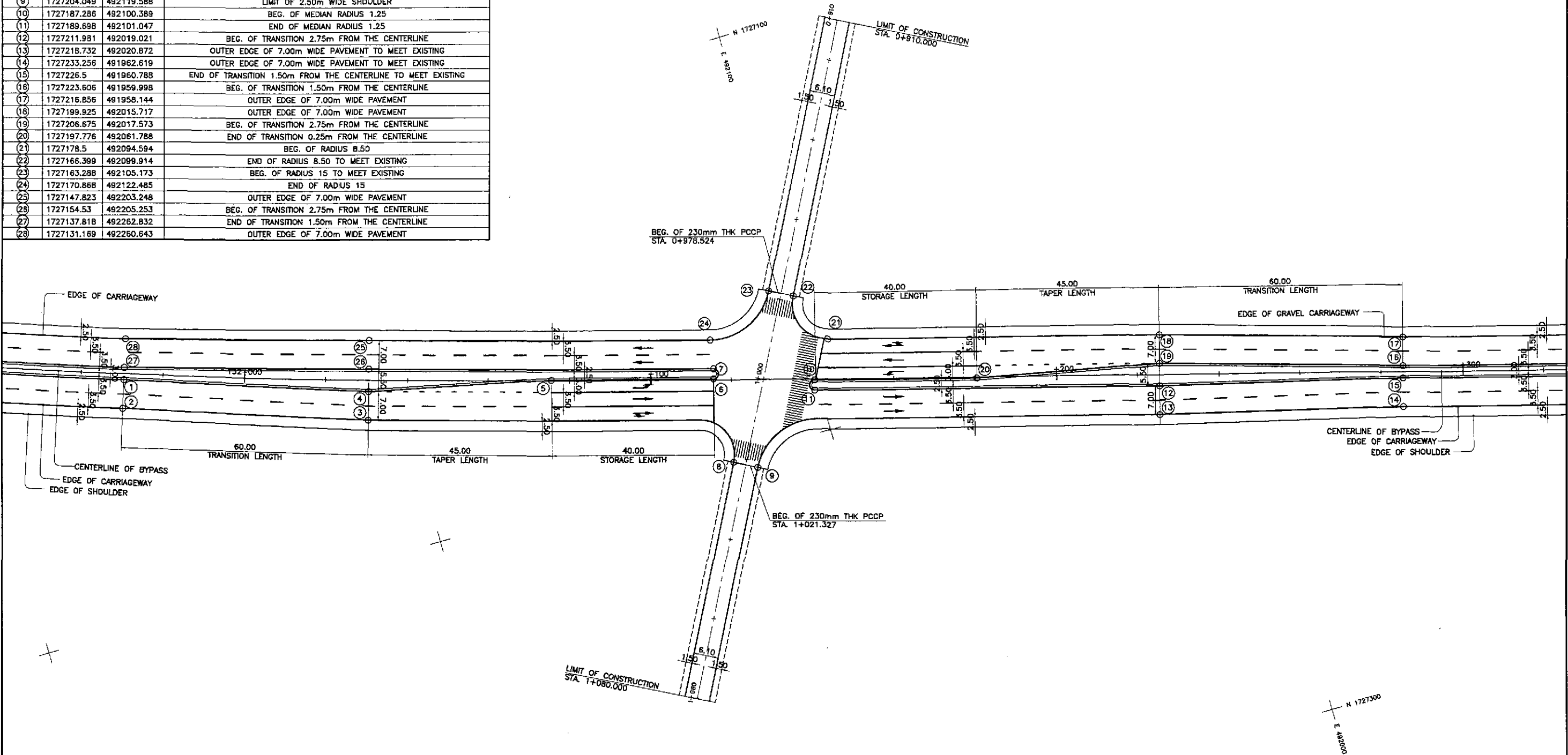
**NOTE :**  
ENCIRCLED FIGURES ( I.E., (A), (B-1), ETC. )  
INDICATE TRAFFIC SIGNAL POST TYPE

**1 INTERSECTION A-30 (STA. 129+921.679) - ULTIMATE STAGE**  
RI-14 SCALE 1:250

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL YACHIYO ENGINEERING CO., LTD.	DESIGNED: 10/17/02 CHECKED: 10/19/02 SUBMITTED: 10/21/02	SIGNATURE: SUBMITTED BY: TEAM LEADER	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN	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 : 1:250 FULL SIZE A1	SHEET CONTENTS : TRAFFIC SIGNAL LIGHT LAYOUT INTERSECTION A-30 (ULTIMATE STAGE)	SHEET NO. : RI-14
	OFFICE OF THE SECRETARY Recommended By: MANUEL M. BONDAN, Undersecretary Approved By: SIMEON A. DATUMANONG, Secretary	PUHL - PMO Submitted By: DANIL D. TRAJANO, Project Director Reviewed By: JOSEFINA M. ALAGAR, Chief, Highways Division Recommended By: GILBERTO S. REYES, OIC, Director IV					

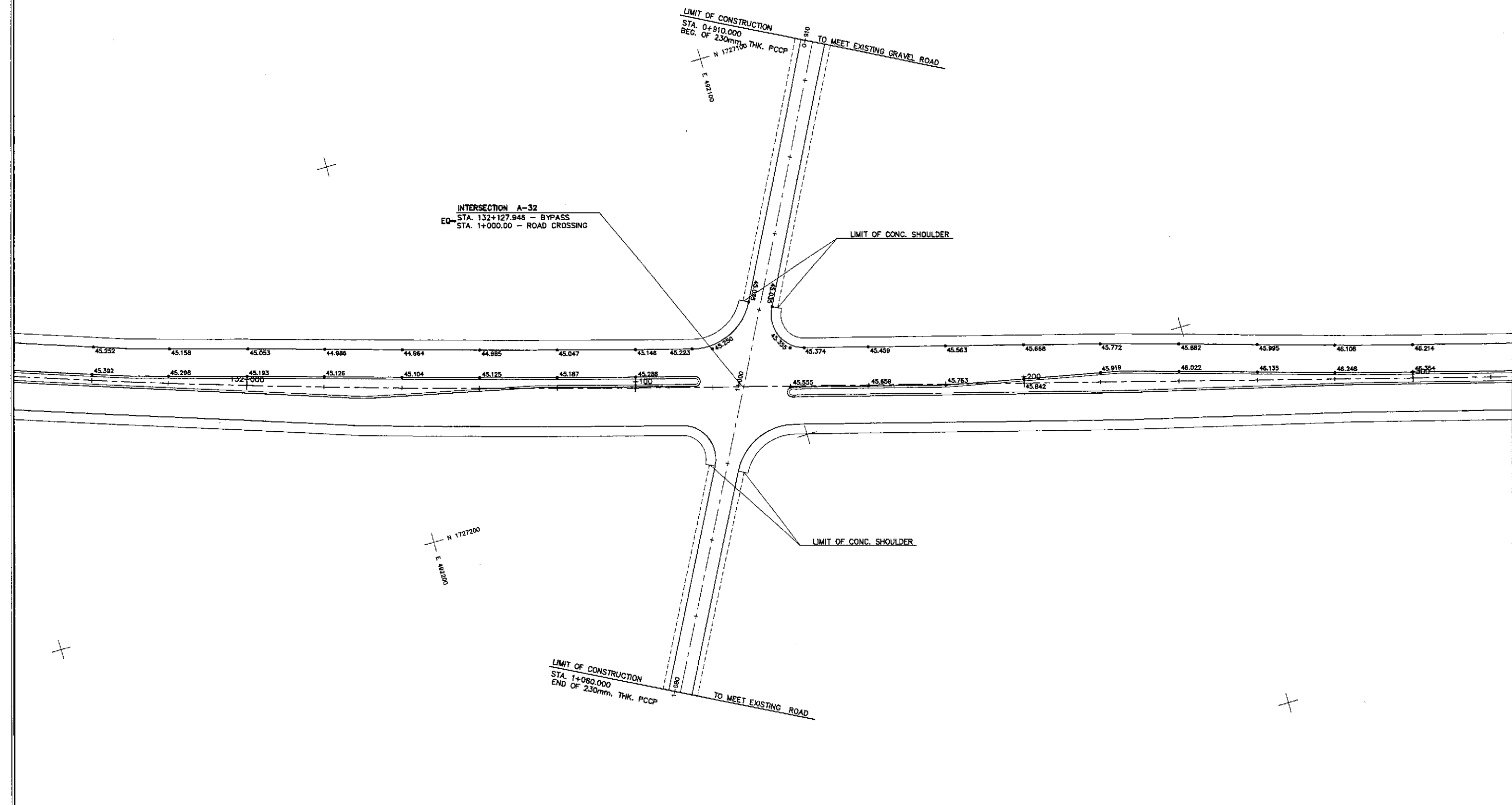
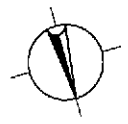
TABLE OF COORDINATES

CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
1	1727140.668	492263.767	BEG. OF TRANSITION TO MEET EXISTING
2	1727147.317	492265.956	OUTER EDGE OF 7.00m WIDE PAVEMENT TO MEET EXISTING
3	1727166.506	492208.833	OUTER EDGE OF 7.00m WIDE PAVEMENT TO MEET EXISTING
4	1727159.8	492206.828	BEG. OF TAPER 2.75m FROM THE CENTERLINE
5	1727169.488	492162.763	END OF TAPER 0.25m FROM THE CENTERLINE
6	1727180.238	492124.239	BEG. OF MEDIAN RADIUS 1.25
7	1727177.827	492123.578	END OF MEDIAN RADIUS 1.25
8	1727201.198	492124.981	LIMIT OF 2.50m WIDE SHOULDER
9	1727204.049	492119.588	LIMIT OF 2.50m WIDE SHOULDER
10	1727187.285	492100.389	BEG. OF MEDIAN RADIUS 1.25
11	1727189.698	492101.047	END OF MEDIAN RADIUS 1.25
12	1727211.981	492019.021	BEG. OF TRANSITION 2.75m FROM THE CENTERLINE
13	1727218.732	492020.872	OUTER EDGE OF 7.00m WIDE PAVEMENT TO MEET EXISTING
14	1727233.256	491962.619	OUTER EDGE OF 7.00m WIDE PAVEMENT TO MEET EXISTING
15	1727226.5	491960.788	END OF TRANSITION 1.50m FROM THE CENTERLINE TO MEET EXISTING
16	1727223.606	491959.998	BEG. OF TRANSITION 1.50m FROM THE CENTERLINE
17	1727216.856	491958.144	OUTER EDGE OF 7.00m WIDE PAVEMENT
18	1727199.925	492015.717	OUTER EDGE OF 7.00m WIDE PAVEMENT
19	1727206.675	492017.573	BEG. OF TRANSITION 2.75m FROM THE CENTERLINE
20	1727197.776	492061.788	END OF TRANSITION 0.25m FROM THE CENTERLINE
21	1727178.5	492094.594	BEG. OF RADIUS 8.50
22	1727166.399	492099.914	END OF RADIUS 8.50 TO MEET EXISTING
23	1727163.288	492105.173	BEG. OF RADIUS 15 TO MEET EXISTING
24	1727170.868	492122.485	END OF RADIUS 15
25	1727147.823	492203.248	OUTER EDGE OF 7.00m WIDE PAVEMENT
26	1727154.53	492205.253	BEG. OF TRANSITION 2.75m FROM THE CENTERLINE
27	1727137.818	492262.832	END OF TRANSITION 1.50m FROM THE CENTERLINE
28	1727131.189	492260.643	OUTER EDGE OF 7.00m WIDE PAVEMENT



1 GEOMETRIC DESIGN LAYOUT  
 RI-15 INTERSECTION A-32 (STA. 132+127.946) - ULTIMATE STAGE  
 SCALE 1:500

	DESIGNED	10/17/02		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 (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-32 (ULTIMATE STAGE)	SHEET NO. : RI-15					
	CHECKED	10/19/02							Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALACAR Chief, Highways Division	Recommended By: GILBERTO S. REYES OIC, Director IV	Approved By: MANUEL M. BONGAON Undersecretary	Approved By: SIMEON A. DATUMANONG Secretary
	SUBMITTED	10/21/02							Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALACAR Chief, Highways Division	Recommended By: GILBERTO S. REYES OIC, Director IV	Approved By: MANUEL M. BONGAON Undersecretary	Approved By: SIMEON A. DATUMANONG Secretary



INTERSECTION A-32  
 STA. 132+127.946 - BYPASS  
 STA. 1+000.00 - ROAD CROSSING

LIMIT OF CONSTRUCTION  
 STA. 0+910.000  
 BEG. OF 230mm THK. PCCP  
 TO MEET EXISTING GRAVEL ROAD

LIMIT OF CONC. SHOULDER

LIMIT OF CONC. SHOULDER

LIMIT OF CONSTRUCTION  
 STA. 1+080.000  
 END OF 230mm THK. PCCP  
 TO MEET EXISTING ROAD

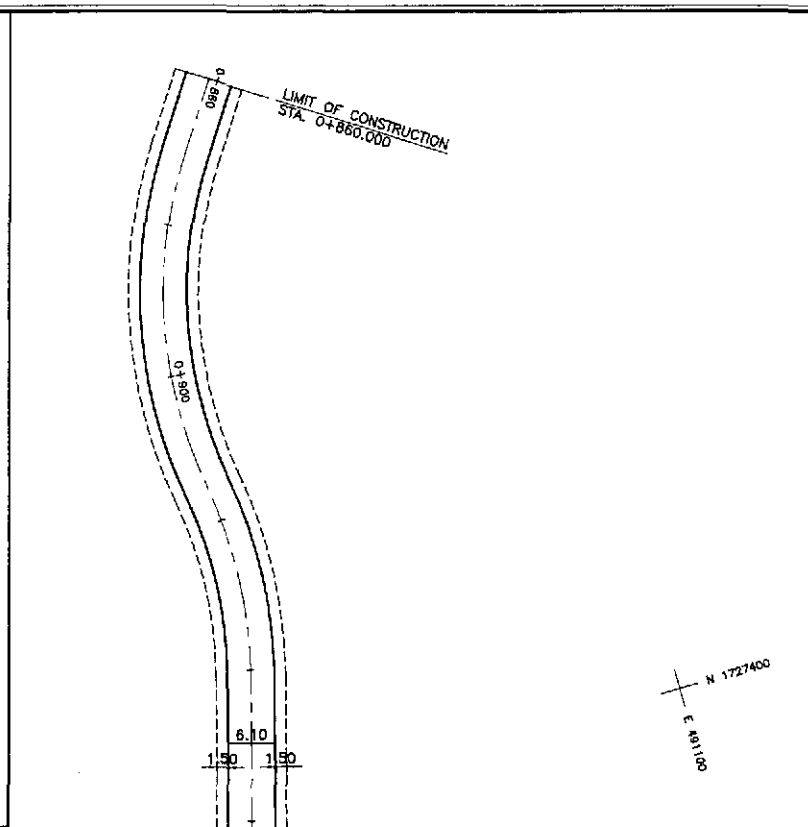
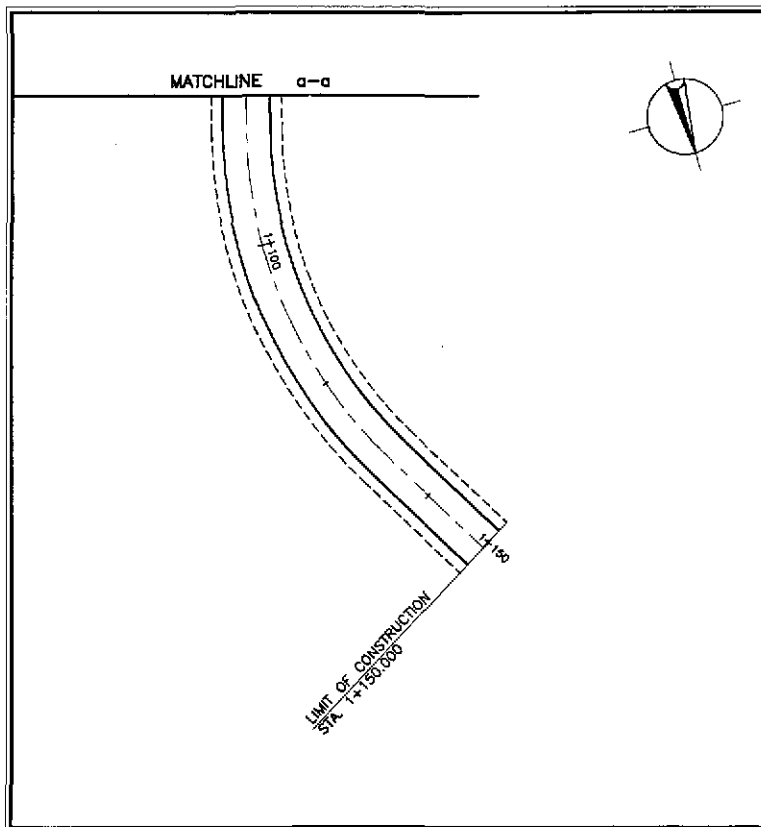
PAVING AND GRADING PLAN

1 INTERSECTION A-32 (STA. 132+127.946) - ULTIMATE STAGE  
 RI-16 SCALE 1:500

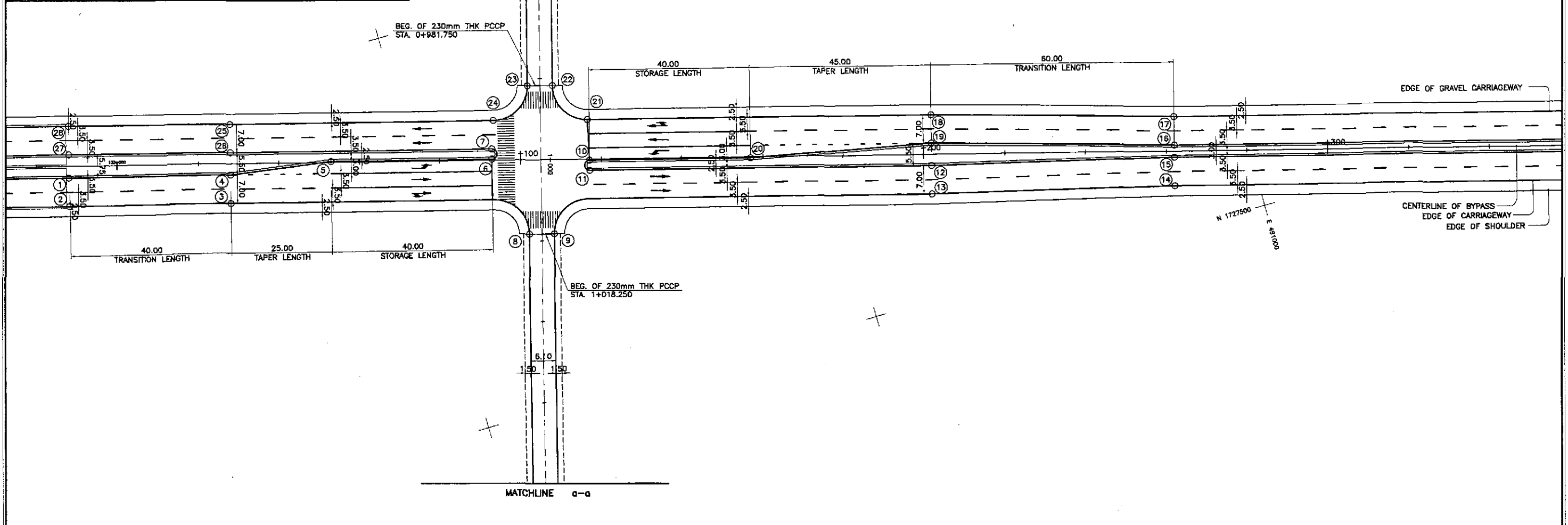
	DESIGNED	10/17/02			REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Palaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE : 1:500 FULL SIZE A1	SHEET CONTENTS : INTERSECTION DETAIL PAVING AND GRADING PLAN INTERSECTION A-32(ULTIMATE STAGE)	SHEET NO. : RI-16		
	CHECKED	10/19/02			Submitted By: DANILLO 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: SIMEON A. DATUMANONG Secretary
	SUBMITTED	10/21/02			TEAM LEADER								





