Boring Designation VB-SJN15-01

DRILLING LOG	DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT: St. Johns County Feasibility		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-SJN15-01	LOCATION COORDINATES: X = 600,629 Y = 2,062,772	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 3 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 04-08-15 / COMPLETED: 04-08-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -54.6 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 96 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-54.6	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 8/1 white (SP)				-56.6		
					1				
			At El. -58.0 Ft., mostly fine-grained sand-sized quartz, 2.5Y 6/1 gray				-58.6		
					2				
-59.9	5.3		At El. -59.2 Ft., little sand to gravel-sized shell						
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, few silt, weak reaction with HCl, 10Y 5/1 greenish gray (SP-SM)				-60.6		
			At El. -60.6 Ft., trace shell		3				
-62.9	8.3								
			SAND, silty, mostly fine-grained sand-sized quartz, some silt, little sand to gravel-sized shell, weak reaction with HCl, 10Y 4/1 dark greenish gray (SM)						
-64.9	10.3		From El. -64.7 to -64.9 Ft., very silty sand seam						
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, no reaction with HCl, interbedded silt seams, 2.5Y 6/2 light brownish gray (SP)						
-67.3	12.7								
			SILT, inorganic-H, some fine-grained sand-sized quartz, no reaction with HCl, N 5/ gray (MH)						
-69.1	14.5								
			SAND, poorly-graded, mostly fine-grained						

(Continued)

Boring Designation VB-SJN15-01

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 600,629 Y = 2,062,772	-54.6 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			sand-sized quartz, trace silt, no reaction with HCl, interbedded silt seams, 2.5Y 6/2 light brownish gray (SP)						
			At El. -70.5 Ft., some fine-grained sand-sized shell, little silt, strong reaction with HCl						
-71.6	17.0		At El. -70.6 Ft., mostly fine to medium-grained sand-sized quartz						
			SAND, poorly-graded with silt, mostly fine to medium-grained sand-sized quartz, few silt, trace shell, weak reaction with HCl, 10Y 5/1 greenish gray (SP-SM)						
-72.9	18.3								
			SILT, inorganic-H, some fine-grained sand-sized quartz, no reaction with HCl, N 5/ gray (MH)						
-73.7	19.1								
-74.6	20.0						-74.6		

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	2.0/2.3	SP*
2	4.0/4.3	SP*
3	6.0/6.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-02

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: St. Johns County Feasibility	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-SJN15-02	LOCATION COORDINATES: X = 601,642 Y = 2,062,879	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 4 UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 04-08-15 COMPLETED: 04-08-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -51.7 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 91 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-51.7	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 6/1 gray (SP)				-52.7		
					1		-54.7		
			At El. -54.7 Ft., mostly fine to medium-grained sand-sized quartz, trace shell		2		-56.7		
			At El. -56.7 Ft., mostly fine-grained sand-sized quartz, 2.5Y 5/1 gray		3				
-58.7	7.0						-58.7		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 5/1 gray (SP-SM)		4				
-60.5	8.8		At El. -59.0 Ft., 10Y 5/1 greenish gray						
			From El. -59.9 to -60.5 Ft., sandy shelly clay seam						
			CLAY, lean, little medium-grained sand-sized limestone, little fine-grained sand-sized quartz, few fine-grained sand-sized shell, weak reaction with HCl, 5G 4/1 dark greenish gray (CL)						
-63.0	11.3								
			SAND, clayey, mostly fine-grained sand-sized quartz, little clay, little fine-grained sand-sized shell, weak reaction with HCl, 10Y 7/1 light greenish gray (SC)						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-02

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 601,642 Y = 2,062,879	-51.7 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-69.8	18.1								
-71.7	20.0						-71.7		

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	1.0/1.3	SP*
2	3.0/3.3	SP*
3	5.0/5.3	SP*
4	7.0/7.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-03

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: St. Johns County Feasibility	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-SJN15-03	LOCATION COORDINATES: X = 599,600 Y = 2,062,664	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 3 UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL:	BEARING:	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 03-31-15 COMPLETED: 03-31-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -53.0 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 100 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-53.0	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 6/1 gray (SP)						
			At El. -54.4 Ft., mostly fine-grained sand-sized quartz, 2.5Y 5/1 gray				-55.0		
					1				
-56.6	3.6						-57.0		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, few fine-grained sand-sized shell, weak reaction with HCl, 2.5Y 5/1 gray (SP-SM)		2				
			At El. -59.0 Ft., trace shell				-59.0		
					3				
			At El. -60.3 Ft., little sand to gravel-sized shell						
			From El. -60.9 to -61.1 Ft., shelly very clayey sand seam						
			From El. -61.1 to -61.7 Ft., strong reaction with HCl, very clayey sand seam with dissolutioned limestone						
-62.0	9.0		From El. -61.7 to -61.9 Ft., clayey sand seam						
			From El. -61.9 to -62.0 Ft., slightly shelly clayey sand seam						
			SAND, poorly-graded with clay, mostly fine-grained sand-sized quartz, few clay, trace shell, strong reaction with HCl, 10Y 7/1 light greenish gray (SP-SC)						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-03

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 599,600 Y = 2,062,664	-53.0 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-73.0	20.0						-73.0		

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	2.0/2.3	SP*
2	4.0/4.3	SP-SM*
3	6.0/6.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-04

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT: St. Johns County Feasibility		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-SJN15-04	LOCATION COORDINATES: X = 598,478 Y = 2,063,569	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 3 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 03-31-15 / COMPLETED: 03-31-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -52.8 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 94 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-52.8	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 7/1 light gray (SP) At El. -53.8 Ft., few fine to medium-grained sand-sized shell				-54.3		
					1				
-55.9	3.1						-56.3		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 6/1 gray (SP-SM)		2				
-57.2	4.4						-57.8		
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt, weak reaction with HCl, 10Y 5/1 greenish gray (SP) At El. -57.8 Ft., some sand to gravel-sized shell At El. -59.1 Ft., little sand to gravel-sized shell, N 5/ gray		3				
-59.9	7.1								
			SILT, inorganic-H, little fine-grained sand-sized quartz, little sand to gravel-sized shell, weak reaction with HCl, N 5/ gray (MH) At El. -60.5 Ft., trace shell, no reaction with HCl						
-62.8	10.0								
			CLAY, lean, some fine-grained sand-sized quartz, trace shell, no reaction with HCl, 10Y 4/1 dark greenish gray (CL)						
-67.8	15.0								

0 5 10 15

(Continued)

Boring Designation VB-SJN15-04

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 598,478 Y = 2,063,569	-52.8 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-72.8	20.0		SAND, clayey, mostly fine-grained sand-sized quartz, little clay, trace shell, strong reaction with HCl, 2.5Y 7/2 light gray (SC) At El. -71.6 Ft.				-72.8		

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	1.5/1.8	SP*
2	3.5/3.8	SP-SM*
3	5.0/5.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-05

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT: St. Johns County Feasibility		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-SJN15-05	LOCATION COORDINATES: X = 598,582 Y = 2,062,532	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 2 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 03-31-15 / COMPLETED: 03-31-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -53.0 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 97 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-53.0	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 6/1 gray (SP)				-54.0		
			At El. -54.5 Ft., mostly fine-grained sand-sized quartz, 2.5Y 5/1 gray		1		-55.5		
-56.4	3.4		From El. -56.2 to -56.4 Ft., shelly sand seam		2				
			SAND, poorly-graded with clay, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, few clay, strong reaction with HCl, 5GY 4/1 dark greenish gray (SP-SC)						
-58.0	5.0		At El. -57.3 Ft., some fine-grained sand-sized quartz, some sand to gravel-sized shell, N 5/ gray						
-59.0	6.0		SAND, clayey, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, some clay, strong reaction with HCl, 5GY 4/1 dark greenish gray (SC)						
			CLAY, fat, little fine-grained sand-sized quartz, few fine gravel-sized shell, weak reaction with HCl, 5G 4/1 dark greenish gray (CH)						
-61.8	8.8		At El. -60.5 Ft., some sand to gravel-sized shell, few fine-grained sand-sized quartz						
			From El. -61.4 to -61.8 Ft., slightly shelly clay seam						
			CLAY, lean, few fine-grained sand-sized quartz, trace shell, weak reaction with HCl, 5G 4/2 grayish green (CL)						
			At El. -63.9 Ft., little fine to medium-grained sand-sized shell, 10GY 6/1 greenish gray						
-65.1	12.1		SAND, clayey, mostly fine-grained sand-sized quartz, little clay, trace shell, strong reaction with HCl, 10Y 6/1 greenish gray (SC)						
			From El. -65.5 to -65.6 Ft., clay seam						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-05

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 598,582 Y = 2,062,532	-53.0 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-72.4	19.4								
-73.0	20.0						-73.0		

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	1.0/1.3	SP*
2	2.5/2.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell

Abbreviations:

15
20
25
30
35

SAJ FORM 1836-A
JUN 02

Boring Designation VB-SJN15-06

DRILLING LOG	DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT: St. Johns County Feasibility		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-SJN15-06	LOCATION COORDINATES: X = 599,486 Y = 2,063,652	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 2 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 04-11-15 / COMPLETED: 04-11-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -55.7 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 100 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-55.7	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 6/2 light brownish gray (SP)						
			From El. -57.5 to -57.8 Ft., intermittent silt seams				-57.7		
			At El. -57.9 Ft., little fine to medium-grained sand-sized shell		1				
			At El. -59.4 Ft., little sand to gravel-sized shell, 2.5Y 5/1 gray				-60.2		
					2				
			At El. -62.4 Ft., little fine to coarse-grained sand-sized shell						
-63.2	7.5								
			SILT, inorganic-H, some fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, weak reaction with HCl, N 5/ gray (MH)						
			From El. -65.2 to -65.4 Ft., strong reaction with HCl, sandy very shelly silt seam						
			At El. -67.6 Ft., little fine-grained sand-sized quartz, trace shell, no reaction with HCl						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-06

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 599,486 Y = 2,063,652	-55.7 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-70.8	15.1		SAND, silty, mostly fine-grained sand-sized quartz, little silt, trace shell, strong reaction with HCl, N 7/ light gray (SM)						
-75.7	20.0						-75.7		

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	2.0/2.3	SP*
2	4.5/4.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell

Abbreviations:

15
20
25
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Boring Designation VB-SJN15-07

DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District	**SHEET** 1 **OF** 2 **SHEETS**	
1. PROJECT St. Johns County Feasibility	**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-SJN15-07 **LOCATION COORDINATES** X = 600,504 Y = 2,063,760	**11. MANUFACTURER'S DESIGNATION OF DRILL** ☐ AUTO HAMMER ☐ MANUAL HAMMER		
3. DRILLING AGENCY Corps of Engineers - CESAJ **CONTRACTOR FILE NO.** 6738-15-5453	**12. TOTAL SAMPLES**	**DISTURBED** 3	**UNDISTURBED (UD)** 0
4. NAME OF DRILLER	**13. TOTAL NUMBER CORE BOXES** 0		
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED **DEG. FROM VERTICAL** **BEARING**	**14. ELEVATION GROUND WATER**		
	15. DATE BORING	**STARTED** 04-11-15	**COMPLETED** 04-11-15
6. THICKNESS OF OVERBURDEN N/A	**16. ELEVATION TOP OF BORING** -52.3 Ft.		
7. DEPTH DRILLED INTO ROCK N/A	**17. TOTAL RECOVERY FOR BORING** 96 %		
8. TOTAL DEPTH OF BORING 20.0 Ft.	**18. SIGNATURE AND TITLE OF INSPECTOR** ,		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-52.3	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 6/2 light brownish gray (SP)						
			At El. -54.3 Ft., trace shell		1		-54.3		
			At El. -54.8 Ft., little fine to medium-grained sand-sized shell						
			At El. -56.3 Ft., mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell		2		-56.3		
			At El. -56.9 Ft., 10Y 5/1 greenish gray						
			At El. -57.8 Ft., mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell		3		-57.8		
-60.0	7.7		From El. -59.6 to -60.0 Ft., very shelly sand seam						
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, few fine-grained sand-sized shell, weak reaction with HCl, 10Y 5/1 greenish gray (SP-SM)						
			At El. -62.0 Ft., little fine to medium-grained sand-sized shell						
-62.6	10.3		SILT, inorganic-H, little fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, weak reaction with HCl, N 5/ gray (MH)						
			At El. -64.4 Ft., few fine-grained sand-sized quartz, trace shell, no reaction with HCl						

0 5 10 15

(Continued)

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 600,504 Y = 2,063,760	-52.3 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-68.3	16.0								
-71.5	19.2		SAND, silty, mostly fine-grained sand-sized quartz, little silt, trace shell, strong reaction with HCl, N 7/ light gray (SM)						
-72.3	20.0						-72.3		

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	2.0/2.3	SP*
2	4.0/4.3	SP*
3	5.5/5.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell

Abbreviations:

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Boring Designation VB-SJN15-08

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: St. Johns County Feasibility	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-SJN15-08	LOCATION COORDINATES: X = 601,528 Y = 2,063,898	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 1 UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL:	BEARING:	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 04-10-15 COMPLETED: 04-10-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -55.1 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 98 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-55.1	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 5/1 gray (SP)		1		-56.1		
-57.3	2.2								
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 7/1 light gray (SP-SM)						
-60.4	5.3		From El. -60.1 to -60.4 Ft., shelly silty sand seam						
			SAND, silty, mostly fine-grained sand-sized quartz, some silt, few fine-grained sand-sized shell, weak reaction with HCl, 10Y 5/1 greenish gray (SM)						
			At El. -63.6 Ft., little sand to gravel-sized shell						
			At El. -64.6 Ft., little fine to medium-grained sand-sized shell						
			From El. -66.1 to -67.4 Ft., intermittent seams of slightly sandy silt						
-67.4	12.3								
			SAND, poorly-graded with silt, mostly fine to medium-grained sand-sized quartz, few silt, trace shell, weak reaction with HCl, 10Y 5/1 greenish gray (SP-SM)						
-69.3	14.2								
			SILT, inorganic-H, some fine to medium-grained sand-sized quartz, trace						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-08

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 601,528 Y = 2,063,898	-55.1 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			shell, weak reaction with HCl, N 5/ gray (MH)						
			At El. -71.0 Ft., 3" silty sand seam At El. -71.2 Ft., little fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell						
-72.7	17.6		SAND, silty, mostly fine-grained sand-sized quartz, little silt, trace shell, strong reaction with HCl, N 7/ light gray (SM)						
-74.6	19.5								
-75.1	20.0						-75.1		

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	1.0/1.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-09

