

DRILLING LOG		DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 of 1
1. PROJECT CAPTIVA ISLAND SAND STUDY		10. SIZE AND TYPE OF BIT 3 5/8"		
2. LOCATION (Coordinates or Station) X=546193.66 Y=769486.10		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-00-33		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 8/11/00 14:20		
8. DEPTH DRILLED INTO ROCK N/A		17. ELEVATION TOP OF HOLE - 34.1 FT		
9. TOTAL DEPTH OF HOLE 18.5 FT		18. TOTAL CORE RECOVERY FOR BORING 92.4%		
		19. SIGNATURE OF GEOLOGIST ID		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS
-34.1	0					
	1				1	Sample #1, Depth = 1.0' Mean (mm): 0.49, Phi Sorting: 1.14 Silt: 0.93% (SW)
	2					
	3		SAND, fine grained, some shell hash/shell fragments, gray (5Y-6/1), (SP). 0.75" whole shell @ 4.9' and 5.3'.			
	4				2	Sample #2, Depth = 4.0' Mean (mm): 0.55, Phi Sorting: 1.18 Silt: 1.11% (SW)
	5					
-40.5	6					
	7				3	Sample #3, Depth = 8.0' Mean (mm): 0.29, Phi Sorting: 1.39 Silt: 5.66% (SW-SM)
	8					
	9		SAND, fine grained, little shell hash/shell fragment increases to some shell hash/fragments between 11.8' & 12.8', gray (5Y-6/1) changes to light gray (5Y-7/1) @ 10.8', (SP). 1" coral fragment @ 9.0'.			
	10				4	Sample #4, Depth = 11.5 Mean (mm): 0.25, Phi Sorting: 1.50 Silt: 8.65% (SW-SM)
	11					
-47.1	12					
-48.2	13		SAND, fine grained, calcareous, trace shell hash, light gray (5Y-7/1), (SP).		5	Sample #5, Depth = 14.0' Mean (mm): 0.28, Phi Sorting: 1.53 Silt: 12.01% (SM)
	14					
	15		CARBONATE CLASTS, ranges from fine silt size to 5", light gray (5Y-7/1), (GM).			
	16					
-51.2	17					
-52.6	18		No Recovery			
	19		End of Boring			
	20					
	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-00-33#1
 Date: 1/1/2001
 By: ID



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

Elevation:	-35.1	Feet	Easting:	546193.66	State Plane	1983
Reference:	NGVD 29		Northing:	769486.10	FLA West	Feet

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

Dry Wt.	93.06	Percent Silt:	0.93
Wash Wt.	92.19		

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	2.350	2.525	2.350	2.525
7	-1.500	2.828	0.780	0.838	3.130	3.363
10	-1.000	2.000	1.180	1.268	4.310	4.631
14	-0.500	1.414	2.370	2.547	6.680	7.178
18	0.000	1.000	3.790	4.073	10.470	11.251
25	0.500	0.707	8.650	9.295	19.120	20.546
35	1.000	0.500	15.060	16.183	34.180	36.729
45	1.500	0.354	22.220	23.877	56.400	60.606
60	2.000	0.250	25.770	27.692	82.170	88.298
80	2.500	0.177	8.510	9.145	90.680	97.443
120	3.000	0.125	1.420	1.526	92.100	98.968
170	3.500	0.088	0.080	0.086	92.180	99.054
200	3.750	0.074	0.010	0.011	92.190	99.065
230	4.000	0.063	0.000	0.000	92.190	99.065
Pan	Pan	0.053	0.870	0.935	93.060	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.93	0.26	0.64	1.28	1.76	1.92	2.37

Median phi:	1.28	Median mm:	0.41
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	0.98	0.51	0.92	-0.52	1.20
Moment	1.04	0.49	1.14	-0.54	1.93

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-33#2
 Date: 1/1/2001
 By: ID



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

Elevation:	-38.1	Feet	Easting:	546193.66	State Plane	1983
Reference:	NGVD 29		Northing:	769486.10	FLA West	Feet

