

SECRETARIA DEL METRO DE PANAMA



JAPAN INTERNATIONAL COOPERATION AGENCY

THE FEASIBILITY STUDY ON PANAMA CITY URBAN TRANSPORTATION LINE-3 PROJECT

DRAWN: _____
DESIGNED: _____

DATE: August 2014
SCALE(A3): Plan 1:5,000
Profile 1:5,000(X) and 1:1,000(Y)

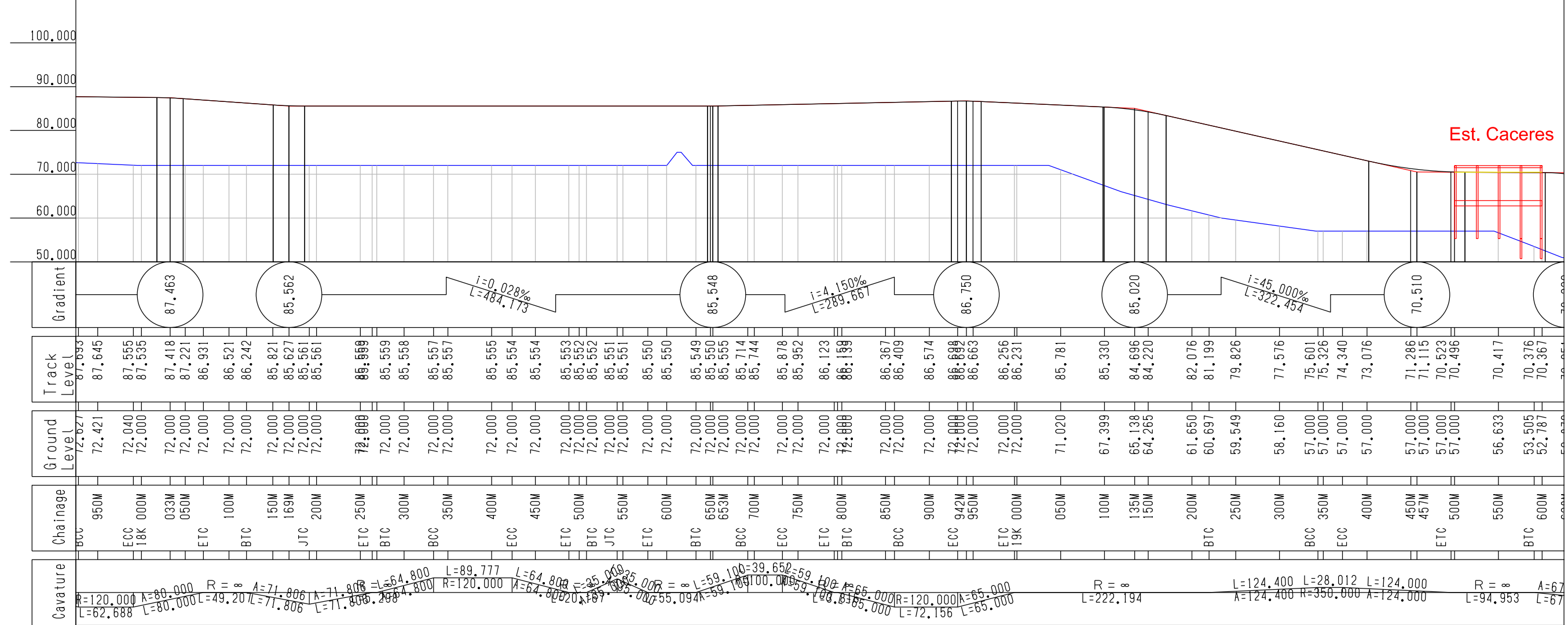
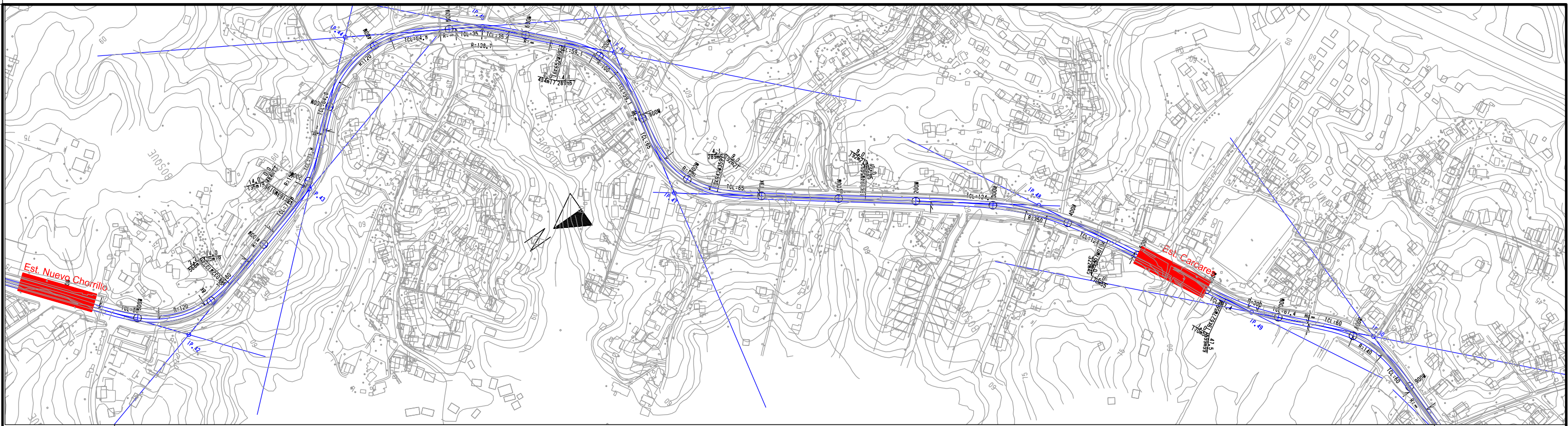
RECEIVED BY: _____
TEAM LEADER/URBAN RAILWAY PLANNING

SUBMITTED BY: _____
CIVIL AND FACILITY PLANNING

CHECKED BY: _____
APPROVED BY: _____

PAGE: 12
18

REMARKS:
Alignment Plan(FR)
(16K500M000 ~ 18K000M000)



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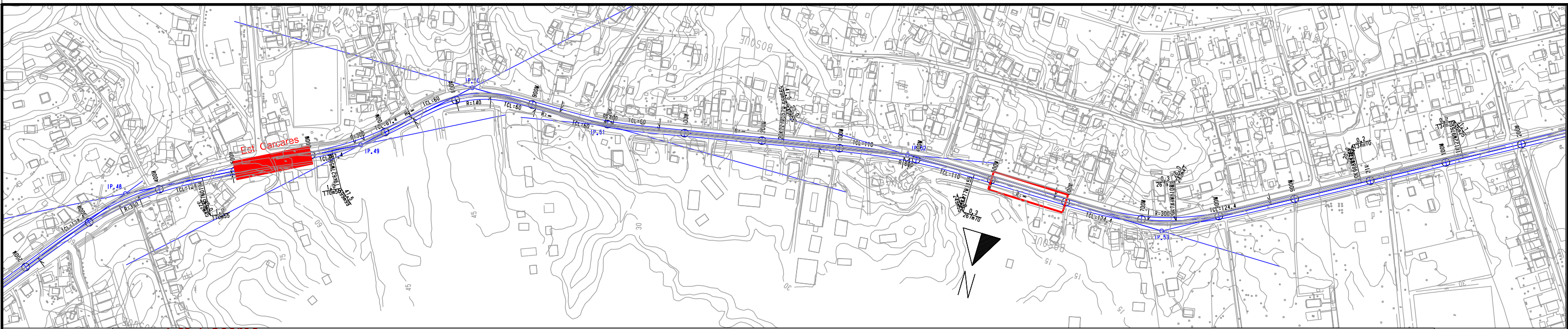
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CIVIL AND FACILITY PLANNING

