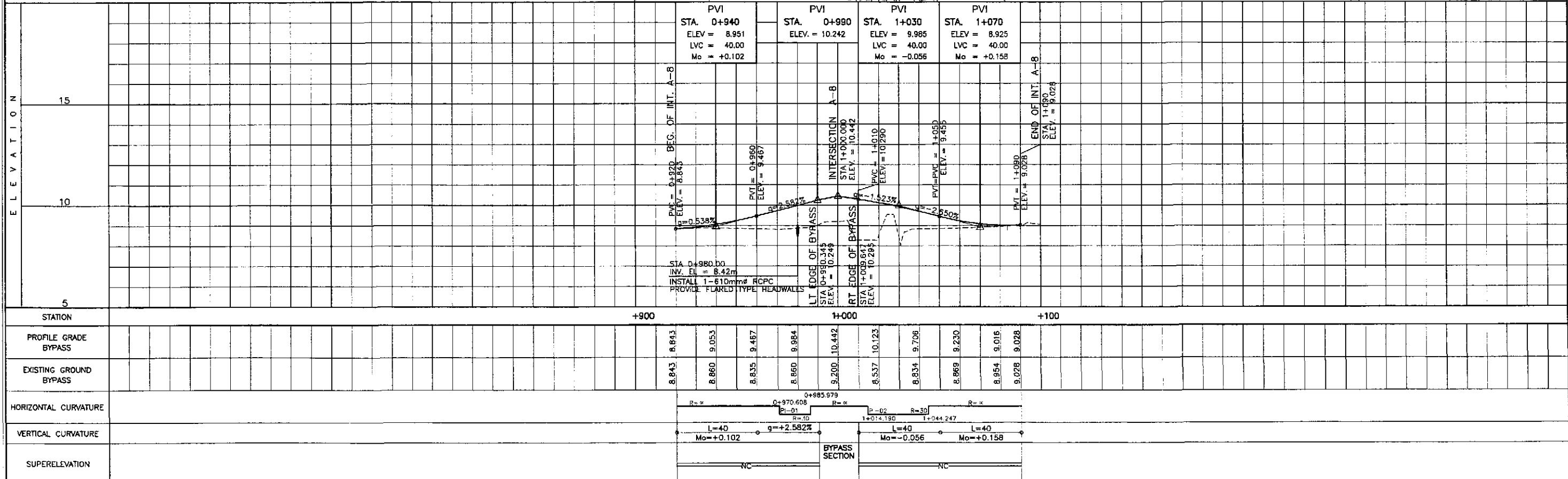
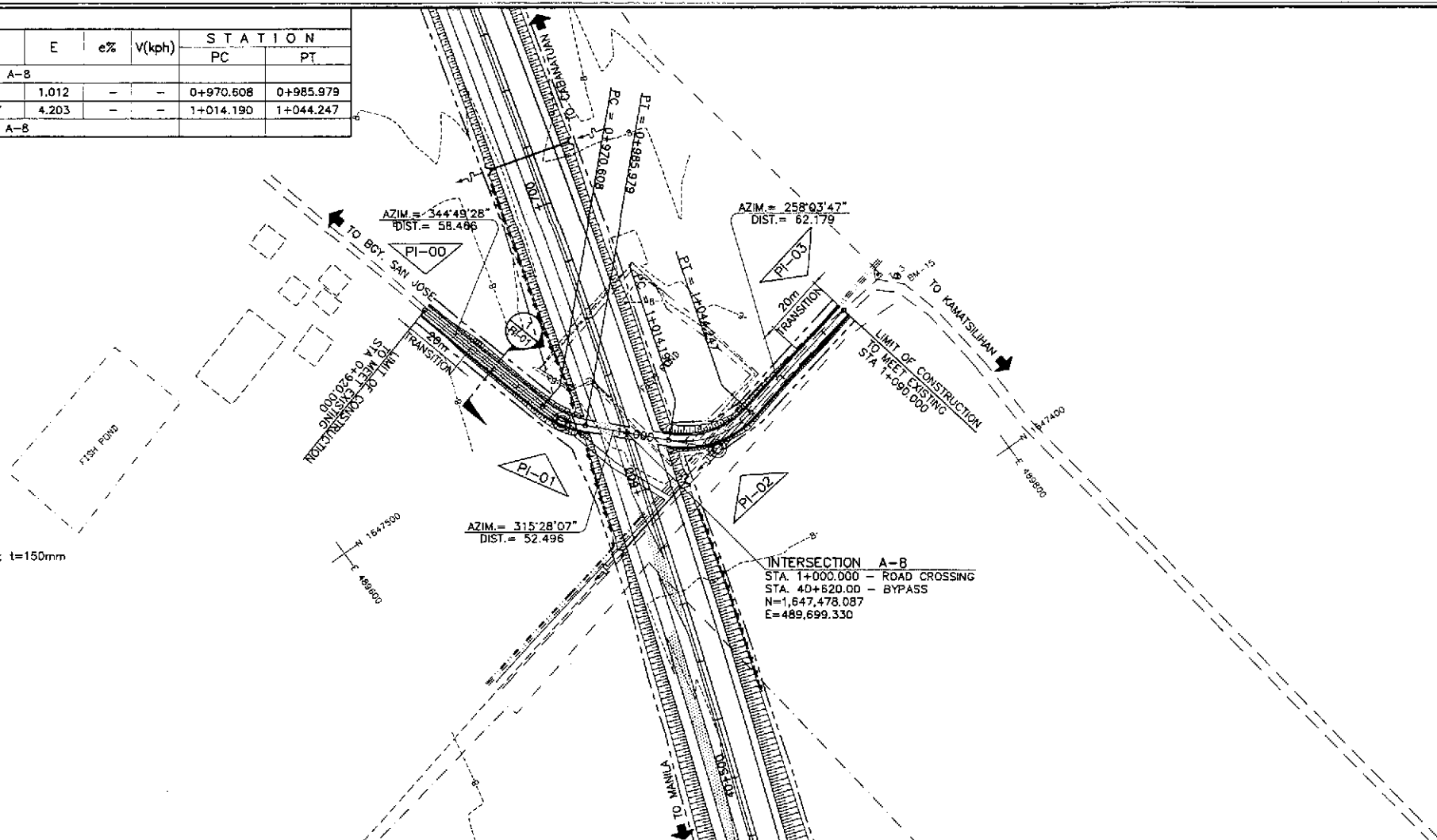
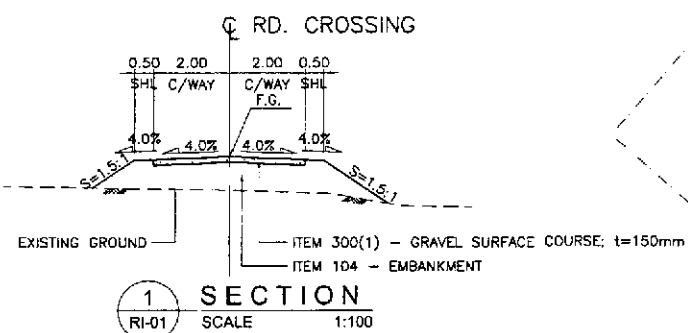


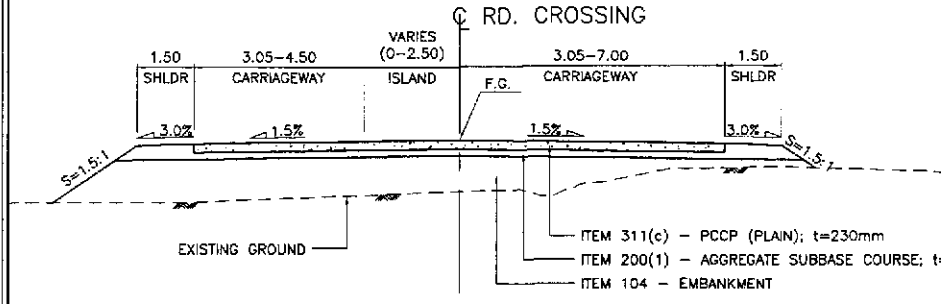
ELEMENTS OF CURVE												
PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION	
		NORTHING	EASTING								PC	PT
PI-00	0+920.000	1,647,550.111	489,668.681								BEG. OF INTERSECTION A-8	
PI-01	0+978.466	1,647,493.684	489,683.986	29°21'21"	30	7.858	15.371	1.012	-	-	0+970.508	0+985.979
PI-02	1+030.616	1,647,456.261	489,720.802	57°24'20"	30	16.426	30.057	4.203	-	-	1+014.190	1+044.247
PI-03	1+090.000	1,647,469.122	489,781.636								END OF INTERSECTION A-8	



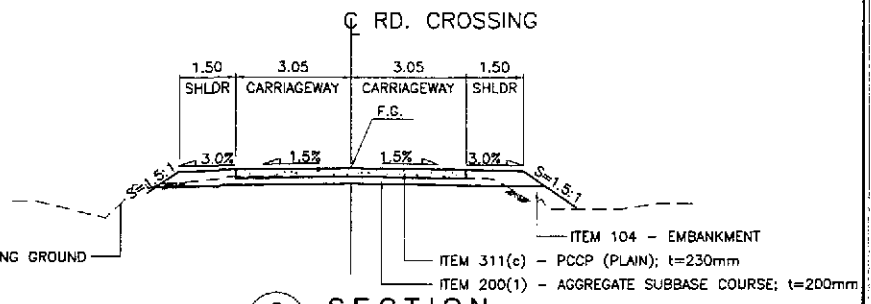
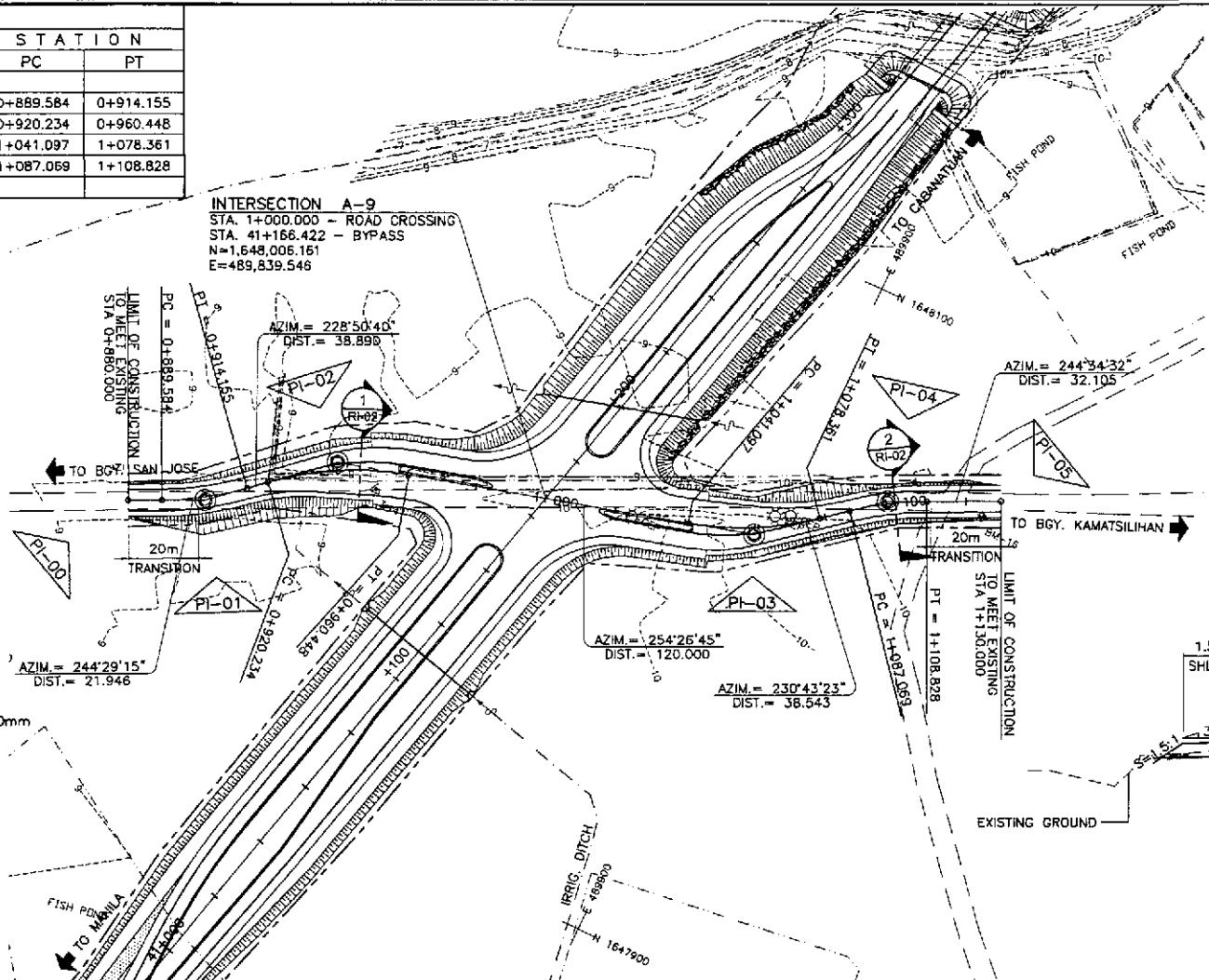
	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)		SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/20/02	S. JOSE	BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO (Project Director) Reviewed By: JOSEFINA M. ALAGAR (Chief, Highway Division) Recommended By: GILBERTO S. REYES (Director IV (OC)) Recommended By: EDMUNDO V. MIR (Undersecretary)				Approved By: SIMON A. DATUMANONG (Secretary)		HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1	PLAN, CROSS-SECTION AND PROFILE INTERSECTION A-8 STA. 0+920 - STA. 1+090 (INITIAL STAGE)	RI-01

PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION	
		NORTHING	EASTING								PC	PT
PI-00	0+880.000	1,647,955.025	489,732.656								BEG. OF INTERSECTION A-9	
PI-01	0+901.946	1,647,964.478	489,752.462	15°38'35"	90	12.363	24.572	0.845	-	-	0+889.584	0+914.155
PI-02	0+940.683	1,647,990.072	489,781.743	25°36'04"	90	20.449	40.214	2.294	-	-	0+920.234	0+960.448
PI-03	1+060.000	1,648,022.250	489,897.348	23°43'22"	90	18.903	37.263	1.964	-	-	1+041.097	1+078.361
PI-04	1+098.002	1,648,046.650	489,927.185	13°51'08"	90	10.933	21.759	0.662	-	-	1+087.069	1+108.828
PI-05	1+130.000	1,648,060.434	489,956.180								END OF INTERSECTION A-9	

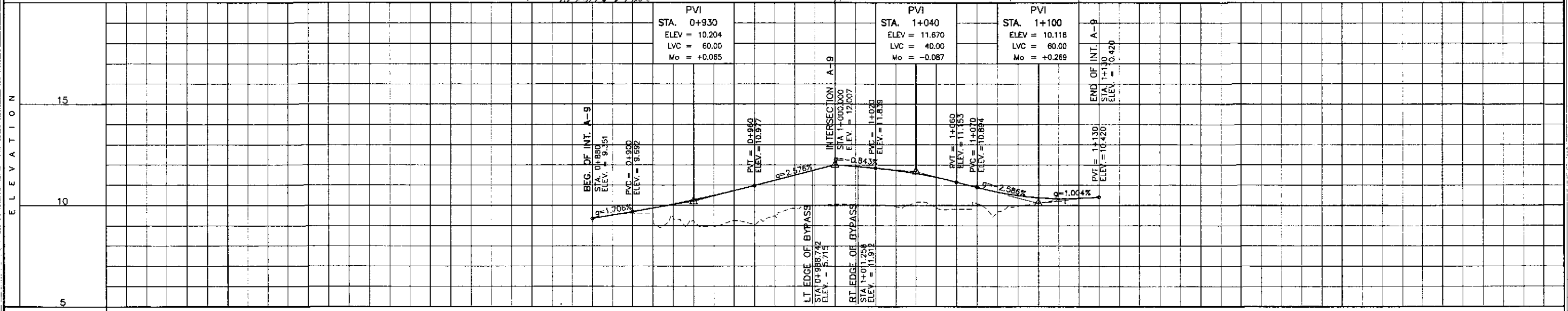
INTERSECTION A-9
 STA. 1+000.000 - ROAD CROSSING
 STA. 41+166.422 - BYPASS
 N=1,648,006.161
 E=489,839.546



1 SECTION
 RI-02 SCALE 1:100



2 SECTION
 RI-02 SCALE 1:100

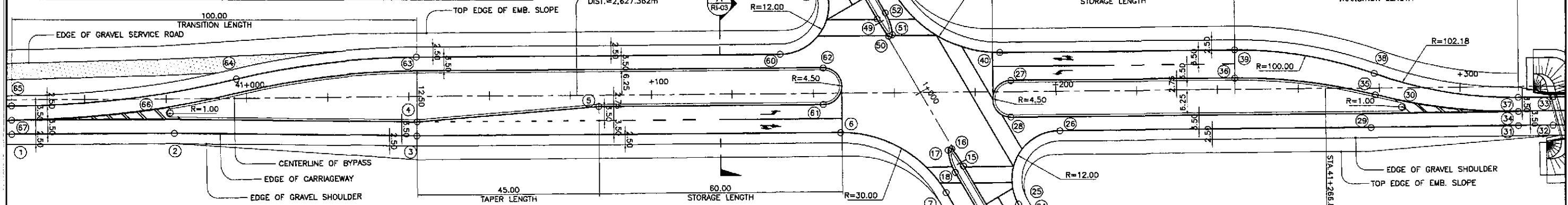


STATION	+900				+1000				+100			
PROFILE GRADE BYPASS	9.351	9.682	10.062	10.491	10.877	11.492	12.007	11.839	11.563	10.666	10.388	10.420
EXISTING GROUND BYPASS	9.351	9.612	9.414	8.973	9.052	9.861	10.066	10.035	10.143	9.812	10.118	10.369
HORIZONTAL CURVATURE	R=90				R=90				R=90			
VERTICAL CURVATURE	g=+1.706%				g=+2.576%				g=-0.843%			
SUPERELEVATION	NC				BYPASS SECTION				NC			

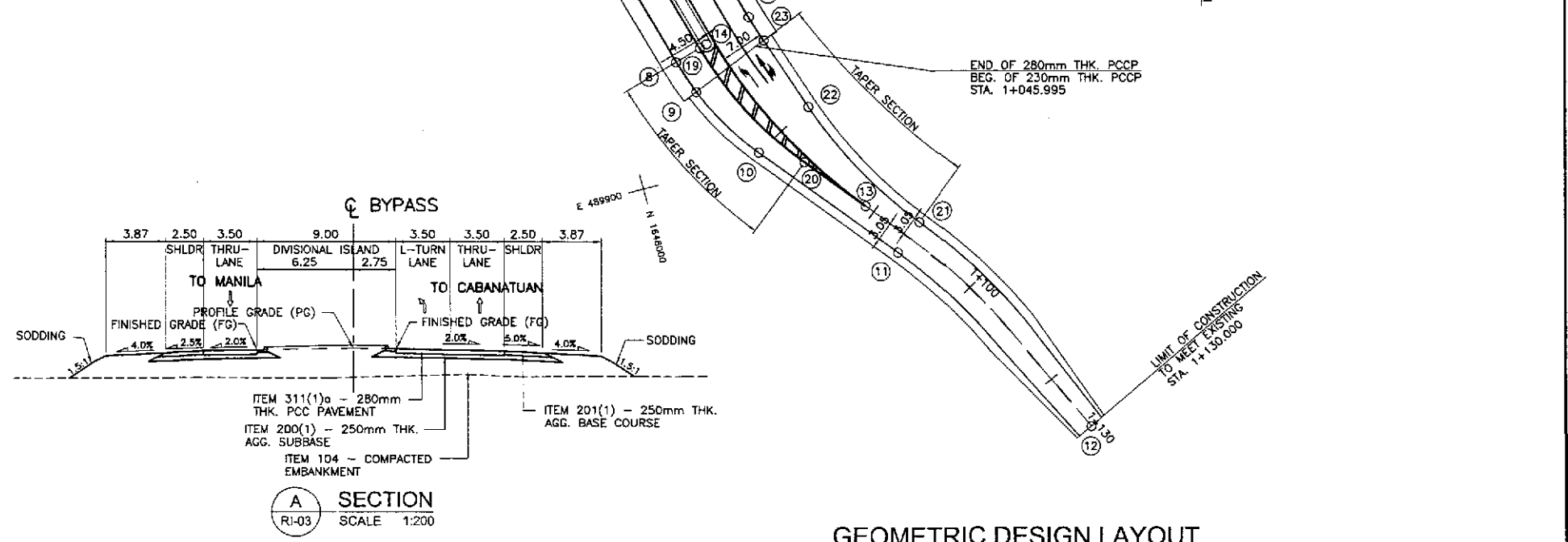
	DESIGNED	DATE	SIGNATURE		SCALE :	SHEET CONTENTS : PLAN, CROSS-SECTION AND PROFILE INTERSECTION A-9 STA. 0+880 - STA. 1+130 (INITIAL STAGE)	SHEET NO. : RI-02	
	CHECKED	9/20/02	S. JOSE		PROJECT AND LOCATION :			HORIZONTAL
	SUBMITTED	9/23/02	M. KINEL		PROJECT AND LOCATION :			VERTICAL
					PROJECT AND LOCATION :			FULL SIZE A1

CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
1	1647786.689	489791.787	BEG. DIVERGING TRAFFIC FLOW
2	1647825.425	489801.765	EDGE OF 3.50m WIDE PAVEMENT
3	1647883.216	489817.943	EDGE OF 3.50m WIDE PAVEMENT
4	1647884.089	489814.553	BEG. OF TAPER
5	1647928.539	489822.390	END OF TAPER FROM 3.50 TO 7.00 m WIDE PAVEMENT
6	1647984.579	489844.055	BEG. OF RADIUS 30
7	1648005.997	489865.062	END OF RADIUS 30
8	1648010.524	489881.324	BEG. OF RADIUS 48.725 & BEG. OF TAPER
9	1648012.237	489886.387	LIMIT OF 2.50m WIDE SHOULDER
10	1648019.746	489899.105	END OF RADIUS 48.725
11	1648037.368	489920.652	BEG. OF RADIUS 86.95
12	1648060.434	489956.180	LIMIT OF CONSTRUCTION
13	1648034.216	489911.981	CENTERLINE INTERSECTION OF TWO LANE PAVEMENT
14	1648016.063	489879.783	CENTER OF MEDIAN RADIUS 1.25
15	1648011.812	489859.847	BEG. RADIUS 42
16	1648010.144	489855.017	INTERSECTION OF RADIUS 42 & RADIUS 0.50
17	1648009.190	489855.124	INTERSECTION OF RADIUS 0.50 & RADIUS 13
18	1648009.481	489860.796	END OF RADIUS 13
19	1648014.859	489880.118	BEG. OF RADIUS 61.383 & BEG. OF TAPER, PAVEMENT 4.50m WIDE
20	1648026.478	489902.518	END OF RADIUS 61.383 & BEG. OF 3.50m WIDE PAVEMENT
21	1648042.090	489916.791	BEG. OF RADIUS 73.085 & BEG. OF TAPER, PAVEMENT 3.05m WIDE
22	1648029.429	489893.928	END OF RADIUS 73.085
23	1648025.256	489881.585	BEG. OF RADIUS 83 & LIMIT OF 2.50m WIDE SHOULDER & END OF TAPER, PAVEMENT 7.00m WIDE
24	1648023.925	489877.261	END OF RADIUS 83
25	1648022.580	489872.431	BEG. RADIUS 12
26	1648037.135	489857.593	END OF RADIUS 12
27	1648028.584	489842.482	BEG. OF MEDIAN RADIUS 4.50
28	1648026.339	489851.198	END OF MEDIAN RADIUS 4.50
29	1648111.744	489876.813	EDGE OF 3.50m WIDE PAVEMENT
30	1648120.309	489873.830	CENTER OF MEDIAN RADIUS 1.00m

CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
55	1647979.727	489779.182	END OF RADIUS 53.35
57	1647985.982	489794.919	LIMIT OF 2.50m WIDE SHOULDER & BEG. OF RADIUS B3
58	1647988.811	489803.320	END OF RADIUS B3 PAVEMENT 7.00m WIDE
59	1647989.741	489806.660	BEG. OF RADIUS 12
60	1647975.187	489821.499	END OF RADIUS 12
61	1647982.285	489836.235	BEG. OF RADIUS 4.50
62	1647984.530	489827.520	END OF RADIUS 4.50
63	1647886.080	489799.059	BEG. OF TRANSITION RADIUS 200
64	1647843.800	489792.815	INTERSECTION OF REVERSE CURVE RADIUS 200 & 250.065
65	1647788.435	489785.008	END OF TRANSITION RADIUS 250.065
66	1647825.709	489796.675	CENTER OF MEDIAN RADIUS 1.00m
67	1647787.562	489788.397	CENTERLINE INTERSECTION OF TWO WAY TRAFFIC

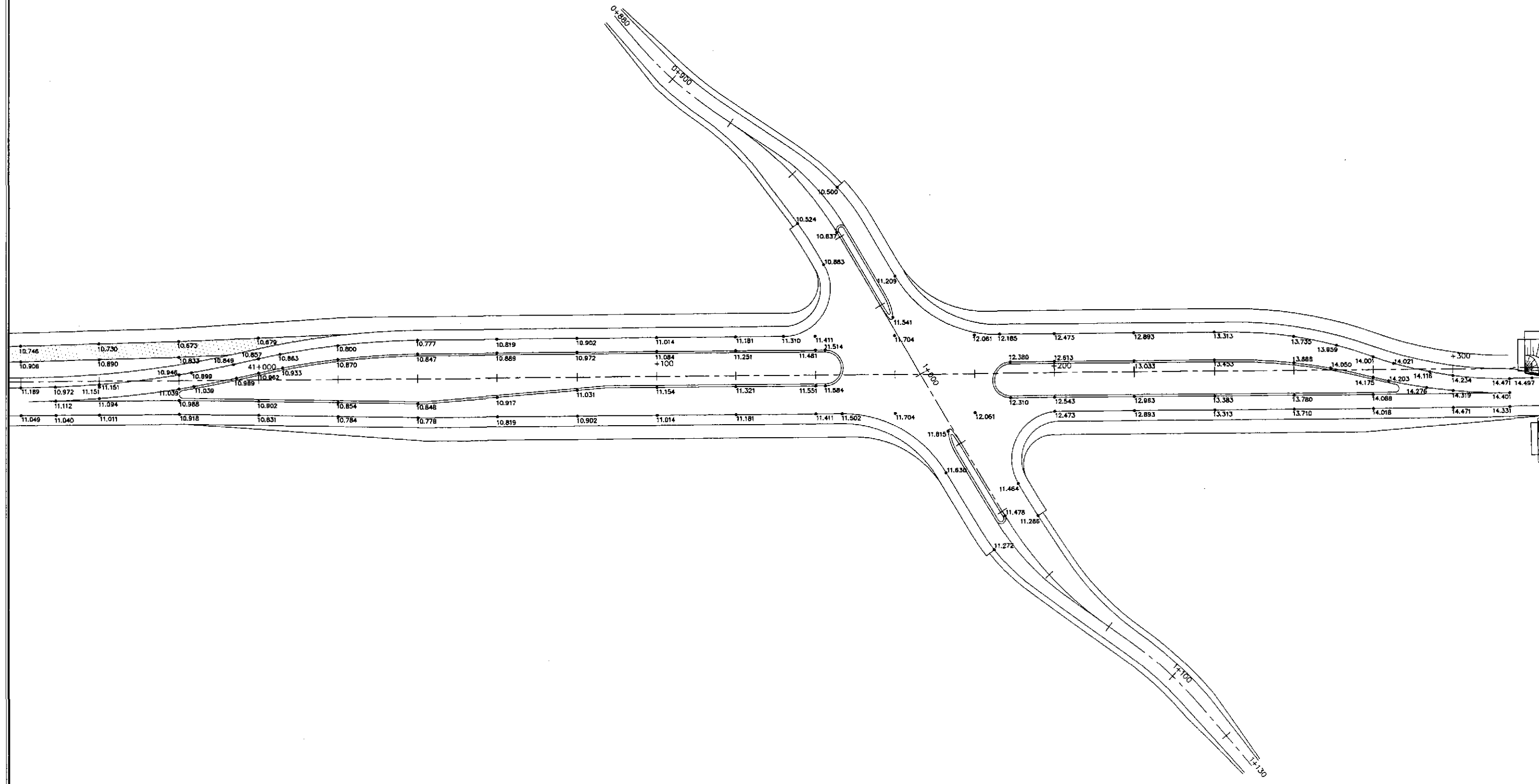
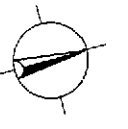


CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
31	1648147.029	489885.777	BEG. OF TWO WAY TRAFFIC
32	1648155.358	489887.893	EDGE OF PAVEMENT
33	1648157.105	489881.114	EDGE OF PAVEMENT 2.60m FROM THE CENTERLINE
34	1648147.902	489882.388	CENTERLINE INTERSECTION OF PAVEMENT 3.50m WIDE PER LANE & BEG. OF RADIUS 138.722
35	1648114.807	489869.266	INTERSECTION OF REVERSE CURVES 138.722 & 138
36	1648082.330	489856.327	END OF RADIUS 138, PAVEMENT 7.00m WIDE
37	1648148.775	489878.998	BEG. OF TRANSITION RADIUS 102.18
38	1648115.913	489864.073	INTERSECTION OF REVERSE CURVES 102.18 & 100
39	1648084.076	489849.549	END OF RADIUS 100 & END OF TAPER, PAVEMENT 7.00m WIDE
40	1648027.742	489835.037	BEG. OF RADIUS 30
41	1648006.325	489814.030	END OF RADIUS 30
42	1648002.299	489799.586	BEG. OF RADIUS 56.752 & BEG. OF TAPER, PAVEMENT 4.50m WIDE
43	1647998.021	489788.685	LIMIT OF 2.50m WIDE SHOULDER
44	1647990.354	489777.432	END OF RADIUS 56.752
45	1647974.911	489759.763	BEG. OF RADIUS 86.95
46	1647955.026	489732.656	LIMIT OF CONSTRUCTION
47	1647976.815	489768.347	CENTERLINE INTERSECTION OF TWO LANE PAVEMENT
48	1647996.240	489799.314	CENTER OF MEDIAN RADIUS 1.25
49	1648000.510	489819.244	BEG. OF RADIUS 42
50	1648002.177	489824.075	INTERSECTION OF RADIUS 42 & RADIUS 0.50
51	1648003.132	489823.968	INTERSECTION OF RADIUS 0.50 & RADIUS 13
52	1648002.841	489818.296	END OF RADIUS 13
53	1647997.444	489798.979	BEG. OF RADIUS 58.991
54	1647985.030	489775.975	END OF RADIUS 58.991 & END OF TAPER, PAVEMENT 3.05m WIDE
55	1647970.318	489763.778	INTERSECTION OF RADIUS 93.05 & 53.35 & BEG. OF TAPER, PAVEMENT 3.05m WIDE



