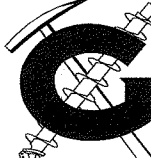





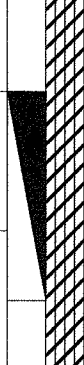
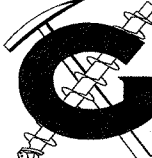






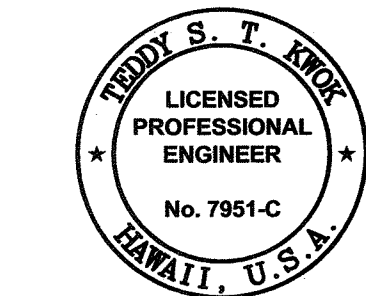


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(60)	2007	40	90

		GEOLABS, INC. Geotechnical Engineering						KAHEKILI HIGHWAY INTERSECTION IMPROVEMENTS KOOLAUPOKO, OAHU, HAWAII				Log of Boring 1	
Other Tests	Moisture Content (%)	Dry Unit Weight (pcf)	Core Recovery (%)	RQD (%)	Penetration Resistance (blows/foot)	Pocket Pen. (tsf)	Depth (feet)	Sample Graphic	USCS	Approximate Ground Surface Elevation (feet MSL): 92.5 *			
										Description			
LL=88 PI=57	44	78			27	3.8			GM	4-inch ASPHALTIC CONCRETE			
									CH	Tan SILTY CORALLINE GRAVEL with sand, medium dense, damp (base course)			
	48				11	2.0				Brown SILTY CLAY with some highly weathered basaltic gravel, stiff to very stiff, moist (fill) grades with some organic matter (strong odor) at 2 feet  grades to stiff, very moist			
	59	60			7	0.5	5			grades to brown with multi-color mottling, soft			
	70				3	0.0	10		CL	Gray with multi-color mottling SILTY CLAY with traces of highly weathered basaltic gravel, very soft, very moist (recent alluvium)			
	64	60			9		15		MH	Reddish brown with gray mottling CLAYEY SILT with traces of extremely weathered basaltic gravel, medium stiff, very moist (old alluvium)			
										Boring terminated at 16.5 feet			
										* Elevations estimated from Topographic Map transmitted by KN Consulting Services, Inc. on December 9, 2004.			
20													
Date Started: October 30, 2004								Water Level: ∇ 11 ft. 10/30/04 1008 HRS					
Date Completed: October 30, 2004													
Logged By: E. Shinsato								Drill Rig: MOBILE B-80					
Total Depth: 16.5 feet								Drilling Method: 4" Auger					
Work Order: 5280-00(A)								Driving Energy: 140 lb. wt., 30 in. drop					

		GEOLABS, INC. Geotechnical Engineering						KAHEKILI HIGHWAY INTERSECTION IMPROVEMENTS KOOLAUPOKO, OAHU, HAWAII				Log of Boring 2	
Other Tests	Moisture Content (%)	Dry Unit Weight (pcf)	Core Recovery (%)	RQD (%)	Penetration Resistance (blows/foot)	Pocket Pen. (tsf)	Depth (feet)	Sample Graphic	USCS	Approximate Ground Surface Elevation (feet MSL): 107 *			
										Description			
	47	74			23	3.0			GM	3-inch ASPHALTIC CONCRETE			
									CH	Tan SILTY CORALLINE GRAVEL with sand, medium dense, damp (base course)			
	54				8	2.0				Dark reddish brown SILTY CLAY with some highly weathered basaltic gravel, stiff to very stiff, moist to very moist (fill)			
										grades to stiff, very moist			
	52	67			12	0.5	5		MH	Dark grayish brown with multi-color mottling CLAYEY SILT with some highly weathered basaltic gravel and organic matter, medium stiff, very moist (fill)			
	116				3	0.3	10		OL	Dark gray ORGANIC SILT with traces of basaltic gravel and decomposed roots, very soft, very moist (recent alluvium)			
	63	63			9	0.5	15		CH	Brown with orange mottling SILTY CLAY with traces of extremely weathered basaltic gravel, soft (old alluvium)			
										Boring terminated at 16.5 feet			

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



Teddy S. T. Knox  
SIGNATURE

4-30-08  
EXPIRATION DATE OF LICENSE

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION








GEOLABS, INC.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**BORING LOGS**  
KAHEKILI HIGHWAY INTERSECTION IMPROVEMENTS  
VICINITY OF HUI IWA STREET  
FEDERAL-AID PROJECT NO. NH-083-1(60)

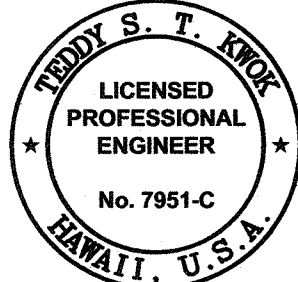
DATE: April 2007

SHEET No. C-38 OF 90 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(60)	2007	41	90

		GEOLABS, INC. Geotechnical Engineering		KAHEKILI HIGHWAY INTERSECTION IMPROVEMENTS KOOLAUPOKO, OAHU, HAWAII				Log of Boring 3		
Other Tests	Moisture Content (%)	Dry Unit Weight (pcf)	Core Recovery (%)	RQD (%)	Penetration Resistance (blows/foot)	Pocket Pen. (tsf)	Depth (feet)	Sample Graphic	USCS	Approximate Ground Surface Elevation (feet MSL): 139 *
	Description									
	51	71			29				CH	Brown SILTY CLAY with some basaltic gravel, stiff, moist (fill)
	50				12	3.0			CH	Reddish brown with multi-color mottling SILTY CLAY with traces of highly weathered basaltic gravel, stiff to very stiff, moist
	49	71			36		5			
	53				8	1.3	10			
	53	69			25		15		OH	Dark gray ORGANIC SILTY CLAY with traces of basaltic gravel and decomposed roots, medium stiff, very moist
									CH	Reddish brown with multi-color mottling SILTY CLAY with some highly weathered basaltic gravel, stiff to very stiff, moist (old alluvium)
										Boring terminated at 16.5 feet
							20			
Date Started: October 30, 2004				Water Level: $\nabla$ Not Encountered						
Date Completed: October 30, 2004										
Logged By: E. Shinsato				Drill Rig: MOBILE B-80						
Total Depth: 16.5 feet				Drilling Method: 4" Auger						
Work Order: 5280-00(A)				Driving Energy: 140 lb. wt., 30 in. drop						

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



*Freddy S. T. Kook*  
SIGNATURE

4-30-08  
EXPIRATION DATE OF LICENSE

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

GEOLABS, INC.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**BORING LOGS**

KAHEKILI HIGHWAY INTERSECTION IMPROVEMENTS  
VICINITY OF HUI IWA STREET  
FEDERAL-AID PROJECT NO. NH-083-1(60)

DATE: April 2007

**SHEET No. C-39 OF 90 SHEETS**