Boring Designation VB-FC18-33

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: Flagler HSDR; Offshore Sand Sources 3A	9. SIZE AND TYPE OF BIT: See Remarks		
	10. COORDINATE SYSTEM/DATUM: State Plane, FLE (U.S. Ft.)	HORIZONTAL: NAD83	VERTICAL: NAVD88
2. BORING DESIGNATION: VB-FC18-33	LOCATION COORDINATES: X = 669,837 Y = 1,900,572	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.	12. TOTAL SAMPLES	DISTURBED: 4 UNDISTURBED (UD): 0
4. NAME OF DRILLER: Talon Smith		13. TOTAL NUMBER CORE BOXES: 2	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 01-01-19 COMPLETED: 01-01-19
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -57.52 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 93 %	
8. TOTAL DEPTH OF BORING: 19.88 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: Scott Davidson, Geologist	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-57.52	0.00						-57.5		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, 10Y 6/1 greenish gray (SP)	100			Vibracore		
							-58.5		
				100	1		Vibracore		
-60.14	2.62						-60.1		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, shell size up to 3", 10Y 5/1 greenish gray (SP)		2				
				100			Vibracore		
-62.5'									
-64.5'									
-64.14	6.62						-64.1		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, trace silt, 10Y 5/1 greenish gray (SP)		3				
				100			Vibracore		
-66.14	8.62						-65.9		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, 10Y 5/1 greenish gray (SP)		4				
-67.64	10.12								
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little shell, few silt, shell size up to 2", 10Y 5/1 greenish gray (SP-SM)						
-68.64	11.12								
			SAND, silty, mostly fine-grained sand-sized quartz, little silt, few fine to coarse-grained sand-sized shell, 10Y 5/1 greenish gray (SM)	100			Vibracore		

0 5 10 15

(Continued)

Boring Designation VB-FC18-33

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 669,837 Y = 1,900,572	-57.5 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-73.24	15.72		SAND, silty, mostly fine to coarse-grained sand-sized shell, little silt, few fine-grained sand-sized quartz, few sand to gravel-sized limestone, 10Y 4/1 dark greenish gray (SM)	100			Vibracore		
-76.02	18.50		From El. -75.5 to -76.0 Ft., mostly sand to gravel-sized shell, little silt, few fine-grained sand-sized quartz, 10Y 4/1 dark greenish gray				-76.0		
-77.40	19.88	NR		0			Vibracore (No Recovery) -77.4		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.5	SP*
1	1.0/1.5	SP*
2	2.6/3.1	SP*
3	6.6/7.1	SP*
4	8.4/8.9	SP*

*Lab visual classification based on gradation curve

Boring Designation VB-FC18-34

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS

1. PROJECT	Flagler HSDR Offshore Sand Sources 3A
2. BORING DESIGNATION	VB-FC18-34
LOCATION COORDINATES	X = 670,507 Y = 1,901,300
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	Talon Smith
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	10.00 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLE (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED: 4 UNDISTURBED (UD): 0
13. TOTAL NUMBER CORE BOXES	2
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED: 12-04-18 COMPLETED: 12-04-18
16. ELEVATION TOP OF BORING	-59.35 Ft.
17. TOTAL RECOVERY FOR BORING	100 %
18. SIGNATURE AND TITLE OF INSPECTOR	Scott Davidson, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-59.35	0.00						-59.4		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt, 10Y 6/1 greenish gray (SP)	100			Vibracore		
							-60.4		
					1				
				100			Vibracore		
-63.35	4.00						-63.4		
-64.35	5.00		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, 10Y 6/1 greenish gray (SP)		2				
-62.5'				100			Vibracore		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt, 10Y 5/1 greenish gray (SP)				-65.4		
-64.5'					3				
				100			Vibracore		
-67.35	8.00						-67.4		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few sand to gravel-sized shell, trace silt, 10Y 5/1 greenish gray (SP)		4				
				100			Vibracore		
-69.35	10.00						-69.4		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.5	SP*

(Continued)

Boring Designation VB-FC18-34

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 670,507 Y = 1,901,300	-59.4 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			1 1.0/1.5 SP* 2 4.0/4.5 SP* 3 6.0/6.5 SP* 4 8.0/8.5 SP* *Lab visual classification based on gradation curve						

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20
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30
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Boring Designation VB-FC18-35

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: Flagler HSDR Offshore Sand Sources 3A	9. SIZE AND TYPE OF BIT: See Remarks		
	10. COORDINATE SYSTEM/DATUM: State Plane, FLE (U.S. Ft.)	HORIZONTAL: NAD83	VERTICAL: NAVD88
2. BORING DESIGNATION: VB-FC18-35	LOCATION COORDINATES: X = 671,166 Y = 1,902,094	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.	12. TOTAL SAMPLES	DISTURBED: 4 UNDISTURBED (UD): 0
4. NAME OF DRILLER: Talon Smith		13. TOTAL NUMBER CORE BOXES: 2	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 01-03-19 COMPLETED: 01-03-19
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -61.08 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 93 %	
8. TOTAL DEPTH OF BORING: 19.87 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: Scott Davidson, Geologist	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-61.08	0.00						-61.1		
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, 10Y 6/1 greenish gray (SP)	100			-61.6 Vibracore		
				100	1		Vibracore		
-62.71	1.63						-62.7		
-62.5'									
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little sand to gravel-sized shell, trace silt, 10Y 6/1 greenish gray (SP)		2				
-63.71	2.63		SAND, poorly-graded, mostly fine-grained sand-sized quartz, few sand to gravel-sized shell, trace silt, silt seam at 0.8' and 1.1' depths, 10Y 6/1 greenish gray (SP)	100			Vibracore		
-64.5'									
-65.11	4.03		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, shell seam at 8.5' depth, 10Y 4/1 dark greenish gray (SP)				-65.7		
				100	3		Vibracore		
-68.31	7.23						-68.7		
-69.71	8.63		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, few silt, 10Y 6/1 greenish gray (SP-SM)		4				
			SAND, silty, mostly fine-grained sand-sized quartz, little silt, trace shell, interbedded clay, 5GY 6/1 greenish gray (SM)	100			Vibracore		
-74.71	13.63								
-75.71	14.63		SILT, inorganic-L, some sand to gravel-sized shell, few fine-grained sand-sized quartz, 5GY 4/1 dark greenish gray (ML)						
			CLAY, inorganic-L, some sand to gravel-sized						