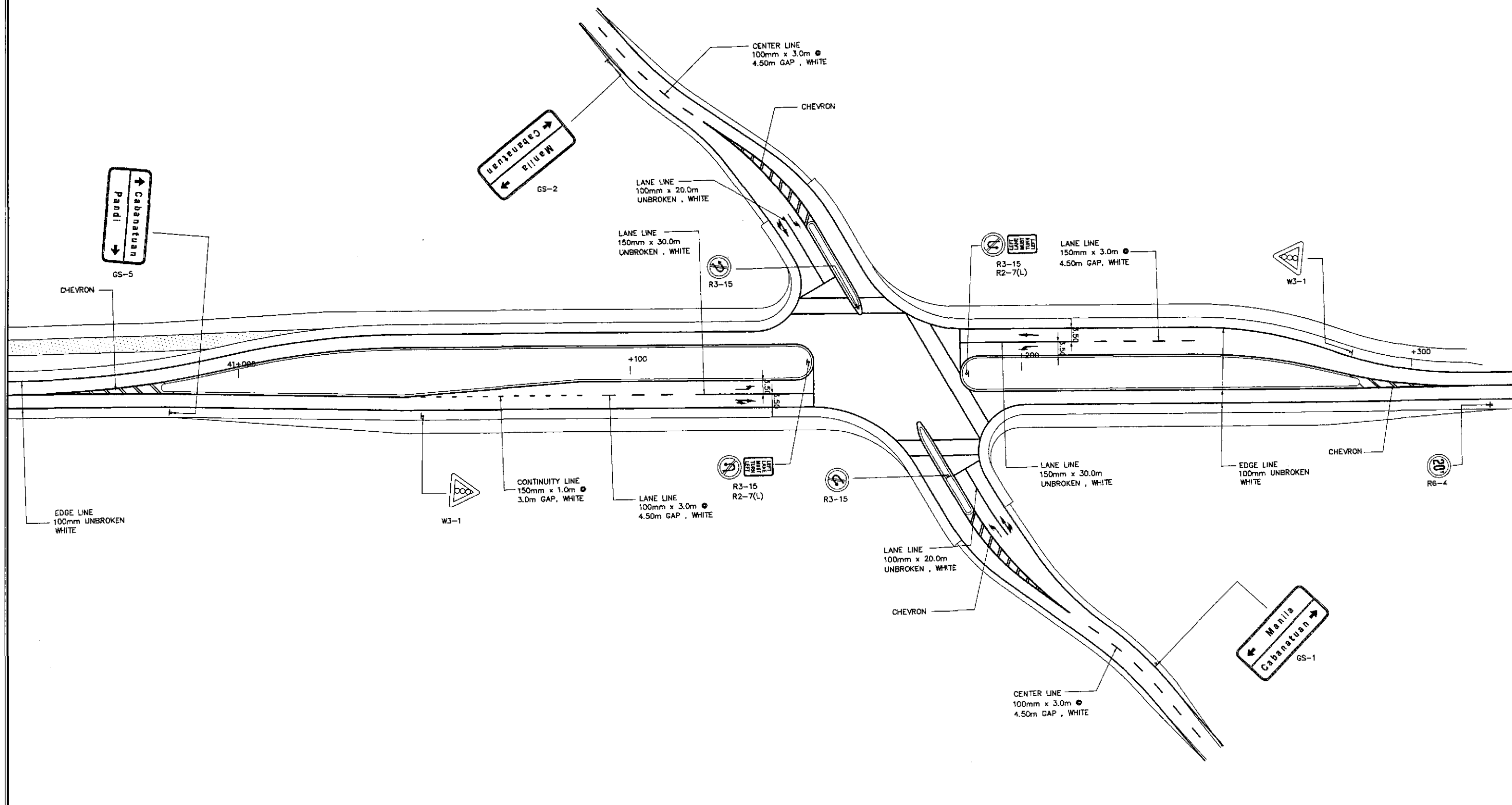
GEOMETRIC DESIGN LAYOUT
INTERSECTION A-9 (STA. 41+166.422) - INITIAL STAGE

	DESIGNED	DATE	SIGNATURE		PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/20/20	S. ROSE		P.W.D. - PWD Submitted By: DANILO C. TRAJANO Project Director	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-9 (INITIAL STAGE)
SUBMITTED 9/23/20 M. KANCHI TEAM LEADER				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. BONDAN Undersecretary	Approved By: SIMEON A. DATUMANONG Secretary	PLARIDEL BYPASS - CONTRACT PACKAGE II FULL SIZE A1



1
 PAVING AND GRADING PLAN
 INTERSECTION A-9 (STA. 41+166.422) - INITIAL STAGE
 RI-04 SCALE 1:500

		DATE	SIGNATURE	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	9/10/02	<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	INTERSECTION DETAIL PAVING AND GRADING PLAN INTERSECTION A-9 (INITIAL STAGE)	RI-04
	CHECKED	9/20/02	<i>[Signature]</i>		OFFICE OF THE SECRETARY	PLARIDEL BYPASS - CONTRACT PACKAGE II			FULL SIZE A1		
	SUBMITTED	9/25/02	<i>[Signature]</i>	Submitted By:	Reviewed By:	Recommended By:	Approved By:				
				DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES Dir., Director IV	MANUEL M. BONDAN Undersecretary				

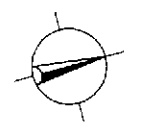


1
RI-05

SCALE

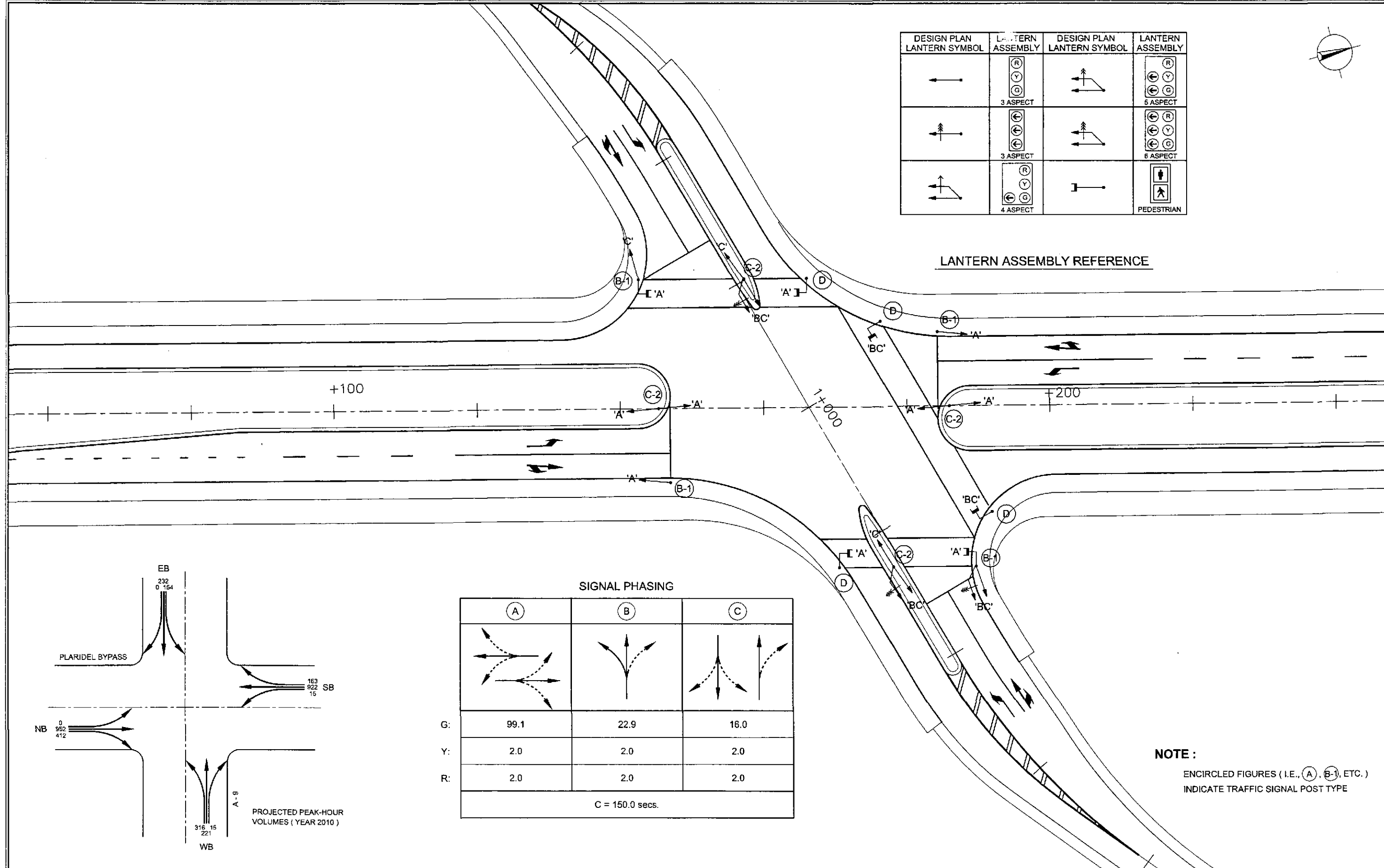
1:500

	DESIGNED	DATE	SIGNATURE	<p align="center">REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/20/02	S. JOSE		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 PLAN INTERSECTION A-9 (INITIAL STAGE)	RI-05
	SUBMITTED	9/23/02	M. KUDAWA		PLARIDEL BYPASS - CONTRACT PACKAGE II			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. BONGAN, Undersecretary Approved By: SIMON A. DATUMANONG, Secretary				Office of the Secretary						



DESIGN PLAN LANTERN SYMBOL	LANTERN ASSEMBLY	DESIGN PLAN LANTERN SYMBOL	LANTERN ASSEMBLY

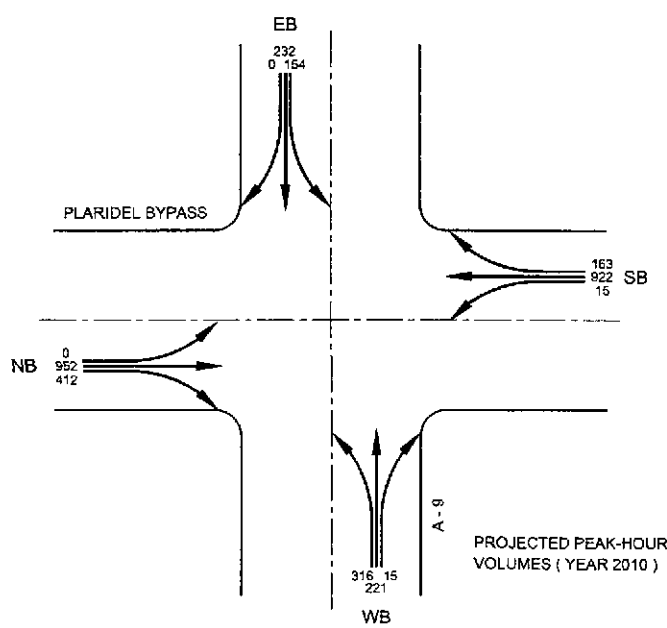
LANTERN ASSEMBLY REFERENCE



SIGNAL PHASING

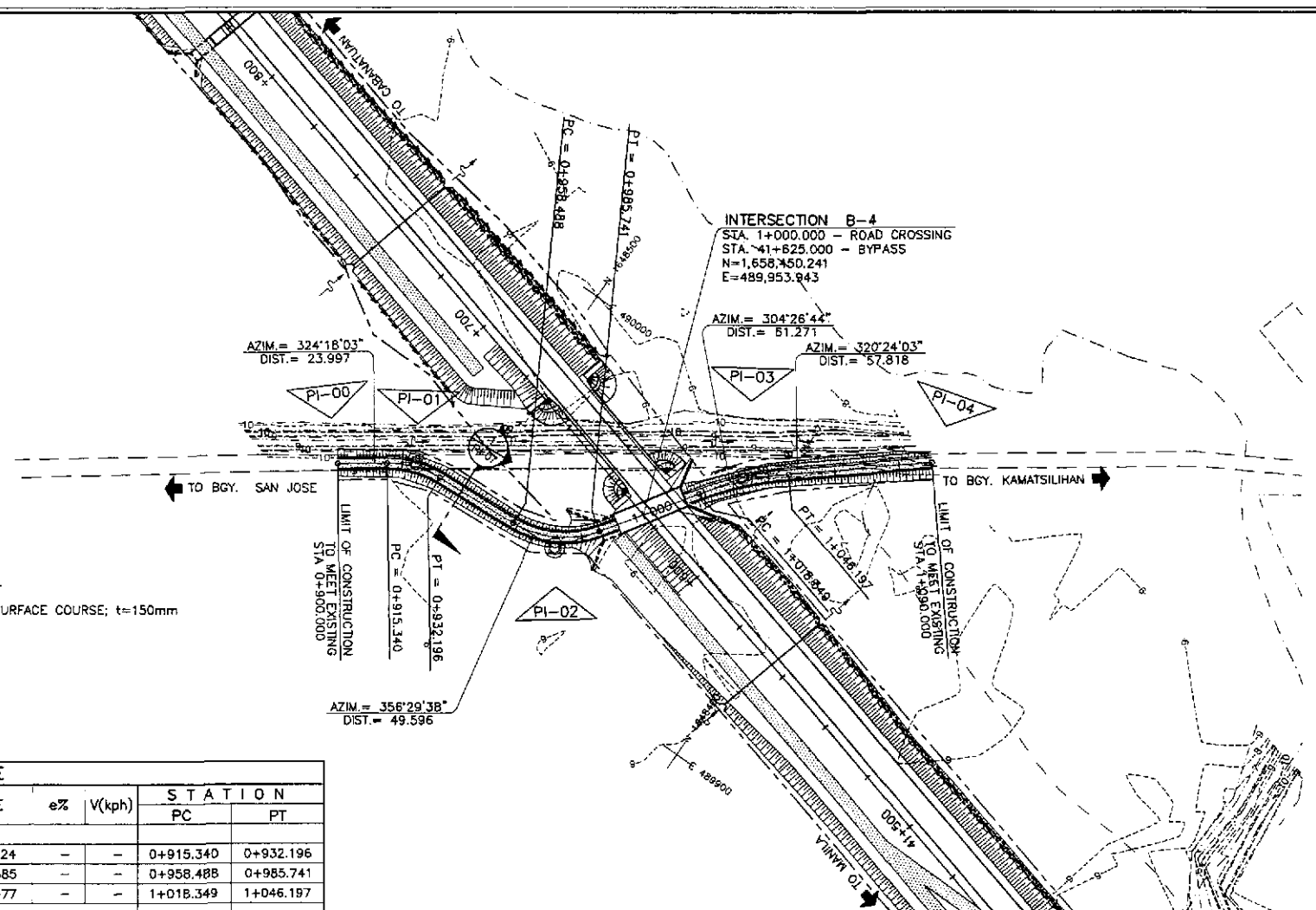
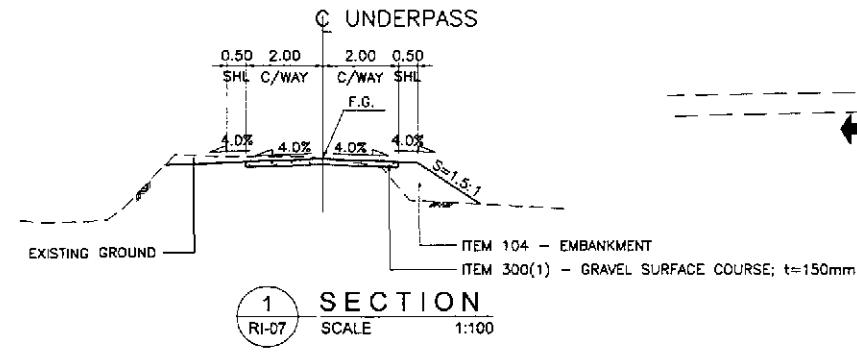
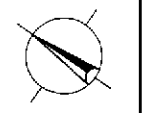
	(A)	(B)	(C)
G:			
Y:	99.1	22.9	16.0
R:	2.0	2.0	2.0
C = 150.0 secs.			

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



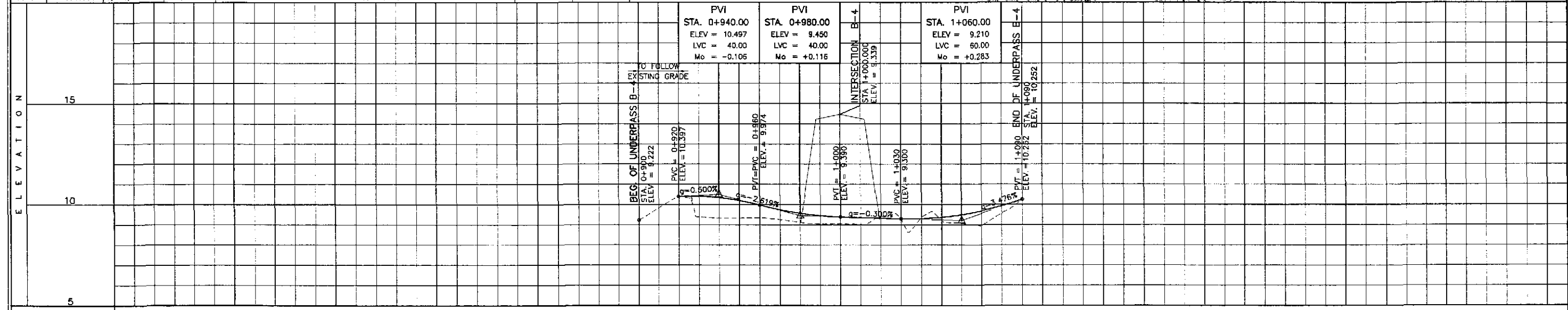
1 INTERSECTION A-9 (STA. 41+166.422) - INITIAL STAGE
RI-06 SCALE 1:250

	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/20/02			BUREAU OF DESIGN Submitted By: DANILO C. TRAJANO Project Director	OFFICE OF THE SECRETARY Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES OIC, Director IV	Recommended By: MANUEL M. BONDAN Undersecretary	Approved By: SIMON A. DATUMANONG Secretary	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-9 (INITIAL STAGE)
	SUBMITTED	9/23/02							PLARIDEL BYPASS - CONTRACT PACKAGE II	FULL SIZE A1		



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	1,648,535.583	489,913.067								BEG. OF INTERSECTION B-4	
PI-01	0+923.997	1,648,516.095	489,927.071	32°11'35"	30	8.657	16.856	1.224	-	-	0+915.340	0+932.196
PI-02	0+973.136	1,648,466.592	489,930.103	52°02'55"	30	14.648	27.252	3.385	-	-	0+958.488	0+985.741
PI-03	1+032.364	1,648,431.935	489,980.631	15°57'19"	100	14.014	27.847	0.977	-	-	1+018.349	1+046.197
PI-04	1+090.000	1,648,387.385	490,017.485								END OF INTERSECTION B-4	



STATION	+900												1+000												+100											
PROFILE GRADE BYPASS	9.222												9.337												9.493											
EXISTING GROUND BYPASS	9.222												9.337												9.493											
HORIZONTAL CURVATURE	R=30												R=30												R=100											
VERTICAL CURVATURE	g=-0.500%												g=-0.300%												g=+0.283%											
SUPERELEVATION	NC																																			

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

Submitted By: **PJHL - PMD**
Reviewed By: **JOSEFINA M. ALAGAR**
Recommended By: **GILBERTO S. REYES**
Recommended By: **EDMUNDO V. MIR**
Approved By: **SIMEON A. DATUMANONG**

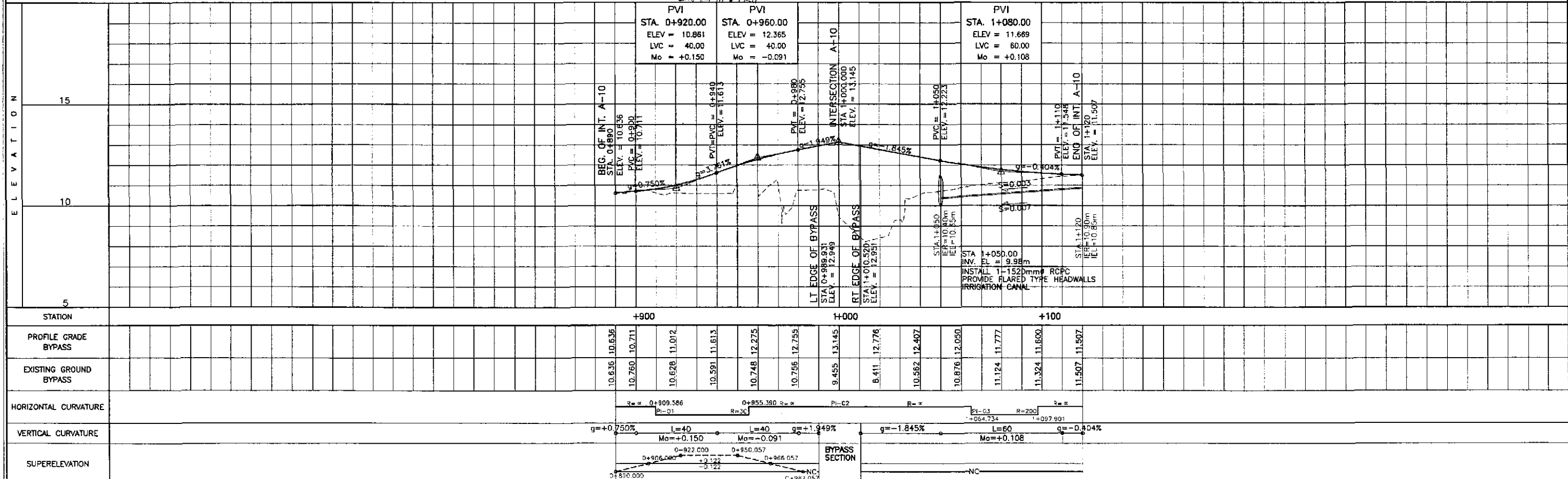
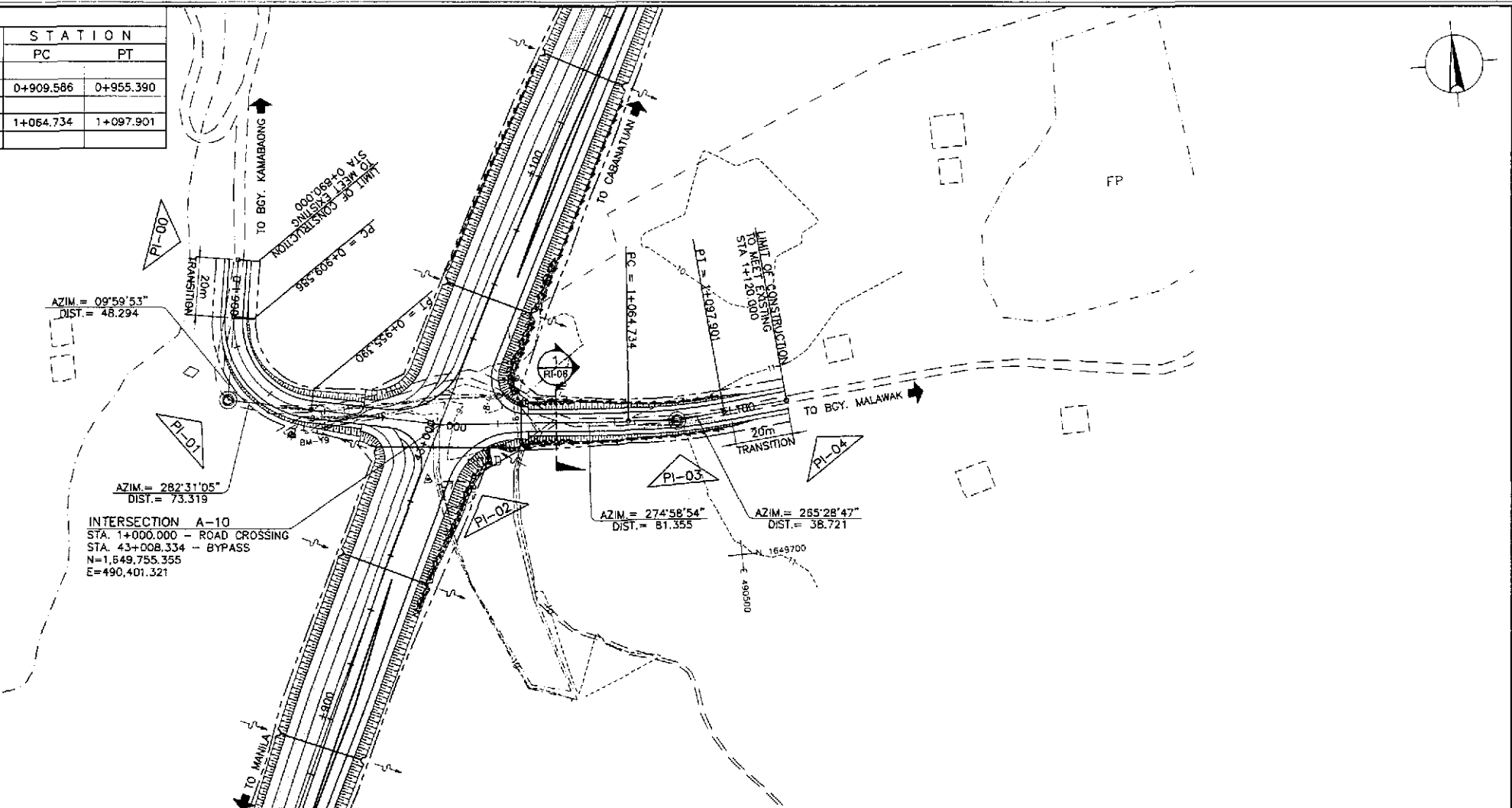
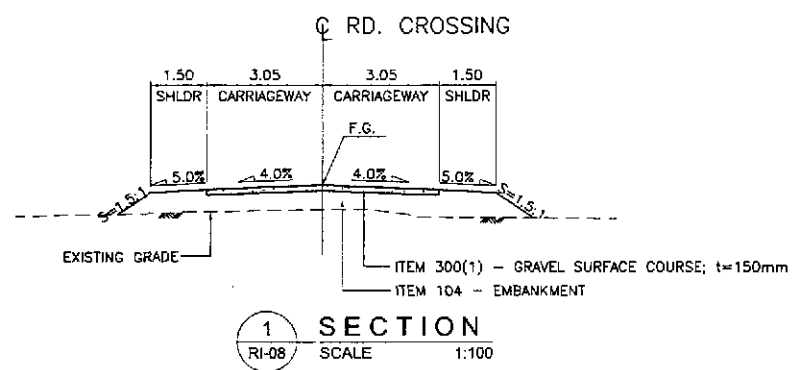
PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)

SCALE :
HORIZONTAL 1:1000
VERTICAL 1:100
FULL SIZE A1

SHEET CONTENTS :
PLAN, CROSS-SECTION AND PROFILE INTERSECTION B-4
STA. 0+900 - STA. 1+090 (INITIAL STAGE)

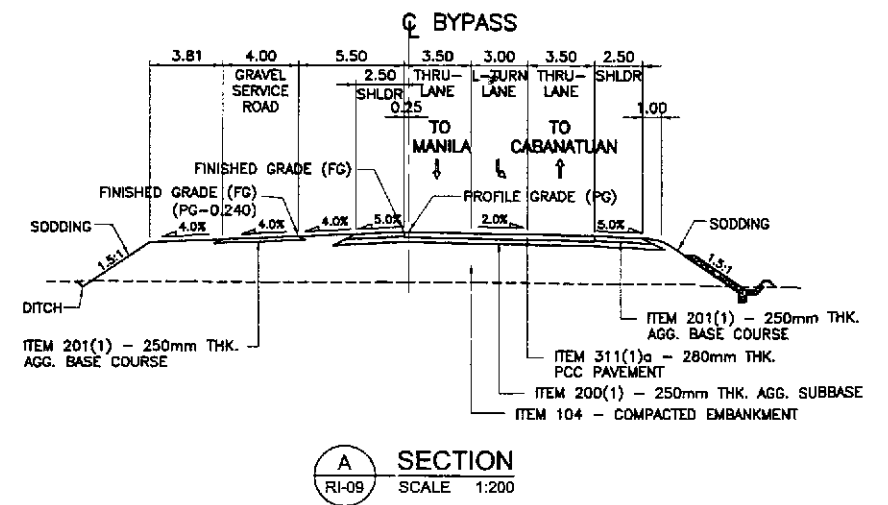
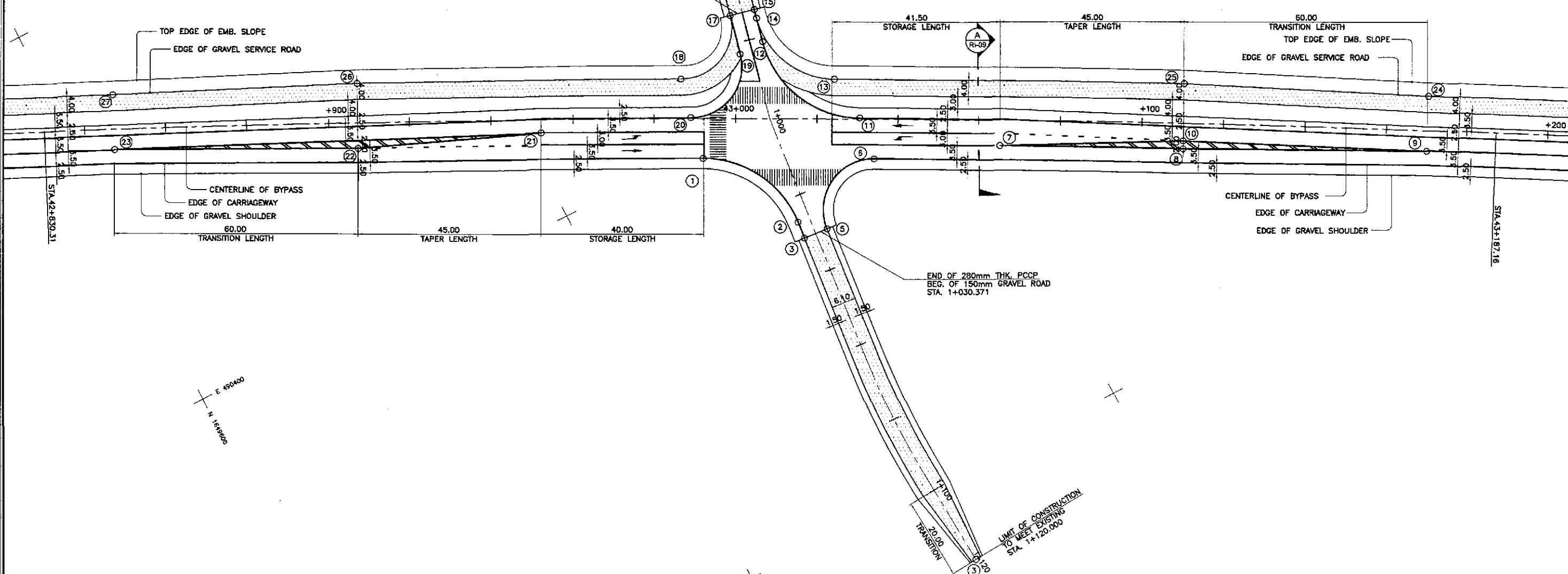
SHEET NO. :
RI-07

PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION	
		NORTHING	EASTING								PC	PT
		PI-00	0+890.000								1,649,818.808	490,338.129
PI-01	0+938.294	1,649,771.247	490,329.744	87°28'48"	30	28.709	45.804	11.523	RC	30	0+909.586	0+955.390
PI-02	1+000.000	1,649,755.355	490,401.321	NO CURVE ELEMENTS/CENTERLINE OF BYPASS								
PI-03	1+081.356	1,649,748.290	490,482.368	09°30'06"	200	16.622	33.168	0.690	-	30	1+064.734	1+097.901
PI-04	1+120.000	1,649,751.342	490,520.969	END OF INTERSECTION A-10								



	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE II	SCALE : HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1	SHEET CONTENTS : PLAN, CROSS-SECTION AND PROFILE INTERSECTION A-10 STA. 0+890 - STA. 1+120 (INITIAL STAGE)	SHEET NO. : RI-08
	CHECKED	9/20/02	S. JOSE		Submitted By:	Reviewed By:	Recommended By:				
	SUBMITTED	9/23/02	Team Leader	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highway Division	GILBERTO S. REYES Director IV (CIC)	EDMUNDO V. MIR Undersecretary	SIMEON A. DATUMANONG Secretary			

