

## **Appendix II – Conway High School**



**Legend**  
 ⊕ Approximate Hand Auger and DCP Test Location

**Test Location Sketch**

Horry County High School Turf Improvements Phase 4  
 Conway High School  
 Conway, South Carolina

SCALE:  
 AS SHOWN  
 DATE:  
 6/20/2022  
 PROJECT NUMBER  
 22630095




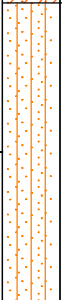

FIGURE NO.  
 2



PROJECT:		HCHS Turf Improvements - Phase 4 Horry County, South Carolina 22630095		HAND AUGER BORING LOG: B-29		
DATE STARTED: 6/3/22		DATE FINISHED: 6/3/22		NOTES:		
SAMPLING METHOD: Hand Auger		PERFORMED BY: K. Fugate				
WATER LEVEL: Not encountered.						
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	DCP VALUE
		<b>ROOTMAT</b> - Approximately 2 inches thick.				
		<b>CLAYEY SAND (SC)</b> - Mostly fine sand, some low to medium plasticity fines, orange and brown, moist, medium dense.				
1		<b>SANDY LEAN CLAY (CL)</b> - Mostly low to medium plasticity fines, some fine sand, grey, orange and yellow, moist, stiff to firm.  ---- Firm.				12
2						7
3		<b>CLAYEY SAND (SC)</b> - Mostly fine to coarse sand, some low to medium plasticity fines, grey and yellow, moist, loose to medium dense.  ---- Medium dense.				9
4		Boring terminated at 4 ft				15


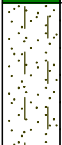




DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

PROJECT:		HCHS Turf Improvements - Phase 4 Horry County, South Carolina 22630095		HAND AUGER BORING LOG: B-30		
DATE STARTED:		6/3/22		DATE FINISHED:		
		6/3/22		NOTES:		
SAMPLING METHOD:		Hand Auger		PERFORMED BY:		
		K. Fugate				
WATER LEVEL:		Not encountered.				
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	DCP VALUE
					10 20 30 60 80	
		<b>ROOTMAT</b> - Approximately 2 inches thick.				
		<b>POORLY GRADED SAND WITH SILT (SP-SM)</b> - Mostly fine sand, few non plastic fines, trace gravel, brown, moist, medium dense. Possible Fill.				
1		<b>CLAYEY SAND (SC)</b> - Mostly fine sand, some low to medium plasticity fines, orange and brown, moist, medium dense to loose.  ---- Fine to coarse sand.				12
2		---- Loose.				6
3		<b>SILTY SAND (SM)</b> - Mostly fine sand, some non plastic fines, grey, moist, loose.				10
4		<b>SANDY LEAN CLAY (CL)</b> - Mostly low to medium plasticity fines, some fine sand, grey, orange and yellow, moist, firm.				6
		Boring terminated at 4 ft				





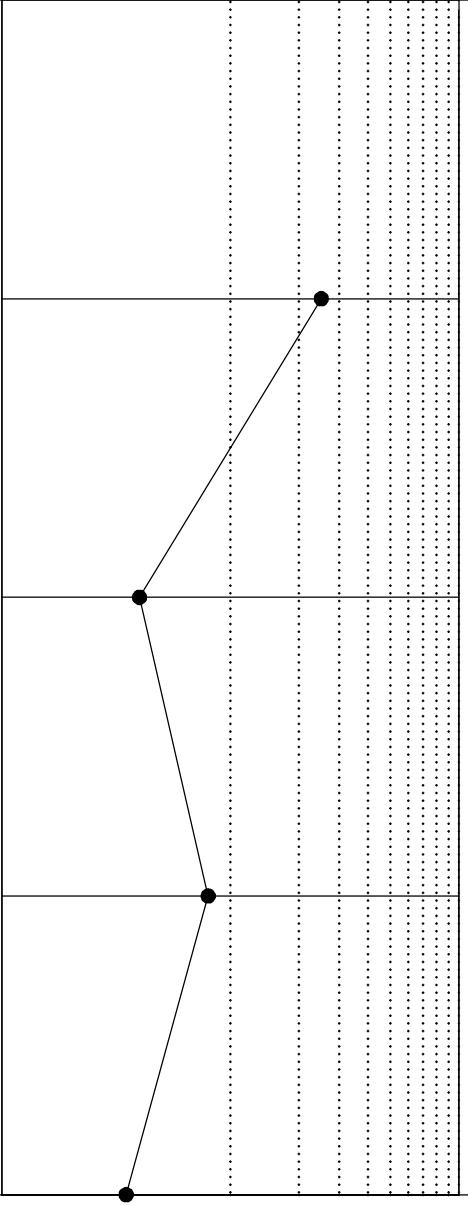


DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

PROJECT:		HCHS Turf Improvements - Phase 4 Horry County, South Carolina 22630095		HAND AUGER BORING LOG: B-31				
DATE STARTED:		6/3/22	DATE FINISHED:		6/3/22	NOTES:		
SAMPLING METHOD:		Hand Auger	PERFORMED BY:		K. Fugate			
WATER LEVEL:		Not encountered.						
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)		DCP VALUE	
					10 20 30 60 80			
		<b>ROOTMAT</b> - Approximately 2 inches thick.						
		<b>POORLY GRADED SAND WITH SILT (SP-SM)</b> - Mostly fine sand, few non plastic fines, trace gravel, brown, moist, loose. Possible Fill.						
1		<b>CLAYEY SAND (SC)</b> - Mostly fine to medium sand, some low to medium plasticity fines, brown, moist, loose.						
2								
3		<b>SANDY LEAN CLAY (CL)</b> - Mostly low to medium plasticity fines, some fine sand, grey, orange and yellow, moist, firm to very soft.						
4		---- Very soft.						
		Boring terminated at 4 ft						
							2	