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

Dry Wt.	92.44	Percent Silt:	1.11
Wash Wt.	91.41		

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	0.590	0.638	0.590	0.638
7	-1.500	2.828	1.220	1.320	1.810	1.958
10	-1.000	2.000	1.880	2.034	3.690	3.992
14	-0.500	1.414	4.320	4.673	8.010	8.665
18	0.000	1.000	8.420	9.109	16.430	17.774
25	0.500	0.707	13.650	14.766	30.080	32.540
35	1.000	0.500	18.360	19.862	48.440	52.402
45	1.500	0.354	17.300	18.715	65.740	71.116
60	2.000	0.250	15.750	17.038	81.490	88.154
80	2.500	0.177	7.810	8.449	89.300	96.603
120	3.000	0.125	1.850	2.001	91.150	98.605
170	3.500	0.088	0.220	0.238	91.370	98.842
200	3.750	0.074	0.030	0.032	91.400	98.875
230	4.000	0.063	0.010	0.011	91.410	98.886
Pan	Pan	0.053	1.030	1.114	92.440	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.89	-0.10	0.24	0.94	1.61	1.88	2.41

Median phi:	0.94	Median mm:	0.52
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	0.85	0.56	0.99	-0.13	0.99
Moment	0.87	0.55	1.18	-0.16	1.51

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-33#3
 Date: 1/1/2001
 By: ID



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

Elevation:	-42.1	Feet	Easting:	546193.66	State Plane	1983
Reference:	NGVD 29		Northing:	769486.10	FLA West	Feet

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

Dry Wt.	96.90	Percent Silt:	5.66
Wash Wt.	91.42		

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	0.300	0.310	0.300	0.310
5	-2.000	4.000	0.650	0.671	0.950	0.980
7	-1.500	2.828	0.580	0.599	1.530	1.579
10	-1.000	2.000	0.920	0.949	2.450	2.528
14	-0.500	1.414	1.480	1.527	3.930	4.056
18	0.000	1.000	2.140	2.208	6.070	6.264
25	0.500	0.707	4.440	4.582	10.510	10.846
35	1.000	0.500	8.280	8.545	18.790	19.391
45	1.500	0.354	13.340	13.767	32.130	33.158
60	2.000	0.250	26.240	27.079	58.370	60.237
80	2.500	0.177	21.030	21.703	79.400	81.940
120	3.000	0.125	9.940	10.258	89.340	92.198
170	3.500	0.088	1.590	1.641	90.930	93.839
200	3.750	0.074	0.460	0.475	91.390	94.314
230	4.000	0.063	0.030	0.031	91.420	94.345
Pan	Pan	0.053	5.480	5.655	96.900	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.29	0.80	1.20	1.81	2.34	2.60	4.03

Median phi:	1.81	Median mm:	0.28
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.79	0.29	1.10	-0.02	1.56
Moment	1.79	0.29	1.39	0.12	2.02

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-33#4
 Date: 1/1/2001
 By: ID



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

Elevation:	-45.6	Feet	Easting:	546193.66	State Plane	1983
Reference:	NGVD 29		Northing:	769486.10	FLA West	Feet

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

Dry Wt.	93.55	Percent Silt:	8.65
Wash Wt.	85.48		

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	0.560	0.599	0.560	0.599
5	-2.000	4.000	1.230	1.315	1.790	1.913
7	-1.500	2.828	0.460	0.492	2.250	2.405
10	-1.000	2.000	0.910	0.973	3.160	3.378
14	-0.500	1.414	1.400	1.497	4.560	4.874
18	0.000	1.000	2.260	2.416	6.820	7.290
25	0.500	0.707	3.490	3.731	10.310	11.021
35	1.000	0.500	5.540	5.922	15.850	16.943
45	1.500	0.354	7.140	7.632	22.990	24.575
60	2.000	0.250	10.910	11.662	33.900	36.237
80	2.500	0.177	24.600	26.296	58.500	62.533
120	3.000	0.125	22.130	23.656	80.630	86.189
170	3.500	0.088	3.850	4.115	84.480	90.305
200	3.750	0.074	0.750	0.802	85.230	91.106
230	4.000	0.063	0.210	0.224	85.440	91.331
Pan	Pan	0.053	8.090	8.648	93.530	99.979

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.47	0.92	1.52	2.26	2.76	2.95	4.11

Median phi:	2.26	Median mm:	0.21
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.95	0.26	1.20	-0.45	1.51
Moment	2.01	0.25	1.50	-0.30	1.97

