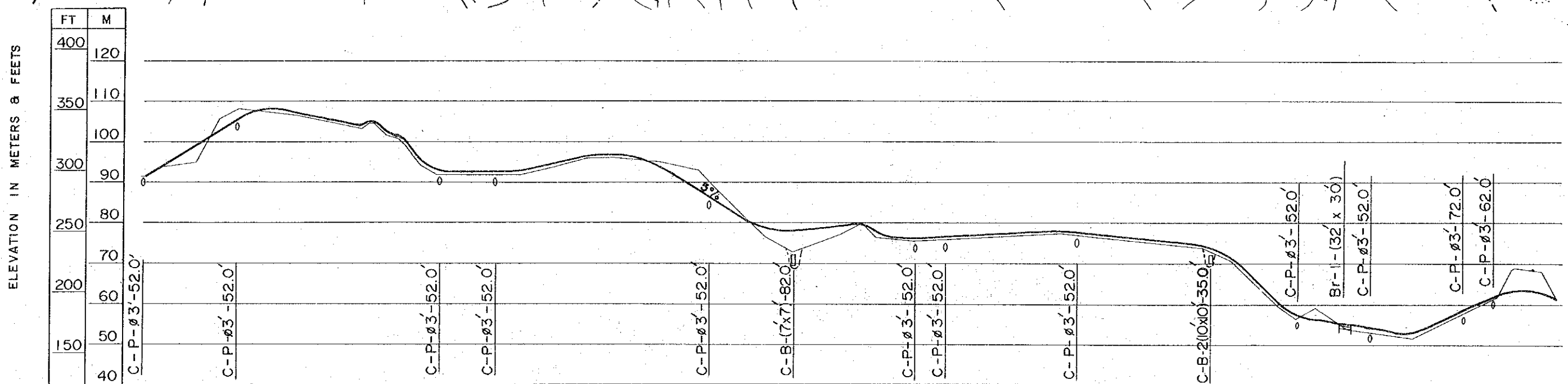
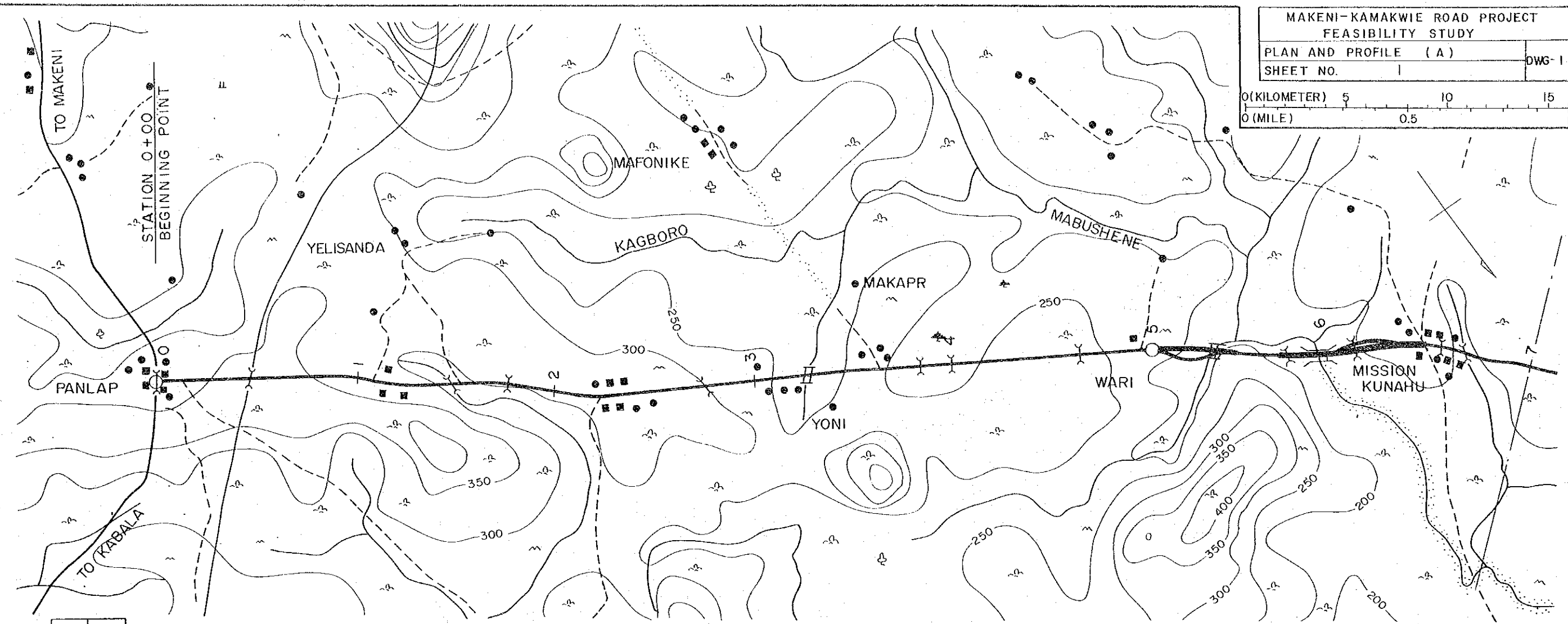
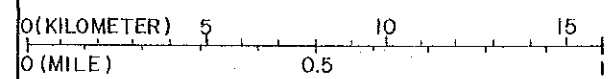


ABBREVIATIONS

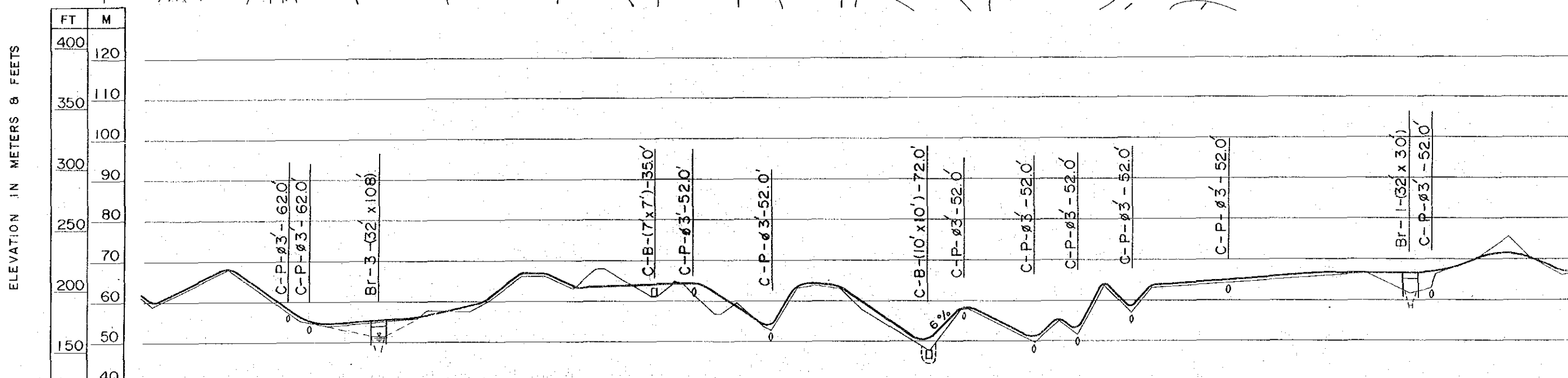
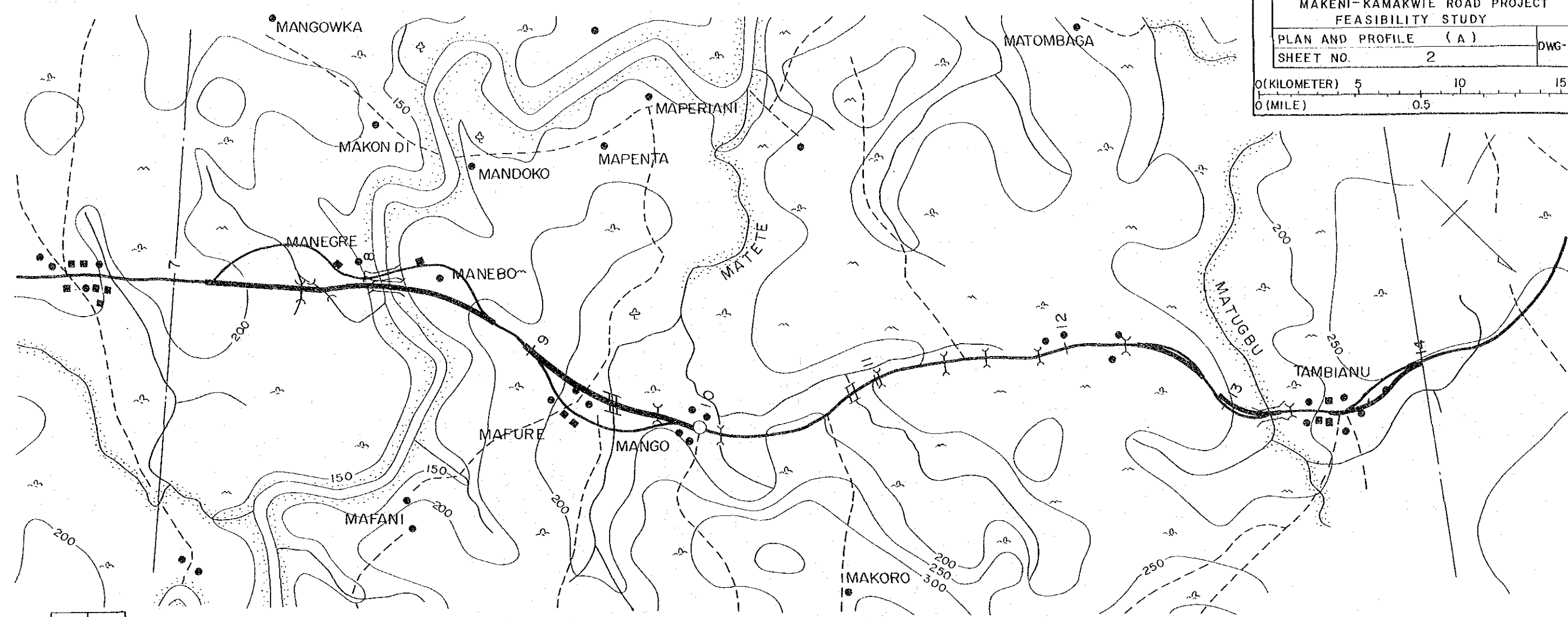
H	RE-ALIGNMENT, HORIZONTAL FOR ROAD IMPROVEMENT
V	RE-ALIGNMENT, VERTICAL FOR ROAD IMPROVEMENT
W	WIDENING OF ROAD WIDTH FOR ROAD IMPROVEMENT
C - P - ϕa - ℓ	PROPOSED PIPE CULVERT, ϕa (DIAMETER, FOOT), ℓ (LENGTH, FOOT)
C - B (a x b) - ℓ	PROPOSED BOX CULVERT, a x b (WIDTH x LENGTH ALONG THE ROAD), ℓ (CULVERT LENGTH)
C - B - n(a x b) - ℓ	PROPOSED BOX CULVERT, n (ROW), a x b (WIDTH x LENGTH ALONG THE ROAD), ℓ (CULVERT LENGTH)
Br - n - (a x b)	PROPOSED PRESTRESSED CONCRETE BRIDGE, n (NOS. OF SPAN), a x b (WIDTH x SPAN LENGTH)



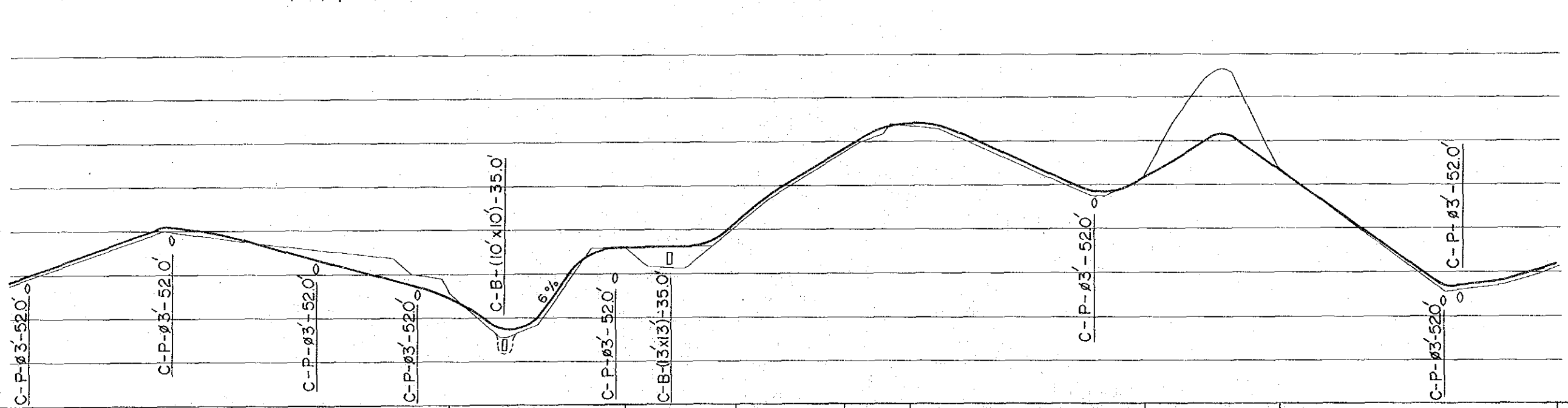
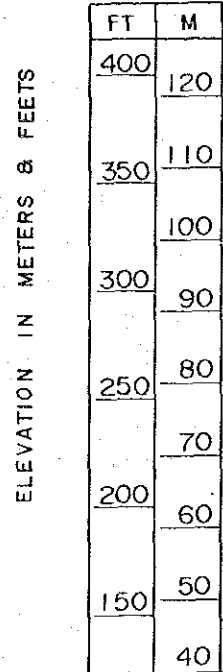
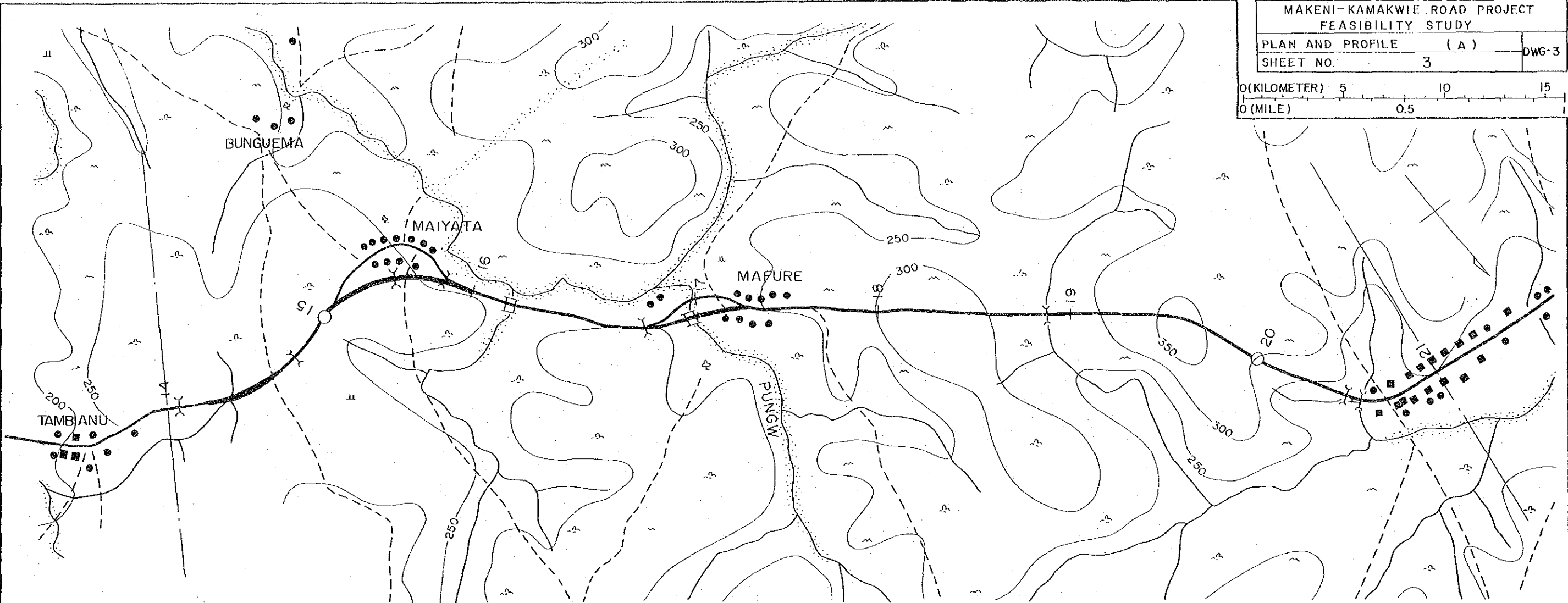
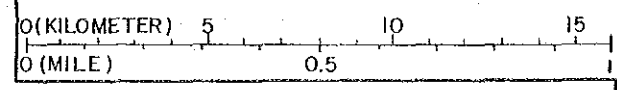
IMPROVEMENT	W	V	W	V	W	H	W	H	V
ROAD SURFACE KIND	SURFACE DRESSING		SURFACE DRESSING WITH SAND MAT	SURFACE DRESSING	SURFACE DRESSING WITH SAND MAT	SURFACE DRESSING		SURFACE DRESSING WITH SAND MAT	SURFACE DRESSING
C B R OF SUBGRADE	C . B . R . > 25								
DISTANCE	MILES	0	1	2	3	4	5	6	7
	KILOMETERS	0	1	2	3	4	5	6	7

MAKENI-KAMAKWIE ROAD PROJECT
 FEASIBILITY STUDY
 PLAN AND PROFILE (A)
 SHEET NO. 2
 DWG-2

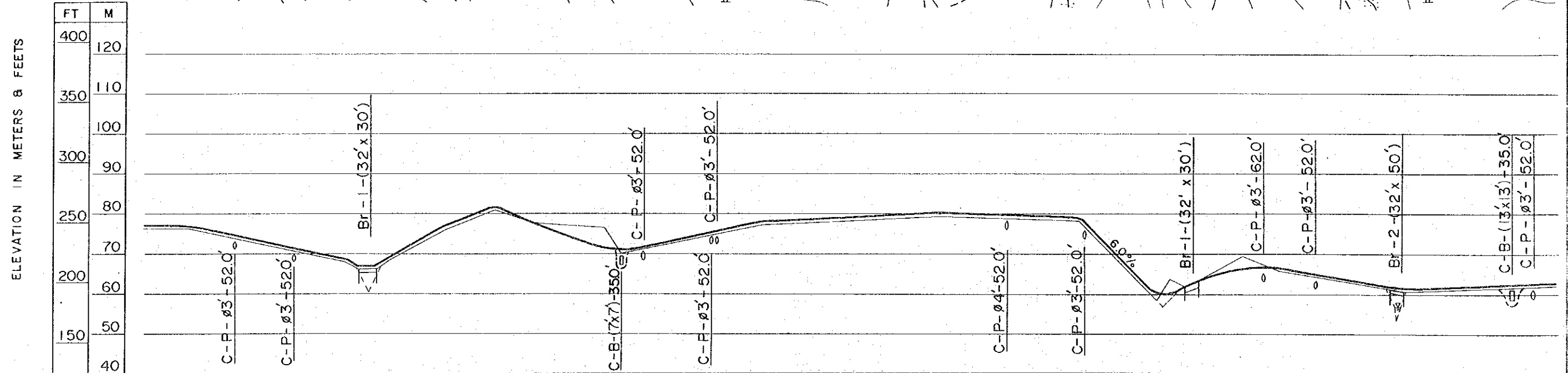
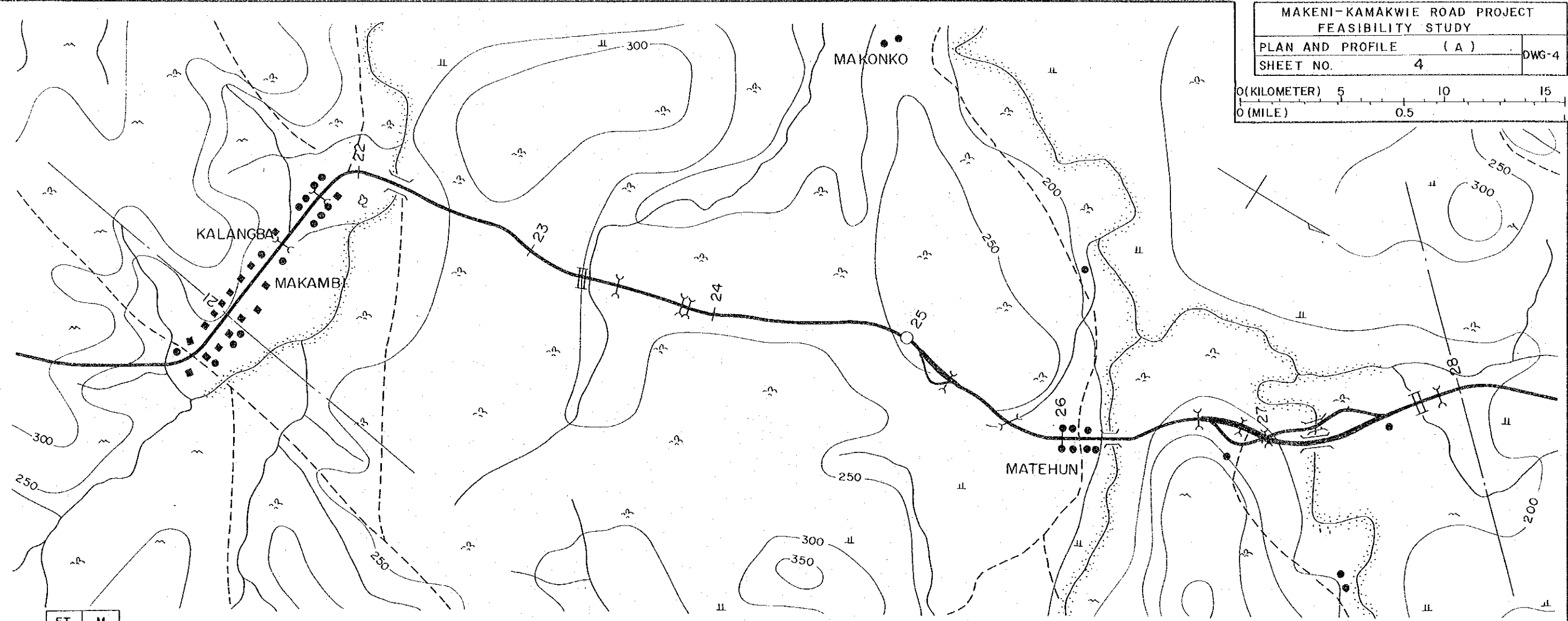
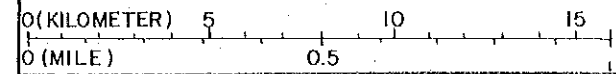
0 (KILOMETER) 5 10 15
 0 (MILE) 0.5



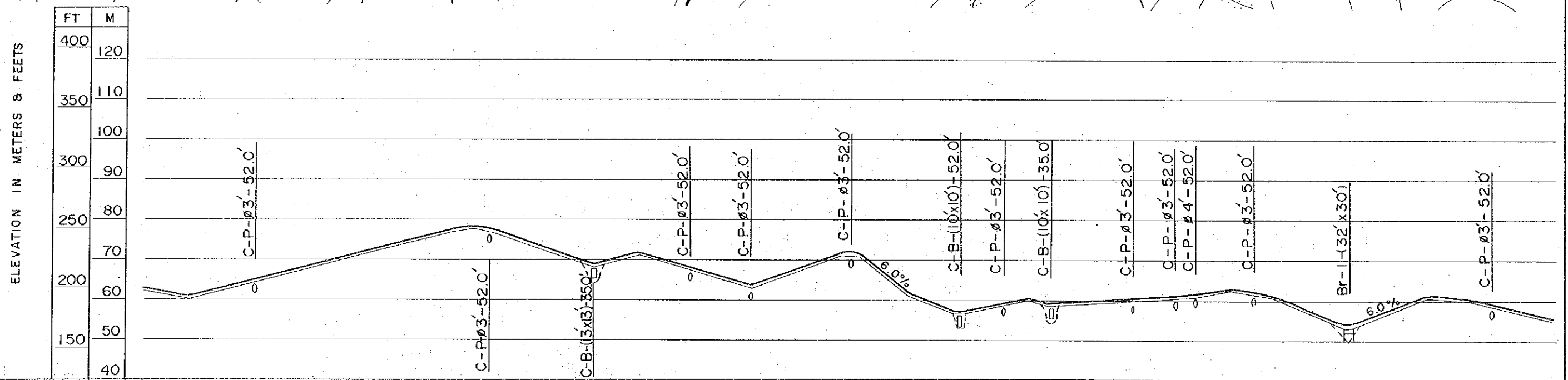
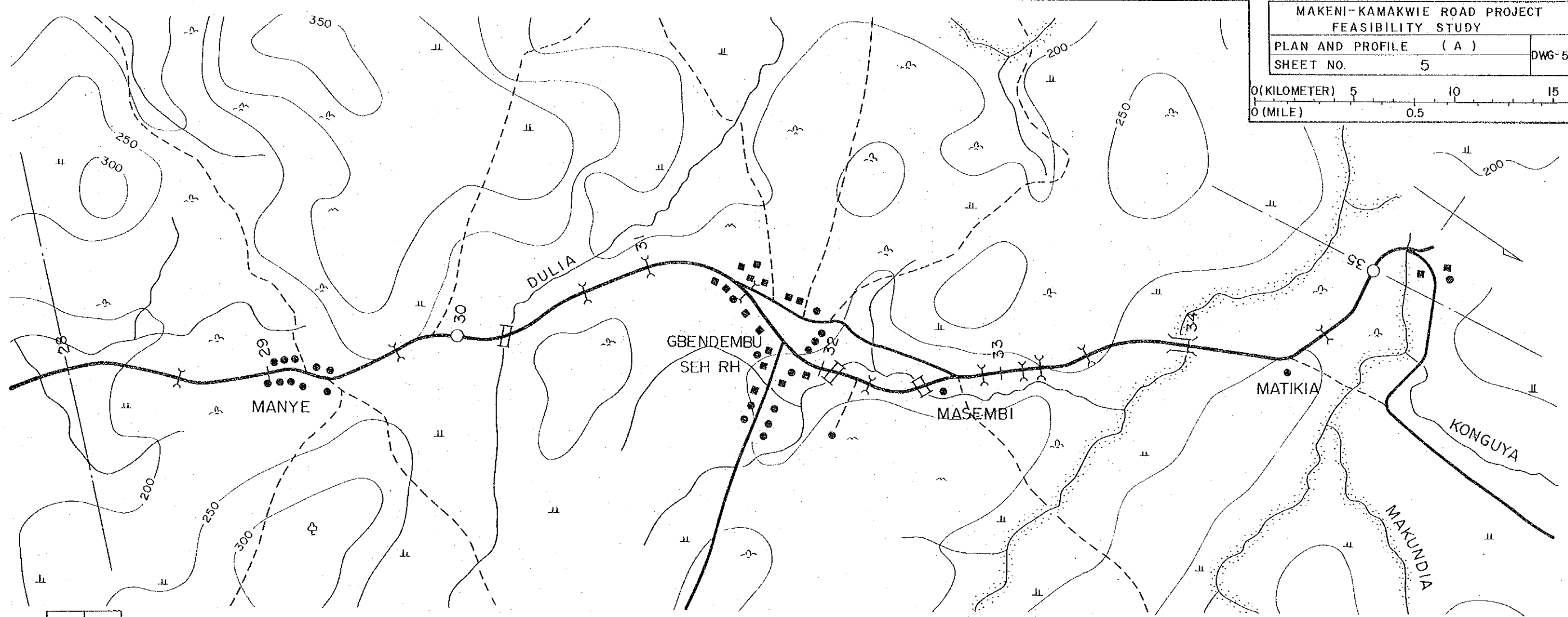
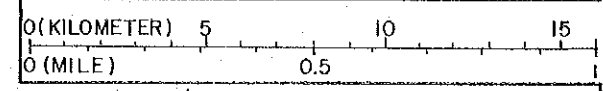
IMPROVEMENT	W	H		W	H	W	V	W	H	W	H	W	H
ROAD SURFACE KIND	SURFACE DRESSING	SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING	SURFACE DRESSING	SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING					
C B R OF SUBGRADE	C. B. R. > 25												
DISTANCE	MILES		5	6		10	11	7	8		13	14	
	KILOMETERS		7	8		9	10	11	12		13	14	



