

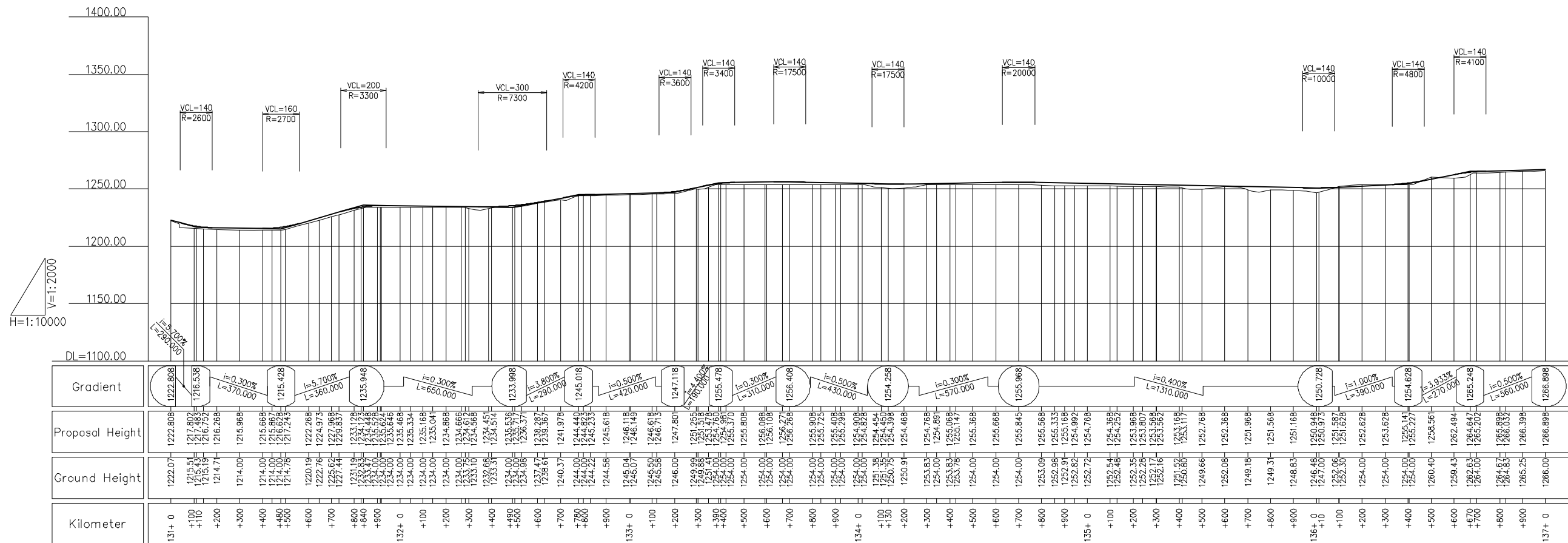
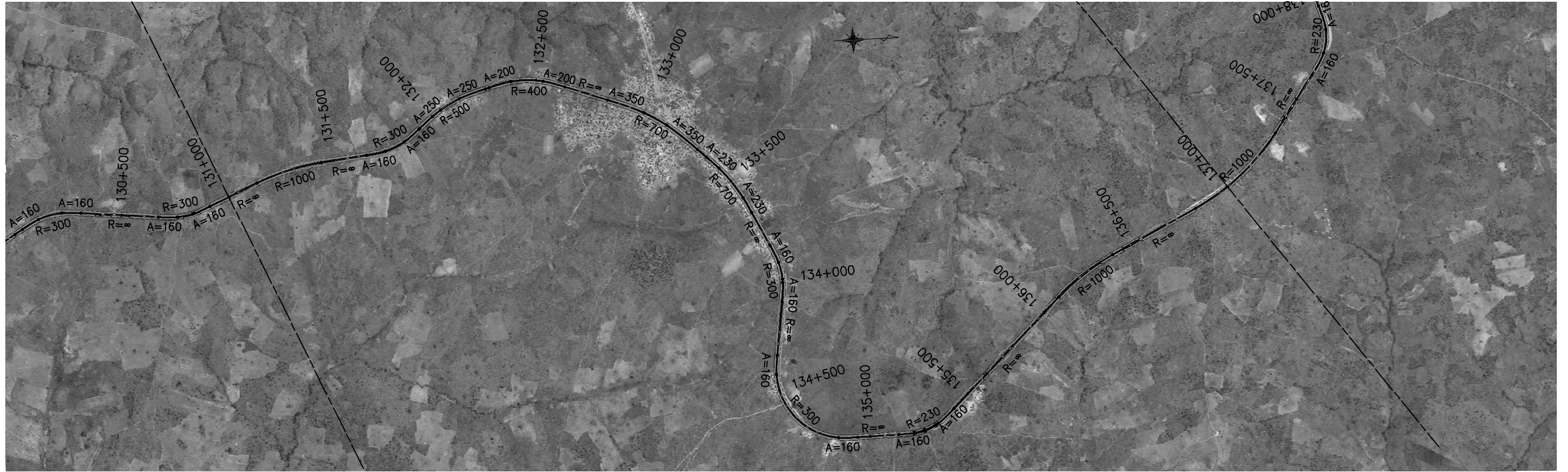
REMARKS:

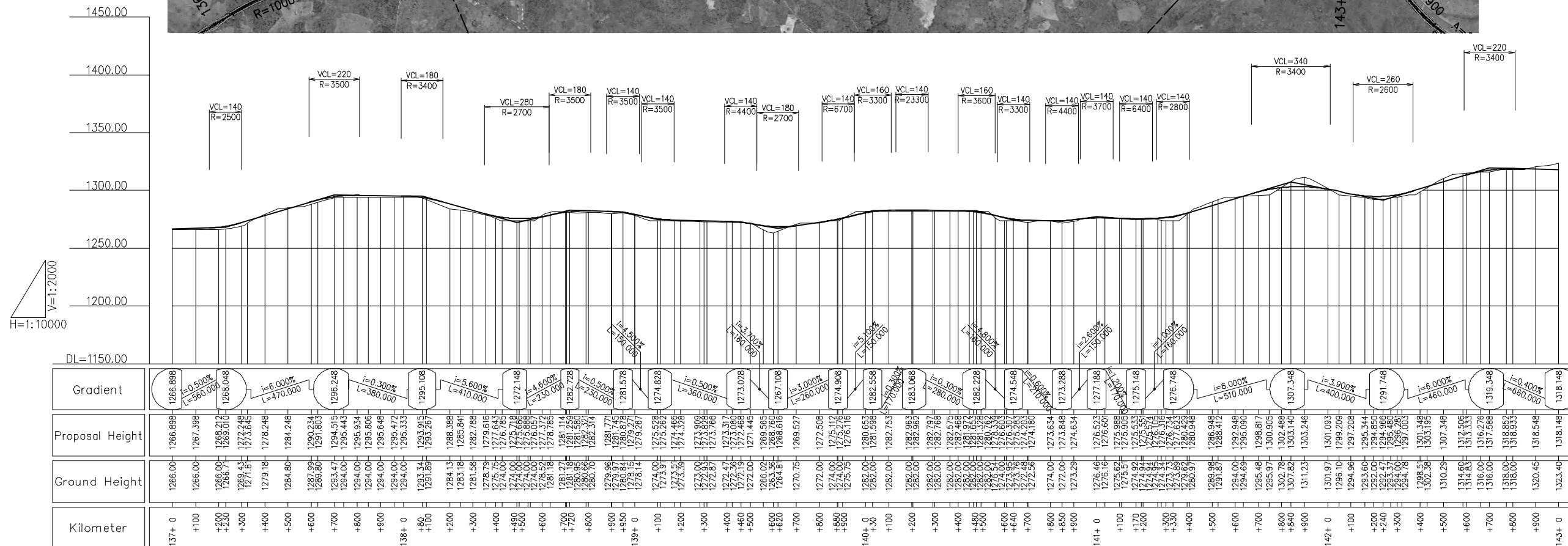
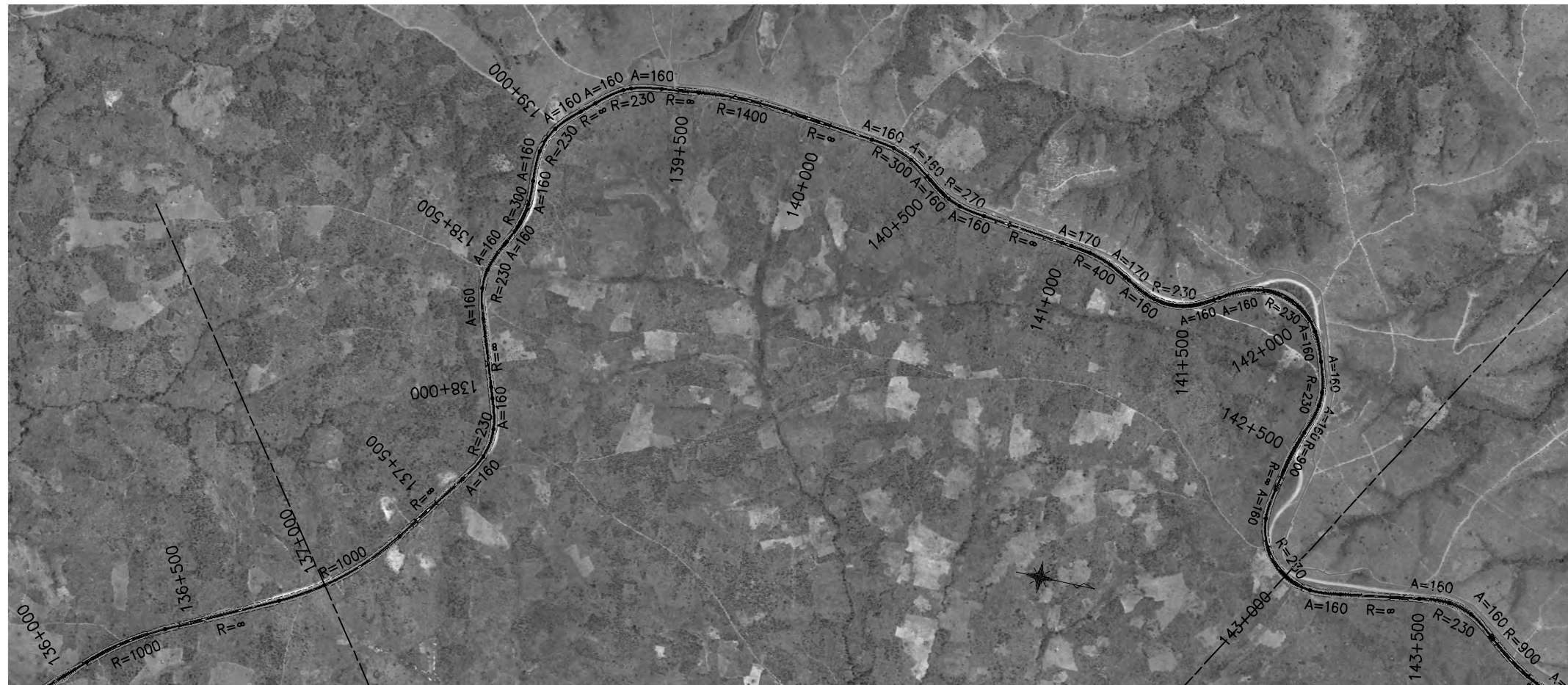
THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR  
 (N13: CUAMBA-MANDIMBA-LICHINGA)  
 Eight-Japan Engineering Consultants Inc.  
 Oriental Consultants Co., Ltd

