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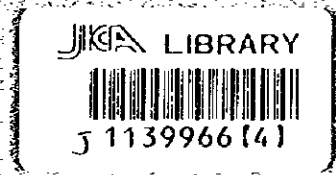
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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

**GUATEMALA MUNICIPALITY
THE REPUBLIC OF GUATEMALA**

**THE FEASIBILITY STUDY
ON
THE PROJECT OF URBAN TRANSPORTATION
IN THE METROPOLITAN AREA OF GUATEMALA**

**FINAL REPORT
DRAWINGS**

MARCH 1997

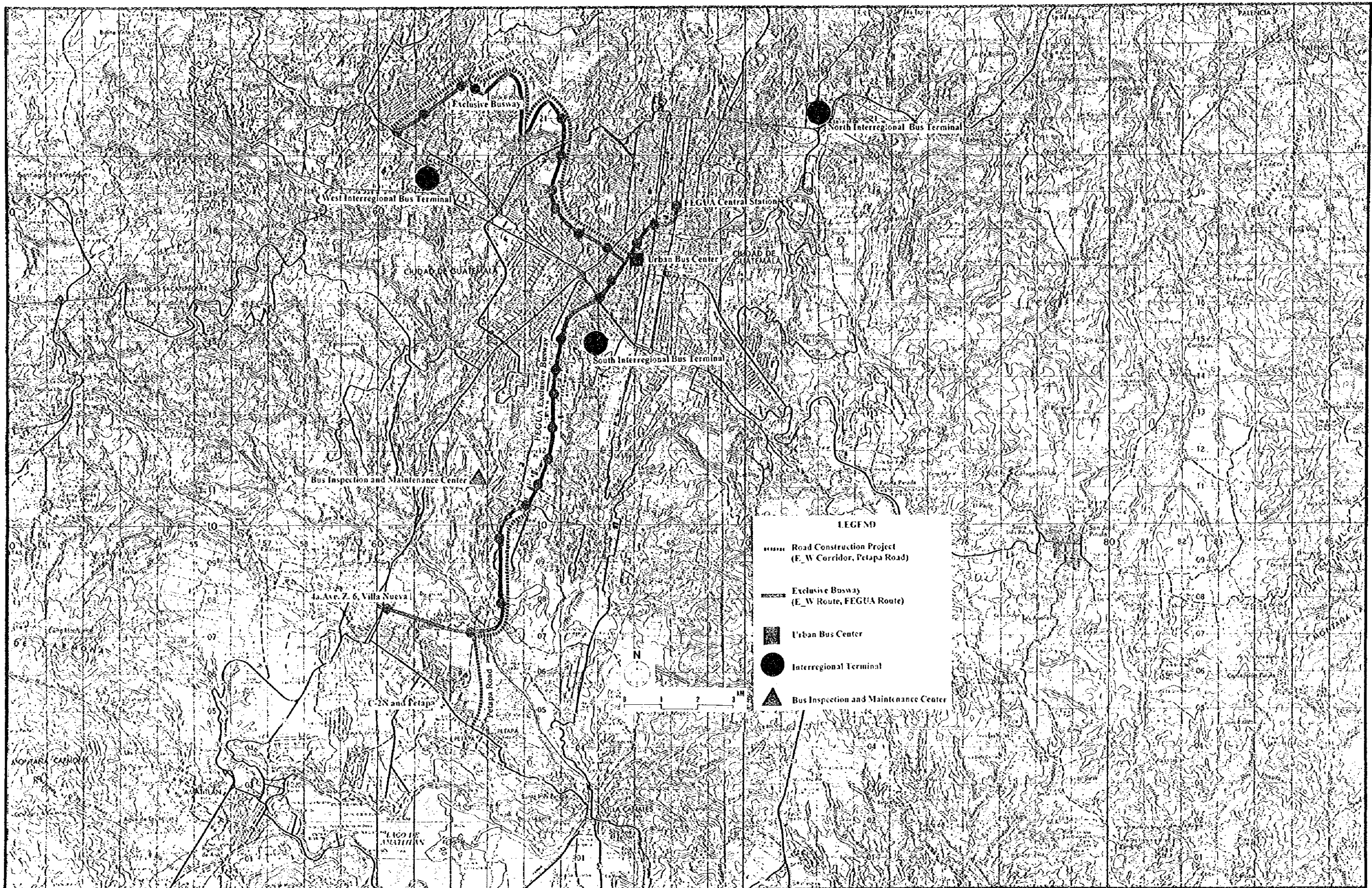
**YACHIYO ENGINEERING CO., LTD.
CHODAI CO., LTD.**



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LOCATION MAP

MAPA DE LOCALIZACION

GUATEMALA MUNICIPALITY

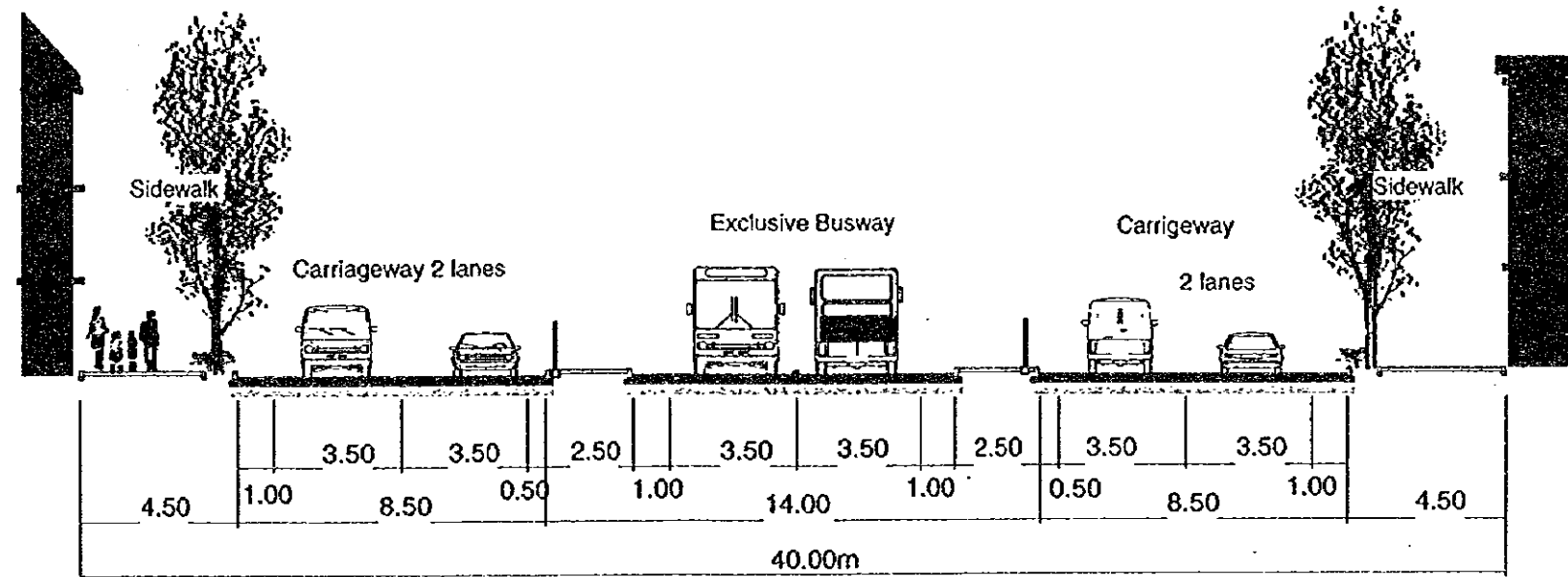
MUNICIPALIDAD DE GUATEMALA

JAPAN INTERNATIONAL COOPERATION AGENCY

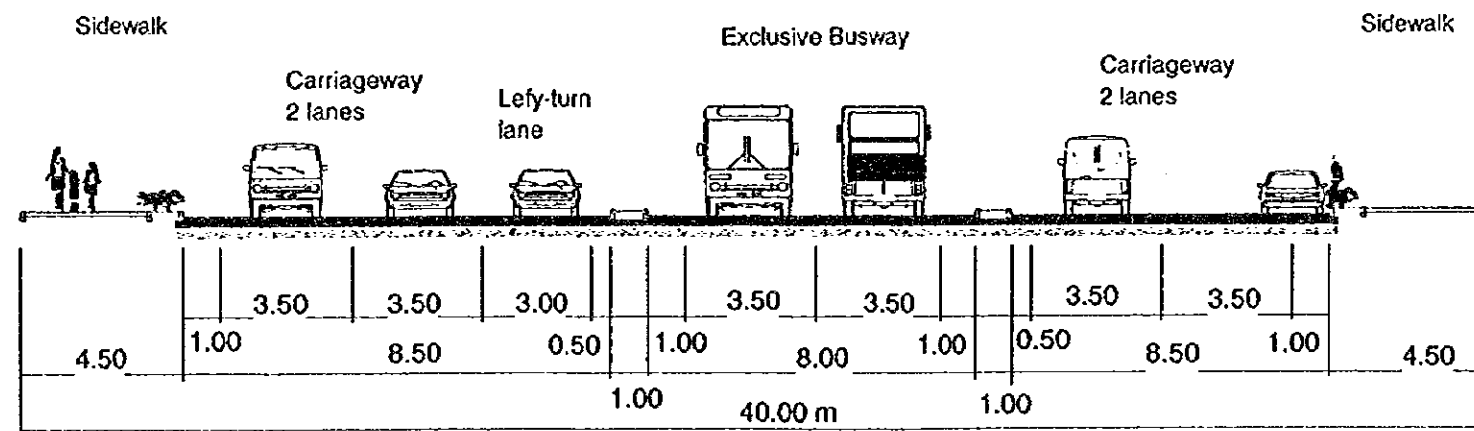
AGENCIA DE COOPERACION INTERNACIONAL DEL JAPON

THE FEASIBILITY STUDY ON THE PROJECT OF URBAN TRANSPORTATION IN THE METROPOLITAN AREA OF GUATEMALA			
EL ESTUDIO DE FACTIBILIDAD SOBRE EL PROYECTO DE TRANSPORTACION URBANA EN EL AREA METROPOLITANA DE GUATEMALA			
SCALE	ESCALA	DWG. No.	HOJA No.
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		1	1

TYPICAL CROSS SECTION



AT-GRADE INTERSECTION



Typical Cross Section(E-W Corridor/Exclusive Busway)
 SECCION TRANSVERSAL TIPICA
 (VIA EXCLUSIVA DE BUS/CORREDOR ESTE-OESTE)

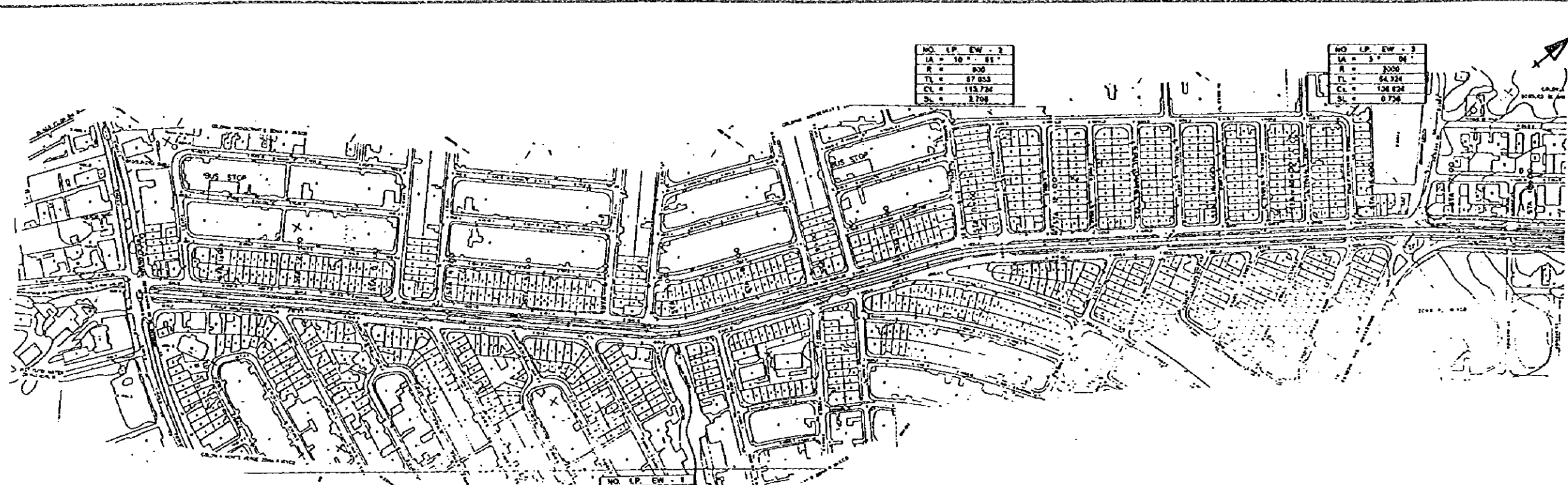
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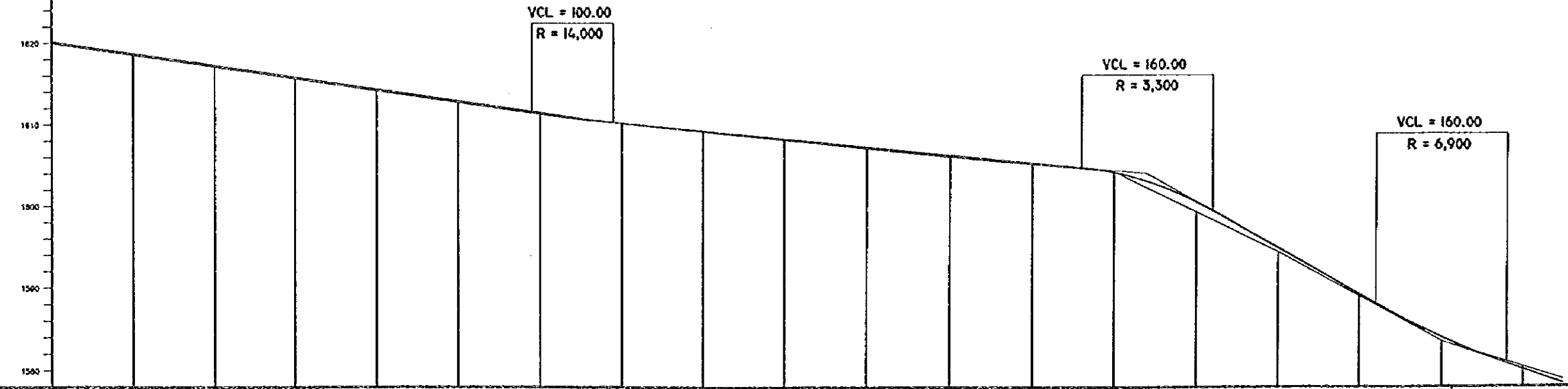
THE FEASIBLY STDY ON THE PROJECT OF UBAN TRANSPOTATION
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 EN EL AREA METROPOLITANA DE GUATEMALA

SCALE ESCALA
 DATE FECHA

DWG No. HOJA No. 2
 PAGE No. PAGINA No. 2



CALZADA SAN JUAN AND BOULEVARD SAN NICOLAS
 STA. 0 + 00



GRADIENT (%)	0.00	-1.563%	-0.257%	-5.834%	-3.428%
PROPOSED HEIGHT (M)	1620.00	1618.44	1618.18	1615.35	1611.92
GROUND HEIGHT (M)	1620.00	1617.88	1617.93	1615.10	1611.50
STATION NUMBER	STA. 0+00	STA. 0+10	STA. 0+20	STA. 0+30	STA. 0+40

PLAN & PROFILE (E-W CORRIDOR/EXCLUSIVE BUS WAY STA. 0~18+50)
 PLANTA Y PERFIL (CORREDOR E-O/VIA EXCLUSIVA DE BUSES STA. 0~18+50)

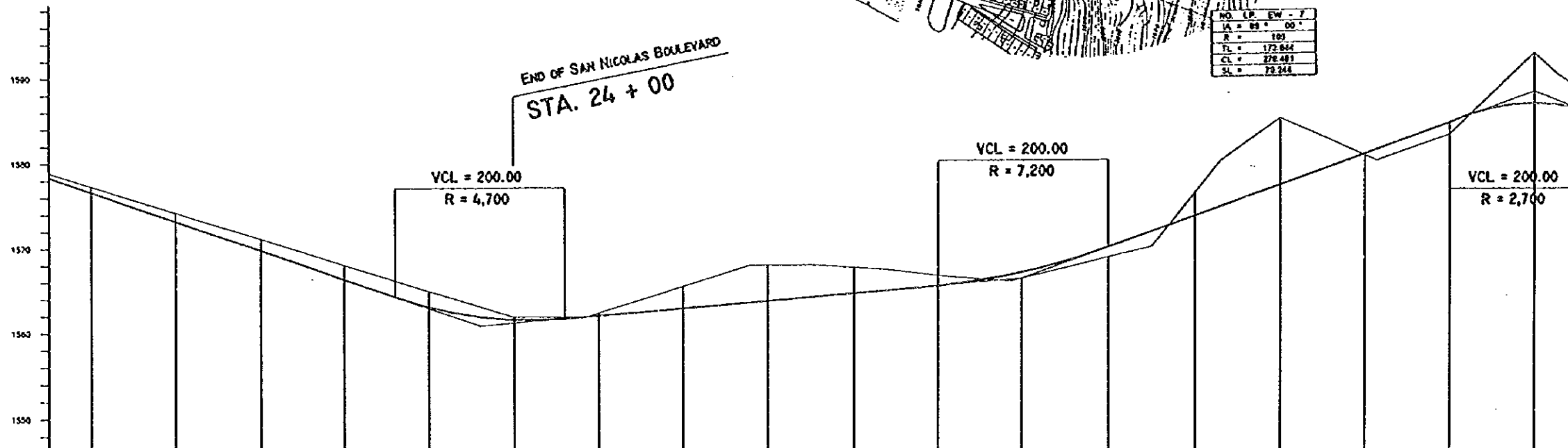
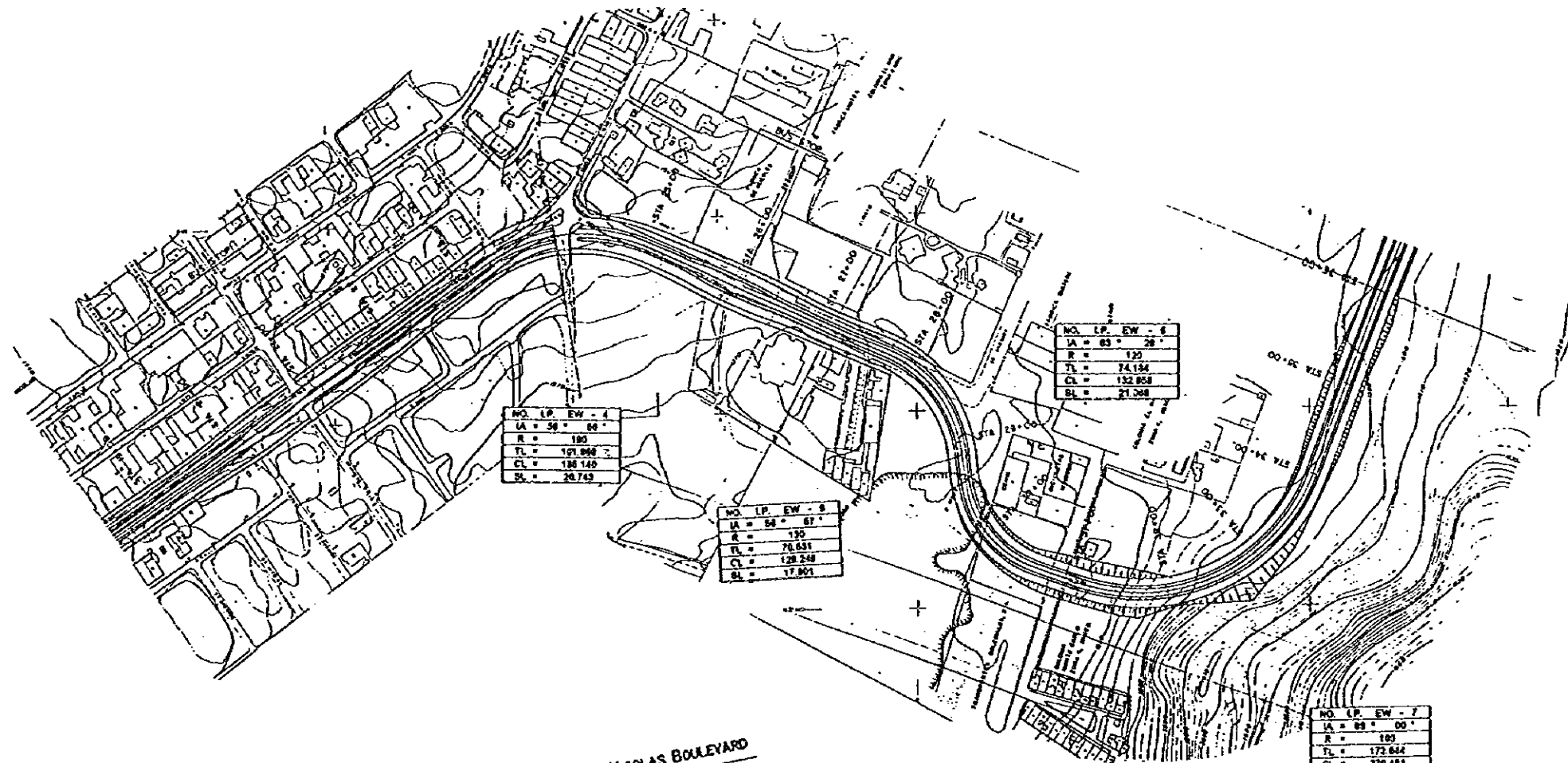
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SCALE ESCALA
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DWG No. HOJA No. 3
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GRADIENT (%)	-1.034% L=400.00m																		
PROPOSED HEIGHT (M)	1576.00	1576.00	1573.27	1569.00	1564.00	1562.00	1561.00	1561.00	1562.00	1563.00	1564.00	1565.00	1566.00	1567.00	1568.00	1569.00	1570.00		
GROUND HEIGHT (M)	1576.00	1576.00	1573.27	1569.00	1564.00	1562.00	1561.00	1561.00	1562.00	1563.00	1564.00	1565.00	1566.00	1567.00	1568.00	1569.00	1570.00		
STATION NUMBER	STA. 18+00	STA. 19+00	STA. 20+00	STA. 21+00	STA. 22+00	STA. 23+00	STA. 24+00	STA. 25+00	STA. 26+00	STA. 27+00	STA. 28+00	STA. 29+00	STA. 30+00	STA. 31+00	STA. 32+00	STA. 33+00	STA. 34+00	STA. 35+00	STA. 36+50