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-09
LOCATION COORDINATES	X = 601,418 Y = 2,064,910
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 6 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 04-10-15 / COMPLETED 04-10-15
16. ELEVATION TOP OF BORING	-50.3 Ft.
17. TOTAL RECOVERY FOR BORING	92 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-50.3	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 6/2 light brownish gray (SP)				-52.3		
					1				
			At El. -53.3 Ft., little fine to medium-grained sand-sized shell				-54.3		
			At El. -54.2 Ft., few medium-grained sand-sized shell, 2.5Y 6/1 gray		2		-55.3		
			At El. -55.3 Ft., mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell		3		-56.3		
			At El. -56.3 Ft., little sand to gravel-sized shell, 2.5Y 7/1 light gray		4		-57.8		
			At El. -57.8 Ft., mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell		5		-58.8		
-59.1	8.8		At El. -58.3 Ft., 2.5Y 5/1 gray At El. -58.8 Ft., few medium-grained sand-sized shell		6				
			SAND, silty, mostly fine-grained sand-sized quartz, little silt, few fine-grained sand-sized shell, weak reaction with HCl, 10Y 5/1 greenish gray (SM)						
-61.1	10.8								
-61.8	11.5		SAND, poorly-graded with silt, mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 6/2 light brownish gray (SP-SM)						
			SAND, silty, mostly fine-grained sand-sized quartz, little silt, few fine-grained sand-sized shell, weak reaction with HCl, 10Y 5/1 greenish gray (SM)						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-09

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 601,418 Y = 2,064,910	-50.3 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-66.5	16.2								
-68.6	18.3		SAND, poorly-graded with silt, mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 6/2 light brownish gray (SP-SM)						
-70.3	20.0						-70.3		

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	2.0/2.3	SP*
2	4.0/4.3	SP*
3	5.0/5.3	SP*
4	6.0/6.3	SP*
5	7.5/7.8	SP*
6	8.5/8.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

15
20
25
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Boring Designation VB-SJN15-10

DRILLING LOG	DIVISION	INSTALLATION	SHEET / OF
	South Atlantic	Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT: St. Johns County Feasibility		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-SJN15-10	LOCATION COORDINATES: X = 600,400 Y = 2,064,778	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 3 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 04-11-15 / COMPLETED: 04-11-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -53.6 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 98 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-53.6	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 7/1 light gray (SP)				-54.6		
					1				
			At El. -55.5 Ft., little fine to medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 6/2 light brownish gray				-56.6		
			At El. -56.6 Ft., mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell		2		-57.6		
			At El. -57.6 Ft., few fine-grained sand-sized shell		3				
			From El. -59.3 to -59.4 Ft., shell seam						
			From El. -60.5 to -60.7 Ft., shell seam						
			At El. -60.7 Ft., few fine to medium-grained sand-sized shell, 10Y 5/1 greenish gray						
-62.5	8.9								
			SILT, inorganic-H, some fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, weak reaction with HCl, N 5/ gray (MH)						
			At El. -64.9 Ft., little fine to medium-grained sand-sized shell						
-66.3	12.7								
			SAND, silty, mostly fine to medium-grained sand-sized quartz, some silt, little fine-grained sand-sized shell, weak reaction with HCl, 10Y 5/1 greenish gray (SM)						
			From El. -67.4 to -67.7 Ft., very shelly very silty sand seam						
			From El. -67.7 to -69.0 Ft., intermittent						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-10

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 600,400 Y = 2,064,778	-53.6 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-69.0	15.4		seams of shelly very sandy silt seam						
			SAND, poorly-graded with silt, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell, few silt, strong reaction with HCl, 2.5Y 5/2 grayish brown (SP-SM)						
-73.1	19.5		At El. -72.9 Ft., little fine-grained sand-sized quartz, 2" silty sand seam, 10Y 5/1 greenish gray						
-73.6	20.0						-73.6		

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	1.0/1.3	SP*
2	3.0/3.3	SP*
3	4.0/4.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell

Abbreviations:

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SAJ FORM 1836-A
JUN 02

Boring Designation VB-SJN15-11

DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District	**SHEET** 1 **OF** 2 **SHEETS**	
1. PROJECT St. Johns County Feasibility	**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-SJN15-11	**LOCATION COORDINATES** X = 599,366 Y = 2,064,750	**11. MANUFACTURER'S DESIGNATION OF DRILL** ☐ AUTO HAMMER ☐ MANUAL HAMMER	
3. DRILLING AGENCY Corps of Engineers - CESAJ	**CONTRACTOR FILE NO.** 6738-15-5453	**12. TOTAL SAMPLES**	**DISTURBED** 7 / **UNDISTURBED (UD)** 0
4. NAME OF DRILLER		**13. TOTAL NUMBER CORE BOXES** 0	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED	**DEG. FROM VERTICAL** / **BEARING**	**14. ELEVATION GROUND WATER**	
		15. DATE BORING	**STARTED** 04-11-15 / **COMPLETED** 04-11-15
6. THICKNESS OF OVERBURDEN N/A		**16. ELEVATION TOP OF BORING** -44.0 Ft.	
7. DEPTH DRILLED INTO ROCK N/A		**17. TOTAL RECOVERY FOR BORING** 96 %	
8. TOTAL DEPTH OF BORING 20.0 Ft.		**18. SIGNATURE AND TITLE OF INSPECTOR** ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-44.0	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 7/1 light gray (SP)				-46.0		
					1		-48.0		
			At El. -48.0 Ft., little medium-grained sand-sized shell		2				
			At El. -49.3 Ft., 2.5Y 6/2 light brownish gray				-50.0		
					3		-52.0		
			At El. -52.0 Ft., few medium-grained sand-sized shell		4		-54.0		
					5		-56.0		
					6		-58.0		
			From El. -57.1 to -57.7 Ft., strong reaction with HCl, intermittent shell seams						
			At El. -57.7 Ft., mostly fine-grained sand-sized quartz, weak reaction with HCl, 2.5Y 5/1 gray		7				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-11

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 599,366 Y = 2,064,750	-44.0 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			At El. -60.3 Ft., 10Y 5/1 greenish gray						
-63.1	19.1		At El. -62.5 Ft., little medium to coarse-grained sand-sized shell						
-64.0	20.0						-64.0		

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	2.0/2.3	SP*
2	4.0/4.3	SP*
3	6.0/6.3	SP*
4	8.0/8.3	SP*
5	10.0/10.3	SP*
6	12.0/12.3	SP*
7	14.0/14.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Carbonate
1	Percent Visual Shell
2	Percent Visual Shell
3	Percent Visual Shell
4	Percent Visual Shell
5	Percent Visual Shell
6	Percent Visual Shell
7	Percent Visual Shell

Abbreviations:

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DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-12
LOCATION COORDINATES	X = 601,320 Y = 2,065,929
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 04-10-15 / COMPLETED 04-10-15
16. ELEVATION TOP OF BORING	-49.8 Ft.
17. TOTAL RECOVERY FOR BORING	100 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-49.8	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 7/2 light gray (SP)				-51.8		
			At El. -51.9 Ft., little fine to medium-grained sand-sized shell		1		-53.8		
			At El. -53.7 Ft., mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell		2		-54.8		
			At El. -54.5 Ft., weak reaction with HCl, 2.5Y 6/2 light brownish gray		3		-56.8		
			At El. -56.8 Ft., mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell		4		-58.8		
			At El. -58.2 Ft., little fine to medium-grained sand-sized shell, 2.5Y 5/1 gray						
			At El. -58.8 Ft., few medium-grained sand-sized shell		5				
			From El. -61.2 to -61.6 Ft., silt seam						
			From El. -62.3 to -62.6 Ft., shell seam						
			At El. -62.6 Ft., few sand to gravel-sized shell, 10Y 5/1 greenish gray						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-12

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 601,320 Y = 2,065,929	-49.8 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-65.4	15.6								
			SILT, inorganic-H, little fine-grained sand-sized quartz, trace shell, no reaction with HCl, N 5/ gray (MH)						
-69.8	20.0						-69.8		

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	2.0/2.3	SP*
2	4.0/4.3	SP*
3	5.0/5.3	SP*
4	7.0/7.3	SP*
5	9.0/9.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-13

DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District	**SHEET** 1 **OF** 2 **SHEETS**	
1. PROJECT St. Johns County Feasibility	**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-SJN15-13	**LOCATION COORDINATES** X = 600,302 Y = 2,065,785	**11. MANUFACTURER'S DESIGNATION OF DRILL** ☐ AUTO HAMMER ☐ MANUAL HAMMER	
3. DRILLING AGENCY Corps of Engineers - CESAJ	**CONTRACTOR FILE NO.** 6738-15-5453	**12. TOTAL SAMPLES**	**DISTURBED** 6 / **UNDISTURBED (UD)** 0
4. NAME OF DRILLER		**13. TOTAL NUMBER CORE BOXES** 0	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED	**DEG. FROM VERTICAL** / **BEARING**	**14. ELEVATION GROUND WATER**	
		15. DATE BORING	**STARTED** 04-11-15 / **COMPLETED** 04-11-15
6. THICKNESS OF OVERBURDEN N/A		**16. ELEVATION TOP OF BORING** -43.9 Ft.	
7. DEPTH DRILLED INTO ROCK N/A		**17. TOTAL RECOVERY FOR BORING** 91 %	
8. TOTAL DEPTH OF BORING 20.0 Ft.		**18. SIGNATURE AND TITLE OF INSPECTOR** ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-43.9	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 7/1 light gray (SP)				-45.9		
					1		-47.9		
			At El. -48.4 Ft., mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, 2.5Y 6/2 light brownish gray		2		-49.9		
			At El. -49.9 Ft., few medium-grained sand-sized shell		3		-51.9		
			At El. -51.9 Ft., mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, 2.5Y 6/2 light brownish gray		4		-52.9		
			At El. -52.9 Ft., few medium-grained sand-sized shell, 2.5Y 6/1 gray		5		-53.9		
			From El. -53.9 to -54.2 Ft., silt seam		6				
			At El. -54.7 Ft., little fine to medium-grained sand-sized shell, 2.5Y 7/1 light gray						
-55.5	11.6								
			SAND, silty, mostly fine-grained sand-sized quartz, little silt, few fine to medium-grained sand-sized shell, weak reaction with HCl, 10Y 5/1 greenish gray (SM)						
			From El. -58.0 to -58.5 Ft., silty very shelly sand seam						
			From El. -58.5 to -58.9 Ft., strong reaction						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-13

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 600,302 Y = 2,065,785	-43.9 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			with HCl, silty sandy shell seam						
-61.6	17.7								
-62.1	18.2		SAND, silty, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, 2.5Y 7/2 light gray (SM)						
-63.9	20.0						-63.9		

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	2.0/2.3	SP*
2	4.0/4.3	SP*
3	6.0/6.3	SP*
4	8.0/8.3	SP*
5	9.0/9.3	SP*
6	10.0/10.3	MH*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-14

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT: St. Johns County Feasibility		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-SJN15-14	LOCATION COORDINATES: X = 599,289 Y = 2,065,677	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 6 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 04-11-15 / COMPLETED: 04-11-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -45.1 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 98 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-45.1	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 7/1 light gray (SP)						
			At El. -46.3 Ft., little fine to medium-grained sand-sized shell						
							-47.6		
			At El. -47.6 Ft., few medium-grained sand-sized shell		1				
			At El. -49.4 Ft., some fine to medium-grained sand-sized shell				-50.1		
			At El. -50.1 Ft., little medium-grained sand-sized shell		2				
							-52.6		
			At El. -52.6 Ft., few medium-grained sand-sized shell		3				
							-55.1		
					4				
							-57.1		
					5				
			At El. -57.8 Ft., mostly fine-grained sand-sized quartz, few silt, weak reaction with HCl, 2.5Y 5/1 gray				-58.1		
-58.6	13.5				6				
			SAND, silty, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, little silt, weak reaction with HCl, 10Y 5/1 greenish gray (SM)						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-14

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 599,289 Y = 2,065,677	-45.1 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			At El. -61.1 Ft., some sand to gravel-sized shell, strong reaction with HCl						
-62.3	17.2		From El. -61.9 to -62.3 Ft., very shelly very silty sand seam						
			SILT, inorganic-H, some fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, weak reaction with HCl, N 4/ dark gray (MH)						
-64.7	19.6								
-65.1	20.0						-65.1		

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	2.5/2.8	SP*
2	5.0/5.3	SP*
3	7.5/7.8	SP*
4	10.0/10.3	SP*
5	12.0/12.3	SP*
6	13.0/13.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Visual Shell
2	Percent Carbonate
2	Percent Visual Shell
3	Percent Visual Shell
4	Percent Visual Shell
5	Percent Visual Shell
6	Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-15

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-15
LOCATION COORDINATES	X = 598,233 Y = 2,065,473
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 04-11-15 / COMPLETED 04-11-15
16. ELEVATION TOP OF BORING	-49.9 Ft.
17. TOTAL RECOVERY FOR BORING	100 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-49.9	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 7/1 light gray (SP)				-50.9		
			At El. -50.9 Ft., few medium-grained sand-sized shell		1				
			At El. -51.4 Ft., little fine to medium-grained sand-sized shell, strong reaction with HCl				-52.9		
			At El. -52.6 Ft., mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, weak reaction with HCl		2				
							-54.4		
			At El. -54.4 Ft., few medium-grained sand-sized shell		3				
			At El. -54.9 Ft., mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell, strong reaction with HCl				-56.4		
			At El. -55.6 Ft., mostly fine-grained sand-sized quartz, weak reaction with HCl		4				
			At El. -56.4 Ft., few medium-grained sand-sized shell				-57.9		
-57.7	7.8		SAND, poorly-graded with silt, mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 5/1 gray (SP-SM)		5				
			At El. -59.7 Ft., little fine to medium-grained sand-sized shell, 10Y 5/1 greenish gray						
-60.2	10.3		SILT, inorganic-H, some fine-grained sand-sized quartz, few medium-grained sand-sized shell, weak reaction with HCl, N 4/ dark gray (MH)						
			At El. -62.0 Ft., trace shell, no reaction with HCl						

(Continued)

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 598,233 Y = 2,065,473	-49.9 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-67.6	17.7								
-69.9	20.0		SAND, silty, some fine-grained sand-sized quartz, some silt, little fine-grained sand-sized shell, weak reaction with HCl, 10Y 5/1 greenish gray (SM)				-69.9		

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	1.0/1.3	SP*
2	3.0/3.3	SP*
3	4.5/4.8	SP*
4	6.5/6.8	SP*
5	8.0/8.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-16