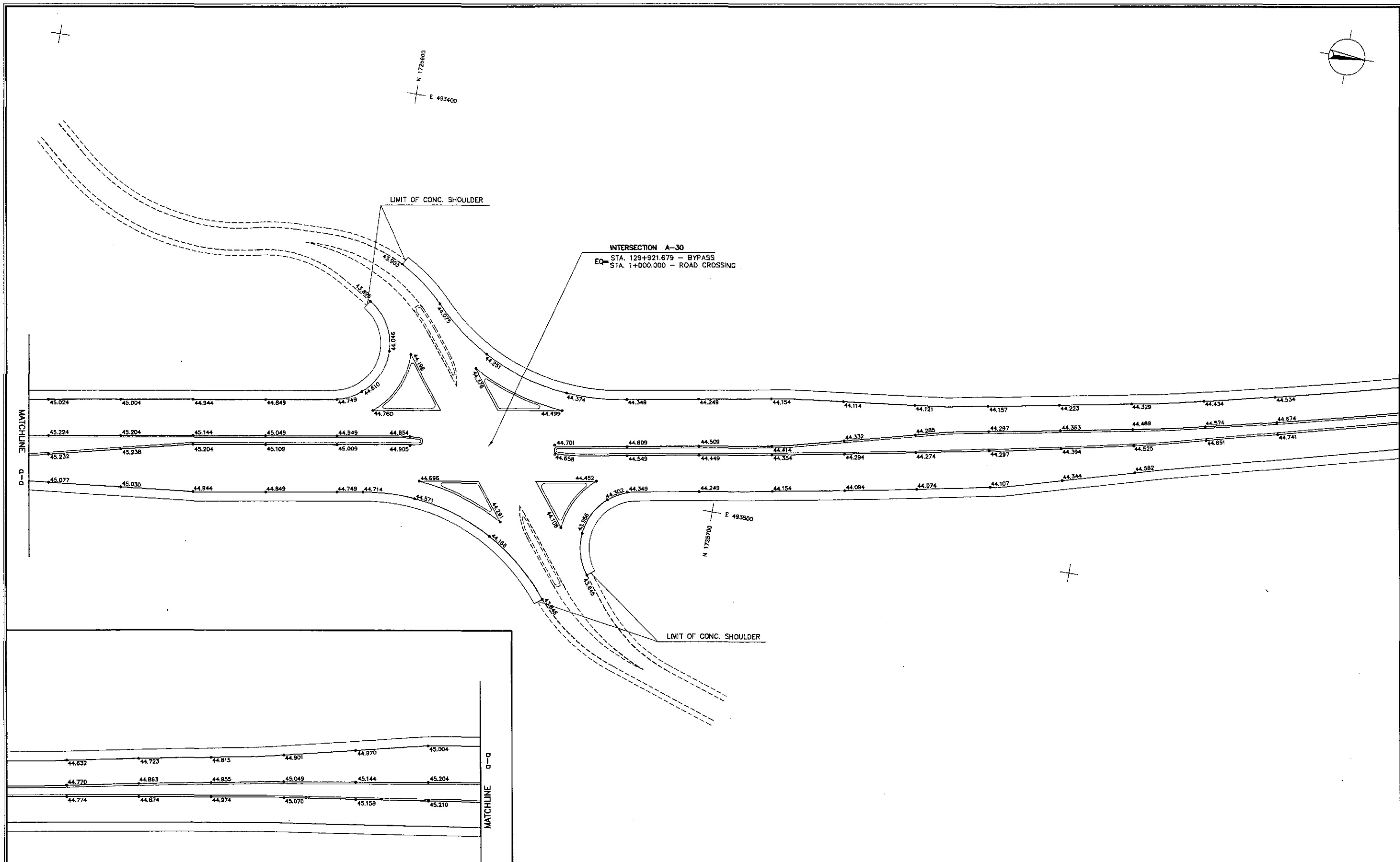


CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
1	1727411.971	491283.084	BEG. OF TRANSITION TO MEET EXISTING
2	1727418.732	491284.897	OUTER EDGE OF 7.00m WIDE PAVEMENT TO MEET EXISTING
3	1727429.095	491246.262	OUTER EDGE OF 7.00m WIDE PAVEMENT TO MEET EXISTING
4	1727422.334	491244.449	BEG. OF TAPER 2.75m FROM THE CENTERLINE
5	1727425.991	491219.537	END OF TAPER 0.25m FROM THE CENTERLINE
6	1727436.474	491180.935	BEG. OF MEDIAN RADIUS 1.25
7	1727434.051	491180.28	END OF MEDIAN RADIUS 1.25
8	1727456.673	491177.146	LIMIT OF 2.50m WIDE SHOULDER
9	1727458.271	491171.259	LIMIT OF 2.50m WIDE SHOULDER
10	1727443.246	491157.905	BEG. OF MEDIAN RADIUS 1.25
11	1727445.659	491158.56	END OF MEDIAN RADIUS 1.25
12	1727467.936	491076.531	BEG. OF TRANSITION 2.75m FROM THE CENTERLINE
13	1727474.691	491078.366	OUTER EDGE OF 7.00m WIDE PAVEMENT TO MEET EXISTING
14	1727489.21	491020.135	OUTER EDGE OF 7.00m WIDE PAVEMENT TO MEET EXISTING
15	1727482.454	491018.301	END OF TRANSITION TO MEET EXISTING
16	1727479.559	491017.514	BEG. OF TRANSITION 1.50m FROM THE CENTERLINE
17	1727472.804	491015.68	OUTER EDGE OF 7.00m WIDE PAVEMENT
18	1727455.873	491073.255	OUTER DGE OF 7.00m WIDE PAVEMENT
19	1727462.628	491075.09	BEG. OF TAPER 2.75m FROM THE CENTERLINE
20	1727453.73	491119.303	END OF TAPER 0.25m FROM THE CENTERLINE
21	1727433.478	491155.718	BEG. OF RADIUS 8.50
22	1727423.047	491161.693	END OF RADIUS 8.50 TO MEET EXISTING
23	1727421.449	491167.58	BEG. OF RADIUS 8.50 TO MEET EXISTING
24	1727427.424	491178.011	END OF RADIUS 8.50
25	1727410.271	491241.173	OUTER EDGE OF 7.00m WIDE PAVEMENT
26	1727417.026	491243.008	BEG. OF TRANSITION 2.75m FROM THE CENTERLINE
27	1727406.422	491281.577	END OF TRANSITION 2.875m FROM THE CENTERLINE
28	1727399.673	491279.721	OUTER EDGE OF 7.00m WIDE PAVEMENT



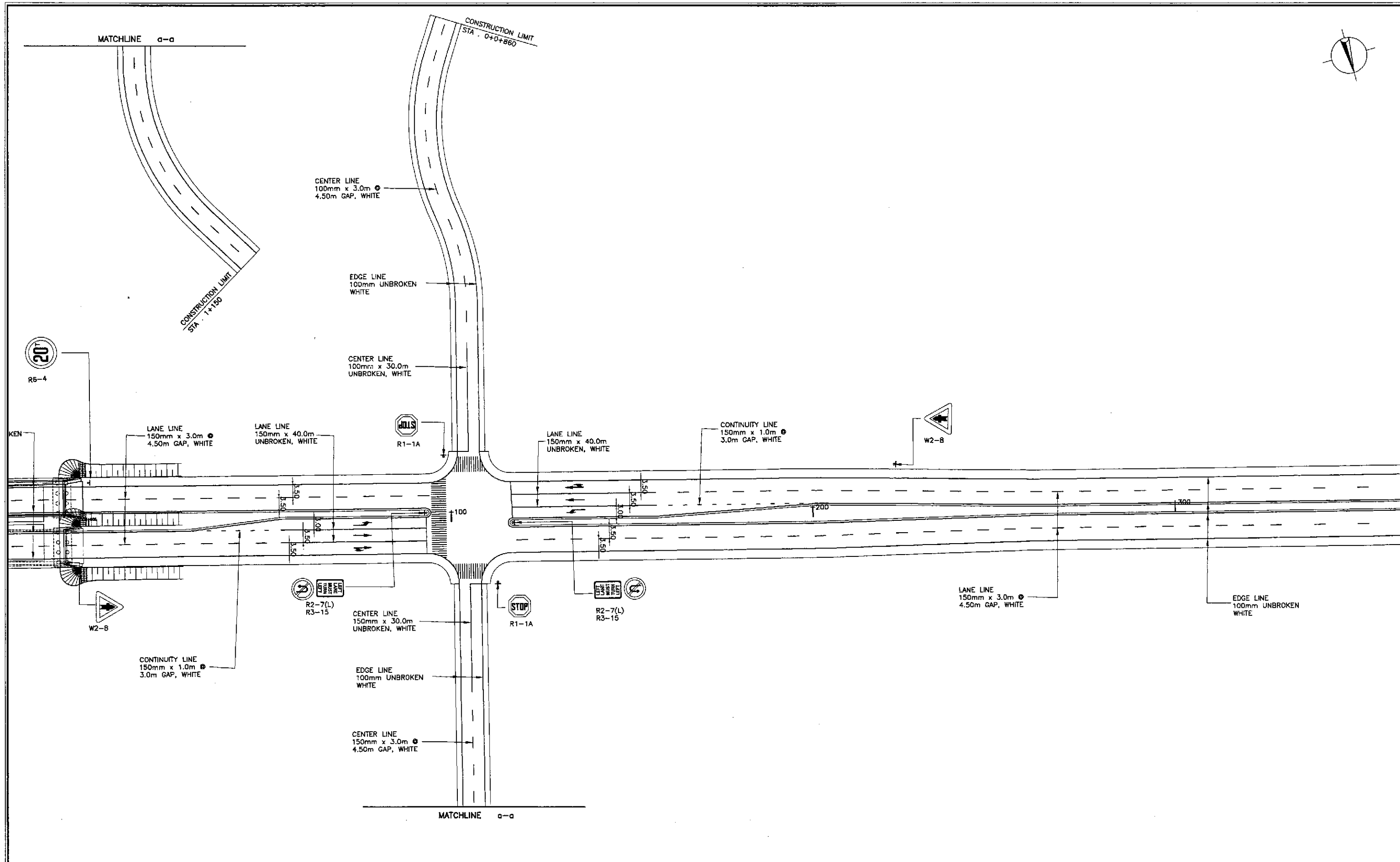
**GEOMETRIC DESIGN LAYOUT**  
**1 INTERSECTION A-33 (STA. 133+105.000) - ULTIMATE STAGE**  
 RI-18 SCALE 1:500

	DESIGNED	10/17/02		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02		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)	1:500	<b>INTERSECTION DETAIL</b> GEOMETRIC DESIGN LAYOUT INTERSECTION A-33 (ULTIMATE STAGE)	<b>RI-18</b>
	SUBMITTED	10/21/02		DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES CIC, Director IV	CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1		



1 INTERSECTION A-30 (STA. 129+921.679) - ULTIMATE STAGE  
 RI-19 SCALE 1:500

	DESIGNED	10/17/02			REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : <b>THE DETAILED DESIGN STUDY ON          UPGRADING INTER-URBAN HIGHWAY SYSTEM          ALONG THE PAN-PHILIPPINE HIGHWAY          (Plaridel, Cabanatuan and San Jose Bypasses)</b> CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE :	1:500	SHEET CONTENTS : <b>INTERSECTION DETAIL          PAVING AND GRADING PLAN          INTERSECTION A-30 (ULTIMATE STAGE)</b>	SHEET NO. :	RI-19
	CHECKED	10/19/02			BUREAU OF DESIGN		OFFICE OF THE SECRETARY			FULL SIZE A1				
	SUBMITTED	10/21/02			Submitted By:	Reviewed By:	Recommended By:	Approved By:						
				DANILO C. TRAJANO Project Director		JOSEFINA M. ALAGAR Chief, Highways Division		GILBERTO S. REYES DC, Director IV		MANUEL M. BONAN Undersecretary		SIMEON A. DATUMANONG Secretary		



**TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT**  
**INTERSECTION A-33 (STA. 133+105.000) - ULTIMATE STAGE**

1  
RI-20

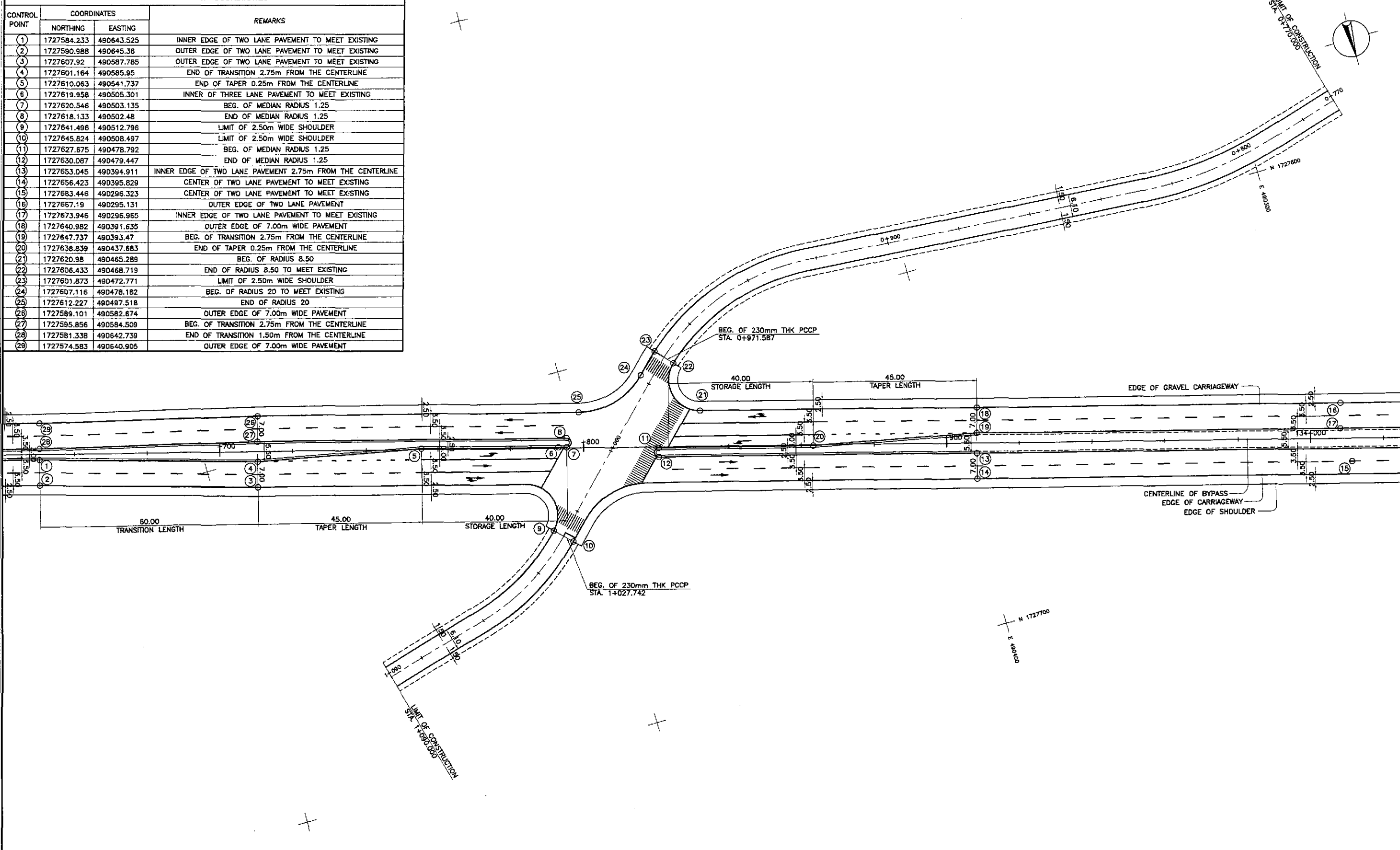
SCALE

1:500

	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	DESIGNED	10/17/02	<i>[Signature]</i>	PJM - 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)	1:500	<b>TRAFFIC SIGNS AND PAVEMENT          MARKINGS LAYOUT</b> INTERSECTION A-33 (ULTIMATE STAGE)
CHECKED	10/19/02	<i>[Signature]</i>	Submitted By:	Reviewed By:	Recommended By:	CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1		
SUBMITTED	10/21/02	<i>[Signature]</i>	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES D/C, Director IV	MANUEL M. BONGAON Undersecretary	SIMEON A. DATUMANONG Secretary		

TABLE OF COORDINATES

CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
1	1727584.233	490643.525	INNER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
2	1727590.988	490645.36	OUTER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
3	1727607.92	490587.785	OUTER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
4	1727601.164	490585.95	END OF TRANSITION 2.75m FROM THE CENTERLINE
5	1727610.063	490541.737	END OF TAPER 0.25m FROM THE CENTERLINE
6	1727619.958	490505.301	INNER OF THREE LANE PAVEMENT TO MEET EXISTING
7	1727620.546	490503.135	BEG. OF MEDIAN RADIUS 1.25
8	1727618.133	490502.48	END OF MEDIAN RADIUS 1.25
9	1727641.496	490512.796	LIMIT OF 2.50m WIDE SHOULDER
10	1727645.824	490508.497	LIMIT OF 2.50m WIDE SHOULDER
11	1727627.875	490478.792	BEG. OF MEDIAN RADIUS 1.25
12	1727630.087	490479.447	END OF MEDIAN RADIUS 1.25
13	1727653.045	490394.911	INNER EDGE OF TWO LANE PAVEMENT 2.75m FROM THE CENTERLINE
14	1727656.423	490395.829	CENTER OF TWO LANE PAVEMENT TO MEET EXISTING
15	1727683.446	490296.323	CENTER OF TWO LANE PAVEMENT TO MEET EXISTING
16	1727667.19	490295.131	OUTER EDGE OF TWO LANE PAVEMENT
17	1727673.946	490296.965	INNER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
18	1727640.982	490391.635	OUTER EDGE OF 7.00m WIDE PAVEMENT
19	1727647.737	490393.47	BEG. OF TRANSITION 2.75m FROM THE CENTERLINE
20	1727638.839	490437.883	END OF TAPER 0.25m FROM THE CENTERLINE
21	1727620.98	490465.289	BEG. OF RADIUS 8.50
22	1727606.433	490468.719	END OF RADIUS 8.50 TO MEET EXISTING
23	1727601.873	490472.771	LIMIT OF 2.50m WIDE SHOULDER
24	1727607.116	490478.182	BEG. OF RADIUS 20 TO MEET EXISTING
25	1727612.227	490497.518	END OF RADIUS 20
26	1727589.101	490582.874	OUTER EDGE OF 7.00m WIDE PAVEMENT
27	1727595.856	490584.509	BEG. OF TRANSITION 2.75m FROM THE CENTERLINE
28	1727581.338	490642.739	END OF TRANSITION 1.50m FROM THE CENTERLINE
29	1727574.583	490640.905	OUTER EDGE OF 7.00m WIDE PAVEMENT



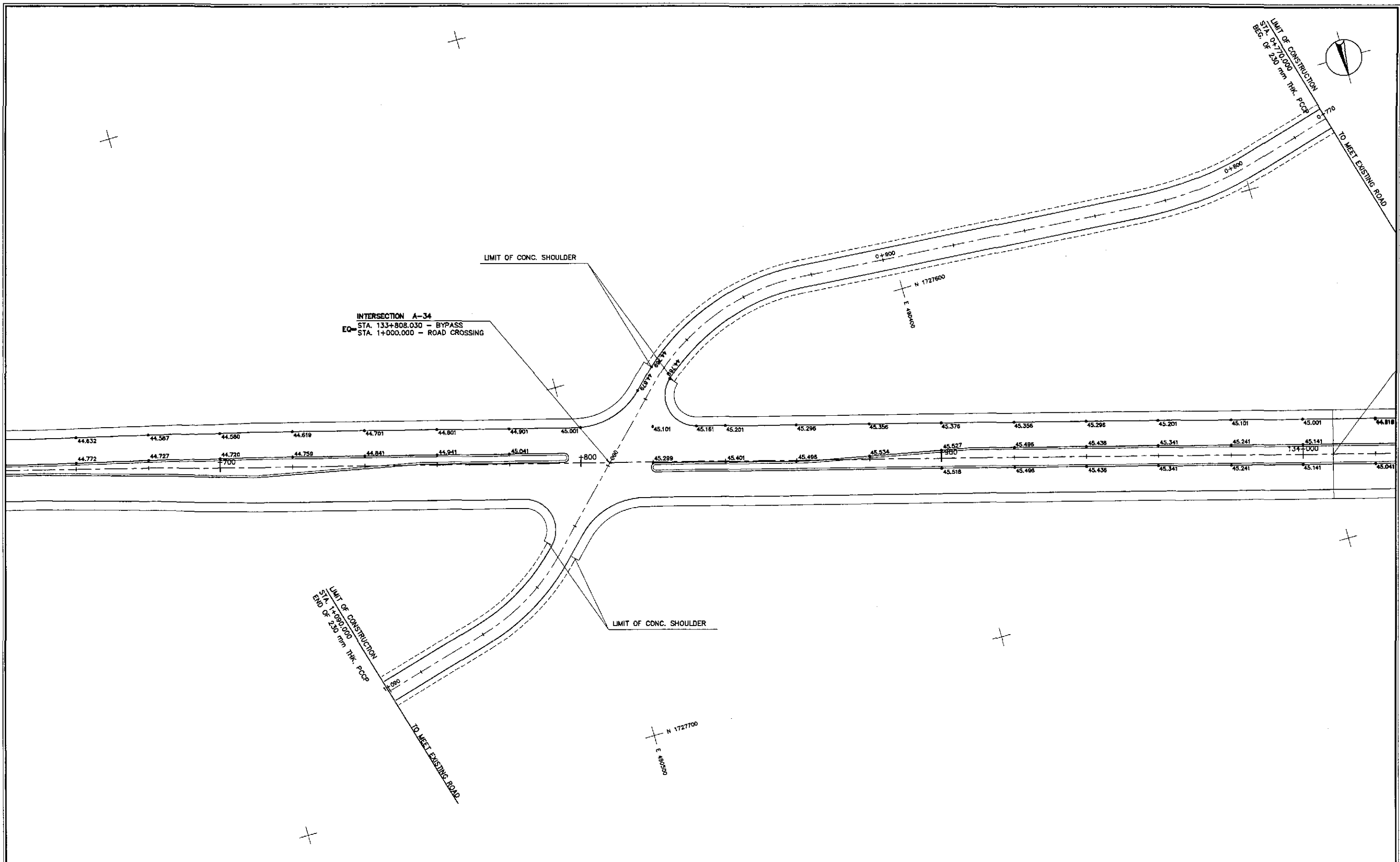
GEOMETRIC DESIGN LAYOUT

INTERSECTION A-34 (STA. 133+808.030) - ULTIMATE STAGE

1  
RI-21

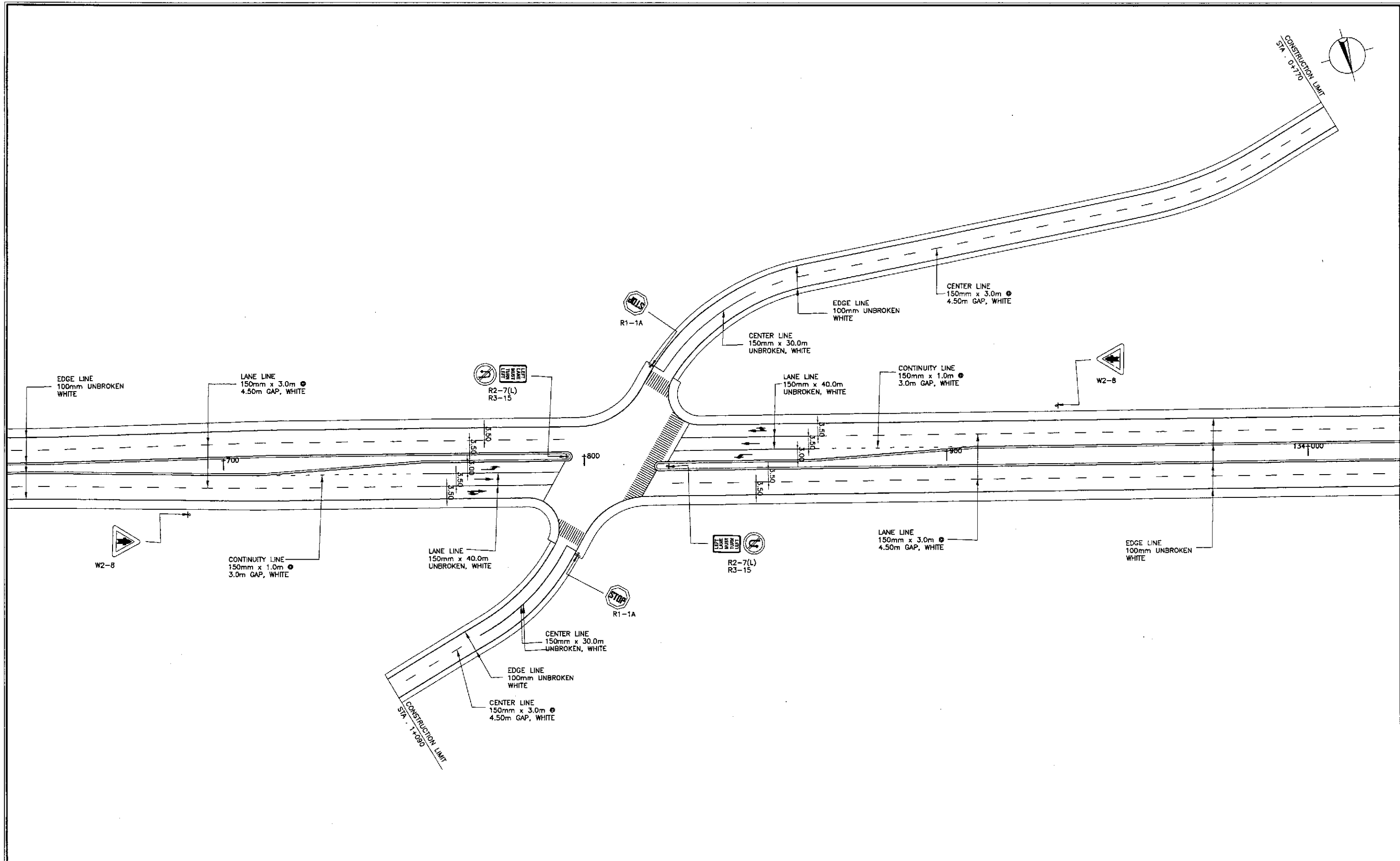
SCALE 1:500

	DESIGNED	10/17/02	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 : 1:500 FULL SIZE A1	SHEET CONTENTS : INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-34 (ULTIMATE STAGE)	SHEET NO. : RI-21
	CHECKED	10/19/02	ORONCE	Submitted By:	Reviewed By:	Recommended By:					
	SUBMITTED	10/21/02	S. GOMEZ	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV					



