







Granularmetric Report Depths and elevations based on measured values				 COASTAL TECH Coastal Geology & Sediments Laboratory 1333 Gateway Dr., Suite 1004 Melbourne, FL 32901 Phone (321) 751-1135 Fax (321) 751-2343			
Project Name: Bonita Beach							
Sample Name: B-4 #1							
Analysis Date: 03-15-12							
Analyzed By: MB							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
688,017.8		749,235.1		Florida State Plane West		-11.2 NAVD 88	
USCS:		Munsell:		Comments:			
SW		Wet - 5Y-6/2 Dry - 5Y-7/2					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
147.04	142.29	0.38	0.00	#200 - 4.00 #230 - 3.48	0.90	10.40	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00	
3.5	-2.50	5.66	0.30	0.20	0.30	0.20	
4	-2.25	4.76	0.06	0.04	0.36	0.24	
5	-2.00	4.00	0.38	0.26	0.74	0.50	
7	-1.50	2.83	0.56	0.38	1.30	0.88	
10	-1.00	2.00	0.92	0.63	2.22	1.51	
14	-0.50	1.41	2.09	1.42	4.31	2.93	
18	0.00	1.00	2.25	1.53	6.56	4.46	
25	0.50	0.71	2.32	1.58	8.88	6.04	
35	1.00	0.50	2.29	1.56	11.17	7.60	
45	1.50	0.35	2.01	1.37	13.18	8.97	
60	2.00	0.25	2.76	1.88	15.94	10.85	
80	2.50	0.18	7.84	5.33	23.78	16.18	
120	3.00	0.13	72.73	49.46	96.51	65.64	
170	3.50	0.09	39.97	27.18	136.48	92.82	
200	3.75	0.07	4.67	3.18	141.15	96.00	
230	4.00	0.06	0.76	0.52	141.91	96.52	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.67	3.34	3.17	2.84	2.59	2.48	0.17	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.61	0.16	0.98	-2.71	10.88		

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Project Name: Bonita Beach							
Sample Name: B-4 #2							
Analysis Date: 03-16-12							
Analyzed By: MB							
Easting (ft): <div style="text-align: center;">688,017.8</div>		Northing (ft): <div style="text-align: center;">749,235.1</div>		Coordinate System: <div style="text-align: center;">Florida State Plane West</div>		Elevation (ft): <div style="text-align: center;">-11.9 NAVD 88</div>	
USCS: <div style="text-align: center;">SW</div>		Munsell: Wet - 5Y-7/2 Dry - 5Y-7/1		Comments:			
Dry Weight (g): <div style="text-align: center;">149.98</div>	Wash Weight (g): <div style="text-align: center;">149.98</div>	Pan Retained (g): <div style="text-align: center;">0.77</div>	Sieve Loss (%): <div style="text-align: center;">0.00</div>	Fines (%): #200 - 0.64 #230 - 0.53	Organics (%): <div style="text-align: center;">1.40</div>	Carbonates (%): <div style="text-align: center;">71.30</div>	Shells (%):
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	4.34	2.89	4.34	2.89	
5/16"	-3.00	8.00	6.04	4.03	10.38	6.92	
3.5	-2.50	5.66	4.58	3.05	14.96	9.97	
4	-2.25	4.76	1.74	1.16	16.70	11.13	
5	-2.00	4.00	3.69	2.46	20.39	13.59	
7	-1.50	2.83	9.75	6.50	30.14	20.09	
10	-1.00	2.00	11.37	7.58	41.51	27.67	
14	-0.50	1.41	18.30	12.20	59.81	39.87	
18	0.00	1.00	15.27	10.18	75.08	50.05	
25	0.50	0.71	11.70	7.80	86.78	57.85	
35	1.00	0.50	8.92	5.95	95.70	63.80	
45	1.50	0.35	6.68	4.45	102.38	68.25	
60	2.00	0.25	7.81	5.21	110.19	73.46	
80	2.50	0.18	9.36	6.24	119.55	79.70	
120	3.00	0.13	16.17	10.78	135.72	90.48	
170	3.50	0.09	12.21	8.14	147.93	98.62	
200	3.75	0.07	1.11	0.74	149.04	99.36	
230	4.00	0.06	0.17	0.11	149.21	99.47	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.28	2.70	2.12	0.00	-1.18	-1.81	-3.24	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	0.22	0.86	1.99	-0.06	2.03		