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-33#5
 Date: 1/1/2001
 By: ID



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

Elevation:	-48.1	Feet	Easting:	546193.66	State Plane	1983
Reference:	NGVD 29		Northing:	769486.10	FLA West	Feet

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

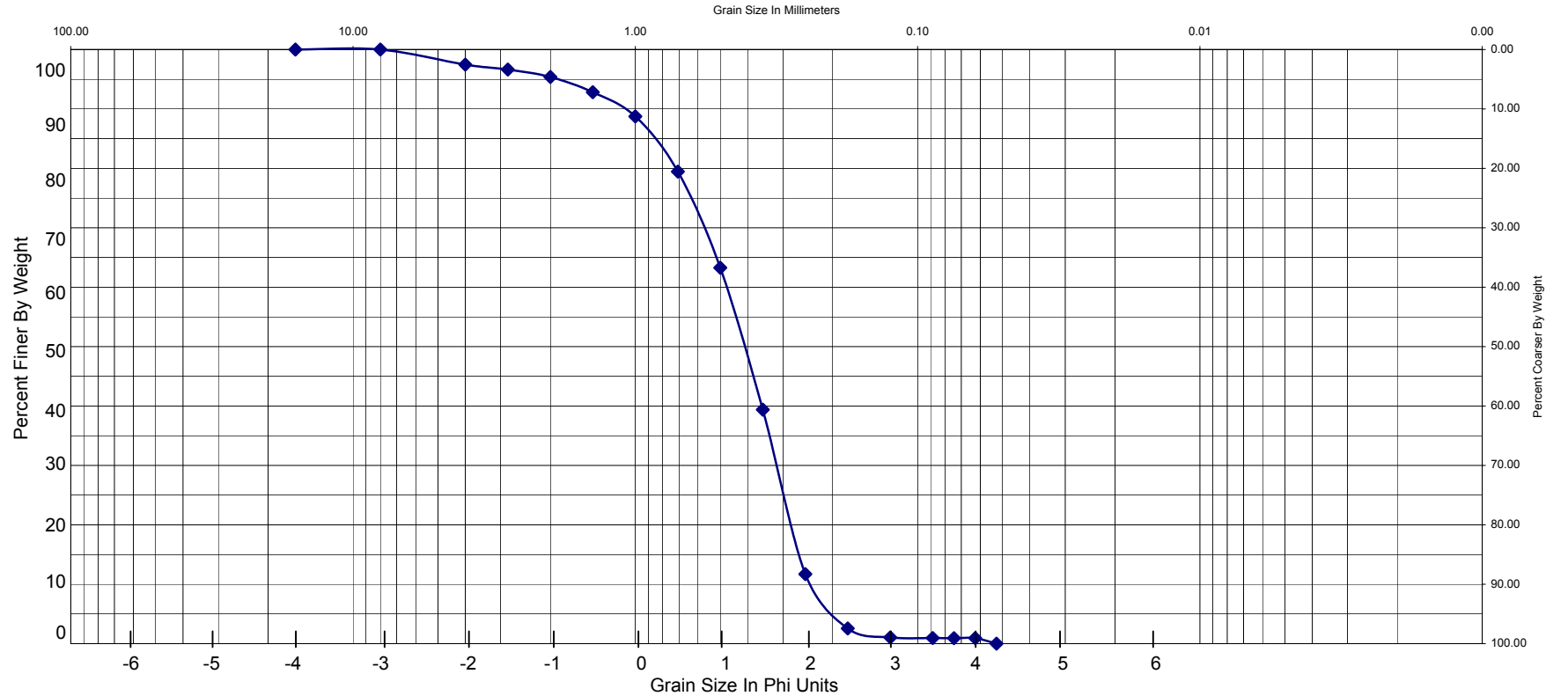
Dry Wt.	85.60	Percent Silt:	12.01
Wash Wt.	75.36		