1
**PAVING AND GRADING PLAN**  
**INTERSECTION A-34 (STA. 133+808.030) - ULTIMATE STAGE**  
 RI-22 SCALE 1:500

<b>JICA</b> JAPAN INTERNATIONAL COOPERATION AGENCY	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/17/02	<i>[Signature]</i>		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pinaridel, Cabanatuan and San Jose Bypasses)			1:500	<b>INTERSECTION DETAIL</b> PAVING AND GRADING PLAN INTERSECTION A-34 (ULTIMATE STAGE)	<b>RI-22</b>
SUBMITTED	10/21/02	<i>[Signature]</i>	CABANATUAN BYPASS - CONTRACT PACKAGE IV			FULL SIZE A1				
				BUREAU OF DESIGN						
				OFFICE OF THE SECRETARY						
				Submitted By:	Reviewed By:	Recommended By:	Approved By:			
				DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	(See cover sheet for Signature/Approval) SIMEON A. DATUMANONG Secretary		

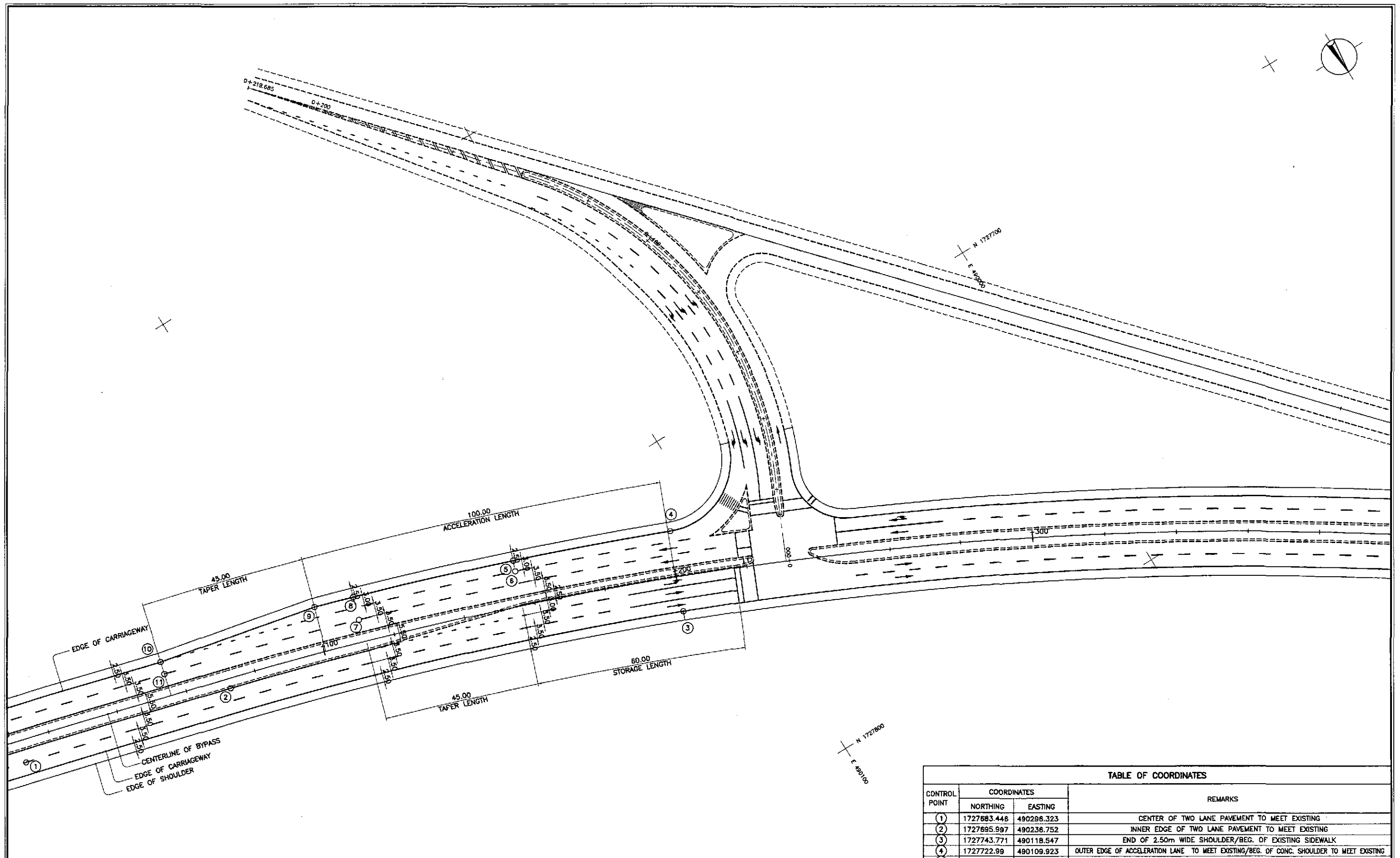


**TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT**  
**INTERSECTION A-34 (STA. 133+808.030) - ULTIMATE STAGE**

1  
RI-23

SCALE 1:500

	DESIGNED	10/17/02	<i>[Signature]</i>		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS					PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	<i>[Signature]</i>		Submitted By:	Reviewed By:	Recommended By:	Recommended By:	Approved By:	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	1:500	TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT INTERSECTION A-34 (ULTIMATE STAGE)	RI-23
	SUBMITTED	10/21/02	<i>[Signature]</i>		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				



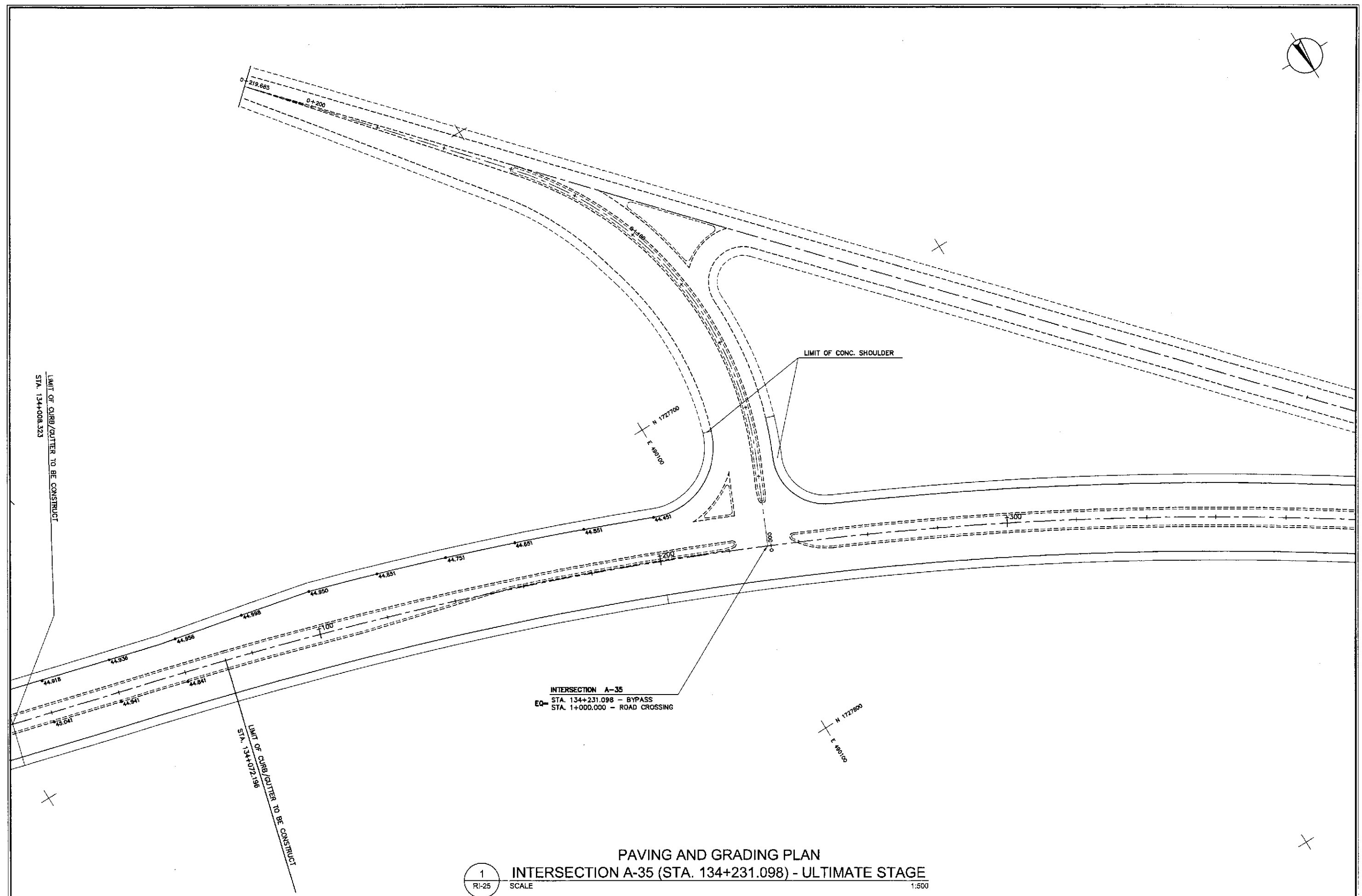
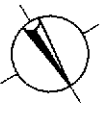
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RI-24 SCALE 1:500

**GEOMETRIC DESIGN LAYOUT**  
**INTERSECTION A-35 (STA. 134+231.098) - ULTIMATE STAGE**

TABLE OF COORDINATES			
CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
(1)	1727683.446	490296.323	CENTER OF TWO LANE PAVEMENT TO MEET EXISTING
(2)	1727695.997	490236.752	INNER EDGE OF TWO LANE PAVEMENT TO MEET EXISTING
(3)	1727743.771	490118.547	END OF 2.50m WIDE SHOULDER/BEG. OF EXISTING SIDEWALK
(4)	1727722.98	490109.923	OUTER EDGE OF ACCELERATION LANE TO MEET EXISTING/BEG. OF CONC. SHOULDER TO MEET EXISTING
(5)	1727706.831	490151.414	OUTER EDGE OF THREE LANE PAVEMENT
(6)	1727709.65	490152.441	INNER EDGE OF ACCELERATION LANE TO MEET EXISTING
(7)	1727698.399	490196.519	OUTER EDGE OF INNER LANE TO MEET EXISTING
(8)	1727692.198	490194.571	OUTER EDGE OF THE ACCELERATION LANE
(9)	1727688.909	490205.246	END OF ACCELERATION LANE/BEG. OF TAPER
(10)	1727679.529	490249.698	END OF TAPER
(11)	1727682.921	490250.562	OUTER EDGE OF INNER LANE TO MEET EXISTING

	DESIGNED	10/17/02	SIGNATURE	<i>[Signature]</i>	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :		
	CHECKED	10/19/02	SIGNATURE	<i>[Signature]</i>		Submitted By:	PJHL - PMO	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)			1:500	INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-35 (ULTIMATE STAGE)	RI-24
	SUBMITTED	10/21/02	SIGNATURE	<i>[Signature]</i>		Reviewed By:	BUREAU OF DESIGN	CABANATUAN BYPASS - CONTRACT PACKAGE IV			FULL SIZE A1		
					Recommended By:	OFFICE OF THE SECRETARY							
					Approved By:								
					MANUEL M. BONOAN	Undersecretary							
					DANILD C. TRAJANO	Project Director							
					JOSEFINA M. ALAGAR	Chief, Highways Division							
					GILBERTO S. REYES	Dir. Director IV							
					SIMEON A. DATUMANONG	Secretary							





INTERSECTION A-35  
 STA. 134+231.098 - BYPASS  
 EQ- STA. 1+000.000 - ROAD CROSSING

1  
 RI-25

PAVING AND GRADING PLAN  
 INTERSECTION A-35 (STA. 134+231.098) - ULTIMATE STAGE  
 SCALE 1:500

**JICA**  
 JAPAN INTERNATIONAL COOPERATION AGENCY

**KAEI** KATAHIRA & ENGINEERS INTERNATIONAL  
**YEO** YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/17/02	[Signature]
CHECKED	10/19/02	[Signature]
SUBMITTED	10/21/02	[Signature]

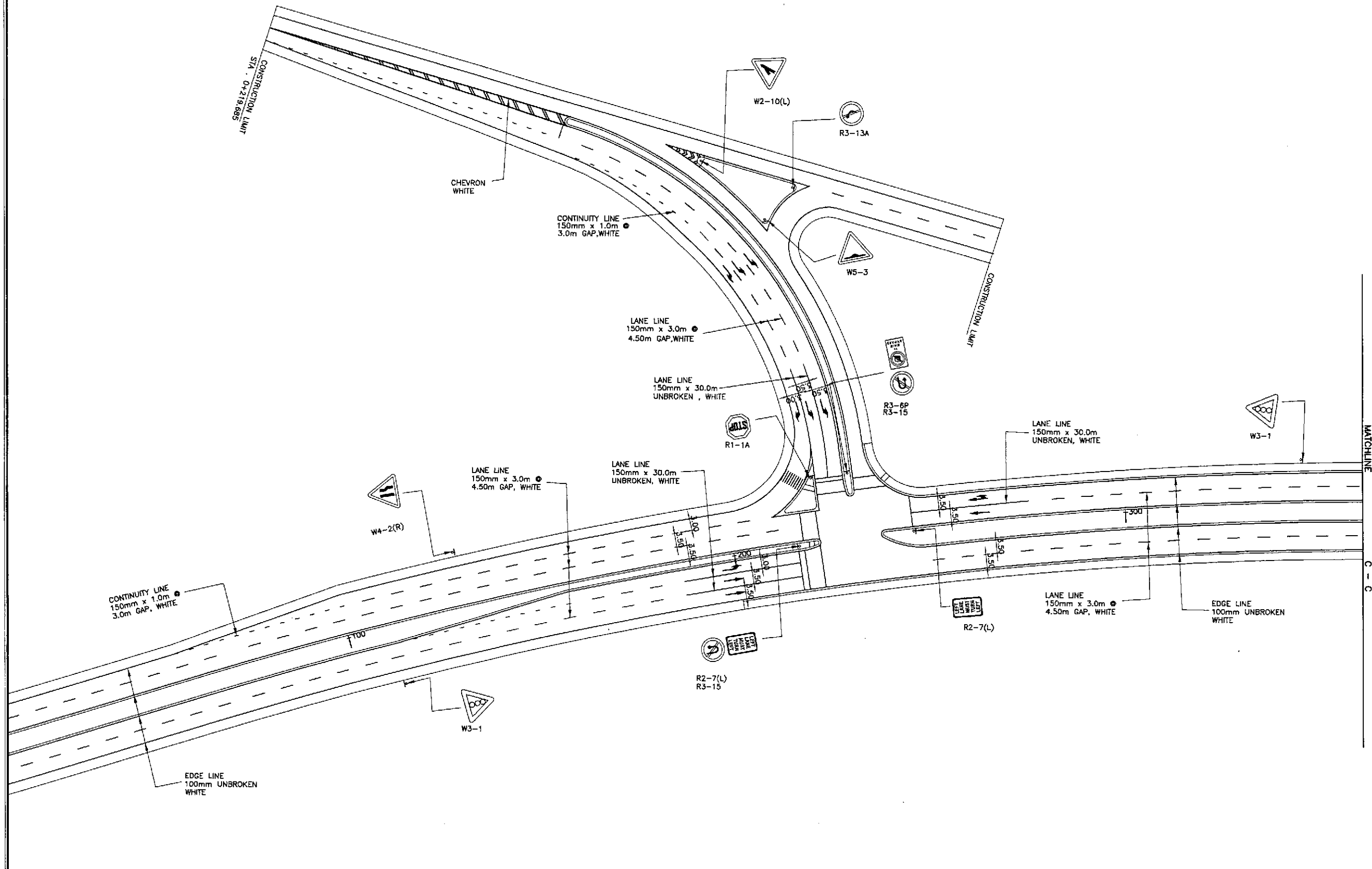
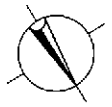
BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Approved By:
DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary
		SIMEON A. DATUMANONG Secretary	

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

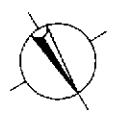
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 INTERSECTION DETAIL  
 PAVING AND GRADING PLAN  
 INTERSECTION A-35 (ULTIMATE STAGE)

SHEET NO. :  
 RI-25



1
**TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT**  
**INTERSECTION A-35 (STA. 134+231.098) - ULTIMATE STAGE**  
 SCALE 1:500

