

**J.R. BORJA  
EXTENSION ROAD**

**ELEMENTS OF CURVES**

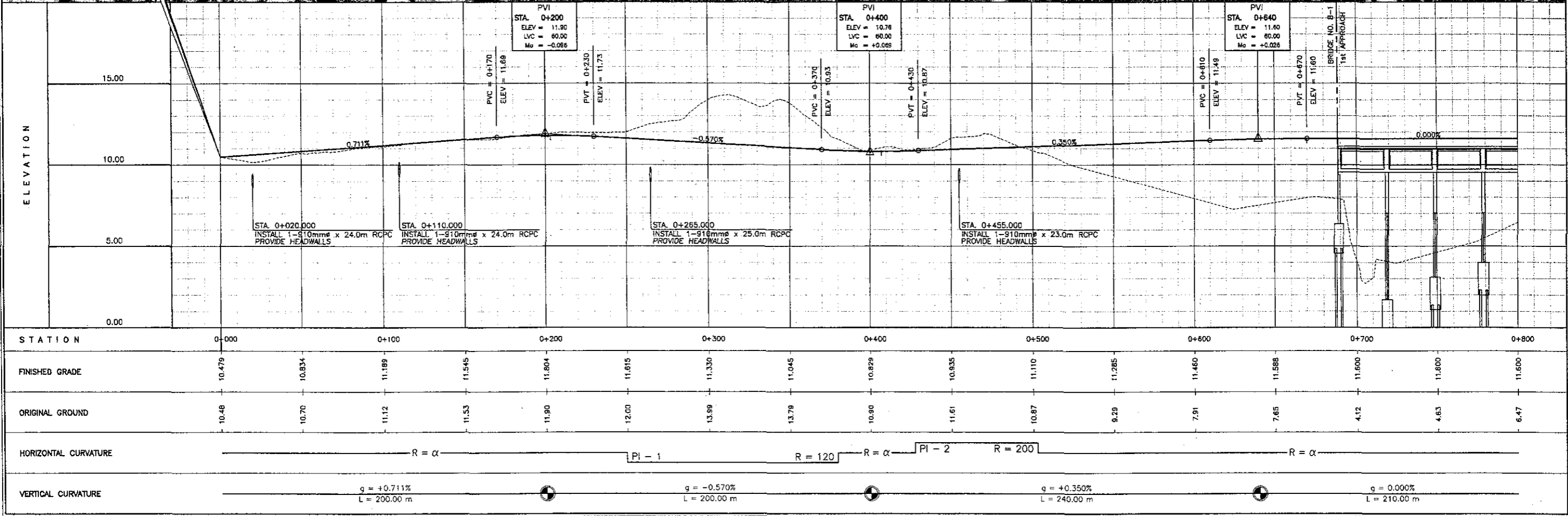
PI NO.	STATION	COORDINATES		I	R	T	Lc	Es	V(kph)
		NORTHING	EASTING						
1	0+324.37	936567.962	464878.713	61° 04' 45"	120.00	70.80	127.92	19.33	60
2	0+468.65	936610.614	465030.796	21° 34' 21"	200.00	38.10	75.30	3.60	60

THE STUDY ON ROAD NETWORK IMPROVEMENT  
FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

SCALE :  
HOR. 1:2500  
VER. 1:250

CAGAYAN DE ORO J. R. BORJA EXTENSION ROAD  
**PLAN AND PROFILE**  
STA. 0+000 - STA. 0+800

DRAWING NO.  
**R-1**





**ELEMENTS OF CURVES**

PI NO.	STATION	COORDINATES		I	R	T	Lc	Es	V(kph)
		NORTHING	EASTING						
3	0+887.22	936567.449	465448.048	24° 24' 53"	250.00	54.09	106.53	5.78	60
4	1+158.22	936429.811	465683.391	68° 14' 20"	200.00	135.51	238.20	41.58	60
5	1+528.61	936677.601	466001.484	91° 05' 27"	120.00	122.31	190.78	51.34	60

THE STUDY ON ROAD NETWORK IMPROVEMENT  
FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

SCALE :  
HOR. 1:2500  
VER. 1:250

CAGAYAN DE ORO J. R. BORJA EXTENSION ROAD

**PLAN**  
STA. 0+800 - STA. 1+600

DRAWING NO.