PLAN & PROFILE (E-W CORRIDOR/EXCLUSIVE BUS WAY STA. 18+50~36+50)
 PLANTA Y PERFIL (CORREDOR E-O/VIA EXCLUSIVA DE BUSES EST. 18+50~36+50)

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SCALE ESCALA
 DATE FECHA

DWG No. HOJA No. 4
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NO. LP. EW - 8
LA = 158° 54'
R = 220
TL = 1248.791
CL = 814.249
SL = 1548.937

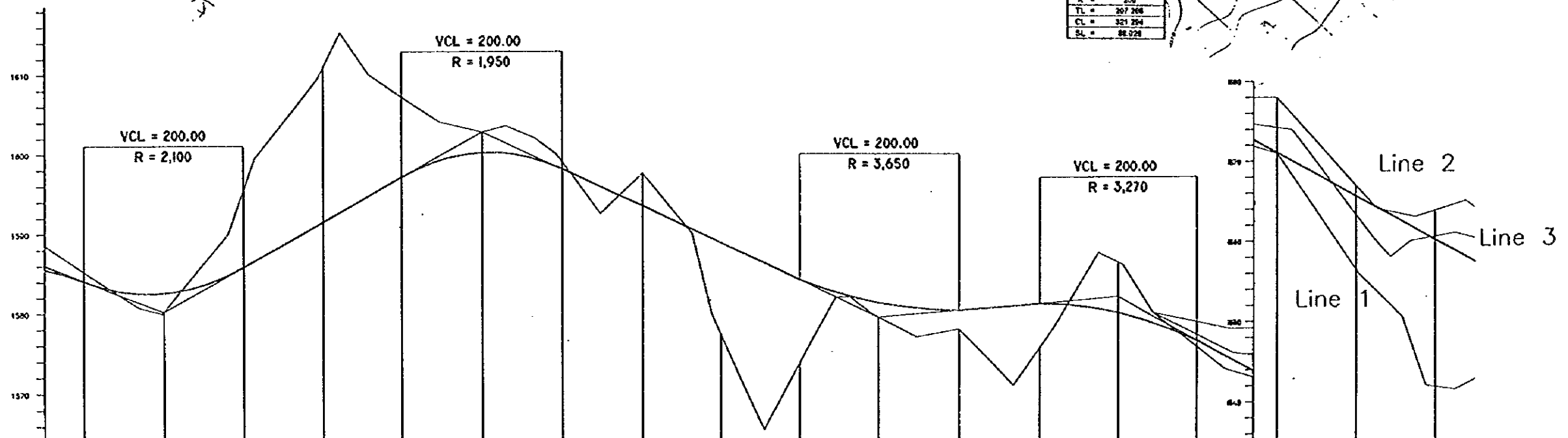
NO. LP. EW - 10
LA = 80° 34'
R = 180
TL = 111.007
CL = 260.928
SL = 25.581

NO. LP. EW - 11
LA = 137° 18'
R = 170
TL = 454.448
CL = 407.258
SL = 294.829

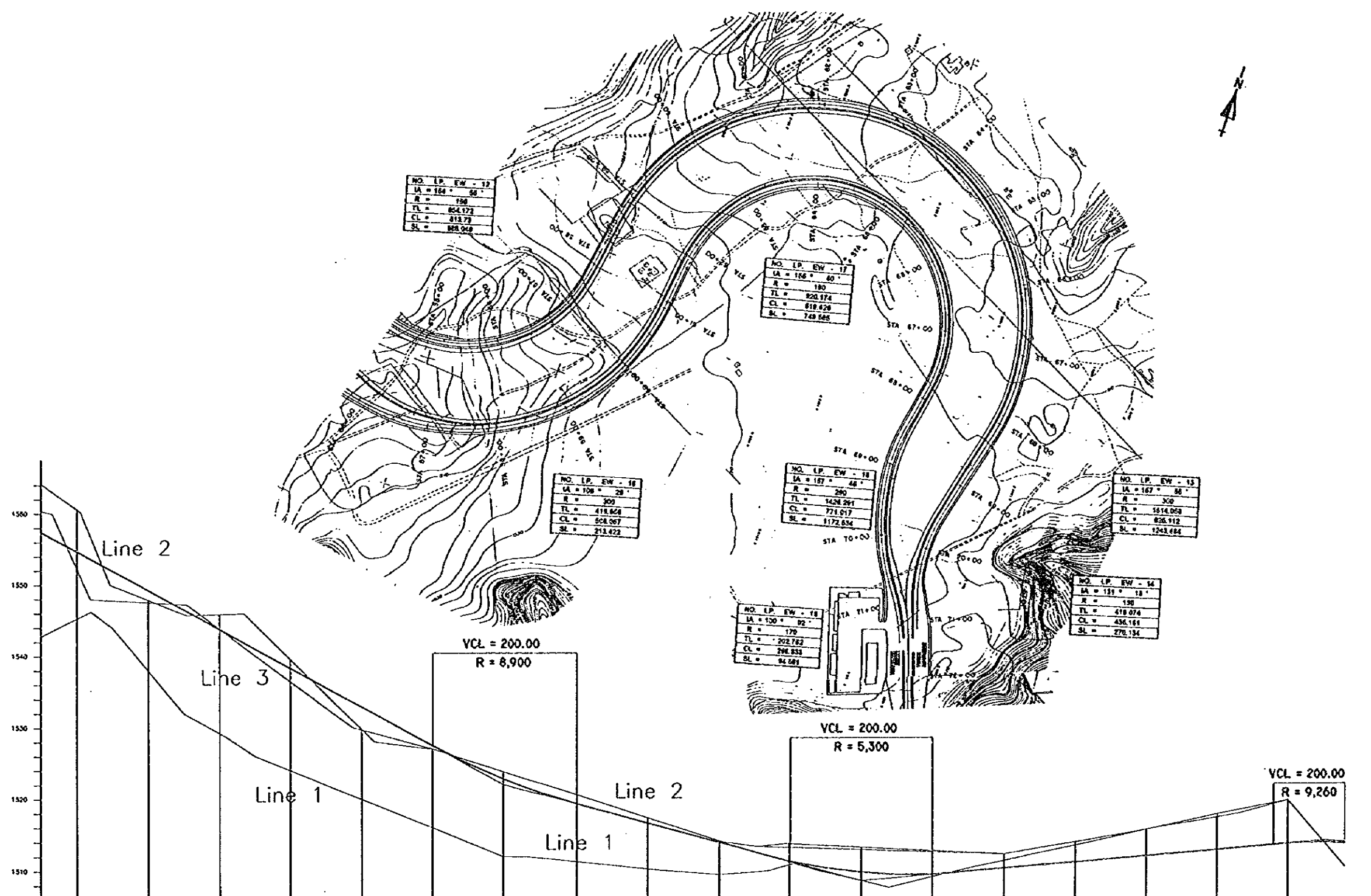
NO. LP. EW - 9
LA = 48° 31'
R = 180
TL = 87.848
CL = 184.343
SL = 18.262

NO. LP. EW - 20
LA = 187° 58'
R = 240
TL = 3432.180
CL = 787.482
SL = 3880.341

NO. LP. EW - 18
LA = 82° 02'
R = 200
TL = 207.268
CL = 321.294
SL = 88.028



GRADIENT (%)	PROPOSED HEIGHT (M)	GROUND HEIGHT (M)	STATION NUMBER
-0.32%	1584.2	1584.2	STA. 37+00
-0.32%	1584.2	1584.2	STA. 38+00
-0.32%	1584.2	1584.2	STA. 39+00
-0.32%	1584.2	1584.2	STA. 40+00
-0.32%	1584.2	1584.2	STA. 41+00
-0.32%	1584.2	1584.2	STA. 42+00
-0.32%	1584.2	1584.2	STA. 43+00
-0.32%	1584.2	1584.2	STA. 44+00
-0.32%	1584.2	1584.2	STA. 45+00
-0.32%	1584.2	1584.2	STA. 46+00
-0.32%	1584.2	1584.2	STA. 47+00
-0.32%	1584.2	1584.2	STA. 48+00
-0.32%	1584.2	1584.2	STA. 49+00
-0.32%	1584.2	1584.2	STA. 50+00
-0.32%	1584.2	1584.2	STA. 51+00
-0.32%	1584.2	1584.2	STA. 52+00
-0.32%	1584.2	1584.2	STA. 53+00
-0.32%	1584.2	1584.2	STA. 54+00



NO. LP. EW - 12
IA = 164° 50'
R = 190
TL = 854.172
CL = 813.77
SL = 855.048

NO. LP. EW - 17
IA = 156° 40'
R = 180
TL = 820.174
CL = 818.428
SL = 749.505

NO. LP. EW - 16
IA = 108° 28'
R = 302
TL = 418.628
CL = 508.067
SL = 213.422

NO. LP. EW - 18
IA = 187° 48'
R = 290
TL = 1428.291
CL = 771.017
SL = 1172.634

NO. LP. EW - 13
IA = 167° 36'
R = 300
TL = 1814.058
CL = 826.112
SL = 1243.484

NO. LP. EW - 14
IA = 151° 18'
R = 190
TL = 418.074
CL = 436.161
SL = 270.134

NO. LP. EW - 15
IA = 100° 02'
R = 170
TL = 202.782
CL = 298.838
SL = 84.581

VCL = 200.00
R = 8,900

VCL = 200.00
R = 5,300

VCL = 200.00
R = 9,260

GRADIENT (%)	PROPOSED HEIGHT (M)	GROUND HEIGHT (M)	STATION NUMBER
1.5	1480.0	1480.0	STA 54+00
1.5	1475.0	1475.0	STA 55+00
1.5	1470.0	1470.0	STA 56+00
1.5	1465.0	1465.0	STA 57+00
1.5	1460.0	1460.0	STA 58+00
1.5	1455.0	1455.0	STA 59+00
1.5	1450.0	1450.0	STA 60+00
1.5	1445.0	1445.0	STA 61+00
1.5	1440.0	1440.0	STA 62+00
1.5	1435.0	1435.0	STA 63+00
1.5	1430.0	1430.0	STA 64+00
1.5	1425.0	1425.0	STA 65+00
1.5	1420.0	1420.0	STA 66+00
1.5	1415.0	1415.0	STA 67+00
1.5	1410.0	1410.0	STA 68+00
1.5	1405.0	1405.0	STA 69+00
1.5	1400.0	1400.0	STA 70+00
1.5	1395.0	1395.0	STA 71+00
1.5	1390.0	1390.0	STA 72+00
1.5	1385.0	1385.0	STA 73+00

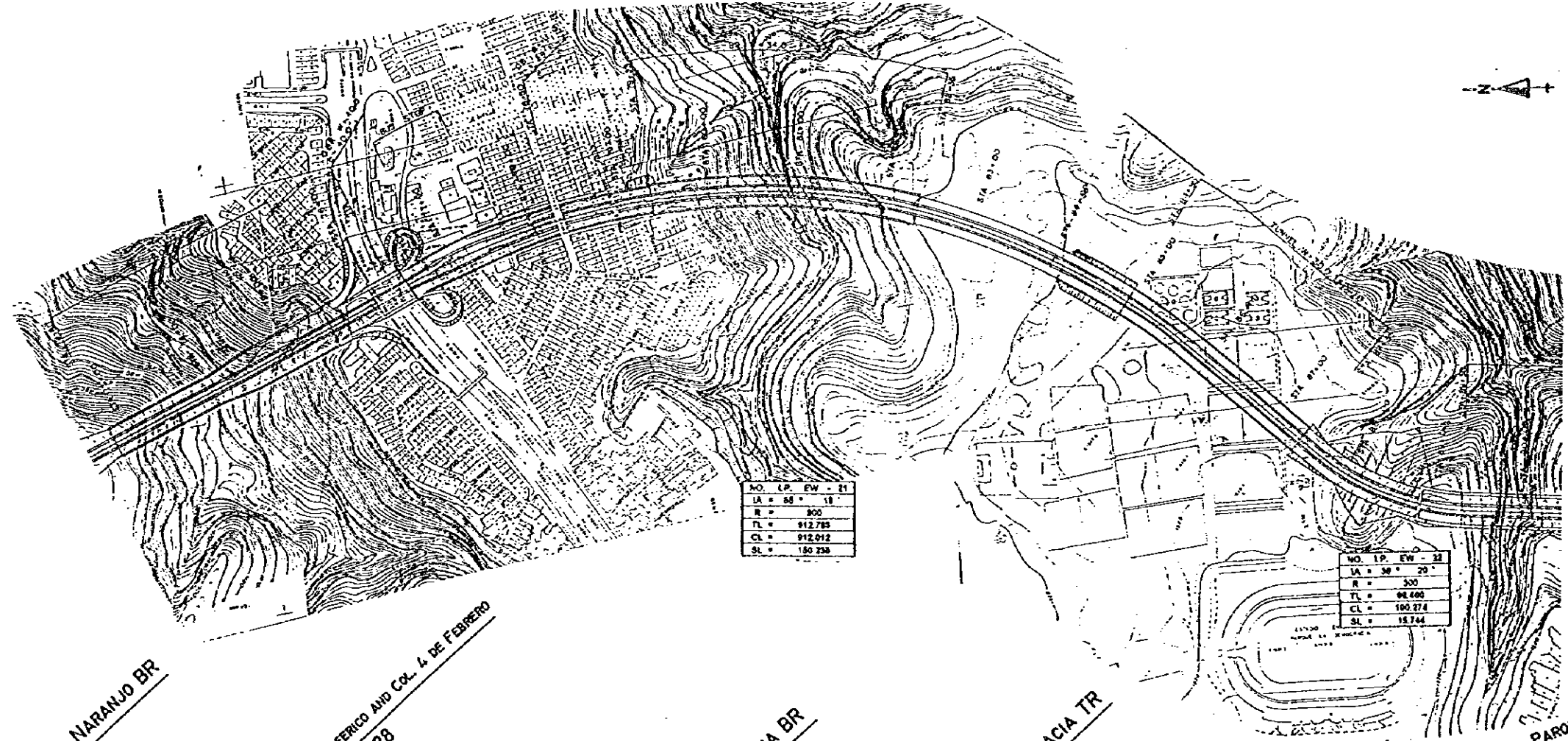
PLAN & PROFILE (E-W CORRIDOR/EXCLUSIVE BUS WAY STA. 54+50~72+50)
PLANTA Y PERFIL (CORREDOR E-O/VIA EXCLUSIVA DE BUSES Est. 54+50~72+50)

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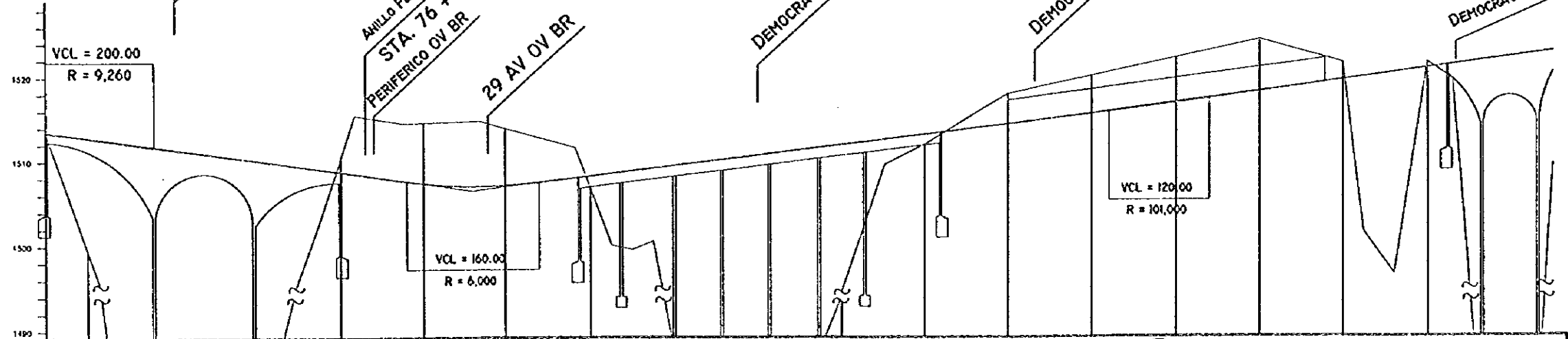
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EL ESTUDIO DE FACTIBILIDAD SOBRE EL PROYECTO DE TRANSPORTACION URBANA EN EL AREA METROPOLITANA DE GUATEMALA

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NO. LP. EW - 21
LA = 55' 18"
R = 800
TL = 912.785
CL = 912.012
SL = 150.258