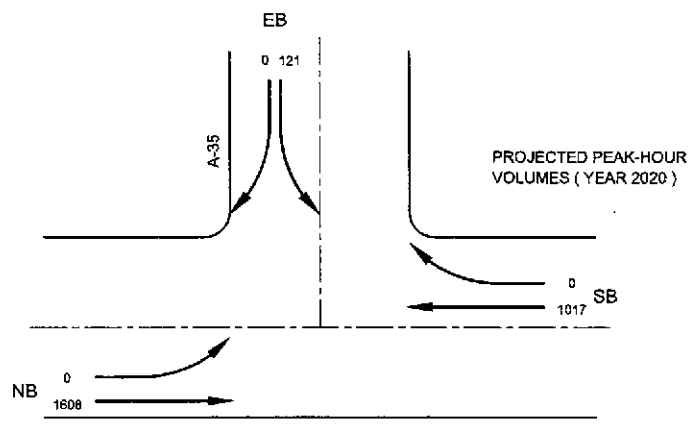
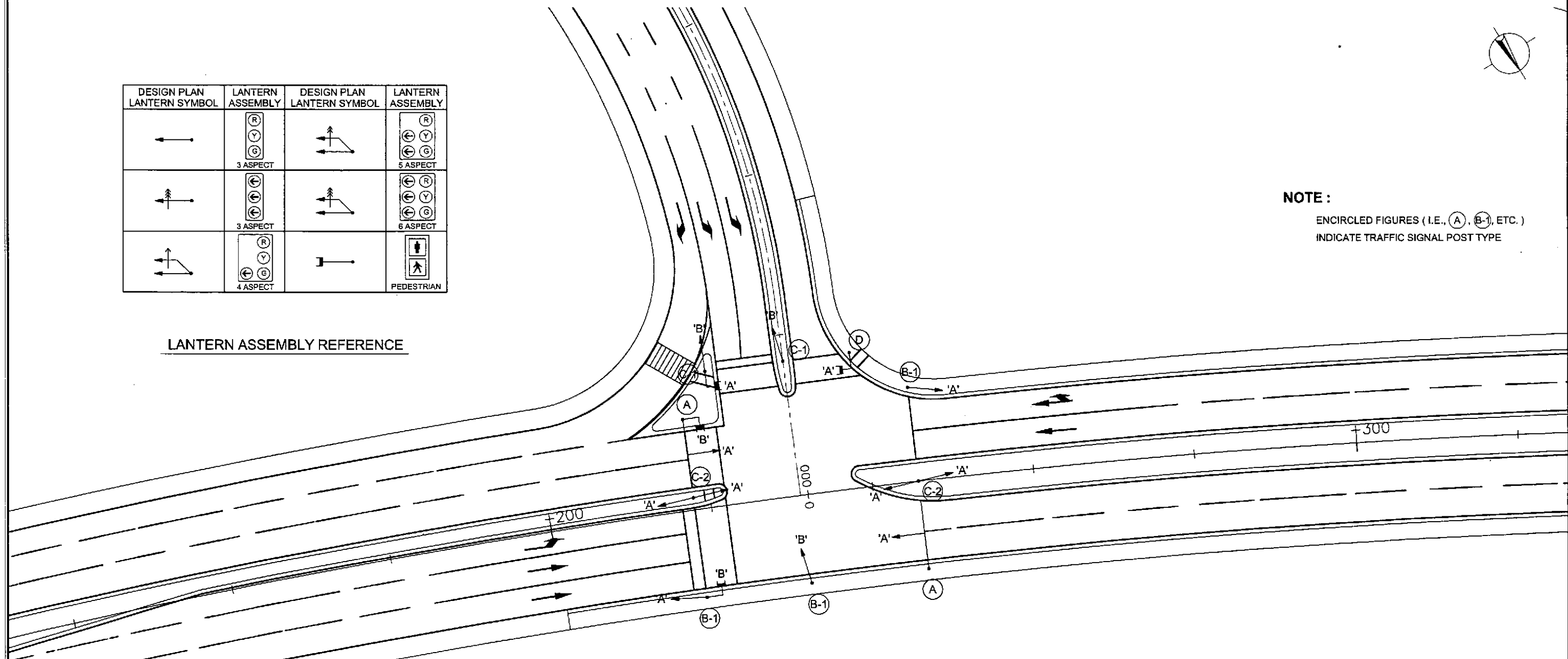
		DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	10/17/02	<i>[Signature]</i>		PJML - PMO	BUREAU OF DESIGN	OFFICE OF THE SECRETARY	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)		1:500	<b>TRAFFIC SIGNS AND PAVEMENT          MARKINGS LAYOUT</b> INTERSECTION A-35 (ULTIMATE STAGE)		RI-26
	CHECKED	10/19/02	<i>[Signature]</i>		Submitted By:	Reviewed By:	Recommended By:	Recommended By:	Approved By:	<b>CABANATUAN BYPASS - CONTRACT PACKAGE IV</b>		FULL SIZE A1	
SUBMITTED	10/24/02	<i>[Signature]</i>	DANILDO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES DIC, Director IV	MANUEL M. BONCAN Undersecretary	SIMEON A. DATUMANONG Secretary						



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

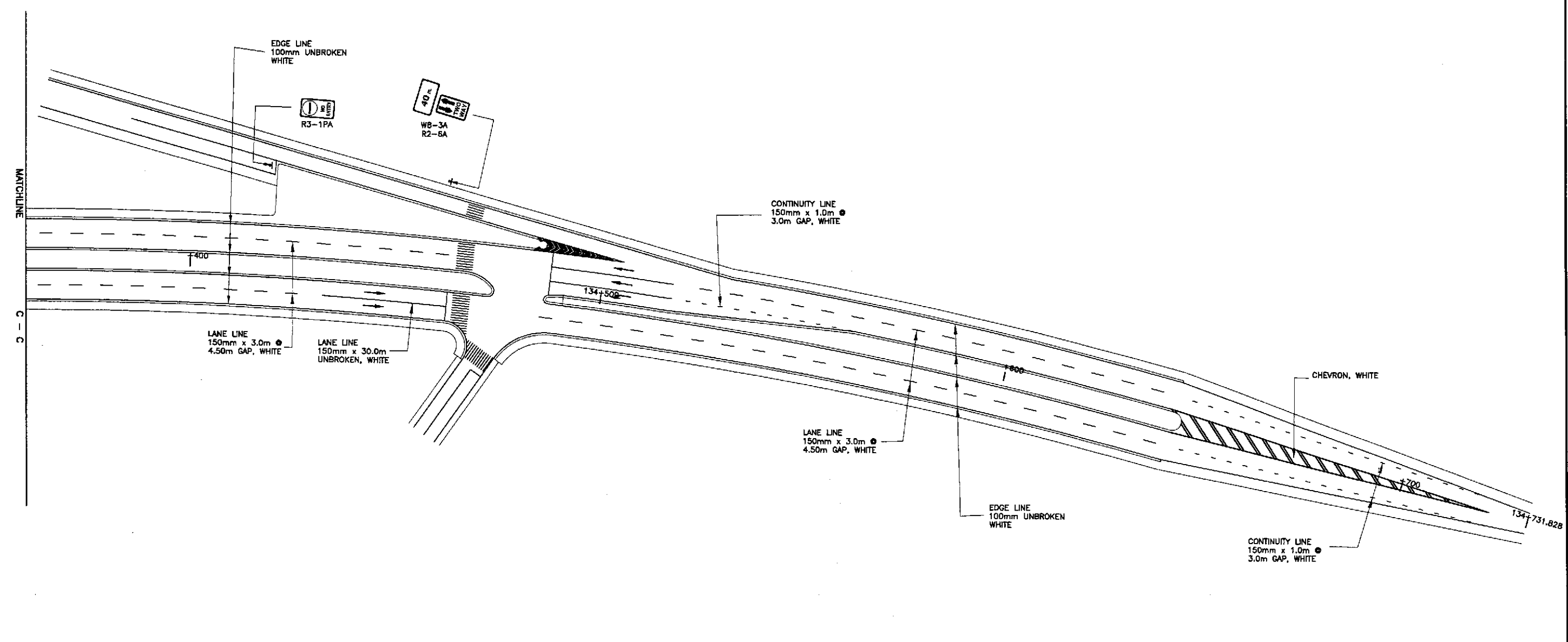
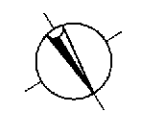


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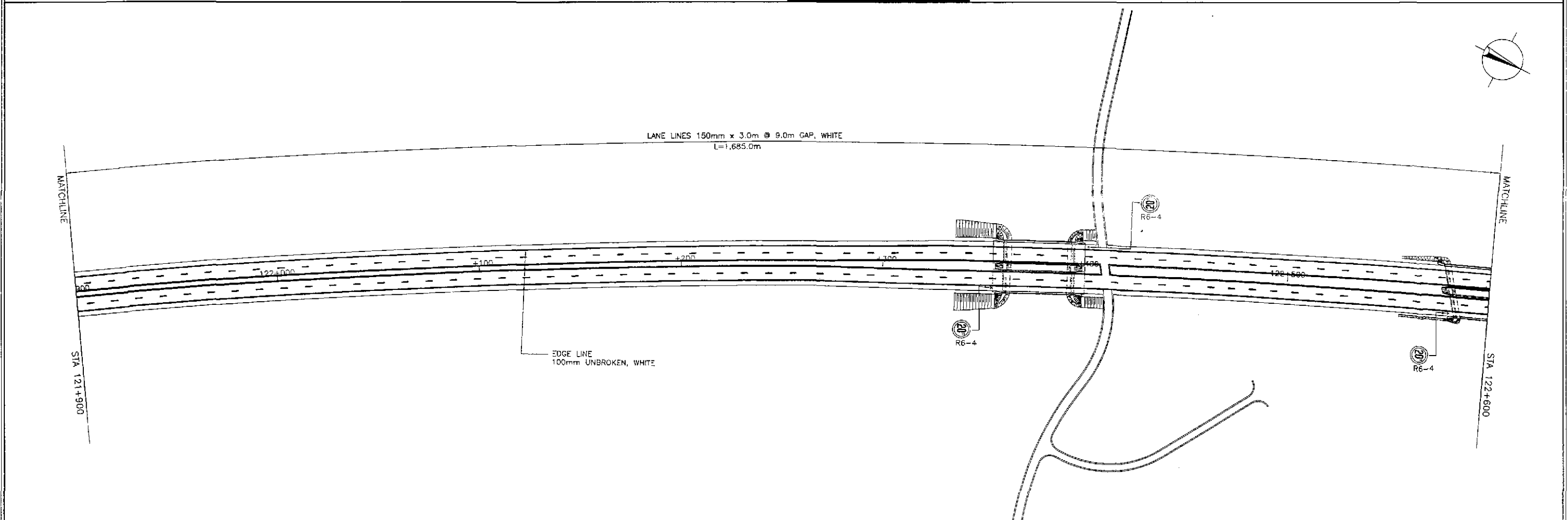
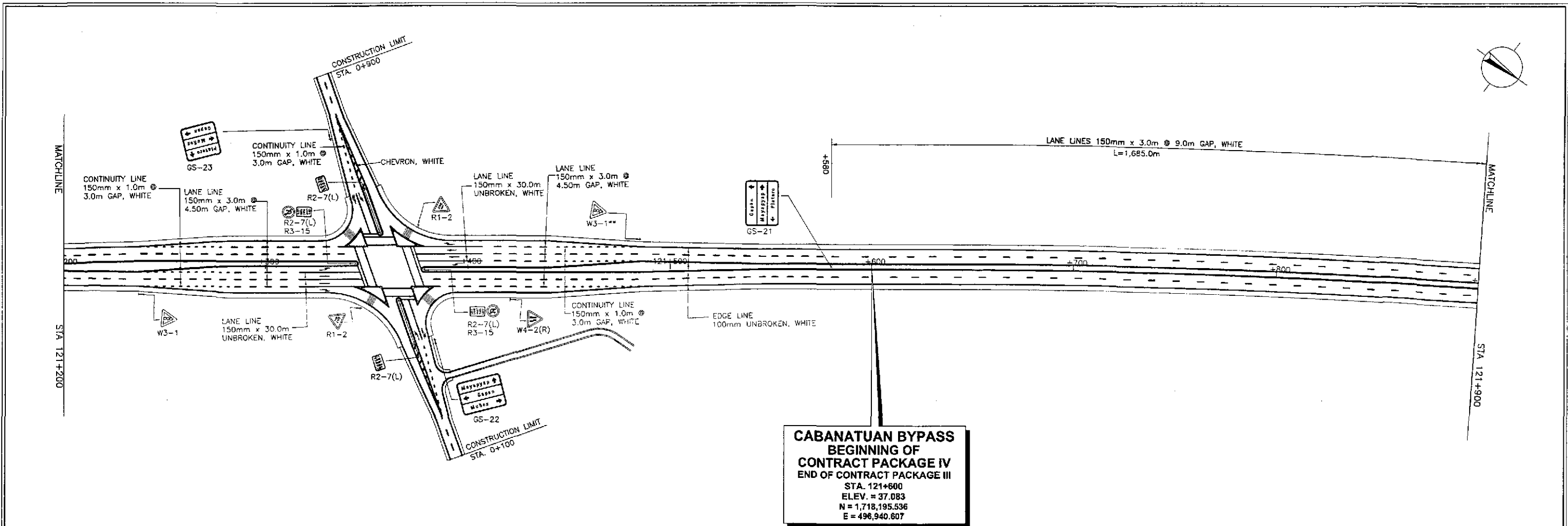
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Y:	2.0	2.0
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1 INTERSECTION A-35 (STA. 134+231.098) - ULTIMATE STAGE  
RI-27 SCALE 1:250

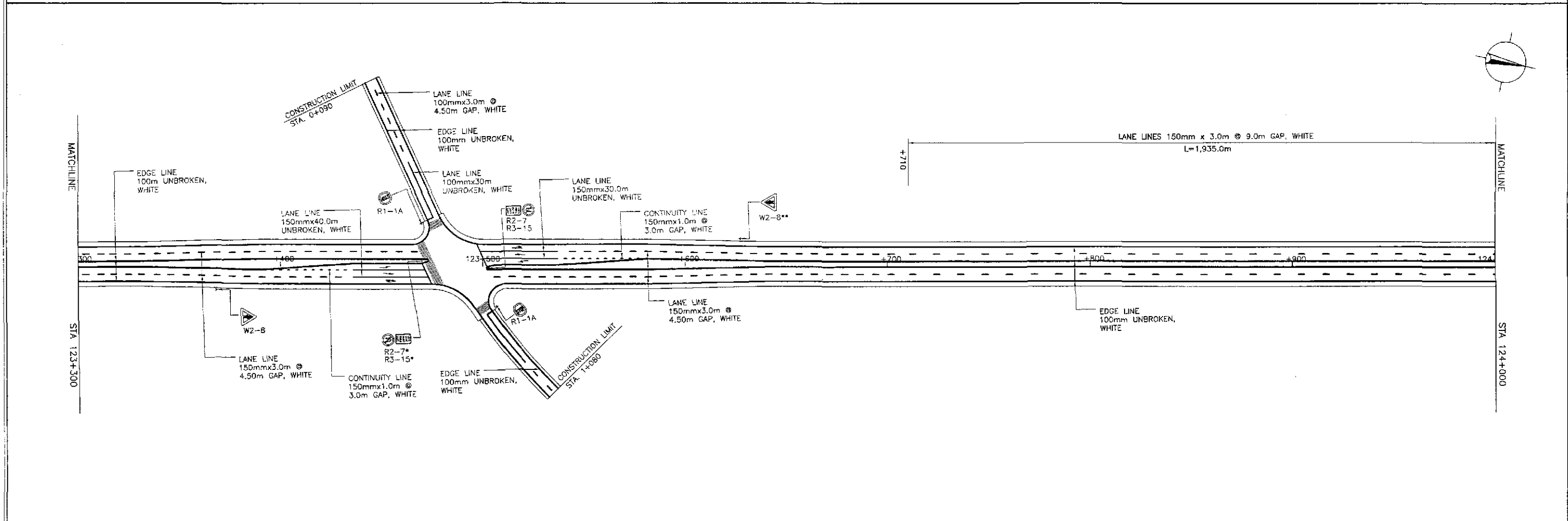
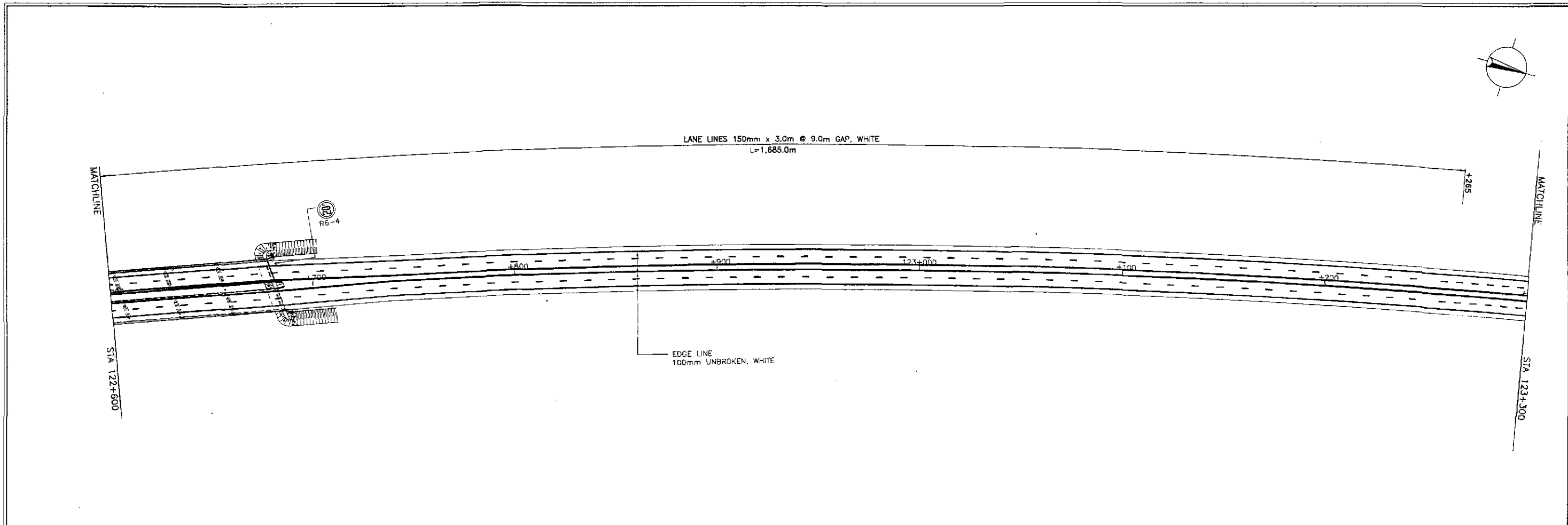
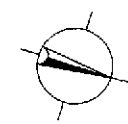
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	CHECKED	10/19/02			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)			1:250	TRAFFIC SIGNAL LIGHT LAYOUT INTERSECTION A-35 (ULTIMATE STAGE)	RI-27
SUBMITTED	10/21/02		TEAM LEADER	CABANATUAN BYPASS - CONTRACT PACKAGE IV			FULL SIZE A1			

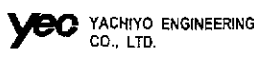


		DATE	SIGNATURE	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	10/18/02	<i>[Signature]</i>		BUREAU OF DESIGN	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)			1:500	TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT	RI-28
	CHECKED	10/19/02	<i>[Signature]</i>		OFFICE OF THE SECRETARY	CABANATUAN BYPASS - CONTRACT PACKAGE IV			FULL SIZE A1	INTERSECTION A-35a (ULTIMATE STAGE)	
				Submitted By:	Reviewed By:	Recommended By:	Approved By:				
				DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary				
				SUBMITTED	10/21/02	<i>[Signature]</i>					



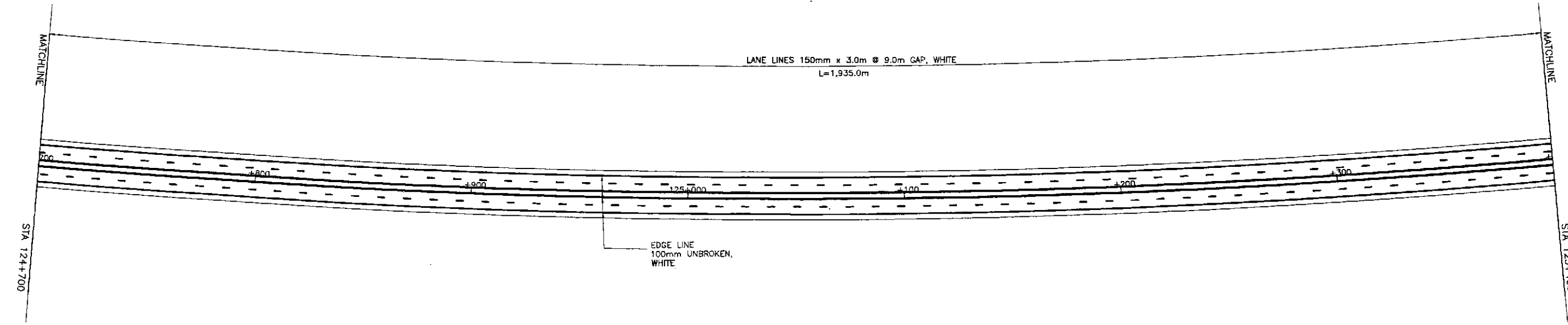
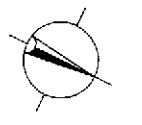
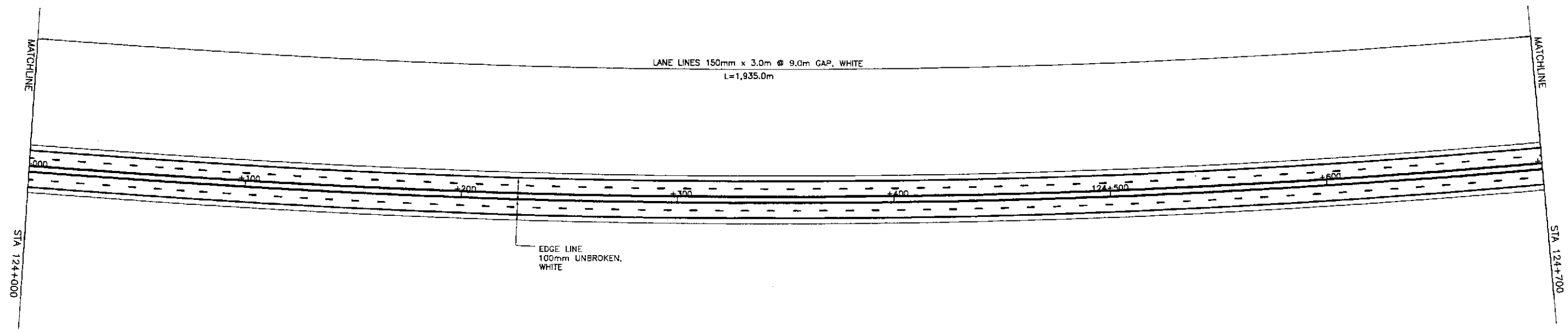
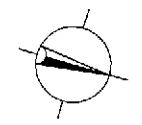
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	CHECKED	10/19/02		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)		1:1000	TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT (ULTIMATE STAGE)	RM-01
	SUBMITTED	10/24/02	DANILLO C. TRAJANO Project Director		CABANATUAN BYPASS - CONTRACT PACKAGE IV FULL SIZE A1		STA. 121+600 - STA. 122+600	



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

DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			
10/17/02		<i>S. Luna</i>	BUREAU OF DESIGN			
10/19/02		<i>S. Gose</i>	OFFICE OF THE SECRETARY		OFFICE OF THE SECRETARY	
10/21/02		<i>Manuel M. Bondon</i>	Submitted By:	Reviewed By:	Recommended By:	Approved By:
			DANILO C. TRAJANG Project Director	JOSEFINA M. ALAGAR Chief, Highway Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDON Undersecretary
						SIMEON A. DATUMANONG Secretary

PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	1:1000	TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT (ULTIMATE STAGE) STA. 122+600 - STA. 124+000	RM-02
CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1		



