

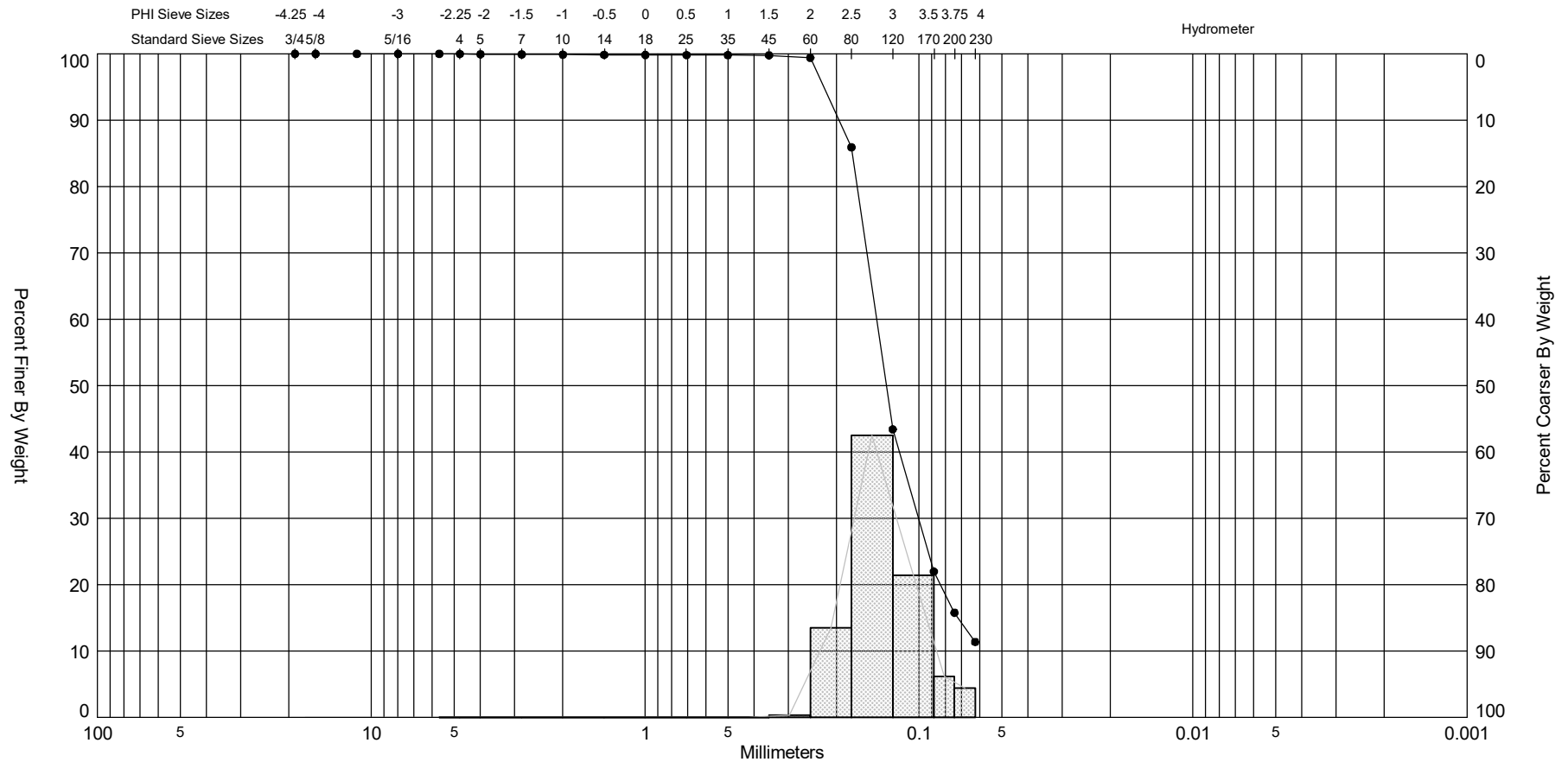
DRILLING LOG		DIVISION	INSTALLATION	SHEET 1 OF 1 SHEETS
1. PROJECT McFaddin NWR Beach Ridge Restoration Jefferson County, Texas			9. SIZE AND TYPE OF BIT 3.0 In.	
2. BORING DESIGNATION JCVC-18-05			10. COORDINATE SYSTEM/DATUM Texas South Central	
3. DRILLING AGENCY APTIM			11. MANUFACTURER'S DESIGNATION OF DRILL ☐ AUTO HAMMER APTIM SEAS VC-700 Vibracore ☐ MANUAL HAMMER	
4. NAME OF DRILLER Francis Stankiewicz			12. TOTAL SAMPLES	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED			13. TOTAL NUMBER CORE BOXES	
6. THICKNESS OF OVERBURDEN 0.0 Ft.			14. ELEVATION GROUND WATER	
7. DEPTH DRILLED INTO ROCK 0.0 Ft.			15. DATE BORING STARTED 05-21-18 20:01 COMPLETED 05-21-18 20:17	
8. TOTAL DEPTH OF BORING 18.3 Ft.			16. ELEVATION TOP OF BORING -20.3 Ft.	
			17. TOTAL RECOVERY FOR BORING 17.6 Ft.	
			18. SIGNATURE AND TITLE OF INSPECTOR KM	

