

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0380(10)	2013	105	166

BORING NO.	B1	DRIVING WT.	140 LB.	W.O.	88-1629.1		
SURFACE ELEV.	37±	DROP	30 IN.	DATE OF DRILLING	8-4-89		
				WATER LEVEL	NONE		
DEPTH (FEET)	GRAPH SYMBOL	UNIFIED SOIL CLASSIFICATION	BLOWS/FT.	DRY DENSITY (PCF.)	MOISTURE CONTENT %	RELATIVE COMPACTION %	DESCRIPTION
0		SM	86/6"	NO	RECOVERY		SILTY SAND - TAN, SLIGHTLY MOIST, DENSE WITH GRAVEL
5		ML	20	91	27		CLAYEY SILT - DARK BROWN, MOIST, STIFF WITH HIGHLY WEATHERED ROCK FRAGMENTS
10			46	84	32		END BORING AT 9.5 FEET
15							
20							
25							
30							

PLATE A1

BORING NO.	B2	DRIVING WT.	140 LB.	W.O.	88-1629.1		
SURFACE ELEV.	26±	DROP	30 IN.	DATE OF DRILLING	8-4-89		
				WATER LEVEL	NONE		
DEPTH (FEET)	GRAPH SYMBOL	UNIFIED SOIL CLASSIFICATION	BLOWS/FT.	DRY DENSITY (PCF.)	MOISTURE CONTENT %	RELATIVE COMPACTION %	DESCRIPTION
0		ML					CLAYEY SILT - REDDISH BROWN, MOIST, STIFF WITH GRAVEL
5			26	94	22		GRADING TO DARK BROWN COLOR AT 3 FEET
10			75/11"	89	32		
15			73	86	32		END BORING AT 10.5 FEET
20							
25							
30							

PLATE A2

BORING NO.	B3	DRIVING WT.	140 LB.	W.O.	88-1629.1		
SURFACE ELEV.	18±	DROP	30 IN.	DATE OF DRILLING	8-23-89		
				WATER LEVEL	NONE		
DEPTH (FEET)	GRAPH SYMBOL	UNIFIED SOIL CLASSIFICATION	BLOWS/FT.	DRY DENSITY (PCF.)	MOISTURE CONTENT %	RELATIVE COMPACTION %	DESCRIPTION
0		ML					CLAYEY SILT - REDDISH BROWN, MOIST, MEDIUM STIFF TO STIFF
5			13	77	41		
10			29	93	30		
15			13	88	34		
20							END BORING AT 10.5 FEET
25							
30							

PLATE A3

BORING NO.	B4	DRIVING WT.	140 LB.	W.O.	88-1629.1		
SURFACE ELEV.	19±	DROP	30 IN.	DATE OF DRILLING	8-23-89		
				WATER LEVEL	NONE		
DEPTH (FEET)	GRAPH SYMBOL	UNIFIED SOIL CLASSIFICATION	BLOWS/FT.	DRY DENSITY (PCF.)	MOISTURE CONTENT %	RELATIVE COMPACTION %	DESCRIPTION
0		ML	44	76	21		CLAYEY SILT - REDDISH BROWN, MOIST, MEDIUM STIFF TO STIFF
5			20	83	38		
10			48	92	31		GRADING TO MOTTLED GRAY COLOR FROM 9 FEET
15							END BORING AT 10 FEET
20							
25							
30							

PLATE A4

BORING NO.	B5	DRIVING WT.	140 LB.	W.O.	88-1629.1		
SURFACE ELEV.	23±	DROP	30 IN.	DATE OF DRILLING	10-20-89		
				WATER LEVEL	NONE		
DEPTH (FEET)	GRAPH SYMBOL	UNIFIED SOIL CLASSIFICATION	BLOWS/FT.	DRY DENSITY (PCF.)	MOISTURE CONTENT %	RELATIVE COMPACTION %	DESCRIPTION
0		ML	65	100	27		CLAYEY SILT - REDDISH BROWN TO BROWN, MOIST, STIFF
5							BASALT - GRAY, MEDIUM HARD
							END BORING AT 5 FEET
10							
15							
20							
25							
30							

PLATE A5

BORING LOG NOTES:

1. THE INFORMATION SHOWN IN THE BORING LOGS WERE OBTAINED FOR THE USE OF THE ENGINEER.
2. THE ENGINEER WILL NOT BE HELD RESPONSIBLE IF THE INFORMATION IS FOUND ERRONEOUS AND/OR DOES NOT INDICATE TRUE CONDITION.
3. NO GUARANTEE IS GIVEN AS TO THE CHARACTER OF THE MATERIAL ENCOUNTERED IN ANY BORING NOR IS ANY GUARANTEE GIVEN THAT THE BORING REPRESENTS THE TRUE CHARACTER OF THE MATERIAL WHICH WILL BE ENCOUNTERED DURING CONSTRUCTION.
4. THE BORING LOGS INDICATE THE APPROXIMATE SUBSURFACE CONDITIONS ENCOUNTERED ONLY AT THE TIME AND LOCATION OF THE BORING, AND MAY NOT REPRESENT CONDITIONS AT OTHER TIMES AND LOCATIONS.
5. THE FOLLOWING GEOTECHNICAL REPORTS ARE AVAILABLE FOR CONTRACTOR TO REVIEW AND DRAW HIS OWN CONCLUSIONS:
 - a. SOILS INVESTIGATION REPORT, KAHULUI AIRPORT ACCESS ROAD PREPARED BY ERNEST K. HIRATA AND ASSOCIATES, INC. DATED NOVEMBER 29, 1989.
 - b. SOIL PROBE HOLES REPORT, KAHULUI AIRPORT ACCESS ROAD PREPARED BY ERNEST K. HIRATA AND ASSOCIATES, INC. DATED APRIL 12, 2001.
 - c. PAVEMENT DESIGN REPORT, KAHULUI AIRPORT ACCESS ROAD PREPARED BY ERNEST K. HIRATA AND ASSOCIATES, INC. DATED JULY 31, 2001.

BORING NO.	B6	DRIVING WT.	140 LB.	W.O.	88-1629.1
SURFACE ELEV.	20±	DROP	30 IN.	DATE OF DRILLING	8-23-89
				WATER LEVEL	NONE

DEPTH (FEET)	GRAPH SYMBOL	UNIFIED SOIL CLASSIFICATION	BLOWS/FT.	DRY DENSITY (PCF.)	MOISTURE CONTENT %	RELATIVE COMPACTION %	DESCRIPTION
0		ML	22	89	34		CLAYEY SILT - REDDISH BROWN, MOIST, STIFF
5							BASALT - GRAY MEDIUM HARD BEGIN NX CORING FROM 5 FEET 87% RECOVERY FROM 5 FEET TO 10 FEET RQD = 78%
10							100% RECOVERY FROM 10 FEET TO 15 FEET RQD = 15% WEATHERED BASALT FROM 10 FEET
15							100% RECOVERY FROM 15 FEET TO 19 FEET RQD = 100%
20							END BORING AT 19 FEET
25							
30							

PLATE A6

BORING NO.	B7	DRIVING WT.	140 LB.	W.O.	88-1629.1		
SURFACE ELEV.	22±	DROP	30 IN.	DATE OF DRILLING	10-22-89		
				WATER LEVEL	NONE		
DEPTH (FEET)	GRAPH SYMBOL	UNIFIED SOIL CLASSIFICATION	BLOWS/FT.	DRY DENSITY (PCF.)	MOISTURE CONTENT %	RELATIVE COMPACTION %	DESCRIPTION
0		ML					CLAYEY SILT - REDDISH BROWN, MOIST, STIFF
			33	102	28		
5			53	88	36		
			50/1"	NO PENETRATION			BASALT - GRAY, MEDIUM HARD
10							END BORING AT 9 FEET
15							
20							
25							
30							

PLATE A7

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
No.	

DRAWING NAME: C:\PROJECTS\KAHULUI-2011\PLANS\25-BORINGS\C-92.DWG PLOT TIME: 02-22-13, 3:31 PM



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FUMUNAGA & ASSOCIATES, INC. APRIL 30, 2014
LIC. EXP. DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
BORING LOGS
KAHULUI AIRPORT ACCESS ROAD, PHASE I
Federal Aid Project No. NH-0380(10)
Scale: As Shown Date: February 2013
SHEET No. C-92 OF 93 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0380(10)	2013	106	166

BORING NO.	B8	DRIVING WT.	140 LB.	W.O.	88-1629.1		
SURFACE ELEV.	27±	DROP	30 IN.	DATE OF DRILLING	8-24-89		
				WATER LEVEL	NONE		
DEPTH (FEET)	GRAPH SYMBOL	UNIFIED SOIL CLASSIFICATION	BLOWS/FT.	DRY DENSITY (PCF.)	MOISTURE CONTENT %	RELATIVE COMPACTION %	DESCRIPTION
0		ML					CLAYEY SILT - REDDISH BROWN, MOIST, MEDIUM STIFF TO STIFF
5			13	77	41		
			29	93	30		
10			60/6"	81	34		BASALT - MOTTLED GRAY, DENSE TO MEDIUM HARD VESICULAR GRADING TO LIGHT GRAY COLOR AND MEDIUM HARD FROM 10 FEET
15							BEGIN NX CORING FROM 14 FEET 100% RECOVERY FROM 14 FEET TO 19 FEET RQD = 90%
20							END BORING AT 19 FEET
25							
30							

