

<b>DRILLING LOG</b>		<b>DIVISION:</b> South Atlantic	<b>INSTALLATION:</b> Jacksonville District	<b>SHEET</b> 1 of 1
1. PROJECT CAPTIVA ISLAND SAND STUDY		10. SIZE AND TYPE OF BIT 3 5/8"		
2. LOCATION (Coordinates or Station) X=540108.87 Y=793465.98		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) NGVD		
3. DRILLING AGENCY: Alpine Ocean Seismic Survey Inc.		12. MANUFACTURER'S DESIGNATION OF DRILL ALPINE PNEUMATIC VIBRACORE		
4. HOLE NO. (As shown on drawing title and file number) CIVC-00-17		13. TOT NO. OF OVERBURDEN SAMPLES TAKEN Disturbed: 0 Undisturbed: 0		
5. NAME OF DRILLER MAURIZIO ROSSI		14. TOTAL NO. OF CORE BOXES		
6. DIRECTION OF HOLE VERTICAL		15. ELEVATION GROUND WATER		
7. THICKNESS OF BURDEN 0.0 FT		16. DATE HOLE Started Completed 8/10/00 14:55		
8. DEPTH DRILLED INTO ROCK N/A		17. ELEVATION TOP OF HOLE -47.0 FT		
9. TOTAL DEPTH OF HOLE 19.1 FT		18. TOTAL CORE RECOVERY FOR BORING 89.0%		
		19. SIGNATURE OF GEOLOGIST SK/ID		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS
-47	0					
	1		SAND, fine grained, some shell hash/shell fragments, gray (5Y-5/1), (SP).		1	Sample #1, Depth = 2.0' Mean (mm):0.51, Phi Sorting: 1.16 Silt: 2.02% (SW)
-50.5	2					
	3					
	4		fine grained, some shell hash/shell fragments/whole shells, gray (5Y-5/1), (SP).		2	Sample #2, Depth = 4.0' Mean (mm): 0.41, Phi Sorting: 1.62 Silt: 4.80% (SW)
-52	5					
	6					
	7		CARBONATE CLASTS, ranges from silt/clay size to about 4", hard & compact, trace shell fragments/ whole shells between 5.0'-7.2', gray (5Y-5/1), (GM-GC).			
	8					
	9					
-57.2	10					
	11					
	12		SAND, medium grained, (calcareous), loose, pale yellow (5Y-7/3), (SP).		3	Sample #3, Depth = 12.0' Mean (mm): 0.26, Phi Sorting: 1.32 Silt: 6.77% (SW-SM)
-62.1	13					
	14					
	15		CARBONATE CLASTS, ranges from silt/clay size to about 2", predominantly calcareous sand, hard & compact, pale yellow (5Y-7/3), (GM-GC).			
-64	16					
	17					
	18		No Recovery			
-66.1	19					
	20		End of Boring			
	21		Note: 1) Soils are field visually classified in accordance with the Unified Soil Classification System.			Note: This column contains laboratory data.
	22					
	23					
	24					

# Gradation Analysis Report

Proj Name: Captiva Island  
 Sample: CIVC-00-17#1  
 Date: 1/1/2001  
 By: ID



2841 N. W. Boca Raton Blvd. Boca Raton FL 33428

Elevation:	-49	Feet	Easting:	540108.87	State Plane	1983
Reference:	NGVD 29		Northing:	793465.98	FLA West	Feet

USCS:	SW	Munsel Dry:	5Y-6/1	Munsel Wet:	5Y-6/1
Comments:	0				

Dry Wt.	60.33	Percent Silt:	2.02
Wash Wt.	59.11		

Sieve Size	PHI Size	mm Size	Grams Retained	% Weight Retained	Cum. Grams Retained	C % Weight Retained
5/8	-4.000	16.000	0.000	0.000	0.000	0.000
5/16	-3.000	8.000	0.000	0.000	0.000	0.000
5	-2.000	4.000	0.190	0.315	0.190	0.315
7	-1.500	2.828	0.820	1.359	1.010	1.674
10	-1.000	2.000	0.850	1.409	1.860	3.083
14	-0.500	1.414	2.780	4.608	4.640	7.691
18	0.000	1.000	4.850	8.039	9.490	15.730
25	0.500	0.707	8.390	13.907	17.880	29.637
35	1.000	0.500	8.750	14.504	26.630	44.141
45	1.500	0.354	9.870	16.360	36.500	60.501
60	2.000	0.250	16.620	27.548	53.120	88.049
80	2.500	0.177	4.930	8.172	58.050	96.221
120	3.000	0.125	0.920	1.525	58.970	97.746
170	3.500	0.088	0.090	0.149	59.060	97.895
200	3.750	0.074	0.040	0.066	59.100	97.961
230	4.000	0.063	0.010	0.017	59.110	97.978
Pan	Pan	0.053	1.220	2.022	60.330	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.79	0.01	0.33	1.18	1.76	1.93	2.43