0 5 10 15

(Continued)

Boring Designation VB-FC18-35

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 671,166 Y = 1,902,094	-61.1 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-77.31	16.23		shell, few fine-grained sand-sized quartz, 5GY 4/1 dark greenish gray (CL) From El. -76.7 to -77.3 Ft., little silt, few fine to medium-grained sand-sized shell, trace quartz, 5GY 4/1 dark greenish gray						
-79.58	18.50		SAND, silty, mostly sand to gravel-sized shell, little silt, few fine-grained sand-sized quartz, 5GY 6/1 greenish gray (SM)	100			Vibracore -79.6		
-80.95	19.87	NR		0			Vibracore (No Recovery) -81.0		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.5/1.0	SP*
2	1.6/2.1	SP*
2	1.6/2.1	SP*
3	4.6/5.1	SP*
4	7.6/8.1	SP-SM*

*Lab visual classification based on gradation curve

15 20 25 30 35

Boring Designation VB-FC18-36

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: Flagler HSDR; Offshore Sand Sources 3A	9. SIZE AND TYPE OF BIT: See Remarks		
	10. COORDINATE SYSTEM/DATUM: State Plane, FLE (U.S. Ft.)	HORIZONTAL: NAD83	VERTICAL: NAVD88
2. BORING DESIGNATION: VB-FC18-36	LOCATION COORDINATES: X = 671,834 Y = 1,902,839	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.	12. TOTAL SAMPLES	DISTURBED: 3 UNDISTURBED (UD): 0
4. NAME OF DRILLER: Talon Smith		13. TOTAL NUMBER CORE BOXES: 2	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 01-03-19 COMPLETED: 01-03-19
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -58.50 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 95 %	
8. TOTAL DEPTH OF BORING: 19.91 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: Scott Davidson, Geologist	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-58.50	0.00						-58.5		
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt, N 5/ gray (SP)	100			Vibracore		
							-60.5		
				100	1		Vibracore		
-62.59	4.09						-62.6		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, N 5/ gray (SP)		2				
-64.09	5.59		SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to coarse-grained sand-sized shell, trace silt, shelly seam at 7.8' depth, 5GY 5/1 greenish gray (SP)	100			Vibracore		
							-65.6		
-66.09	7.59				3				
-66.59	8.09		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few fine to coarse-grained sand-sized shell, few silt, 5GY 5/1 greenish gray (SP-SM)						
			SAND, silty, mostly fine-grained sand-sized quartz, little silt, few fine to coarse-grained sand-sized shell, 5GY 5/1 greenish gray (SM) From El. -67.6 to -71.8 Ft., mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, little silt, silty seam at 12.2' depth. shell size up to 3", 10Y 5/1 greenish gray	100			Vibracore		
-71.79	13.29								
			SAND, clayey, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, 5GY 5/1 greenish gray (SC)						

0 5 10 15

-62.5'

-64.5'

(Continued)

Boring Designation VB-FC18-36

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 671,834 Y = 1,902,839	-58.5 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-74.19	15.69								
			SAND, silty, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, little silt, trace plant debris, 5G 6/1 greenish gray (SM)	100			Vibracore		
-77.50	19.00		From El. -76.6 to -77.5 Ft., some fine to coarse-grained sand-sized shell, some silt, little fine-grained sand-sized quartz, 10Y 7/1 light greenish gray				-77.5		
-78.41	19.91	NR		0			Vibracore (No Recovery) -78.4		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.5	SP*
1	2.0/2.5	SP*
2	4.1/4.6	SP*
3	7.1/7.6	*