CHECKED BY: [Blank]
APPROVED BY: [Blank]

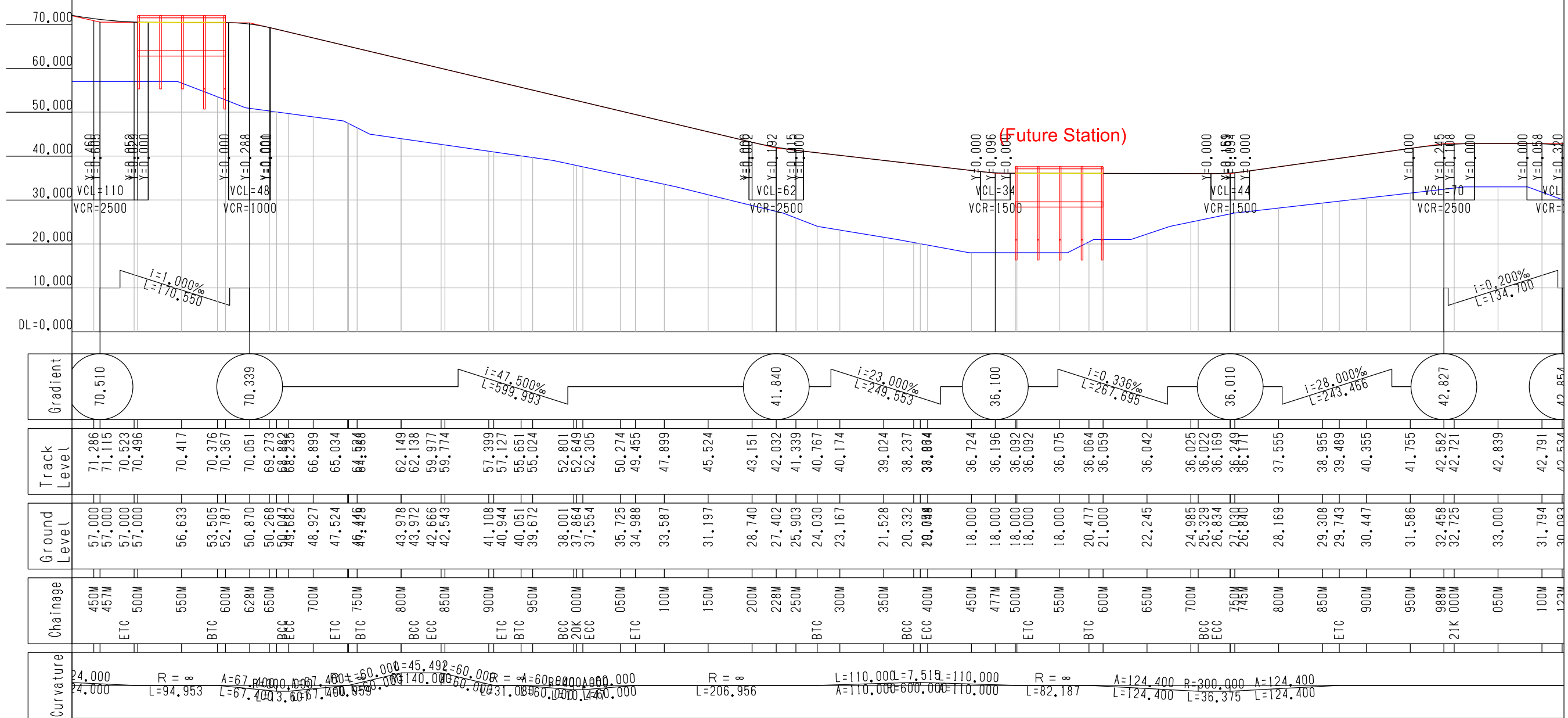
PAGE: 13
18

REMARKS:
Alignment Plan(FR)
(18K000M000 ~ 19K500M000)



Est. Carcares

(Future Station)



Curvature	Chainage	Ground Level	Track Level	Gradient
24.000	450M	57.000	71.286	70.510
24.000	457M	57.000	71.115	
	ETC	57.000	70.523	
	500M	57.000	70.496	
	550M	56.633	70.417	
	BTC	53.505	70.376	
	600M	52.787	70.367	
	628M	50.870	70.051	
	650M	50.268	69.273	
	BCC	49.642	68.882	
	700M	48.927	66.899	
	ETC	47.524	65.034	
	BTC	46.426	64.586	
	800M	43.978	62.149	
	BCC	43.972	62.138	
	ECC	42.666	59.977	
	850M	42.543	59.774	
	900M	41.108	57.399	
	ETC	40.944	57.127	
	BTC	40.051	55.651	
	950M	39.672	55.024	
	BCC	38.001	52.801	
	20K	37.864	52.649	
	ECC	37.554	52.305	
	050M	35.725	50.274	
	ETC	34.988	49.455	
	100M	33.587	47.899	
	150M	31.197	45.524	
	200M	28.740	43.151	
	228M	27.402	42.032	
	250M	25.903	41.339	
	BTC	24.030	40.767	
	300M	23.167	40.174	
	350M	21.528	39.024	
	BCC	20.332	38.237	
	ECC	19.084	38.884	
	450M	18.000	36.724	
	477M	18.000	36.196	
	500M	18.000	36.092	
	ETC	18.000	36.092	
	550M	18.000	36.075	
	BTC	20.477	36.064	
	600M	21.000	36.059	
	650M	22.245	36.042	
	700M	24.985	36.025	
	BCC	25.329	36.022	
	ECC	26.834	36.169	
	750M	27.030	36.249	
	800M	28.169	37.555	
	850M	29.308	38.955	
	ETC	29.743	39.489	
	900M	30.447	40.355	
	950M	31.586	41.755	
	988M	32.458	42.582	
	21K	32.725	42.721	
	050M	33.000	42.839	
	100M	31.794	42.791	
	123M	30.092	42.534	



