



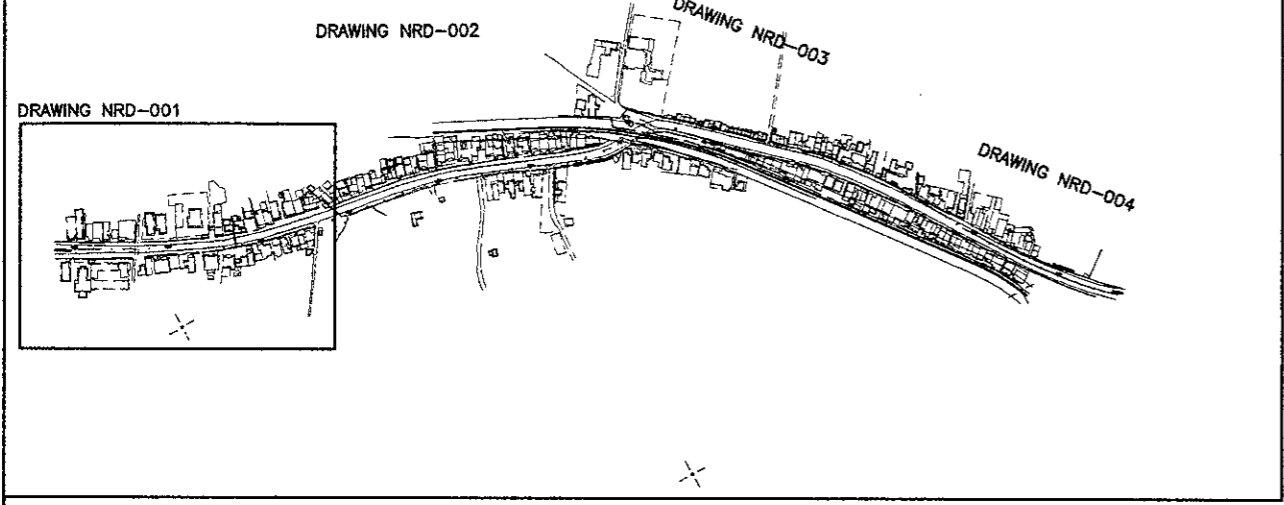
JAPAN INTERNATIONAL
COOPERATION AGENCY



DIRECTORATE GENERAL OF HIGHWAY
MINISTRY OF PUBLIC WORKS
REPUBLIC OF INDONESIA

ROADS

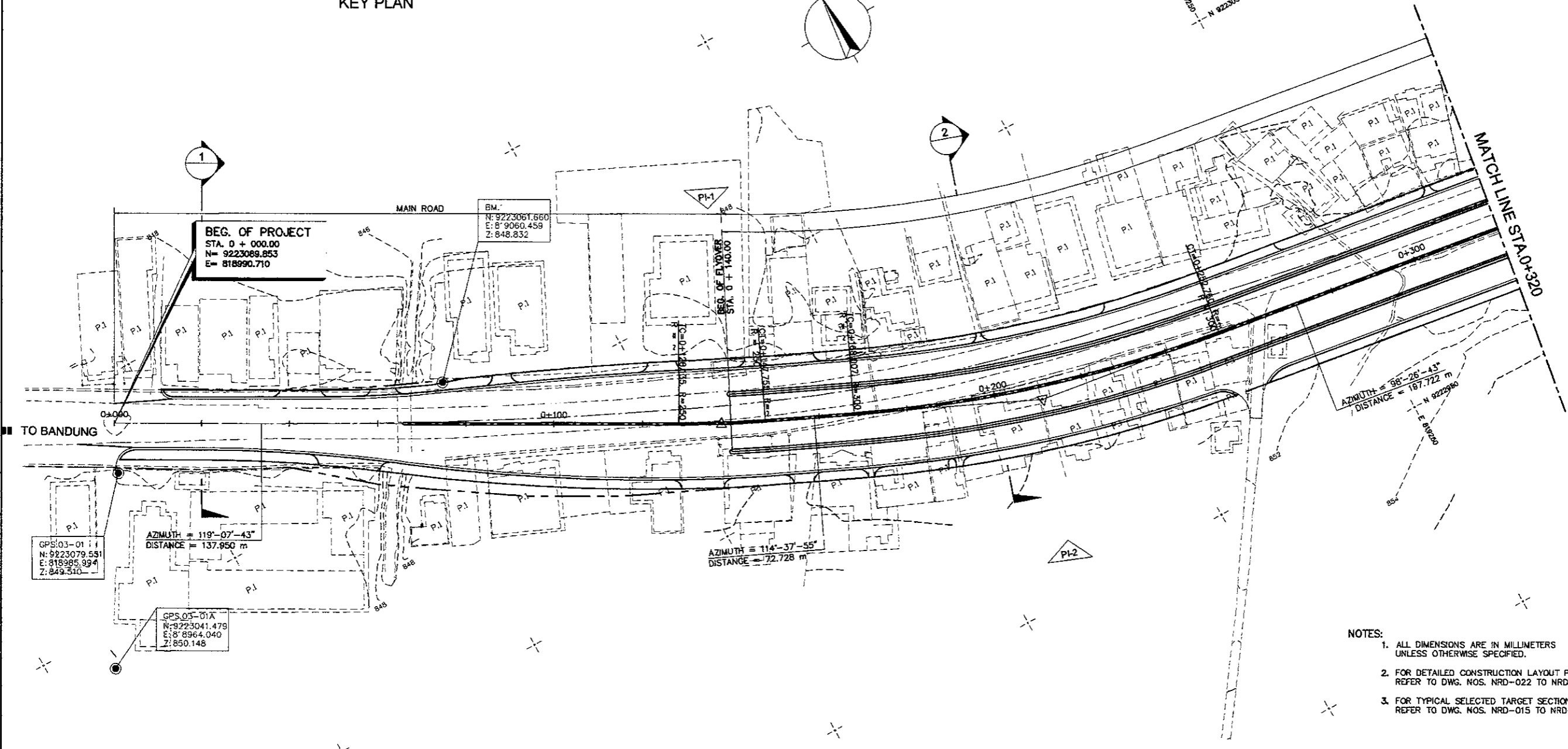
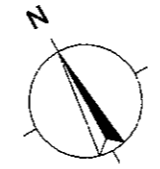
KEI KATAHIRA & ENGINEERS INTERNATIONAL



DATA	PI NO. - 1	UNITS
PI STA.	STA. 0 + 137.950	
N	9223022.703	m
E	819111.213	m
V	40	km/h
Δ	4-29-48	"
Θs	-	"
R	250	m
A	-	m
Ts	-	m
Es	0.193	m
Tc	9.815	m
Ls	-	m
Lc	19.620	m
L	19.620	m
e	4.2	%

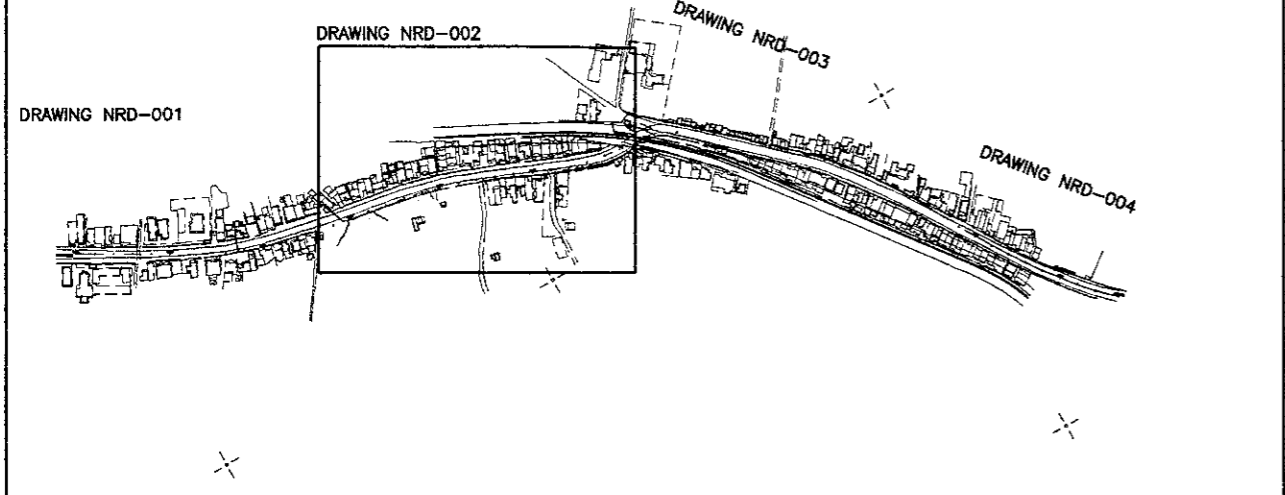
DATA	PI NO. - 2	UNITS
PI STA.	STA. 0 + 210.668	
N	9222992.391	m
E	819177.324	m
V	40	km/h
Δ	16-11-12	"
Θs	-	"
R	300	m
A	-	m
Ts	-	m
Es	3.018	m
Tc	42.851	m
Ls	-	m
Lc	84.753	m
L	84.753	m
e	3.9	%

KEY PLAN



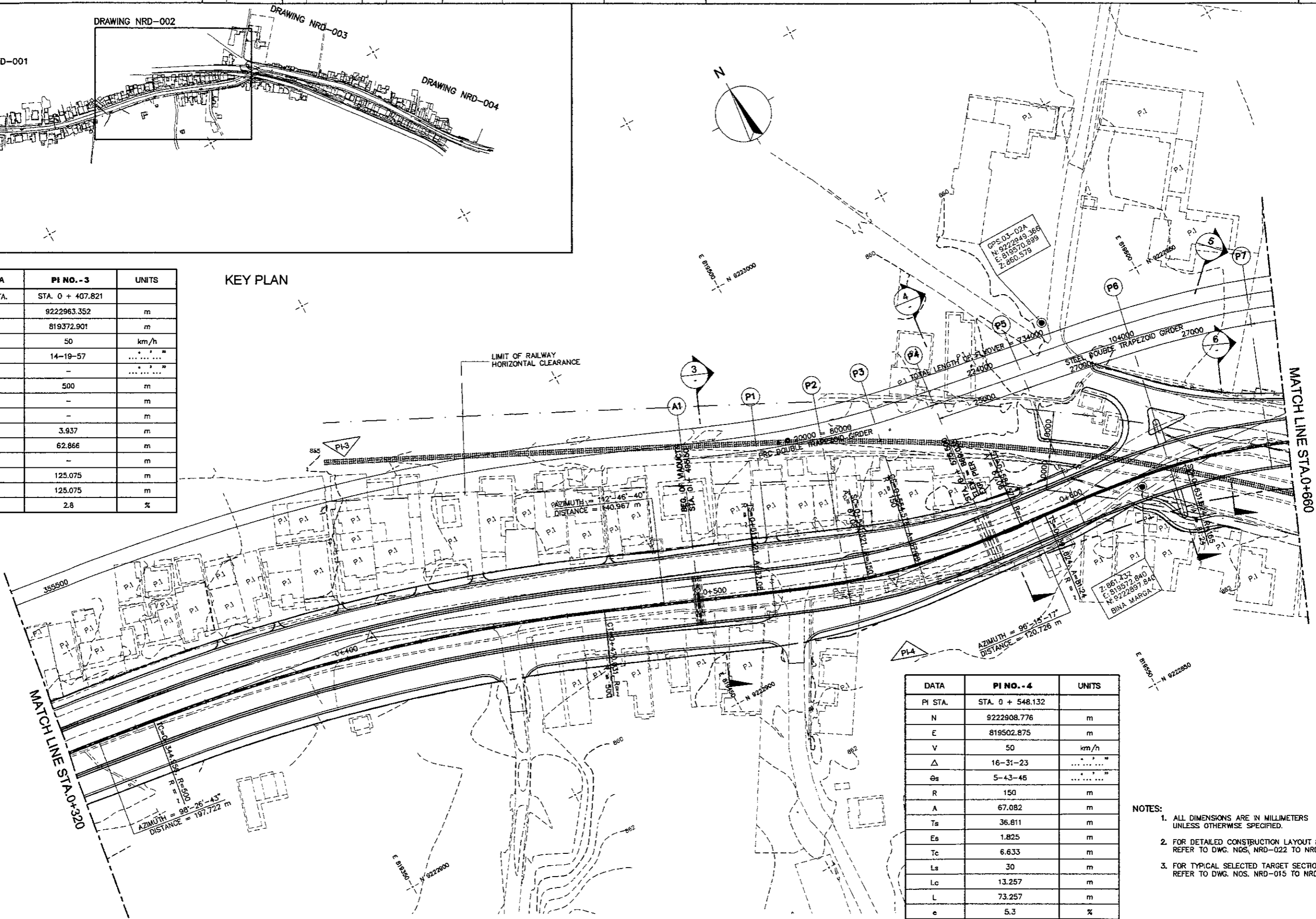
- NOTES:
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 2. FOR DETAILED CONSTRUCTION LAYOUT PLAN, REFER TO DWG. NOS. NRD-022 TO NRD-028
 3. FOR TYPICAL SELECTED TARGET SECTIONS REFER TO DWG. NOS. NRD-015 TO NRD-019

1 ROADWAY PLAN (FLYOVER)
 SCALE 1:1000



DATA	PI NO. - 3	UNITS
PI STA.	STA. 0 + 407.821	
N	9222963.352	m
E	819372.901	m
V	50	km/h
Δ	14-19-57"
θ_s	-"
R	500	m
A	-	m
Ts	-	m
Es	3.937	m
Tc	62.866	m
Ls	-	m
Lc	125.075	m
L	125.075	m
e	2.8	%

KEY PLAN

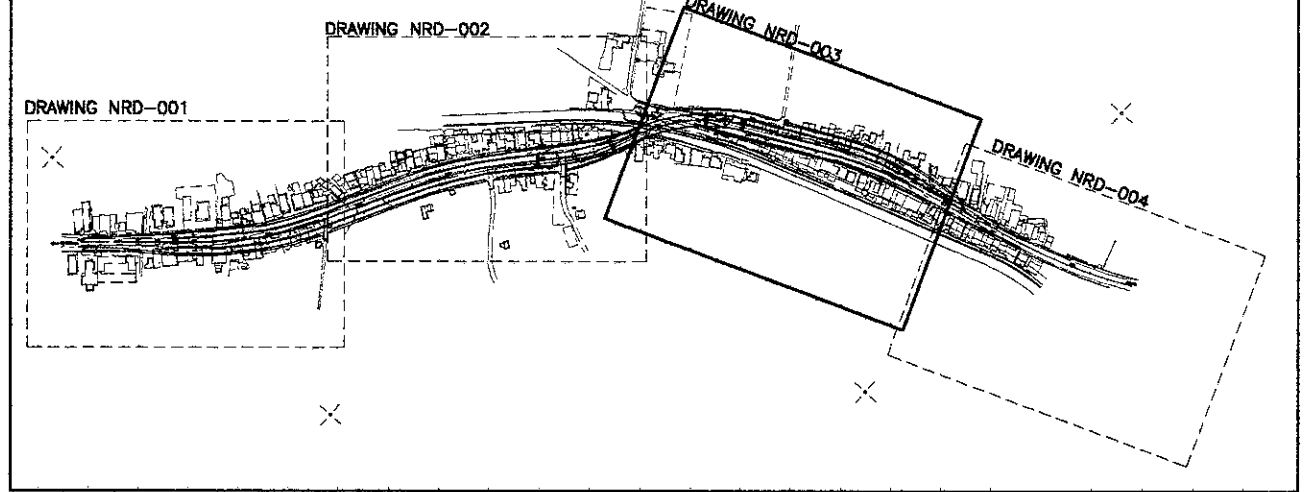


DATA	PI NO. - 4	UNITS
PI STA.	STA. 0 + 548.132	
N	9222908.776	m
E	819502.875	m
V	50	km/h
Δ	16-31-23"
θ_s	5-43-45"
R	150	m
A	67.082	m
Ts	36.811	m
Es	1.825	m
Tc	6.633	m
Ls	30	m
Lc	13.257	m
L	73.257	m
e	5.3	%

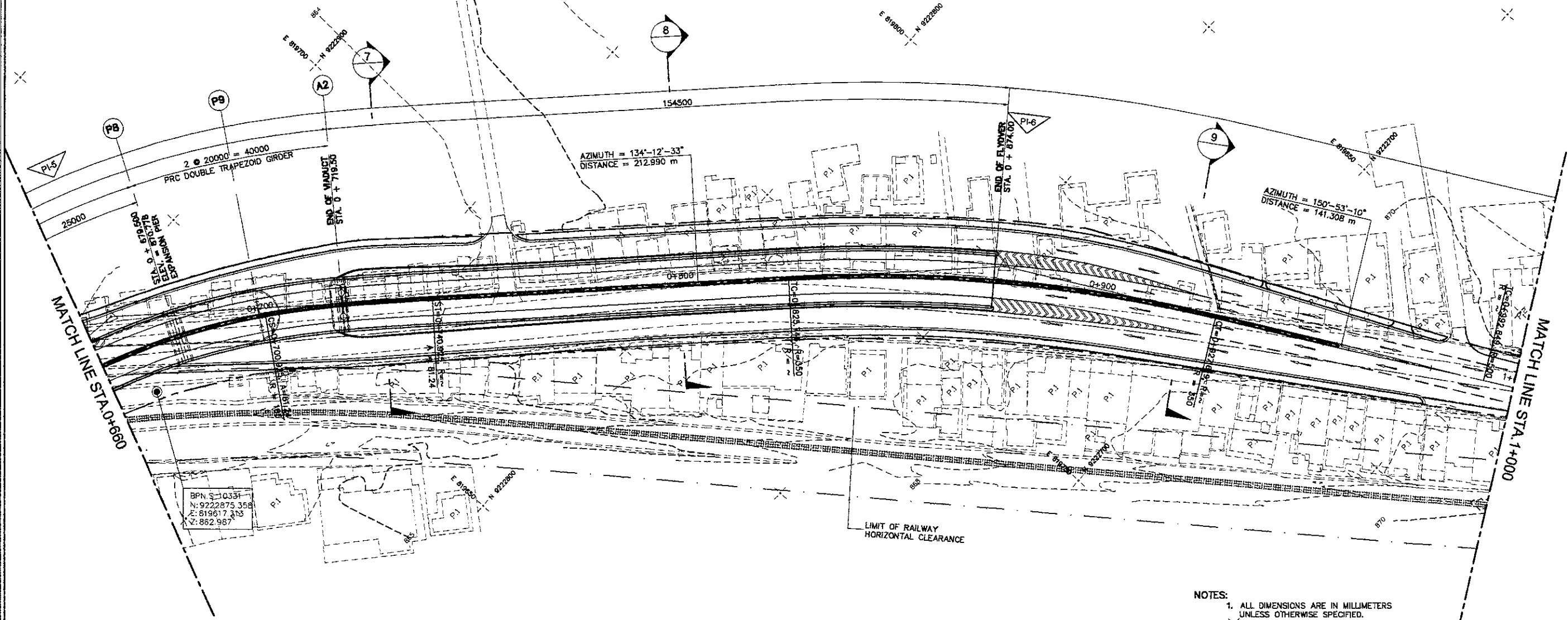
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 - FOR TYPICAL SELECTED TARGET SECTIONS REFER TO DWG. NOS. NRD-015 TO NRD-019

DATA	PI NO. - 5	UNITS
PI STA.	STA. 0 + 668.494	
N	9222895.622	m
E	819622.883	m
V	50	km/h
Δ	37-57-15	"
Θs	6-56-42	"
R	165	m
A	81.240	m
Ts	76.869	m
Es	9.910	m
Tc	35.169	m
Ls	40	m
Lc	64.300	m
L	149.300	m
e	5.1	%

DATA	PI NO. - 6	UNITS
PI STA.	STA. 0 + 877.045	
N	9222797.109	m
E	819775.554	m
V	40	km/h
Δ	16-40-37	"
Θs	-	"
R	350	m
A	-	m
Ts	-	m
Es	3.740	m
Tc	51.299	m
Ls	-	m
Lc	101.874	m
L	101.874	m
e	3.6	%

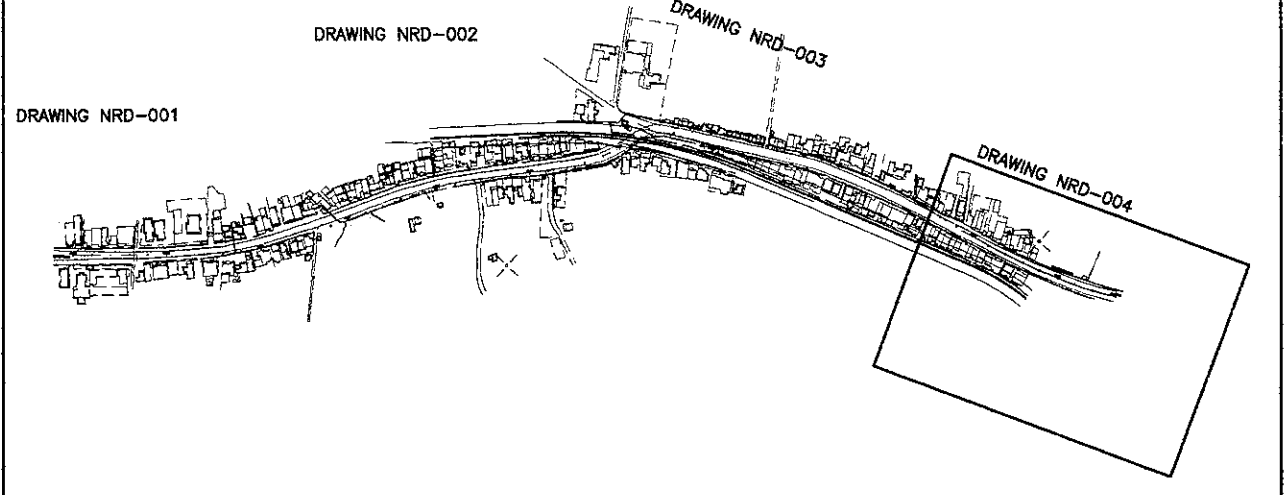


KEY PLAN



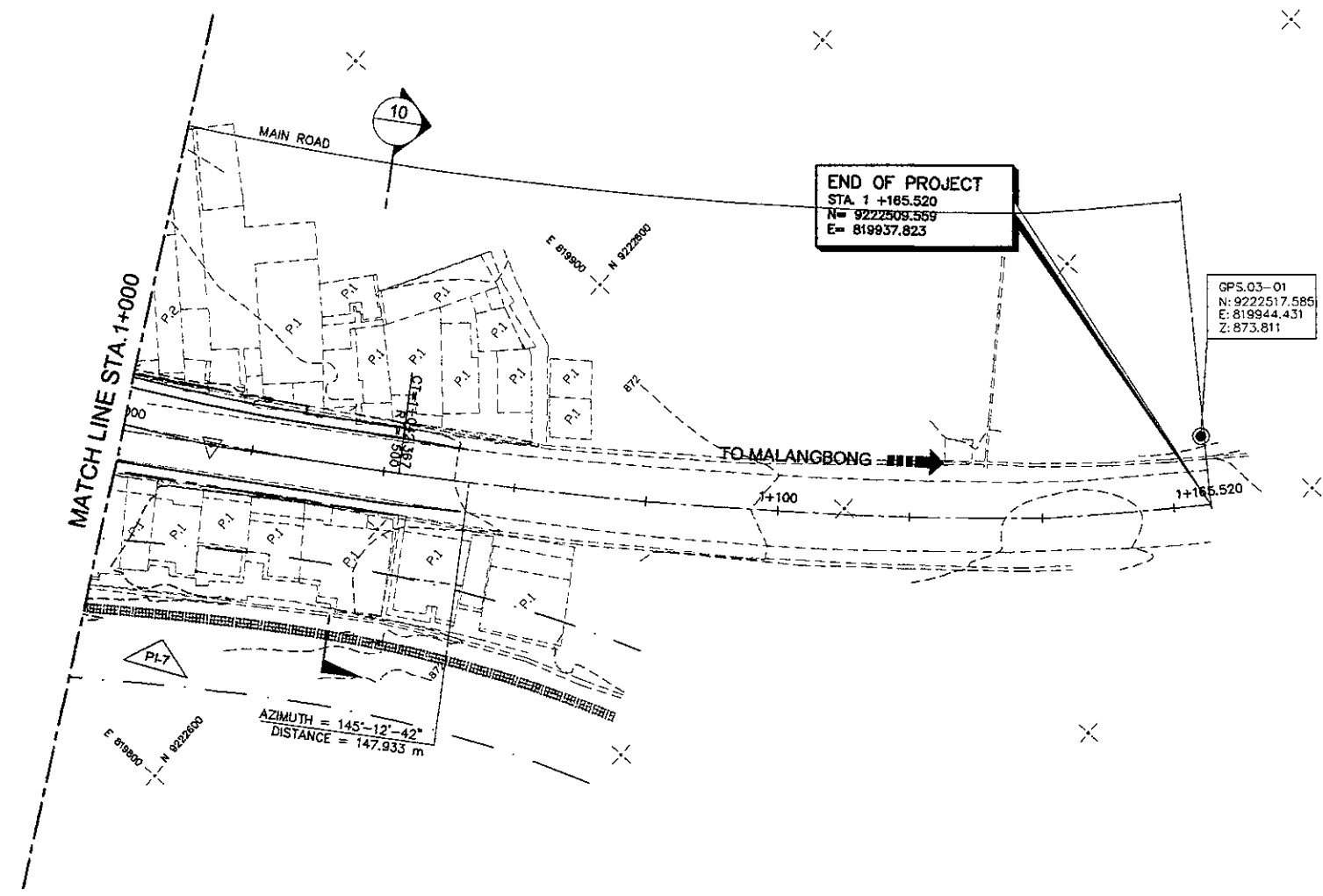
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 3. FOR TYPICAL SELECTED TARGET SECTIONS REFER TO DWG. NOS. NRD-015 TO NRD-019

