



Borella Geology, Inc.
Consulting Engineering Geology

July 18, 2007

Tim Shaw, Park Planner
City of San Clemente
Beaches, Parks and Recreation
100 N. Seville
San Clemente, California, 92673

Subject: Limited Geotechnical Investigation and Evaluation of Surface Soil conditions for Phase 1B, Recommendations for:
(1) Swimming Pool and associated locker rooms and offices,
(2) Athletic and Utility Light Poles, and
(3) Restrooms

Dear Mr. Shaw:

The limited geotechnical report is completed that addresses soil conditions in specific areas of the new park site in the Vista Hermosa-Via La Pata area of San Clemente. The investigation was performed in the months of June through July 2007. The report consists of the following:

1. Site reconnaissance and review of recent grading reports (see references) and plans
2. Five soil borings and soil sampling in selected areas
3. Laboratory analysis
4. Presentation of results and recommendations.

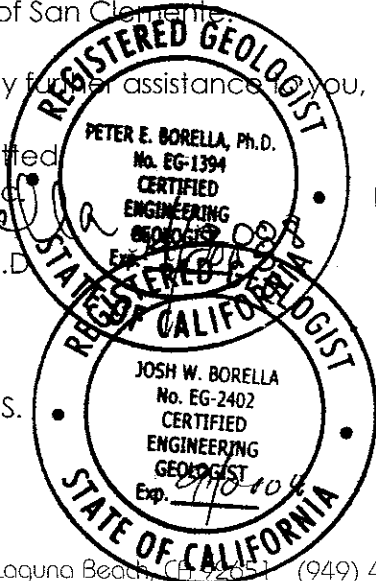
The main purposes were to provide foundation recommendations for the swimming pool and associated buildings, athletic and utility light poles, and restrooms that are to be built on the site. Recommendations for the roads and parking pavement will be made directly to you from the Engineering Department, City of San Clemente.

If we can be of any further assistance to you, please contact us.

Respectfully submitted,
Borella Geology, Inc.