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	0.090	0.105	0.090	0.105
7	-1.500	2.828	0.160	0.187	0.250	0.292
10	-1.000	2.000	0.600	0.701	0.850	0.993
14	-0.500	1.414	1.820	2.126	2.670	3.119
18	0.000	1.000	3.000	3.505	5.670	6.624
25	0.500	0.707	6.690	7.815	12.360	14.439
35	1.000	0.500	9.720	11.355	22.080	25.794
45	1.500	0.354	10.200	11.916	32.280	37.710
60	2.000	0.250	14.100	16.472	46.380	54.182
80	2.500	0.177	14.830	17.325	61.210	71.507
120	3.000	0.125	10.640	12.430	71.850	83.937
170	3.500	0.088	2.470	2.886	74.320	86.822
200	3.750	0.074	0.850	0.993	75.170	87.815
230	4.000	0.063	0.150	0.175	75.320	87.991
Pan	Pan	0.053	10.280	12.009	85.600	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.23	0.57	0.97	1.87	2.64	3.01	4.15

Median phi:	1.87	Median mm:	0.27
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.87	0.27	1.27	0.01	1.07
Moment	1.85	0.28	1.53	0.10	1.59



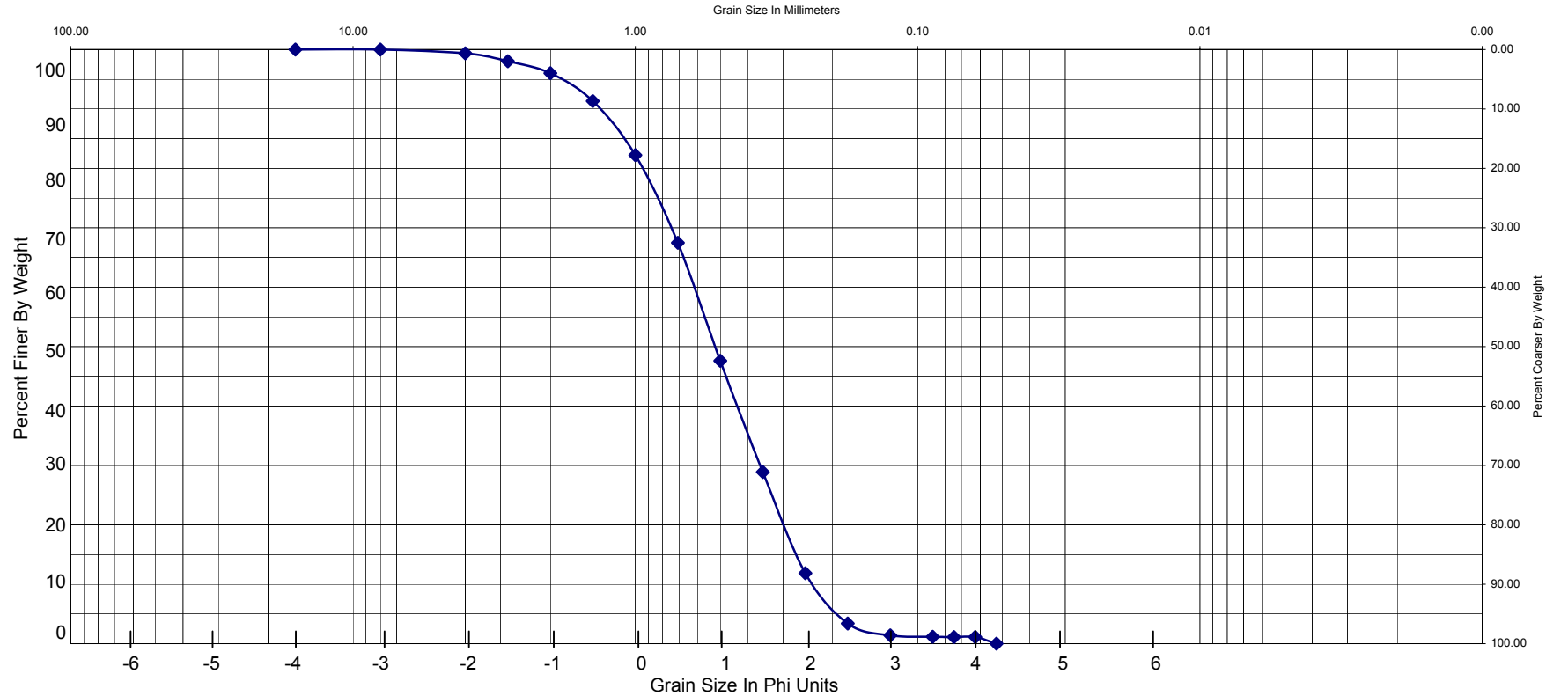
Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-33#1	1.0		SW	0.93	0.41	0.49	-0.54	1.93	1.14	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID



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

Easting (X):	546193.66 Feet
Northing (Y):	769486.10 Feet
Sample Elevation:	-35.1 NGVD 29
Coord. System:	State Plane 1983 FLA West



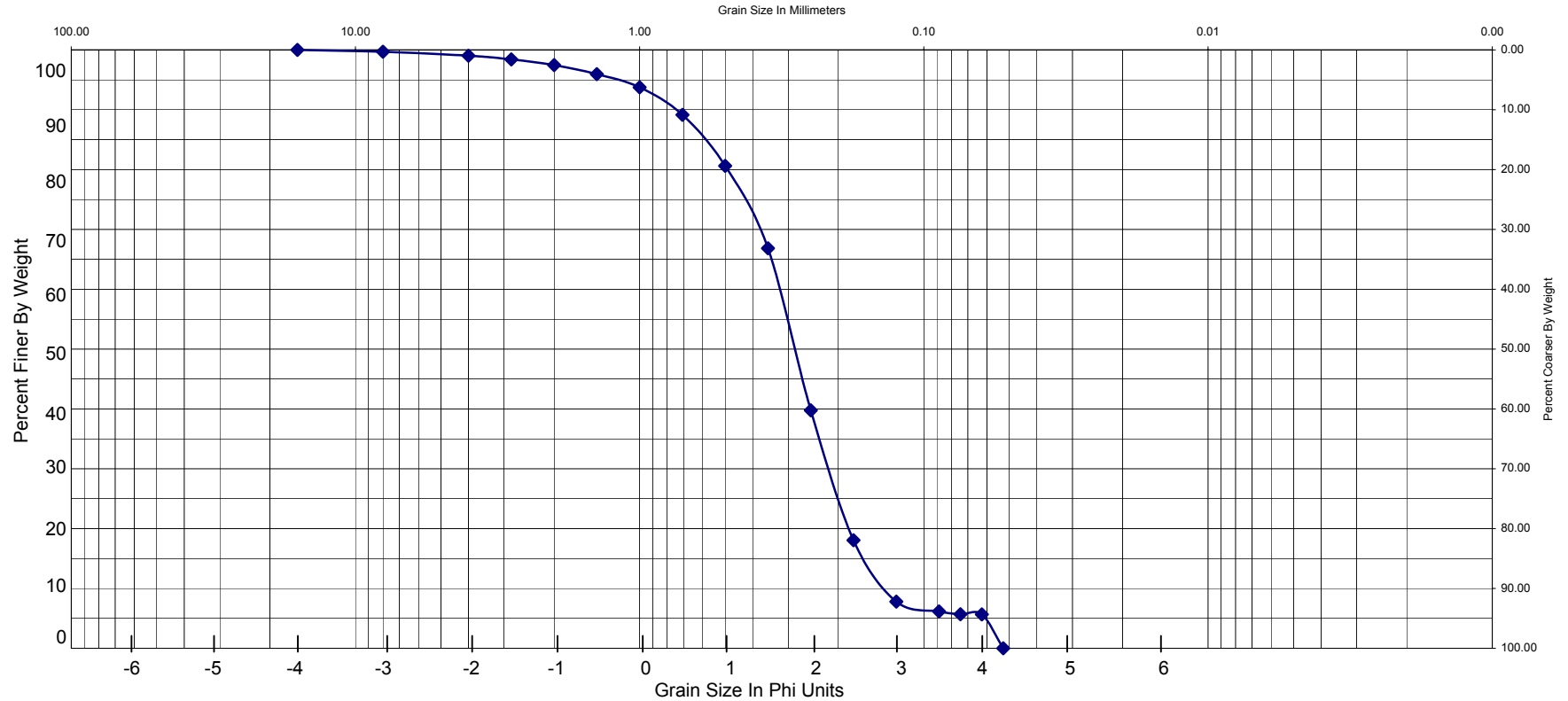
Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-33#2	4.0		SW	1.11	0.52	0.55	-0.16	1.51	1.18	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID




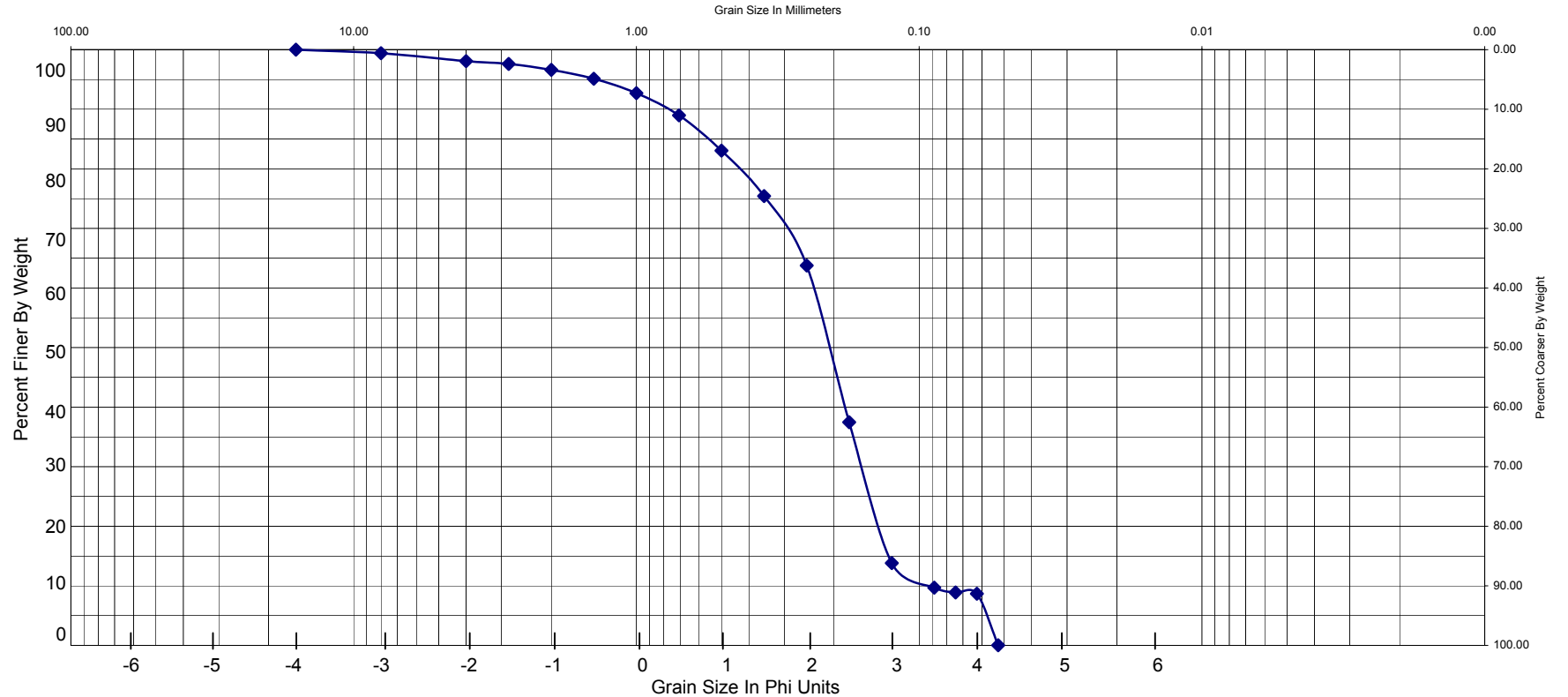
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2481 N. W. BOCA RATON BLVD.
BOCA RATON, FLORIDA 33431

Easting (X):	546193.66 Feet
Northing (Y):	769486.10 Feet
Sample Elevation:	-38.1 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-00-33#3	8.0		SW-SM	5.66	0.29	0.29	0.12	2.02	1.39	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
 <div> COASTAL PLANNING & ENGINEERING, INC. 2481 N. W. BOCA RATON BLVD. BOCA RATON, FLORIDA 33431 </div>													Easting (X): 546193.66 Feet
													Northing (Y): 769486.10 Feet
													Sample Elevation: -42.1 NGVD 29
													Coord. System: State Plane 1983 FLA West