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



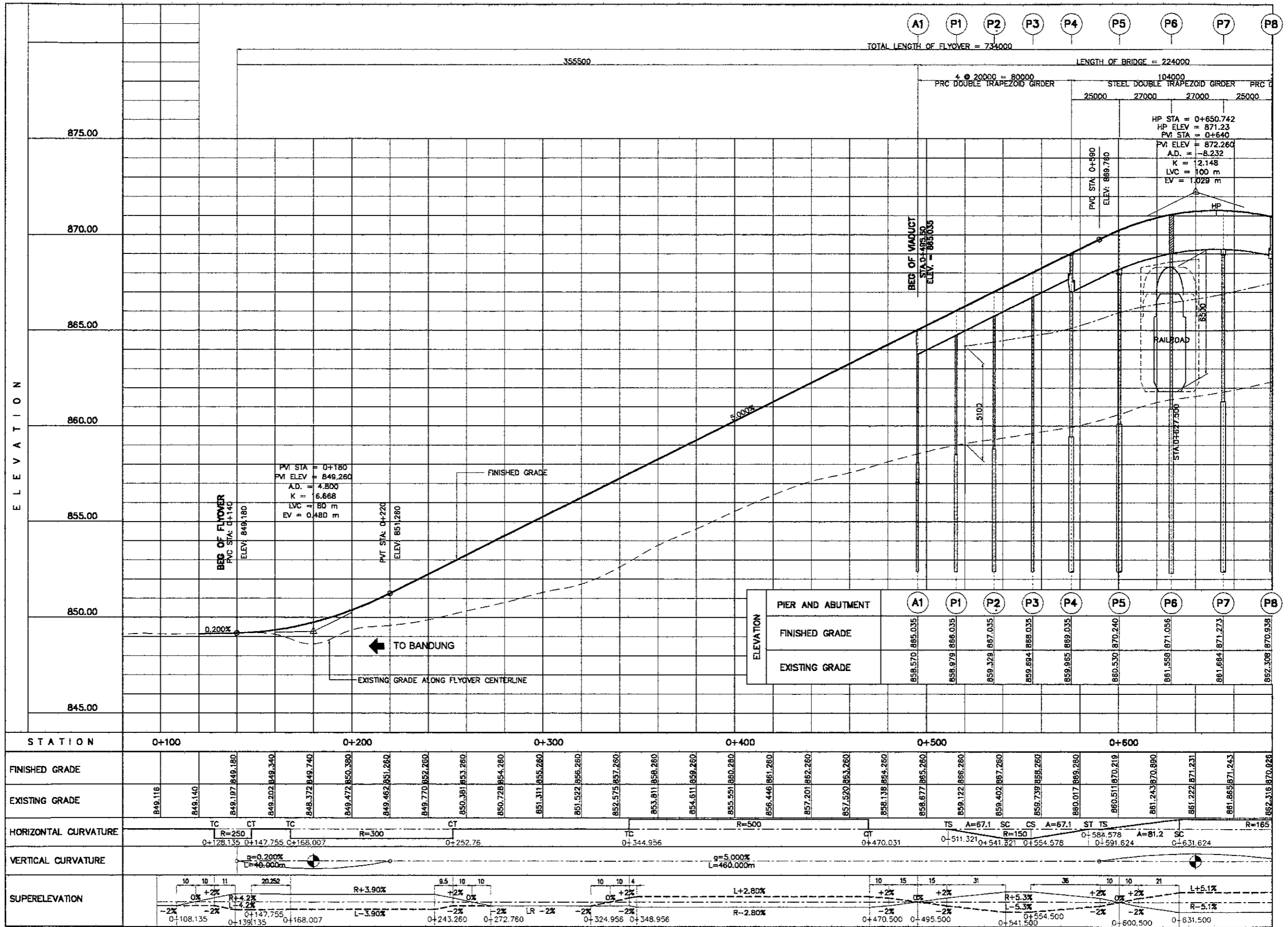
KEY PLAN

DATA	PI NO. - 7	UNITS
PI STA.	STA. 0 + 017.628	
N	9222623.654	m
E	819844.307	m
V	50	km/h
Δ	5-40-28	"
Φs	-	"
R	500	m
A	-	m
Ts	-	m
Es	0.614	m
Tc	24.779	m
Ls	-	m
Lc	49.518	m
L	48.518	m
e	2.8	%



1 ROADWAY PLAN (FLYOVER)
 SCALE 1:1000

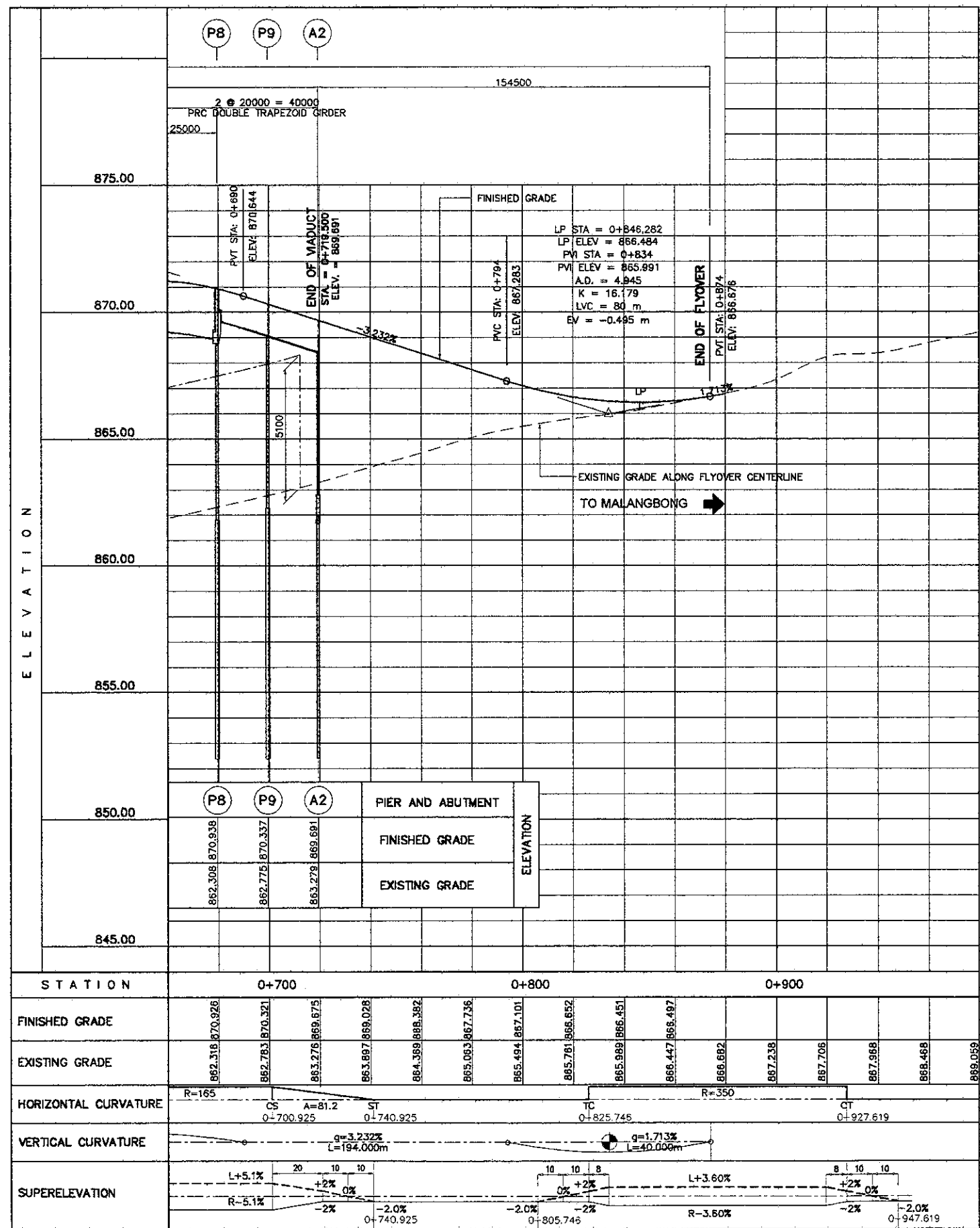
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1 PROFILE OF FLYOVER
 SCALE H = 1 : 2000
 V = 1 : 200

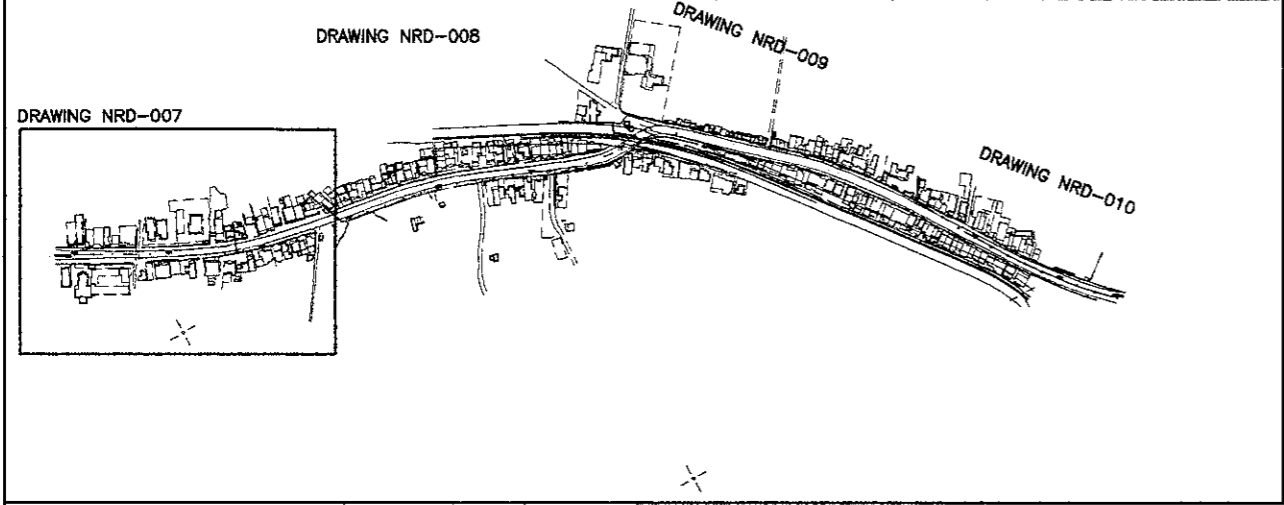
NOTE:
 EXISTING GRADE ELEVATIONS ARE TAKEN FROM
 CENTERLINE OF FLYOVER.

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



1 PROFILE OF FLYOVER
 SCALE H = 1 : 2000
 V = 1 : 200

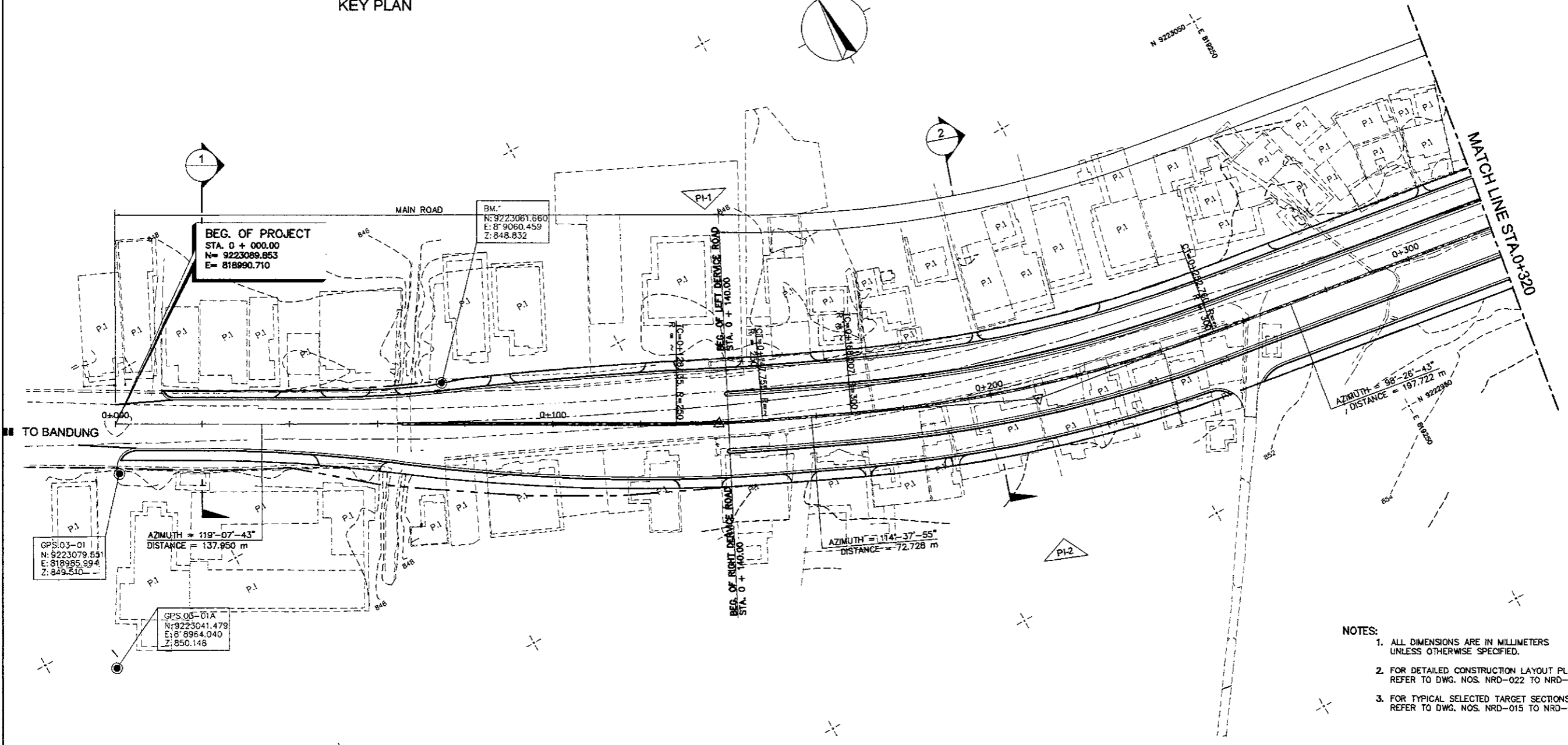
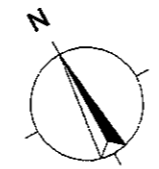
NOTE:
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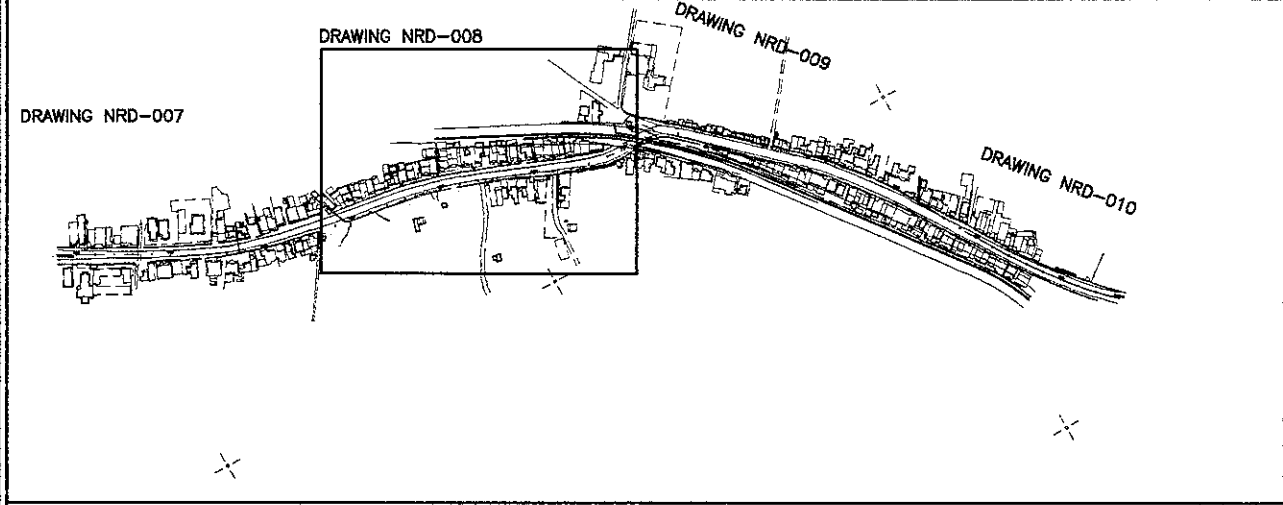
DATA	PI NO. - 1	UNITS	DATA	PI NO. - 2	UNITS
PI STA.	STA. 0 + 137.950		PI STA.	STA. 0 + 210.668	
N	9223022.703	m	N	9222992.391	m
E	819111.213	m	E	819177.324	m
V	40	km/h	V	40	km/h
Δ	4-29-48	"	Δ	16-11-12	"
Θ_a	-	"	Θ_a	-	"
R	250	m	R	300	m
A	-	m	A	-	m
Ts	-	m	Ts	-	m
Es	0.193	m	Es	3.018	m
Tc	9.815	m	Tc	42.661	m
Ls	-	m	Ls	-	m
Lc	19.620	m	Lc	84.753	m
L	19.620	m	L	84.753	m
e	4.2	%	e	3.9	%

NOTE: CURVE DATA IS REFERRED FROM FLYOVER DESIGN CENTERLINE ALIGNMENT

KEY PLAN



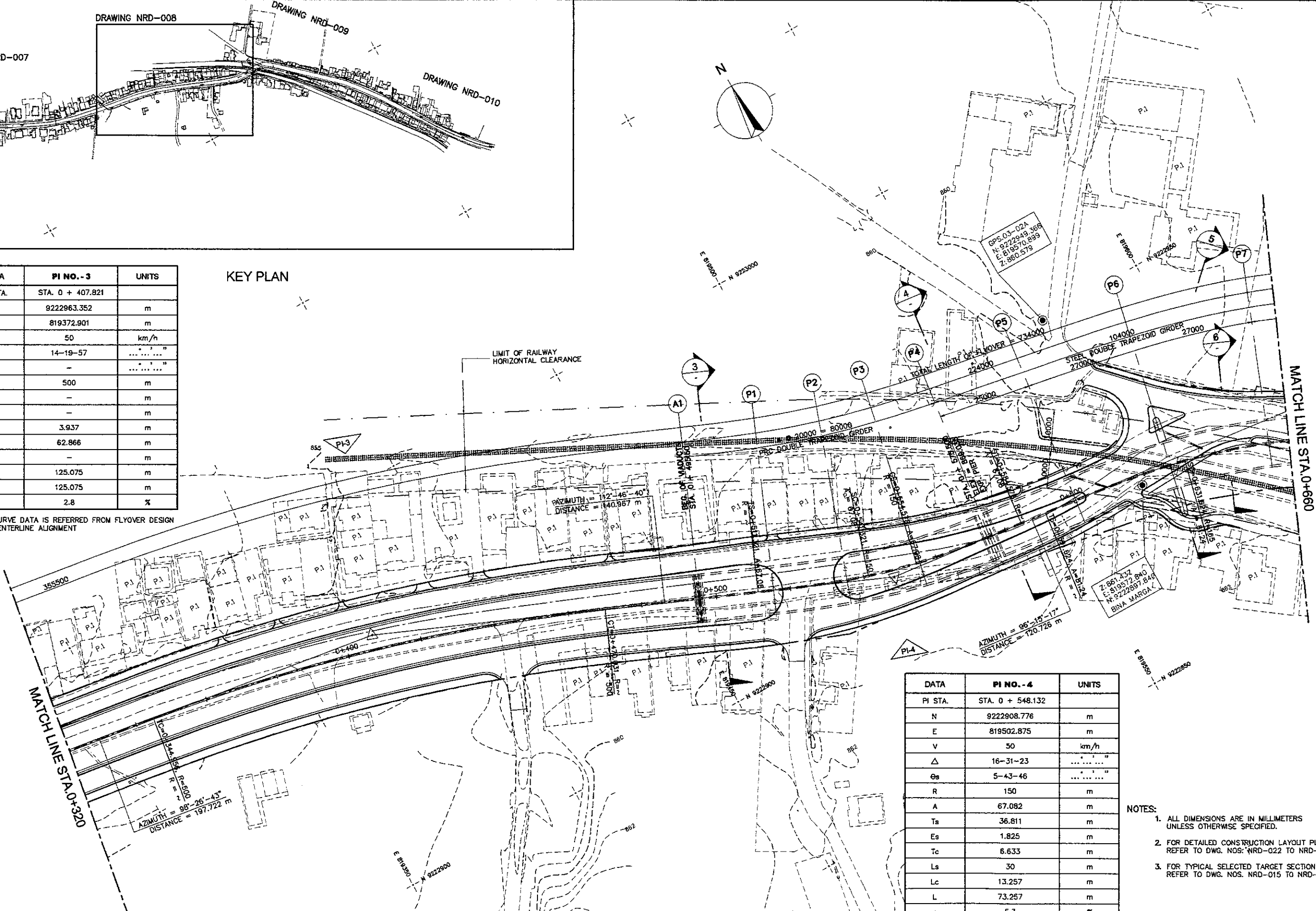
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DATA	PI NO. - 3	UNITS
PI STA.	STA. 0 + 407.821	
N	9222863.352	m
E	819372.901	m
V	50	km/h
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θ_s	-	''
R	500	m
A	-	m
Ts	-	m
Es	3.937	m
Tc	62.866	m
La	-	m
Lc	125.075	m
L	125.075	m
e	2.8	%

KEY PLAN

NOTE: CURVE DATA IS REFERRED FROM FLYOVER DESIGN CENTERLINE ALIGNMENT



DATA	PI NO. - 4	UNITS
PI STA.	STA. 0 + 548.132	
N	9222908.776	m
E	819502.875	m
V	50	km/h
Δ	16-31-23	''
θ_s	5-43-46	''
R	150	m
A	67.082	m
Ts	36.811	m
Es	1.825	m
Tc	6.633	m
La	30	m
Lc	13.257	m
L	73.257	m
e	5.3	%

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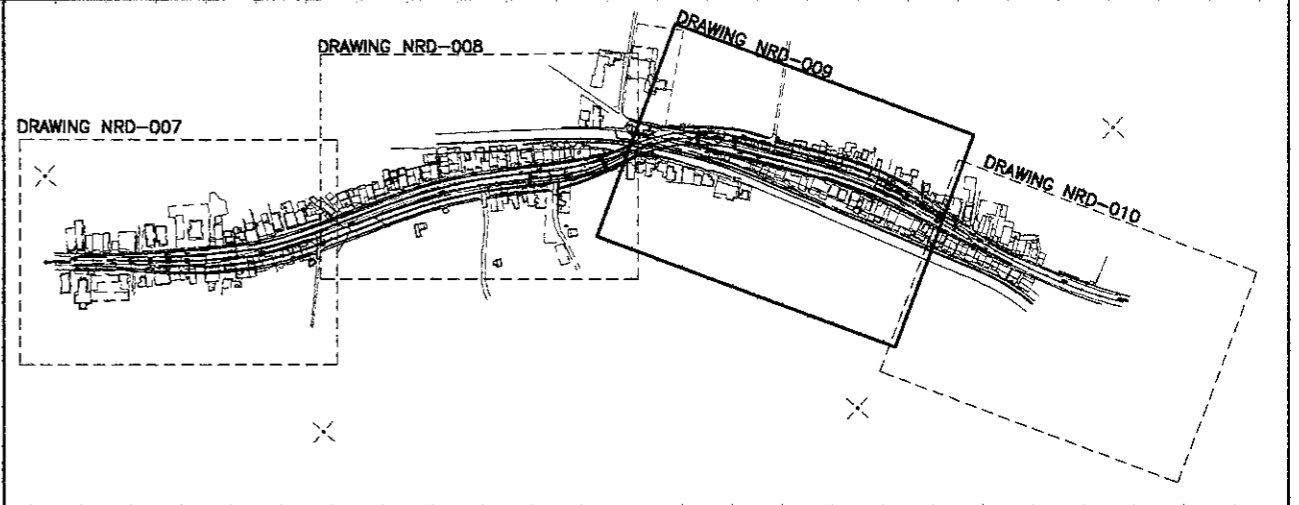
NOTE: CURVE DATA IS REFERRED FROM FLYOVER DESIGN CENTERLINE ALIGNMENT