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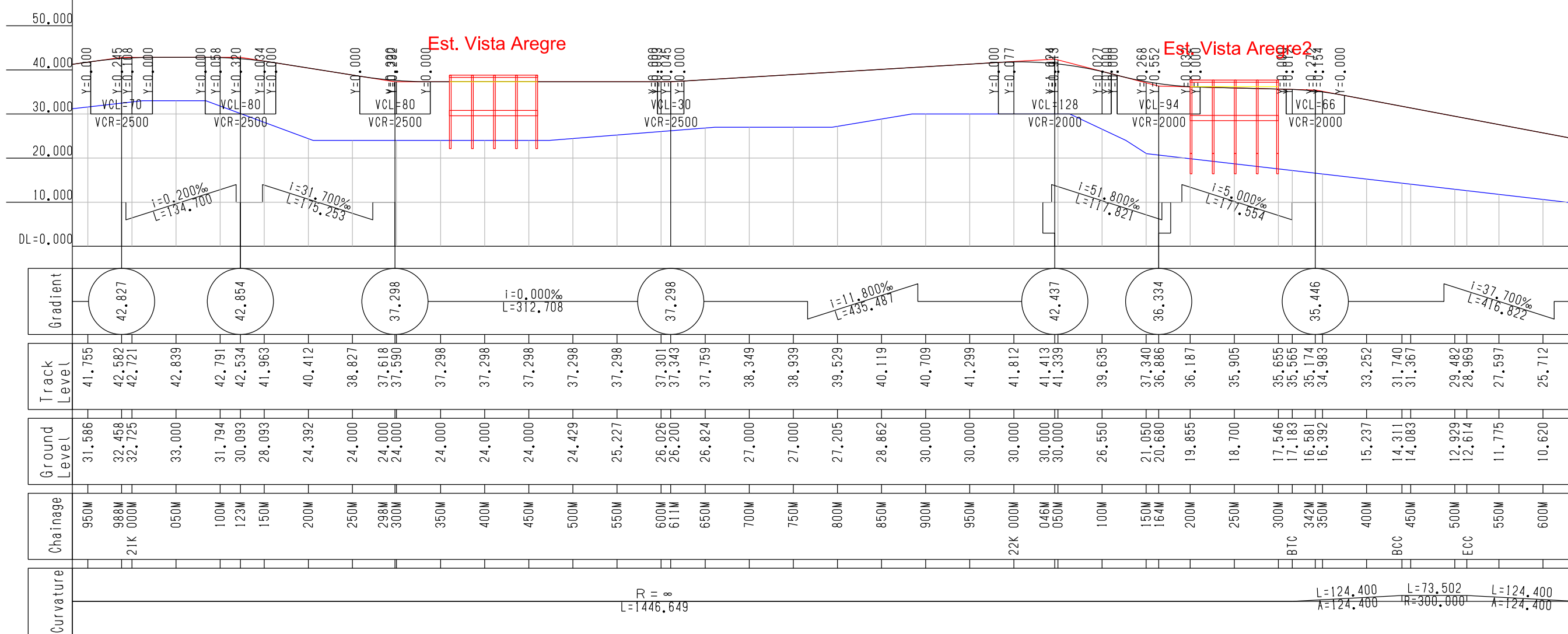
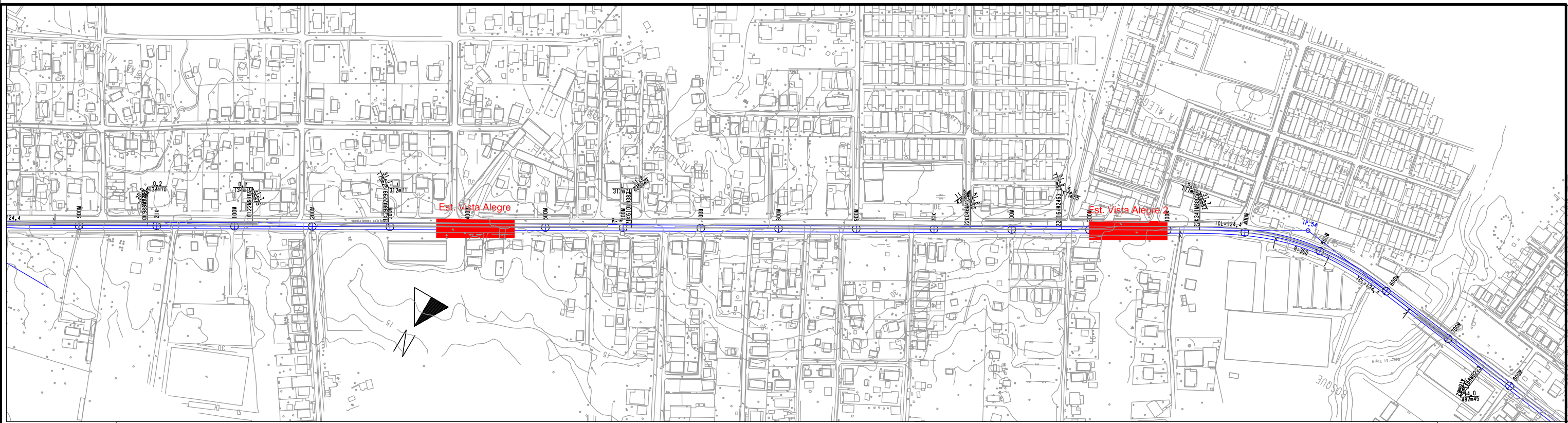
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TEAM LEADER/URBAN RAILWAY PLANNING	CIVIL AND FACILITY PLANNING

CHECKED BY:	PAGE: 14
APPROVED BY:	18

REMARKS:
Alignment Plan(FR)
(19K500M000 ~ 21K000M000)



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TEAM LEADER/URBAN RAILWAY PLANNING