NO. LP. EW - 22
LA = 38' 20"
R = 500
TL = 98.680
CL = 100.374
SL = 16.744



GRADIENT (%)	0.120% L=300.00m																										
PROPOSED HEIGHT (M)	1502.8	1503.78	1503.78	1512.06	1510.48	1509.23	1507.46	1507.00	1507.46	1510.7	1509.7	1509.23	1511.15	1512.7	1513.26	1514.06	1514.06	1517.02	1517.02	1518.37	1518.37	1523.0	1521.26	1520.7	1522.8	1527.5	1527.5
GROUND HEIGHT (M)	1502.8	1502.8	1502.8	1512.06	1510.48	1509.23	1507.46	1507.00	1507.46	1510.7	1509.7	1509.23	1511.15	1512.7	1513.26	1514.06	1514.06	1517.02	1517.02	1518.37	1518.37	1523.0	1521.26	1520.7	1522.8	1527.5	1527.5
STATION NUMBER	STA. 72+50	72+50	72+50	73+00	73+50	74+00	74+50	75+00	75+50	76+00	76+50	77+00	77+50	78+00	78+50	79+00	79+50	80+00	80+50	81+00	81+50	82+00	82+50	83+00	83+50	84+00	84+50

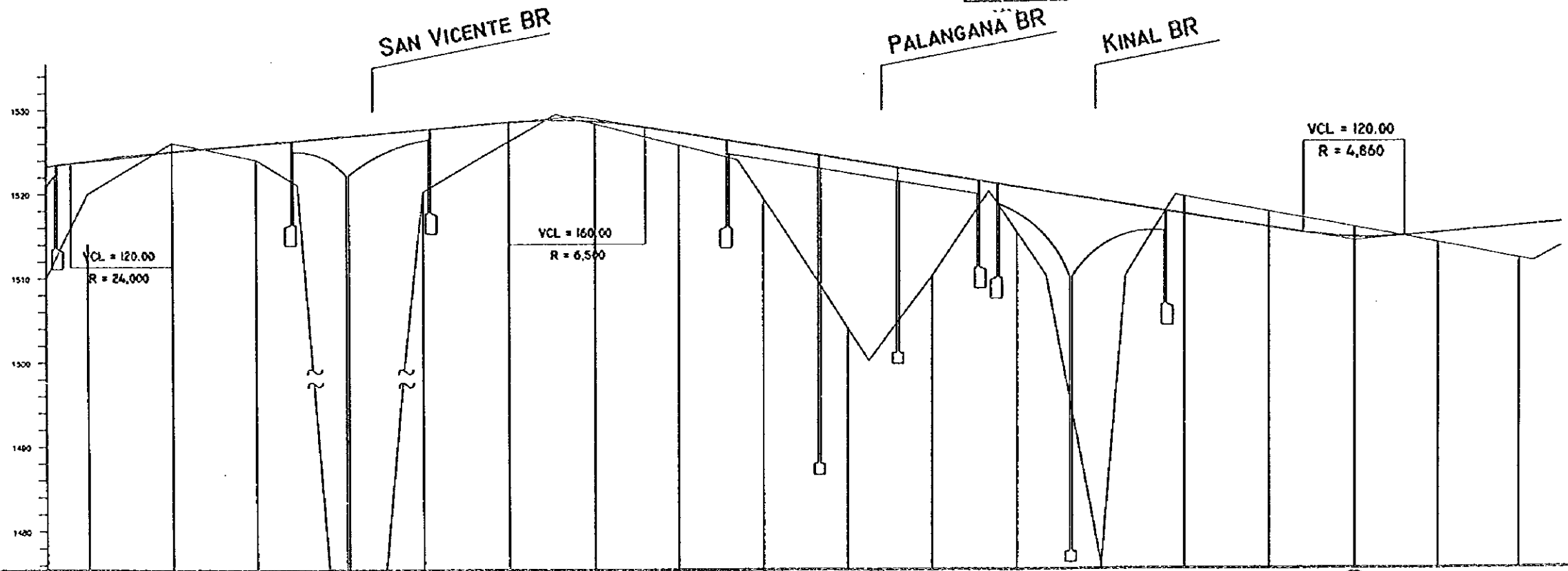
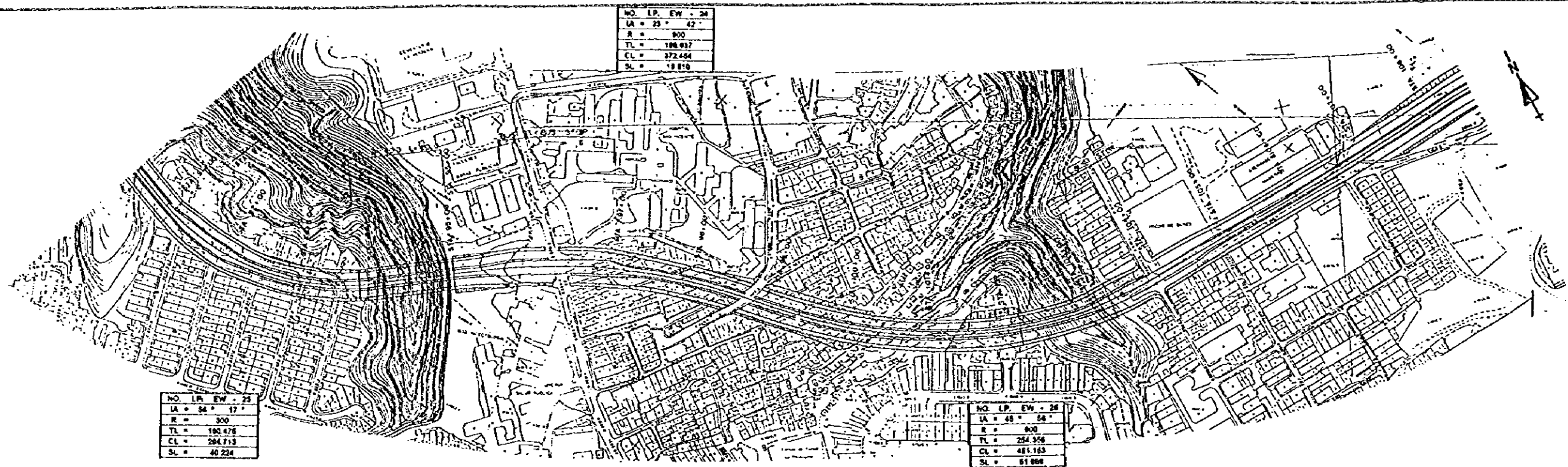
PLAN & PROFILE (E-W CORRIDOR/EXCLUSIVE BUS WAY STA. 72+50~90+50)
 PLANTA Y PERFIL (CORREDOR E-O/VIA EXCLUSIVA DE BUSES EST. 72+50~90+50)

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 EL ESTUDIO DE FACTIBILIDAD SOBRE EL PROYECTO DE TRANSPORTACION URBANA EN EL AREA METROPOLITANA DE GUATEMALA

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GRADIENT (%)															
PROPOSED HEIGHT (M)	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9
GROUND HEIGHT (M)	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9	1514.9
STATION NUMBER	90+00	90+20	90+40	90+60	90+80	91+00	91+20	91+40	91+60	91+80	92+00	92+20	92+40	92+60	92+80

PLAN & PROFILE (E-W CORRIDOR/EXCLUSIVE BUS WAY STA. 90+50~108+50)
 PLANTA Y PERFIL (CORREDOR E-O/VIA EXCLUSIVA DE BUSES EST. 90+50~108+50)

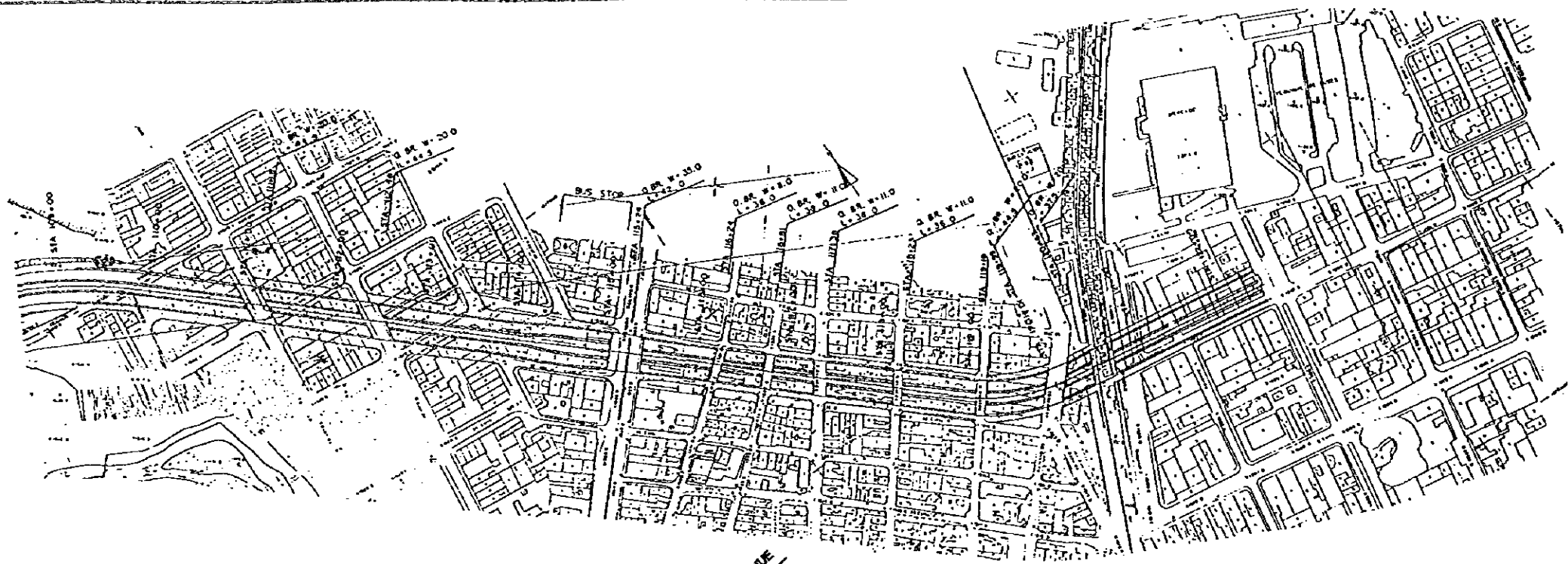
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7 AV OV BR

6 AV OV BR

32 ST. AND BOLIVAR AVENUE
STA. 115 + 24

BOLIVAR OV BR

2 AV OV BR

3 AV OV BR

7 AV OV BR

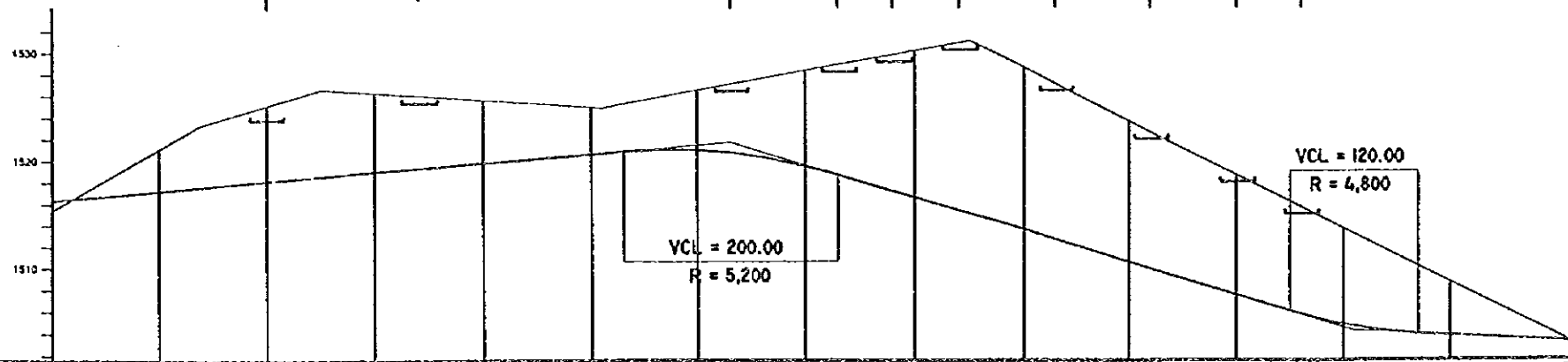
8 AV OV BR

9 AV OV BR

10 AV OV BR

FEGUA BW OV BR

STREET 30, ZONE 8
TERMINAL BUS CENTER, ZONE 4
URBAN BUS CENTER, ZONE 4
STA. 122 + 60



GRADIENT (%)	PROPOSED HEIGHT (M)	GROUND HEIGHT (M)	STATION NUMBER
0.50%	1519.2	1519.2	STA. 108+00
0.50%	1517.2	1517.2	STA. 109+00
0.50%	1516.2	1516.2	STA. 110+00
0.50%	1515.2	1515.2	STA. 111+00
0.50%	1514.2	1514.2	STA. 112+00
0.50%	1513.2	1513.2	STA. 113+00
0.50%	1512.2	1512.2	STA. 114+00
0.50%	1511.2	1511.2	STA. 115+00
0.50%	1510.2	1510.2	STA. 116+00
0.50%	1509.2	1509.2	STA. 117+00
0.50%	1508.2	1508.2	STA. 118+00
0.50%	1507.2	1507.2	STA. 119+00
0.50%	1506.2	1506.2	STA. 120+00
0.50%	1505.2	1505.2	STA. 121+00
0.50%	1504.2	1504.2	STA. 122+00

PLAN & PROFILE (E-W CORRIDOR/EXCLUSIVE BUS WAY STA. 108+50~122+60)
 PLANTA Y PERFIL (CORREDOR E-O/VIA EXCLUSIVA DE BUSES EST. 108+50~122+60)

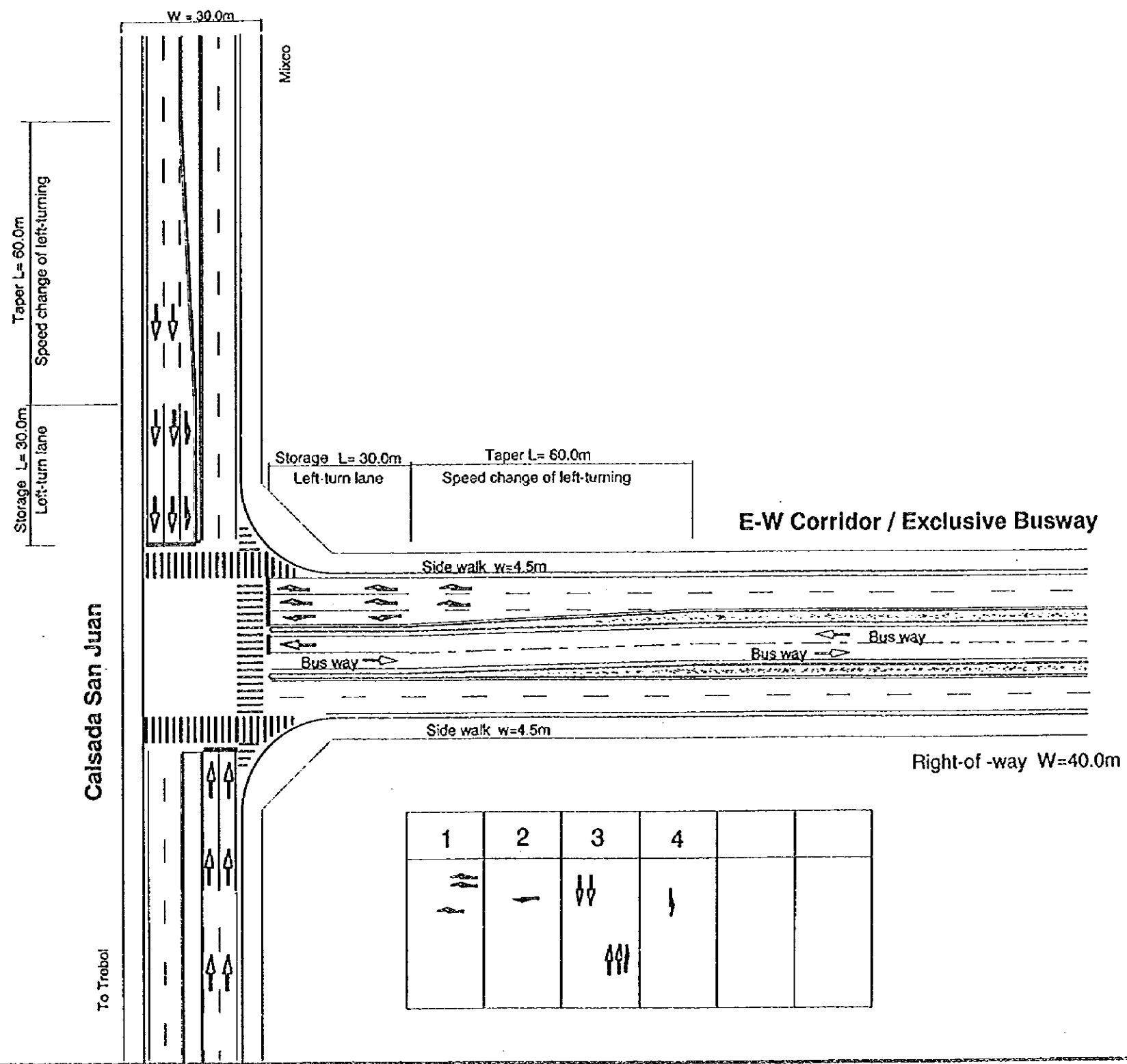
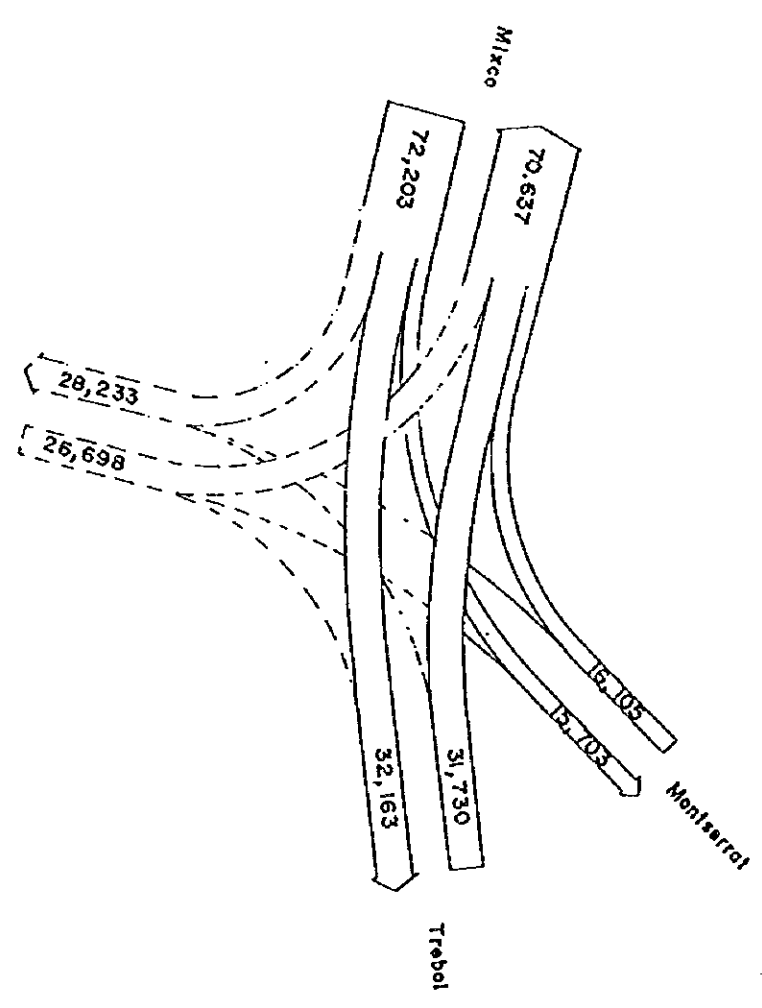
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SCALE ESCALA
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At-Grade Interchange
(Calzada San Juan y Boulevard San Nicolas)
INTERCAMBIO DE TRAFICO A NIVEL
(CALZADA SAN JUAN Y BOULEVARD SAN NICOLAS)