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	

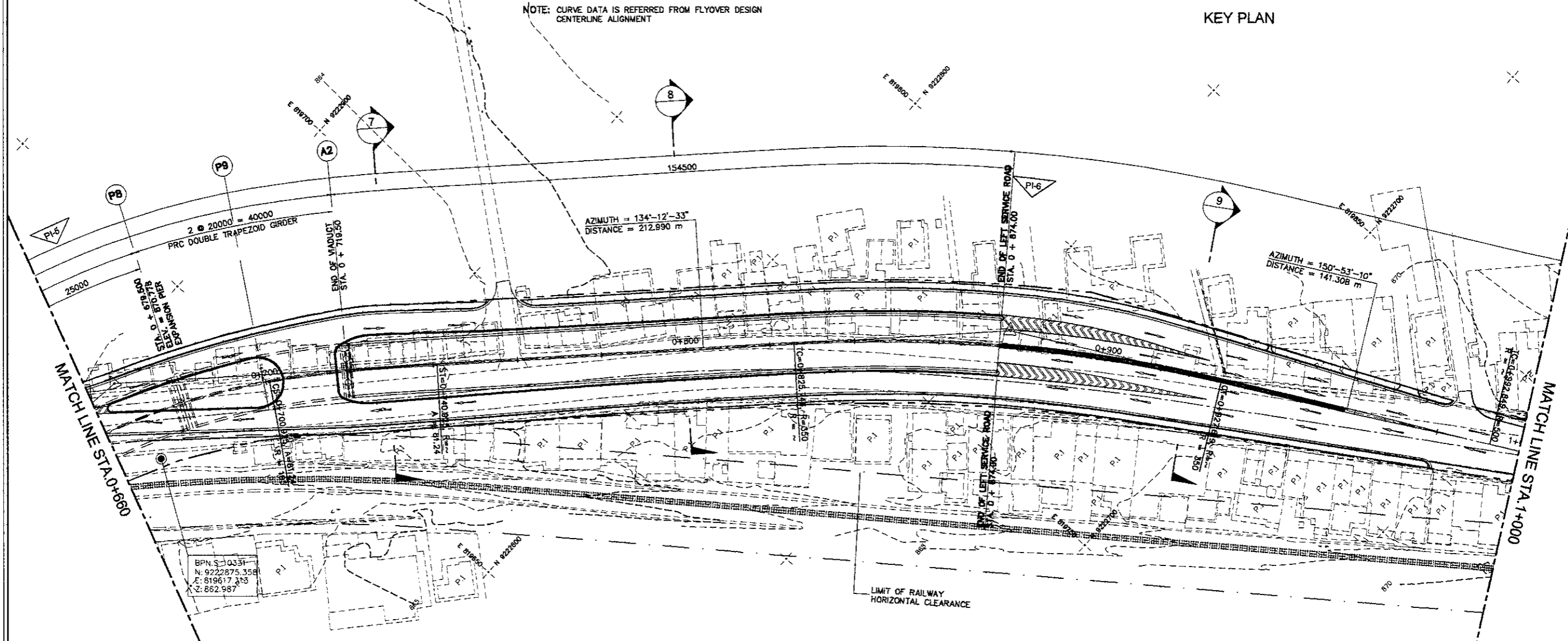
DATA	PI NO. - 5	UNITS
PI STA.	STA. 0 + 668.494	
N	9222895.622	m
E	819622.883	m
V	50	km/h
Δ	37-57-15	"
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R	165	m
A	81.240	m
Ts	76.869	m
Es	9.910	m
Tc	35.169	m
Ls	40	m
Lc	64.300	m
L	149.300	m
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DATA	PI NO. - 6	UNITS
PI STA.	STA. 0 + 877.045	
N	9222767.109	m
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Θ_s	-	"
R	350	m
A	-	m
Ts	-	m
Es	3.740	m
Tc	51.299	m
Ls	-	m
Lc	101.874	m
L	101.874	m
e	3.6	%

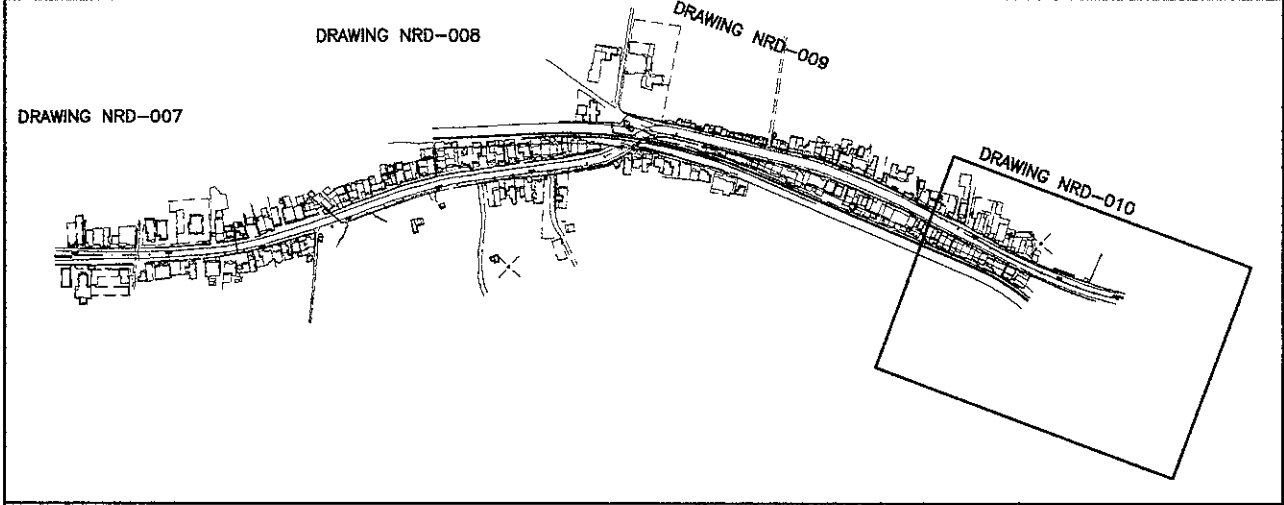
NOTE: CURVE DATA IS REFERRED FROM FLYOVER DESIGN CENTERLINE ALIGNMENT



KEY PLAN



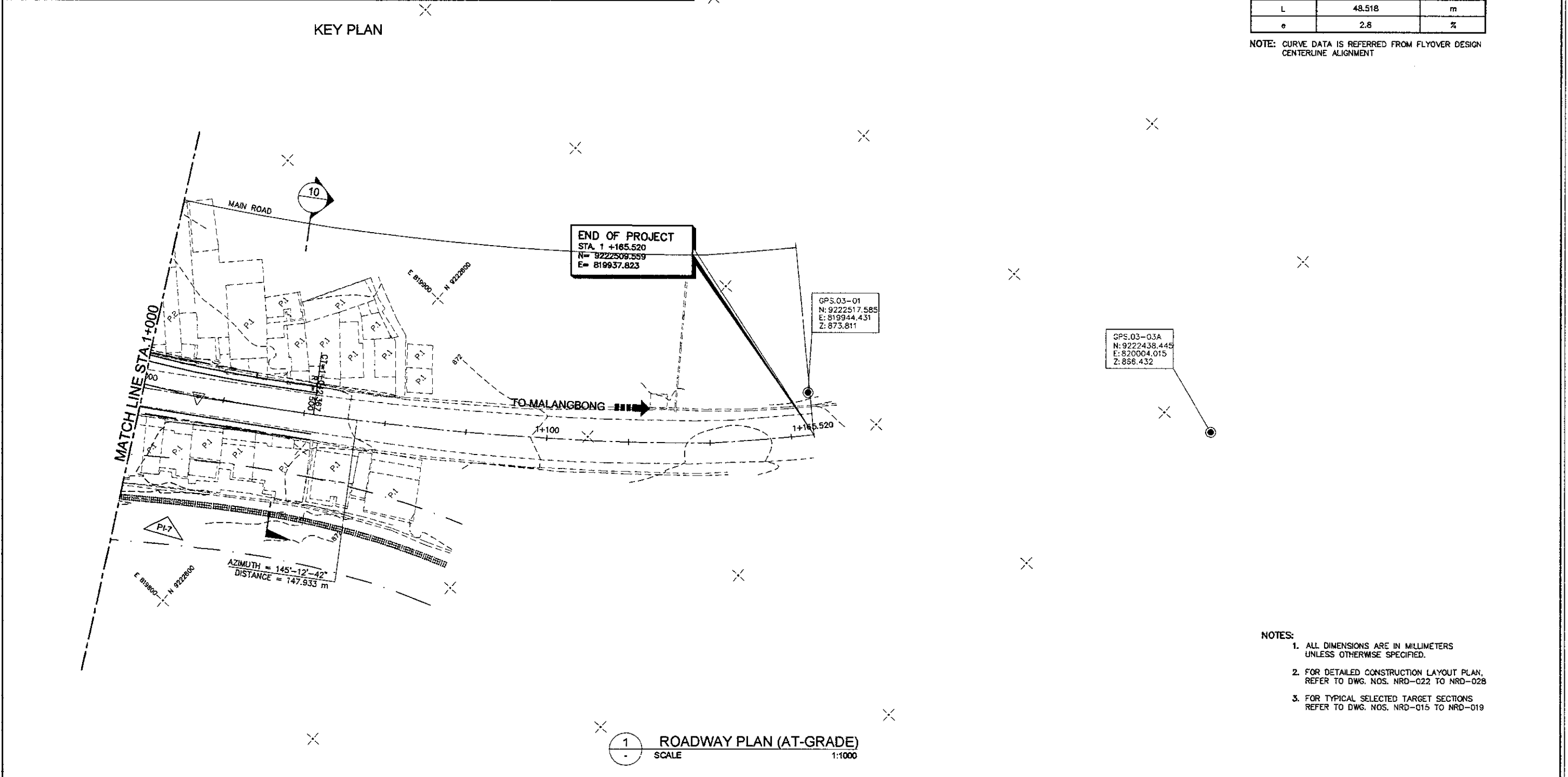
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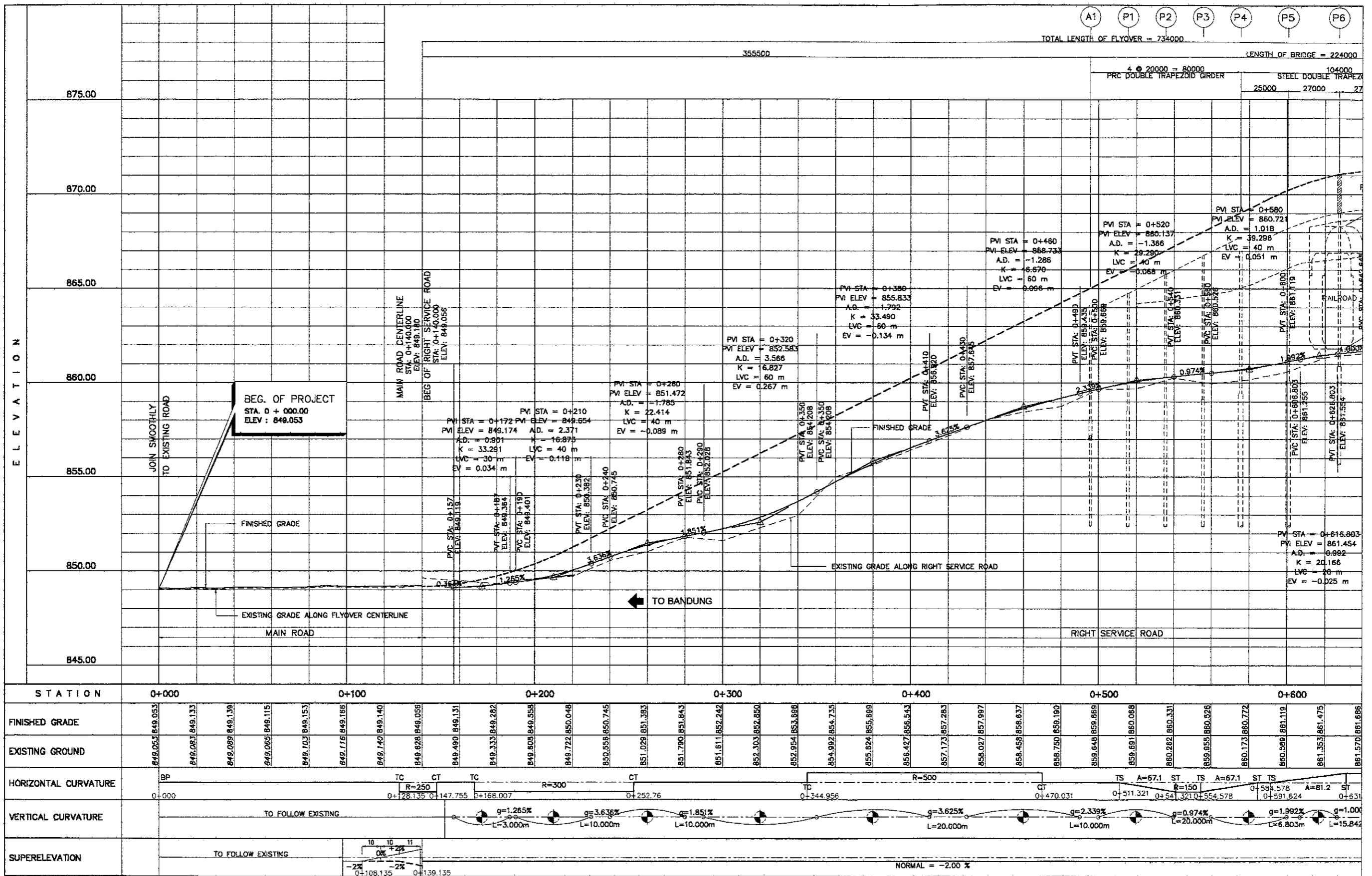
KEY PLAN

DATA	PI NO.- 7	UNITS
PI STA.	STA. 0 + 017.628	
N	9222623.654	m
E	819844.307	m
V	50	km/h
Δ	5-40-28	°
θ_s	-	°
R	500	m
A	-	m
Ts	-	m
Es	0.614	m
Tc	24.779	m
La	-	m
Lc	49.518	m
L	49.518	m
e	2.8	%

NOTE: CURVE DATA IS REFERRED FROM FLYOVER DESIGN CENTERLINE ALIGNMENT

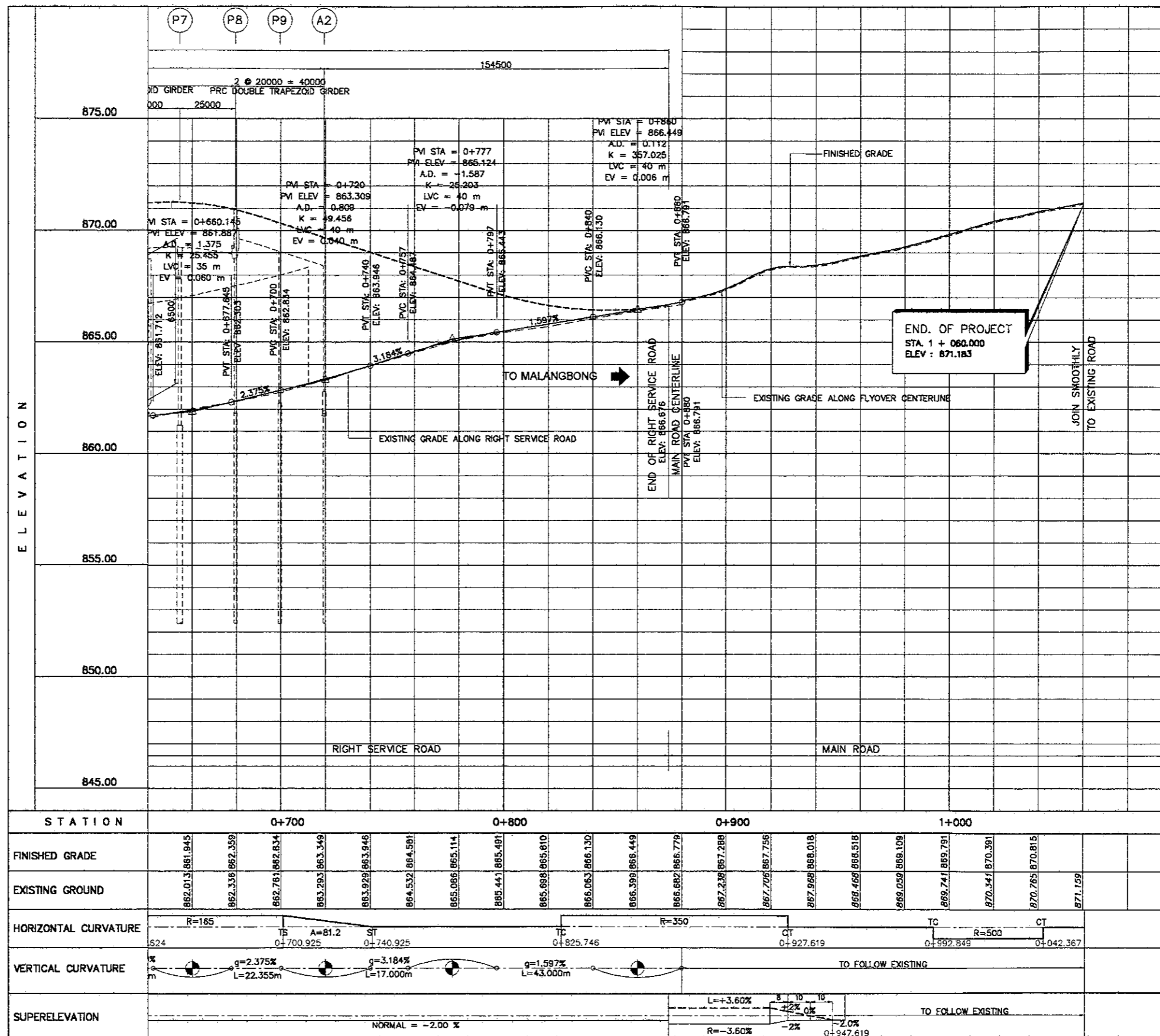


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1 MAIN ROAD & RIGHT SERVICE ROAD PROFILE 1 OF 2
 SCALE H=1:2000 V=1:200

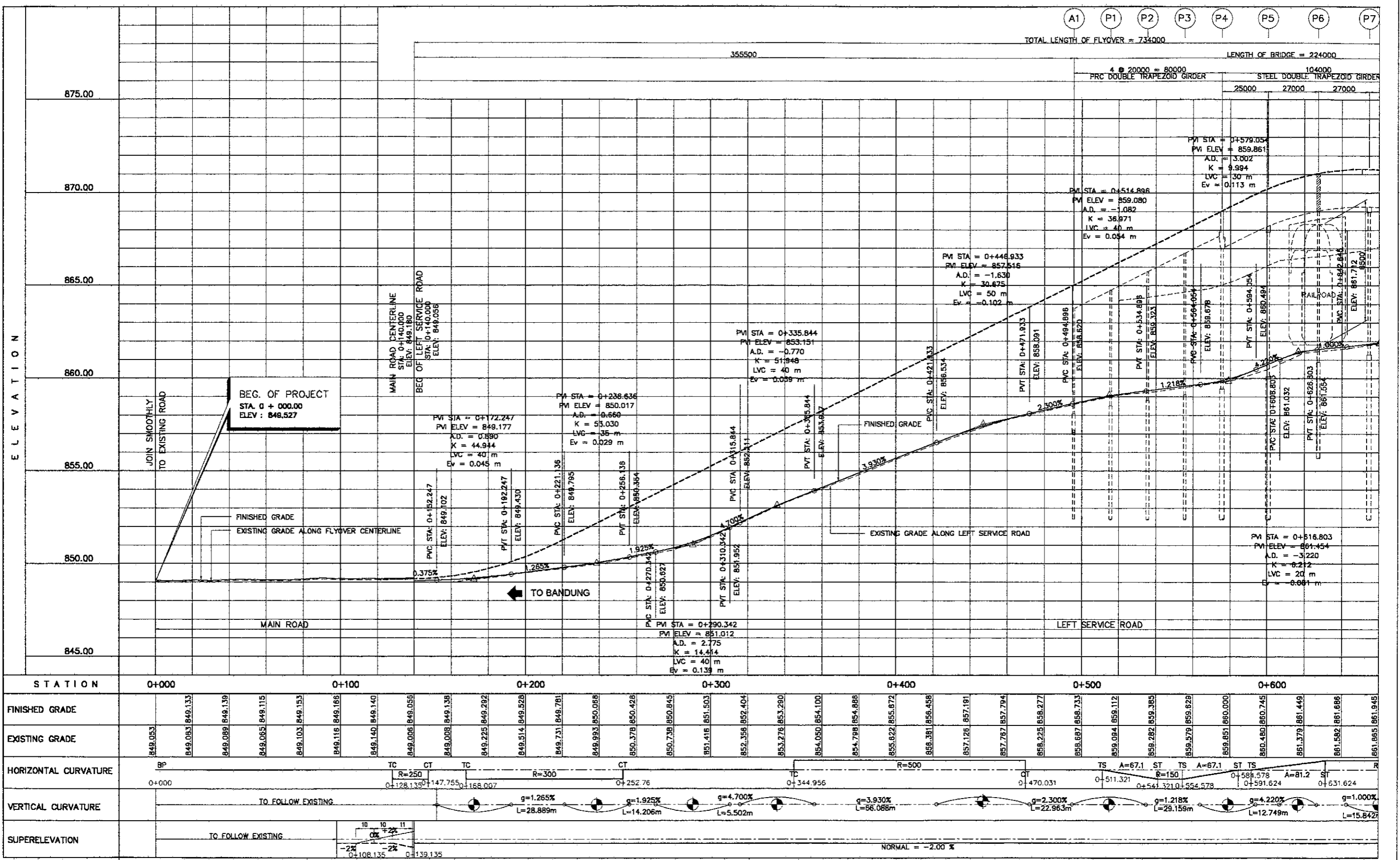
- NOTES:
- EXISTING GRADE ELEVATIONS ALONG MAIN ROAD ARE TAKEN FROM CENTERLINE OF FLYOVER.
 - EXISTING/FINISHED GRADE ELEVATIONS ALONG RIGHT SERVICE ROAD ARE TAKEN FROM INNER EDGE OF NEW ROADWAY.
 - HORIZONTAL CURVATURE DIAGRAM IS REFERRED FROM FLYOVER CENTERLINE ALIGNMENT.
 - SUPERELEVATION AT SERVICE ROAD SHALL BE 2.0% AT NEW PAVEMENT OTHERWISE TO FOLLOW EXISTING CROSS SLOPE.