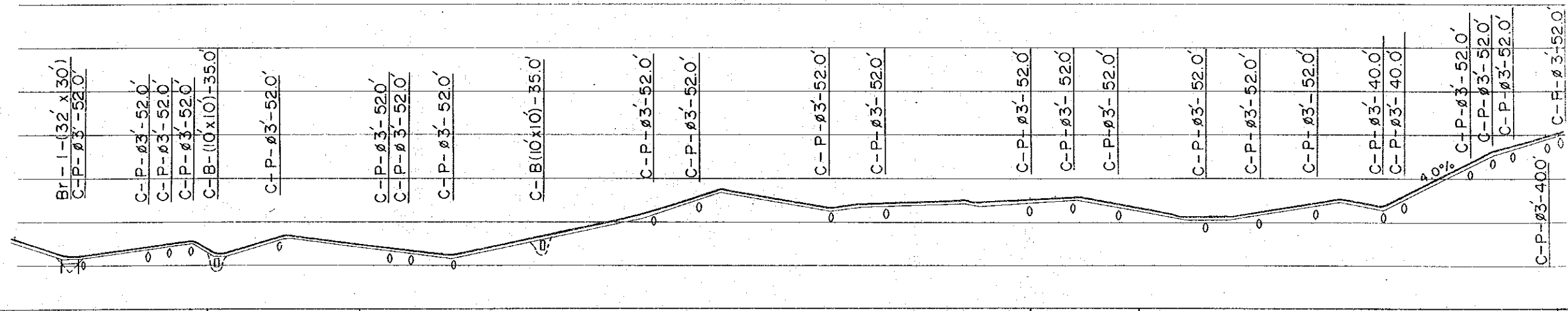
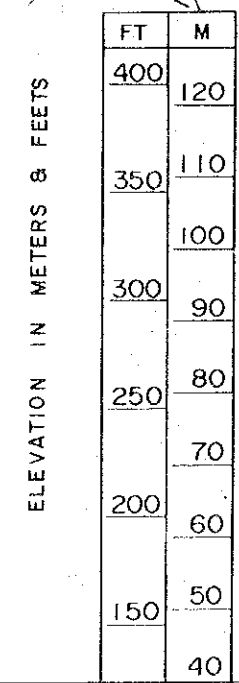
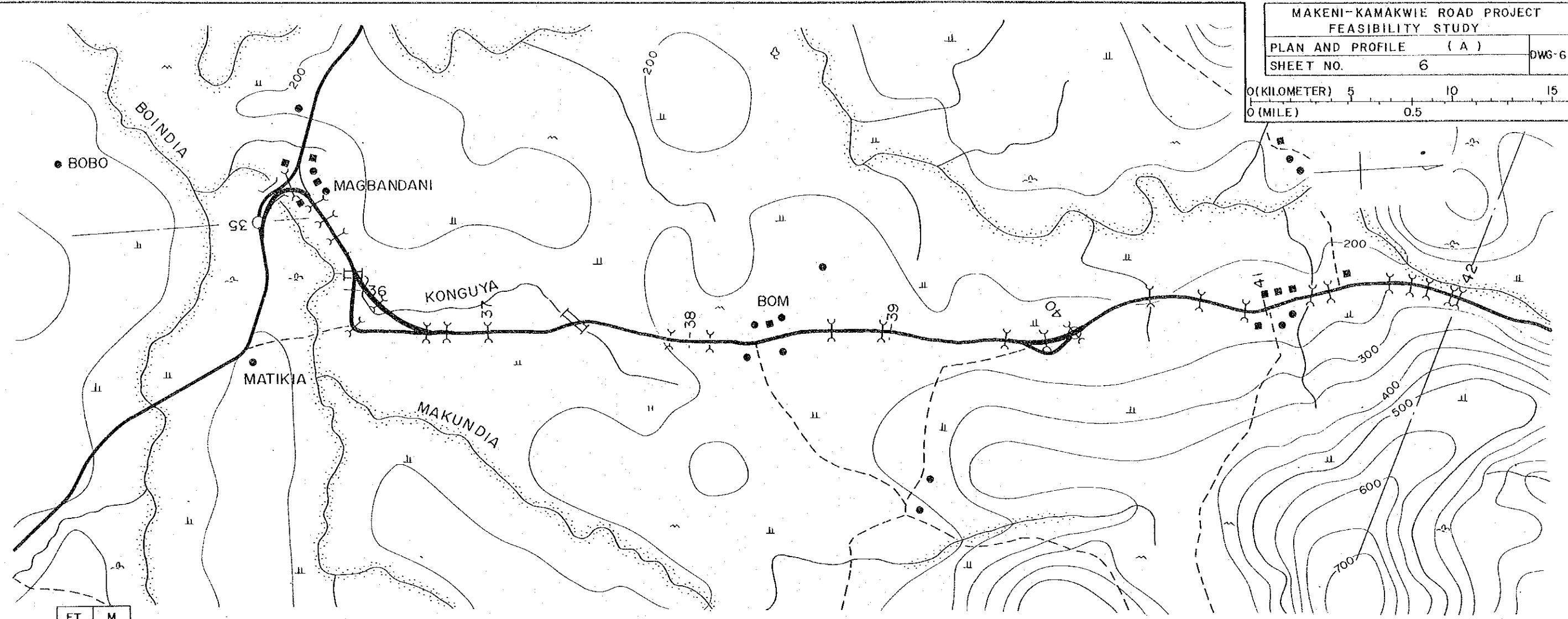
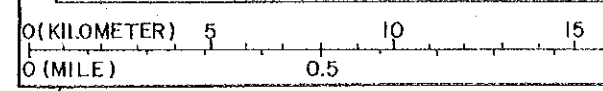
IMPROVEMENT	W	H	W	H	W	H	W	V	W	V	W		
ROAD SURFACE KIND	SURFACE DRESSING			SURFACE DRESSING WITH SAND MAT			SURFACE DRESSING			SURFACE DRESSING WITH SAND MAT			
C.B.R. OF SUBGRADE	C.B.R. > 25												
DISTANCE	9			10			11			12			
MILES													
KILOMETERS	14		15		16		17		18		19	20	21



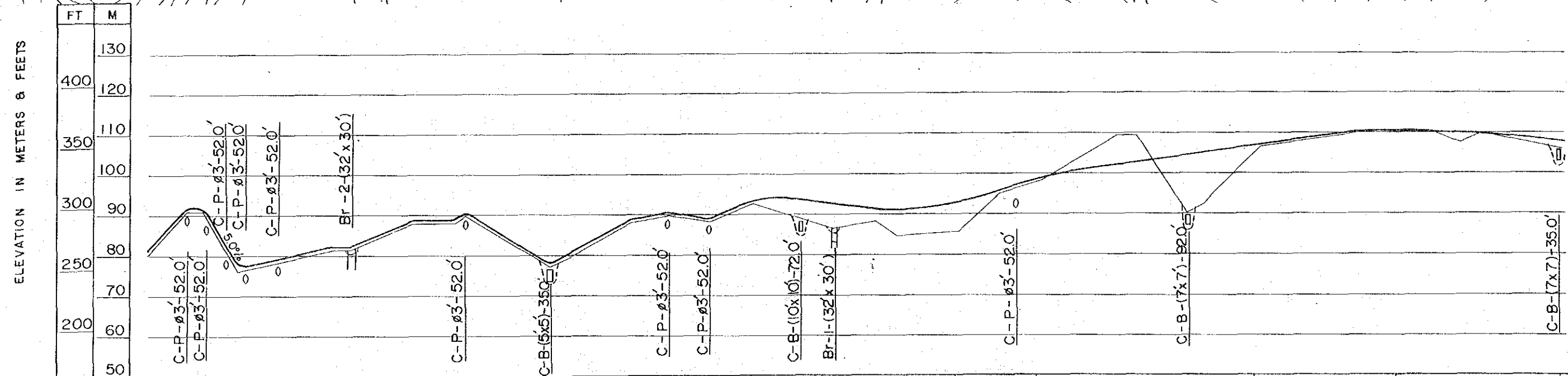
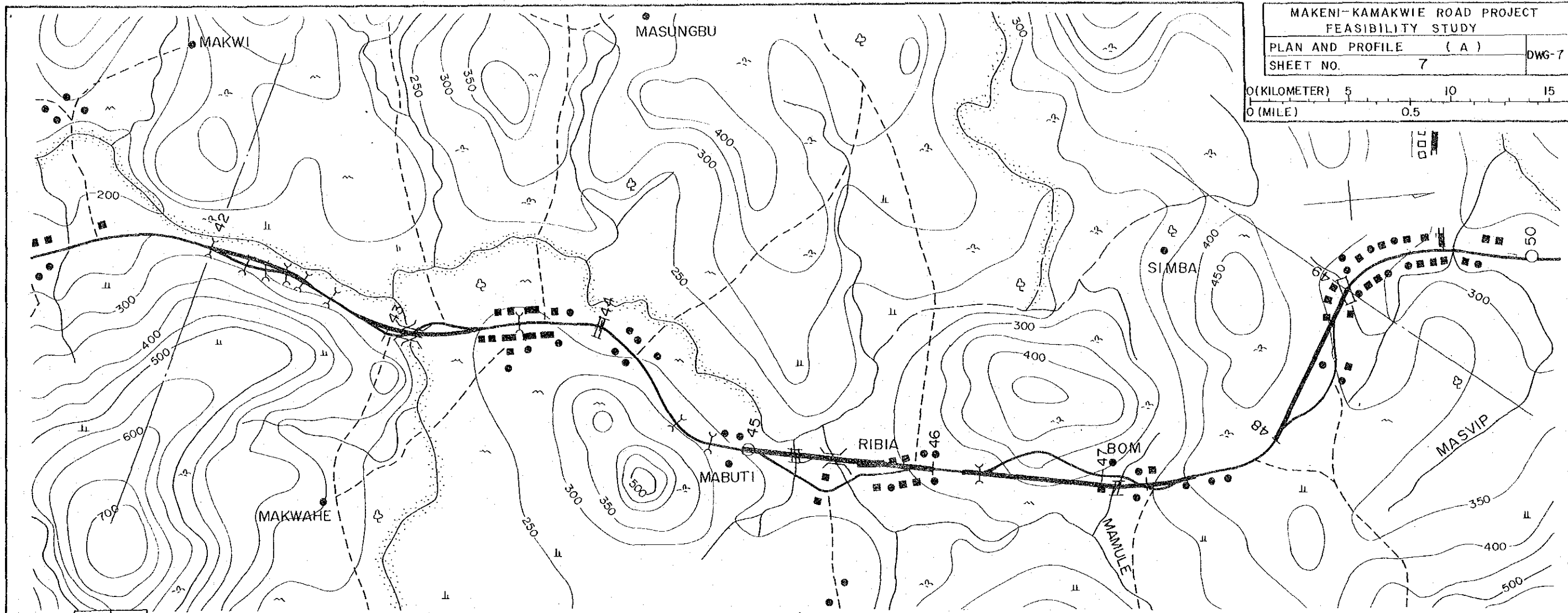
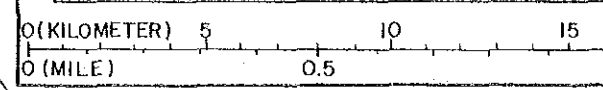
IMPROVEMENT	W		V	W		H	W	V	H	W
	SURFACE DRESSING	SAFACE DRESSING WITH SAND MAT		SURFACE DRESSING		SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING		
ROAD SURFACE KIND	SURFACE DRESSING	SAFACE DRESSING WITH SAND MAT		SURFACE DRESSING		SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING		
C B R OF SUBGRADE	C. B. R > 25									
DISTANCE	MILES	14		15		16		17		
	KILOMETERS	21	22	23	24	25	26	27	28	



IMPROVEMENT	W								H	
	SURFACE DRESSING	SURFACE DRESSING WITH SAND MAT	SURFACE DRESSING	SURFACE DRESSING WITH SAND MAT	SURFACE DRESSING	SURFACE DRESSING WITH SAND MAT	SURFACE DRESSING	SURFACE DRESSING		
C B R OF SUBGRADE	C. B. R. > 25									
DISTANCE	MILES	18		19		20		21		
	KILOMETERS	28	29	30	31	32	33	34	35	



IMPROVEMENT	H	W	H	W	H	W				
ROAD SURFACE KIND	SURFACE DRESSING		SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING		SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING	
C.B.R. OF SUBGRADE	C.B.R. > 25									
DISTANCE	22		23		24		25		26	
MILES	22		23		24		25		26	
KILOMETERS	35	36	37	38	39	40	41	42		

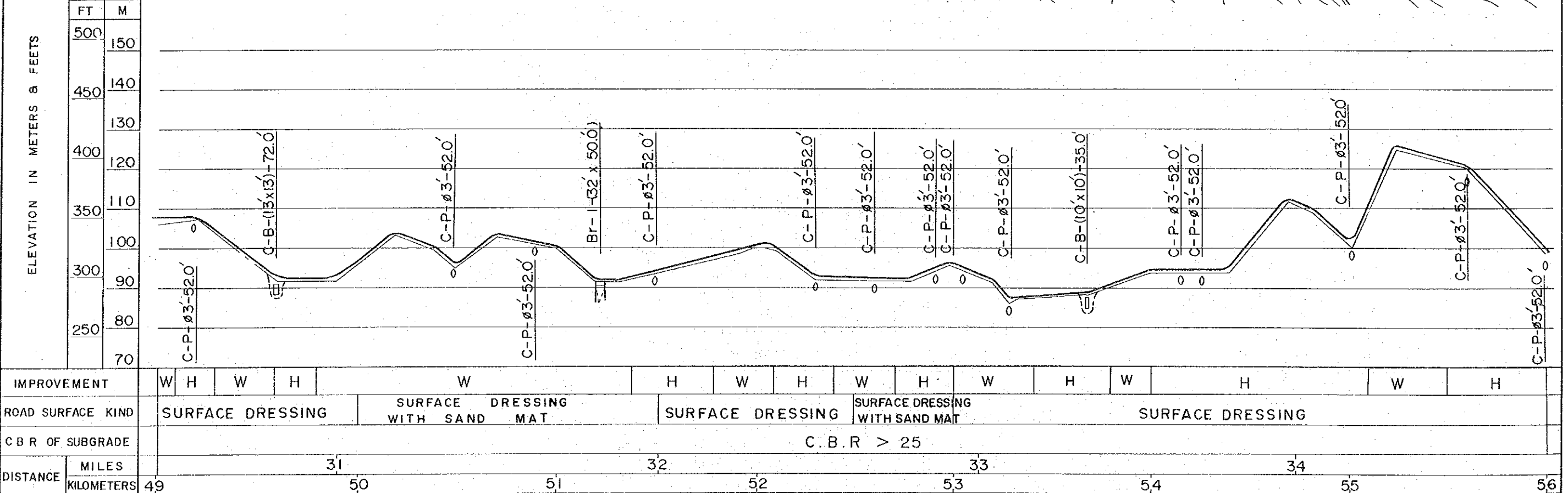
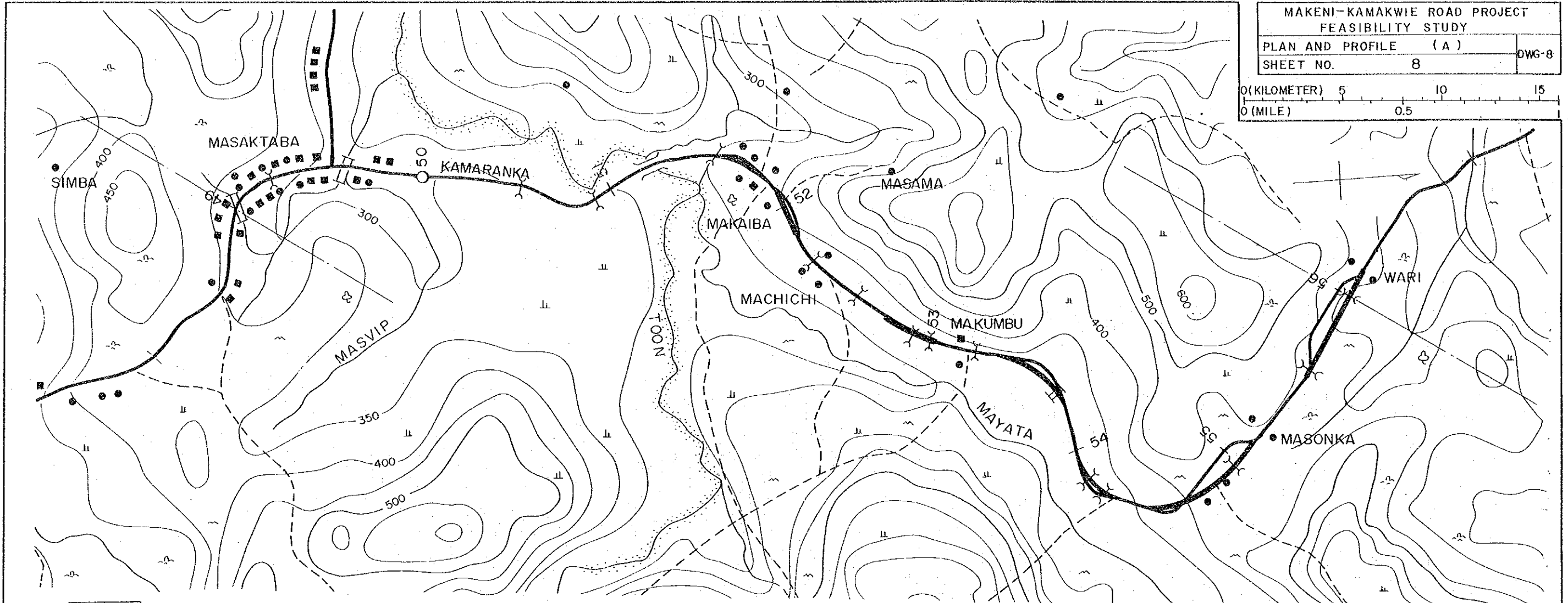


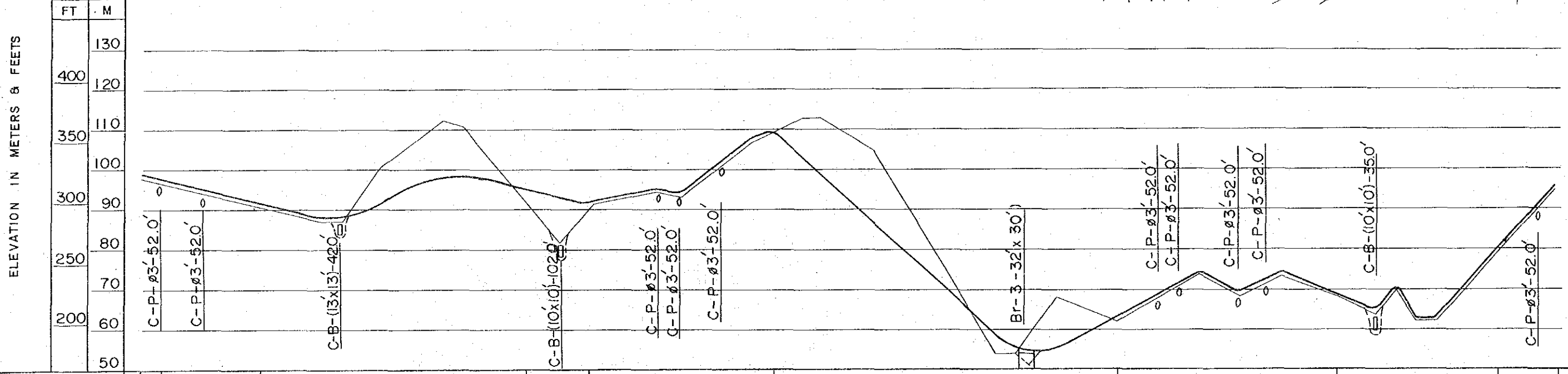
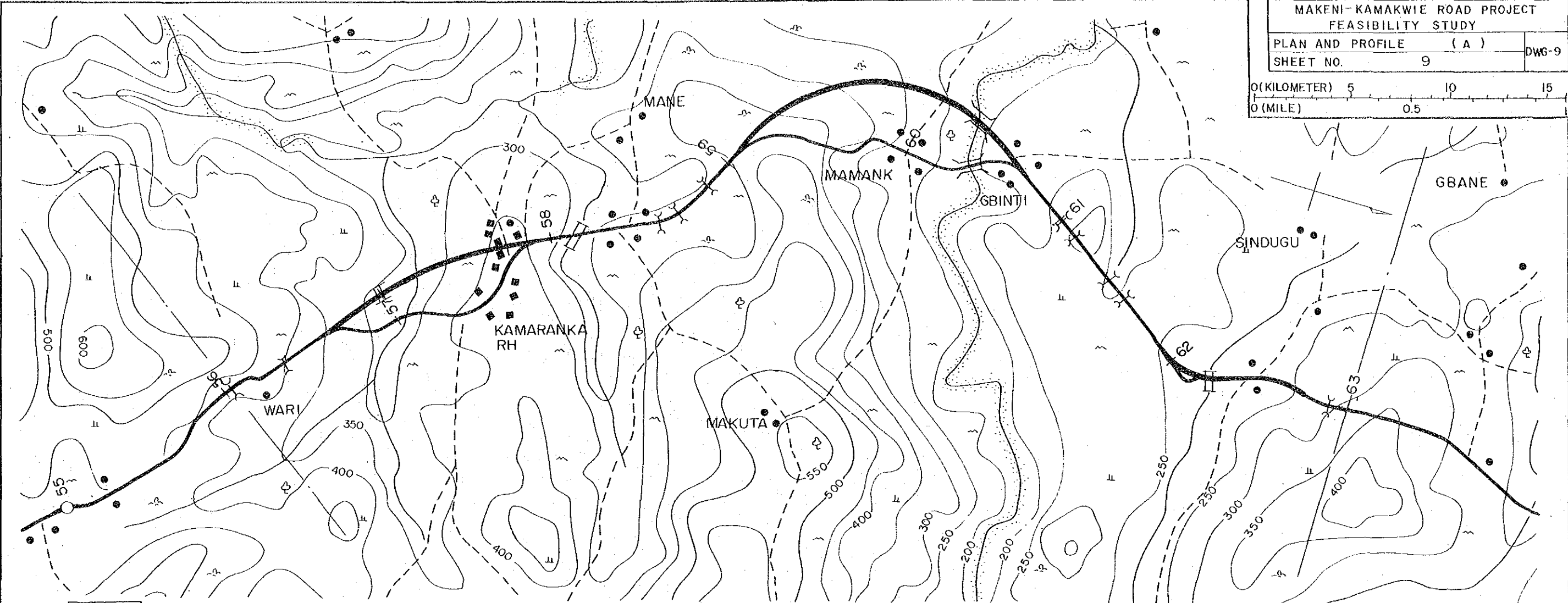
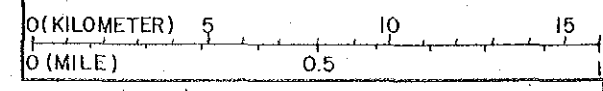
IMPROVEMENT	H	W	H	W	H	W	H	W	H	
ROAD SURFACE KIND				SURFACE DRESSING			SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING WITH SAND MAT	
C B R OF SUBGRADE				C . B . R > 25						
DISTANCE	42	43	44	45	46	47	48	49		
MILES			27	28	29	30				
KILOMETERS										

MAKENI-KAMAKWIE ROAD PROJECT
FEASIBILITY STUDY

PLAN AND PROFILE (A)	DWG-8
SHEET NO. 8	

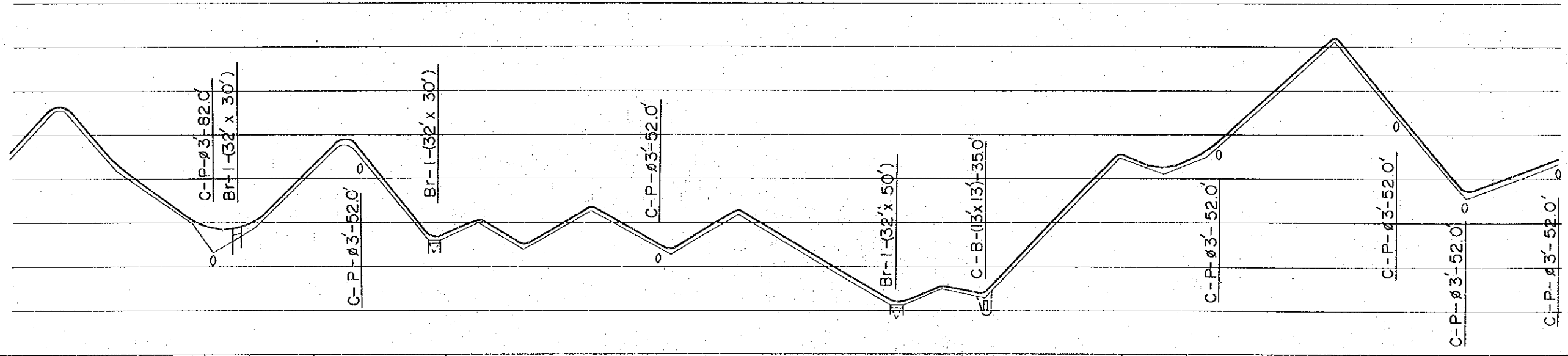
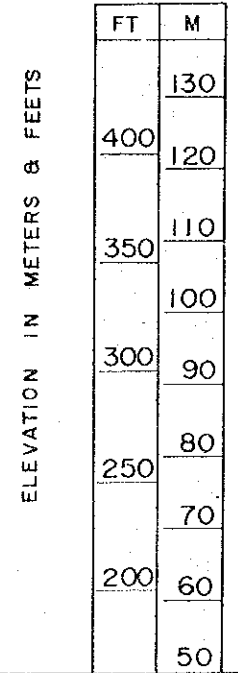
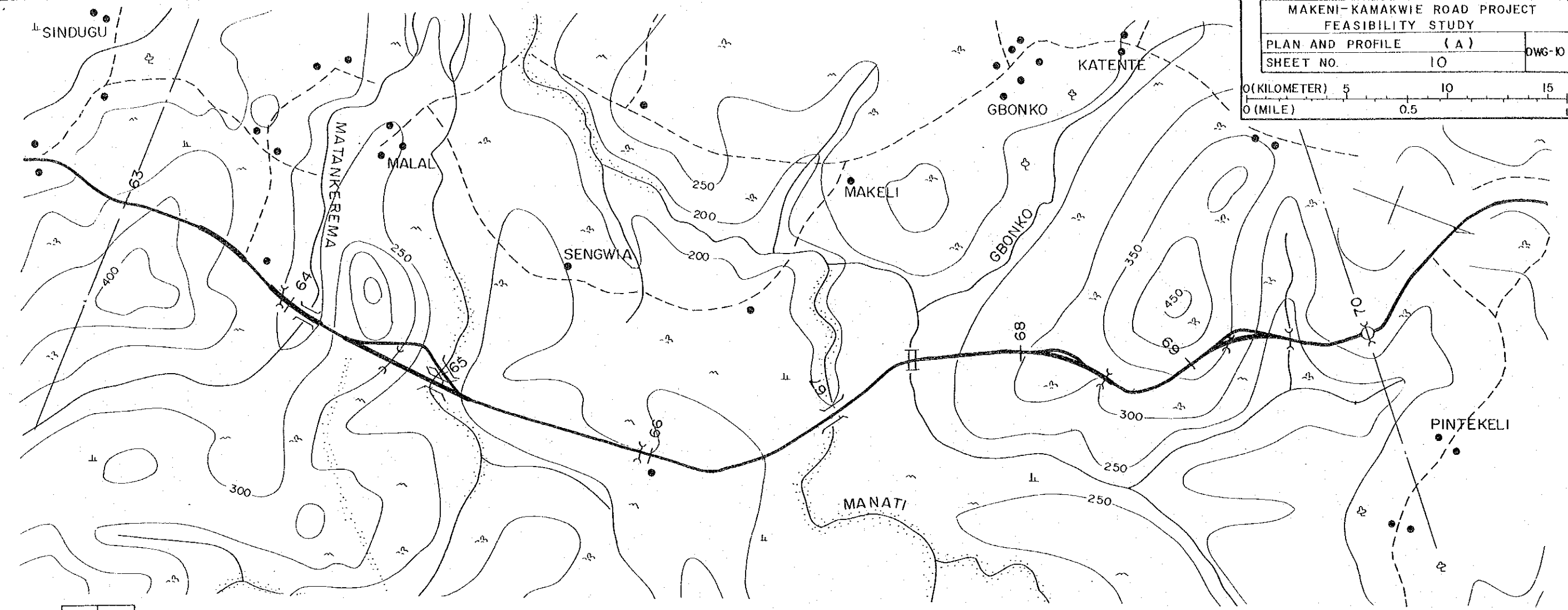
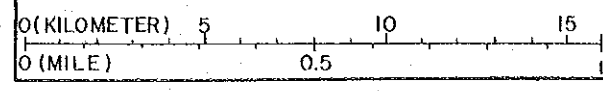
0 (KILOMETER) 5 10 15
0 (MILE) 0.5