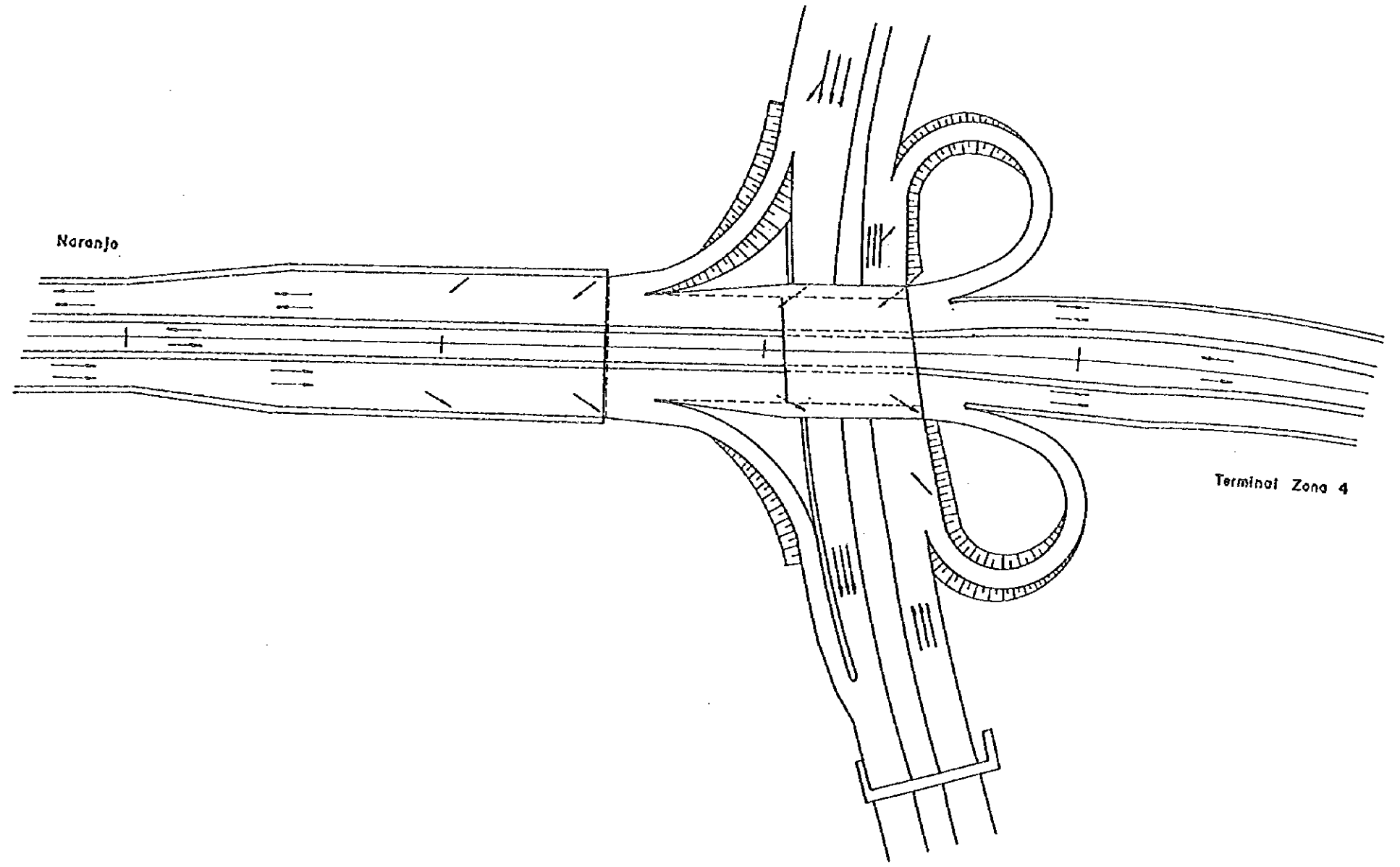
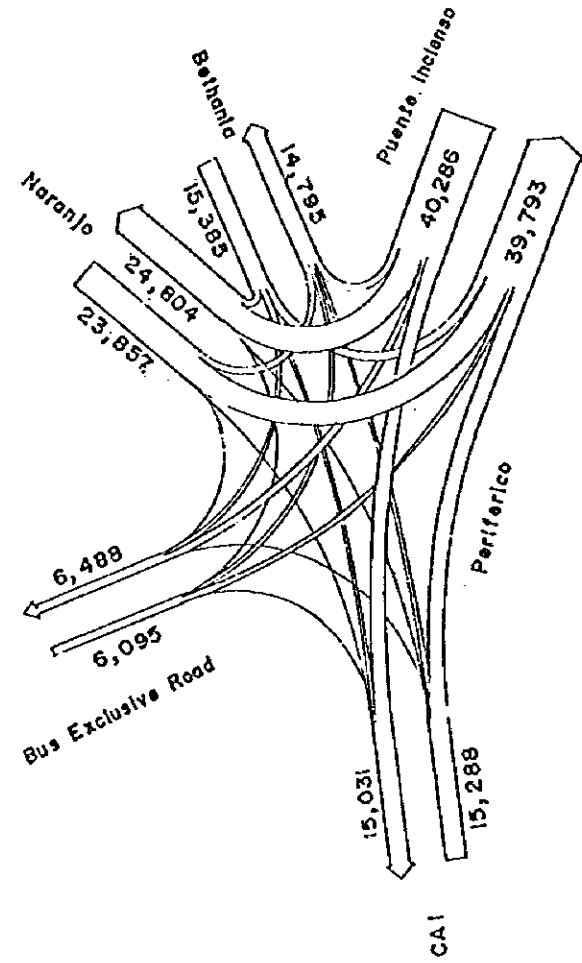
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EN EL AREA METROPOLITANA DE GUATEMALA

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Cloverleaf Interchange (Periferico y E-W Corridor)



Cloverleaf Interchange (Periferico y E-W Corridor)

INTERCAMBIO DE TRAFICO EN HOJA DE TEBOL
(PERIFERICO Y CORREDOR ESTE-OESTE)

GUATEMALA
MUNICIPALITY

MUNICIPALIDAD
DE GUATEMALA

JAPAN INTERNATIONAL
COOPERATION AGENCY

AGENCIA DE COOPERACION
INTERNACIONAL DEL JAPAN

THE FEASIBILITY STUDY ON THE PROJECT OF URBAN TRANSPORTATION
IN THE METROPOLITAN AREA OF GUATEMALA
EL ESTUDIO DE FACTIBILIDAD SOBRE EL PROYECTO DE TRANSPORTATION URBANA
EN EL AREA METROPOLITANA DE GUATEMALA

SCALE ESCALA

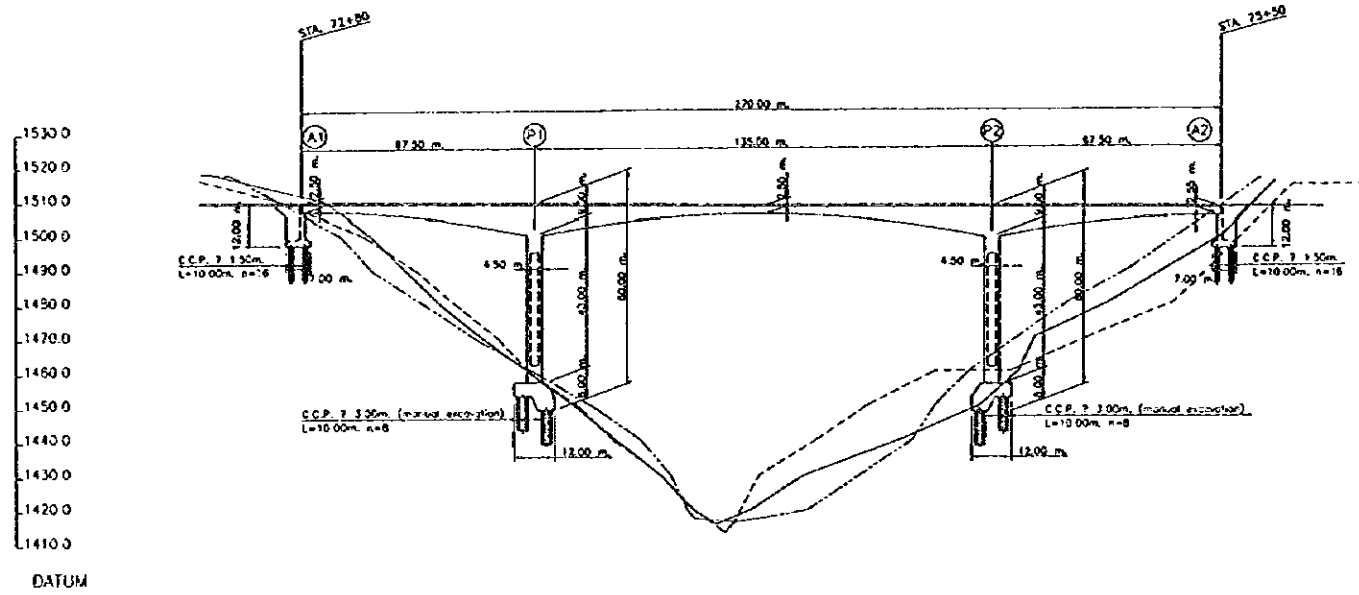
DATE FECHA

DWG No. HOJA No. 11

PAGE No. PAGINA No. 11

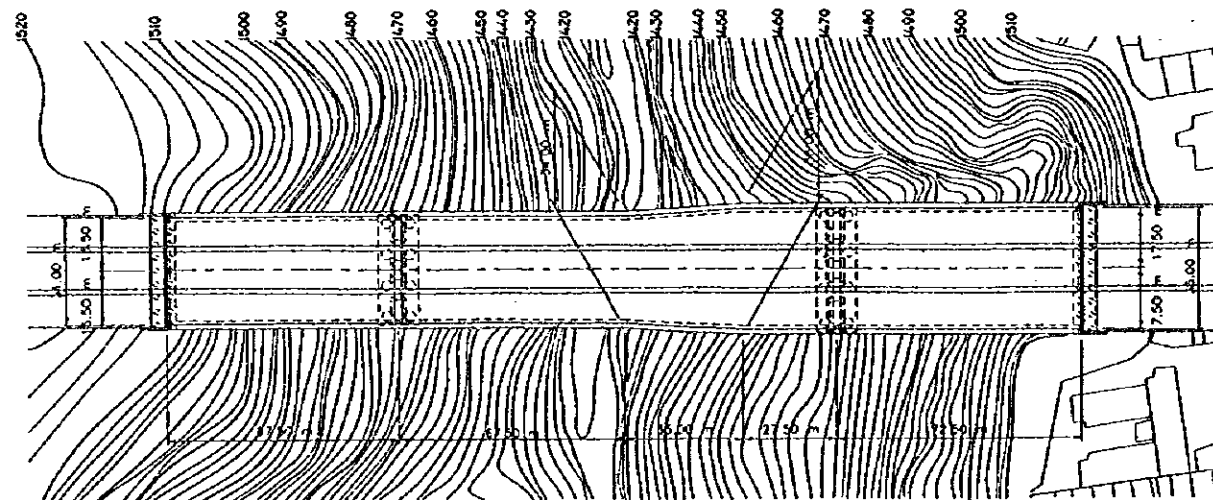
NARANJO BRIDGE

ELEVATION

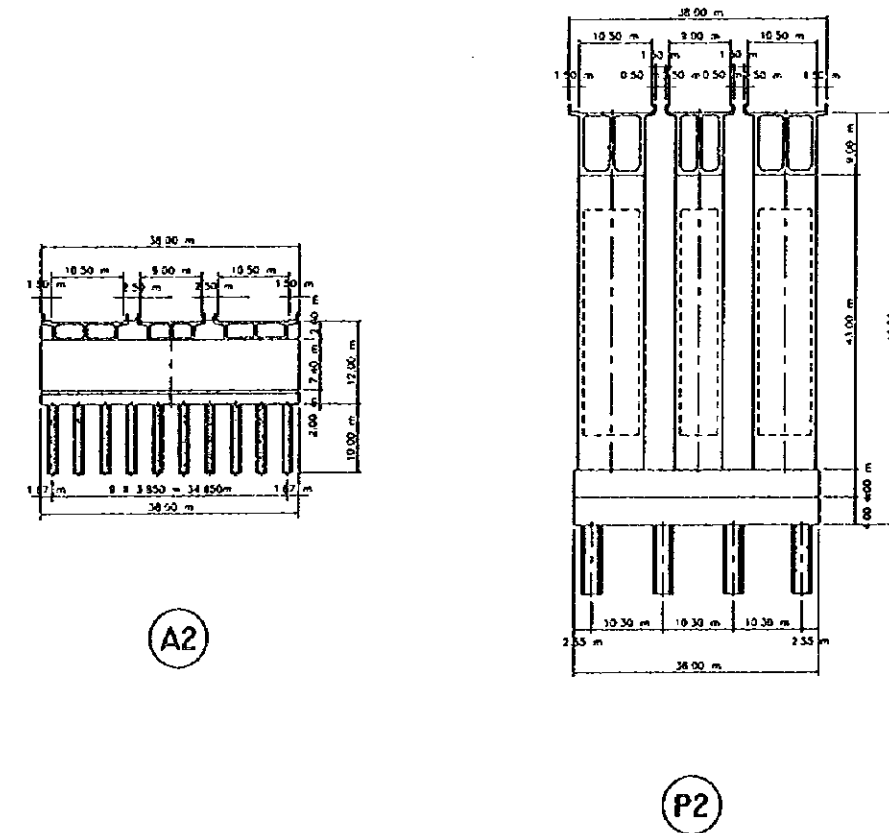


GRADE	$i = 1.405 \%$ $L = 270.00 \text{ m}$				
PLANNING HEIGHT	153.75	153.47	153.00	150.00	150.45
GROUND HEIGHT	150.00	150.00	143.80	147.00	150.50
STATION	72+00	73+00	74+00	75+00	76+00

PLAN



SECTION



DESIGN CRITERIA

TYPE	P.C. 3 SPAN CONTINUOUS GIRDER
TOTAL BRIDGE LENGTH	270.00 M
SPAN	67.50 M + 135.00 M + 67.50 M
WIDTH	31.00 M - 35.00 M
LIVE LOAD	HS 20 - 44
IMPACT COEFFICIENT	$I = \frac{15+24}{L+38}$
ACCELERATION COEFFICIENT	$A = 0.30$
STANDARD	AASHTO

GENERAL VIEW OF BRIDGE - NARANJO BRIDGE
VISTA GENERAL DEL PUENTE - PUENTE NARANJO

GUATEMALA MUNICIPALITY
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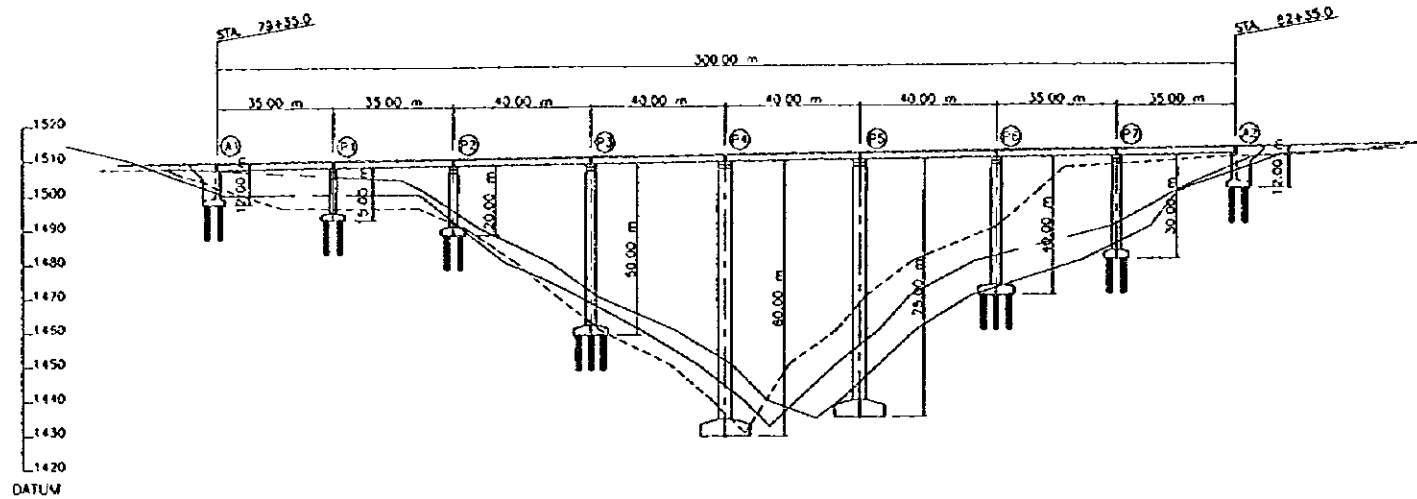
JAPAN INTERNATIONAL COOPERATION AGENCY
AGENCIA DE COOPERACIÓN INTERNACIONAL DEL JAPÓN

THE FEASIBILITY STUDY ON THE PROJECT OF URBAN TRANSPORTATION IN THE METROPOLITAN AREA OF GUATEMALA
EL ESTUDIO DE FACTIBILIDAD SOBRE EL PROYECTO DE TRANSPORTACIÓN URBANA EN EL ÁREA METROPOLITANA DE GUATEMALA

SCALE	ESCALA	DWG. No.	HOJA No.	12
DATE	FECHA	PAGE No.	PÁGINA No.	12

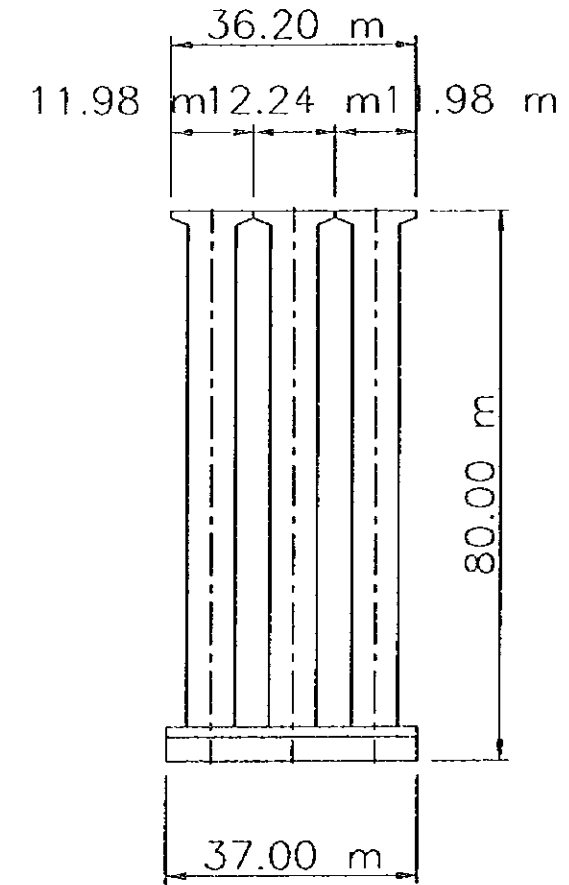
DEMOCRACIA BRIDGE

ELEVATION



GRADE	$i = 1.220\%$ $L = 300.00\text{m}$				
PLANNING HEIGHT	1509.20	1509.03	1511.15	1512.57	1512.85
GROUND LEVEL	1486.25	1488.00	1490.00	1495.00	1498.00
STATION	STA. 79+35.0	STA. 80+00	STA. 81+00	STA. 82+00	STA. 82+35.0

