Caltrans | EXPLORATION BORING FIELD LOG | Date 4/09/08 | Boring No. RW11-A1

Location Doyle Drive Replacement | Log No. | EA No. 163701 | Page 1 of 3

Dist. 04 Co. SF Rt. 101 P.M. Br. No. Purpose of Work Geotechnical Investigation

Rt. Ft.. Lt. Line. Sta. Northings. Eastings. Elev. 11.232

Ground Water Data: Date/Time | Water Level | Bot. of Boring

Logged By : E. Ortega | Drill Crew : Brad Johnson

Drill rig : CME 75 | Hammer Type and Weight :

Drilling Method : Rotatory Wash | Casing :

Hole Completion : 4/10/08

Depth	Sample Interval	Tool	Blows RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Remarks
1								← Drilled thru unpaved area	Corrosion Sample
2									
3									
4									
5									
6		0	Push					Sandy fat clay (CH), very soft, dark gray, moist, high pls $q_u = 2.75$ Ton/ft2	
7									
8									
9									
10		0	Push					Poorly graded sand with silt (SP-SM), very loose, dark gray, moist, low pls, med. sand, weak cementation	
11									
12									
13									
14									
15		6						Poorly graded sand (SP), med dense, dark gray, moist, n.pls, med sand, weak cementation, with marine shells	
16		5							
17		6							
18									
19									
20								Same	
21		10							
22		15							
23		9							
24									
25									
26									
27									
28									
29									
30		0	Push					Poorly graded sand with silt (SP-SM), very loose, dark gray, moist, low pls, med. sand, weak cementation	
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									

EXPLORATION BORING FIELD LOG

Date 4/09/08 4/10/08 | Boring No. RW11-01

Location Doyle Drive Replacement | Lab No. ____ | EA No. 163701 | Page 2 of 3

Dist. 04 Co. SF Rt. 101 P.M. ____ Br. No. ____ | Purpose of Work Geotechnical Investigation

____ Ft., Rt./Lt. ____ Line. Sta. ____ Northings. ____ Eastings. ____ Elev. ____

Ground Water Data: Date/Time	Water Level	Bot. of Boring	
			Logged By: E. Ortega — Drill Crew: Brad Johnson
			Drill rig: CME 75 — Hammer Type and Weight:
			Drilling Method: Rotatory Wash — Casing:
			Hole Completion: 4/10/08

Depth	Blows	Description	Remarks
30	1	Same with marine shell	
31	1		
	6		
32			
33			
34			
35	11	Same but dense	
36	19		
	20		
37			
38			
39			
40	13	Colma Sand, Poorly graded sand (SP), dense, light brown, moist, n.pls, med. sand, weak cementation, with oxidation spots	
41	20		
	22		
42			
43			
44			
45	9	Same	
46	23		
	23		
47			
48			
49			
50	19	Same	
[illegible]	25		
	21		
[illegible]	4	6 in upper - Same. 12 in bottom "gravelly fat Clay (CH), hard, dark gray, high pls, with 5% gravels to 3/8"	
	9		
	35	q_u = 1.75 Ton/ft²	

Caltrans | EXPLORATION BORING FIELD LOG | Date 4/10/08 | No. RW11-A1

Location Doyle Drive Replacement | Lab No. | EA No. 163701 | Page 3 of 3

Dist. 04 Co. SF Rt. 101 P.M. Br. No. | Purpose of Work Geotechnical Investigation

Ft. Rt. Lt. Line. Sta. Northings. Eastings. Elev.

Ground Water Data	Date / Time	Water Level	Bot. of Boring

Logged By: E. Ortega | Drill Crew: Brad Johnson

Drill rig: CME 75 | Hammer Type and Weight:

Drilling Method: Rotatory Wash | Casing:

Hole Completion: 4/10/08

Depth	Sample Interval Tool	Blows / RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Remarks
59							Sedimentary rock, Sandstone decomposed to v. int fractured, dark gray	
60		>50						
61							Sandstone, moderately to intensely fractured, dark gray, soft with oxidation spots and calcium. RQD = 4.5+10+4.5+14+4/54 = 68.5%	
62								
63								
64								
65							Same but intensely to v. int fract RQD = 5+8+7+7/60 = 45%	
66								
67								
68								
69								
70							Same but moderately to intensely fract RQD = 11+10+8+9+5.5+4.5+5/60 = 95.8%	
71								
72								
73								
74								
75							Bottom of boring @ 75 ft on 4/10/08	