DRAWING TITLE: Plan and Profile (22)

PREPARED BY	CHECKED BY	APPROVED BY
NAME		
SIGNATURE		
DATE		

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
1/10,000		23	-





Station	Gradient	Proposal Height	Ground Height	Kilometer
137+0	1266.898	1266.898	1266.00	137+0
+100	$i = -0.500\%$ $L = 560.000$	1267.396	1266.00	+100
+200	1268.048	1268.212	1266.00	+200
+300	$i = 6.000\%$ $L = 470.000$	1271.81	1269.43	+300
+400	1296.248	1278.248	1279.18	+400
+500	$i = 0.300\%$ $L = 380.000$	1284.248	1284.80	+500
+600	1295.108	1291.503	1287.88	+600
+700	$i = 5.600\%$ $L = 410.000$	1295.443	1293.47	+700
+800	1295.806	1295.806	1294.00	+800
+900	$i = 0.300\%$ $L = 380.000$	1295.648	1294.00	+900
+1000	1295.335	1295.335	1294.00	+1000
+1100	1293.267	1293.267	1293.34	+1100
+1200	1288.388	1288.388	1284.13	+1200
+1300	1282.788	1282.788	1283.18	+1300
+1400	1276.633	1276.633	1278.79	+1400
+1500	1272.148	1272.148	1274.00	+1500
+1600	$i = 4.600\%$ $L = 230.000$	1276.057	1274.00	+1600
+1700	1282.728	1282.728	1278.52	+1700
+1800	$i = 0.500\%$ $L = 230.000$	1281.580	1281.17	+1800
+1900	1281.578	1281.578	1279.97	+1900
+2000	1274.828	1274.828	1274.00	+2000
+2100	$i = 0.500\%$ $L = 360.000$	1274.328	1273.53	+2100
+2200	1273.908	1273.908	1273.00	+2200
+2300	$i = 3.000\%$ $L = 260.000$	1274.116	1274.00	+2300
+2400	1273.028	1273.028	1272.47	+2400
+2500	$i = 5.100\%$ $L = 160.000$	1271.445	1272.19	+2500
+2600	1267.108	1267.108	1266.02	+2600
+2700	$i = 3.000\%$ $L = 260.000$	1269.527	1263.39	+2700
+2800	1282.558	1282.558	1270.75	+2800
+2900	$i = 0.300\%$ $L = 280.000$	1282.753	1272.00	+2900
+3000	1283.088	1283.088	1272.00	+3000
+3100	$i = 0.300\%$ $L = 280.000$	1282.768	1282.00	+3100
+3200	1282.228	1282.228	1282.00	+3200
+3300	$i = 6.000\%$ $L = 150.000$	1282.757	1276.46	+3300
+3400	1282.575	1282.575	1276.16	+3400
+3500	1281.633	1281.633	1275.62	+3500
+3600	$i = 3.000\%$ $L = 280.000$	1281.336	1275.93	+3600
+3700	1282.228	1282.228	1274.61	+3700
+3800	$i = 0.300\%$ $L = 280.000$	1282.336	1274.61	+3800
+3900	1274.548	1274.548	1274.84	+3900
+4000	$i = 0.300\%$ $L = 280.000$	1274.233	1274.33	+4000
+4100	1273.288	1273.288	1273.48	+4100
+4200	$i = 6.000\%$ $L = 510.000$	1273.634	1273.29	+4200
+4300	1271.888	1271.888	1272.00	+4300
+4400	$i = 3.000\%$ $L = 280.000$	1271.981	1271.88	+4400
+4500	1271.148	1271.148	1271.16	+4500
+4600	$i = 1.000\%$ $L = 160.000$	1276.748	1276.46	+4600
+4700	1307.348	1307.348	1276.46	+4700
+4800	$i = 6.000\%$ $L = 510.000$	1303.468	1276.16	+4800
+4900	1303.246	1303.246	1275.62	+4900
+5000	$i = 3.900\%$ $L = 400.000$	1301.093	1275.93	+5000
+5100	1297.208	1297.208	1275.62	+5100
+5200	$i = 6.000\%$ $L = 460.000$	1295.344	1296.10	+5200
+5300	1294.966	1294.966	1296.10	+5300
+5400	$i = 0.400\%$ $L = 660.000$	1295.480	1294.96	+5400
+5500	1297.005	1297.005	1295.48	+5500
+5600	1301.348	1301.348	1294.96	+5600
+5700	1307.348	1307.348	1294.96	+5700
+5800	$i = 6.000\%$ $L = 460.000$	1313.506	1302.58	+5800
+5900	1318.148	1318.148	1310.29	+5900
+6000	$i = 0.400\%$ $L = 660.000$	1316.208	1314.60	+6000
+6100	1317.568	1317.568	1314.60	+6100
+6200	1318.852	1318.852	1316.00	+6200
+6300	1318.548	1318.548	1316.00	+6300
+6400	1318.148	1318.148	1318.00	+6400
+6500	1318.548	1318.548	1318.00	+6500
+6600	1318.148	1318.148	1320.45	+6600
+6700	1318.148	1318.148	1323.40	+6700

REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR  
 (N13: CUAMBA-MANDIMBA-LICHINGA)