Median phi:	1.18	Median mm:	0.44
-------------	------	------------	------

	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	0.95	0.52	0.97	-0.32	0.92
Moment	0.98	0.51	1.16	-0.25	1.49

# Gradation Analysis Report

Proj Name: Captiva Island  
 Sample: CIVC-00-17#2  
 Date: 1/1/2001  
 By: ID



2841 N. W. Boca Raton Blvd. Boca Raton FL 33428

Elevation:	-51	Feet	Easting:	540108.87	State Plane	1983
Reference:	NGVD 29		Northing:	793465.98	FLA West	Feet

USCS:	SW	Munsel Dry:	5Y-6/1	Munsel Wet:	5Y-6/1
Comments:	0				

Dry Wt.	53.16	Percent Silt:	4.80
Wash Wt.	50.61		

Sieve Size	PHI Size	mm Size	Grams Retained	% Weight Retained	Cum. Grams Retained	C % Weight Retained
5/8	-4.000	16.000	0.000	0.000	0.000	0.000
5/16	-3.000	8.000	0.000	0.000	0.000	0.000
5	-2.000	4.000	1.760	3.311	1.760	3.311
7	-1.500	2.828	0.590	1.110	2.350	4.421
10	-1.000	2.000	0.770	1.448	3.120	5.869
14	-0.500	1.414	1.710	3.217	4.830	9.086
18	0.000	1.000	2.950	5.549	7.780	14.635
25	0.500	0.707	3.800	7.148	11.580	21.783
35	1.000	0.500	4.610	8.672	16.190	30.455
45	1.500	0.354	6.970	13.111	23.160	43.567
60	2.000	0.250	15.090	28.386	38.250	71.953
80	2.500	0.177	9.310	17.513	47.560	89.466
120	3.000	0.125	2.410	4.533	49.970	93.999
170	3.500	0.088	0.470	0.884	50.440	94.883
200	3.750	0.074	0.110	0.207	50.550	95.090
230	4.000	0.063	0.040	0.075	50.590	95.166
Pan	Pan	0.053	2.550	4.797	53.140	99.962

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-1.30	0.10	0.68	1.61	2.09	2.34	3.60

Median phi:	1.61	Median mm:	0.33
-------------	------	------------	------

	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.27	0.41	1.30	-0.45	1.43
Moment	1.30	0.41	1.62	-0.23	1.89

# Gradation Analysis Report

Proj Name: Captiva Island  
 Sample: CIVC-00-17#3  
 Date: 1/1/2001  
 By: ID



2841 N. W. Boca Raton Blvd. Boca Raton FL 33428

Elevation:	-59	Feet	Easting:	540108.87	State Plane	1983
Reference:	NGVD 29		Northing:	793465.98	FLA West	Feet

