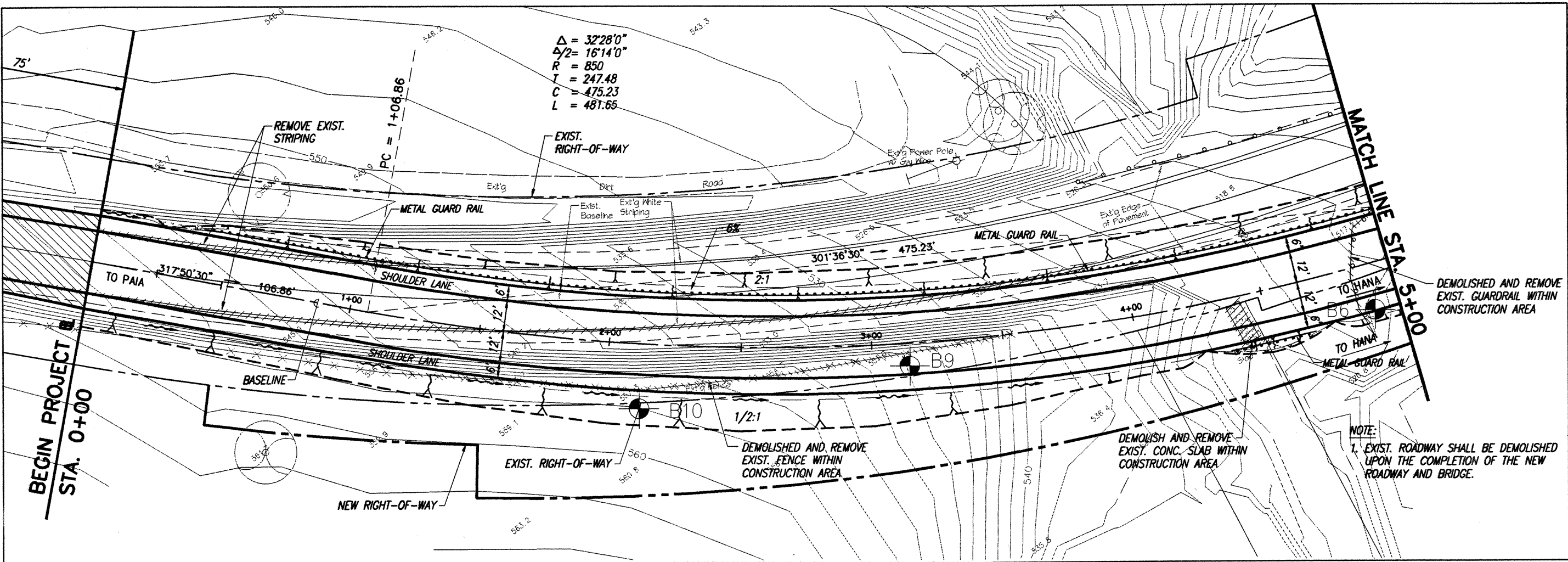


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-036-1(14)	2000	5	70



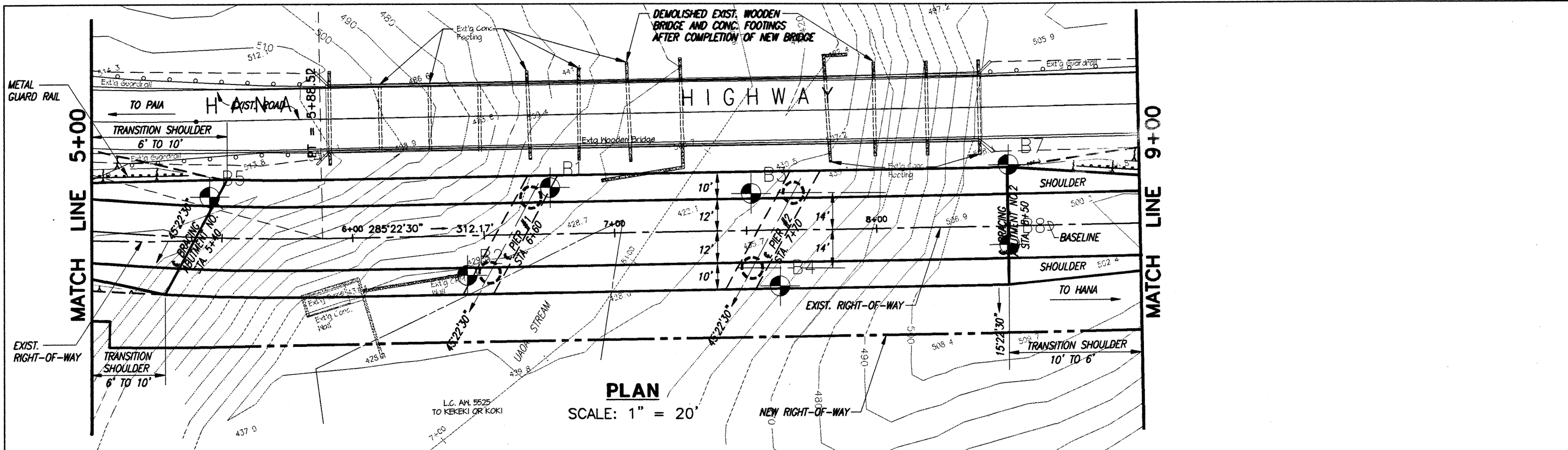
LEGEND: Approximate location of borings

Reference: Plan and Profile prepared by Engineers Surveyors Hawaii, Inc.