RW11-A1

Caltrans | EXPLORATION BORING FIELD LOG | Date 12-13-07 | Boring No. ENB-R2

Location Doyle Drive Replacement | Lab No. | EA No. 163701 | Page 1 of 4

Dist. 04 Co. SF Rt. 101 P.M. Br. No. Purpose of Work Geotechnical Investigation

Ft., Rt. Lt. Line. Sta. Northings. Eastings. Elev. 11.8

Ground Water Data: Date / Time | Water Level | Bot. of Boring

Logged By : E Ortega | Drill Crew :

Drill rig : | Hammer Type and Weight :

Drilling Method : Wet rotatory | Casing :

Hole Completion : 12-14-07

Depth	Sample Interval / Tool / Blows	RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Remarks
1							Drilled thru AC pavement	
2								
3	4							MC
	5							
4	8							
	3						Fill: Uniformly graded Sand (SP), loose, dark gray, moist, medium sand	SPT
5	3							
6	3							▽ Estimated
7								← Wet drill
8								
9								
10								← 9'8" start Bay Mud
11								Shelby 10'-12.5'
12								
13								
14								
15	0							
16	1	b						MC
	1	a						
17	1						← Poorly graded Silty Sand (SP-SM)	
	2						loose, dark gray, moisture, fine Sand	SPT
18	6							
19								
20								
21	5							MC
	15							
22	19	a						
23	1						← Same but medium dense	
	9							SPT
24	13							
25								

Caltrans | EXPLORATION BORING FIELD LOG | Date 12-13-07 | Boring No. ENB-R2

Location Doyle Drive Replacement | Lab No. | EA No. 163701 | Page 2 of 4

Dist. 04 Co. SF Rt. 101 P.M. | Br. No. | Purpose of Work Geotechnical Investigation

Ft.. Rt./Lt. | Line. Sta. | Northings. | Eastings. | Elev. 0'

Ground Water Data: Date/Time | Water Level | Bot. of Boring

Logged By : E. Ortega | Drill Crew :

Drill rig : | Hammer Type and Weight :

Drilling Method : Wet Rotatory | Casing :

Hole Completion :

Depth	Sample Interval	Tool	Blows	RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Remarks
25										
			1							MC
26			0							
			1		a					
27			1						← Same, but loose	SPT
			3							
28			5							
29										
30			7							MC
			7							
31			11		a					
32			5						← Same, but medium dense and with marine shells.	SPT
			6							
33			7							
34										
35			25		b					MC
36			34		a					
			43							
37			19						← Uniform/graded Sand (SP), very dense, light brown, med sand some oxidation spots (Colma Sand)	SPT
			35							
38			49							
39										
40										
			26							MC
41			40							
			41		a					
42			16						← Same	SPT
			30							
43			33							
44										
45										
			23							MC
46			50		b					
					a					
47			17						← Same but dense	SPT
			43							
48			50		5.5"					

Caltrans

EXPLORATION BORING FIELD LOG

Date 12-13-07 | Boring No. ENB-R2

Location Doyle Drive Replacement | Lab No. | EA No. 163701 | Page 3 of 4

Dist. 04 Co. SF Rt. 101 P.M. | Br. No. | Purpose of Work Geotechnical Investigation

Rt. Ft., Lt. | Line, Sta. | Northings. | Eastings. | Elev.