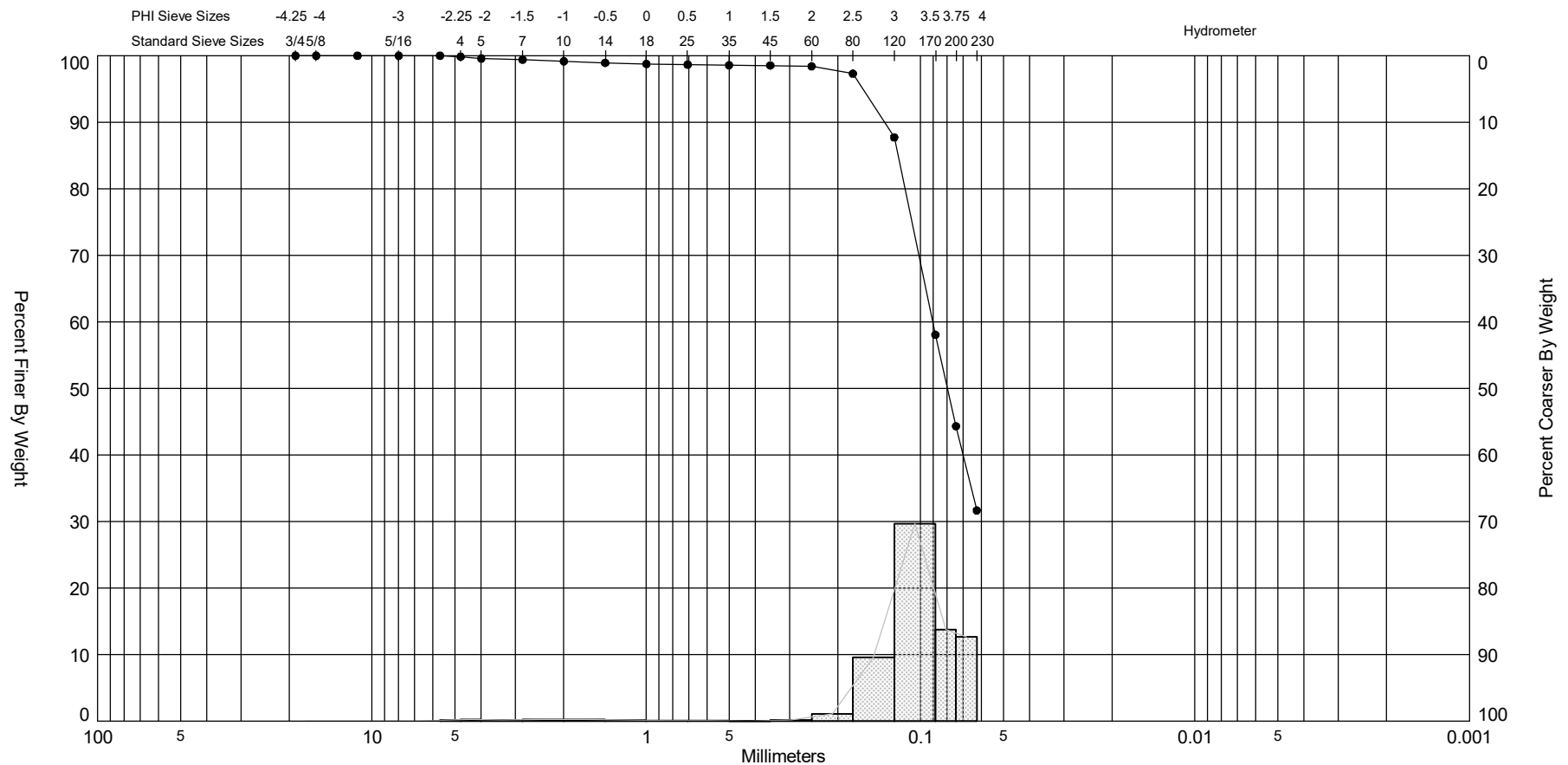
ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-20.3	0.0					
-23.5	3.2		SAND, fine grained, quartz, some silt, trace shell hash, 1.25" whole shell @ 2.6', 3.0" little shell hash pocket @ 2.7' with trace shell fragments up to (1.5" x 0.5"), 0.5" rock @ 2.7', 0.25" rock @ 3.0', gray (5Y-6/1), (SM).		1	Sample #1, Depth = 1.6' Mean (mm): 0.10, Phi Sorting: 0.76 Fines (230): 31.65% (SM)
-26.3	6.0		SAND, fine grained, quartz, some clay, 1.0" clay pockets @ 3.9' & 4.0', 2.0" clayey pocket @ 5.8', gray (5Y-6/1), (SC).		2	Sample #2, Depth = 4.6' Mean (mm): 0.11, Phi Sorting: 0.43 Fines (230): 20.64% (SC)
-37.9	17.6		SAND, fine grained, quartz, trace silt, light gray (5Y-7/1), (SP-SM).		3	Sample #3, Depth = 11.8' Mean (mm): 0.14, Phi Sorting: 0.40 Fines (230): 5.93% (SP-SM)
-38.6	18.3		No Recovery.			
			End of Boring			