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Project Name: Bonita Beach							
Sample Name: B-4 #3							
Analysis Date: 03-16-12							
Analyzed By: MB							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
688,017.8		749,235.1		Florida State Plane West		-13.2 NAVD 88	
USCS:		Munsell:		Comments:			
SW-SM		Wet - 5Y-6/1 Dry - 5Y-7/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
148.08	141.62	0.15	0.00	#200 - 5.11 #230 - 4.45	1.10	49.60	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00	
3.5	-2.50	5.66	0.21	0.14	0.21	0.14	
4	-2.25	4.76	0.86	0.58	1.07	0.72	
5	-2.00	4.00	0.39	0.26	1.46	0.98	
7	-1.50	2.83	1.18	0.80	2.64	1.78	
10	-1.00	2.00	1.95	1.32	4.59	3.10	
14	-0.50	1.41	2.85	1.92	7.44	5.02	
18	0.00	1.00	2.80	1.89	10.24	6.91	
25	0.50	0.71	2.01	1.36	12.25	8.27	
35	1.00	0.50	1.52	1.03	13.77	9.30	
45	1.50	0.35	1.32	0.89	15.09	10.19	
60	2.00	0.25	2.63	1.78	17.72	11.97	
80	2.50	0.18	5.86	3.96	23.58	15.93	
120	3.00	0.13	74.45	50.28	98.03	66.21	
170	3.50	0.09	38.41	25.94	136.44	92.15	
200	3.75	0.07	4.06	2.74	140.50	94.89	
230	4.00	0.06	0.97	0.66	141.47	95.55	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.79	3.34	3.17	2.84	2.59	2.50	-0.51	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.53	0.17	1.15	-2.55	9.1		

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Project Name: Bonita Beach							
Sample Name: B-4 #4							
Analysis Date: 03-16-12							
Analyzed By: MB							
Easting (ft): <div style="text-align: center;">688,017.8</div>		Northing (ft): <div style="text-align: center;">749,235.1</div>		Coordinate System: <div style="text-align: center;">Florida State Plane West</div>		Elevation (ft): <div style="text-align: center;">-13.9 NAVD 88</div>	
USCS: SW-SM W/ GRAVEL		Munsell: Wet - 5Y-6/2 Dry - 5Y-6/1		Comments:			
Dry Weight (g): <div style="text-align: center;">129.38</div>	Wash Weight (g): <div style="text-align: center;">122.52</div>	Pan Retained (g): <div style="text-align: center;">0.48</div>	Sieve Loss (%): <div style="text-align: center;">0.11</div>	Fines (%): #200 - 6.21 #230 - 5.80	Organics (%): <div style="text-align: center;">2.00</div>	Carbonates (%): <div style="text-align: center;">48.20</div>	Shells (%):
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	6.25	4.83	6.25	4.83	
5/16"	-3.00	8.00	6.33	4.89	12.58	9.72	
3.5	-2.50	5.66	6.92	5.35	19.50	15.07	
4	-2.25	4.76	2.33	1.80	21.83	16.87	
5	-2.00	4.00	4.47	3.45	26.30	20.32	
7	-1.50	2.83	7.67	5.93	33.97	26.25	
10	-1.00	2.00	6.59	5.09	40.56	31.34	
14	-0.50	1.41	8.43	6.52	48.99	37.86	
18	0.00	1.00	5.76	4.45	54.75	42.31	
25	0.50	0.71	3.55	2.74	58.30	45.05	
35	1.00	0.50	2.46	1.90	60.76	46.95	
45	1.50	0.35	1.82	1.41	62.58	48.36	
60	2.00	0.25	2.33	1.80	64.91	50.16	
80	2.50	0.18	6.51	5.03	71.42	55.19	
120	3.00	0.13	27.88	21.55	99.30	76.74	
170	3.50	0.09	19.05	14.72	118.35	91.46	
200	3.75	0.07	3.02	2.33	121.37	93.79	
230	4.00	0.06	0.53	0.41	121.90	94.20	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.25	2.96	1.96	-1.61	-2.37	-3.48	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	0.56	0.68	2.47	-0.32	1.55		