USCS:	SW-SM	Munsel Dry:	5Y-6/1	Munsel Wet:	5Y-6/1
Comments:	0				

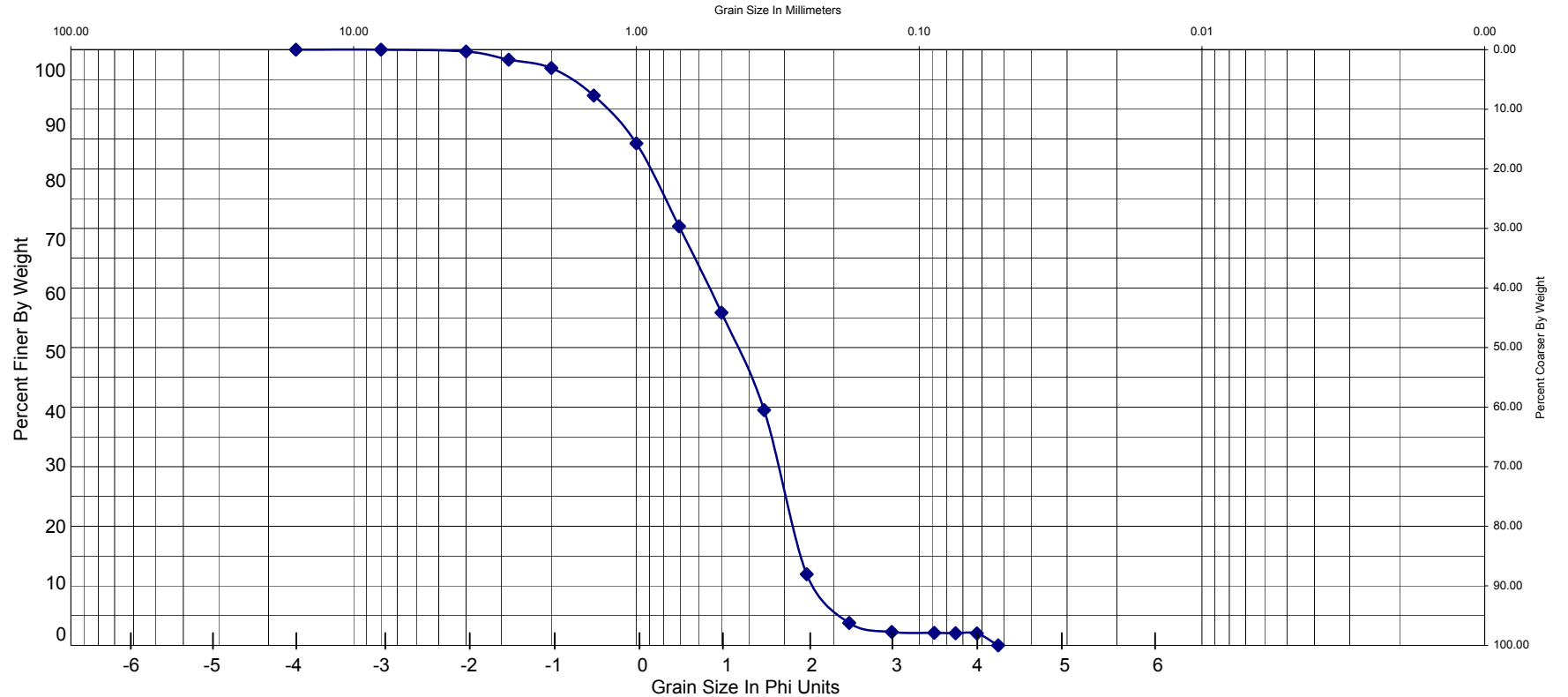
Dry Wt.	63.80	Percent Silt:	6.77
Wash Wt.	59.48		

Sieve Size	PHI Size	mm Size	Grams Retained	% Weight Retained	Cum. Grams Retained	C % Weight Retained
5/8	-4.000	16.000	0.000	0.000	0.000	0.000
5/16	-3.000	8.000	0.000	0.000	0.000	0.000
5	-2.000	4.000	0.360	0.564	0.360	0.564
7	-1.500	2.828	0.280	0.439	0.640	1.003
10	-1.000	2.000	0.220	0.345	0.860	1.348
14	-0.500	1.414	0.690	1.082	1.550	2.429
18	0.000	1.000	1.460	2.288	3.010	4.718
25	0.500	0.707	3.100	4.859	6.110	9.577
35	1.000	0.500	4.680	7.335	10.790	16.912
45	1.500	0.354	6.450	10.110	17.240	27.022
60	2.000	0.250	12.460	19.530	29.700	46.552
80	2.500	0.177	17.860	27.994	47.560	74.545
120	3.000	0.125	10.420	16.332	57.980	90.878
170	3.500	0.088	1.210	1.897	59.190	92.774
200	3.750	0.074	0.200	0.313	59.390	93.088
230	4.000	0.063	0.070	0.110	59.460	93.197
Pan	Pan	0.053	4.320	6.771	63.780	99.969


PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
0.03	0.94	1.40	2.06	2.51	2.79	4.07