CIVIL AND FACILITY PLANNING

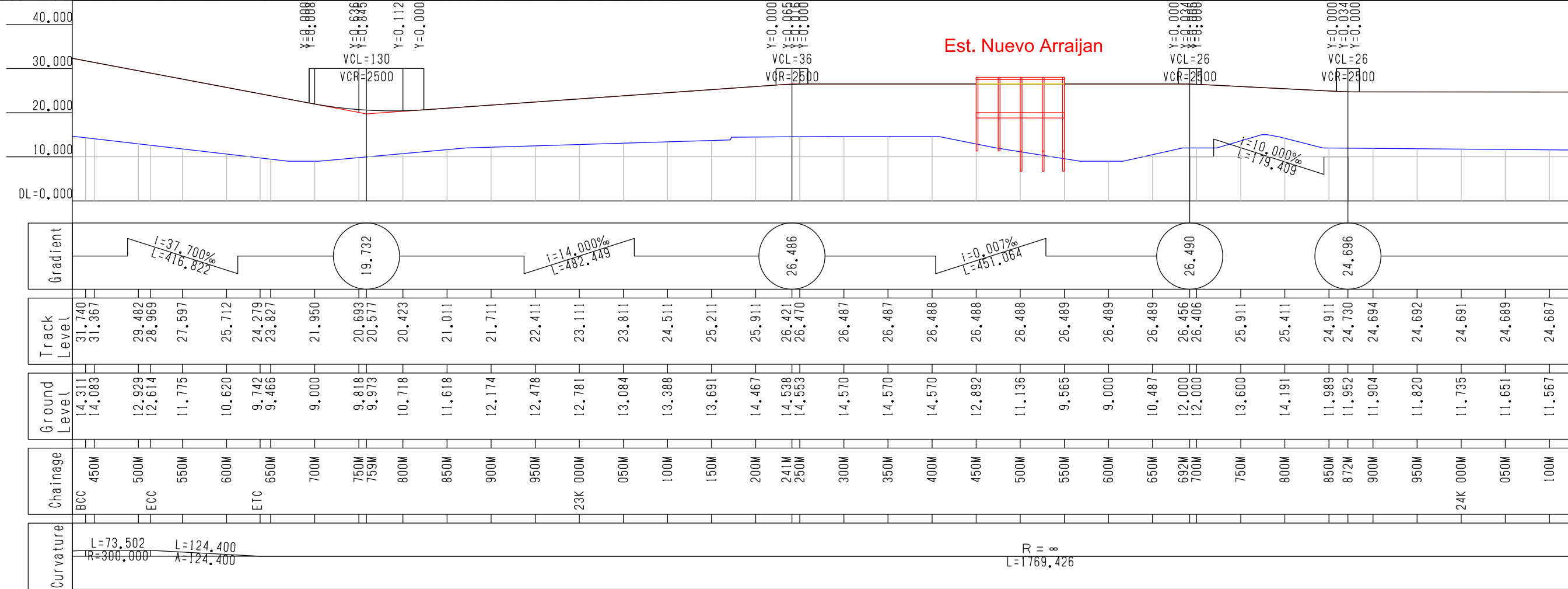
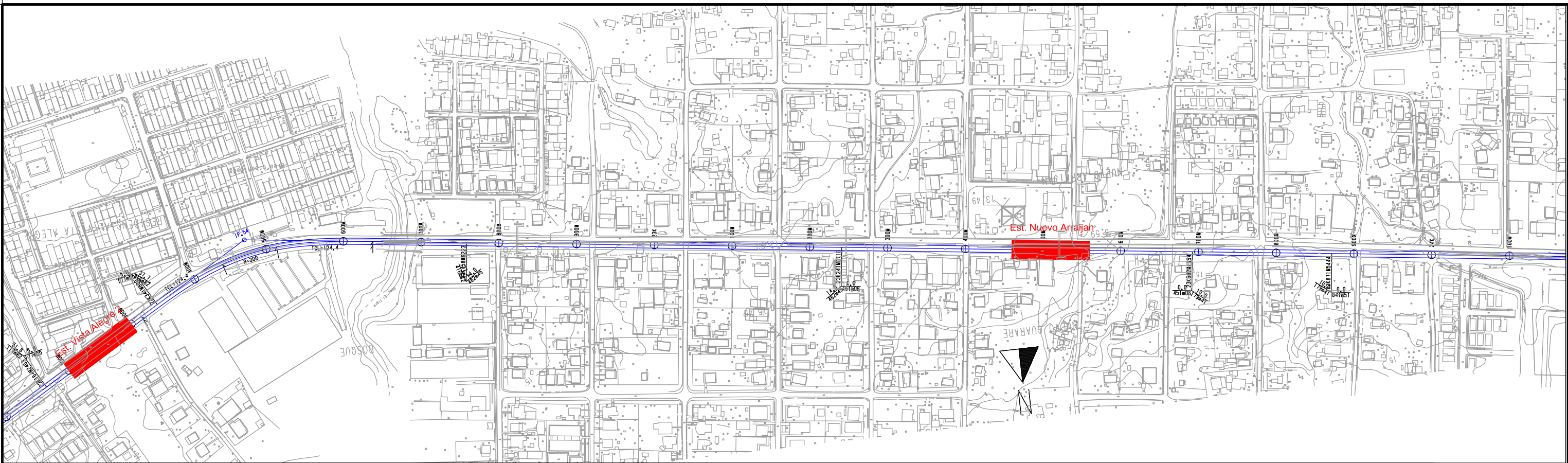
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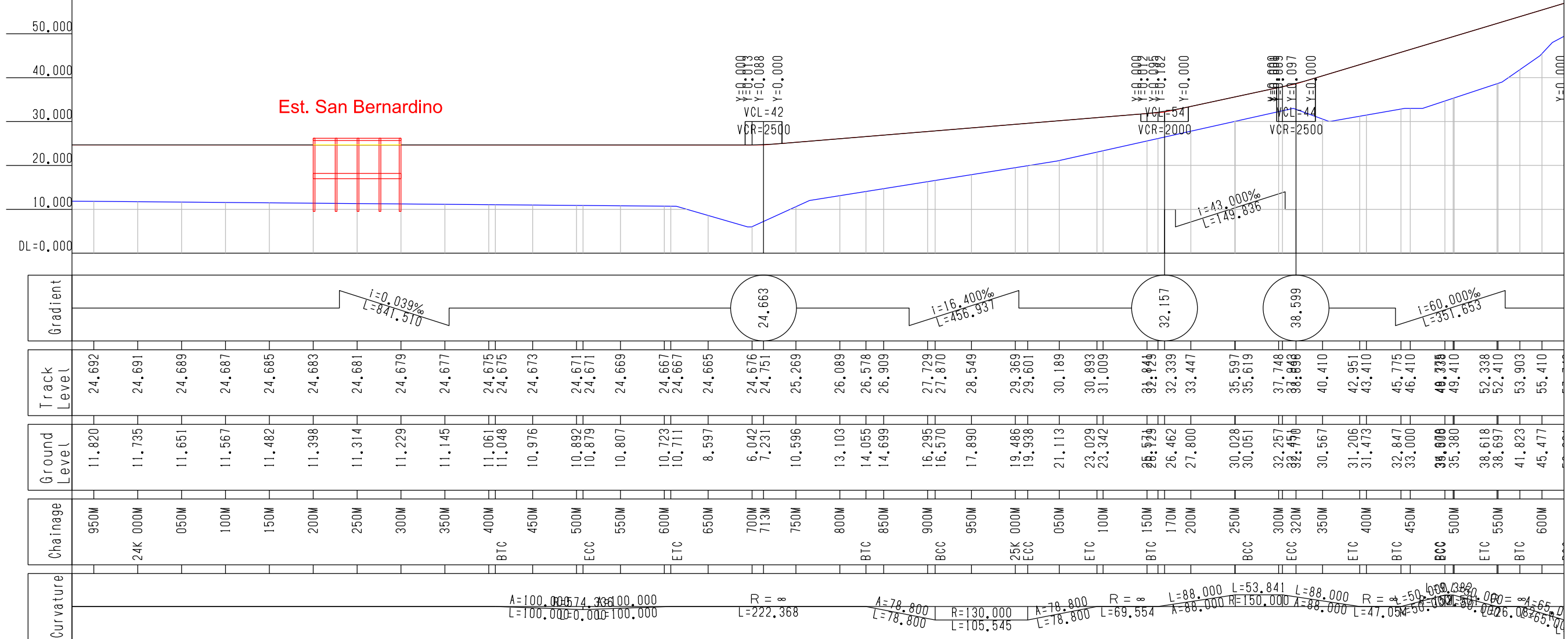
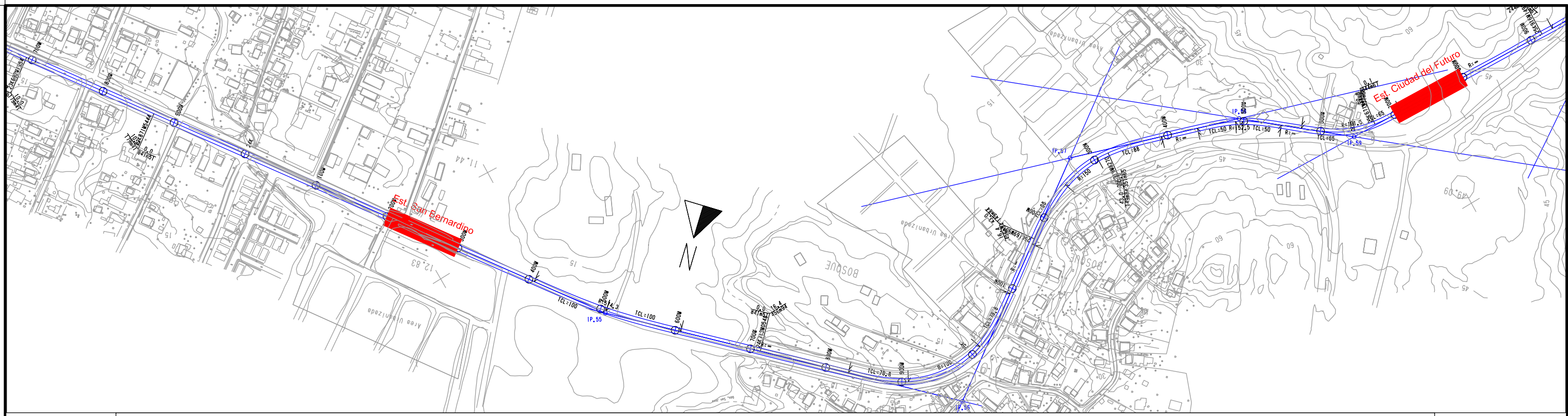
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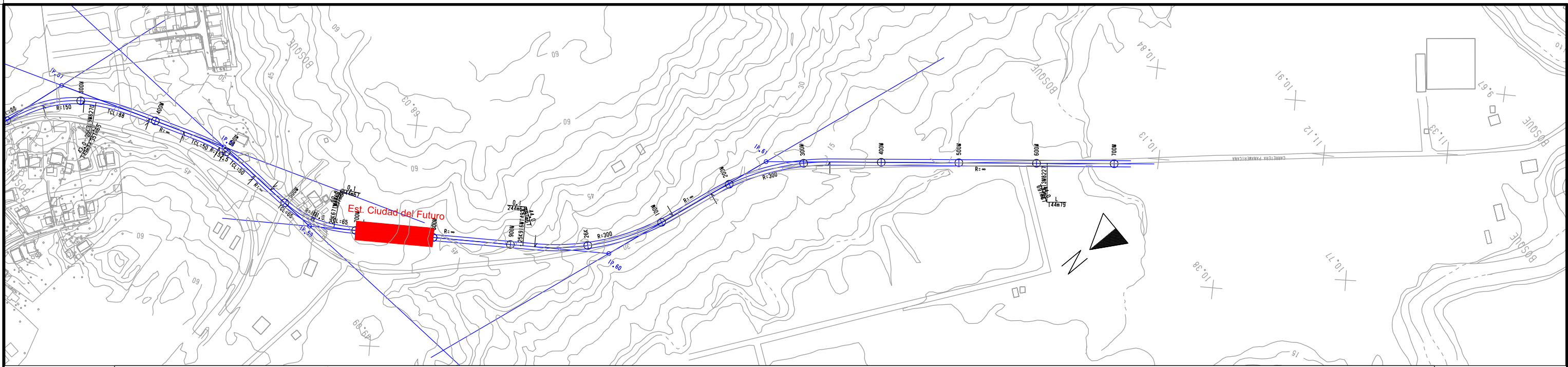
REMARKS:

Alignment Plan(FR)
(21K000M000 ~ 22K500M000)

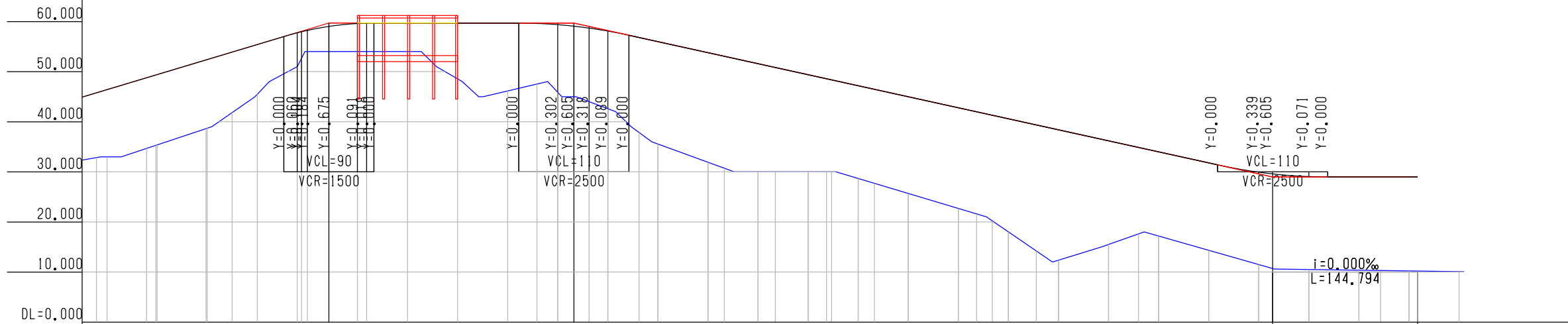
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Est. Ciudad del Futuro