**R-2a**

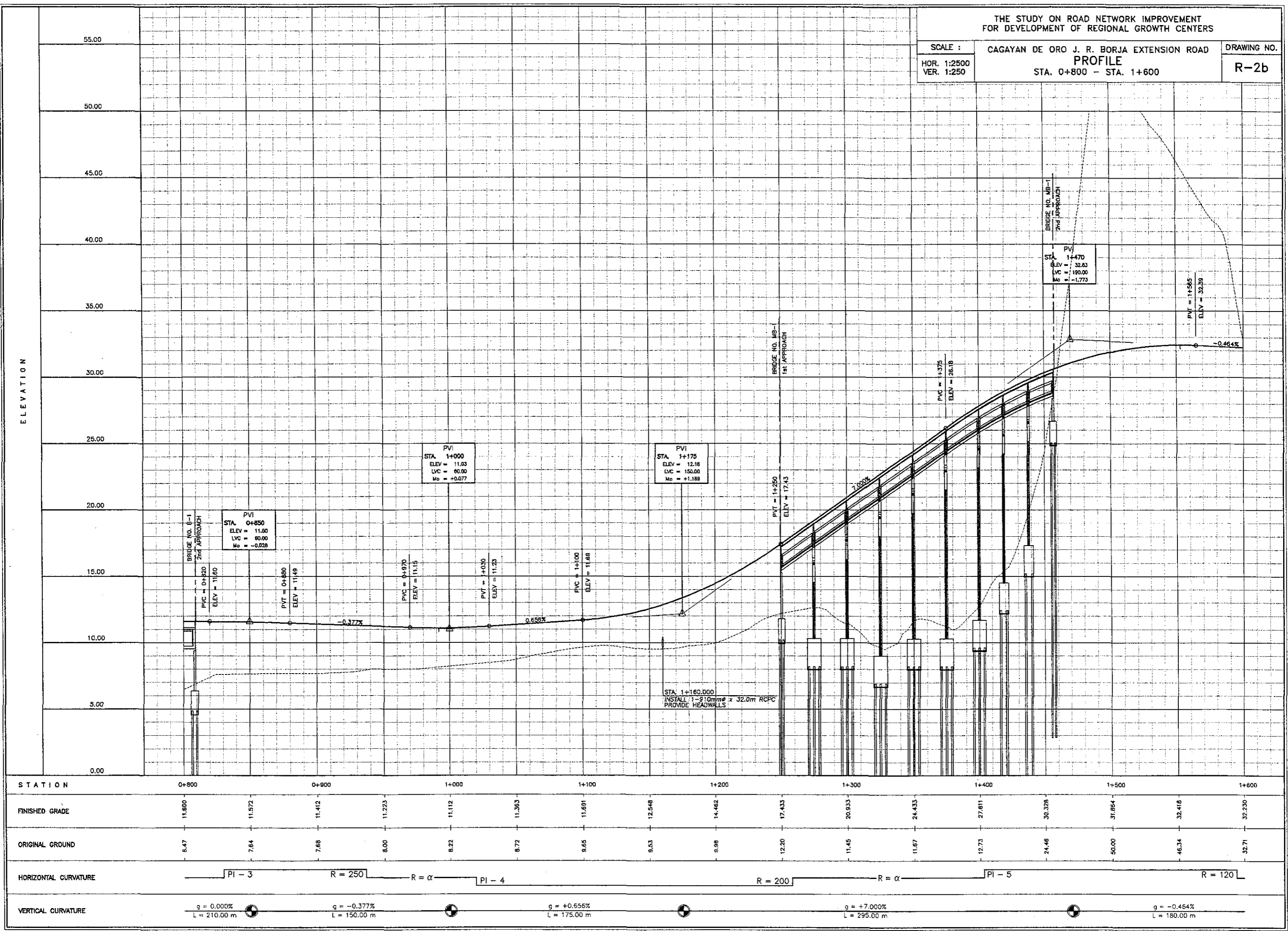


THE STUDY ON ROAD NETWORK IMPROVEMENT  
FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

SCALE :  
HOR. 1:2500  
VER. 1:250

CAGAYAN DE ORO J. R. BORJA EXTENSION ROAD  
PROFILE  
STA. 0+800 - STA. 1+600

DRAWING NO.  
R-2b





**ELEMENTS OF CURVES**

PI NO.	STATION	COORDINATES		I	R	T	Lc	Es	V(kph)
		NORTHING	EASTING						
6	2+015.60	936244.703	466325.656	30° 20' 40"	700.00	189.82	370.73	25.28	60

THE STUDY ON ROAD NETWORK IMPROVEMENT  
FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