Ground Water Data: Date/Time | Water Level | Bot. of Boring

Logged By: E Ortega | Drill Crew:

Drill rig: | Hammer Type and Weight:

Drilling Method: Wet rotatory | Casing:

Hole Completion:

Depth	Sample Interval	Core Blows/RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Remarks
49								
50								
		21						MC
51		39	b					
		48	a					
52								
53								
54								
55								
		16					← Same, but very dense and	SPT
56		32					some marine shells	
		50	5"					
57								
58								
59								
60								
		18					← Poorly graded, Silty Sand (SP-SM)	MC
61		23					very dense, dark brown, medium sand	
		28	a					
62								
63								
64								
65								
		13					← Same	SPT
66		17						
		13					← Lean Clay (CL), very stiff,	
67							dark gray, low to medium plasticity	
68							q_u = 3.4 Tons/ft²	
69								
70								
		50	5"				← SEDIMENTARY ROCK (SHALE),	SPT
71							dark brown, very intensely fractured	
							to decomposed, soft, not healed	
72							(Lean Clay (CL), low plasticity)	
73								
74								
75								
		43					← Same	SPT
76		50						

Caltrans | EXPLORATION BORING FIELD LOG | Date 10-15-07 | Boring No. ENB-R2

Location Doyle Drive Replacement | Lab No. | EA No. 163701 | Page 4 of 4

Dist. 04 Co. SF Rt. 101 P.M. | Br. No. | Purpose of Work Geotechnical Investigation

Rt. Ft., Lt. | Line. Sta. | Northings. | Eastings. | Elev.

Ground Water Data: Date / Time | Water Level | Bot. of Boring

Logged By : E Ortega | Drill Crew :

Drill rig : | Hammer Type and Weight :

Drilling Method : Wet rotatory | Casing :

Hole Completion :

Depth	Samples / Interval / Tool	Blows	RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description			Remarks
77											
78											
79											
80											
81								← Same, with some oxidation spots			
82								RQD = 4+4.5/36 = 23.6%			
83											
84											
85											
86								← Same			
87											
88											
89											
90											← 12-14-07
91											
92											
93											
94											
95											
96								← Same			
97											
98								← Bottom of Boring @ 98' on 12-14-07			

34-0164SB-R1

Caltrans | EXPLORATION BORING FIELD LOG | Date 8/25 | Boring No.

Location Doyle Dr. | Lab No. | EA No. 163701 | Page 1 of 3

Dist. 04 Co. SF Rt. 101 P.M. | Br. No. | Purpose of Work

Ft. Rt. Lt. | Line. Sta. | Northings. | Eastings. | Elev.

Ground Water Data: Date / Time | Water Level | Bot. of Boring

Logged By :

Drill Crew : Bob Corey Steve Andrew

Drill rig :

Hammer Type and Weight : Automatic

Drilling Method : Rotary Wash

Casing :

Hole Completion : 110 bgs Grout To 5 bgs Chips to 0.5 bgs Grass Plug on Top

Depth	Sample Interval Tool	Blows RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Kp	Rd	Remarks
1	Punch Core						Grass / Silty Sand Roots			
2				70%			(Fill) Silty Gravelly Sand (SW)			
3							Dry 15% silt 15% Angular Gravel			
4							70% fine Sand			
5	X	1 2 1	1	100%						Sample 1
6							Sand (SP) - 100% med sand No Plasticity			
7							No cementation			
8				100			Sandy Clay (SC) · Very Soft · Green	0-0.5		
9							Gray · 40% sand · 60% Silt · Low Plasticity			
10							No cement Grades To			B
11	X	Pink	2	100			Clay (CL) · Very Soft 100% Gray	0		Sample 2
12							med - High Plasticity Roots &			
13							Grass			Bore hole collapsed
14				100			1" Layer of Sand w/ roots Grades To			
15							Sand (SP) 100% med sand No Plasticity			
16	X	1 1 1	3				No cementation			Sample 3
17							· Very loose			
18										
19				100						
20										
21	X	3 3 7	4				Same Shells @ 20' med dense			Sample 4
22										
23				70%						
24										
25							color Change Yellow Brown			
26	X	6 10 14	5							Sample 5
27										
28				70						
29										
30										
31	X	8 15 24	6	100			Sand w/ silt (SW-SM) Colma Formation			Sample 6
32							Dense Yellow Orange 10% silt			
33							90% Fine sand No Cementation			
34				70						
35										
36	X	16 19 25	7	100			Colma Same as above			Sample 7
37							Some Laminations			
38										
39										
40										

8/25/08

34-016458-R1

Caltrans | EXPLORATION BORING FIELD LOG | Date 8/26 | Boring No.