SECTION

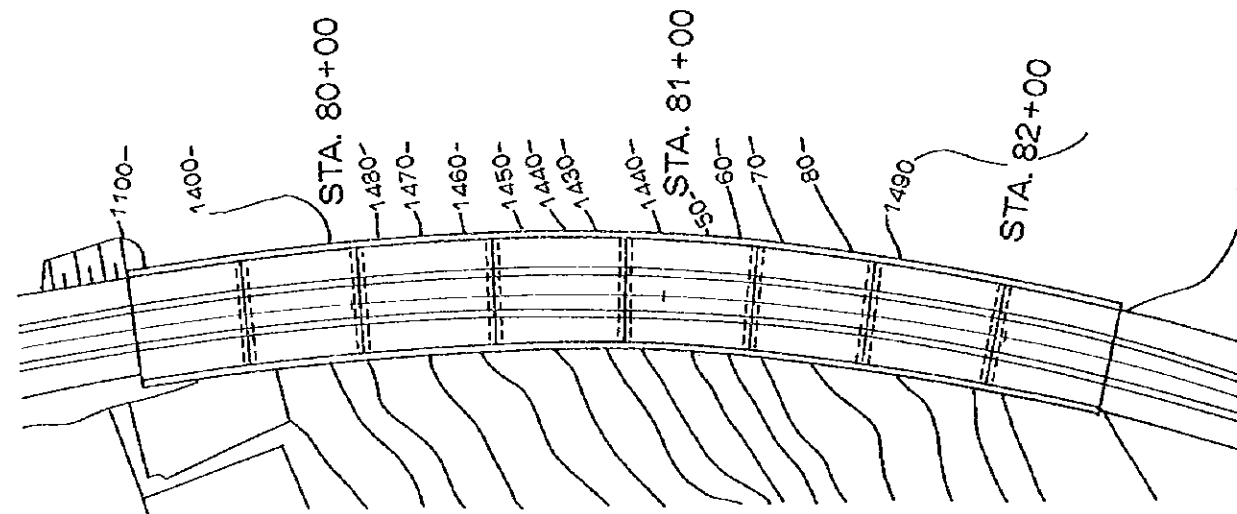


(P4)

DESIGN CRITERIA

TYPE	SIMPLE COMPOSITE PCI GIRDER
TOTAL BRIDGE LENGTH	300.00 M
SPAN	35.00 M, 40.00 M
WIDTH	34.00 M
LIVE LOAD	HS 20 - 44
IMPACT COEFFICIENT	$I = \frac{15+24}{L+38}$
ACCELERATION COEFFICIENT	A = 0.30
STANDARD	AASHTO

PLAN



GENERAL VIEW OF BRIDGE - DEMOCRACIA BRIDGE
VISTA GENERAL DEL PUENTE - PUENTE DEMOCRACIA

GUATEMALA MUNICIPALITY
MUNICIPALIDAD DE GUATEMALA

JAPAN INTERNATIONAL COOPERATION AGENCY
AGENCIA DE COOPERACIÓN INTERNACIONAL DEL JAPÓN

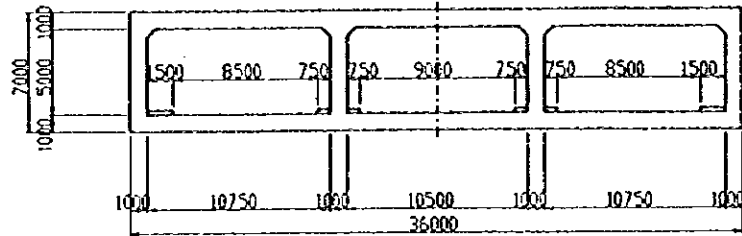
THE FEASIBILITY STUDY ON THE PROJECT OF URBAN TRANSPORTATION IN THE METROPOLITAN AREA OF GUATEMALA
EL ESTUDIO DE FACTIBILIDAD SOBRE EL PROYECTO DE TRANSPORTACIÓN URBANA EN EL ÁREA METROPOLITANA DE GUATEMALA

SCALE	ESCALA	DWG. No.	HOJA No.	13
DATE	FECHA	PAGE No.	PÁGINA No.	13

DEMOCRACIA PARQUE TUNNEL
ZONE 7 RETAINING WALL

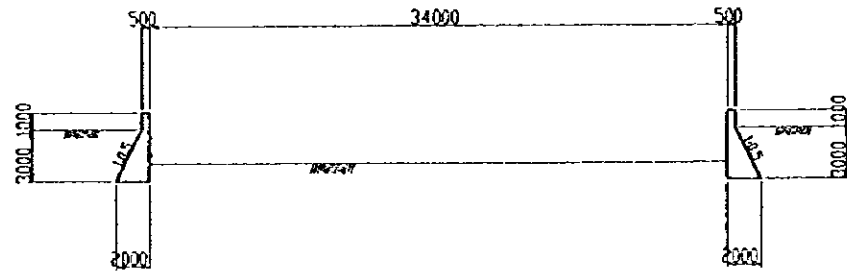
DEMOCRACIA PARQUE TUNNEL

SECTION

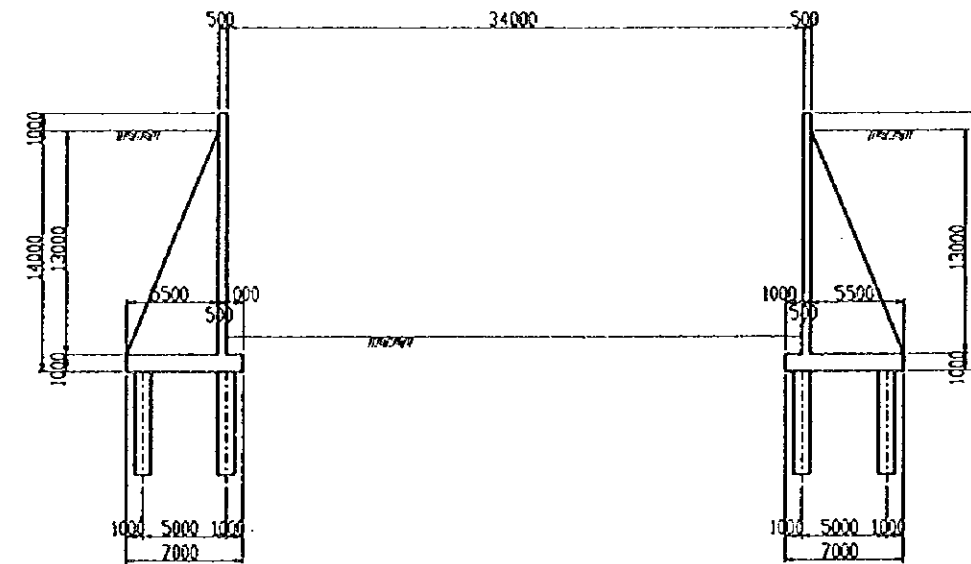


ZONE 7 RETAINING WALL

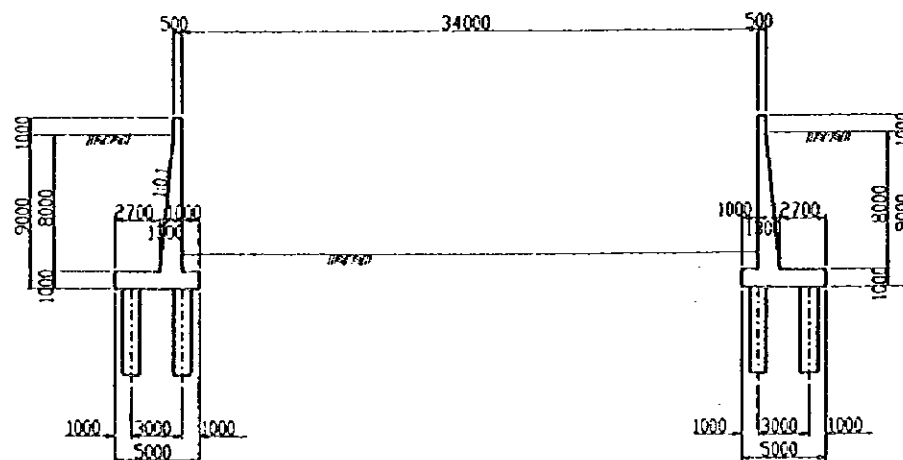
GRAVITY TYPE



BUTTRESSED TYPE



REVERSED T-TYPE



GENERAL VIEW - DEMOCRACIA PARQUE TUNNEL
ZONE 7 RETAINING WALL
VISTA GENERAL - TUNNEL PARQUE LA DEMOCRACIA
ZONE 7 MURO DE CONTENCION

GUATEMALA
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JAPAN INTERNATIONAL
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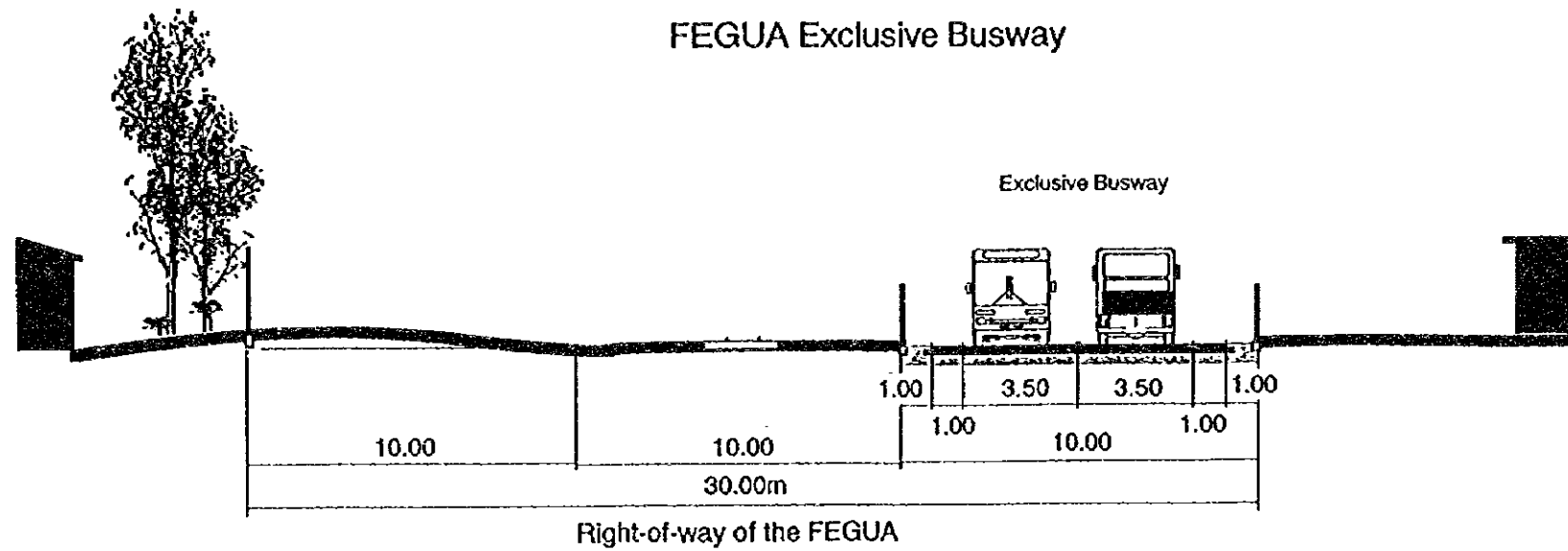
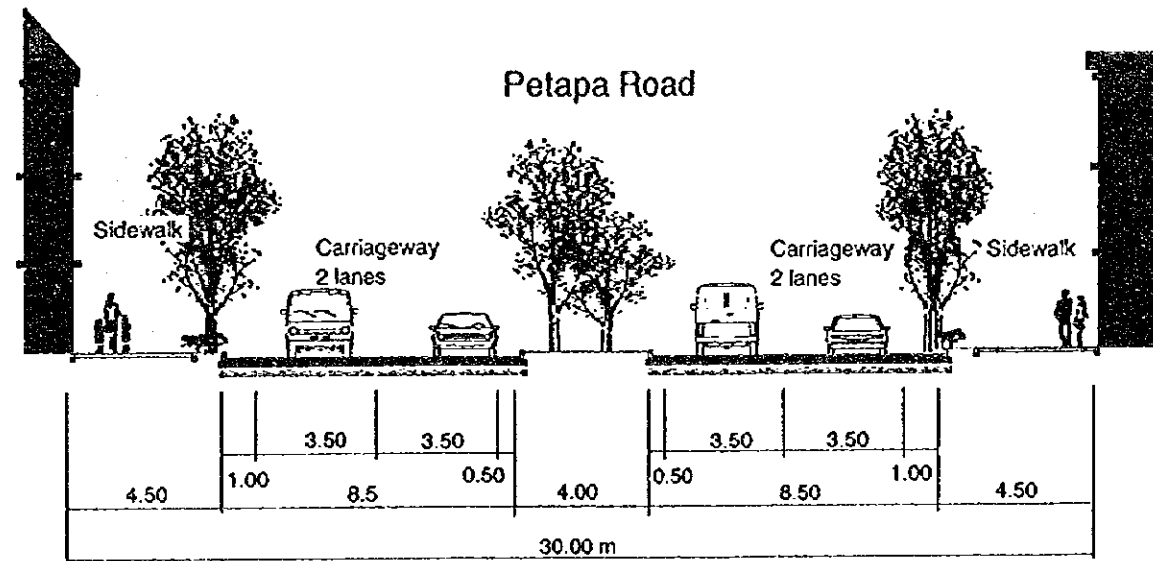
AGENCIA DE COOPERACION
INTERNACIONAL DEL JAPON

THE FEASIBILITY STUDY ON THE PROJECT OF URBAN TRANSPORTATION
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EN EL AREA METROPOLITANA DE GUATEMALA

SCALE ESCALA
DATE FECHA

DWG. No. Hoja No. 14
PAGE No. Pagina No. 14

TYPYCAL CROSS SECTION



Typical Cross Section(Petapa Road / FEGUA Exclusive Busway)
 SECCION TRANSVERSAL TIPICA
 (VIA EXCLUSIVA DE BUS FEGUA / AVENIDA PETAPA)

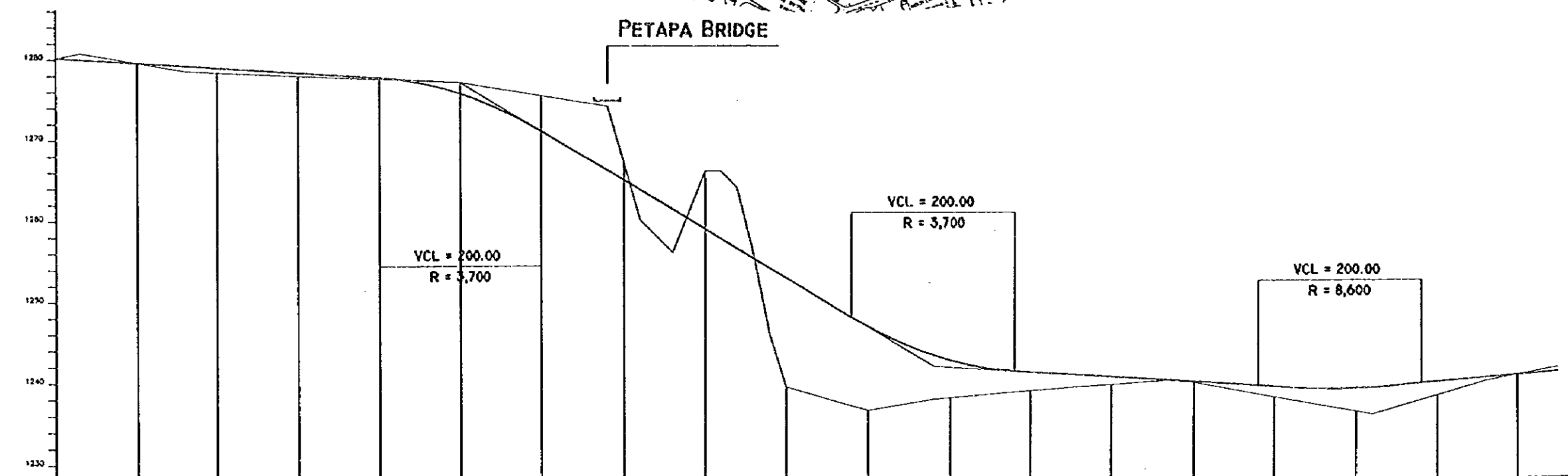
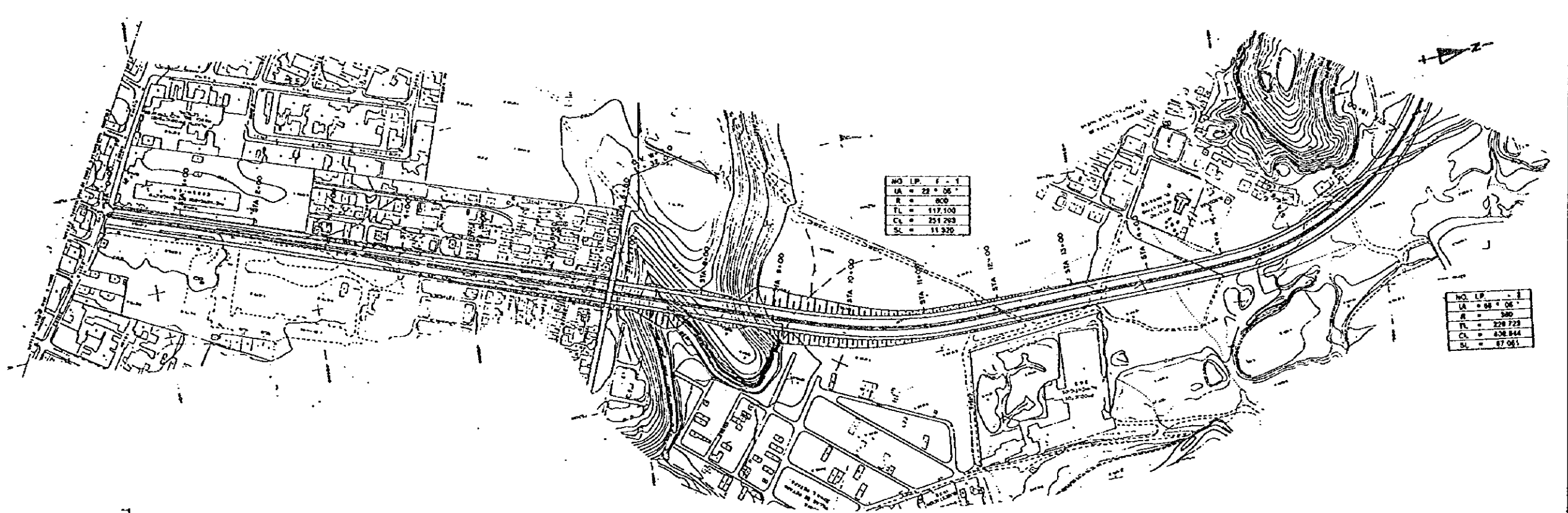
GUATEMALA
 MUNICIPALITY
 MUNICIPALIDAD
 DE GUATEMALA

JAPAN INTERNATIONAL
 COOPERATION AGENCY
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 INTERNACIONAL DEL JAPAN

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 EL ESTUDIO DE FACTIBILIDAD SOBRE EL PROYECTO DE TRANSPORTACION URBANA
 EN EL AREA METROPOLITANA DE GUATEMALA