IMPROVEMENT	H	V	H	V	W	H	W	H	W
ROAD SURFACE KIND		SURFACE DRESSING WITH SAND MAT	SURFACE DRESSING		SURFACE DRESSING WITH SAND MAT	SURFACE DRESSING	SURFACE DRESSING WITH SAND MAT	SURFACE DRESSING	
C B R OF SUBGRADE						C. B. R. > 25			
DISTANCE	MILES	35		36		37	38		39
	KILOMETERS	56	57	58	59	60	61	62	63

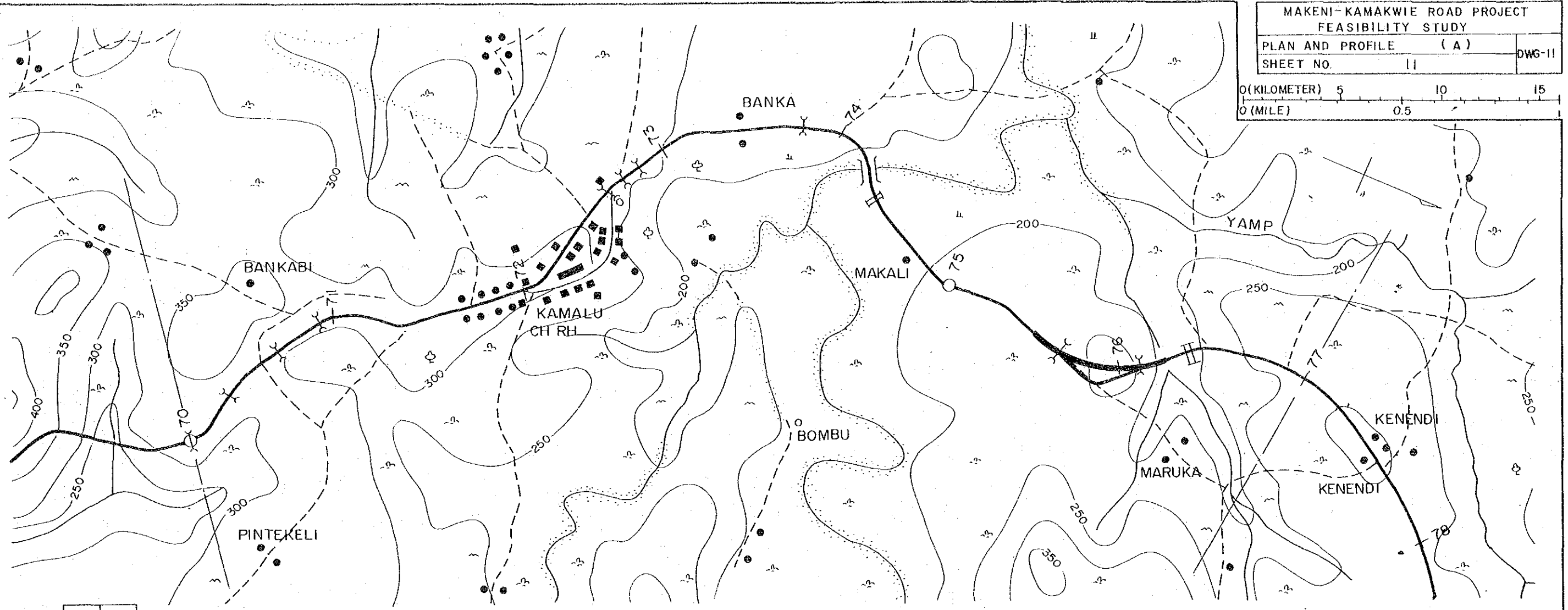
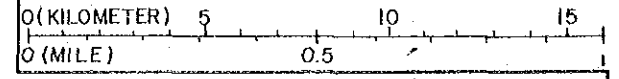
MAKENI-KAMAKWIE ROAD PROJECT
 FEASIBILITY STUDY
 PLAN AND PROFILE (A)
 SHEET NO. 10 DWG-10



IMPROVEMENT	W	H	W	H	W	H	W	H	W	H	W								
ROAD SURFACE KIND	SURFACE DRESSING		SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING			SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING									
C B R OF SUBGRADE	C. B. R. > 25																		
DISTANCE	MILES																		
	KILOMETERS																		
	63		64		40		65		41		66		67		68		69		70

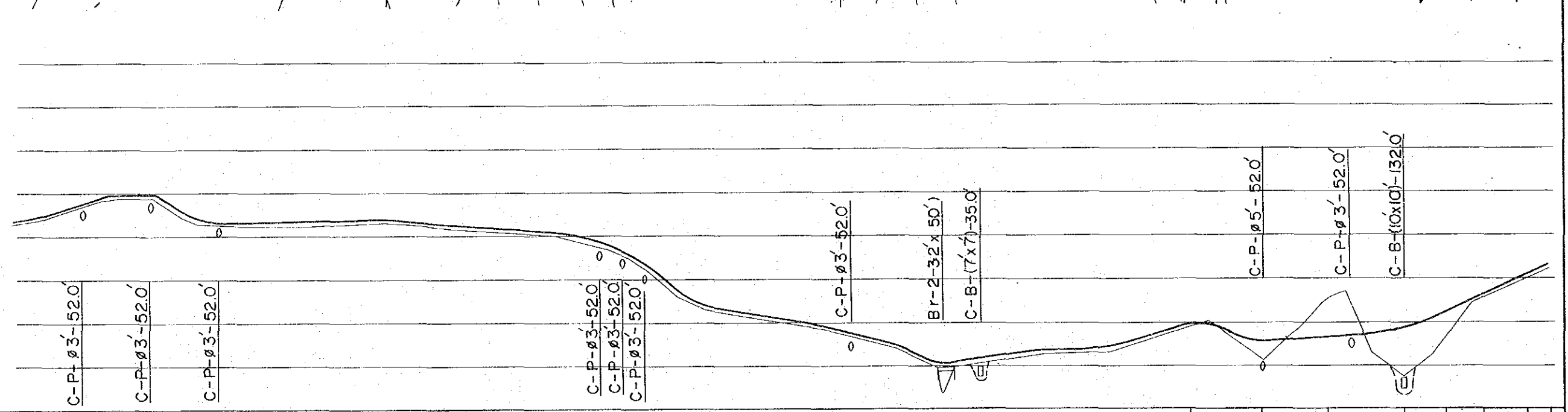
MAKENI-KAMAKWIE ROAD PROJECT
 FEASIBILITY STUDY
 PLAN AND PROFILE (A)
 SHEET NO. 11

DWG-11



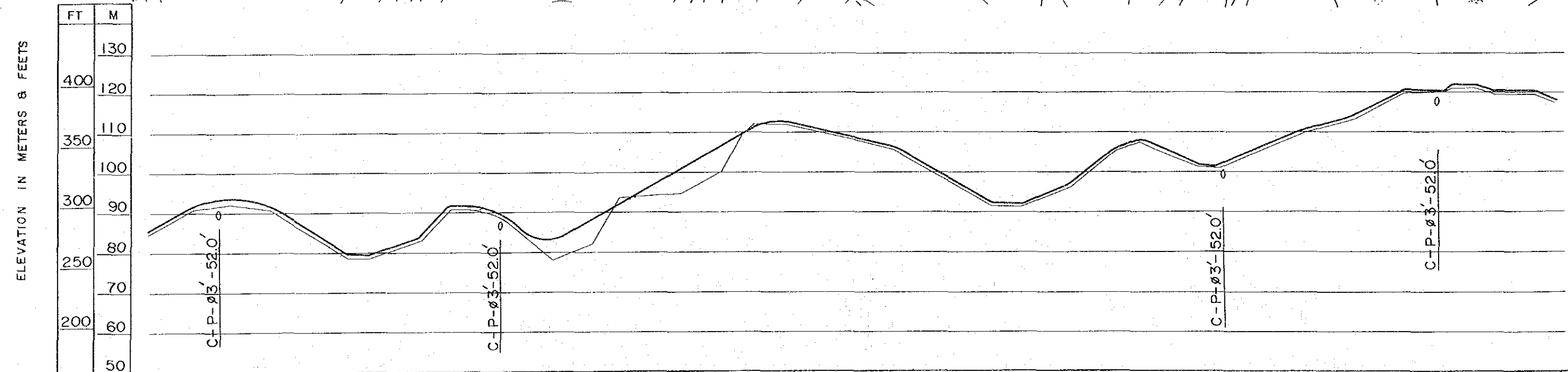
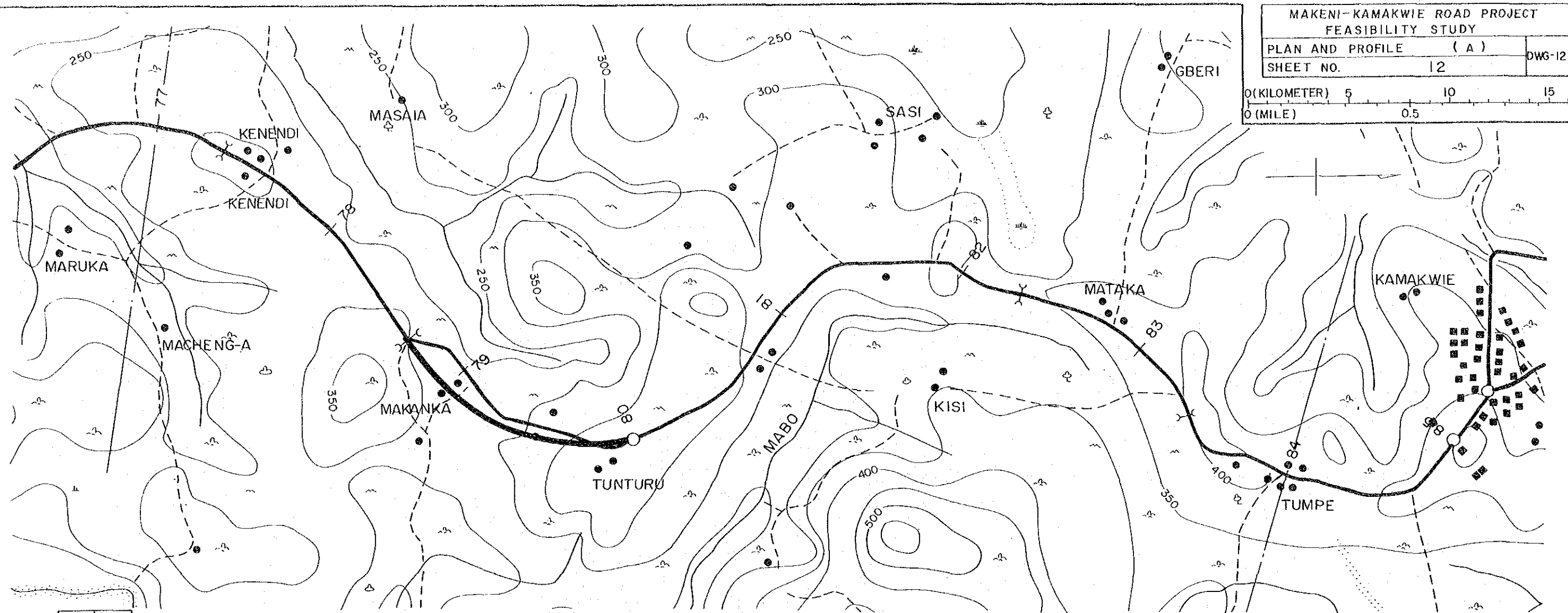
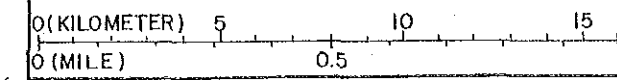
ELEVATION IN METERS & FEET

FT	M
130	
400	120
	110
350	100
	90
300	80
	70
250	60
	50



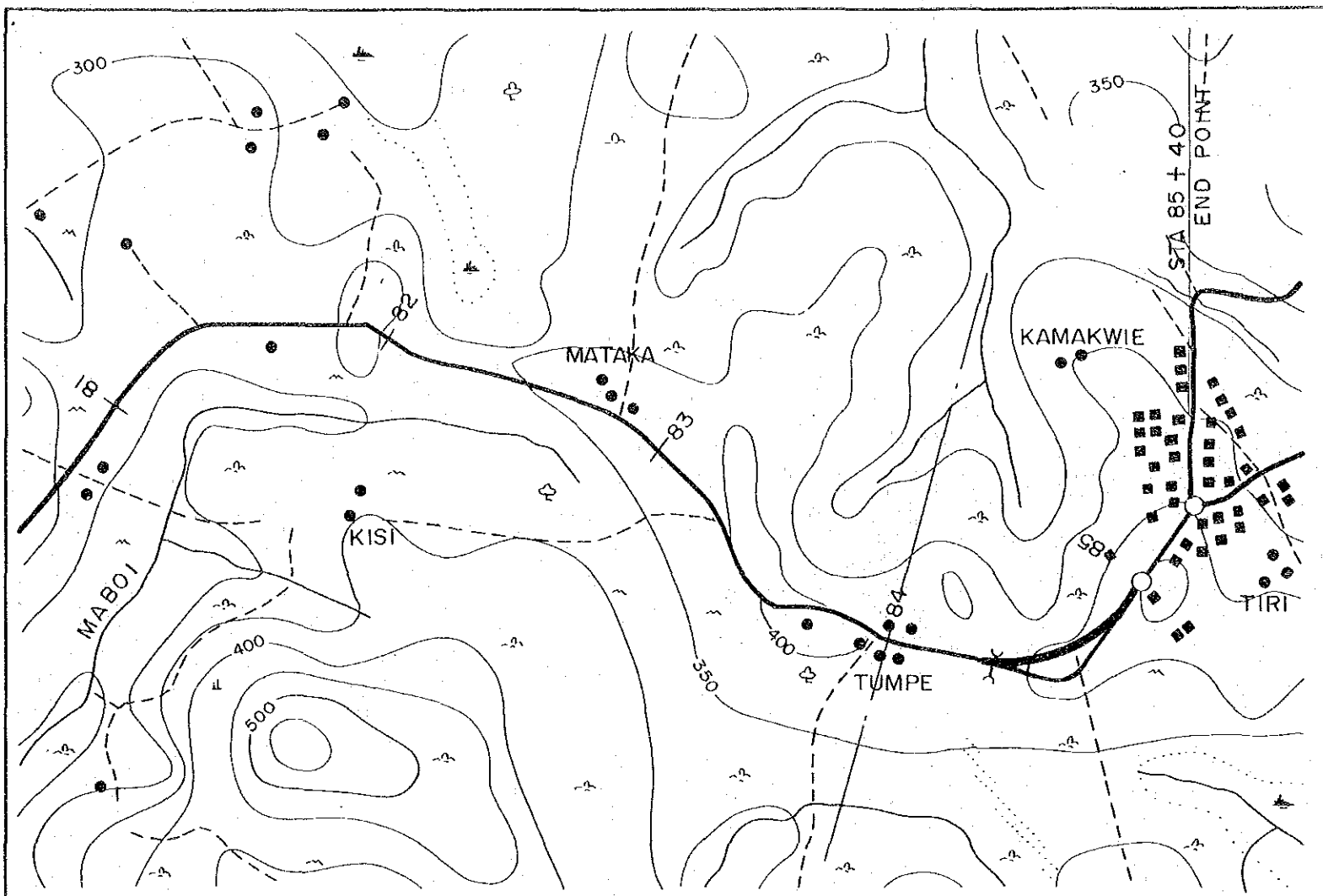
IMPROVEMENT	W										V	H	V	H	V	H	W
ROAD SURFACE KIND	SURFACE DRESSING										SURFACE DRESSING WITH SAND MAT.			SURFACE DRESSING			
C B R OF SUBGRADE	C. B. R > 25																
DISTANCE	MILES		KILOMETERS														
	70	44	71	72	45	73	74	46	75	47	76	77					

MAKENI-KAMAKWIE ROAD PROJECT
FEASIBILITY STUDY
PLAN AND PROFILE (A)
SHEET NO. 12 DWG-12



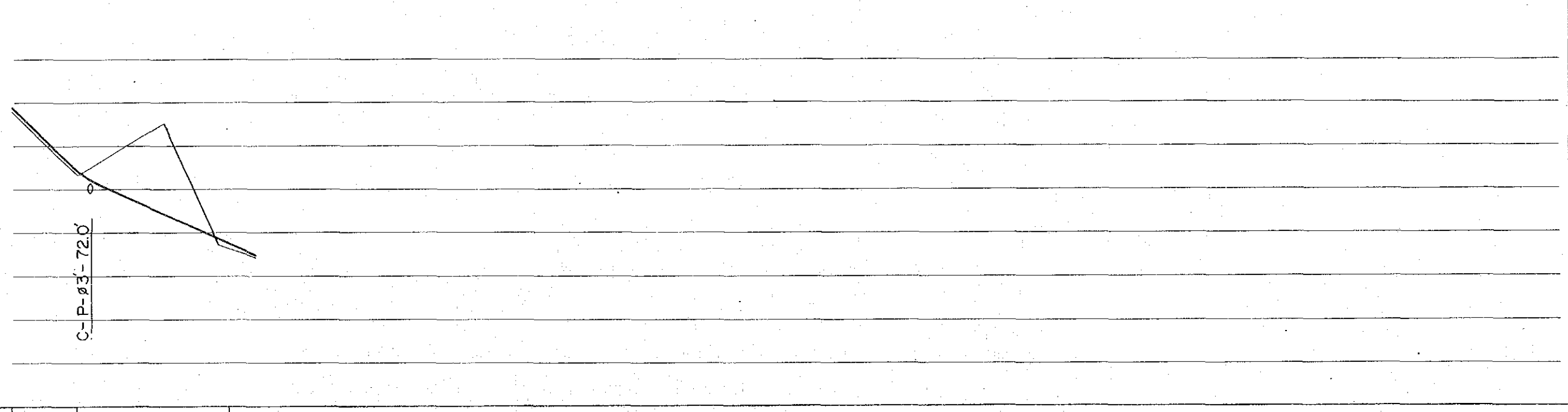
IMPROVEMENT	W	H	W	H	W
ROAD SURFACE KIND	SURFACE DRESSING		SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING
C B R OF SUBGRADE	C . B . R > 25				
DISTANCE	MILES		KILOMETERS		
	48	49	50	51	52
	77	78	79	80	81
					82
					83
					84

MAKENI-KAMAKWIE ROAD PROJECT
 FEASIBILITY STUDY
 PLAN AND PROFILE (A)
 SHEET NO. 13 DWG-13
 0 (KILOMETER) 5 10 15
 0 (MILE) 0.5

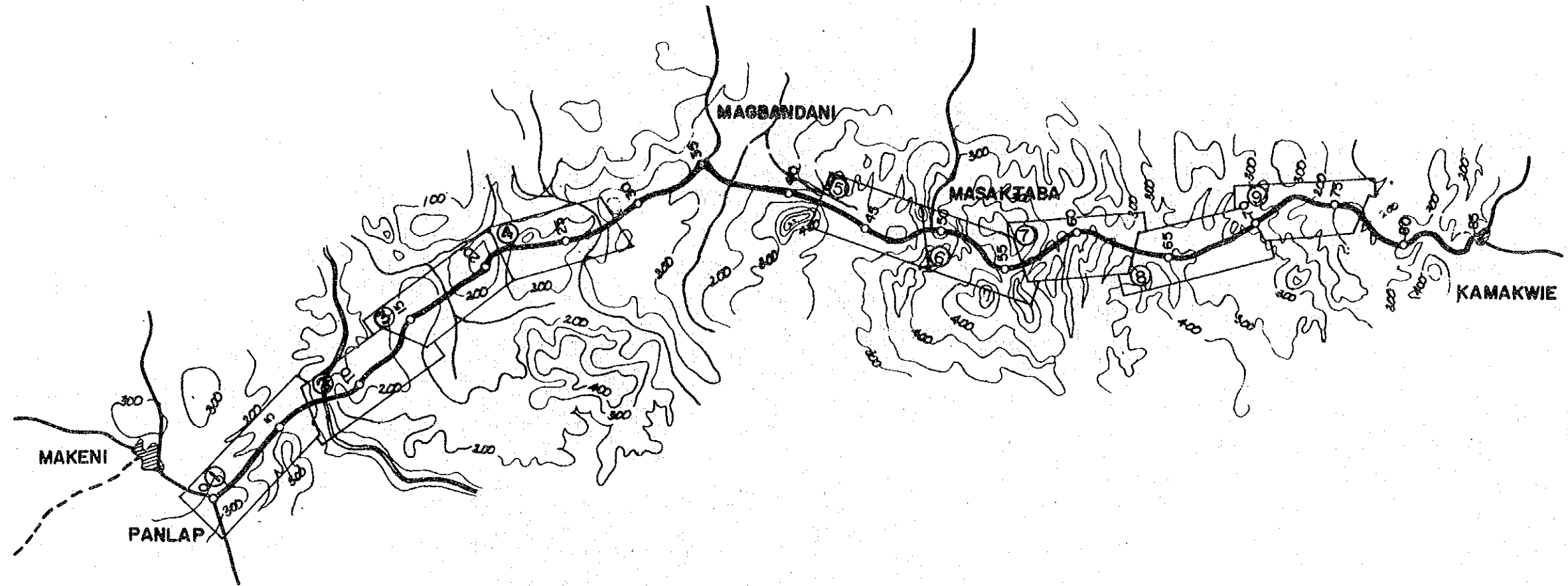


ELEVATION IN METERS & FEET

FT	M
400	120
350	110
300	90
250	80
200	60
130	40
50	15

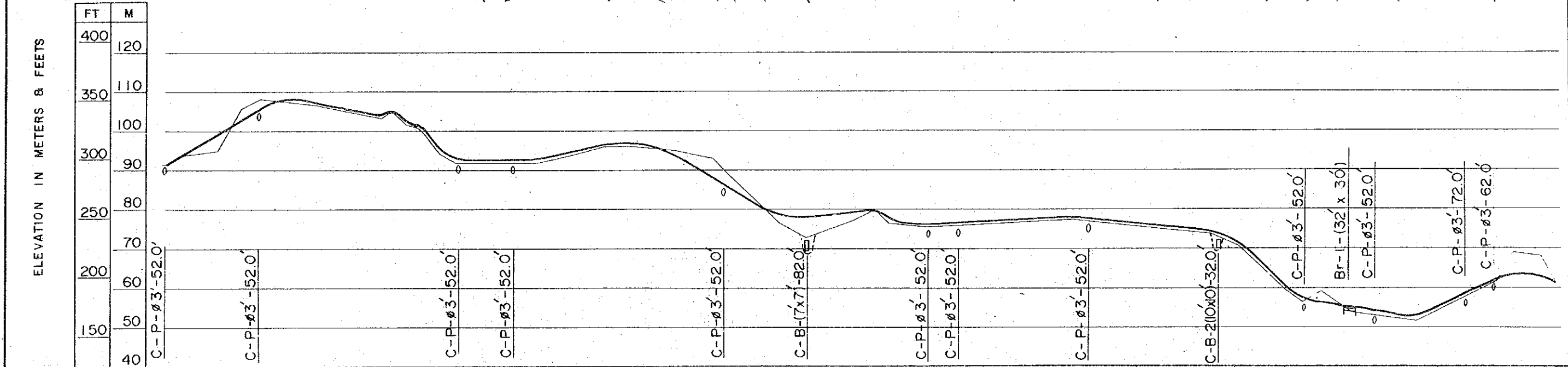
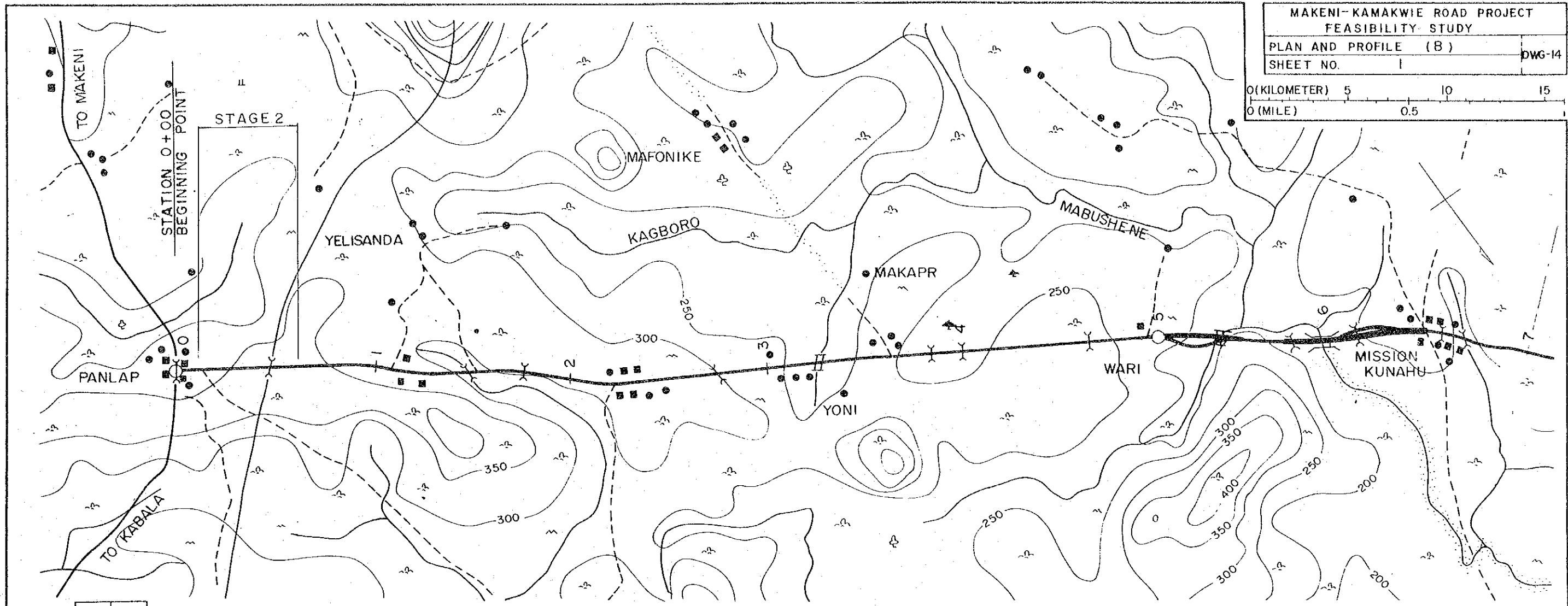
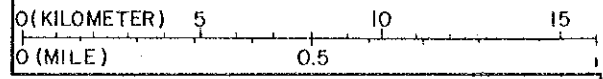


IMPROVEMENT	W	H	W
ROAD SURFACE KIND	SURFACE DRESSING		
C.B.R. OF SUBGRADE	C.B.R. > 25		
DISTANCE	MILES		
	KILOMETERS	84	85