SCALE :	CAGAYAN DE ORO J. R. BORJA EXTENSION ROAD	DRAWING NO.
HOR. 1:2500 VER. 1:250	PLAN STA. 1+600 - STA. 2+400	R-3a



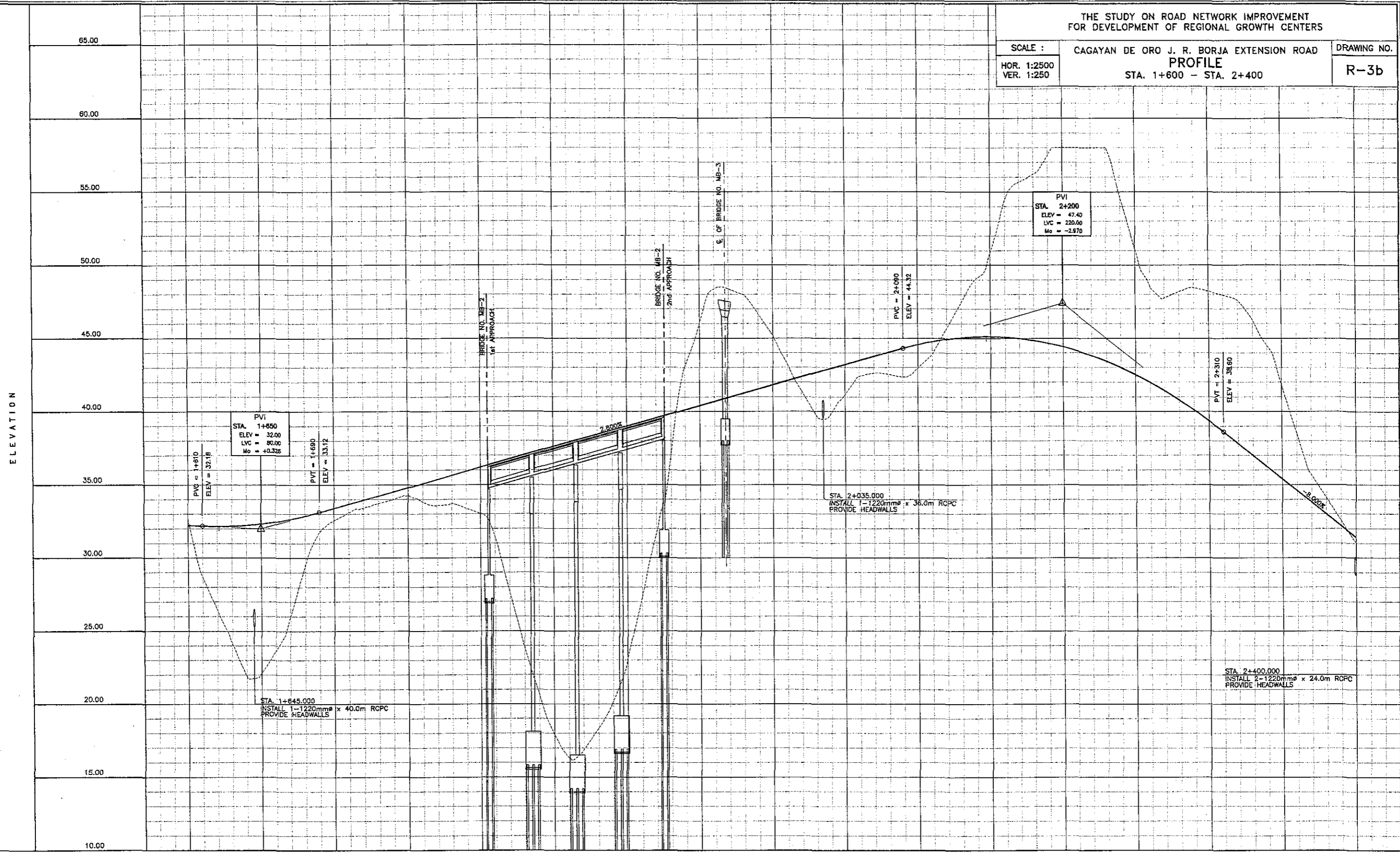
THE STUDY ON ROAD NETWORK IMPROVEMENT  
FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

SCALE :  
HOR. 1:2500  
VER. 1:250

CAGAYAN DE ORO J. R. BORJA EXTENSION ROAD  
PROFILE  
STA. 1+600 - STA. 2+400

DRAWING NO.  
R-3b

ELEVATION



STATION	1+600	1+700	1+800	1+900	2+000	2+100	2+200	2+300	2+400								
FINISHED GRADE	32.330	32.324	33.397	34.787	36.197	37.587	38.987	40.397	41.797	43.197	44.573	45.114	44.427	42.514	39.373	35.397	31.397
ORIGINAL GROUND	32.71	22.12	32.57	34.23	33.03	17.81	33.12	46.05	45.23	41.15	42.97	50.80	55.00	51.15	48.21	41.82	31.16
HORIZONTAL CURVATURE	R = α										PI - 6		R = 700		R = α		PI - 7
VERTICAL CURVATURE	g = -0.464% L = 180.00 m					g = +2.800% L = 550.00 m					g = -8.000% L = 320.00 m						



**ELEMENTS OF CURVES**

PI NO.	STATION	COORDINATES		I	R	T	Lc	Es	V(kph)
		NORTHING	EASTING						
7	2+465.18	936066.822	466748.239	24° 43' 55"	400.00	87.70	172.66	9.50	60
8	2+857.04	936079.931	467142.609	13° 37' 36"	1000.00	119.48	237.83	7.11	60
9	3+061.43	936038.175	467343.837	09° 50' 05"	1000.00	86.04	171.65	3.69	60

THE STUDY ON ROAD NETWORK IMPROVEMENT  
FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

SCALE :	CAGAYAN DE ORO J. R. BORJA EXTENSION ROAD	DRAWING NO.
HOR. 1:2500 VER. 1:250	PLAN STA. 2+400 - STA. 3+200	R-4a



**CAGAYAN DE ORO  
J. R. BORJA EXTENSION ROAD**  
END OF PACKAGE 1  
START OF PACKAGE 2  
STA. 2+848.95

PI-7

PI-8

PI-9