Chainage	Ground Level	Track Level	Gradient	Curvature
BTC 450M	32.847	45.775	$i=60.000\%$ $L=357.653$	$R=50.000$ $L=268.000$
BCC 500M	33.000	46.410		$R=50.000$ $L=268.000$
ETC 550M	34.808	48.735		$R=50.000$ $L=268.000$
BTC 600M	35.380	49.410		$R=50.000$ $L=268.000$
BCC 650M	38.618	52.338		$R=50.000$ $L=268.000$
ECC 671M	38.697	52.410		$R=50.000$ $L=268.000$
ETC 700M	41.823	53.903		$R=50.000$ $L=268.000$
BCC 750M	45.477	55.410		$R=50.000$ $L=268.000$
ECC 771M	50.991	57.743		$R=50.000$ $L=268.000$
ETC 800M	54.888	59.836		$R=50.000$ $L=268.000$
BCC 850M	54.000	59.024		$R=50.000$ $L=268.000$
ECC 900M	54.000	59.605		$R=50.000$ $L=268.000$
ETC 950M	54.000	59.677		$R=50.000$ $L=268.000$
BC 1000M	54.000	59.691		$R=50.000$ $L=268.000$
BC 1050M	48.549	59.687		$R=50.000$ $L=268.000$
BC 1100M	46.144	59.682		$R=50.000$ $L=268.000$
BC 1150M	45.879	59.376		$R=50.000$ $L=268.000$
BC 1200M	45.000	59.071		$R=50.000$ $L=268.000$
BC 1250M	44.005	58.693		$R=50.000$ $L=268.000$
BC 1300M	42.596	58.098		$R=50.000$ $L=268.000$
BC 1350M	35.549	55.987		$R=50.000$ $L=268.000$
BC 1400M	31.901	53.787		$R=50.000$ $L=268.000$
BC 1450M	30.000	51.587		$R=50.000$ $L=268.000$
BC 1500M	30.000	50.830		$R=50.000$ $L=268.000$
BC 1550M	30.000	49.387		$R=50.000$ $L=268.000$
BC 1600M	30.000	48.355		$R=50.000$ $L=268.000$
BC 1650M	28.665	47.187		$R=50.000$ $L=268.000$
BC 1700M	25.672	44.987		$R=50.000$ $L=268.000$
BC 1750M	22.679	42.787		$R=50.000$ $L=268.000$
BC 1800M	20.197	41.293		$R=50.000$ $L=268.000$
BC 1850M	18.008	40.587		$R=50.000$ $L=268.000$
BC 1900M	12.366	38.387		$R=50.000$ $L=268.000$
BC 1950M	15.507	36.187		$R=50.000$ $L=268.000$
BC 2000M	17.175	33.987		$R=50.000$ $L=268.000$
BC 2050M	14.332	31.787		$R=50.000$ $L=268.000$
BC 2100M	11.488	29.926		$R=50.000$ $L=268.000$
BC 2150M	10.702	29.584		$R=50.000$ $L=268.000$
BC 2200M	10.502	29.050		$R=50.000$ $L=268.000$
BC 2250M	10.359	28.979		$R=50.000$ $L=268.000$
BC 2300M	10.298	28.979		$R=50.000$ $L=268.000$
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BC 2500M		28.979		$R=50.000$ $L=268.000$
BC 2550M		28.979		$R=50.000$ $L=268.000$
BC 2600M		28.979		$R=50.000$ $L=268.000$
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BC 3900M		28.979		$R=50.000$ $L=268.000$
BC 3950M		28.979		$R=50.000$ $L=268.000$
BC 4000M		28.979		$R=50.000$ $L=268.000$
BC 4050M		28.979		$R=50.000$ $L=268.000$
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BC 6250M		28.979		$R=50.000$ $L=268.000$
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BC 6350M		28.979		$R=50.000$ $L=268.000$
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BC 7250M		28.979		$R=50.000$ $L=268.000$
BC 7300M		28.979		$R=50.000$ $L=268.000$
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BC 7400M		28.979		$R=50.000$ $L=268.000$
BC 7450M		28.979		$R=50.000$ $L=268.000$
BC 7500M		28.979		$R=50.000$ $L=268.000$



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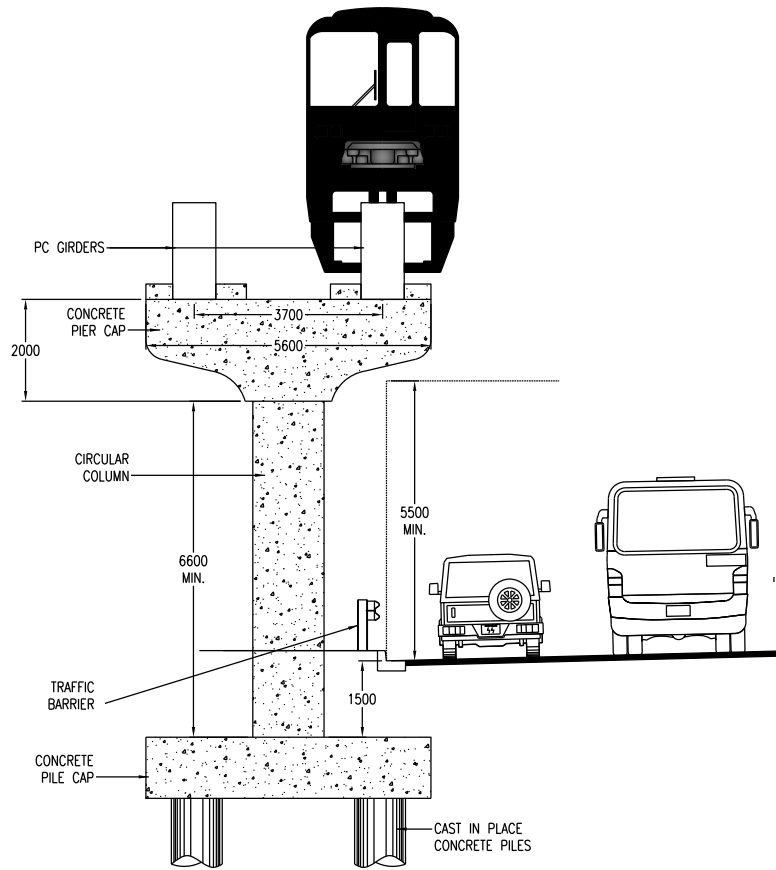
SUBMITTED BY: _____
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APPROVED BY: _____

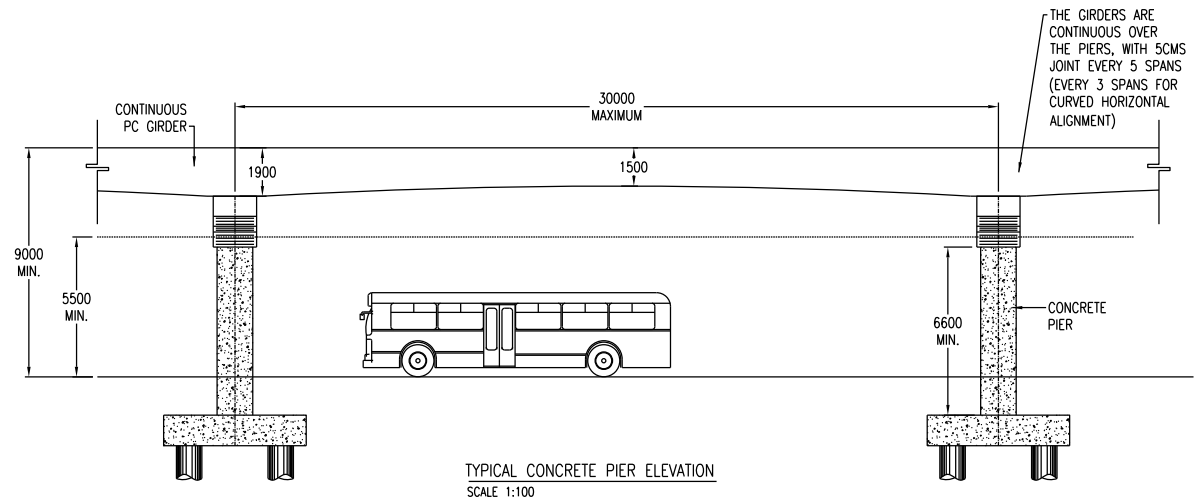
PAGE: 18

REMARKS:
Alignment Plan(FR)
(25K500M000 ~ 26K800M000)

4-2 構造物図面



TYPICAL CONCRETE PIER ELEVATION
SCALE 1:100



GENERAL NOTES

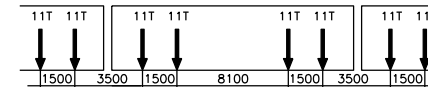
1.0 DESIGN

DESIGN CODES

- * AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, THIRD EDITION 2004
- * TECHNICAL STANDARD FOR SEISMIC DESIGN IN PANAMA

LIVE LOAD

- * 6 CARS OF 44 TONS EACH.