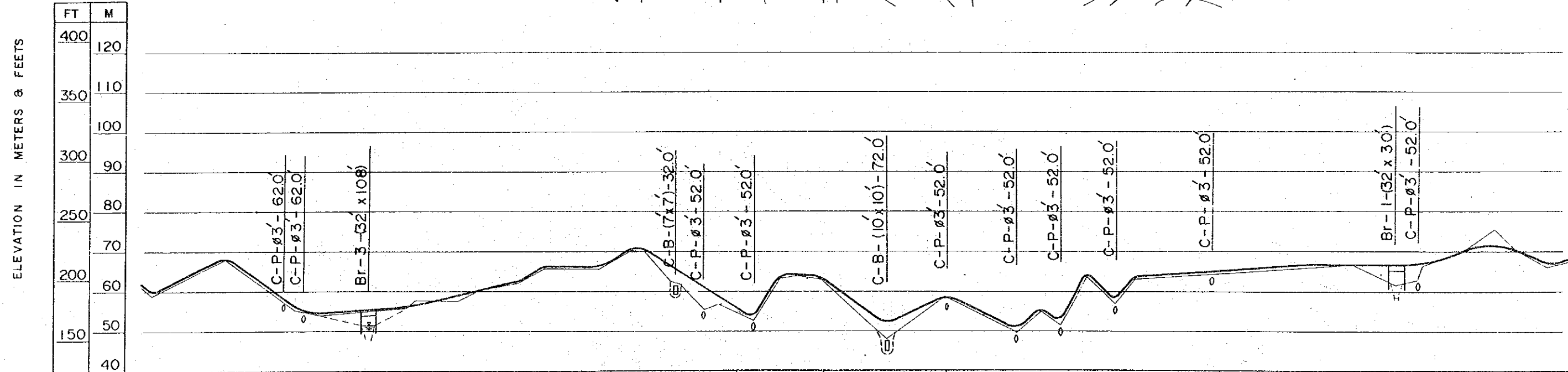
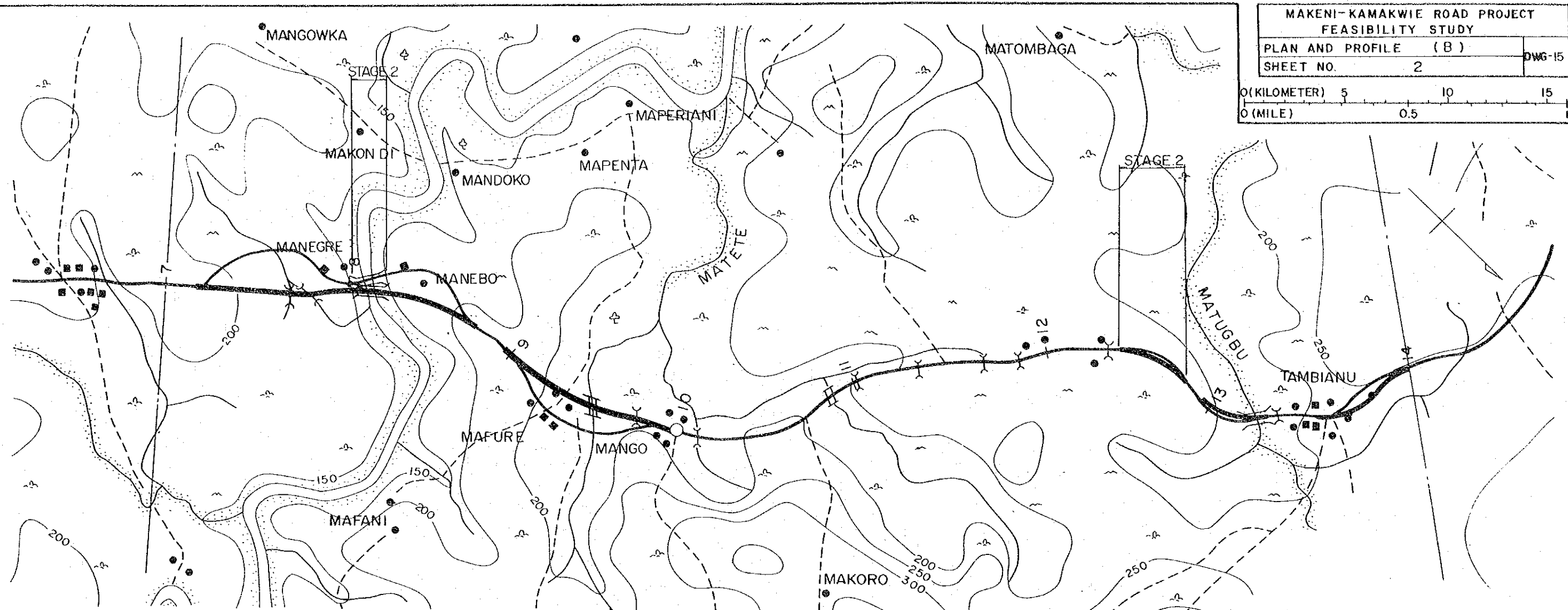
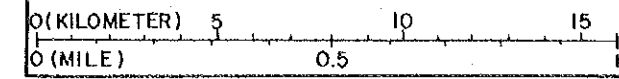


ABBREVIATIONS

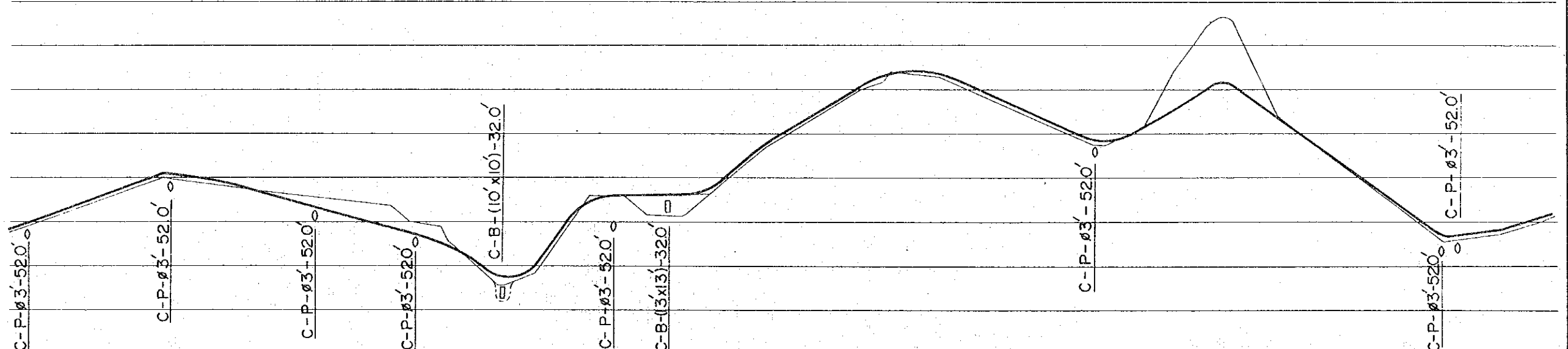
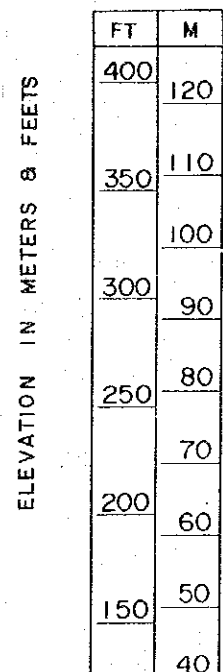
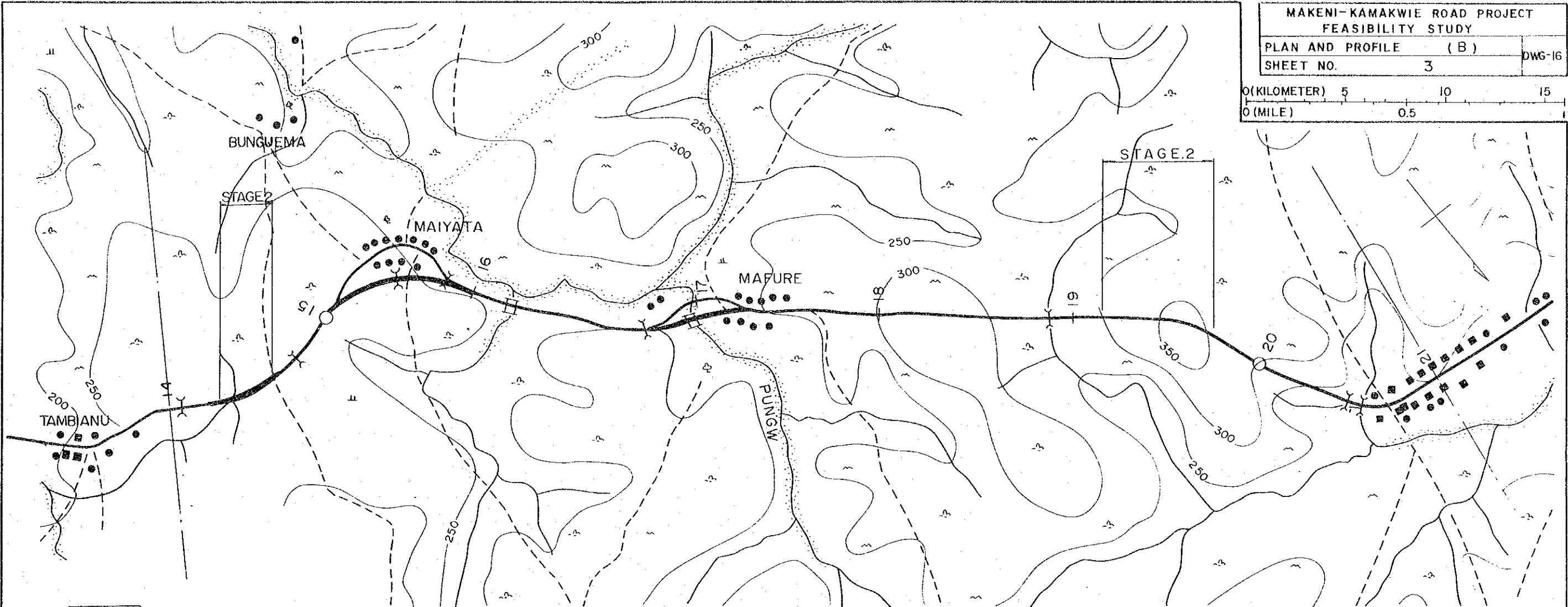
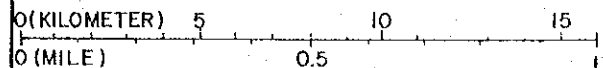
H	RE-ALIGNMENT, HORIZONTAL FOR ROAD IMPROVEMENT
V	RE-ALIGNMENT, VERTICAL FOR ROAD IMPROVEMENT
W	WIDENING OF ROAD WIDTH FOR ROAD IMPROVEMENT
C - P - $\phi a - \ell$	PROPOSED PIPE CULVERT, ϕa (DIAMETER, FOOT), ℓ (LENGTH, FOOT)
C - B (a x b) - ℓ	PROPOSED BOX CULVERT, a x b (WIDTH x LENGTH ALONG THE ROAD), ℓ (CULVERT LENGTH)
C - B - n(a x b) - ℓ	PROPOSED BOX CULVERT, n (ROW), a x b (WIDTH x LENGTH ALONG THE ROAD), ℓ (CULVERT LENGTH)
Br - n - (a x b)	PROPOSED PRESTRESSED CONCRETE BRIDGE, n (NOS. OF SPAN), a x b (WIDTH x SPAN LENGTH)



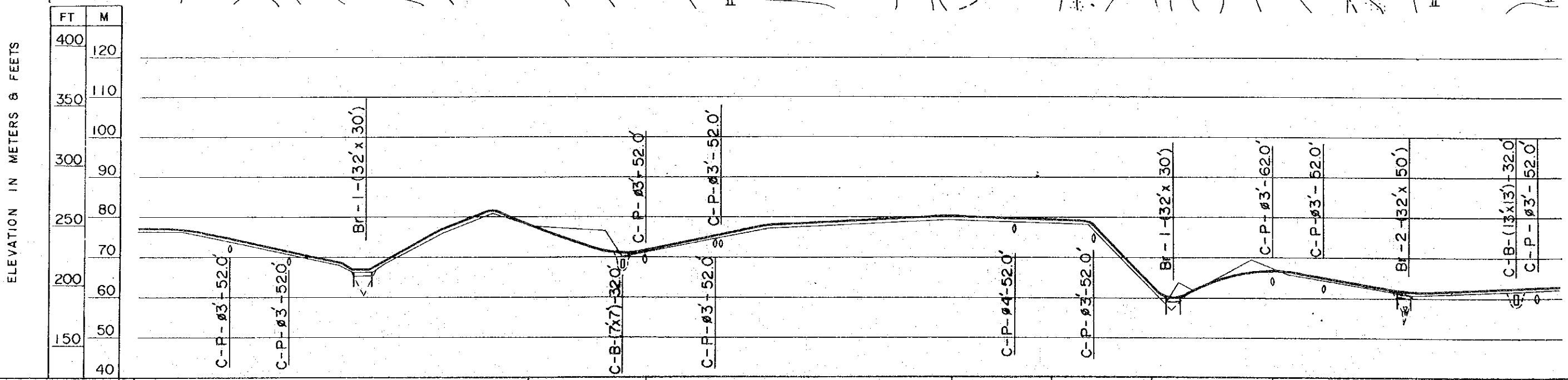
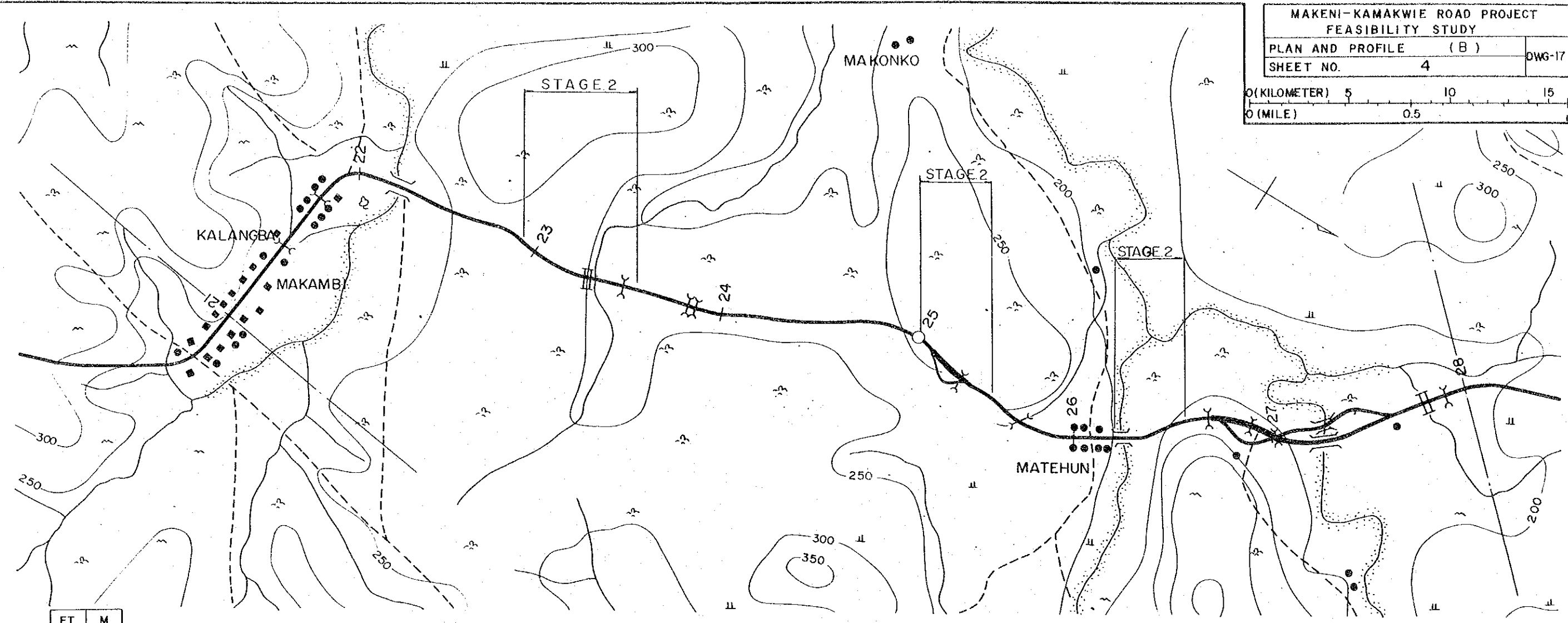
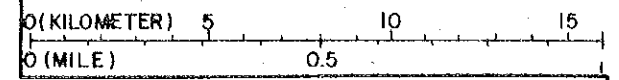
IMPROVEMENT	W	V	W	V	W	H	W	H	V
ROAD SURFACE KIND	SURFACE DRESSING		SURFACE DRESSING WITH SAND MAT	SURFACE DRESSING	SURFACE DRESSING WITH SAND MAT	SURFACE DRESSING		SURFACE DRESSING WITH SAND MAT	SURFACE DRESSING
C B R OF SUBGRADE	C B R > 25								
DISTANCE	MILES	0	1	2	3	4	5	6	7
	KILOMETERS	0	1	2	3	4	5	6	7



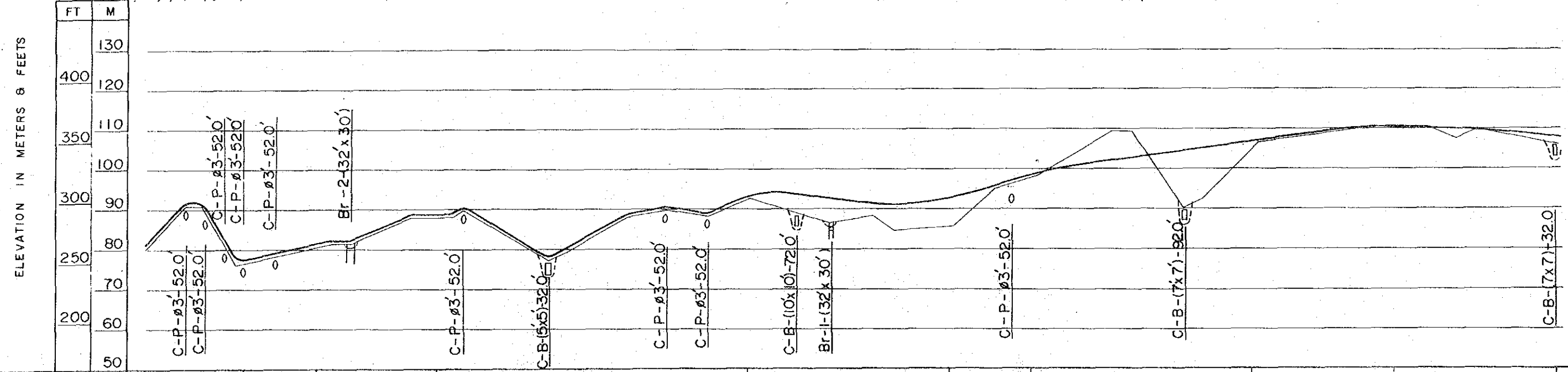
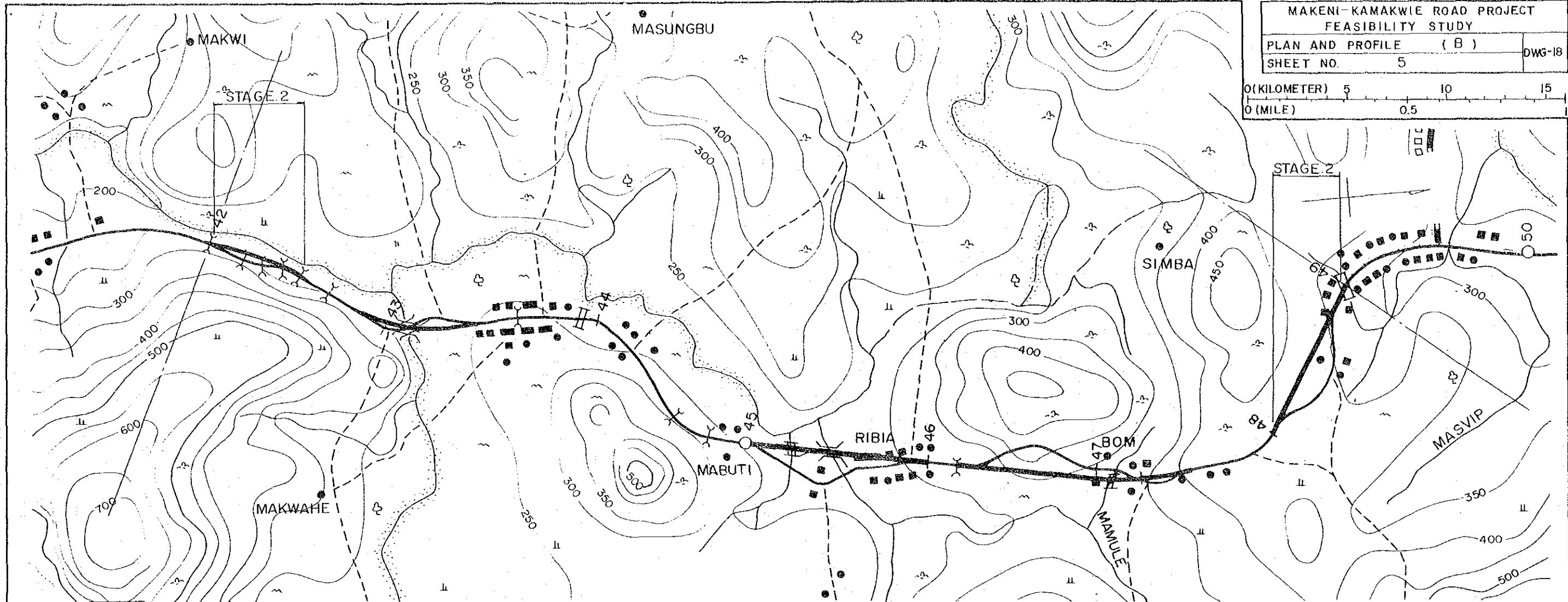
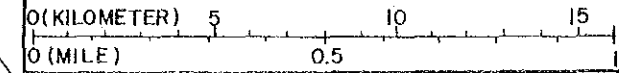
IMPROVEMENT	W	H		W	H	W	V	W	H	W	H	W	H
ROAD SURFACE KIND	SURFACE DRESSING	SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING	SURFACE DRESSING	SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING					
C B R OF SUBGRADE	C . B . R > 25												
DISTANCE	MILES	5		6	7	8		8		13		14	
	KILOMETERS	7	8	9	10	11	12	13	14				



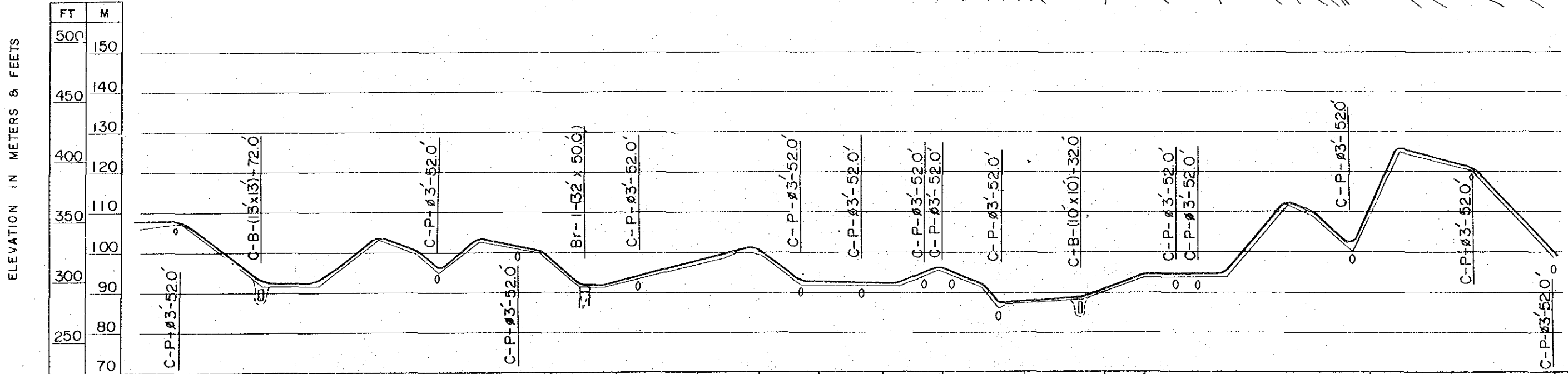
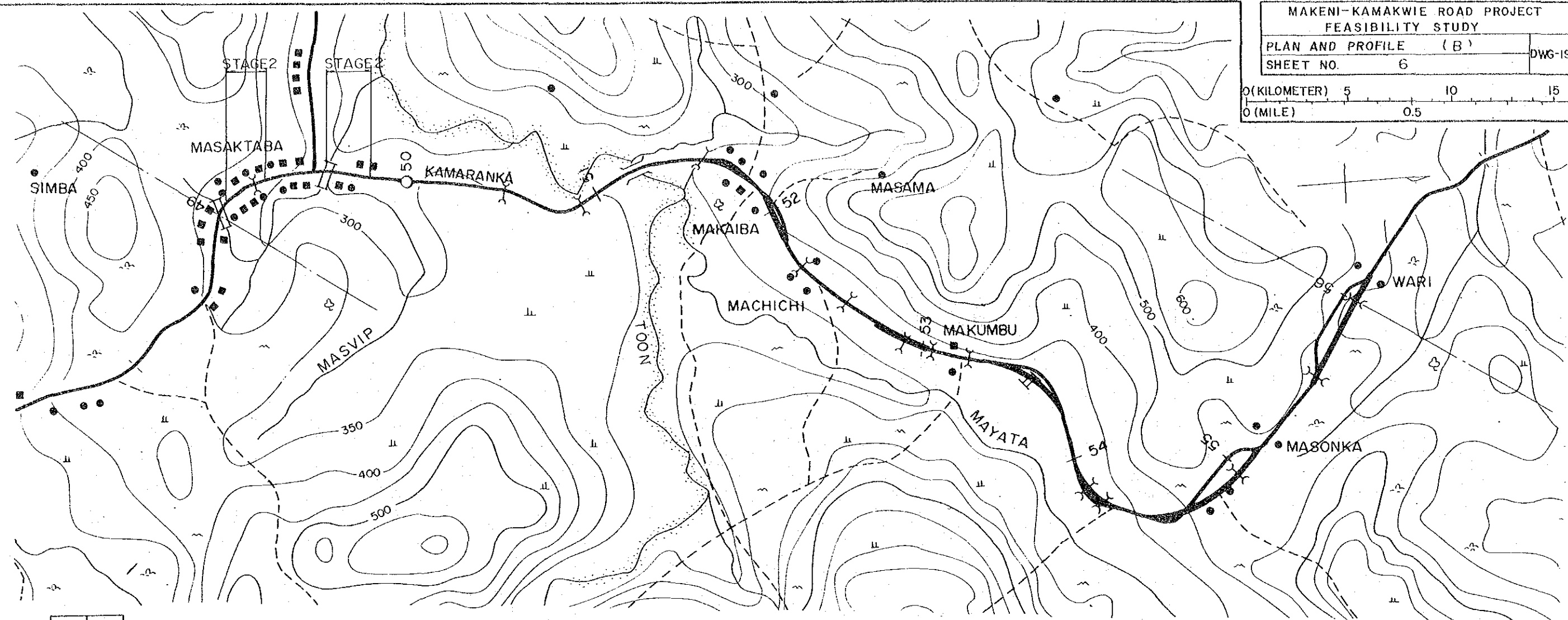
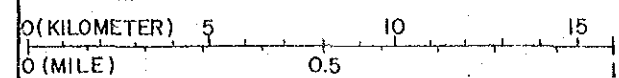
IMPROVEMENT	W	H	W	H	W	H	W	V	W	V	W	
ROAD SURFACE KIND	SURFACE DRESSING		SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING			SURFACE DRESSING WITH SAND MAT	SURFACE DRESSING	SURFACE DRESSING WITH SAND MAT	SURFACE DRESSING	
C B R OF SUBGRADE	C.B.R > 25											
DISTANCE	MILES	9		10		11		12		13		
	KILOMETERS	14	15	16	17	18	19	20	21			



IMPROVEMENT		W		V		W		H		W		V		H		W	
ROAD SURFACE KIND		SURFACE DRESSING		SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING		SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING		SURFACE DRESSING		SURFACE DRESSING		SURFACE DRESSING	
C.B.R. OF SUBGRADE						C.B.R. > 25											
DISTANCE		MILES		14		15		16		17		17		17		28	
		KILOMETERS		21		22		23		24		25		26		27	