GRAPHIC SCALE: 0 20 40 80 FT. 1" = 40'

W.O. 98-3029 Replacement of Uaoa Bridge and Approaches

Ernest K. Hirata & Associates, Inc. BORING LOCATION PLAN



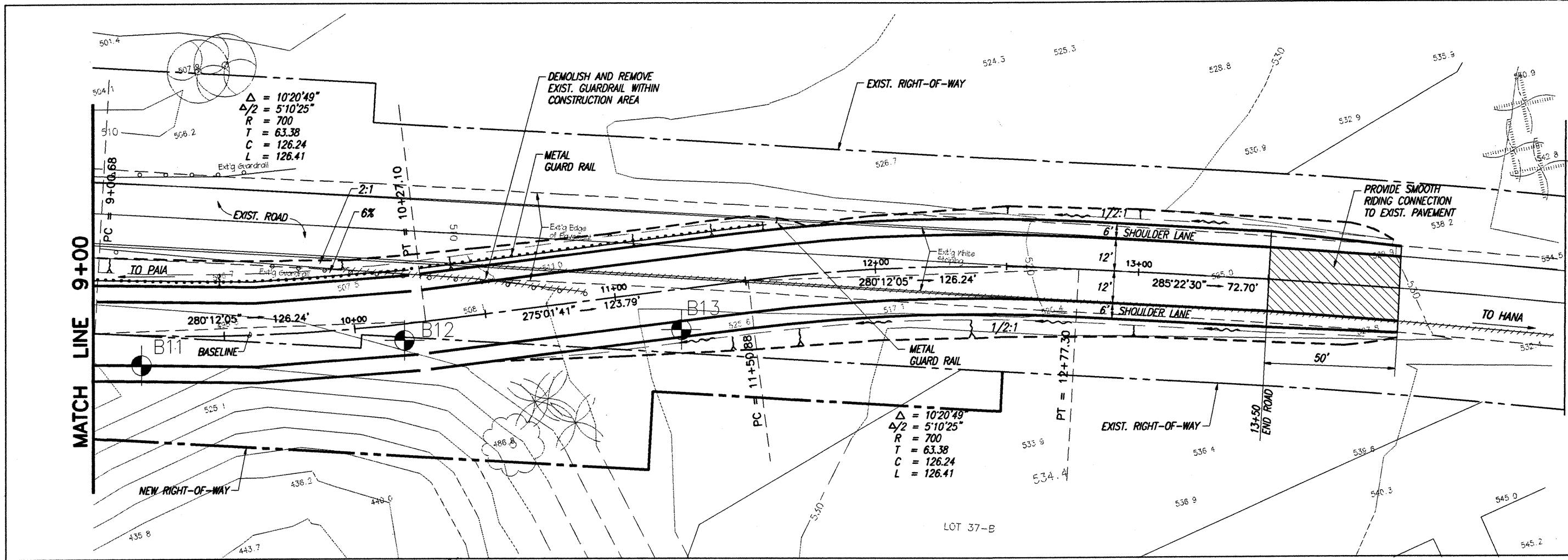
LEGEND: Approximate location of borings

Reference: Plan and Profile prepared by Engineers Surveyors Hawaii, Inc.