**JICA**  
 JAPAN INTERNATIONAL COOPERATION AGENCY

**KATAHIRA & ENGINEERS**  
 INTERNATIONAL

**YEO**  
 YACHIYO ENGINEERING CO., LTD.

DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
DESIGNED: 10/17/02	<i>[Signature]</i>	BUREAU OF DESIGN OFFICE OF THE SECRETARY
CHECKED: 10/19/02	<i>[Signature]</i>	
SUBMITTED: 10/21/02	<i>[Signature]</i>	
	Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division
		Recommended By: GILBERTO S. REYES OK, Director IV
		Recommended By: MANUEL M. BONDAN Undersecretary
		Approved By: SIMEON A. DATUMANONG Secretary

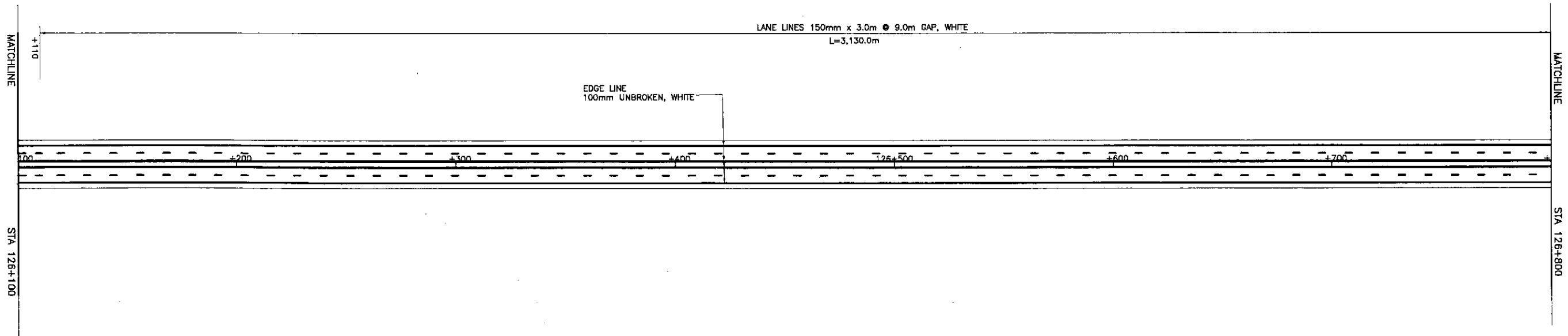
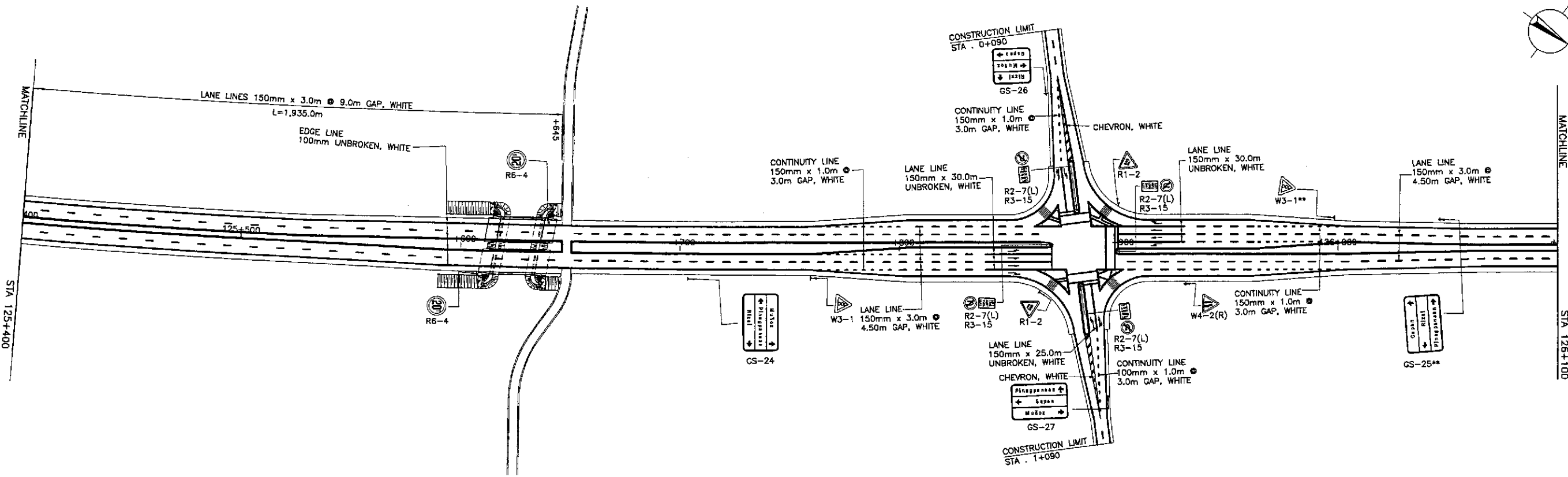
PROJECT AND LOCATION :  
 THE DETAILED DESIGN STUDY ON  
 UPGRADING INTER-URBAN HIGHWAY SYSTEM  
 ALONG THE PAN-PHILIPPINE HIGHWAY  
 (Plaridel, Cabanatuan and San Jose Bypasses)

**CABANATUAN BYPASS - CONTRACT PACKAGE IV**

SCALE :  
 1:1000  
 FULL SIZE A1

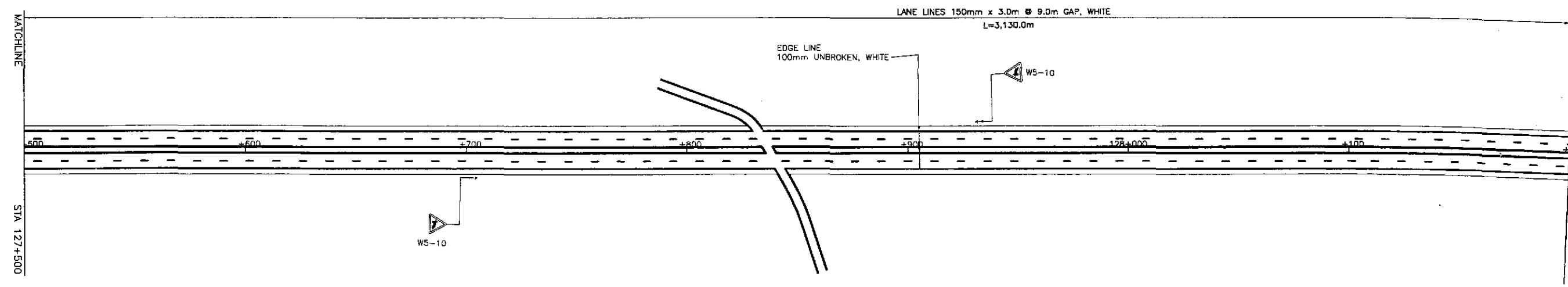
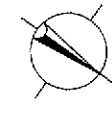
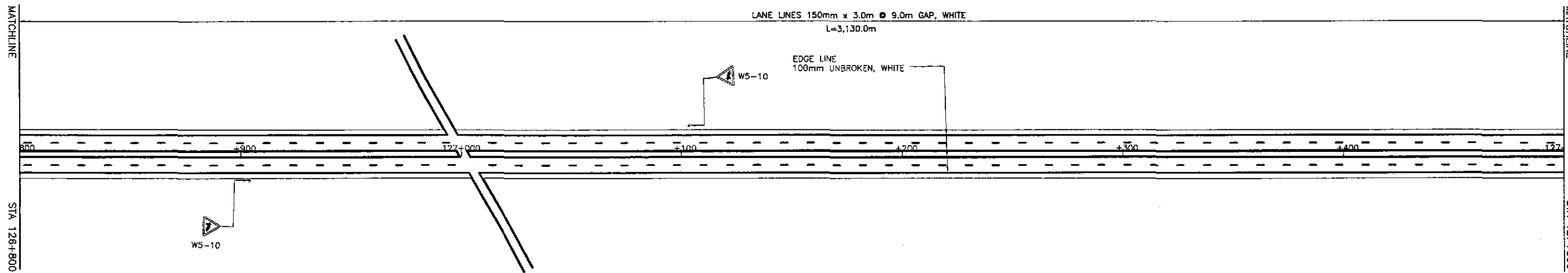
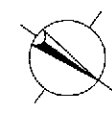
SHEET CONTENTS :  
**TRAFFIC SIGNS AND PAVEMENT  
 MARKINGS LAYOUT**  
 (ULTIMATE STAGE)  
 STA. 124+000 - STA. 125+400

SHEET NO. :  
**RM-03**

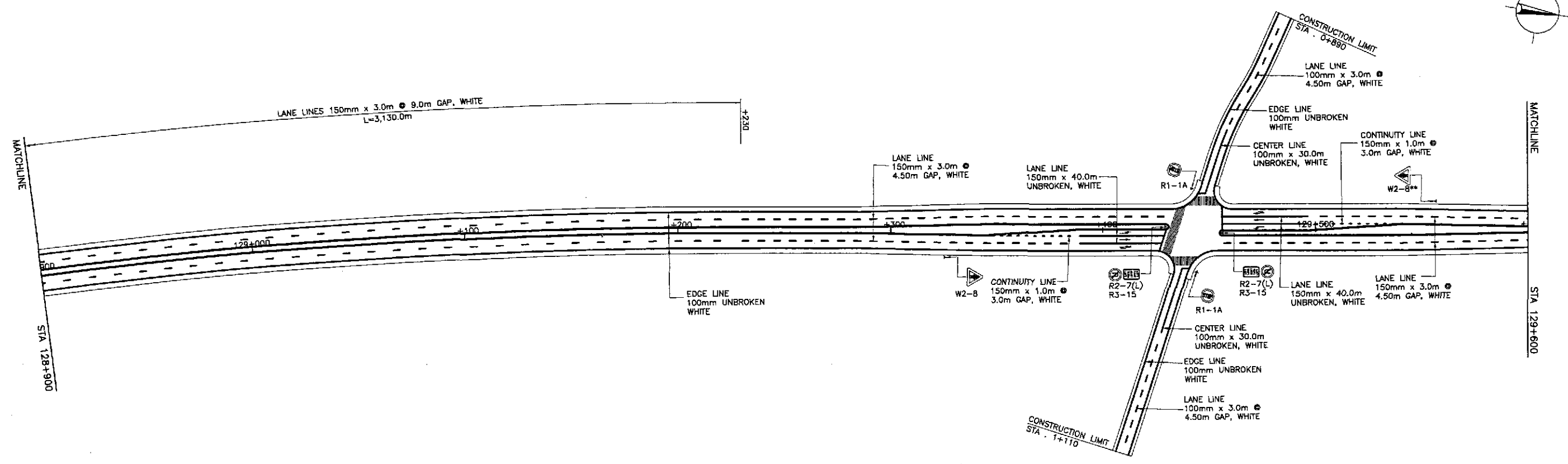
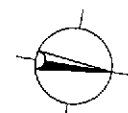
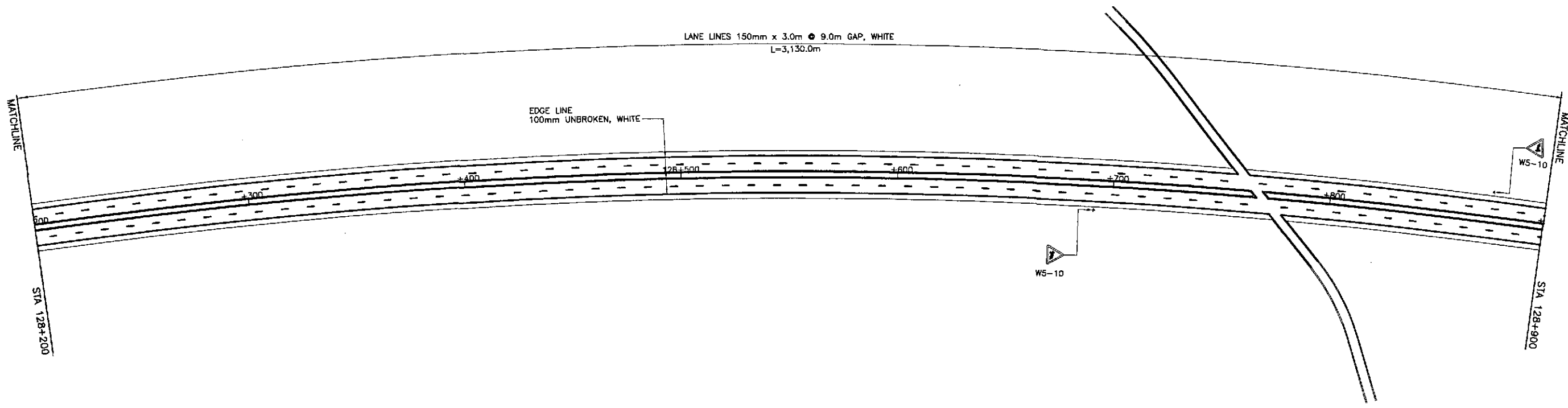
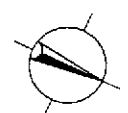


 JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS YEO YACHIYO ENGINEERING CO., LTD.	DESIGNED	10/17/02		 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02			PUHL - PMO Submitted By:	BUREAU OF DESIGN Reviewed By:	OFFICE OF THE SECRETARY Recommended By:	Approved By:		
SUBMITTED	10/21/02		DANILLO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES DIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary	FULL SIZE A1		





	DESIGNED	10/17/02			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 : TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT ( ULTIMATE STAGE ) STA. 126+800 - STA. 128+200	SHEET NO. : <b>RM-05</b>	
	CHECKED	10/19/02			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) MANUEL M. BONOAN Undersecretary					Approved By: (See cover sheet for Signature/Approval) SIMEON A. DATUMANONG Secretary
	SUBMITTED	10/21/02			TEAM LEADER DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONOAN Undersecretary					SIMEON A. DATUMANONG Secretary



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

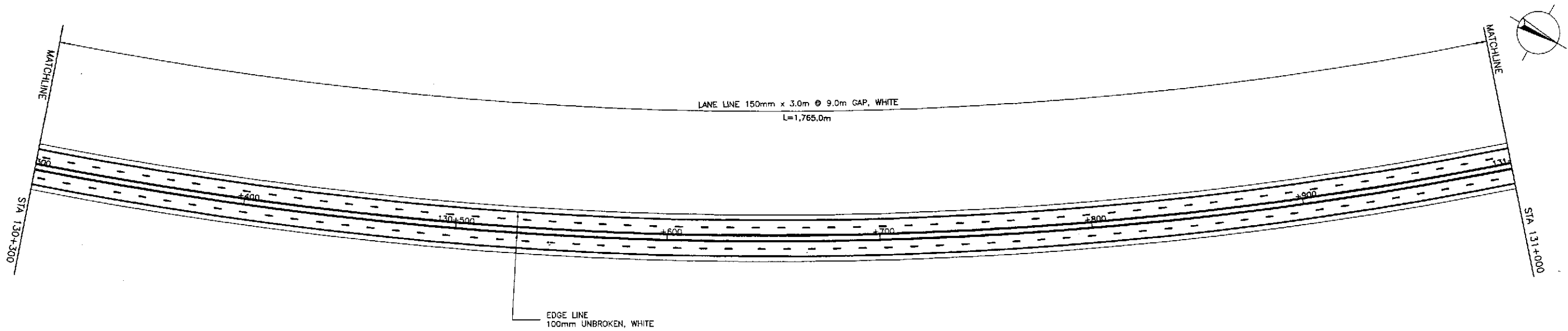
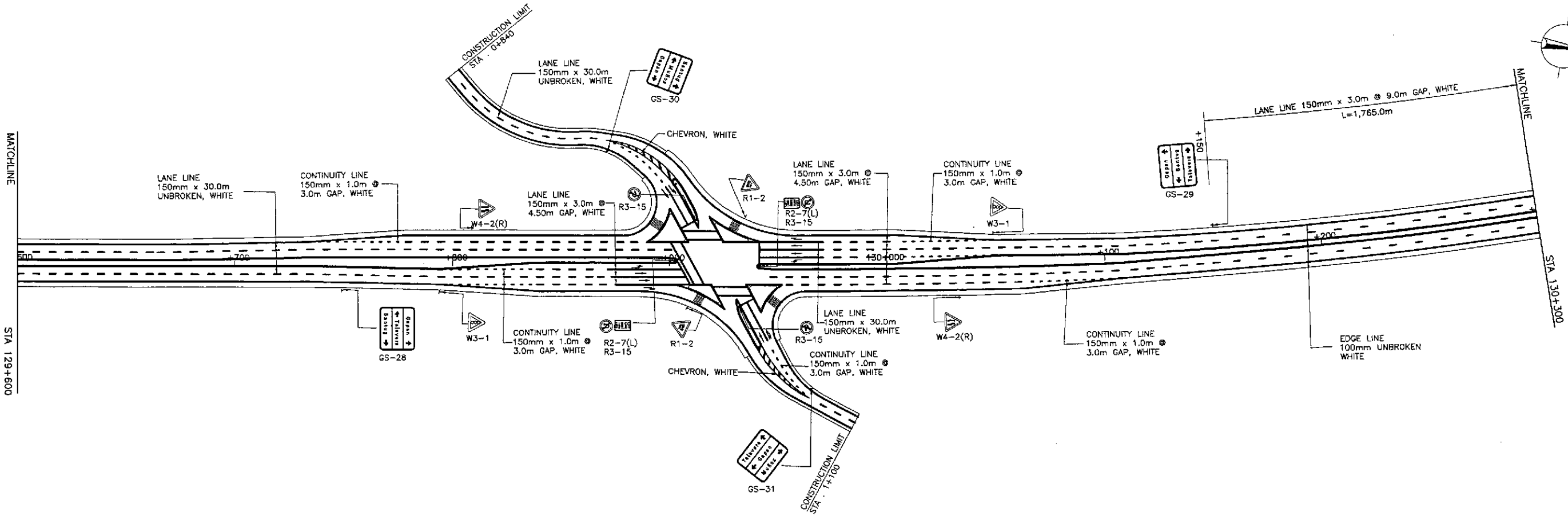
DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES	DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			
DESIGNED: 10/17/02	<i>S. LUNA</i>		BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
CHECKED: 10/19/02	<i>S. GASS</i>		Submitted By:	Reviewed By:	Recommended By:	Approved By:
SUBMITTED: 10/21/02	<i>M. ...</i>		DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	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)  
**CABANATUAN BYPASS - CONTRACT PACKAGE IV**

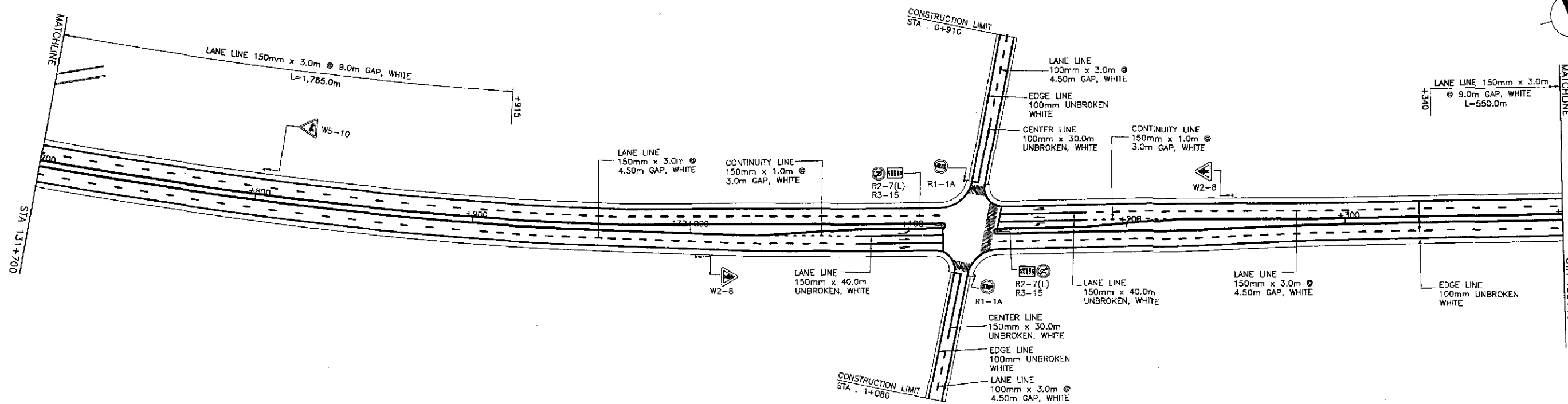
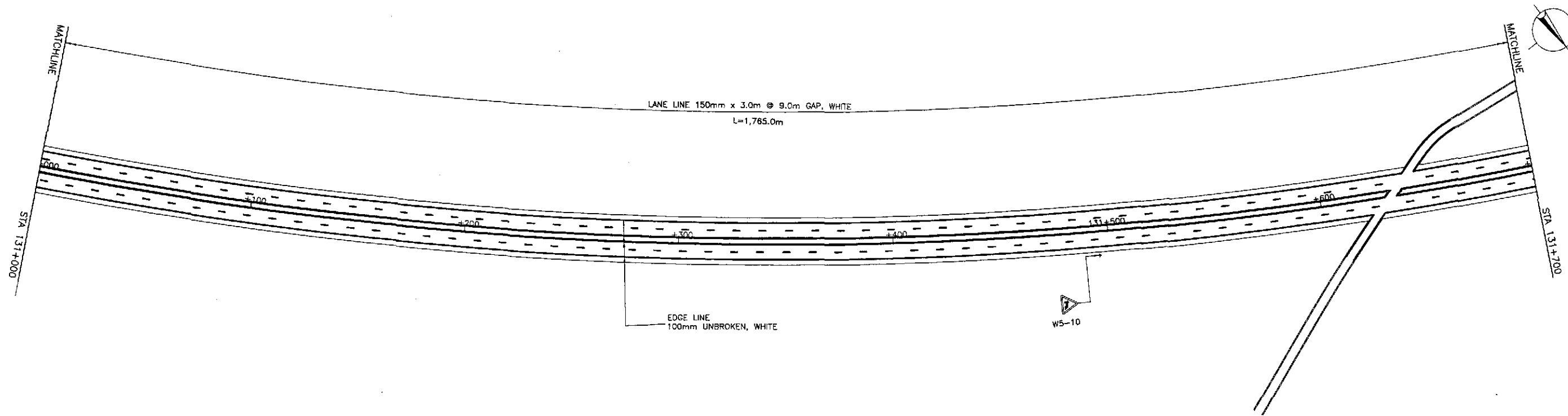
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 FULL SIZE A1