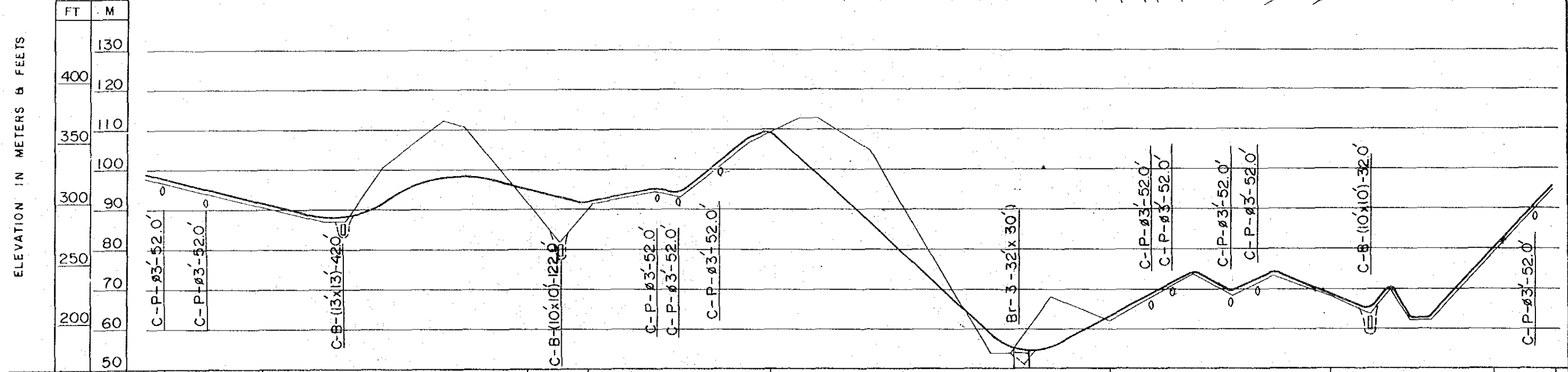
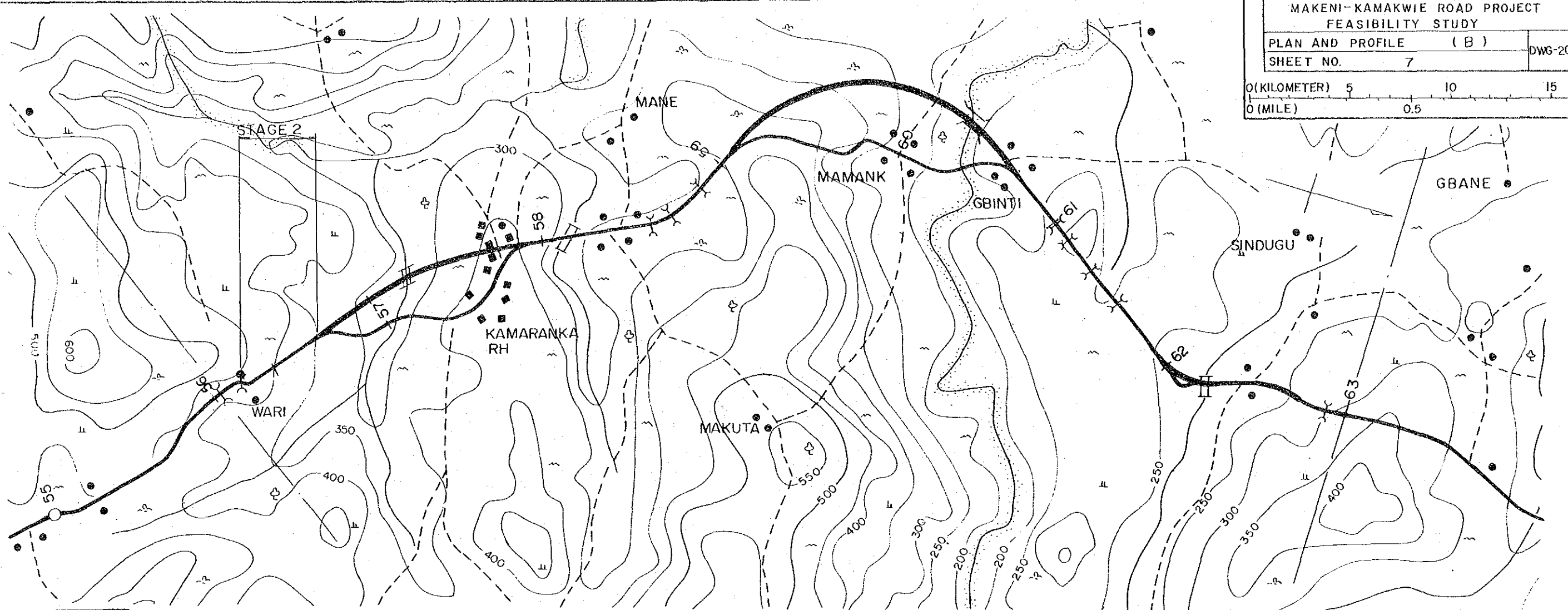
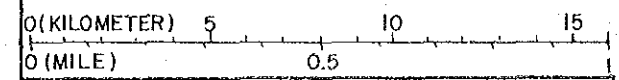


IMPROVEMENT		H	W	H	W	H	W	H	W	H			
ROAD SURFACE KIND		SURFACE DRESSING					SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING		
C B R OF SUBGRADE		C . B . R > 25											
DISTANCE	MILES			27		28		29		30			
	KILOMETERS	42		43		44		45		46	47	48	49



IMPROVEMENT	W	H	W	H	W	H	W	H	W	H	W	H	W	H	W	H				
ROAD SURFACE KIND	SURFACE DRESSING				SURFACE DRESSING WITH SAND MAT				SURFACE DRESSING				SURFACE DRESSING WITH SAND MAT				SURFACE DRESSING			
C B R OF SUBGRADE	C. B. R. > 25																			
DISTANCE	MILES		31		32		33		34		35		36		37					
	KILOMETERS		49		50		51		52		53		54		55		56			

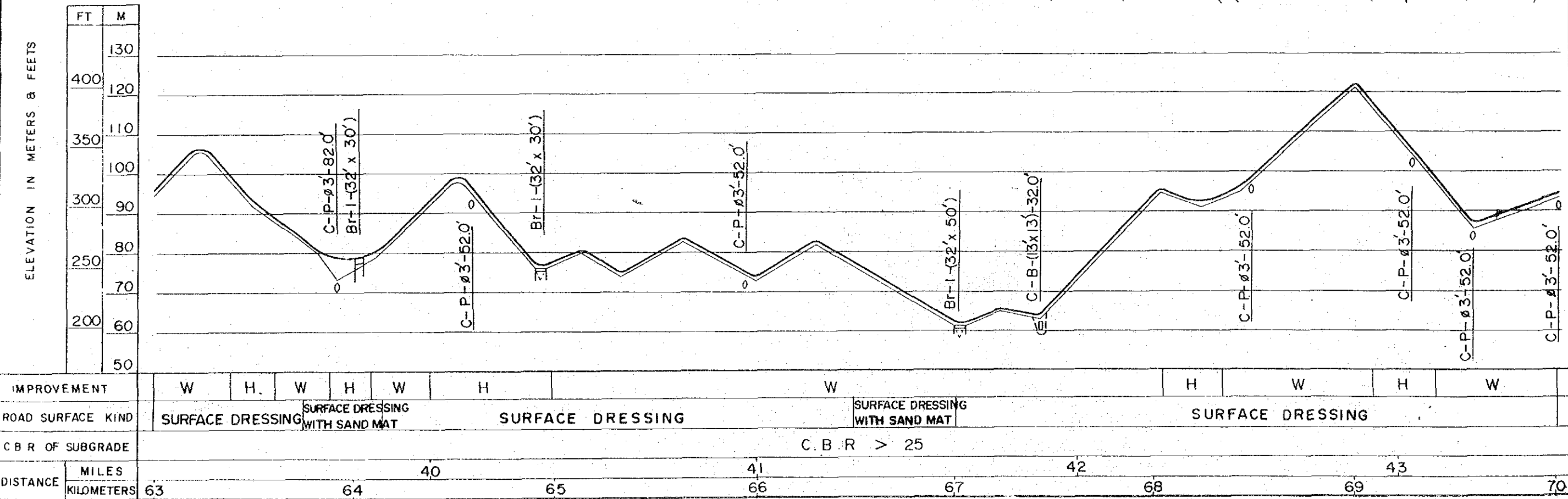
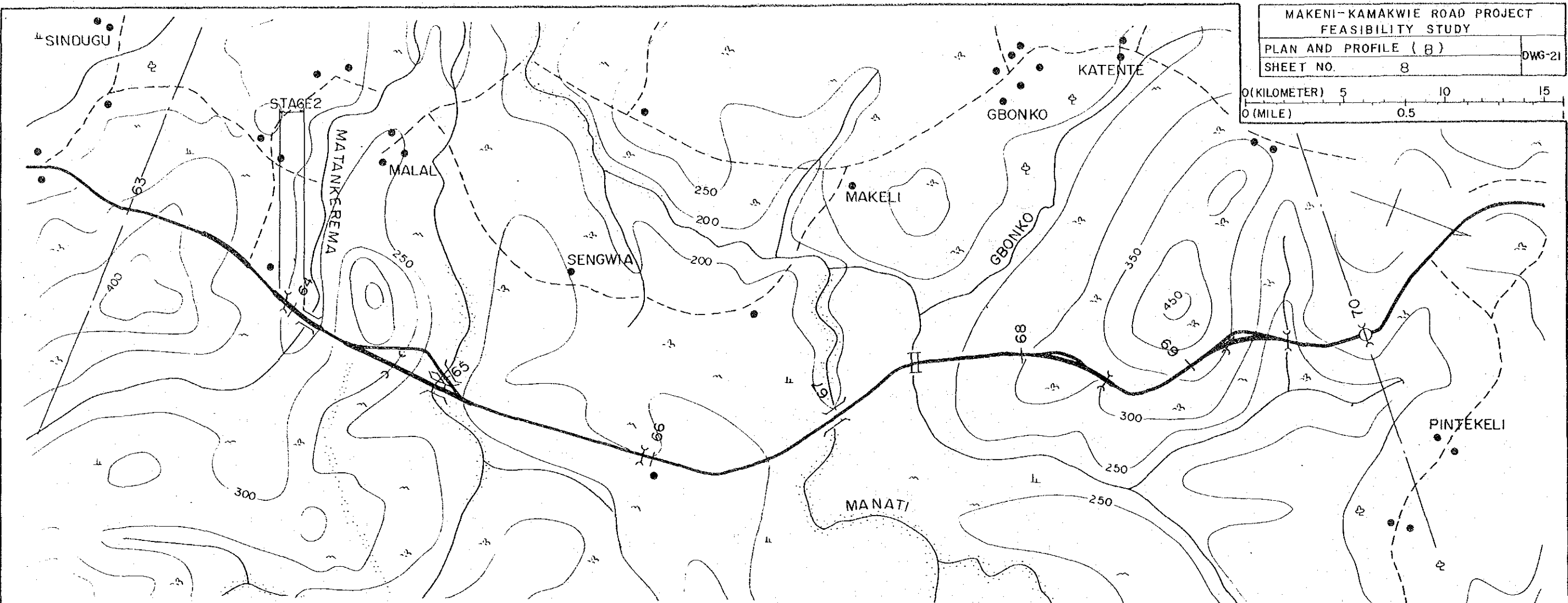
MAKENI-KAMAKWIE ROAD PROJECT
 FEASIBILITY STUDY
 PLAN AND PROFILE (B)
 SHEET NO. 7 DWG-20



IMPROVEMENT	H	V	H	V	W	H	W	H	W	
ROAD SURFACE KIND	SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING		SURFACE DRESSING WITH SAND MAT		SURFACE DRESSING		SURFACE DRESSING	
C B R OF SUBGRADE	C. B. R > 25									
DISTANCE	35		36		37		38		39	
	56	57	58	59	60	61	62	63		

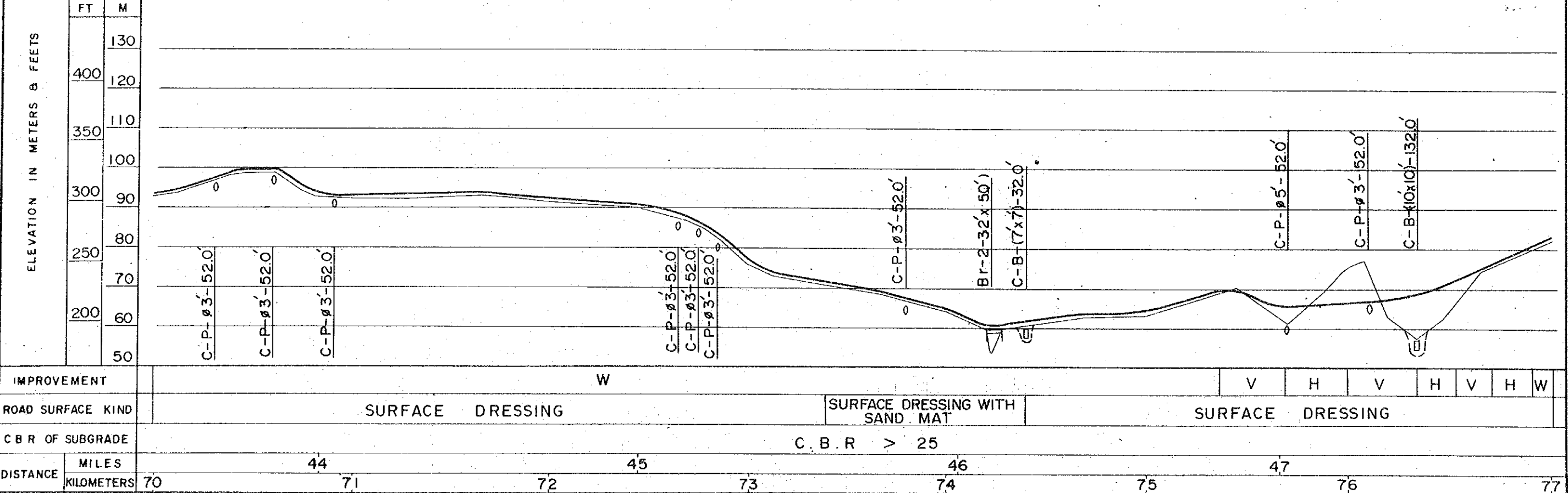
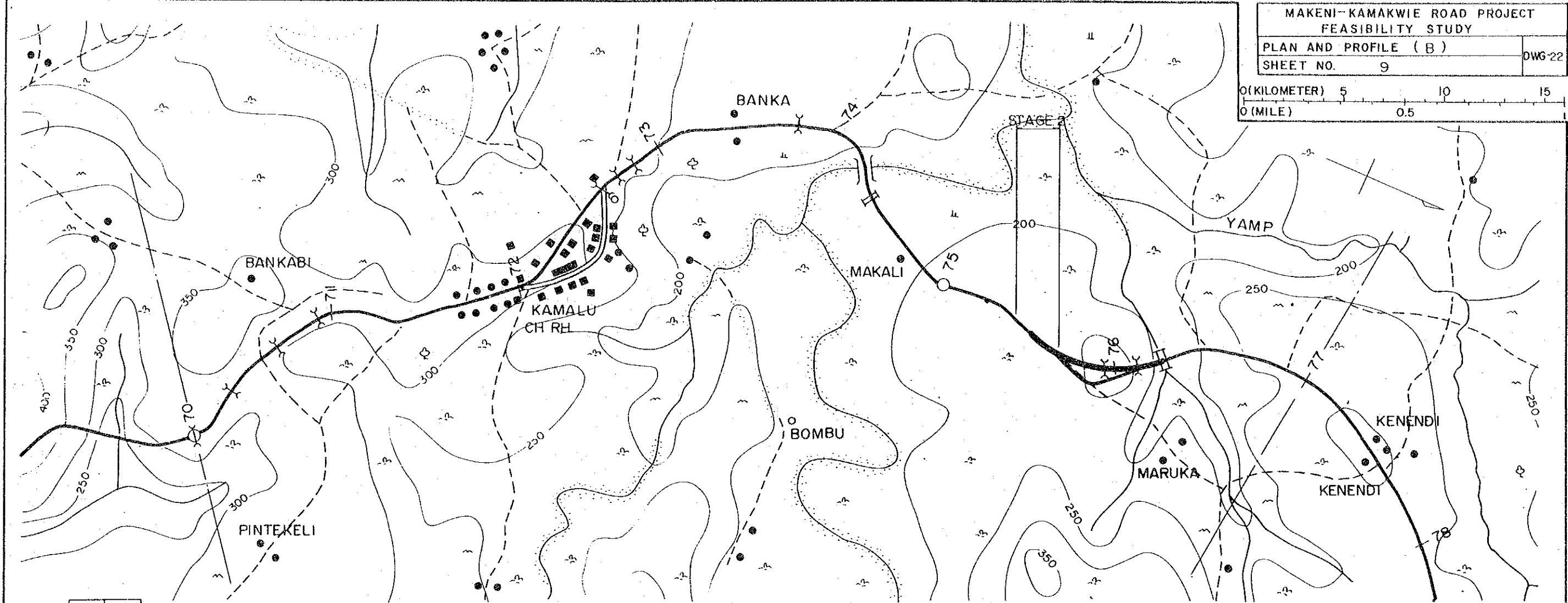
MAKENI-KAMAKWIE ROAD PROJECT
FEASIBILITY STUDY
PLAN AND PROFILE (B)
SHEET NO. 8
DWG-21

0 (KILOMETER) 5 10 15
0 (MILE) 0.5

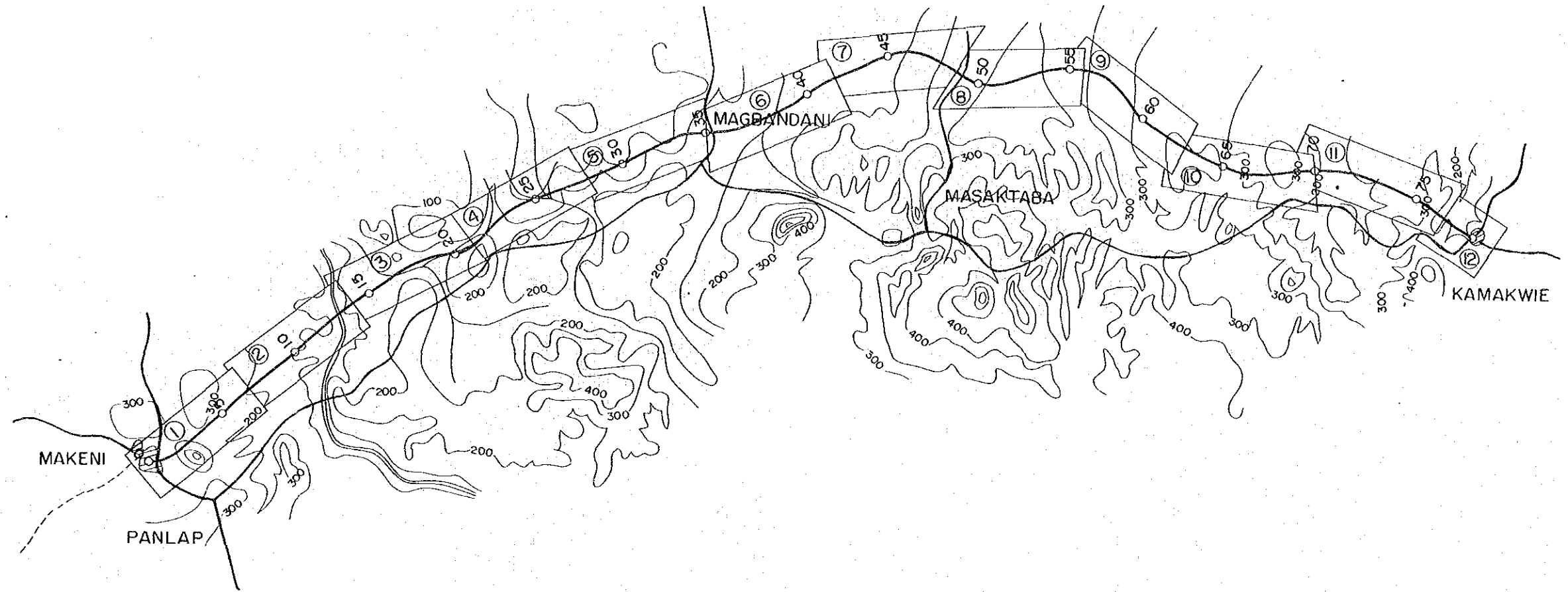


MAKENI-KAMAKWIE ROAD PROJECT
 FEASIBILITY STUDY
 PLAN AND PROFILE (B)
 SHEET NO. 9
 DWG-22

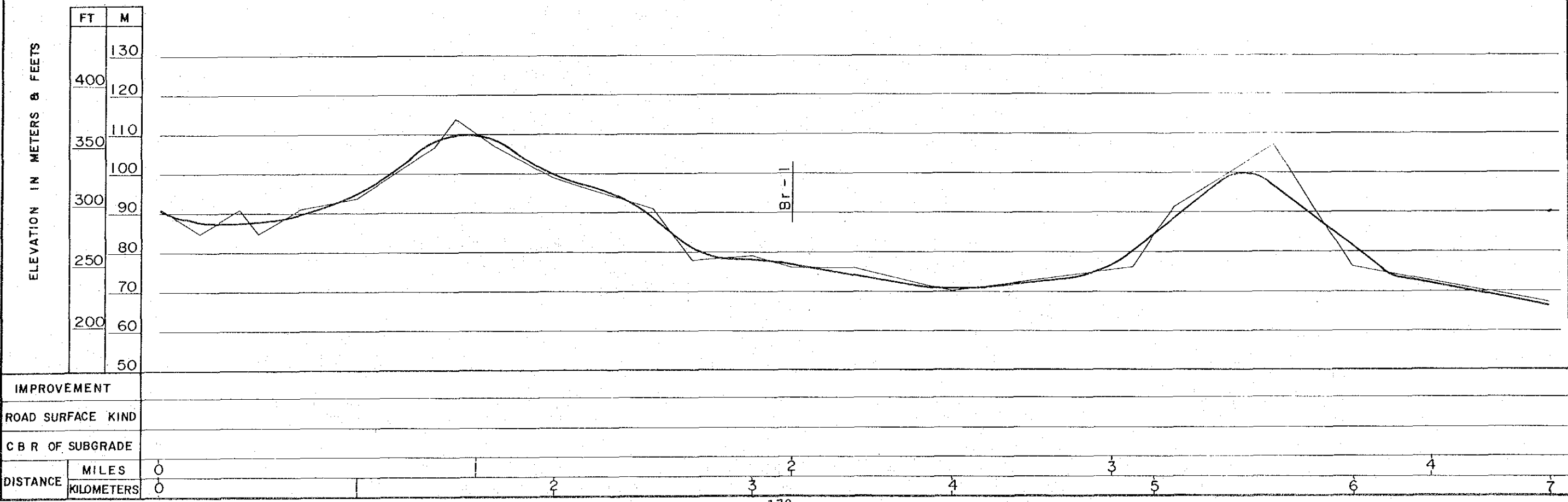
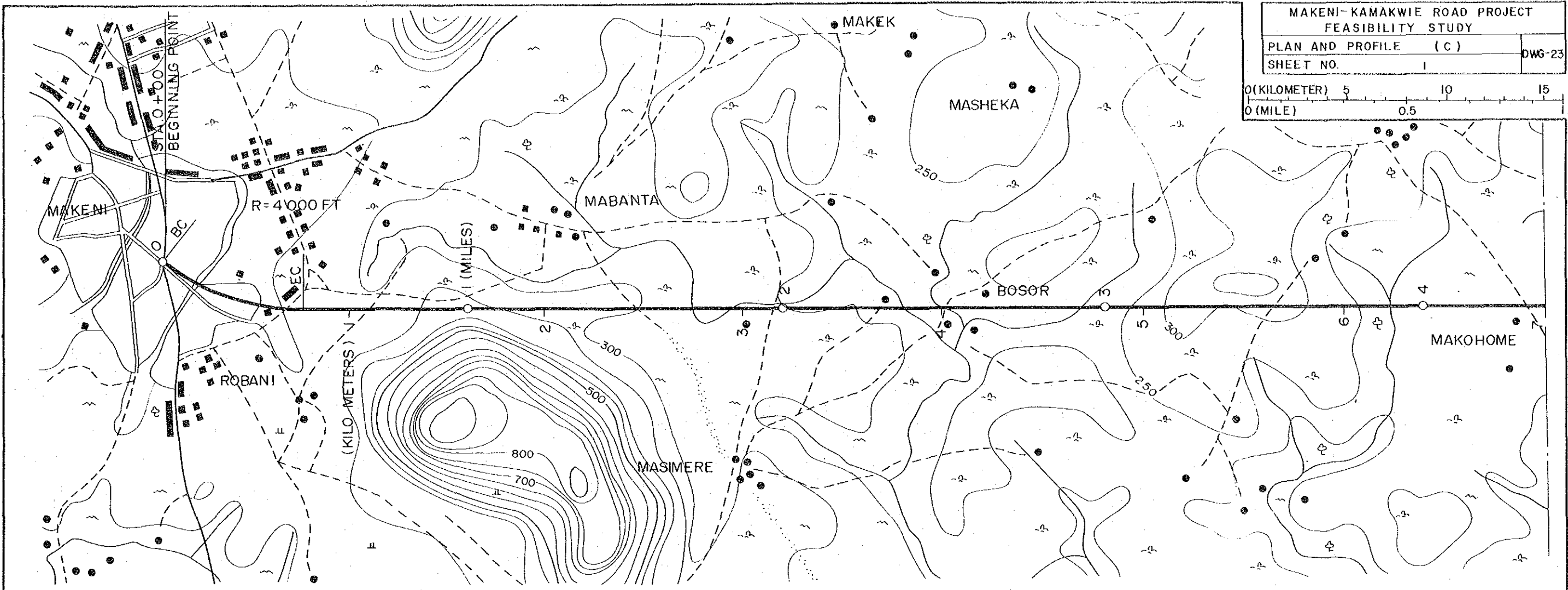
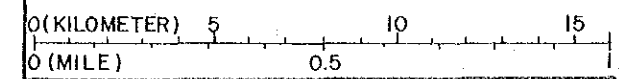
0 (KILOMETER) 5 10 15
 0 (MILE) 0.5



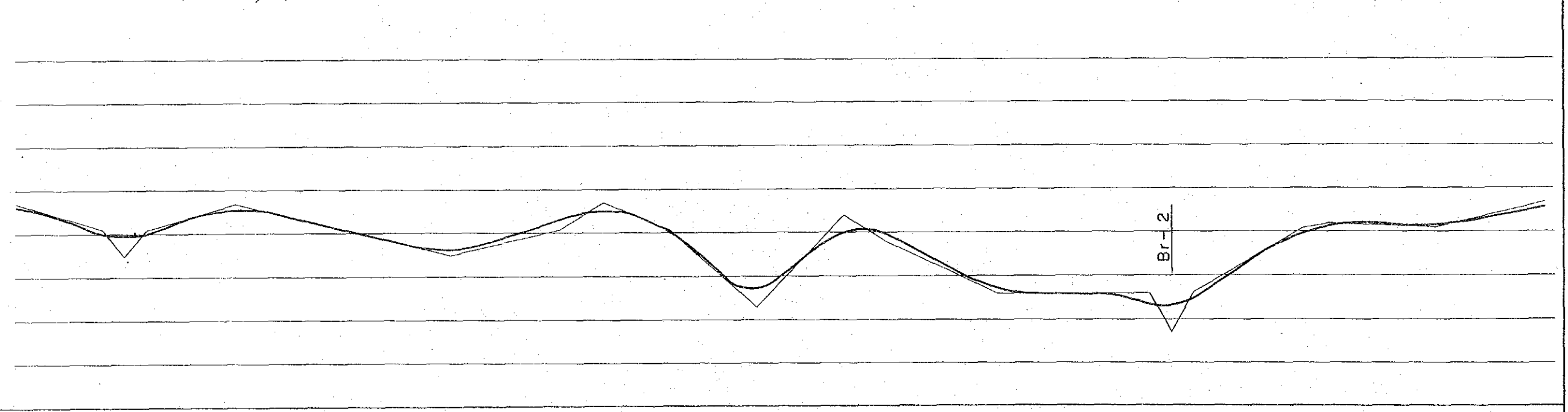
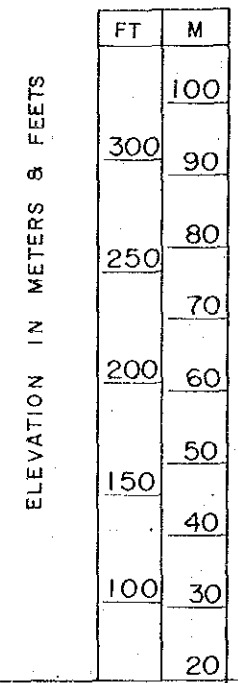
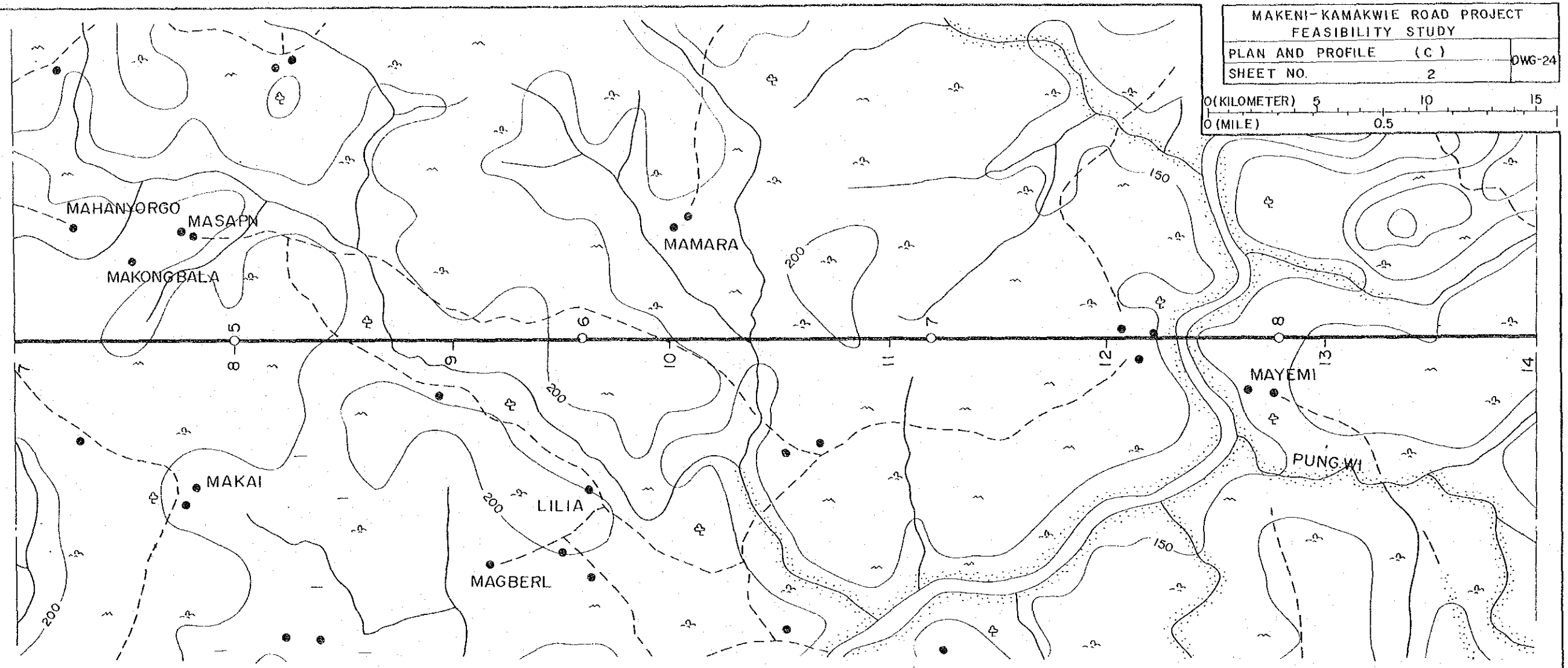
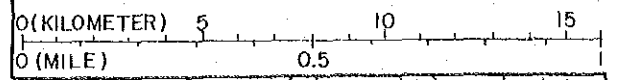
MAKENI-KAMAKWIE ROAD PROJECT FEASIBILITY STUDY	
COVER SHEET (C)	DWG-
SHEET NO.	