GRAPHIC SCALE: 0 20 40 80 FT. 1" = 40'

W.O. 98-3029 Replacement of Uaoa Bridge and Approaches

Ernest K. Hirata & Associates, Inc. BORING LOCATION PLAN



LEGEND: Approximate location of borings

Reference: Plan and Profile prepared by Engineers Surveyors Hawaii, Inc.

GRAPHIC SCALE: 0 20 40 80 FT. 1" = 40'

W.O. 98-3029 Replacement of Uaoa Bridge and Approaches

Ernest K. Hirata & Associates, Inc. BORING LOCATION PLAN

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
QUANTITIES BY	CHECKED BY	
CHECKED BY		

197-34 1B-00.DWG UAOA(ESH-1) 1=40 09/21/99 kly

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
BORING LOGS
HANA HIGHWAY
REPLACEMENT OF UAOA BRIDGE AND APPROACHES
DISTRICT OF MAKAWAO
Federal-Aid Project No. BR-036-1(14)

Scale: As Noted Date: May, 1999
SHEET No. C-3 OF 42 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-036-1(14)	2000	6	70

ERNEST K. HIRATA & ASSOCIATES, INC.

Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B1 DRIVING WT. 140 lb. DATE OF DRILLING 7-14-98
SURFACE ELEV. 434±* DROP 30 in. WATER LEVEL 7.9 feet

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
			12	74	34	Clayey SILT (MH) - Brown, moist, medium stiff, with sand and gravel.
			37	86	36	Cobbles at 4 feet. Mottled orange brown color from 5 feet.
			25	72	57	Cobbles at 6.5 feet.
			48	77	43	WEATHERED BASALT (WH-WC) - Mottled gray and red, medium dense to dense, highly to completely weathered.
			78	78	44	
			30	73	54	Completely weathered at 24 feet.
			66	No Recovery		
			39/6" 50/2"	86	32	Dense to medium hard at 33 feet.
						End boring at 35 feet.
						* Elevations based on Topographic Survey Map provided by Engineers Surveyors Hawaii, Inc.

ERNEST K. HIRATA & ASSOCIATES, INC.

Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B2 DRIVING WT. 140 lb. DATE OF DRILLING 6-9-98
SURFACE ELEV. 428± DROP 30 in. WATER LEVEL 2 feet

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
			6	78	40	Clayey SILT (MH) - Brown, very moist, medium stiff, with sand, gravel, and cobbles.
			16	No Recovery		
			33	65	61	WEATHERED BASALT (WC) - Mottled gray, medium dense to dense, completely weathered.
			16	69	59	Medium dense from 11 feet.
			11		63	Mottled grayish brown color from 14 feet.
			6		59	
			10		58	
			32	85	43	Highly to completely weathered, medium dense to dense from 35 to 42 feet.
			89	82	43	
			20	64	65	
			15/No Penetration			Dense at 47.5 feet. Begin NX coring at 49 feet. No recovery from 49 to 54 feet.
			18	88	38	End NX coring at 54 feet.
			30/6" 60/3"	57	37	Dense to medium hard from 57.5 to 60 feet.

ERNEST K. HIRATA & ASSOCIATES, INC.

Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B2 (continued) DRIVING WT. 140 lb. DATE OF DRILLING 6-9-98
SURFACE ELEV. 428± DROP 30 in. WATER LEVEL 2 feet

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
			77	119	40	Dense, highly to completely weathered from 60 feet.
			33	68	56	Dense to medium hard from 66 to 68 feet.
			10/No Penetration			BASALT (WS-WM) - Gray, hard, slightly to moderately weathered. Begin NX coring at 74.5 feet. 100% Recovery from 74.5 to 79.5 feet. RQD = 70% Highly fractured from 74.5 to 78 feet.
			31/6" 35/2" 5/No Penetration	87	37	36% Recovery from 79.5 to 84.5 feet. RQD = 26% Moderately weathered at 80 feet. Completely weathered from 81.5 to 85.5 feet, medium dense to dense.
						100% Recovery from 86 to 91 feet. RQD = 72%
						80% Recovery from 91 to 96 feet. RQD = 20% Highly to moderately weathered from 93 to 96 feet, dense.
						100% Recovery from 96 to 101 feet. RQD = 30% Moderately weathered from 96 feet, dense to medium hard.
						End boring at 101 feet.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

HANA HIGHWAY
REPLACEMENT OF UAOA BRIDGE AND APPROACHES
DISTRICT OF MAKAWAO
Federal-Aid Project No. BR-036-1(14)

Scale: As Noted Date: May, 1999

SHEET No. C-4 OF 42 SHEETS

FED.ROAD DIST.NO.	STATE	FED. AID PROJ. NO.	FISCAL	SHEET	TOTAL SHEETS
HAWAII	HAW.	BR-036-1(14)	2000	7	70

ERNEST K. HIRATA & ASSOCIATES, INC.
Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B3 DRIVING WT. 140 lb. DATE OF DRILLING 7-1-98
SURFACE ELEV. 426± DROP 30 in. WATER LEVEL Not Recorded

DEPTH H O	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
			25/2" 5/No	No Recovery Penetration		Clayey SILT (MH) - Brown, very moist to wet, medium stiff, with sand, cobbles, and boulders.
5			10/No	Penetration		
			38	79	43	WEATHERED BASALT (WH-WM) - Mottled gray, dense, highly to moderately weathered.
10			100	111	11	Begin NX coring at 10 feet. 26% Recovery from 10 to 15 feet. RQD = 0%
15			56	75	42	
20			10/No	Penetration		BASALT (WS) - Gray, medium hard to hard, slightly weathered. 100% Recovery from 20 to 25 feet. RQD = 84%
25						94% Recovery from 25 to 30 feet. RQD = 60%
30						Highly fractured at 29 feet.
35			37		74	WEATHERED BASALT (WH-WM) - Grayish brown, dense to medium hard, highly to moderately weathered. 86% Recovery from 30 to 35 feet. RQD = 8% Mottled red and gray color, dense from 33 feet
40						66% recovery from 37 to 42 feet. RQD = 14% Moderately weathered from 37 to 39 feet, medium hard.
45			23		71	Completely weathered, reddish brown color from 42 feet.
50			17		62	
55			35/3" 10/No	Penetration	30	70% Recovery from 53 to 58 feet. RQD = 20% Moderately weathered from 53 to 55 feet, dense to medium hard.
60			38		67	

ERNEST K. HIRATA & ASSOCIATES, INC.
Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B3 (continued) DRIVING WT. 140 lb. DATE OF DRILLING 7-1-98
SURFACE ELEV. 426± DROP 30 in. WATER LEVEL Not Recorded

DEPTH H O	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
60						BASALT (WS) - Gray, hard, moderately fractured. 100% Recovery from 62 to 67 feet. RQD = 66%
65						Moderately weathered at 64 feet, dense to medium hard.
70						100% Recovery from 67 to 70 feet. RQD = 50%
						Highly fractured from 69 to 70.5 feet. 60% Recovery from 70 to 75 feet. RQD = 16% Highly to moderately weathered from 70.5 to 73.5 feet, dense to medium hard.
75						Moderately weathered from 73.5 to 75 feet. 96% Recovery from 75 to 80 feet. RQD = 60%
80						84% Recovery from 80 to 85 feet. RQD = 52%
85						Clinker at 83.5 to 84.5 feet.
90						End boring at 85 feet.

ERNEST K. HIRATA & ASSOCIATES, INC.
Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B4 DRIVING WT. 140 lb. DATE OF DRILLING 7-15-98
SURFACE ELEV. 448± DROP 30 in. WATER LEVEL @ 9 ft.