SHEET CONTENTS :  
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 MARKINGS LAYOUT**  
 (ULTIMATE STAGE)  
 STA. 128+200 - STA. 129+600

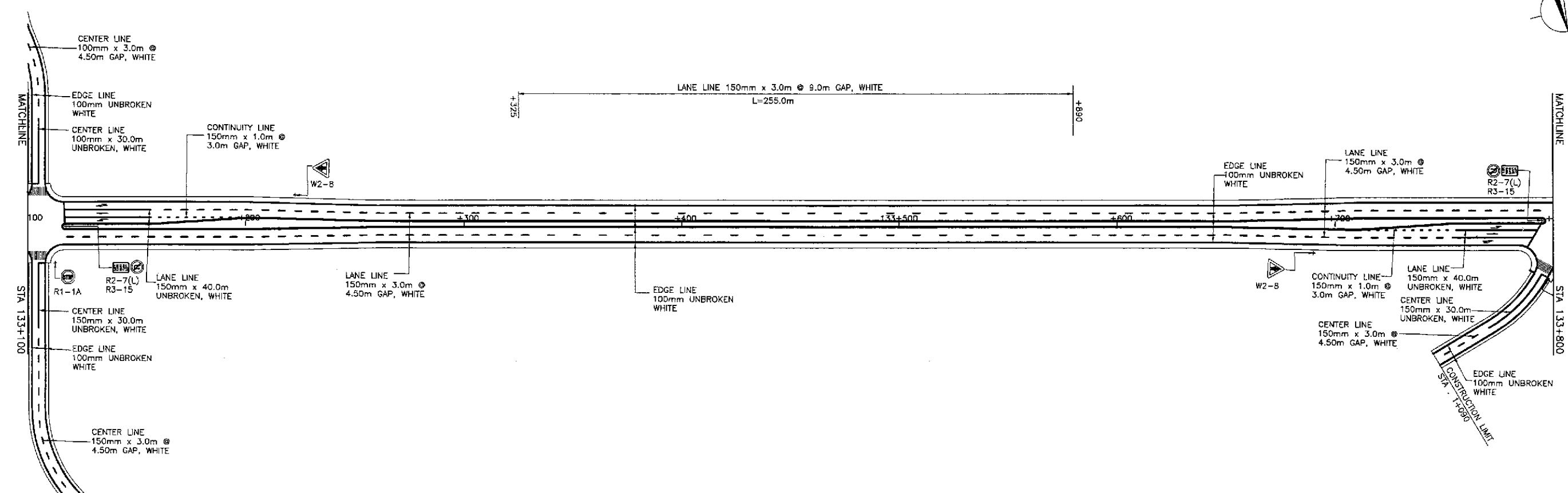
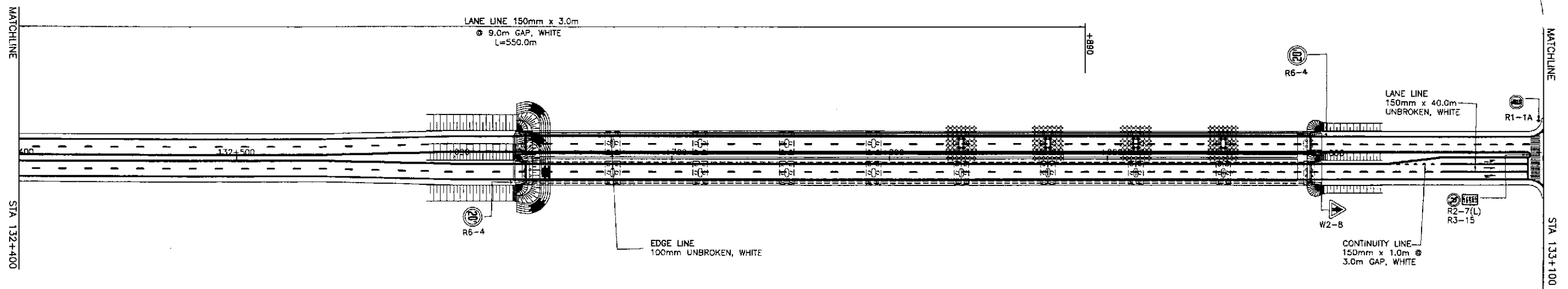
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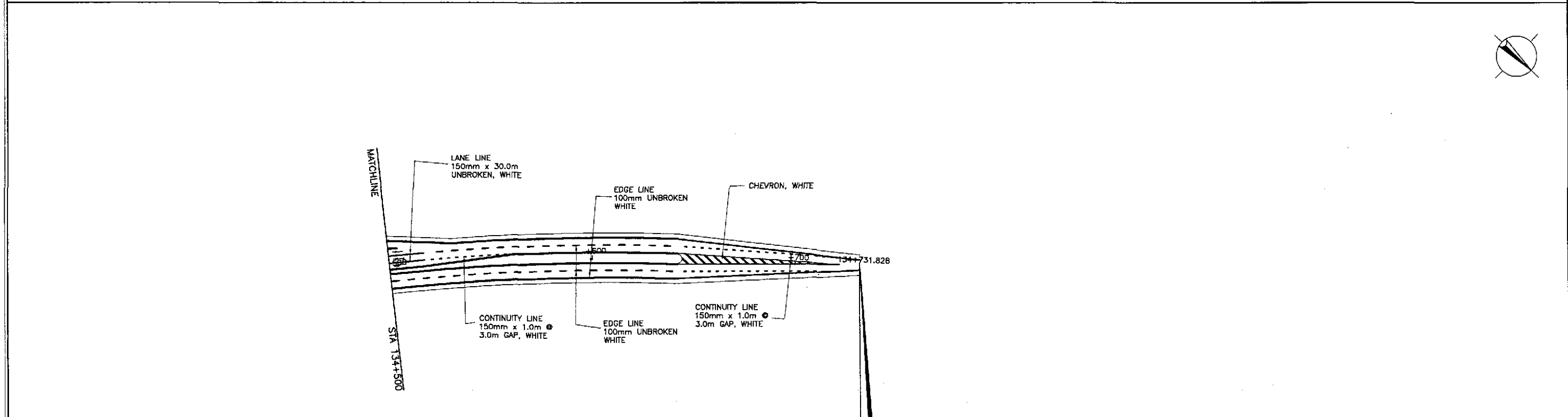
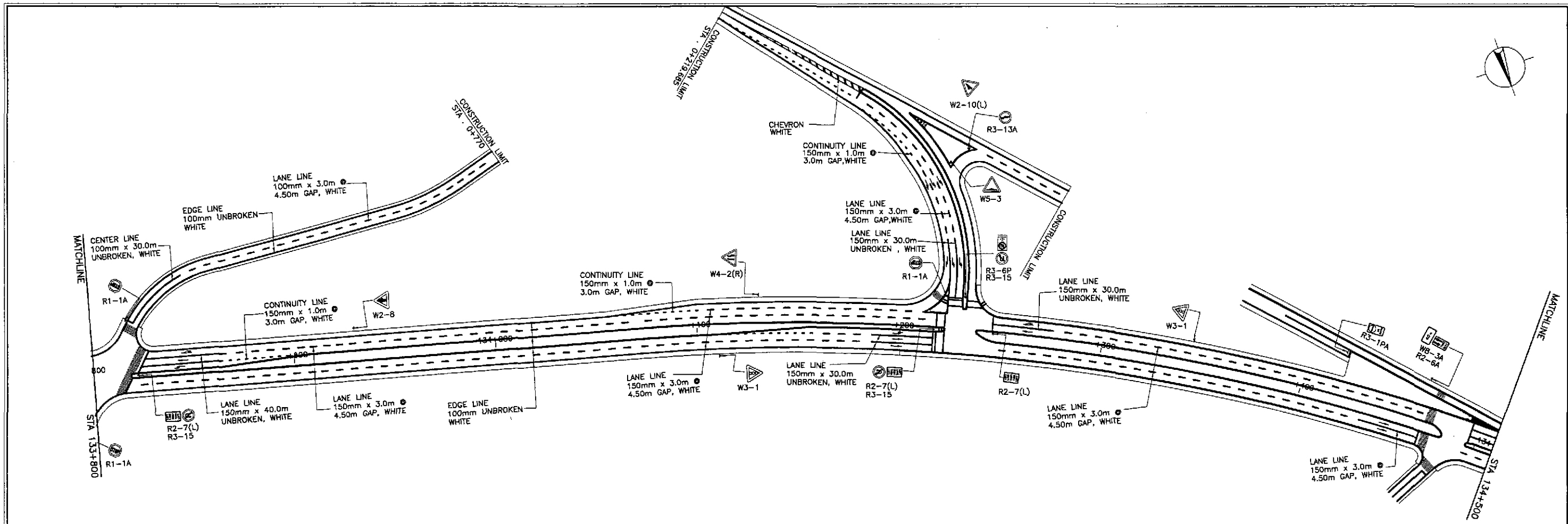
 <b>JICA</b> JAPAN INTERNATIONAL COOPERATION AGENCY		 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS		PROJECT AND LOCATION : <b>THE DETAILED DESIGN STUDY ON          UPGRADING INTER-URBAN HIGHWAY SYSTEM          ALONG THE PAN-PHILIPPINE HIGHWAY          (Pilaridel, Cabanatuan and San Jose Bypasses)</b>		SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : <b>TRAFFIC SIGNS AND PAVEMENT          MARKINGS LAYOUT          (ULTIMATE STAGE)          STA. 129+600 - STA. 131+300</b>	SHEET NO. : <b>RM-07</b>					
DESIGNED	10/17/02	SIGNATURE	<i>[Signature]</i>	Submitted By:	DANILO C. TRAJANO Project Director	Reviewed By:	JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By:	GILBERTO S. REYES DIC, Director IV	Approved By:	MANUEL M. BONGAN Undersecretary	Approved By:	SIMEON A. DATUMANONG Secretary
CHECKED	10/29/02	SIGNATURE	<i>[Signature]</i>	Submitted By:	DANILO C. TRAJANO Project Director	Reviewed By:	JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By:	GILBERTO S. REYES DIC, Director IV	Approved By:	MANUEL M. BONGAN Undersecretary	Approved By:	SIMEON A. DATUMANONG Secretary
SUBMITTED	10/21/02	SIGNATURE	<i>[Signature]</i>	Submitted By:	DANILO C. TRAJANO Project Director	Reviewed By:	JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By:	GILBERTO S. REYES DIC, Director IV	Approved By:	MANUEL M. BONGAN Undersecretary	Approved By:	SIMEON A. DATUMANONG Secretary



	DESIGNED	10/17/02	SIGNATURE					PROJECT AND LOCATION : <b>THE DETAILED DESIGN STUDY ON          UPGRADING INTER-URBAN HIGHWAY SYSTEM          ALONG THE PAN-PHILIPPINE HIGHWAY          (Plaridel, Cabanatuan and San Jose Bypasses)</b> <b>CABANATUAN BYPASS - CONTRACT PACKAGE IV</b>	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : <b>TRAFFIC SIGNS AND PAVEMENT          MARKINGS LAYOUT          (ULTIMATE STAGE)</b> STA. 131+000 - STA. 132+400	SHEET NO. : <b>RM-08</b>
	CHECKED	10/19/02	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: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval) SIMEON A. DATUMANONG Secretary				
	SUBMITTED	10/21/02	TEAM LEADER 	BUREAU OF DESIGN OFFICE OF THE SECRETARY							

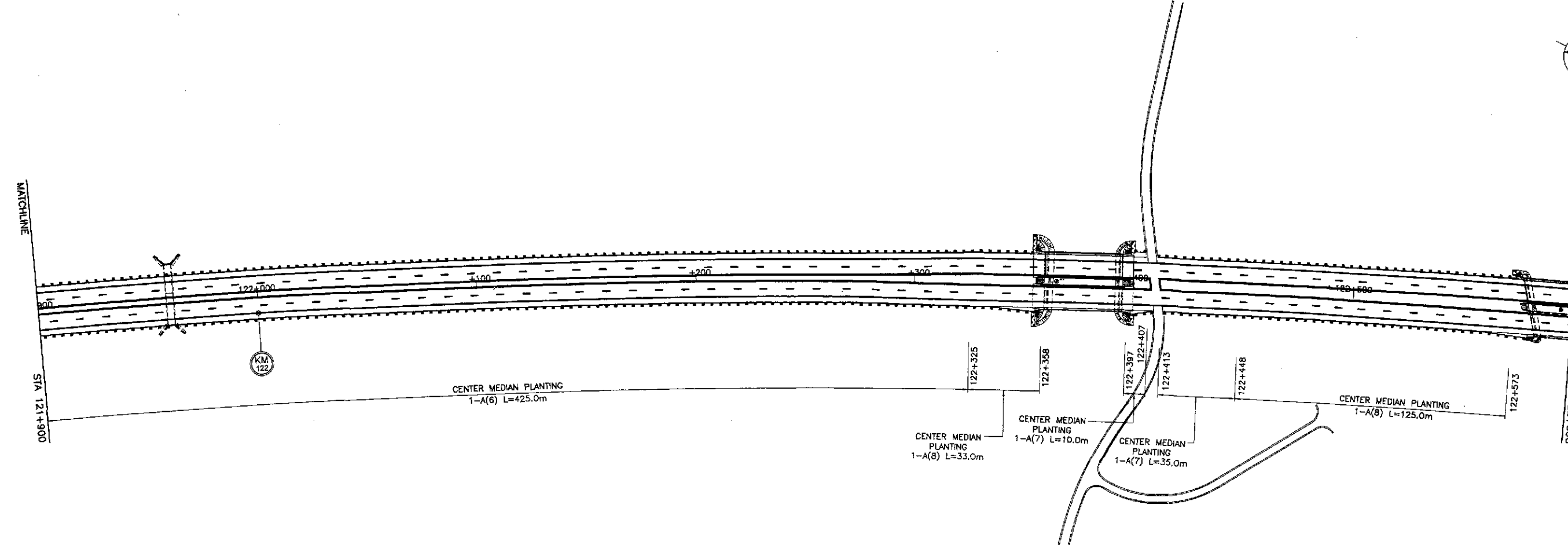
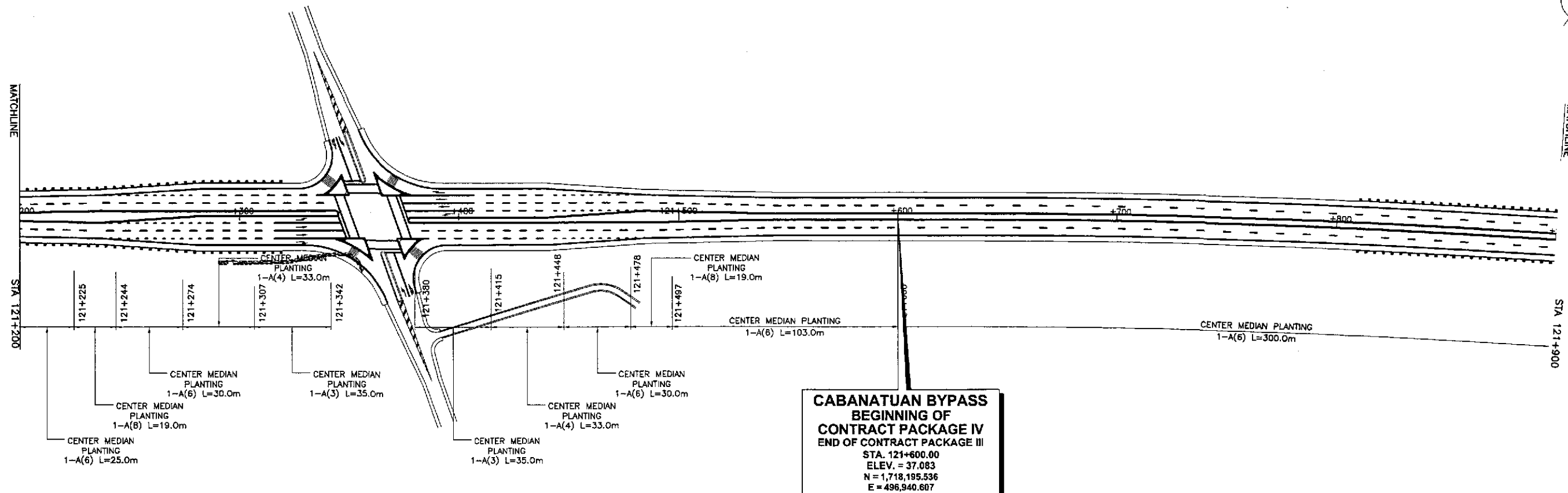


	DESIGNED	10/17/02			REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) <b>CABANATUAN BYPASS - CONTRACT PACKAGE IV</b>	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : <b>TRAFFIC MARKINGS AND PAVEMENT          MARKINGS LAYOUT          (ULTIMATE STAGE)          STA. 132+400 - STA. 133+800</b>	SHEET NO. : <b>RM-09</b>
	CHECKED	10/19/02			Submitted By:	Reviewed By:	Recommended By:	Recommended By:				
	SUBMITTED	10/21/02			DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highway Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONGAON Undersecretary				

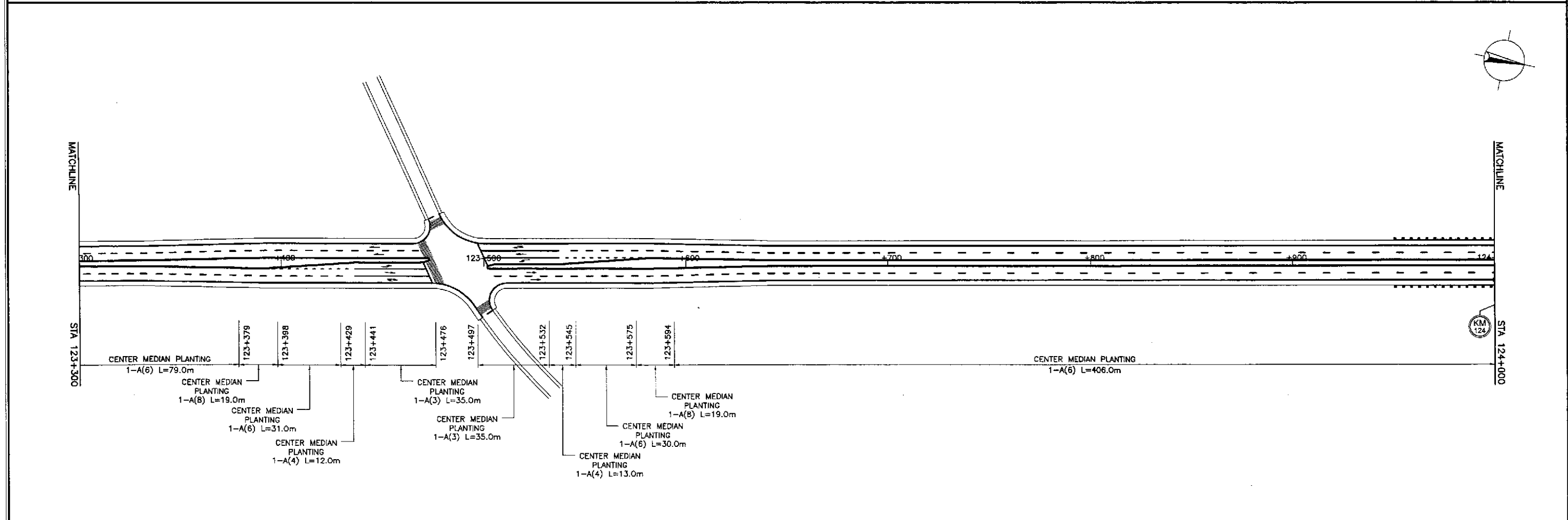
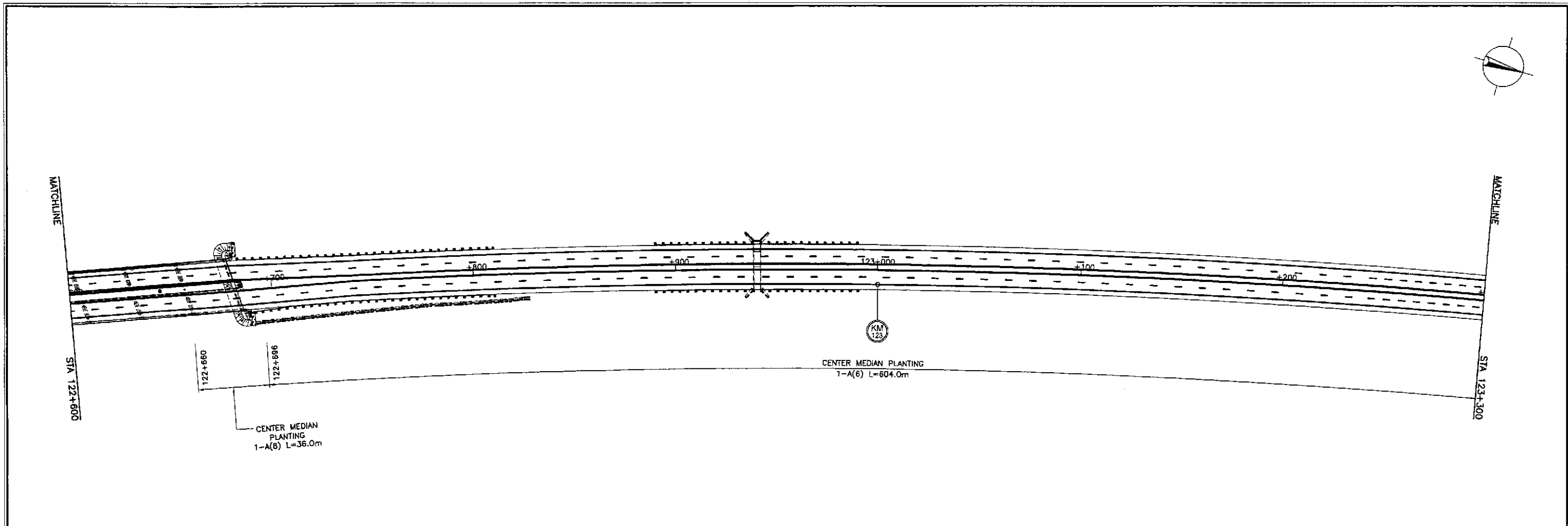