DEAD LOAD

- * REINFORCED CONCRETE 2,400 kg/m³
- * COMPACTED EARTH FILL 1,600 kg/m³
- * STRUCTURAL STEEL 7,850 kg/m³

SEISMIC LOAD

- * ACCELERATION COEFFICIENT A=0.20 (PANAMA CITY)
- * SITE COEFFICIENTS, SOIL PROFILE S2, S=1.20

MATERIALS PROPERTIES

CONCRETE

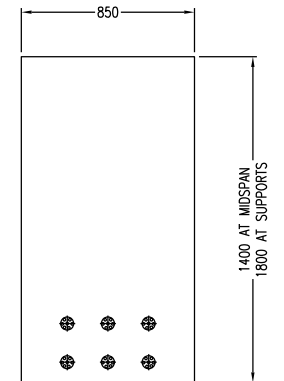
- * PRESTRESSED CONCRETE 420 kg/cm²
- * PIER CONCRETE 280 kg/cm²
- * PILES CONCRETE 280 kg/cm²

PRESTRESSING STEEL

- * LOW RELAXATION SEVEN WIRE CABLES GRADE 270K
- FPU = 18,900 KG/CM²

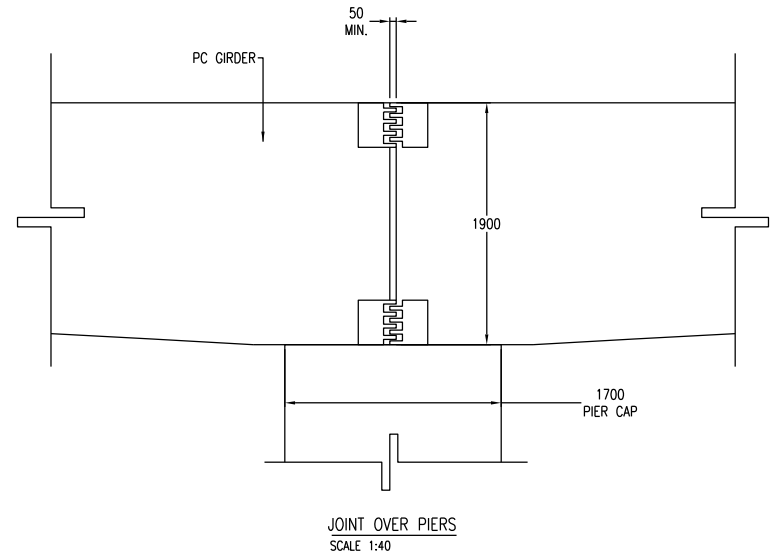
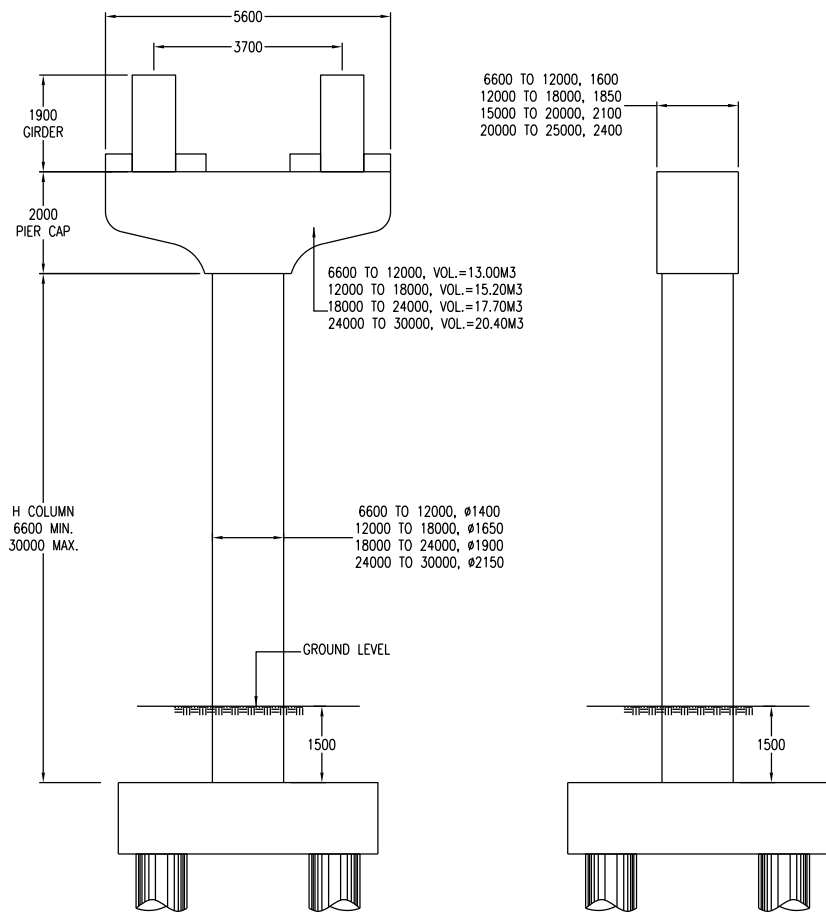
REINFORCEMENT STEEL

- * CORRUGATED BARS GRADE 60 ASTM A-615, fy=4200 Kg/cm²



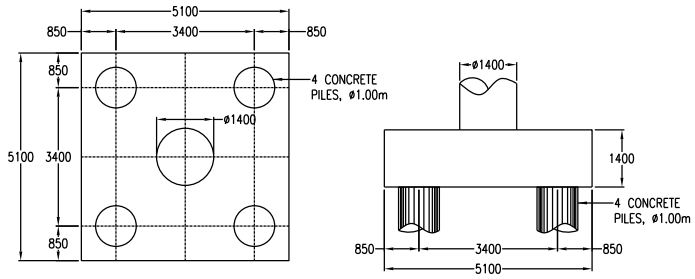
POST-TENSIONED GIRDER SECTION
SCALE 1:25

PROJECT: THE FEASIBILITY STUDY OF PANAMA CITY URBAN TRANSPORTATION LINE-3 PROJECT		
CONTENTS: TYPICAL DETAILS		
DESIGNED: R.M.G.	DATE: JANUARY-2013	
DRAWN: E.A.D.C.	SCALE: INDICATED	SHEET: 1 / 3

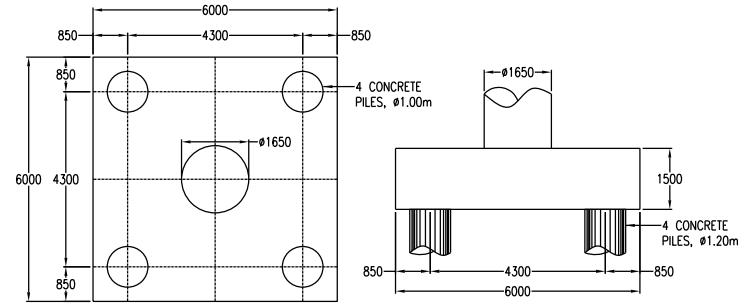


GEOMETRY OF PIER CAP AND COLUMNS
SCALE 1:100

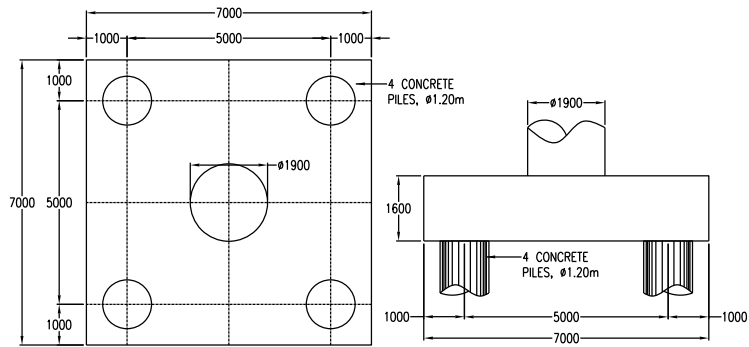
PROJECT: THE FEASIBILITY STUDY OF PANAMA CITY URBAN TRANSPORTATION LINE-3 PROJECT		
CONTENTS: PIER DETAILS		
DESIGNED: R.M.G.	DATE: OCTOBER-2013	
DRAWN: E.A.D.C.	SCALE: INDICATED	SHEET: 2 / 3