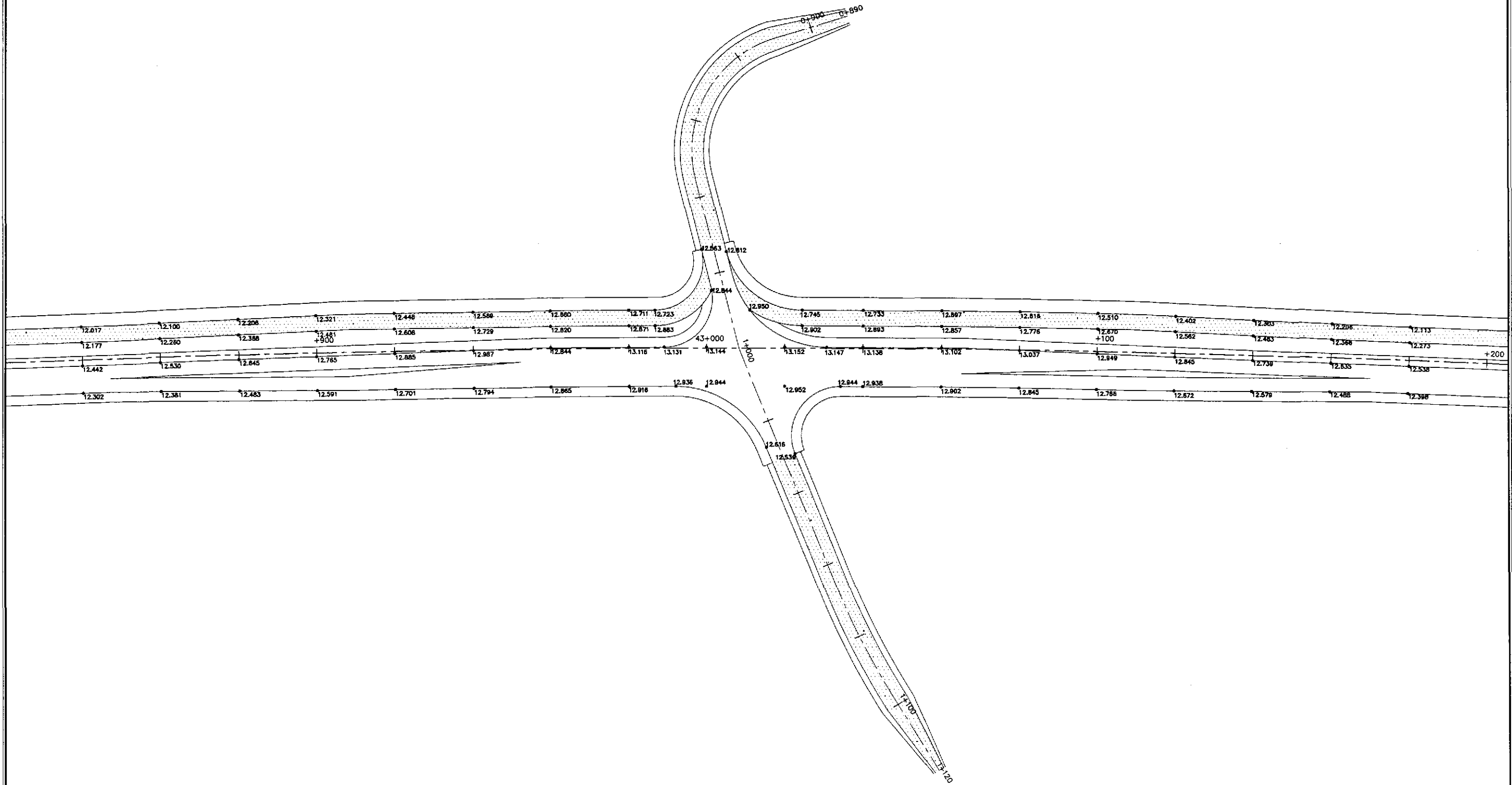
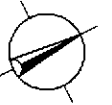
TABLE OF COORDINATES			
CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
1	1649736.409	490402.642	BEG. OF CORNER RADIUS 25
2	1649750.044	490427.128	END OF CORNER RADIUS 25
3	1649749.679	490431.312	LIMIT OF 2.50m WIDE SHOULDER
4	1649751.342	490520.969	LIMIT OF CONSTRUCTION
5	1649755.756	490431.842	BEG. OF CORNER RADIUS 12.50/LIMIT OF 2.50m WIDE SHOULDER
6	1649773.949	490421.823	END OF CORNER RADIUS 12.50
7	1649803.009	490433.024	END OF STORAGE LANE
8	1649842.68	490454.131	INNER EDGE OF 3.50m WIDE LANE
9	1649895.836	490481.788	CENTER OF TWO LANE PAVEMENT
10	1649843.601	490452.413	BEG. OF TAPER, LANE WIDTH 3.50m
11	1649775.346	490411.29	BEG. OF RADIUS 25
12	1649762.402	490383.653	END OF RADIUS 25
13	1649774.075	490399.95	BEG. OF CORNER RADIUS 20
14	1649763.695	490377.828	END OF RADIUS 20
15	1649764.172	490375.679	LIMIT OF 2.50m WIDE SHOULDER
16	1649818.808	490338.129	LIMIT OF CONSTRUCTION
17	1649758.217	490374.356	BEG. OF RADIUS 12.50/LIMIT OF 2.50m WIDE SHOULDER
18	1649740.393	490382.811	END OF RADIUS 12.50
19	1649756.093	490383.924	BEG. OF RADIUS 12.50
20	1649738.263	490392.376	END OF RADIUS 12.50
21	1649703.742	490379.06	END OF LANE
22	1649662.026	490362.048	BEG. OF TAPER, LANE WIDTH 3.50m
23	1649608.415	490335.284	CENTER OF TWO LANE PAVEMENT (7.00m WIDE)
24	1649902.409	490468.997	EDGE OF SERVICE ROAD
25	1649850.236	490440.027	EDGE OF SERVICE ROAD
26	1649668.999	490347.647	EDGE OF SERVICE ROAD
27	1649614.110	490323.044	EDGE OF SERVICE ROAD



1
RI-09 SCALE 1:500

GEOMETRIC DESIGN LAYOUT
INTERSECTION A-10 (STA. 43+008.334) - INITIAL STAGE

	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-10 (INITIAL STAGE)	SHEET NO. : RI-09
	CHECKED	9/20/02	<i>[Signature]</i>		Submitted By:	Reviewed By:	Recommended By:	Approved By:				
	SUBMITTED	9/23/02	<i>[Signature]</i>		DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONGAN Undersecretary				



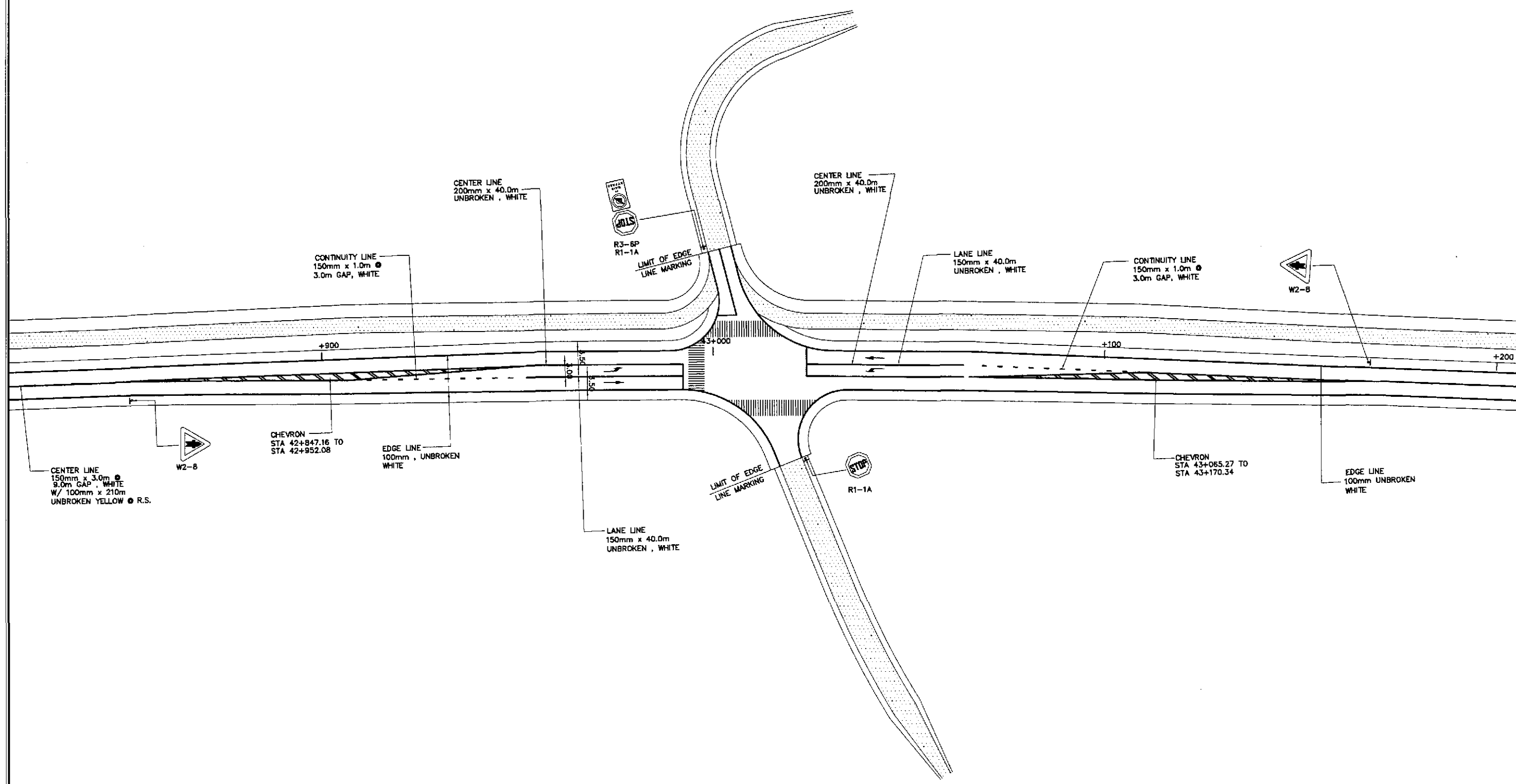
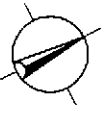
PAVING AND GRADING PLAN
INTERSECTION A-10 (STA. 43+008.334) - INITIAL STAGE

1
RI-10

SCALE

1:500

JICA 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	7/20/02	<i>S. JOSE</i>		Submitted By:	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilaridel, Cabanatuan and San Jose Bypasses)			1:500	INTERSECTION DETAIL PAVING AND GRADING PLAN INTERSECTION A-10 (INITIAL STAGE)	RI-10
	SUBMITTED	7/23/02	<i>H. RAJANO</i>		Team Leader	BUREAU OF DESIGN	OFFICE OF THE SECRETARY	PLARIDEL BYPASS - CONTRACT PACKAGE II			FULL SIZE A1
				P.J.H.L. - P.M.O.	Reviewed By:	Recommended By:	Recommended By:				
				DANIL D. C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONOAN Undersecretary				
				SIMEON A. DATUMANONG Secretary							



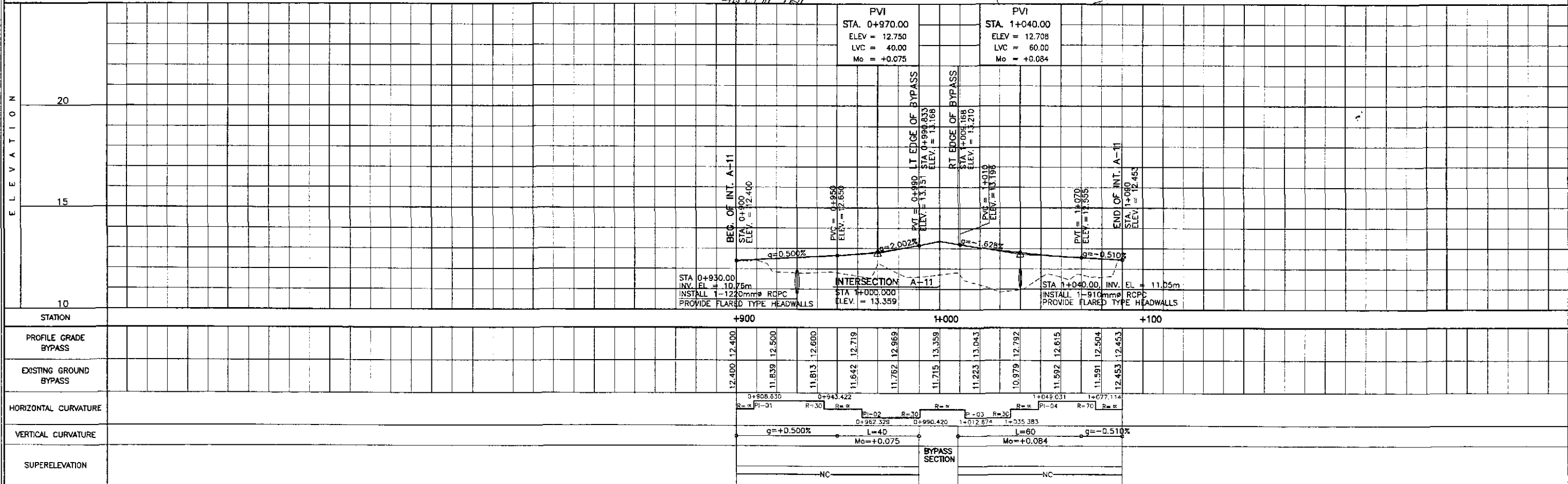
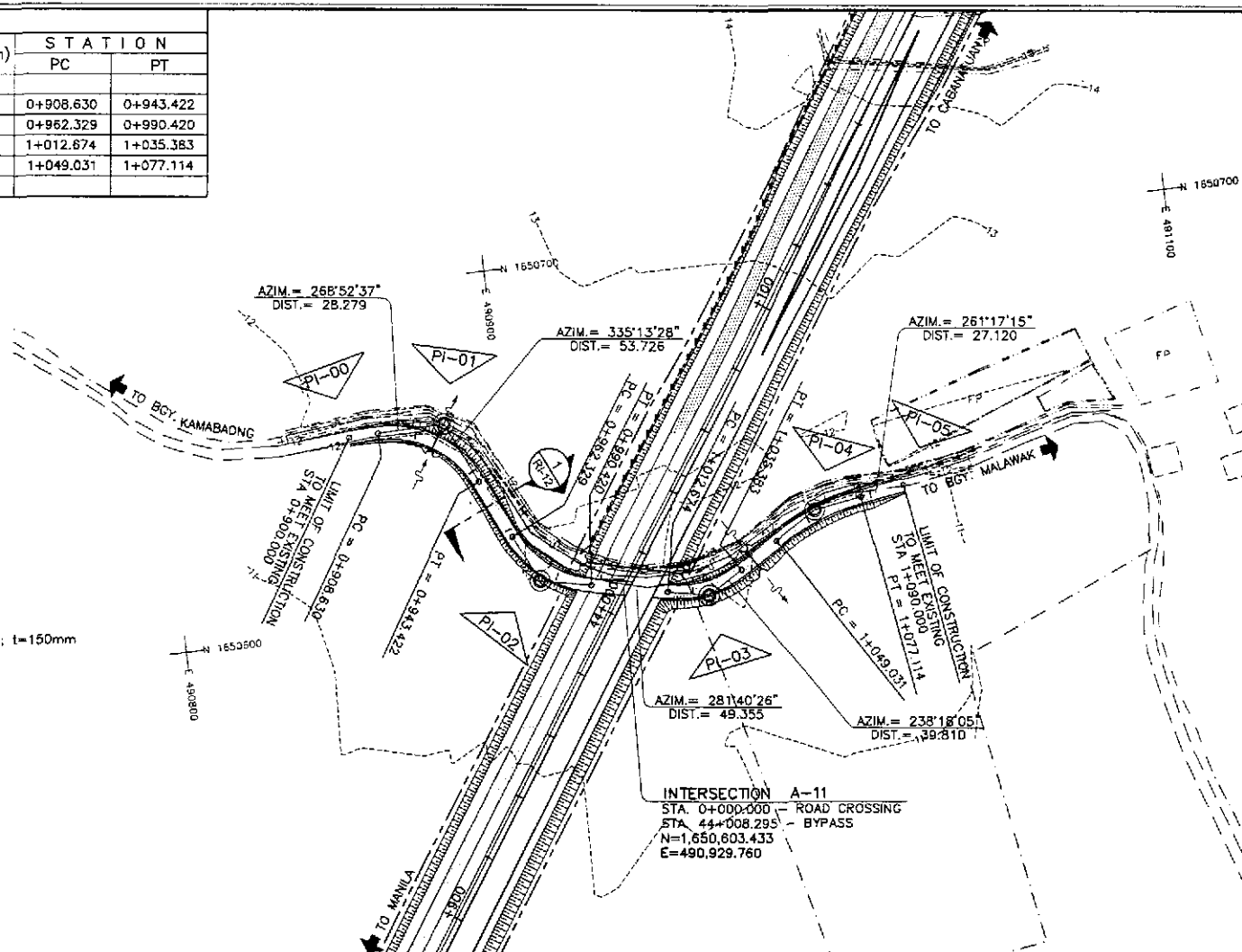
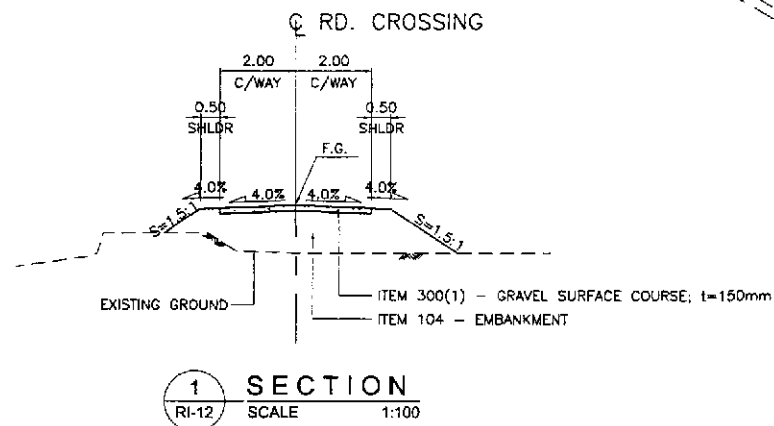
TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT PLAN
 INTERSECTION A-10 (STA. 43+008.334) - INITIAL STAGE

1
 RI-11

SCALE 1:500

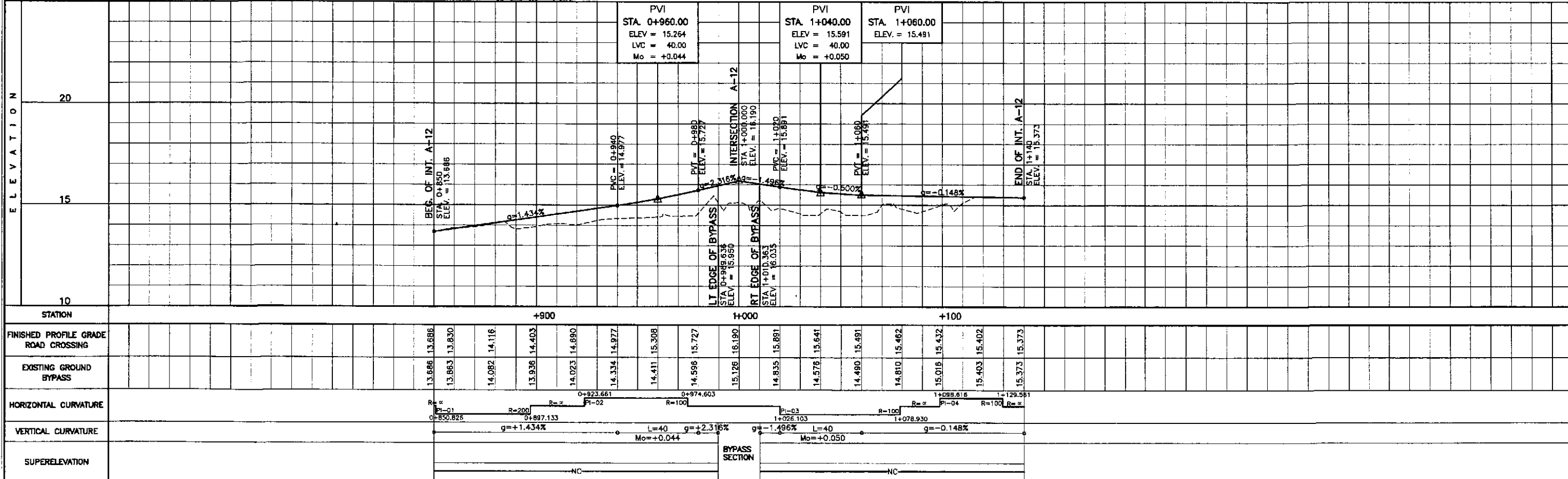
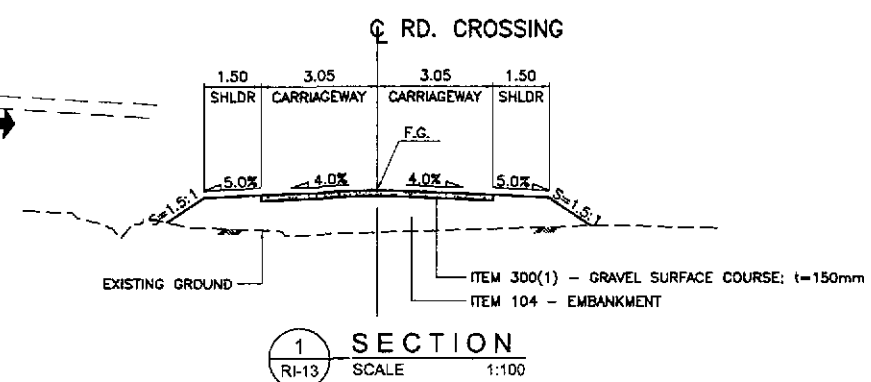
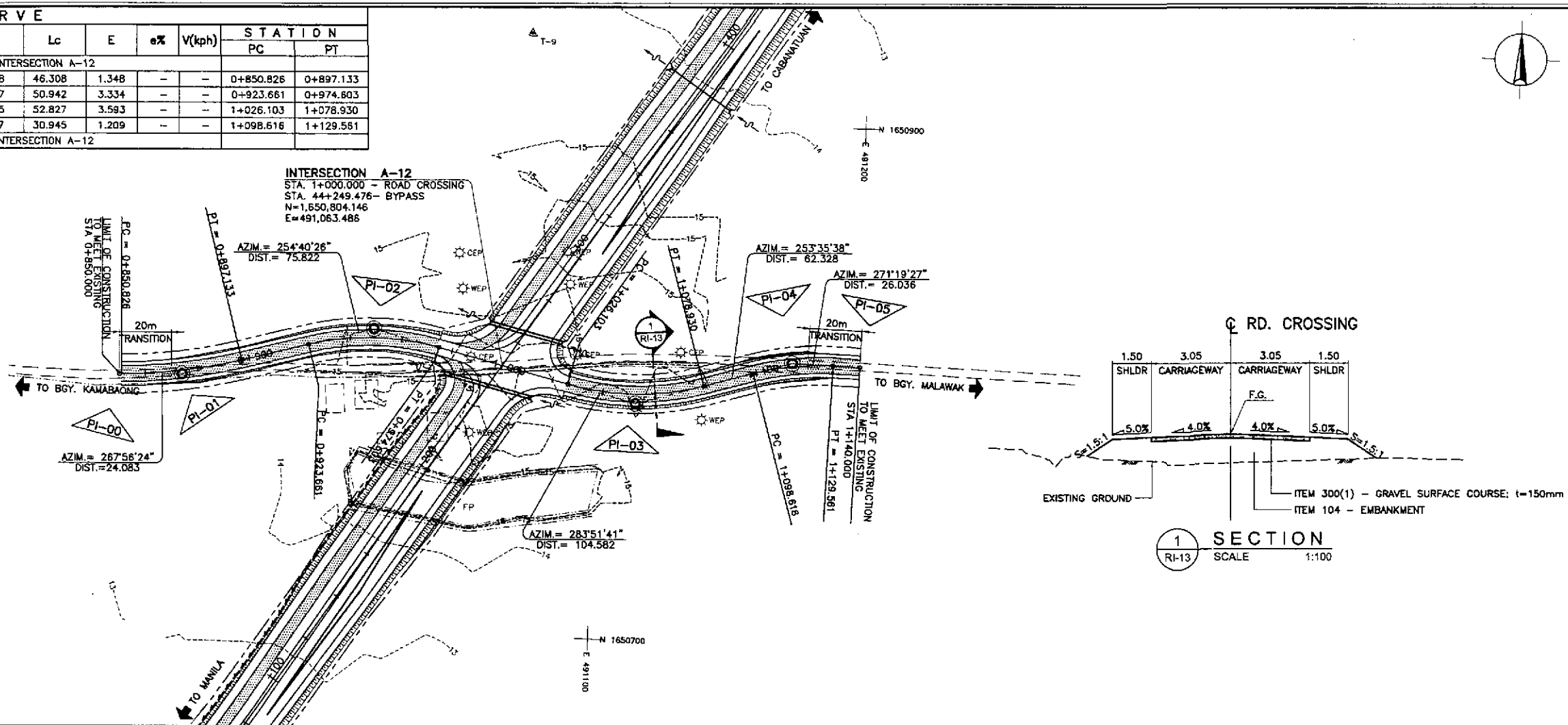
	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/18/02	S. LUNA		BUREAU OF DESIGN		OFFICE OF THE SECRETARY		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	1:500	TRAFFIC SIGNS AND PAVEMENT MARKINGS LAOUT PLAN INTERSECTION A-10 (INITIAL STAGE)	RI-11
	SUBMITTED	9/23/02	M. BONDAN		Submitted By:	Reviewed By:	Recommended By:	Approved By:	PLARIDEL BYPASS - CONTRACT PACKAGE II	FULL SIZE A1		
					DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES Dir. Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary			

PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION	
		NORTHING	EASTING								PC	PT
PI-00	0+900.000	1,650,656.707	490,854.817								BEG. OF INTERSECTION A-11	
PI-01	0+928.279	1,650,657.262	490,683.091	66°26'51"	30	19.649	34.792	5.862	-	-	0+908.630	0+943.422
PI-02	0+977.499	1,650,608.441	490,905.521	53°39'02"	30	15.171	28.091	3.618	-	-	0+962.329	0+990.420
PI-03	1+024.604	1,650,598.455	490,953.854	43°22'21"	30	11.930	22.710	2.285	-	-	1+012.674	1+035.383
PI-04	1+063.284	1,650,619.373	490,987.726	22°59'10"	70	14.233	28.083	1.432	-	-	1+049.031	1+077.114
PI-05	1+090.000	1,650,623.481	491,014.533								END OF INTERSECTION A-11	



		<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p> <p>PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</p> <p>PLARIDEL BYPASS - CONTRACT PACKAGE II</p>				<p>SCALE :</p> <p>HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1</p>	<p>SHEET CONTENTS :</p> <p>PLAN, CROSS-SECTION AND PROFILE INTERSECTION A-11 STA. 0+900 - STA. 1+090 (INITIAL STAGE)</p>	<p>SHEET NO. :</p> <p>RI-12</p>				
DESIGNED	DATE 9/18/21	SIGNATURE [Signature]	<p>Submitted By: DANILO C. TRAJANO Project Director</p>		<p>Reviewed By: JOSEFINA M. ALAGAR Chief, Highway Division</p>		<p>Recommended By: GILBERTO S. REYES Director IV (DIC)</p>		<p>Recommended By: EDMUNDO V. MIR Undersecretary</p>		<p>Approved By: SIMEON A. DATUMANONG Secretary</p>	

PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION	
		NORTHING	EASTING								PC	PT
		PI-00	0+850.000								1,650,795.561	490,916.358
PI-01	0+874.083	1,650,796.427	490,940.425	13°15'58"	200	23.258	46.308	1.348	-	-	0+850.826	0+897.133
PI-02	0+949.698	1,650,816.488	491,013.551	29°11'16"	100	26.037	50.942	3.334	-	-	0+923.661	0+974.803
PI-03	1+053.149	1,650,791.413	491,115.088	30°16'03"	100	27.045	52.827	3.593	-	-	1+026.103	1+078.930
PI-04	1+114.213	1,650,809.017	491,174.878	17°43'49"	100	15.597	30.945	1.209	-	-	1+098.616	1+129.561
PI-05	1+140.000	1,650,808.415	491,200.907	END OF INTERSECTION A-12								



STATION	FINISHED PROFILE GRADE ROAD CROSSING	EXISTING GROUND BYPASS	HORIZONTAL CURVATURE	VERTICAL CURVATURE	SUPERELEVATION
850	13.886	13.886	R=200	g=+1.434%	NC
874	13.863	13.863	R=200	g=+1.434%	NC
897	14.116	14.082	R=200	g=+1.434%	NC
923	14.403	13.936	R=200	g=+1.434%	NC
949	14.890	14.023	R=200	g=+1.434%	NC
974	14.977	14.334	R=200	g=+1.434%	NC
998	15.308	14.411	R=200	g=+1.434%	NC
1026	15.727	14.598	R=100	g=-1.496%	NC
1053	16.190	15.126	R=100	g=-1.496%	NC
1078	15.641	14.835	R=100	g=-1.496%	NC
1098	15.491	14.576	R=100	g=-1.496%	NC
1129	15.462	14.490	R=100	g=-0.148%	NC
1140	15.432	14.810	R=100	g=-0.148%	NC
1140	15.402	15.018	R=100	g=-0.148%	NC
1140	15.373	15.403	R=100	g=-0.148%	NC
1140	15.373	15.373	R=100	g=-0.148%	NC

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

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

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

DESIGNED: 9/10/02
CHECKED: 9/20/02
SUBMITTED: 7/23/02

DATE: 9/10/02
SIGNATURE: [Signatures]

PROJECT DIRECTOR: DANILLO C. TRAJANO
CHIEF, HIGHWAYS DIVISION: JOSEFINA M. ALAGAR
OIC, DIRECTOR IV: GILBERTO S. REYES
UNDERSECRETARY: MANUEL M. BONDAN
SECRETARY: SIMEON A. DATUMANONG

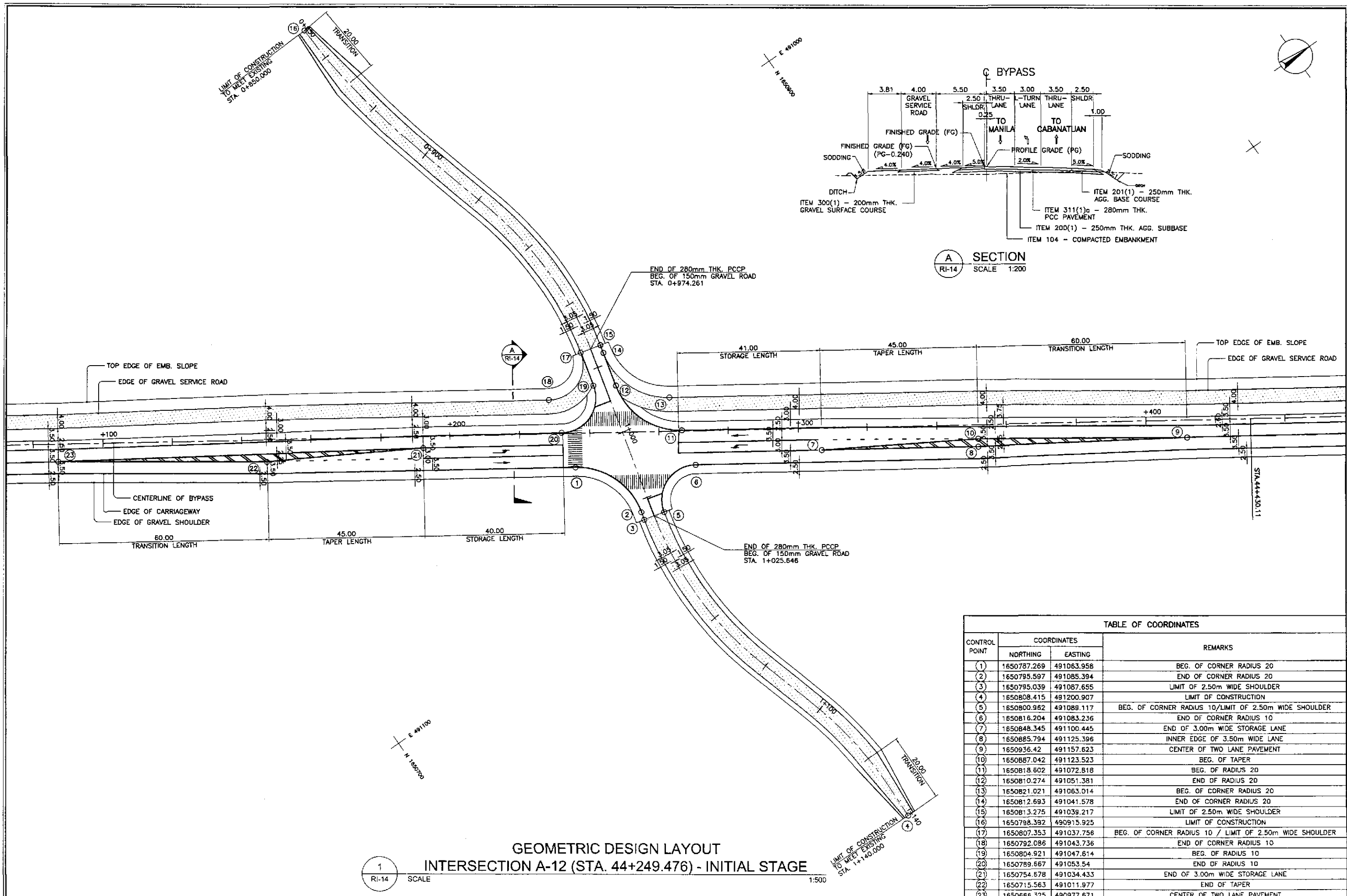
PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)

PLARIDEL BYPASS - CONTRACT PACKAGE II

SCALE :
HORIZONTAL 1:1000
VERTICAL 1:100
FULL SIZE A1

SHEET CONTENTS :
PLAN, CROSS-SECTION AND PROFILE
INTERSECTION A-12
STA. 0+850 - STA. 1+140 (INITIAL STAGE)

