

LOGGED BY R. Chew	BEGIN DATE 12-27-07	COMPLETION DATE 12-27-07	BOREHOLE LOCATION (Lat/Long or North/East and Datum) N2120828.269 / E5997724.382 (NAD83)	HOLE ID DSB-R7
DRILLING CONTRACTOR Gregg Drilling and Testing, Inc.		BOREHOLE LOCATION (Offset, Station, Line) Offset 38ft L Sta 48+85 SB Alignment		SURFACE ELEVATION 11.009 ft (NAVD88)
DRILLING METHOD Mud Rotary		DRILL RIG Fraste Multi-drill (truck)		BOREHOLE DIAMETER 5 in. (soil); 4 in. (rock)
SAMPLER TYPE(S) AND SIZE(S) (ID) MC (2.4"), SPT (1.4"), D&M Piston (2.4"), HQ Core		SPT HAMMER TYPE Automatic, 140 lbs., 30-inch drop		HAMMER EFFICIENCY, ERI 76.2%
BOREHOLE BACKFILL AND COMPLETION Neat Cement Grout backfill		GROUNDWATER DURING DRILLING AFTER DRILLING (DATE) READINGS		TOTAL DEPTH OF BORING 92 ft

ELEVATION (ft)	DEPTH (ft)	Material Graphics	Description	Sample Location	Sample Number	Blows per 6 In	Blows per Foot	Recovery (%)	RQD (%)	Moisture Content (%)	Dry Unit Weight (pcf)	Shear Strength (tsf)	Drilling Method	Casing Depth	Remarks
0	0		4" ASPHALT CONCRETE												
1	1		8" AGGREGATE BASE MATERIAL												
9.01	2		Poorly graded SAND (SP), medium dense, dark gray, very moist, fine, trace shell fragments and fine to coarse GRAVEL, GRAVEL is subangular, trace CLAY. [FILL]		S1	10 15 11	26	22							PID= 0.1 ppm
7.01	4		Grades without GRAVEL.		S2	4 5 5	10	100				PP = 1.5			
5.01	5		Lean CLAY with SAND (CL), stiff, gray, very moist, SAND is fine, sulfur odor. [BAY MUD]												
5.01	6		Grades to SANDY lean CLAY.		U3		25	33							
3.01	7		Fat CLAY (CH), gray, very moist, with decayed vegetation, trace fine SAND, black specks.		U4		25	78				TV = 0.15, 0.25			
1.01	8				U4		25	78							
1.01	10				S5	0 0 0	0	100							
1.01	11		Grades to fat CLAY with SAND.		U6		50	83							
1.01	12				U7		55	100				TV = 0.15, 0.25			
-2.99	13		CLAYEY SAND (SC), medium dense, gray, wet, fine to medium, with SANDY CLAY lenses, trace shell fragments (up to 1/16" diameter). [MARINE SAND]												
-4.99	14				U7		55	100							
-4.99	16		Poorly graded SAND (SP), medium dense, gray, wet, fine, trace shell fragments (up to 1/16" diameter).		S8	9 14 17	31	78							
-6.99	17		Poorly graded SAND with CLAY (SP-SC), medium dense, gray to dark gray, wet, fine to medium, trace shell fragments (up to 1/4" diameter).		S9	3 4 8	12	100							
-8.99	20		Poorly graded SAND (SP), medium dense, gray, wet, fine, with abundant shell fragments (up to 1/16" diameter).		S10	10 9 5	14	56							
-10.99	22				S11	1 1 12	13	100							
-12.99	23		CLAYEY SAND (SP-SC), medium dense, grayish brown, wet, fine, with SANDY fat CLAY lenses.												
	24														
	25														

(continued)

CALTRANS FORMAT DOYLEDRIVE\_ARUPLOGS\_11-2-08.GPJ ARUP LIBRARY CALTRANS FORMAT.GLB 11/3/08



Department of Transportation  
Division of Engineering Services  
Geotechnical Services