MAKENI-KAMAKWIE ROAD PROJECT
 FEASIBILITY STUDY
 PLAN AND PROFILE (C)
 SHEET NO. 1 DWG-23



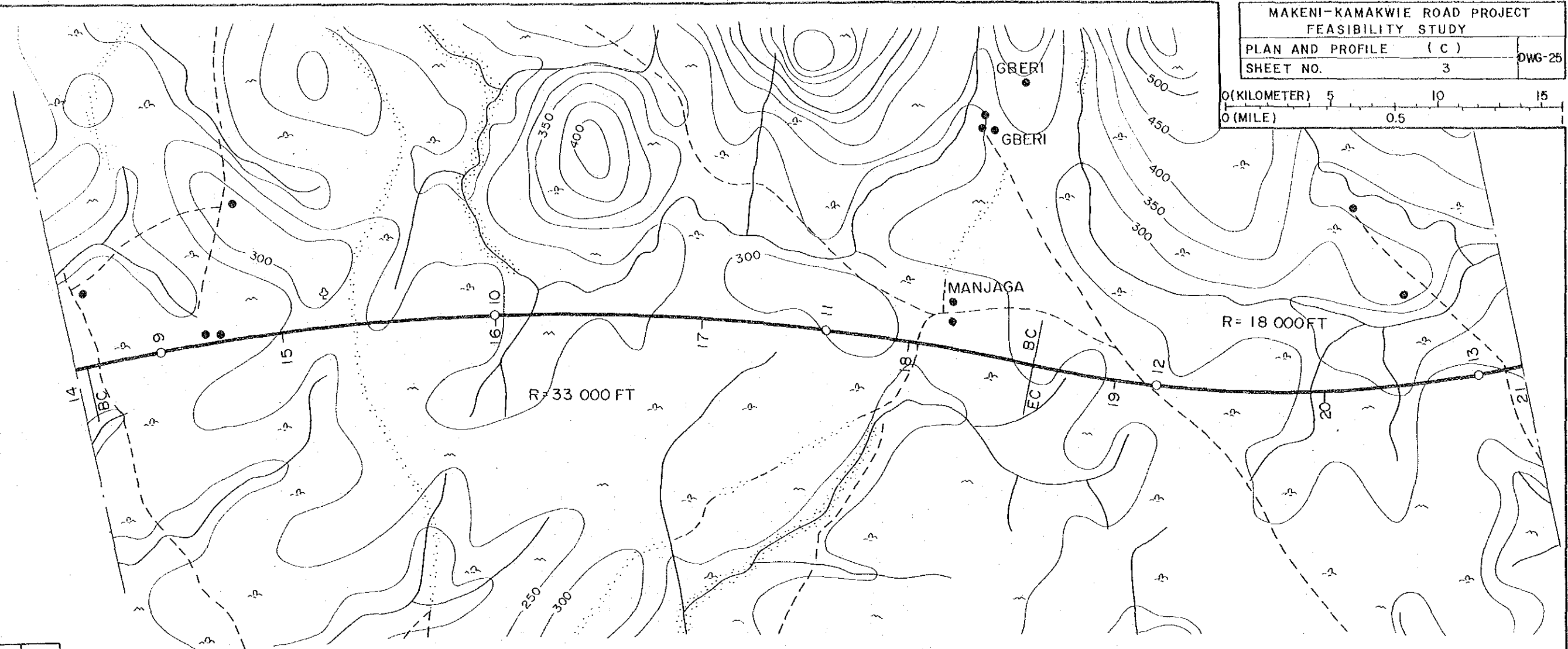
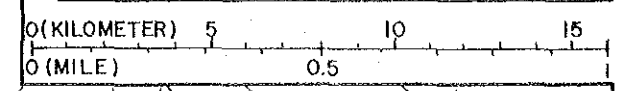
MAKENI-KAMAKWIE ROAD PROJECT
 FEASIBILITY STUDY
 PLAN AND PROFILE (C)
 SHEET NO. 2 DWG-24



IMPROVEMENT	
ROAD SURFACE KIND	
C B R OF SUBGRADE	
DISTANCE	7 8 9 10 11 12 13 14
	MILES
	KILOMETERS

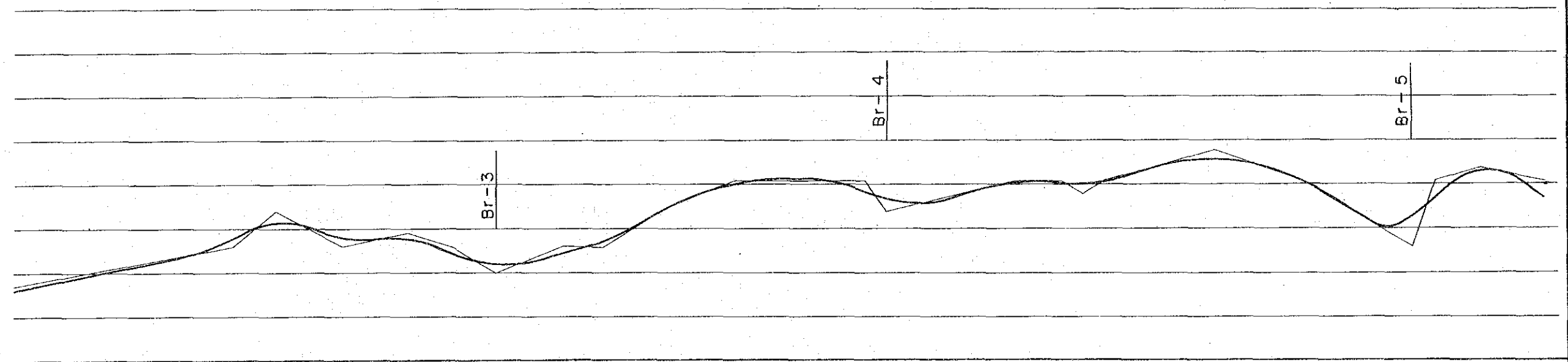
MAKENI-KAMAKWIE ROAD PROJECT
 FEASIBILITY STUDY
 PLAN AND PROFILE (C)
 SHEET NO. 3

DWG-25



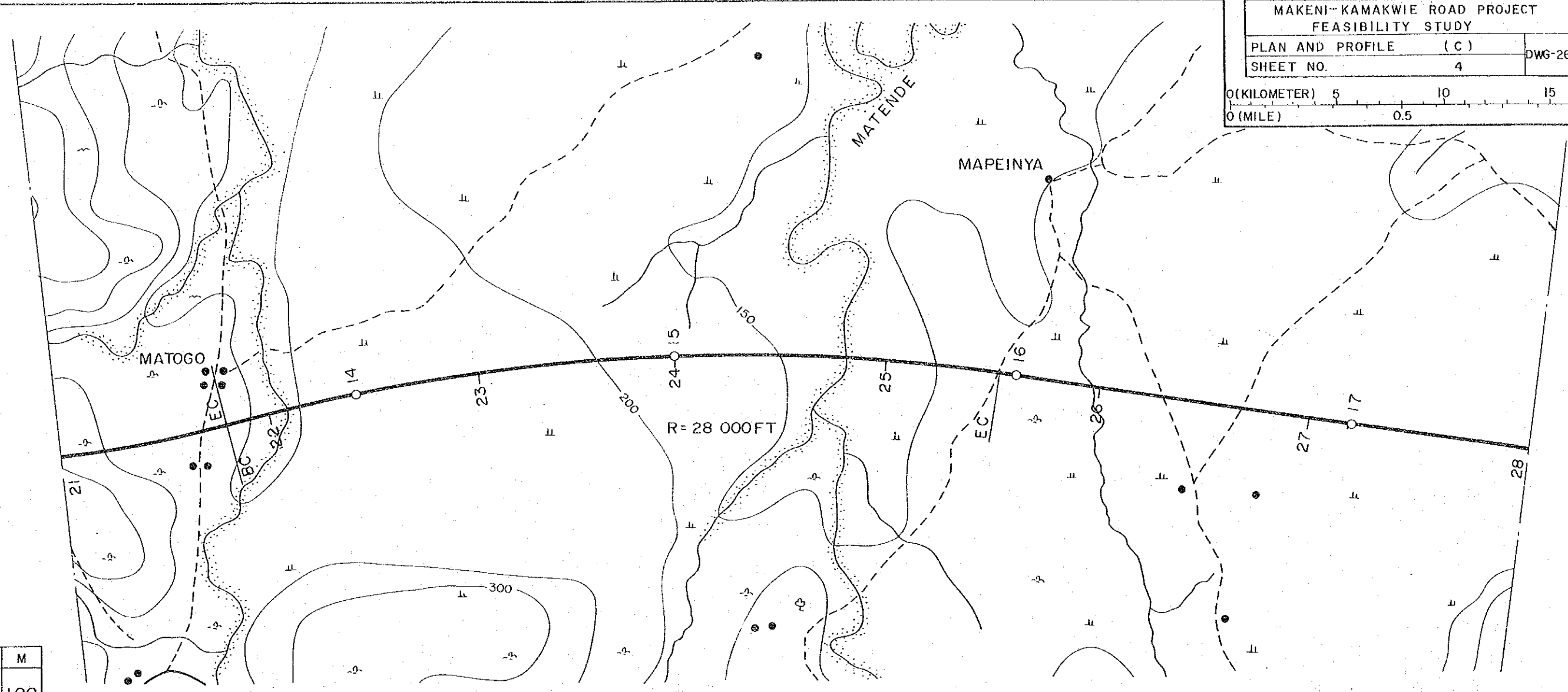
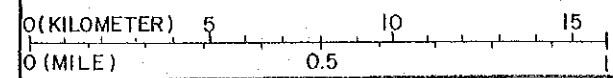
ELEVATION IN METERS & FEET

FT	M
130	
400	120
350	110
100	
300	90
250	80
70	
200	60
50	

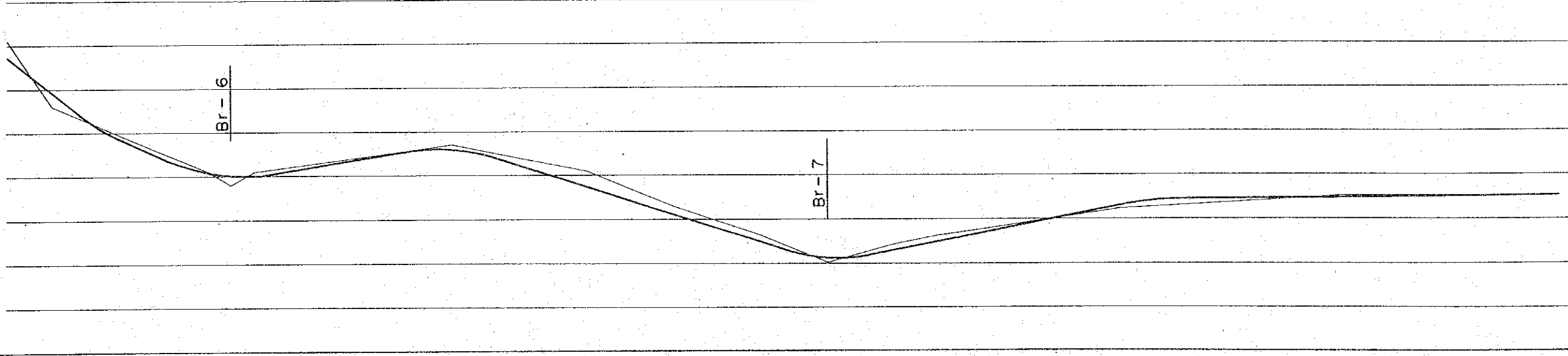
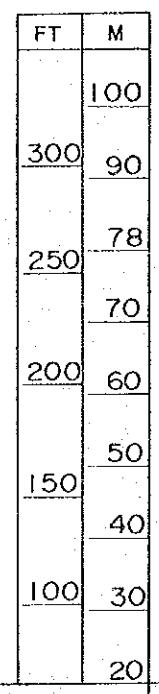


IMPROVEMENT												
ROAD SURFACE KIND												
C B R OF SUBGRADE												
DISTANCE	MILES	9	10	11	12	13						
	KILOMETERS	14	15	16	17	18	19	20	21			

MAKENI-KAMAKWIE ROAD PROJECT
 FEASIBILITY STUDY
 PLAN AND PROFILE (C)
 SHEET NO. 4 DWG-26

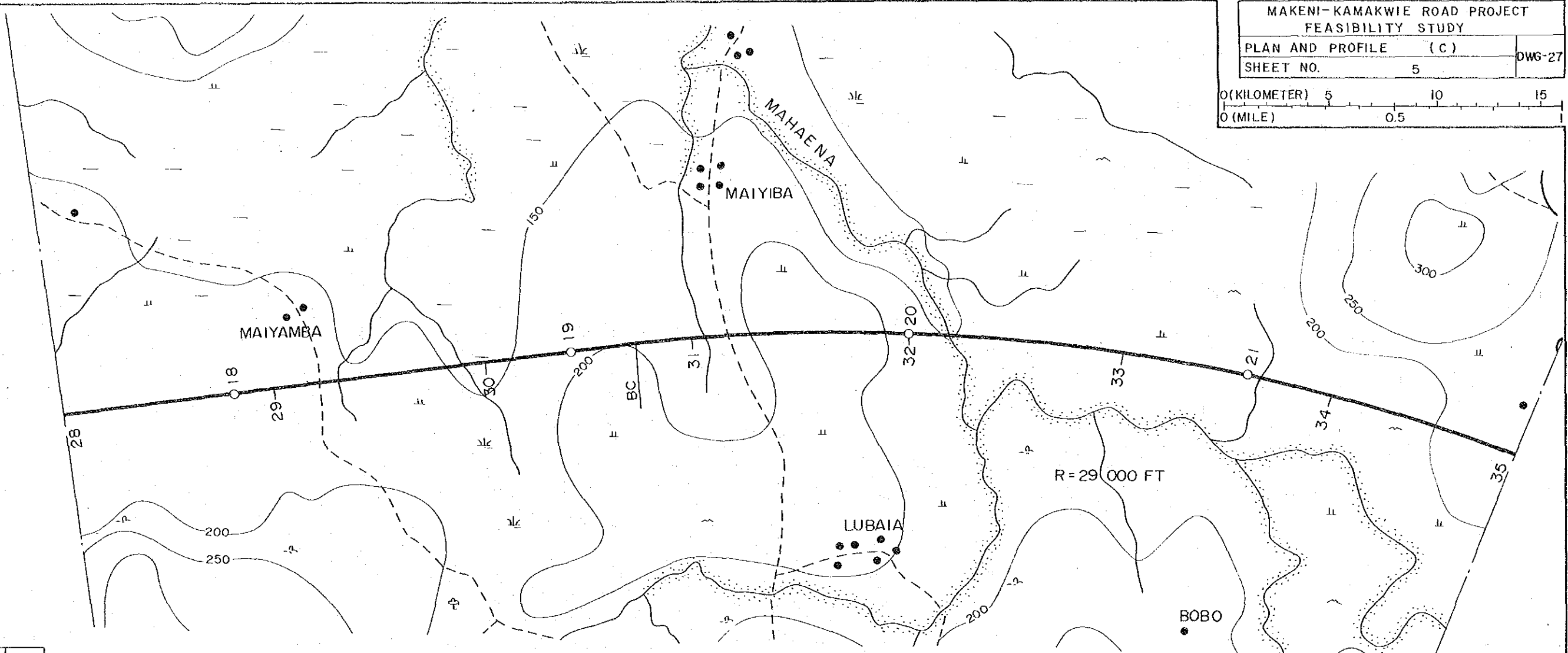
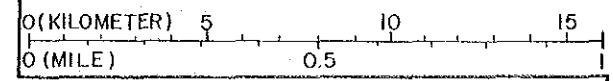


ELEVATION IN METERS & FEET



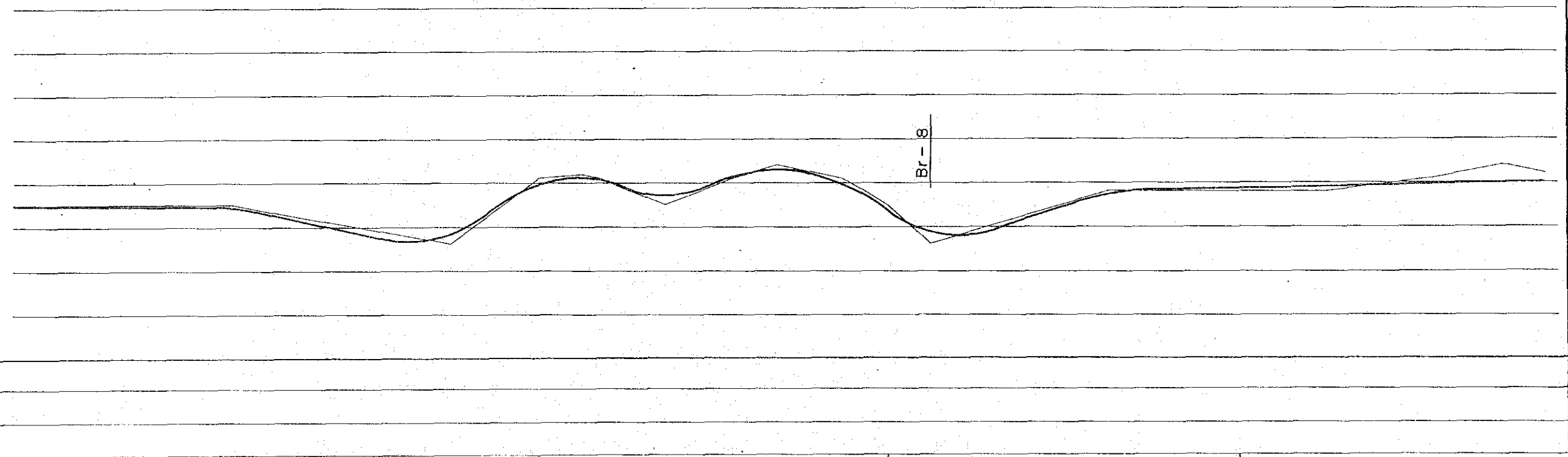
IMPROVEMENT		
ROAD SURFACE KIND		
CB R OF SUBGRADE		
DISTANCE	MILES	14 15 16 17
	KILOMETERS	21 22 23 24 25 26 27 28

MAKENI-KAMAKWIE ROAD PROJECT
 FEASIBILITY STUDY
 PLAN AND PROFILE (C)
 SHEET NO. 5 DWG-27



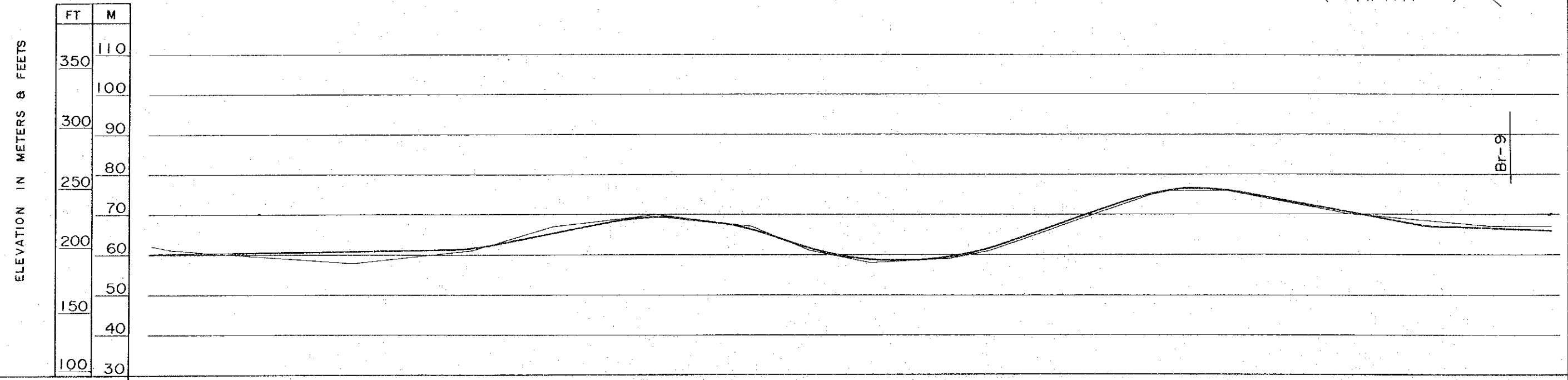
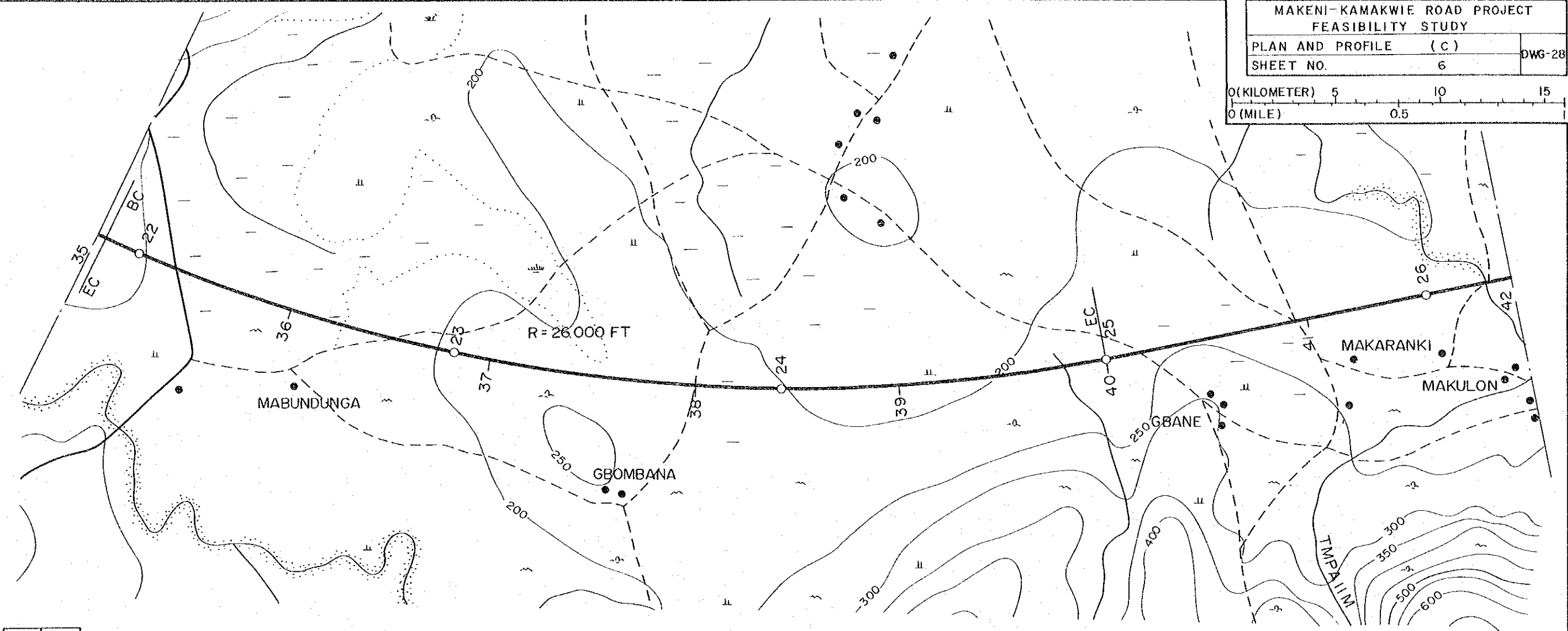
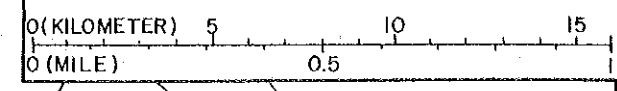
ELEVATION IN METERS & FEET

