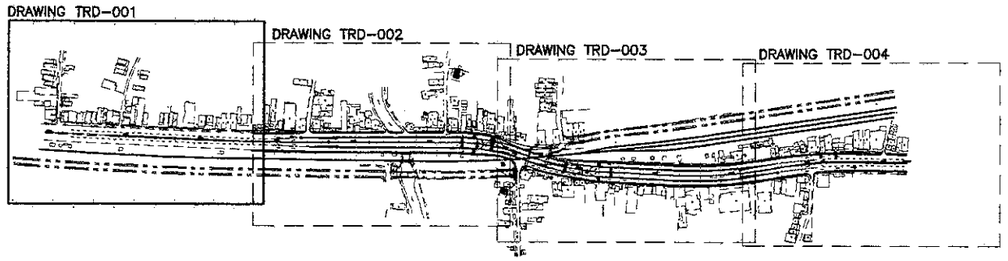
JAPAN INTERNATIONAL
COOPERATION AGENCY

DIRECTORATE GENERAL OF HIGHWAY
MINISTRY OF PUBLIC WORKS
REPUBLIC OF INDONESIA

ROADS

KATAHIRA & ENGINEERS INTERNATIONAL

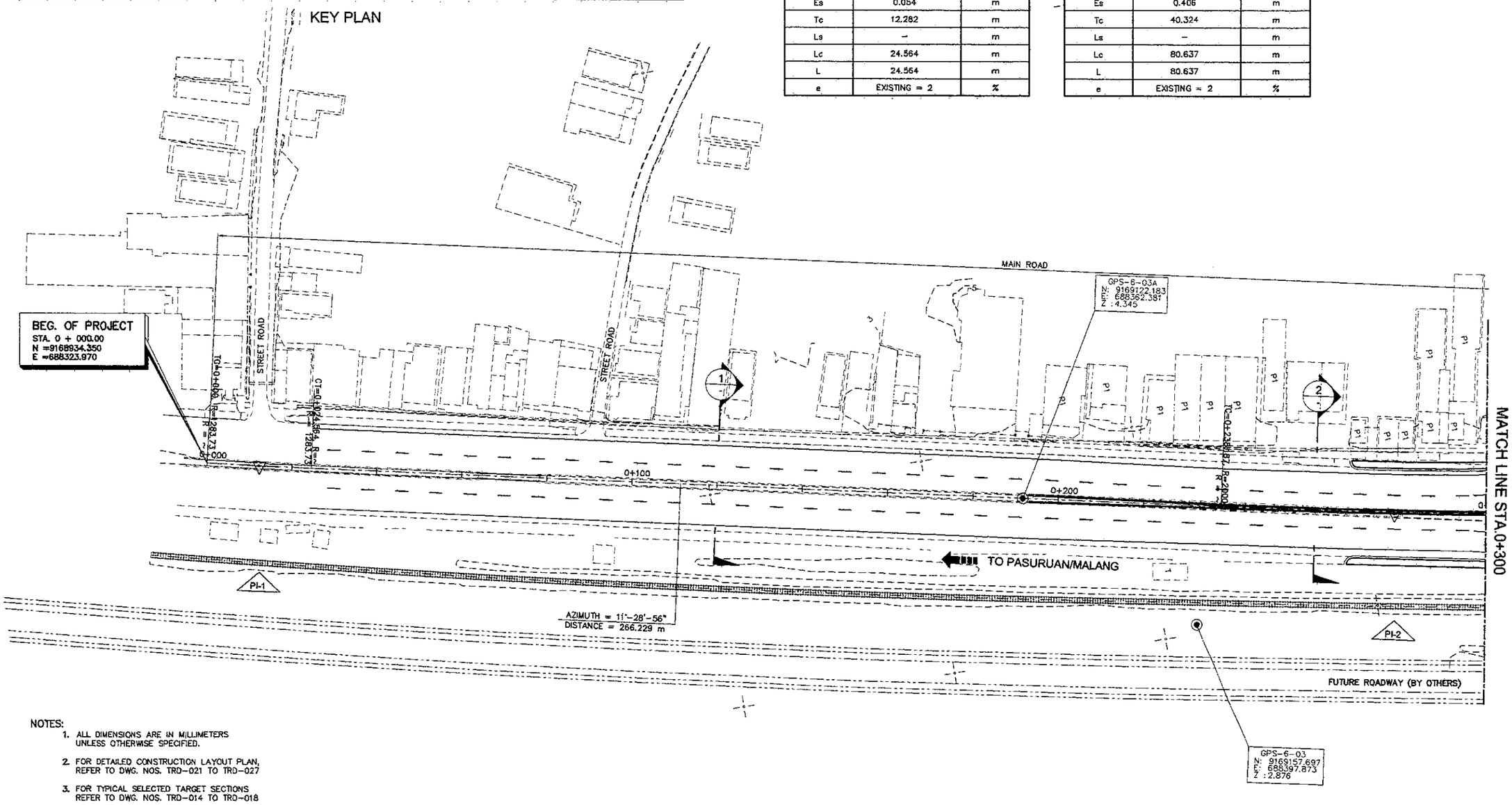
JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 1000	ROADWAY PLAN (FLYOVER) 1 OF 4	TRD-001
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400				SHEET NO :
	Date	Date	Date	Sign / Date		FULL SIZE A3		01 / 62



KEY PLAN

DATA	PI NO.-1	UNITS
PI STA.	STA. 0 + 012.282	
N	9168934.353	m
E	688323.973	m
V	40	km/h
Δ	1-05-47	...° ...' ..."
θs	–	...° ...' ..."
R	1283.735	m
A	–	m
Ts	–	m
Es	0.054	m
Tc	12.282	m
Ls	–	m
Lc	24.564	m
L	24.564	m
e	EXISTING = 2	%

DATA	PI NO.-2	UNITS
PI STA.	STA. 0 + 278.510	
N	9169207.244	m
E	688379.631	m
V	40	km/h
Δ	2-18-36	...° ...' ..."
θs	–	...° ...' ..."
R	2000	m
A	–	m
Ts	–	m
Es	0.406	m
Tc	40.324	m
Ls	–	m
Lc	80.637	m
L	80.637	m
e	EXISTING = 2	%

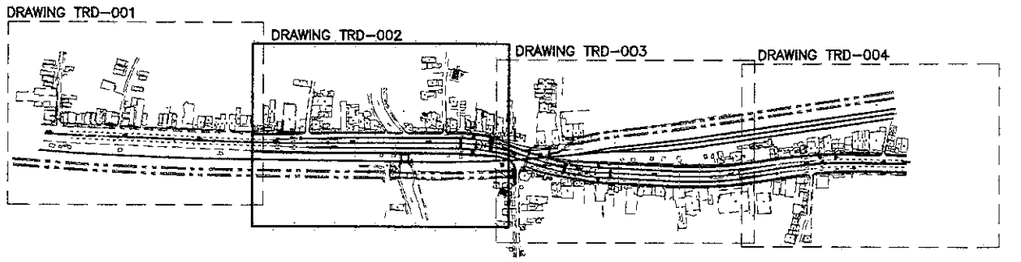


NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. FOR DETAILED CONSTRUCTION LAYOUT PLAN, REFER TO DWG. NOS. TRD-021 TO TRD-027
3. FOR TYPICAL SELECTED TARGET SECTIONS REFER TO DWG. NOS. TRD-014 TO TRD-018

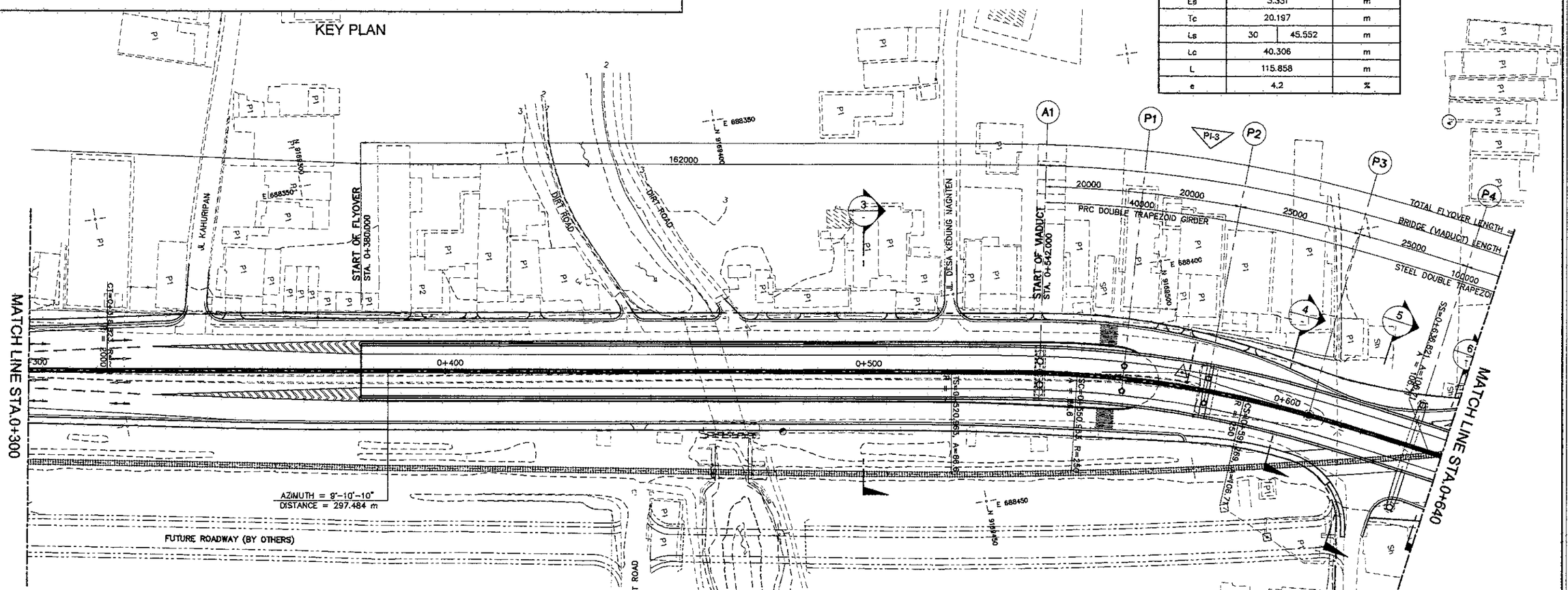
1 ROADWAY PLAN (FLYOVER)
SCALE 1:1000

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 1000	ROADWAY PLAN (FLYOVER) 2 OF 4	TRD-002
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400				SHEET NO :
	Date	Date	Date	Sign / Date		FULL SIZE A3		02 / 62



KEY PLAN

DATA	PI NO. - 3		UNITS
PI STA.	STA. 0 + 575.983		
N	9169500.926		m
E	688427.036		m
V	60		km/h
Δ	17–53–42		° ' "
θs	3–26–16	5–13–11	° ' "
R	250		m
A	86.603	106.714	m
Ts	55.020	61.548	m
Es	3.331		m
Tc	20.197		m
Ls	30	45.552	m
Lc	40.306		m
L	115.858		m
e	4.2		%

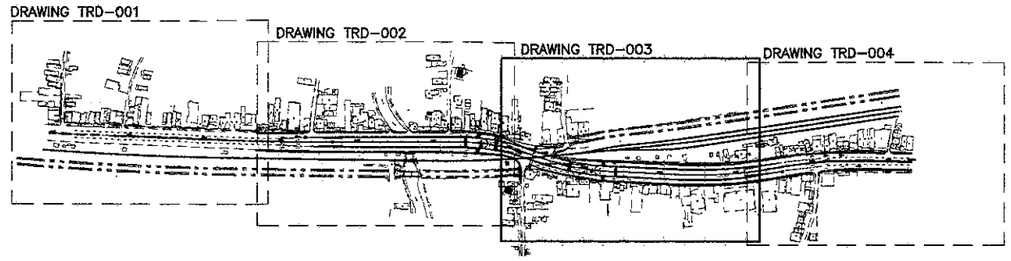


NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. FOR DETAILED CONSTRUCTION LAYOUT PLAN, REFER TO DWG. NOS. TRD–021 TO TRD–027
3. FOR TYPICAL SELECTED TARGET SECTIONS REFER TO DWG. NOS. TRD–014 TO TRD–018

1 / - ROADWAY PLAN (FLYOVER)
SCALE 1:1000

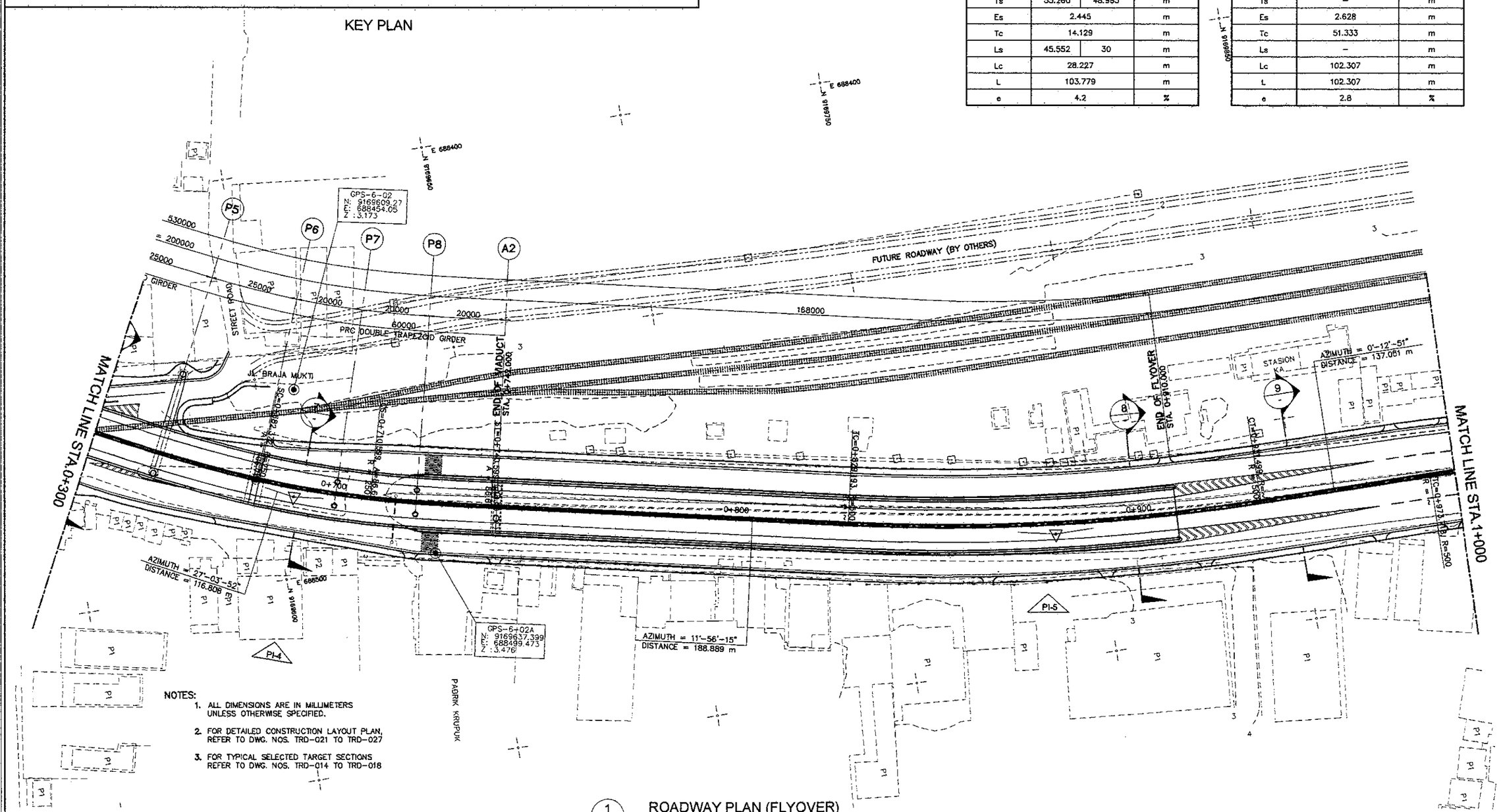
JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 1000	ROADWAY PLAN (FLYOVER) 3 OF 4	TRD-003
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400				SHEET NO :
	Date	Date	Date	Sign / Date		FULL SIZE A3		03 / 62



KEY PLAN

DATA	PI NO.-4		UNITS
PI STA.	STA. 0 + 692.080		
N	9169604.843		m
E	688480.183		m
V	60		km/h
Δ	15-07-36		° ' "
θs	5-13-11	3-26-16	° ' "
R	250		m
A	106.719	86.603	m
Ts	55.260	48.953	m
Es	2.445		m
Tc	14.129		m
Ls	45.552	30	m
Lc	28.227		m
L	103.779		m
e	4.2		%

DATA	PI NO.-5	UNITS
PI STA.	STA. 0 + 880.525	
N	9169789.747	m
E	688519.253	m
V	60	km/h
Δ	11-43-25	° ' "
θs	–	° ' "
R	500	m
A	–	m
Ts	–	m
Es	2.628	m
Tc	51.333	m
Ls	–	m
Lc	102.307	m
L	102.307	m
e	2.8	%



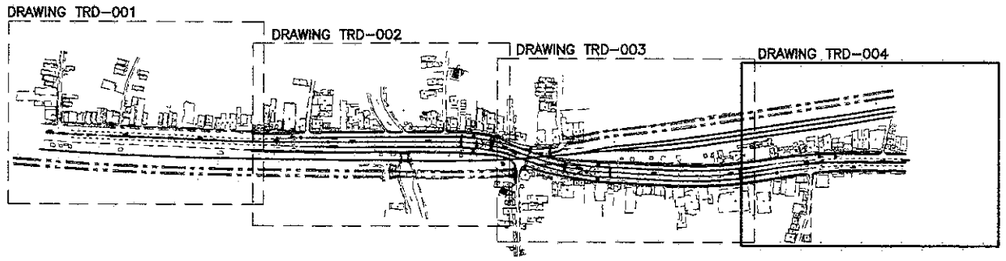
NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. FOR DETAILED CONSTRUCTION LAYOUT PLAN, REFER TO DWG. NOS. TRD-021 TO TRD-027
3. FOR TYPICAL SELECTED TARGET SECTIONS REFER TO DWG. NOS. TRD-014 TO TRD-018

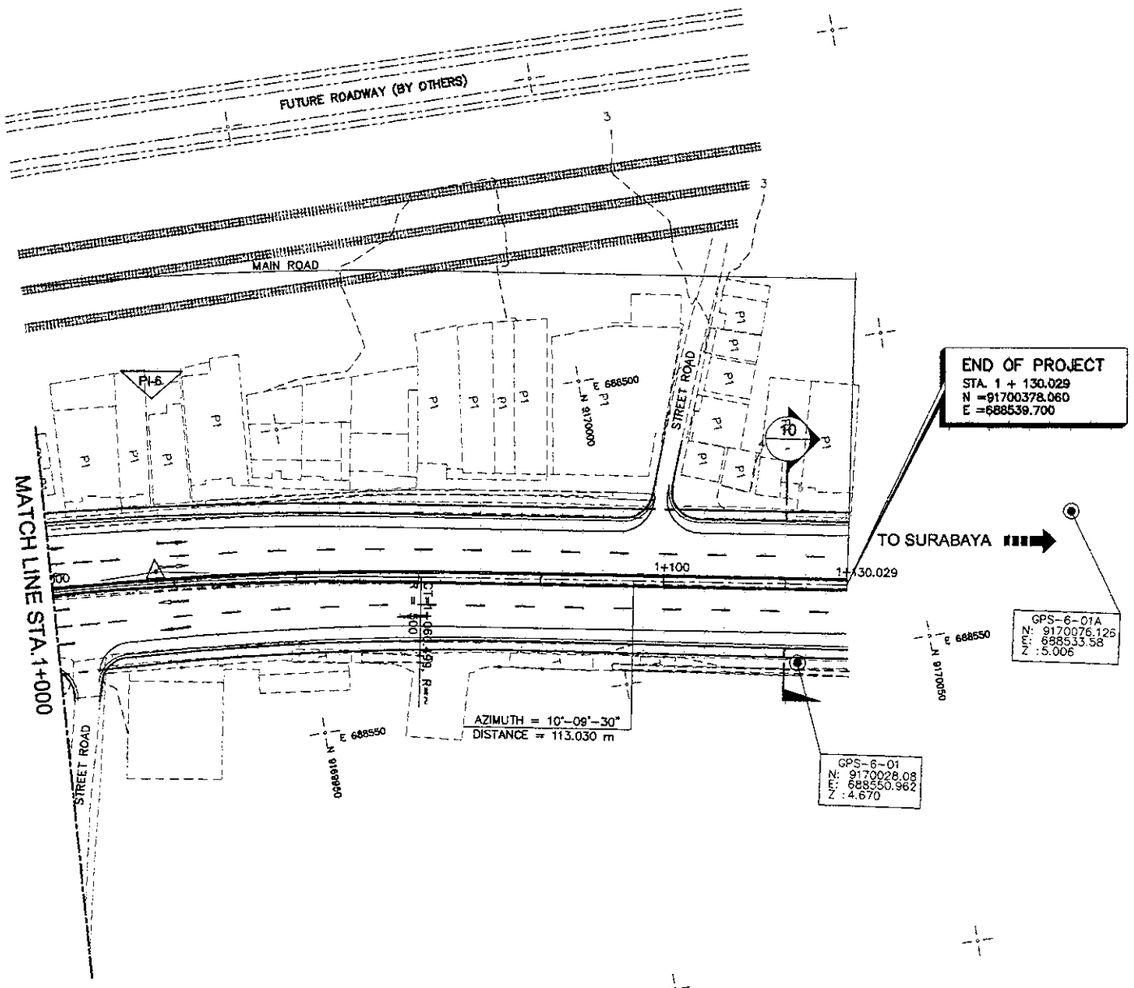
1 / - ROADWAY PLAN (FLYOVER)

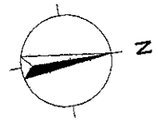
SCALE 1:1000

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY		CHECKED BY		SUBMITTED BY		REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS			PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI				DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 1000	ROADWAY PLAN (FLYOVER) 4 OF 4	TRD-004
	Sign		Sign		Sign		APPROVED BY	Ir. HERRY VAZA M,Eng.Sc	Sign				SHEET NO :
	Date		Date		Date			NIP. : 110038400	Date		FULL SIZE A3		04 / 62



KEY PLAN





DATA	PI NO.-6	UNITS
PI STA.	STA. 0 + 017.218	
N	9169926.797	m
E	688519.766	m
V	60	km/h
Δ	9-56-40	° ' "
θs	–	° ' "
R	500	m
A	–	m
Ts	–	m
Es	1.889	m
Tc	43.500	m
Ls	–	m
Lc	86.781	m
L	86.781	m
e	2.1	%