SHEET NO. :
RI-13

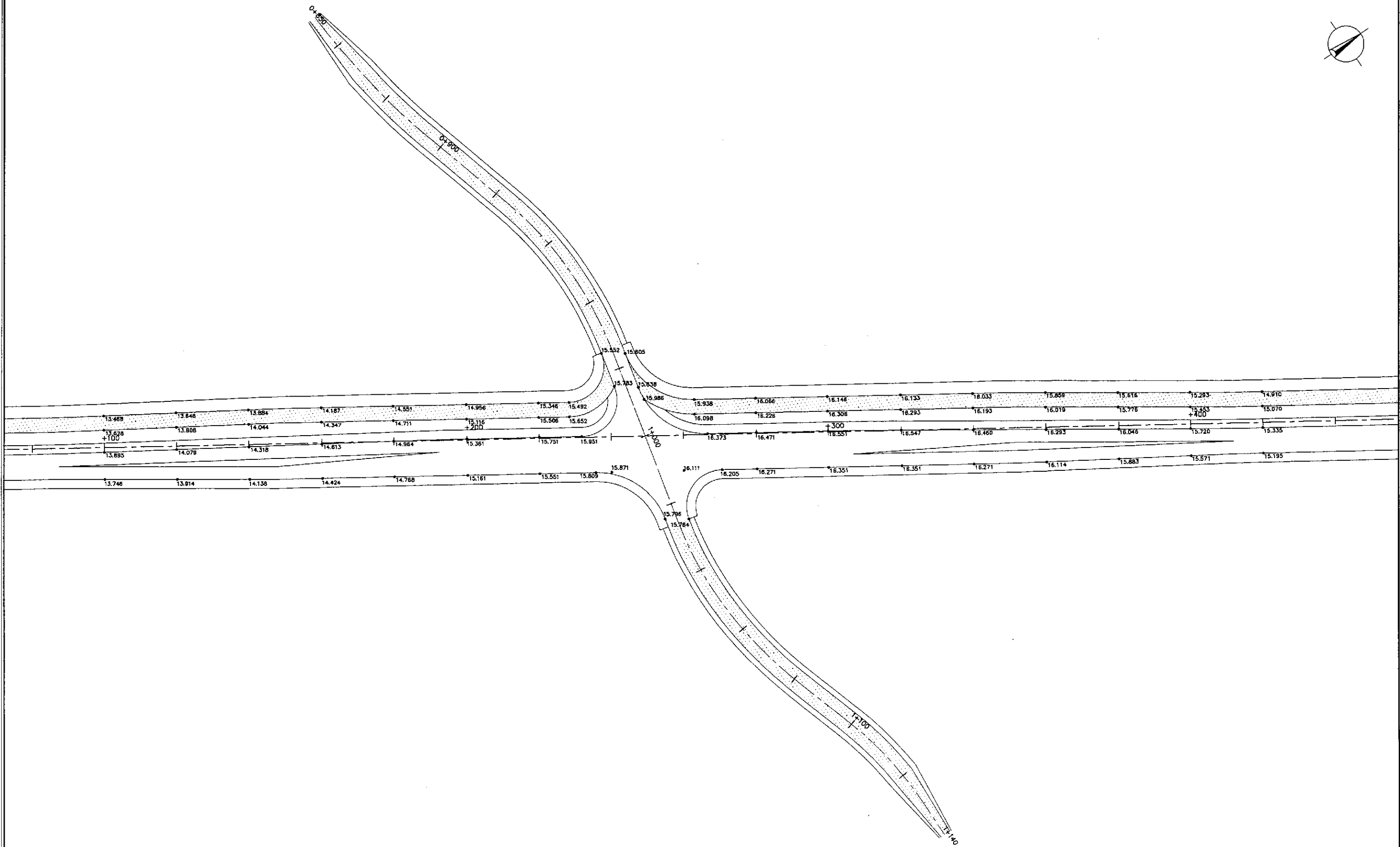
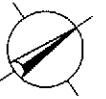


**GEOMETRIC DESIGN LAYOUT
INTERSECTION A-12 (STA. 44+249.476) - INITIAL STAGE**

TABLE OF COORDINATES			
CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
(1)	1650787.269	491063.958	BEG. OF CORNER RADIUS 20
(2)	1650795.597	491085.394	END OF CORNER RADIUS 20
(3)	1650795.039	491087.655	LIMIT OF 2.50m WIDE SHOULDER
(4)	1650808.415	491200.907	LIMIT OF CONSTRUCTION
(5)	1650800.962	491089.117	BEG. OF CORNER RADIUS 10/LIMIT OF 2.50m WIDE SHOULDER
(6)	1650816.204	491083.236	END OF CORNER RADIUS 10
(7)	1650848.345	491100.445	END OF 3.00m WIDE STORAGE LANE
(8)	1650885.794	491125.396	INNER EDGE OF 3.50m WIDE LANE
(9)	1650936.42	491157.623	CENTER OF TWO LANE PAVEMENT
(10)	1650887.042	491123.523	BEG. OF TAPER
(11)	1650818.602	491072.818	BEG. OF RADIUS 20
(12)	1650810.274	491051.381	END OF RADIUS 20
(13)	1650821.021	491063.014	BEG. OF CORNER RADIUS 20
(14)	1650812.693	491041.578	END OF CORNER RADIUS 20
(15)	1650813.275	491039.217	LIMIT OF 2.50m WIDE SHOULDER
(16)	1650798.392	490915.925	LIMIT OF CONSTRUCTION
(17)	1650807.353	491037.756	BEG. OF CORNER RADIUS 10 / LIMIT OF 2.50m WIDE SHOULDER
(18)	1650792.086	491043.736	END OF CORNER RADIUS 10
(19)	1650804.921	491047.814	BEG. OF RADIUS 10
(20)	1650789.667	491053.54	END OF RADIUS 10
(21)	1650754.678	491034.433	END OF 3.00m WIDE STORAGE LANE
(22)	1650715.563	491011.977	END OF TAPER
(23)	1650666.325	490977.671	CENTER OF TWO LANE PAVEMENT

RI-14 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 (Pilaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE II	SCALE :	SHEET CONTENTS : INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-12 (INITIAL STAGE)	SHEET NO. :	
	CHECKED	9/10/02	A. ORONCE		BUREAU OF DESIGN		OFFICE OF THE SECRETARY			1:500		FULL SIZE A1	RI-14
	SUBMITTED	9/23/02	M. ROSA		Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES OC, Director IV	Recommended By: MANUEL M. BONDAN Undersecretary		Approved By: SIMON A. DATUMANONG Secretary			



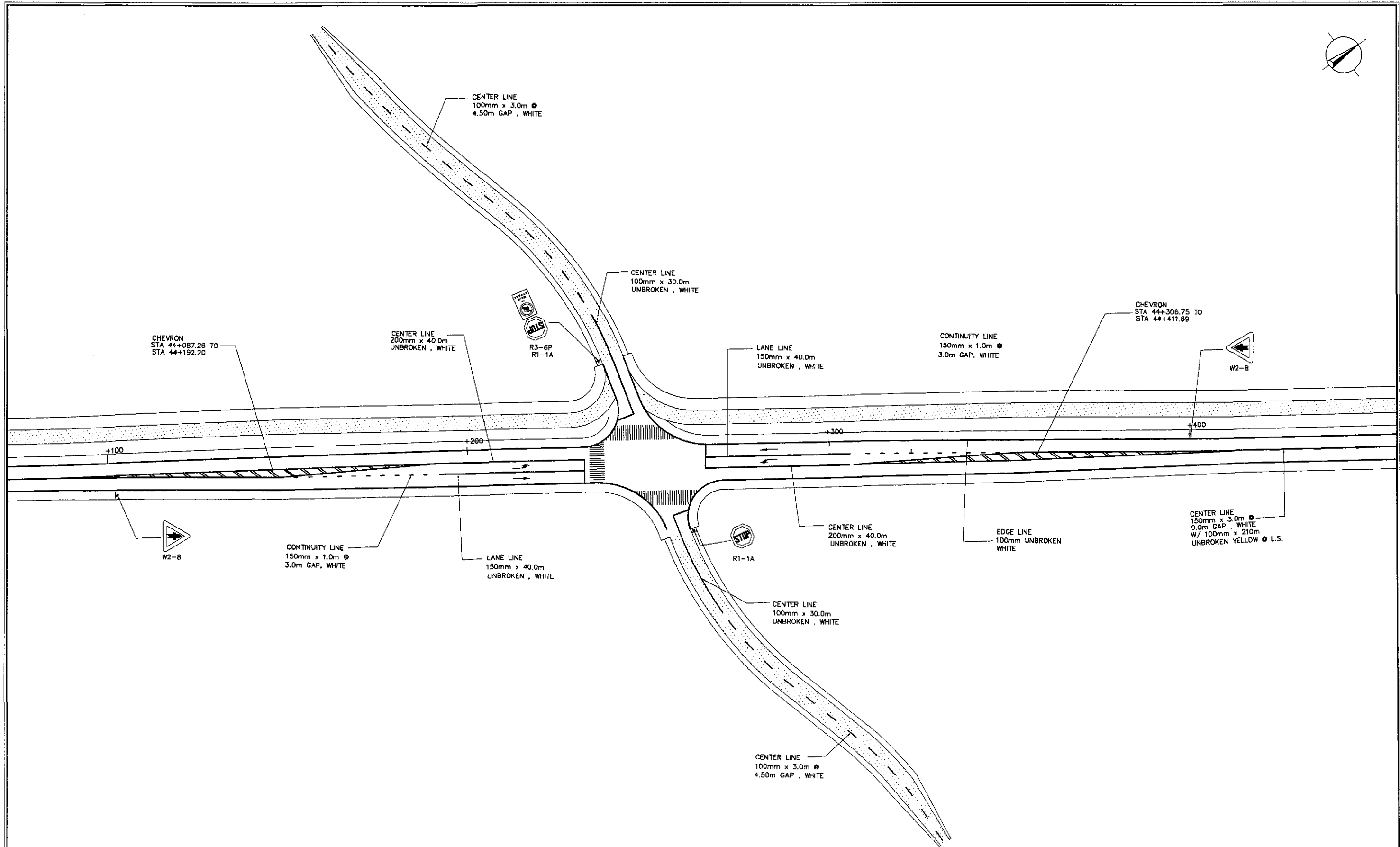
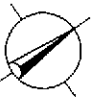
PAVING AND GRADING PLAN
INTERSECTION A-12 (STA. 44+249.476) - INITIAL STAGE

1
RI-15

SCALE

1:500

		DATE	SIGNATURE	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	9/18/02			BUREAU OF DESIGN	OFFICE OF THE SECRETARY			1:500	INTERSECTION DETAIL PAVING AND GRADING PLAN INTERSECTION A-12 (INITIAL STAGE)	RI-15
	CHECKED	9/20/02			Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES OIC, Director IV	Manuel M. Bondan Undersecretary			
SUBMITTED	9/23/02		TEAM LEADER	PLARIDEL BYPASS - CONTRACT PACKAGE II							



TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT PLAN
INTERSECTION A-12 (STA. 44+249.476) - INITIAL STAGE

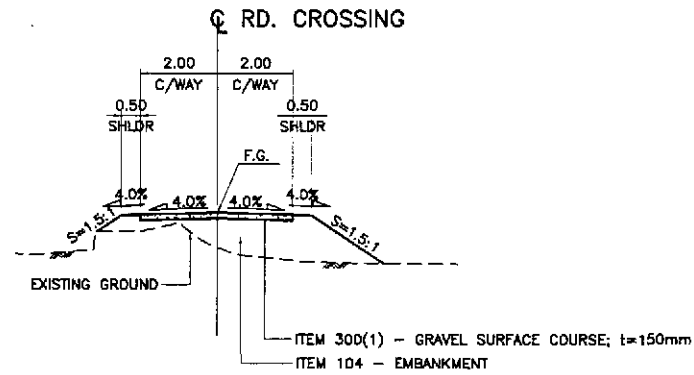
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RI-16

SCALE

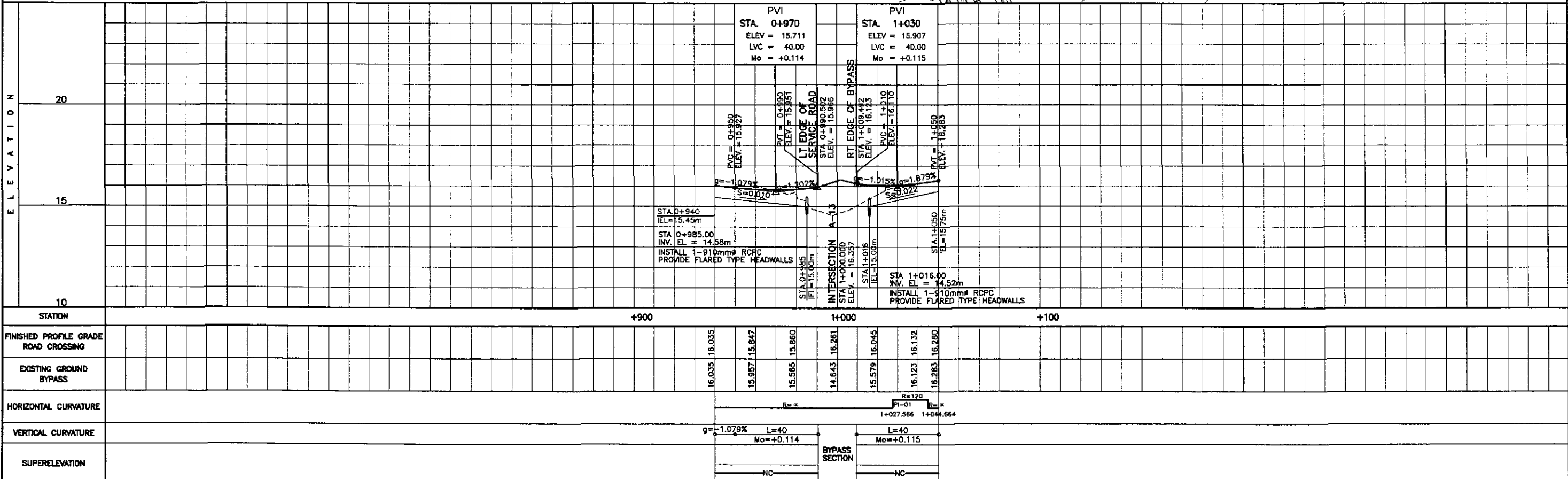
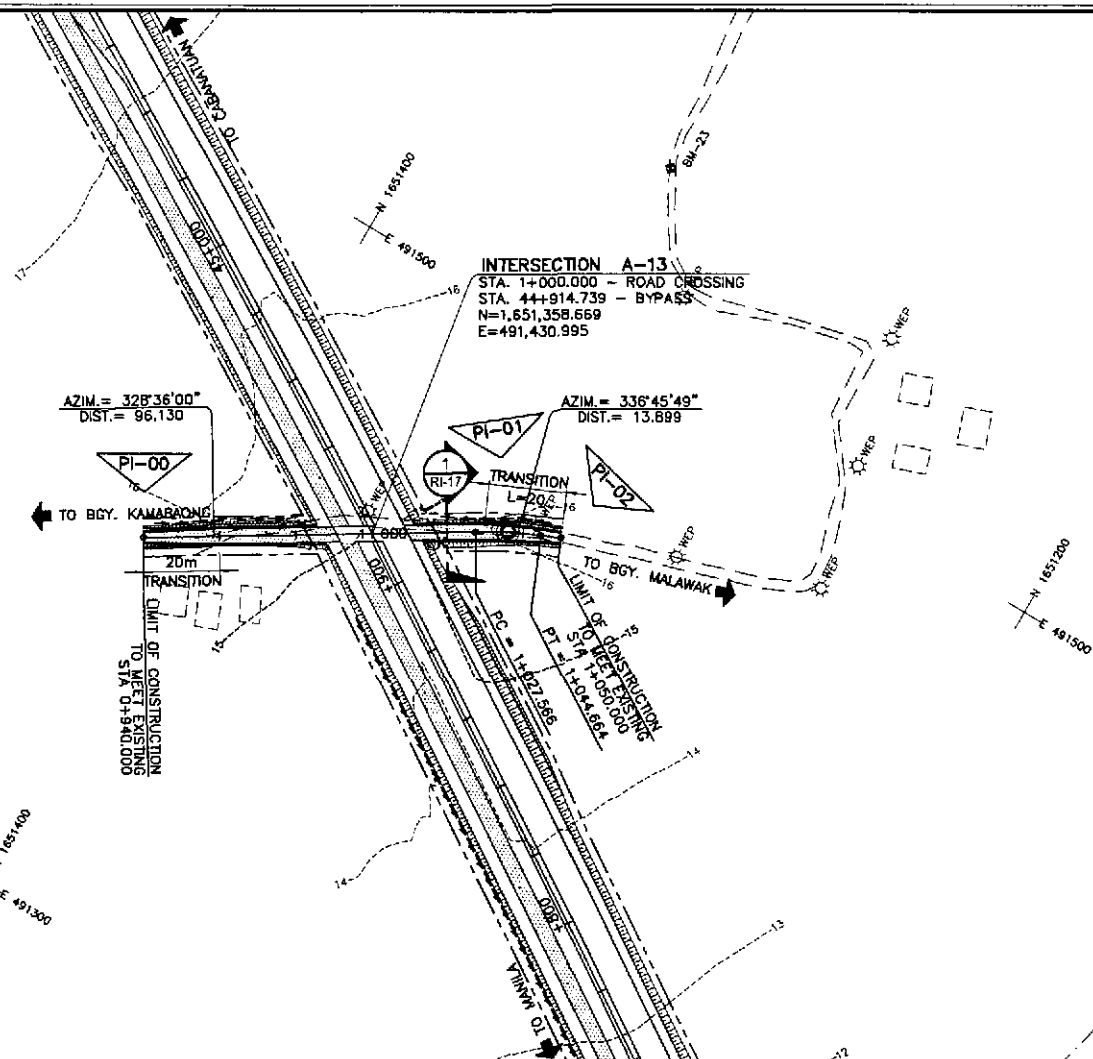
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	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/20/02	<i>S. Luna</i>		BUREAU OF DESIGN		OFFICE OF THE SECRETARY		THE DETAILED DESIGN 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 PLAN INTERSECTION A-12 (INITIAL STAGE)	RI-16
	SUBMITTED	9/23/02	<i>M. Kersch</i>		Submitted By:	Reviewed By:	Recommended By:	Approved By:	PLARIDEL BYPASS - CONTRACT PACKAGE II	FULL SIZE A1		
				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				

ELEMENTS OF CURVE													
PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION		
		NORTHING	EASTING								PC	PT	
PI-00	0+940.000	1,651,409.881	491,389.735	BEG. OF INTERSECTION A-13									
PI-01	1+036.130	1,651,327.830	491,449.820	08°09'49"	120	8.563	17.098	0.305	-	-	1+027.566	1+044.664	
PI-02	1+050.000	1,651,315.058	491,455.303	END OF INTERSECTION A-13									

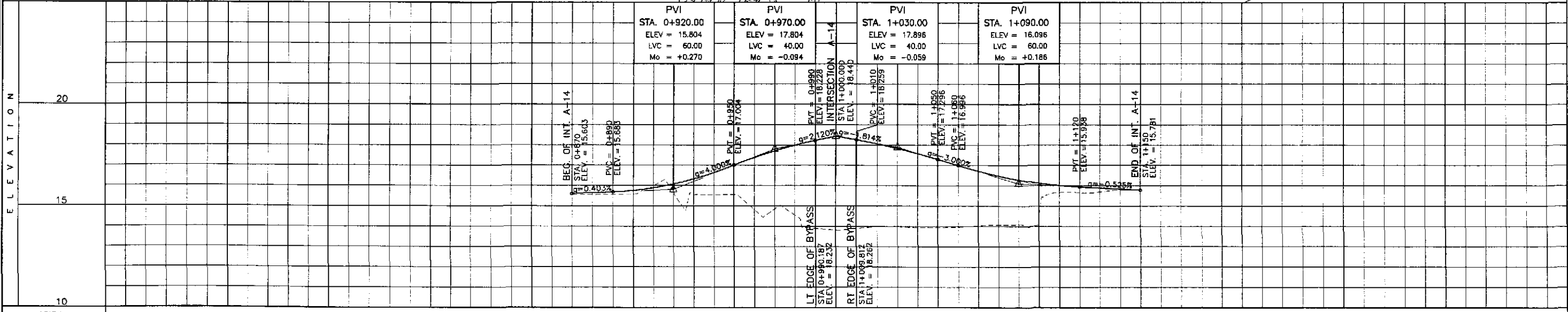
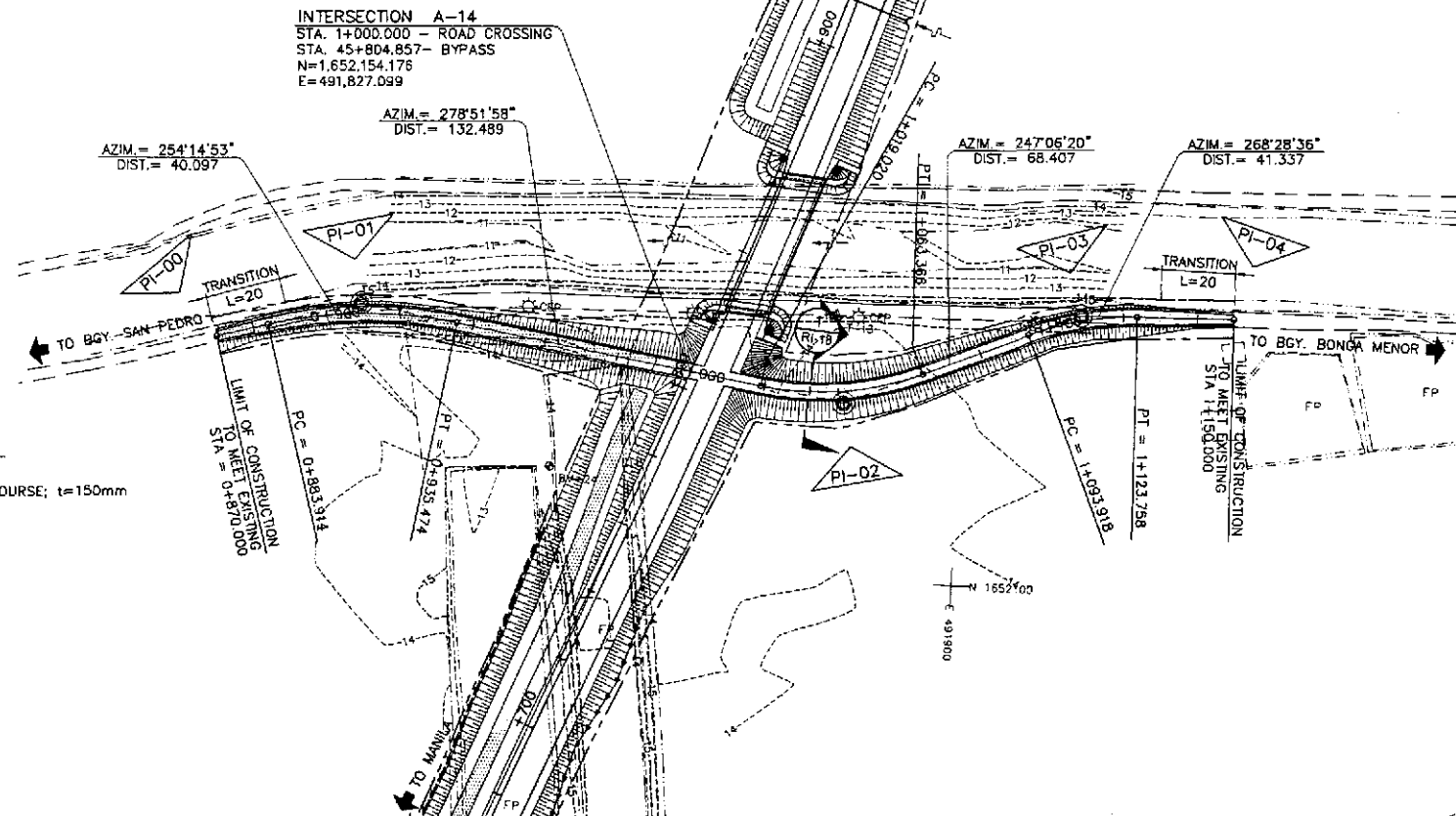
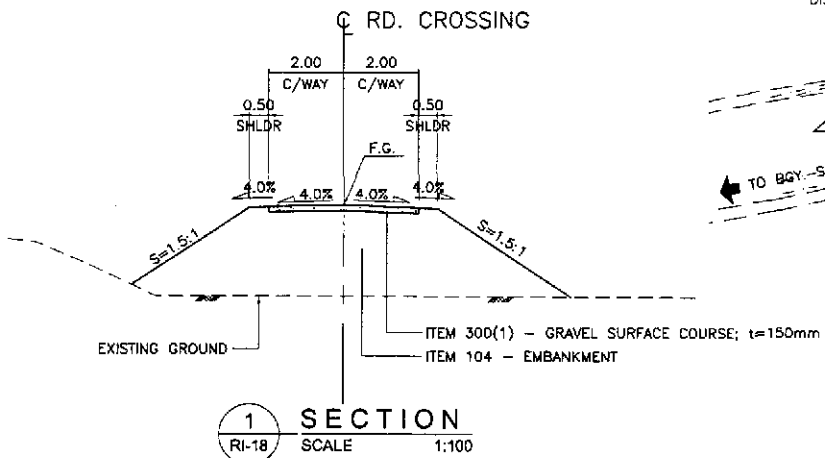


1 SECTION
RI-17
SCALE 1:100



<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>		<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>		<p>PROJECT AND LOCATION :</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>SCALE :</p> <p>HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1</p>		<p>SHEET CONTENTS :</p> <p>PLAN, CROSS-SECTION AND PROFILE INTERSECTION A-13 STA. 0+940 - STA. 1+050 (INITIAL STAGE)</p>		<p>SHEET NO. :</p> <p>RI-17</p>	
<p>DESIGNED: 9/18/02</p> <p>CHECKED: 9/20/02</p> <p>SUBMITTED: 9/23/02</p>	<p>SIGNATURE: [Signature]</p> <p>DATE: 9/18/02</p> <p>DATE: 9/20/02</p> <p>DATE: 9/23/02</p>	<p>Submitted By: DANILLO C. TRAJANO Project Director</p>	<p>Reviewed By: JOSEFINA M. ALACAR Chief, Highways Division</p>	<p>Recommended By: GILBERTO S. REYES DIC, Director IV</p>	<p>Recommended By: MANUEL M. BONDAN Undersecretary</p>	<p>Approved By: SIMEDON A. DATUMANONG Secretary</p>	<p>PLARIDEL BYPASS - CONTRACT PACKAGE II</p>				

PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION	
		NORTHING	EASTING								PC	PT
PI-00	0+870.000	1,652,157.271	491,698.881								BEG. OF INTERSECTION A-14	
PI-01	0+910.098	1,652,168.156	491,737.472	24°37'05"	120	26.184	51.560	2.824	RC	40	0+883.914	0+935.474
PI-02	1+041.778	1,652,147.737	491,868.378	31°45'38"	80	22.759	44.346	3.174	-	40	1+019.020	1+063.356
PI-03	1+106.450	1,652,174.349	491,931.396	22°22'16"	80	15.095	29.840	1.412	RC	40	1+093.918	1+123.758
PI-04	1+150.000	1,652,175.448	491,972.718								END OF INTERSECTION A-14	



STATION	+900										+1000										+1100										
PROFILE GRADE BYPASS	15.603	15.603	15.643	15.574	15.753	15.998	16.074	15.847	16.634	14.822	17.381	14.580	17.993	13.810	18.440	13.997	18.062	13.944	17.581	13.983	16.996	14.062	16.478	14.435	16.126	15.651	15.938	15.781	15.833	15.781	15.781
EXISTING GROUND BYPASS																															
HORIZONTAL CURVATURE	R=120										R=80										R=80										
VERTICAL CURVATURE	g=+0.403%										g=-3.000%										g=-0.525%										
SUPERELEVATION	+0.080										-0.080										-0.080										

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

Submitted By: DANILLO C. TRAJANO, Project Director
Reviewed By: JOSEFINA M. ALAGAR, Chief, Highway Division
Recommended By: GILBERTO S. REYES, Director IV (OIC)
Approved By: EDMUNDO V. MIR, Undersecretary

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

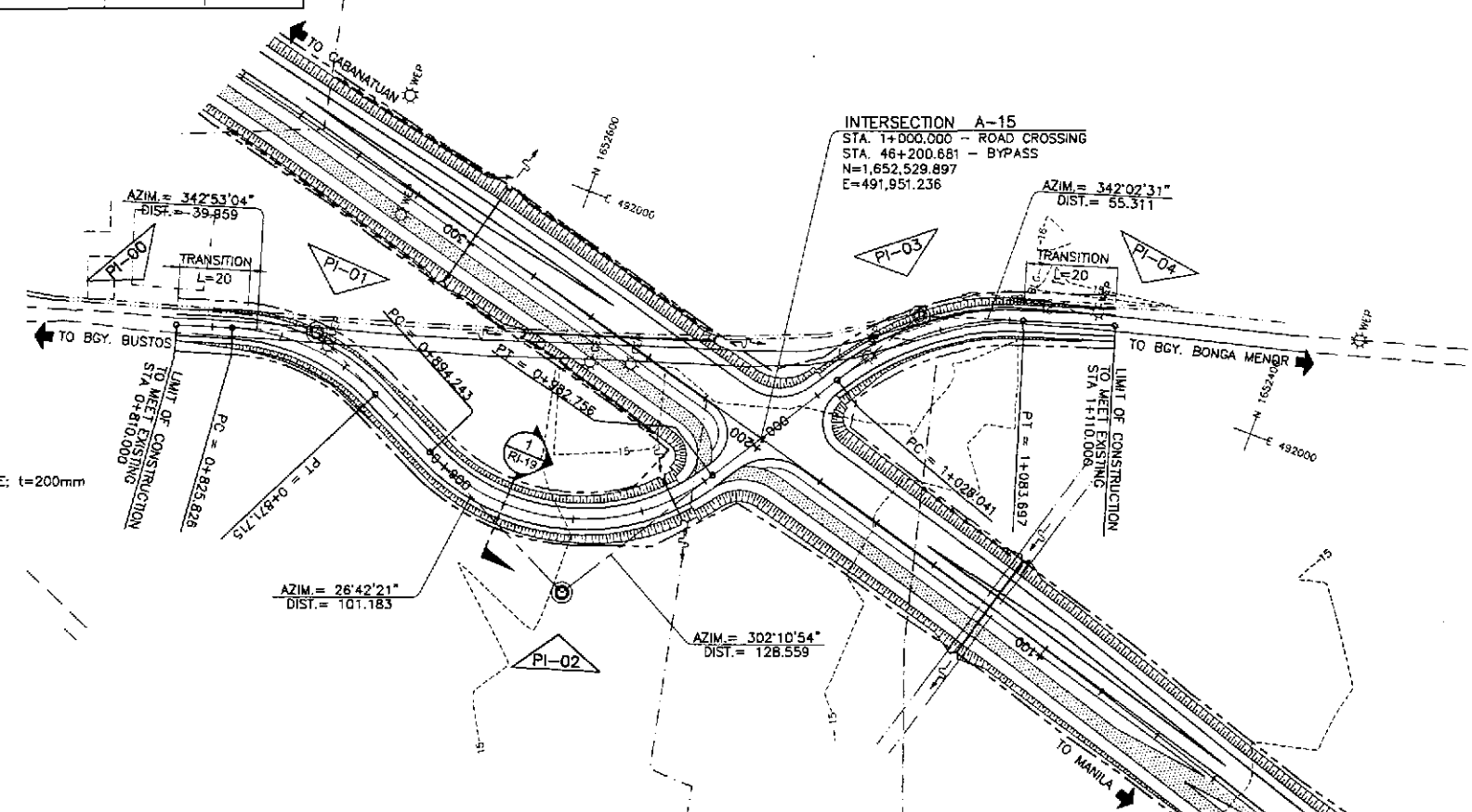
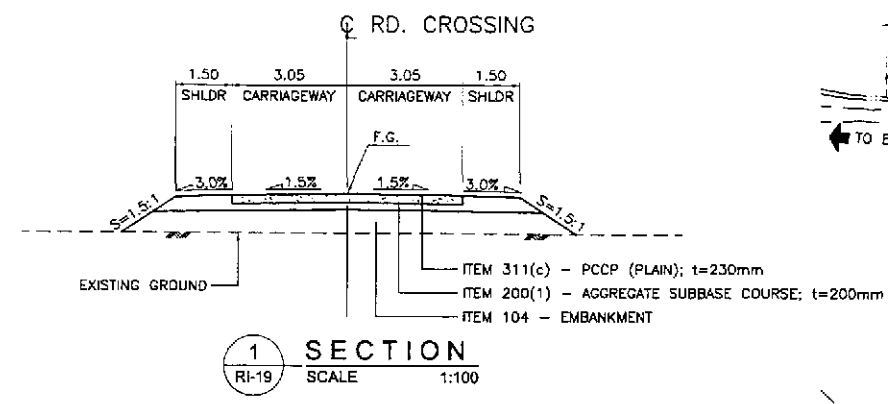
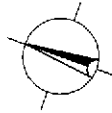
PLARIDEL BYPASS - CONTRACT PACKAGE II