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Project Name: Bonita Beach							
Sample Name: B-4 #5							
Analysis Date: 03-16-12							
Analyzed By: MB							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
688,017.8		749,235.1		Florida State Plane West		-14.9 NAVD 88	
USCS:		Munsell:		Comments:			
SM		Wet - 5Y-5/1 Dry - 5Y-6/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
135.16	114.80	1.83	0.10	#200 - 19.59 #230 - 16.53	2.30	21.70	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	1.28	0.95	1.28	0.95	
5/16"	-3.00	8.00	1.15	0.85	2.43	1.80	
3.5	-2.50	5.66	1.03	0.76	3.46	2.56	
4	-2.25	4.76	0.85	0.63	4.31	3.19	
5	-2.00	4.00	0.70	0.52	5.01	3.71	
7	-1.50	2.83	0.54	0.40	5.55	4.11	
10	-1.00	2.00	1.24	0.92	6.79	5.03	
14	-0.50	1.41	1.53	1.13	8.32	6.16	
18	0.00	1.00	1.48	1.09	9.80	7.25	
25	0.50	0.71	1.23	0.91	11.03	8.16	
35	1.00	0.50	1.03	0.76	12.06	8.92	
45	1.50	0.35	1.15	0.85	13.21	9.77	
60	2.00	0.25	1.50	1.11	14.71	10.88	
80	2.50	0.18	2.52	1.86	17.23	12.74	
120	3.00	0.13	25.25	18.68	42.48	31.42	
170	3.50	0.09	57.30	42.39	99.78	73.81	
200	3.75	0.07	8.92	6.60	108.70	80.41	
230	4.00	0.06	4.13	3.06	112.83	83.47	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
		3.55	3.22	2.83	2.59	-1.02	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.62	0.16	1.55	-2.67	9.45		

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Project Name: Bonita Beach							
Sample Name: B-4 #6							
Analysis Date: 03-16-12							
Analyzed By: MB							
Easting (ft): <div style="text-align: center;">688,017.8</div>		Northing (ft): <div style="text-align: center;">749,235.1</div>		Coordinate System: <div style="text-align: center;">Florida State Plane West</div>		Elevation (ft): <div style="text-align: center;">-17.9 NAVD 88</div>	
USCS: <div style="text-align: center;">SM</div>		Munsell: Wet - 5Y-5/1 Dry - 5Y-6/1		Comments:			
Dry Weight (g): <div style="text-align: center;">151.77</div>	Wash Weight (g): <div style="text-align: center;">136.01</div>	Pan Retained (g): <div style="text-align: center;">1.52</div>	Sieve Loss (%): <div style="text-align: center;">0.09</div>	Fines (%): #200 - 13.92 #230 - 11.47	Organics (%): <div style="text-align: center;">1.80</div>	Carbonates (%): <div style="text-align: center;">14.60</div>	Shells (%):
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.61	0.40	0.61	0.40	
3.5	-2.50	5.66	2.09	1.38	2.70	1.78	
4	-2.25	4.76	1.12	0.74	3.82	2.52	
5	-2.00	4.00	0.77	0.51	4.59	3.03	
7	-1.50	2.83	1.67	1.10	6.26	4.13	
10	-1.00	2.00	2.59	1.71	8.85	5.84	
14	-0.50	1.41	3.77	2.48	12.62	8.32	
18	0.00	1.00	2.43	1.60	15.05	9.92	
25	0.50	0.71	1.46	0.96	16.51	10.88	
35	1.00	0.50	1.23	0.81	17.74	11.69	
45	1.50	0.35	1.22	0.80	18.96	12.49	
60	2.00	0.25	1.79	1.18	20.75	13.67	
80	2.50	0.18	4.16	2.74	24.91	16.41	
120	3.00	0.13	40.75	26.85	65.66	43.26	
170	3.50	0.09	51.28	33.79	116.94	77.05	
200	3.75	0.07	13.70	9.03	130.64	86.08	
230	4.00	0.06	3.72	2.45	134.36	88.53	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.69	3.47	3.10	2.66	2.43	-1.25	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.5	0.18	1.53	-2.17	6.71		