FED. ROAD DIST. NO.	STATE	FEDERAL – AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH–A311(3)	2002	75	159

BORING LOG

W.O. 99–3144

BORING NO. B1 (STA 16+00) DRIVING WT. 140 lb. DATE OF DRILLING 3/4/99
SURFACE ELEV. 50± DROP 30 in. WATER LEVEL None

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0						Clayey SILT (ML–CL) – Brown, moist, medium stiff to stiff, with sand.
			22	84	21	
						Stiff from 3 feet.
5			33	92	27	
			53	89	28	
10						
						SLIGHTLY WEATHERED BASALT (WS) – Gray, medium hard.
15						End boring at 15 feet.

Plate B1

BORING LOG

W.O. 99–3144

BORING NO. B2 (STA 26+00) DRIVING WT. 140 lb. DATE OF DRILLING 3/4/99
SURFACE ELEV. 63± DROP 30 in. WATER LEVEL None

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0			7	60	15	Clayey SILT (ML–CL) – Brown, moist, firm to medium stiff, with sand.
			20	77	20	
5			50	84	22	Stiff from 4 feet.
10						SLIGHTLY WEATHERED BASALT (WS) – Gray, medium hard. Begin NX coring at 9 feet. 100% Recovery from 9 to 14 feet. RQD = 20%
15						End boring at 14 feet.

Plate B2

BORING LOG

W.O. 99–3144

BORING NO. B3 (Near Hansen Rd.) DRIVING WT. 140 lb. DATE OF DRILLING 3/3/99
SURFACE ELEV. 70± DROP 30 in. WATER LEVEL None

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0			30	91	32	Clayey SILT (ML–CL) – Reddish brown, moist, stiff, with sand.
			18	82	40	Medium stiff to stiff from 3 feet.
5			22	80	42	
10						SLIGHTLY WEATHERED BASALT (WS) – Gray, hard. Begin NX coring at 9 feet. 90% Recovery from 9 to 14 feet. RQD = 72%
15						End boring at 14 feet.

Plate B3

BORING LOG

W.O. 99–3144

BORING NO. B4 (STA 35+00) DRIVING WT. 140 lb. DATE OF DRILLING 3/3/99
SURFACE ELEV. 71± DROP 30 in. WATER LEVEL None

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0						Clayey SILT (ML–CL) – Brown, moist, stiff, with sand.
			41	103	25	
5			22	83	39	Medium stiff to stiff at 4 feet.
			79	91	26	
10						SLIGHTLY WEATHERED BASALT (WS) – Gray, medium hard.
15						End boring at 13 feet.

Plate B4

BORING LOG

W.O. 99–3144

BORING NO. B5 (STA 44+00) DRIVING WT. 140 lb. DATE OF DRILLING 3/3/99
SURFACE ELEV. 75± DROP 30 in. WATER LEVEL None

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0			48	83	27	Clayey SILT (ML–CL) – Reddish brown, moist, stiff, with sand.
			30	91	27	
5			17	80	25	Medium stiff to stiff from 5 feet.
10			51	98	21	WEATHERED BASALT (WH–WM) – Mottled grayish brown, dense to medium hard.
			15/No Penetration			
15						End boring at 14 feet.

Plate B5

Note:

1. *Boring Logs and Locations Reproduced From the "Soils Investigation" Report for Puunene Avenue/Mokulele Highway Widening Project, Puunene, Maui, Hawaii for Sato & Associates, Inc., By Ernest K. Hirata & Associates, Inc., W.O. 99–3144, Dated October 1, 1999.*

2. *The Boring Logs Indicate the Approximate Subsurface Soil Conditions Encountered Only At Those Times and Locations Where Borings Were Made, and May Not Represent Conditions At Other Times and Locations.*

3. *The Boring Logs are for Design Purposes Only, and are Not Intended for Use in Developing Cost Estimates By The Contractor.*

DANIEL S. MIYASATO
LICENSED PROFESSIONAL ENGINEER
No. 3443–C
HAWAII U.S.A.

SATO & ASSOCIATES, INC.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

PUUNENE AVENUE WIDENING
Kuihelani Highway to Hansen Road
And
MOKULELE HIGHWAY WIDENING
Hansen Road to Vicinity of
Cane Haul Road Crossing
Federal – Aid Project No. NH–A311(3)

Scale: Not to Scale Date: October 2001

SHEET No. 1 OF 2 SHEETS

75

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

R:\maku-VE\BORING.DWG
JN: M9901.00
PLOT: 1=1
9/28/01

FED. ROAD DIST. NO.	STATE	FEDERAL – AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH–A311(3)	2002	76	159

BORING LOG

W.O. 99–3144

BORING NO. B6 (STA 53+50) DRIVING WT. 140 lb. DATE OF DRILLING 2/25/99
SURFACE ELEV. 79± DROP 30 in. WATER LEVEL None

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0						Clayey SILT (ML–CL) – Reddish brown, moist, medium stiff to stiff, with sand.
			9	87	31	
			22	93	27	
5			32	100	26	Stiff from 5 feet.
10			33	94	30	Mottled reddish brown color from 9 feet.
15			25	79	40	
						End boring at 15.5 feet.

Plate B6

BORING LOG

W.O. 99–3144

BORING NO. B7 (STA 59+00) DRIVING WT. 140 lb. DATE OF DRILLING 2/25/99
SURFACE ELEV. 81± DROP 30 in. WATER LEVEL None

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0						Clayey SILT (ML–CL) – Reddish brown, moist, stiff, with sand.
			40	90	23	
5			29	95	27	
10			21	87	36	
			40	85	39	WEATHERED BASALT (WC) – Mottled grayish brown, dense.
15						End boring at 14.5 feet.

Plate B7

BORING LOG

W.O. 99–3144

BORING NO. B8 (STA 67+50) DRIVING WT. 140 lb. DATE OF DRILLING 2/25/99
SURFACE ELEV. 84± DROP 30 in. WATER LEVEL None

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0			22	80	19	Clayey SILT (ML–CL) – Reddish brown, moist, medium stiff to stiff, with sand.
			12	88	21	
5			29	97	24	Silty CLAY (ML–CL) – Reddish brown, moist, stiff, with sand.
10			76	97	27	
15			63	82	30	
						End boring at 15.5 feet.

Plate B8

Note:

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

DANIEL S. MIYASATO LICENSED PROFESSIONAL ENGINEER No. 3443–C HAWAII U.S.A.

SATO & ASSOCIATES, INC.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

PUUNENE AVENUE WIDENING
Kuihelani Highway to Hansen Road
And
MOKULELE HIGHWAY WIDENING
Hansen Road to Vicinity of
Cane Haul Road Crossing
Federal – Aid Project No. NH–A311(3)

Scale: Not to Scale Date: October 2001

SHEET No. 2 OF 2 SHEETS

R:\moku-VE\BORING.DWG 9/26/01
JN: M9901.00
PLOT: 1=1