Location _____ Lab No. _____ EA No. _____ Page 2 of 3

Dist. ____ Co. ____ Rt. ____ P.M. ____ Br. No. ____ Purpose of Work _____

____ Ft., Rt. Lt. ____ Line. Sta. ____ Northings. ____ Eastings. ____ Elev. ____

Ground Water Data	Date / Time	Water Level	Bot. of Boring

Logged By : | Drill Crew :
Drill rig : | Hammer Type and Weight :
Drilling Method : | Casing :
Hole Completion :

Depth	Sample Interval Tool	Blows / RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	KP	RQD	Remarks
41		14 19 26	8	100			Same			Sample 8
2										
3										
4										
45										
6		15 22 26	9	100			Silty Sand (SM) Dense yellowish			Sample 9
7							orange 25% Silt 75% Fine			
8							Sand No Plasticity No Cementation			
9							@ 7 Feet No Lamination Gray			
50							Sand (SP) Denses 100% med Sand Yell orange			
1		10 16 17	10	100			No cement			Sample 10
2										
3							@ 51.25 Silty Sand (SW-SM) Green			
4							Gray 40% Silt 60% fine			
55							Sand No Plasticity No Cement			
6		11 15 21	11	100			Some Clay			Sample 11
7							Grade into Sand (SP) Dense Yell Orange			
8							100% med Sand			
9							Clayey Sand (SC) 30% Clay 10% Silt			
60							70% fine sand Green No Plasticity			
1		9 15 22	12	100			No cement			Sample 12
2							Grades to Sand (SP) Green 100% med			
3							Sand			
4							Grades to Silty sand dense Green			
65							30% Silt 70% fine Sand			
6		9 16 8	13				Same			
7							Clay (CH) Very Stiff Green 100% Clay	2.75		Sample 13
8							Med - High Plasticity No Cement			
9										
70							Clasts of shale in Clay			
1		5 7 10	14				Shale brown laminated 45° Angle up to			Sample 14
2							1" thick & Sandstone ½" clasts Angular			
3							Impressions of shells in shale			sandstone Pebbles well
4							Clay with Shells 70% Clay 30% Shells			rounded
75							Silty Sand (SM) Yellow Orange Red mottle			
6		13 25 40	15	75%			Clayey Sand (SC) Very Stiff 40% Clay 60%	>4.5		Sample 15
77							Fine Sand Gray sand inclusions			
8										
9				20%				NA		Start Coring
80							Sandstone - Fine grain Thickly bed brown			Run Time
							Very intense Weathering High fracture	NA		
							Very hard Top			

8/26

BH 34 0164SB R1

Caltrans | EXPLORATION BORING FIELD LOG | Date 8/ | Boring No.

Location | Lab No. | EA No. EA16374 | Page 3 of 3

Dist. | Co. | Rt. | P.M. | Br. No. | Purpose of Work

Ft., Rt. Lt. | Line. Sta. | Northings. | Eastings. | Elev.

Ground Water Data	Date / Time	Water Level	Bot. of Boring	Logged By :	Drill Crew :
			Drill Method	Drill rig :	Hammer Type and Weight :
				Drilling Method :	Casing :
				Hole Completion :	

Depth	Sample Interval Tool	Blows RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Remarks Run	Time
81							Same SST highly decomposed	80 → 84	1:29 → 1:49
2		8/29"		29/48			Sandstone med. Grain - massive		
3							Yellow orange intensly weather		
4							highly fractured Extremly hard		
85									
6								84 → 88	1:58 → 2:16
7		20/48		48/48			Bedding Plane Fracture 40°		
8									
9									
90								88 → 93	2:22 → 2:42
1		22/60		58/60			Same		
2									
3								93 → 98	2:52 → 3:01
94									
95									
6		16/60		59/60			Graywacke Same Fracture 40°	98 → 100'	3:07 → 3:11
7									
8									
9		17/24		24/24			Same		
100									
1									
2							Graywacke Higher Clay/Silt content		
3		0/60		34/60			Very Intensly Fractured massive	100' → 105	8:28 → 8:41
4							Hard		
105									
6									
107								105 → 110	8:47 → 8:55
8		0/100		40/60			Same		1:16 → 1:21
9								Hose broke @ 8:55	
110								repairs begin 1:16	
								Start Drilling again	

100' 8/26/08

Total Depth 110'
Grouted to 5 bgs
Chips to 0.5' bgs
Replace with Grass with
orginal Grass Plug
H_2O flowing out of Pipe @ 110' · Pull pipe
up 2' flowing water stops

34-0164NB-R2

Caltrans

EXPLORATION BORING FIELD LOG

Date 9/8/08 | Boring No.