DEPTH H O	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
			23		60	Clayey SILT (MH) - Brown, moist, medium stiff, with sand and cobbles.
5			21	68	56	WEATHERED BASALT (WC) - Mottled grayish brown, moist, medium dense, completely weathered.
10			13	63	61	
15			14/3" 10/No	76 Penetration	61	Dense at 13 feet.
20			14	63	53	
25			17	62	66	
30			10/No	Penetration		BASALT (WS) - Gray, hard, slightly weathered. Begin NX coring from 29 feet. 96% Recovery from 29 to 34 feet. RQD = 96%
35						End boring at 34 feet.

ERNEST K. HIRATA & ASSOCIATES, INC.
Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B5 DRIVING WT. 140 lb. DATE OF DRILLING 8-31-98
SURFACE ELEV. 517± DROP 30 in. WATER LEVEL None

DEPTH H O	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
			7	78	44	Clayey SILT (MH) - Grayish brown, moist, stiff, with weathered rock fragments.
5			9	82	42	WEATHERED BASALT (WC) - Dark brown, moist, medium dense, completely weathered.
10			11	92	34	Mottled gray and orange brown color from 8 to 15 feet.
15			15	94	32	
20			22	66	45	
25			18	63	50	
30			26	75	46	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
BORING LOGS

HANA HIGHWAY
REPLACEMENT OF UAOA BRIDGE AND APPROACHES
DISTRICT OF MAKAWAO
Federal-Aid Project No. BR-036-1(14)

Scale: As Noted Date: May, 1999
SHEET No. C-5 OF 42 SHEETS

FED.ROAD DIST.NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-036-1(14)	2000	8	70

ERNEST K. HIRATA & ASSOCIATES, INC.

Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B5 (continued) DRIVING WT. 140 lb. DATE OF DRILLING 8-31-98
SURFACE ELEV. 517± DROP 30 in. WATER LEVEL None

DEPTH H	GRA PH	S A M P L E	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
30						
			23	79	48	
35						
			45	78	46	
40						
			8	67	59	Clayey SILT (MH) - Mottled grayish brown, moist, medium stiff to stiff, with weathered rock fragments. (Completely Weathered Basalt)
45						
			13	60	60	
50						
			28	76	46	
55						
			14	65	60	
60						
			12	81	43	
65						
			7	80	43	
70						WEATHERED BASALT (WH-WC) - Mottled grayish brown, moist, dense, highly to completely weathered.
			67	93	32	
75						
			42/6" 50/3"	98	25	
80						
			16	74	49	Medium dense at 83 feet.
85						
			57	76	45	
90						

ERNEST K. HIRATA & ASSOCIATES, INC.

Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B5 (continued) DRIVING WT. 140 lb. DATE OF DRILLING 9-1-98
SURFACE ELEV. 517± DROP 30 in. WATER LEVEL None

DEPTH H	GRA PH	S A M P L E	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
90						
			57	78	43	
95						
			28	67	55	
100						End boring at 99.5 feet.
105						

ERNEST K. HIRATA & ASSOCIATES, INC.

Geotechnical Engineering

BORING LOG

W.O. 98-3082

BORING NO. B6 DRIVING WT. 140 lb. DATE OF DRILLING 9-1-98
SURFACE ELEV. 522± DROP 30 in. WATER LEVEL None

DEPTH H	GRA PH	S A M P L E	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0						Clayey SILT (MH) - Dark brown, moist, medium stiff.
			13	61	69	
5			33	73	46	WEATHERED BASALT (WC) - Grayish brown, moist, dense, completely weathered.
10			44	82	43	
15			41	87	38	
20			20	74	43	
25			38	93	33	
30			60/6"	81	32	Medium hard at 30 feet.
35			18	74	46	
40			10	75	50	
45			12	No Recovery		
50			17	66	63	
						End boring at 50.5 feet.
55						

ERNEST K. HIRATA & ASSOCIATES, INC.

Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B7 DRIVING WT. 140 lb. DATE OF DRILLING 8-4-98
SURFACE ELEV. 506± DROP 30 in. WATER LEVEL @ 72 feet

DEPTH H	GRA PH	S A M P L E	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0						Clayey SILT (MH) - Brown, moist, medium stiff, with basalt gravel.
			22	82	22	
						Cobbles at 2.5 feet.
5			20	68	52	
			50/No Penetration			WEATHERED BASALT (WH-WC) - Grayish brown, moist, dense, highly to completely weathered.
10						Moderately weathered from 9.5 to 12 feet, dense to medium hard, highly fractured. Begin NX coring from 10 feet. 57% Recovery from 10 to 13.5 feet. RQD = 0% End NX coring at 13.5 feet.
15			21	82	32	
20			8	85	34	Completely weathered, medium dense at 20 feet.
25			78	84	19	Medium hard at 23.5 feet. Dense to medium hard from 25 feet.
30						

Plate B18

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

HANA HIGHWAY
REPLACEMENT OF UAOA BRIDGE AND APPROACHES
DISTRICT OF MAKAWAO
Federal-Aid Project No. BR-036-1(14)

Scale: As Noted Date: May, 1999

SHEET No. C-6 OF 42 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-036-1(14)	2000	9	70

ERNEST K. HIRATA & ASSOCIATES, INC.
Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B7 (continued) DRIVING WT. 140 lb. DATE OF DRILLING 8-5-98
SURFACE ELEV. 506± DROP 30 in. WATER LEVEL @ 72 feet

DEPTH	GRAPE	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
30			10/No penetration			Begin NX coring from 30 feet. 40% Recovery from 30 to 35 feet. RQD = 0% Moderately to highly weathered from 30 to 35 feet, dense to medium hard, highly fractured.
35			25/2"	No Recovery		30% Recovery from 35 to 40 feet. RQD = 0%
40			21		42	Completely weathered from 40 feet.
45			11	56	60	
50			10	73	49	
55			24	79	47	
60			14	52	58	
65			54	83	43	Highly weathered from 65 feet.
70			48	82	47	
75			36	78	45	
80			47	No recovery		
85			37	69	50	
90						

ERNEST K. HIRATA & ASSOCIATES, INC.
Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B7 (continued) DRIVING WT. 140 lb. DATE OF DRILLING 8-10-98
SURFACE ELEV. 506± DROP 30 in. WATER LEVEL @ 72 feet

DEPTH	GRAPE	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
90			32	No Recovery		
95			53	73	48	
100			28	79	39	
105						End boring at 101.5 feet.

ERNEST K. HIRATA & ASSOCIATES, INC.
Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B8 DRIVING WT. 140 lb. DATE OF DRILLING 8-11-98
SURFACE ELEV. 507± DROP 30 in. WATER LEVEL None

DEPTH	GRAPE	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0			24	81	46	Clayey SILT (MH) - Brown, moist, medium stiff to stiff.
5						WEATHERED BASALT (WH) - Mottled grayish brown, moist, dense, highly weathered. Begin NX coring from 4.5 feet. 33% Recovery from 4.5 to 7.5 feet. RQD = 20% Moderately weathered from 5 to 8.5 feet, medium hard, highly fractured. 32% Recovery from 8 to 13 feet. RQD = 0% Highly weathered, dense from 8.5 feet.
10			33		31	
15						
20			50/3"	Tip Recovery		Moderately weathered, dense to medium hard from 19 to 21.5 feet. 50% Recovery from 20.5 to 24.5 feet. RQD = 0%
25						22% Recovery from 24.5 to 29.5 feet. RQD = 0%
30			25/5" 10/No Penetration		30	34% Recovery from 30 to 35 feet. RQD = 0% Moderately weathered, dense to medium hard from 30 to 32 feet.
35			19/6"		24	End NX coring at 35 feet. Completely weathered from 34 feet, dense.
40			38	61	39	
45			49	76	33	
50			30	74	43	
55						End boring at 49.5 feet.