MCFADDIN 2018 VC.GPJ 8/3/18

Granularmetric Report Depths and elevations based on measured values				 APTIM 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391-8102			
Project Name: McFaddin NWR Beach Ridge Restoration							
Sample Name: JCVC-18-05 COMP							
Analysis Date: 10-05-18							
Analyzed By: BF							
Easting (ft): 3,471,949		Northing (ft): 13,788,955		Coordinate System: Texas South Central		Elevation (ft):	
USCS: SM		Munsell:		Comments: COMPOSITE			
Dry Weight (g): 100.00	Wash Weight (g): 100.00	Pan Retained (g): 11.29	Sieve Loss (%): 0.08	Fines (%): #200 - 15.78 #230 - 11.37	Organics (%):	Carbonates (%):	Shell Hash (%):
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	0.00	0.00	0.00	0.00	
4	-2.25	4.76	0.02	0.02	0.02	0.02	
5	-2.00	4.00	0.04	0.04	0.06	0.06	
7	-1.50	2.83	0.02	0.02	0.08	0.08	
10	-1.00	2.00	0.04	0.04	0.12	0.12	
14	-0.50	1.41	0.03	0.03	0.15	0.15	
18	0.00	1.00	0.02	0.02	0.17	0.17	
25	0.50	0.71	0.02	0.02	0.19	0.19	
35	1.00	0.50	0.01	0.01	0.20	0.20	
45	1.50	0.35	0.02	0.02	0.22	0.22	
60	2.00	0.25	0.36	0.36	0.58	0.58	
80	2.50	0.18	13.50	13.50	14.08	14.08	
120	3.00	0.13	42.52	42.52	56.60	56.60	
170	3.50	0.09	21.43	21.43	78.03	78.03	
200	3.75	0.07	6.19	6.19	84.22	84.22	
230	4.00	0.06	4.41	4.41	88.63	88.63	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.74	3.43	2.92	2.63	2.52	2.16	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.9	0.13	0.48	-1.24	16.46		