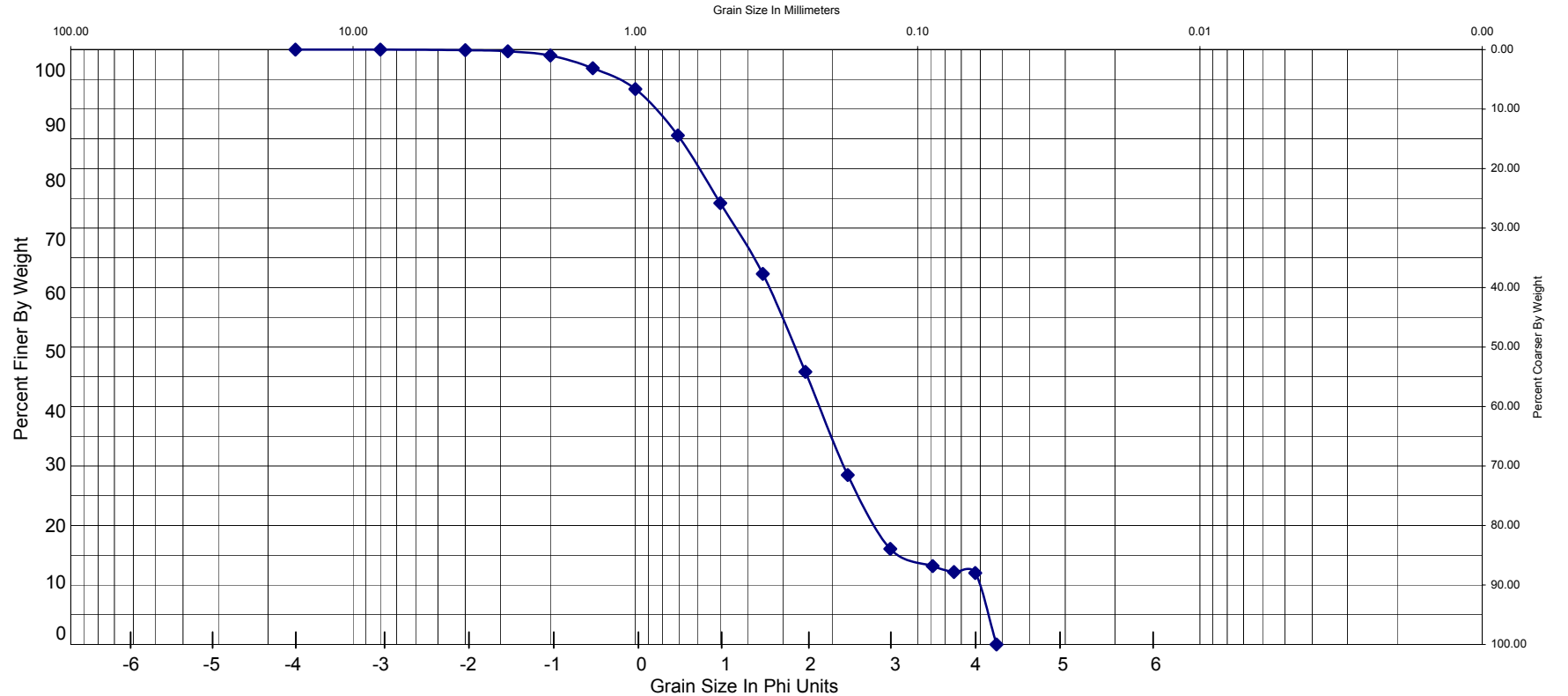


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-33#4	11.5		SW-SM	8.65	0.21	0.25	-0.3	1.97	1.5	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 546193.66 Feet
													Northing (Y): 769486.10 Feet
													Sample Elevation: -45.6 NGVD 29
													Coord. System: State Plane 1983 FLA West




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2481 N. W. BOCA RATON BLVD.
BOCA RATON, FLORIDA 33431



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-00-33#5	14.0		SM	12.01	0.27	0.28	0.1	1.59	1.53	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID



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

Easting (X):	546193.66 Feet
Northing (Y):	769486.10 Feet
Sample Elevation:	-48.1 NGVD 29
Coord. System:	State Plane 1983 FLA West