**CABANATUAN BYPASS  
END OF  
CONTRACT PACKAGE IV**  
 STA. 134+731.828  
 ELEV. = 42.855  
 N = 1,728,053.796  
 E = 489,696.546

	DESIGNED	10/17/02	SIGNATURE	<i>[Signature]</i>		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	SIGNATURE	<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)	1:1000	TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT (ULTIMATE STAGE) STA. 133+800 - STA. 134+731.828	RM-10
	SUBMITTED	10/21/02	SIGNATURE	<i>[Signature]</i>		Submitted By:	Reviewed By:	Recommended By:	Recommended By:	Approved By:	CABANATUAN BYPASS - CONTRACT PACKAGE IV		
				DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES DC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary					

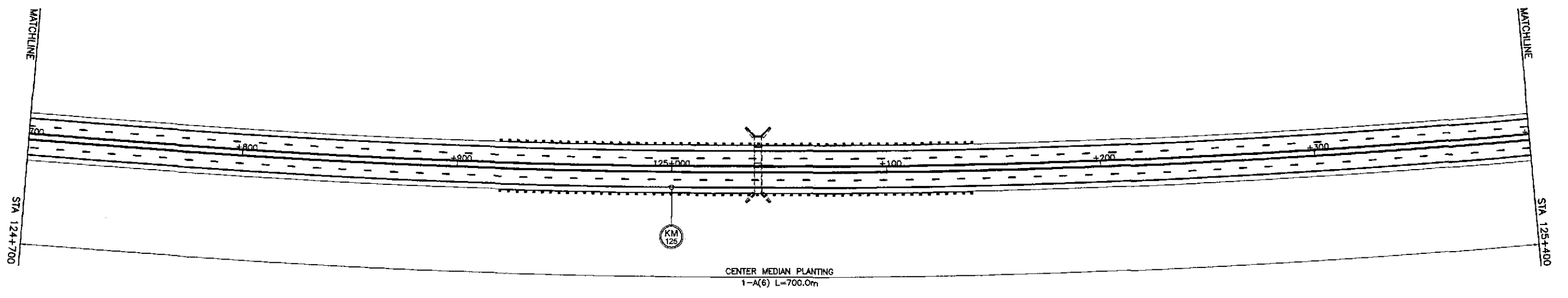
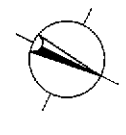
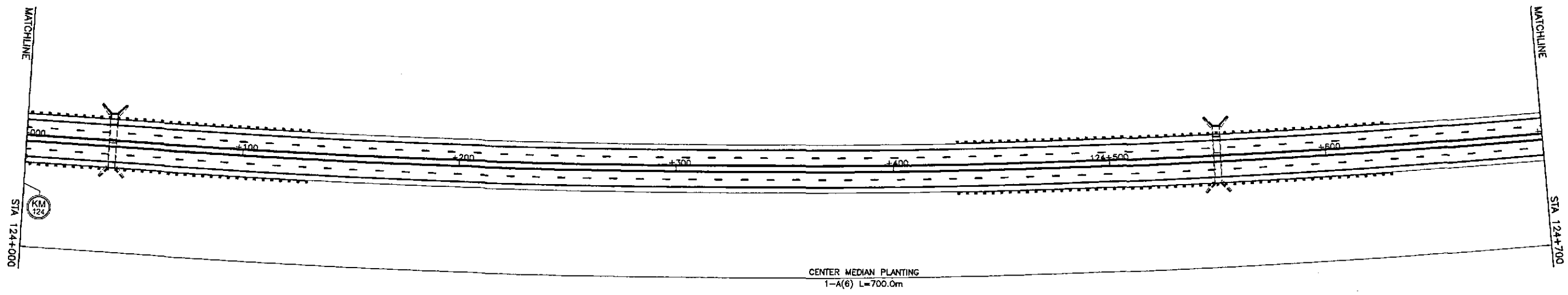
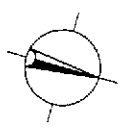


	DESIGNED	10/17/02	 DANILO C. TRAJANO Project Director	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) <b>CABANATUAN BYPASS - CONTRACT PACKAGE IV</b>	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : <b>PLANTINGS, GUARDRAILS AND          KILOMETER POSTS LAYOUT</b> (ULTIMATE STAGE) STA. 121+600 - STA. 122+600	SHEET NO. : <b>RM-11</b>
	CHECKED	10/19/02		Submitted By: JOSEFINA M. ALAGAR Chief, Highways Division	Reviewed By: GILBERTO S. REYES OIC, Director IV	Recommended By: MANUEL M. BONDAN Undersecretary				
	SUBMITTED	10/21/02	Submitted By: DANIEL M. KUNCH TEAM LEADER							

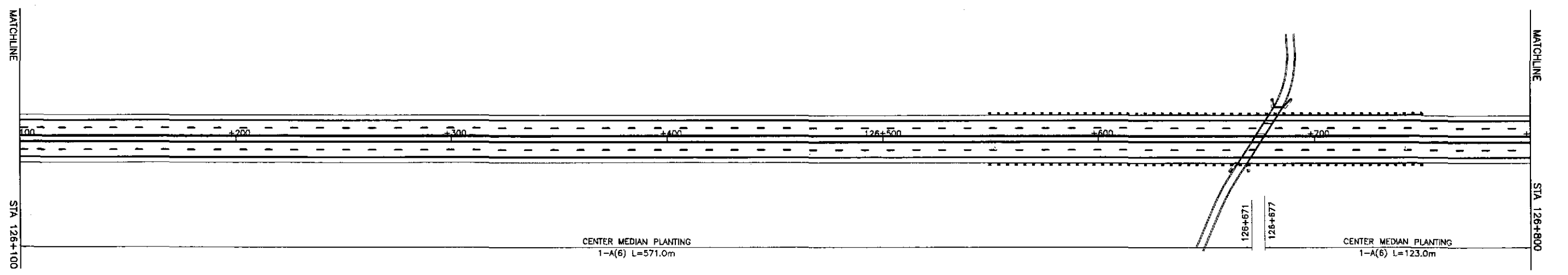
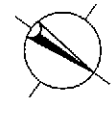
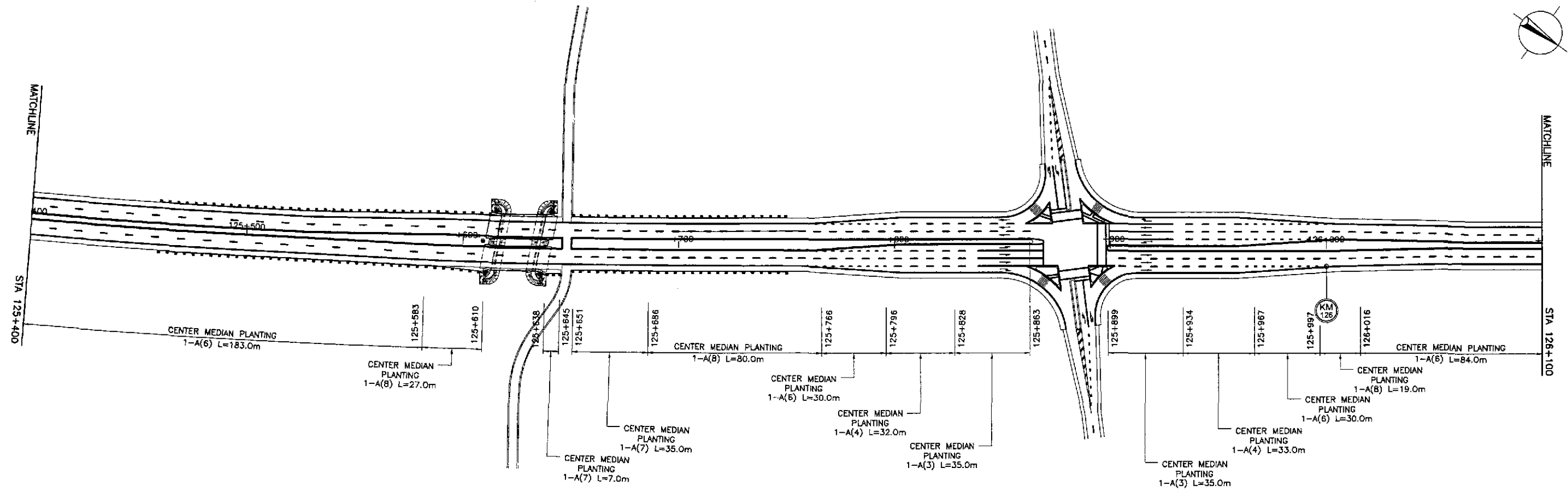
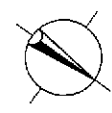


<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p>KATAHIRA &amp; ENGINEERS INTERNATIONAL</p> <p>YACHIO ENGINEERING CO., LTD.</p>	DESIGNED	10/17/02	<i>hlt</i>	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p> <p>BUREAU OF DESIGN</p> <p>OFFICE OF THE SECRETARY</p>	PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	CHECKED	10/19/02	<i>S. J. ASE</i>		Submitted By:	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	1:1000	<b>PLANTINGS, GUARDRAILS AND KILOMETER POSTS LAYOUT</b> ( ULTIMATE STAGE ) STA. 122+600 - STA. 124+000	<b>RM-12</b>
	SUBMITTED	10/21/02	<i>M. R. R. R.</i>		Reviewed By:	CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1		
			Team Leader	Recommended By:					
			Project Director	Recommended By:					
				Chief, Highway Division					
				OIC, Director IV					
				Undersecretary					
				Secretary					





	DESIGNED	10/17/02	<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) <b>CABANATUAN BYPASS - CONTRACT PACKAGE IV</b>	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : <b>PLANTINGS, GUARDRAILS AND KILOMETER POSTS LAYOUT</b> ( ULTIMATE STAGE ) STA. 124+000 - STA. 125+400	SHEET NO. : <b>RM-13</b>
	CHECKED	10/17/02	<i>[Signature]</i>		Submitted By:	Reviewed By:	Recommended By:	Recommended By:				
	SUBMITTED	10/21/02	<i>[Signature]</i>		DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary				



**JICA**  
**JAPAN INTERNATIONAL COOPERATION AGENCY**

**KATAHIRA & ENGINEERS**  
**YEO YACHIYO ENGINEERING CO., LTD.**

	DATE	SIGNATURE
DESIGNED	10/17/02	<i>S. LUNA</i>
CHECKED	10/18/02	<i>ROSE</i>
SUBMITTED	10/21/02	<i>M. KIMURA</i>

BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Approved By:
DANIL D. C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES O.C. Director IV	MANUEL M. BONDAN Undersecretary
		SIMEON A. DATUMANONG Secretary	

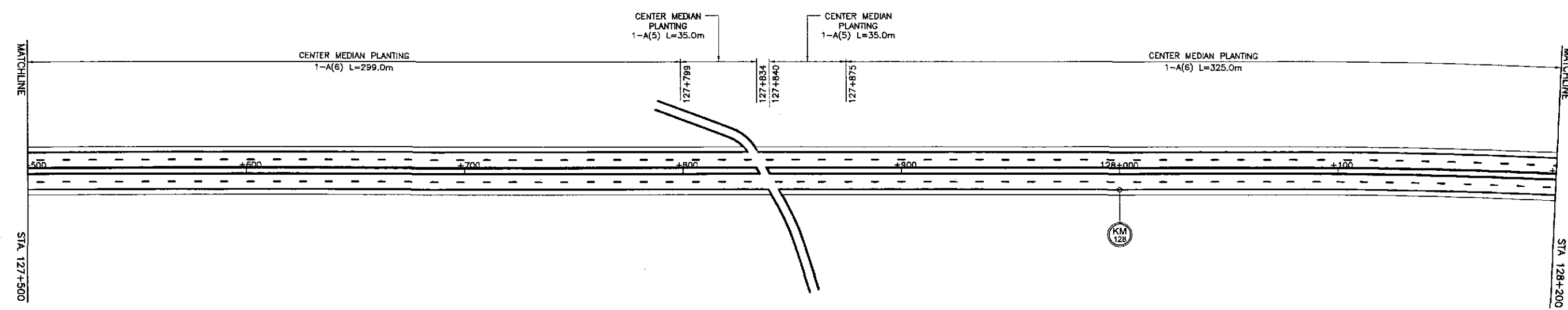
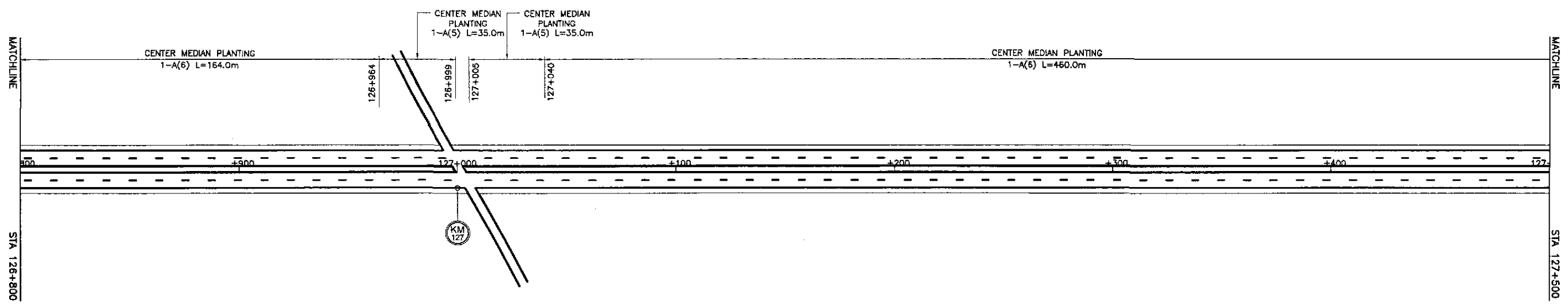
PROJECT AND LOCATION :  
 THE DETAILED DESIGN STUDY ON  
 UPGRADING INTER-URBAN HIGHWAY SYSTEM  
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 (Piaridel, Cabanatuan and San Jose Bypasses)

**CABANATUAN BYPASS - CONTRACT PACKAGE IV**

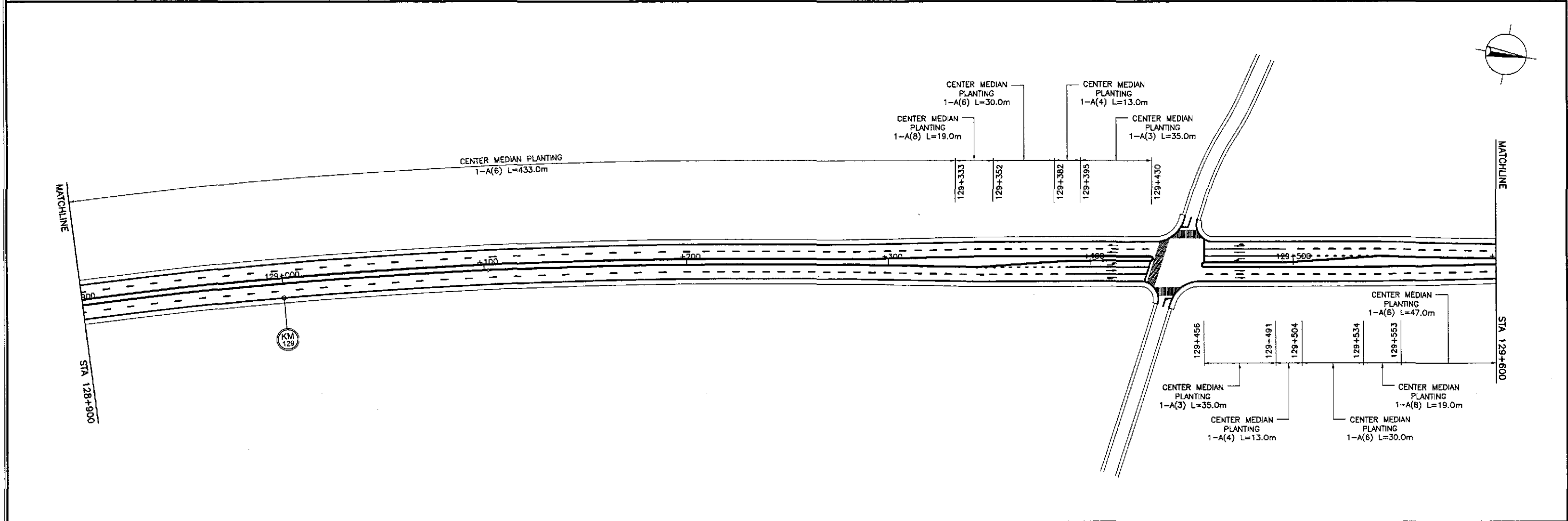
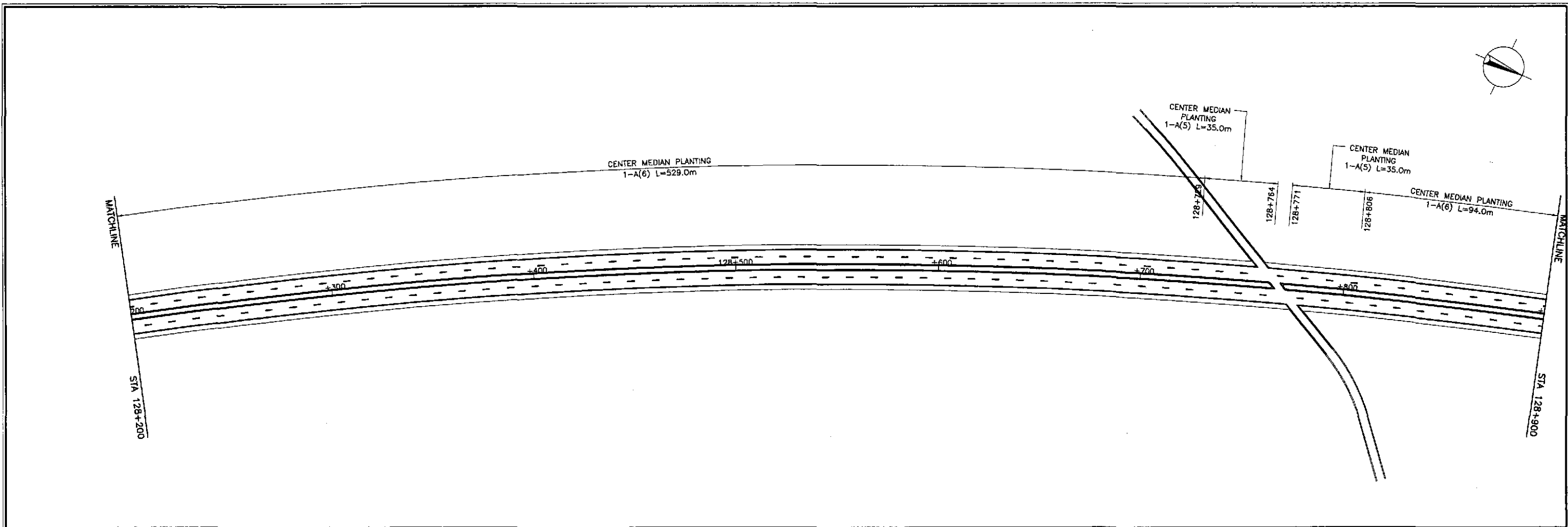
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 FULL SIZE A1

SHEET CONTENTS :  
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 KILOMETERS POSTS LAYOUT**  
 (ULTIMATE STAGE)  
 STA. 125+400 - STA. 126+800