STATION	0+700				0+800				0+900				1+000			
FINISHED GRADE	862.013	862.359	862.761	863.293	863.929	864.581	865.089	865.481	865.898	866.130	866.398	866.791	867.239	867.756	868.018	868.468
EXISTING GROUND	862.013	862.359	862.761	863.293	863.929	864.581	865.089	865.481	865.898	866.130	866.398	866.791	867.239	867.756	868.018	868.468
HORIZONTAL CURVATURE	R=165				R=350				R=500							
VERTICAL CURVATURE	g=2.375%, L=22.355m				g=3.184%, L=17.000m				g=1.597%, L=43.000m							
SUPERELEVATION	NORMAL = -2.00 %				L=+3.60%, R=-3.60%				TO FOLLOW EXISTING							

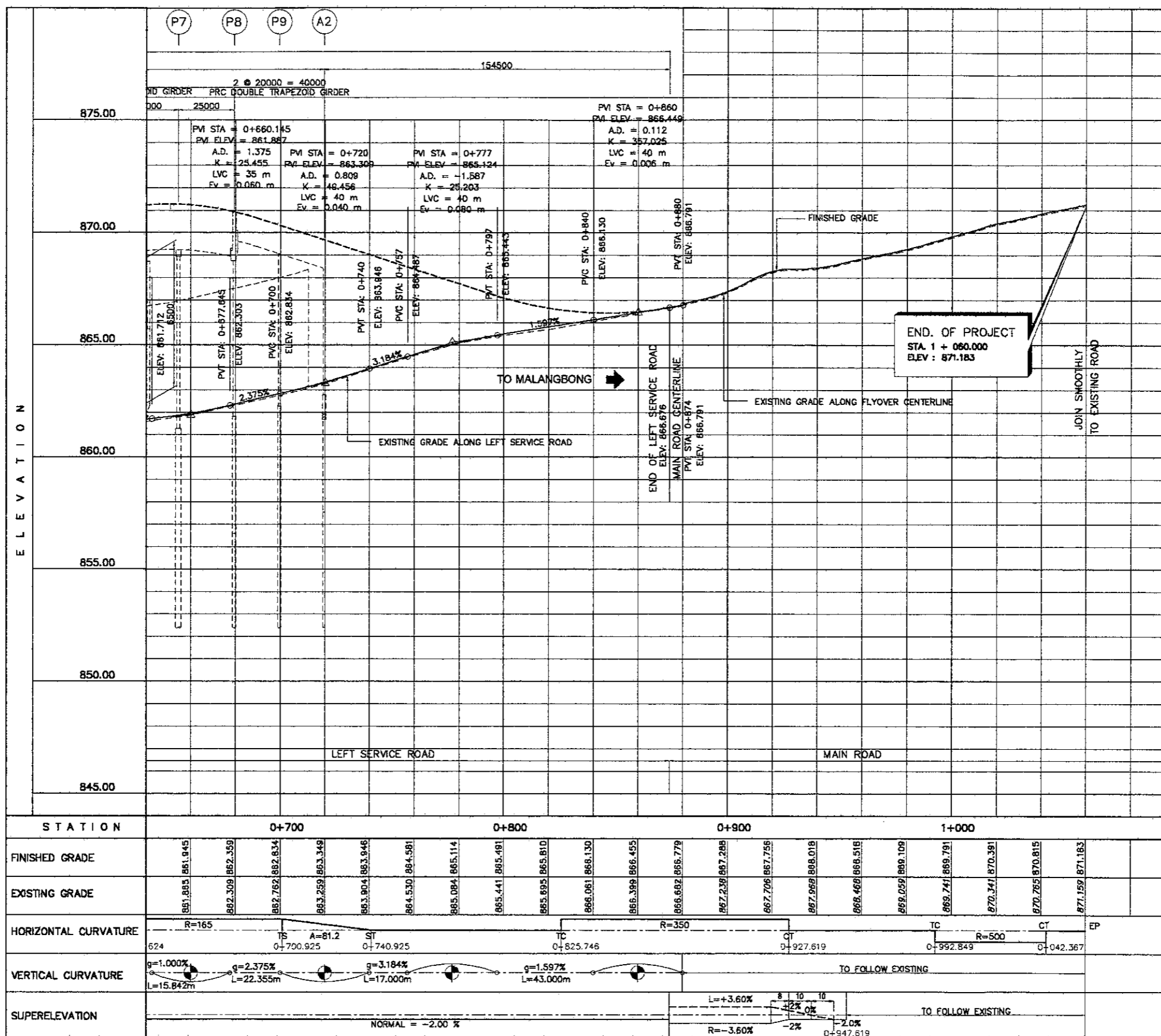
2 MAIN ROAD & RIGHT SERVICE ROAD PROFILE (2 OF 2)
 SCALE H = 1: 2000 V = 1: 200

- NOTES:
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 - EXISTING/FINISHED GRADE ELEVATIONS ALONG RIGHT SERVICE ROAD ARE TAKEN FROM INNER EDGE OF NEW ROADWAY.
 - HORIZONTAL CURVATURE DIAGRAM IS REFERRED FROM FLYOVER CENTERLINE ALIGNMENT.
 - SUPERELEVATION AT SERVICE ROAD SHALL BE 2.0% AT NEW PAVEMENT OTHERWISE TO FOLLOW EXISTING CROSS SLOPE.



1 MAIN ROAD & LEFT SERVICE ROAD PROFILE (1 OF 2)
 SCALE H=1:2000 V=1:200

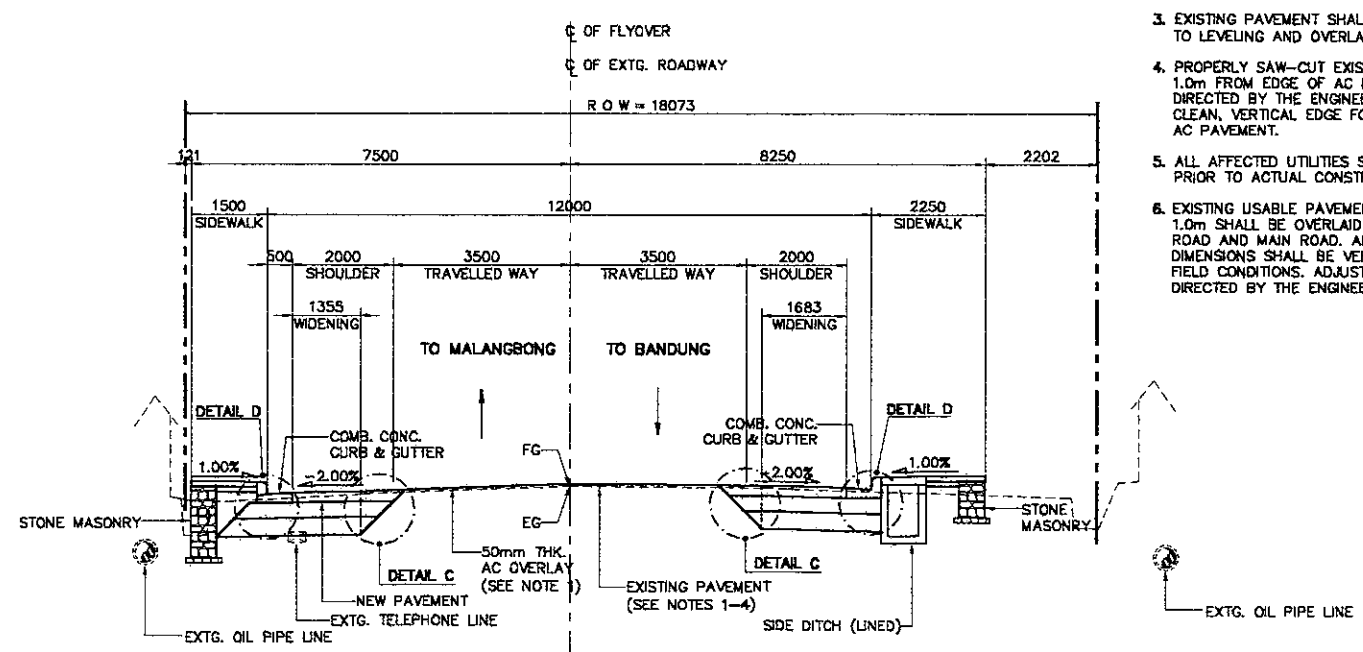
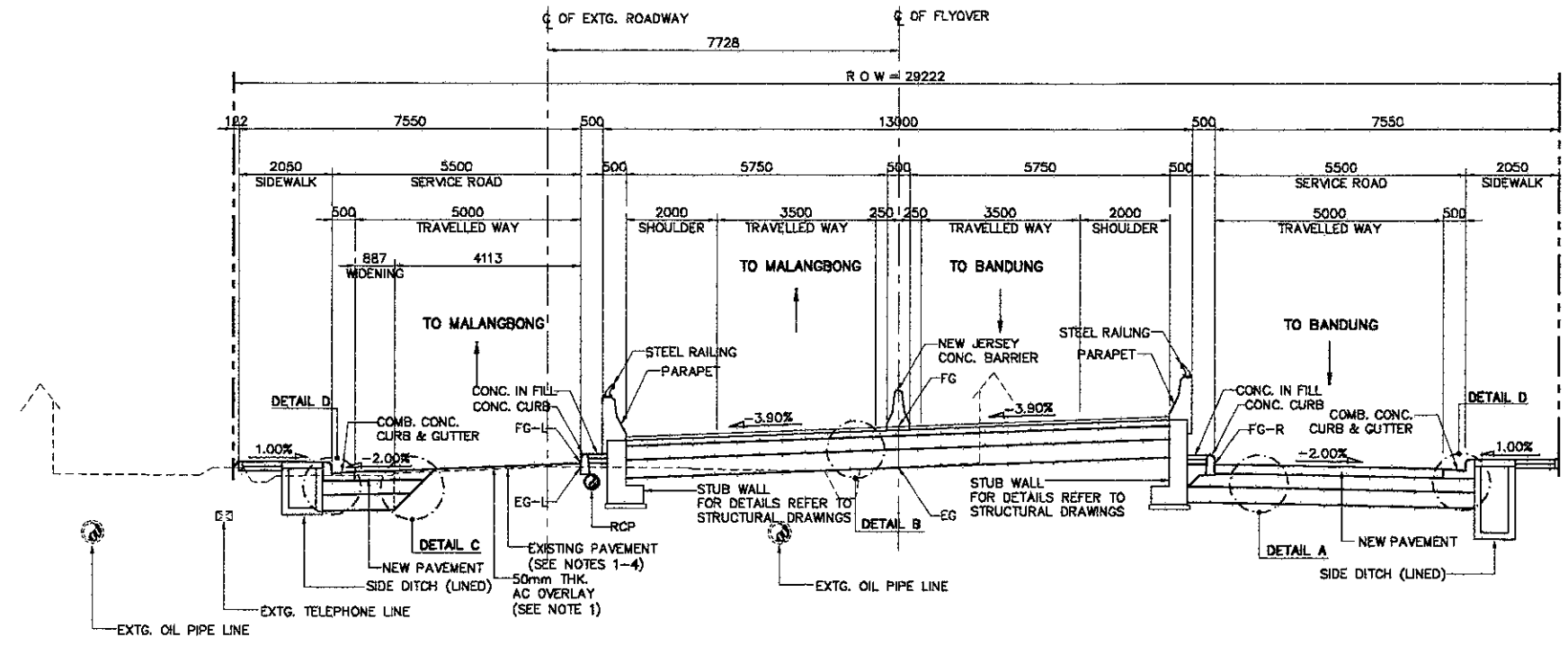
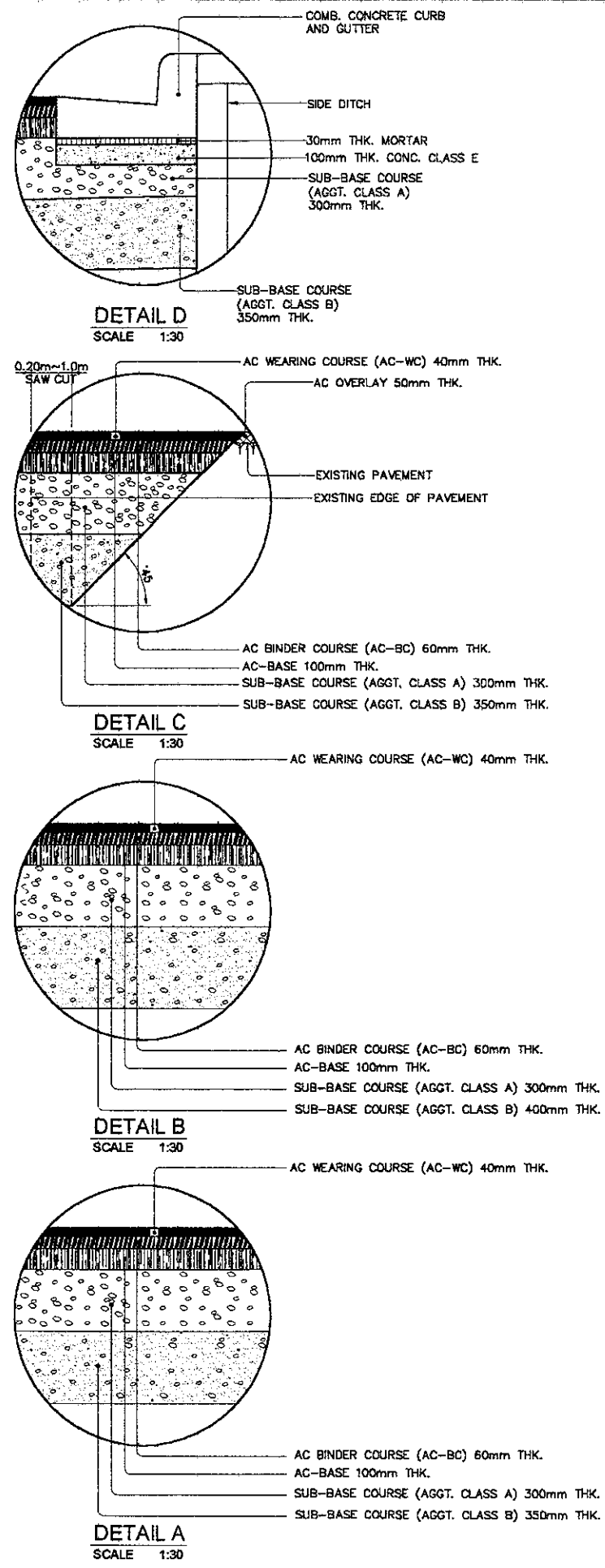
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 - EXISTING/FINISHED GRADE ELEVATIONS ALONG RIGHT SERVICE ROAD ARE TAKEN FROM INNER EDGE OF NEW ROADWAY.
 - HORIZONTAL CURVATURE DIAGRAM IS REFERRED FROM FLYOVER CENTERLINE ALIGNMENT.
 - SUPERELEVATION AT SERVICE ROAD SHALL BE 2.0% AT NEW PAVEMENT OTHERWISE TO FOLLOW EXISTING CROSS SLOPE.



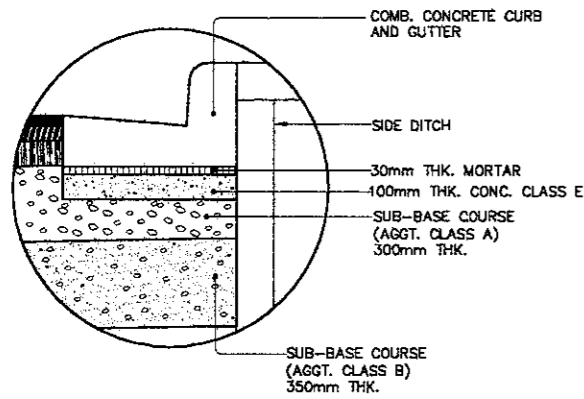
STATION	0+700				0+800				0+900				1+000			
FINISHED GRADE	861.945	862.399	862.834	863.349	863.946	864.581	865.114	865.481	865.810	866.130	866.455	866.779	867.288	867.756	868.018	868.516
EXISTING GRADE	861.883	862.309	862.762	863.259	863.946	864.530	865.084	865.441	865.695	866.061	866.399	866.692	867.239	867.706	868.059	868.516
HORIZONTAL CURVATURE	R=165 624				A=81.2 0+700.925				R=350 0+825.746				R=500 0+992.849			
VERTICAL CURVATURE	g=1.000% L=15.842m		g=2.375% L=22.355m		g=3.184% L=17.000m		g=1.597% L=43.000m		TO FOLLOW EXISTING							
SUPERELEVATION	NORMAL = -2.00 %								L=+3.60% R=-3.60% -2% 0+947.819							

- NOTES:
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 - EXISTING/FINISHED GRADE ELEVATIONS ALONG RIGHT SERVICE ROAD ARE TAKEN FROM INNER EDGE OF NEW ROADWAY.
 - HORIZONTAL CURVATURE DIAGRAM IS REFERRED FROM FLYOVER CENTERLINE ALIGNMENT.
 - SUPERELEVATION AT SERVICE ROAD SHALL BE 2.0% AT NEW PAVEMENT OTHERWISE TO FOLLOW EXISTING CROSS SLOPE.

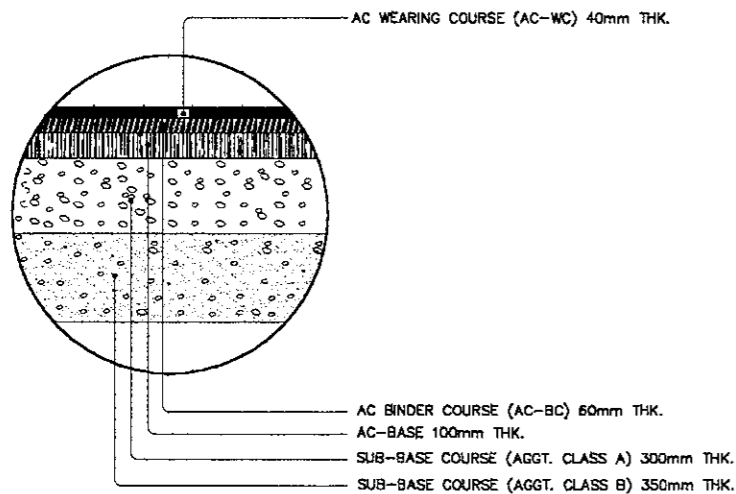
1 MAIN ROAD & LEFT SERVICE ROAD PROFILE (2 OF 2)
 SCALE H = 1: 2000 V = 1: 200



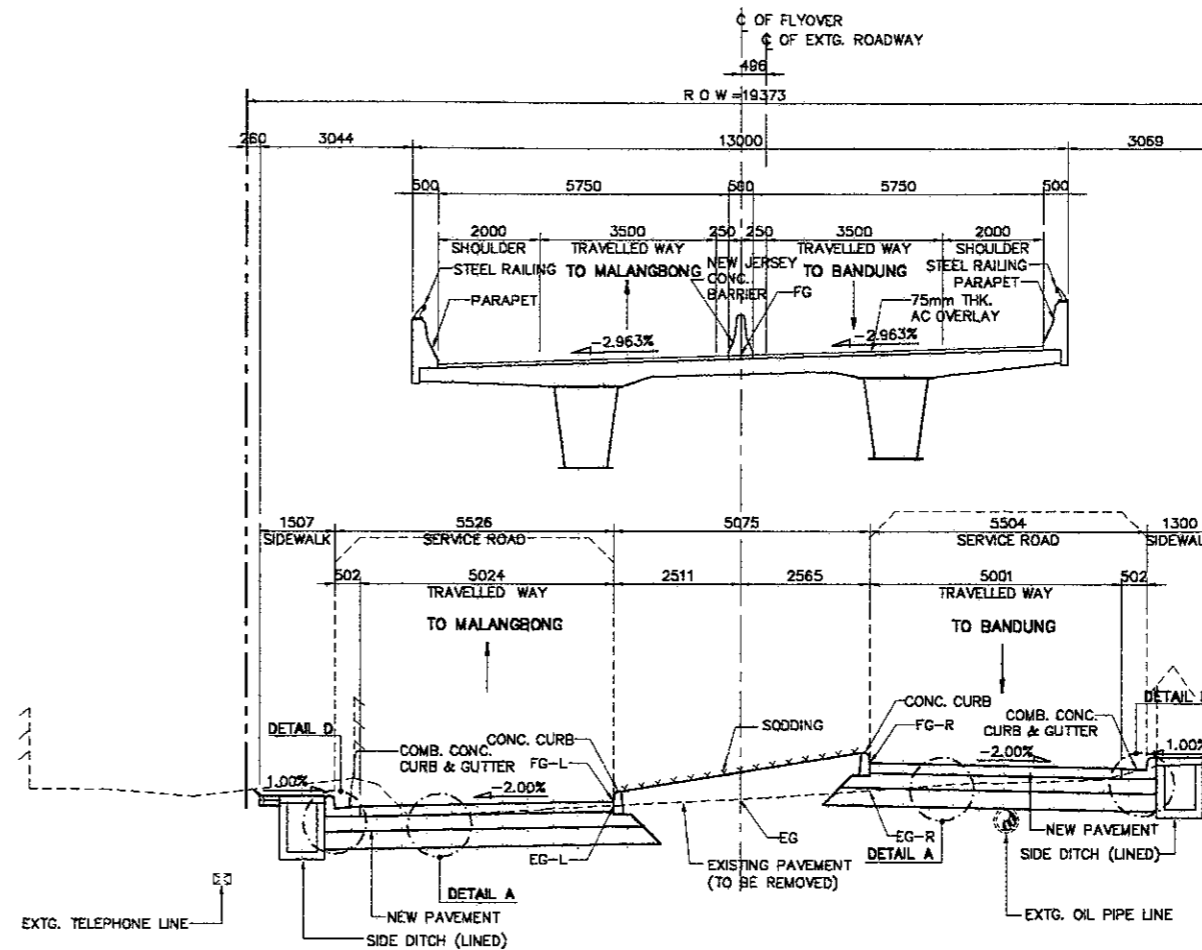
- NOTES:**
1. ALL SURFICIAL DAMAGE/DISTRESS OF EXISTING PAVEMENT TO BE REPAIRED FIRST PRIOR TO OVERLAYING.
 2. PAVEMENT GRADE LEVELING IS REQUIRED AT EXISTING PAVEMENT FOR UNIFORM OVERLAY THICKNESS AND CROSS SLOPE ADJUSTMENTS.
 3. EXISTING PAVEMENT SHALL BE SCARIFIED PRIOR TO LEVELING AND OVERLAYING.
 4. PROPERLY SAW-CUT EXISTING ROAD 0.20m TO 1.0m FROM EDGE OF AC PAVEMENT OR AS DIRECTED BY THE ENGINEER TO PROVIDE CLEAN, VERTICAL EDGE FOR JOINING TO NEW AC PAVEMENT.
 5. ALL AFFECTED UTILITIES SHALL BE RELOCATED PRIOR TO ACTUAL CONSTRUCTION.
 6. EXISTING USABLE PAVEMENT GREATER THAN 1.0m SHALL BE OVERLAID AS PART OF SERVICE ROAD AND MAIN ROAD. ALL ELEVATIONS AND DIMENSIONS SHALL BE VERIFIED TO SUIT ACTUAL FIELD CONDITIONS. ADJUSTMENTS SHALL BE AS DIRECTED BY THE ENGINEER.



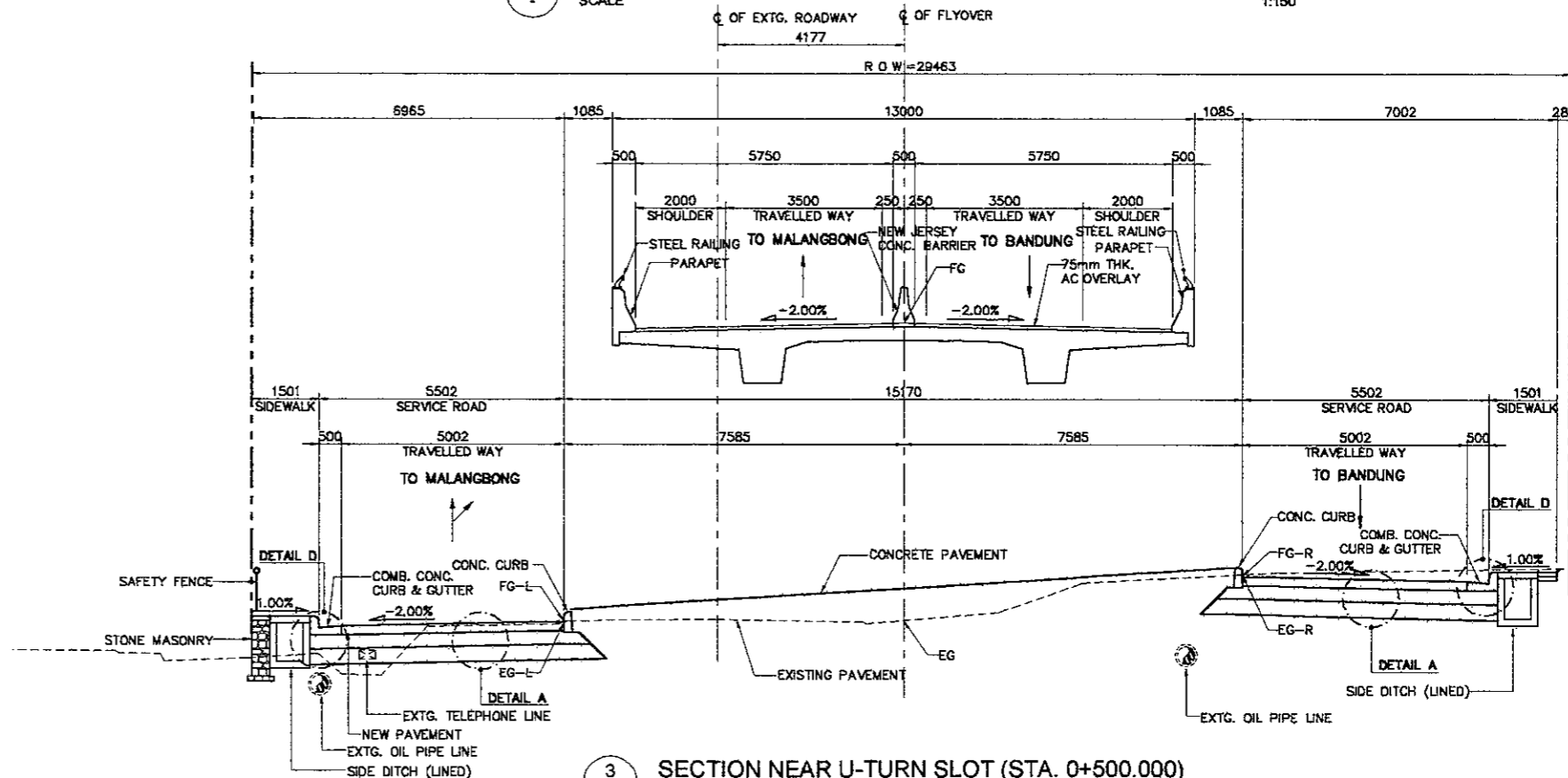
DETAIL D
 SCALE 1:30



DETAIL A
 SCALE 1:30



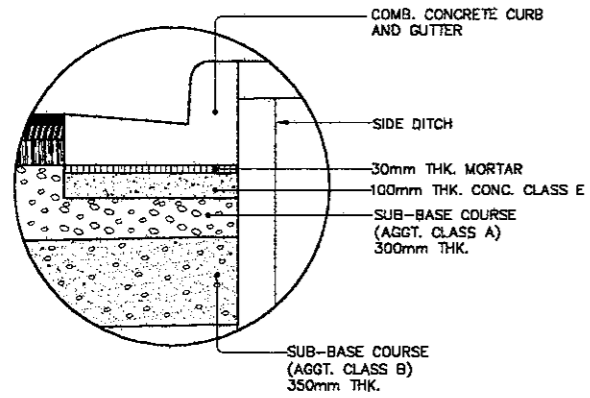
4 SECTION OF SERVICE ROAD UNDER VIADUCT (STA. 0+580.000)
 SCALE 1:150



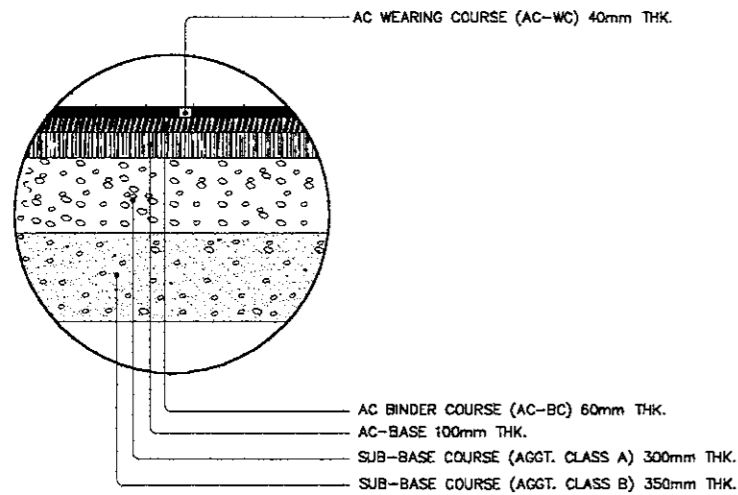
3 SECTION NEAR U-TURN SLOT (STA. 0+500.000)
 SCALE 1:150

- NOTES:**
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 2. PAVEMENT GRADE LEVELING IS REQUIRED AT EXISTING PAVEMENT FOR UNIFORM OVERLAY THICKNESS AND CROSS SLOPE ADJUSTMENTS.
 3. EXISTING PAVEMENT SHALL BE SCARIFIED PRIOR TO LEVELING AND OVERLAYING.
 4. PROPERLY SAW-CUT EXISTING ROAD 0.20m TO 1.0m FROM EDGE OF AC PAVEMENT OR AS DIRECTED BY THE ENGINEER TO PROVIDE CLEAN, VERTICAL EDGE FOR JOINING TO NEW AC PAVEMENT.
 5. ALL AFFECTED UTILITIES SHALL BE RELOCATED PRIOR TO ACTUAL CONSTRUCTION.
 6. EXISTING USABLE PAVEMENT GREATER THAN 1.0m SHALL BE OVERLAID AS PART OF SERVICE ROAD AND MAIN ROAD. ALL ELEVATIONS AND DIMENSIONS SHALL BE VERIFIED TO SUIT ACTUAL FIELD CONDITIONS. ADJUSTMENTS SHALL BE AS DIRECTED BY THE ENGINEER.