*Lab visual classification based on gradation curve

NO DREDGE

Boring Designation VB-FC18-37

DRILLING LOG

DIVISION: South Atlantic

INSTALLATION: Jacksonville District

SHEET 1 OF 2 SHEETS

1. PROJECT: Flagler HSDR; Offshore Sand Sources 3A
2. BORING DESIGNATION: VB-FC18-37
LOCATION COORDINATES: X = 672,464 Y = 1,903,597
3. DRILLING AGENCY: Corps of Engineers - CESAJ
CONTRACTOR FILE NO.:
4. NAME OF DRILLER: Talon Smith
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:
6. THICKNESS OF OVERBURDEN: N/A
7. DEPTH DRILLED INTO ROCK: N/A
8. TOTAL DEPTH OF BORING: 19.90 Ft.
9. SIZE AND TYPE OF BIT: See Remarks
10. COORDINATE SYSTEM/DATUM: State Plane, FLE (U.S. Ft.) HORIZONTAL: NAD83 VERTICAL: NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL: ☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES: DISTURBED 2 UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES: 2
14. ELEVATION GROUND WATER:
15. DATE BORING: STARTED 01-03-19 COMPLETED 01-03-19
16. ELEVATION TOP OF BORING: -61.42 Ft.
17. TOTAL RECOVERY FOR BORING: 95 %
18. SIGNATURE AND TITLE OF INSPECTOR: Scott Davidson, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-61.42	0.00						-61.4		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few sand to gravel-sized shell, few silt, 10Y 5/1 greenish gray (SP)		1				
-62.57	1.15		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, few fine to coarse-grained sand-sized shell, 10Y 4/1 dark greenish gray (SP-SM)	100			Vibracore		
			From El. -64.3 to -65.8 Ft., mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, few silt, 10Y 4/1 dark greenish gray				-64.5		
-65.82	4.40		CLAY, inorganic-H, little fine-grained sand-sized quartz, few fine to coarse-grained sand-sized shell, with intermittent silty sand layer., 10GY 5/1 greenish gray (CH)		2				
-70.84	9.42		From El. -70.2 to -70.8 Ft., little fine to coarse-grained sand-sized shell, few fine-grained sand-sized quartz, 10GY 5/1 greenish gray	100			Vibracore		
			SAND, silty, mostly fine-grained sand-sized shell, some silt, few fine-grained sand-sized quartz, 5GY 5/1 greenish gray (SM)						
			From El. -75.2 to -76.6 Ft., mostly sand to gravel-sized shell, little silt, few fine-grained sand-sized quartz, 5GY 4/1 dark greenish gray						

0 5 10 15

(Continued)

Boring Designation VB-FC18-37

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 672,464 Y = 1,903,597	-61.4 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-76.62	15.20		CLAY, inorganic-L, little sand to gravel-sized shell, little fine-grained sand-sized quartz, 5GY 7/1 light greenish gray (CL)						
-78.02	16.60		SAND, clayey, some sand to gravel-sized shell, some clay, few fine-grained sand-sized quartz, 5GY 5/1 greenish gray (SC)	100			Vibracore		
-79.02	17.60		SAND, silty, some sand to gravel-sized shell, some silt, few fine-grained sand-sized quartz, 5GY 5/1 greenish gray (SM)						
-80.42	19.00						-80.4		
-81.32	19.90	NR		0			Vibracore (No Recovery) -81.3		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.0/0.5	SP*
1	0.0/0.5	SP*
2	3.1/3.6	SP-SM*

*Lab visual classification based on gradation curve

Boring Designation VB-FC18-38

DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District	**SHEET** 1 **OF** 2 **SHEETS**	
1. PROJECT Flagler HSDR; Offshore Sand Sources 3A	**9. SIZE AND TYPE OF BIT** See Remarks		
	10. COORDINATE SYSTEM/DATUM State Plane, FLE (U.S. Ft.)	**HORIZONTAL** NAD83	**VERTICAL** NAVD88
2. BORING DESIGNATION VB-FC18-38	**LOCATION COORDINATES** X = 670,574 Y = 1,899,901	**11. MANUFACTURER'S DESIGNATION OF DRILL** ☐ AUTO HAMMER ☐ MANUAL HAMMER	
3. DRILLING AGENCY Corps of Engineers - CESAJ	**CONTRACTOR FILE NO.**	**12. TOTAL SAMPLES**	**DISTURBED** 4 / **UNDISTURBED (UD)** 0
4. NAME OF DRILLER Talon Smith		**13. TOTAL NUMBER CORE BOXES** 2	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED	**DEG. FROM VERTICAL** / **BEARING**	**14. ELEVATION GROUND WATER**	
		15. DATE BORING	**STARTED** 01-06-19 / **COMPLETED** 01-06-19
6. THICKNESS OF OVERBURDEN N/A		**16. ELEVATION TOP OF BORING** -58.60 Ft.	
7. DEPTH DRILLED INTO ROCK N/A		**17. TOTAL RECOVERY FOR BORING** 97 %	
8. TOTAL DEPTH OF BORING 18.62 Ft.		**18. SIGNATURE AND TITLE OF INSPECTOR** Scott Davidson, Geologist	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-58.60	0.00						-58.6		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, trace silt, 10Y 6/1 greenish gray (SP)	100			Vibracore		
							-59.6		
				100	1		Vibracore		
-62.08	3.48						-62.1		
-62.5'			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt, 10Y 5/1 greenish gray (SP)		2				
				100			Vibracore		
							-64.0		
-64.5'					3				
-64.58	5.98								
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, few sand to gravel-sized shell, 10Y 5/1 greenish gray (SP-SM)	100			Vibracore		
			From El. -66.5 to -71.0 Ft., mostly fine-grained sand-sized quartz, few silt, few fine to coarse-grained sand-sized shell, silt seam at 14.6' depth, 10Y 5/1 greenish gray				-67.0		
					4				
				100			Vibracore		
-70.98	12.38								
			SAND, silty, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, little silt, 10GY 5/1 greenish gray (SM) From El. -71.8 to -74.3 Ft., some fine to coarse-grained sand-sized shell, some silt, few fine-grained sand-sized quartz, few clay, 5G 5/1 greenish gray						

0 5 10 15

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 670,574 Y = 1,899,901	-58.6 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-74.28	15.68								
			CLAY, inorganic-H, few fine-grained sand-sized quartz, trace shell, sand seam at 18.2' depth, 5G 5/1 greenish gray (CH)	100			Vibracore		
-76.60	18.00						-76.6		
-77.22	18.62	NR		0			-77.2 Vibracore (No Recovery)		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.5	SP*
1	1.0/1.5	SP*
2	3.5/4.0	SP*
3	5.4/5.9	SP*
4	8.4/8.9	SP*