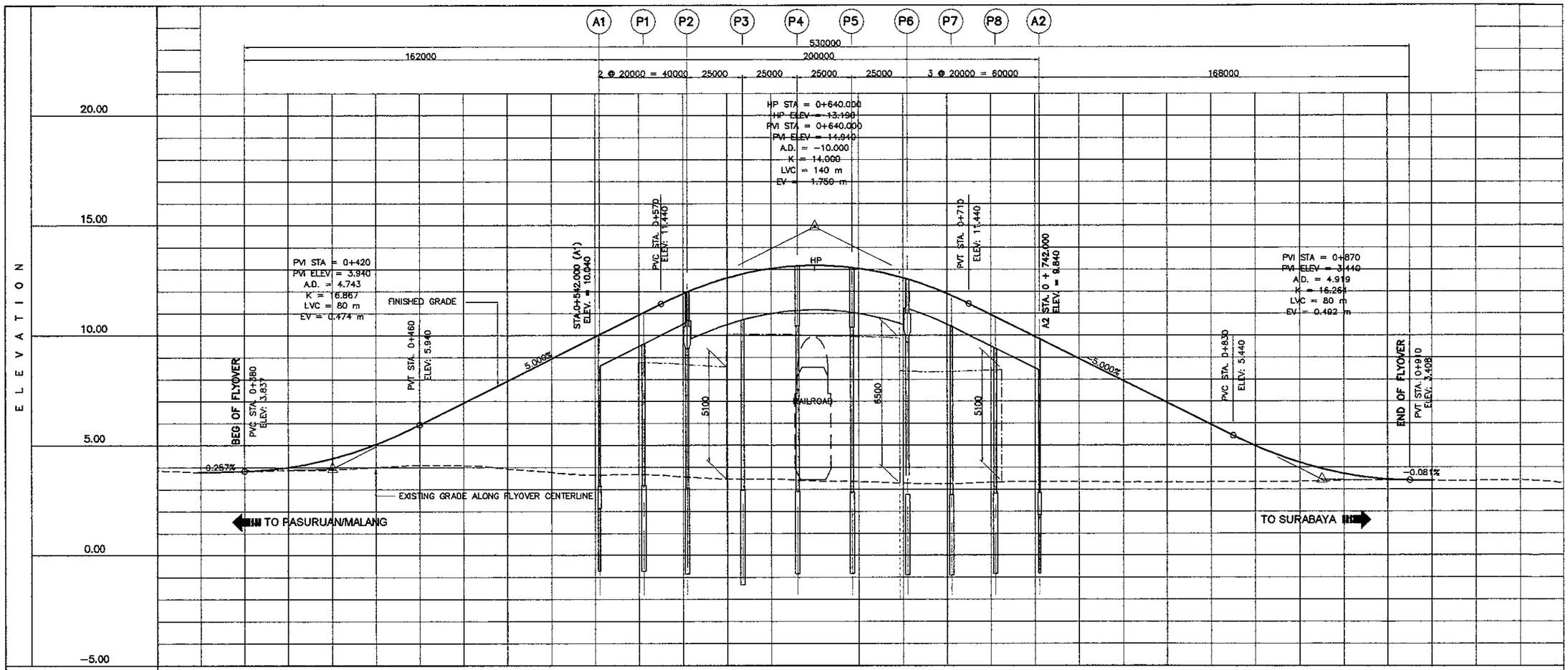
NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. FOR DETAILED CONSTRUCTION LAYOUT PLAN, REFER TO DWG. NOS. TRD-021 TO TRD-027
3. FOR TYPICAL SELECTED TARGET SECTIONS REFER TO DWG. NOS. TRD-014 TO TRD-018

1 / - ROADWAY PLAN (FLYOVER)
SCALE 1:1000

JICA JAPAN INTERNATIONAL COOPERATION AGENCY / KEI KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	H=1 : 2000 V=1 : 200	PROFILE OF FLYOVER	TRD-005
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400		FULL SIZE A3		SHEET NO : 05 / 62
	Date	Date	Date	Sign / Date				

ELEVATION	A1	P1	P2	P3	P4	P5	P6	P7	P8	A2
PIER AND ABUTMENT	A1	P1	P2	P3	P4	P5	P6	P7	P8	A2
FINISHED GRADE	10.040	11.040	11.989	12.801	13.167	13.087	12.580	11.817	10.840	9.840
EXISTING GRADE	3.644	3.871	3.580	3.463	3.408	3.355	3.266	3.250	3.322	3.341



STATION	0+400	0+500	0+600	0+700	0+800	0+900

FINISHED GRADE																													
	3.786	3.837	4.007	4.414	5.059	5.940	6.940	7.940	8.940	9.840	10.840	11.904	12.619	13.047	13.190	13.047	12.619	11.904	10.840	9.840	8.840	7.840	6.840	5.940	4.971	4.217	3.709	3.446	3.399

EXISTING GRADE																															
	3.782	3.820	3.853	3.895	4.004	4.109	4.088	3.927	3.783	3.647	3.674	3.572	3.466	3.458	3.378	3.346	3.274	3.247	3.317	3.338	3.353	3.323	3.329	3.333	3.338	3.345	3.389	3.408	3.399	3.387	3.417	3.263

HORIZONTAL CURVATURE: R=∞ | TS | A=86.6 | SC | R=250 | CS | A=106.71 | SS | A=106.71 | SC | R=250 | CS | A=86.6 | ST | R=∞ | TC | CT | R=∞ | TC

TS=0+520.963 SC=0+550.963 CS=0+591.269 SS=0+636.821 SC=0+682.372 CS=0+710.569 ST=0+740.569 TC=0+829.193 R=500 CT=0+931.499 TC=0+97

VERTICAL CURVATURE: g=0.257% L=40.0m; g=5.000% L=220.000m; g=-5.000% L=230.000m; g=-0.081% L=40.0m

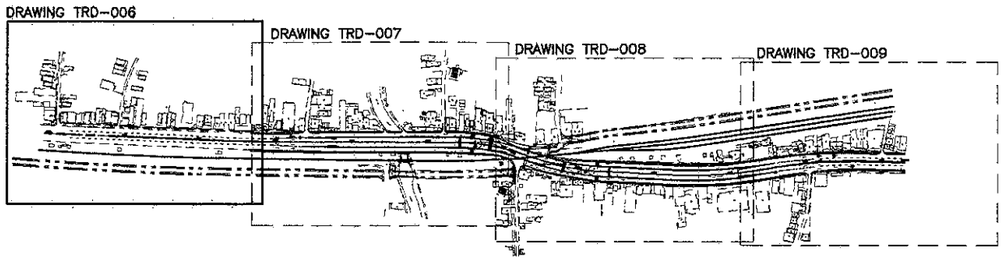
SUPERELEVATION: L=R=-2% (-2%, -2%) 0+498.5; L+5.0% (+2%, 0%) 0+551; R-5.0% (-2%, -2%) 0+591; R+5.0% (+2%, 0%) 0+632; L-5.0% (-2%, -2%) 0+682; L=R=-2% (-2%, -2%) 0+710.5; R+3.5% (+2%, 0%) 0+763; L-3.5% (-2%, -2%) 0+799; 0+841; 0+913; 0+955

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

NOTE:

EXISTING GRADE ELEVATIONS ARE TAKEN FROM CENTERLINE OF FLYOVER.

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name R. UENO	Name T. OKUMURA	Name M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 1000	ROADWAY PLAN (AT-GRADE) 1 OF 4	TRD-006
	Sign	Sign	Sign					SHEET NO :
	Date	Date	Date	APPROVED BY Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400 Sign Date		FULL SIZE A3		06 / 62

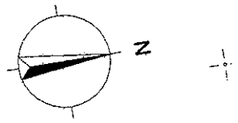


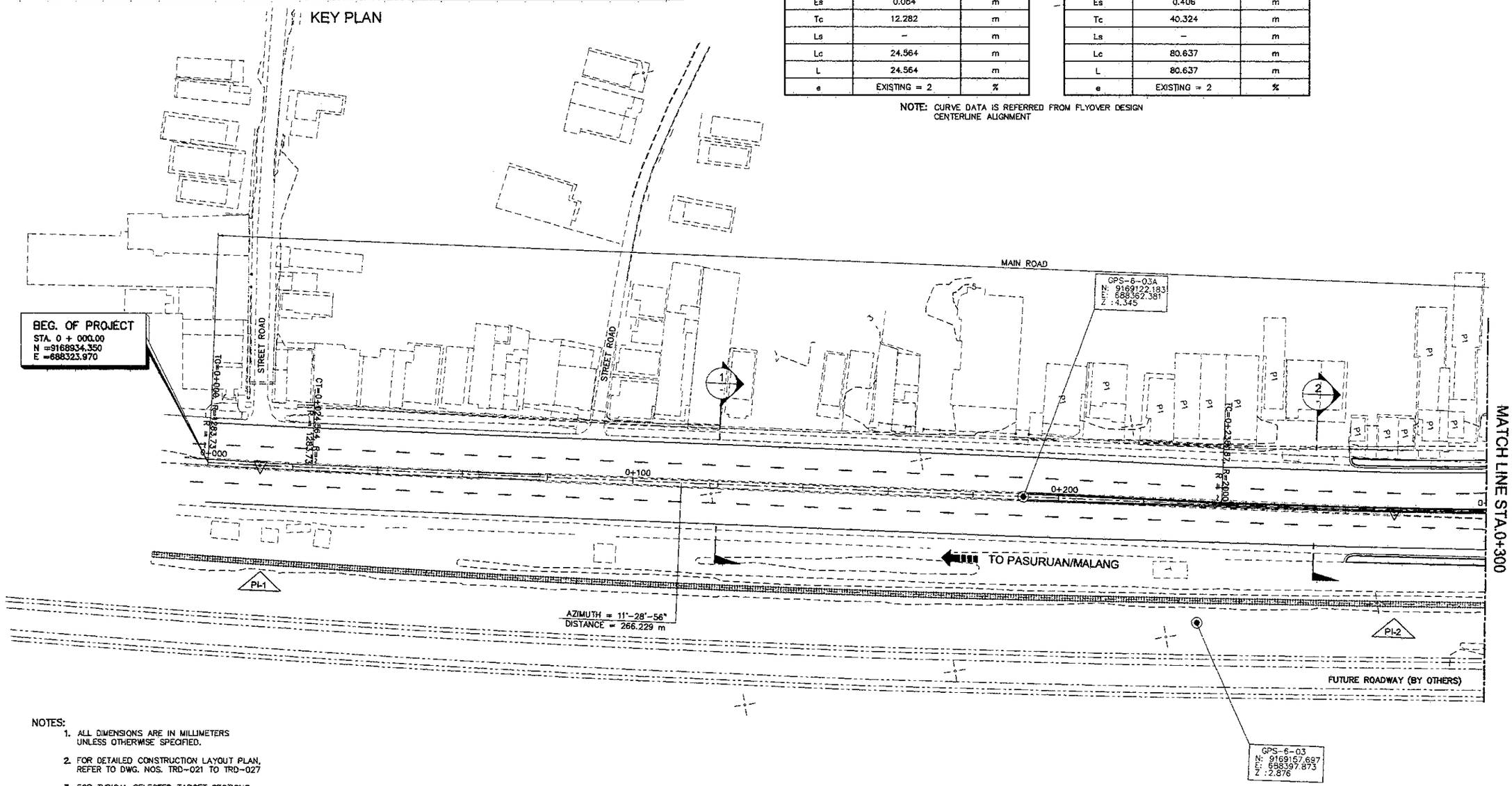
KEY PLAN

DATA	PI NO.-1	UNITS
PI STA.	STA. 0 + 012.282	
N	9168934.353	m
E	688323.973	m
V	40	km/h
Δ	1-05-47	° ' "
θs	–	° ' "
R	1283.735	m
A	–	m
Ts	–	m
Es	0.054	m
Tc	12.282	m
Ls	–	m
Lc	24.564	m
L	24.564	m
e	EXISTING = 2	%

DATA	PI NO.-2	UNITS
PI STA.	STA. 0 + 278.510	
N	9169207.244	m
E	688379.631	m
V	40	km/h
Δ	2-18-36	° ' "
θs	–	° ' "
R	2000	m
A	–	m
Ts	–	m
Es	0.406	m
Tc	40.324	m
Ls	–	m
Lc	80.637	m
L	80.637	m
e	EXISTING = 2	%

NOTE: CURVE DATA IS REFERRED FROM FLYOVER DESIGN CENTERLINE ALIGNMENT



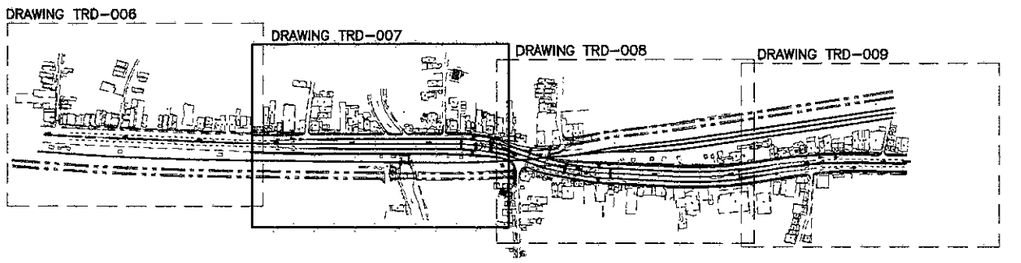


NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. FOR DETAILED CONSTRUCTION LAYOUT PLAN, REFER TO DWG. NOS. TRD-021 TO TRD-027
3. FOR TYPICAL SELECTED TARGET SECTIONS REFER TO DWG. NOS. TRD-014 TO TRD-018

1 ROADWAY PLAN (AT-GRADE)
SCALE 1:1000

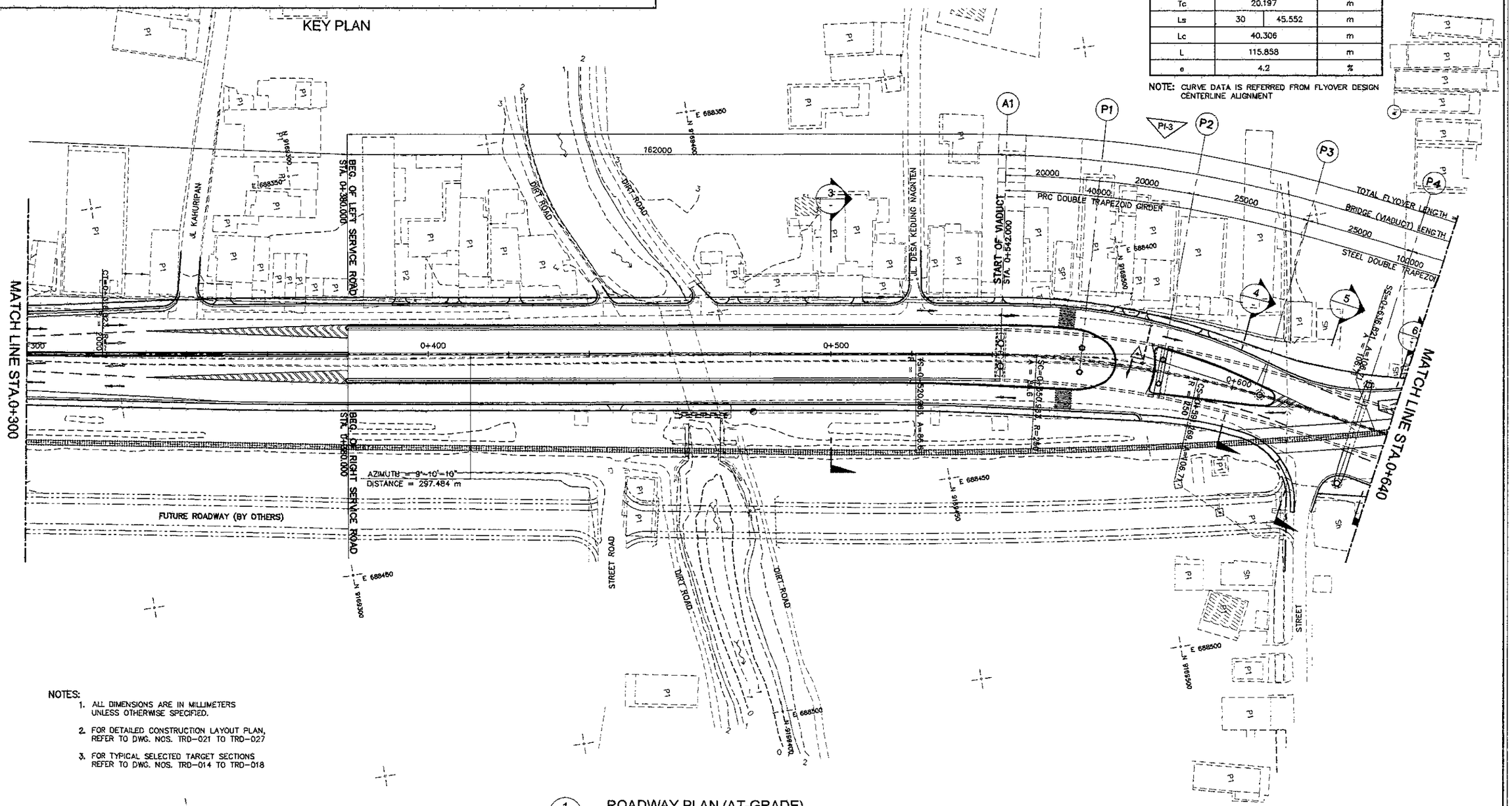
JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name R. UENO	Name T. OKUMURA	Name M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 1000	ROADWAY PLAN (AT-GRADE) 2 OF 4	TRD-007
	Sign	Sign	Sign	APPROVED BY Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400 Sign		FULL SIZE A3		SHEET NO : 07 / 62
	Date	Date	Date	Date				



KEY PLAN

DATA	PI NO.-3		UNITS
PI STA.	STA. 0 + 575.983		
N	9169500.926		m
E	688427.036		m
V	60		km/h
△	17-53-42		° ' "
θs	3-28-16	5-13-11	° ' "
R	250		m
A	86.603	106.714	m
Ts	55.020	61.548	m
Es	3.331		m
Tc	20.197		m
Ls	30	45.552	m
Lc	40.306		m
L	115.858		m
e	4.2		%

NOTE: CURVE DATA IS REFERRED FROM FLYOVER DESIGN CENTERLINE ALIGNMENT

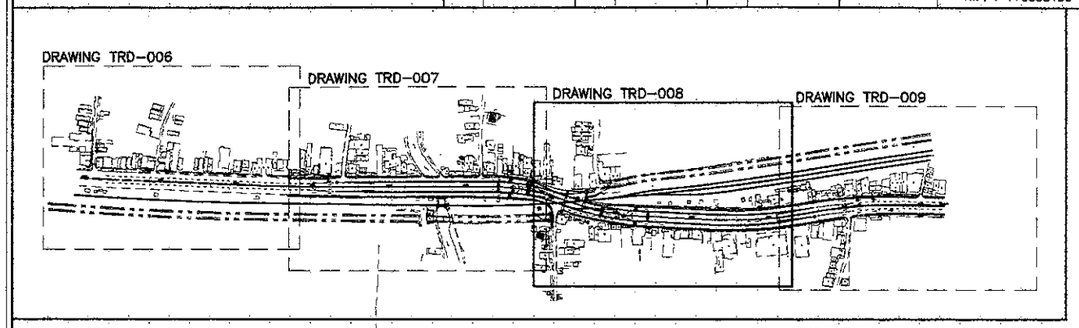


NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. FOR DETAILED CONSTRUCTION LAYOUT PLAN, REFER TO DWG. NOS. TRD-021 TO TRD-027
3. FOR TYPICAL SELECTED TARGET SECTIONS REFER TO DWG. NOS. TRD-014 TO TRD-018

1 ROADWAY PLAN (AT-GRADE)
SCALE 1:1000

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 1000	ROADWAY PLAN (AT-GRADE) 3 OF 4	TRD-008
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400				SHEET NO :
	Date	Date	Date	Sign / Date		FULL SIZE A3		08 / 62

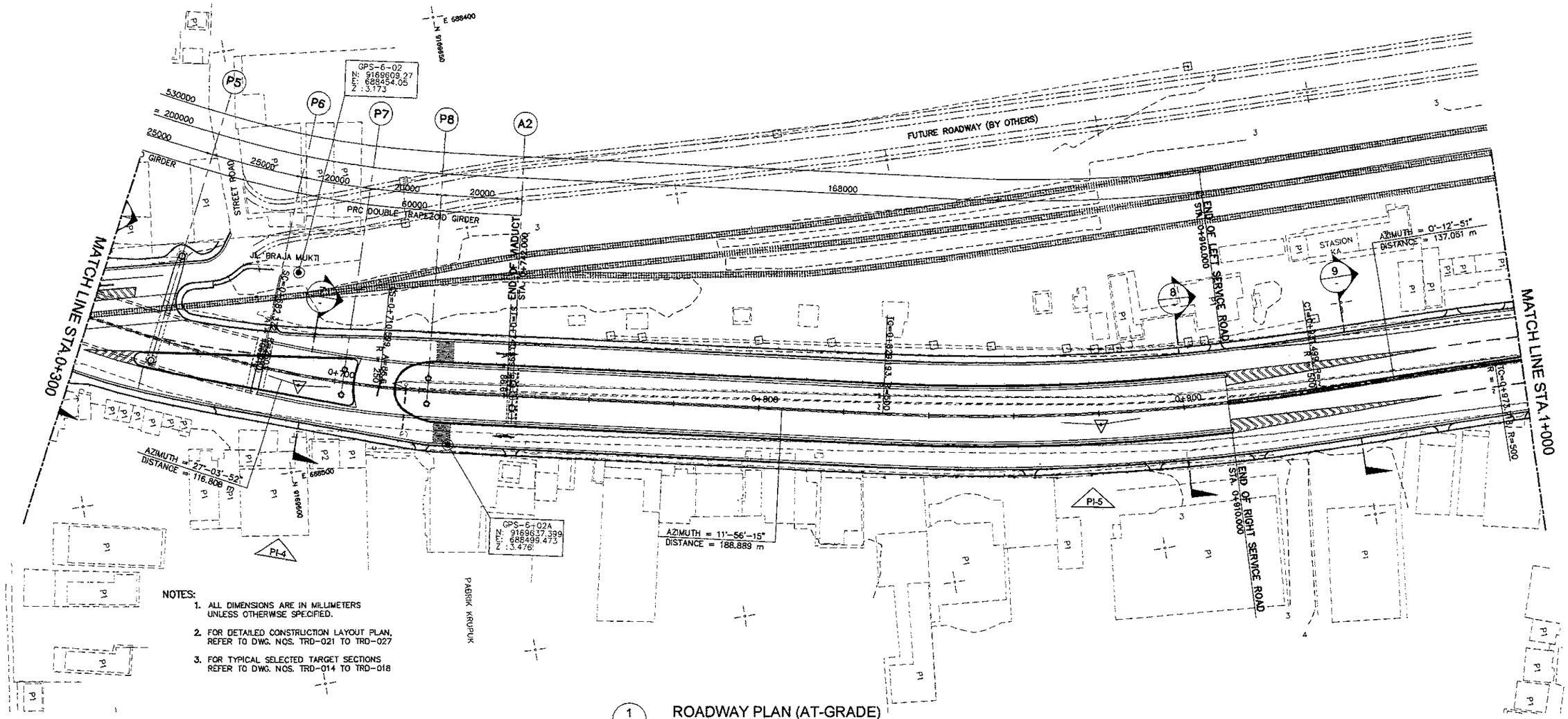


KEY PLAN

DATA	PI NO.-4		UNITS
PI STA.	STA. 0 + 692.080		
N	9169604.943		m
E	688480.183		m
V	60		km/h
Δ	15-07-38		° ' "
θs	5-13-11	3-26-16	° ' "
R	250		m
A	106.719	86.603	m
Ts	55.260	48.963	m
Es	2.445		m
Tc	14.129		m
Ls	45.552	30	m
Lc	28.227		m
L	103.779		m
e	4.2		%