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	

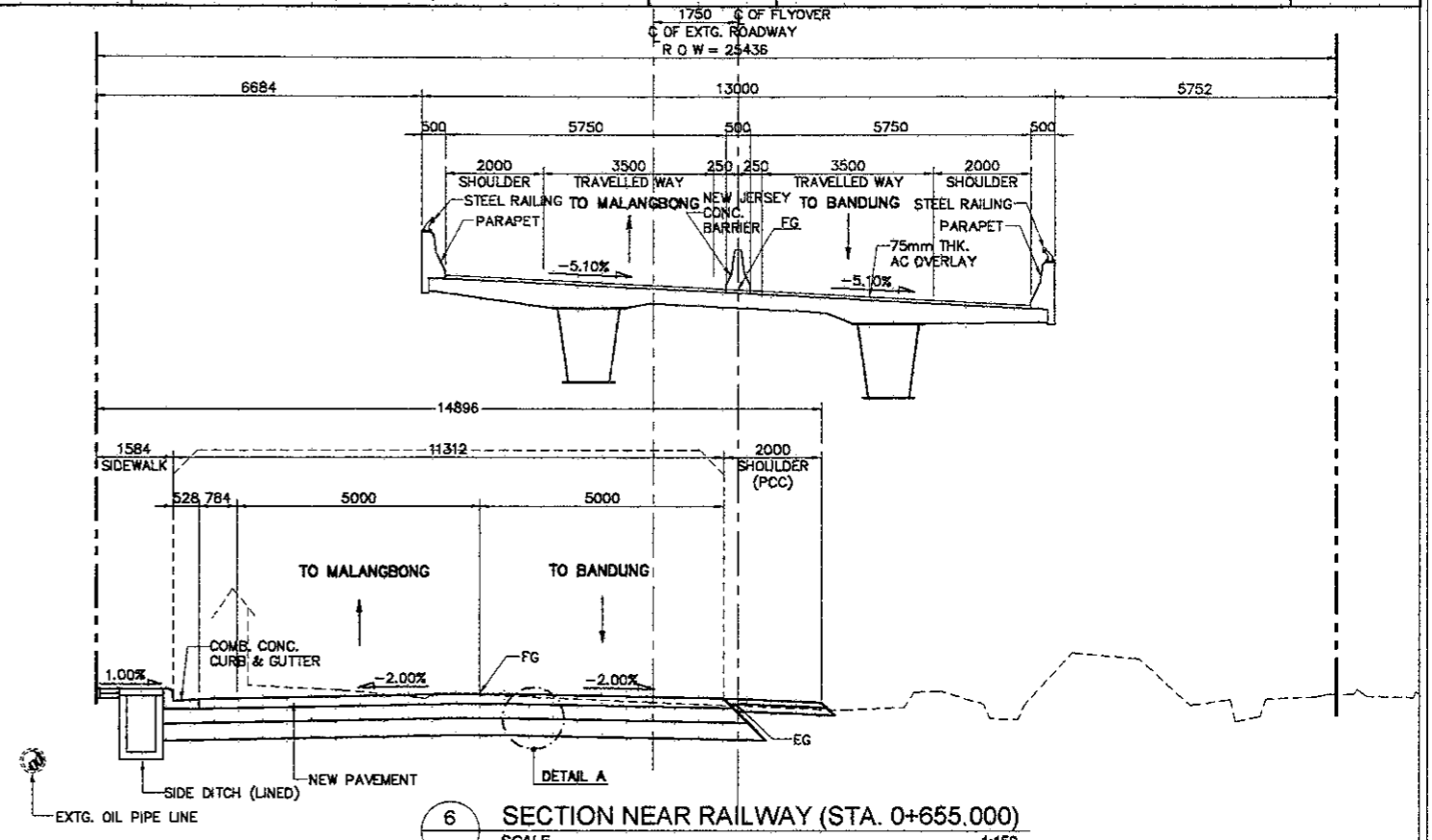


DETAIL D
 SCALE 1:30

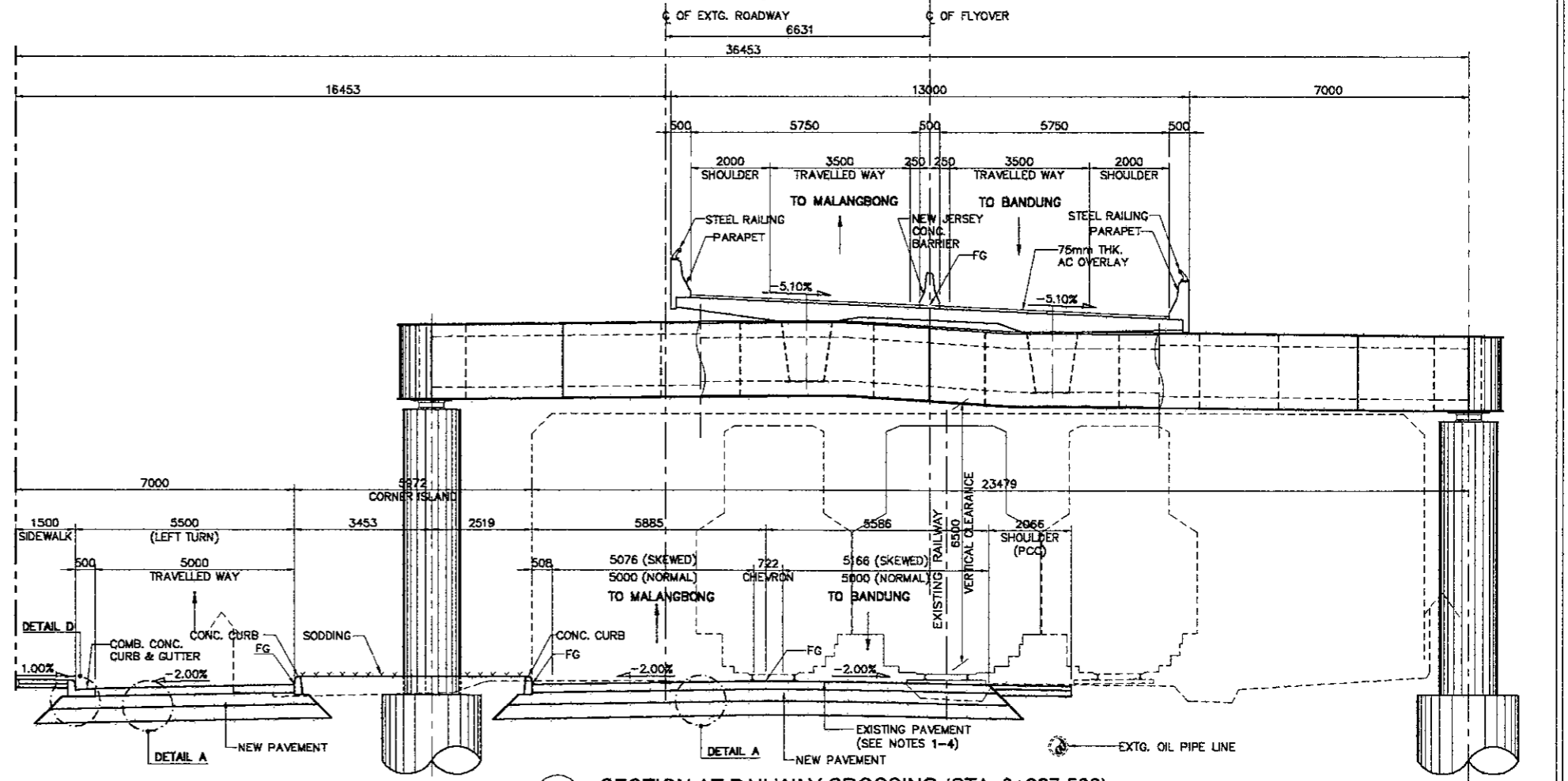


DETAIL A
 SCALE 1:30

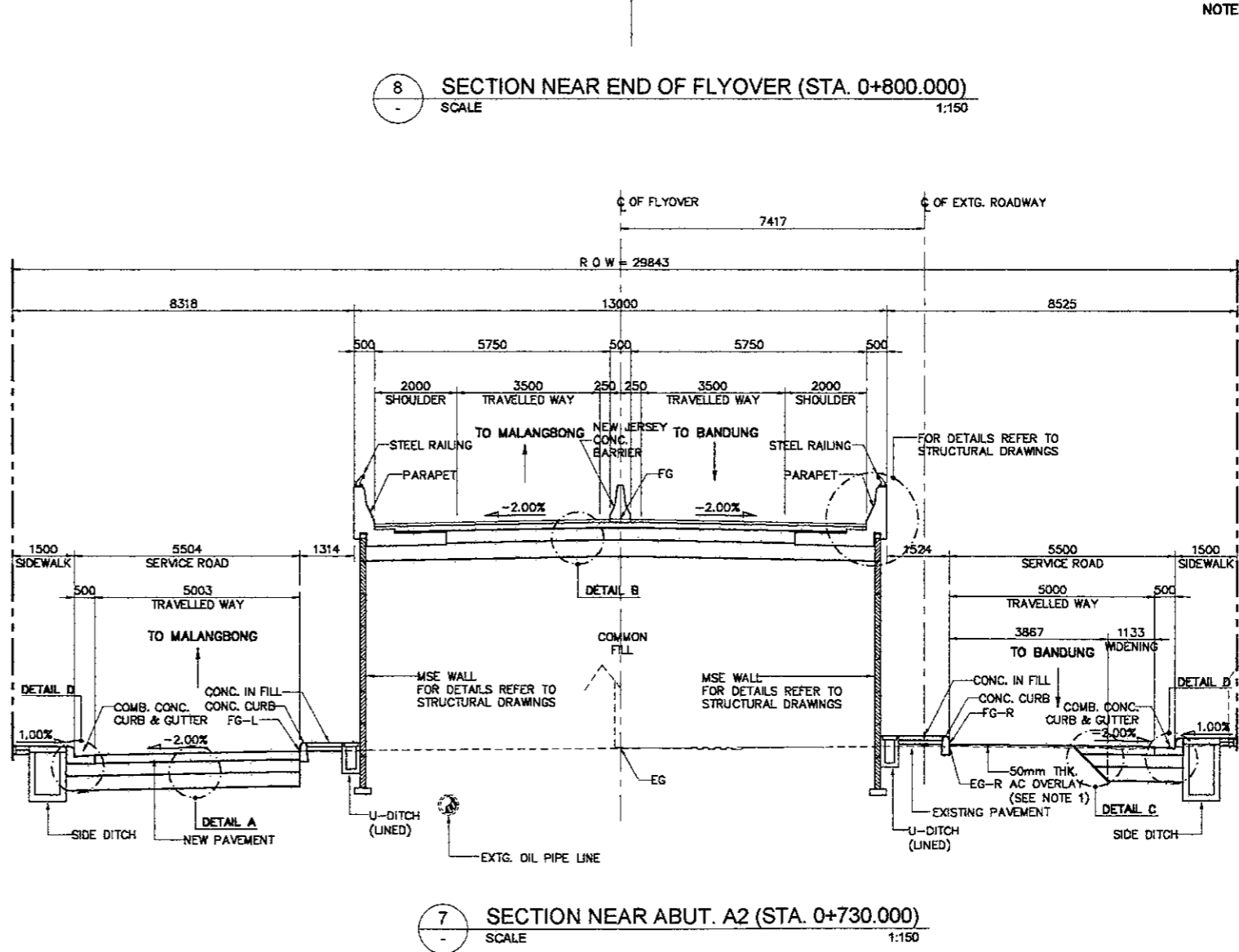
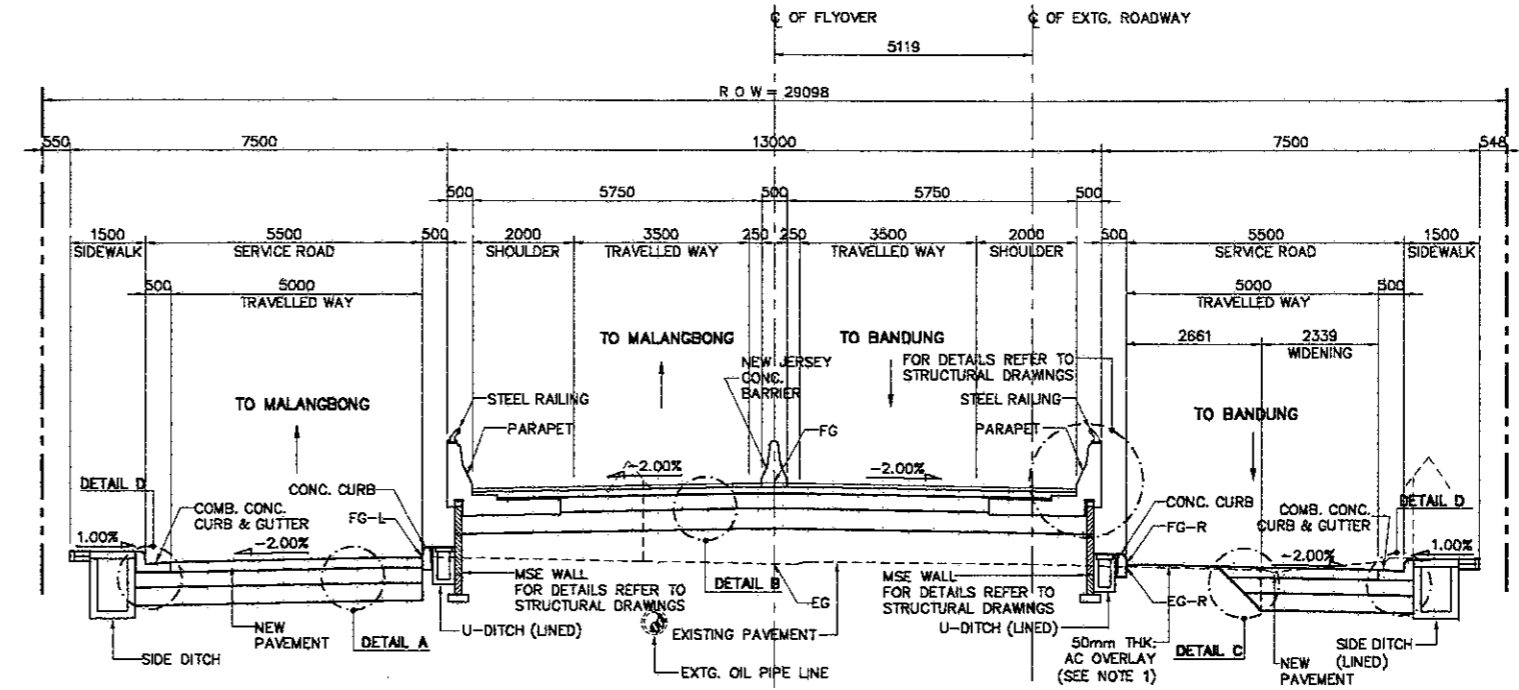
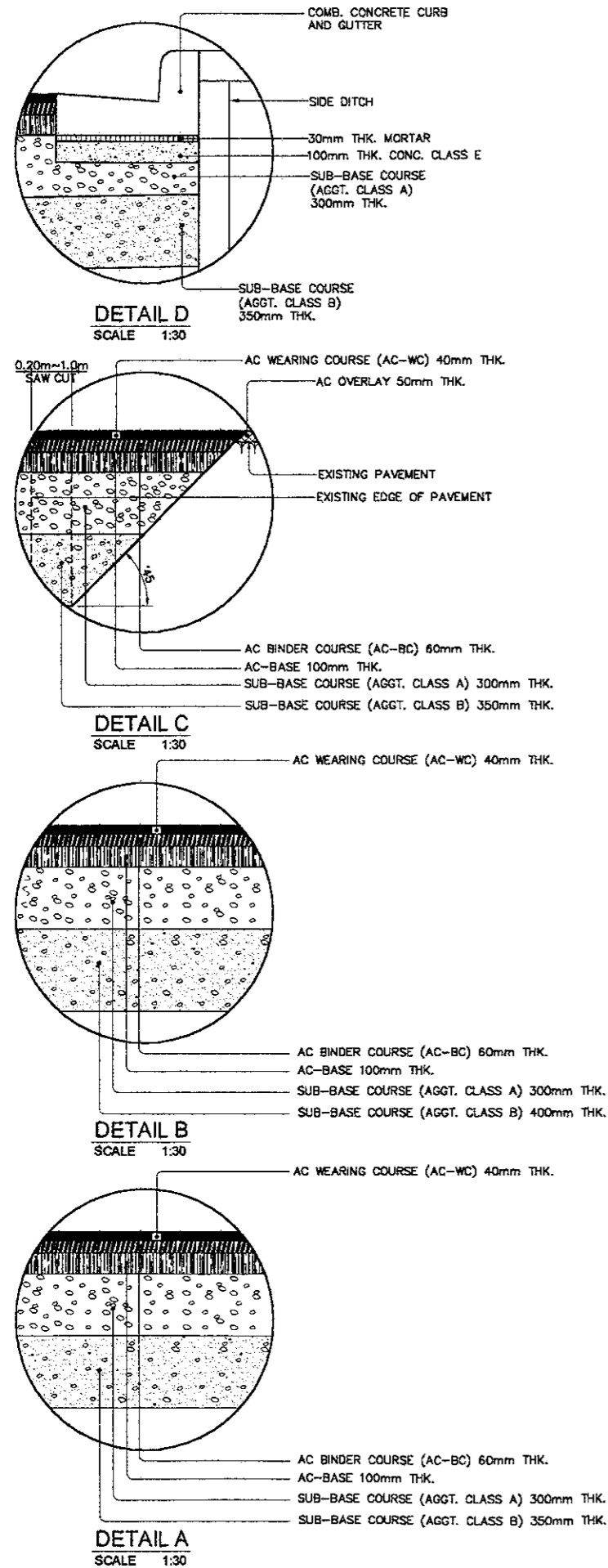
- NOTES:
1. ALL SURFICIAL DAMAGE/DISTRESS OF EXISTING PAVEMENT TO BE REPAIRED FIRST PRIOR TO OVERLAYING.
 2. PAVEMENT GRADE LEVELING IS REQUIRED AT EXISTING PAVEMENT FOR UNIFORM OVERLAY THICKNESS AND CROSS SLOPE ADJUSTMENTS.
 3. EXISTING PAVEMENT SHALL BE SCARIFIED PRIOR TO LEVELING AND OVERLAYING.
 4. PROPERLY SAW-CUT EXISTING ROAD 0.20m TO 1.0m FROM EDGE OF AC PAVEMENT OR AS DIRECTED BY THE ENGINEER TO PROVIDE CLEAN, VERTICAL EDGE FOR JOINING TO NEW AC PAVEMENT.
 5. ALL AFFECTED UTILITIES SHALL BE RELOCATED PRIOR TO ACTUAL CONSTRUCTION.
 6. EXISTING USABLE PAVEMENT GREATER THAN 1.0m SHALL BE OVERLAID AS PART OF SERVICE ROAD AND MAIN ROAD. ALL ELEVATIONS AND DIMENSIONS SHALL BE VERIFIED TO SUIT ACTUAL FIELD CONDITIONS. ADJUSTMENTS SHALL BE AS DIRECTED BY THE ENGINEER.