SCALE:
HORIZONTAL 1:1000
VERTICAL 1:100
FULL SIZE A1

SHEET CONTENTS:
PLAN, CROSS-SECTION AND PROFILE INTERSECTION A-14
STA. 0+870 - STA. 1+150 (INITIAL STAGE)

SHEET NO.:
RI-18

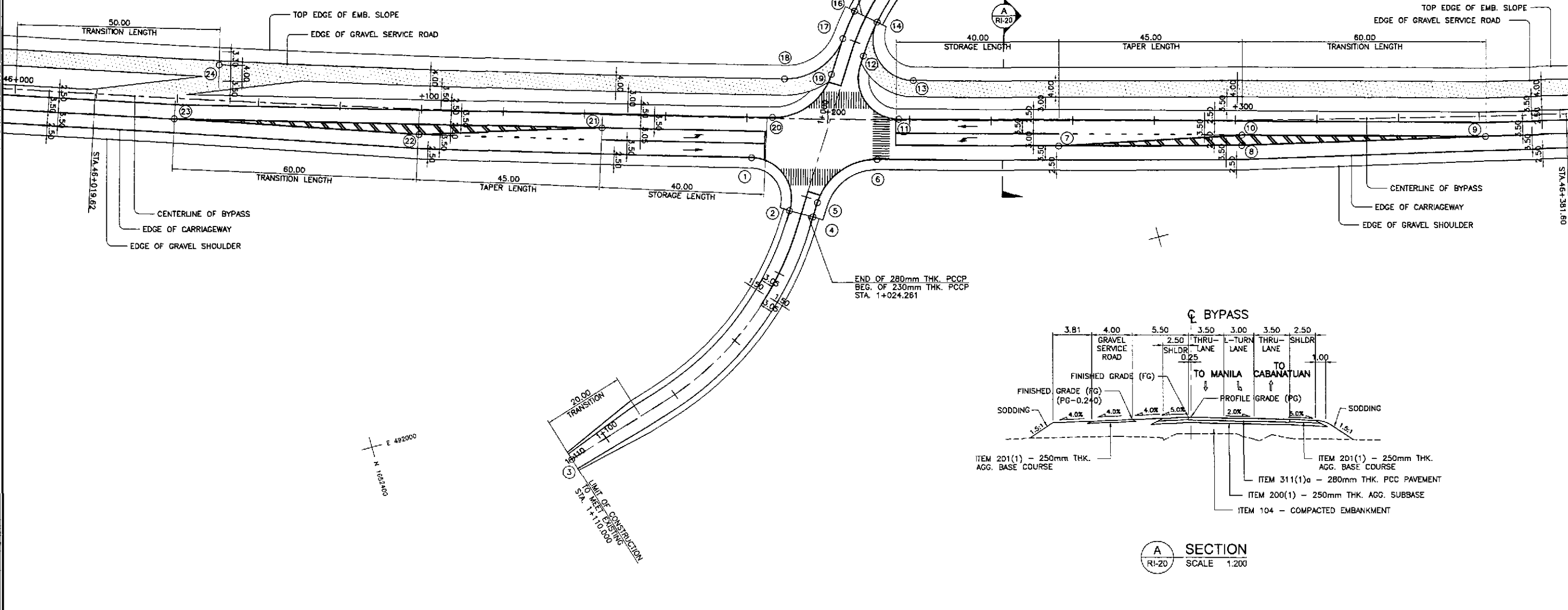
ELEMENTS OF CURVE												
PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION	
		NORTHING	EASTING								PC	PT
PI-00	0+810.000	1,652,696.699	491,924.207								BEG. OF INTERSECTION A-15	
PI-01	0+849.959	1,652,658.510	491,935.967	43°49'17"	60	24.133	45.890	4.671	-	-	0+825.826	0+871.715
PI-02	0+948.766	1,652,568.120	491,890.495	84°31'27"	60	54.523	88.513	21.073	-	-	0+894.243	0+982.756
PI-03	1+057.048	1,652,499.513	491,999.519	39°51'37"	80	29.007	56.856	5.096	-	-	1+028.041	1+083.697
PI-04	1+110.000	1,652,446.384	492,015.688								END OF INTERSECTION A-15	



ELEVATION	STATION																					
	0+810	0+825	0+840	0+855	0+870	0+885	0+900	0+915	0+930	0+945	0+960	0+975	0+990	1+005	1+020	1+035	1+050	1+065	1+080	1+095	1+110	
20																						
15																						
10																						
PROFILE GRADE BYPASS																						
EXISTING GROUND BYPASS																						
HORIZONTAL CURVATURE																						
VERTICAL CURVATURE																						
SUPERELEVATION																						

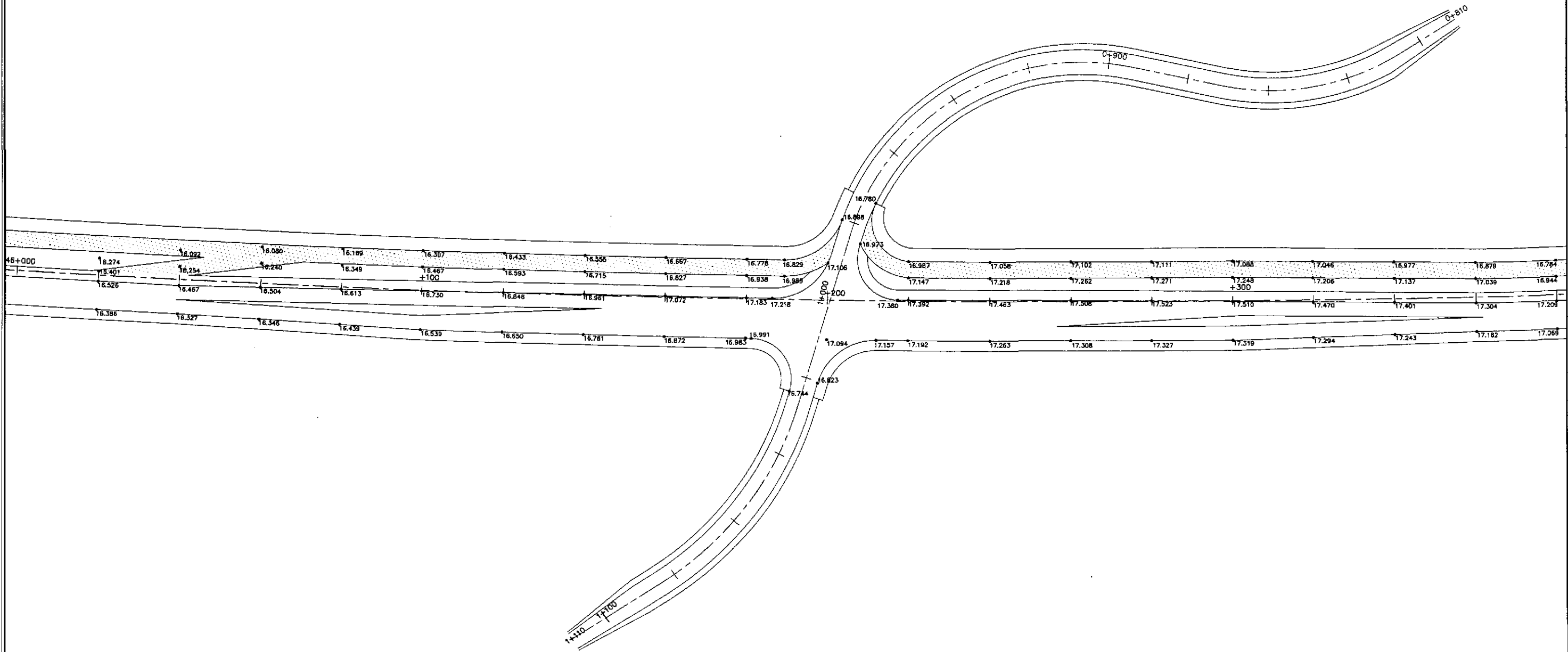
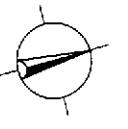
	DESIGNED	DATE	SIGNATURE		DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE II				SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/20/21	S. COSE		Submitted By:	Reviewed By:	Recommended By:	Recommended By:	Approved By:	Approved By:	HORIZONTAL	PLAN, CROSS-SECTION AND PROFILE INTERSECTION A-15 STA. 0+810 - STA. 1+110 (INITIAL STAGE)	RI-19		
	SUBMITTED	9/23/21	M. KUCI		DANILO C. TRAJANO	JOSEFINA M. ALAGAR	GILBERTO S. REYES	EDMUNDO V. MIR	SIMEON A. DATUMANONG	VERTICAL					
					Project Director	Chief, Highway Division	Director IV (DIC)	Undersecretary	Secretary	FULL SIZE A1					

TABLE OF COORDINATES			
CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
1	1652508.619	491955.317	BEG. OF CORNER RADIUS 10
2	1652514.324	491970.255	END OF CORNER RADIUS 10
3	1652446.384	492015.688	LIMIT OF CONSTRUCTION
4	1652519.626	491973.284	LIMIT OF 2.50m WIDE SHOULDER
5	1652521.577	491970.184	BEG. OF CORNER RADIUS 15
6	1652538.310	491963.726	END OF CORNER RADIUS 15
7	1652582.188	491972.129	END OF 3.00m WIDE STORAGE LANE
8	1652625.715	491983.601	INNER EDGE OF 3.50m WIDE LANE
9	1652684.216	491997.003	CENTER OF TWO LANE PAVEMENT
10	1652626.399	491981.145	BEG. OF TAPER, LANE WIDTH 3.50m
11	1652546.017	491955.494	BEG. OF RADIUS 10
12	1652541.654	491938.278	END OF RADIUS 10
13	1652551.898	491947.268	BEG. OF CORNER RADIUS 10
14	1652547.055	491931.037	END OF CORNER RADIUS 10
15	1652629.319	492010.905	LIMIT OF CONSTRUCTION
16	1652542.489	491927.014	LIMIT OF 2.50m WIDE SHOULDER
17	1652537.956	491932.807	BEG. OF CORNER RADIUS 15
18	1652521.495	491938.718	END OF CORNER RADIUS 15
19	1652532.963	491940.637	BEG. OF RADIUS 15
20	1652516.146	491947.070	END OF RADIUS 15
21	1652474.994	491938.750	BEG. OF 3.00m WIDE STORAGE LANE
22	1652431.127	491928.665	BEG. OF TAPER, LANE WIDTH 3.50m
23	1652374.075	491909.443	CENTER OF TWO LANE PAVEMENT
24	1652388.260	491899.519	BEG. TRANSITION OF TRICYCLE LANE



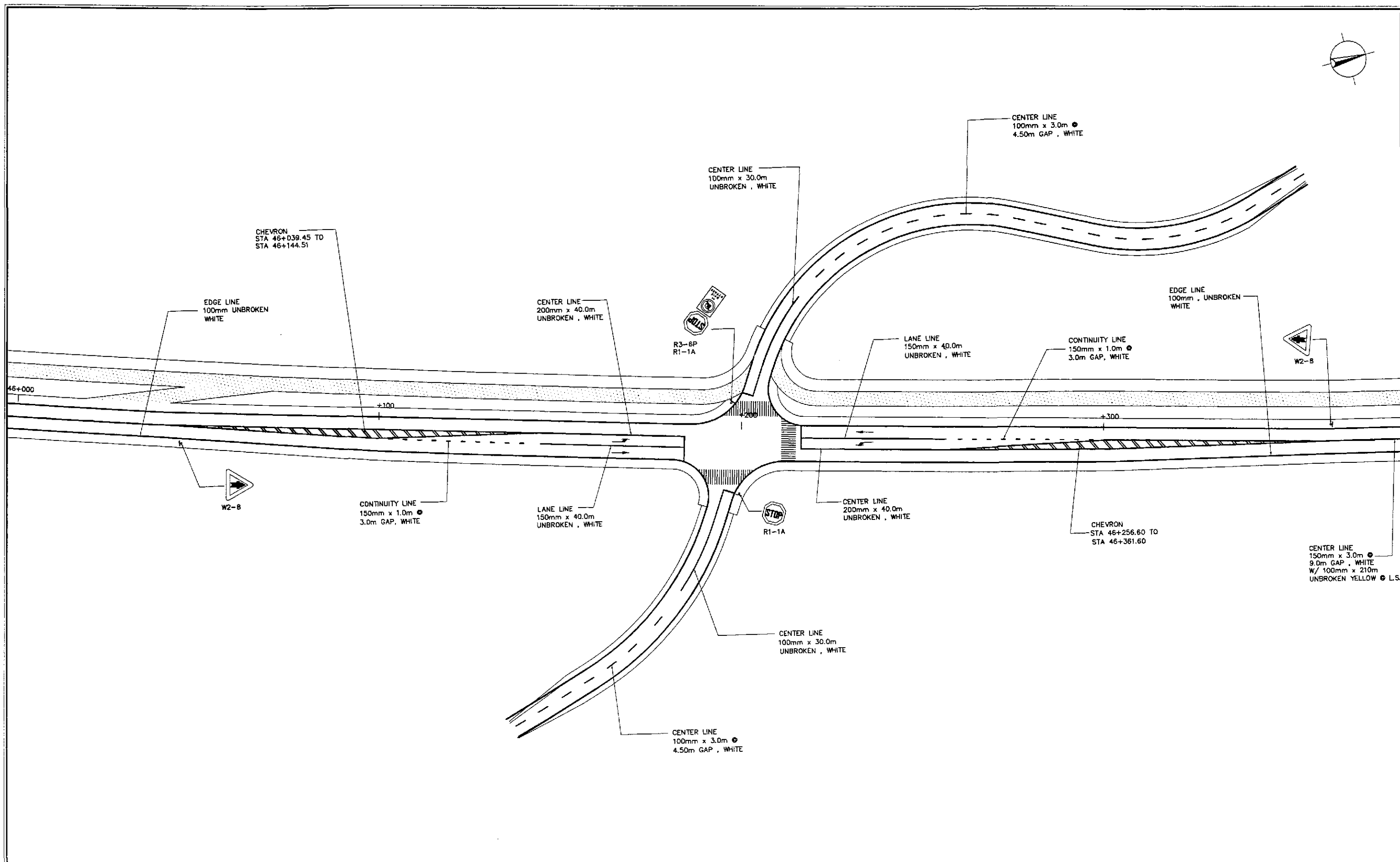
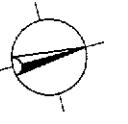
1
GEOMETRIC DESIGN LAYOUT
INTERSECTION A-15 (STA. 46+200.681) - INITIAL STAGE
 SCALE 1:500

	DESIGNED	9/2/02	A. ORONCE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/20/02	3-9800		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	INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-15 (INITIAL STAGE)	RI-20
	SUBMITTED	9/23/02	3-9800		DANILO 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		



1
 PAVING AND GRADING PLAN
 INTERSECTION A-15 (STA. 46+200.681) - INITIAL STAGE
 RI-21 SCALE 1:500

	DESIGNED	9/10/02	SIGNATURE			REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/20/02	SIGNATURE			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	INTERSECTION DETAIL PAVING AND GRADING PLAN INTERSECTION A-15 (INITIAL STAGE)	RI-21
SUBMITTED	9/23/02	SIGNATURE		DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	PLARIDEL BYPASS - CONTRACT PACKAGE II	FULL SIZE A1				



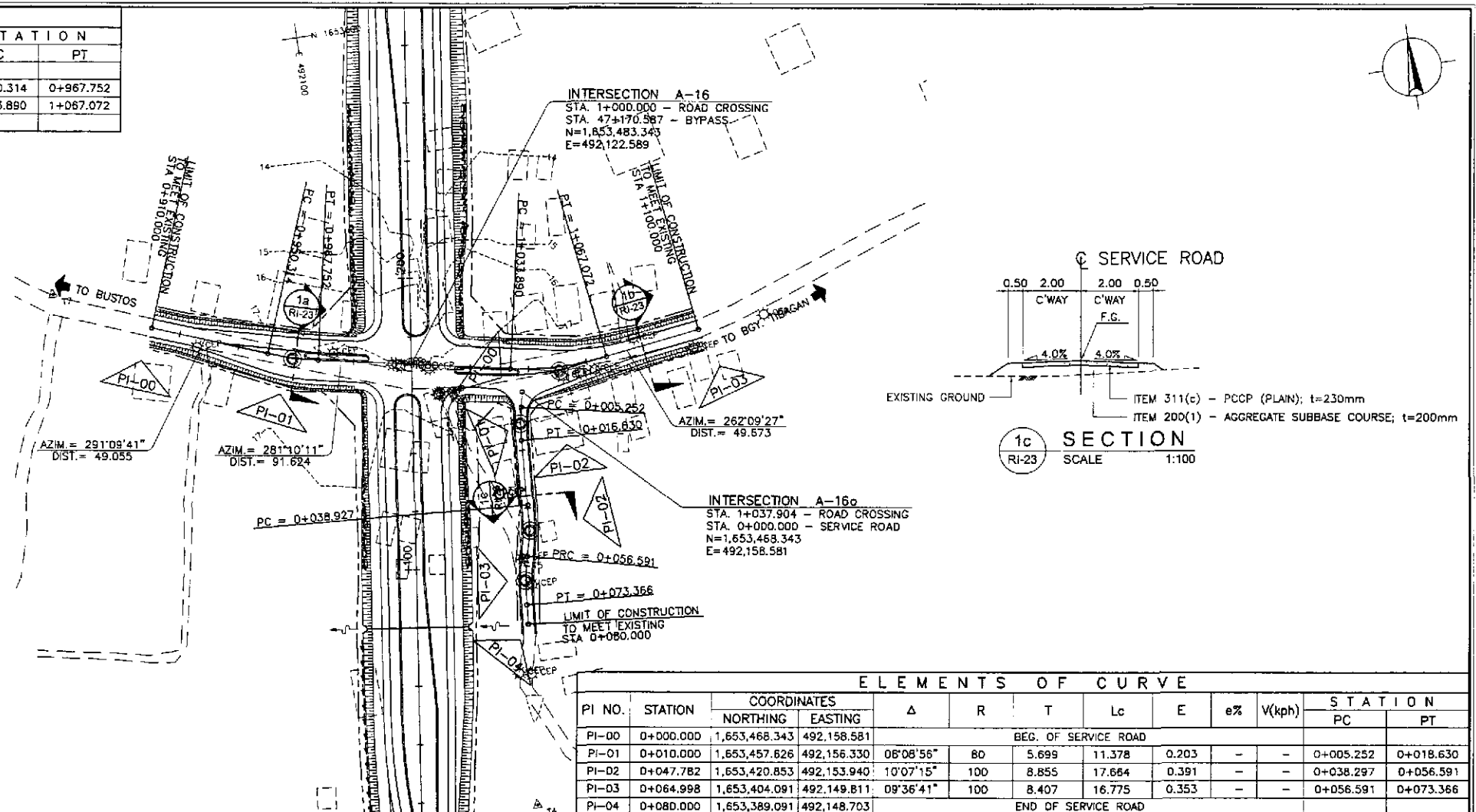
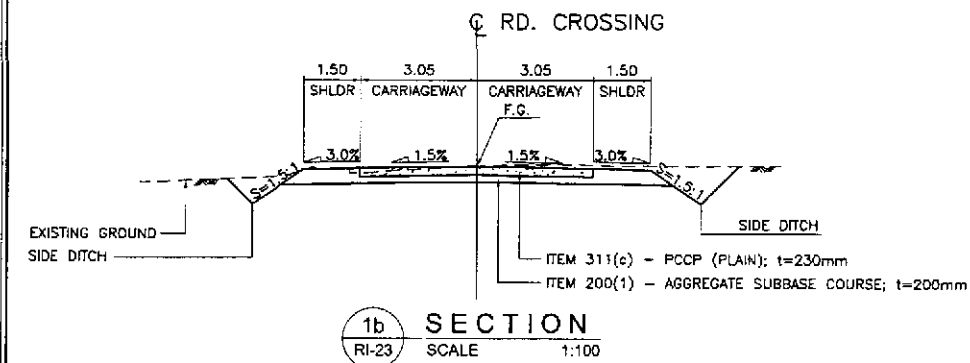
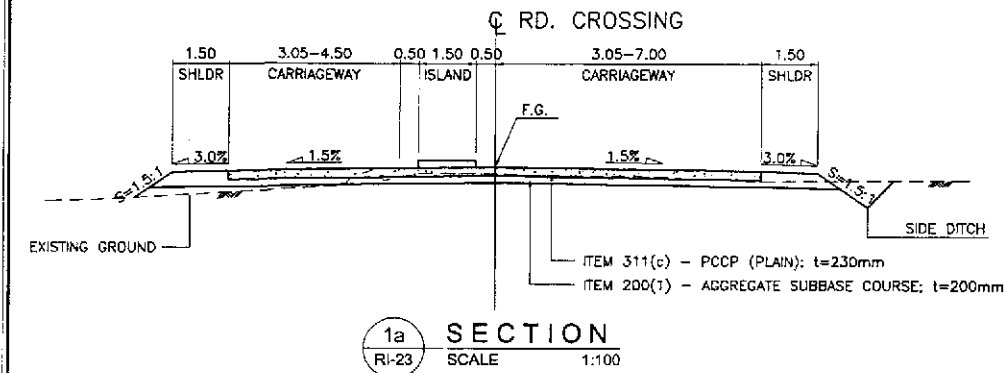
**TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT PLAN
INTERSECTION A-15 (STA. 46+200.681) - INITIAL STAGE**

1
RI-22

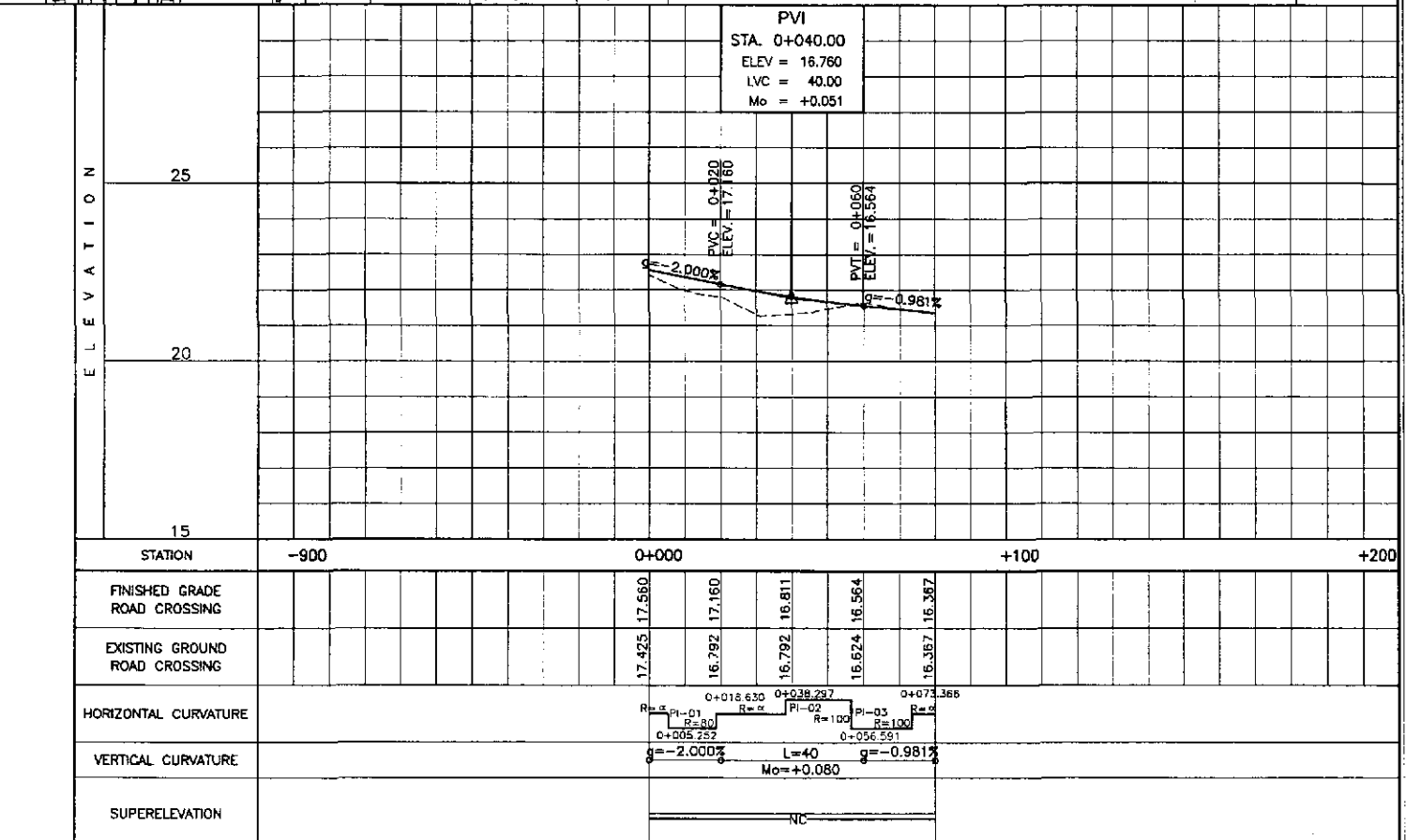
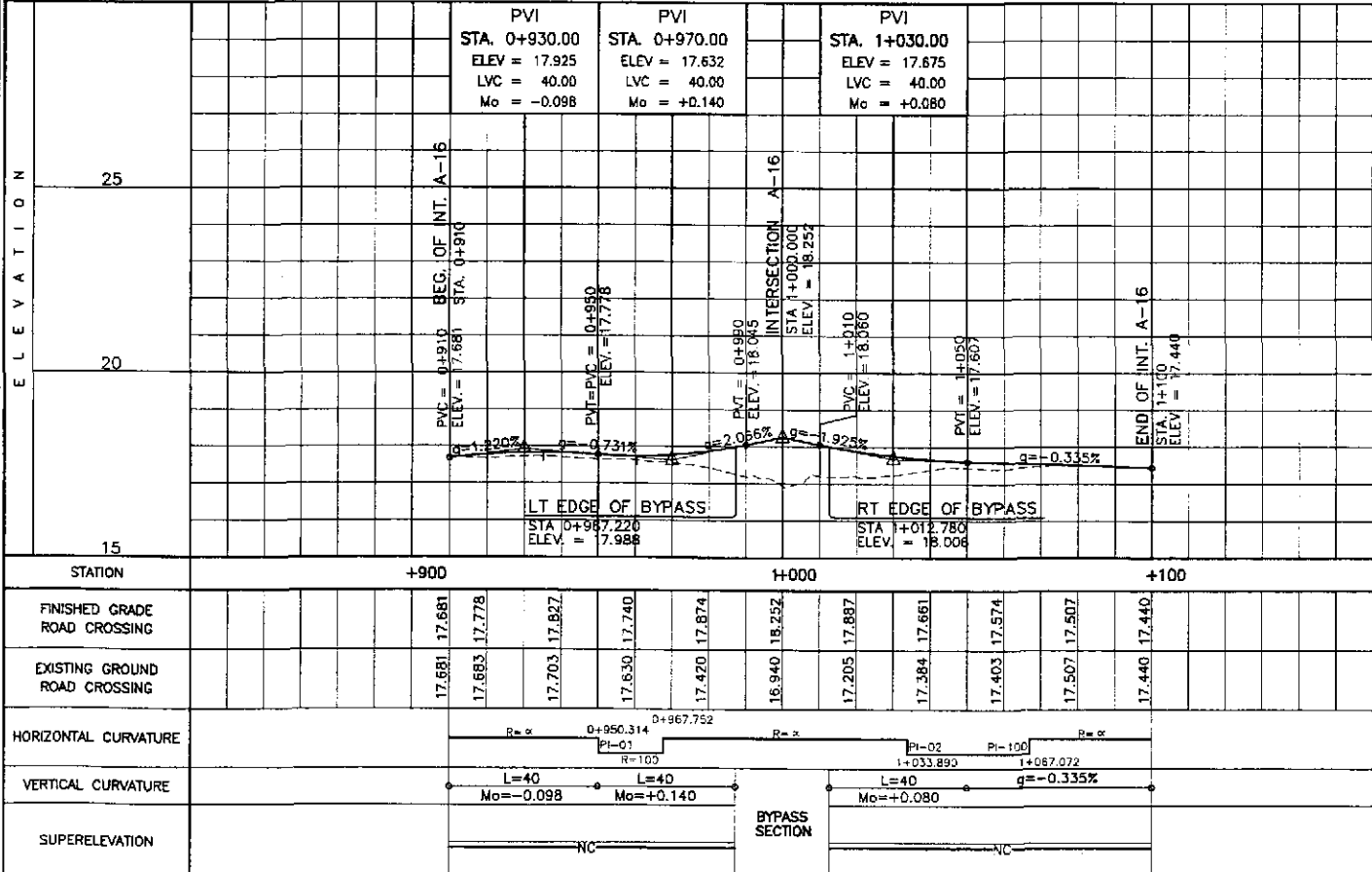
SCALE 1:500

	DESIGNED	9/18/02	S. LUNA		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/20/02	S. GONZALES		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	TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT PLAN INTERSECTION A-15 (INITIAL STAGE)
	SUBMITTED	9/23/02	M. RUILO	DANILO C. TRAJANO	JOSEFINA M. ALACAR	GILBERTO S. REYES	MANUEL M. BONDAN	PLARIDEL BYPASS - CONTRACT PACKAGE II	FULL SIZE A1		
			TEAM LEADER	Project Director	Chief, Highways Division	OC, Director IV	Undersecretary				

PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION	
		NORTHING	EASTING								PC	PT
PI-00	0+910.000	1,653,508.992	492,036.628								BEG. OF INTERSECTION A-16	
PI-01	0+959.055	1,653,491.283	492,082.376	09°59'30"	100	8.741	17.439	0.381	-	-	0+950.314	0+967.752
PI-02	1+050.635	1,653,473.534	492,172.264	19°00'44"	100	16.745	33.182	1.392	-	-	1+033.890	1+067.072
PI-03	1+100.000	1,653,480.312	492,221.472								END OF INTERSECTION A-16	



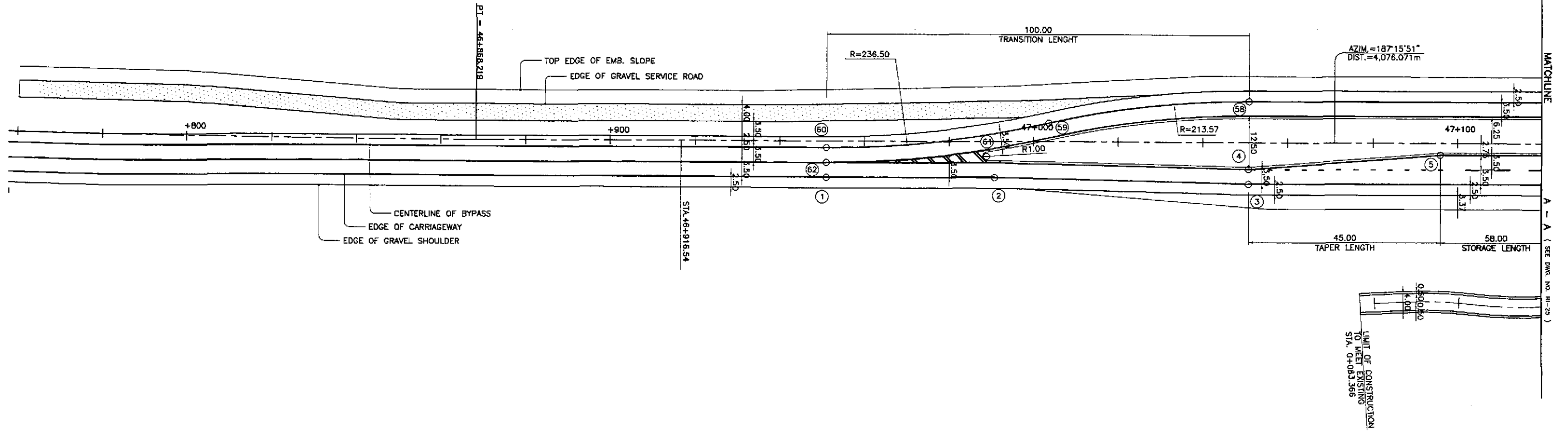
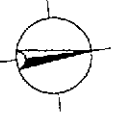
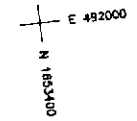
PI NO.	STATION	COORDINATES		Δ	R	T	Lc	E	e%	V(kph)	STATION	
		NORTHING	EASTING								PC	PT
PI-00	0+000.000	1,653,468.343	492,158.581								BEG. OF SERVICE ROAD	
PI-01	0+010.000	1,653,457.826	492,156.330	08°08'56"	80	5.699	11.378	0.203	-	-	0+005.252	0+018.630
PI-02	0+047.782	1,653,420.853	492,153.940	10°07'15"	100	8.855	17.664	0.391	-	-	0+038.297	0+056.591
PI-03	0+064.998	1,653,404.091	492,149.811	09°36'41"	100	8.407	16.775	0.353	-	-	0+056.591	0+073.366
PI-04	0+080.000	1,653,389.091	492,148.703								END OF SERVICE ROAD	