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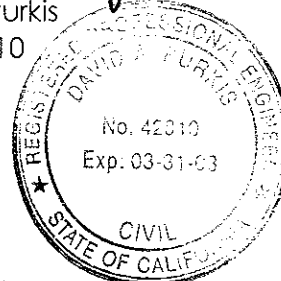
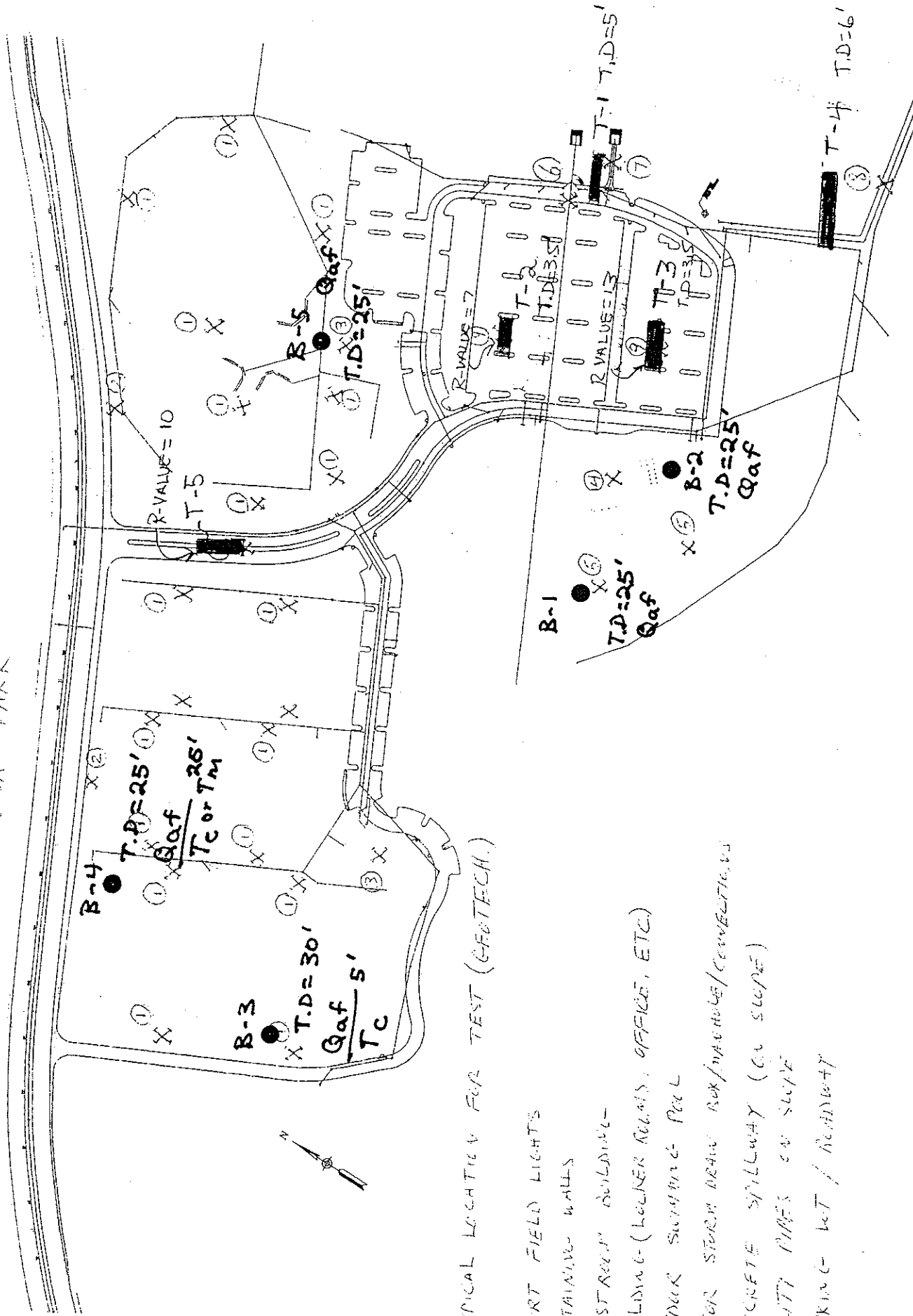


Figure 1: Site Location Map for Exploration borings Trenches and Selected Area For Investigation.

DORING AND TRENCH LOCATIONS

LA DATA - VISTA HEKALOVA PARK



X TYPICAL LOCATION FOR TEST (GEO-TECH.)

- ① SPORT FIELD LIGHTS
- ② RETAINING WALLS
- ③ RESTROOM BUILDING
- ④ BUILDING (LOCKER ROOMS, OFFICE, ETC)
- ⑤ OUTDOOR SWIMMING POOL
- ⑥ MAJOR STORM DRAIN BOX/PIPE/CONNECTIONS
- ⑦ CONCRETE SPILLWAY (ON SLOPE)
- ⑧ UTILITY PIPES ON SLOPE
- ⑨ PARKING LOT / ROADWAY

Appendix 1: Exploration Boring Logs

Depth	Graph	Strike/dip	SPT/CSP	Description Hollow Stem 8"
				Jet Drilling - Auto trip Hammer - 140 lb 2.5' drop.
5			CSP @ 5' 8/22/20	0-5' - Qaf - silty clay to clay silt. dry, no roots - medium brown. @ 5' - dry silty clay to clayey silt mottled light brown, No roots. * Note upper 5' <u>Easily drilled.</u>
10			SPT 6/10/8	@ 10' mottled Dry silty clay to clayey silt, brown to medium brown Nylon cloth recovered (<u>Tight drilling</u>)
15			CSP @ 15' 7/12/25	@ 15' Tight brown silty clay mottled dense, moist.
20			SPT @ 20' 6/18/20	@ 20' - tight to very stiff silty clay to clayey silt. mottled brown, gypsum fragment
25			SPT @ 25' 5/7/10	@ 25' - medium dense, silty clay to clayey silt, mottled
30				Location See index map. 117° 36.402 W 33° 27.616 N Elevation 375-380
35				
40				Qaf = artificial fill