FT	M
300	90
250	75
200	60
150	45
100	30
50	15
0	0

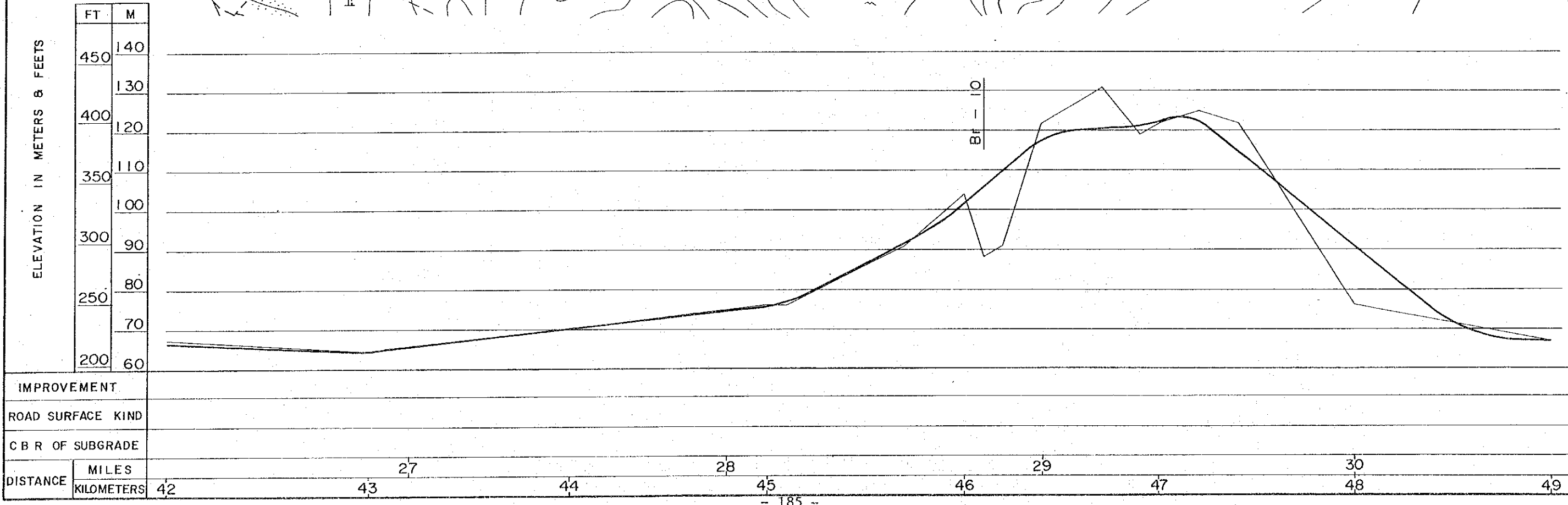
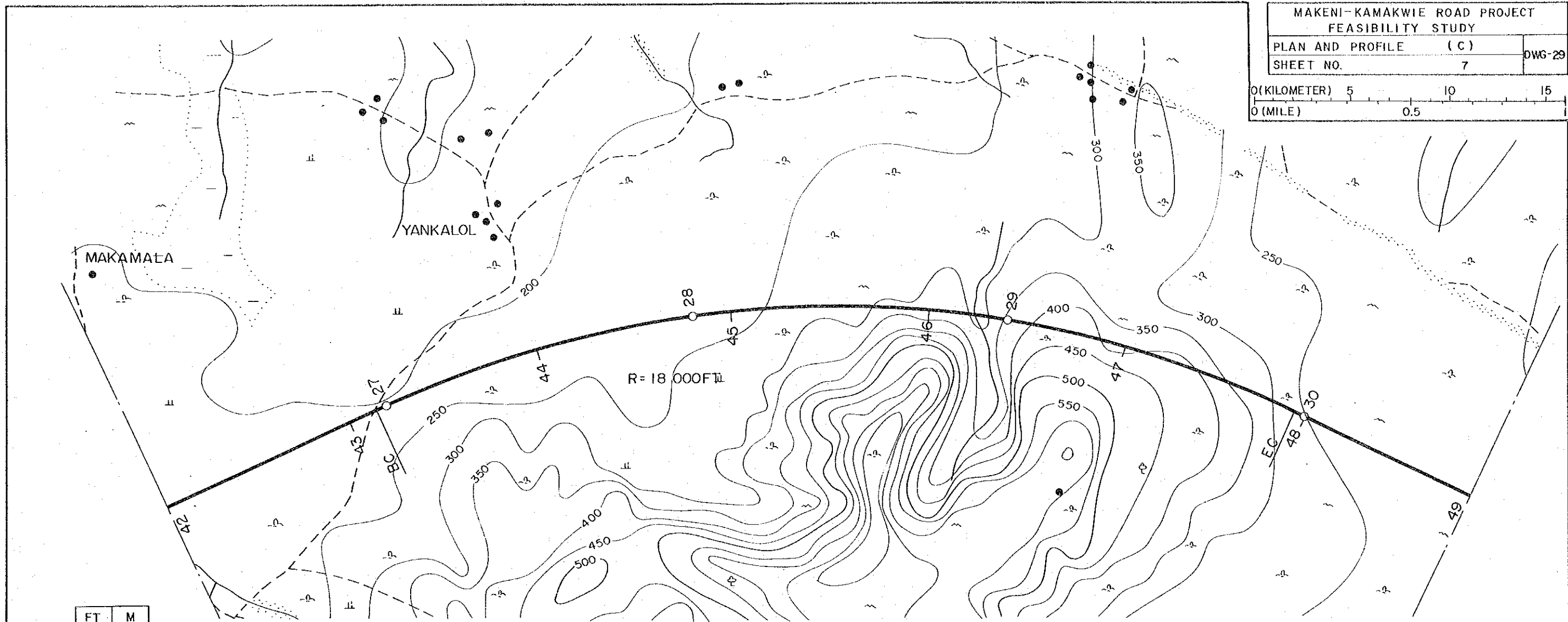
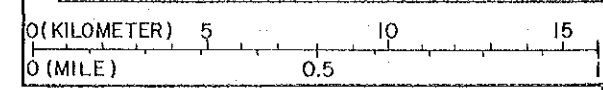


IMPROVEMENT																			
ROAD SURFACE KIND																			
C B R OF SUBGRADE																			
DISTANCE	MILES	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
	KILOMETERS	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

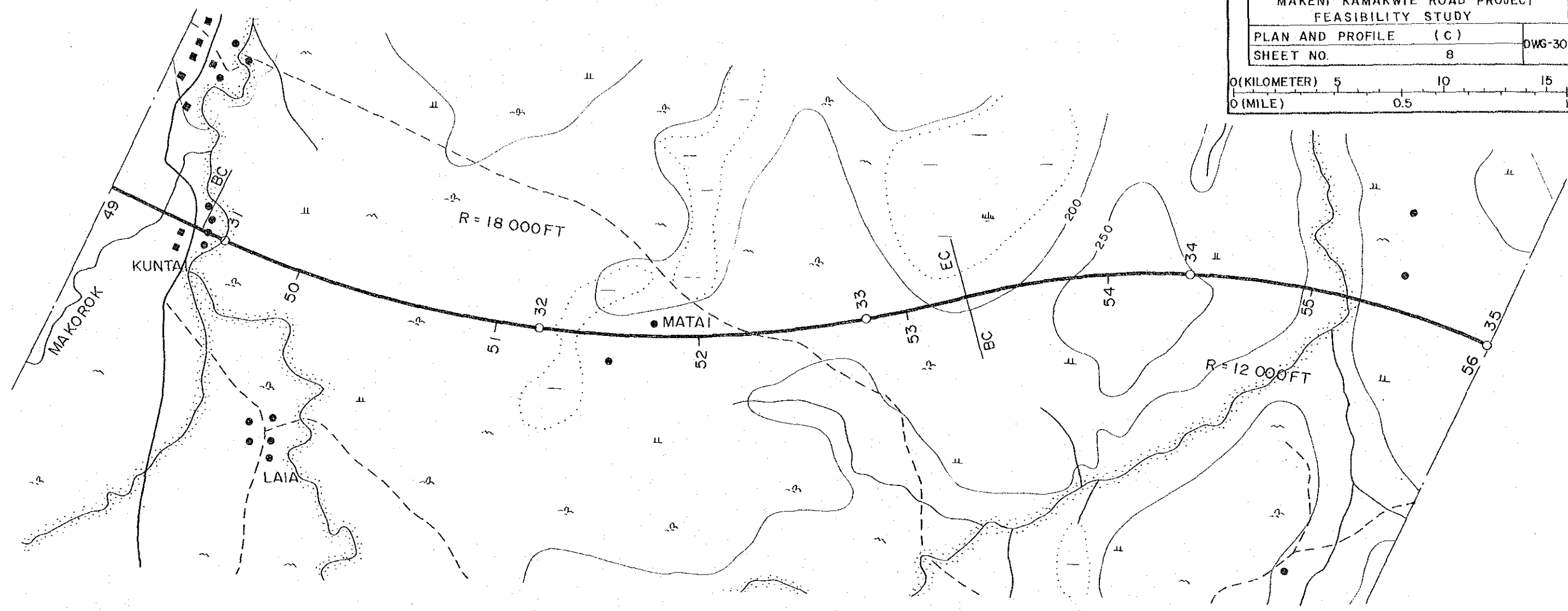
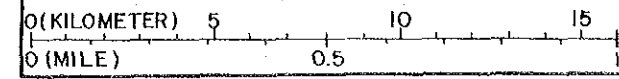
MAKENI-KAMAKWIE ROAD PROJECT
 FEASIBILITY STUDY
 PLAN AND PROFILE (C)
 SHEET NO. 6 DWG-28



IMPROVEMENT		
ROAD SURFACE KIND		
C B R OF SUBGRADE		
DISTANCE	MILES	22 23 24 25 26
	KILOMETERS	35 36 37 38 39 40 41 42

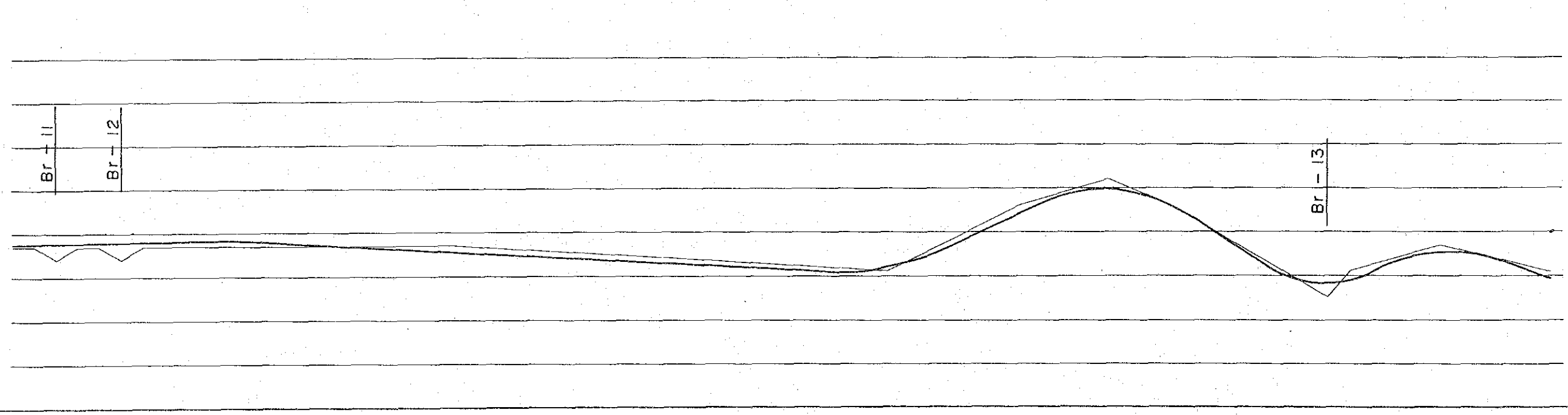


MAKENI-KAMAKWIE ROAD PROJECT
 FEASIBILITY STUDY
 PLAN AND PROFILE (C)
 SHEET NO. 8 DWG-30

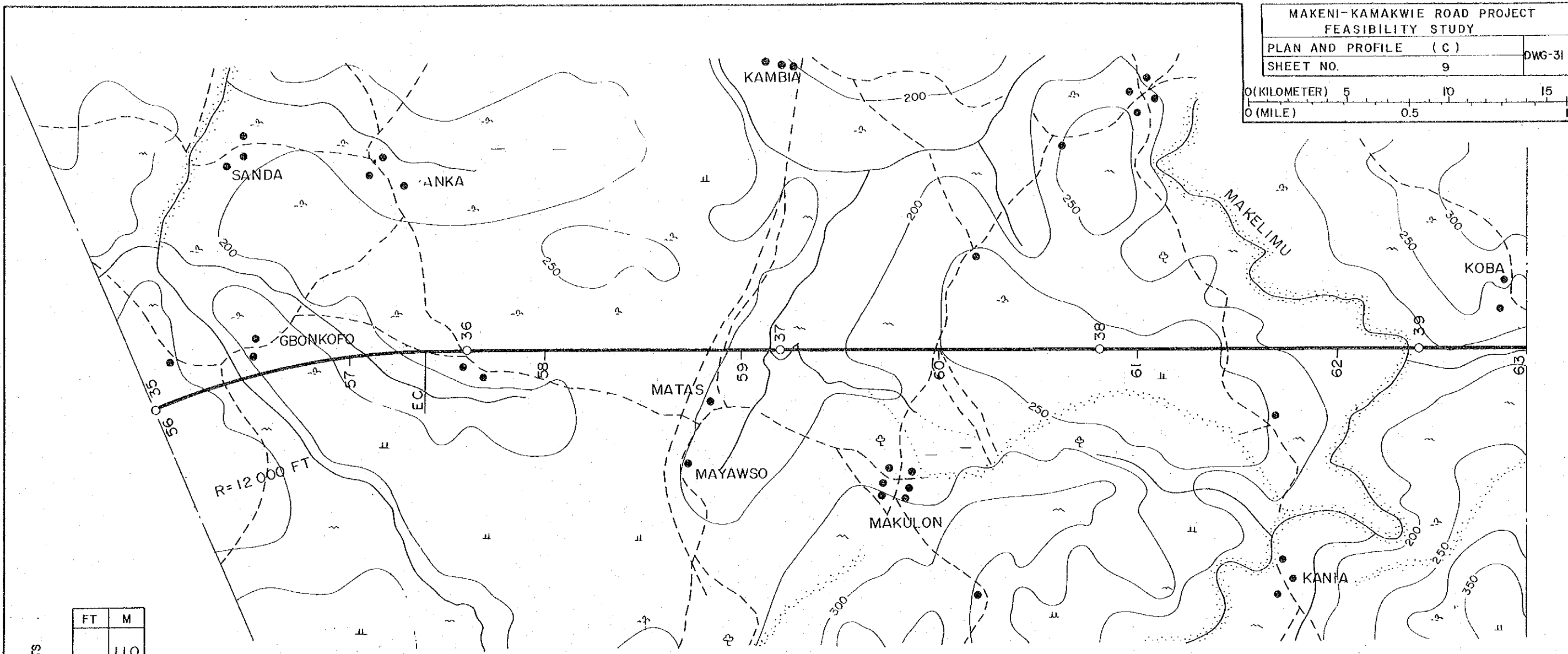
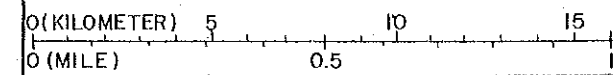


ELEVATION IN METERS & FEET

FT	M
350	110
300	90
250	75
200	60
150	45
100	30

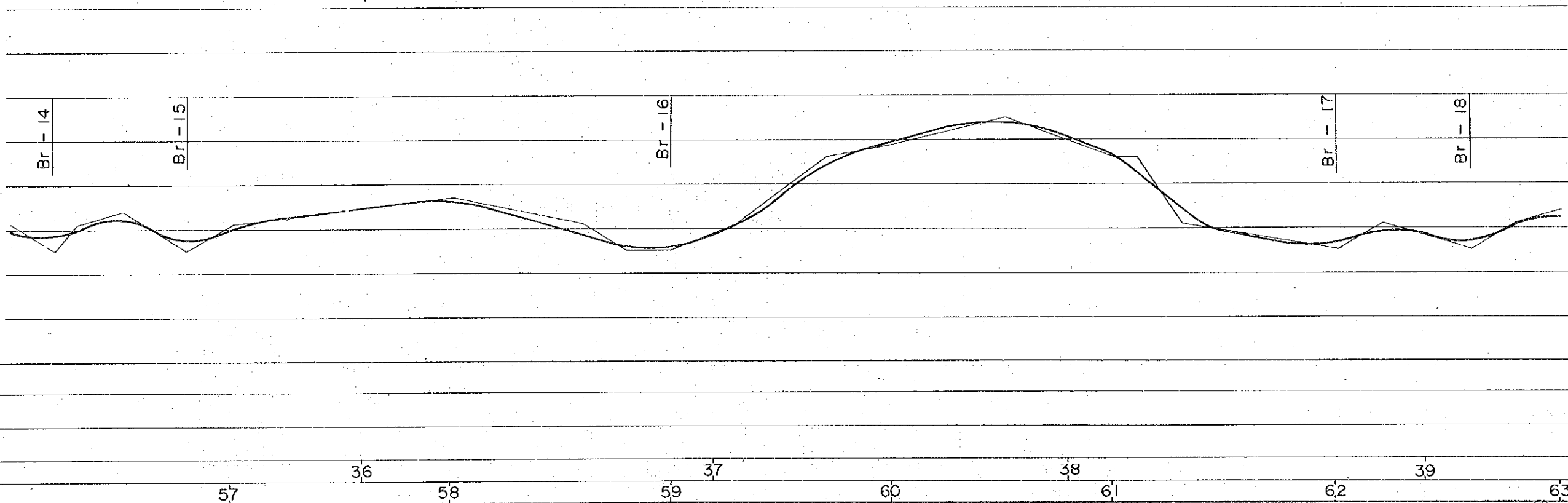


IMPROVEMENT													
ROAD SURFACE KIND													
C B R OF SUBGRADE													
DISTANCE	MILES	31	32	33	34	35							
	KILOMETERS	49	50	51	52	53	54	55	56				



ELEVATION IN METERS & FEET

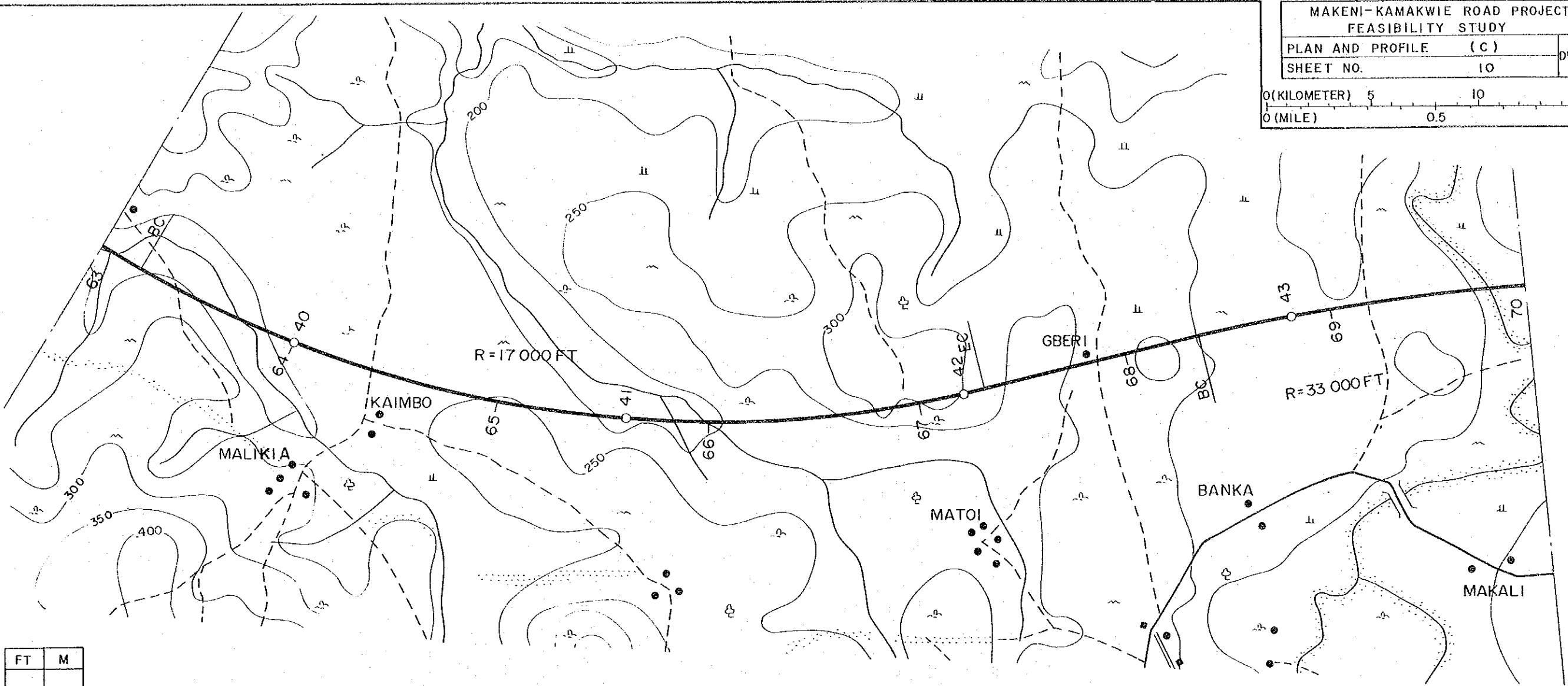
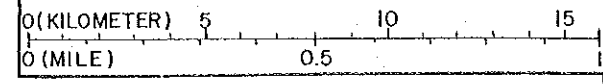
FT	M
350	110
300	90
250	80
200	60
150	40
100	30



IMPROVEMENT	
ROAD SURFACE KIND	
C B R OF SUBGRADE	
DISTANCE	MILES
	KILOMETERS

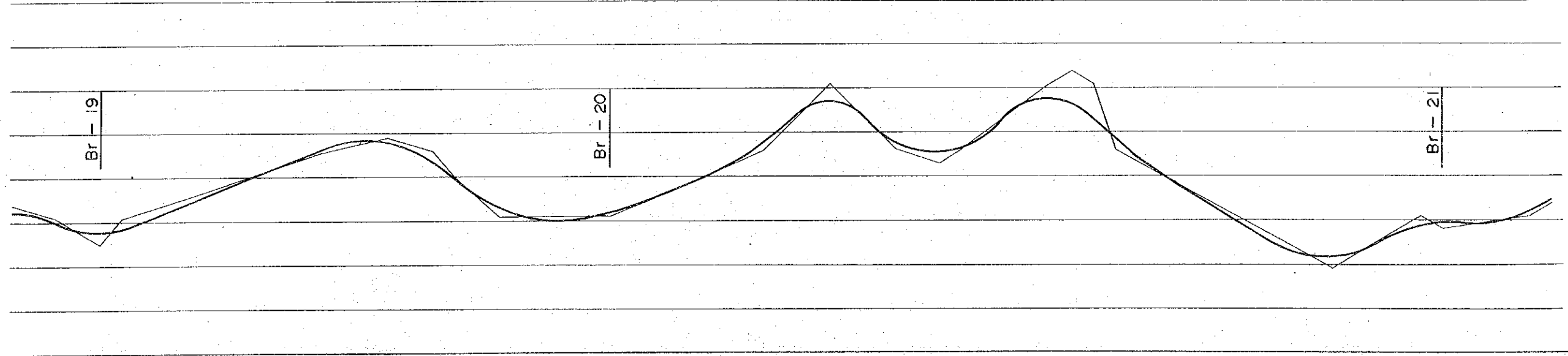
57 36 58 59 37 60 38 61 62 39 63

MAKENI-KAMAKWIE ROAD PROJECT
 FEASIBILITY STUDY
 PLAN AND PROFILE (C)
 SHEET NO. 10 DWG-32



ELEVATION IN METERS & FEET

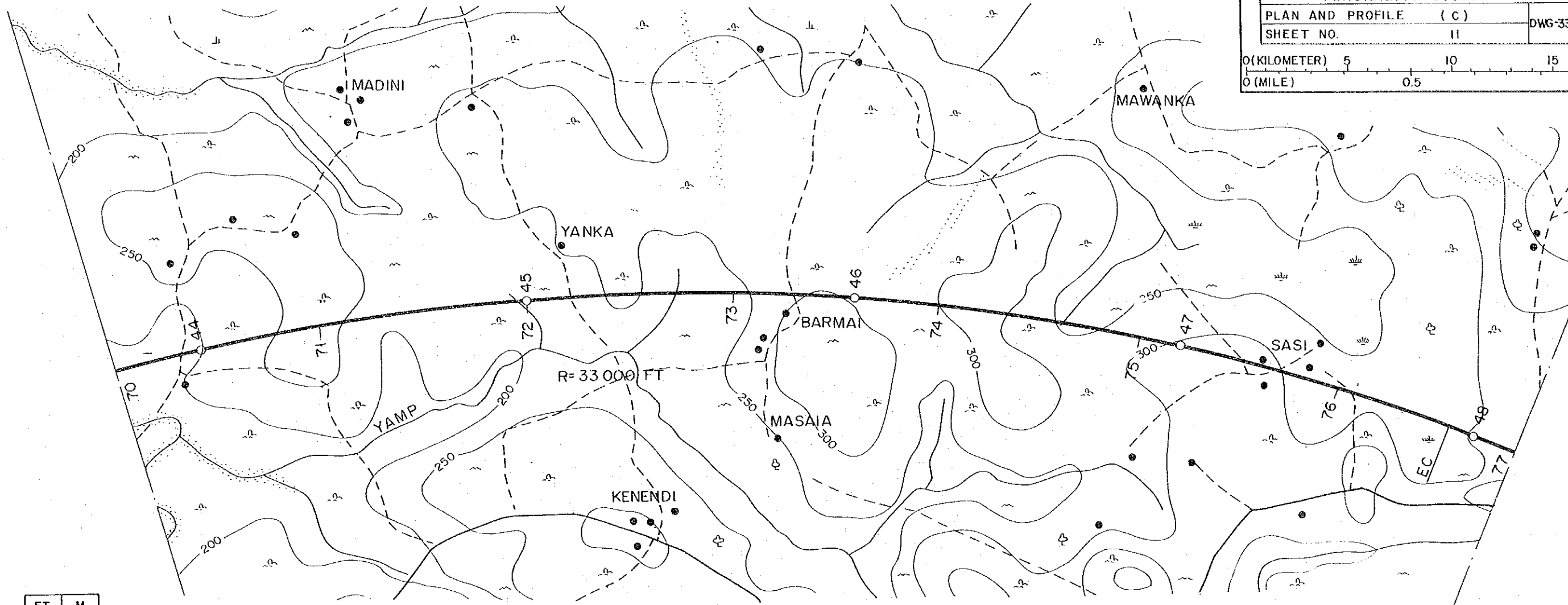
FT	M
350	110
300	90
250	80
200	60
150	40
100	30



IMPROVEMENT											
ROAD SURFACE KIND											
C B R OF SUBGRADE											
DISTANCE	MILES	40	41	42	43						
	KILOMETERS	63	64	65	66	67	68	69	70		

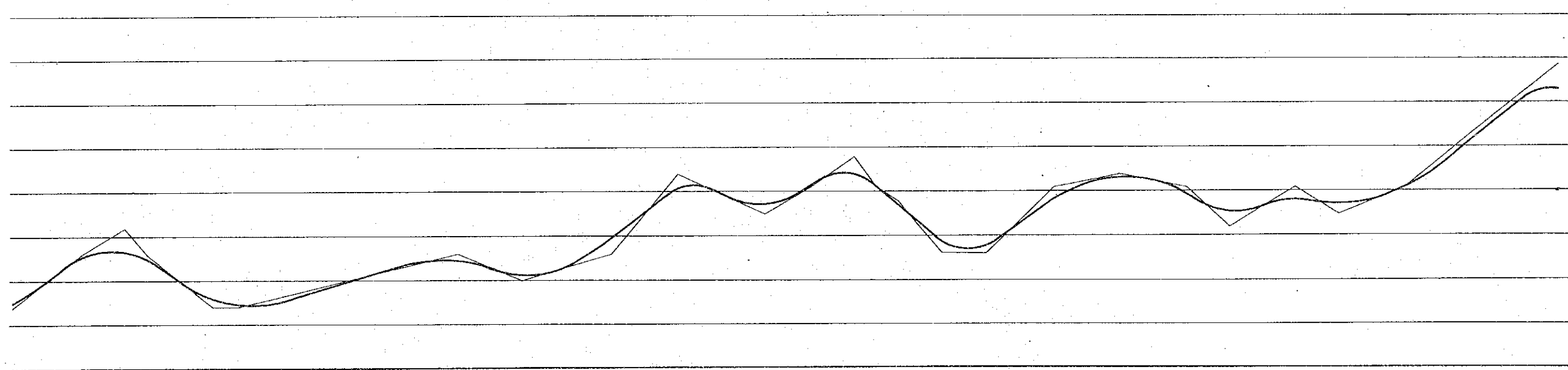
MAKENI-KAMAKWIE ROAD PROJECT
 FEASIBILITY STUDY
 PLAN AND PROFILE (C)
 SHEET NO. II DWG-33