SCALE ESCALA
 DATE FECHA

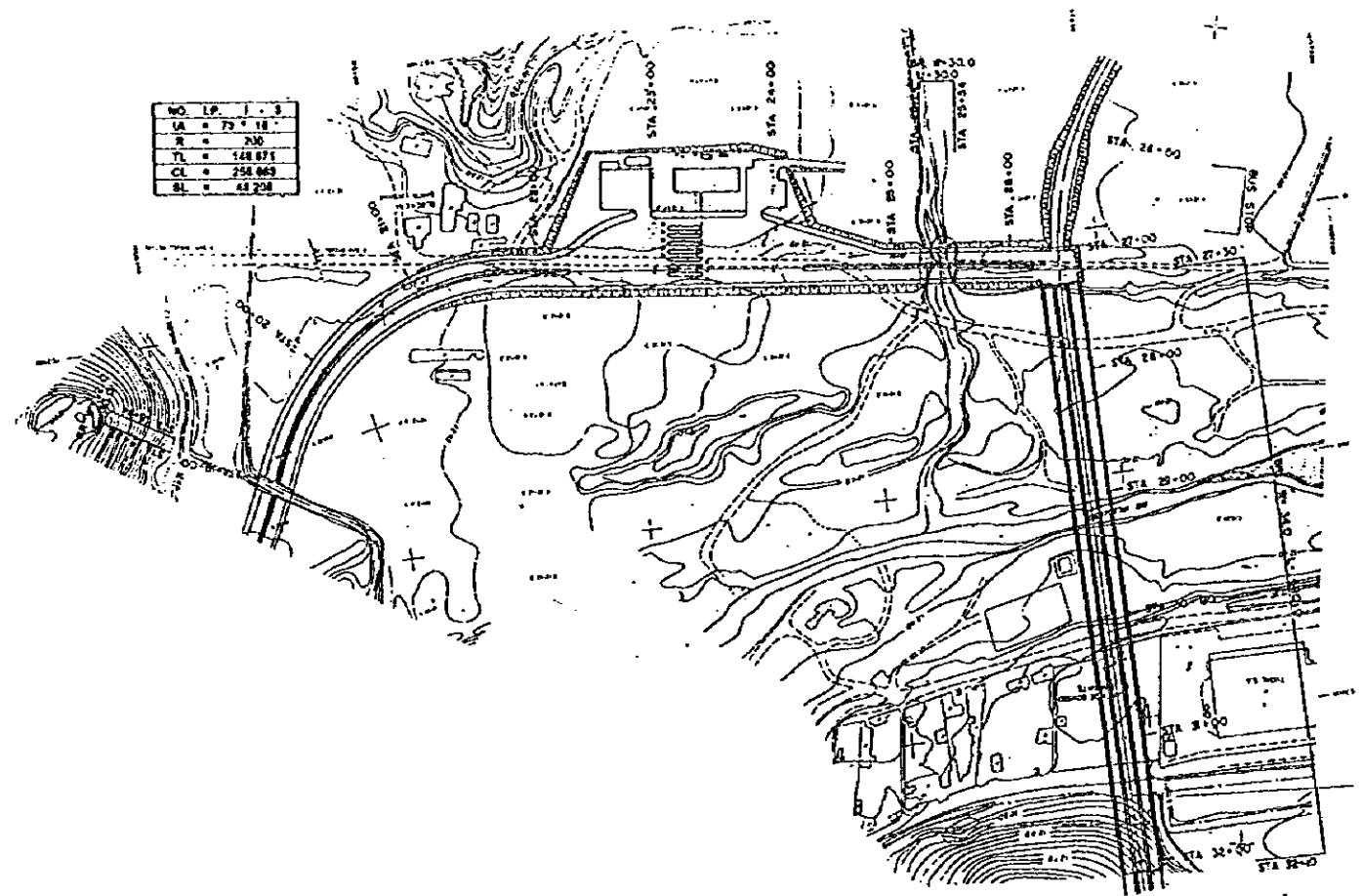
DWG No. HOJA No. 15
 PAGE No. PAGINA No. 15



GRADIENT (%)	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PROPOSED HEIGHT (M)	1281.00	1279.50	1278.00	1276.50	1275.00	1273.50	1272.00	1270.50	1269.00	1267.50	1266.00	1264.50	1263.00	1261.50	1260.00	1258.50	1257.00	1255.50	1254.00	1252.50
GROUND HEIGHT (M)	1280.00	1278.00	1276.00	1274.00	1272.00	1270.00	1268.00	1266.00	1264.00	1262.00	1260.00	1258.00	1256.00	1254.00	1252.00	1250.00	1248.00	1246.00	1244.00	1242.00
STATION NUMBER	STA 0+00.00	STA 0+25.00	STA 0+50.00	STA 0+75.00	STA 1+00.00	STA 1+25.00	STA 1+50.00	STA 1+75.00	STA 2+00.00	STA 2+25.00	STA 2+50.00	STA 2+75.00	STA 3+00.00	STA 3+25.00	STA 3+50.00	STA 3+75.00	STA 4+00.00	STA 4+25.00	STA 4+50.00	STA 4+75.00

PLAN & PROFILE (PETAPA ROAD STA. 0+00~18+50)
PLANTA Y PERFIL (RUTA PETAPA EST. 0+00~18+50)

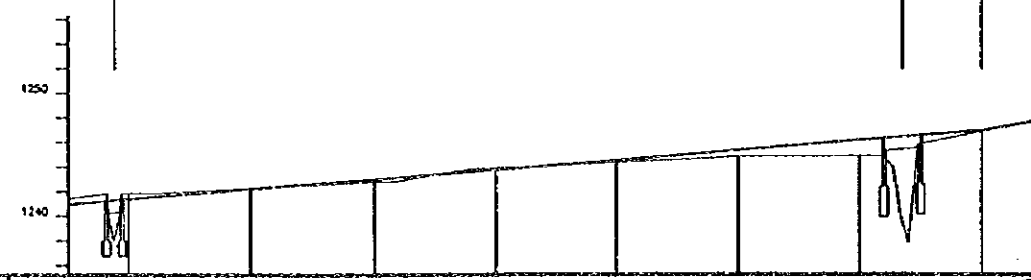
GUATEMALA MUNICIPALITY MUNICIPALIDAD DE GUATEMALA	JAPAN INTERNATIONAL COOPERATION AGENCY AGENCIA DE COOPERACION INTERNACIONAL DEL JAPON	THE FEASIBILITY STUDY ON THE PROJECT OF URBAN TRANSPORTATION IN THE METROPOLITAN AREA OF GUATEMALA EL ESTUDIO DE FACTIBILIDAD SOBRE EL PROYECTO DE TRANSPORTACION URBANA EN EL AREA METROPOLITANA DE GUATEMALA	
SCALE DATE	ESCALA FECHA	DWG No.	HOJA No. 16
		PAGE No.	PÁGINA No. 16



NO. LP.	J-2
UA	79-18
R	200
TL	148.871
CL	258.869
SL	43.208

PARAISO BRIDGE

FRUTAL BRIDGE
VILLA NUEVA EL FRUTAL
STA. 26 + 00



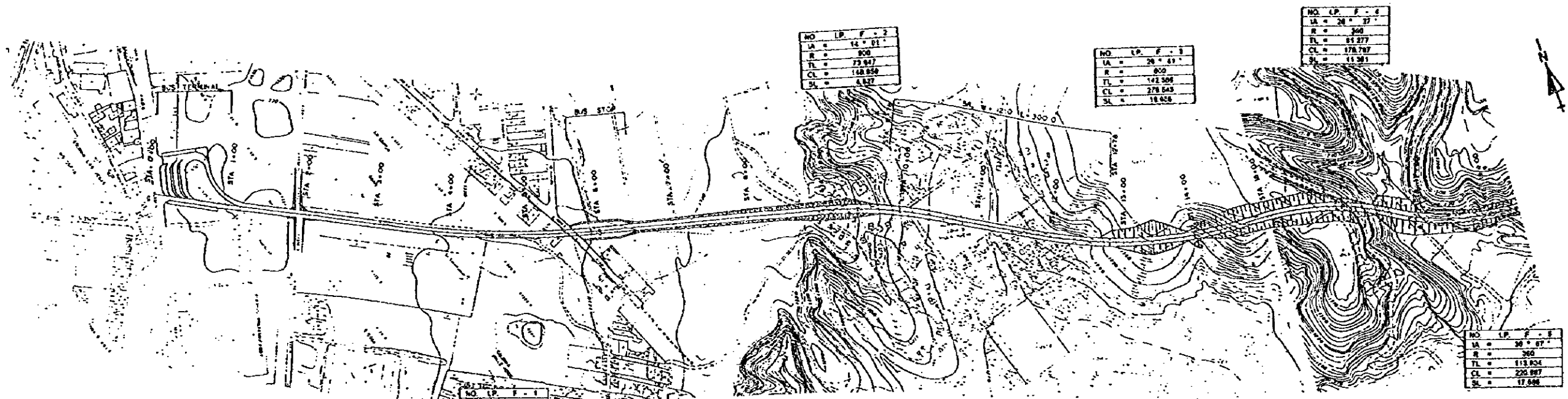
GRADIENT (%)	+0.75% L=100.00 m									
PROPOSED HEIGHT (M)	1241.20	1242.20	1243.20	1244.20	1245.20	1246.20	1247.20	1248.20	1249.20	1250.20
GROUND HEIGHT (M)	1238.20	1239.20	1240.20	1241.20	1242.20	1243.20	1244.20	1245.20	1246.20	1247.20
STATION NUMBER	STA 18+50	STA 19+00	STA 19+50	STA 20+00	STA 20+50	STA 21+00	STA 21+50	STA 22+00	STA 22+50	STA 23+00

PLAN & PROFILE (PETAPA ROAD STA. 18+50~26+40)
PLANTA Y PERFIL (RUTA PETAPA EST. 18+50~26+40)

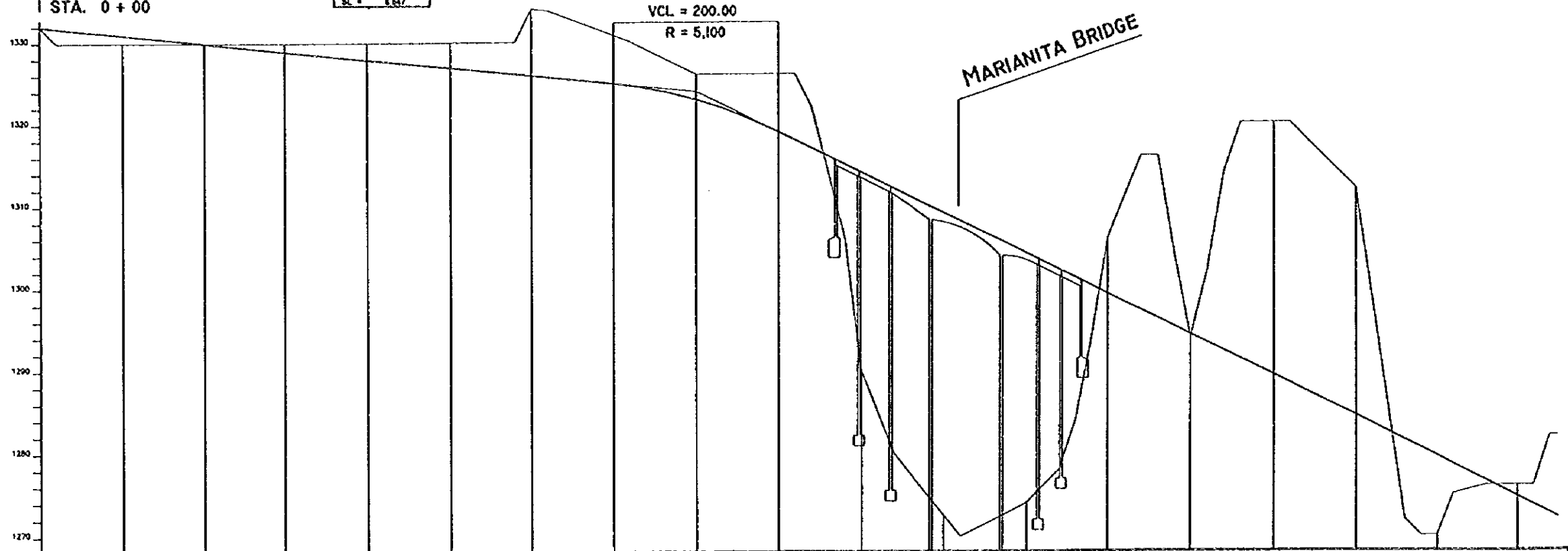
GUATEMALA MUNICIPALITY
MUNICIPALIDAD DE GUATEMALA

JAPAN INTERNATIONAL COOPERATION AGENCY
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THE FEASIBILITY STUDY ON THE PROJECT OF URBAN TRANSPORTATION IN THE METROPOLITAN AREA OF GUATEMALA EL ESTUDIO DE FACTIBILIDAD SOBRE EL PROYECTO DE TRANSPORTACION URBANA EN EL AREA METROPOLITANA DE GUATEMALA			
SCALE	ESCALA	DWG No.	HOJA No.
DATE	FECHA	PAGE No.	PÁGINA No.
			17
			17



4A AVE. Z.6 VILLA NUEVA
 STA. 0 + 00



GRADIENT (%)	PROPOSED HEIGHT (M)	GROUND HEIGHT (M)	STATION NUMBER
0.32	1332.00	1333.00	STA. 0+000
0.32	1331.68	1332.68	STA. 0+010
0.32	1331.36	1332.36	STA. 0+020
0.32	1331.04	1332.04	STA. 0+030
0.32	1330.72	1331.72	STA. 0+040
0.32	1330.40	1331.40	STA. 0+050
0.32	1330.08	1331.08	STA. 0+060
0.32	1329.76	1330.76	STA. 0+070
0.32	1329.44	1330.44	STA. 0+080
0.32	1329.12	1330.12	STA. 0+090
0.32	1328.80	1329.80	STA. 0+100
0.32	1328.48	1329.48	STA. 0+110
0.32	1328.16	1329.16	STA. 0+120
0.32	1327.84	1328.84	STA. 0+130
0.32	1327.52	1328.52	STA. 0+140
0.32	1327.20	1328.20	STA. 0+150
0.32	1326.88	1327.88	STA. 0+160
0.32	1326.56	1327.56	STA. 0+170
0.32	1326.24	1327.24	STA. 0+180
0.32	1325.92	1326.92	STA. 0+190
0.32	1325.60	1326.60	STA. 0+200

PLAN & PROFILE (FEGUA EXCLUSIVE BUSWAY STA. 0~18+50)
 PLANTA Y PERFIL (VIA EXCLUSIVA DE BUSES FEGUA EST. 0~18+50)

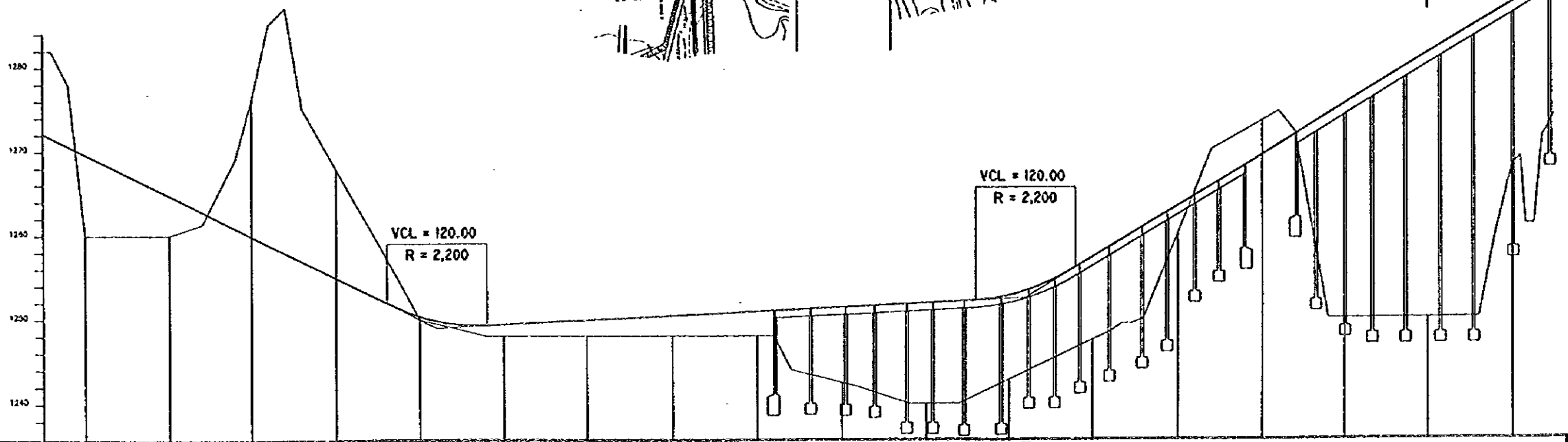
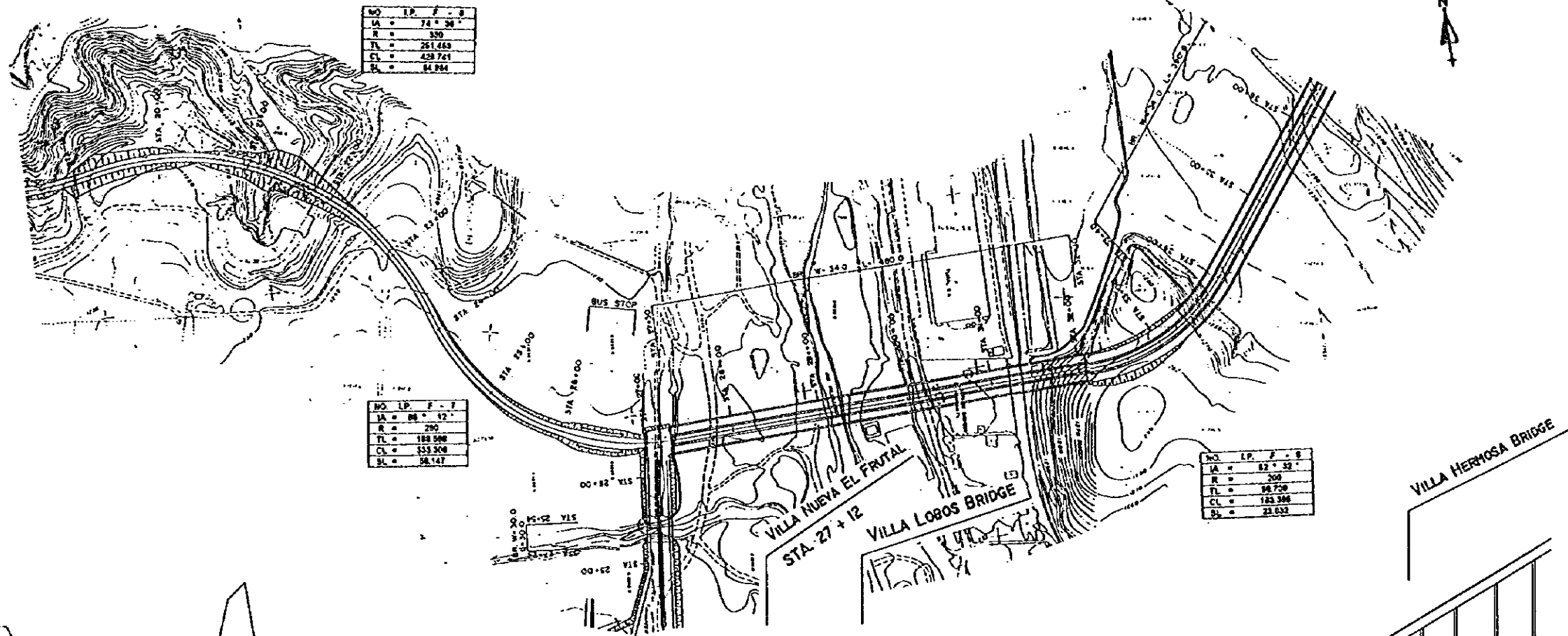
GUATEMALA MUNICIPALITY
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SCALE ESCALA
 DATE FECHA

DWG NO. HOJA NO. 18
 PAGE NO. PAGINA NO. 18



GRADIENT (%)	+4.820% L=1520.00 m		-1.330% L=700.00 m		+3.600% L=780.00 m	
PROPOSED HEIGHT (M)	1250.00	1250.00	1250.00	1250.00	1250.00	1250.00
GROUND HEIGHT (M)	1250.00	1250.00	1250.00	1250.00	1250.00	1250.00
STATION NUMBER	STA 18+00	STA 19+00	STA 20+00	STA 21+00	STA 22+00	STA 23+00