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-16
LOCATION COORDINATES	X = 601,216 Y = 2,066,929
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 6 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 04-10-15 / COMPLETED 04-10-15
16. ELEVATION TOP OF BORING	-46.1 Ft.
17. TOTAL RECOVERY FOR BORING	100 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-46.1	0.0								
-47.0	0.9		SAND, poorly-graded, mostly fine to medium-grained sand-sized shell, some fine to medium-grained sand-sized quartz, trace silt, strong reaction with HCl, 2.5Y 7/1 light gray (SP)						
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell, 2.5Y 6/2 light brownish gray (SP)				-49.1		
			At El. -49.1 Ft., little medium-grained sand-sized shell		1				
-50.6	4.5								
-51.1	5.0		SAND, poorly-graded, mostly fine to medium-grained sand-sized shell, some fine to medium-grained sand-sized quartz (SP)						
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell (SP)				-52.1		
			At El. -52.1 Ft., few medium-grained sand-sized shell, trace limestone		2				
			At El. -55.1 Ft., little medium-grained sand-sized shell, discontinue silt		3		-55.1		
			At El. -56.2 Ft., weak reaction with HCl, 2.5Y 7/2 light gray						
			At El. -57.6 Ft., mostly fine-grained sand-sized quartz, trace shell, trace silt, 2.5Y 5/2 grayish brown		4		-58.1		
							-60.1		
			At El. -60.1 Ft., few medium-grained sand-sized shell		5				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-16

DRILLING LOG (Cont. Sheet)	INSTALLATION: Jacksonville District	SHEET 2 OF 2 SHEETS
PROJECT: St. Johns County Feasibility	COORDINATE SYSTEM/DATUM: State Plane, FLE (U.S. Ft.) / HORIZONTAL: NAD83 / VERTICAL: NAVD88	
LOCATION COORDINATES: X = 601,216 Y = 2,066,929	ELEVATION TOP OF BORING: -46.1 Ft.	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-61.8	15.7								
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, trace shell, weak reaction with HCl, 10Y 5/1 greenish gray (SP-SM)		6		-62.1		
			At El. -63.9 Ft., little sand to gravel-sized shell						
-66.1	20.0						-66.1		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	12.0/12.3	SP*
5	14.0/14.3	SP*
6	16.0/16.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Visual Shell
2	Percent Visual Shell
3	Percent Carbonate
3	Percent Visual Shell
4	Percent Visual Shell
5	Percent Visual Shell
6	Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-17

DRILLING LOG	DIVISION	INSTALLATION	SHEET / OF
	South Atlantic	Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT: St. Johns County Feasibility		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-SJN15-17	LOCATION COORDINATES: X = 600,198 Y = 2,066,797	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 6 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 04-10-15 / COMPLETED: 04-10-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -42.8 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 100 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-42.8	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 7/1 light gray (SP)				-45.8		
					1				
							-48.8		
			At El. -48.8 Ft., trace silt		2				
-49.5	6.7								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized shell, some fine to medium-grained sand-sized quartz, 2.5Y 6/1 gray (SP)						
-50.5	7.7		SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, 2.5Y 7/2 light gray (SP)				-51.8		
					3				
			At El. -53.4 Ft., 2.5Y 6/1 gray				-53.8		
			At El. -53.8 Ft., few medium-grained sand-sized shell		4				
							-55.8		
			At El. -55.8 Ft., mostly fine-grained sand-sized quartz		5				
			At El. -56.2 Ft., weak reaction with HCl, 2.5Y 5/1 gray				-56.8		
					6				

0 5 10 15

(Continued)

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 600,198 Y = 2,066,797	-42.8 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-62.8	20.0		From El. -60.5 to -60.8 Ft., shell seam At El. -60.8 Ft., few fine-grained sand-sized shell, 10Y 5/1 greenish gray				-62.8		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	11.0/11.3	SP*
5	13.0/13.3	SP*
6	14.0/14.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-18

DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District	**SHEET** 1 **OF** 2 **SHEETS**	
1. PROJECT St. Johns County Feasibility	**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-SJN15-18	**LOCATION COORDINATES** X = 599,190 Y = 2,066,696	**11. MANUFACTURER'S DESIGNATION OF DRILL** ☐ AUTO HAMMER ☐ MANUAL HAMMER	
3. DRILLING AGENCY Corps of Engineers - CESAJ	**CONTRACTOR FILE NO.** 6738-15-5453	**12. TOTAL SAMPLES**	**DISTURBED** 5 / **UNDISTURBED (UD)** 0
4. NAME OF DRILLER		**13. TOTAL NUMBER CORE BOXES** 0	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED	**DEG. FROM VERTICAL** / **BEARING**	**14. ELEVATION GROUND WATER**	
		15. DATE BORING	**STARTED** 04-10-15 / **COMPLETED** 04-10-15
6. THICKNESS OF OVERBURDEN N/A		**16. ELEVATION TOP OF BORING** -43.8 Ft.	
7. DEPTH DRILLED INTO ROCK N/A		**17. TOTAL RECOVERY FOR BORING** 100 %	
8. TOTAL DEPTH OF BORING 20.0 Ft.		**18. SIGNATURE AND TITLE OF INSPECTOR** ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-43.8	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 7/1 light gray (SP)						
							-46.3		
			From El. -46.3 to -46.7 Ft., 1/4" diameter vertical sandy silt seam		1				
			At El. -48.7 Ft., 2.5Y 6/2 light brownish gray						
							-49.8		
					2				
							-51.8		
			At El. -51.8 Ft., few medium-grained sand-sized shell, trace silt		3				
							-53.8		
			At El. -53.8 Ft., mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell		4				
							-55.8		
-56.1	12.3		At El. -55.8 Ft., mostly fine to medium-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, trace limestone		5				
-57.8	14.0		SAND, silty, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, little silt, weak reaction with HCl, 10Y 5/1 greenish gray (SM)						
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine to						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-18

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 599,190 Y = 2,066,696	-43.8 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-59.7	15.9		medium-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 6/2 light brownish gray (SP-SM)						
			SAND, silty, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, little silt, weak reaction with HCl, 10Y 5/1 greenish gray (SM)						
			At El. -62.6 Ft., little medium to coarse-grained sand-sized shell						
-63.8	20.0						-63.8		

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	2.5/2.8	SP*
2	6.0/6.3	SP*
3	8.0/8.3	SP*
4	10.0/10.3	SP*
5	12.0/12.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15
20
25
30
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Boring Designation VB-SJN15-19

DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District	**SHEET** 1 **OF** 2 **SHEETS**	
1. PROJECT St. Johns County Feasibility	**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-SJN15-19	**LOCATION COORDINATES** X = 598,188 Y = 2,066,636	**11. MANUFACTURER'S DESIGNATION OF DRILL** ☐ AUTO HAMMER ☐ MANUAL HAMMER	
3. DRILLING AGENCY Corps of Engineers - CESAJ	**CONTRACTOR FILE NO.** 6738-15-5453	**12. TOTAL SAMPLES**	**DISTURBED** 6 / **UNDISTURBED (UD)** 0
4. NAME OF DRILLER		**13. TOTAL NUMBER CORE BOXES** 0	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED	**DEG. FROM VERTICAL** / **BEARING**	**14. ELEVATION GROUND WATER**	
		15. DATE BORING	**STARTED** 04-10-15 / **COMPLETED** 04-10-15
6. THICKNESS OF OVERBURDEN N/A		**16. ELEVATION TOP OF BORING** -45.5 Ft.	
7. DEPTH DRILLED INTO ROCK N/A		**17. TOTAL RECOVERY FOR BORING** 100 %	
8. TOTAL DEPTH OF BORING 20.0 Ft.		**18. SIGNATURE AND TITLE OF INSPECTOR** ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-45.5	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 7/1 light gray (SP)						
			At El. -46.8 Ft., some fine to medium-grained sand-sized shell, strong reaction with HCl						
			At El. -47.6 Ft., little fine to medium-grained sand-sized shell						
							-48.5		
			At El. -48.5 Ft., mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, few medium-grained sand-sized limestone, weak reaction with HCl		1				
			At El. -50.8 Ft., little fine to medium-grained sand-sized shell						
							-51.5		
			At El. -51.5 Ft., few medium-grained sand-sized shell, trace silt		2				
			At El. -52.5 Ft., little fine to medium-grained sand-sized shell						
							-54.5		
			At El. -54.5 Ft., few medium-grained sand-sized shell, discontinue silt		3				
			At El. -55.8 Ft., 2.5Y 7/2 light gray						
							-56.5		
			At El. -56.5 Ft., trace silt		4				
			At El. -57.3 Ft., 2.5Y 7/1 light gray						
							-58.5		
			At El. -58.5 Ft., mostly fine-grained sand-sized quartz, trace shell, trace silt		5				
							-60.0		
			At El. -60.0 Ft., few medium-grained		6				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-19

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 598,188 Y = 2,066,636	-45.5 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-60.6	15.1		sand-sized shell SAND, silty, mostly fine-grained sand-sized quartz, little silt, few fine to medium-grained sand-sized shell, weak reaction with HCl, 10Y 5/1 greenish gray (SM) At El. -61.6 Ft., little sand to gravel-sized shell						
-62.3	16.8		SILT, inorganic-H, little fine-grained sand-sized quartz, few medium-grained sand-sized shell, weak reaction with HCl, N 5/ gray (MH) At El. -63.3 Ft., few fine-grained sand-sized quartz, trace shell						
-65.5	20.0						-65.5		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	11.0/11.3	SP*
5	13.0/13.3	SP*
6	14.5/14.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

15
20
25
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Boring Designation VB-SJN15-20

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT: St. Johns County Feasibility		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-SJN15-20	LOCATION COORDINATES: X = 601,180 Y = 2,067,947	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 5 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 04-09-15 / COMPLETED: 04-09-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -40.7 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 81 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-40.7	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 7/1 light gray (SP)						
							-43.7		
			At El. -43.7 Ft., few medium-grained sand-sized shell		1				
							-46.7		
			At El. -46.7 Ft., little medium-grained sand-sized shell, trace silt		2				
			At El. -48.1 Ft., 2.5Y 7/2 light gray				-49.2		
			At El. -49.2 Ft., few medium-grained sand-sized shell		3				
-50.0	9.3		SAND, poorly-graded, mostly fine to medium-grained sand-sized shell, some fine to medium-grained sand-sized quartz, trace silt, 2.5Y 6/2 light brownish gray (SP)						
-50.9	10.2		SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell, few silt, strong reaction with HCl, 2.5Y 7/2 light gray (SP)				-51.7		
			At El. -51.7 Ft., few medium-grained sand-sized shell, weak reaction with HCl		4				
			At El. -52.6 Ft., 2.5Y 5/1 gray				-53.2		
			At El. -53.2 Ft., mostly fine-grained sand-sized quartz		5				
-54.5	13.8		At El. -53.8 Ft., 2.5Y 6/1 gray						
			SAND, silty, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, little silt, weak reaction with HCl, 2.5Y 5/1 gray (SM)						

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(Continued)

Boring Designation VB-SJN15-20

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 601,180 Y = 2,067,947	-40.7 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-56.9	16.2								
-60.7	20.0						-60.7		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	8.5/8.8	SP*
4	11.0/11.3	SP*
5	12.5/12.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15
20
25
30
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DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-21
LOCATION COORDINATES	X = 600,147 Y = 2,067,852
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 6 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 04-10-15 / COMPLETED 04-10-15
16. ELEVATION TOP OF BORING	-42.2 Ft.
17. TOTAL RECOVERY FOR BORING	96 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-42.2	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 5/1 gray (SP)						
							-45.7		
			At El. -45.7 Ft., little medium-grained sand-sized shell		1				
							-49.2		
			At El. -49.2 Ft., few medium-grained sand-sized shell		2				
							-52.7		
			At El. -52.7 Ft., little medium-grained sand-sized shell, discontinue silt		3				
							-56.2		
			At El. -56.3 Ft., 2" sandy silt seam		4				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-21

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 600,147 Y = 2,067,852	-42.2 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
							-59.2		
			At El. -59.2 Ft., little medium-grained sand-sized shell, strong reaction with HCl		5				
							-60.2		
			At El. -60.2 Ft., little medium to coarse-grained sand-sized shell, weak reaction with HCl		6				
-61.3	19.1								
-62.2	20.0						-62.2		

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	3.5/3.8	SP*
2	7.0/7.3	SP*
3	10.5/10.8	SP*
4	14.0/14.3	SP*
5	17.0/17.3	SP*
6	18.0/18.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Visual Shell
2	Percent Visual Shell
3	Percent Visual Shell
4	Percent Carbonate
4	Percent Visual Shell
5	Percent Visual Shell
6	Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-22

DRILLING LOG	DIVISION	INSTALLATION	SHEET / OF
	South Atlantic	Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT: St. Johns County Feasibility		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-SJN15-22	LOCATION COORDINATES: X = 599,155 Y = 2,067,738	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 7 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 04-10-15 / COMPLETED: 04-10-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -43.3 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 100 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-43.3	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 6/1 gray (SP)				-46.3		
			At El. -46.3 Ft., little medium-grained sand-sized shell		1				
							-49.8		
			At El. -49.8 Ft., mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell		2				
			At El. -52.4 Ft., weak reaction with HCl, 2.5Y 5/1 gray				-52.8		
			At El. -52.8 Ft., little medium-grained sand-sized shell		3				
			At El. -53.8 Ft., strong reaction with HCl, 2.5Y 6/1 gray				-54.3		
			At El. -54.3 Ft., mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell		4				
			At El. -54.8 Ft., mostly fine-grained sand-sized quartz, 2.5Y 7/1 light gray				-57.3		
			At El. -57.1 Ft., weak reaction with HCl, 2.5Y 5/2 grayish brown		5				

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Boring Designation VB-SJN15-22

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 599,155 Y = 2,067,738	-43.3 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
							-59.3		
					6				
							-61.3		
-61.6	18.3		At El. -61.3 Ft., few medium-grained sand-sized shell		7				
-63.3	20.0		SAND, silty, mostly fine-grained sand-sized quartz, little silt, little sand to gravel-sized shell, weak reaction with HCl, 10Y 5/1 greenish gray (SM)				-63.3		

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	3.0/3.3	SP*
2	6.5/6.8	SP*
3	9.5/9.8	SP*
4	11.0/11.3	SP*
5	14.0/14.3	SP*
6	16.0/16.3	SP*
7	18.0/18.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell
7 Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-23

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-23
LOCATION COORDINATES	X = 598,152 Y = 2,067,618
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 04-10-15 / COMPLETED 04-10-15
16. ELEVATION TOP OF BORING	-48.4 Ft.
17. TOTAL RECOVERY FOR BORING	94 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-48.4	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 7/1 light gray (SP)				-49.9		
			At El. -49.7 Ft., 2.5Y 5/1 gray		1				
			At El. -49.9 Ft., mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell				-52.4		
			At El. -50.3 Ft., little medium-grained sand-sized shell, 2.5Y 7/1 light gray		2				
			At El. -54.2 Ft., 2.5Y 6/1 gray				-54.9		
			At El. -54.9 Ft., few medium-grained sand-sized shell		3				
			At El. -55.7 Ft., mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, 2.5Y 5/1 gray				-56.4		
			At El. -56.4 Ft., trace shell, weak reaction with HCl		4				
			From El. -57.0 to -57.3 Ft., silt seam						
			From El. -57.3 to -57.7 Ft., shell seam						
			At El. -58.2 Ft., few fine-grained sand-sized shell, 2.5Y 6/2 light brownish gray						
			At El. -59.4 Ft., little fine to medium-grained sand-sized shell, 10Y 5/1 greenish gray						
			From El. -60.3 to -61.0 Ft., silt seam						
-61.0	12.6								
			SILT, inorganic-H, little fine-grained sand-sized quartz, few medium-grained sand-sized shell, weak reaction with HCl, N 4/ dark gray (MH)						