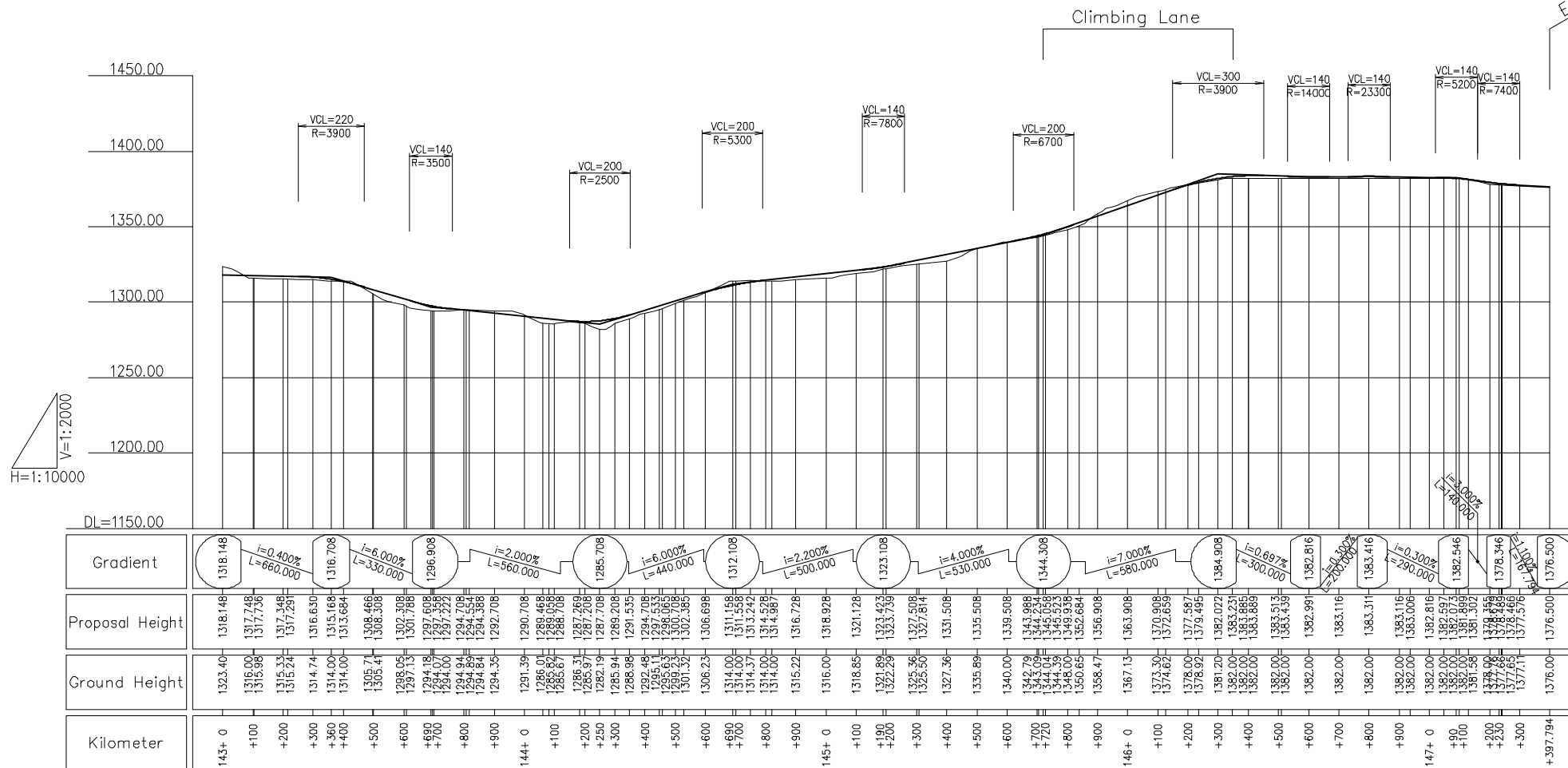
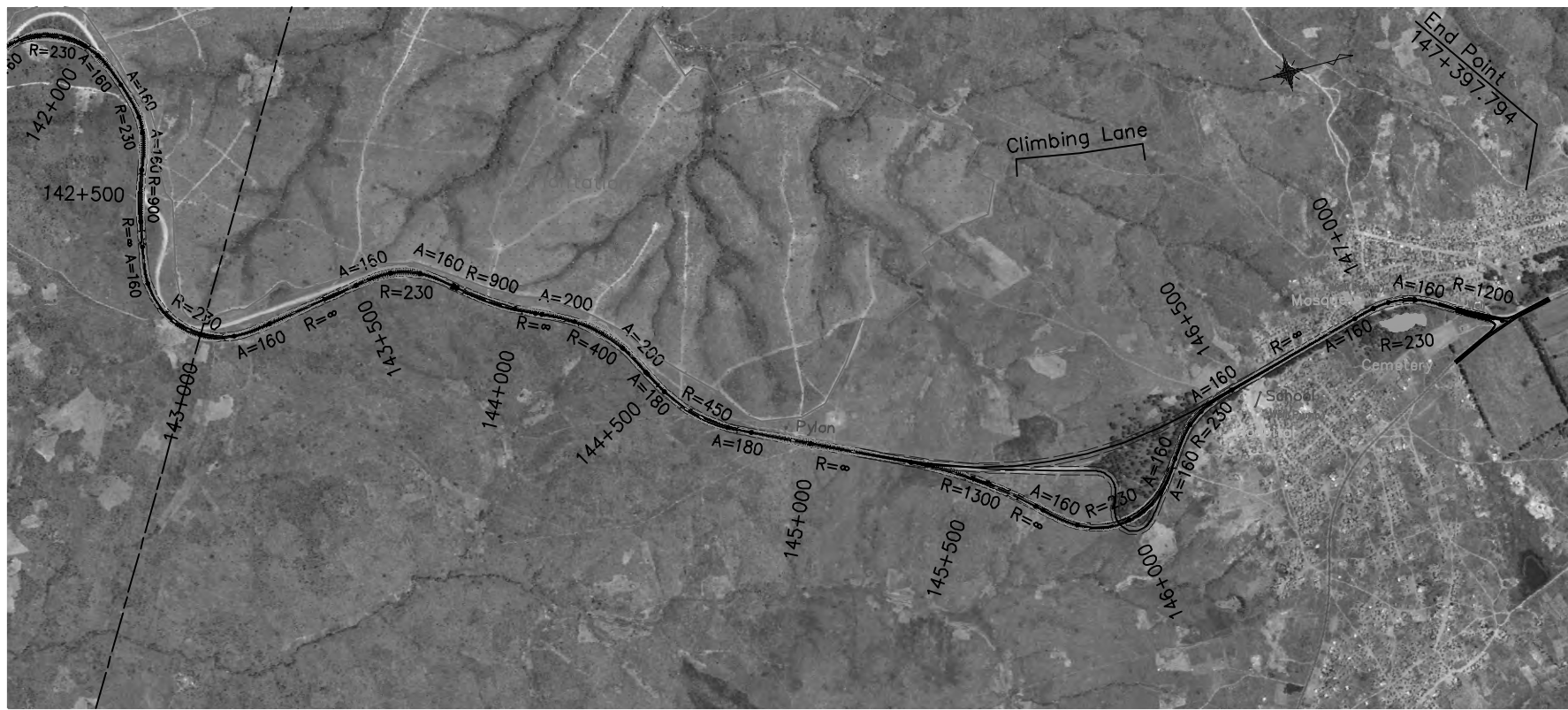
Eight-Japan Engineering Consultants Inc.  
 Oriental Consultants Co., Ltd