*Lab visual classification based on gradation curve

Boring Designation VB-FC18-39

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: Flagler HSDR; Offshore Sand Sources 3A	9. SIZE AND TYPE OF BIT: See Remarks		
	10. COORDINATE SYSTEM/DATUM: State Plane, FLE (U.S. Ft.)	HORIZONTAL: NAD83	VERTICAL: NAVD88
2. BORING DESIGNATION: VB-FC18-39	LOCATION COORDINATES: X = 671,269 Y = 1,900,652	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.	12. TOTAL SAMPLES	DISTURBED: 4 UNDISTURBED (UD): 0
4. NAME OF DRILLER: Talon Smith		13. TOTAL NUMBER CORE BOXES: 2	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 01-06-19 COMPLETED: 01-06-19
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -57.18 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 94 %	
8. TOTAL DEPTH OF BORING: 19.72 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: Scott Davidson, Geologist	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-57.18	0.00						-57.2		
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt, 10Y 5/1 greenish gray (SP)	100			Vibracore		
							-58.2		
					1				
-59.48	2.30		SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, trace silt, trace shell, 10Y 5/1 greenish gray (SP)	100			Vibracore		
-61.18	4.00		SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt, trace gravel-sized shell at 8'., 10Y 5/1 greenish gray (SP)				-61.2		
					2				
-62.5'				100			Vibracore		
							-64.2		
-64.5'					3				
-65.78	8.60		SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, trace silt, 10Y 5/1 greenish gray (SP)	100			Vibracore		
							-67.2		
					4				
-69.96	12.78		CLAY, inorganic-L, little fine-grained sand-sized quartz, trace shell, 10GY 5/1 greenish gray (CL)	100			Vibracore		
-71.56	14.38		SAND, silty, some fine-grained sand-sized quartz, some silt, little fine to coarse-grained						

0 5 10 15

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Boring Designation VB-FC18-39

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 671,269 Y = 1,900,652	-57.2 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-72.26	15.08		sand-sized shell, 10GY 5/1 greenish gray (SM)						
			SAND, clayey, some sand to gravel-sized shell, some clay, little fine-grained sand-sized quartz, 10GY 5/1 greenish gray (SC)						
-73.76	16.58								
			CLAY, inorganic-L, little sand to gravel-sized shell, few fine-grained sand-sized quartz, shell size up to 4", 10GY 5/1 greenish gray (CL)	100			Vibracore		
-75.68	18.50						-75.7		
		NR		0			Vibracore (No Recovery)		
-76.90	19.72						-76.9		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.5	SP*
1	1.0/1.5	SP*
2	4.0/4.5	SP*
3	7.0/7.5	SP*
4	10.0/10.5	SP*

*Lab visual classification based on gradation curve

Boring Designation VB-FC18-40

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: Flagler HSDR; Offshore Sand Sources 3A	9. SIZE AND TYPE OF BIT: See Remarks		
	10. COORDINATE SYSTEM/DATUM: State Plane, FLE (U.S. Ft.)	HORIZONTAL: NAD83	VERTICAL: NAVD88
2. BORING DESIGNATION: VB-FC18-40	LOCATION COORDINATES: X = 671,919 Y = 1,901,410	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.	12. TOTAL SAMPLES	DISTURBED: 4 UNDISTURBED (UD): 0
4. NAME OF DRILLER: Talon Smith		13. TOTAL NUMBER CORE BOXES: 2	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 01-06-19 COMPLETED: 01-06-19
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -58.18 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 87 %	
8. TOTAL DEPTH OF BORING: 19.63 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: Scott Davidson, Geologist	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-58.18	0.00						-58.2		
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little sand to gravel-sized shell, trace silt, 5Y 6/1 gray (SP)	100			-58.7 Vibracore		
				100	1		Vibracore		
							-59.6		
					2				
-60.85	2.67		SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to coarse-grained sand-sized shell, trace silt, 5Y 5/2 olive gray (SP)	100			Vibracore		
							-62.6		
-64.05	5.87		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt, 5Y 5/2 olive gray (SP)	100	3		Vibracore		
-65.55	7.37						-65.6		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt, shell size up to 3", 10Y 4/1 dark greenish gray (SP-SM)		4				
-68.95	10.77		SAND, silty, some sand to gravel-sized shell, some fine to medium-grained sand-sized quartz, little silt, 5GY 5/1 greenish gray (SM) From El. -69.6 to -72.6 Ft., some fine-grained sand-sized quartz, some silt, little sand to gravel-sized shell, shell seam at 15.5' depth, 10GY 5/1 greenish gray	100			Vibracore		
-72.55	14.37		SAND, silty, mostly sand to gravel-sized shell, some silt, little fine-grained sand-sized quartz,						

-62.5'

-64.5'

0 5 10 15

(Continued)

Boring Designation VB-FC18-40

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 671,919 Y = 1,901,410	-58.2 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-75.18	17.00		5G 5/1 greenish gray (SM)	100			Vibracore -75.2		
-77.81	19.63	NO RECOVERY		0			Vibracore (No Recovery) -77.8		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.5/1.0	SP*
2	1.4/1.9	SP*
2	1.4/1.9	SP*
3	4.4/4.9	SP*
4	7.4/7.9	SP*