0 5 10 15

(Continued)

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 598,152 Y = 2,067,618	-48.4 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-65.6	17.2								
-67.2	18.8		SAND, silty, mostly fine to medium-grained sand-sized quartz, some silt, few medium-grained sand-sized shell, weak reaction with HCl, 10Y 5/1 greenish gray (SM)						
-68.4	20.0						-68.4		

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	1.5/1.8	SP*
2	4.0/4.3	SP*
3	6.5/6.8	SP*
4	8.0/8.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-24

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-24
LOCATION COORDINATES	X = 600,992 Y = 2,068,941
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 04-09-15 / COMPLETED 04-09-15
16. ELEVATION TOP OF BORING	-41.6 Ft.
17. TOTAL RECOVERY FOR BORING	100 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-41.6	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 7/1 light gray (SP)				-44.6		
			At El. -44.6 Ft., little medium-grained sand-sized shell		1				
			At El. -47.6 Ft., trace silt		2		-47.6		
-49.4	7.8		SAND, poorly-graded, mostly fine to medium-grained sand-sized shell, some fine to medium-grained sand-sized quartz, 2.5Y 6/2 light brownish gray (SP)						
-50.1	8.5		SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell (SP)				-51.1		
			At El. -50.9 Ft., mostly fine-grained sand-sized quartz		3				
			At El. -51.1 Ft., few medium-grained sand-sized shell						
			At El. -51.6 Ft., mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell, 2.5Y 7/1 light gray				-54.1		
			At El. -53.9 Ft., mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 6/2 light brownish gray		4				
			At El. -54.9 Ft., 2.5Y 5/1 gray				-55.6		
			At El. -55.6 Ft., few medium-grained sand-sized shell		5				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-24

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 600,992 Y = 2,068,941	-41.6 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
~~-56.8~~	~~15.2~~		SAND, poorly-graded with silt, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell, few silt, strong reaction with HCl, 2.5Y 6/2 light brownish gray (SP-SM)						
-58.4	16.8		SAND, silty, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, little silt, weak reaction with HCl, 10Y 5/1 greenish gray (SM)						
-61.6	20.0						-61.6		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.5/9.8	SP*
4	12.5/12.8	SP*
5	14.0/14.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

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20
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Boring Designation VB-SJN15-25

DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District		**SHEET** 1 **OF** 2 **SHEETS**
1. PROJECT St. Johns County Feasibility	**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-SJN15-25 **LOCATION COORDINATES** X = 599,984 Y = 2,068,804	**11. MANUFACTURER'S DESIGNATION OF DRILL** ☐ AUTO HAMMER ☐ MANUAL HAMMER		
3. DRILLING AGENCY Corps of Engineers - CESAJ **CONTRACTOR FILE NO.** 6738-15-5453	**12. TOTAL SAMPLES**	**DISTURBED** 5	**UNDISTURBED (UD)** 0
4. NAME OF DRILLER	**13. TOTAL NUMBER CORE BOXES** 0		
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED **DEG. FROM VERTICAL** **BEARING**	**14. ELEVATION GROUND WATER**		
	15. DATE BORING	**STARTED** 04-09-15	**COMPLETED** 04-09-15
6. THICKNESS OF OVERBURDEN N/A	**16. ELEVATION TOP OF BORING** -43.0 Ft.		
7. DEPTH DRILLED INTO ROCK N/A	**17. TOTAL RECOVERY FOR BORING** 100 %		
8. TOTAL DEPTH OF BORING 20.0 Ft.	**18. SIGNATURE AND TITLE OF INSPECTOR** ,		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-43.0	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 7/1 light gray (SP)						
			At El. -44.6 Ft., little fine to coarse-grained sand-sized shell						
							-46.5		
			At El. -46.5 Ft., little medium-grained sand-sized shell		1				
			At El. -46.9 Ft., 2.5Y 6/2 light brownish gray						
							-50.0		
					2				
			At El. -51.7 Ft., few medium-grained sand-sized shell						
							-53.5		
					3				
			At El. -55.0 Ft., some fine to coarse-grained sand-sized shell, strong reaction with HCl, 2.5Y 6/1 gray						
			At El. -55.9 Ft., 1" sandy silt seam, 2.5Y 5/1 gray						
							-56.5		
			At El. -56.0 Ft., little fine to medium-grained sand-sized shell, few silt, weak reaction with HCl		4				
							-58.0		

0 5 10 15

(Continued)

Boring Designation VB-SJN15-25

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 599,984 Y = 2,068,804	-43.0 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			At El. -58.0 Ft., few medium-grained sand-sized shell From El. -58.3 to -59.7 Ft., strong reaction with HCl, intermittent shell seams		5				
-59.7	16.7		SAND, silty, mostly fine-grained sand-sized quartz, little silt, few fine-grained sand-sized shell, weak reaction with HCl, 2.5Y 5/1 gray (SM)						
-63.0	20.0		At El. -62.3 Ft., little sand to gravel-sized shell, strong reaction with HCl				-63.0		

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	3.5/3.8	SP*
2	7.0/7.3	SP*
3	10.5/10.8	SP*
4	13.5/13.8	SP*
5	15.0/15.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Carbonate
1	Percent Visual Shell
2	Percent Visual Shell
3	Percent Visual Shell
4	Percent Visual Shell
5	Percent Visual Shell

Abbreviations:

15 20 25 30 35

Boring Designation VB-SJN15-26

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-26
LOCATION COORDINATES	X = 598,993 Y = 2,068,690
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 04-10-15 / COMPLETED 04-10-15
16. ELEVATION TOP OF BORING	-45.9 Ft.
17. TOTAL RECOVERY FOR BORING	73 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-45.9	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 7/2 light gray (SP)				-48.9		
					1		-51.9		
			At El. -51.9 Ft., trace silt		2		-54.9		
			At El. -54.2 Ft., 2.5Y 6/2 light brownish gray						
			At El. -54.9 Ft., mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell		3		-56.4		
-56.1	10.2								
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, few silt, strong reaction with HCl, 10Y 5/1 greenish gray (SP-SM)		4				
			At El. -57.4 Ft., little fine to medium-grained sand-sized shell						
-60.5	14.6								

0 5 10 15

(Continued)

Boring Designation VB-SJN15-26

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 598,993 Y = 2,068,690	-45.9 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-65.9	20.0						-65.9		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	10.5/10.8	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-27

DRILLING LOG	DIVISION	INSTALLATION	SHEET / OF
	South Atlantic	Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT: St. Johns County Feasibility		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-SJN15-27	LOCATION COORDINATES: X = 597,954 Y = 2,068,637	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 6 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 04-10-15 / COMPLETED: 04-10-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -45.9 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 73 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-45.9	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 6/1 gray (SP)				-48.4		
					1		-50.9		
					2		-52.9		
			At El. -52.5 Ft., mostly fine gravel-sized quartz, few medium-grained sand-sized shell, trace silt, 2.5Y 5/1 gray		3		-54.9		
			At El. -54.9 Ft., trace shell		4		-56.9		
			At El. -56.9 Ft., few medium-grained sand-sized shell		5		-58.9		
-58.9	13.0								
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 5/1 gray (SP-SM)		6				
-60.0	14.1								
-60.4	14.5		From El. -59.8 to -60.0 Ft., silty very shelly						

0 5 10 15

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION		SHEET 2 OF 2 SHEETS
	Jacksonville District		
PROJECT	**COORDINATE SYSTEM/DATUM**	**HORIZONTAL**	**VERTICAL**
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88
LOCATION COORDINATES	**ELEVATION TOP OF BORING**		
X = 597,954 Y = 2,068,637	-45.9 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			sand seam SAND, clayey, mostly fine-grained sand-sized quartz, some clay, little sand to gravel-sized shell, weak reaction with HCl, 5G 4/1 dark greenish gray (SC)						
-65.9	20.0						-65.9		

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	2.5/2.8	SP*
2	5.0/5.3	SP*
3	7.0/7.3	SP*
4	9.0/9.3	SP*
5	11.0/11.3	SP*
6	13.0/13.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-28
LOCATION COORDINATES	X = 599,859 Y = 2,069,792
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 6 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 04-09-15 / COMPLETED 04-09-15
16. ELEVATION TOP OF BORING	-44.9 Ft.
17. TOTAL RECOVERY FOR BORING	83 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-44.9	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 7/2 light gray (SP)				-46.9		
					1				
							-49.9		
			From El. -50.3 to -50.7 Ft., very shelly sand seam		2				
							-52.9		
					3				
			At El. -55.2 Ft., 2.5Y 5/1 gray				-55.9		
			At El. -55.9 Ft., mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell		4				
			At El. -57.0 Ft., little medium-grained sand-sized shell				-57.4		
					5				
							-58.9		
			From El. -59.0 to -59.2 Ft., shell seam		6				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-28

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 599,859 Y = 2,069,792	-44.9 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-61.4	16.5		At El. -59.8 Ft., few medium-grained sand-sized shell, weak reaction with HCl						
-64.9	20.0						-64.9		

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	2.0/2.3	SP*
2	5.0/5.3	SP*
3	8.0/8.3	SP*
4	11.0/11.3	SP*
5	12.5/12.8	SP*
6	14.0/14.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

15
20
25
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Boring Designation VB-SJN15-29

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-29
LOCATION COORDINATES	X = 597,844 Y = 2,069,619
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 6 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 04-09-15 / COMPLETED 04-09-15
16. ELEVATION TOP OF BORING	-45.9 Ft.
17. TOTAL RECOVERY FOR BORING	100 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-45.9	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 7/2 light gray (SP)				-48.9		
					1				
							-51.9		
					2				
			From El. -53.1 to -53.3 Ft., very shelly sand seam At El. -53.3 Ft., mostly fine-grained sand-sized quartz, 2.5Y 5/2 grayish brown				-53.9		
					3				
			From El. -55.4 to -55.7 Ft., very shelly sand seam At El. -55.7 Ft., few medium-grained sand-sized shell, weak reaction with HCl				-55.9		
					4				
			At El. -57.6 Ft., mostly fine to medium-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, strong reaction with HCl, 2.5Y 7/1 light gray At El. -58.6 Ft., few fine-grained sand-sized shell, 2.5Y 5/1 gray				-57.9		
					5				
			At El. -59.9 Ft., mostly fine-grained sand-sized quartz				-59.9		
					6				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-29

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 597,844 Y = 2,069,619	-45.9 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-61.7	15.8		From El. -61.2 to -61.7 Ft., shell seam						
-64.1	18.2		SILT, inorganic-H, little fine-grained sand-sized quartz, little sand to gravel-sized shell, weak reaction with HCl, N 5/ gray (MH) At El. -62.4 Ft., some fine-grained sand-sized quartz, 10Y 5/1 greenish gray At El. -63.3 Ft., little fine to medium-grained sand-sized shell						
-65.1	19.2		SAND, clayey, mostly fine-grained sand-sized quartz, little clay, trace shell, weak reaction with HCl, 5G 4/1 dark greenish gray (SC)						
-65.9	20.0		SAND, poorly-graded with clay, mostly fine-grained sand-sized quartz, few clay, weak reaction with HCl, 2.5Y 5/2 grayish brown (SP-SC)				-65.9		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	8.0/8.3	SP*
4	10.0/10.3	SP*
5	12.0/12.3	SP*
6	14.0/14.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Visual Shell
2	Percent Carbonate
2	Percent Visual Shell
3	Percent Visual Shell
4	Percent Visual Shell
5	Percent Visual Shell
6	Percent Visual Shell

Abbreviations:

15 20 25 30 35

Boring Designation VB-SJN15-30

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: St. Johns County Feasibility	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-SJN15-30	LOCATION COORDINATES: X = 600,774 Y = 2,070,984	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 6 UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 04-09-15 COMPLETED: 04-09-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -45.1 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 98 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-45.1	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 7/1 light gray (SP)				-48.1		
					1				
							-51.1		
			At El. -51.1 Ft., trace silt		2				
							-54.1		
			At El. -54.1 Ft., mostly fine-grained sand-sized quartz		3				
			At El. -56.1 Ft., 1" shell seam				-57.1		
					4				
			At El. -57.6 Ft., mostly fine to medium-grained sand-sized quartz				-58.6		
			At El. -57.9 Ft., 1" shell seam						
			At El. -58.0 Ft., mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 6/1 gray		5				
-60.1	15.0		At El. -59.0 Ft., 2" shell seam				-60.1		

0 5 10 15

(Continued)

Boring Designation VB-SJN15-30

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 600,774 Y = 2,070,984	-45.1 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			At El. -59.2 Ft., 2" shell seam		6				
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, few silt, strong reaction with HCl, 2.5Y 7/1 light gray (SP-SM)						
-62.1	17.0								
			SAND, silty, mostly fine-grained sand-sized quartz, little silt, little fine to medium-grained sand-sized shell, weak reaction with HCl, 10Y 5/1 greenish gray (SM)						
			At El. -63.1 Ft., some sand to gravel-sized shell, strong reaction with HCl						
-64.6	19.5								
-65.1	20.0						-65.1		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	12.0/12.3	SP*
5	13.5/13.8	SP*
6	15.0/15.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-31

DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District	**SHEET** 1 **OF** 2 **SHEETS**	
1. PROJECT St. Johns County Feasibility	**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-SJN15-31	**LOCATION COORDINATES** X = 598,732 Y = 2,070,721	**11. MANUFACTURER'S DESIGNATION OF DRILL** ☐ AUTO HAMMER ☐ MANUAL HAMMER	
3. DRILLING AGENCY Corps of Engineers - CESAJ	**CONTRACTOR FILE NO.** 6738-15-5453	**12. TOTAL SAMPLES**	**DISTURBED** 5 / **UNDISTURBED (UD)** 0
4. NAME OF DRILLER		**13. TOTAL NUMBER CORE BOXES** 0	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED	**DEG. FROM VERTICAL** / **BEARING**	**14. ELEVATION GROUND WATER**	
		15. DATE BORING	**STARTED** 04-09-15 / **COMPLETED** 04-09-15
6. THICKNESS OF OVERBURDEN N/A		**16. ELEVATION TOP OF BORING** -44.4 Ft.	
7. DEPTH DRILLED INTO ROCK N/A		**17. TOTAL RECOVERY FOR BORING** 98 %	
8. TOTAL DEPTH OF BORING 20.0 Ft.		**18. SIGNATURE AND TITLE OF INSPECTOR** ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-44.4	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 7/1 light gray (SP)				-47.4		
					1				
							-50.4		
			At El. -50.4 Ft., little medium to coarse-grained sand-sized shell		2				
			At El. -51.8 Ft., 2.5Y 6/1 gray				-53.4		
			At El. -53.4 Ft., little medium-grained sand-sized shell		3				
			From El. -54.0 to -54.3 Ft., sandy silt seam				-56.4		
					4		-57.9		
			At El. -57.9 Ft., few medium-grained sand-sized shell, 2.5Y 5/1 gray		5				
			From El. -58.4 to -58.8 Ft., strong reaction with HCl, very shelly sand seam						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-31