DATA	PI NO.-5	UNITS
PI STA.	STA. 0 + 880.525	
N	9169789.747	m
E	688519.253	m
V	60	km/h
Δ	11-43-25	° ' "
θs	–	° ' "
R	500	m
A	–	m
Ts	–	m
Es	2.628	m
Tc	51.333	m
Ls	–	m
Lc	102.307	m
L	102.307	m
e	2.8	%

NOTE: CURVE DATA IS REFERRED FROM FLYOVER DESIGN CENTERLINE ALIGNMENT

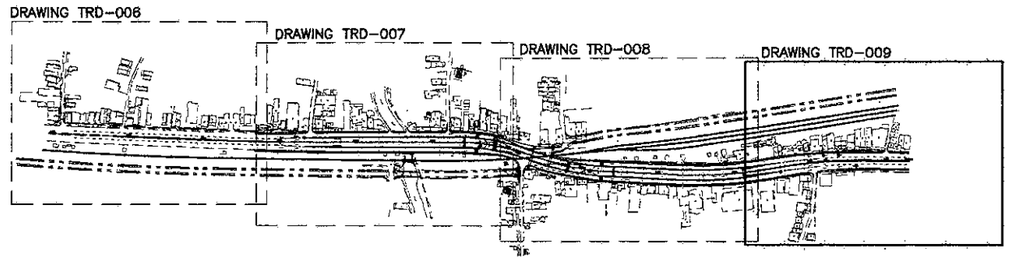


NOTES:

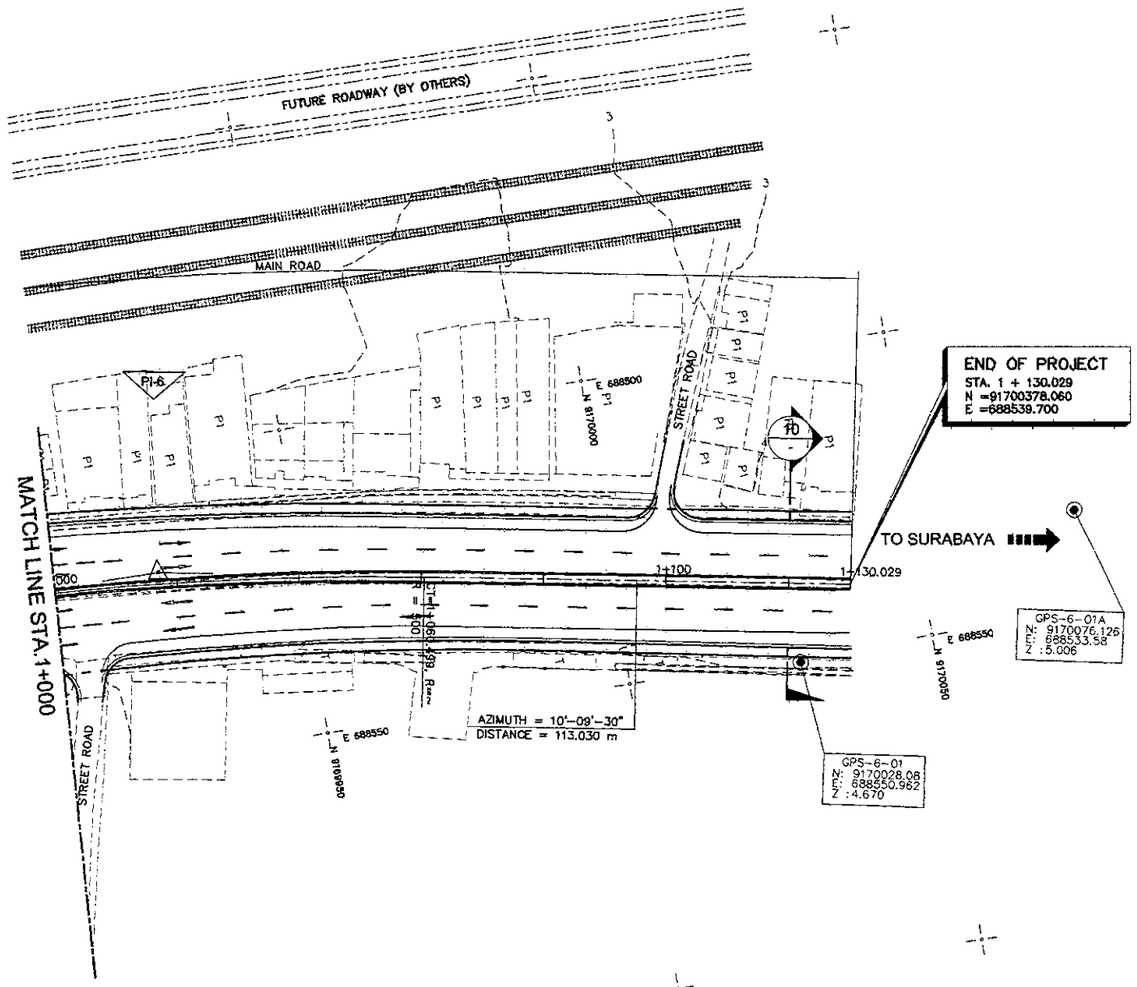
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. FOR DETAILED CONSTRUCTION LAYOUT PLAN, REFER TO DWG. NOS. TRD-021 TO TRD-027
3. FOR TYPICAL SELECTED TARGET SECTIONS REFER TO DWG. NOS. TRD-014 TO TRD-018

1 ROADWAY PLAN (AT-GRADE)
SCALE 1:1000

JICA JAPAN INTERNATIONAL COOPERATION AGENCY / KEI KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 1000	ROADWAY PLAN (AT-GRADE) 4 OF 4	TRD-009
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M.Eng.Sc				SHEET NO :
	Date	Date	Date	NIP. : 110038400 Sign / Date		FULL SIZE A3		09 / 62



KEY PLAN



NOTES:

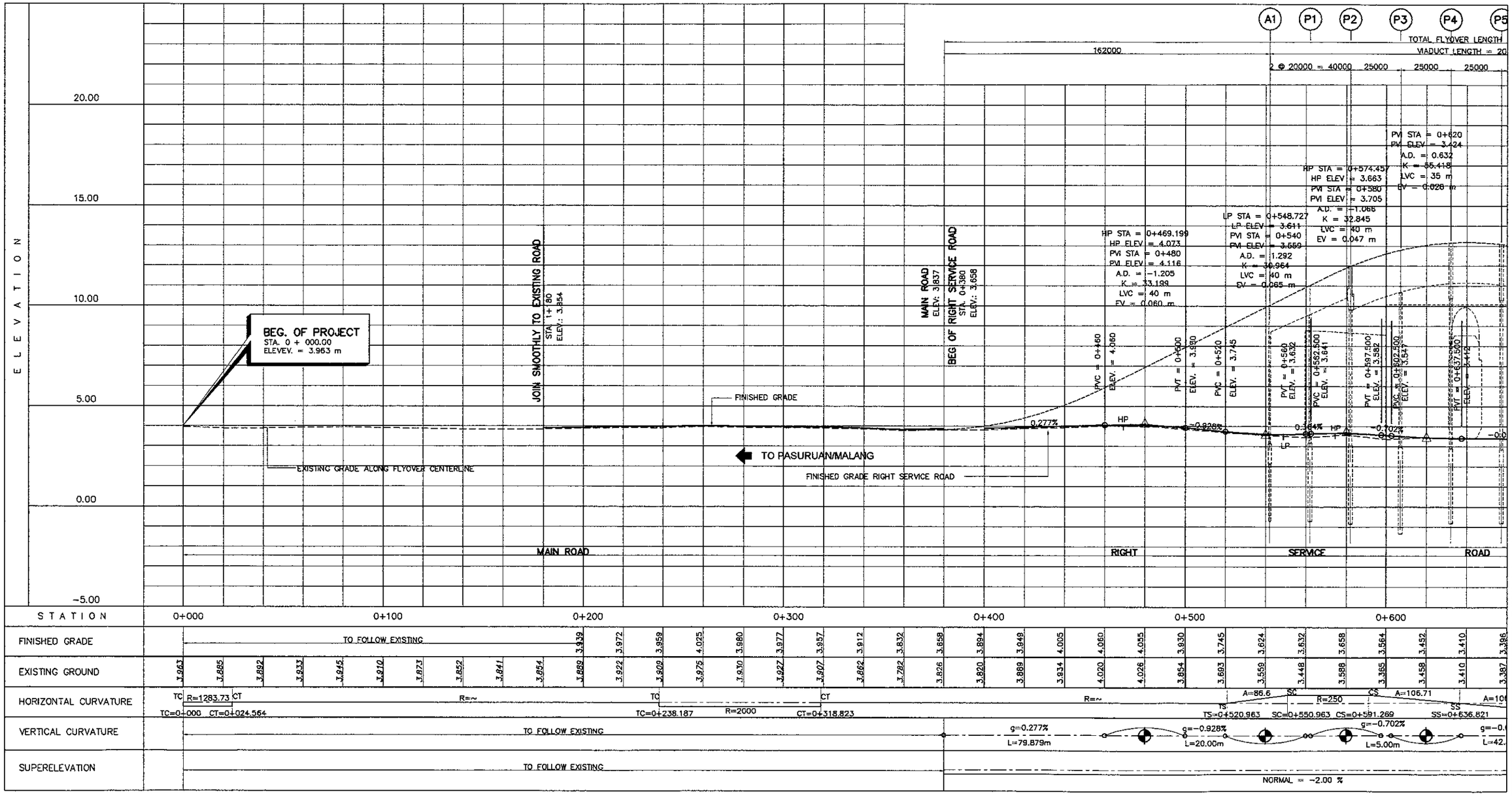
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. FOR DETAILED CONSTRUCTION LAYOUT PLAN, REFER TO DWG. NOS. TRD-021 TO TRD-027
3. FOR TYPICAL SELECTED TARGET SECTIONS REFER TO DWG. NOS. TRD-014 TO TRD-018

1 / - ROADWAY PLAN (AT-GRADE)
SCALE 1:1000

DATA	PI NO. - 6	UNITS
PI STA.	STA. 0 + 017.218	
N	9169926.797	m
E	688519.766	m
V	60	km/h
Δ	9-56-40	...°...'..."
θs	–	...°...'..."
R	500	m
A	–	m
Ts	–	m
Es	1.889	m
Tc	43.500	m
Ls	–	m
Lc	86.781	m
L	86.781	m
e	2.1	%

NOTE: CURVE DATA IS REFERRED FROM FLYOVER DESIGN CENTERLINE ALIGNMENT

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	H=1 : 2000 V=1 : 200 FULL SIZE A3	PROFILE OF MAIN ROAD & RIGHT SERVICE ROAD 1 OF 2	TRD-010
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400				SHEET NO : 10 / 62
	Date	Date	Date	Sign / Date				

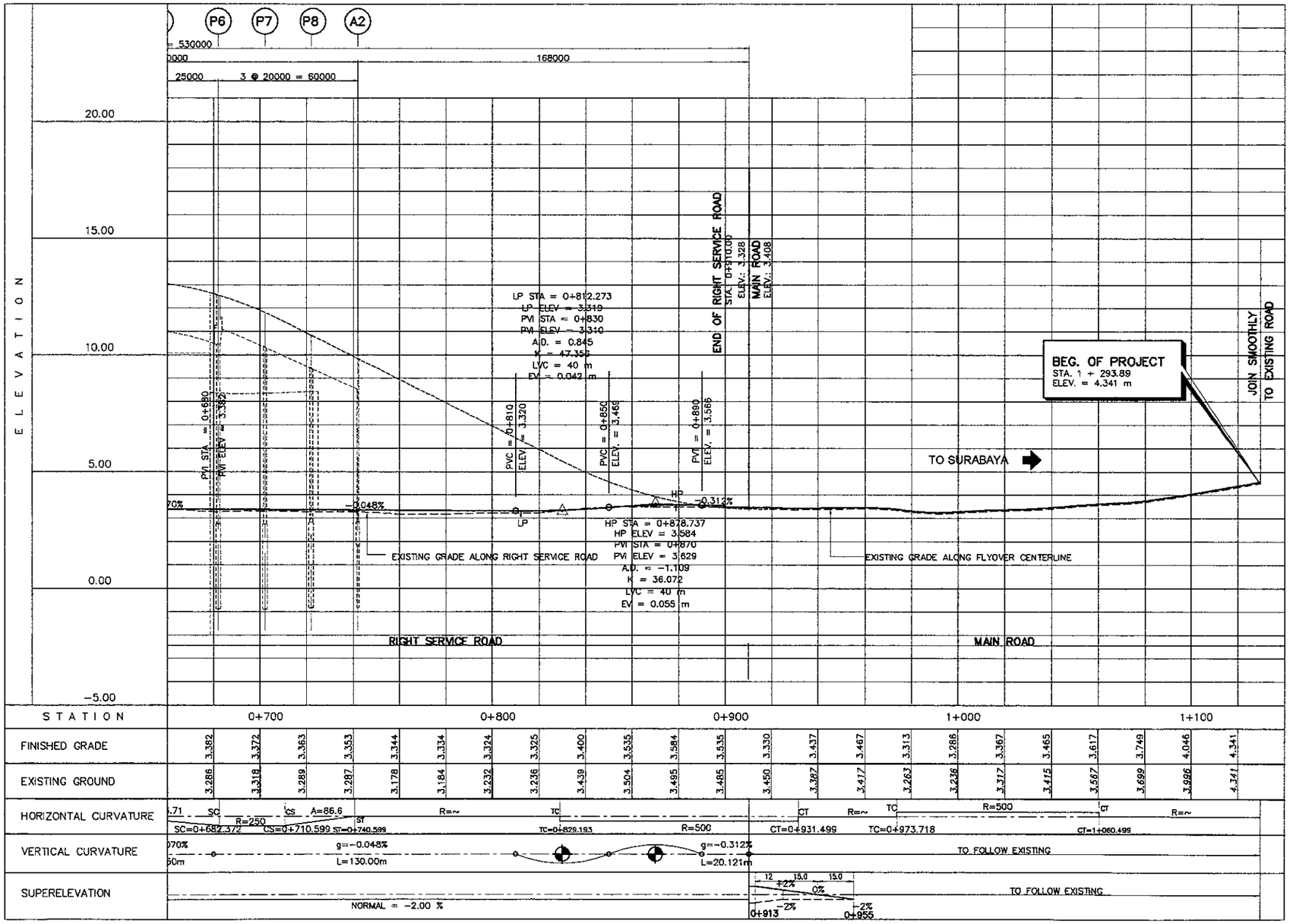


1 / - PROFILE OF MAIN ROAD & RIGHT SERVICE ROAD (1 OF 2)
SCALE H = 1 : 2000 V = 1 : 200

NOTES:

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

JICA JAPAN INTERNATIONAL COOPERATION AGENCY / KEI KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	H=1 : 2000 V=1 : 200	PROFILE OF MAIN ROAD & RIGHT SERVICE ROAD 2 OF 2	TRD-011
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400		FULL SIZE A3		SHEET NO : 11 / 62
	Date	Date	Date	Sign / Date				



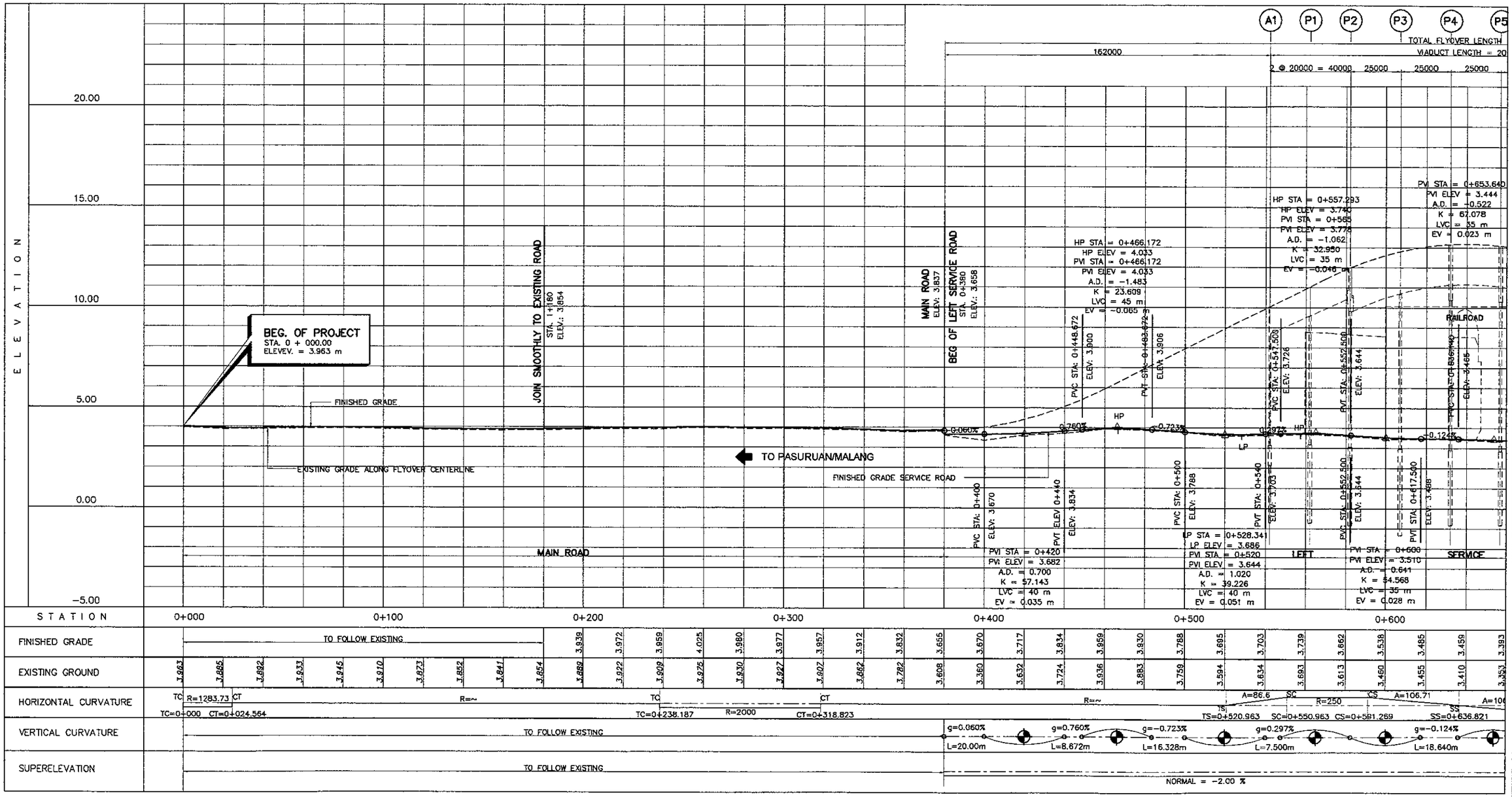
1 / - PROFILE OF MAIN ROAD & RIGHT SERVICE ROAD (2 OF 2)

SCALE H = 1 : 2000 V = 1 : 200

NOTES:

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

JICA JAPAN INTERNATIONAL COOPERATION AGENCY / KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	H=1 : 2000 V=1 : 200	PROFILE OF MAIN ROAD & LEFT SERVICE ROAD 1 OF 2	TRD-012
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M.Eng.Sc NIP. : 110038400		FULL SIZE A3		SHEET NO : 12 / 62
	Date	Date	Date	Sign / Date				



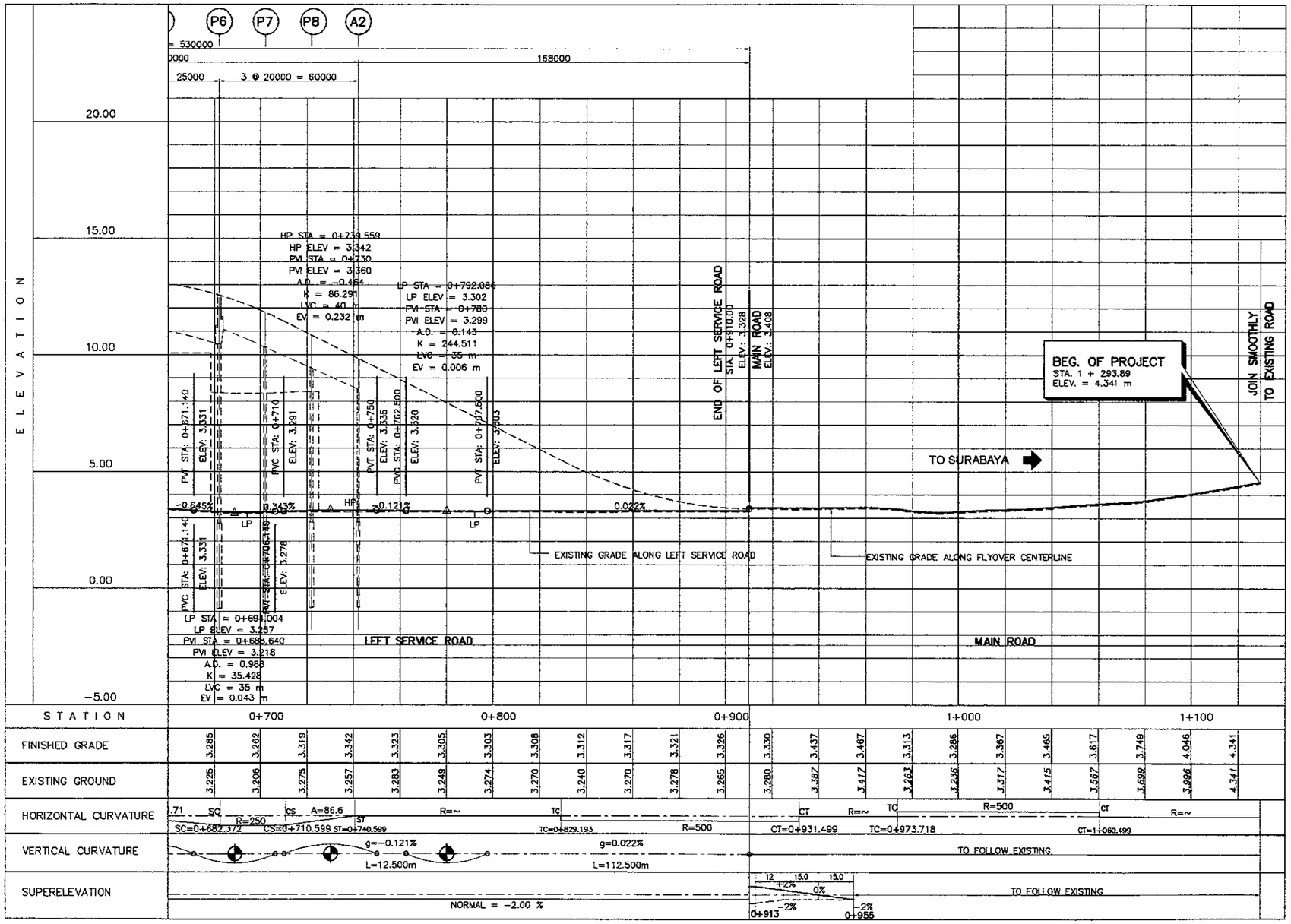
1 / - PROFILE OF MAIN ROAD & LEFT SERVICE ROAD (1 OF 2)

SCALE H = 1 : 2000 V = 1 : 200

NOTES:

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

JICA JAPAN INTERNATIONAL COOPERATION AGENCY / KEI KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	H=1 : 2000 V=1 : 200	PROFILE OF MAIN ROAD & LEFT SERVICE ROAD 2 OF 2	TRD-013
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400		FULL SIZE A3		SHEET NO : 13 / 62
	Date	Date	Date	Sign / Date				