PLATE A8

PLATE A8

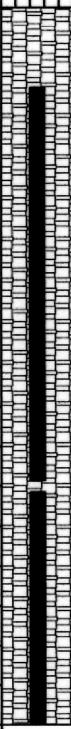
BORING NO.	B9	DRIVING WT.	140 LB.	W.O.	88-1629.1		
SURFACE ELEV.	15±	DROP	30 IN.	DATE OF DRILLING	4-20-89		
				WATER LEVEL	13 FT.		
DEPTH (FEET)	GRAPH SYMBOL	UNIFIED SOIL CLASSIFICATION	BLOWS/FT.	DRY DENSITY (PCF.)	MOISTURE CONTENT %	RELATIVE COMPACTION %	DESCRIPTION
0		ML					CLAYEY SILT - REDDISH BROWN, MOIST, MEDIUM STIFF
3			34/11"	88	31		BOULDER AT 3 FEET
5			21	88	36		
10			51	81	37		GRADING TO MOTTLE ORANGE AND GRAYISH BROWN COLOR FROM 9 FEET (WEATHERED ROCK)
14							BASALT - GRAY, HARD, VESICULAR
15							BEGIN NX CORING FROM 14 FEET 96% RECOVERY FROM 14 FEET TO 24 FEET ROD = 86% WEATHERED SEAM AT 19 FEET
20							
25							92% RECOVERY FROM 24 FEET TO 30 FEET ROD = 17% WEATHERED SEAM AT 25.5 FEET
30							END BORING AT 30 FEET

PLATE A

PLATE A9

BORING NO.	B11	DRIVING WT.	140 LB.	W.O.	88-1629.1		
SURFACE ELEV.	17±	DROP	30 IN.	DATE OF DRILLING	10-2-89		
				WATER LEVEL	12.9 FT		
DEPTH (FEET)	GRAPH SYMBOL	UNIFIED SOIL CLASSIFICATION	BLOWS/FT.	DRY DENSITY (PCF.)	MOISTURE CONTENT %	RELATIVE COMPACTION %	DESCRIPTION
0		ML					
			28	75	42		CLAYEY SILT - REDDISH BROWN, MOIST, STIFF
5			56	91	31		
			29	90	38		
10							GRADING TO MOTTLE GRAYISH BROWN COLOR AND SANDY FROM 8 FEET (WEATHERED ROCK)
15							
							BASALT - GRAY, HARD TO MEDIUM HARD VESICULAR
20							BEGIN NX CORING FROM 16 FEET 93% RECOVERY FROM 16 FEET TO 26 FEET RQD = 45%
25							SLIGHTLY WEATHERED FROM 24 FEET 90% RECOVERY FROM 26 FEET TO 32 FEET RQD = 60%
30							END BORING AT 32 FEET

PLATE A11

PLATE A11

BORING NO.	B13	DRIVING WT.	140 LB.	W.O.	88-1629.1		
SURFACE ELEV.	27±	DROP	30 IN.	DATE OF DRILLING	8-24-89		
				WATER LEVEL	NONE		
DEPTH (FEET)	GRAPH SYMBOL	UNIFIED SOIL CLASSIFICATION	BLOWS/FT.	DRY DENSITY (PCF.)	MOISTURE CONTENT %	RELATIVE COMPACTION %	DESCRIPTION
0		ML					CLAYEY SILT - REDDISH BROWN, MOIST, MEDIUM STIFF TO STIFF
13			13	77	41		
29			29	93	30		
11							BASALT - GRAY, MEDIUM HARD, SLIGHTLY WEATHERED BEGIN NX CORING FROM 11 FEET 100% RECOVERY FROM 11 FEET TO 19.5 FEET RQD = 50%
19.5							
20							END BORING AT 19.5 FEET
25							
30							

PLATE A15

PLATE A15

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

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FUKUNAGA & ASSOCIATES, INC. APRIL 30, 2014 L.C. EXP. DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
BORING LOGS
KAHULUI AIRPORT ACCESS ROAD, PHASE I Federal Aid Project No. NH-0380(10) Scale: As Shown Date: February 2013
SHEET No. C-93 OF 93 SHEETS