6 SECTION NEAR RAILWAY (STA. 0+655.000)
 SCALE 1:150

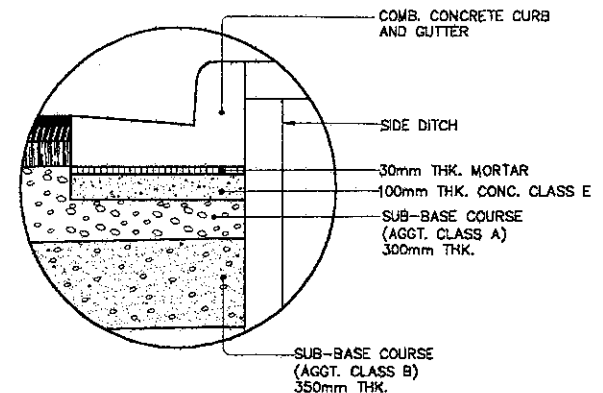


5 SECTION AT RAILWAY CROSSING (STA. 0+627.500)
 SCALE 1:150

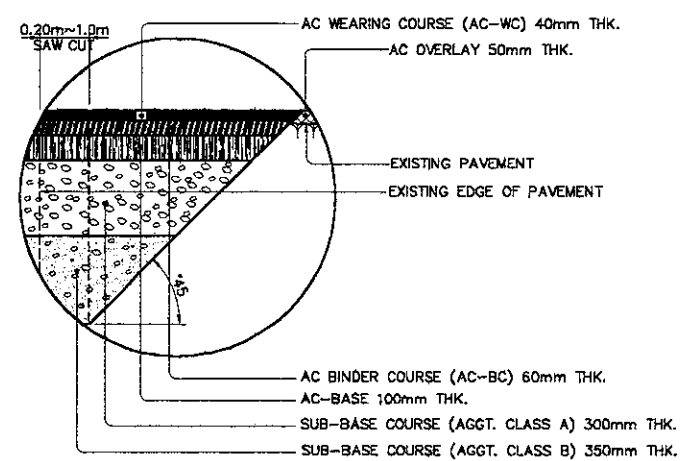


- NOTES:**
1. ALL SURFICIAL DAMAGE/DISTRESS OF EXISTING PAVEMENT TO BE REPAIRED FIRST PRIOR TO OVERLAYING.
 2. PAVEMENT GRADE LEVELING IS REQUIRED AT EXISTING PAVEMENT FOR UNIFORM OVERLAY THICKNESS AND CROSS SLOPE ADJUSTMENTS.
 3. EXISTING PAVEMENT SHALL BE SCARIFIED PRIOR TO LEVELING AND OVERLAYING.
 4. PROPERLY SAW-CUT EXISTING ROAD 0.20m TO 1.0m FROM EDGE OF AC PAVEMENT OR AS DIRECTED BY THE ENGINEER TO PROVIDE CLEAN, VERTICAL EDGE FOR JOINING TO NEW AC PAVEMENT.
 5. ALL AFFECTED UTILITIES SHALL BE RELOCATED PRIOR TO ACTUAL CONSTRUCTION.
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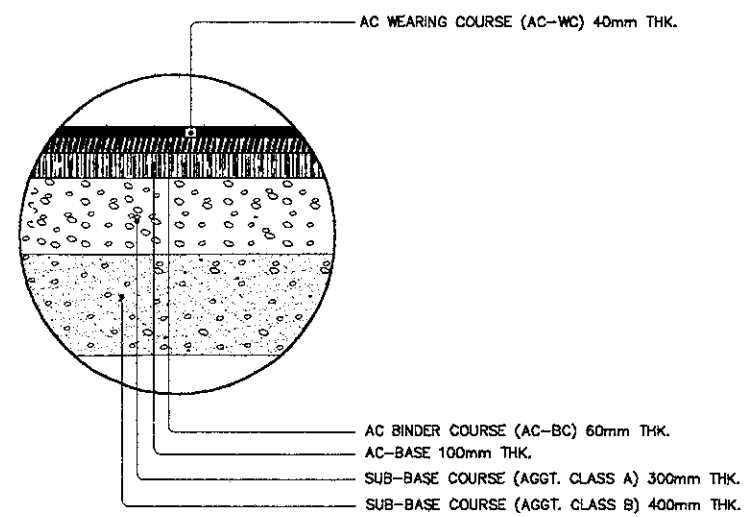
DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



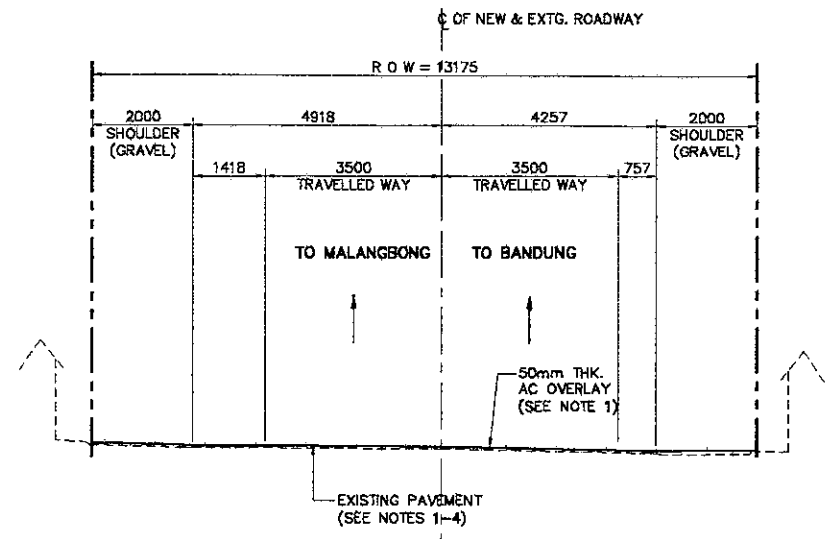
DETAIL D
 SCALE 1:30



DETAIL C
 SCALE 1:30

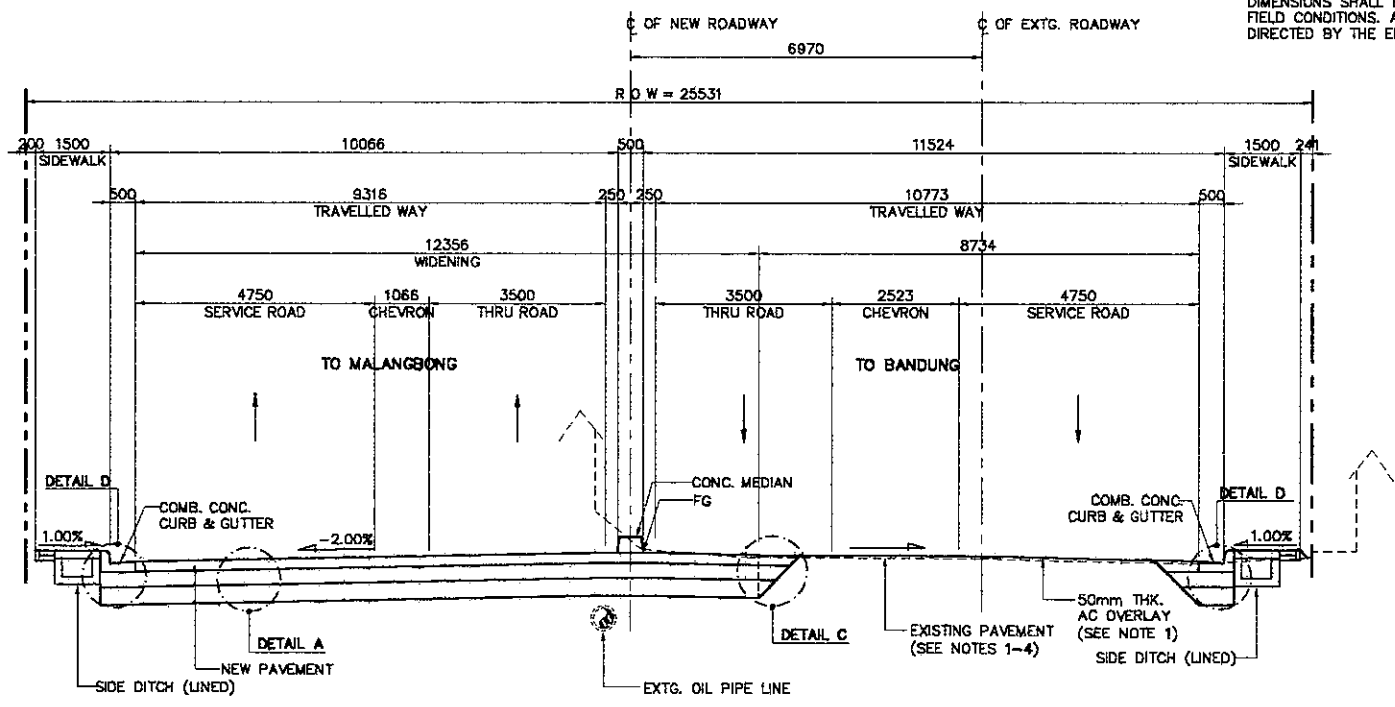


DETAIL A
 SCALE 1:30

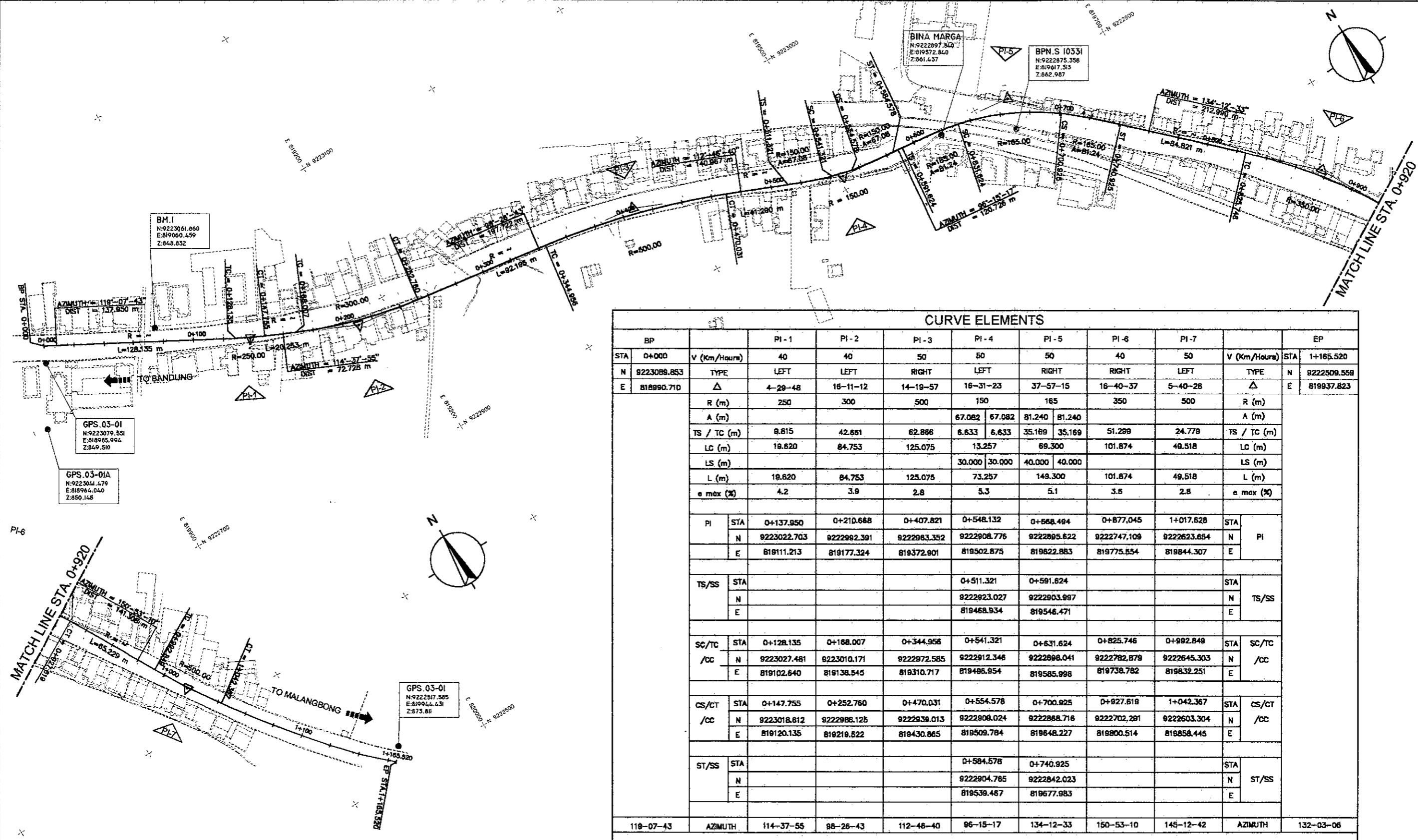


10 SECTION NEAR END OF PROJECT (STA. 1+040.000)
 SCALE 1:150

- NOTES:**
1. ALL SURFICIAL DAMAGE/DISTRESS OF EXISTING PAVEMENT TO BE REPAIRED FIRST PRIOR TO OVERLAYING.
 2. PAVEMENT GRADE LEVELING IS REQUIRED AT EXISTING PAVEMENT FOR UNIFORM OVERLAY THICKNESS AND CROSS SLOPE ADJUSTMENTS.
 3. EXISTING PAVEMENT SHALL BE SCARIFIED PRIOR TO LEVELING AND OVERLAYING.
 4. PROPERLY SAW-CUT EXISTING ROAD 0.20m TO 1.0m FROM EDGE OF AC PAVEMENT OR AS DIRECTED BY THE ENGINEER TO PROVIDE CLEAN, VERTICAL EDGE FOR JOINING TO NEW AC PAVEMENT.
 5. ALL AFFECTED UTILITIES SHALL BE RELOCATED PRIOR TO ACTUAL CONSTRUCTION.
 6. EXISTING USABLE PAVEMENT GREATER THAN 1.0m SHALL BE OVERLAID AS PART OF SERVICE ROAD AND MAIN ROAD. ALL ELEVATIONS AND DIMENSIONS SHALL BE VERIFIED TO SUIT ACTUAL FIELD CONDITIONS. ADJUSTMENTS SHALL BE AS DIRECTED BY THE ENGINEER.



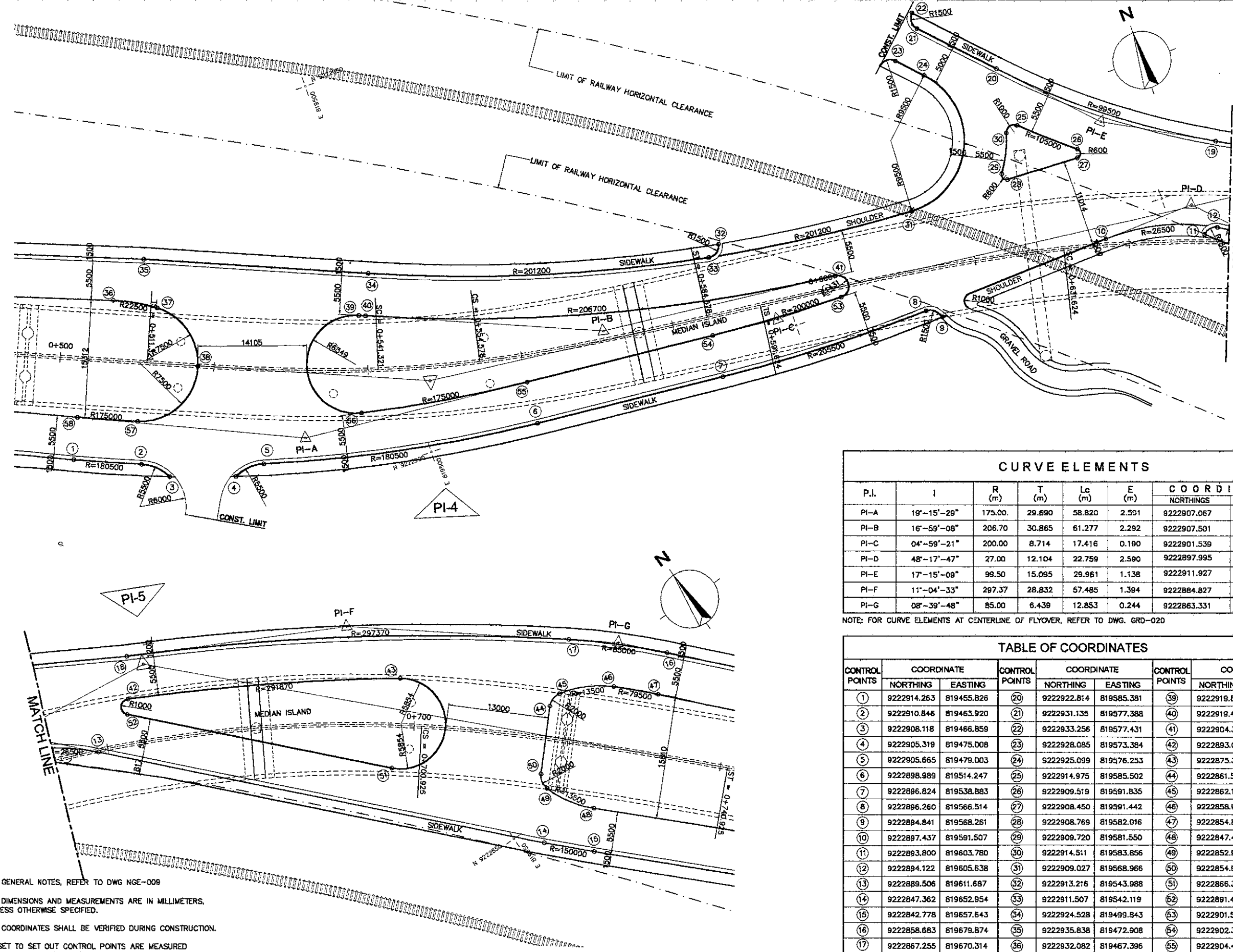
9 SECTION AT SERVICE ROAD WIDENING (STA. 0+920.000)
 SCALE 1:150



CURVE ELEMENTS												
BP		PI-1	PI-2	PI-3	PI-4	PI-5	PI-6	PI-7		EP		
STA	0+000	V (Km/Hours)	40	40	50	50	50	40	50	V (Km/Hours)	STA	1+165.520
N	9223089.853	TYPE	LEFT	LEFT	RIGHT	LEFT	RIGHT	RIGHT	LEFT	TYPE	N	9222509.558
E	818990.710	Δ	4-29-48	18-11-12	14-19-57	16-31-23	37-57-15	16-40-37	5-40-28	Δ	E	819937.823
		R (m)	250	300	500	150	185	350	500	R (m)		
		A (m)				67.082	67.082	81.240	81.240	A (m)		
		TS / TC (m)	8.815	42.861	62.886	6.633	6.633	35.169	35.169	51.289	24.778	TS / TC (m)
		LC (m)	18.820	84.753	125.075	13.257	69.300	101.874	49.518	101.874	49.518	LC (m)
		LS (m)				30.000	30.000	40.000	40.000			LS (m)
		L (m)	18.820	84.753	125.075	73.257	148.300	101.874	49.518	49.518	L (m)	
		e max (%)	4.2	3.9	2.8	5.3	5.1	3.5	2.8	e max (%)		
		PI	STA	0+137.850	0+210.688	0+407.821	0+548.132	0+668.484	0+877.045	1+017.628	STA	PI
			N	9223022.703	9222982.391	9222963.352	9222908.776	9222895.622	9222747.109	9222623.664	N	
			E	819111.213	819177.324	819372.901	819502.875	819822.883	819775.854	819844.307	E	
		TS/SS	STA			0+511.321	0+591.624			STA	TS/SS	
			N			9222923.027	9222803.987			N		
			E			819468.934	819546.471			E		
		SC/TC	STA	0+128.135	0+168.007	0+344.956	0+541.321	0+631.624	0+825.746	0+992.849	STA	SC/TC
		/CC	N	9223027.481	9223010.171	9222872.585	9222912.348	9222898.041	9222782.878	9222645.303	N	/CC
			E	819102.640	819138.545	819310.717	819486.954	819585.998	819738.782	819832.251	E	
		CS/CT	STA	0+147.755	0+252.780	0+470.031	0+554.578	0+700.925	0+827.618	1+042.367	STA	CS/CT
		/CC	N	9223018.612	9222988.125	9222938.013	9222808.024	9222868.716	9222702.291	9222603.304	N	/CC
			E	819120.135	819218.522	819430.865	819509.784	819648.227	819800.514	818858.445	E	
		ST/SS	STA			0+584.578	0+740.925			STA	ST/SS	
			N			9222804.785	9222842.023			N		
			E			819539.467	819677.983			E		
118-07-43	AZIMUTH	114-37-55	98-26-43	112-46-40	96-15-17	134-12-33	150-53-10	145-12-42		AZIMUTH	132-03-06	

REFERENCE PEGS LAYOUT						
	GPS.03-01	GPS.03-01A	GPS.03-02A	BM.1	BINA MARGA	BPN.S 10331
N	9223079.551	9223041.478	9222849.366	9223061.660	9222897.840	9222875.358
E	818985.894	818964.040	819570.898	819060.458	819572.840	819617.313
Z	849.510	850.148	860.579	848.832	861.437	862.987

1 ALIGNMENT LAYOUT AND CURVE ELEMENTS
 SCALE 1:2500



P.I.	I	R (m)	T (m)	Lc (m)	E (m)	COORDINATES	
						NORTHINGS	EASTINGS
PI-A	19°-15'-29"	175.00	29.690	58.820	2.501	9222907.067	819485.151
PI-B	16°-59'-08"	206.70	30.865	61.277	2.292	9222907.501	819526.196
PI-C	04°-59'-21"	200.00	8.714	17.416	0.190	9222901.539	819548.045
PI-D	48°-17'-47"	27.00	12.104	22.759	2.590	9222897.995	819603.374
PI-E	17°-15'-09"	99.50	15.095	29.961	1.138	9222911.927	819595.837
PI-F	11°-04'-33"	297.37	28.832	57.485	1.394	9222884.827	819647.454
PI-G	08°-39'-48"	85.00	6.439	12.853	0.244	9222863.331	819675.418

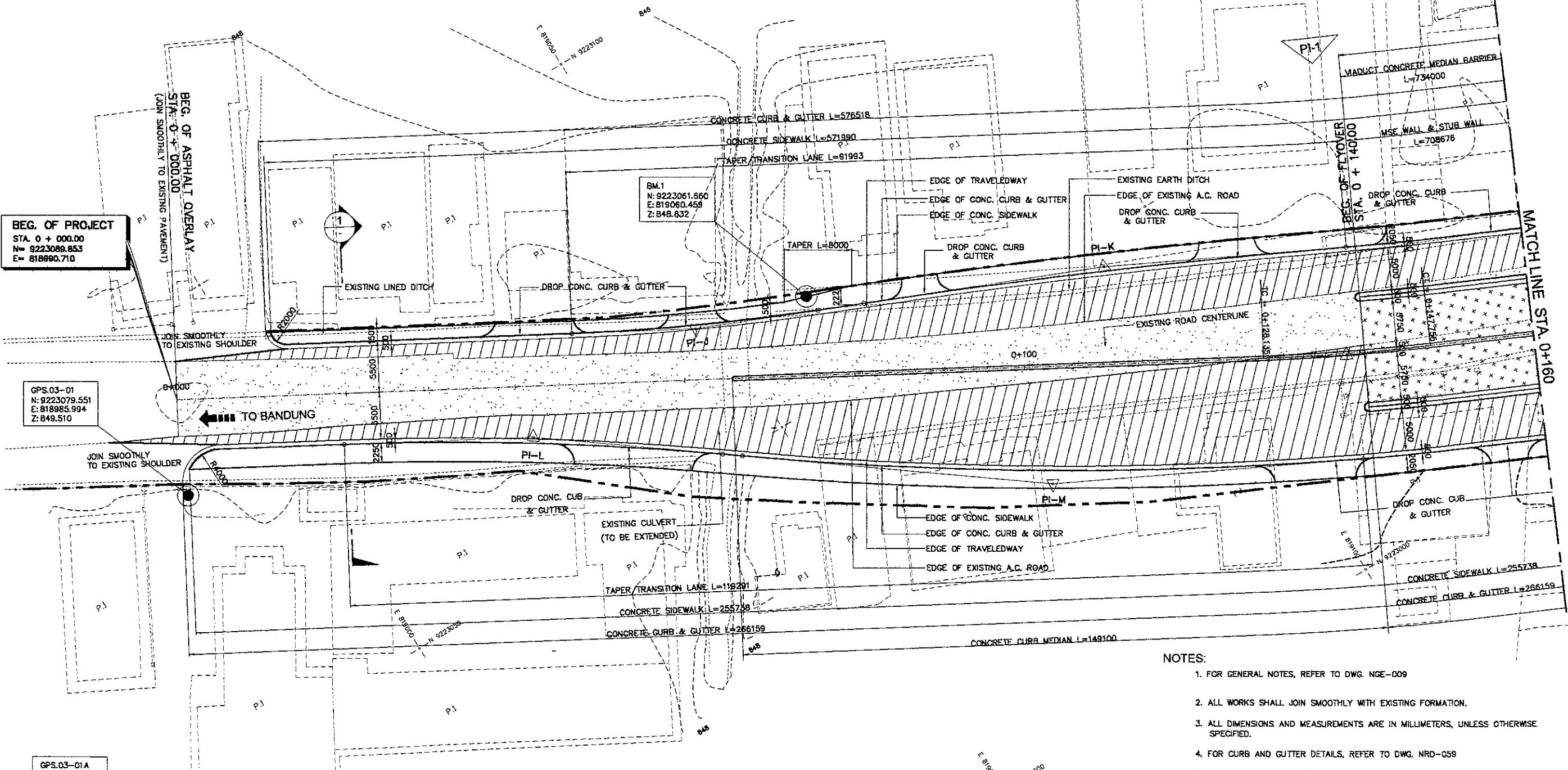
NOTE: FOR CURVE ELEMENTS AT CENTERLINE OF FLYOVER, REFER TO DWG. GRD-020

CONTROL POINTS	COORDINATE		CONTROL POINTS	COORDINATE		CONTROL POINTS	COORDINATE	
	NORTHING	EASTING		NORTHING	EASTING		NORTHING	EASTING
1	9222914.263	819455.826	20	9222922.814	819585.381	39	9222918.804	819496.886
2	9222910.846	819463.920	21	9222931.135	819577.388	40	9222919.457	819497.714
3	9222908.118	819466.859	22	9222933.256	819577.431	41	9222904.389	819556.904
4	9222905.319	819475.008	23	9222928.085	819573.384	42	9222893.021	819618.664
5	9222905.665	819479.003	24	9222925.099	819576.253	43	9222875.380	819649.417
6	9222898.989	819514.247	25	9222914.975	819585.502	44	9222861.513	819663.452
7	9222896.824	819538.883	26	9222909.519	819591.835	45	9222862.145	819665.342
8	9222896.260	819566.514	27	9222908.450	819591.442	46	9222858.943	819671.709
9	9222894.841	819568.261	28	9222908.769	819582.016	47	9222854.877	819675.903
10	9222897.437	819591.507	29	9222909.720	819581.550	48	9222847.413	819680.740
11	9222893.800	819603.780	30	9222914.511	819583.856	49	9222852.937	819657.178
12	9222894.122	819605.638	31	9222909.027	819568.966	50	9222854.808	819657.578
13	9222899.506	819611.687	32	9222913.216	819543.988	51	9222866.392	819642.018
14	9222847.362	819652.954	33	9222911.507	819542.119	52	9222891.425	819617.506
15	9222842.778	819657.643	34	9222924.528	819499.843	53	9222901.534	819556.759
16	9222858.683	819679.874	35	9222935.838	819472.908	54	9222902.302	819539.365
17	9222867.255	819670.314	36	9222932.082	819467.396	55	9222904.468	819514.728
18	9222897.681	819621.646	37	9222929.293	819472.492	56	9222907.744	819493.087
19	9222904.633	819609.052	38	9222920.430	819475.029	57	9222916.224	819465.280
						58	9222910.277	819458.688

- NOTES:
- FOR GENERAL NOTES, REFER TO DWG NGE-008
 - ALL DIMENSIONS AND MEASUREMENTS ARE IN MILLIMETERS, UNLESS OTHERWISE SPECIFIED.
 - ALL COORDINATES SHALL BE VERIFIED DURING CONSTRUCTION.
 - OFFSET TO SET OUT CONTROL POINTS ARE MEASURED PERPENDICULAR TO THE DESIGN LINE.
 - ALL HORIZONTAL AND VERTICAL GEOMETRY AT CONNECTIONS/TIE-INS SHALL BE VERIFIED DURING CONSTRUCTION.