Location Marshall & Gorgas St | Lab No. | EA No. 163701 | Page 1 of 3

Dist. 04 Co. SF Rt. 101 P.M. Br. No. Purpose of Work Geotechnical

Ft. Rt. Lt. Line. Sta. Northings. Eastings. Elev.

Ground Water Data: Date / Time | Water Level | Bot. of Boring

Logged By: M Gaffney | Drill Crew: Bob, Karl

Drill rig: Acker | Hammer Type and Weight: Automatic

Drilling Method: Rotary Wash | Casing:

Hole Completion: 120'

Depth	Sample Interval Tool	Blows RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	KP	RQD	Remarks
1							Asphalt 1" of Green Clay			
2							Sand (SP): Green. 100% med sand			
3				75			No Plast. No cement			
4										
5										
6	Push		1	100			Clay (CL) Soft. Green (Top 2" 5.5-5.7 black	0.5		Sample 1
7							organic) 100% Clay High Plasticity, No			
8							cement			
9										
10										
1	Push		2	100			Sand w/clay (SC): Green 10% Clay 90% Sand			Sample 2
2							Clay again			
3										
4							Sand Green/Gray 100% Sand (coarsening down)			
5							No Cement Shells			
6	3 3 10		3	100						Sample 3
7				30%						
8		Corrosion								
9										9/8/08
20										
1	Push		4	80			Same. SPT Push Under its own			Sample 4
2							Weight			
3				50%						
4		Corrosion								
25							↓Grade To			Sample 5
6	Push		5				Clayey Sand (SC) Very loose Gray	.5		Push w/ hammer
7							Green 20% Clay 10% Silt 70%			
8							med grain Sand No Plasticity No			
9				100			Cement			
30							Sand (SP) Light brown 100% med →			Beach Sand Sample 6
1			6				Coarse Sand. No Cementation			RPM on hammer set
2							@ 31.25 - Change - Color Gray Green			wrong blows inconsistent
3							& Fine Grain Sand			
4							@ 33. Light Brown. Gray Green Pockets			
35							of Sand 6" (Cohen)			
6	12 23 35		7	100			Sand (SP) Very Dense. Yellow Orange			Sample 7
7							Red Lamination 1/2" Thick 1/16 Black			
8							Lamination 100% Sand			
9				100						
40							Same			

Adam 518-369-6965

54-D169NB R2

Caltrans | EXPLORATION BORING FIELD LOG | Date | Boring No.

Location | Lab No. | EA No. 163701 | Page 2 of

Dist. | Co. | Rt. | P.M. | Br. No. | Purpose of Work

Ft., Lt. | Rt. Line. Sta. | Northings. | Eastings. | Elev.

Ground Water Data: Date / Time | Water Level | Bot. of Boring

Logged By : | Drill Crew :

Drill rig : | Hammer Type and Weight :

Drilling Method : | Casing :

Hole Completion :

Depth	Sample Interval	Tool	Blows	ROD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	USCS	Qual	Remarks
41	X	10 15 16		18		100			Same Sand (Colma) Dense			Sample 8
42												
43												
44												
45												
46	X	12 21 26		9		100			Same			Sample 9
47												
48									@ 48' red laminations			
49												
50												
51	X	12 25 50		10		100						Sample 10
52												
53									Same			
54												
55												
56	X	9 17 20		11		100			Same			Sample 11
57												
58												
59						90						
60												
61	X	12 18 26		12								Sample 12
62									- color change blue Gray Homogeneous			
63									Out of Colma			
64									Sand (SP) Dense Blue Gray 100%			
65									Fine Sand No cementation			
66	X	11 17 20		13		100						Sample 13
67												
68									Same as above			
69												
70									↓ Grades To			
71	X	8 12		M		100			Sand w/ Silt (SP-SM) Dense brown Gray			Sample 14
72									80% Silt 90% Fine Sand No cement			
73												
74												
75									Clay (CL) brown 100% Clay High Plasticity			
76	X	4 6 9		15					No cement	325-75		Sample 15
77									@ 76' Seashells			At Between 75-85
78												a caller Form above Drill
79									70% Clayey Sand (SC) brown 40% clays 60% Fine sand			Head & Water when in To
80									30% Sandy Clay (CL) " 70% Clay 30% Fine Sand ½"			Formation