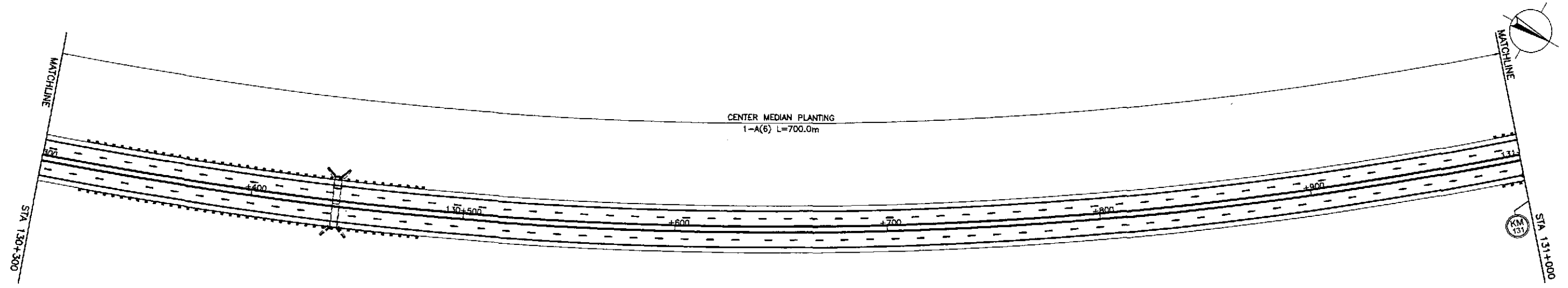
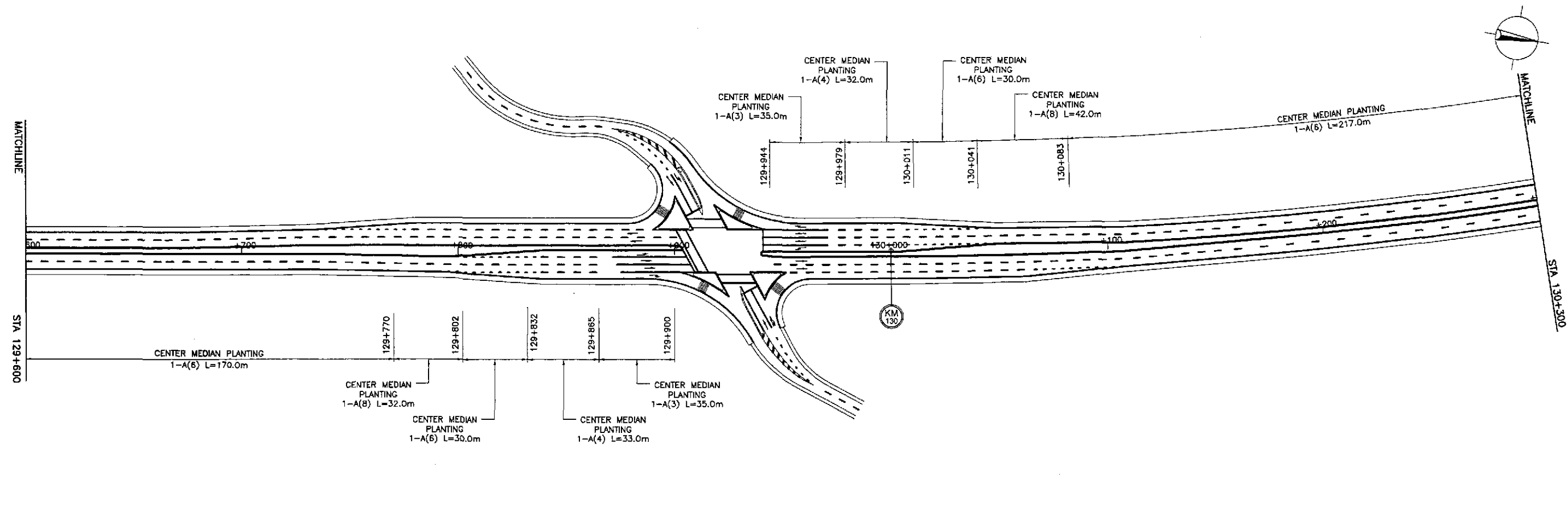
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**RM-14**



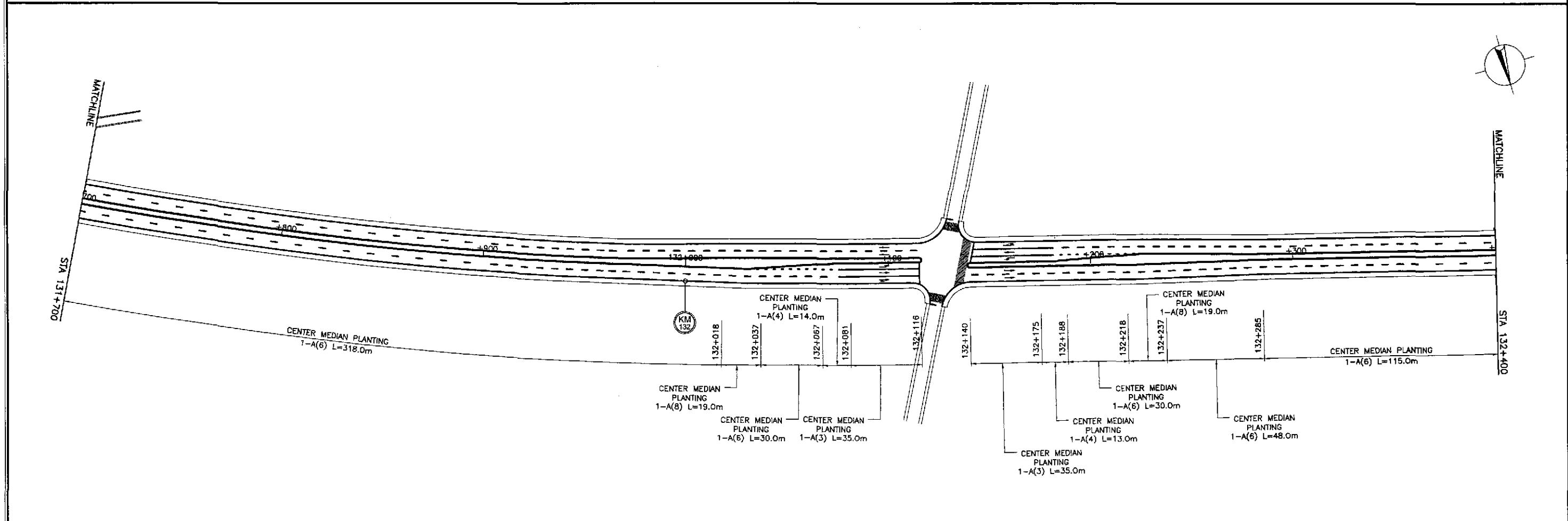
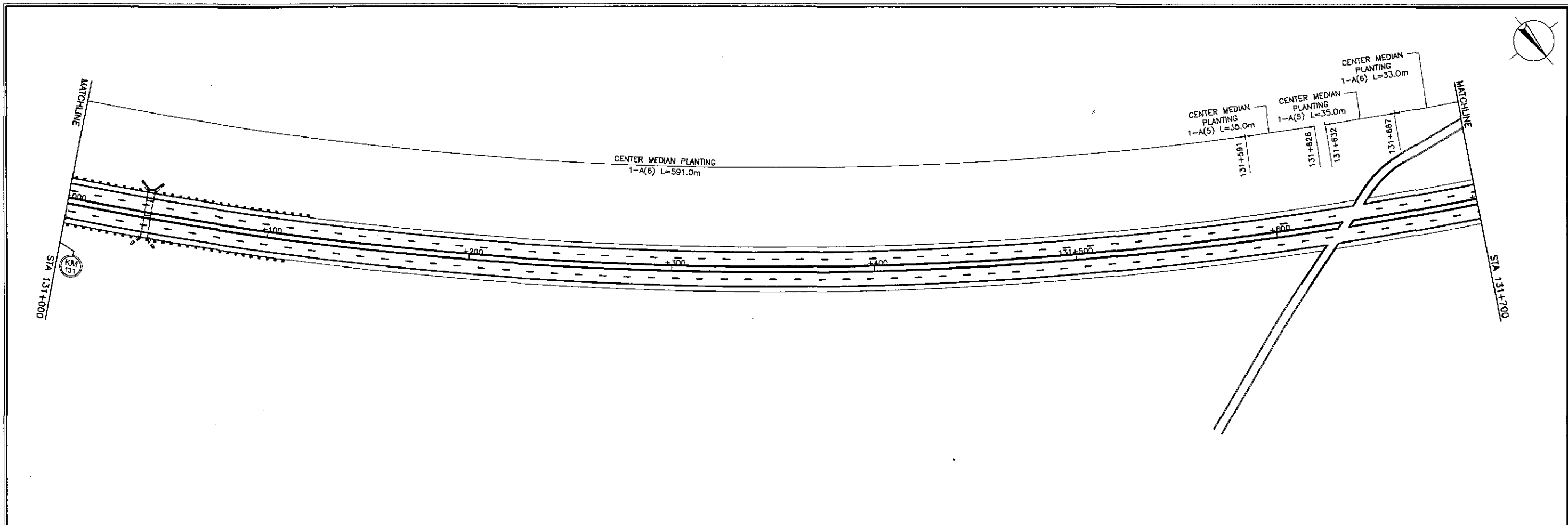
	DESIGNED	10/17/02		<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)			1:1000	<b>PLANTINGS, GUARDRAILS AND KILOMETER POSTS LAYOUT</b> (ULTIMATE STAGE) STA. 126+800 - STA. 128+200	<b>RM-15</b>
	SUBMITTED	10/21/02			CABANATUAN BYPASS - CONTRACT PACKAGE IV			FULL SIZE A1		
				BUREAU OF DESIGN		OFFICE OF THE SECRETARY				
				Submitted By:	Reviewed By:	Recommended By:	Approved By:			
				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		



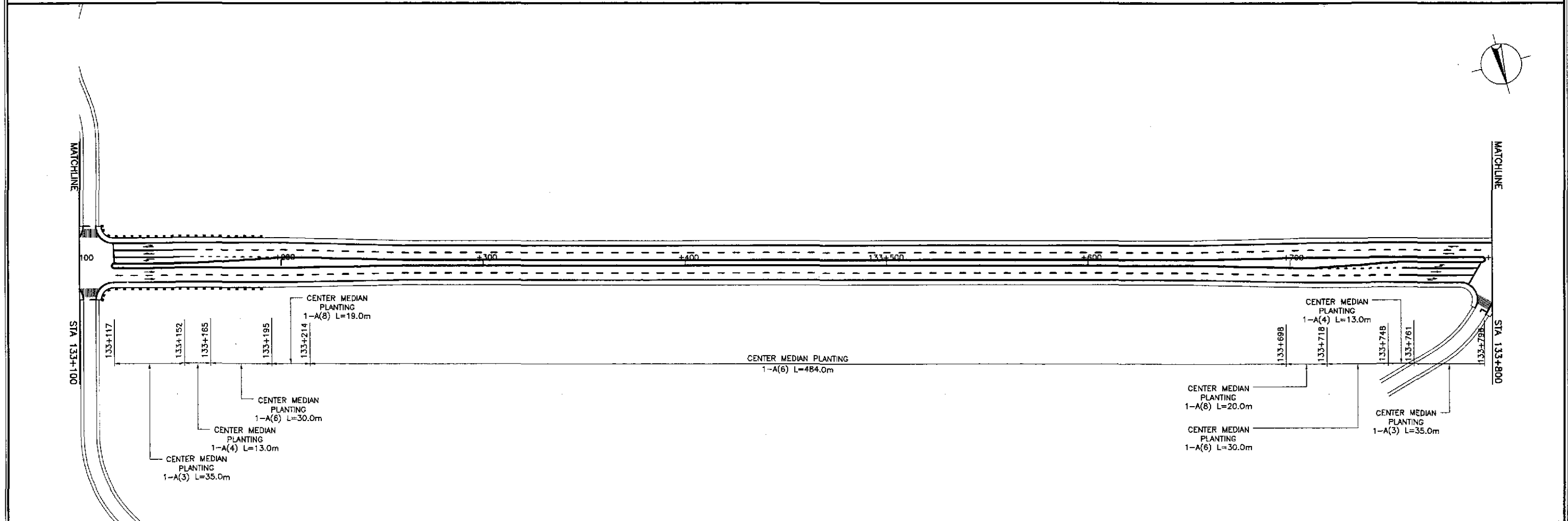
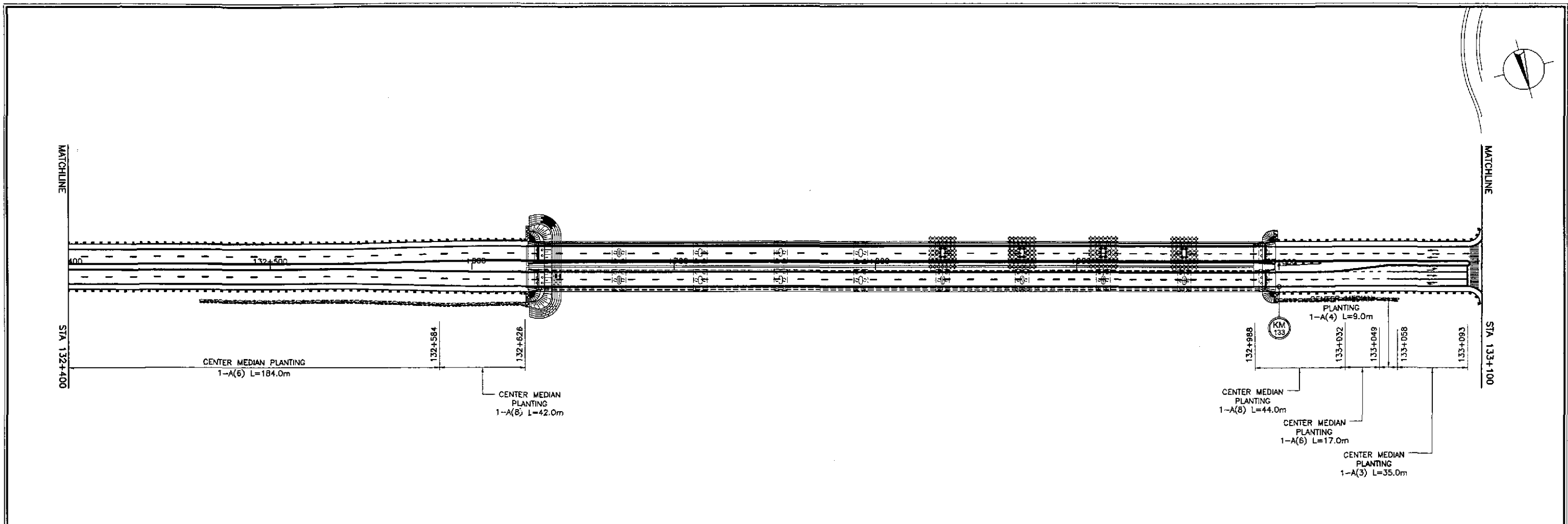
<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p>KATAHIRA &amp; ENGINEERS INTERNATIONAL</p> <p>YACHIYO ENGINEERING CO., LTD.</p>	DESIGNED	10/17/02		<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :		SCALE :	SHEET CONTENTS :	SHEET NO. :		
	CHECKED	10/19/02			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)		1:1000			<p><b>PLANTINGS, GUARDRAILS AND KILOMETER POSTS LAYOUT</b> ( ULTIMATE STAGE ) STA. 128+200 - STA. 129+600</p>	RM-16
	SUBMITTED	10/21/02			CABANATUAN BYPASS - CONTRACT PACKAGE IV		FULL SIZE A1				
<p>Submitted By: DANLO C. TRAJANO Project Director</p>			<p>Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division</p>			<p>Recommended By: GILBERTO S. REYES OIC, Director IV</p>			<p>Office of the Secretary</p> <p>Recommended By: MANUEL M. BONOAN Undersecretary</p> <p>Approved By: SIMEON A. DATUMANONG Secretary</p>		



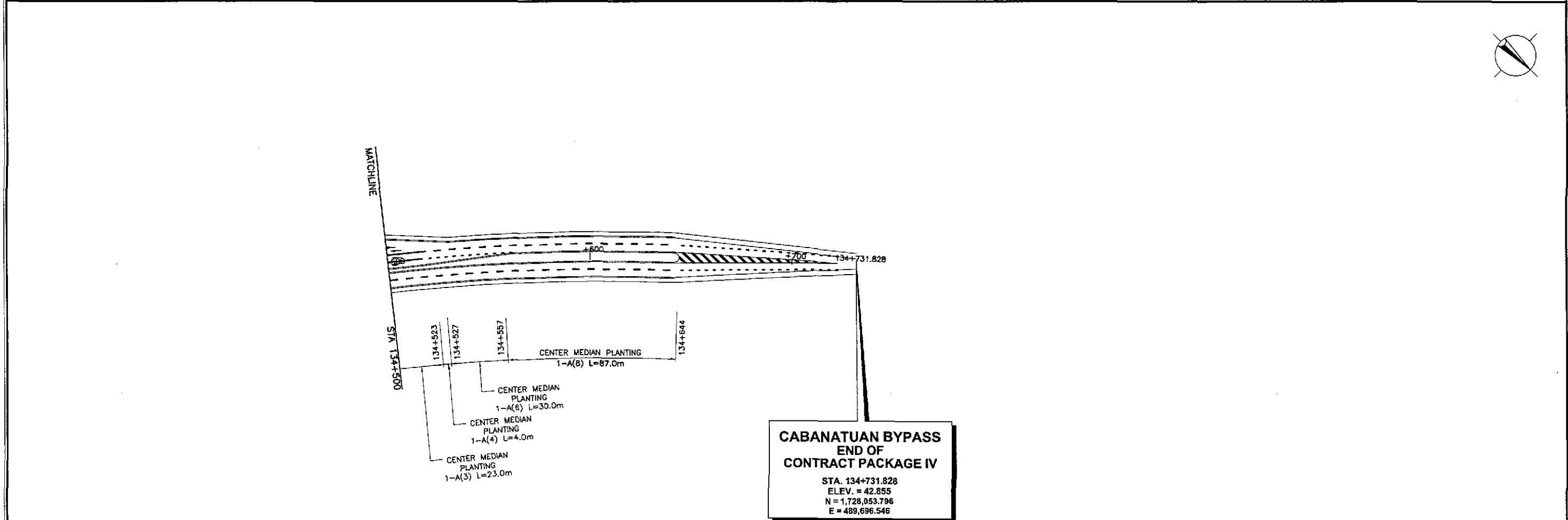
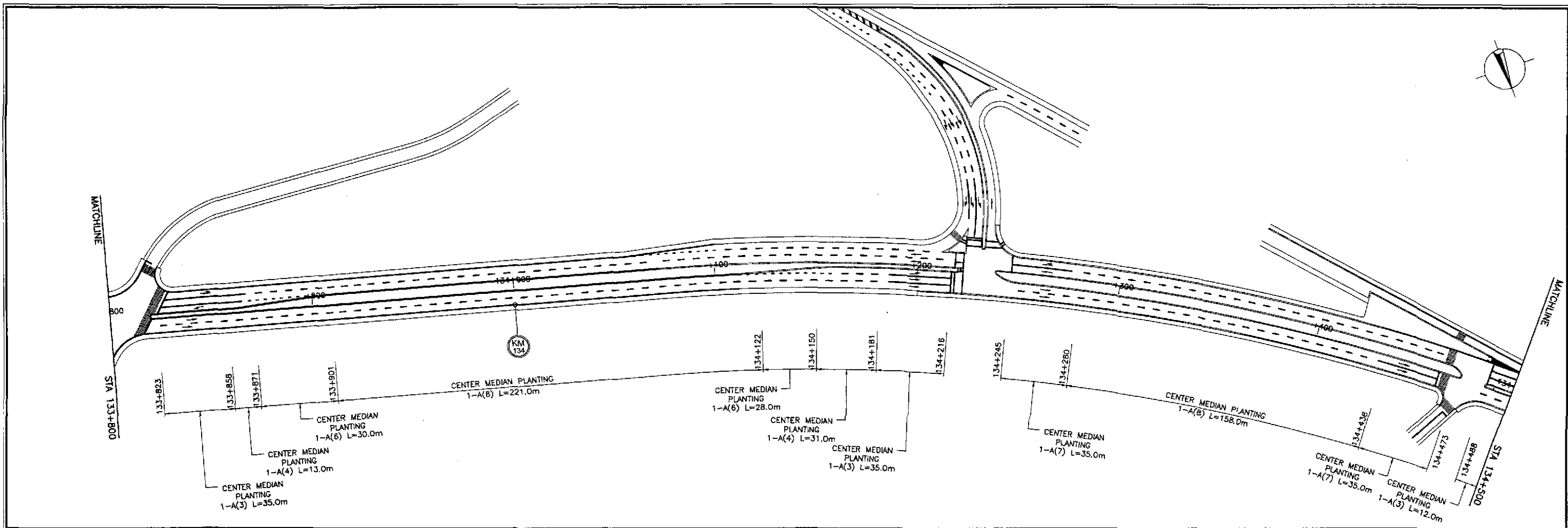
	DESIGNED	10/17/02	<i>S. Luna</i>		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) <b>CABANATUAN BYPASS - CONTRACT PACKAGE IV</b>	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : <b>PLANTINGS, GUARDRAILS AND KILOMETER POSTS LAYOUT</b> ( ULTIMATE STAGE ) STA. 129+600 - STA. 131+300	SHEET NO. : <b>RM-17</b>
	CHECKED	10/19/02	<i>S. Luna</i>		BUREAU OF DESIGN		OFFICE OF THE SECRETARY					
	SUBMITTED	10/21/02	<i>M. K. K.</i>		Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES OIE, Director IV	Recommended By: MANUEL M. BONGON Undersecretary				



 JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS YACHIO ENGINEERING CO., LTD.	DESIGNED	10/17/02	S. LOM	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN	PROJECT AND LOCATION :		SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	S. COSE		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, ROW AND KILOMETER POSTS LAYOUT ( ULTIMATE STAGE ) STA. 131+000 - STA. 132+400	<b>RM-18</b>
	SUBMITTED	10/21/02	M. K. ...		CABANATUAN BYPASS - CONTRACT PACKAGE IV		FULL SIZE A1		
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. BONOAN Undersecretary	
Approved By: SIMEON A. DATUMANONG Secretary				Approved By: SIMEON A. DATUMANONG Secretary					



	DESIGNED	10/17/02	<i>[Signature]</i>		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	<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)	1:1000	<b>PLANTINGS, GUARDRAILS AND KILOMETER POSTS LAYOUT</b> (ULTIMATE STAGE) STA. 132+400 - STA. 133+800	<b>RM-19</b>
	SUBMITTED	10/21/02	<i>[Signature]</i>		Submitted By:	Reviewed By:	Recommended By:	Approved By:	FULL SIZE A1		
				DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary	CABANATUAN BYPASS - CONTRACT PACKAGE IV		



**CABANATUAN BYPASS  
END OF  
CONTRACT PACKAGE IV**

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

	DESIGNED	10/17/02		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 (Piaridel, Cabanatuan and San Jose Bypasses) <b>CABANATUAN BYPASS - CONTRACT PACKAGE IV</b>	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : <b>PLANTINGS, GUARDRAILS AND KILOMETER POSTS LAYOUT (ULTIMATE STAGE)</b> STA. 133+800 - STA. 134+731.828	SHEET NO. : <b>RM-20</b>
	CHECKED	10/19/02		BUREAU OF DESIGN		OFFICE OF THE SECRETARY					
	SUBMITTED	10/21/02		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. BONOAN Undersecretary				