MCFADDIN_COMPOSITE_20181008.GPJ 11/19/18



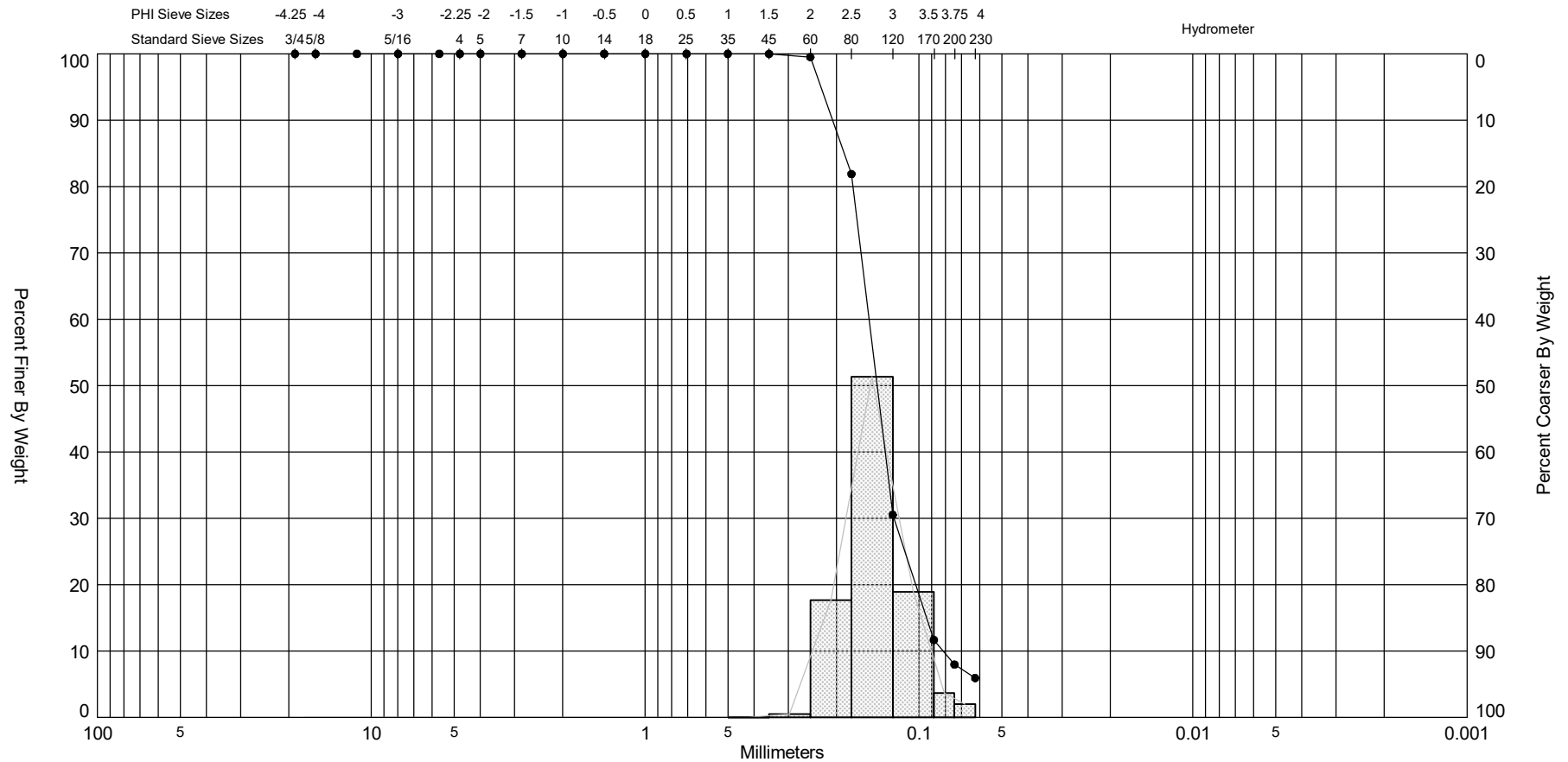


Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
JCVC-18-05 #1	—●—	-21.9	SM	#200 - 44.32 #230 - 31.65			3.65	3.26	-4.56	29.67	0.76	Project Name:	McFaddin NWR Beach Ridge Restoration
Comments:												Analysis Date:	06-21-18
Depths and elevations based on measured values												Analyzed By:	SMT
							APTIM 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391-8102					Easting (X, ft):	3,471,949
												Northing (Y, ft):	13,788,955
												Horizontal Datum:	NAD 1983
												Vertical Datum:	NAVD88