REPORT TITLE BORING RECORD				HOLE ID DSB-R7
DIST. 4	COUNTY S.F.	ROUTE 101	POSTMILE 8.3/9.4	EA 163701
PROJECT OR BRIDGE NAME Doyle Drive Replacement Project				
BRIDGE NUMBER 34-164L	PREPARED BY T. Carroll	DATE 11-3-08	SHEET 1 of 4	

Figure

ELEVATION (ft)	DEPTH (ft)	Material Graphics	Description	Sample Location	Sample Number	Blows per 6 in	Blows per Foot	Recovery (%)	RQD (%)	Moisture Content (%)	Dry Unit Weight (pcf)	Shear Strength (tsf)	Drilling Method	Casing Depth	Remarks
-14.99	25				S12	12 19 19	38	100							
	26		Poorly graded SAND (SP), medium dense, yellowish brown, moist, fine to medium. [COLMA SAND]												
-16.99	27				S13	5 8 17	25	100							
	28		Poorly graded SAND with CLAY (SP-SC), medium dense, light yellowish brown, fine to medium, with iron-oxide staining, dark gray streaks.												
	29														
-18.99	30				S14	27 40 50/ 5.5"	90/11.5	86							
	31		Poorly graded SAND (SP), dense, yellowish brown, moist, fine, trace CLAY, with iron-oxide staining.												
-20.99	32				S15	12 32 42	74	100							
	33		31.5' grades dark yellowish brown. Poorly graded SAND with CLAY (SP-SC), very dense, dark yellowish brown, wet, fine, slight iron-oxide stained streaks.												
-22.99	34														
	35		Poorly graded SAND (SP), very dense, dark yellowish brown, very moist to wet, fine, slight iron-oxide stained streaks, trace CLAY.		S16	15 36 39	75	89							
-24.99	36														
	37				S17	12 25 35	60	0							
-26.99	38														
	39														
-28.99	40				S18	26 50/6"	50/6"	83							
	41														
-30.99	42				S19	16 22 33	55	67							
	43		42.0' - 42.5', very thin seams (<1/4") of CLAYEY SAND.												
-32.99	44														
	45				S20	22 36 39	75	89							
-34.99	46														
	47				S21	11 30 43	73	100							
-36.99	48		47.0' - 47.5', lenses of orange brown CLAYEY SAND.												
	49														
-38.99	50				S22	36 50/6"	50/6"	67							
	51														
-40.99	52				S23	13 25 28	53	67							
	53		51.6' - 52.0', iron-oxide stained lenses. Poorly graded SAND with CLAY (SP-SC), very dense, dark yellowish brown, very moist, very fine.												
-42.99	54														
	55														

(continued)

CALTRANS FORMAT DOYLEDRIVE\_ARUPLOGS\_11-2-08.GPJ ARUP LIBRARY CALTRANS FORMAT GLB 11/3/08



Department of Transportation  
Division of Engineering Services  
Geotechnical Services

REPORT TITLE <b>BORING RECORD</b>				HOLE ID DSB-R7	
DIST. 4	COUNTY S.F.	ROUTE 101	POSTMILE 8.3/9.4	EA 163701	
PROJECT OR BRIDGE NAME Doyle Drive Replacement Project					
BRIDGE NUMBER 34-164L		PREPARED BY T. Carroll		DATE 11-3-08	SHEET 2 of 4