	DESIGNED	9/18/02	SIGNATURE	[Signature]		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE II	SCALE :	SHEET CONTENTS : PLAN, CROSS-SECTION AND PROFILE INT. A-16 AND INT. A-16a STA. 0+910 - STA. 1+100 AND STA. 0+000 - STA. 0+080 (INITIAL STAGE)	SHEET NO. : RI-23
	CHECKED	9/20/02	SIGNATURE	[Signature]		BUREAU OF DESIGN OFFICE OF THE SECRETARY					HORIZONTAL		
	SUBMITTED	9/23/02	SIGNATURE	[Signature]		Submitted By: DANILLO C. TRAJANO Project Director					VERTICAL		
						Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division					1:100		
				Recommended By: GILBERTO S. REYES D.C. Director IV				FULL SIZE A1					
				Recommended By: MANUEL M. BONDAN Undersecretary									
				Approved By: SIMON A. DATUMANONG Secretary									

TABLE OF COORDINATES

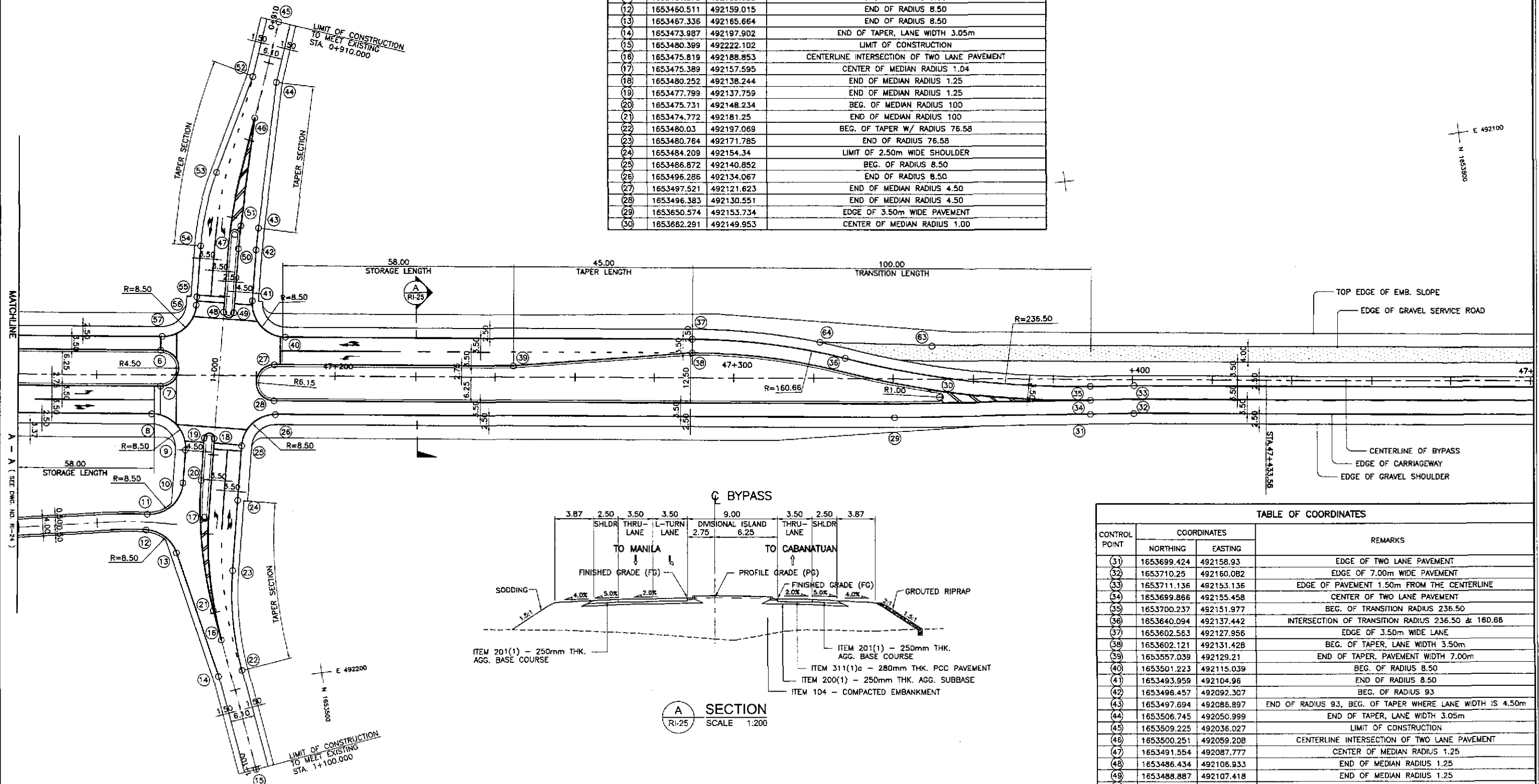
CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
1	1853264.406	492103.25	EDGE OF 7.00m WIDE PAVEMENT
2	1853303.941	492108.288	EDGE OF 3.50m WIDE PAVEMENT
3	1853363.373	492117.125	EDGE OF 3.50m WIDE PAVEMENT
4	1853363.816	492113.653	BEG. OF TAPER, LANE WIDTH 3.50m
5	1853408.97	492115.881	END OF TAPER, PAVEMENT WIDTH 7.00m
58	1853365.911	492097.791	BEG. OF TRANSITION RADIUS 213.57
59	1853318.165	492097.087	INTERSECTION OF TRANSITION RADIUS 213.57 & 236.50
60	1853265.291	492096.306	END OF TRANSITION RADIUS 236.50
61	1853302.681	492103.089	CENTER OF MEDIAN RADIUS 1.00
62	1853264.849	492099.778	CENTER OF TWO LANE PAVEMENT, 7.00m WIDE



1 GEOMETRIC DESIGN LAYOUT INTERSECTION A-16 (STA. 47+170.587) - INITIAL 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	9/20/02	S. ROSE	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	INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-16 (INITIAL STAGE) 1 of 2	RI-24
	SUBMITTED	9/23/02	M. KILAN	Submitted By:	Reviewed By:	Recommended By:	Approved By:	PLARIDEL BYPASS - CONTRACT PACKAGE II	FULL SIZE A1		
		DANILO C. TRAJANO Project Director		JOSEFINA M. ALAGAR Chief, Highway Division		GILBERTO S. REYES DIC, Director IV		MANUEL M. BONDAN Undersecretary		SIMEON A. DATUMANONG Secretary	

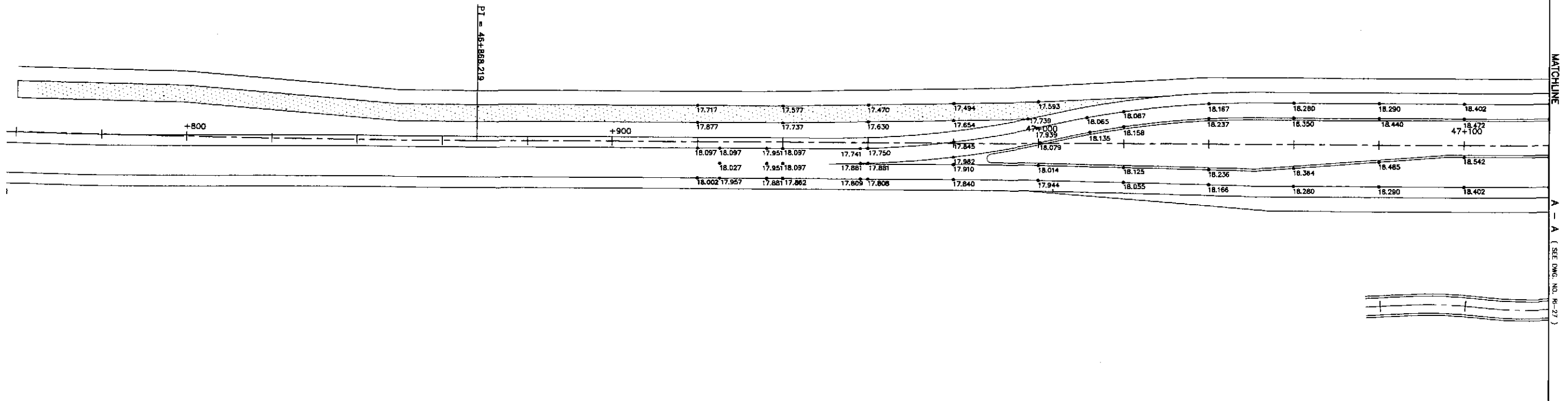
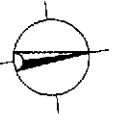
CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
6	1653469.626	492114.539	END OF MEDIAN RADIUS 4.50
7	1653468.488	492123.467	END OF MEDIAN RADIUS 4.50
8	1653465.463	492130.138	END OF RADIUS 8.50
9	1653472.727	492140.217	END OF RADIUS 8.50
10	1653471.117	492148.369	END OF RADIUS 8.50
11	1653461.273	492155.088	END OF RADIUS 8.50
12	1653460.511	492159.015	END OF RADIUS 8.50
13	1653467.336	492165.664	END OF RADIUS 8.50
14	1653473.987	492197.902	END OF TAPER, LANE WIDTH 3.05m
15	1653480.399	492222.102	LIMIT OF CONSTRUCTION
16	1653475.819	492188.853	CENTERLINE INTERSECTION OF TWO LANE PAVEMENT
17	1653475.389	492157.595	CENTER OF MEDIAN RADIUS 1.04
18	1653480.252	492138.244	END OF MEDIAN RADIUS 1.25
19	1653477.799	492137.759	END OF MEDIAN RADIUS 1.25
20	1653475.731	492148.234	BEG. OF MEDIAN RADIUS 100
21	1653474.772	492181.25	END OF MEDIAN RADIUS 100
22	1653480.03	492197.069	BEG. OF TAPER W/ RADIUS 76.58
23	1653480.784	492171.785	END OF RADIUS 76.58
24	1653484.209	492154.34	LIMIT OF 2.50m WIDE SHOULDER
25	1653486.872	492140.852	BEG. OF RADIUS 8.50
26	1653496.286	492134.067	END OF RADIUS 8.50
27	1653497.521	492121.623	END OF MEDIAN RADIUS 4.50
28	1653496.383	492130.551	END OF MEDIAN RADIUS 4.50
29	1653650.574	492153.734	EDGE OF 3.50m WIDE PAVEMENT
30	1653682.291	492149.953	CENTER OF MEDIAN RADIUS 1.00



CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
31	1653699.424	492158.93	EDGE OF TWO LANE PAVEMENT
32	1653710.25	492160.082	EDGE OF 7.00m WIDE PAVEMENT
33	1653711.136	492153.136	EDGE OF PAVEMENT 1.50m FROM THE CENTERLINE
34	1653699.866	492155.458	CENTER OF TWO LANE PAVEMENT
35	1653700.237	492151.977	BEG. OF TRANSITION RADIUS 236.50
36	1653640.094	492137.442	INTERSECTION OF TRANSITION RADIUS 236.50 & 160.66
37	1653602.583	492127.956	EDGE OF 3.50m WIDE LANE
38	1653602.121	492131.428	BEG. OF TAPER, LANE WIDTH 3.50m
39	1653557.039	492129.21	END OF TAPER, PAVEMENT WIDTH 7.00m
40	1653501.223	492115.039	BEG. OF RADIUS 8.50
41	1653493.959	492104.96	END OF RADIUS 8.50
42	1653496.457	492092.307	BEG. OF RADIUS 9.3
43	1653497.694	492086.897	END OF RADIUS 9.3, BEG. OF TAPER WHERE LANE WIDTH IS 4.50m
44	1653506.745	492050.999	END OF TAPER, LANE WIDTH 3.05m
45	1653509.225	492036.027	LIMIT OF CONSTRUCTION
46	1653500.251	492059.208	CENTERLINE INTERSECTION OF TWO LANE PAVEMENT
47	1653491.554	492087.777	CENTER OF MEDIAN RADIUS 1.25
48	1653486.434	492106.933	END OF MEDIAN RADIUS 1.25
49	1653488.887	492107.418	END OF MEDIAN RADIUS 1.25
50	1653492.043	492091.436	BEG. OF RADIUS 97.50
51	1653493.339	492085.764	END OF RADIUS 97.50
52	1653501.022	492048.862	BEG. OF TAPER, LANE WIDTH 3.05m
53	1653489.049	492071.667	BEG. OF RADIUS 66.12
54	1653482.723	492089.595	END OF RADIUS 86.12 & END OF TAPER (PAVEMENT WIDTH 7.00m)
55	1653480.224	492102.248	LIMIT OF 2.50m WIDE SHOULDER
56	1653479.814	492104.325	BEG. OF RADIUS 8.50
57	1653470.400	492111.110	END OF RADIUS 8.50
63	1653661.996	492138.996	EDGE OF SERVICE ROAD
64	1653634.202	492132.659	INTERSECTION OF EDGE OF SERVICE ROAD AND SHOULDER

1
GEOMETRIC DESIGN LAYOUT
INTERSECTION A-16 (STA. 47+170.587) - INITIAL STAGE
 RI-25 SCALE 1:200 1:500

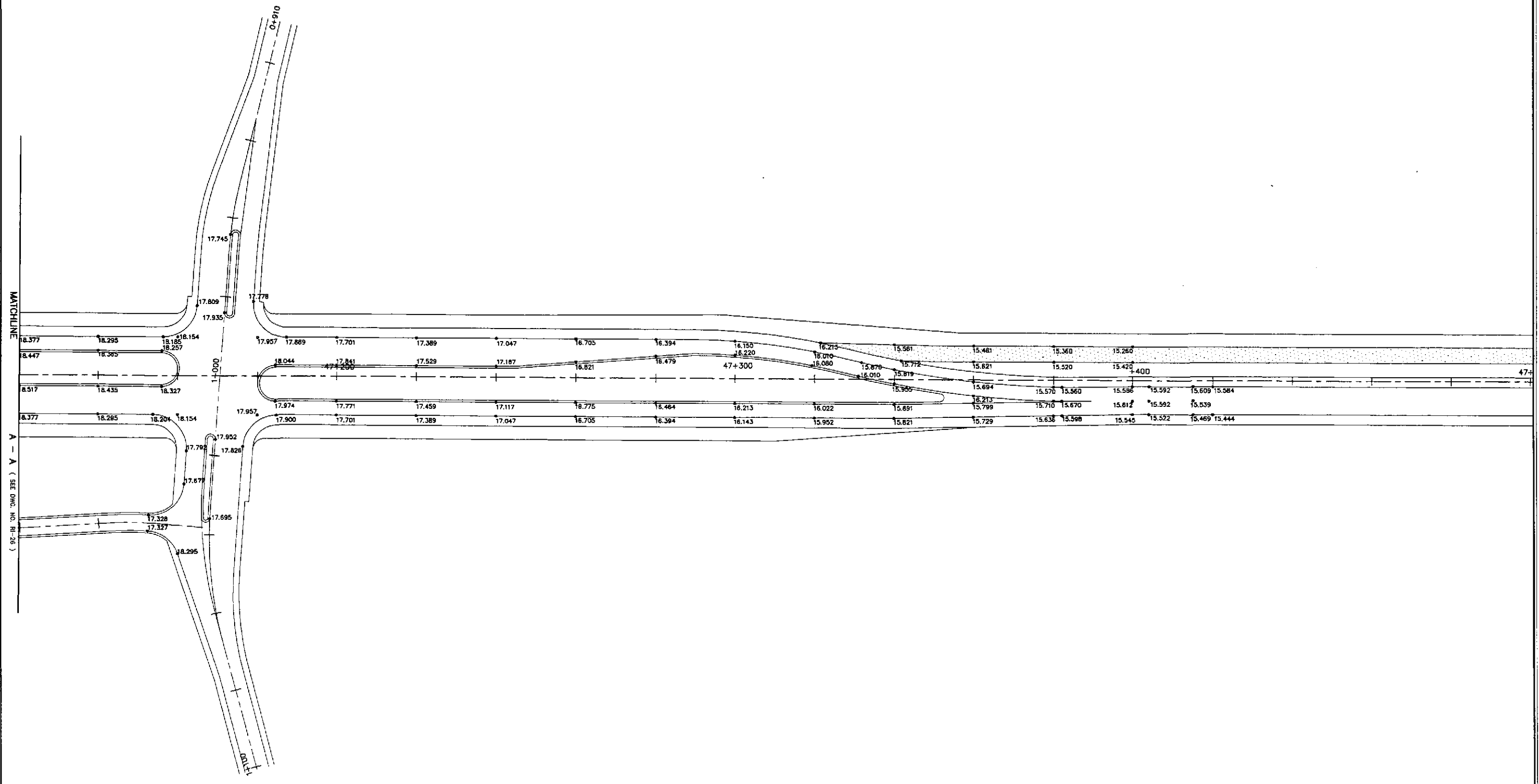
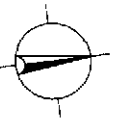
	DESIGNED	9/10/02	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE II	SCALE : 1:500 FULL SIZE A1	SHEET CONTENTS : INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-16 (INITIAL STAGE) 2 of 2	SHEET NO. : RI-25
	CHECKED	9/20/02	BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO Project Director						
	SUBMITTED	9/23/02	OFFICE OF THE SECRETARY Recommended By: JOSEFINA M. ALAGAR Chief, Highways Division						



1
RI-26 SCALE

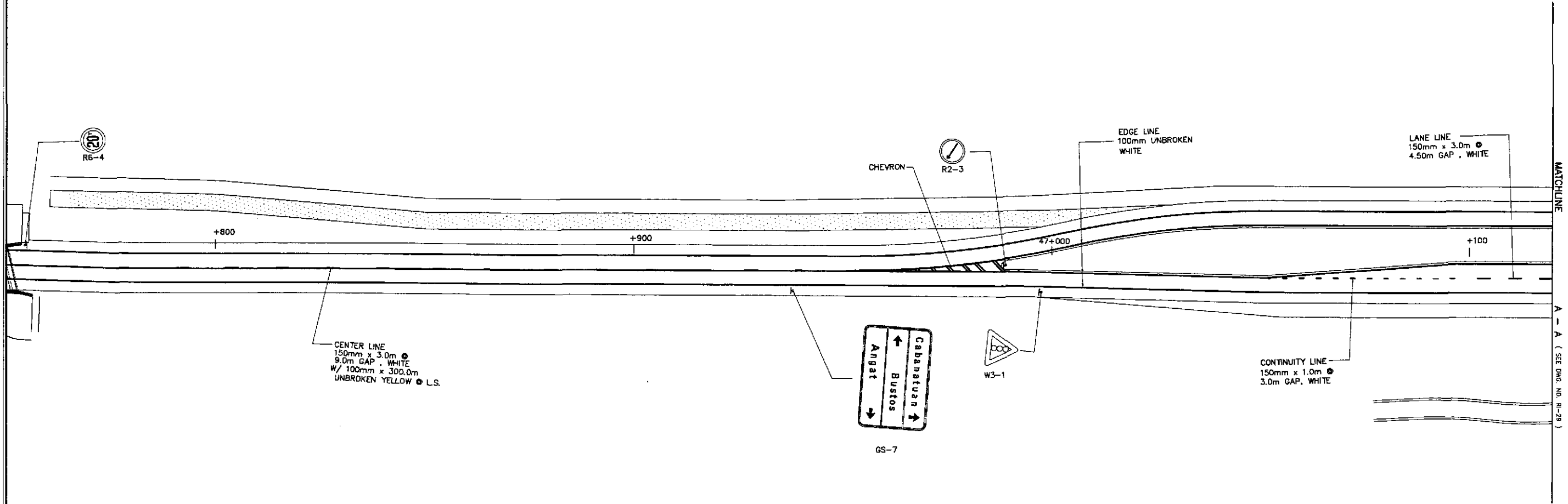
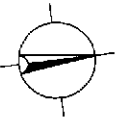
PAVING AND GRADING PLAN
INTERSECTION A-16 (STA. 47+170.587) - INITIAL STAGE
1:500

	DESIGNED	9/18/01			REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/20/01			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	INTERSECTION DETAIL PAVING AND GRADING PLAN INTERSECTION A-16 (INITIAL STAGE) 1 of 2	RI-26
	SUBMITTED	7/23/01			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		



1
 PAVING AND GRADING PLAN
 INTERSECTION A-16 (STA. 47+170.587) - INITIAL STAGE
 RI-27 SCALE 1:500

		DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :			
	DESIGNED	9/18/02				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	INTERSECTION DETAIL PAVING AND GRADING PLAN INTERSECTION A-16 (INITIAL STAGE) 2 of 2	RI-27
	CHECKED	9/20/02				Submitted By:	Reviewed By:				
SUBMITTED	9/29/02		DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary				
				PLARIDEL BYPASS - CONTRACT PACKAGE II		FULL SIZE A1					

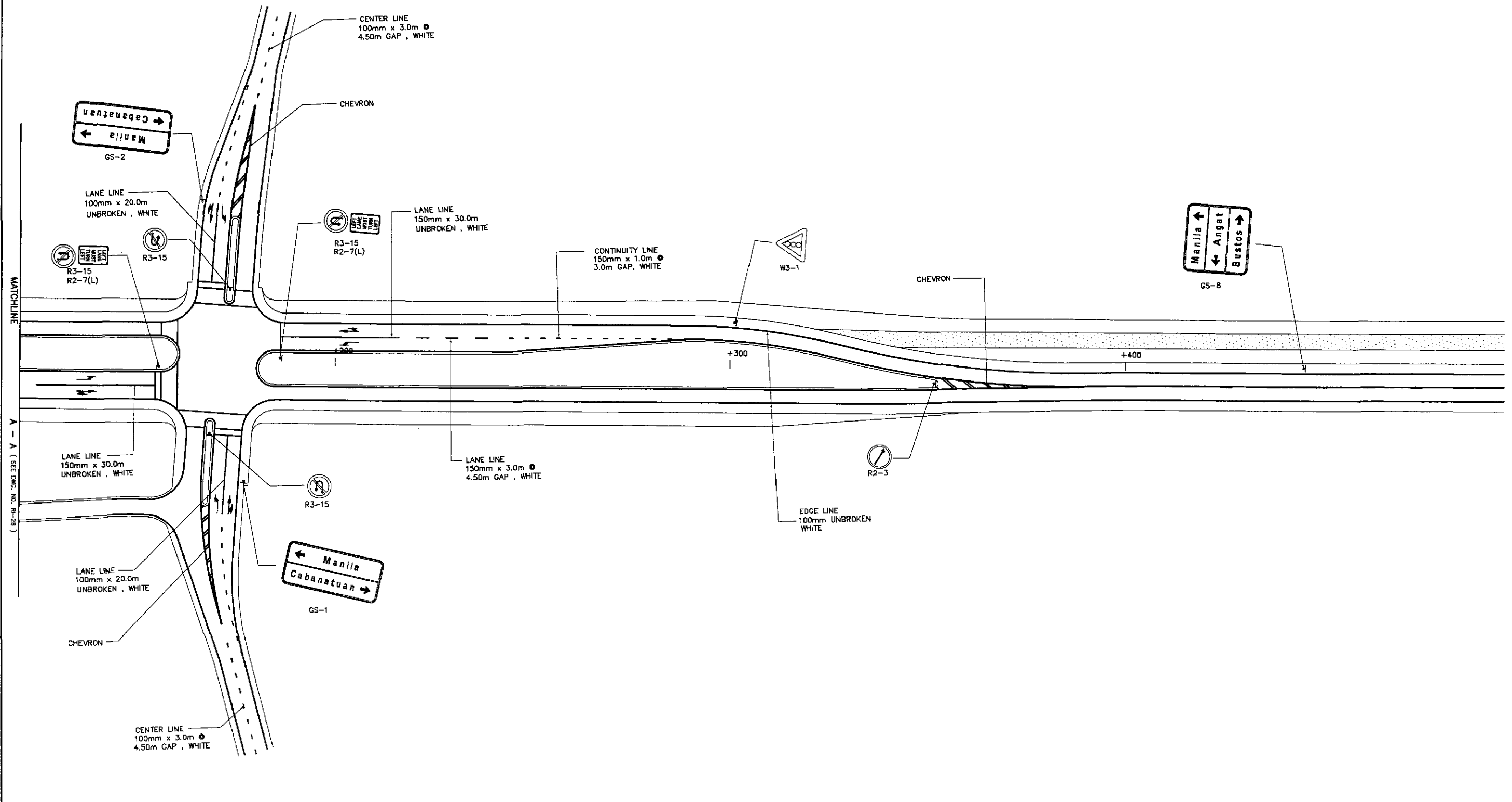
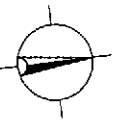


1
RI-28

SCALE

1:500

	DESIGNED	9/18/02	S. LUNA	<p align="center">REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :	
	CHECKED	9/20/02	S. LUNA		BUREAU OF DESIGN	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilaridel, Cabanatuan and San Jose Bypasses)			1:500	TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT PLAN INTERSECTION A-16 (INITIAL STAGE)	RI-28
	SUBMITTED	9/23/02	M. KRITCHAN		OFFICE OF THE SECRETARY	PLARIDEL BYPASS - CONTRACT PACKAGE II			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. BONDAN Undersecretary	Approved By: SIMEON A. DATUMANONG Secretary				



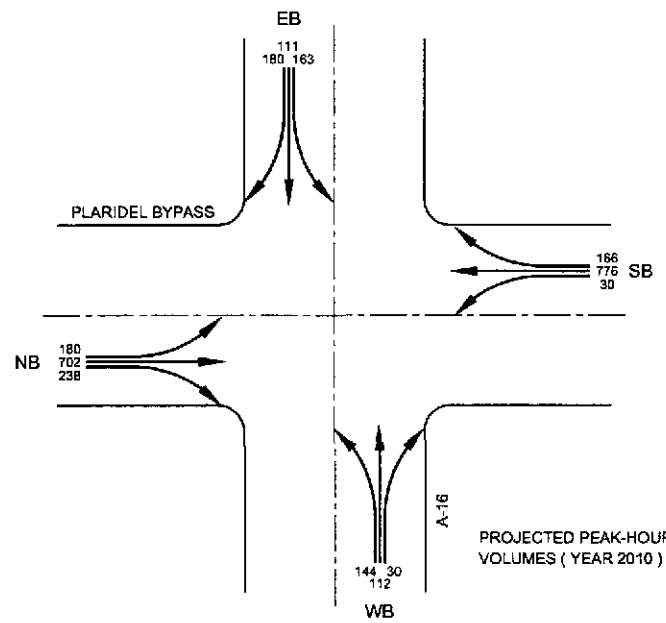
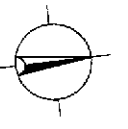
**TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT PLAN
INTERSECTION A-16 (STA. 47+170.587) - INITIAL STAGE**

1
RI-29

SCALE

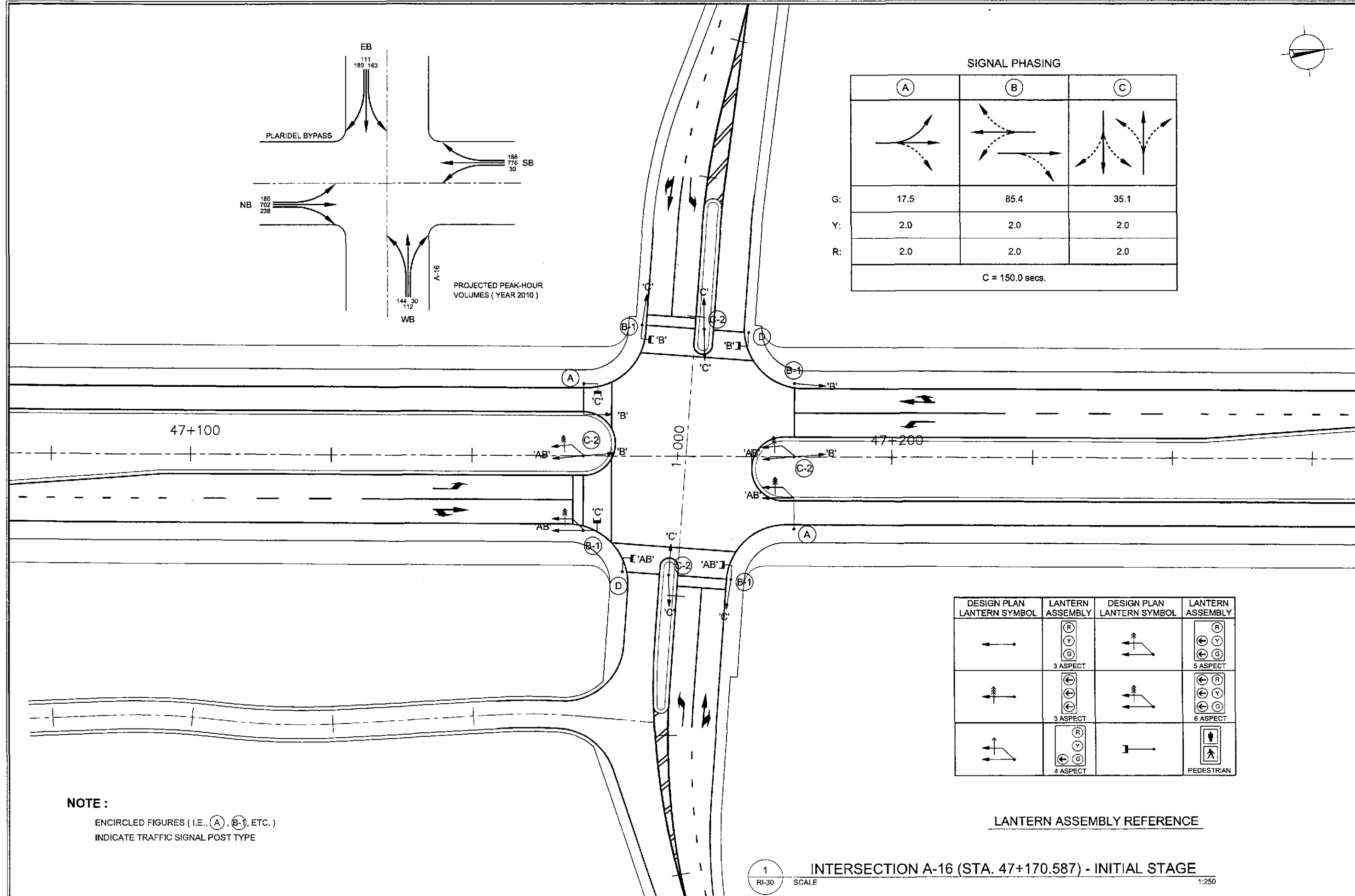
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	DESIGNED	9/18/02	S. LUNA	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :	
	CHECKED	9/20/02	S. JOSE		BUREAU OF DESIGN	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Piaridel, Cabanatuan and San Jose Bypasses)			1:500	TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT PLAN INTERSECTION A-16 (INITIAL STAGE)	RI-29
	SUBMITTED	9/23/02	M. TRAJANO		OFFICE OF THE SECRETARY	PLARIDEL BYPASS - CONTRACT PACKAGE II			FULL SIZE A1		
Submitted By:		Reviewed By:		Recommended By:		Approved By:					
DANILO C. TRAJANO Project Director		JOSEFINA M. ALAGAR Chief, Highways Division		GILBERTO S. REYES Dir., Director IV		MANUEL M. BONDAN Undersecretary		SIMEON A. DATUMANONG Secretary			



SIGNAL PHASING

	(A)	(B)	(C)
G:	17.5	85.4	35.1
Y:	2.0	2.0	2.0
R:	2.0	2.0	2.0
C = 150.0 secs.			