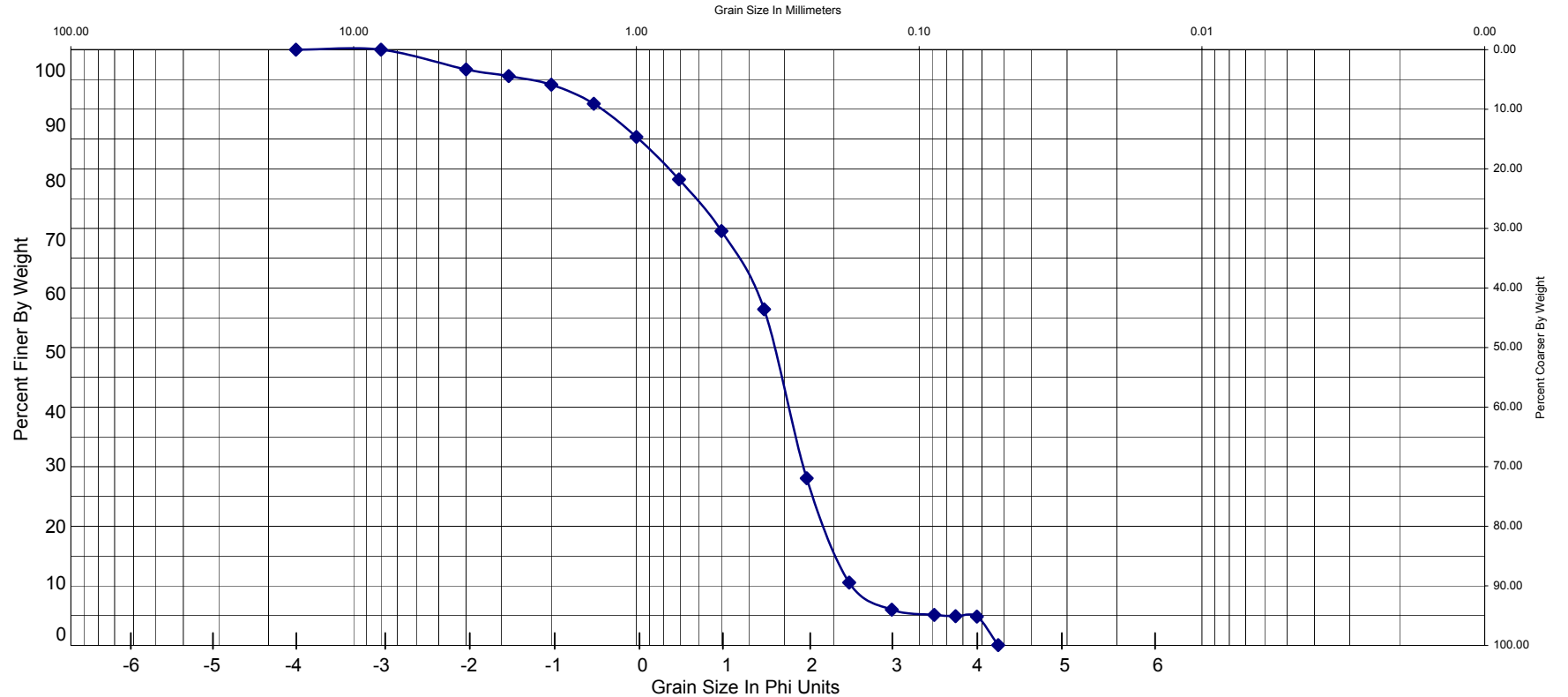
Median phi:	2.06	Median mm:	0.24
-------------	------	------------	------

	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.98	0.25	1.07	-0.12	1.49
Moment	1.97	0.26	1.32	0.09	1.91