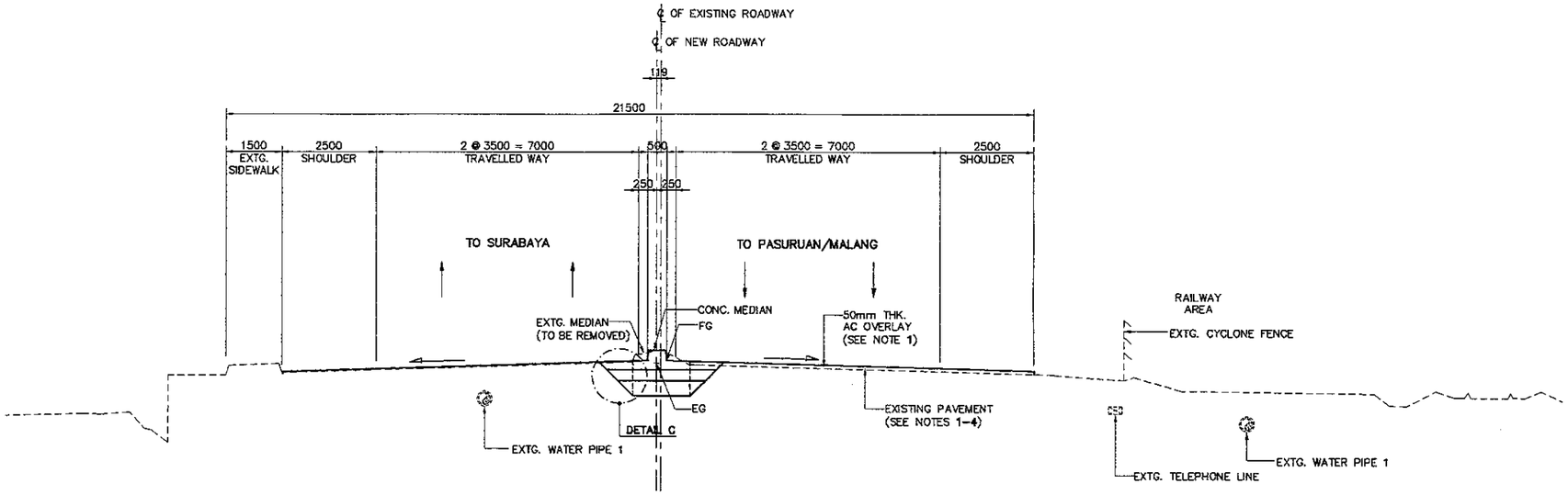


1 / - PROFILE OF MAIN ROAD & LEFT SERVICE ROAD (2 OF 2)
SCALE H = 1 : 2000 V = 1 : 200

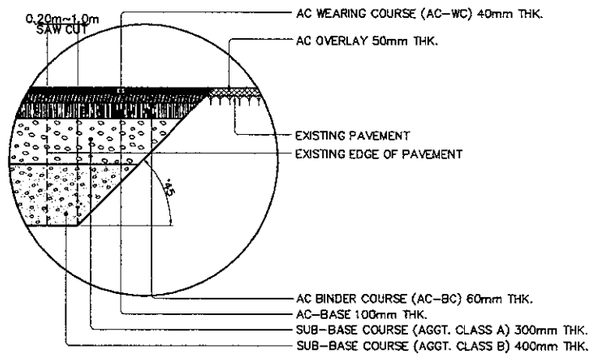
NOTES:

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

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 150	TYPICAL ROAD CROSS SECTION (1 OF 5)	TRD-014
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400		FULL SIZE A3		SHEET NO : 14 / 62
	Date	Date	Date	Sign / Date				



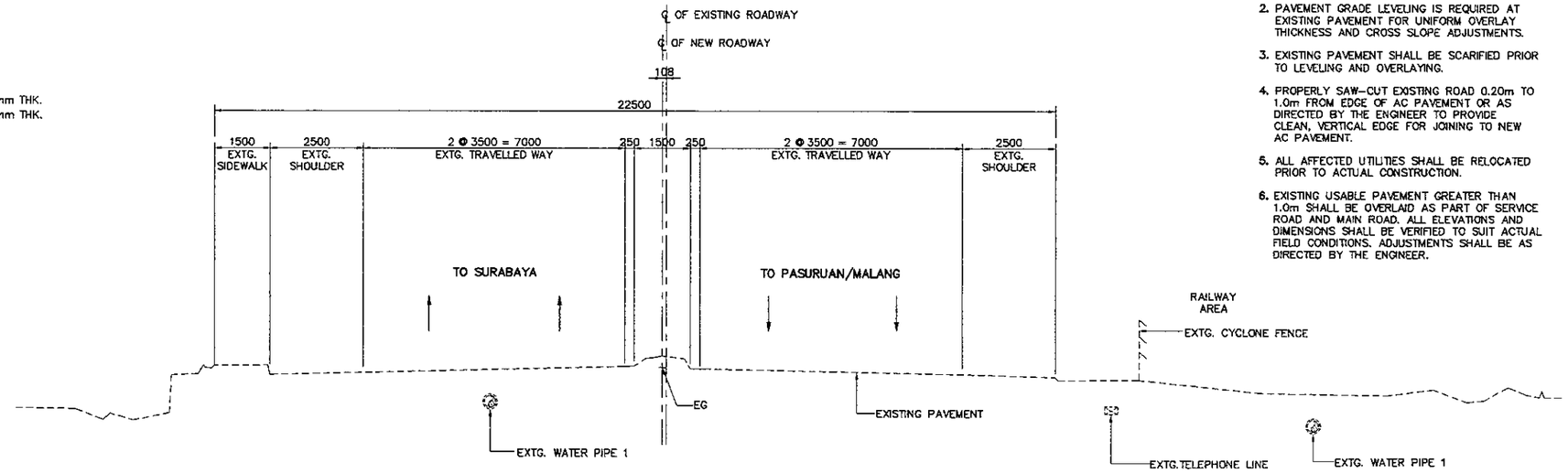
2 - SECTION OF EXISTING ROADWAY NEAR START OF FLYOVER (STA. 0+260.000)
SCALE 1:150



DETAIL C
SCALE 1:40

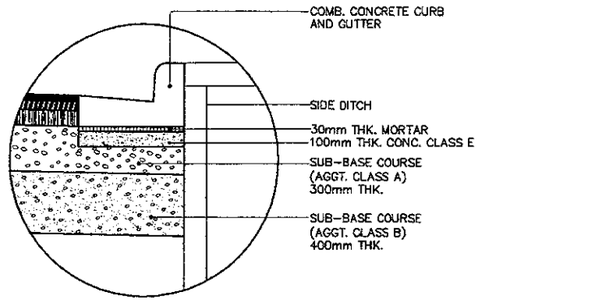
NOTES:

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.

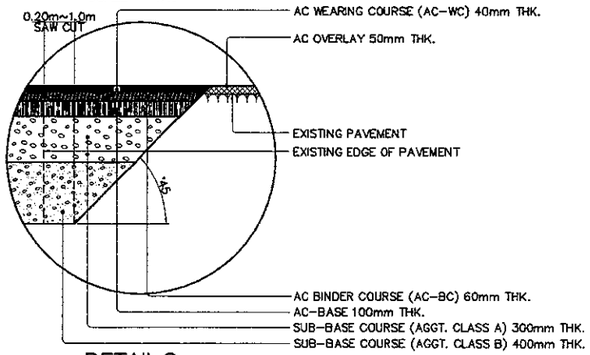


1 - SECTION AT EXISTING ROADWAY (STA. 0+120.000)
SCALE 1:150

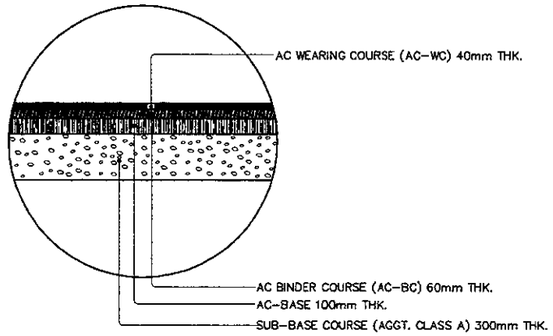
JICA / JAPAN INTERNATIONAL COOPERATION AGENCY	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
KEI KATAHIRA & ENGINEERS INTERNATIONAL	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400	DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 150 FULL SIZE A3	TYPICAL ROAD CROSS SECTION (2 OF 5)	TRD-015 SHEET NO : 15 / 62
	Sign	Sign	Sign	Sign				
	Date	Date	Date	Date				



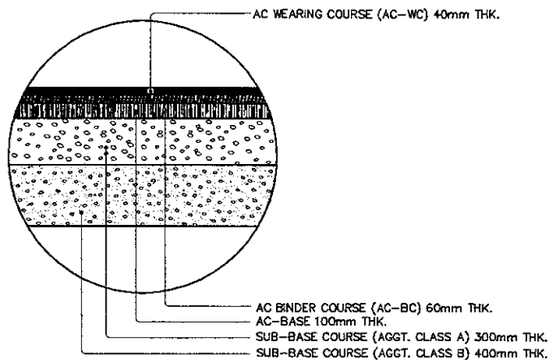
DETAIL D
SCALE 1:40



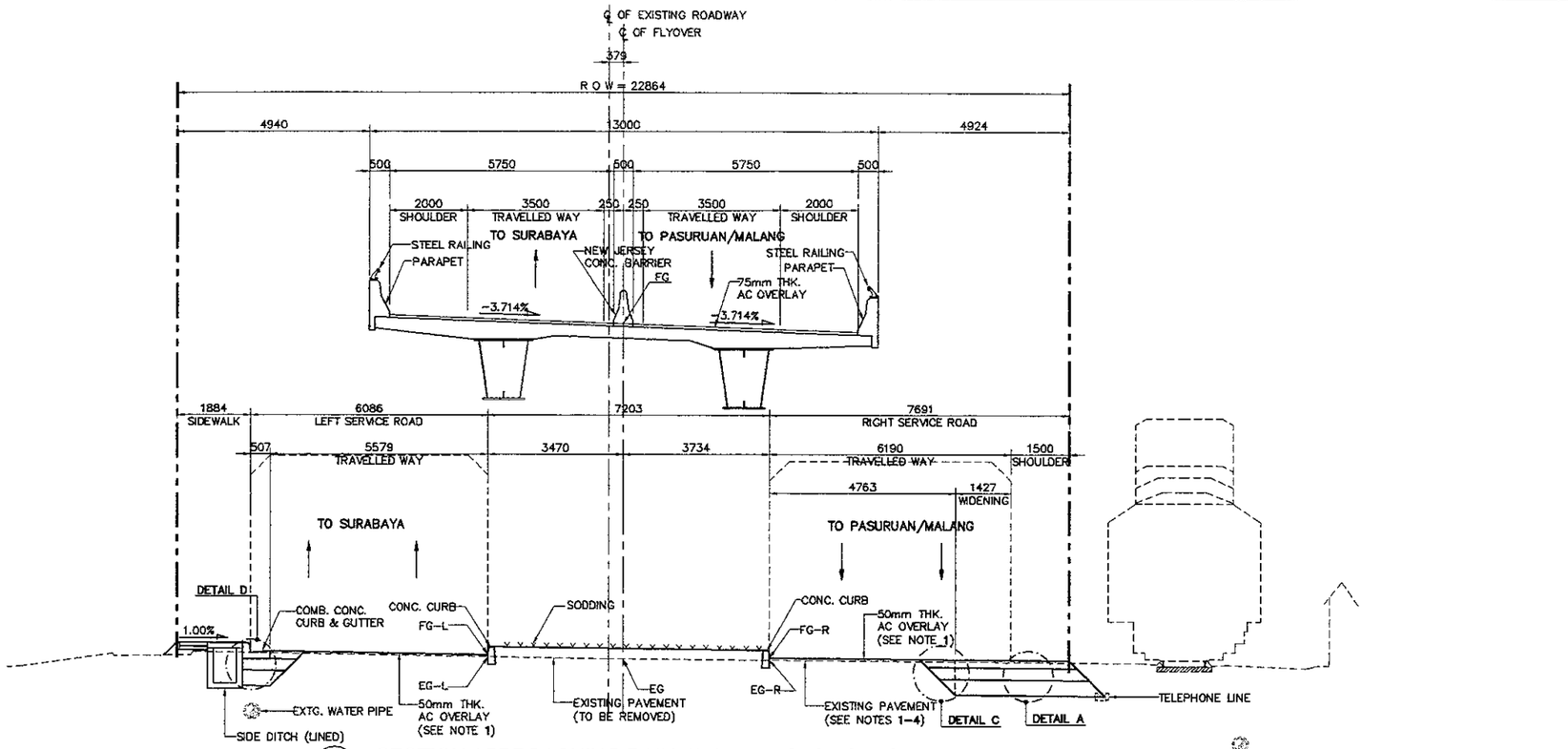
DETAIL C
SCALE 1:40



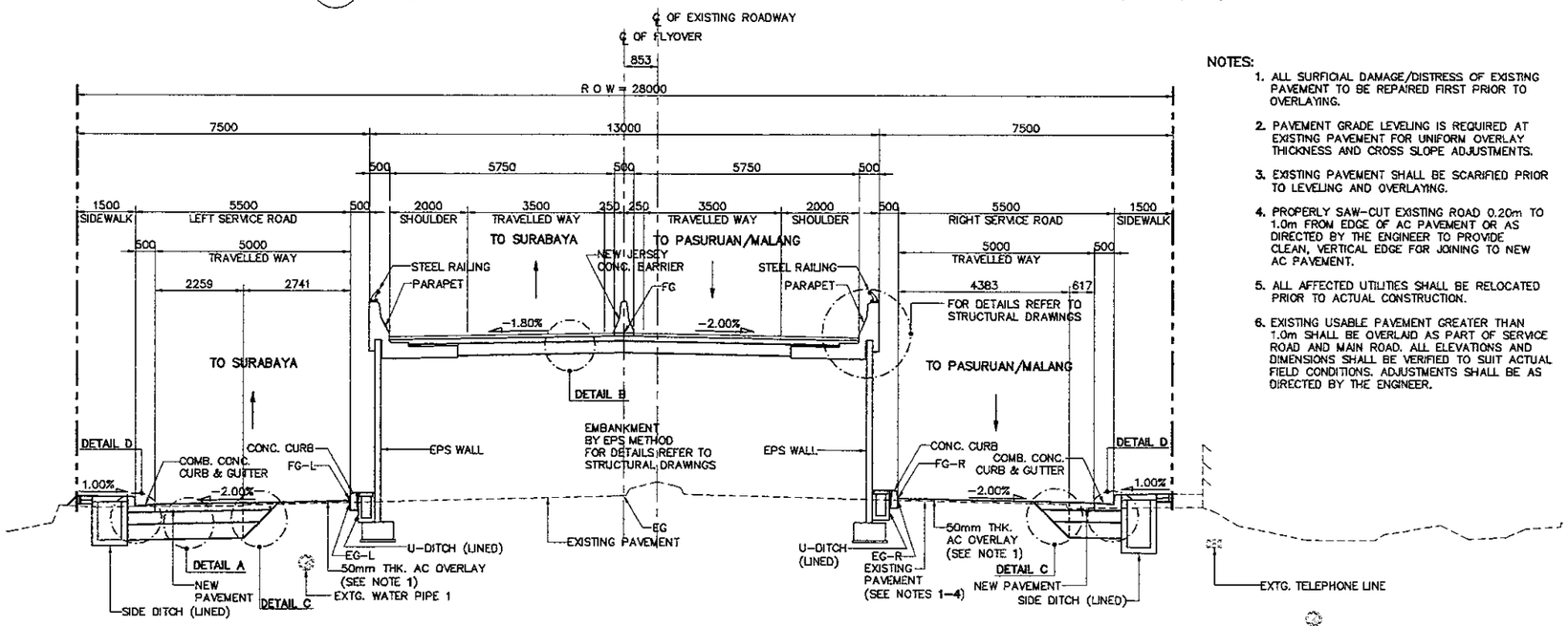
DETAIL B
SCALE 1:40



DETAIL A
SCALE 1:40



4 - SECTION APPROACHING RAILWAY INTERSECTION (STA. 0+600.000)
SCALE 1:150

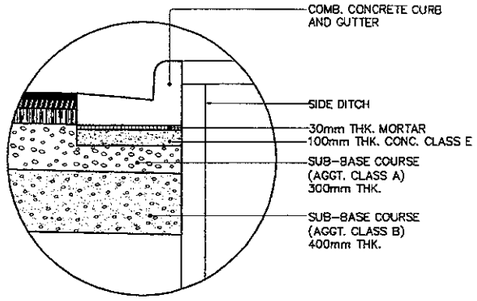


3 - SECTION AT APPROACH RAMP (STA. 0+500.000)
SCALE 1:150

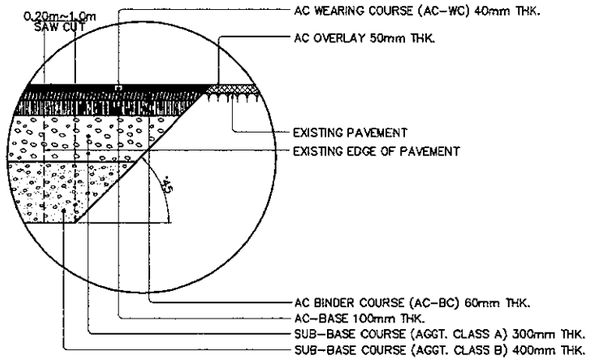
NOTES:

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.

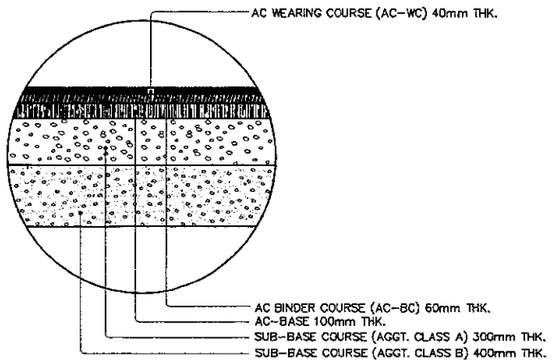
JICA JAPAN INTERNATIONAL COOPERATION AGENCY / KEI KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name R. UENO	Name T. OKUMURA	Name M. KIUCHI	APPROVED BY Ir. HERRY VAZA M,Eng.Sc	DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 150	TYPICAL ROAD CROSS SECTION (3 OF 5)	TRD-016
	Sign	Sign	Sign	NIP. : 110038400 Sign		FULL SIZE A3		SHEET NO : 16 / 62
	Date	Date	Date	Date				