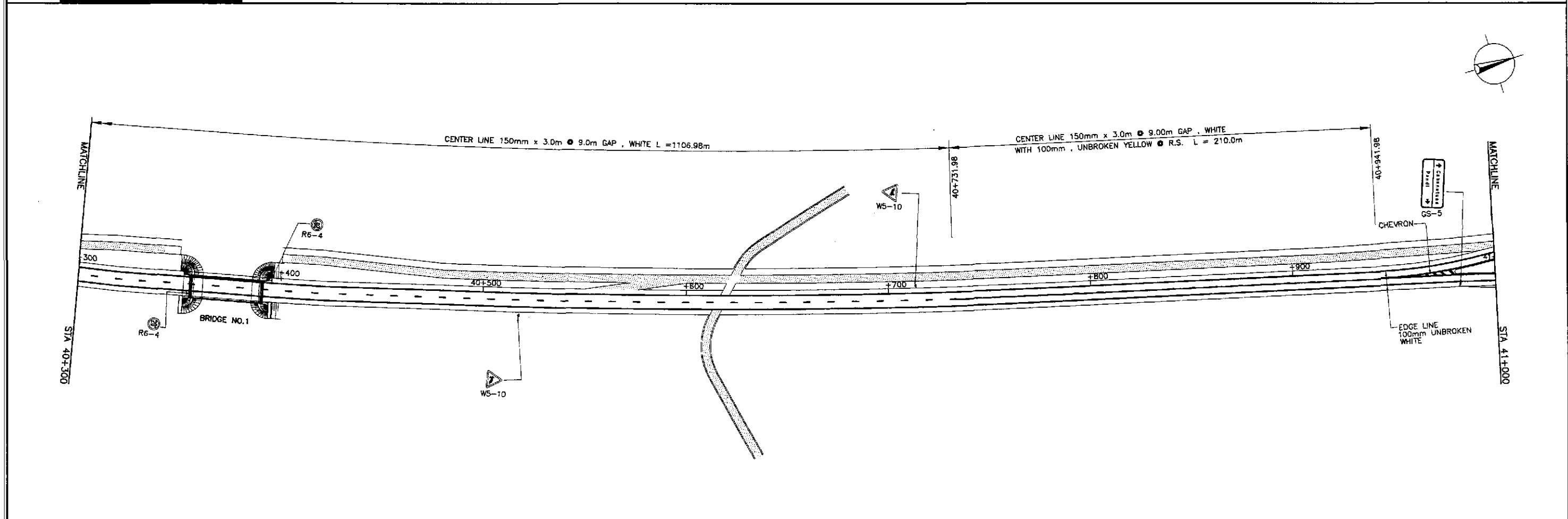
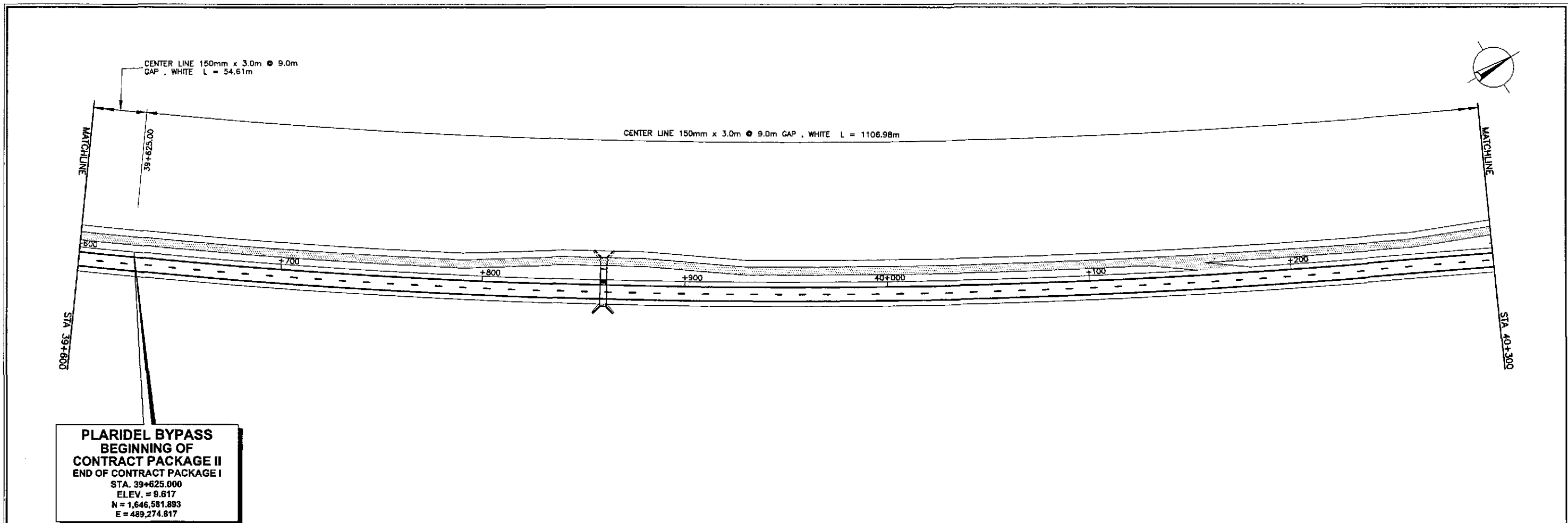
NOTE :
ENCIRCLED FIGURES (I.E., (A), (B-1), ETC.)
INDICATE TRAFFIC SIGNAL POST TYPE

LANTERN ASSEMBLY REFERENCE

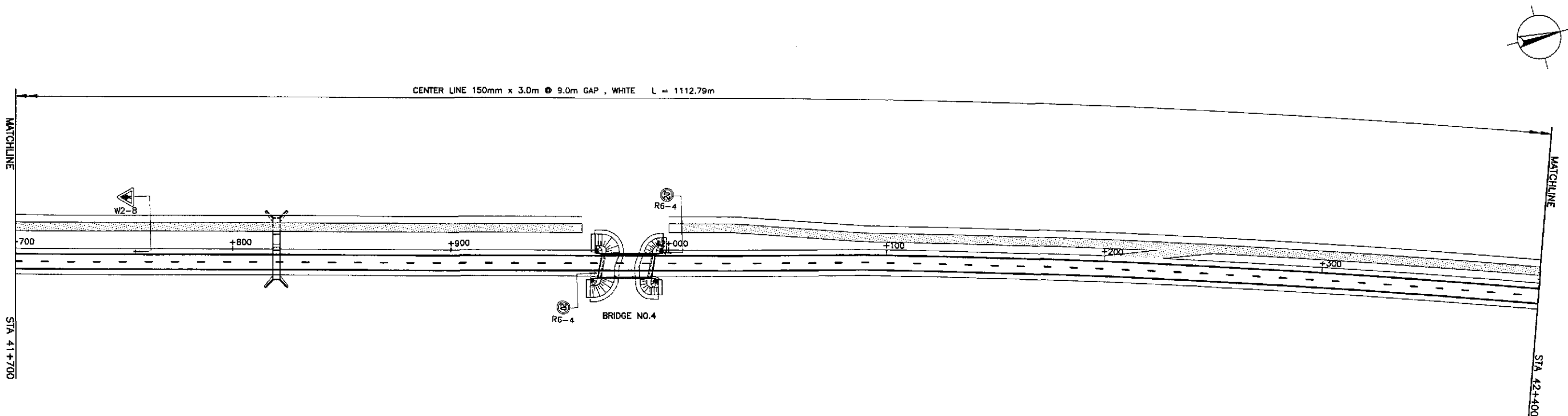
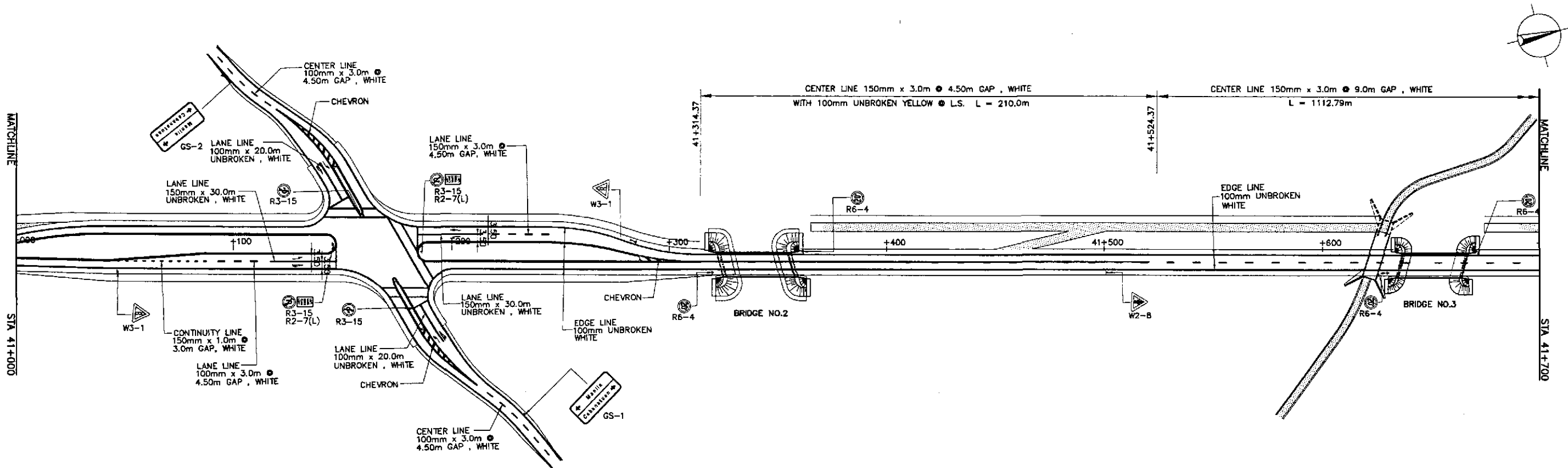
DESIGN PLAN LANTERN SYMBOL	LANTERN ASSEMBLY	DESIGN PLAN LANTERN SYMBOL	LANTERN ASSEMBLY
	 3 ASPECT		 5 ASPECT
	 3 ASPECT		 6 ASPECT
	 4 ASPECT		 PEDESTRIAN

1 INTERSECTION A-16 (STA. 47+170.587) - INITIAL STAGE
RI-30 SCALE 1:250

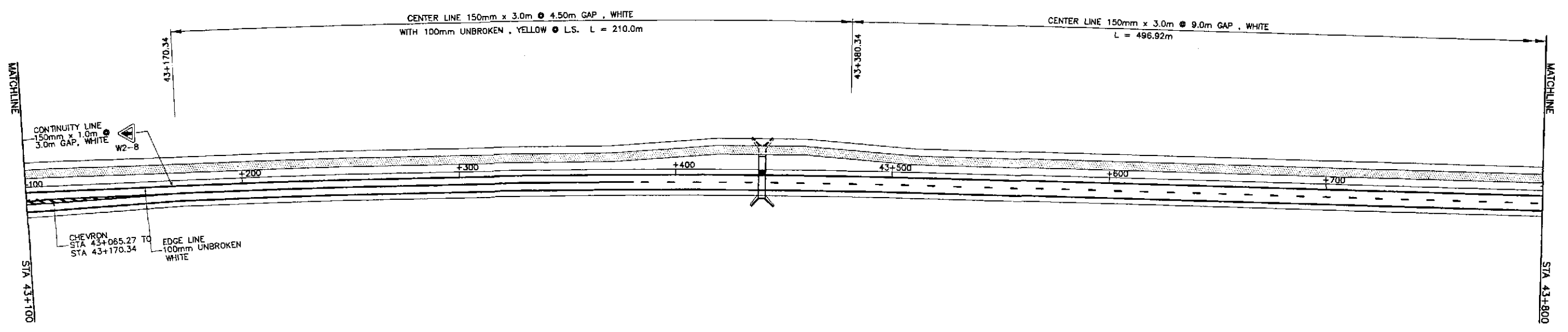
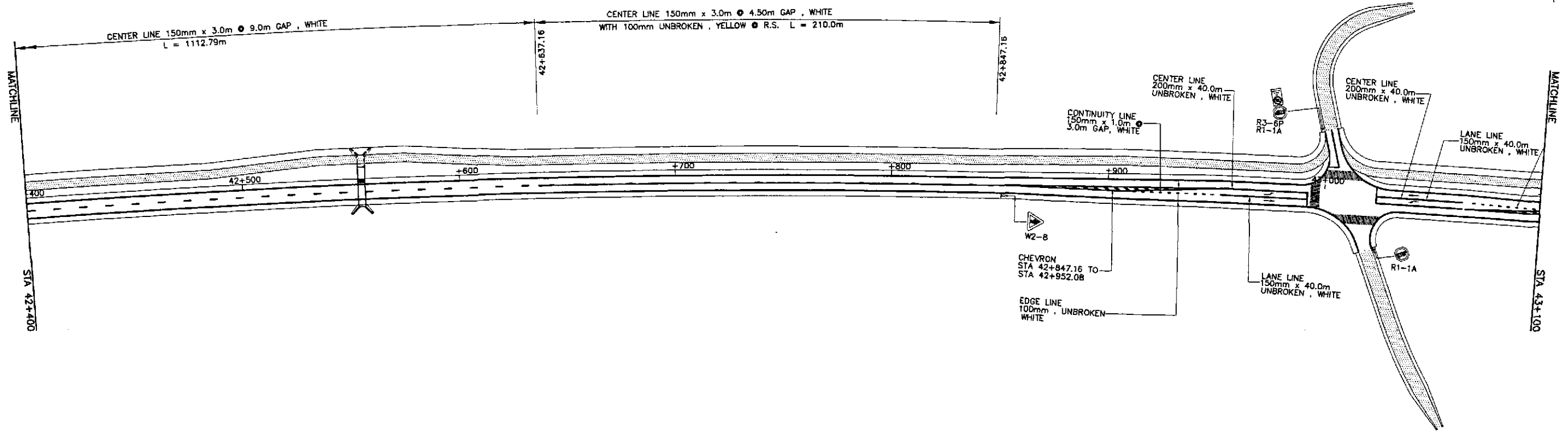
	DATE	SIGNATURE	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	9/18/02		BUREAU OF DESIGN		OFFICE OF THE SECRETARY		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	1:250	TRAFFIC SIGNAL LIGHT LAYOUT INTERSECTION A-16 (INITIAL STAGE)	RI-30
	CHECKED	9/20/02		Submitted By:	Reviewed By:	Recommended By:	Approved By:				
SUBMITTED	9/23/02		DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES CIC, Director IV	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary				
							PLARIDEL BYPASS - CONTRACT PACKAGE II	FULL SIZE A1			



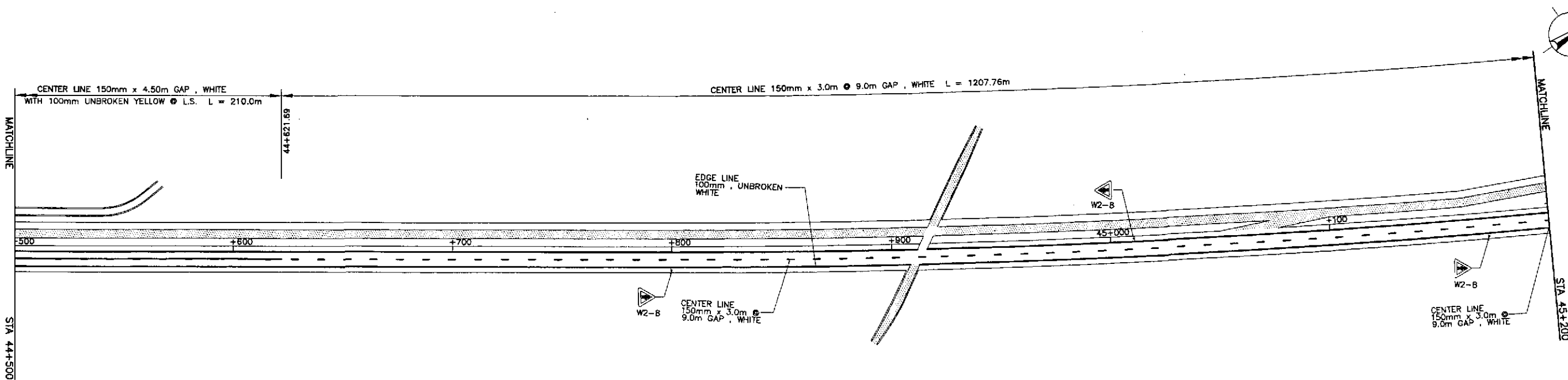
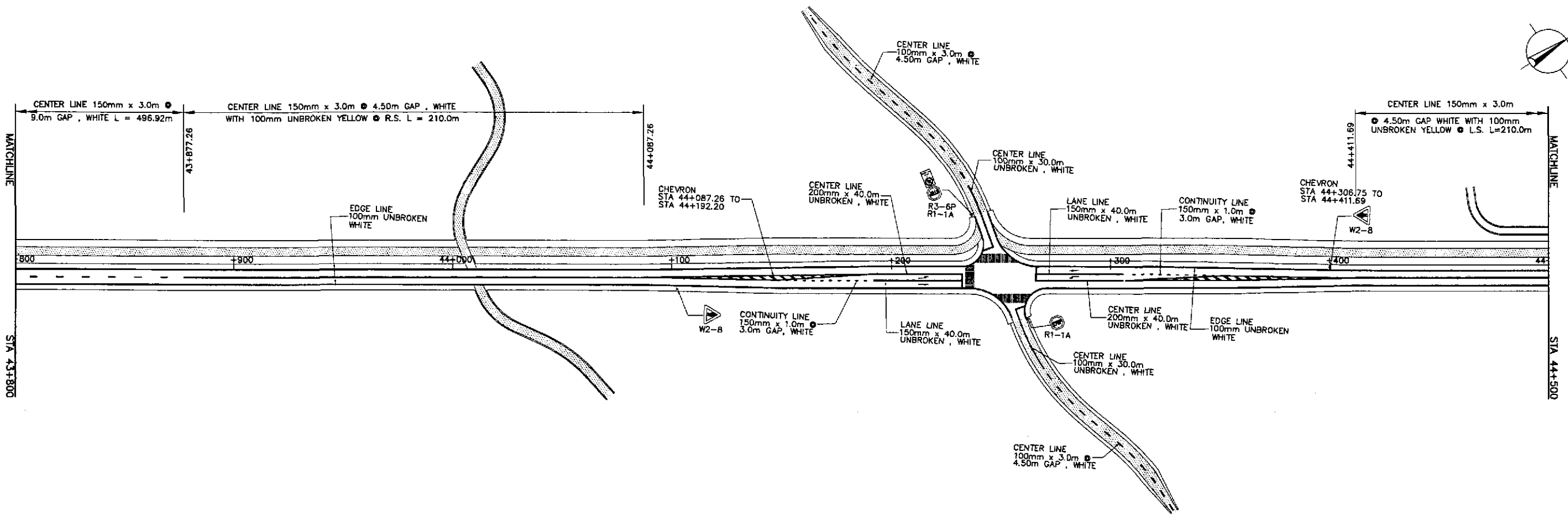
		DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	9/18/02	<i>[Signature]</i>	BUREAU OF DESIGN	OFFICE OF THE SECRETARY	1:1000 FULL SIZE A1	TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT PLAN ALONG BYPASS (INITIAL STAGE) STA. 39+625 - STA. 41+000	RM-01	
	CHECKED	9/20/02	<i>[Signature]</i>	Submitted By:	Reviewed By:				Recommended By:
SUBMITTED	9/23/02	<i>[Signature]</i>	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OK, Director IV				MANUEL M. BONDAN Undersecretary



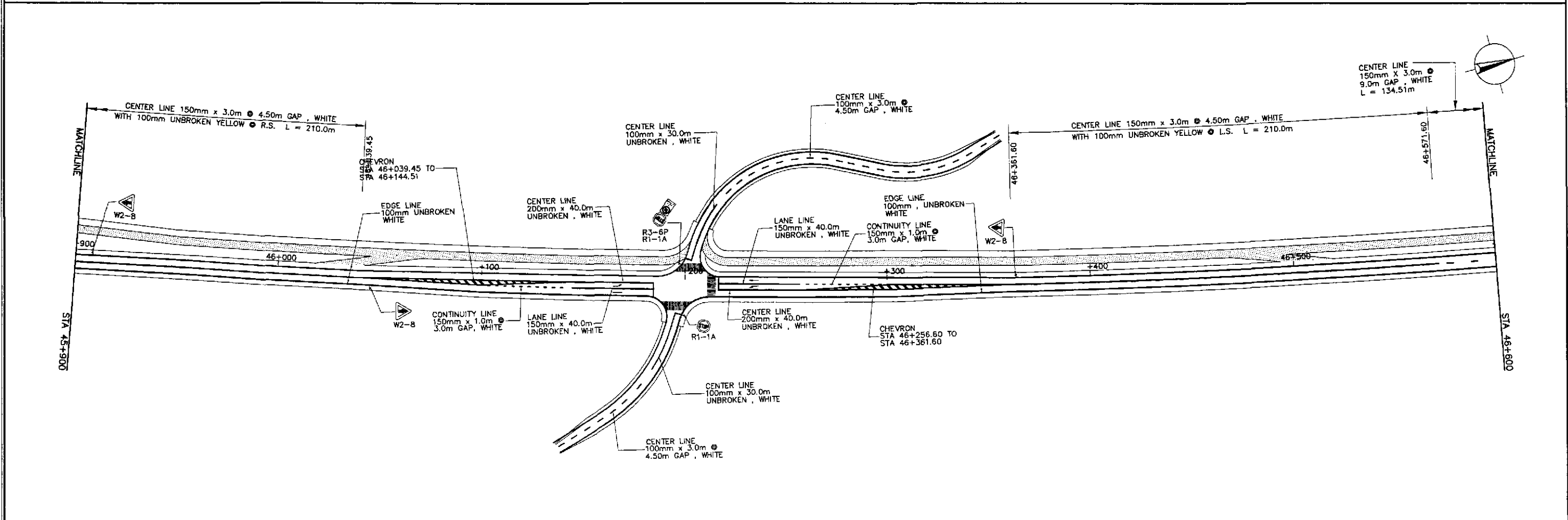
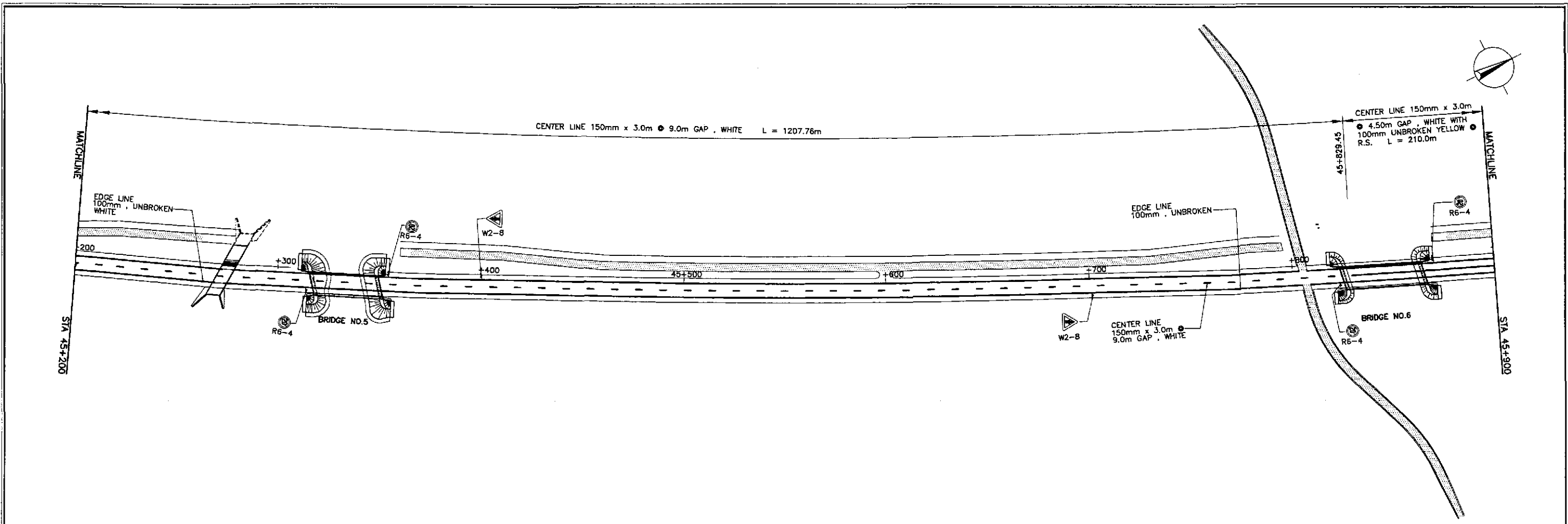
	DESIGNED	9/18/01	<i>[Signature]</i> LUNA	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :	
	CHECKED	9/20/01	<i>[Signature]</i> S. ROSSE		BUREAU OF DESIGN	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)			1:1000	TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT PLAN ALONG BYPASS (INITIAL STAGE) STA. 41+000 - STA. 42+400	RM-02
	SUBMITTED	9/23/01	<i>[Signature]</i> M. RIVERA		OFFICE OF THE SECRETARY	PLARIDEL BYPASS - CONTRACT PACKAGE II			FULL SIZE A1		
			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. BONDAN Undersecretary	Approved By: SIMEDN A. DATUMANONG Secretary			



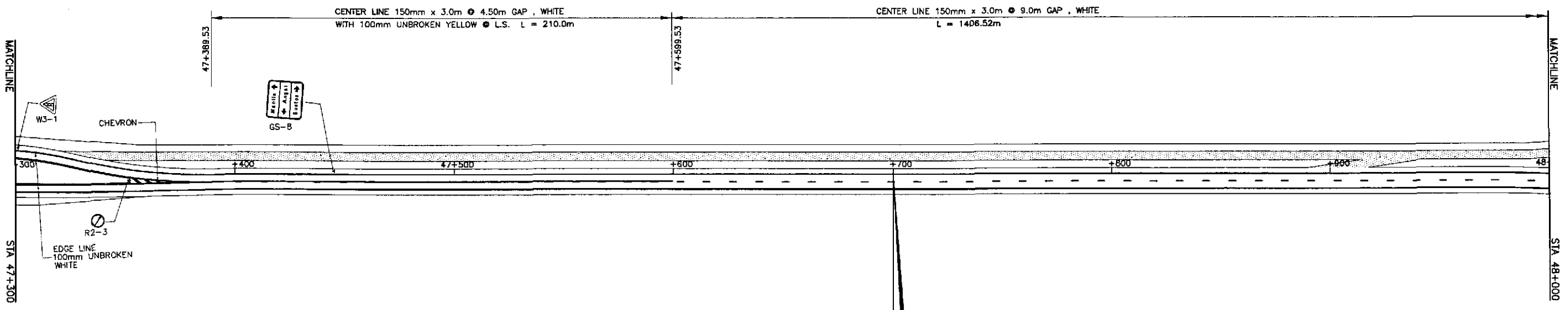
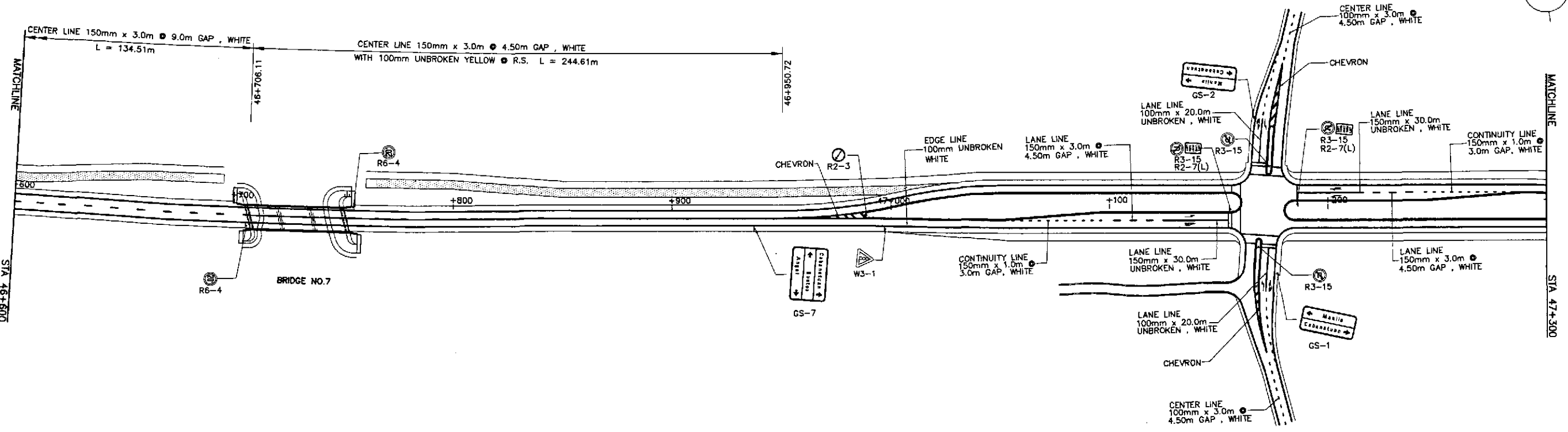
	DESIGNED	9/8/02	<i>sl</i>		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE II	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT PLAN ALONG BYPASS (INITIAL STAGE) STA. 42+400 - STA. 43+800	SHEET NO. : RM-03	
	CHECKED	9/10/02	<i>S. ROSE</i>		Submitted By:	Reviewed By:	Recommended By:					Office of the Secretary
	SUBMITTED	9/25/02	<i>M. K...</i>		DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES D/C, Director IV					MANUEL M. BONDAN Undersecretary



	DESIGNED	9/18/02	<i>[Signature]</i> 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) PLARIDEL BYPASS - CONTRACT PACKAGE II	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT PLAN ALONG BYPASS (INITIAL STAGE) STA. 43+800 - STA. 45+200	SHEET NO. : RM-04
	CHECKED	9/20/02	<i>[Signature]</i> S. ROSE		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/Approval) MANUEL M. BONDAN Undersecretary	Approved By: (See cover sheet for Signature/Approval) SIMFON A. DATUMANONG Secretary				
	SUBMITTED	9/23/02	<i>[Signature]</i> M. KUSUH TEAM LEADER										

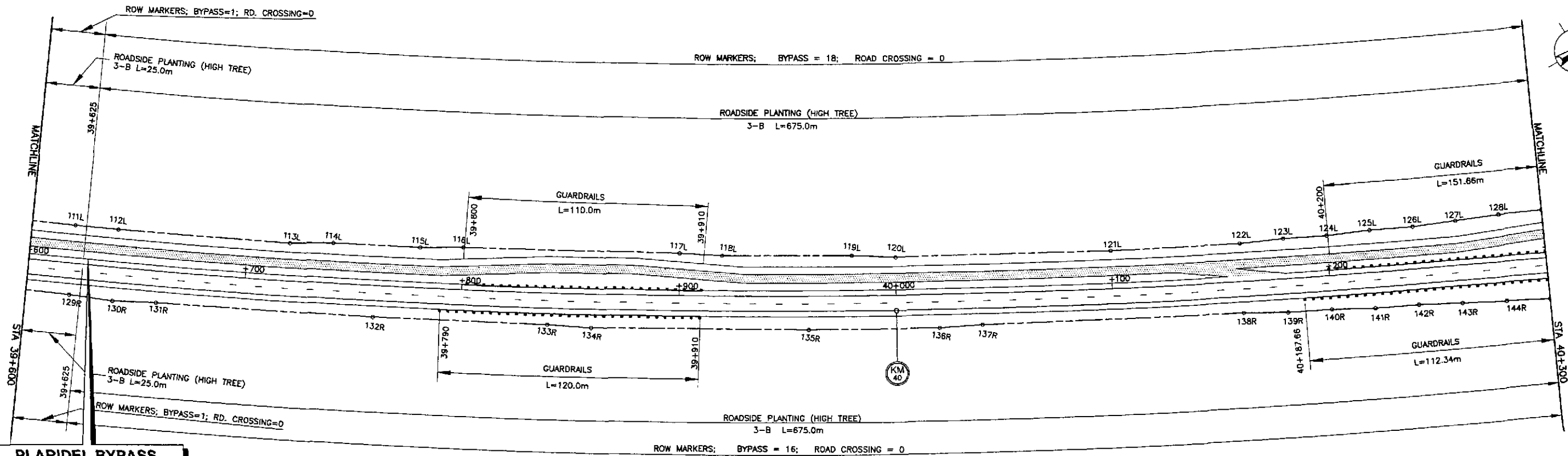


	DESIGNED	9/18/02	SIGNATURE	<i>S. Luna</i>		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE II	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT PLAN ALONG BYPASS (INITIAL STAGE) STA. 45+200 - STA. 46+600	SHEET NO. : RM-05
	CHECKED	9/20/02	SIGNATURE	<i>R. G. G.</i>		Submitted By:	Reviewed By:	Recommended By:	Recommended By:				
	SUBMITTED	9/23/02	SIGNATURE	<i>M. R. R.</i>		DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES DIC, Director IV	MANUE. M. BONDAN Undersecretary				

