





Granularmetric Report Depths and elevations based on measured values				 Athena Technologies, Inc. 1293 Graham Farm Road McClellanville, SC 29458 ph (843) 887-3800 fax (843) 887-3801			
Project Name: Sarasota County Public Works							
Sample Name: SK-Area1-V11 #A1-V11-1							
Analysis Date: 02-06-14							
Analyzed By: CRM Sr							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
442,645		1,026,509		Florida State Plane West		-44.0 NAVD 88	
USCS:		Munsell:		Comments:			
SP							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
117.47	115.87			#200 - 1.70 #230 - 1.38		83.80	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	% Passing Sieve	
3/4"	-4.25	19.03		0.00	0.00	100.00	
5/8"	-4.00	16.00		0.00	0.00	100.00	
#3.5	-2.50	5.66		0.60	0.70	99.40	
#4	-2.25	4.76		0.27	1.02	99.13	
#5	-2.00	4.00		0.14	1.19	98.99	
#7	-1.50	2.83		0.38	1.64	98.61	
#10	-1.00	2.00		0.52	2.25	98.09	
#14	-0.50	1.41		1.39	3.88	96.70	
#18	0.00	1.00		5.27	10.07	91.43	
#25	0.50	0.71		18.81	32.17	72.62	
#35	1.00	0.50		26.93	63.81	45.69	
#45	1.50	0.35		18.06	85.02	27.63	
#60	2.00	0.25		15.56	103.30	12.07	
#80	2.50	0.18		5.56	109.83	6.51	
#120	3.00	0.13		3.66	114.13	2.85	
#170	3.50	0.09		1.00	115.31	1.85	
#200	3.75	0.07		0.15	115.49	1.70	
#230	4.00	0.06		0.32	115.87	1.38	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.71	1.87	1.58	0.92	0.44	0.20	-0.34	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	0.97	0.51	0.92	-0.44	5.78		

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Project Name: Sarasota County Public Works							
Sample Name: SK-Area1-V11 #A1-V11-1 Post							
Analysis Date: 02-13-14							
Analyzed By: CRM Sr							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
442,645		1,026,509		Florida State Plane West		-44.0 NAVD 88	
USCS:		Munsell:		Comments:			
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
18.78	18.54			#200 - 4.80 #230 - 1.29			
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	% Passing Sieve	
3/4"	-4.25	19.03		0.00	0.00	100.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	100.00	
#3.5	-2.50	5.66	0.00	0.00	0.00	100.00	
#4	-2.25	4.76	0.00	0.00	0.00	100.00	
#5	-2.00	4.00	0.00	0.00	0.00	100.00	
#7	-1.50	2.83	0.00	0.00	0.00	100.00	
#10	-1.00	2.00	0.00	0.00	0.00	100.00	
#14	-0.50	1.41	0.00	0.00	0.00	100.00	
#18	0.00	1.00	0.00	0.00	0.00	100.00	
#25	0.50	0.71	0.10	0.53	0.10	99.47	
#35	1.00	0.50	0.22	1.17	0.32	98.30	
#45	1.50	0.35	1.85	9.85	2.17	88.45	
#60	2.00	0.25	7.28	38.76	9.45	49.69	
#80	2.50	0.18	2.99	15.92	12.44	33.77	
#120	3.00	0.13	3.82	20.34	16.26	13.43	
#170	3.50	0.09	1.56	8.31	17.82	5.12	
#200	3.75	0.07	0.06	0.32	17.88	4.80	
#230	4.00	0.06	0.66	3.51	18.54	1.29	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.59	2.94	2.72	2.00	1.67	1.56	1.17	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.17	0.22	0.69	0.45	2.89		

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Project Name: Sarasota County Public Works							
Sample Name: SK-Area1-V11 #A1-V11-2							
Analysis Date: 02-06-14							
Analyzed By: CRM Sr							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
442,645		1,026,509		Florida State Plane West		-47.2 NAVD 88	
USCS:		Munsell:		Comments:			
SM							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
108.92	93.77			#200 - 19.66 #230 - 13.90			16.00
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	% Passing Sieve	
3/4"	-4.25	19.03		0.00	0.00	100.00	
5/8"	-4.00	16.00		0.00	0.00	100.00	
#3.5	-2.50	5.66		0.38	0.41	99.62	
#4	-2.25	4.76		0.13	0.55	99.49	
#5	-2.00	4.00		0.06	0.62	99.43	
#7	-1.50	2.83		0.12	0.75	99.31	
#10	-1.00	2.00		0.12	0.88	99.19	
#14	-0.50	1.41		0.41	1.33	98.78	
#18	0.00	1.00		0.86	2.27	97.92	
#25	0.50	0.71		1.65	4.07	96.27	
#35	1.00	0.50		2.30	6.57	93.97	
#45	1.50	0.35		2.74	9.55	91.23	
#60	2.00	0.25		4.88	14.86	86.35	
#80	2.50	0.18		7.94	23.51	78.41	
#120	3.00	0.13		22.57	48.09	55.84	
#170	3.50	0.09		26.34	76.78	29.50	
#200	3.75	0.07		9.84	87.50	19.66	
#230	4.00	0.06		5.76	93.77	13.90	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.91	3.61	3.11	2.58	2.15	0.78	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.73	0.15	1.02	-2.21	10.16		

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Project Name: Sarasota County Public Works							
Sample Name: SK-Area1-V11 #A1-V11-3							
Analysis Date: 02-06-14							
Analyzed By: CRM Sr							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
442,645		1,026,509		Florida State Plane West		-50.2 NAVD 88	
USCS:		Munsell:		Comments:			
SM							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
109.99	94.74			#200 - 18.06 #230 - 13.88			17.00
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	% Passing Sieve	
3/4"	-4.25	19.03		0.00	0.00	100.00	
5/8"	-4.00	16.00		9.38	10.32	90.62	
#3.5	-2.50	5.66		1.32	11.77	89.30	
#4	-2.25	4.76		0.59	12.42	88.71	
#5	-2.00	4.00		0.50	12.97	88.21	
#7	-1.50	2.83		1.72	14.86	86.49	
#10	-1.00	2.00		1.54	16.55	84.95	
#14	-0.50	1.41		2.76	19.59	82.19	
#18	0.00	1.00		6.59	26.84	75.60	
#25	0.50	0.71		9.57	37.37	66.03	
#35	1.00	0.50		8.78	47.03	57.25	
#45	1.50	0.35		4.96	52.49	52.29	
#60	2.00	0.25		4.60	57.55	47.69	
#80	2.50	0.18		4.47	62.47	43.22	
#120	3.00	0.13		10.85	74.40	32.37	
#170	3.50	0.09		9.87	85.26	22.50	
#200	3.75	0.07		4.44	90.14	18.06	
#230	4.00	0.06		4.18	94.74	13.88	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.87	3.37	1.75	0.03	-0.83	-4.12	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	0.85	0.55	2.37	-0.8	2.75		