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Plan and Profile (24)

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NAME		
SIGNATURE		
DATE		

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1/10,000		25	-



Station	Gradient	Proposal Height	Ground Height	Kilometer
143+0	1318.148	1318.148	1323.40	143+0
+100	i=0.400% L=660.000	1317.748	1316.00	+100
+200		1317.346	1315.98	+200
+300		1317.291	1315.24	+300
+360		1316.630	1314.74	+360
+400		1315.168	1314.00	+400
+500		1308.466	1305.41	+500
+600		1302.708	1298.05	+600
+700		1297.608	1294.18	+700
+800		1294.000	1294.00	+800
+900		1292.708	1294.35	+900
144+0		1290.708	1291.39	144+0
+100		1288.708	1289.00	+100
+200		1287.208	1285.67	+200
+250		1287.208	1285.97	+250
+300		1289.208	1285.94	+300
+400		1294.708	1292.48	+400
+500		1297.533	1295.11	+500
+600		1306.698	1301.52	+600
+700		1311.558	1314.00	+700
+800		1314.528	1314.00	+800
+900		1316.728	1315.22	+900
145+0		1318.928	1316.00	145+0
+100		1321.128	1316.85	+100
+200		1323.736	1321.86	+200
+300		1327.814	1325.50	+300
+400		1331.508	1327.36	+400
+500		1335.508	1329.89	+500
+600		1339.508	1340.00	+600
+700		1344.234	1342.78	+700
+800		1349.938	1344.00	+800
+900		1356.908	1350.65	+900
146+0		1363.908	1358.47	146+0
+100		1370.908	1367.13	+100
+200		1372.639	1373.32	+200
+300		1379.495	1378.92	+300
+400		1383.889	1381.20	+400
+500		1383.439	1382.00	+500
+600		1382.991	1382.00	+600
+700		1383.116	1382.00	+700
+800		1383.311	1382.00	+800
+900		1383.116	1382.00	+900
147+0		1382.816	1382.00	147+0
+100		1382.597	1382.00	+100
+200		1381.809	1382.00	+200
+300		1378.456	1378.99	+300
+397.794		1376.500	1376.00	+397.794

REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR (N13: CUAMBA-MANDIMBA-LICHINGA)