Figure

ELEVATION (ft)	DEPTH (ft)	Material Graphics	Description	Sample Location	Sample Number	Blows per 6 In	Blows per Foot	Recovery (%)	RQD (%)	Moisture Content (%)	Dry Unit Weight (pcf)	Shear Strength (tsf)	Drilling Method	Casing Depth	Remarks
-44.99	56		Poorly graded SAND with CLAY (SP-SC), very dense, dark yellowish brown, very moist, very fine. Grades olive gray, increase in fines content.	S24	18 30 35	65	83								
-46.99	58														
-48.99	60		CLAYEY SAND (SC), medium dense, olive gray, wet, fine to very fine, with lenses of SANDY CLAY.	S25	11 12 19	31	67								PID= 0.1 ppm
-50.99	62														
-52.99	64														
-54.99	66		Grades to light olive gray.	S26	21 36 40	76	83								
-56.99	68		Lean CLAY with SAND (CL), medium stiff, light olive gray, very moist, with abundant shells (up to 1/2" diameter), SAND is fine. [OLD BAY CLAY]												
-58.99	70														
-60.99	72		CLAYEY SAND with GRAVEL (SC), medium dense, olive brown, very moist, fine to medium, GRAVEL is fine, subrounded, with shell fragments (up to 1/16" diameter), black specks. [ALLUVIUM]	S27	8 11 16	27	100								
-62.99	74														
-64.99	76		SEDIMENTARY ROCK (Sandstone "Wacke"), orangish yellow, very intensely weathered, very soft, with light gray SANDY CLAY infilling, with black streaks. [BEDROCK]	S28	60/6"	60/6"	100								
-66.99	78		Fine to medium grained, yellowish brown, moderately weathered, moderately hard, moderately fractured, fractures primarily subhorizontal at 81.15', 81.4', and 84.0'. 77.5' - 77.9', possible leaching resulting in friable matrix.	C29 C30			100 91	0 2/4.5'							C29 sample in bag
-68.99	80														
-70.99	82														
-72.99	84		82.5', polished fracture surfaces, with precipitate and/or clay gouge, fine grained.	C31 C32			0 100	0 70							Very slow run due to fluid mixing C31 was run only 6" before core bit plugged and needed to be pulled
	85		84.2' - 86.3', intensely fractured.												

(continued)



Department of Transportation  
Division of Engineering Services  
Geotechnical Services

REPORT TITLE <b>BORING RECORD</b>				HOLE ID <b>DSB-R7</b>	
DIST. <b>4</b>	COUNTY <b>S.F.</b>	ROUTE <b>101</b>	POSTMILE <b>8.3/9.4</b>	EA <b>163701</b>	
PROJECT OR BRIDGE NAME <b>Doyle Drive Replacement Project</b>					
BRIDGE NUMBER <b>34-164L</b>		PREPARED BY <b>T. Carroll</b>		DATE <b>11-3-08</b>	SHEET <b>3 of 4</b>

Figure

ELEVATION (ft)	DEPTH (ft)	Material Graphics	Description	Sample Location	Sample Number	Blows per 6 In	Blows per Foot	Recovery (%)	RQD (%)	Moisture Content (%)	Dry Unit Weight (pcf)	Shear Strength (tsf)	Drilling Method	Casing Depth	Remarks
85															
-74.99	86	•••••	SEDIMENTARY ROCK (Sandstone "Wacke"), orangish yellow, very intensely weathered, very soft, with light gray SANDY CLAY infilling, with black streaks. [BEDROCK]										◇◇◇◇◇		C31 sample in bag
	87	•••••											◇◇◇◇◇		
-76.99	88	•••••		C33				96	59				◇◇◇◇◇		
	89	•••••											◇◇◇◇◇		
-78.99	90	•••••	89.1' - 89.4', possible leaching resulting in friable matrix. 89.3' - 90.2', healed, intensely fractured zone.										◇◇◇◇◇		
	91	•••••	90.2' - 90.4', very intensely fractured.										◇◇◇◇◇		
-80.99	92	•••••	91.6' - 91.8', very intensely fractured.										◇◇◇◇◇		
	93		Borehole terminated at a depth of 92 feet on 12/27/2007.												
-82.99	94		See Boring Record Legend for soil classification chart and key to test data and sampler type.												
	95														
-84.99	96														
	97														
-86.99	98														
	99														
-88.99	100														
	101														
-90.99	102														
	103														
-92.99	104														
	105														
-94.99	106														
	107														
-96.99	108														
	109														
-98.99	110														
	111														
-100.99	112														
	113														
-102.99	114														
	115														



Department of Transportation  
Division of Engineering Services  
Geotechnical Services

REPORT TITLE <b>BORING RECORD</b>				HOLE ID DSB-R7
DIST. 4	COUNTY S.F.	ROUTE 101	POSTMILE 8.3/9.4	EA 163701
PROJECT OR BRIDGE NAME Doyle Drive Replacement Project				
BRIDGE NUMBER 34-164L	PREPARED BY T. Carroll	DATE 11-3-08	SHEET 4 of 4	

**Figure**