Well rounded argillite Pebble 1½" Angular Sandstone Clast

BH#34-0164NB.R2

Caltrans

EXPLORATION BORING FIELD LOG

Date | Boring No.

Location | Lab No. | EA No. 163701 | Page 3 of

Dist. | Co. | Rt. | P.M. | Br. No. | Purpose of Work

Ft., Rt. Lt. | Line. Sta. | Northings. | Eastings. | Elev.

Ground Water Data: Date / Time | Water Level | Bot. of Boring | Drill Method

Logged By : | Drill Crew :

Drill rig : | Hammer Type and Weight :

Drilling Method : | Casing :

Hole Completion :

Depth	Sample Interval Tool	Blows RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	LP	Rqd	Remarks
81	7 11 12		16				Clay (CL) Hard Green 100% Clay	>45		Sample 16 9/9/08
2							high Plasticity			
3							Sand increasing downward			
4										9/10/08
85							Sandy Clay (CL) Green 60% Clay			
6	5 9 15		17	100			40% Sand No Plast. No Cement	3.5-4.0		Sample 17
7							@ 97' Color Change Yellow Orange			
8							@ 98' Sub Angular 1" Gravel			
9							decomposed → Slightly weathered			
90							↓			
1	4 6 8		18	70			Clayey Sand (SP-SC) medium dense			Sample 18
2							Yellow orange red mottle - 30% Clay			
3							65% med sand 5% Gravel sub round			
4							1/4" Gravel No Plasticity No Cement			
95										
6	12 18 30		19	90			Same 50% Clay 50% Med-Fine Sand			Sample 19
7										
8										
9							99.5			
100							change color Light Gray black mottle			
1	10 17 23		20	90			100.25 Color Yellow Orange Light Gray &			Sample 20
2							red mottle 45% Clay 55% Fine → Coarse			
3							Sand - Coarse Quartz sand up to			
4							1/8 inch			
105							↓ Quartz sand increases			
6	50 50/1		21	20			@ 104.75 Decomposed sandstone			Sample 21
7							Brown			106.5-110 10:08-10:28
8							Graywacke			106.5-108 Hard Drilling
9										108-109 Soft Drilling
110										109-110 Hard Drilling
1	39 50/5		22	50			Sandstone - Gray White Brown			Sample 22
2							Highly Decomposed. Quartz			
3							Graywacke			10:47-10:52 for 2ft
4										
115							Total Depth 120'			
6							Grout 120'-5' Tremmie. 22 bag Samples			10:57-11:14 112.5-120
7							Bentonite chips 5'-0.5' No Core boxes			
8							Cement 0.5'-0'			
9							Hole PS logged before Grout			No Artesian
120										Conditions were observed

No sampling →

Drill Ahead 6:1

TS-R2

Caltrans

EXPLORATION BORING FIELD LOG

Date 1-07-08 | Boring No.

Location Doyle Drive Replacement | Lab No. | EA No. 163701 | Page 1 of 2

Dist. 04 Co. SF Rt. 101 P.M. Br. No. | Purpose of Work Geotechnical Investigation

Ft. Rt. Lt. Line. Sta. Northings. Eastings. Elev.