PLAN & PROFILE (FEGUA EXCLUSIVE BUSWAY/PETAPA ROAD STA.18+50~36+50)
 PLANTA Y PERFIL (VIA EXCLUSIVA DE BUSES FEGUA/RUTA PETAPA EST.18+50~36+50)

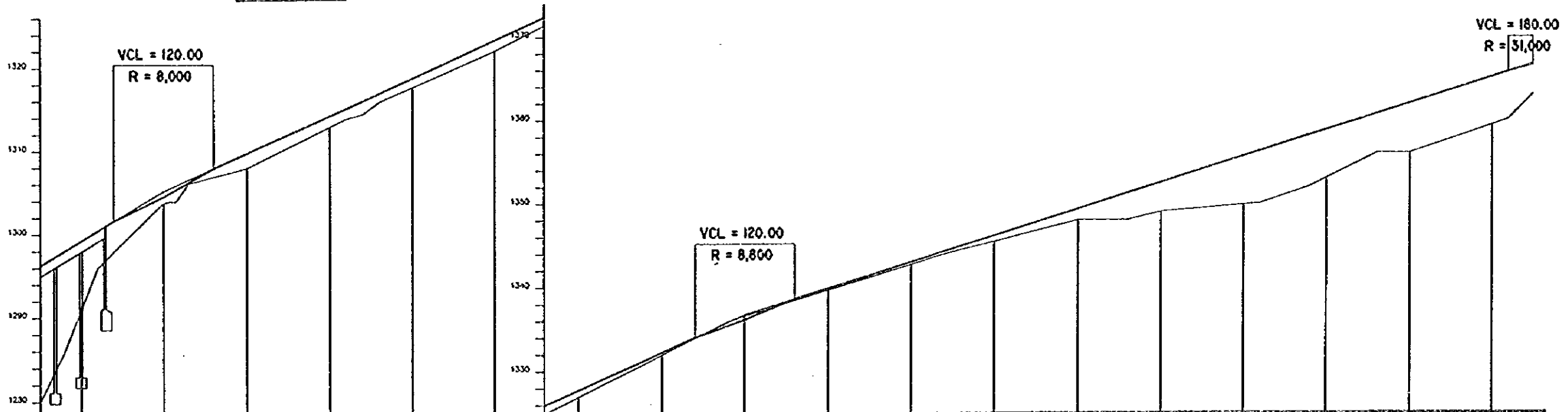
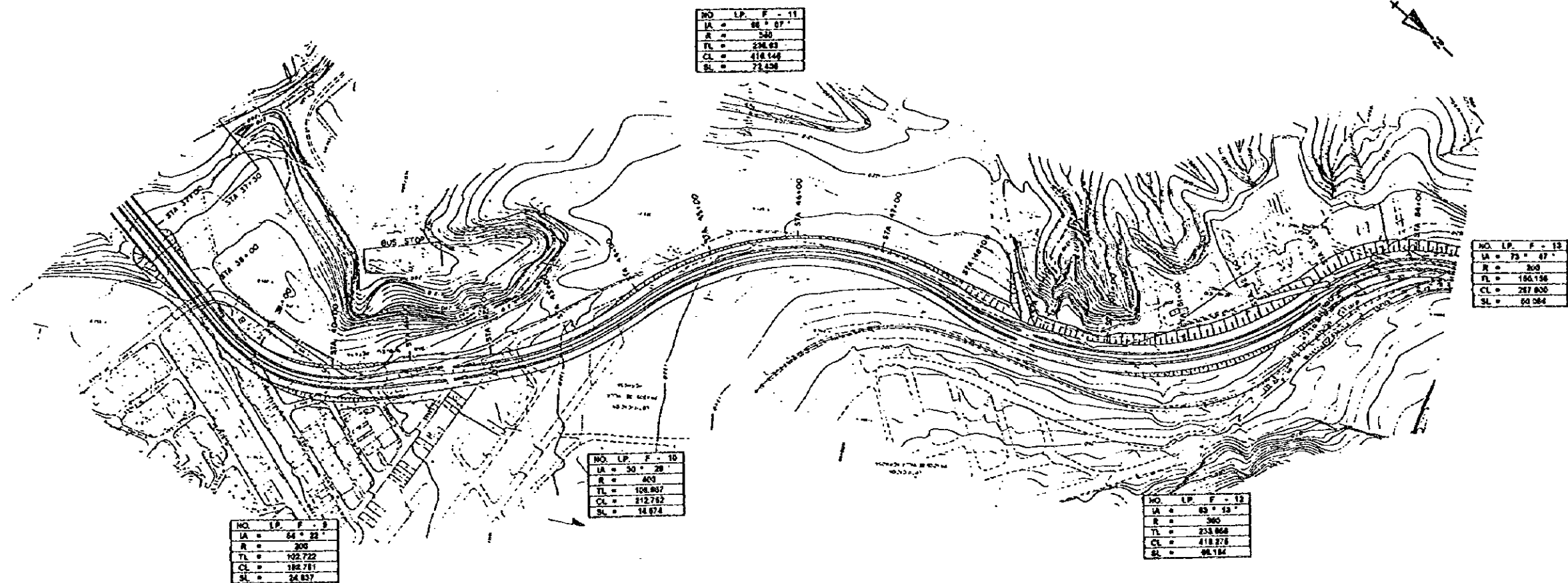
GUATEMALA MUNICIPALITY
 MUNICIPALIDAD DE GUATEMALA

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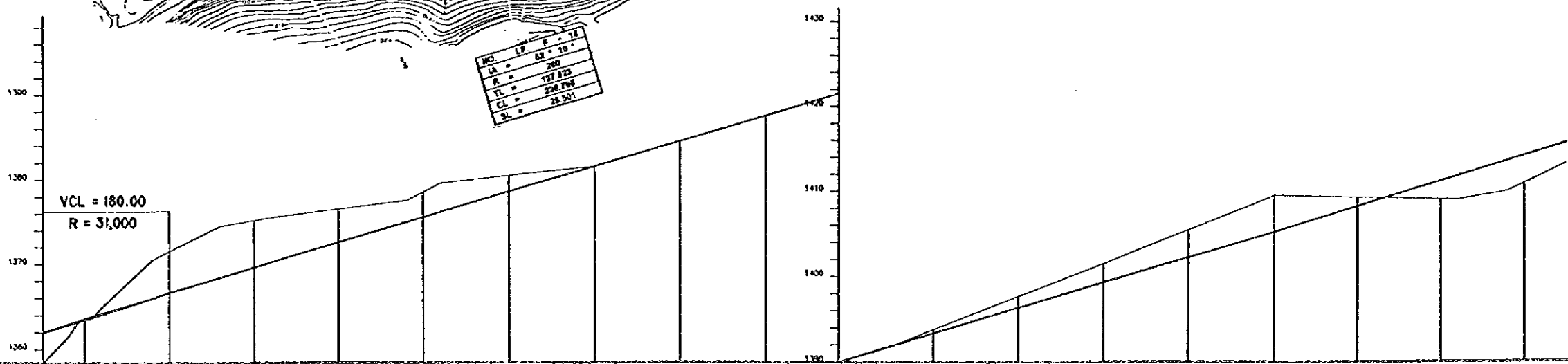
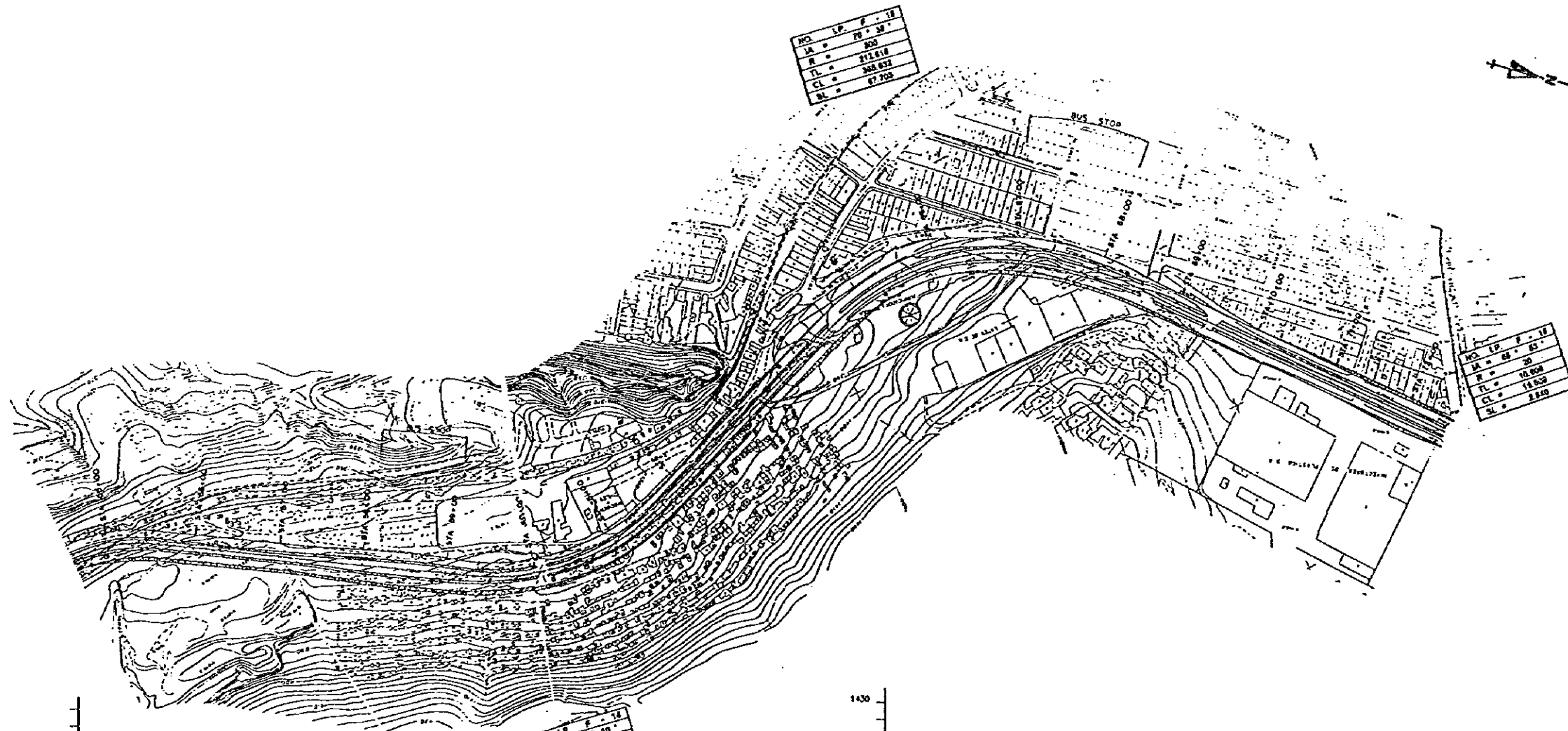
THE FEASIBILITY STUDY ON THE PROJECT OF URBAN TRANSPORTATION IN THE METROPOLITAN AREA OF GUATEMALA
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SCALE ESCALA
 DATE FECHA

DWG NO. HOJA NO. 19
 PAGE NO. PAGINA NO. 19



GRADIENT (%)	PROPOSED HEIGHT (M)	GROUND HEIGHT (M)	STATION NUMBER
3.400%	1230.00	1230.00	STA 36+00
3.400%	1233.60	1233.60	STA 37+00
3.400%	1237.20	1237.20	STA 38+00
3.400%	1240.80	1240.80	STA 39+00
3.400%	1244.40	1244.40	STA 40+00
3.400%	1248.00	1248.00	STA 41+00
3.400%	1251.60	1251.60	STA 42+00
3.400%	1255.20	1255.20	STA 43+00
3.400%	1258.80	1258.80	STA 44+00
3.400%	1262.40	1262.40	STA 45+00
3.400%	1266.00	1266.00	STA 46+00
3.400%	1269.60	1269.60	STA 47+00
3.400%	1273.20	1273.20	STA 48+00
3.400%	1276.80	1276.80	STA 49+00
3.400%	1280.40	1280.40	STA 50+00
3.400%	1284.00	1284.00	STA 51+00
3.400%	1287.60	1287.60	STA 52+00
3.400%	1291.20	1291.20	STA 53+00
3.400%	1294.80	1294.80	STA 54+00



GRADIENT (%)	PROPOSED HEIGHT (M)	GROUND HEIGHT (M)	STATION NUMBER
2.807	1362.00	1362.00	STA. 54+00
2.807	1365.00	1365.00	STA. 55+00
2.807	1368.00	1368.00	STA. 56+00
2.807	1371.00	1371.00	STA. 57+00
2.807	1374.00	1374.00	STA. 58+00
2.807	1377.00	1377.00	STA. 59+00
2.807	1380.00	1380.00	STA. 60+00
2.807	1383.00	1383.00	STA. 61+00
2.807	1386.00	1386.00	STA. 62+00
2.807	1389.00	1389.00	STA. 63+00
2.807	1392.00	1392.00	STA. 64+00
2.807	1395.00	1395.00	STA. 65+00
2.807	1398.00	1398.00	STA. 66+00
2.807	1401.00	1401.00	STA. 67+00
2.807	1404.00	1404.00	STA. 68+00
2.807	1407.00	1407.00	STA. 69+00
2.807	1410.00	1410.00	STA. 70+00
2.807	1413.00	1413.00	STA. 71+00
2.807	1416.00	1416.00	STA. 72+00
2.807	1419.00	1419.00	STA. 73+00

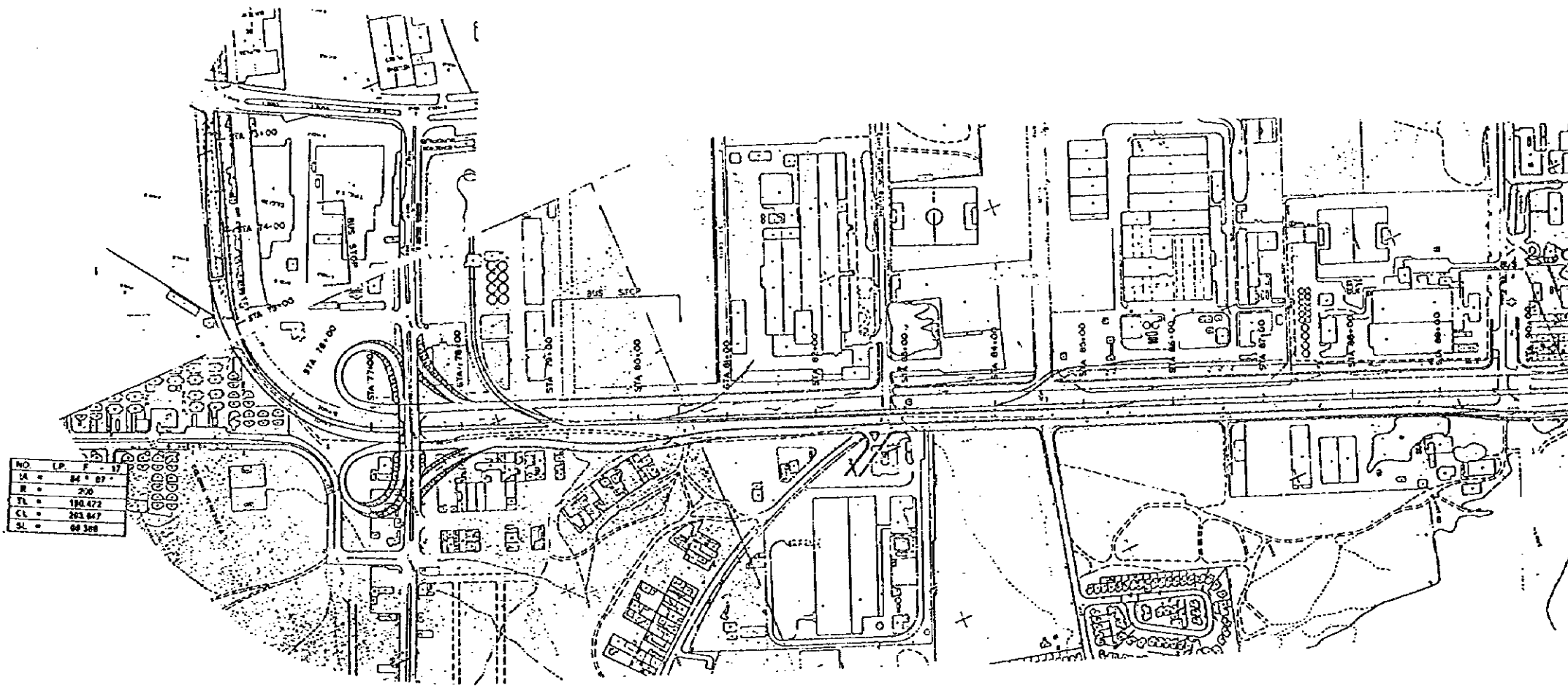
PLAN & PROFILE (FEGUA EXCLUSIVE BUSWAY/PETAPA ROAD STA.54+50~72+50)
 PLANTA Y PERFIL (VIA EXCLUSIVA DE BUSES FEGUA/RUTA PETAPA EST. 54+50~72+50)