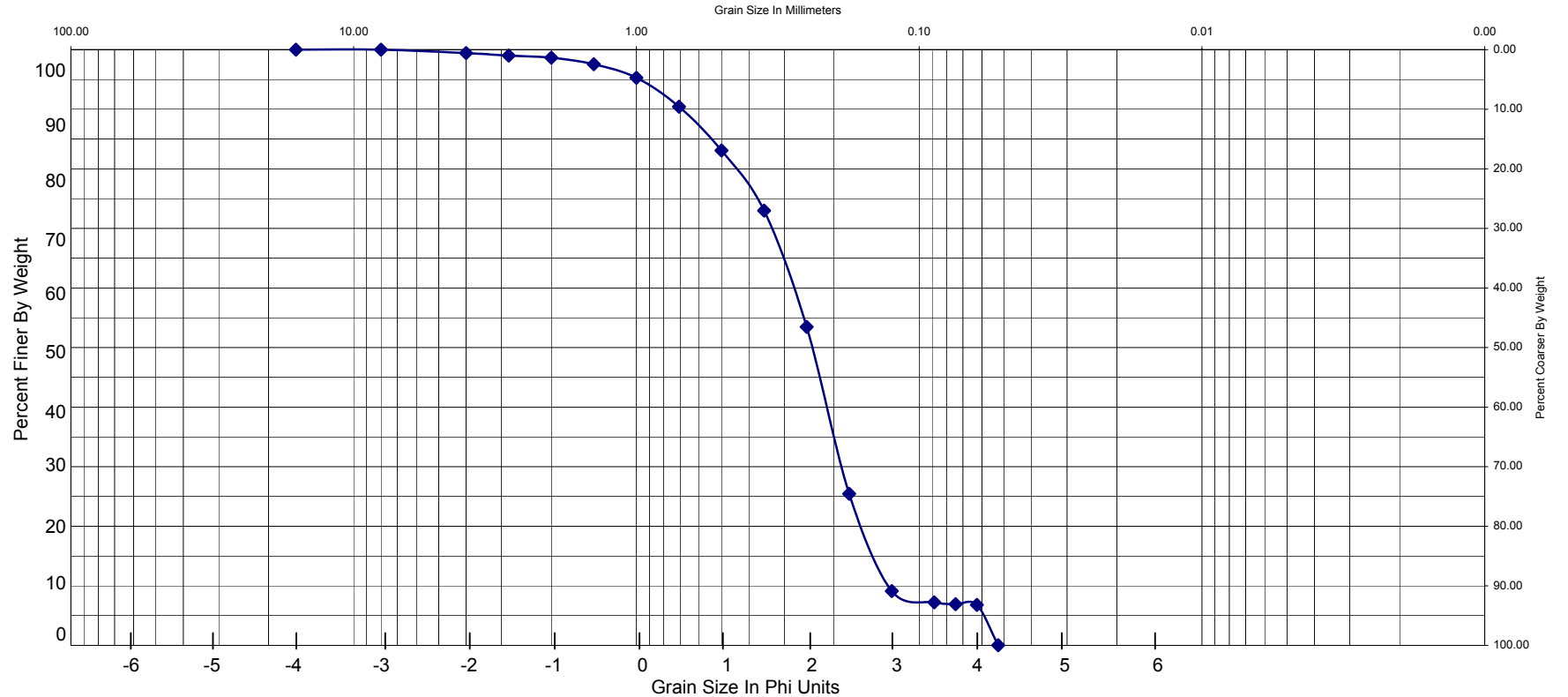
Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-17#1	2.0		SW	2.02	0.44	0.51	-0.25	1.49	1.16	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 540108.87 Feet
													Northing (Y): 793465.98 Feet
													Sample Elevation: -49 NGVD 29
<b>COASTAL PLANNING &amp; ENGINEERING, INC.</b> <b>2481 N. W. BOCA RATON BLVD.</b> <b>BOCA RATON, FLORIDA 33431</b>													Coord. System: State Plane 1983 FLA West



Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-17#2	4.0		SW	4.80	0.33	0.41	-0.23	1.89	1.62	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
			<b>COASTAL PLANNING &amp; ENGINEERING, INC.</b> <b>2481 N. W. BOCA RATON BLVD.</b> <b>BOCA RATON, FLORIDA 33431</b>										Easting (X): 540108.87 Feet
													Northing (Y): 793465.98 Feet
													Sample Elevation: -51 NGVD 29
													Coord. System: State Plane 1983 FLA West



Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-17#3	12.0		SW-SM	6.77	0.24	0.26	0.09	1.91	1.32	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 540108.87 Feet
													Northing (Y): 793465.98 Feet
													Sample Elevation: -59 NGVD 29
													Coord. System: State Plane 1983 FLA West



**COASTAL PLANNING & ENGINEERING, INC.**  
**2481 N. W. BOCA RATON BLVD.**  
**BOCA RATON, FLORIDA 33431**