Ground Water Data	Date / Time	Water Level	Bot. of Boring
	1-7-08 / 1330	3'	

Logged By : E Ortega | Drill Crew : R Medina

Drill rig : Fraste Multidrill XL | Hammer Type and Weight :

Drilling Method : Wet Rotatory | Casing :

Hole Completion : 1-07-08

Depth	Sample Interval Tool	Blows / RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description			Remarks
1							Drilled thru AC Pavement			
2										
3							FILL			
4										
5										
		3								MC
6		2	b							
		3	a							
7		0					Poorly graded Silty Sand (SP),			SPT
		1					loose, dark gray, med. sand, weak cementation			
8		1					over Sandy Clay (CH), very soft,			
9							dark gray, med. high plast. qu = 0.5-1.0 Ton/ft²			
10							(9in SP over 9in CH)			
										Shelby
11										
12										
		50	psi							
13										
14										
15										
		6								MC
16		11								
		18	a							
17		8					Poorly graded Silty Sand (SP),			SPT
		15					med dense, dark gray, med. sand,			
18		15					weak cementation, with marine shells			
19										
20										
		10								MC
21		20								
		23	a							
22		6					Same but dense			SPT
		16								
23		23								
24										
25										
		3								MC
26		9								
		6	a							

TS-R2

Caltrans

EXPLORATION BORING FIELD LOG

Date 1-07-08 | Boring No.

Location Doyle Drive Replacement | Lab No. | EA No. 163701 | Page 2 of 2

Dist. 04 Co. SF Rt. 101 P.M. Br. No. Purpose of Work Geotechnical Investigation

Ft.. Rt. Lt. Line. Sta. Northings. Eastings. Elev.

Ground Water Data: Date/Time | Water Level | Bot. of Boring

Logged By : E Ortega | Drill Crew : R Medina

Drill rig : Fraste Multidrill XL | Hammer Type and Weight :

Drilling Method : Wet Rotatary | Casing :

Hole Completion :

Depth	Sample Interval / Tool	Blows	RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Remarks
27		0						Sandy Clay (CH) very soft dark gray, low pls, q_u = 0.5 Ton/ft²	SPT
28									
29									
30									
31		2							MC
		5							
		5		a					
32		7						Poorly graded Clayey Sand (SP-SC), loose, dark gray, med sand, weak cementation, with marine shells	SPT
33		2							
34		4							
35									
		3							MC
36		3							
		4		a					
37		2						Same but medium dense	SPT
38		8							
39		19							
40									
		16							MC
41		13							
		18							
42		3						Poorly graded Silty Sand (SP), loose, dark gray, med. Sand weak cementation.	SPT
		4							
43		4							
44									
45									
		1							MC
46		1							
		1		a					
47		0						Sandy Clay (CH), firm, dark gray med to high pls, q_u = .5 - 1.0 Ton/ft²	SPT
		1							
48		4							
49									
50									
								Poorly graded Silty Sand (SP), very dense dark gray, med sand, weak cementation	MC (Colma Sand ?)
51									

Bottom of boring @ 51.5 on 1-07-08

TS-R3

Caltrans | EXPLORATION BORING FIELD LOG | Date 2-5-08 | Boring No.

Location Doyle Drive Replacement | Lab No. | EA No. 163701 | Page 1 of 3

Dist. 04 Co. SF Rt. 101 P.M. Br. No. | Purpose of Work Geotechnical Investigation

Rt. Ft., Lt. Line, Sta. Northings, Eastings, Elev.

Ground Water Data: Date / Time | Water Level | Bot. of Boring

Logged By: E Ortega | Drill Crew: B Johnson

Drill rig: CME 75 | Hammer Type and Weight:

Drilling Method: Rotatory Wash | Casing:

Hole Completion: 2-5-08

Depth	Sample Interval / Tool / Blows / RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Remarks
1						Drilled thru AC pavement and fill	
2							
3							
4							
5	5					Sandy Clay (CH), stiff, light brown, med to high plas, q_u = 1.5 – 2.0 Ton/ft²	SPT
6	6						
	5						
7							
8							
9							
10	3					Poorly graded Sand (SP), loose, dark gray, med. sand, weak cementation, with tree roots.	SPT
11	3						
	6						
12							
13							
14							
15	15						
16	34					Same but very dense with gravels to 1" and marine shells (1% gravels)	SPT
	49						
17							
18							
19							
20							
21	3					Same	SPT
	12						
	19						
22							
23							
24							
25							
	High					Fat Clay (CH), very soft, dark gray, high plas (Bay Mud)	SPT
26							
27							
28							
29							
30							

TS-R3

Caltrans

EXPLORATION BORING FIELD LOG

Date 2-5-08 | Boring No.

