LOGGED BY	BEGIN DATE	COMPLETION DATE	BOREHOLE LOCATION (Lat/Long or North/East and Datum)	HOLE ID
S. McLandrich	12-19-07	12-20-07	N2120785.495 / E5997339.439 (NAD83)	DSB-R1
DRILLING CONTRACTOR			BOREHOLE LOCATION (Offset, Station, Line)	SURFACE ELEVATION
Gregg Drilling and Testing, Inc.			Offset 17ft L Sta 52+6 SB Alignment	10.911 ft (NAVD88)
DRILLING METHOD			DRILL RIG	BOREHOLE DIAMETER
Mud Rotary			Failing 1500	5 in.
SAMPLER TYPE(S) AND SIZE(S) (ID)			SPT HAMMER TYPE	HAMMER EFFICIENCY, ERi
MC (2.4"), SPT (1.4"), Grab, Shelby (2.87"), Pitcher (2.87")			Automatic, 140 lbs., 30-inch drop	72.8%
BOREHOLE BACKFILL AND COMPLETION			GROUNDWATER READINGS DURING DRILLING AFTER DRILLING (DATE)	TOTAL DEPTH OF BORING
Neat Cement Grout backfill				129 ft

ELEVATION (ft)	DEPTH (ft)	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	Lean CLAY with GRAVEL, soft, dark reddish brown, moist, GRAVEL is fine to coarse, angular. [FILL]		S1										
8.91	2			S2	1 1 1	2	100							
	3	Grades with pockets of dark greenish gray fat CLAY.												
6.91	4			S3	0 0 0	0	100							Nail found in sample at 3.5'
	5													
4.91	6	Poorly graded SAND (SP), yellowish brown, fine.												
	7			S4	0 1 2	3	100							
2.91	8	Organic SOIL with SAND (OL), soft, dark brown, with pieces of decomposed wood. [BAY MUD]												
	9	Fat CLAY (CH), soft to medium stiff, bluish gray, moist, with brown mottling.		U5		50 psi	50				PP = 0.163			
0.91	10	Poorly graded SAND with CLAY (SP-SC), dark bluish gray, fine to medium. [MARINE SAND]												
	11													
-1.09	12													
	13	Grades loose with lenses of lean CLAY with pieces of decomposed wood.		S6	0 1 3	4	78							
-3.09	14	13.5' - 14.0', CLAYEY zone.		S7	3 9 10	19	78							
-5.09	16													
	17			S8	5 4 2	6	67							
-7.09	18	Fat CLAY (CH), soft, bluish gray, wet, with trace SAND. [BAY MUD]												
	19	Poorly graded CLAYEY SAND (SC), olive brown, wet, fine to medium. [MARINE SAND]		S9	0 0 4	4	100							
-9.09	20													
	21	Poorly graded SAND (SP), dense, dark yellowish brown, wet, fine, with trace fines, with horizontal iron-oxidized staining. [COLMA SAND]												
-11.09	22													
	23			S10	15 25 43	68	100							
-13.09	24			S11		42	100							
	25													

(continued)

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Division of Engineering Services
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REPORT TITLE				HOLE ID
BORING RECORD				DSB-R1
DIST.	COUNTY	ROUTE	POSTMILE	EA
4	S.F.	101	8.3/9.4	163701
PROJECT OR BRIDGE NAME				
Doyle Drive Replacement Project				
BRIDGE NUMBER	PREPARED BY	DATE	SHEET	
34-164L	T. Carroll	11-3-08	1 of 5	

Figure

CALTRANS FORMAT DOYLEDRIVE_ARUPLOGS_11-2-08.GPJ ARUP LIBRARY_CALTRANS FORMAT.GLB 11/3/08

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
	25		Poorly graded SAND (SP), dense, dark yellowish brown, wet, fine, with trace fines, with horizontal iron-oxidized staining. [COLMA SAND] 25.0', grades olive brown, grades with medium SAND.			10 18 24									
-15.09	26														
	27														
-17.09	28				S12	25 50/6"	50/6"	100							
	29		29.2' - 29.4', heavily oxidized zone, SAND grades fine.		S13	8 20 34	54	100							
-19.09	30														
	31														
-21.09	32														
	33				S14	21 50/6"	50/6"	100							
-23.09	34				S15	14 19 31	50	100							
	35														
-25.09	36														
	37														
-27.09	38				S16	27 50/6"	50/6"	100							
	39		Grades very dense.		S17	17 36 44	80	100							
-29.09	40														
	41														
-31.09	42														
	43		Grades dark grayish brown and very fine.		S18	24 50/6"	50/6"	100							
-33.09	44		44.2' - 44.3', light olive brown CLAY lense with iron-oxidation above and below.		S19	16 14 29	43	100							
	45														
-35.09	46														
	47														
-37.09	48				S20	33 50/6"	50/6"	100							
	49		Poorly graded SAND with CLAY (SP-SC), grayish brown and reddish brown, wet, fine, with iron-oxide staining.		S21	7 11 15	26	100							
-39.09	50														
	51														
-41.09	52														
	53				S22	17 29 31	60	100							
-43.09	54														
	55														