0 (KILOMETER) 5 10 15
 0 (MILE) 0.5



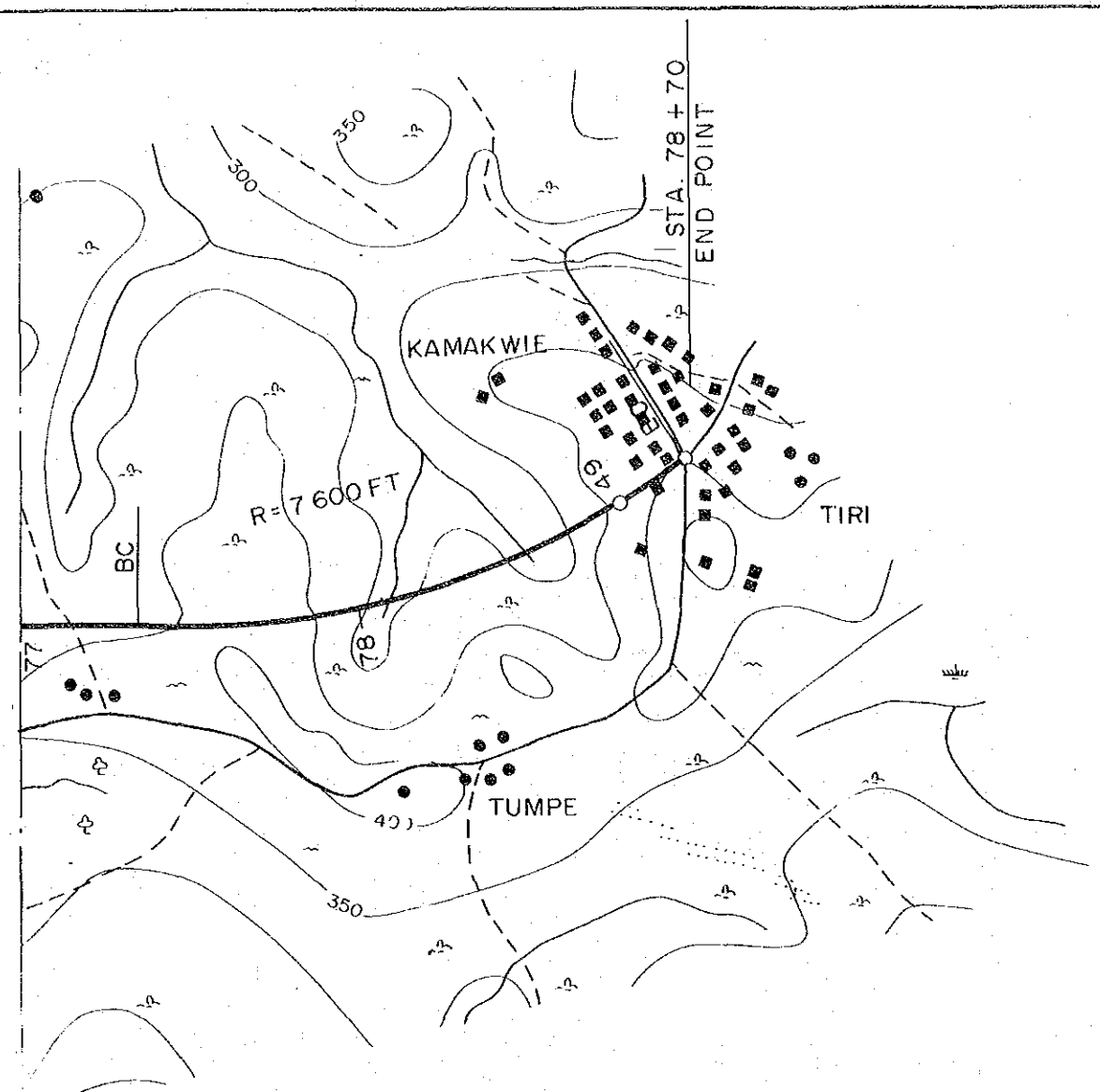
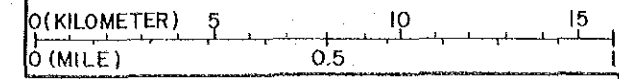
ELEVATION IN METERS & FEET

FT	M
400	120
350	110
300	90
250	80
200	60
130	
120	
110	
100	
90	
80	
70	
60	
50	



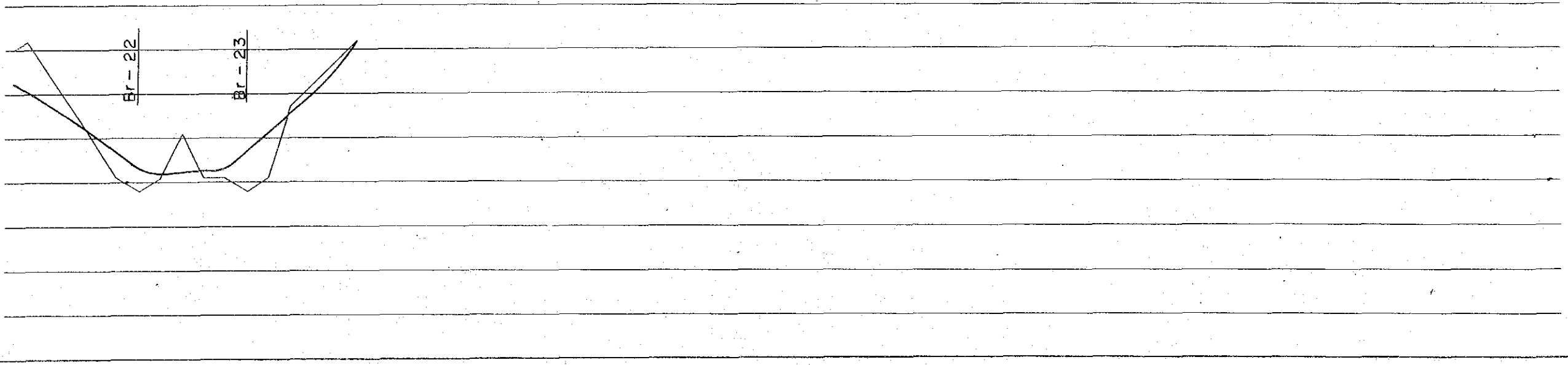
IMPROVEMENT													
ROAD SURFACE KIND													
C B R OF SUBGRADE													
DISTANCE	MILES	44		45		46		47		76		48	
	KILOMETERS	70	71	72	73	74	75	76	77				

MAKENI-KAMAKWIE ROAD PROJECT		
FEASIBILITY STUDY		
PLAN AND PROFILE	(C)	DWG-34
SHEET NO.	12	

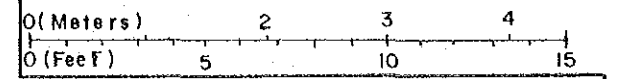


ELEVATION IN METERS & FEET

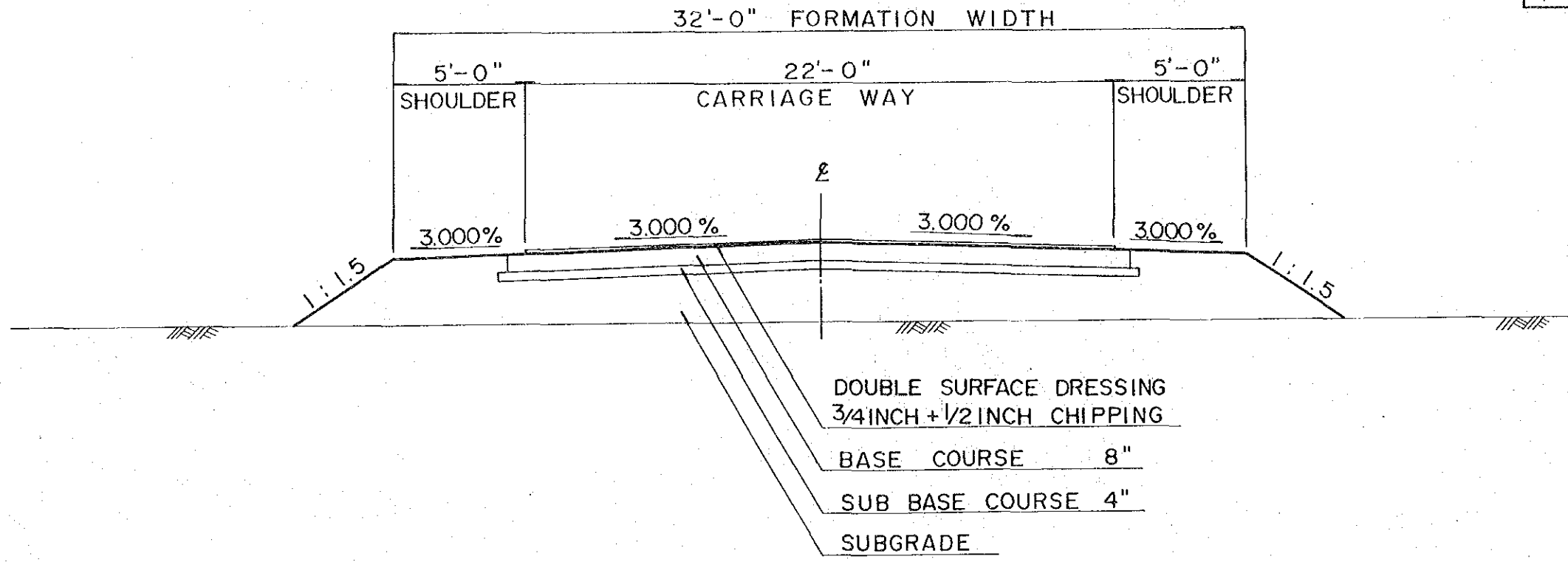
FT	M
400	120
350	110
300	90
250	80
200	60
130	40
50	15



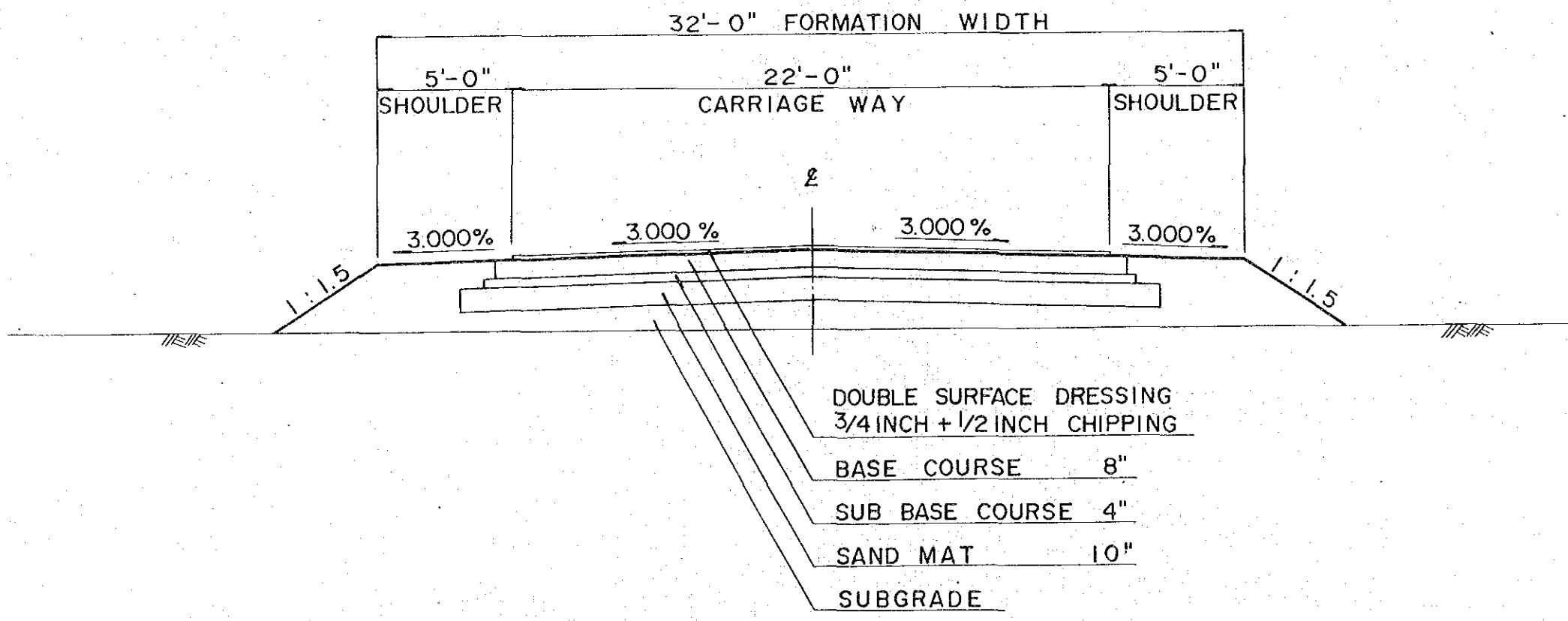
IMPROVEMENT		
ROAD SURFACE KIND		
CB R OF SUBGRADE		
DISTANCE	MILES	49 49.1
	KILOMETERS	77 78 78.6

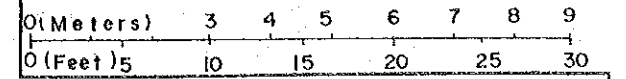


TYPE A

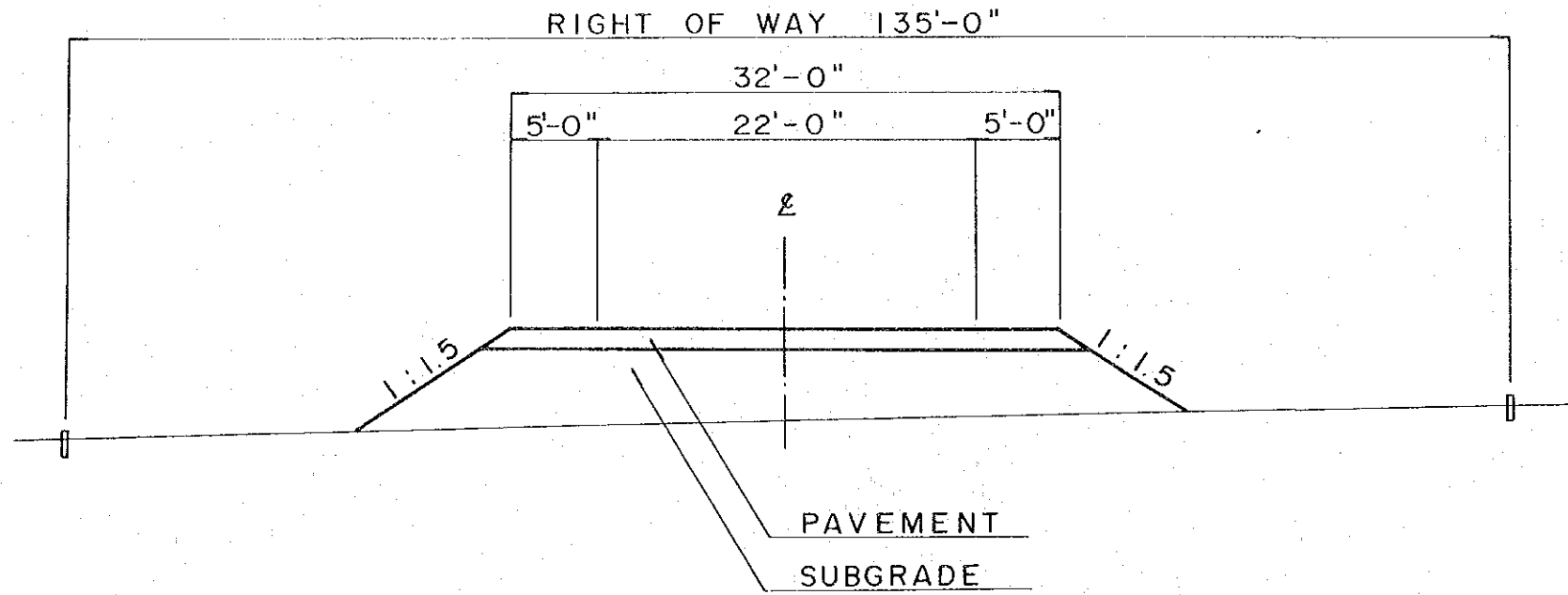


TYPE B

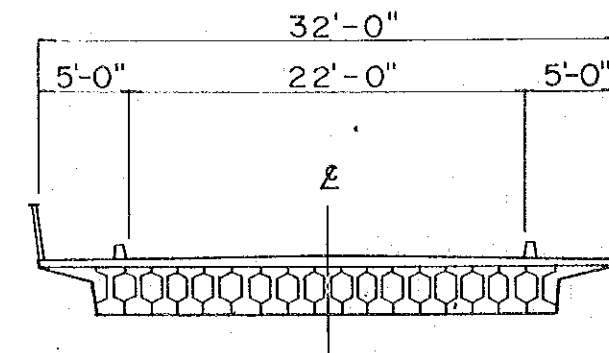




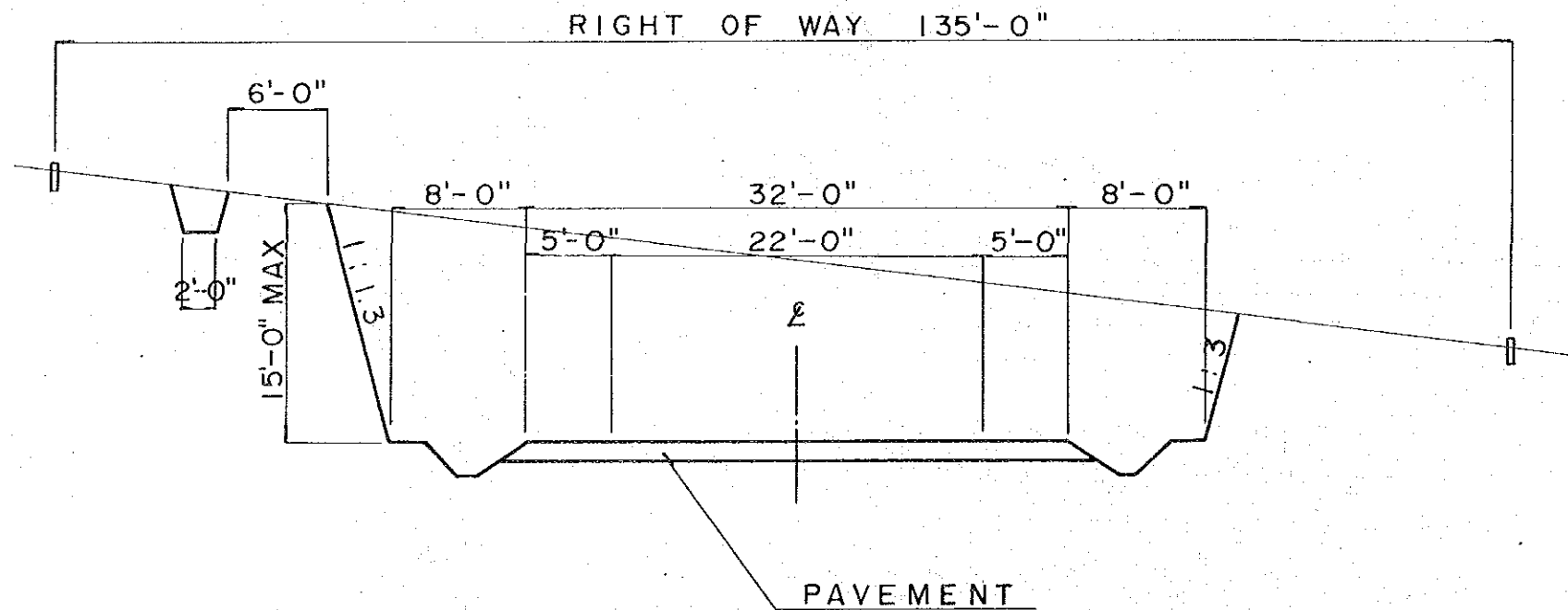
FILL SECTION



BRIDGE SECTION



CUT SECTION

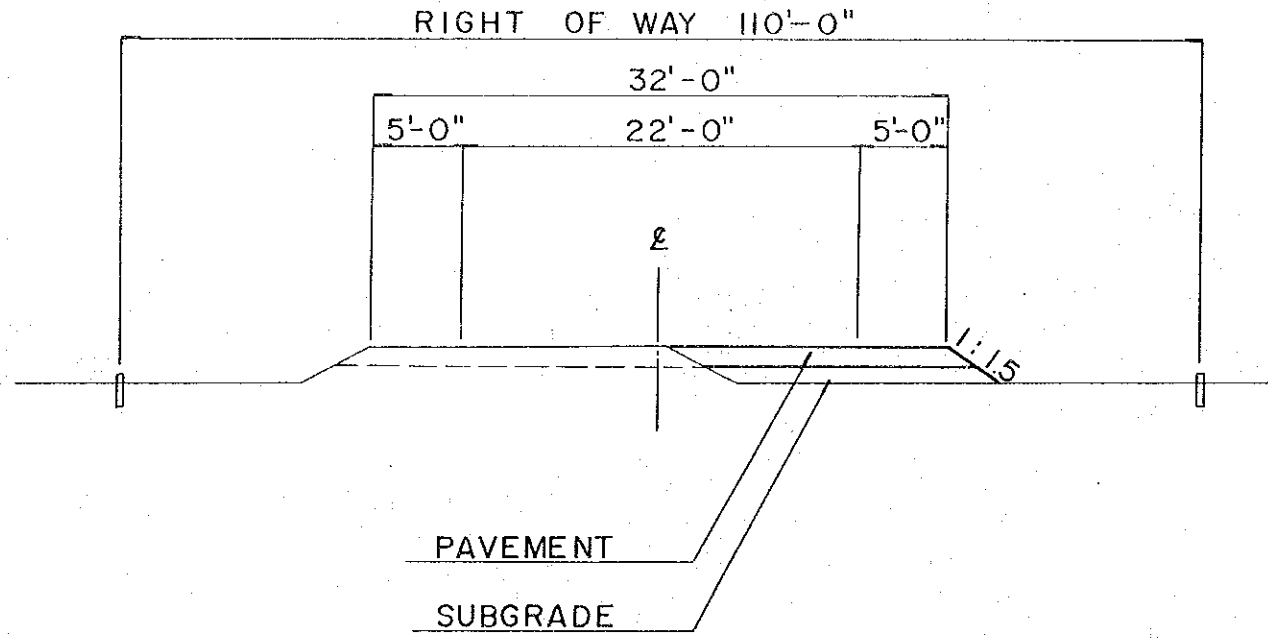


MAKENI-KAMAKWIE ROAD PROJECT	
FEASIBILITY STUDY	
TYPICAL CROSS SECTION	DWG-37
EXISTING ROAD SECTION	

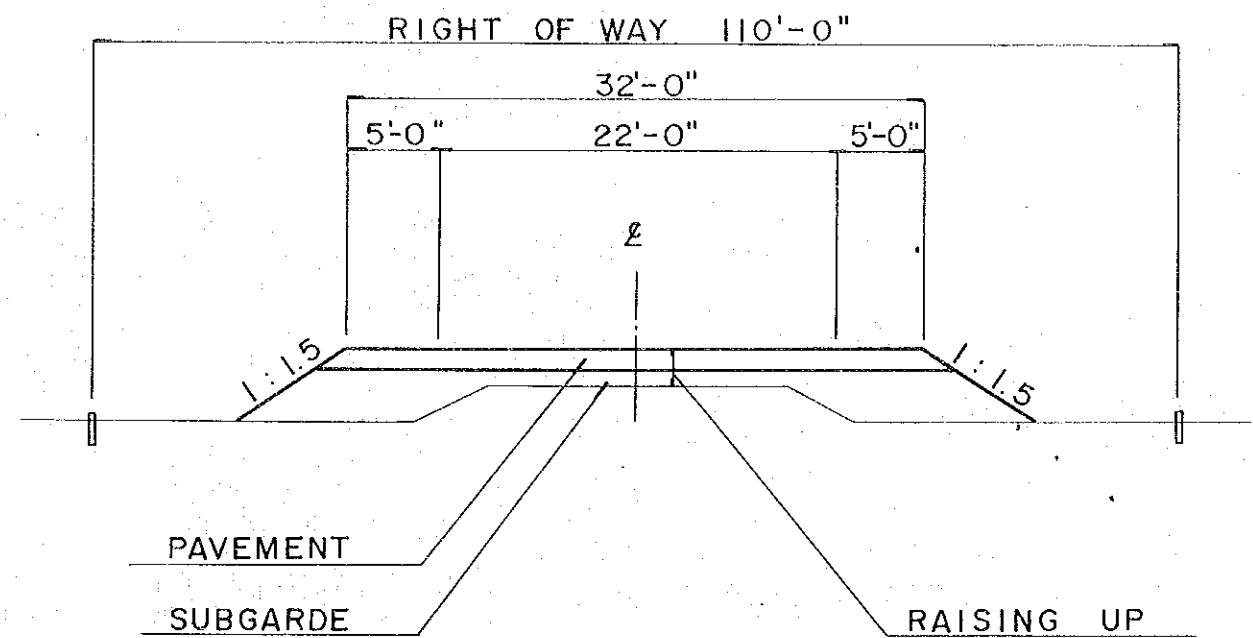
0 (Meters)	3	4	5	6	7	8	9
0 (Feet)	10	15	20	25	30		

FILL SECTION

WIDENING

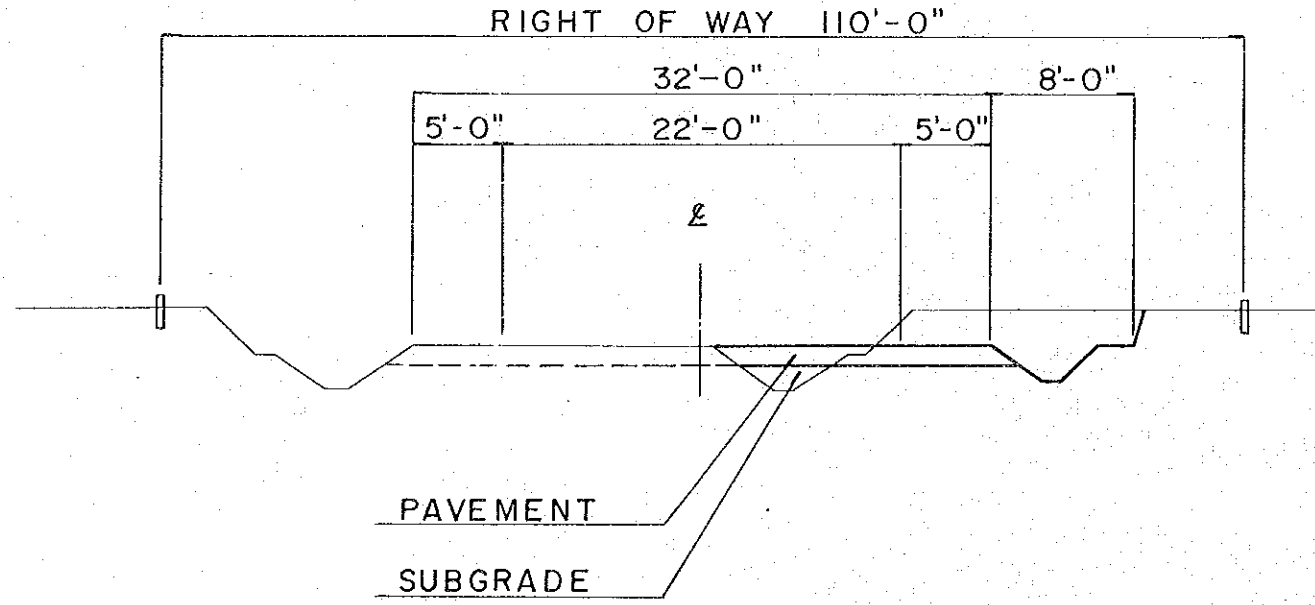


RAISING UP AND WIDENING



OUT SECTION

WIDENING



DIGGING DOWN AND WIDENING