Location Doyle Drive Replacement | Lab No. | EA No. 163701 | Page 2 of 2

Dist. 04 Co. SF Rt. 101 P.M. Br. No. | Purpose of Work Geotechnical Investigation

Ft. Rt. Lt. Line. Sta. Northings. Eastings. Elev.

Ground Water Data	Date / Time	Water Level	Bot. of Boring

Logged By : E Ortega | Drill Crew : B Johnson

Drill rig : B47 | Hammer Type and Weight :

Drilling Method : Rotatory wash | Casing :

Hole Completion : 2-5-08

Depth	Sample Interval Tool	Blows RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description			Remarks
30							Sandy Lean Clay (CL), very soft, dark gray, low pls.			Brass
31		a - Push								
32										
33										
34										
35		12					Poorly graded Sand (SP), dense, light brown, med Sand, weak cementation (Colma Sand) w some oxidation spots.			SPT
36		20								
		25								
37										
38										
39										
40		22					Same but very dense			SPT
41		32								
		33								
42							Bottom of boring @ 41.5' on 2-05-08			

RW15-R1

Caltrans EXPLORATION BORING FIELD LOG

Date 2-6-08 | Boring No.

Location Doyle Drive Replacement | Lab No. | EA No. 163701 | Page 1 of 2

Dist. 04 Co. SF Rt. 101 P.M. | Br. No. | Purpose of Work Geotechnical Investigation

Rt. Ft., Lt. | Line. Sta. | Northings. | Eastings. | Elev.

Ground Water Data: Date / Time | Water Level | Bot. of Boring

Logged By : E Ortega | Drill Crew : B Johnson

Drill rig : B47 | Hammer Type and Weight :

Drilling Method : Rotatory Wash | Casing :

Hole Completion : 2-6-08

Depth	Sample Interval (ft)	Blows per 6"	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Remarks
1							← Drilled thru AC pavement and fill	
2								
3								
4								
5		3					← Poorly graded Sand (SP), loose, dark brown, med sand, weak cementation, with gravels to 1" (85% Sand 15% gravels)	SPT
6		3						
7		4						
8								
9								
10								
11		3					← Poorly graded Sand (SP), med dense, dark gray, med sand, weak cementation	SPT
12		6						
13		11						
14								
15								
16		5					← Same	SPT
17		11						
18		14						
19								
20								
21							← Sandy Fat Clay (CH), very soft, dark gray, med to high plas, q_u = 0.25 - .50 Ton/ft²	SPT
22		Push						
23								
24								
25								
26		7					← Poorly graded Sand (SP), med dense, dark gray, med sand, weak cementation.	
27		12						
28		12						
29								
30								
31								
32								
33								
34								
35								

RW15-R1

Caltrans | EXPLORATION BORING FIELD LOG | Date 2-6-08 | Boring No.

Location Doyle Drive Replacement | Lab No. | EA No. 163701 | Page 2 of 2

Dist. 04 Co. SF Rt. 101 P.M. Br. No. Purpose of Work Geotechnical Investigation

Rt. Ft., Lt. Line, Sta. Northings. Eastings. Elev.

Ground Water Data: Date/Time | Water Level | Bot. of Boring

Logged By: E Ortega | Drill Crew: B Johnson

Drill rig: CME 47 | Hammer Type and Weight: | Casing:

Drilling Method: Rotetory wash

Hole Completion: 2-6-08

Depth	Sample Interval (Tool)	Blows/ROD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Remarks
30							← Sandy fat Clay (CH), very soft, dark gray, med to high pls, q_u = 0.75 Tsf/ft2	SPT
31								
32								
33								
34								
35		4					← Poorly graded Sand (SP), dense, dark, gray to light brown, mod sand, weak cementation, some oxidation spots (Colma Sand)	SPT
36		16						
37		16						
38								
39								
40								
41		17					← Same but very dense and dark gray.	SPT
42		30						
43		30						
44								
45								
46		17					← Same	SPT
47		24						
48		31						
49								
50								
51		24					← Same but light brown	
52		>50						
53							← Bottom of boring @ 51.5' on 2-6-08	