TAPER/TRANSITION CURVE ELEMENTS

P.I.	COORDINATES		I	R (m)	T (m)	Lc (m)	E (m)	PC		PT	
	NORTHINGS	EASTINGS						NORTHINGS	EASTINGS	NORTHINGS	EASTINGS
PI-J	9223065.168	819047.334	05°-29'-02"	257.547	14.589	29.146	0.413	9223072.270	819034.591	9223059.552	819080.798
PI-K	9223046.448	819092.207	04°-01'-11"	814.538	28.584	57.145	0.501	9223057.454	819065.827	9223033.621	819117.752
PI-L	9223064.204	819024.413	07°-19'-59"	319.243	22.380	44.699	0.716	9223075.098	819004.863	9223050.904	819042.412
PI-M	9223027.729	819073.774	09°-47'-54"	427.698	36.661	73.142	1.568	9223049.516	819044.290	9223011.278	819106.536



BEG. OF PROJECT
 STA. 0 + 000.00
 N= 9223065.168
 E= 818990.710

GPS.03-01
 N: 9223079.551
 E: 818985.994
 Z: 848.510

GPS.03-01A
 N: 9223041.479
 E: 818964.040
 Z: 850.148

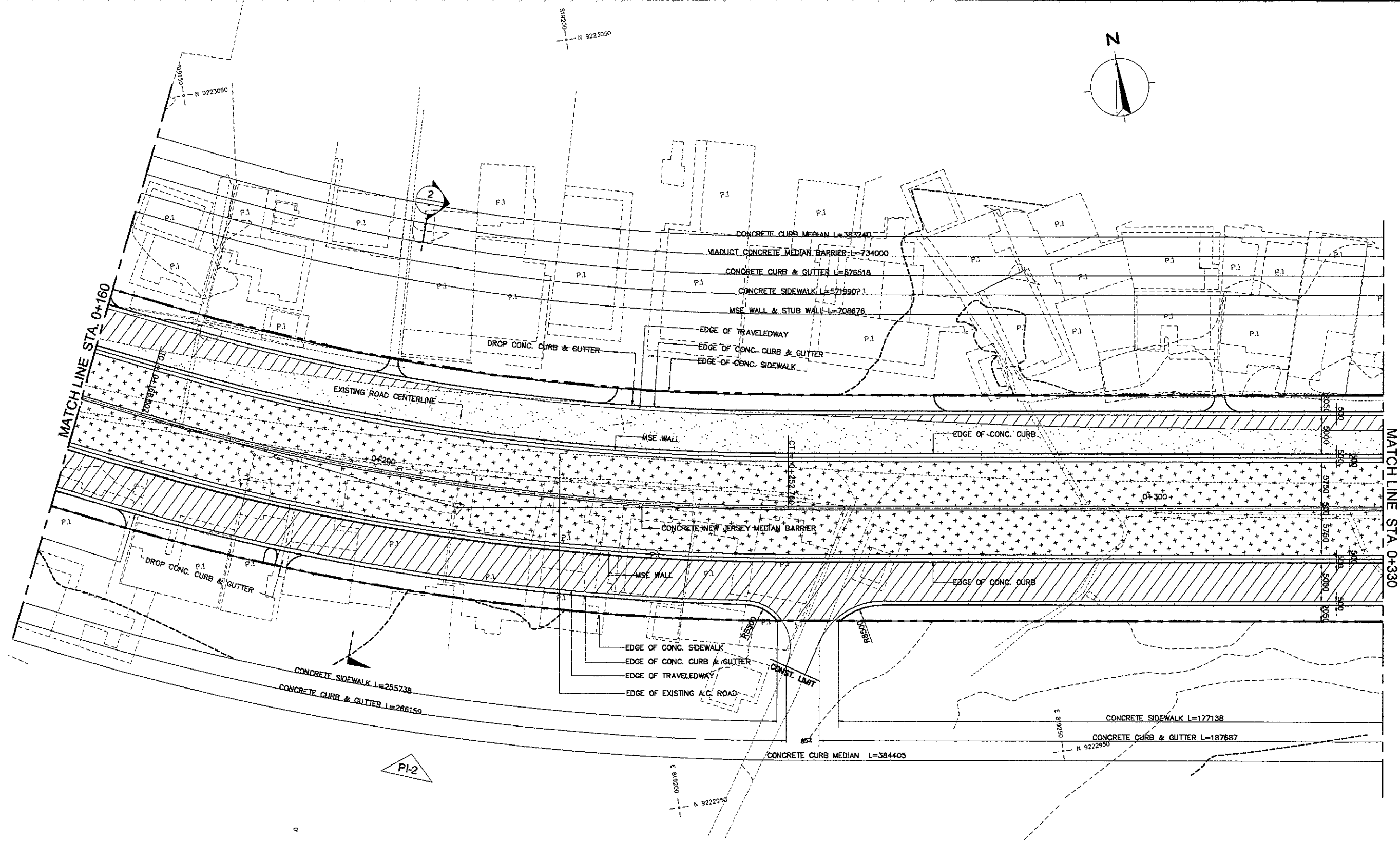
- LEGEND:**
- PAVEMENT OVERLAY
 - PAVEMENT WIDENING - NEW PAVEMENT
 - PAVEMENT AT APPROACH RAMP

1 DETAILED CONSTRUCTION LAYOUT PLAN
 SCALE 1:500

NOTES:

1. FOR GENERAL NOTES, REFER TO DWG. NGE-009
2. ALL WORKS SHALL JOIN SMOOTHLY WITH EXISTING FORMATION.
3. ALL DIMENSIONS AND MEASUREMENTS ARE IN MILLIMETERS, UNLESS OTHERWISE SPECIFIED.
4. FOR CURB AND GUTTER DETAILS, REFER TO DWG. NRD-059
5. FOR DRAINAGE LAYOUT, REFER TO DWGS. NDG-002 TO NDG-005
6. FOR STANDARD ASPHALT PAVEMENT DETAILS, REFER TO DWG. NRD-057
7. MOUNTABLE (DROP) CONC. CURB AND MOUNTABLE (DROP) COMBINATION CONC. CURB & GUTTER SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER AT ALL DRIVEWAYS AND ENTRANCES AFFECTED BY WIDENING AND/OR AT-GRADE IMPROVEMENT OR AS SPECIFIED IN THIS DRAWING.
8. FOR CURVE ELEMENTS OF FLYOVER CENTERLINE ALIGNMENT, REFER TO DWG. NRD-020
9. ALL HORIZONTAL AND VERTICAL GEOMETRY AT CONNECTIONS/TIE-INS SHALL BE VERIFIED ON SITE BEFORE CONSTRUCTION.
10. FOR GEOMETRIC LAYOUT AT INTERSECTION, REFER TO DWG. NRD-021

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	

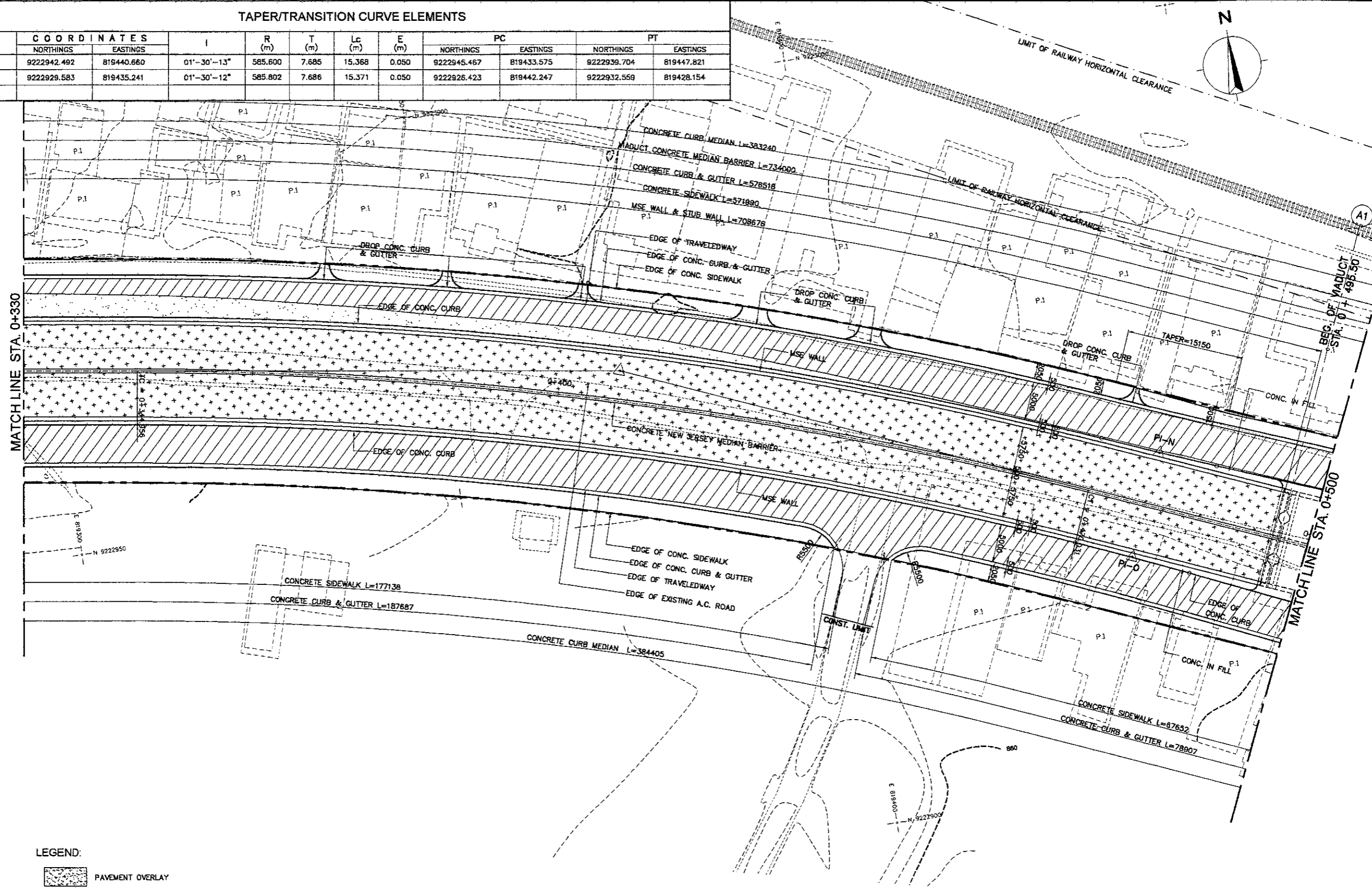


1 DETAILED CONSTRUCTION LAYOUT PLAN
 SCALE 1:500

NOTE:
 1. FOR SPECIFIC NOTES, REFER TO DWG. NRD-022

TAPER/TRANSITION CURVE ELEMENTS

P.I.	COORDINATES		I	R (m)	T (m)	Lc (m)	E (m)	PC		PT	
	NORTHINGS	EASTINGS						NORTHINGS	EASTINGS	NORTHINGS	EASTINGS
PI-N	9222942.492	819440.660	01°-30'-13"	585.600	7.685	15.368	0.050	9222945.467	819433.575	9222939.704	819447.821
PI-O	9222929.583	819435.241	01°-30'-12"	585.802	7.686	15.371	0.050	9222928.423	819442.247	9222932.559	819428.154

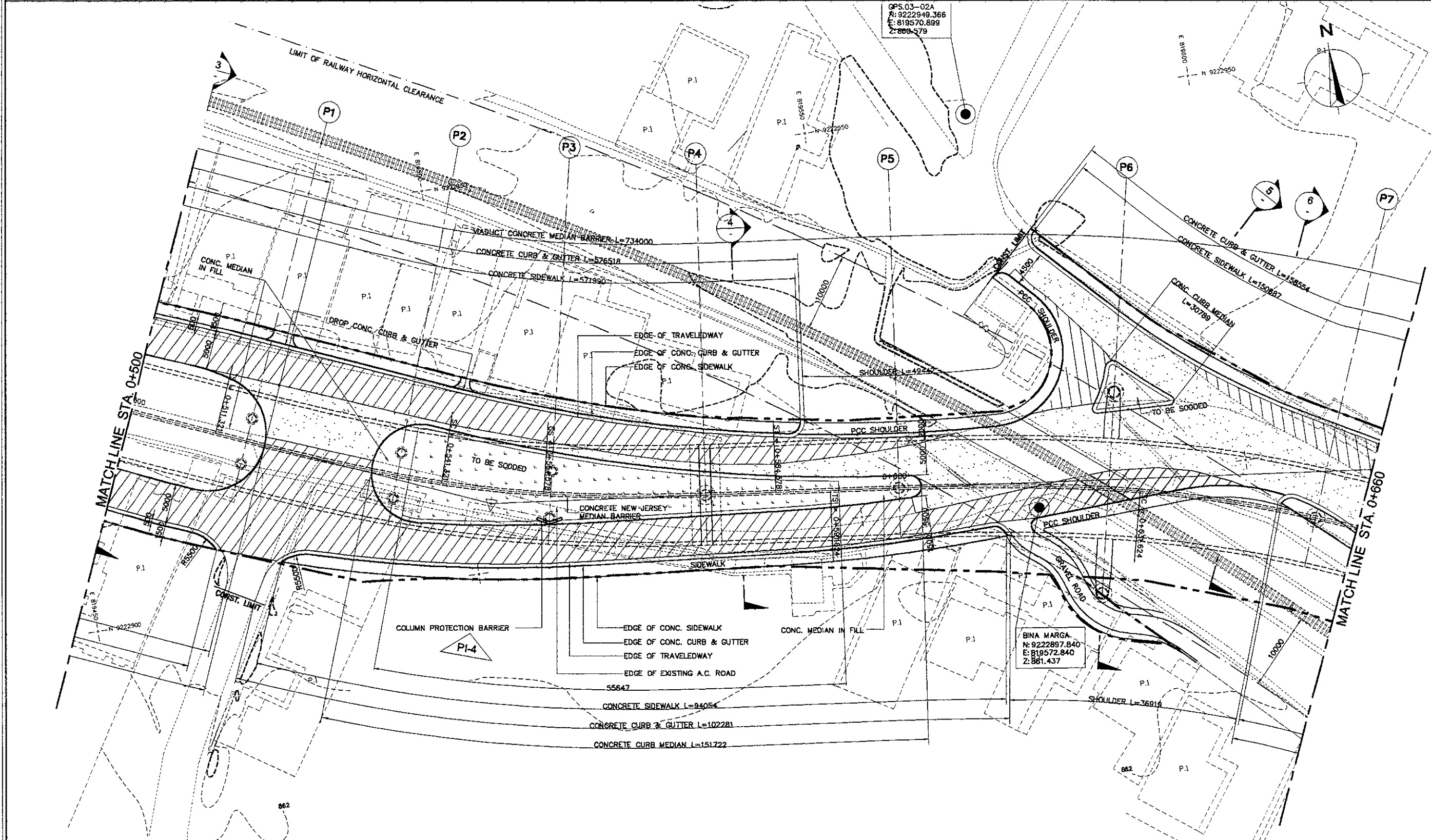


- LEGEND:
- PAVEMENT OVERLAY
 - PAVEMENT WIDENING - NEW PAVEMENT
 - PAVEMENT AT APPROACH RAMP

1 DETAILED CONSTRUCTION LAYOUT PLAN
 SCALE 1:500

NOTE:
 1. FOR SPECIFIC NOTES, REFER TO DWG. NRD-022

DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI
Sign:	Sign:	Sign:
Date:	Date:	Date:



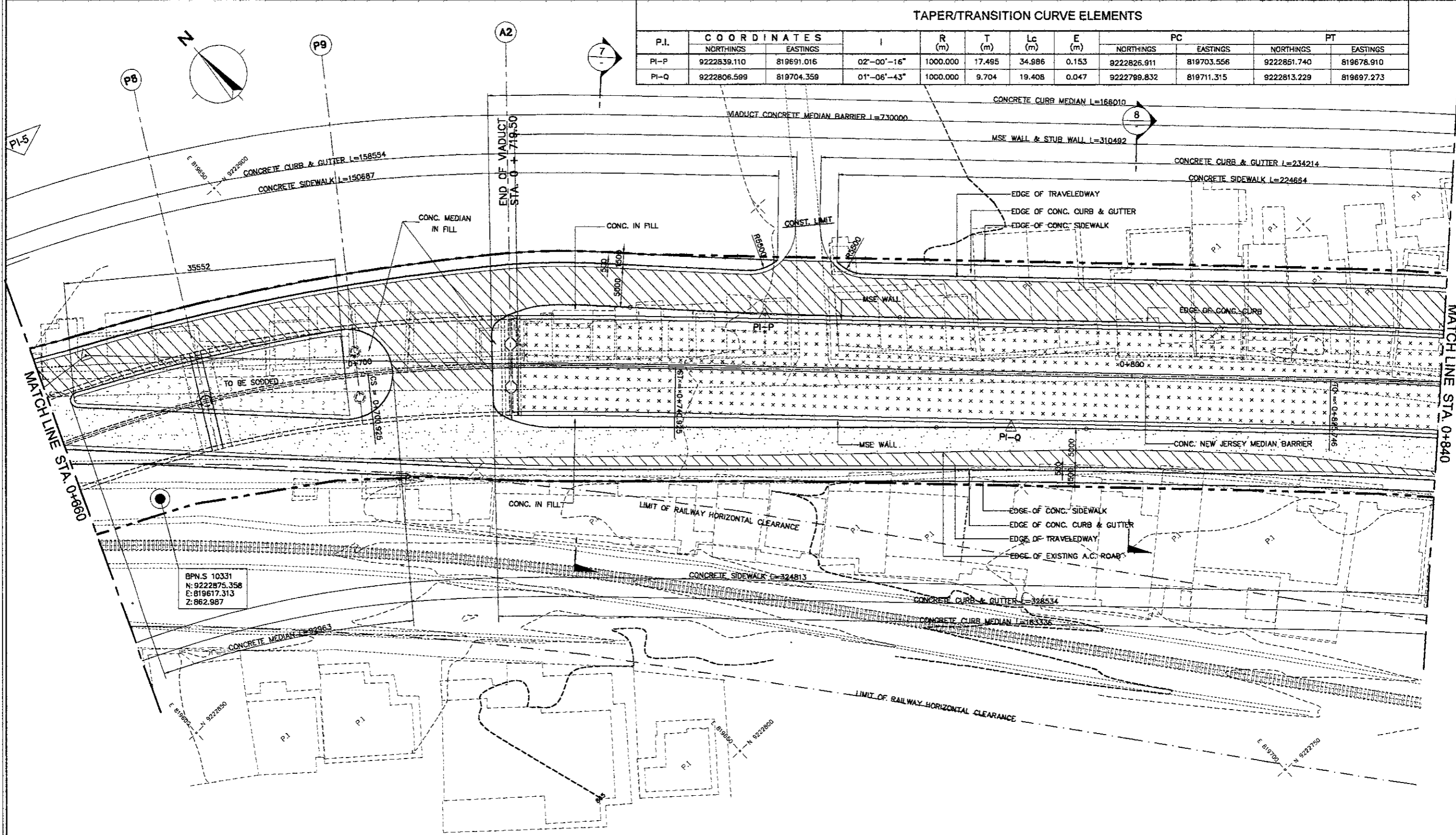
- LEGEND:
- PAVEMENT OVERLAY
 - PAVEMENT WIDENING - NEW PAVEMENT
 - PAVEMENT AT APPROACH RAMP

1 DETAILED CONSTRUCTION LAYOUT PLAN
 SCALE 1:500

NOTE:
 1. FOR SPECIFIC NOTES, REFER TO DWG. NRD-022

TAPER/TRANSITION CURVE ELEMENTS

P.I.	COORDINATES		I	R (m)	T (m)	Lc (m)	E (m)	PC		PT	
	NORTHINGS	EASTINGS						NORTHINGS	EASTINGS	NORTHINGS	EASTINGS
PI-P	9222839.110	819691.016	02°-00'-16"	1000.000	17.485	34.986	0.153	9222826.911	819703.556	9222851.740	819678.910
PI-Q	9222806.599	819704.359	01°-06'-43"	1000.000	9.704	19.408	0.047	9222789.832	819711.315	9222813.229	819697.273



BPN.S 10331
 N: 9222875.358
 E: 819617.313
 Z: 862.987

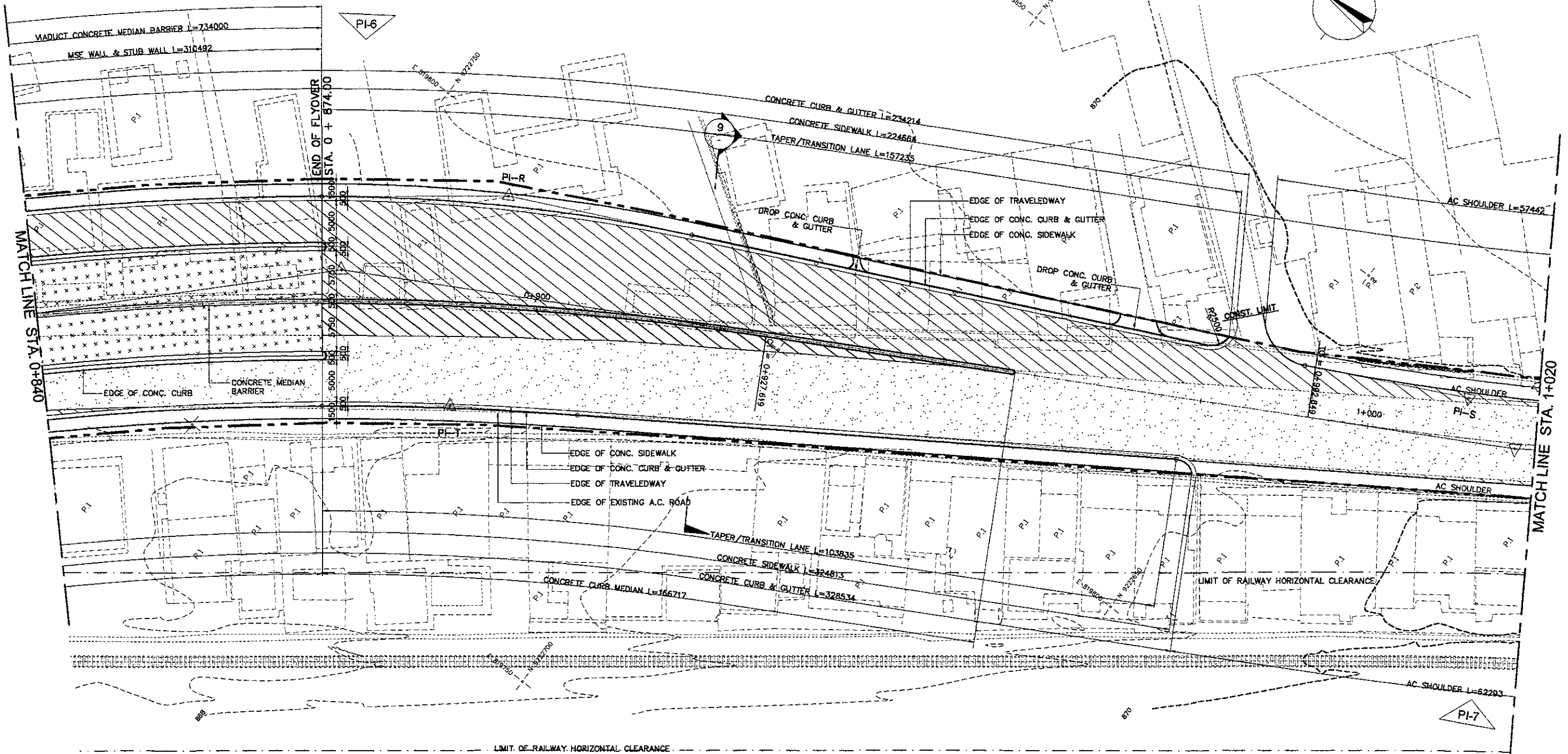
- LEGEND:**
- PAVEMENT OVERLAY
 - PAVEMENT WIDENING - NEW PAVEMENT
 - PAVEMENT AT APPROACH RAMP