*Lab visual classification based on gradation curve

Boring Designation VB-FC18-41

DRILLING LOG

DIVISION: South Atlantic		INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS
1. PROJECT: Flagler HSDR Offshore Sand Sources 3A		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLE (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: NAVD88
2. BORING DESIGNATION: VB-FC18-41	LOCATION COORDINATES: X = 672,582 Y = 1,902,160	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.	12. TOTAL SAMPLES	DISTURBED: 4 / UNDISTURBED (UD): 0
4. NAME OF DRILLER: Talon Smith		13. TOTAL NUMBER CORE BOXES: 2	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 01-06-19 / COMPLETED: 01-06-19
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -58.62 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 96 %	
8. TOTAL DEPTH OF BORING: 19.18 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: Scott Davidson, Geologist	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-58.62	0.00						-58.6		
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little sand to gravel-sized shell, trace silt, 10Y 6/1 greenish gray (SP)	100			Vibracore		
							-59.6		
					1				
				100			Vibracore		
-62.5'									
							-62.9		
-63.44	4.82				2				
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few sand to gravel-sized shell, trace silt, 10Y 5/1 greenish gray (SP)						
-64.5'				100			Vibracore		
-64.94	6.32								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, trace silt, 10Y 4/1 dark greenish gray (SP)				-65.9		
					3				
-67.94	9.32			100			Vibracore		
			SAND, silty, mostly fine to medium-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, little silt, 10Y 5/1 greenish gray (SM)				-68.9		
-69.94	11.32				4				
			SAND, clayey, mostly fine to coarse-grained sand-sized shell, little clay, few fine-grained sand-sized quartz, silt seam at 17.6 and 17.9 depth, shell size up to 3", 5G 6/1 greenish gray (SC)	100			Vibracore		

0 5 10 15

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Boring Designation VB-FC18-41

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 672,582 Y = 1,902,160	-58.6 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-73.64	15.02		CLAY, inorganic-L, little sand to gravel-sized shell, few fine-grained sand-sized quartz, shell size up to 6", 5G 4/1 dark greenish gray (CL)	100			Vibracore		
-77.12	18.50						-77.1		
-77.80	19.18	NR		0			Vibracore (No Recovery) -77.8		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.5	SP*
1	1.0/1.5	SP*
2	4.3/4.8	SP*
3	7.3/7.8	SP*
4	10.3/10.8	SM*

*Lab visual classification based on gradation curve

Boring Designation VB-FC18-42

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: Flagler HSDR; Offshore Sand Sources 3A	9. SIZE AND TYPE OF BIT: See Remarks		
	10. COORDINATE SYSTEM/DATUM: State Plane, FLE (U.S. Ft.)	HORIZONTAL: NAD83	VERTICAL: NAVD88
2. BORING DESIGNATION: VB-FC18-42	LOCATION COORDINATES: X = 673,238 Y = 1,902,919	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.	12. TOTAL SAMPLES	DISTURBED: 4 UNDISTURBED (UD): 0
4. NAME OF DRILLER: Talon Smith		13. TOTAL NUMBER CORE BOXES: 2	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 01-06-19 COMPLETED: 01-06-19
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -57.09 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 93 %	
8. TOTAL DEPTH OF BORING: 19.89 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: Scott Davidson, Geologist	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-57.09	0.00						-57.1		
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt, 10Y 6/1 greenish gray (SP)	100			Vibracore		
							-58.1		
				100	1		Vibracore		
							-60.7		
				100	2		Vibracore		
-62.5'									
-62.70	5.61		SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, trace silt, 10Y 5/1 greenish gray (SP)	100	3		-62.7 Vibracore		
-64.5'							-64.7		
-65.20	8.11				4				
-66.20	9.11		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt, 10Y 5/1 greenish gray (SP)						
			SAND, silty, mostly fine-grained sand-sized quartz, little silt, little clay, trace shell, 10Y 5/1 greenish gray (SM)						
			From El. -68.2 to -69.7 Ft., some fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, some silt, few clay, 10Y 5/1 greenish gray	100			Vibracore		
			From El. -69.7 to -70.7 Ft., mostly fine-grained sand-sized quartz, little silt, trace shell, 10Y 5/1 greenish gray						
-70.70	13.61								
-71.70	14.61		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, trace shell, 10Y 5/1 greenish gray (SP-SM)						
			SAND, silty, mostly fine-grained sand-sized						

0 5 10 15

(Continued)

Boring Designation VB-FC18-42

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 673,238 Y = 1,902,919	-57.1 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-73.00	15.91		quartz, some silt, trace shell, 10Y 5/1 greenish gray (SM)						
-75.59	18.50		SILT, inorganic-L, little fine-grained sand-sized quartz, with interbedded clay seam, 5GY 5/1 greenish gray (ML)	100			Vibracore -75.6		
-76.98	19.89	NR		0			Vibracore (No Recovery) -77.0		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Lost during recovery at depth 19'-20'.

4. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.5	SP*
2	3.6/4.1	SP*
2	3.6/4.1	SP*
3	5.6/6.1	SP*
4	7.6/8.1	SP*

*Lab visual classification based on gradation curve

Boring Designation VB-FC18-43

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: Flagler HSDR Offshore Sand Sources 3A	9. SIZE AND TYPE OF BIT: See Remarks		
	10. COORDINATE SYSTEM/DATUM: State Plane, FLE (U.S. Ft.)	HORIZONTAL: NAD83	VERTICAL: NAVD88
2. BORING DESIGNATION: VB-FC18-43	LOCATION COORDINATES: X = 671,359 Y = 1,899,252	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.	12. TOTAL SAMPLES	DISTURBED: 4 UNDISTURBED (UD): 0
4. NAME OF DRILLER: Talon Smith		13. TOTAL NUMBER CORE BOXES: 2	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 01-08-19 COMPLETED: 01-08-19
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -57.83 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 91 %	
8. TOTAL DEPTH OF BORING: 19.88 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: Scott Davidson, Geologist	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-57.83	0.00						-57.8		
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt, 10Y 5/1 greenish gray (SP)	100			Vibracore		
							-58.8		
				100	1		Vibracore		
							-61.0		
				100	2		Vibracore		
-62.5'									
-63.55	5.72		SAND, poorly-graded, mostly fine-grained sand-sized quartz, few silt, trace silt, shell size up to 2.5", 10Y 5/1 greenish gray (SP)				-64.0		
-64.5'					3				
-64.95	7.12		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, shell size up to 2.5", 10Y 5/1 greenish gray (SP)	100			Vibracore		
							-67.0		
-67.45	9.62		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, trace shell, 10Y 5/1 greenish gray (SP-SM)		4				
				100			Vibracore		
-71.45	13.62		SAND, silty, mostly fine-grained sand-sized quartz, some silt, trace shell, trace clay, 10Y 5/1 greenish gray (SM)						
-72.55	14.72		CLAY, inorganic-L, little fine-grained sand-sized						

0 5 10 15

(Continued)

Boring Designation VB-FC18-43

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 671,359 Y = 1,899,252	-57.8 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			quartz, few medium to coarse-grained sand-sized shell, 5GY 5/1 greenish gray (CL)	100			Vibracore		
-74.75	16.92								
-75.83	18.00		SAND, silty, some fine-grained sand-sized quartz, some silt, little fine to coarse-grained sand-sized shell, 5GY 5/1 greenish gray (SM)				-75.8		
		NR		0			Vibracore (No Recovery)		
-77.71	19.88						-77.7		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.5	SP*
2	3.1/3.6	SP*
2	3.1/3.6	SP*
3	6.1/6.6	SP*
4	9.1/9.6	SP*

*Lab visual classification based on gradation curve

Boring Designation VB-FC18-44

DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District		**SHEET** 1 **OF** 2 **SHEETS**
1. PROJECT Flagler HSDR Offshore Sand Sources 3A	**9. SIZE AND TYPE OF BIT** See Remarks		
	10. COORDINATE SYSTEM/DATUM State Plane, FLE (U.S. Ft.)	**HORIZONTAL** NAD83	**VERTICAL** NAVD88
2. BORING DESIGNATION VB-FC18-44 / **LOCATION COORDINATES** X = 672,038 Y = 1,900,000	**11. MANUFACTURER'S DESIGNATION OF DRILL** ☐ AUTO HAMMER ☐ MANUAL HAMMER		
3. DRILLING AGENCY Corps of Engineers - CESAJ / **CONTRACTOR FILE NO.**	**12. TOTAL SAMPLES**	**DISTURBED** 4	**UNDISTURBED (UD)** 0
4. NAME OF DRILLER Talon Smith	**13. TOTAL NUMBER CORE BOXES** 2		
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED / **DEG. FROM VERTICAL** / **BEARING**	**14. ELEVATION GROUND WATER**		
	15. DATE BORING	**STARTED** 01-08-19	**COMPLETED** 01-08-19
6. THICKNESS OF OVERBURDEN N/A	**16. ELEVATION TOP OF BORING** -58.17 Ft.		
7. DEPTH DRILLED INTO ROCK N/A	**17. TOTAL RECOVERY FOR BORING** 95 %		
8. TOTAL DEPTH OF BORING 19.90 Ft.	**18. SIGNATURE AND TITLE OF INSPECTOR** Scott Davidson, Geologist		

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-58.17	0.00						-58.2		
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little sand to cobble-sized shell, trace silt, 5Y 6/1 gray (SP)	100			Vibracore		
							-59.2		
				100	1		Vibracore		
							-61.3		
					2				
-62.5'				100			Vibracore		
							-64.3		
-64.5'					3				
-65.77	7.60		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt, 5Y 5/1 gray (SP)	100			Vibracore		
							-67.3		
-68.27	10.10		SAND, silty, mostly fine-grained sand-sized quartz, little silt, few fine to medium-grained sand-sized shell, 10Y 5/1 greenish gray (SM)		4				
-70.27	12.10		SAND, silty, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, little silt, 10Y 4/1 dark greenish gray (SM)	100			Vibracore		
-72.97	14.80		From El. -72.0 to -73.0 Ft., some fine-grained sand-sized quartz, some silt, little fine-grained sand-sized shell, 5GY 4/1 dark greenish gray						

0 5 10 15

(Continued)

Boring Designation VB-FC18-44

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 672,038 Y = 1,900,000	-58.2 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			SILT, inorganic-L, few fine-grained sand-sized quartz, trace shell, 5GY 4/1 dark greenish gray (ML)						
-75.37	17.20			100			Vibracore		
			CLAY, inorganic-H, trace quartz, trace shell, 5GY 4/1 dark greenish gray (CH)						
-77.17	19.00						-77.2		
-78.07	19.90	NR		0			Vibracore (No Recovery) -78.1		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.5	SP*
2	3.1/3.6	SP*
2	3.1/3.6	SP*
3	6.1/6.6	SP*
4	9.1/9.6	SP*