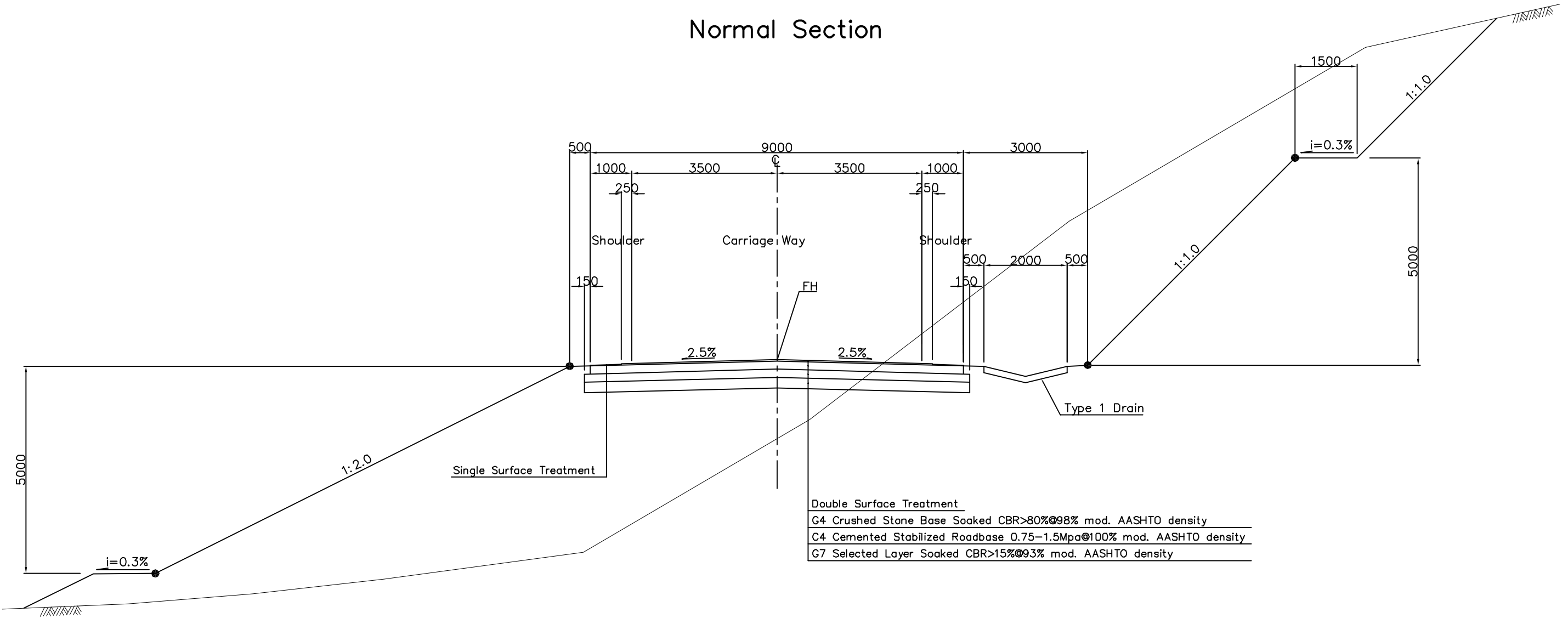
Eight-Japan Engineering Consultants Inc.			DRAWING TITLE			
Oriental Consultants Co., Ltd			Plan and Profile (25)			
PREPARED BY	CHECKED BY	APPROVED BY	SCALE	SHEET NO.	DRAWING NO.	REV. NO.
NAME			1/10,000		26	-
SIGNATURE						
DATE						

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

NR NATIONAL ROAD ADMINISTRATION

# Typical Cross Section (1)

## Normal Section



Double Surface Treatment  
 G4 Crushed Stone Base Soaked CBR>80%@98% mod. AASHTO density  
 C4 Cemented Stabilized Roadbase 0.75-1.5Mpa@100% mod. AASHTO density  
 G7 Selected Layer Soaked CBR>15%@93% mod. AASHTO density

Description	Unit	Sub-grade Class		
		S2	S3	S4
Double Surface Treatment	mm	-	-	-
G4 Crushed Stone Base Soaked CBR>80%@98% mod. AASHTO density	mm	200	200	150
C4 Cemented Stabilized Roadbase 0.75-1.5Mpa@100% mod. AASHTO density	mm	250	200	200
G7 Selected Layer Soaked CBR>15%@93% mod. AASHTO density	mm	250	250	200

JAPAN INTERNATIONAL COOPERATION AGENCY

NATIONAL ROAD ADMINISTRATION

REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR (N13: CUAMBA-MANDIMBA-LICHINGA)

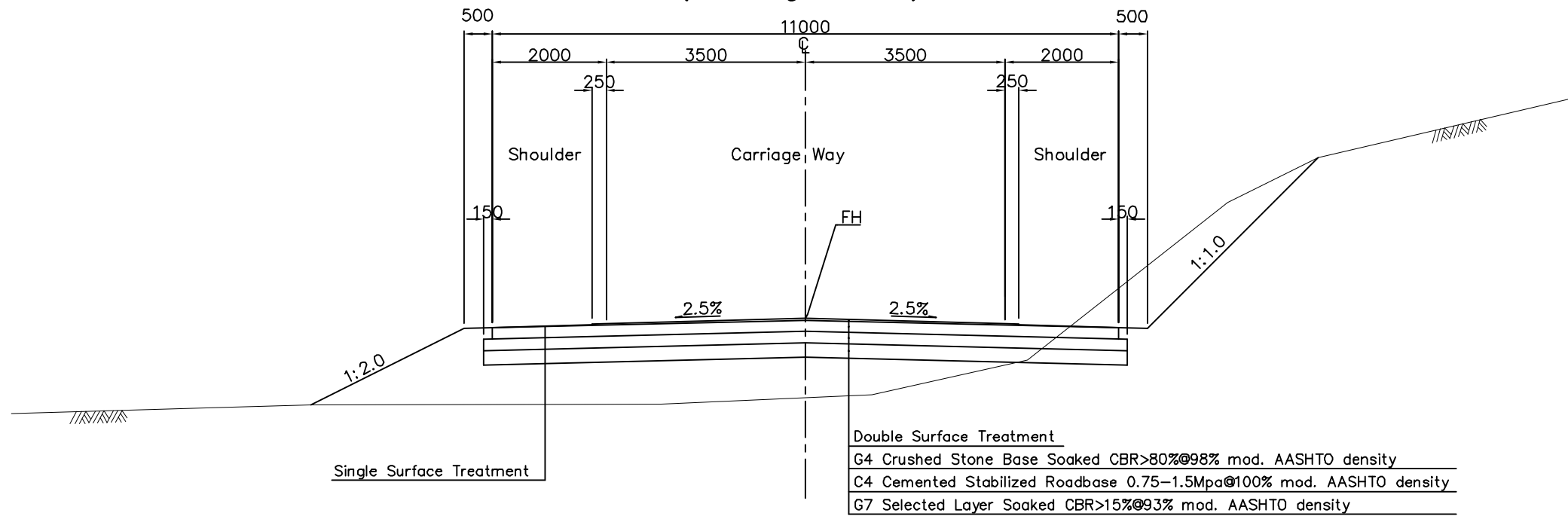
Eight-Japan Engineering Consultants Inc.  
 Oriental Consultants Co., Ltd