ERNEST K. HIRATA & ASSOCIATES, INC.
Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B9 DRIVING WT. 140 lb. DATE OF DRILLING 9-3-98
SURFACE ELEV. 550± DROP 30 in. WATER LEVEL None

DEPTH	GRAPE	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0			24	90	34	Clayey SILT (MH) - Mottled brown, moist, medium stiff to stiff, with weathered rock fragments.
5			12	77	34	WEATHERED BASALT (WC) - Grayish brown, moist, medium dense, completely weathered.
10			9	87	25	
15			5	58	72	Loose to medium dense at 14 feet.
20			12	73	51	
25						End boring at 20.5 feet.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DESIGNED BY	
No.	CHECKED BY	

1997-34 fB-04.DWG UAOA(ESH-1), 1=1 09/21/99 jky

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
BORING LOGS
HANA HIGHWAY
REPLACEMENT OF UAOA BRIDGE AND APPROACHES
DISTRICT OF MAKAWAO
Federal-Aid Project No. BR-036-1(14)
Scale: As Noted Date: May, 1999
SHEET No. C-7 OF 42 SHEETS

FED.ROAD DIST.NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-036-1(14)	2000	10	70

ERNEST K. HIRATA & ASSOCIATES, INC.

Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B10 DRIVING WT. 140 lb. DATE OF DRILLING 9-3-98
SURFACE ELEV. 558± DROP 30 in. WATER LEVEL None

DEPTH H O	GRA P H	S A M P L E	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
			20	73	51	Clayey SILT (MH) - Mottled orange brown, moist, stiff, with weathered rock fragments.
			23	87	33	
5						WEATHERED BASALT (WC) - Grayish brown, moist, dense, completely weathered.
			30	80	39	
10			60		36	Highly weathered from 14 feet.
15			57		31	
20						End boring at 21.5 feet.
25						

ERNEST K. HIRATA & ASSOCIATES, INC.

Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B11 DRIVING WT. 140 lb. DATE OF DRILLING 7-29-98
SURFACE ELEV. 497± DROP 30 in. WATER LEVEL None

DEPTH H O	GRA P H	S A M P L E	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
			36	84	38	Clayey SILT (MH) - Brown, moist, stiff, with gravel.
			37	85	37	
5						WEATHERED BASALT (WC) - Mottled brown, moist, medium dense, completely weathered.
			17	82	39	
10			54	88	38	Mottled grayish brown color from 13 feet.
15			40	90	38	
20			35	88	37	Very moist at 23 feet.
25						
30						End boring at 24.5 feet.

ERNEST K. HIRATA & ASSOCIATES, INC.

Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B12 DRIVING WT. 140 lb. DATE OF DRILLING 7-28-98
SURFACE ELEV. 502± DROP 30 in. WATER LEVEL None

DEPTH H O	GRA P H	S A M P L E	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
			8	78	29	Clayey SILT (MH) - Brown, moist, medium stiff.
			12	84	28	
5			26	99	28	Mottled reddish brown color and stiff from 5 feet.
			19	97	24	
10						With weathered gravel from 9 feet.
15			70	94	34	
20			38/6" 50/4"	86	33	WEATHERED BASALT (WH-WC) - Mottled grayish brown, moist, dense, highly to completely weathered.
25			42/6" 50/2"	93	35	
30						End boring at 25.5 feet.

ERNEST K. HIRATA & ASSOCIATES, INC.

Geotechnical Engineering

BORING LOG

W.O. 98-3029

BORING NO. B13 DRIVING WT. 140 lb. DATE OF DRILLING 7-28-98
SURFACE ELEV. 520± DROP 30 in. WATER LEVEL None

DEPTH H O	GRA P H	S A M P L E	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
			25	82	32	Clayey SILT (MH) - Mottled brown, moist, stiff.
5			23	90	29	WEATHERED BASALT (WC-WH) - Mottled brown, moist, medium dense to dense, completely to highly weathered.
			22	103	20	
10						Mottled grayish brown color from 10 feet.
15			26	91	32	
20						End boring at 15.5 feet.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

197-34 tB-05.DWG UAOA(ESH-1) 1=1 09/21/99 jky

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

HANA HIGHWAY
REPLACEMENT OF UAOA BRIDGE AND APPROACHES
DISTRICT OF MAKAWAO
Federal-Aid Project No. BR-036-1(14)

Scale: As Noted Date: May, 1999
SHEET No. C-8 OF 42 SHEETS