*Lab visual classification based on gradation curve

Boring Designation VB-FC18-45

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: Flagler HSDR Offshore Sand Sources 3A	9. SIZE AND TYPE OF BIT: See Remarks		
	10. COORDINATE SYSTEM/DATUM: State Plane, FLE (U.S. Ft.)	HORIZONTAL: NAD83	VERTICAL: NAVD88
2. BORING DESIGNATION: VB-FC18-45	LOCATION COORDINATES: X = 672,731 Y = 1,900,741	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.	12. TOTAL SAMPLES	DISTURBED: 4 UNDISTURBED (UD): 0
4. NAME OF DRILLER: Talon Smith		13. TOTAL NUMBER CORE BOXES: 2	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 01-08-19 COMPLETED: 01-08-19
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -58.86 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 90 %	
8. TOTAL DEPTH OF BORING: 19.90 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: Scott Davidson, Geologist	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-58.86	0.00						-58.9		
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, trace silt, 2.5Y 6/1 gray (SP)	100			-59.4 Vibracore		
				100	1		Vibracore		
-60.96	2.10		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, 2.5Y 6/1 gray (SP)				-61.0		
-62.5'				100	2		Vibracore		
-63.96	5.10						-64.0		
-64.5'			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, 2.5Y 6/1 gray (SP)		3				
				100			Vibracore		
-65.96	7.10		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt, 10Y 5/1 greenish gray (SP)				-67.0		
					4				
-68.46	9.60		SAND, silty, mostly fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, little silt, 10Y 5/1 greenish gray (SM)						
-69.66	10.80		SAND, clayey, some fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, some clay, shell size up to 3", 5GY 4/1 dark greenish gray (SC)	100			Vibracore		
-71.66	12.80		CLAY, inorganic-L, little sand to gravel-sized shell, few fine-grained sand-sized quartz, 10Y 4/1 dark greenish gray (CL)						
-72.76	13.90		CLAY, inorganic-H, trace quartz, trace shell, 5GY 4/1 dark greenish gray (CH)						

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(Continued)

Boring Designation VB-FC18-45

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 672,731 Y = 1,900,741	-58.9 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-76.86	18.00			100			Vibracore -76.9		
-78.76	19.90	NR		0			Vibracore (No Recovery) -78.8		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Lost during recovery at depth 19'-20'.

4. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.5/1.0	SP*
1	0.5/1.0	SP*
2	2.1/2.6	SP*
3	5.1/5.6	SP*
4	8.1/8.6	SP*

*Lab visual classification based on gradation curve

15 20 25 30 35

Boring Designation VB-FC18-46

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: Flagler HSDR Offshore Sand Sources 3A	9. SIZE AND TYPE OF BIT: See Remarks		
	10. COORDINATE SYSTEM/DATUM: State Plane, FLE (U.S. Ft.)	HORIZONTAL: NAD83	VERTICAL: NAVD88
2. BORING DESIGNATION: VB-FC18-46	LOCATION COORDINATES: X = 673,347 Y = 1,901,502	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.	12. TOTAL SAMPLES	DISTURBED: 2 UNDISTURBED (UD): 0
4. NAME OF DRILLER: Talon Smith		13. TOTAL NUMBER CORE BOXES: 2	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 01-08-19 COMPLETED: 01-08-19
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -60.57 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 85 %	
8. TOTAL DEPTH OF BORING: 19.90 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: Scott Davidson, Geologist	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-60.57	0.00						-60.6		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt, 5Y 5/1 gray (SP)	100			Vibracore		
-62.5'							-62.6		
					1				
				100			Vibracore		
-64.07	3.50								
-64.5'			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, 10Y 5/1 greenish gray (SP)				-64.6		
-65.57	5.00				2				
			SAND, silty, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, little silt, 10Y 5/1 greenish gray (SM)						
			From El. -67.6 to -69.0 Ft., some fine-grained sand-sized quartz, little sand to gravel-sized shell, little silt, few sand to gravel-sized limestone, 10Y 4/1 dark greenish gray						
-68.97	8.40								
			SILT, inorganic-L, some fine to coarse-grained sand-sized shell, few fine-grained sand-sized quartz, 10Y 3/1 very dark greenish gray (ML)						
			From El. -69.6 to -70.1 Ft., some fine to coarse-grained sand-sized shell, little fine-grained sand-sized quartz, 5GY 5/1 greenish gray	100			Vibracore		
			From El. -70.1 to -73.0 Ft., some fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, 5GY 4/1 dark greenish gray						
			From El. -73.0 to -76.2 Ft., little fine-grained sand-sized quartz, trace shell, 10Y 4/1 dark greenish gray						

0 5 10 15

(Continued)

Boring Designation VB-FC18-46

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 673,347 Y = 1,901,502	-60.6 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-77.57	17.00		From El. -76.2 to -77.2 Ft., some fine-grained sand-sized quartz, little sand to gravel-sized shell, 10Y 4/1 dark greenish gray From El. -77.2 to -77.6 Ft., little fine-grained sand-sized quartz, few medium to coarse-grained sand-sized shell, 10Y 6/1 greenish gray	100			Vibracore -77.6		
-80.47	19.90	NO RECOVERY		0			Vibracore (No Recovery) -80.5		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.5	SP*
1	2.0/2.5	SP*
2	4.0/4.5	SP*