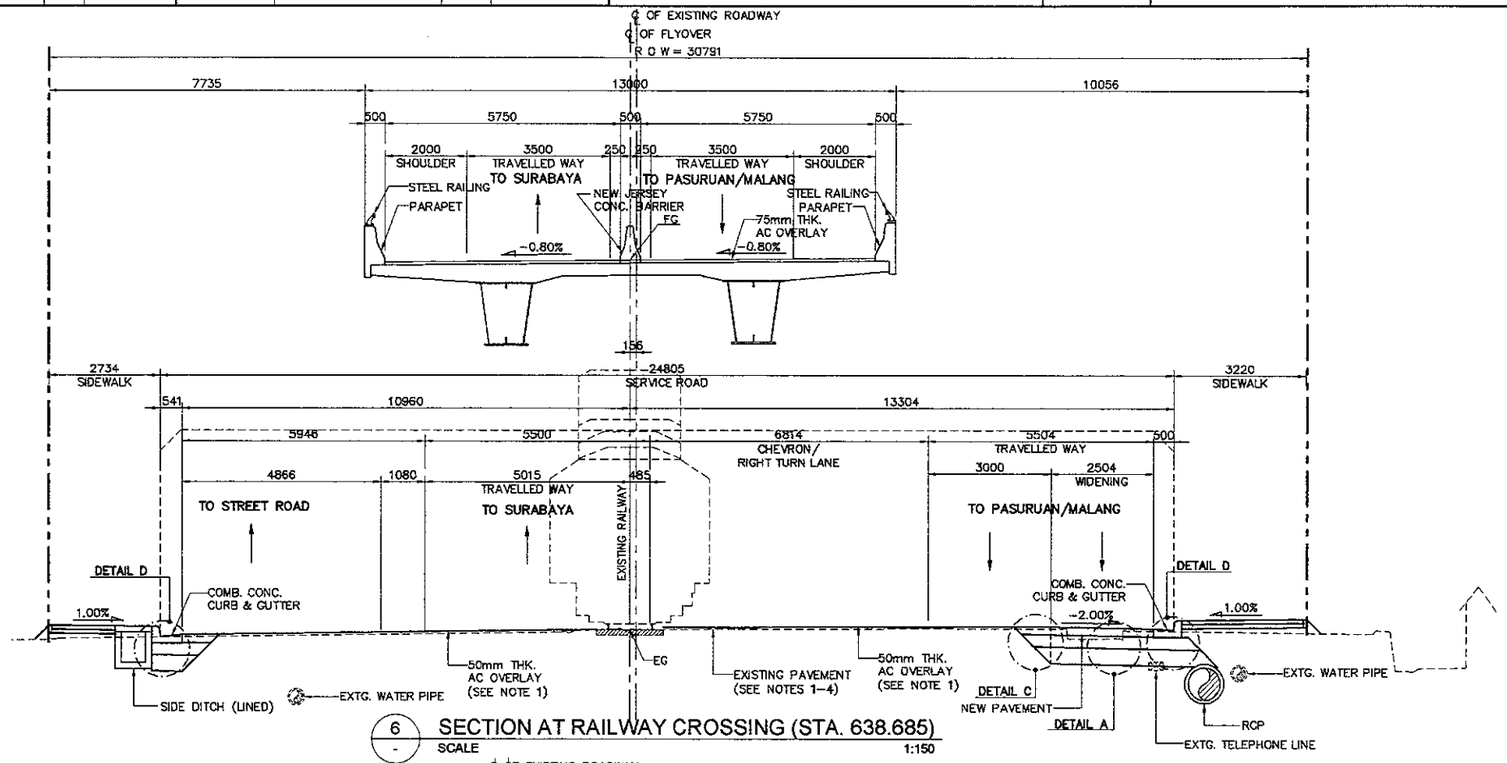
DETAIL D
SCALE 1:40



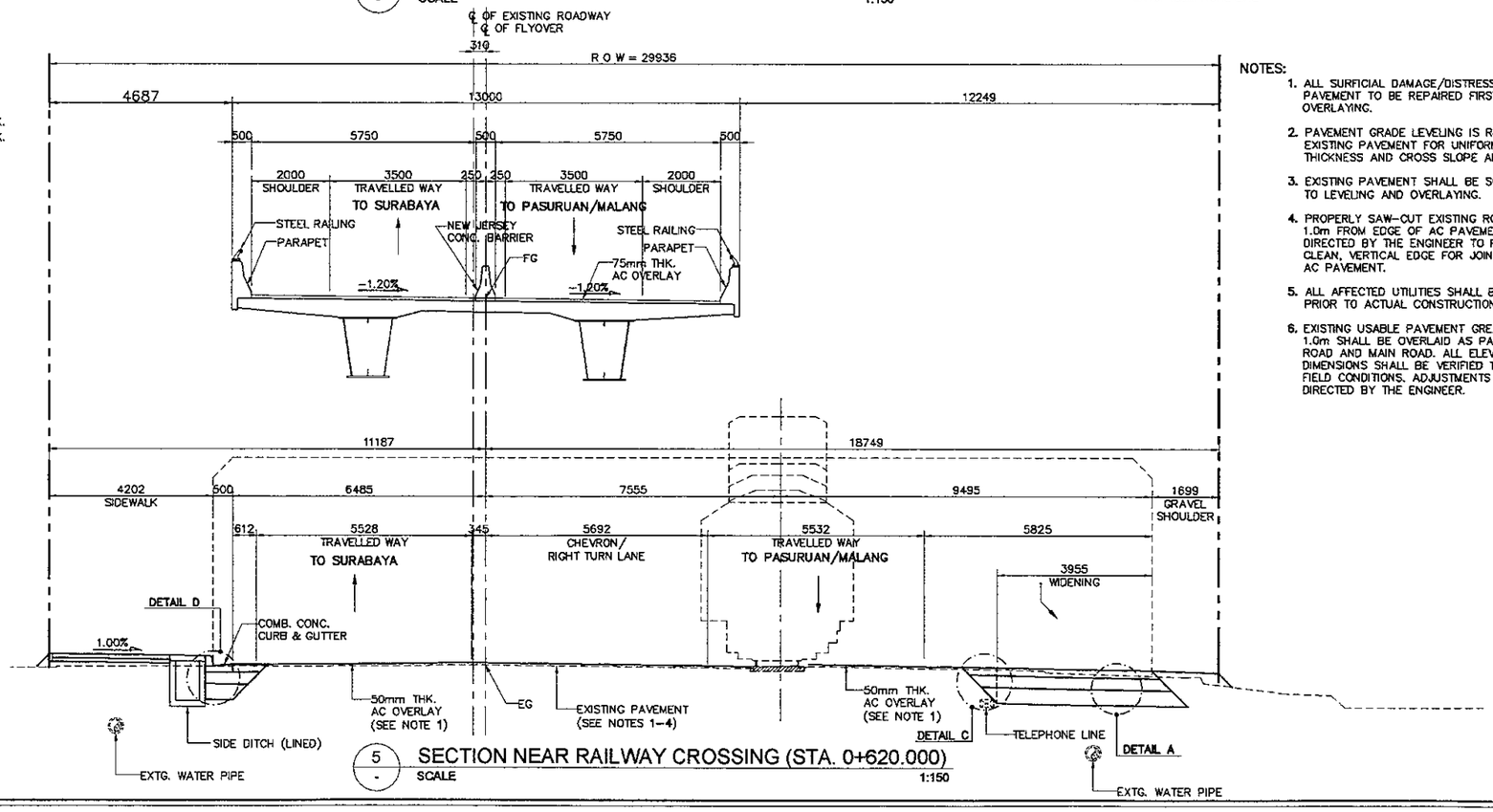
DETAIL C
SCALE 1:40



DETAIL A
SCALE 1:40



6 SECTION AT RAILWAY CROSSING (STA. 638.685)
SCALE 1:150

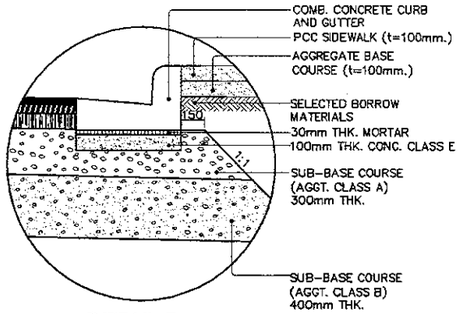


5 SECTION NEAR RAILWAY CROSSING (STA. 0+620.000)
SCALE 1:150

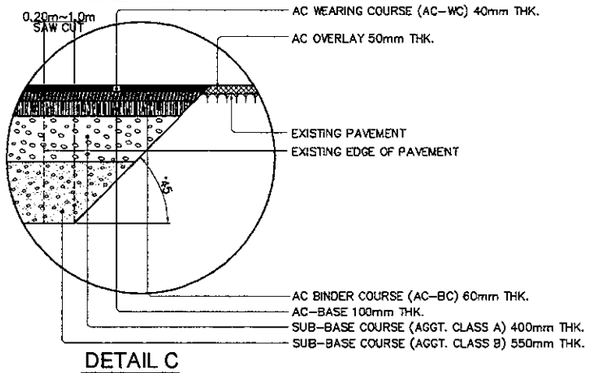
NOTES:

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.

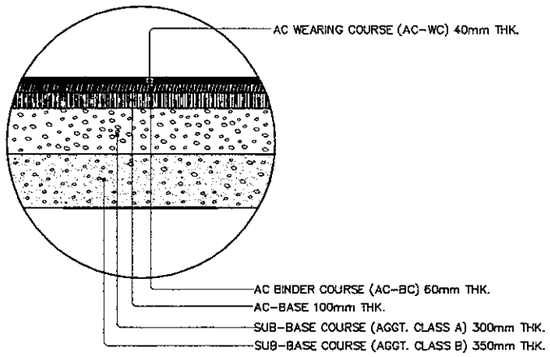
JICA JAPAN INTERNATIONAL COOPERATION AGENCY / KEI KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 150	TYPICAL ROAD CROSS SECTION (4 OF 5)	TRD-017
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400		FULL SIZE A3		SHEET NO : 17 / 62
	Date	Date	Date	Sign / Date				



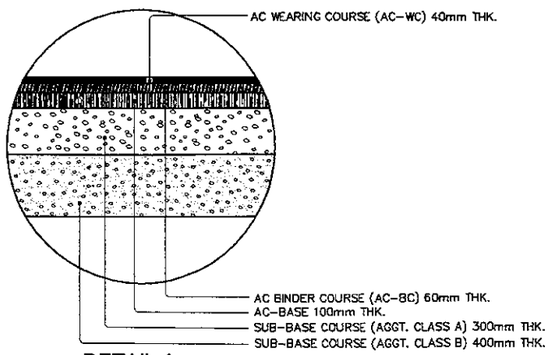
DETAIL D
SCALE 1:40



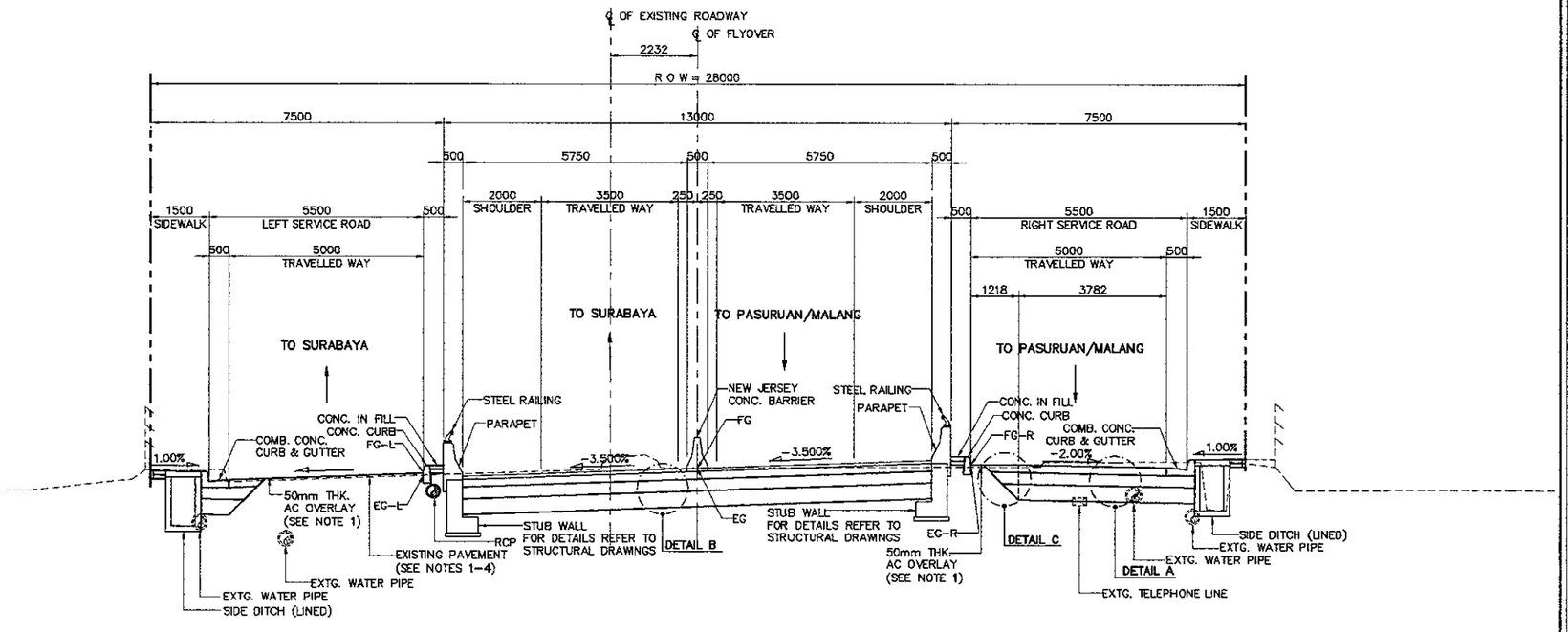
DETAIL C
SCALE 1:40



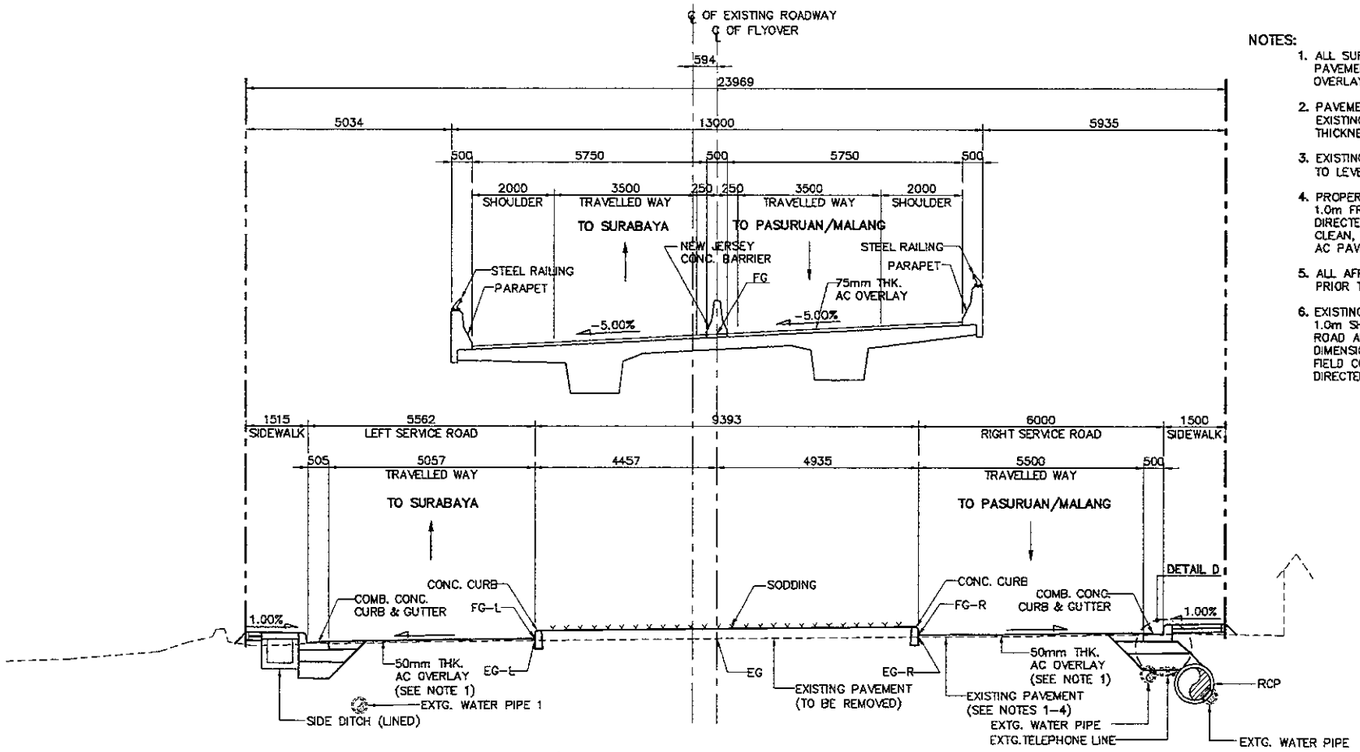
DETAIL B
SCALE 1:40



DETAIL A
SCALE 1:40



8 - SECTION AT END OF FLYOVER (STA. 0+900.000)
SCALE 1:150

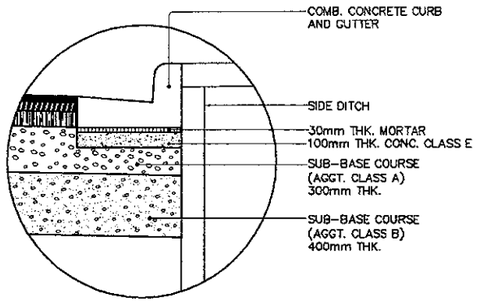


7 - SECTION (STA. 0+693.530)
SCALE 1:150

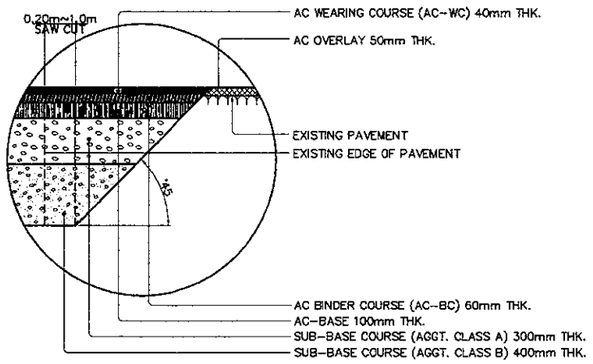
NOTES:

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.

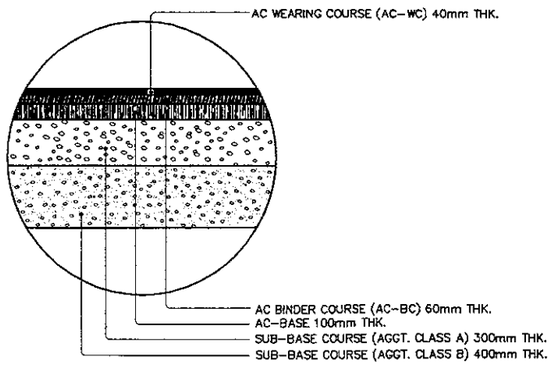
JICA JAPAN INTERNATIONAL COOPERATION AGENCY / KEI KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 150	TYPICAL ROAD CROSS SECTION (5 OF 5)	TRD-018
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400				SHEET NO : 18 / 62
	Date	Date	Date	Sign / Date		FULL SIZE A3		



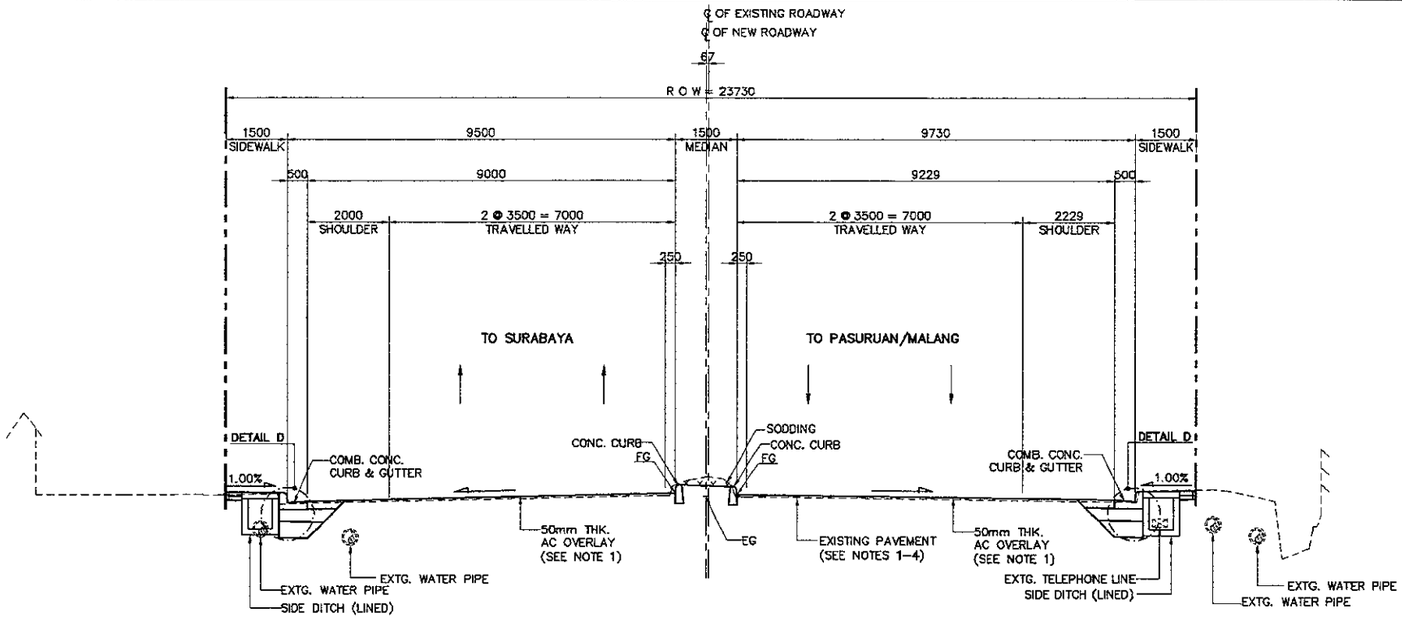
DETAIL D
SCALE 1:40



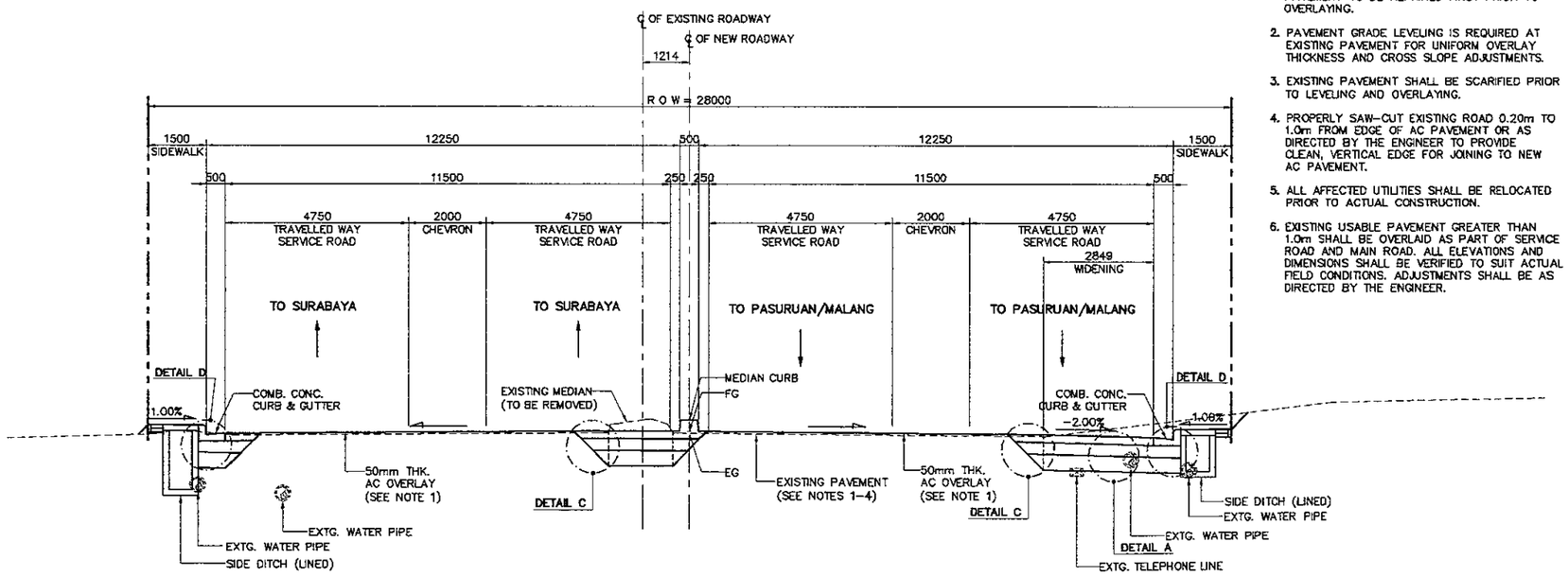
DETAIL C
SCALE 1:40



DETAIL A
SCALE 1:40



10 - SECTION NEAR END OF PROJECT (STA. 1+120.000)
SCALE 1:150

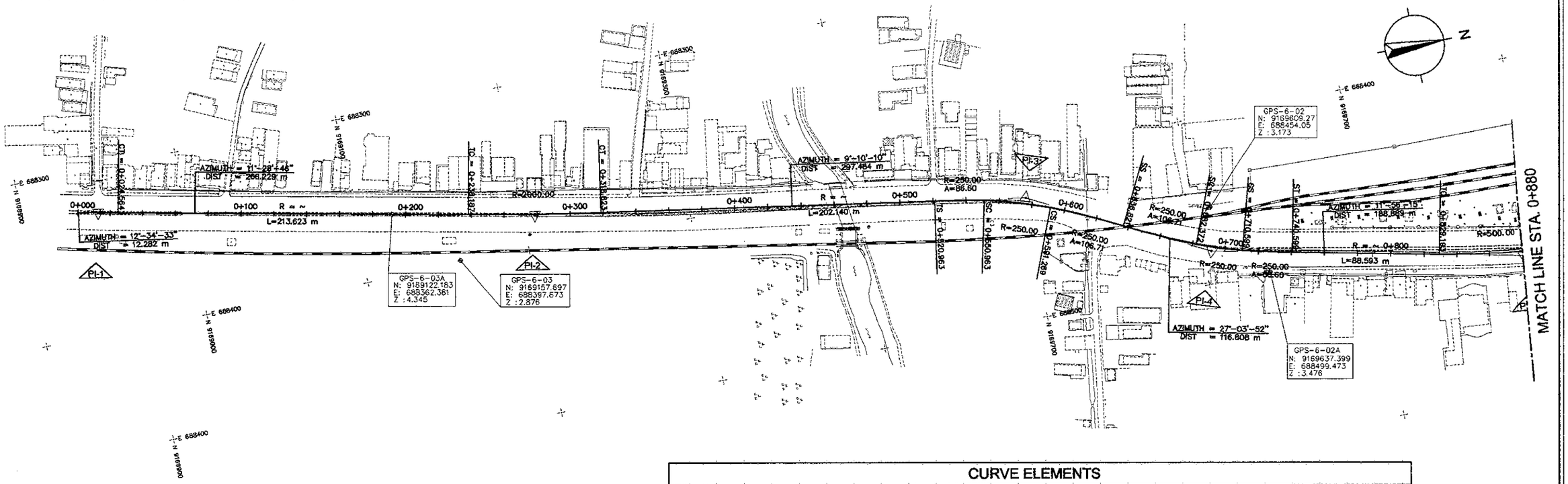


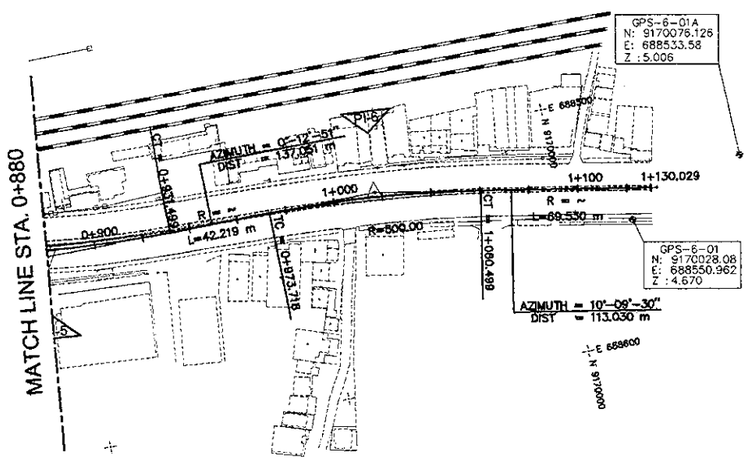
9 - SECTION NEAR END OF FLYOVER (STA. 0+940.000)
SCALE 1:150