MCFADDIN_2018_VC.GPJ 8/14/18

MCFADDIN_2018_VC.GPJ 8/14/18



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
JCVC-18-05 #3	—●—	-32.1	SP-SM	#200 - 7.96 #230 - 5.93			2.81	2.81	0.41	3.2	0.4	Project Name:	McFaddin NWR Beach Ridge Restoration
Comments:												Analysis Date:	06-21-18
Depths and elevations based on measured values												Analyzed By:	SMT
							APTIM 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391-8102					Easting (X, ft):	3,471,949
												Northing (Y, ft):	13,788,955
												Horizontal Datum:	NAD 1983
												Vertical Datum:	NAVD88

Granularmetric Report Depths and elevations based on measured values				 APTIM 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391-8102											
Project Name: McFaddin NWR Beach Ridge Restoration															
Sample Name: JCVC-18-05 #1															
Analysis Date: 06-21-18															
Analyzed By: SMT															
Easting (ft): 3,471,949		Northing (ft): 13,788,955		Coordinate System: Texas South Central		Elevation (ft): -21.9 NAVD88									
USCS: SM		Munsell: Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 2.5Y-8/1		Comments:											
Dry Weight (g): 94.02		Wash Weight (g): 72.38		Pan Retained (g): 7.91		Sieve Loss (%): 0.22		Fines (%): #200 - 44.32 #230 - 31.65		Organics (%):		Carbonates (%):		Shell Hash (%):	
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		0.00		0.00		0.00		0.00			
4		-2.25		4.76		0.13		0.14		0.13		0.14			
5		-2.00		4.00		0.26		0.28		0.39		0.42			
7		-1.50		2.83		0.17		0.18		0.56		0.60			
10		-1.00		2.00		0.23		0.24		0.79		0.84			
14		-0.50		1.41		0.21		0.22		1.00		1.06			
18		0.00		1.00		0.16		0.17		1.16		1.23			
25		0.50		0.71		0.10		0.11		1.26		1.34			
35		1.00		0.50		0.08		0.09		1.34		1.43			
45		1.50		0.35		0.03		0.03		1.37		1.46			
60		2.00		0.25		0.13		0.14		1.50		1.60			
80		2.50		0.18		1.03		1.10		2.53		2.70			
120		3.00		0.13		9.02		9.59		11.55		12.29			
170		3.50		0.09		27.89		29.66		39.44		41.95			
200		3.75		0.07		12.91		13.73		52.35		55.68			
230		4.00		0.06		11.91		12.67		64.26		68.35			
Phi 5		Phi 16		Phi 25		Phi 50		Phi 75		Phi 84		Phi 95			
						3.65		3.21		3.06		2.62			
Moment		Mean Phi		Mean mm		Sorting		Skewness		Kurtosis					
Statistics		3.26		0.10		0.76		-4.56		29.67					

Granularmetric Report Depths and elevations based on measured values				 APTIM 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391-8102											
Project Name: McFaddin NWR Beach Ridge Restoration															
Sample Name: JCVC-18-05 #2															
Analysis Date: 06-21-18															
Analyzed By: SP															
Easting (ft): 3,471,949		Northing (ft): 13,788,955		Coordinate System: Texas South Central		Elevation (ft): -24.9 NAVD88									
USCS: SC		Munsell: Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1		Comments:											
Dry Weight (g): 94.37		Wash Weight (g): 80.94		Pan Retained (g): 6.04		Sieve Loss (%): 0.00		Fines (%): #200 - 29.84 #230 - 20.64		Organics (%):		Carbonates (%):		Shell Hash (%):	
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		0.00		0.00		0.00		0.00			
4		-2.25		4.76		0.00		0.00		0.00		0.00			
5		-2.00		4.00		0.00		0.00		0.00		0.00			
7		-1.50		2.83		0.00		0.00		0.00		0.00			
10		-1.00		2.00		0.00		0.00		0.00		0.00			
14		-0.50		1.41		0.00		0.00		0.00		0.00			
18		0.00		1.00		0.00		0.00		0.00		0.00			
25		0.50		0.71		0.01		0.01		0.01		0.01			
35		1.00		0.50		0.01		0.01		0.02		0.02			
45		1.50		0.35		0.01		0.01		0.03		0.03			
60		2.00		0.25		0.05		0.05		0.08		0.08			
80		2.50		0.18		2.75		2.91		2.83		2.99			
120		3.00		0.13		26.00		27.55		28.83		30.54			
170		3.50		0.09		25.71		27.24		54.54		57.78			
200		3.75		0.07		11.68		12.38		66.22		70.16			
230		4.00		0.06		8.68		9.20		74.90		79.36			
Phi 5		Phi 16		Phi 25		Phi 50		Phi 75		Phi 84		Phi 95			
				3.88		3.36		2.90		2.74		2.54			
Moment		Mean Phi		Mean mm		Sorting		Skewness		Kurtosis					
Statistics		3.17		0.11		0.43		-0.08		2.58					