*Lab visual classification based on gradation curve

Boring Designation VB-FC18-47

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: Flagler HSDR Offshore Sand Sources 3A	9. SIZE AND TYPE OF BIT: See Remarks		
	10. COORDINATE SYSTEM/DATUM: State Plane, FLE (U.S. Ft.)	HORIZONTAL: NAD83	VERTICAL: NAVD88
2. BORING DESIGNATION: VB-FC18-47	LOCATION COORDINATES: X = 674,019 Y = 1,902,270	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.	12. TOTAL SAMPLES	DISTURBED: 4 UNDISTURBED (UD): 0
4. NAME OF DRILLER: Talon Smith		13. TOTAL NUMBER CORE BOXES: 2	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 01-08-19 COMPLETED: 01-08-19
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -58.00 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 98 %	
8. TOTAL DEPTH OF BORING: 19.50 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: Scott Davidson, Geologist	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-58.00	0.00						-58.0		
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, 5Y 6/1 gray (SP)	100			Vibracore -59.0		
				100	1		Vibracore		
-61.61	3.61		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt, shelly seam at 6'		2		-61.6		
-62.5'			depth, 10Y 5/1 greenish gray (SP)	100			Vibracore		
-63.61	5.61		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt, 10Y 5/1 greenish gray (SP)		3		-63.6		
-64.5'									
-65.11	7.11		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, shell size up to 1", 10GY 6/1 greenish gray (SP)	100			Vibracore -66.6		
-67.61	9.61				4				
-67.91	9.91		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, trace shell, 10Y 6/1 greenish gray (SP-SM)						
-68.11	10.11		SAND, clayey, mostly fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, little clay, 10Y 6/1 greenish gray (SC)						
			SAND, silty, some fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, little silt, with interbedded clay layer, 10GY 5/1 greenish gray (SM)	100			Vibracore		
-71.41	13.41		From El. -69.4 to -71.4 Ft., some fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, little silt, 10Y 5/1 greenish gray						
-72.61	14.61		SAND, silty, mostly fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, little silt, 10Y 5/1 greenish gray (SM)						

0 5 10 15

(Continued)

Boring Designation VB-FC18-47

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 674,019 Y = 1,902,270	-58.0 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-73.91	15.91		SAND, poorly-graded with silt, mostly fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, few silt, 10Y 5/1 greenish gray (SP-SM)						
			SAND, silty, some fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, little silt, 5GY 4/1 dark greenish gray (SM)	100			Vibracore		
-77.11	19.11		From El. -74.9 to -77.1 Ft., mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, little silt, shell size up to 3", 5GY 5/1 greenish gray				-77.1		
-77.50	19.50	NO REC		0			-77.5 Vibracore (No Recovery)		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.5	SP*
1	1.0/1.5	SP*
2	3.6/4.1	SP*
3	5.6/6.1	SP*
4	8.6/9.1	SP*

*Lab visual classification based on gradation curve

Boring Designation VB-FC18-48

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: Flagler HSDR; Offshore Sand Sources 3A	9. SIZE AND TYPE OF BIT: See Remarks		
	10. COORDINATE SYSTEM/DATUM: State Plane, FLE (U.S. Ft.)	HORIZONTAL: NAD83	VERTICAL: NAVD88
2. BORING DESIGNATION: VB-FC18-48	LOCATION COORDINATES: X = 672,132 Y = 1,898,585	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.	12. TOTAL SAMPLES	DISTURBED: 4 UNDISTURBED (UD): 0
4. NAME OF DRILLER: Talon Smith		13. TOTAL NUMBER CORE BOXES: 2	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 01-08-19 COMPLETED: 01-08-19
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -60.08 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 94 %	
8. TOTAL DEPTH OF BORING: 19.21 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: Scott Davidson, Geologist	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-60.08	0.00						-60.1		
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few fine to medium-grained sand-sized shell, trace silt, 10Y 6/1 greenish gray (SP)	100			Vibracore		
							-61.1		
					1				
				100			Vibracore		
-62.5'									
-63.29	3.21						-63.3		
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, 10Y 6/1 greenish gray (SP)		2				
-64.5'									
-64.99	4.91			100			Vibracore		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt, 10Y 5/1 greenish gray (SP)				-66.3		
					3				
-67.29	7.21								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace shell, 10Y 5/1 greenish gray (SP)	100			Vibracore		
-68.39	8.31						-69.3		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to coarse-grained sand-sized shell, trace silt, 10Y 4/1 dark greenish gray (SP)		4				
-72.09	12.01								
			SAND, silty, some fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, little silt, little sand to gravel-sized limestone, 10Y 4/1 dark greenish gray (SM)	100			Vibracore		
			From El. -72.7 to -74.7 Ft., some fine-grained sand-sized quartz, some silt, few fine to coarse-grained sand-sized shell, 10Y 4/1 dark greenish gray						
			From El. -74.7 to -76.3 Ft., some fine to						

0 5 10 15

(Continued)

Boring Designation VB-FC18-48

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Flagler HSDR	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 672,132 Y = 1,898,585	-60.1 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-76.29	16.21		coarse-grained sand-sized shell, some silt, few fine-grained sand-sized quartz, 10Y 4/1 dark greenish gray						
-78.08	18.00		CLAY, inorganic-L, few fine to coarse-grained sand-sized shell, trace quartz, 5GY 4/1 dark greenish gray (CL)	100			Vibracore -78.1		
-79.29	19.21	NR		0			Vibracore (No Recovery) -79.3		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.5	*
2	3.2/3.7	SP*
2	3.2/3.7	SP*
3	6.2/6.7	SP*
4	9.2/9.7	SP*

*Lab visual classification based on gradation curve