DRAWING TITLE  
 Typical Cross Section (1)

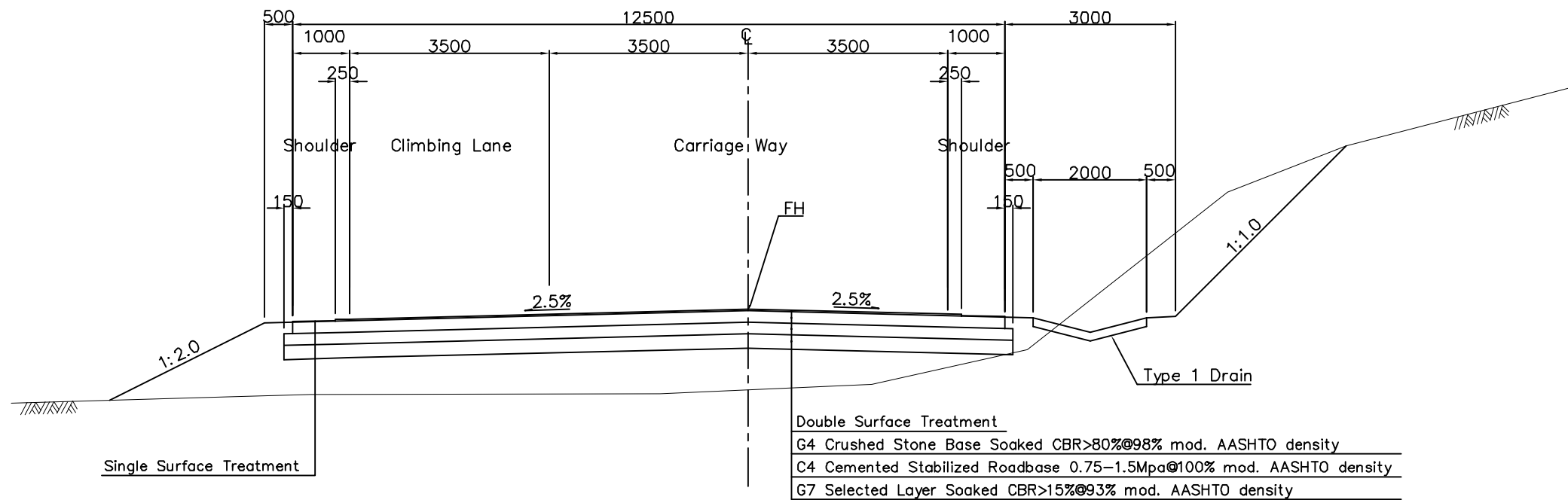
PREPARED BY	CHECKED BY	APPROVED BY	SCALE	SHEET NO.	DRAWING NO.	REV. NO.
NAME			1/50		27	-
SIGNATURE						
DATE						

# Typical Cross Section (2)

## Village Section (Massangulo, Lione)



## Climbing Lane



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NATIONAL ROAD ADMINISTRATION

REMARKS:

THE PREPARATORY SURVEY ON ROAD IMPROVEMENT PLAN IN NACALA DEVELOPMENT CORRIDOR  
(N13: CUAMBA-MANDIMBA-LICHINGA)

Eight-Japan Engineering Consultants Inc.  
 Oriental Consultants Co., Ltd

DRAWING TITLE

Typical Cross Section (2)

	PREPARED BY	CHECKED BY	APPROVED BY
NAME			
SIGNATURE			
DATE			

SCALE	SHEET NO.	DRAWING NO.	REV. NO.
1/50		28	-