MCFADDIN_2018_VC.GPJ 8/14/18

Granularmetric Report Depths and elevations based on measured values				 APTIM 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391-8102			
Project Name: McFaddin NWR Beach Ridge Restoration							
Sample Name: JCVC-18-05 #3							
Analysis Date: 06-21-18							
Analyzed By: SMT							
Easting (ft): 3,471,949		Northing (ft): 13,788,955		Coordinate System: Texas South Central		Elevation (ft): -32.1 NAVD88	
USCS: SP-SM		Munsell: Wet - 5Y-7/1 Dry - 5Y-7/1 Washed - 5Y-8/1		Comments:			
Dry Weight (g): 93.98	Wash Weight (g): 88.92	Pan Retained (g): 0.44	Sieve Loss (%): 0.07	Fines (%): #200 - 7.96 #230 - 5.93	Organics (%):	Carbonates (%):	Shell Hash (%):
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	0.00	0.00	0.00	0.00	
4	-2.25	4.76	0.00	0.00	0.00	0.00	
5	-2.00	4.00	0.00	0.00	0.00	0.00	
7	-1.50	2.83	0.00	0.00	0.00	0.00	
10	-1.00	2.00	0.00	0.00	0.00	0.00	
14	-0.50	1.41	0.00	0.00	0.00	0.00	
18	0.00	1.00	0.00	0.00	0.00	0.00	
25	0.50	0.71	0.00	0.00	0.00	0.00	
35	1.00	0.50	0.00	0.00	0.00	0.00	
45	1.50	0.35	0.01	0.01	0.01	0.01	
60	2.00	0.25	0.43	0.46	0.44	0.47	
80	2.50	0.18	16.59	17.65	17.03	18.12	
120	3.00	0.13	48.25	51.34	65.28	69.46	
170	3.50	0.09	17.74	18.88	83.02	88.34	
200	3.75	0.07	3.48	3.70	86.50	92.04	
230	4.00	0.06	1.91	2.03	88.41	94.07	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.39	3.15	2.81	2.57	2.44	2.13	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.81	0.14	0.4	0.41	3.2		

MCFADDIN_2018_VC.GPJ 8/14/18



MCFADDIN NWR BEACH
RIDGE RESTORATION
PHASE II
JCVC-18-05
0.0' - 2.0'



MCFADDIN NWR BEACH
RIDGE RESTORATION
PHASE II
JCVC-18-05
2.0' - 4.0'



MCFADDIN NWR BEACH
RIDGE RESTORATION
PHASE II
JCVC-18-05
4.0' - 6.0'



MCFADDIN NWR BEACH
RIDGE RESTORATION
PHASE II
JCVC-18-05
6.0' - 8.0'





MCFADDIN NWR BEACH
RIDGE RESTORATION
PHASE II
JCVC-18-05
8.0'-10.0'



MCFADDIN NWR BEACH
RIDGE RESTORATION
PHASE II
JCVC-18-05
10.0'-12.0'



MCFADDIN NWR BEACH
RIDGE RESTORATION
PHASE II
JCVC-18-05
12.0'-14.0'



MCFADDIN NWR BEACH
RIDGE RESTORATION
PHASE II
JCVC-18-05
14.0'-16.0'





MCFADDIN NWR BEACH
RIDGE RESTORATION
PHASE II
JCVC-18-05
16.0'-17.6'