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 598,732 Y = 2,070,721	-44.4 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-61.4	17.0								
			SAND, clayey, mostly fine-grained sand-sized quartz, some clay, few coarse-grained sand-sized shell, weak reaction with HCl, N 5/ gray (SC)						
-63.9	19.5		At El. -63.5 Ft., occasional cemented fragments						
-64.4	20.0						-64.4		

NOTES:

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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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	12.0/12.3	SP*
5	13.5/13.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Visual Shell
2	Percent Visual Shell
3	Percent Carbonate
3	Percent Visual Shell
4	Percent Visual Shell
5	Percent Visual Shell

Abbreviations:

15 20 25 30 35

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-32
LOCATION COORDINATES	X = 599,657 Y = 2,071,859
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 6 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 04-09-15 / COMPLETED 04-09-15
16. ELEVATION TOP OF BORING	-44.1 Ft.
17. TOTAL RECOVERY FOR BORING	100 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-44.1	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 6/2 light brownish gray (SP)				-47.1		
			At El. -47.1 Ft., mostly fine-grained sand-sized quartz		1				
			At El. -48.0 Ft., little medium-grained sand-sized shell, strong reaction with HCl				-50.1		
			At El. -50.1 Ft., mostly fine to medium-grained sand-sized quartz		2				
			From El. -52.6 to -52.7 Ft., sandy silt seam				-53.1		
			At El. -53.1 Ft., mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, weak reaction with HCl		3		-54.1		
			At El. -53.7 Ft., mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, discontinue silt, 2.5Y 5/1 gray		4				
-56.1	12.0		At El. -55.2 Ft., trace shell				-56.1		
			SAND, poorly-graded with silt, mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 5/1 gray (SP-SM)		5		-58.1		
					6				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-32

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 599,657 Y = 2,071,859	-44.1 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-62.1	18.0		At El. -61.6 Ft., some sand to gravel-sized shell						
			CLAY, lean, little fine-grained sand-sized quartz, trace shell, weak reaction with HCl, 5GY 4/1 dark greenish gray (CL)						
-63.8	19.7								
-64.1	20.0		SAND, clayey, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, little clay, weak reaction with HCl, 2.5Y 5/2 grayish brown (SC)				-64.1		

NOTES:

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3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	10.0/10.3	SP*
5	12.0/12.3	SP-SM*
6	14.0/14.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-33

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT: St. Johns County Feasibility		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-SJN15-33	LOCATION COORDINATES: X = 597,637 Y = 2,071,656	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 4 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 04-09-15 / COMPLETED: 04-09-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -49.2 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 100 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-49.2	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 6/1 gray (SP)				-51.2		
			From El. -51.5 to -51.9 Ft., very shelly sand seam		1				
			At El. -53.6 Ft., mostly fine-grained sand-sized quartz				-54.2		
			At El. -54.2 Ft., 2.5Y 5/1 gray		2				
			From El. -54.9 to -55.1 Ft., silt seam						
			From El. -55.8 to -55.9 Ft., silt seam						
			At El. -57.0 Ft., little medium-grained sand-sized shell				-57.2		
-58.2	9.0				3				
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, few silt, strong reaction with HCl, 2.5Y 5/1 gray (SP-SM)				-58.7		
			At El. -58.7 Ft., few medium to coarse-grained sand-sized shell, 2.5Y 4/1 dark gray		4				
			At El. -59.8 Ft., little sand to gravel-sized shell, weak reaction with HCl, N 5/ gray						
			At El. -62.4 Ft., 5Y 7/1 light gray						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-33

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 597,637 Y = 2,071,656	-49.2 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-69.2	20.0		At El. -66.1 Ft., few fine to medium-grained sand-sized shell				-69.2		

NOTES:

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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	2.0/2.3	SP*
2	5.0/5.3	SP*
3	8.0/8.3	SP*
4	9.5/9.8	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-34

DRILLING LOG	DIVISION	INSTALLATION	SHEET / OF
	South Atlantic	Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT: St. Johns County Feasibility		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-SJN15-34	LOCATION COORDINATES: X = 600,555 Y = 2,073,003	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 5 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 04-09-15 / COMPLETED: 04-09-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -41.2 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 100 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-41.2	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 7/1 light gray (SP)				-44.7		
			At El. -44.7 Ft., few medium-grained sand-sized shell, discontinue silt		1		-48.2		
			At El. -48.2 Ft., mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell		2		-51.7		
			At El. -51.2 Ft., mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt		3		-55.2		
			At El. -54.7 Ft., 2.5Y 6/2 light brownish gray						
			At El. -55.2 Ft., mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell		4				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-34

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 600,555 Y = 2,073,003	-41.2 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			At El. -57.0 Ft., little sand to gravel-sized shell		5		-57.2		
-58.6	17.4								
			SAND, silty, mostly fine-grained sand-sized quartz, some silt, little fine to medium-grained sand-sized shell, weak reaction with HCl, 10Y 5/1 greenish gray (SM)						
-61.2	20.0						-61.2		

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	3.5/3.8	SP*
2	7.0/7.3	SP*
3	10.5/10.8	SP*
4	14.0/14.3	SP*
5	16.0/16.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Visual Shell
2	Percent Carbonate
2	Percent Visual Shell
3	Percent Visual Shell
4	Percent Visual Shell
5	Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-35

DRILLING LOG	DIVISION	INSTALLATION	SHEET / OF
	South Atlantic	Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT: St. Johns County Feasibility		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-SJN15-35	LOCATION COORDINATES: X = 598,530 Y = 2,072,752	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 4 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 04-09-15 / COMPLETED: 04-09-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -49.6 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 96 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-49.6	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 6/1 gray (SP)						
							-52.6		
			At El. -52.6 Ft., few medium-grained sand-sized shell		1				
			At El. -54.1 Ft., some fine to medium-grained sand-sized shell						
			At El. -54.6 Ft., mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 6/2 light brownish gray				-55.6		
					2				
			At El. -56.4 Ft., little fine to medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 6/1 gray						
-58.1	8.5						-58.1		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, few silt, weak reaction with HCl, 10Y 5/1 greenish gray (SP-SM)		3		-59.6		
			At El. -59.6 Ft., few medium-grained sand-sized shell		4				
			At El. -60.6 Ft., little sand to gravel-sized shell, strong reaction with HCl						
-61.3	11.7								
			SILT, inorganic-H, some fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, weak reaction with HCl, 10Y 4/1 dark greenish gray (MH)						
-64.2	14.6								
			SAND, clayey, mostly fine-grained						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-35

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 598,530 Y = 2,072,752	-49.6 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
~~-64.8~~	~~15.2~~		sand-sized quartz, little clay, trace shell, no reaction with HCl, 10Y 4/1 dark greenish gray (SC)						
-65.3	15.7								
-65.9	16.3		SAND, poorly-graded with clay, mostly fine-grained sand-sized quartz, few clay, discontinue shell, no reaction with HCl, 2.5Y 7/2 light gray (SP-SC)						
			SAND, clayey, mostly fine-grained sand-sized quartz, little clay, no reaction with HCl, 5G 5/1 greenish gray (SC)						
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell, trace clay, strong reaction with HCl, N 6/ gray (SP)						
-68.7	19.1								
-69.6	20.0						-69.6		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	8.5/8.8	SP-SM*
4	10.0/10.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-36

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-36
LOCATION COORDINATES	X = 594,015 Y = 2,081,469
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-30-15 / COMPLETED 03-30-15
16. ELEVATION TOP OF BORING	-48.2 Ft.
17. TOTAL RECOVERY FOR BORING	95 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-48.2	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 6/1 gray (SP)				-51.2		
			At El. -51.2 Ft., few medium-grained sand-sized shell, discontinue silt, weak reaction with HCl		1		-54.2		
			At El. -54.2 Ft., little medium-grained sand-sized shell, strong reaction with HCl		2		-57.7		
			At El. -56.5 Ft., mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 5/1 gray		3		-59.7		
-58.9	10.7		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 5/1 gray (SP-SM)		4				
			At El. -61.6 Ft., trace shell, no reaction with HCl						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-36

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 594,015 Y = 2,081,469	-48.2 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			From El. -63.6 to -64.0 Ft., shell seam At El. -64.0 Ft., little fine to medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 6/1 gray						
-66.0	17.8								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell, trace siltstone, strong reaction with HCl, 2.5Y 8/1 white (SP)						
-67.2	19.0								
-68.2	20.0						-68.2		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.5/9.8	SP*
4	11.5/11.8	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-37

DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District	**SHEET** 1 **OF** 2 **SHEETS**	
1. PROJECT St. Johns County Feasibility	**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-SJN15-37 **LOCATION COORDINATES** X = 593,170 Y = 2,080,870	**11. MANUFACTURER'S DESIGNATION OF DRILL** ☐ AUTO HAMMER ☐ MANUAL HAMMER		
3. DRILLING AGENCY Corps of Engineers - CESAJ **CONTRACTOR FILE NO.** 6738-15-5453	**12. TOTAL SAMPLES**	**DISTURBED** 4	**UNDISTURBED (UD)** 0
4. NAME OF DRILLER	**13. TOTAL NUMBER CORE BOXES** 0		
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED **DEG. FROM VERTICAL** **BEARING**	**14. ELEVATION GROUND WATER**		
	15. DATE BORING	**STARTED** 03-30-15	**COMPLETED** 03-30-15
6. THICKNESS OF OVERBURDEN N/A	**16. ELEVATION TOP OF BORING** -50.2 Ft.		
7. DEPTH DRILLED INTO ROCK N/A	**17. TOTAL RECOVERY FOR BORING** 93 %		
8. TOTAL DEPTH OF BORING 20.0 Ft.	**18. SIGNATURE AND TITLE OF INSPECTOR** ,		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-50.2	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 7/1 light gray (SP)				-52.2		
			From El. -51.0 to -51.5 Ft., shell seam		1				
-53.9	3.7						-54.2		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 5/1 gray (SP-SM)		2				
-55.0	4.8		From El. -54.8 to -55.0 Ft., shell seam				-56.2		
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 7/1 light gray (SP)		3				
-57.3	7.1		At El. -56.7 Ft., 2.5Y 6/1 gray				-58.2		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, few medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 5/1 gray (SP-SM)		4				
			At El. -63.1 Ft., some fine-grained sand-sized quartz, some sand to gravel-sized shell						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-37

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 593,170 Y = 2,080,870	-50.2 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-68.7	18.5		At El. -67.1 Ft., 8" layer of clayey fine sand						
-70.2	20.0						-70.2		

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	2.0/2.3	SP*
2	4.0/4.3	SP-SM*
3	6.0/6.3	SP*
4	8.0/8.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell

Abbreviations:

15
20
25
30
35

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-38
LOCATION COORDINATES	X = 592,199 Y = 2,080,308
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-29-15 / COMPLETED 03-29-15
16. ELEVATION TOP OF BORING	-46.2 Ft.
17. TOTAL RECOVERY FOR BORING	90 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-46.2	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 6/1 gray (SP)				-48.7		
					1				
			At El. -51.2 Ft., few medium-grained sand-sized shell, discontinue silt				-51.2		
			At El. -51.5 Ft., little fine to medium-grained sand-sized shell, weak reaction with HCl		2				
			At El. -53.2 Ft., mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, 2.5Y 5/1 gray				-53.7		
					3				
			At El. -54.7 Ft., some fine to medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 7/1 light gray				-55.7		
			At El. -55.3 Ft., mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 5/1 gray		4				
-56.5	10.3		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 5/1 gray (SP-SM)				-57.2		
			At El. -57.2 Ft., trace shell		5				

(Continued)

Boring Designation VB-SJN15-38

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 592,199 Y = 2,080,308	-46.2 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-61.5	15.3		SAND, poorly-graded with silt, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, strong reaction with HCl, 10Y 5/1 greenish gray (SP-SM)						
			At El. -63.1 Ft., N 7/ light gray						
-64.2	18.0		At El. -63.7 Ft., 10Y 5/1 greenish gray						
-66.2	20.0						-66.2		

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	2.5/2.8	SP*
2	5.0/5.3	SP*
3	7.5/7.8	SP*
4	9.5/9.8	SP*
5	11.0/11.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Carbonate
1	Percent Visual Shell
2	Percent Visual Shell
3	Percent Visual Shell
4	Percent Visual Shell
5	Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-39

DRILLING LOG	DIVISION	INSTALLATION	SHEET / OF
	South Atlantic	Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT: St. Johns County Feasibility		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-SJN15-39	LOCATION COORDINATES: X = 593,489 Y = 2,082,312	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 3 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 03-30-15 / COMPLETED: 03-30-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -48.1 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 73 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-48.1	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 7/2 light gray (SP)				-51.1		
					1				
			At El. -52.0 Ft., few medium-grained sand-sized shell						
			At El. -53.3 Ft., weak reaction with HCl, 2.5Y 5/1 gray				-54.1		
					2				
-55.0	6.9						-55.1		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 5/1 gray (SP-SM)		3				
			At El. -60.4 Ft., mostly fine to medium-grained sand-sized quartz, some sand to gravel-sized shell, strong reaction with HCl						
			At El. -61.2 Ft., few fine to medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 6/2 light brownish gray						
-62.6	14.5								

0 5 10 15

(Continued)

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 593,489 Y = 2,082,312	-48.1 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-68.1	20.0						-68.1		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	7.0/7.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-40

DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District		**SHEET** 1 **OF** 2 **SHEETS**
1. PROJECT St. Johns County Feasibility	**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-SJN15-40 **LOCATION COORDINATES** X = 592,660 Y = 2,081,732	**11. MANUFACTURER'S DESIGNATION OF DRILL** ☐ AUTO HAMMER ☐ MANUAL HAMMER		
3. DRILLING AGENCY Corps of Engineers - CESAJ **CONTRACTOR FILE NO.** 6738-15-5453	**12. TOTAL SAMPLES**	**DISTURBED** 4	**UNDISTURBED (UD)** 0
4. NAME OF DRILLER	**13. TOTAL NUMBER CORE BOXES** 0		
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED **DEG. FROM VERTICAL** **BEARING**	**14. ELEVATION GROUND WATER**		
	15. DATE BORING	**STARTED** 03-30-15	**COMPLETED** 03-30-15
6. THICKNESS OF OVERBURDEN N/A	**16. ELEVATION TOP OF BORING** -44.6 Ft.		
7. DEPTH DRILLED INTO ROCK N/A	**17. TOTAL RECOVERY FOR BORING** 83 %		
8. TOTAL DEPTH OF BORING 20.0 Ft.	**18. SIGNATURE AND TITLE OF INSPECTOR** ,		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-44.6	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 7/1 light gray (SP)						
			At El. -46.2 Ft., 2.5Y 6/1 gray				-46.6		
					1				
			From El. -48.0 to -48.2 Ft., shell seam				-48.6		
			At El. -48.6 Ft., few medium-grained sand-sized shell		2				
			From El. -49.3 to -49.4 Ft., shell seam						
			At El. -50.3 Ft., 2.5Y 5/1 gray				-51.1		
-52.7	8.1				3				
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, trace shell, weak reaction with HCl, 2.5Y 5/1 gray (SP-SM)				-53.6		
					4				

0 5 10 15

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Boring Designation VB-SJN15-40

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 592,660 Y = 2,081,732	-44.6 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-61.2	16.6								
-64.6	20.0						-64.6		

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	2.0/2.3	SP*
2	4.0/4.3	SP*
3	6.5/6.8	SP*
4	9.0/9.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-41

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT	St. Johns County Feasibility	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-SJN15-41	LOCATION COORDINATES	X = 591,779 Y = 2,081,200
11. MANUFACTURER'S DESIGNATION OF DRILL		☐ AUTO HAMMER ☐ MANUAL HAMMER	
3. DRILLING AGENCY	Corps of Engineers - CESAJ	CONTRACTOR FILE NO.	6738-15-5453
12. TOTAL SAMPLES	DISTURBED: 6	UNDISTURBED (UD): 0	
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES	0
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL:	BEARING:	14. ELEVATION GROUND WATER
15. DATE BORING	STARTED: 03-29-15	COMPLETED: 03-29-15	
6. THICKNESS OF OVERBURDEN	N/A	16. ELEVATION TOP OF BORING	-44.5 Ft.
7. DEPTH DRILLED INTO ROCK	N/A	17. TOTAL RECOVERY FOR BORING	85 %
8. TOTAL DEPTH OF BORING	20.0 Ft.	18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-44.5	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 6/1 gray (SP)				-46.5		
					1		-48.5		
			At El. -48.4 Ft., mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, discontinue silt		2		-50.5		
					3		-52.5		
			At El. -53.8 Ft., few medium-grained sand-sized shell		4		-54.5		
					5		-55.5		
					6				

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Boring Designation VB-SJN15-41

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 591,779 Y = 2,081,200	-44.5 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-61.4	16.9		At El. -60.7 Ft., little sand to gravel-sized shell						
-64.5	20.0						-64.5		

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	2.0/2.3	SP*
2	4.0/4.3	SP*
3	6.0/6.3	SP*
4	8.0/8.3	SP*
5	10.0/10.3	SP*
6	11.0/11.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

15
20
25
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DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
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-SJN15-42
LOCATION COORDINATES	X = 592,989 Y = 2,083,186
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
12. TOTAL SAMPLES	DISTURBED: 5 / UNDISTURBED (UD): 0
4. NAME OF DRILLER	
13. TOTAL NUMBER CORE BOXES	0
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED: 03-30-15 / COMPLETED: 03-30-15
6. THICKNESS OF OVERBURDEN	N/A
16. ELEVATION TOP OF BORING	-45.0 Ft.
7. DEPTH DRILLED INTO ROCK	N/A
17. TOTAL RECOVERY FOR BORING	96 %
8. TOTAL DEPTH OF BORING	20.0 Ft.
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-45.0	0.0								
-46.1	1.1		SAND, poorly-graded, some fine to coarse-grained sand-sized shell, some fine to medium-grained sand-sized quartz, trace silt, strong reaction with HCl, 2.5Y 6/2 light brownish gray (SP)						
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell (SP)				-47.5		
					1				
							-50.0		
					2				
			At El. -52.1 Ft., 2.5Y 5/2 grayish brown				-52.0		
					3				
							-54.0		
					4				
			At El. -55.8 Ft., little fine-grained sand-sized shell, weak reaction with HCl, 10Y 5/1 greenish gray				-56.5		
					5				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-42

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 592,989 Y = 2,083,186	-45.0 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-64.1	19.1		At El. -62.4 Ft., little fine to coarse-grained sand-sized shell						
-65.0	20.0						-65.0		

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	2.5/2.8	SP*
2	5.0/5.3	SP*
3	7.0/7.3	SP*
4	9.0/9.3	SP*
5	11.5/11.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

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DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-43
LOCATION COORDINATES	X = 592,150 Y = 2,082,636
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-30-15 / COMPLETED 03-30-15
16. ELEVATION TOP OF BORING	-43.5 Ft.
17. TOTAL RECOVERY FOR BORING	95 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-43.5	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 7/1 light gray (SP)						
			From El. -45.9 to -50.9 Ft., intermittent seams of shell and silt (seams vary from 1" to 3")				-46.5		
					1				
			At El. -49.0 Ft., mostly fine-grained sand-sized quartz, some medium-grained sand-sized shell, strong reaction with HCl				-49.0		
					2				
			At El. -51.8 Ft., mostly fine to medium-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, trace silt				-52.0		
					3				
			At El. -52.5 Ft., mostly fine-grained sand-sized quartz, trace shell, weak reaction with HCl, 2.5Y 6/1 gray				-53.5		
			At El. -53.5 Ft., few medium-grained sand-sized shell		4				
			At El. -54.5 Ft., 2.5Y 5/1 gray				-55.5		
					5				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-43

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 592,150 Y = 2,082,636	-43.5 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-62.4	18.9								
-63.5	20.0						-63.5		

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	3.0/3.3	SP*
2	5.5/5.8	SP*
3	8.5/8.8	SP*
4	10.0/10.3	SP*
5	12.0/12.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Visual Shell
2	Percent Carbonate
2	Percent Visual Shell
3	Percent Visual Shell
4	Percent Visual Shell
5	Percent Visual Shell

Abbreviations:

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Boring Designation VB-SJN15-44

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: St. Johns County Feasibility	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-SJN15-44	LOCATION COORDINATES: X = 591,300 Y = 2,082,068	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 6 UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 03-29-15 COMPLETED: 03-29-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -40.9 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 93 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-40.9	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 6/2 light brownish gray (SP)				-43.9		
			At El. -44.2 Ft., some medium-grained sand-sized shell		1		-46.9		
			At El. -48.9 Ft., mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, 2.5Y 6/1 gray		2		-49.9		
					3		-50.9		
			At El. -50.9 Ft., little medium-grained sand-sized shell		4		-52.9		
			At El. -52.9 Ft., mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, discontinue silt		5		-54.9		
			From El. -54.6 to -54.8 Ft., sandy silt seam						
			At El. -54.9 Ft., mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt		6				
-55.9	15.0								

0 5 10 15

(Continued)

Boring Designation VB-SJN15-44

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 591,300 Y = 2,082,068	-40.9 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-59.5	18.6		SAND, silty, mostly fine-grained sand-sized quartz, little silt, few fine-grained sand-sized shell, weak reaction with HCl, 2.5Y 5/1 gray (SM) At El. -57.6 Ft., little sand to gravel-sized shell At El. -58.2 Ft., few fine-grained sand-sized shell						
-60.9	20.0						-60.9		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	10.0/10.3	SP*
5	12.0/12.3	SP*
6	14.0/14.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-45

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: St. Johns County Feasibility	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-SJN15-45	LOCATION COORDINATES: X = 592,411 Y = 2,084,012	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 5 UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 03-30-15 COMPLETED: 03-30-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -47.7 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 83 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-47.7	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, strong reaction with HCl, N 4/ dark gray (SP)				-49.7		
			At El. -50.0 Ft., 2.5Y 6/2 light brownish gray		1		-51.2		
			At El. -51.2 Ft., few medium-grained sand-sized shell		2				
			At El. -52.1 Ft., mostly fine to medium-grained sand-sized quartz, little medium to coarse-grained sand-sized shell				-53.7		
			At El. -54.1 Ft., mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, discontinue silt		3		-55.2		
			At El. -55.8 Ft., few fine-grained sand-sized shell, trace silt, weak reaction with HCl, 10Y 5/1 greenish gray		4		-56.7		
					5				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-45

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 592,411 Y = 2,084,012	-47.7 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-64.3	16.6								
-67.7	20.0						-67.7		

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	2.0/2.3	SP*
2	3.5/3.8	SP*
3	6.0/6.3	SP*
4	7.5/7.8	SP*
5	9.0/9.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

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Boring Designation VB-SJN15-46

DRILLING LOG	DIVISION	INSTALLATION	SHEET / OF
	South Atlantic	Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT: St. Johns County Feasibility		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-SJN15-46	LOCATION COORDINATES: X = 591,577 Y = 2,083,467	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 6 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 03-30-15 / COMPLETED: 03-30-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -40.2 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 85 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-40.2	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 6/1 gray (SP)				-43.2		
					1				
			At El. -45.6 Ft., mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 6/2 light brownish gray				-46.2		
					2				
			At El. -48.2 Ft., mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell				-48.2		
					3				
							-50.2		
					4				
			At El. -51.5 Ft., few fine to medium-grained sand-sized shell, 2.5Y 6/1 gray				-52.2		
			At El. -52.2 Ft., mostly fine-grained sand-sized quartz, trace shell		5				
			At El. -52.7 Ft., few fine-grained sand-sized shell				-53.7		
-54.1	13.9				6				
			SAND, silty, mostly fine-grained sand-sized quartz, little silt, trace shell, weak reaction with HCl, 2.5Y 5/1 gray (SM)						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-46

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 591,577 Y = 2,083,467	-40.2 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-57.1	16.9								
-60.2	20.0						-60.2		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	8.0/8.3	SP*
4	10.0/10.3	SP*
5	12.0/12.3	SP*
6	13.5/13.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

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Boring Designation VB-SJN15-47

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-47
LOCATION COORDINATES	X = 590,732 Y = 2,082,887
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-29-15 / COMPLETED 03-29-15
16. ELEVATION TOP OF BORING	-42.8 Ft.
17. TOTAL RECOVERY FOR BORING	84 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-42.8	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 7/1 light gray (SP)						
			At El. -46.2 Ft., 2.5Y 6/1 gray		1		-46.3		
			From El. -47.7 to -47.9 Ft., sand seam				-49.8		
			At El. -49.8 Ft., few medium-grained sand-sized shell, trace silt From El. -50.2 to -50.6 Ft., shell seam		2		-53.3		
			At El. -53.3 Ft., mostly fine-grained sand-sized quartz		3		-55.8		
			At El. -55.3 Ft., little medium to coarse-grained sand-sized shell, strong reaction with HCl, 2.5Y 5/1 gray		4		-57.8		
-57.4	14.6		SAND, poorly-graded with silt, mostly						

0 5 10 15

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Boring Designation VB-SJN15-47

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 590,732 Y = 2,082,887	-42.8 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
			fine-grained sand-sized quartz, little medium-grained sand-sized shell, few silt, strong reaction with HCl, 2.5Y 5/1 gray (SP-SM)		5				
-58.9	16.1		From El. -58.7 to -58.9 Ft., shell seam						
-59.6	16.8		SAND, silty, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, weak reaction with HCl, 2.5Y 5/1 gray (SM)						
-62.8	20.0						-62.8		

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	3.5/3.8	SP*
2	7.0/7.3	SP*
3	10.5/10.8	SP*
4	13.0/13.3	SP*
5	15.0/15.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Visual Shell
2	Percent Visual Shell
3	Percent Visual Shell
4	Percent Carbonate
4	Percent Visual Shell
5	Percent Visual Shell

Abbreviations:

15
20
25
30
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DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: St. Johns County Feasibility	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-SJN15-48	LOCATION COORDINATES: X = 589,867 Y = 2,082,392	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 5 UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL:	BEARING:	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 03-29-15 COMPLETED: 03-29-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -42.2 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 95 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-42.2	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 6/2 light brownish gray (SP)						
							-45.7		
			At El. -45.7 Ft., some medium to coarse-grained sand-sized shell		1				
			At El. -47.8 Ft., little medium-grained sand-sized shell, 2.5Y 7/2 light gray						
			At El. -48.7 Ft., 2.5Y 6/2 light brownish gray				-49.2		
					2				
			From El. -49.6 to -49.8 Ft., silt seam				-50.7		
			At El. -50.7 Ft., few medium-grained sand-sized shell, trace silt, weak reaction with HCl		3				
			At El. -51.2 Ft., mostly fine-grained sand-sized quartz, trace shell, 2.5Y 7/1 light gray				-53.2		
			At El. -53.4 Ft., 2.5Y 6/1 gray		4				
			At El. -54.4 Ft., few fine to medium-grained sand-sized shell						
			At El. -55.1 Ft., few fine-grained sand-sized shell, 2.5Y 5/1 gray				-55.7		
			At El. -55.7 Ft., trace silt		5				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-48

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 589,867 Y = 2,082,392	-42.2 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-61.2	19.0								
-62.2	20.0						-62.2		

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	3.5/3.8	SP*
2	7.0/7.3	SP*
3	8.5/8.8	SP*
4	11.0/11.3	SP*
5	13.5/13.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15
20
25
30
35

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-49
LOCATION COORDINATES	X = 591,912 Y = 2,084,849
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 7 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-30-15 / COMPLETED 03-30-15
16. ELEVATION TOP OF BORING	-42.0 Ft.
17. TOTAL RECOVERY FOR BORING	98 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-42.0	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 6/1 gray (SP)				-45.0		
					1				
			From El. -47.2 to -47.4 Ft., silt seam				-48.0		
					2				
			At El. -50.0 Ft., mostly fine-grained sand-sized quartz From El. -50.3 to -50.5 Ft., shell seam		3		-50.0		
							-52.0		
			At El. -52.0 Ft., mostly fine to medium-grained sand-sized quartz, little sand to gravel-sized shell From El. -52.1 to -52.4 Ft., shell seam		4				
							-54.0		
			At El. -54.0 Ft., few medium-grained sand-sized shell, weak reaction with HCl		5				
							-56.0		
			At El. -56.0 Ft., trace shell		6				

(Continued)

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 591,912 Y = 2,084,849	-42.0 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-58.0	16.0						-58.0		
-61.5	19.5		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, trace shell, weak reaction with HCl, 2.5Y 6/1 gray (SP-SM) At El. -58.4 Ft., 2.5Y 5/1 gray		7				
-62.0	20.0						-62.0		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	8.0/8.3	SP*
4	10.0/10.3	SP*
5	12.0/12.3	SP*
6	14.0/14.3	SP*
7	16.0/16.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell
7 Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-50

DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District	**SHEET** 1 **OF** 2 **SHEETS**	
1. PROJECT St. Johns County Feasibility	**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-SJN15-50	**LOCATION COORDINATES** X = 591,035 Y = 2,084,311	**11. MANUFACTURER'S DESIGNATION OF DRILL** ☐ AUTO HAMMER ☐ MANUAL HAMMER	
3. DRILLING AGENCY Corps of Engineers - CESAJ	**CONTRACTOR FILE NO.** 6738-15-5453	**12. TOTAL SAMPLES**	**DISTURBED** 6 / **UNDISTURBED (UD)** 0
4. NAME OF DRILLER		**13. TOTAL NUMBER CORE BOXES** 0	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED	**DEG. FROM VERTICAL** / **BEARING**	**14. ELEVATION GROUND WATER**	
		15. DATE BORING	**STARTED** 03-30-15 / **COMPLETED** 03-30-15
6. THICKNESS OF OVERBURDEN N/A		**16. ELEVATION TOP OF BORING** -41.7 Ft.	
7. DEPTH DRILLED INTO ROCK N/A		**17. TOTAL RECOVERY FOR BORING** 97 %	
8. TOTAL DEPTH OF BORING 20.0 Ft.		**18. SIGNATURE AND TITLE OF INSPECTOR** ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-41.7	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 5/1 gray (SP)				-44.7		
					1				
			At El. -46.7 Ft., 2.5Y 6/1 gray				-47.7		
					2				
			From El. -49.5 to -49.7 Ft., shell seam At El. -49.7 Ft., few medium-grained sand-sized shell, 2.5Y 7/1 light gray				-50.7		
					3				
			At El. -53.8 Ft., mostly fine-grained sand-sized quartz, trace shell, weak reaction with HCl, 2.5Y 7/1 light gray				-54.2		
					4				
			At El. -56.2 Ft., few medium-grained				-56.2		
					5				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-50

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 591,035 Y = 2,084,311	-41.7 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-57.7	16.0		sand-sized shell At El. -56.4 Ft., 2.5Y 5/1 gray						
-61.0	19.3		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 5/1 gray (SP-SM)		6		-58.2		
-61.7	20.0						-61.7		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	12.5/12.8	SP*
5	14.5/14.8	SP*
6	16.5/16.8	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Visual Shell
2	Percent Carbonate
2	Percent Visual Shell
3	Percent Visual Shell
4	Percent Visual Shell
5	Percent Visual Shell
6	Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-51

DRILLING LOG	DIVISION	INSTALLATION	SHEET / OF
	South Atlantic	Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT: St. Johns County Feasibility		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-SJN15-51	LOCATION COORDINATES: X = 590,201 Y = 2,083,725	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 7 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 03-29-15 / COMPLETED: 03-29-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -41.2 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 100 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-41.2	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 7/2 light gray (SP)				-44.2		
					1				
			From El. -46.9 to -47.2 Ft., shell seam At El. -47.2 Ft., trace silt				-47.2		
					2				
							-50.2		
			At El. -50.2 Ft., mostly fine-grained sand-sized quartz		3				
							-53.2		
			At El. -53.2 Ft., mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, weak reaction with HCl		4				
							-56.2		

0 5 10 15

(Continued)

Boring Designation VB-SJN15-51

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 590,201 Y = 2,083,725	-41.2 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
					5				
			At El. -57.9 Ft., mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, N 7/ light gray				-58.2		
			At El. -58.7 Ft., 2.5Y 5/1 gray		6				
							-60.2		
			At El. -60.2 Ft., little medium to coarse-grained sand-sized shell		7				
-61.2	20.0		From El. -60.3 to -60.7 Ft., shell seam				-61.2		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	12.0/12.3	SP*
5	15.0/15.3	SP*
6	17.0/17.3	SP*
7	19.0/19.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Visual Shell
2	Percent Visual Shell
3	Percent Visual Shell
4	Percent Visual Shell
5	Percent Carbonate
5	Percent Visual Shell
6	Percent Visual Shell
7	Percent Visual Shell
3	Percent Visual Shell

Abbreviations:

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-52
LOCATION COORDINATES	X = 589,320 Y = 2,083,241
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 7 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-29-15 / COMPLETED 03-29-15
16. ELEVATION TOP OF BORING	-41.9 Ft.
17. TOTAL RECOVERY FOR BORING	83 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-41.9	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 6/2 light brownish gray (SP)				-43.9		
					1		-45.9		
			At El. -45.9 Ft., trace silt		2				
			At El. -46.7 Ft., little fine to medium-grained sand-sized shell				-47.9		
			At El. -47.9 Ft., few medium-grained sand-sized shell, discontinue silt		3		-49.9		
			At El. -49.7 Ft., little medium-grained sand-sized shell, trace silt, strong reaction with HCl		4		-51.9		
			At El. -51.9 Ft., mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, weak reaction with HCl		5		-53.9		
			At El. -53.9 Ft., mostly fine to medium-grained sand-sized quartz, trace shell		6		-55.9		
			At El. -55.7 Ft., mostly fine-grained sand-sized quartz, 2.5Y 5/1 gray		7				

0 5 10 15

(Continued)

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 589,320 Y = 2,083,241	-41.9 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-57.9	16.0								
-58.4	16.5		SAND, clayey, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, little clay, strong reaction with HCl, 2.5Y 4/1 dark gray (SC)						
-61.9	20.0						-61.9		

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	2.0/2.3	SP*
2	4.0/4.3	SP*
3	6.0/6.3	SP*
4	8.0/8.3	SP*
5	10.0/10.3	SP*
6	12.0/12.3	SP*
7	14.0/14.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell
7 Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-53

DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District	**SHEET** 1 **OF** 2 **SHEETS**	
1. PROJECT St. Johns County Feasibility	**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-SJN15-53	**LOCATION COORDINATES** X = 591,370 Y = 2,085,686	**11. MANUFACTURER'S DESIGNATION OF DRILL** ☐ AUTO HAMMER ☐ MANUAL HAMMER	
3. DRILLING AGENCY Corps of Engineers - CESAJ	**CONTRACTOR FILE NO.** 6738-15-5453	**12. TOTAL SAMPLES**	**DISTURBED** 5 / **UNDISTURBED (UD)** 0
4. NAME OF DRILLER		**13. TOTAL NUMBER CORE BOXES** 0	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED	**DEG. FROM VERTICAL** / **BEARING**	**14. ELEVATION GROUND WATER**	
		15. DATE BORING	**STARTED** 03-29-15 / **COMPLETED** 03-29-15
6. THICKNESS OF OVERBURDEN N/A		**16. ELEVATION TOP OF BORING** -45.7 Ft.	
7. DEPTH DRILLED INTO ROCK N/A		**17. TOTAL RECOVERY FOR BORING** 100 %	
8. TOTAL DEPTH OF BORING 20.0 Ft.		**18. SIGNATURE AND TITLE OF INSPECTOR** ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-45.7	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 6/1 gray (SP)						
			At El. -47.4 Ft., little fine-grained sand-sized shell, weak reaction with HCl						
			At El. -48.8 Ft., trace silt				-49.2		
					1				
			From El. -50.3 to -50.7 Ft., shell seams						
			At El. -51.8 Ft., few medium-grained sand-sized shell				-52.7		
					2				
			At El. -53.3 Ft., little fine to medium-grained sand-sized shell						
			At El. -54.5 Ft., 2" shell seam At El. -54.7 Ft., trace shell, 2.5Y 6/1 gray				-55.7		
					3				
							-57.7		
			At El. -57.7 Ft., few medium-grained sand-sized shell, 2.5Y 5/1 gray		4				
-59.3	13.6						-59.7		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 5/1 gray		5				

(Continued)

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 591,370 Y = 2,085,686	-45.7 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			(SP-SM)						
-65.7	20.0						-65.7		

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	3.5/3.8	SP*
2	7.0/7.3	SP*
3	10.0/10.3	SP*
4	12.0/12.3	SP*
5	14.0/14.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-54

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: St. Johns County Feasibility	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-SJN15-54	LOCATION COORDINATES: X = 590,457 Y = 2,085,161	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 6 UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL:	BEARING:	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 03-29-15 COMPLETED: 03-29-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -45.9 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 100 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-45.9	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized quartz, trace silt, strong reaction with HCl, 2.5Y 6/2 light brownish gray (SP)						
			From El. -47.7 to -47.8 Ft., sandy silt seam				-47.9		
					1				
			At El. -49.0 Ft., some fine to medium-grained sand-sized shell, some fine to medium-grained sand-sized quartz				-49.9		
			At El. -49.9 Ft., mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell		2				
			At El. -50.4 Ft., 2" shell seam						
			At El. -50.6 Ft., 2.5Y 6/1 gray						
							-51.9		
			At El. -51.9 Ft., few medium-grained sand-sized shell		3				
							-53.9		
			At El. -53.7 Ft., few fine to medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 5/1 gray		4				
			From El. -54.7 to -55.1 Ft., intermittent sandy silt seams						
							-55.9		
			At El. -55.7 Ft., mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, 2.5Y 6/1 gray		5				
			From El. -56.9 to -57.1 Ft., shelly sand seam						
			At El. -57.1 Ft., mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, 2.5Y 5/1 gray						
-57.9	12.0						-57.9		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 5/1 gray (SP-SM)		6				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-54

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 590,457 Y = 2,085,161	-45.9 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			At El. -61.4 Ft., little sand to gravel-sized shell						
			At El. -63.8 Ft., trace shell, N 5/ gray						
-65.9	20.0						-65.9		

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	2.0/2.3	SP*
2	4.0/4.3	SP*
3	6.0/6.3	SP*
4	8.0/8.3	SP*
5	10.0/10.3	SP*
6	12.0/12.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

15
20
25
30
35

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-55
LOCATION COORDINATES	X = 589,676 Y = 2,084,550
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 7 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-29-15 / COMPLETED 03-29-15
16. ELEVATION TOP OF BORING	-42.8 Ft.
17. TOTAL RECOVERY FOR BORING	100 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-42.8	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 6/1 gray (SP)				-44.8		
					1		-46.8		
			At El. -47.3 Ft., mostly fine to medium-grained sand-sized quartz		2		-48.8		
			At El. -48.8 Ft., few medium-grained sand-sized shell		3				
-50.8	8.0						-50.8		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, few silt, strong reaction with HCl, 2.5Y 5/1 gray (SP-SM)		4				
-52.8	10.0		From El. -51.0 to -51.1 Ft., sandy silt seam				-52.8		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, weak reaction with HCl, 2.5Y 5/1 gray (SP)		5		-55.8		
			At El. -55.8 Ft., mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell		6				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-55

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 589,676 Y = 2,084,550	-42.8 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
							-58.8		
					7				
-59.6	16.8								
			SAND, silty, mostly fine-grained sand-sized quartz, little silt, weak reaction with HCl, 2.5Y 5/1 gray (SM)						
			At El. -61.1 Ft., few fine-grained sand-sized shell						
-62.1	19.3								
-62.8	20.0		SAND, poorly-graded with silt, mostly fine to medium-grained sand-sized quartz, some sand to gravel-sized shell, few silt, strong reaction with HCl, N 5/ gray (SP-SM)				-62.8		

Abbreviations:

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	2.0/2.3	SP*
2	4.0/4.3	SP*
3	6.0/6.3	SP*
4	8.0/8.3	SP-SM*
5	10.0/10.3	SP*
6	13.0/13.3	SP*
7	16.0/16.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell
7 Percent Visual Shell

Boring Designation VB-SJN15-56

DRILLING LOG	DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT: St. Johns County Feasibility		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-SJN15-56	LOCATION COORDINATES: X = 588,768 Y = 2,084,067	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 6 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 03-29-15 / COMPLETED: 03-29-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -40.5 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 93 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-40.5	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 7/2 light gray (SP)				-43.5		
					1		-46.5		
					2		-49.5		
			At El. -49.5 Ft., mostly fine-grained sand-sized quartz		3		-51.5		
			At El. -51.5 Ft., trace shell, 2.5Y 6/1 gray		4				
			At El. -52.3 Ft., few fine to medium-grained sand-sized shell						
-53.5	13.0						-53.5		
			SAND, poorly-graded with silt, mostly fine to medium-grained sand-sized quartz, few silt, few medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 6/1 gray (SP-SM)		5				
-55.5	15.0						-55.5		

0 5 10 15

(Continued)

Boring Designation VB-SJN15-56

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 588,768 Y = 2,084,067	-40.5 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-56.6	16.1		SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 6/1 gray (SP)		6				
-59.0	18.5		SAND, silty, mostly fine-grained sand-sized quartz, little silt, trace shell, weak reaction with HCl, 2.5Y 6/1 gray (SM)						
-60.5	20.0						-60.5		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	11.0/11.3	SP*
5	13.0/13.3	SP-SM*
6	15.0/15.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Carbonate
1	Percent Visual Shell
2	Percent Visual Shell
3	Percent Visual Shell
4	Percent Visual Shell
5	Percent Visual Shell
6	Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-57

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-57
LOCATION COORDINATES	X = 587,796 Y = 2,085,832
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 6 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-29-15 / COMPLETED 03-29-15
16. ELEVATION TOP OF BORING	-38.2 Ft.
17. TOTAL RECOVERY FOR BORING	96 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-38.2	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 6/2 light brownish gray (SP)				-41.2		
					1		-44.2		
					2		-47.2		
					3		-50.2		
			At El. -50.2 Ft., little medium-grained sand-sized shell		4		-53.2		

0 5 10 15

(Continued)

Boring Designation VB-SJN15-57

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 587,796 Y = 2,085,832	-38.2 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			At El. -53.2 Ft., trace shell		5				
			At El. -55.1 Ft., mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, 2.5Y 5/1 gray				-55.7		
					6				
-57.3	19.1								
-58.2	20.0						-58.2		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	12.0/12.3	SP*
5	15.0/15.3	SP*
6	17.5/17.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Visual Shell
2	Percent Visual Shell
3	Percent Carbonate
3	Percent Visual Shell
4	Percent Visual Shell
5	Percent Visual Shell
6	Percent Visual Shell

Abbreviations:

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: St. Johns County Feasibility	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-SJN15-58	LOCATION COORDINATES: X = 588,713 Y = 2,088,437	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 7 UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 03-29-15 COMPLETED: 03-29-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -43.8 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 85 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-43.8	0.0								
			SAND, poorly-graded, mostly sand to gravel-sized shell, little fine to medium-grained sand-sized quartz, strong reaction with HCl, 2.5Y 4/1 dark gray (SP)						
-45.1	1.3		SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, trace silt, 2.5Y 7/1 light gray (SP)						
			At El. -46.2 Ft., little medium-grained sand-sized shell, weak reaction with HCl				-46.8		
					1				
			At El. -48.8 Ft., some sand to gravel-sized shell, strong reaction with HCl						
			At El. -49.5 Ft., few medium-grained sand-sized shell, weak reaction with HCl				-49.8		
					2				
			At El. -51.7 Ft., 2.5Y 6/1 gray						
			From El. -52.1 to -52.4 Ft., silty sand seam						
			At El. -52.8 Ft., mostly fine-grained sand-sized quartz				-52.8		
					3				
							-54.8		
					4				
							-56.8		
-57.3	13.5				5				
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, few silt, weak reaction with HCl, 2.5Y 6/1 gray (SP-SM)						
-58.8	15.0						-58.8		

(Continued)

DRILLING LOG (Cont. Sheet)

INSTALLATION	SHEET / OF
Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 588,713 Y = 2,088,437	-43.8 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
			From El. -58.4 to -58.6 Ft., sandy silt seams		6				
-59.5	15.7		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 6/1 gray (SP)				-59.8		
			From El. -59.3 to -59.7 Ft., very shelly silty sand seam		7				
-60.7	16.9		SAND, poorly-graded with silt, mostly sand to gravel-sized shell, some fine to medium-grained sand-sized quartz, few silt, strong reaction with HCl, 2.5Y 5/1 gray (SP-SM)						
-63.8	20.0						-63.8		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	11.0/11.3	SP*
5	13.0/13.3	SP-SM*
6	15.0/15.3	SP*
7	16.0/16.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell
7 Percent Visual Shell

Abbreviations:

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-59
LOCATION COORDINATES	X = 586,166 Y = 2,088,102
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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 6 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-29-15 / COMPLETED 03-29-15
16. ELEVATION TOP OF BORING	-40.1 Ft.
17. TOTAL RECOVERY FOR BORING	100 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-40.1	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few fine-grained sand-sized shell, weak reaction with HCl, 2.5Y 6/2 light brownish gray (SP)						
			At El. -41.5 Ft., few medium-grained sand-sized shell				-43.1		
					1				
							-46.1		
					2				
							-49.1		
			At El. -49.1 Ft., mostly fine-grained sand-sized quartz, trace silt		3				
			At El. -50.0 Ft., mostly fine to medium-grained sand-sized quartz				-50.6		
					4				
			At El. -51.2 Ft., mostly fine-grained sand-sized quartz				-53.6		
			At El. -53.6 Ft., trace shell		5				

0 5 10 15

(Continued)

Boring Designation VB-SJN15-59

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 586,166 Y = 2,088,102	-40.1 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			At El. -55.4 Ft., 5G 5/1 greenish gray		6		-55.6		
-60.1	20.0						-60.1		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	10.5/10.8	SP*
5	13.5/13.8	SP*
6	15.5/15.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

15
20
25
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35

Boring Designation VB-SJN15-60

DRILLING LOG	DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT: St. Johns County Feasibility		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-SJN15-60	LOCATION COORDINATES: X = 588,015 Y = 2,090,244	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 3 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 03-26-15 / COMPLETED: 03-26-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -46.6 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 93 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-46.6	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 5/2 grayish brown (SP)						
			From El. -49.0 to -49.2 Ft., very shelly sand seam				-49.6		
			At El. -49.2 Ft., little medium-grained sand-sized shell, 2.5Y 6/2 light brownish gray		1				
			At El. -50.1 Ft., little fine to coarse-grained sand-sized shell				-52.6		
-54.4	7.8				2				
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, few medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 5/1 gray (SP-SM)				-55.1		
					3				
-57.1	10.5		From El. -56.8 to -57.1 Ft., shelly very silty sand seam						
			SAND, clayey, mostly fine-grained sand-sized quartz, some clay, weak reaction with HCl, N 5/ gray (SC)						
-58.5	11.9		From El. -58.3 to -58.5 Ft., shelly very clayey sand seam						
			CLAY, lean, few fine-grained sand-sized quartz, no reaction with HCl, N 4/ dark gray (CL)						
			At El. -60.8 Ft., little fine-grained sand-sized quartz						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-60

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 588,015 Y = 2,090,244	-46.6 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-65.1	18.5		At El. -62.1 Ft., few fine-grained sand-sized quartz, 5G 4/1 dark greenish gray						
-66.6	20.0						-66.6		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	8.5/8.8	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-61

DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District	**SHEET** 1 **OF** 2 **SHEETS**	
1. PROJECT St. Johns County Feasibility	**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-SJN15-61 **LOCATION COORDINATES** X = 586,049 Y = 2,090,478	**11. MANUFACTURER'S DESIGNATION OF DRILL** ☐ AUTO HAMMER ☐ MANUAL HAMMER		
3. DRILLING AGENCY Corps of Engineers - CESAJ **CONTRACTOR FILE NO.** 6738-15-5453	**12. TOTAL SAMPLES**	**DISTURBED** 7	**UNDISTURBED (UD)** 0
4. NAME OF DRILLER	**13. TOTAL NUMBER CORE BOXES** 0		
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED **DEG. FROM VERTICAL** **BEARING**	**14. ELEVATION GROUND WATER**		
	15. DATE BORING	**STARTED** 03-26-15	**COMPLETED** 03-26-15
6. THICKNESS OF OVERBURDEN N/A	**16. ELEVATION TOP OF BORING** -38.2 Ft.		
7. DEPTH DRILLED INTO ROCK N/A	**17. TOTAL RECOVERY FOR BORING** 100 %		
8. TOTAL DEPTH OF BORING 20.0 Ft.	**18. SIGNATURE AND TITLE OF INSPECTOR** ,		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-38.2	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 6/1 gray (SP)						
			At El. -40.3 Ft., few medium-grained sand-sized shell				-41.2		
					1				
			At El. -43.7 Ft., little medium-grained sand-sized shell				-44.2		
					2				
			At El. -46.6 Ft., few medium-grained sand-sized shell				-47.2		
					3				
			From El. -47.7 to -47.9 Ft., very shelly sand seam						
			At El. -48.9 Ft., mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 5/1 gray				-49.2		
					4		-50.2		
			At El. -50.2 Ft., few fine-grained sand-sized shell						
			At El. -50.5 Ft., mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 6/1 gray		5				
			At El. -51.4 Ft., little fine to medium-grained sand-sized shell						
			From El. -52.4 to -52.7 Ft., very shelly sand seam				-53.2		

0 5 10 15

(Continued)

Boring Designation VB-SJN15-61

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 586,049 Y = 2,090,478	-38.2 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			At El. -53.2 Ft., trace shell, weak reaction with HCl		6				
							-54.2		
			At El. -54.2 Ft., mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell		7				
-55.6	17.4								
			SAND, silty, mostly fine-grained sand-sized quartz, little silt, little fine to medium-grained sand-sized shell, weak reaction with HCl, 10Y 5/1 greenish gray (SM)						
-58.2	20.0						-58.2		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	11.0/11.3	SP*
5	12.0/12.3	SP*
6	15.0/15.3	SP*
7	16.0/16.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Visual Shell
2	Percent Carbonate
2	Percent Visual Shell
3	Percent Visual Shell
4	Percent Visual Shell
5	Percent Visual Shell
6	Percent Visual Shell
7	Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-62

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: St. Johns County Feasibility	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-SJN15-62	LOCATION COORDINATES: X = 585,853 Y = 2,092,273	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 4 UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL	BEARING	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 03-26-15 COMPLETED: 03-26-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -44.9 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 95 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-44.9	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 6/1 gray (SP)				-47.9		
					1		-50.9		
					2		-53.9		
			At El. -53.9 Ft., mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell		3				
			At El. -54.8 Ft., trace shell				-56.9		
-56.0	11.1		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little coarse gravel-sized shell, few silt, strong reaction with HCl, 2.5Y 5/1 gray (SP-SM)		4				
			At El. -57.8 Ft., few medium-grained sand-sized shell, weak reaction with HCl						
-59.2	14.3		SILT, inorganic-H, few fine-grained sand-sized quartz, no reaction with HCl,						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-62

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 585,853 Y = 2,092,273	-44.9 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-63.8	18.9		N 4/ dark gray (MH)						
-64.9	20.0						-64.9		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	12.0/12.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell

Abbreviations:

Boring Designation VB-SJN15-63

DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District	**SHEET** 1 **OF** 2 **SHEETS**	
1. PROJECT St. Johns County Feasibility	**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-SJN15-63	**LOCATION COORDINATES** X = 584,417 Y = 2,091,500	**11. MANUFACTURER'S DESIGNATION OF DRILL** ☐ AUTO HAMMER ☐ MANUAL HAMMER	
3. DRILLING AGENCY Corps of Engineers - CESAJ	**CONTRACTOR FILE NO.** 6738-15-5453	**12. TOTAL SAMPLES**	**DISTURBED** 3 / **UNDISTURBED (UD)** 0
4. NAME OF DRILLER		**13. TOTAL NUMBER CORE BOXES** 0	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED	**DEG. FROM VERTICAL** / **BEARING**	**14. ELEVATION GROUND WATER**	
		15. DATE BORING	**STARTED** 03-26-15 / **COMPLETED** 03-26-15
6. THICKNESS OF OVERBURDEN N/A		**16. ELEVATION TOP OF BORING** -42.3 Ft.	
7. DEPTH DRILLED INTO ROCK N/A		**17. TOTAL RECOVERY FOR BORING** 100 %	
8. TOTAL DEPTH OF BORING 20.0 Ft.		**18. SIGNATURE AND TITLE OF INSPECTOR** ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-42.3	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few fine to medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 6/2 light brownish gray (SP)				-45.3		
					1				
							-48.3		
			At El. -48.3 Ft., mostly fine-grained sand-sized quartz, trace shell		2				
			From El. -50.3 to -50.4 Ft., silty sand seam				-51.3		
			At El. -51.3 Ft., few medium-grained sand-sized shell		3				
-53.3	11.0								
			SAND, silty, mostly fine-grained sand-sized quartz, little silt, few medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 5/1 gray (SM)						
			At El. -54.1 Ft., little sand to gravel-sized shell						
			At El. -55.3 Ft., some sand to gravel-sized shell						
			At El. -56.0 Ft., some silt, trace shell, 2.5Y 3/1 very dark gray						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-63

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 584,417 Y = 2,091,500	-42.3 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-57.7	15.4								
			CLAY, lean, some fine-grained sand-sized quartz, no reaction with HCl, 5G 4/1 dark greenish gray (CL)						
-59.2	16.9		From El. -59.0 to -59.2 Ft., silty sand seam						
			SAND, clayey, mostly fine-grained sand-sized quartz, some clay, no reaction with HCl, 5GY 4/1 dark greenish gray (SC)						
-62.3	20.0						-62.3		

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	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1	Percent Visual Shell
2	Percent Carbonate
2	Percent Visual Shell
3	Percent Visual Shell

Abbreviations:

15 20 25 30 35

SAJ FORM 1836-A
JUN 02

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	St. Johns County Feasibility
2. BORING DESIGNATION	VB-SJN15-64
LOCATION COORDINATES	X = 585,752 Y = 2,094,801
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5453
4. NAME OF DRILLER	
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	20.0 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	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-26-15 / COMPLETED 03-26-15
16. ELEVATION TOP OF BORING	-46.9 Ft.
17. TOTAL RECOVERY FOR BORING	90 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-46.9	0.0								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 5/2 grayish brown (SP)						
			From El. -47.3 to -47.4 Ft., silty shelly sand seam				-48.9		
			At El. -48.3 Ft., little medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 6/2 light brownish gray		1				
			At El. -48.9 Ft., few medium-grained sand-sized shell				-50.9		
					2				
							-52.9		
			At El. -53.1 Ft., mostly fine-grained sand-sized quartz, trace shell, 2.5Y 5/1 gray		3		-53.9		
			At El. -53.9 Ft., few medium-grained sand-sized shell		4				
			At El. -54.1 Ft., 10Y 5/1 greenish gray						
			At El. -56.6 Ft., little sand to gravel-sized shell						
			From El. -57.6 to -57.9 Ft., shelly very clayey sand seam						
			At El. -57.9 Ft., little fine-grained sand-sized shell						
			At El. -59.0 Ft., some fine to medium-grained sand-sized shell, strong reaction with HCl, N 8/ white						
			From El. -61.1 to -61.4 Ft., shell seam						

0 5 10 15

(Continued)

Boring Designation VB-SJN15-64

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 585,752 Y = 2,094,801	-46.9 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-64.8	17.9		At El. -62.2 Ft., some fine-grained sand-sized quartz, some sand to gravel-sized shell, little fine gravel-sized limestone, 2.5Y 5/1 gray						
-66.9	20.0						-66.9		

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	2.0/2.3	SP*
2	4.0/4.3	SP*
3	6.0/6.3	SP*
4	7.0/7.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell

Abbreviations:

15
20
25
30
35

Boring Designation VB-SJN15-65

DRILLING LOG

DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 OF 2 SHEETS	
1. PROJECT: St. Johns County Feasibility	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-SJN15-65	LOCATION COORDINATES: X = 583,857 Y = 2,093,404	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5453	12. TOTAL SAMPLES	DISTURBED: 5 UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL:	BEARING:	14. ELEVATION GROUND WATER
		15. DATE BORING	STARTED: 03-26-15 COMPLETED: 03-26-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -42.7 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 100 %	
8. TOTAL DEPTH OF BORING: 20.0 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/1 FT.	N-VALUE
-42.7	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, weak reaction with HCl, 2.5Y 6/1 gray (SP)				-44.7		
					1		-46.7		
					2		-48.7		
					3		-50.7		
			At El. -50.1 Ft., mostly fine to medium-grained sand-sized quartz		4		-52.7		
			At El. -52.0 Ft., mostly fine-grained sand-sized quartz		5				
-55.6	12.9		From El. -55.2 to -55.6 Ft., shelly sandy silt seam						
			SILT, inorganic-L, few medium-grained sand-sized shell, few fine-grained sand-sized quartz, weak reaction with HCl, N 5/ gray (ML)						

0 5 10 15

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JUN 02

(Continued)

Boring Designation VB-SJN15-65

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

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
St. Johns County Feasibility	State Plane, FLE (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 583,857 Y = 2,093,404	-42.7 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			From El. -57.7 to -58.2 Ft., no reaction with HCl, slightly sandy shelly silt seam At El. -58.0 Ft., discontinue shell						
-61.6	18.9								
-62.7	20.0		CLAY, lean, few fine-grained sand-sized quartz, no reaction with HCl, N 3/ very dark gray (CL)				-62.7		

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	2.0/2.3	SP*
2	4.0/4.3	SP*
3	6.0/6.3	SP*
4	8.0/8.3	SP*
5	10.0/10.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15
20
25
30
35