Depth	Graph	Strike/dip	SPT/CSP	Description Hollow stem 8"
				Jett Drilling - Auto trip Hammer. 140lb. 2.5' drop.
5			SPT @ 5' 7/14/12	0-5' silty clay to clay silt. Easily drilled
				@ 7' hard obstruction hit - hole moved - off set 10' (N45° W)
10		* Hard drilling ↓	CSP @ 10' 5/14/23	Brown silty clay / clayey silt. mottled, medium dense
15			SPT @ 15' 8/12/20	@ 10' silty clay w/ minor sand & grit mottled, brown to grayish brown moist, plastic at 10' <u>Drilling gets harder</u>
20			CSP @ 20' 10/14/20	@ 15' - greenish gray mottled clayey silt with chalky fragments of Monterey mixed in with. Capistrano matrix Limonite fragments present.
25		SPT @ 25' 8/12/12	@ 20' - grayish brown to brown silty clay to clayey silt.	
30			@ 25' clayey silt with large gypsum fragments, mottled medium dense, tight. siltstone & chalky fragments minor Fe-oxide stained siltstone fragments	
35				
40				

Location (See index map)

33° 27.622' N

117° 36.330' W

El. 366

Qaf = artificial fill

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Date 6/19/07

Boring# 3

Total Depth 30'

Residence LA PATA - VISTA HERMOSA (Liahts - Soccer Field)

Depth	Graph	Strike/dip	SPT/CSP	Description Hollowstem 8"
0	Qaf			Soil - Auto trip Hammer - 140 lb X 2.5' drop
0-5'	Qaf			Qaf. brown to dark brown silty clay.
5	↑	* hard drilling		@ 5' <u>Bedrock encountered</u>
10	Tc unoxidized		CSP @ 10' 13/40/55	@ 10' Black to dark brown clayey <u>siltstone</u> oxidized tight hard.
20			SPT @ 20' 7/10/28	@ 20' <u>Black homogeneous siltstone</u> massive tight, high blow counts
30			SPT. 8/15/21	@ 30' Black unoxidized siltstone homogeneous tight, micaceous
35				Location: N 33° 27.584' W 117° 36.568' El. 397-398
40				Qaf = artificial fill Tc = Capistrano Formation.

Depth	Graph	Strike/dip	SPT/CSP	Description Hollow stem 8"
	↑			Jett Drilling Autotrip Hammer.
0-5'	Qaf			Brown to medium brown clayey silt. Easy drilling.
10'	*	* Hard Drilling ↓	SPT@10' 10/15/17	Drilling harder at 10' @ 10' Qaf - fill medium brown to brown silty clay to clayey silt. rock fragments & chips. Hard.
20'	*		SPT@20' 6/8/10	@ 20' yellow chips to white chalky rock fragments w/in compacted fill medium dense to stiff.
25'	*		@ 25' SPT. 7/10/10.	@ 25' oxidized siltstone with fractures, vertical Sulfur veins - minor gypsum moist. fine laminations micaceous
25-30'	Tc or Tm			
35'				Location. (Diagonal to B-3) 33° 27.648' N. 117° 36.550' W. E1 374-382.

Tc = Capistrano Formation
 Tm = Monterey
 Qaf = Artificial Fill

Depth	Graph	Strike/dip	SPT/CSP	Description Hollow stem 8"
				Jet Drilling - Auto trip - 140lb Hammer
0-5'			CSP @ 5' 5/14/17	Britty silty clay to clayey silt w/ rock fragments dry, mottled, brown to gray brown Note: @ 7' Drilling is hard
5-15'				
15-20'			SPT @ 15' 10/12/14	@ 15' - Brown mottled silty clay to clayey silt, rock fragments dense to medium dense competent, yellow sulfur blebs or clumps minor gypsum crystals stiff to very stiff.
20-25'			SPT @ 25' 7/10/10	@ 25' Brown/dark brown silty clay to clayey silt mottled with Monterey chalk fragments plastic but dense. stiff to very stiff
25'				