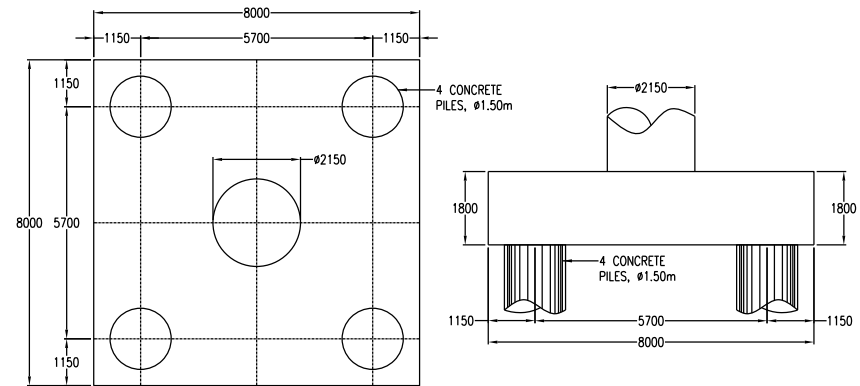
PILE CAP FOR COLUMNS OF H=6.60m TO H=12.00m



PILE CAP FOR COLUMNS OF H=12.00m TO H=18.00m



PILE CAP FOR COLUMNS OF H=18.00m TO H=24.00m



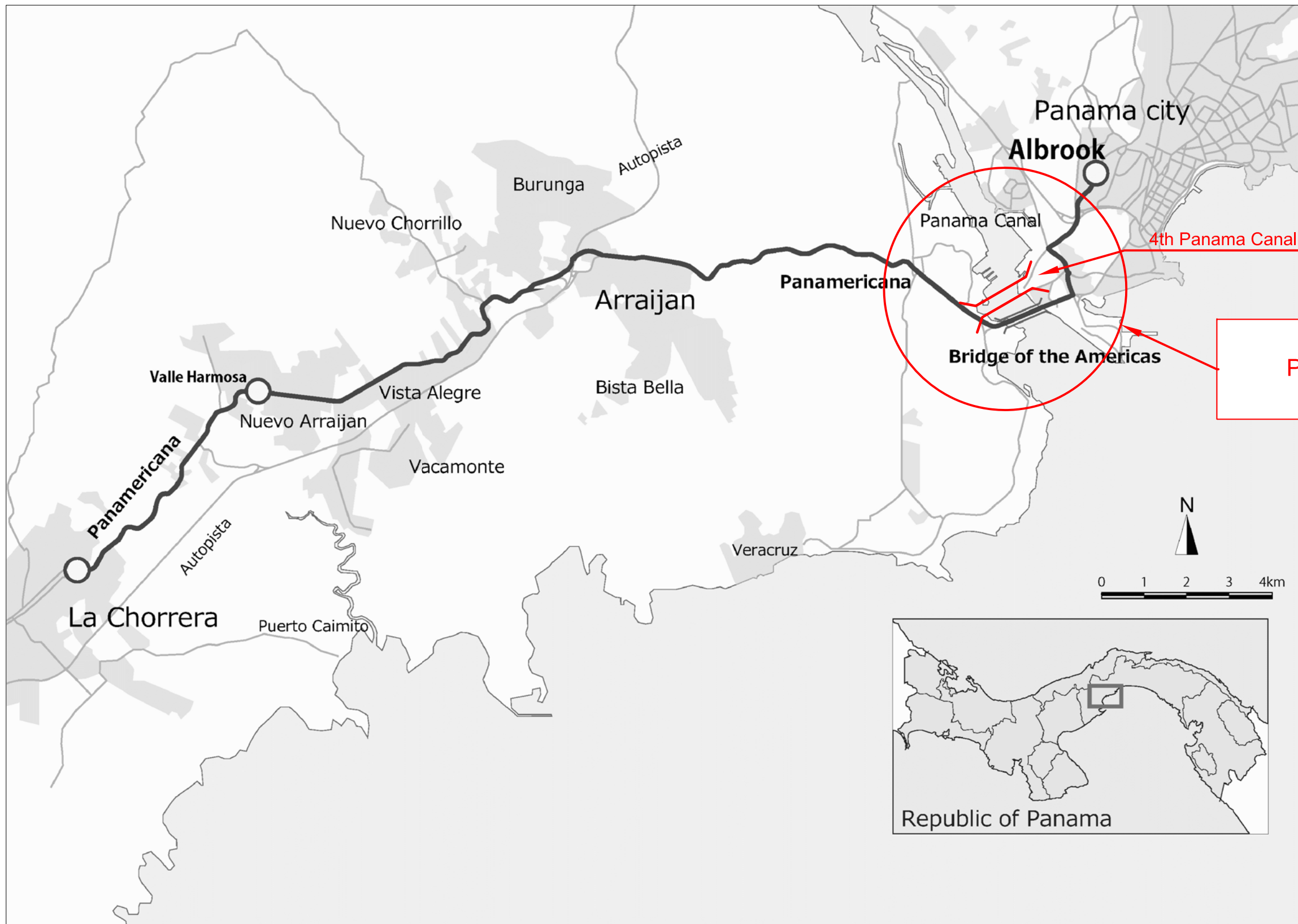
PILE CAP FOR COLUMNS OF H=24.00m TO H=30.00m

PROJECT:		
THE FEASIBILITY STUDY OF PANAMA CITY URBAN TRANSPORTATION LINE-3 PROJECT		
CONTENTS:		
FOOTING DETAILS		
DESIGNED:	DATE:	
R.M.G.	OCTOBER-2013	
DRAWN:	SCALE:	SHEET:
E.A.D.C.	INDICATED	3 / 3

付属資料 5: 概略設計図面(第4パナマ運河橋)

付属資料 5-1: 概略設計図面

付属資料 5-1-1: 位置図



SECRETARIA DEL METRO DE PANAMA



JAPAN INTERNATIONAL COOPERATION AGENCY

THE FEASIBILITY STUDY ON PANAMA CITY URBAN TRANSPORTATION LINE-3 PROJECT

DRAWN:
DESIGNED:

DATE: May 2014
SCALE: S=1:100,000

RECEIVED BY:
TEAM LEADER/URBAN RAILWAY PLANNING

SUBMITTED BY:
CIVIL AND FACILITY PLANNING

CHECKED BY:
APPROVED BY:

PAGE: 1/2

REMARKS:

Project Location Map (1 of 2)