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.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY / KEI KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 2500	ALIGNMENT LAYOUT AND CURVE ELEMENTS	TRD-019
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400				SHEET NO : 19 / 62
	Date	Date	Date	Sign / Date		FULL SIZE A3		





REFERENCE PEGS LAYOUT

	GPS-6-03A	GPS-6-03	GPS-6-02	GPS-6-02A	GPS-6-01	GPS-6-01A
N	9169122.183	9169157.697	9169609.27	9169637.399	9170028.08	9170076.126
E	688362.381	688397.873	688454.05	688499.473	688550.962	688533.58
Z	4.345	2.876	3.173	3.476	4.670	5.006

1 / - ALIGNEMENT LAYOUT AND CURVE ELEMENTS
SCALE 1:1000

CURVE ELEMENTS

	BP		PI - 1	PI - 2	PI - 3		PI - 4		PI - 5	PI - 6		EP
STA	0+000	V (Km/Hours)	40	40	60		60		60	40	V (Km/Hours)	STA 1+130.029
N	9168934.353	TYPE	LEFT	LEFT	LEFT		RIGHT		LEFT	RIGHT	TYPE	N 9170038.055
E	688323.973	△	1-05-47	2-18-36	17-53-42		15-07-36		11-43-25	9-56-40	△	E 688539.701
		R (m)	1283.735	2000	250		250		500	500	R (m)	
		A (m)			86.603	106.714	106.714	86.603			A (m)	
		TS / TC (m)	12.282	40.325	20.197			14.129	51.333	43.500	TS / TC (m)	
		LC (m)	24.564	80.637	40.306		28.227		102.307	86.781	LC (m)	
		LS (m)			30.000	45.552	45.552	30.000			LS (m)	
		L (m)	24.564	80.637	115.858		103.779		102.307	86.781	L (m)	
		e max (%)	EXISTING	Normal = 2	5.0		5.0		3.5	EXISTING	e max (%)	
	PI	STA	0+012.282	0+278.510	0+575.983		0+692.080		0+880.525	1+017.218	STA PI	
		N	9168948.341	9169207.244	9169500.926		9169604.943		9169789.747	9169926.797	N	
		E	688326.647	688379.631	688427.036		688480.183		688519.253	688519.766	E	
	TS/SS	STA			0+520.963		0+636.821				STA TS/SS	
		N			9169446.809		9169555.735				N	
		E			688418.268		688455.040				E	
	SC/TC /CC	STA	0+000.000	0+238.187	0+550.963		0+682.372		0+829.193	0+973.718	STA SC/TC /CC	
		N	9168934.353	9169167.727	9169476.120		9169596.894		9169739.525	9169883.298	N	
		E	688323.973	688371.606	688423.639		688474.517		688508.636	688519.603	E	
	CS/CT /CC	STA	0+024.564	0+318.823	0+591.269		0+710.599		0+931.499	1+060.499	STA CS/CT /CC	
		N	9168958.377	9169247.053	9169514.578		9169623.631		9169841.079	9169969.615	N	
		E	688329.092	688386.057	688435.563		688483.520		688519.445	688527.438	E	
	ST/SS	STA			0+636.821		0+740.599				STA ST/SS	
		N			9169555.735		9169652.847				N	
		E			688455.040		688490.310				E	
12-34-33		AZIMUTH	11-28-46	11-28-46	27-03-52		11-56-15		0-12-51	10-09-30	AZIMUTH	10-09-30

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY		CHECKED BY		SUBMITTED BY		REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name	R. UENO	Name	T. OKUMURA	Name	M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 500	GEOMETRIC LAYOUT PLAN AT INTERSECTION	TRD-020
	Sign		Sign		Sign		APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400				SHEET NO :
	Date		Date		Date		Sign / Date		FULL SIZE A3		20 / 62

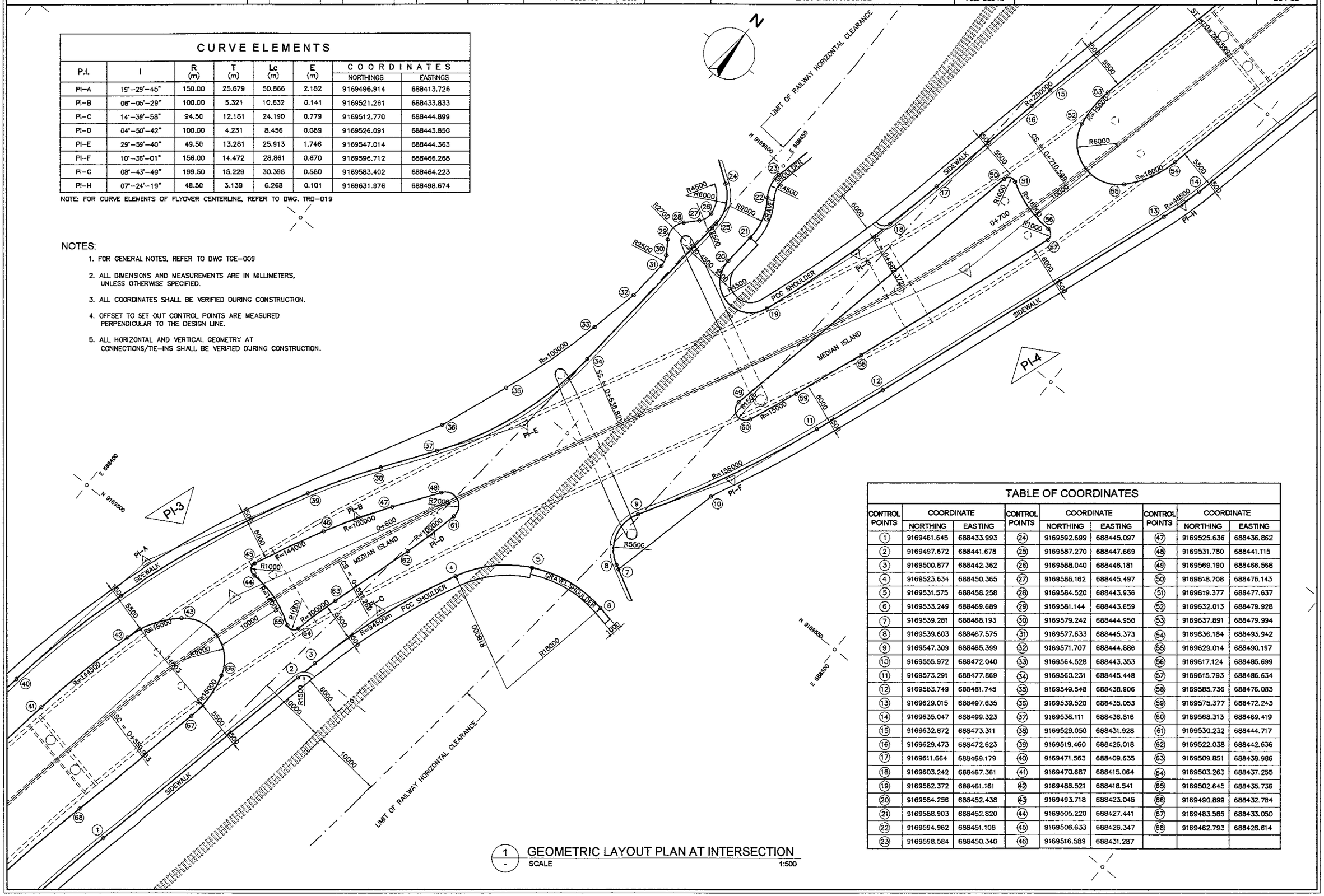
CURVE ELEMENTS

P.I.	I	R (m)	T (m)	Lc (m)	E (m)	COORDINATES NORTHINGS	COORDINATES EASTINGS
PI-A	19°-29'-45"	150.00	25.679	50.866	2.182	9169496.914	688413.726
PI-B	06°-05'-29"	100.00	5.321	10.632	0.141	9169521.261	688433.833
PI-C	14°-39'-58"	94.50	12.181	24.190	0.779	9169512.770	688444.899
PI-D	04°-50'-42"	100.00	4.231	8.456	0.089	9169526.091	688443.850
PI-E	29°-59'-40"	49.50	13.261	25.913	1.746	9169547.014	688444.363
PI-F	10°-36'-01"	156.00	14.472	28.861	0.670	9169596.712	688466.268
PI-G	08°-43'-49"	199.50	15.229	30.398	0.580	9169583.402	688464.223
PI-H	07°-24'-19"	48.50	3.139	6.268	0.101	9169631.976	688498.674

NOTE: FOR CURVE ELEMENTS OF FLYOVER CENTERLINE, REFER TO DWG. TRD-019

NOTES:

1. FOR GENERAL NOTES, REFER TO DWG TGE-009
2. ALL DIMENSIONS AND MEASUREMENTS ARE IN MILLIMETERS, UNLESS OTHERWISE SPECIFIED.
3. ALL COORDINATES SHALL BE VERIFIED DURING CONSTRUCTION.
4. OFFSET TO SET OUT CONTROL POINTS ARE MEASURED PERPENDICULAR TO THE DESIGN LINE.
5. ALL HORIZONTAL AND VERTICAL GEOMETRY AT CONNECTIONS/TIE-INS SHALL BE VERIFIED DURING CONSTRUCTION.

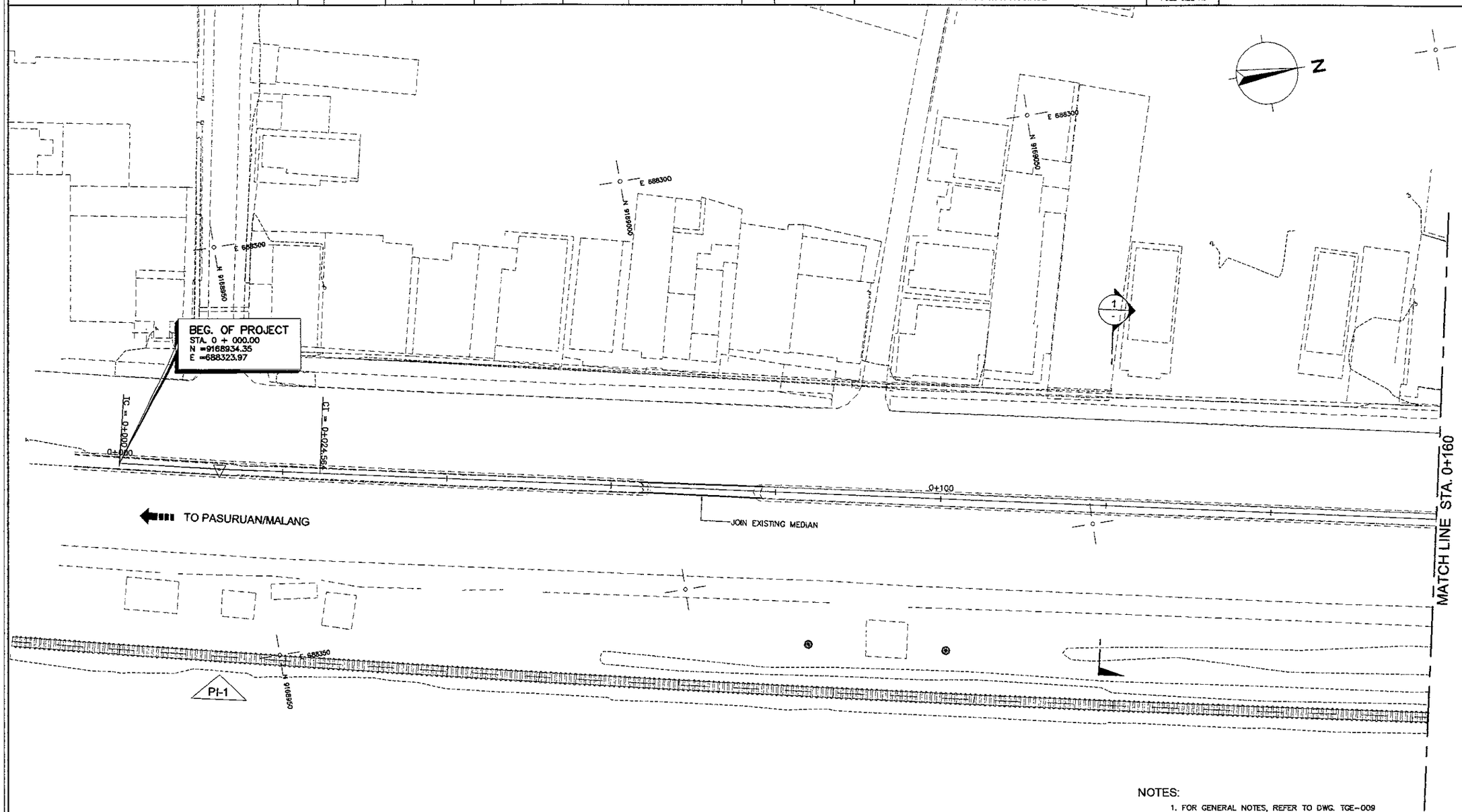


1 - GEOMETRIC LAYOUT PLAN AT INTERSECTION
SCALE 1:500

TABLE OF COORDINATES

CONTROL POINTS	COORDINATE NORTHING	COORDINATE EASTING	CONTROL POINTS	COORDINATE NORTHING	COORDINATE EASTING	CONTROL POINTS	COORDINATE NORTHING	COORDINATE EASTING
1	9169461.645	688433.993	24	9169592.699	688445.097	47	9169525.636	688436.862
2	9169497.672	688441.678	25	9169587.270	688447.669	48	9169531.780	688441.115
3	9169500.877	688442.362	26	9169588.040	688446.181	49	9169569.190	688466.568
4	9169523.634	688450.365	27	9169586.162	688445.497	50	9169618.708	688476.143
5	9169531.575	688458.258	28	9169584.520	688443.936	51	9169619.377	688477.637
6	9169533.249	688469.689	29	9169581.144	688443.659	52	9169632.013	688479.928
7	9169539.281	688468.193	30	9169579.242	688444.950	53	9169637.891	688479.994
8	9169539.603	688467.575	31	9169577.633	688445.373	54	9169636.184	688493.942
9	9169547.309	688465.399	32	9169571.707	688444.886	55	9169629.014	688490.197
10	9169555.972	688472.040	33	9169564.528	688443.353	56	9169617.124	688485.699
11	9169573.291	688477.869	34	9169560.231	688445.448	57	9169615.793	688486.634
12	9169583.749	688481.745	35	9169549.548	688438.906	58	9169585.736	688476.083
13	9169629.015	688497.635	36	9169539.520	688435.053	59	9169575.377	688472.243
14	9169635.047	688499.323	37	9169536.111	688436.816	60	9169568.313	688469.419
15	9169632.872	688473.311	38	9169529.050	688431.928	61	9169530.232	688444.717
16	9169629.473	688472.623	39	9169519.460	688426.018	62	9169522.038	688442.636
17	9169611.664	688469.179	40	9169471.563	688409.635	63	9169509.851	688438.986
18	9169603.242	688467.361	41	9169470.687	688415.064	64	9169503.263	688437.255
19	9169582.372	688461.161	42	9169486.521	688418.541	65	9169502.645	688435.736
20	9169584.256	688452.438	43	9169493.718	688423.045	66	9169480.899	688432.784
21	9169588.903	688452.820	44	9169505.220	688427.441	67	9169483.585	688433.050
22	9169594.962	688451.108	45	9169506.633	688426.347	68	9169462.793	688428.614
23	9169598.584	688450.340	46	9169516.589	688431.287			

JICA JAPAN INTERNATIONAL COOPERATION AGENCY / KEI KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 500	DETAILED CONSTRUCTION LAYOUT PLAN 1 OF 7	TRD-021
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400				SHEET NO : 21 / 62
	Date	Date	Date	Sign / Date		FULL SIZE A3		



1 DETAILED CONSTRUCTION LAYOUT PLAN

SCALE 1:500

LEGEND:

- PAVEMENT OVERLAY
- PAVEMENT WIDENING -NEW PAVEMENT
- PAVEMENT AT APPROACH RAMPS

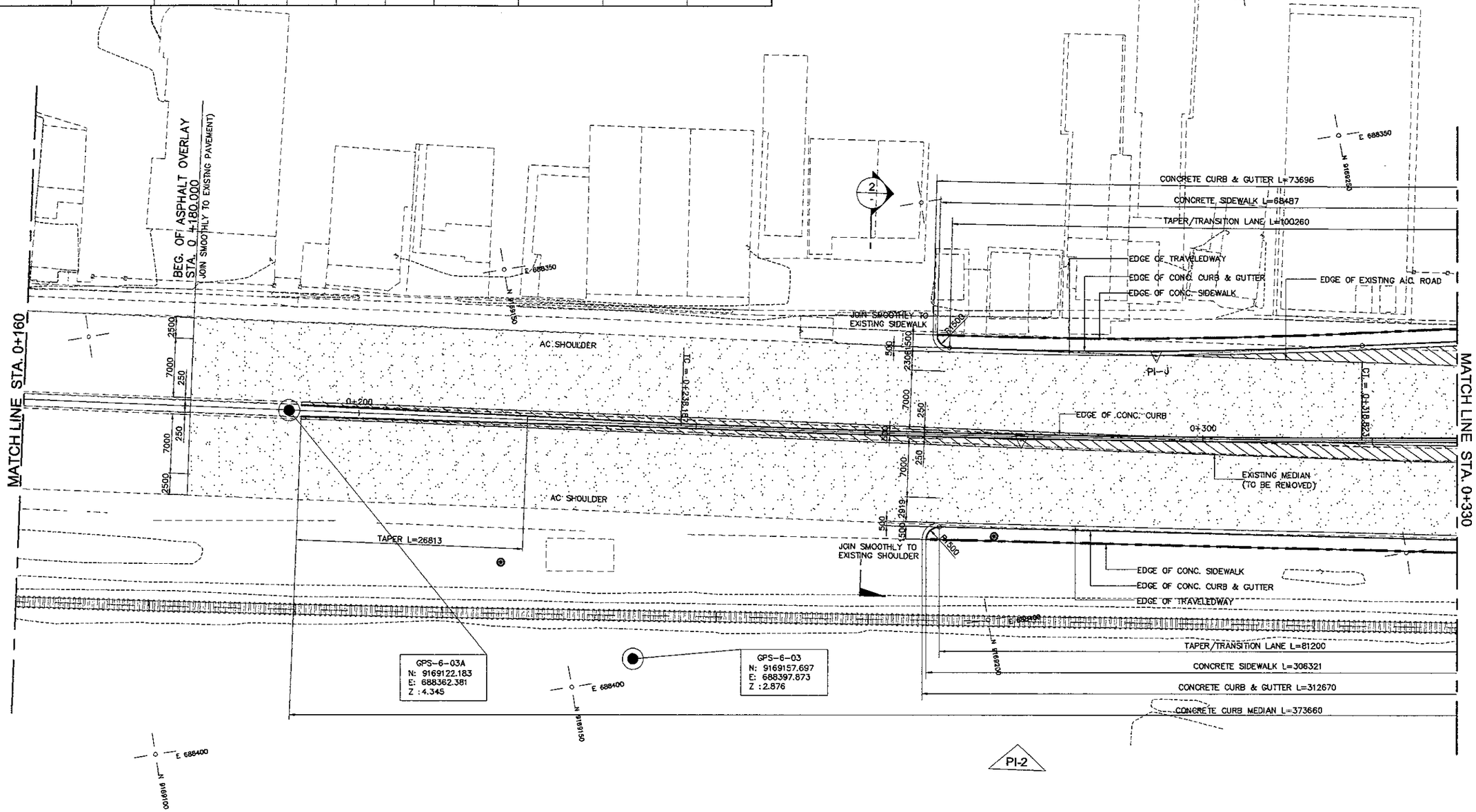
NOTES:

1. FOR GENERAL NOTES, REFER TO DWG. TGE-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. TRD-056
5. FOR DRAINAGE LAYOUT, REFER TO DWGS. TDG-002 TO TDG-005
6. FOR STANDARD ASPHALT PAVEMENT DETAILS, REFER TO DWG. TRD-054
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. TRD-019
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. TRD-020

JICA JAPAN INTERNATIONAL COOPERATION AGENCY / KEI KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 500	DETAILED CONSTRUCTION LAYOUT PLAN 2 OF 7	TRD-022
	Sign:	Sign:	Sign:	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400 Sign:		FULL SIZE A3		SHEET NO : 22 / 62
	Date:	Date:	Date:	Date:				

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	9169224.550	688372.312	05°-02'-32"	554.965	24.436	48.840	0.538	9169248.839	688374.988	9169200.591	688367.512



LEGEND:

- PAVEMENT OVERLAY
- PAVEMENT WIDENING -NEW PAVEMENT
- PAVEMENT AT APPROACH RAMPS

1 / - DETAILED CONSTRUCTION LAYOUT PLAN
SCALE 1:500

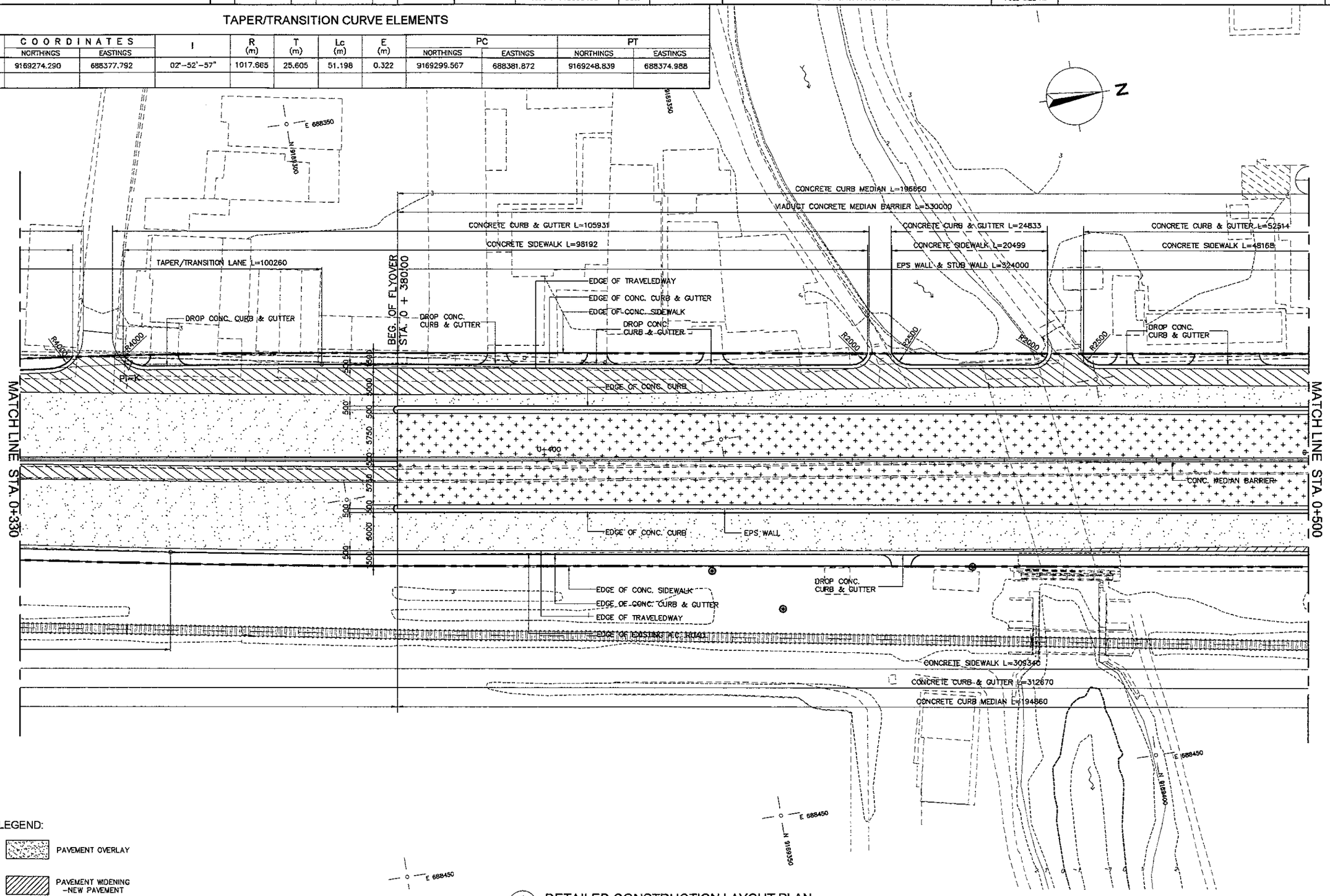
NOTE:

1. FOR SPECIFIC NOTES, REFER TO DWG TRD-021

JICA	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
JAPAN INTERNATIONAL COOPERATION AGENCY	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 500	DETAILED CONSTRUCTION LAYOUT PLAN 3 OF 7	TRD-023
KEI KATAHIRA & ENGINEERS INTERNATIONAL	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400		FULL SIZE A3		SHEET NO : 23 / 62
	Date	Date	Date	Sign / Date				

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-K	9169274.290	688377.792	02°-52'-57"	1017.665	25.605	51.198	0.322	9169299.567	688381.872	9169248.839	688374.988



LEGEND:

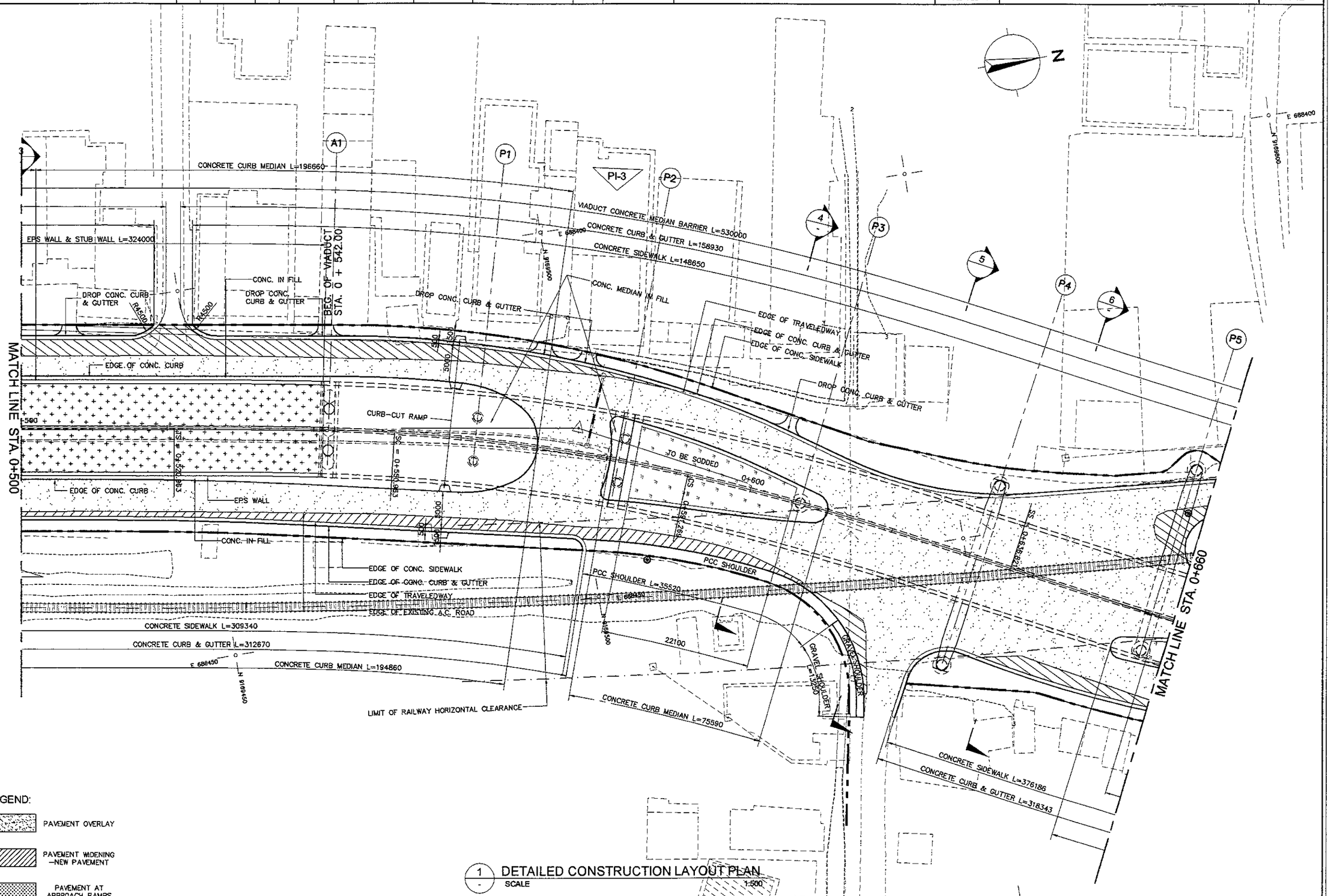
- PAVEMENT OVERLAY
- PAVEMENT WIDENING -NEW PAVEMENT
- PAVEMENT AT APPROACH RAMPS

1 DETAILED CONSTRUCTION LAYOUT PLAN
SCALE 1:500

NOTE:

1. FOR SPECIFIC NOTES, REFER TO DWG TRD-021

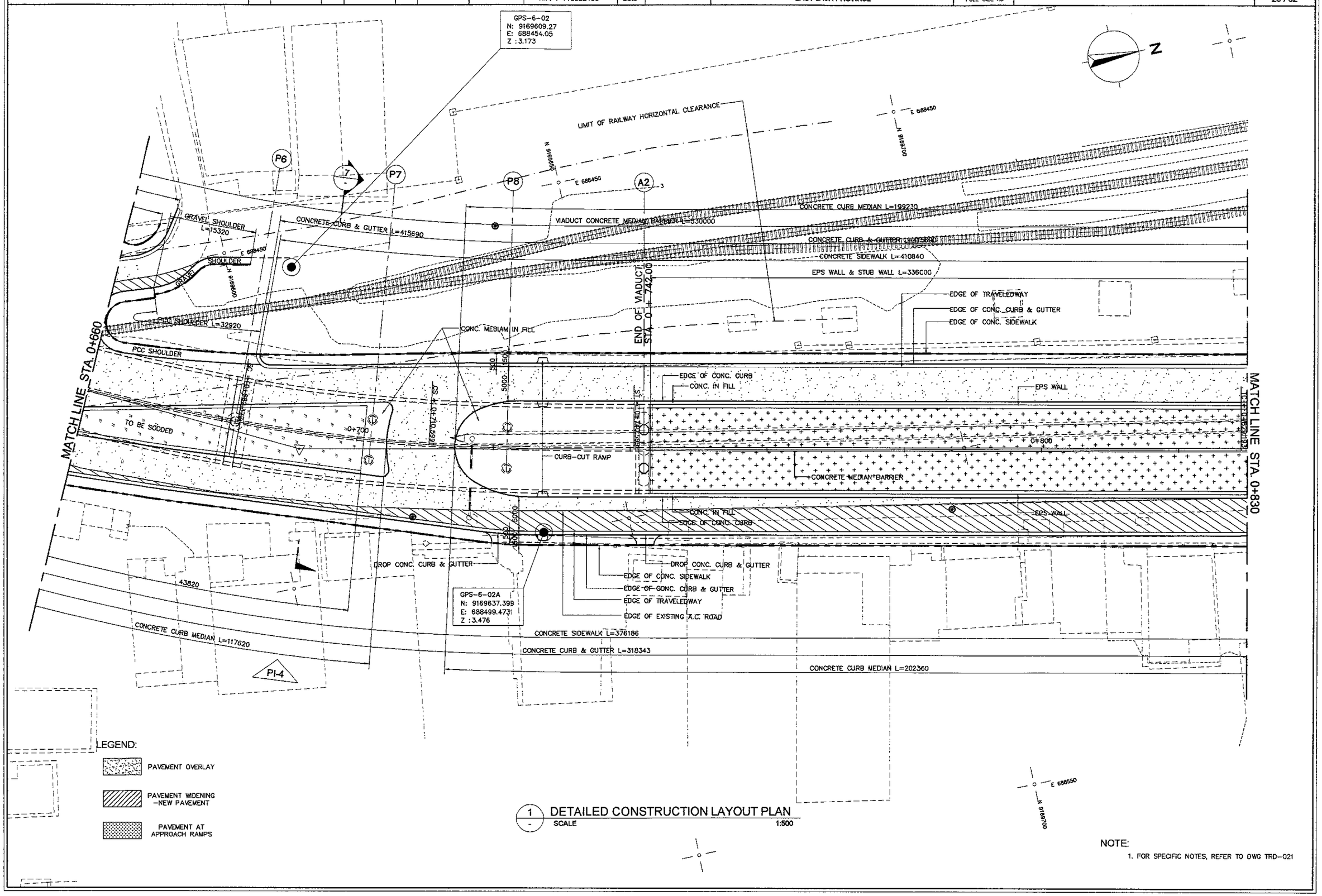
JICA JAPAN INTERNATIONAL COOPERATION AGENCY / KEI KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name R. UENO	Name T. OKUMURA	Name M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 500	DETAILED CONSTRUCTION LAYOUT PLAN 4 OF 7	TRD-024
	Sign	Sign	Sign	APPROVED BY Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400 Sign				SHEET NO :
	Date	Date	Date	Date		FULL SIZE A3		24 / 62



1 DETAILED CONSTRUCTION LAYOUT PLAN
SCALE 1:500

NOTE:
1. FOR SPECIFIC NOTES, REFER TO DWG TRD-021

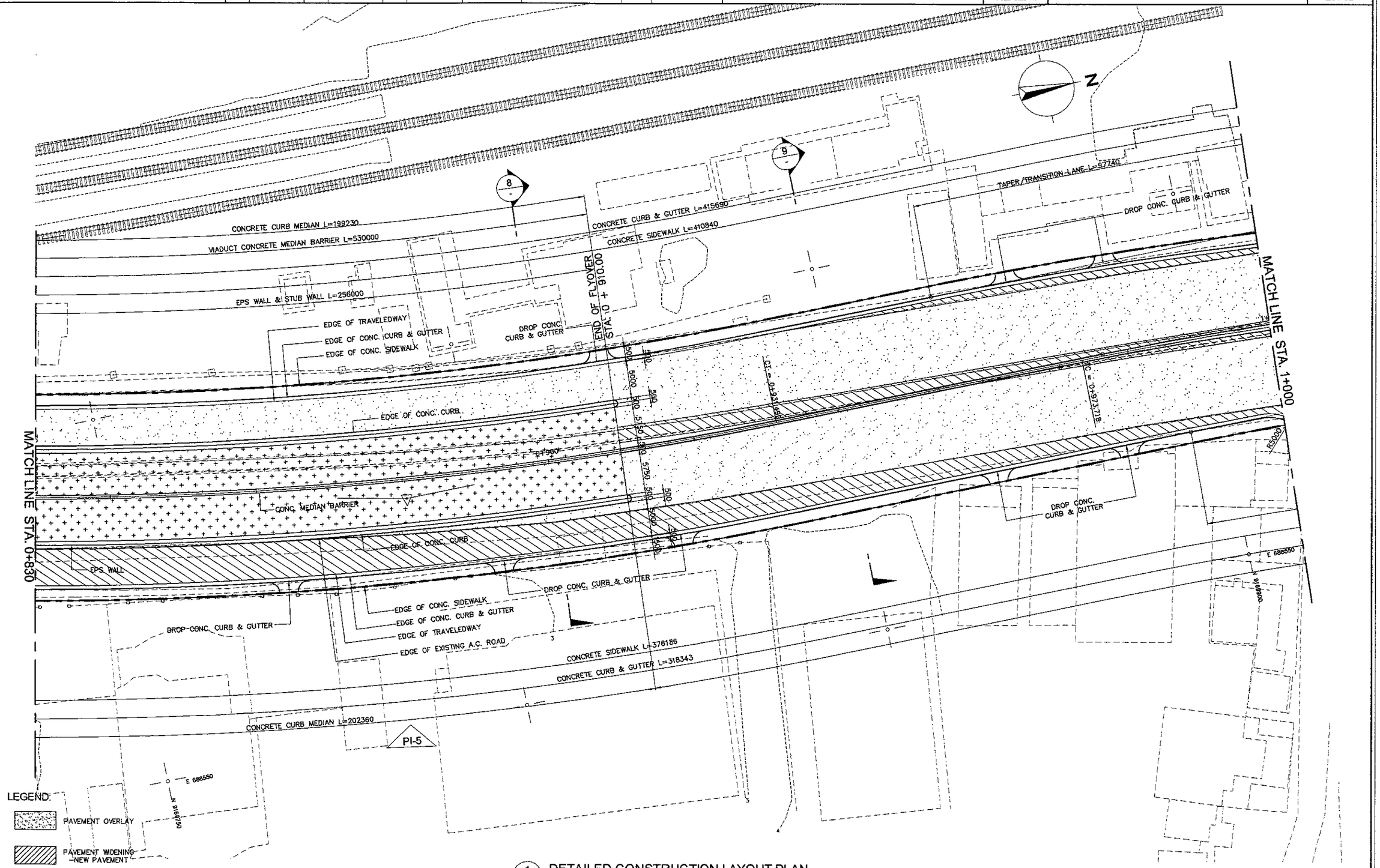
JICA JAPAN INTERNATIONAL COOPERATION AGENCY / KEI KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 500	DETAILED CONSTRUCTION LAYOUT PLAN 5 OF 7	TRD-025
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400		FULL SIZE A3		SHEET NO : 25 / 62
	Date	Date	Date	Sign / Date				



1 DETAILED CONSTRUCTION LAYOUT PLAN
SCALE 1:500

NOTE:
1. FOR SPECIFIC NOTES, REFER TO DWG TRD-021

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 500	DETAILED CONSTRUCTION LAYOUT PLAN 6 OF 7	TRD-026
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400 — Sign / Date		FULL SIZE A3		SHEET NO : 26 / 62
	Date	Date	Date					



LEGEND:

- PAVEMENT OVERLAY
- PAVEMENT WIDENING -NEW PAVEMENT
- PAVEMENT AT APPROACH RAMPS

1 DETAILED CONSTRUCTION LAYOUT PLAN
SCALE 1:500

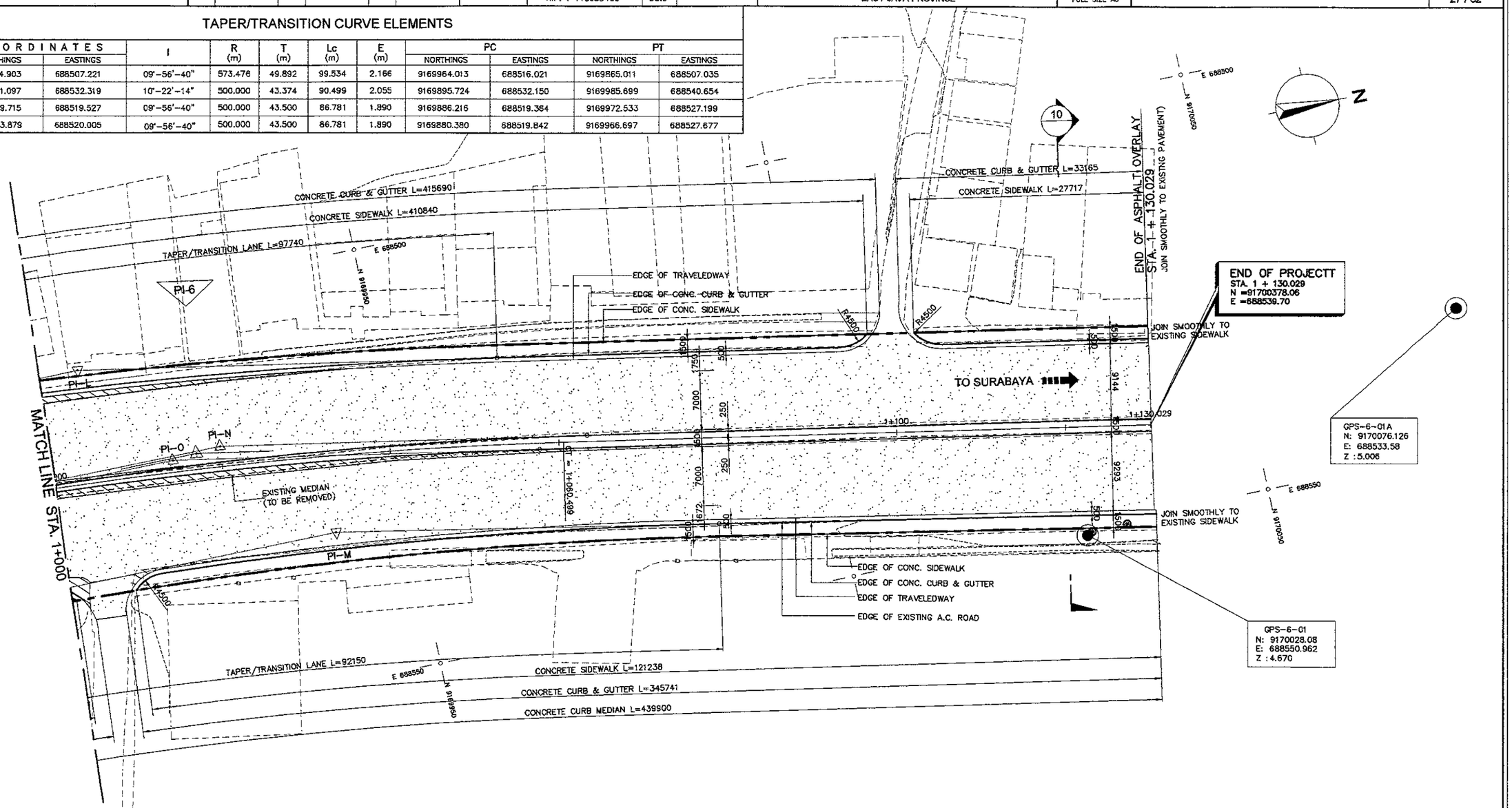
NOTE:

1. FOR SPECIFIC NOTES, REFER TO DWG TRD-021

JICA JAPAN INTERNATIONAL COOPERATION AGENCY / KEI KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc	DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 500	DETAILED CONSTRUCTION LAYOUT PLAN 7 OF 7	TRD-027
	Sign	Sign	Sign	NIP. : 110038400 Sign		FULL SIZE A3		SHEET NO : 27 / 62
	Date	Date	Date	Date				

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-L	9169914.903	688507.221	09°-56'-40"	573.476	49.892	99.534	2.166	9169964.013	688516.021	9169865.011	688507.035
PI-M	9169941.097	688532.319	10°-22'-14"	500.000	43.374	90.499	2.055	9169895.724	688532.150	9169985.699	688540.654
PI-N	9169929.715	688519.527	09°-56'-40"	500.000	43.500	86.781	1.890	9169886.216	688519.364	9169972.533	688527.199
PI-O	9169923.879	688520.005	09°-56'-40"	500.000	43.500	86.781	1.890	9169880.380	688519.842	9169966.697	688527.677



LEGEND:

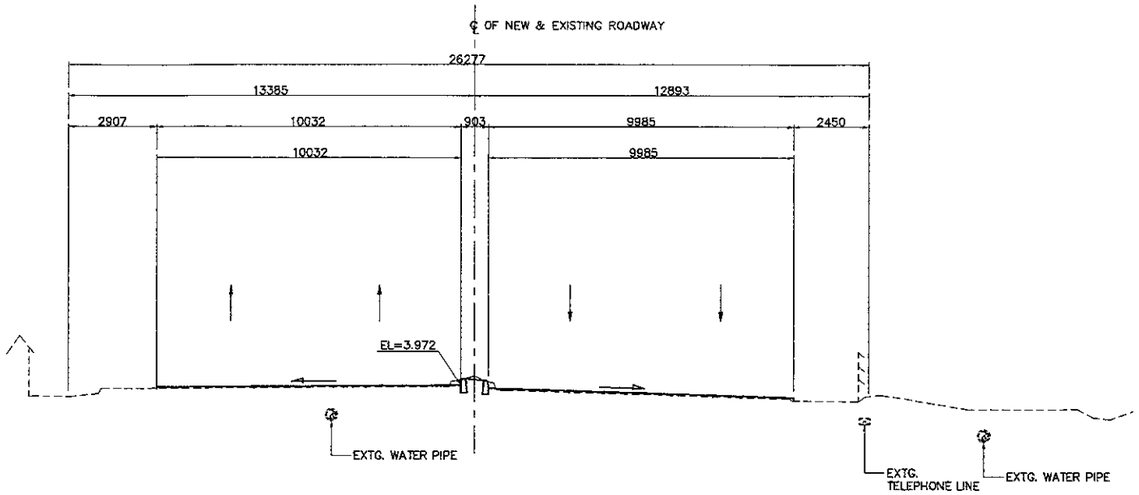
- PAVEMENT OVERLAY
- PAVEMENT WIDENING -NEW PAVEMENT
- PAVEMENT AT APPROACH RAMPS

1 / - DETAILED CONSTRUCTION LAYOUT PLAN
SCALE 1:500

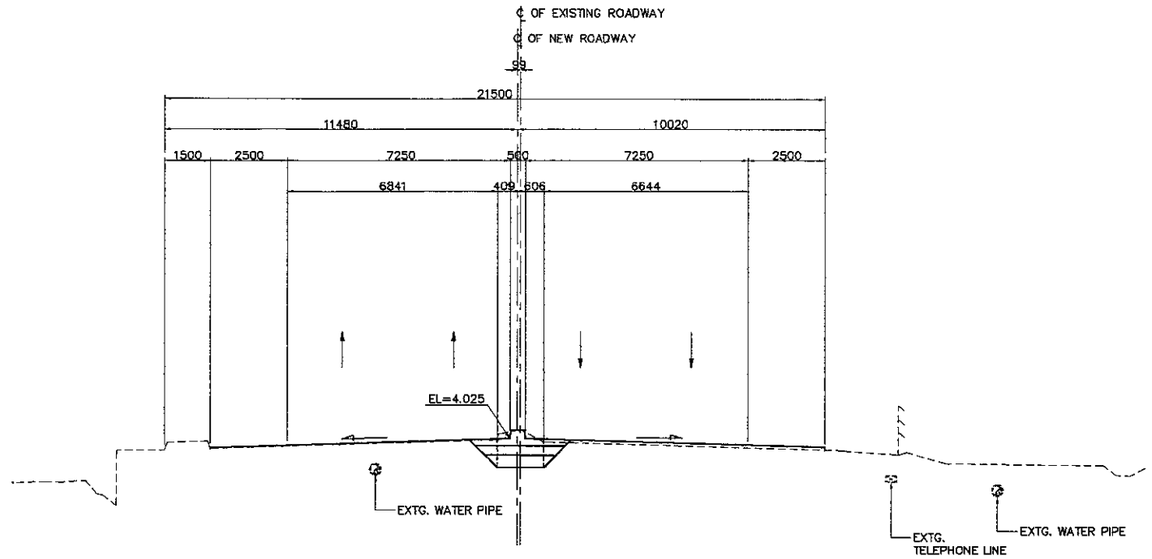
NOTE:

1. FOR SPECIFIC NOTES, REFER TO DWG TRD-021

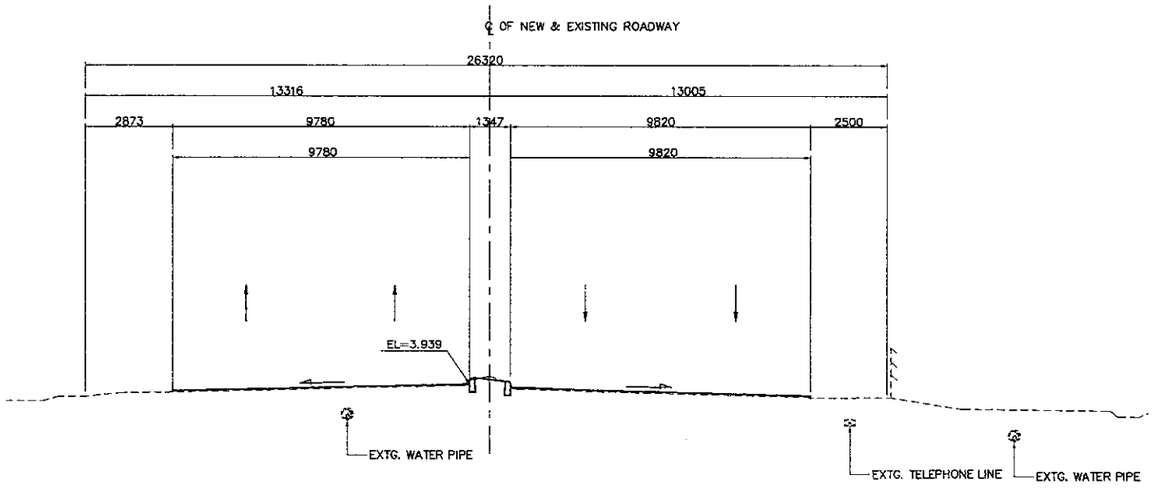
JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name: R. UENO	Name: T. OKUMURA	Name: M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 200	CROSS SECTION STA. 0 + 200.000 - STA. 0 + 260.000 (1 OF 12)	TRD-028
	Sign	Sign	Sign	APPROVED BY: Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400				SHEET NO :
	Date	Date	Date	Sign / Date		FULL SIZE A3		28 / 62



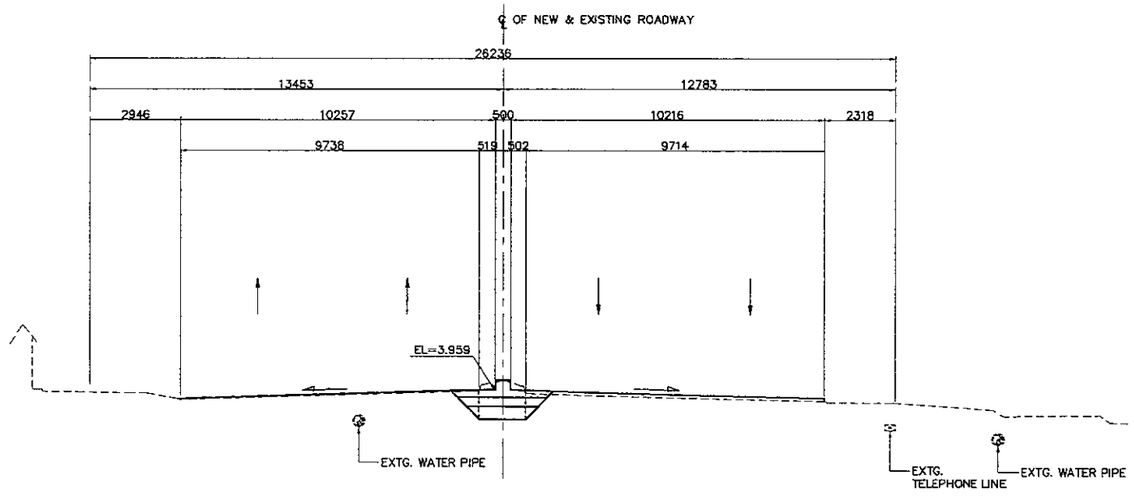
2 - SECTION (STA. 0 + 220.000)
SCALE 1:200



4 - SECTION (STA. 0 + 260.000)
SCALE 1:200



1 - SECTION (STA. 0 + 200.000)
SCALE 1:200

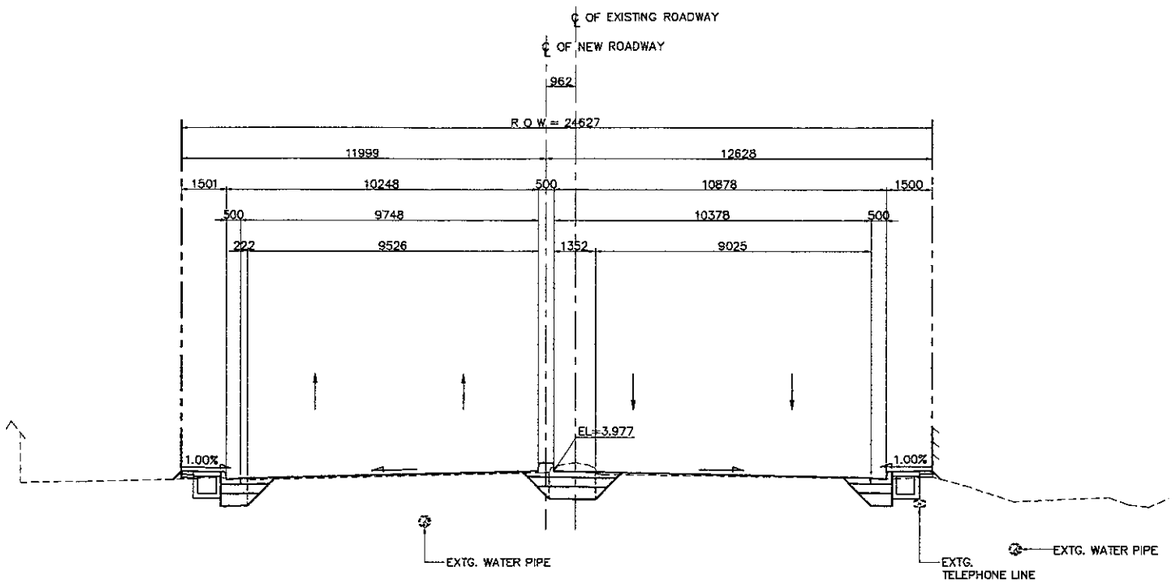


3 - SECTION (STA. 0 + 240.000)
SCALE 1:200

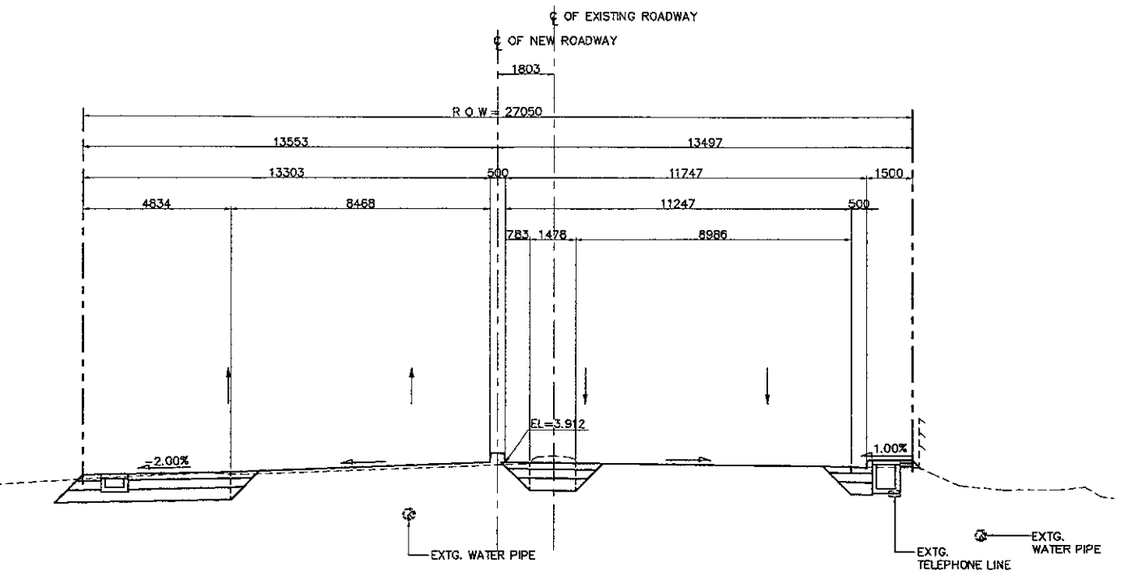
NOTES:

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.

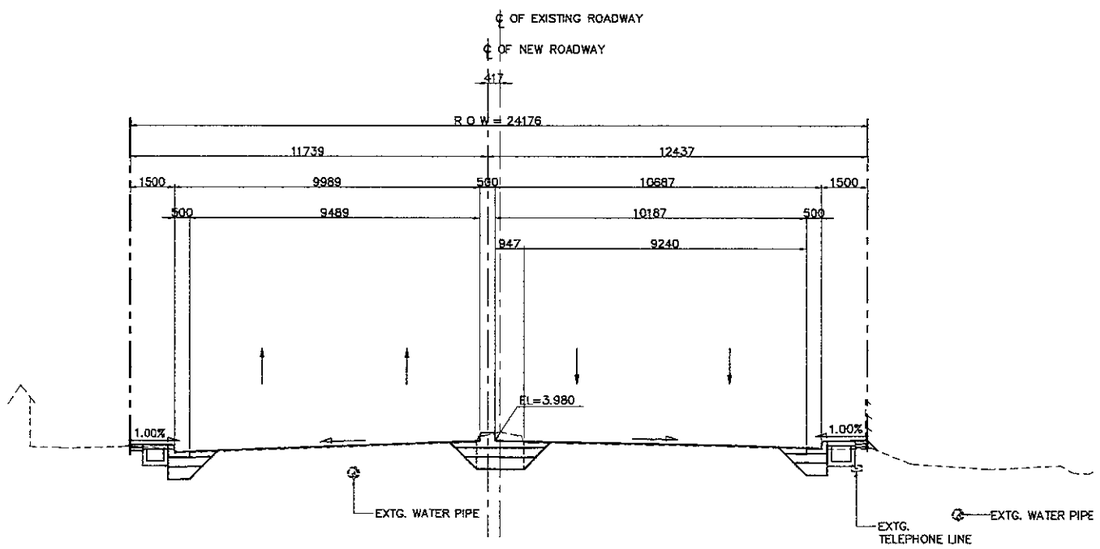
JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name R. UENO	Name T. OKUMURA	Name M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 200	CROSS SECTION STA. 0 + 280.000 - STA. 0 + 340.000 (2 OF 12)	TRD-029
	Sign	Sign	Sign	APPROVED BY Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400 Sign		FULL SIZE A3		SHEET NO : 29 / 62
	Date	Date	Date	Date				



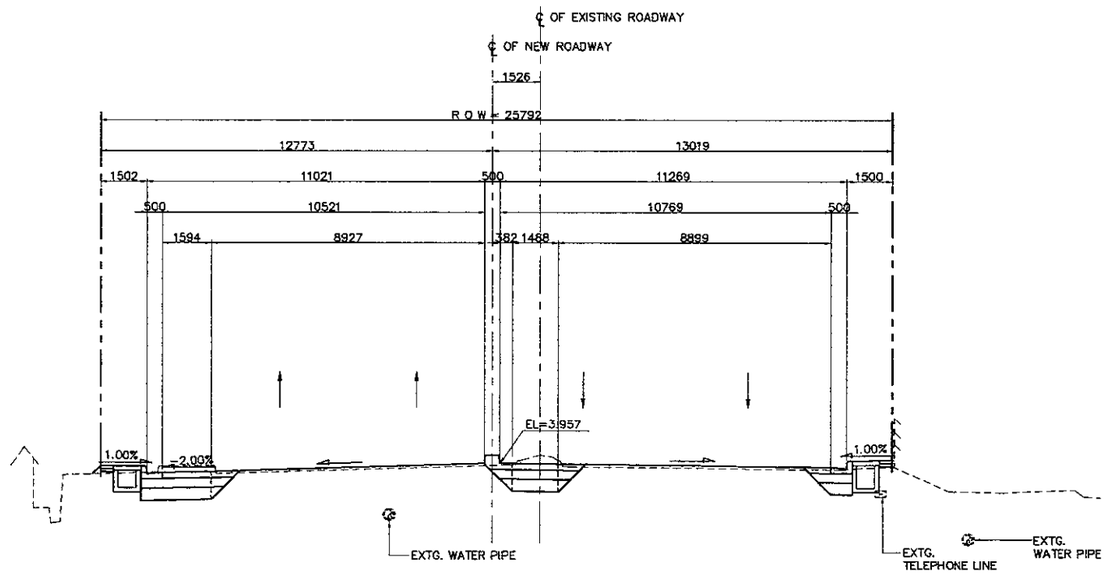
2 - SECTION (STA. 0 + 300.000)
SCALE 1:200



4 - SECTION (STA. 0 + 340.000)
SCALE 1:200



1 - SECTION (STA. 0 + 280.000)
SCALE 1:200

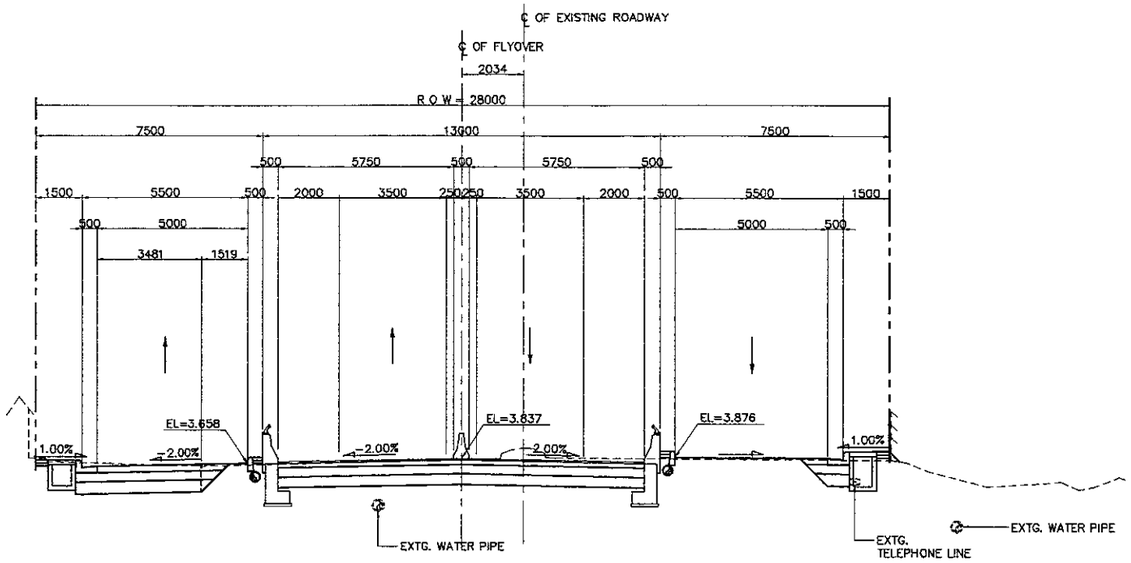


3 - SECTION (STA. 0 + 320.000)
SCALE 1:200

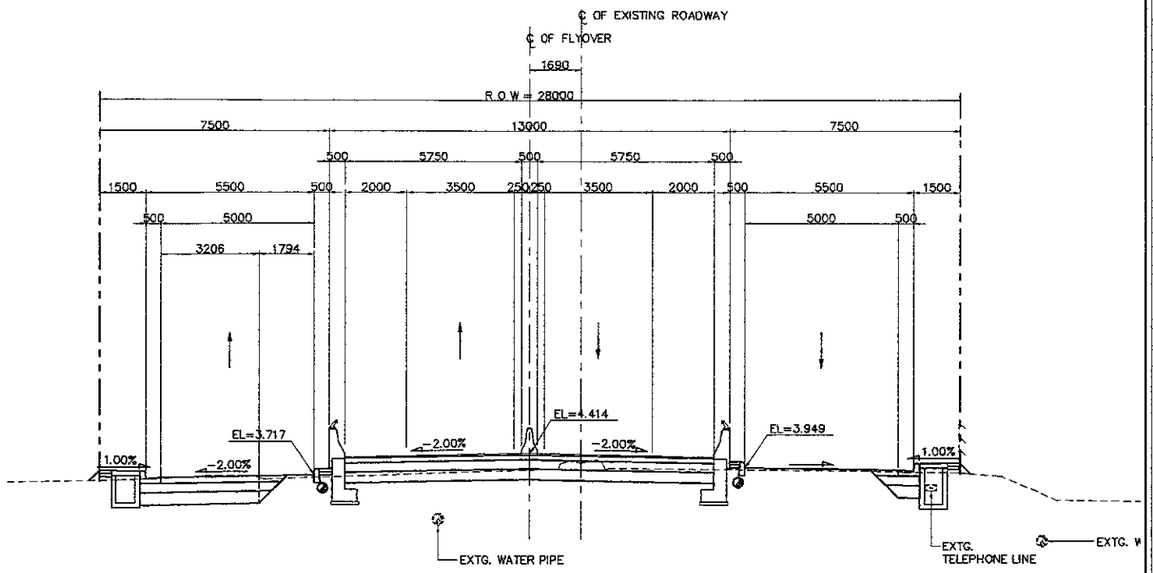
NOTES:

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.

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY	CHECKED BY	SUBMITTED BY	REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :	SCALE :	DRAWING TITLE :	DRAWING NO :
	Name R. UENO	Name T. OKUMURA	Name M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT TANGGULANGIN FLYOVER - CONTRACT PACKAGE 3 (PETERONGAN -TANGGULANGIN) EAST JAVA PROVINCE	1 : 200	CROSS SECTION STA. 0 + 360.000 - STA. 0 + 420.000 (3 OF 12)	TRD-030
	Sign	Sign	Sign	APPROVED BY Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400				SHEET NO :
	Date	Date	Date	Sign / Date		FULL SIZE A3		30 / 62



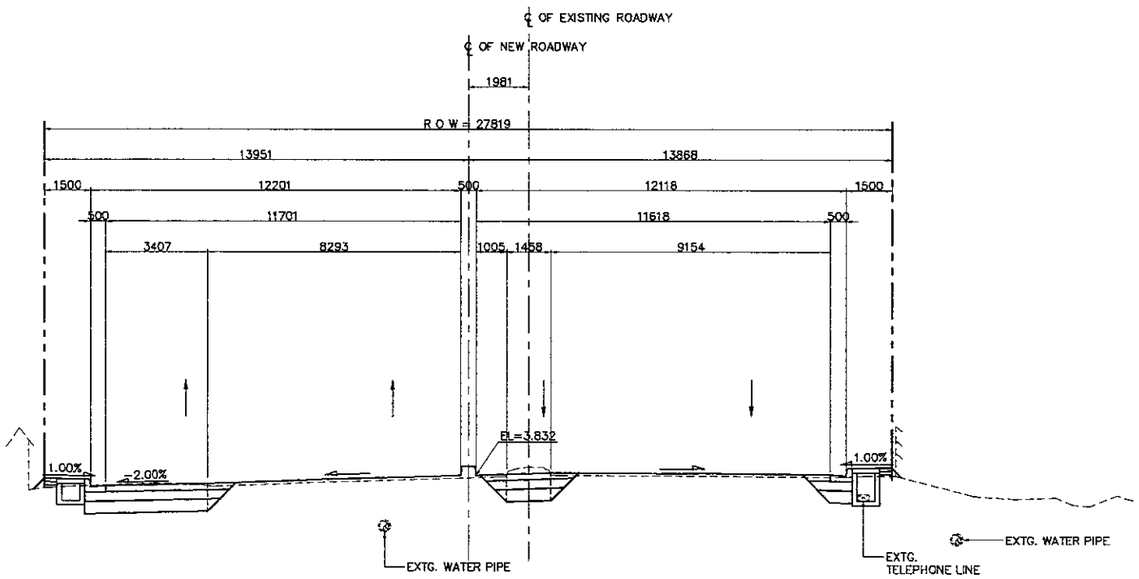
2 SECTION (STA. 0 + 380.000)
SCALE 1:200



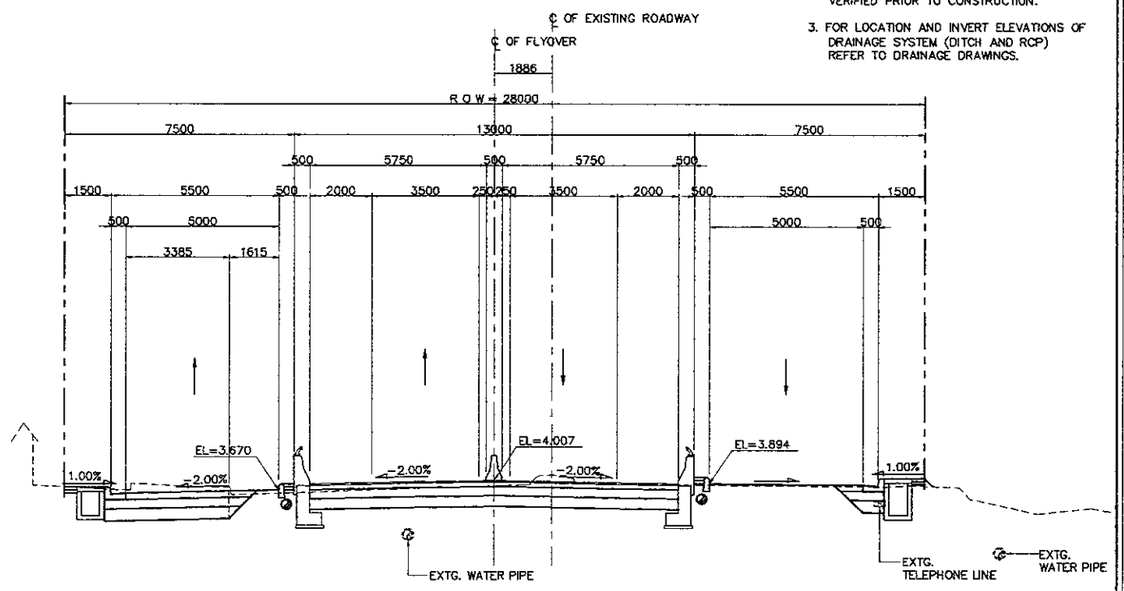
4 SECTION (STA. 0 + 420.000)
SCALE 1:200

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.



1 SECTION (STA. 0 + 360.000)
SCALE 1:200



3 SECTION (STA. 0 + 400.000)
SCALE 1:200