1 DETAILED CONSTRUCTION LAYOUT PLAN
 SCALE 1:500

NOTE:
 1. FOR SPECIFIC NOTES, REFER TO DWG. NRD-022

TAPER/TRANSITION CURVE ELEMENTS

P.I.	COORDINATES		I	R (m)	T (m)	Lc (m)	E (m)	PC		PT	
	NORTHINGS	EASTINGS						NORTHINGS	EASTINGS	NORTHINGS	EASTINGS
PI-R	9222736.687	819794.749	12°-05'-17"	211.033	22.345	44.523	1.180	9222754.335	819781.044	9222716.560	819804.454
PI-S	9222631.608	819845.764	07°-35'-58"	295.500	19.891	39.724	0.660	9222649.401	819836872	9222615.148	819856.932
PI-T	9222726.949	819770.658	04°-16'-00"	409.661	15.261	30.507	0.284	9222739.002	819761.298	9222714.232	819779.096

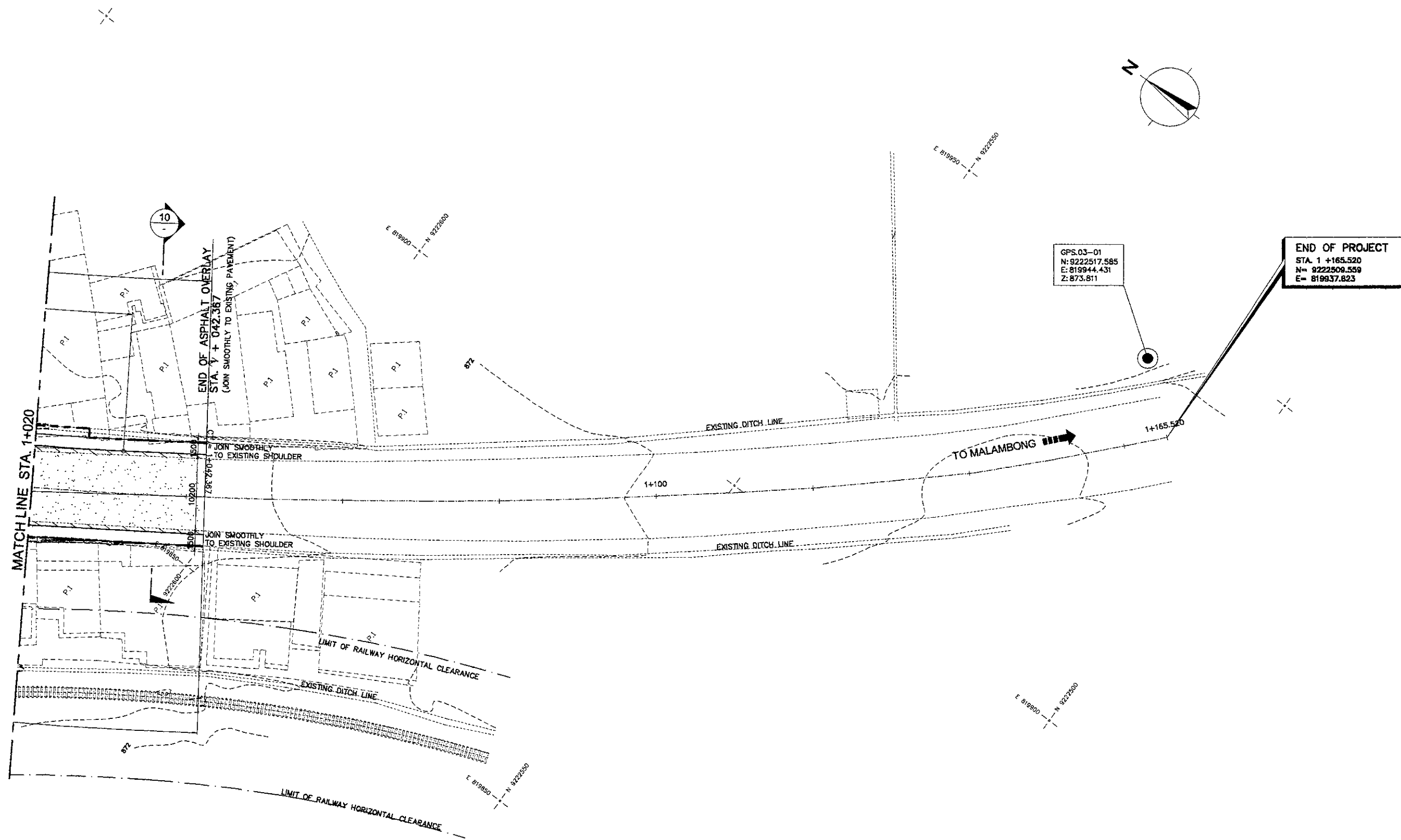





- LEGEND:
- PAVEMENT OVERLAY
 - PAVEMENT WIDENING - NEW PAVEMENT
 - PAVEMENT AT APPROACH RAMP


1 DETAILED CONSTRUCTION LAYOUT PLAN
 SCALE 1:500

NOTE:
 1. FOR SPECIFIC NOTES, REFER TO DWG. NRD-022

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



- LEGEND:
-  PAVEMENT OVERLAY
 -  PAVEMENT WIDENING - NEW PAVEMENT
 -  PAVEMENT AT APPROACH RAMP

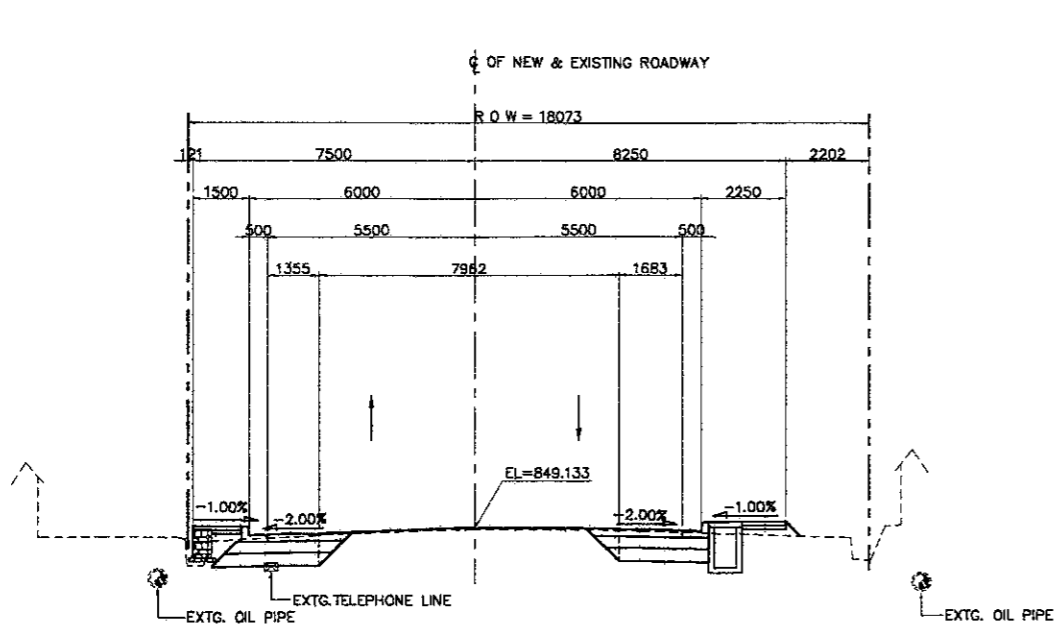

 DETAILED CONSTRUCTION LAYOUT PLAN

 SCALE 1:500

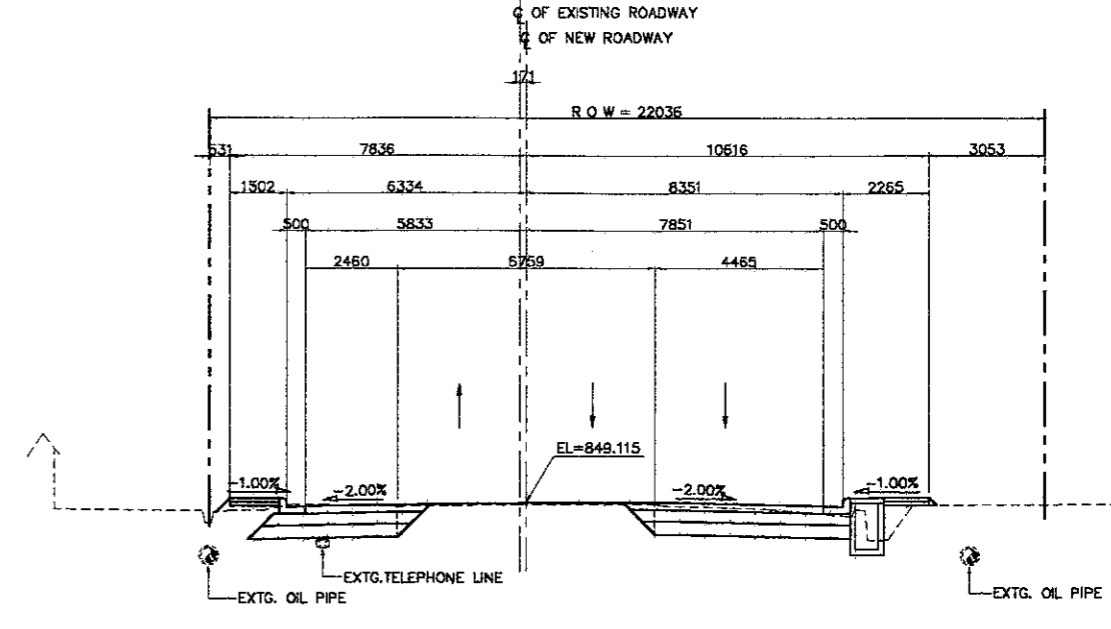
NOTE:

 1. FOR SPECIFIC NOTES, REFER TO DWG. NRD-022

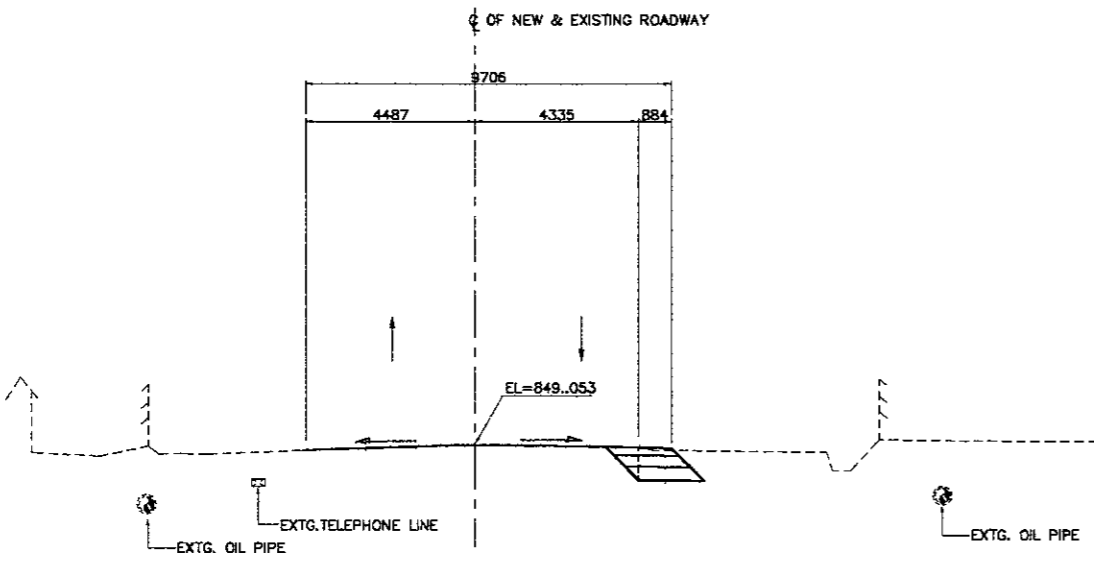
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name R. UENO	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



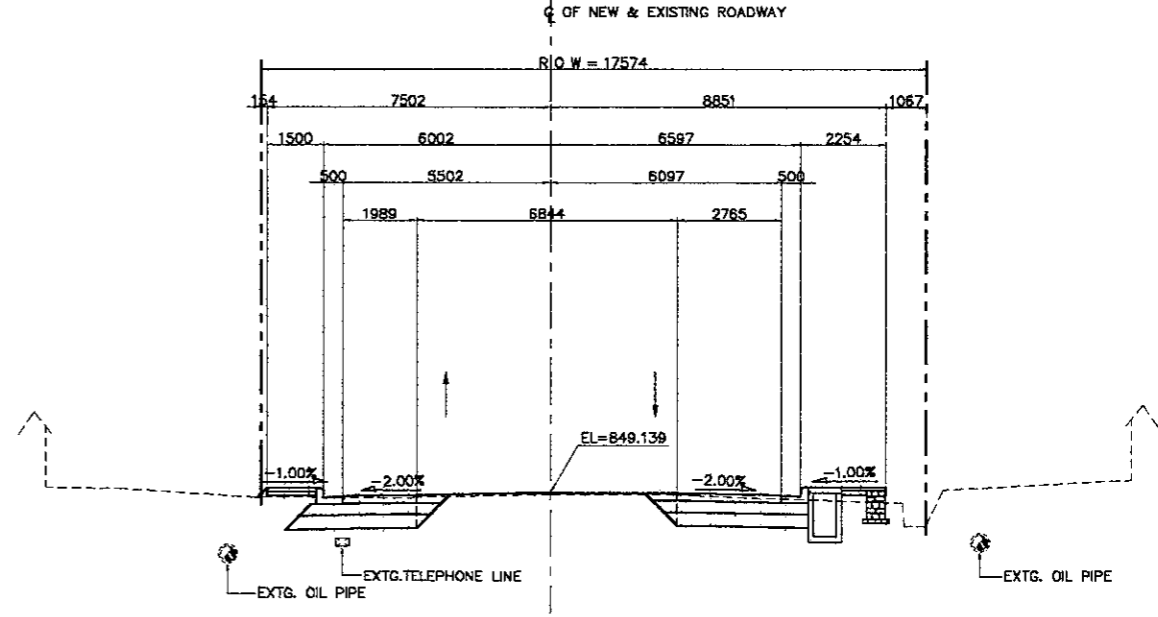
2 SECTION (STA. 0 + 020.000)
 SCALE 1:200



4 SECTION (STA. 0 + 060.000)
 SCALE 1:200

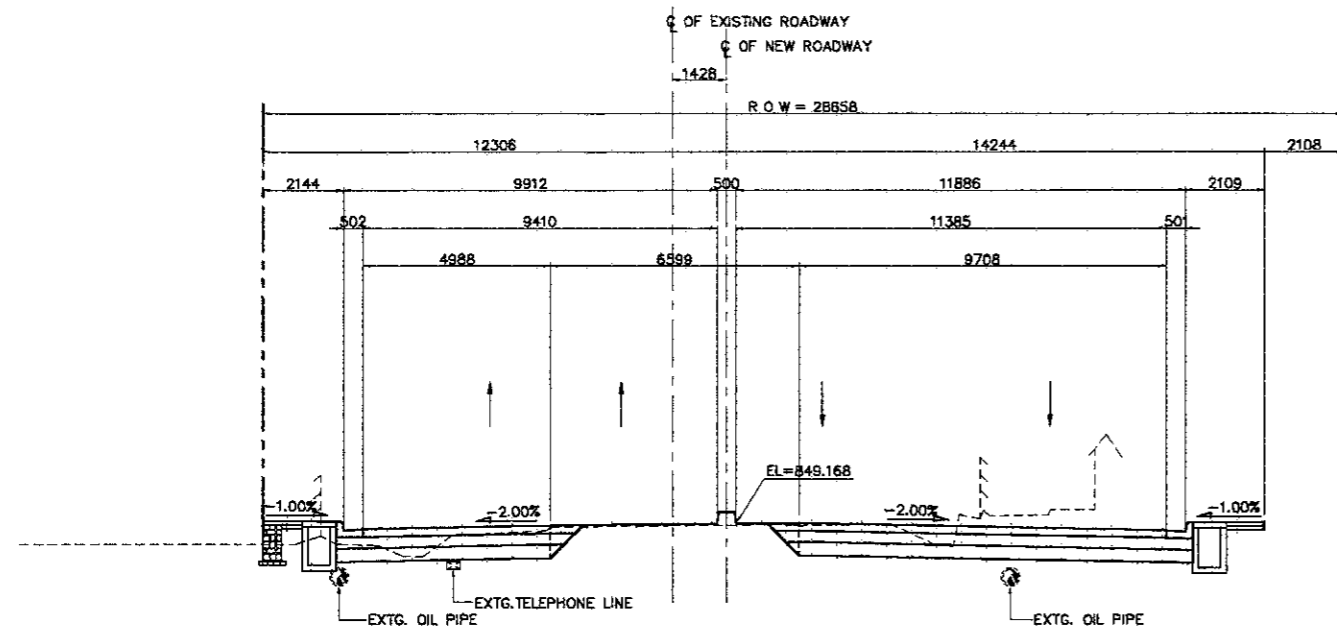


1 SECTION (STA. 0 + 000.000)
 SCALE 1:200

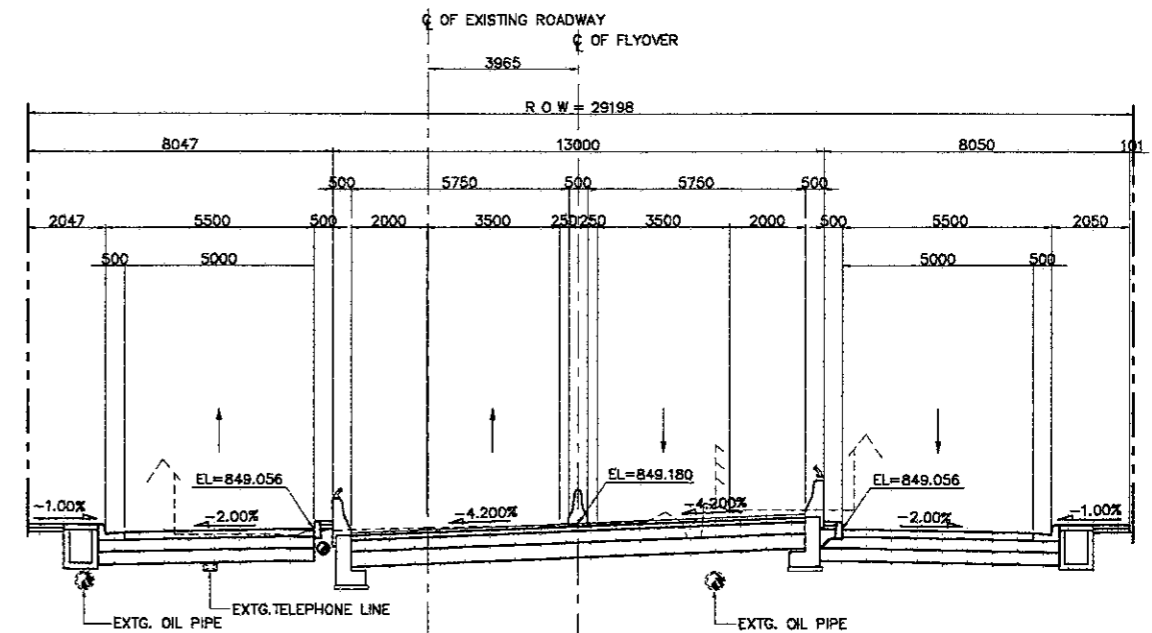


3 SECTION (STA. 0 + 040.000)
 SCALE 1:200

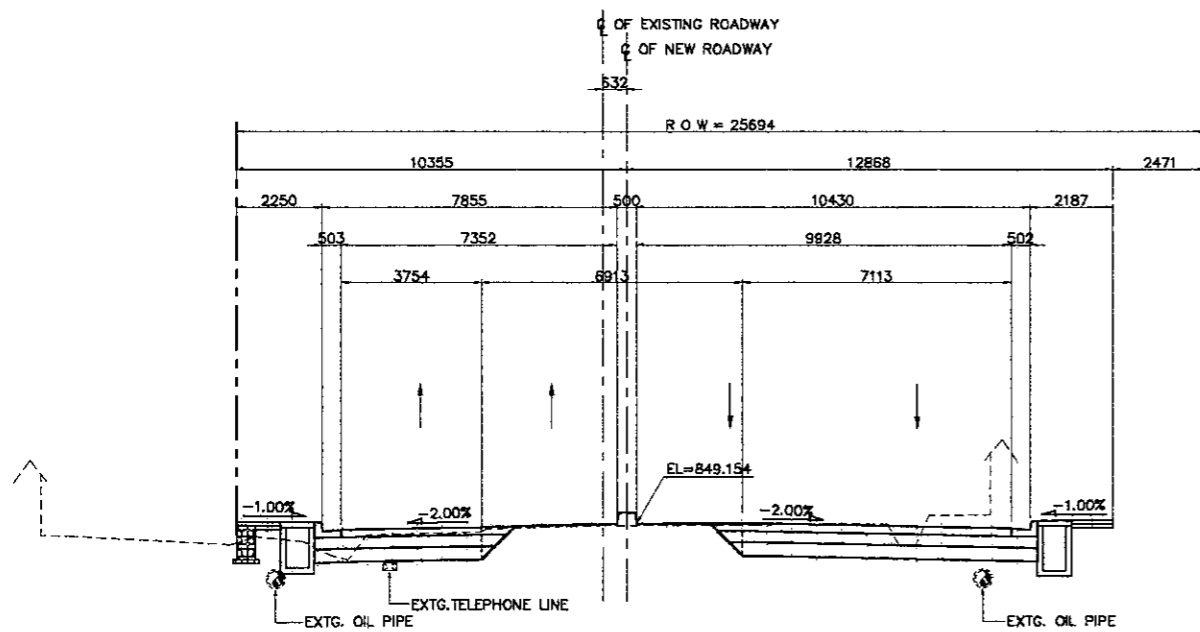
- NOTES:
1. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED DURING CONSTRUCTION.
 2. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
 3. FOR LOCATION AND INVERT ELEVATIONS OF DRAINAGE SYSTEM (DITCH AND RCP) REFER TO DRAINAGE DRAWINGS.



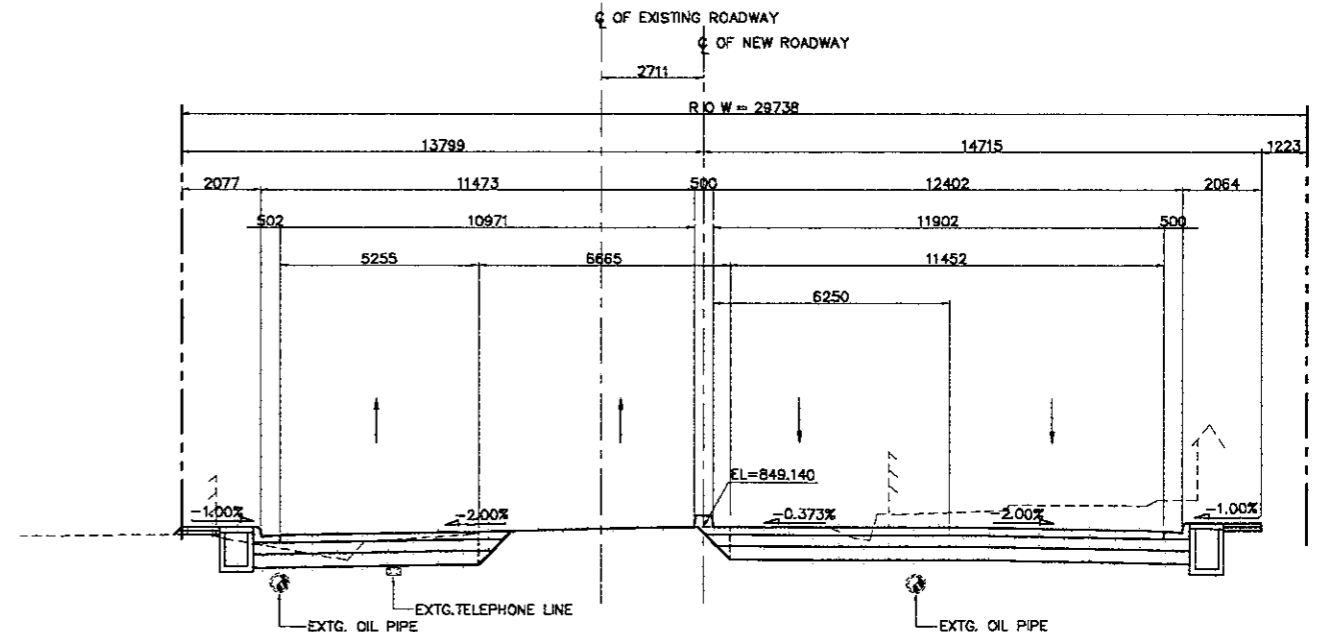
2 SECTION (STA. 0 + 100.000)
 SCALE 1:200



4 SECTION (STA. 0 + 140.000)
 SCALE 1:200



1 SECTION (STA. 0 + 080.000)
 SCALE 1:200



3 SECTION (STA. 0 + 120.000)
 SCALE 1:200

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED DURING CONSTRUCTION.
2. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
3. FOR LOCATION AND INVERT ELEVATIONS OF DRAINAGE SYSTEM (DITCH AND RCP) REFER TO DRAINAGE DRAWINGS.