GUATEMALA MUNICIPALITY
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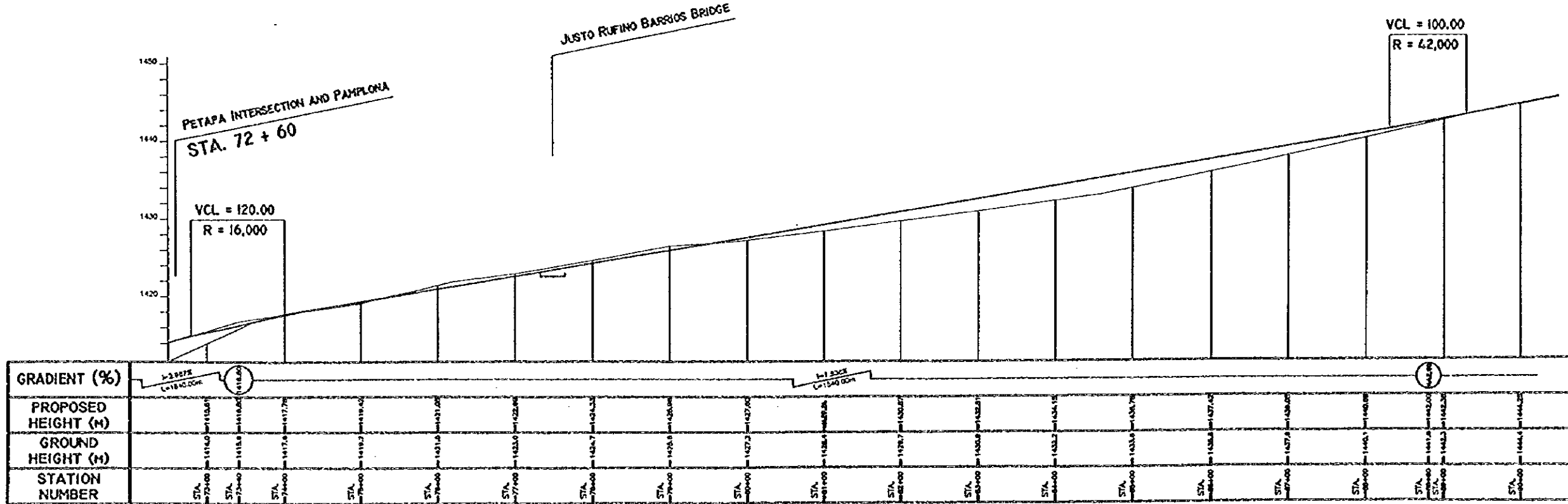
JAPAN INTERNATIONAL COOPERATION AGENCY
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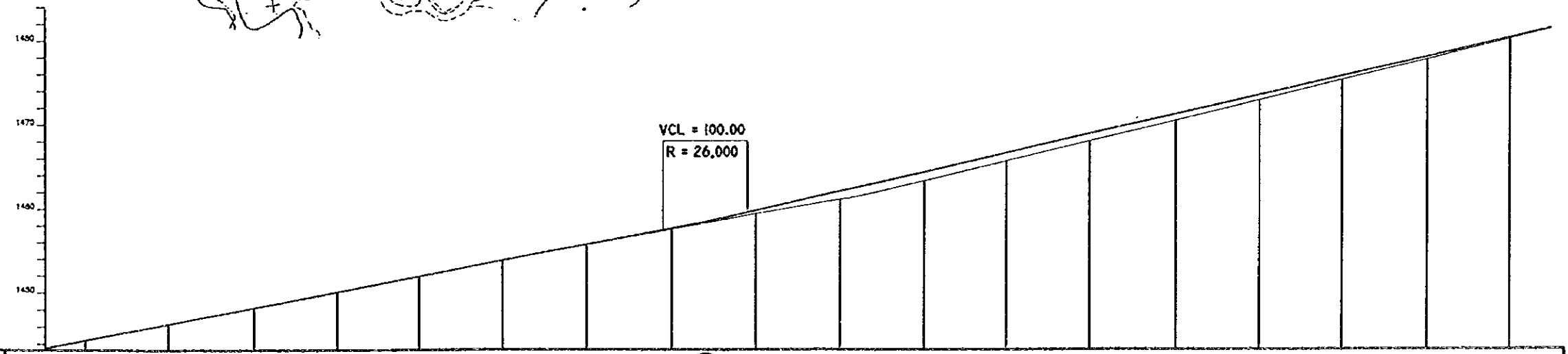
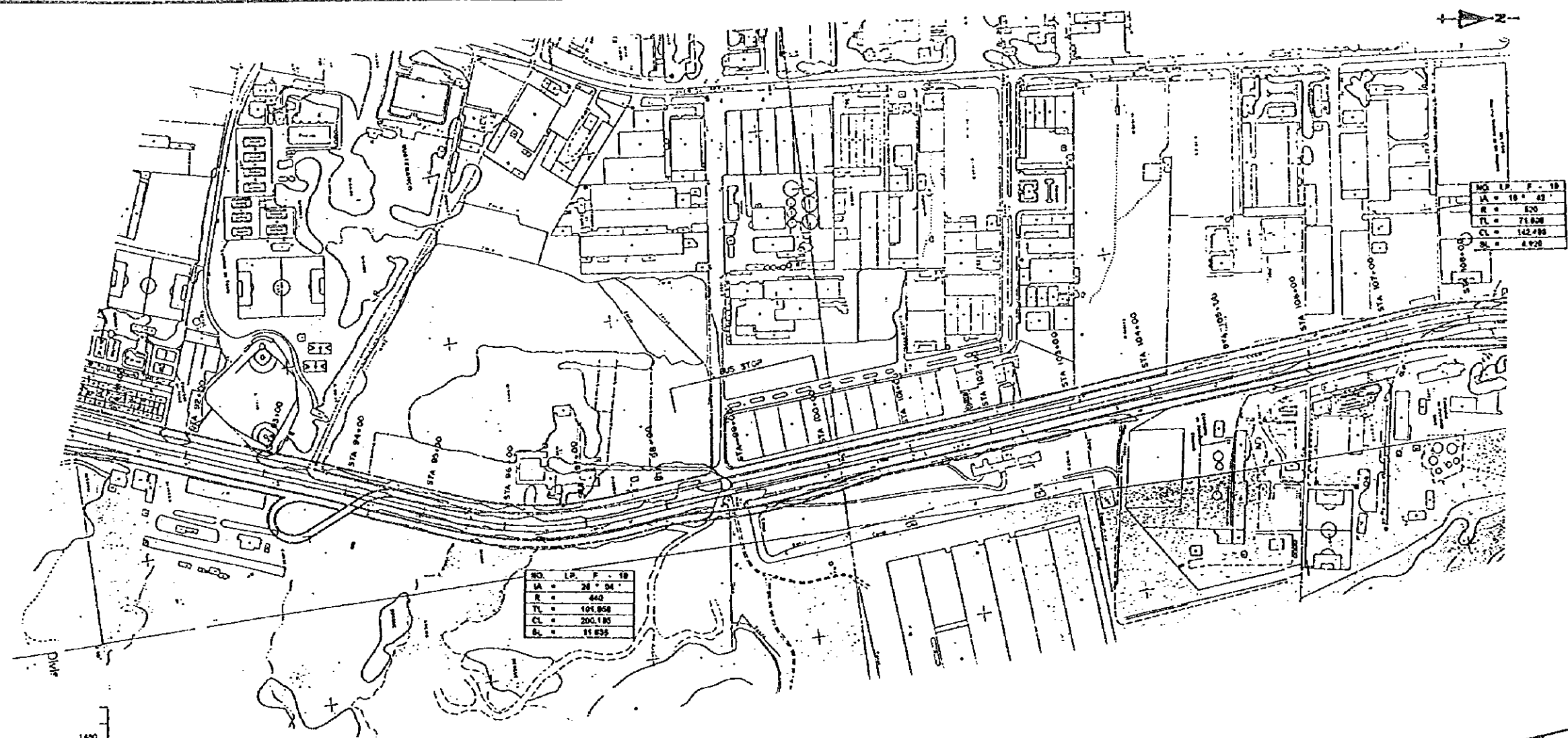
THE FEASIBILITY STUDY ON THE PROJECT OF URBAN TRANSPORTATION IN THE METROPOLITAN AREA OF GUATEMALA
 EL ESTUDIO DE FACTIBILIDAD SOBRE EL PROYECTO DE TRANSPORTACION URBANA EN EL AREA METROPOLITANA DE GUATEMALA

SCALE	ESCALA	DWG No.	HOJA No.	21
DATE	FECHA	PAGE No.	PAGINA No.	21



NO	LP	F	ST
1A	=	84	+ 87
R	=	200	
TL	=	198.472	
CL	=	203.847	
SL	=	68.328	





GRADIENT (%)	PROPOSED HEIGHT (M)	GROUND HEIGHT (M)	STATION NUMBER
			STA 91+00
			STA 92+00
			STA 93+00
			STA 94+00
			STA 95+00
			STA 96+00
			STA 97+00
			STA 98+00
			STA 99+00
			STA 100+00
			STA 101+00
			STA 102+00
			STA 103+00
			STA 104+00
			STA 105+00
			STA 106+00
			STA 107+00
			STA 108+50

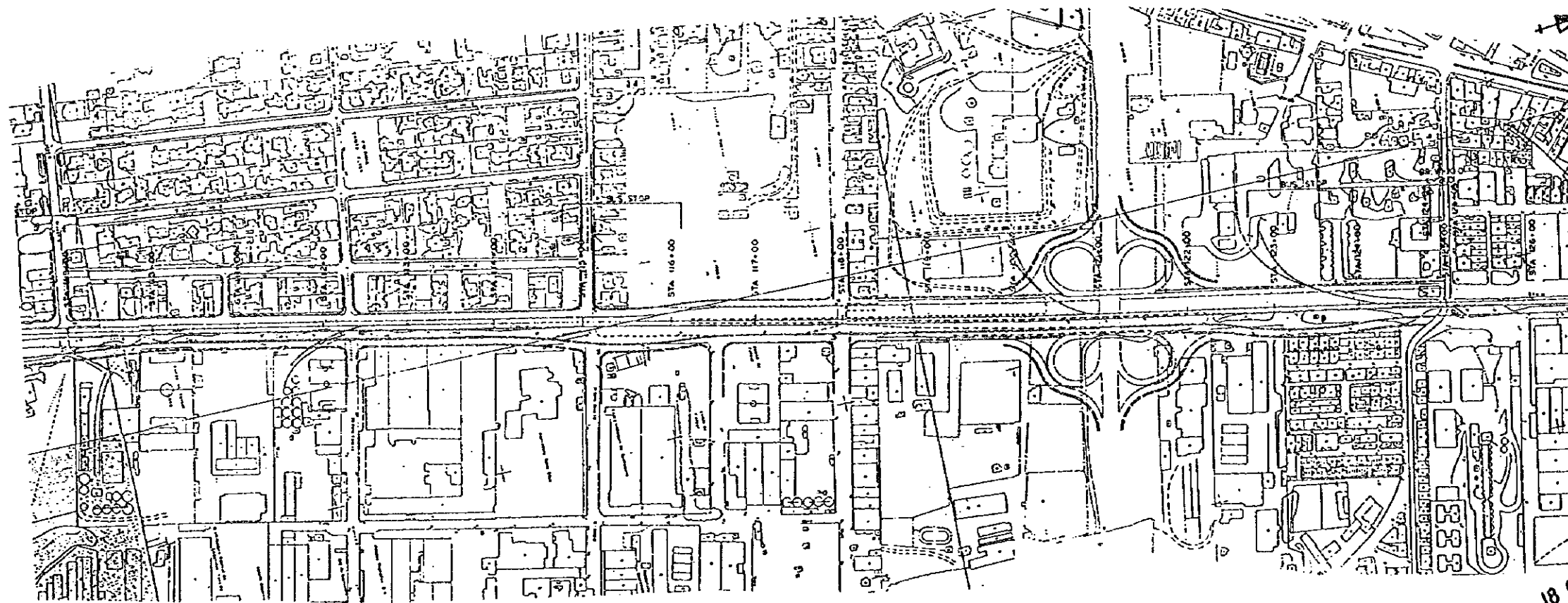
PLAN & PROFILE (FEGUA EXCLUSIVE BUSWAY STA. 90+50~108+50)
 PLANTA Y PERFIL (VIA EXCLUSIVA DE BUSES FEGUA EST. 90+50~108+50)

GUATEMALA MUNICIPALITY
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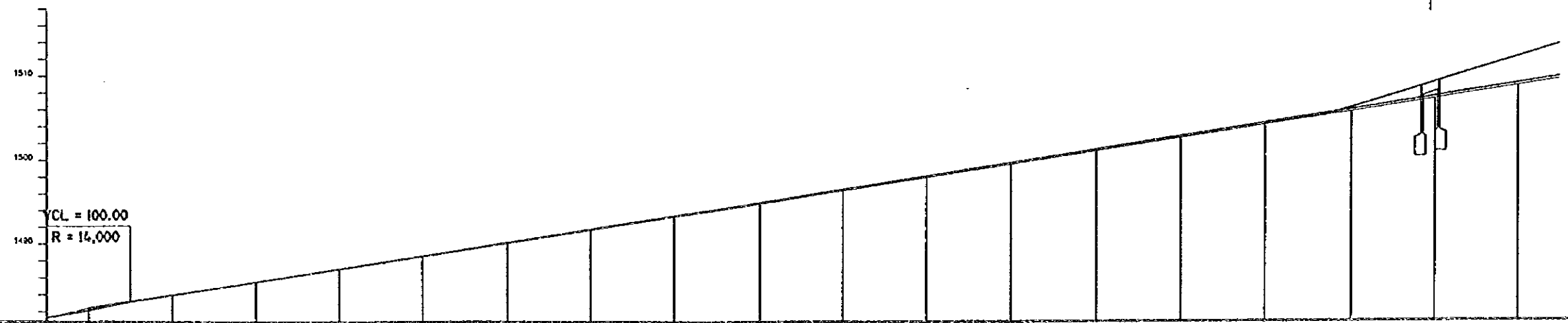
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 AGENCIA DE COOPERACION INTERNACIONAL DEL JAPON

THE FEASIBILITY STUDY ON THE PROJECT OF URBAN TRANSPORTATION IN THE METROPOLITAN AREA OF GUATEMALA
 EL ESTUDIO DE FACTIBILIDAD SOBRE EL PROYECTO DE TRANSPORTACION URBANA EN EL AREA METROPOLITANA DE GUATEMALA

SCALE	ESCALA	DWG NO.	HOJA NO.
DATE	FECHA	PAGE NO.	PÁGINA NO.
			23
			23



18 CALLE OVER BRIDGE
STA. 125 + 00



GRADIENT (%)	PROPOSED HEIGHT (M)	GROUND HEIGHT (M)	STATION NUMBER
	1464.00	1464.00	STA 108+00
	1468.00	1468.00	STA 109+00
	1472.00	1472.00	STA 110+00
	1476.00	1476.00	STA 111+00
	1480.00	1480.00	STA 112+00
	1484.00	1484.00	STA 113+00
	1488.00	1488.00	STA 114+00
	1492.00	1492.00	STA 115+00
	1496.00	1496.00	STA 116+00
	1500.00	1500.00	STA 117+00
	1504.00	1504.00	STA 118+00
	1508.00	1508.00	STA 119+00
	1512.00	1512.00	STA 120+00
	1516.00	1516.00	STA 121+00
	1520.00	1520.00	STA 122+00
	1524.00	1524.00	STA 123+00
	1528.00	1528.00	STA 124+00
	1532.00	1532.00	STA 125+00
	1536.00	1536.00	STA 126+00

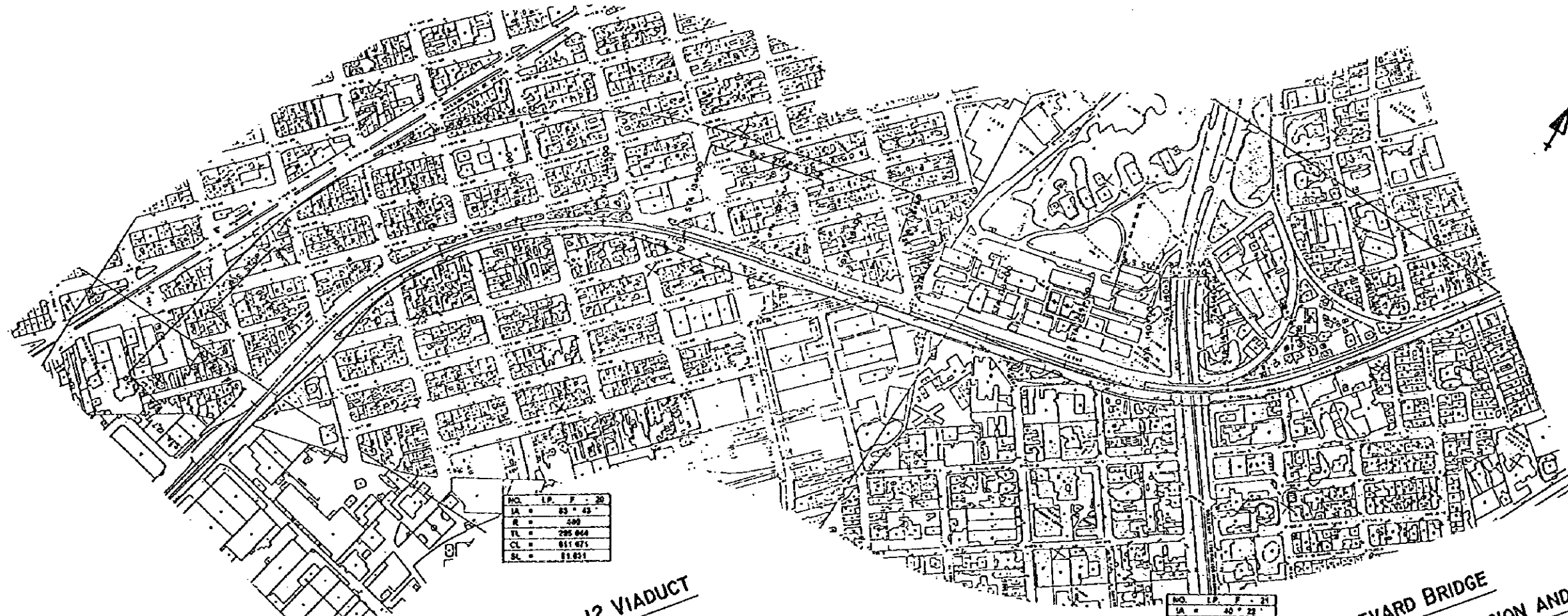
PLAN & PROFILE (FEGUA EXCLUSIVE BUSWAY STA.108+50~126+50)
PLANTA Y PERFIL (VIA EXCLUSIVA DE BUSES FEGUA EST.108+50~126+50)

GUATEMALA MUNICIPALITY
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SCALE	ESCALA	DWG No.	HOJA No.
DATE	FECHA	PAGE No.	PAGINA No.
		24	24
		21	21

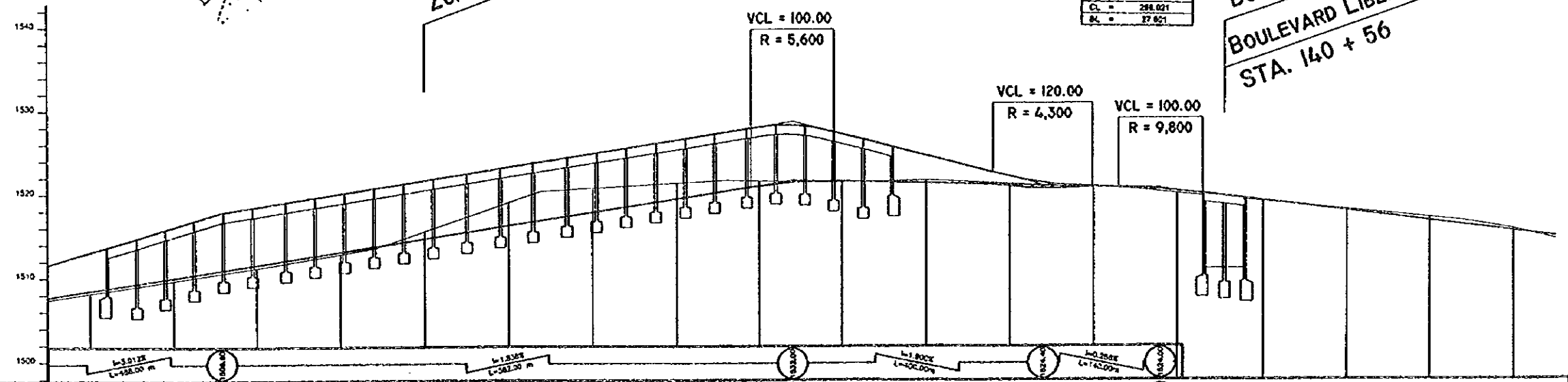


NO.	12
LA	63.43
R	400
TL	295.044
CL	511.671
SL	11.851

NO.	21
LA	40.22
R	420
TL	154.458
CL	288.021
SL	27.621

ZONA 12 VIADUCT

BOULEVARD BRIDGE
BOULEVARD LIBERACION AND PAMPLONA
STA. 140 + 56



GRADIENT (%)	PROPOSED HEIGHT (M)	GROUND HEIGHT (M)	STATION NUMBER
1.512%	1511.7	1511.6	STA 127+00
1.512%	1511.7	1511.6	STA 128+00
1.512%	1511.7	1511.6	STA 129+00
1.512%	1511.7	1511.6	STA 130+00
1.512%	1511.7	1511.6	STA 131+00
1.512%	1511.7	1511.6	STA 132+00
1.512%	1511.7	1511.6	STA 133+00
1.512%	1511.7	1511.6	STA 134+00
1.512%	1511.7	1511.6	STA 135+00
1.512%	1511.7	1511.6	STA 136+00
1.512%	1511.7	1511.6	STA 137+00
1.512%	1511.7	1511.6	STA 138+00
1.512%	1511.7	1511.6	STA 139+00
1.512%	1511.7	1511.6	STA 140+00
1.512%	1511.7	1511.6	STA 141+00
1.512%	1511.7	1511.6	STA 142+00
1.512%	1511.7	1511.6	STA 143+00
1.512%	1511.7	1511.6	STA 144+00

PLAN & PROFILE (FEGUA EXCLUSIVE BUSWAY STA.126+50~144+50)
PLANTA Y PERFIL (VIA EXCLUSIVA DE BUSES FEGUA EST.126+50~144+50)

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SCALE ESCALA
DATE FECHA

DWG NO. HOJA NO. 25
PAGE NO. PAJERA NO. 25