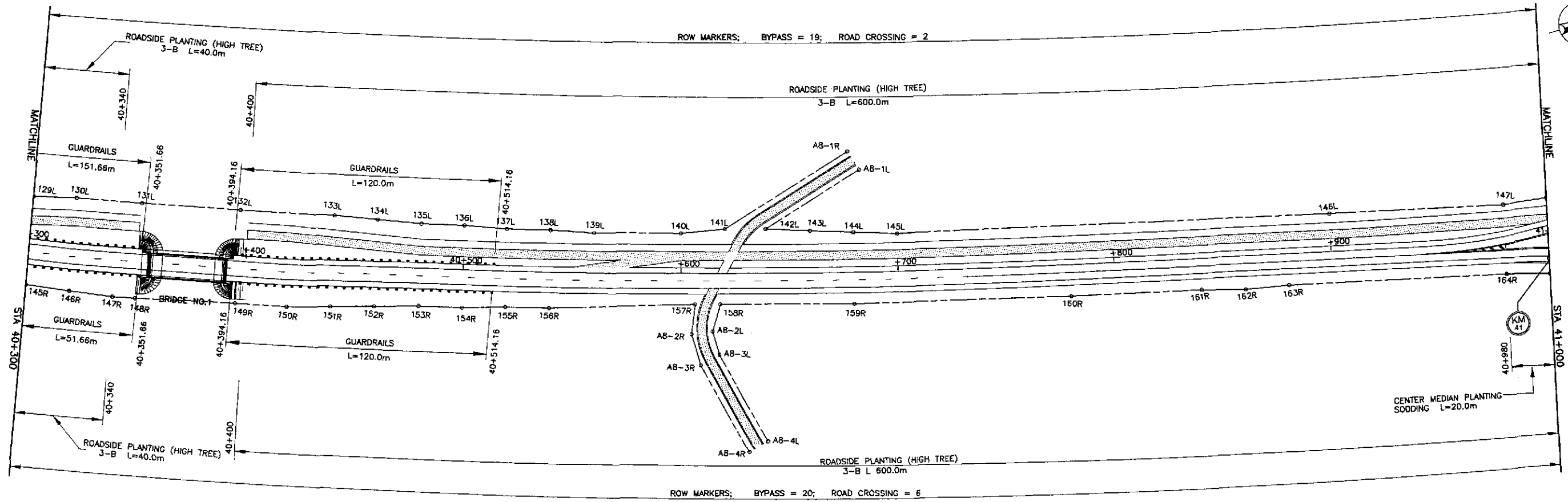


PLARIDEL BYPASS
END OF
CONTRACT PACKAGE II
BEG. OF CONTRACT PACKAGE III
 STA. 47+400.00
 ELEV. = 15.715
 N = 1,653,710.915
 E = 492,151.596

	DESIGNED	9/18/02	<i>[Signature]</i> LUNA	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :				SCALE :	SHEET CONTENTS :	SHEET NO. :								
	CHECKED	9/20/02	<i>[Signature]</i> S. GARCIA		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 PLAN ALONG BYPASS (INITIAL STAGE) STA. 46+600 - STA. 47+400	RM-06					
	SUBMITTED	9/23/02	<i>[Signature]</i> M. K. KANANI		PLARIDEL BYPASS - CONTRACT PACKAGE II										FULL SIZE A1				
Submitted By: PUHL - PMO 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			

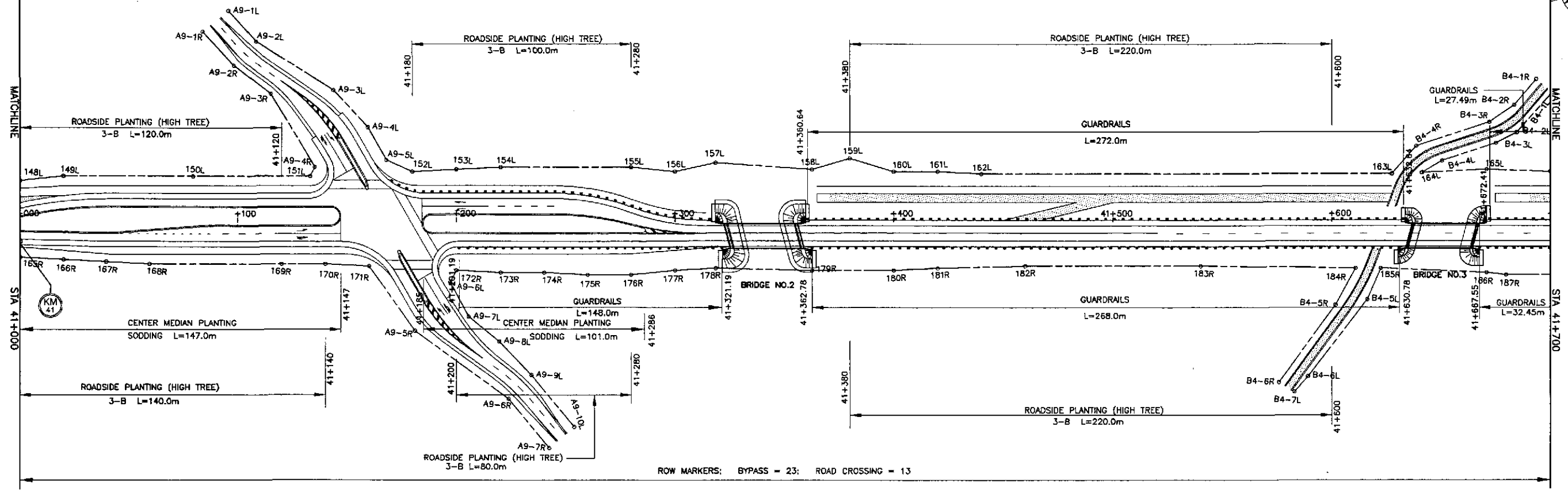


**PLARIDEL BYPASS
BEGINNING OF
CONTRACT PACKAGE II
END OF CONTRACT PACKAGE I**
 STA. 39+625.000
 ELEV. = 9.617
 N = 1,646,581.893
 E = 489,274.817



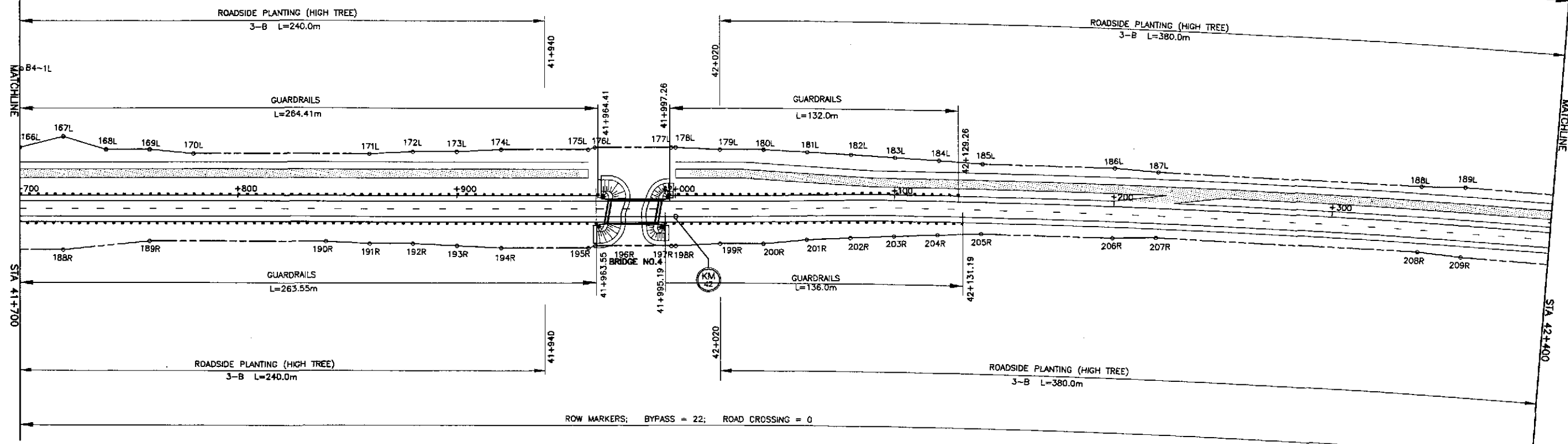
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	CHECKED	9/20/02	<i>[Signature]</i>		BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES D.C., Director IV					Recommended By: MANUEL M. BONDAN Undersecretary	Approved By: SIMEON A. DATUMANONG Secretary
	SUBMITTED	9/23/02	<i>[Signature]</i>		P.J.H. - PMC Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES D.C., Director IV					Recommended By: MANUEL M. BONDAN Undersecretary	Approved By: SIMEON A. DATUMANONG Secretary

ROW MARKERS: BYPASS = 18; ROAD CROSSING = 17



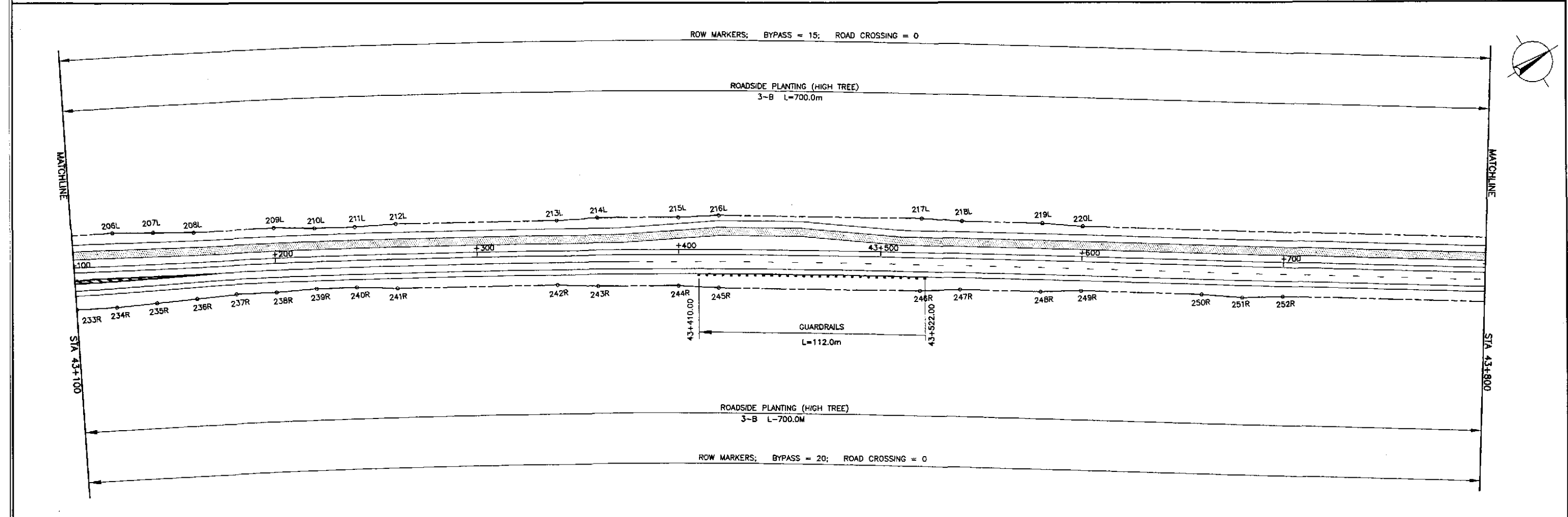
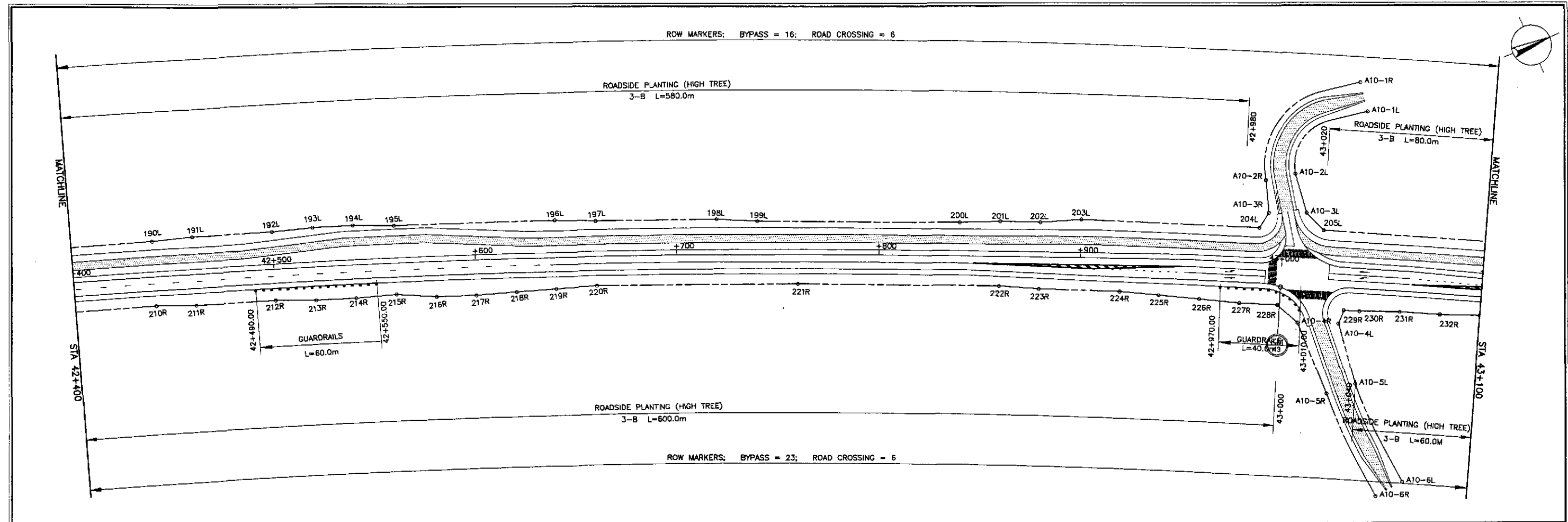
ROW MARKERS: BYPASS = 23; ROAD CROSSING = 13

ROW MARKERS: BYPASS = 24; ROAD CROSSING = 0

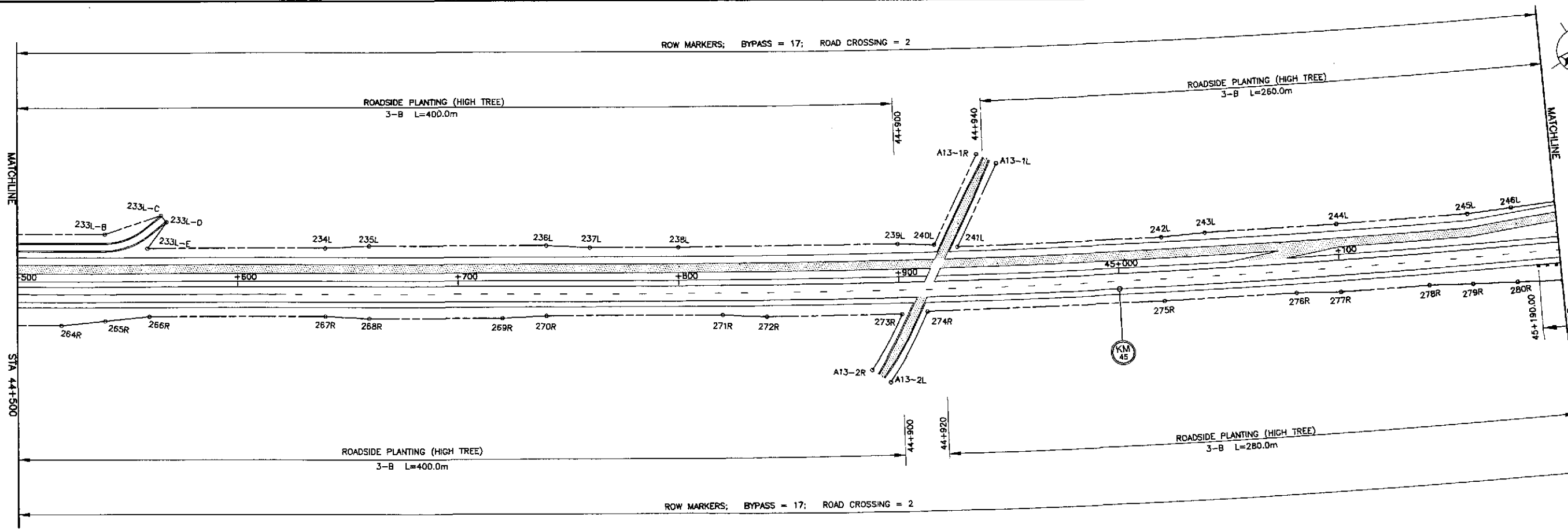
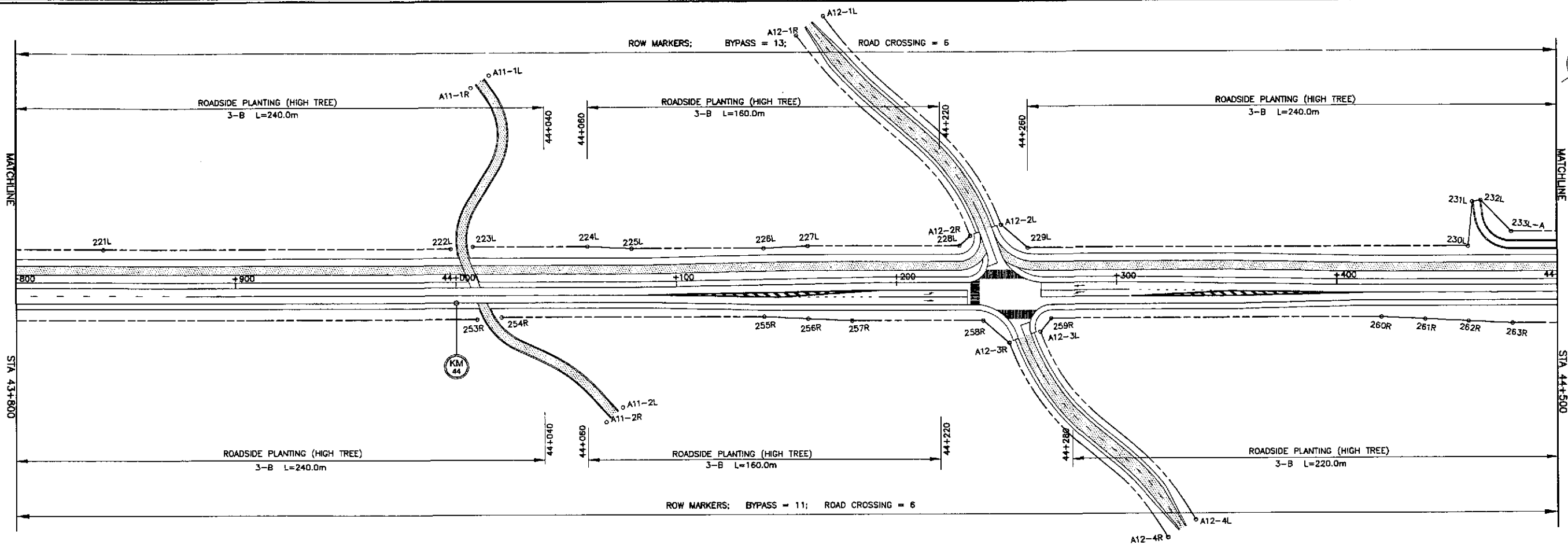


ROW MARKERS: BYPASS = 22; ROAD CROSSING = 0

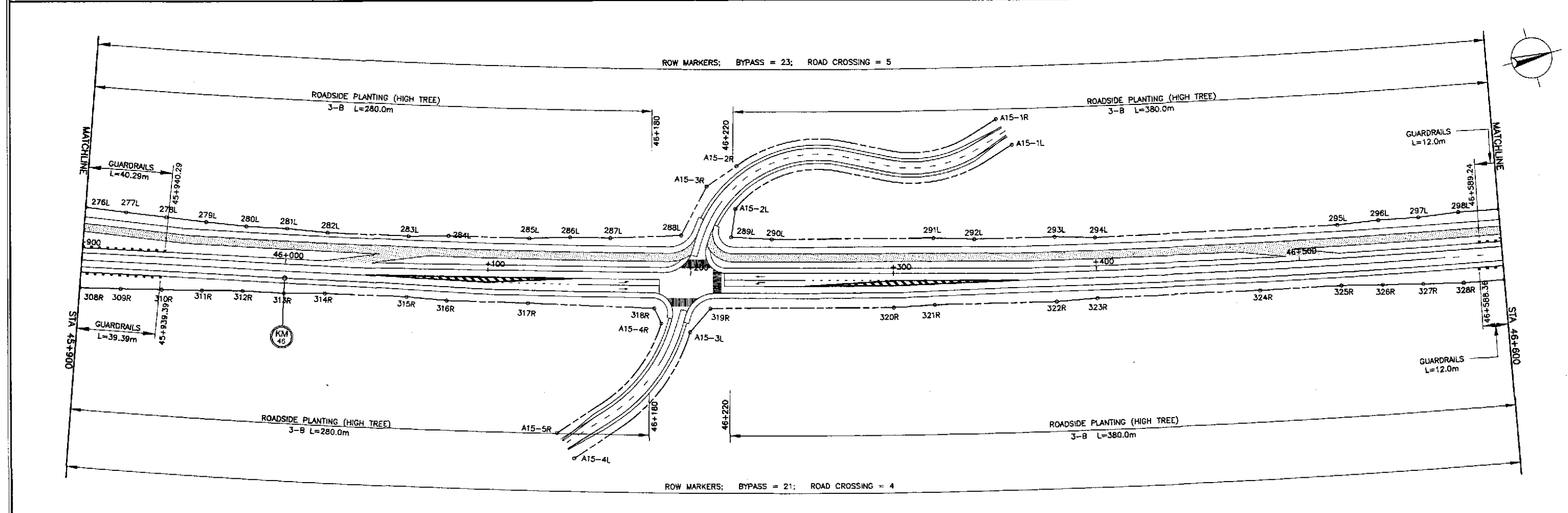
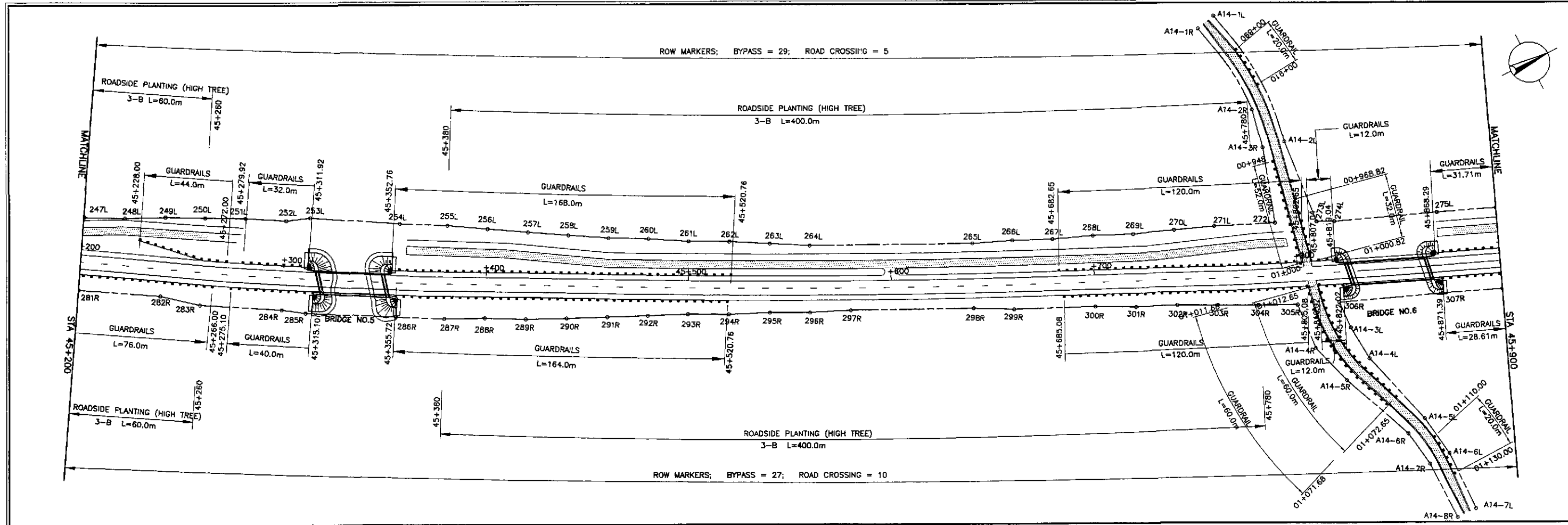
	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : PLANTING, GUARDRAIL AND RIGHT-OF-WAY LAYOUT (INITIAL STAGE) STA. 41+000 - STA. 42+400	SHEET NO. : RM-08	
	CHECKED	9/20/01	S. Luna		PUHL - PMO Submitted By:	BUREAU OF DESIGN Reviewed By:	OFFICE OF THE SECRETARY Recommended By:					Approved By:
	SUBMITTED	9/23/01	M. M. BONDAN		DANILLO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV					MANUEL M. BONDAN Undersecretary



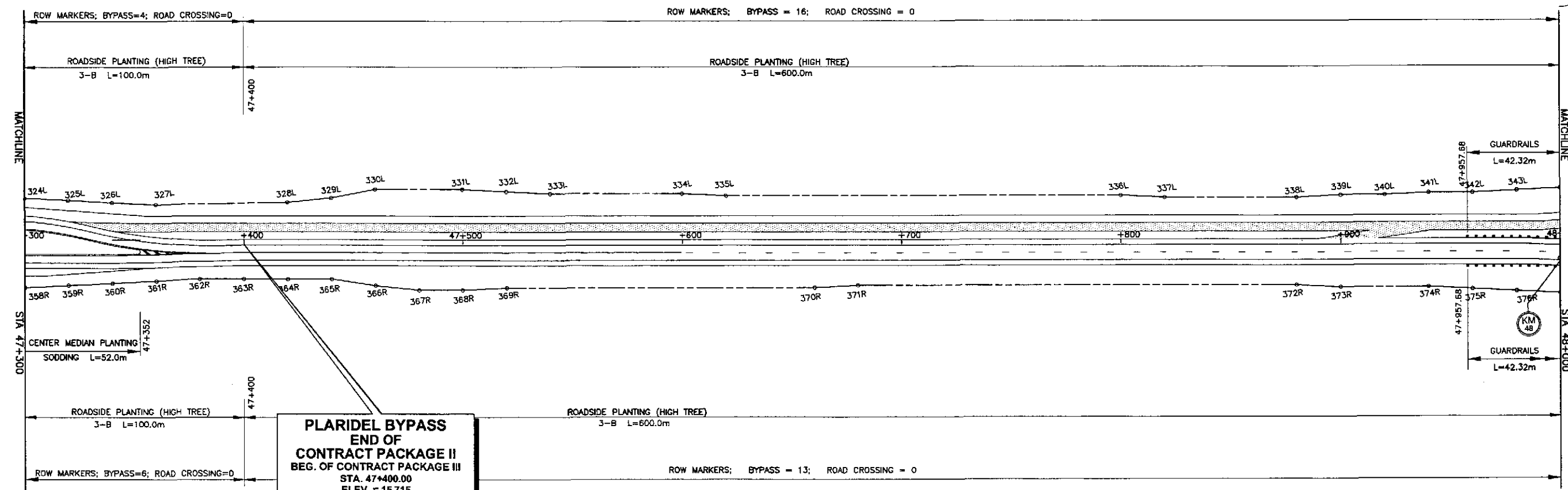
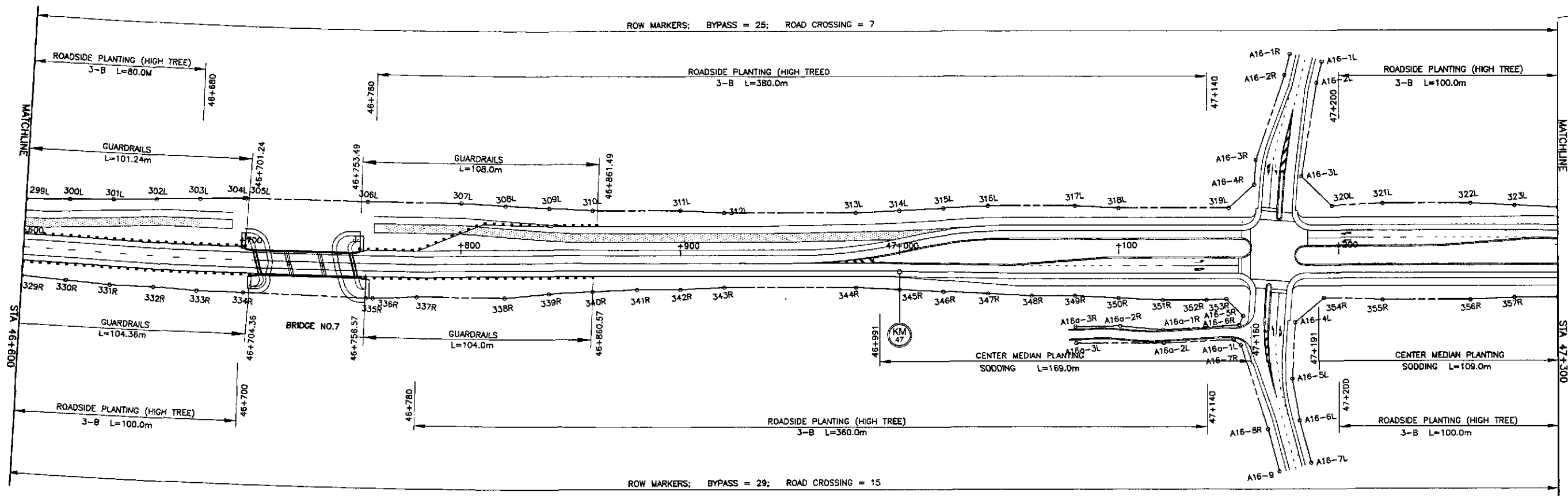
	DESIGNED	9/18/02			REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) PLARIDEL BYPASS - CONTRACT PACKAGE II	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : PLANTING, GUARDRAIL AND RIGHT-OF-WAY LAYOUT (INITIAL STAGE) STA. 42+400 - STA. 43+800	SHEET NO. : RM-09		
	CHECKED	9/20/02			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 OIC, Director IV					Approved By: MANUEL M. BONDAN Undersecretary	Approved By: SIMEON A. DATUMANONG Secretary
	SUBMITTED	9/23/02			M. RIBERA TEAM LEADER								



	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 (Pilaridel, Cabanatuan and San Jose Bypasses)	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : PLANTING, GUARDRAIL AND RIGHT-OF-WAY LAYOUT (INITIAL STAGE) STA. 43+800 - STA. 45+200	SHEET NO. : RM-10
	CHECKED	9/20/02	<i>S. Luna</i>		BUREAU OF DESIGN		OFFICE OF THE SECRETARY					
	SUBMITTED	9/23/02	<i>M. B. Bondan</i>		Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES Dir. Director IV	Recommended By: MANUEL M. BONDAN Undersecretary				



	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 : 1:1000 FULL SIZE A1	SHEET CONTENTS : PLANTING, GUARDRAIL AND RIGHT-OF-WAY LAYOUT (INITIAL STAGE) STA. 45+200 - STA. 46+600	SHEET NO. : RM-11
	CHECKED	9/20/02	<i>[Signature]</i>		BUREAU OF DESIGN						
	SUBMITTED	9/23/02	<i>[Signature]</i>		Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES O.C. Director IV				



PLARIDEL BYPASS
END OF
CONTRACT PACKAGE II
BEG. OF CONTRACT PACKAGE III
 STA. 47+400.00
 ELEV. = 15.715
 N = 1,653,710.915
 E = 492,151.596

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

DATE	SIGNATURE
DESIGNED 9/18/02	<i>[Signature]</i>
CHECKED 9/20/02	<i>[Signature]</i>
SUBMITTED 9/23/02	<i>[Signature]</i>

REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			
BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By: PJHL - PMD	Reviewed By: JOSEFINA M. ALAGAR	Recommended By: MANUEL M. BONDAN	Approved By: SIMEON A. DATUMANONG
DANILO C. TRAJANO Project Director	Chief, Highways Division	Undersecretary	Secretary

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

SCALE :
 1:1000
 FULL SIZE A1

SHEET CONTENTS :
 PLANTING, GUARDRAIL AND
 RIGHT-OF-WAY - LAYOUT
 (INITIAL STAGE)
 STA. 46+600 - STA. 47+400

SHEET NO. :
 RM-12