(continued)

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REPORT TITLE				HOLE ID
BORING RECORD				DSB-R1
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 5	

Figure

CALTRANS FORMAT DOYLEDRIVE_ARUPLOGS_11-2-08.GPJ ARUP LIBRARY_CALTRANS FORMAT.GLB 11/3/08

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
	55		Poorly graded SAND with CLAY (SP-SC), grayish brown and reddish brown, wet, fine, with iron-oxide staining.												
-45.09	56		Poorly graded SAND (SP), bluish gray, wet, very fine, very dense, trace fines.												
	57														
-47.09	58				S23	18 25 34	59	100							
	59														
-49.09	60														
	61														
-51.09	62		Poorly graded SAND with CLAY (SP-SC), very dense, bluish gray, wet, fine.												
	63				S24	18 28 33	61	100							
-53.09	64														
	65														
-55.09	66														
	67														
-57.09	68		Poorly graded SAND (SP), bluish gray, wet, fine, with CLAY lenses and black specks (carbon).		S25	35 28 50/4"	78/4"	100							
	69														
-59.09	70														
	71		CLAYEY SAND (SC), bluish gray, moist, very fine, with decomposed plant material.												
-61.09	72														
	73				S26	11 18 26	44	100							
-63.09	74														
	75		Lean CLAY (CL), very stiff, bluish gray, moist, with trace SILT. [OLD BAY CLAY]												
-65.09	76														
	77														
-67.09	78				U27		125 psi	100							
	79														
-69.09	80											PP = 2.0			
	81														
-71.09	82														
	83				U28		100 psi	100							
-73.09	84		Grades to SANDY Lean CLAY with shell fragments and lenses of CLAYEY SAND.												
	85														

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BORING RECORD				DSB-R1
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PROJECT OR BRIDGE NAME Doyle Drive Replacement Project				
BRIDGE NUMBER 34-164L	PREPARED BY T. Carroll	DATE 11-3-08	SHEET 3 of 5	

Figure

CALTRANS FORMAT DOYLEDRIVE_ARUPLOGS_11-2-08.GPJ ARUP LIBRARY CALTRANS FORMAT.GLB 11/3/08

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		Lean CLAY (CL), very stiff, bluish gray, moist, with trace SILT. [OLD BAY CLAY]												
-75.09	86														
	87														
-77.09	88		Grades to lean CLAY with lenses of CLAYEY SAND, with shell fragments.		S29	5 8 11	19	100							PID= 1.5 ppm
	89														
-79.09	90														
	91														
-81.09	92														
	93														
-83.09	94														
	95		SANDY CLAY, brown (based on cuttings). [ALLUVIUM]												Driller reports change in drilling at 95'
-85.09	96														
	97														
-87.09	98		SILTY SAND (SM), very stiff, yellowish brown, with olive brown mottling, SAND is fine to moist, with reddish brown SILT lense at 98.7' to 99.2', with black specks.		S30	27 50/5"	50/5"	100							
	99														Unit appears to be interbedded sands and silt by observation of drill cuttings
-89.09	100														
	101														PID= 1.6 ppm
-91.09	102		Driller reports a change to SAND at 102.0'.												
	103		SANDY SILT (ML), reddish brown, moist, with lenses of light gray CLAY.												Driller reports silt and sand interbedded due to drill advancing at varying speeds with some pressure
-93.09	104														
	105														
-95.09	106														
	107														
-97.09	108				S31	12 17 21	38	100							
	109														
-99.09	110														
	111														
-101.09	112														
	113														
-103.09	114														
	115														

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BORING RECORD				DSB-R1
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 5	

Figure

CALTRANS FORMAT DOYLEDRIVE_ARUPLOGS_11-2-08.GPJ ARUP LIBRARY_CALTRANS FORMAT.GLB 11/3/08

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
	115		SANDY SILT (ML), reddish brown, moist, with lenses of light gray CLAY.												
-105.09	116		Grades to poorly graded SAND (SP), very dense, olive brown, wet, very fine, with trace fines.												
	117														
-107.09	118			X	S32	27	50/	61							
	119					50/ 5.5"	5.5"								
-109.09	120														
	121														
-111.09	122														
	123														
-113.09	124														
	125														
-115.09	126														
	127														
-117.09	128			X	S33	32	50/5"	100							
	129					50/5"									
			Borehole terminated at a depth of 129 feet on 12/20/2007.												
-119.09	130		See Boring Record Legend for soil classification chart and key to test data and sampler type.												
	131														
-121.09	132														
	133														
-123.09	134														
	135														
-125.09	136														
	137														
-127.09	138														
	139														
-129.09	140														
	141														
-131.09	142														
	143														
-133.09	144														
	145														

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PROJECT OR BRIDGE NAME Doyle Drive Replacement Project				
BRIDGE NUMBER 34-164L	PREPARED BY T. Carroll	DATE 11-3-08	SHEET 5 of 5	

Figure

CALTRANS FORMAT DOYLEDRIVE_ARUPLOGS_11-2-08.GPJ ARUP LIBRARY_CALTRANS FORMAT.GLB 11/3/08