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

PROJECT:		HCHS Turf Improvements - Phase 4 Horry County, South Carolina 22630095		HAND AUGER BORING LOG: B-32		
DATE STARTED:		6/3/22	DATE FINISHED:		6/3/22	NOTES:
SAMPLING METHOD:		Hand Auger	PERFORMED BY:		K. Fugate	
WATER LEVEL:		Not encountered.				
Depth (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION (feet)	WATER LEVEL	DYNAMIC CONE PENETRATION RESISTANCE (blows/1.75 in.)	
		<b>ROOTMAT</b> - Approximately 2 inches thick.				
		<b>POORLY GRADED SAND WITH SILT (SP-SM)</b> - Mostly fine sand, few non plastic fines, trace gravel, brown, moist, medium dense. Possible Fill.				
1		<b>CLAYEY SAND (SC)</b> - Mostly fine sand, some low to medium plasticity fines, orange and brown, moist, medium dense.				
2		<b>SANDY LEAN CLAY (CL)</b> - Mostly low to medium plasticity fines, some fine sand, grey, orange and yellow, moist, soft to firm.				
3		---- Firm.				
		---- Soft.				
4		Boring terminated at 4 ft				
						20+    4    8    4



DCP INDEX IS THE DEPTH (IN.) OF PENETRATION PER BLOW OF A 10.1 LB HAMMER FALLING 22.6 IN., DRIVING A 0.79 IN. O.D. 60 DEGREE CONE.

Form No: TR-D2216-T265-1  
 Revision No. 1  
 Revision Date: 08/16/17

## LABORATORY DETERMINATION OF WATER CONTENT



ASTM D 2216  AASHTO T 265

S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #:	22630095	Report Date:	6/14/2022
Project Name:	Horry County HS Turf Improvements Phase 4	Test Date(s):	6/8/2022
Client Name:	Clough, Harbour & Associates, LLP		
Client Address:	110 Traders Cross, Suite 201; Bluffton, SC 29902		
Sample by:	K. Fugate	Sample Date(s):	6/3-7/2022

<b>Method:</b>	A (1%) <input type="checkbox"/>	B (0.1%) <input checked="" type="checkbox"/>	Balance ID.	19608	Calibration Date:	2/25/22
			Oven ID.	17745	Calibration Date:	4/5/22

Boring No.	Sample No.	Sample Depth	Tare #	Tare Weight	Tare Wt. + Wet Wt	Tare Wt. + Dry Wt	Water Weight	Percent Moisture	N o t e
		ft. or m.		grams	grams	grams	grams	%	
B-29	S-1	1'-1.25'	VWX	82.6	258.7	237.6	21.10	13.6%	
B-30	S-2	2.5'-3.5'	Sally	82.6	254.7	224.4	30.30	21.4%	
B-31	S-3	2'-2.5'	YYY	82.7	205.8	183.0	22.80	22.7%	
B-32	S-4	1'-1.25'	PQR	80.9	249.0	237.2	11.80	7.5%	

Notes / Deviations / References

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ASTM D 2216: Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass

<u>Ron Forest, P.E.</u>	RPE	<u>Principal Engineer</u>	21-Jun
<i>Technical Responsibility</i>	<i>Signature</i>	<i>Position</i>	<i>Date</i>

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## SOIL SIEVE ANALYSIS USING SINGLE SIEVE-SET SIEVING



Single Portion

ASTM D6913

S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project No: 22630095	Report Date: 6/14/2022
Project Name: Horry County HS Turf Improvements Phase 4	Lab #: 603
Client Name: Clough, Harbour & Associates, LLP	Test Date: 6/13/2022
Client Address: 110 Traders Cross, Suite 201; Bluffton, SC 29902	Date Sampled: 6/3-7/2022
Boring #: B-31	Sample#: S-3
Location: Football Fields - Conway High School	Depth: 2'-2.5'

Sample Description: Gray with Red Sandy Lean Clay (CL)

Estimate Max. Particle Size (99% Passing):	<b>#4</b>	Testing Dates:	6/13/22
Method A (1%) <input type="checkbox"/>	Method B (0.1%) <input checked="" type="checkbox"/>	Material Excluded?	None
Procedure for obtaining Specimen:	Moist <input checked="" type="checkbox"/>	Air-Dried <input type="checkbox"/>	Oven-Dried <input checked="" type="checkbox"/>
Sampling Method	Stockpile: <input checked="" type="checkbox"/>	Mechanically Split: <input type="checkbox"/>	Quartered: <input type="checkbox"/>
Dispersion Process?	Soaked without Dispersant <input type="checkbox"/>	Soaked with Dispersant <input checked="" type="checkbox"/>	Ultrasonic Bath <input type="checkbox"/>
Estimated Wet Mass of specimen required:	200	Shaking Apparatus	<input checked="" type="checkbox"/>

**Specimen:** Pan No. **YYY** B) Tare Wt. **82.7** Method B of ASTM D1140 or D6913 Sec. 11.4.3

A) Total Specimen Wet Wt. + Tare Wt. (g.)	<b>205.8</b>	Pan No. <b>YYY</b>	Tare Wt.	<b>82.7</b>
C) Total Specimen Dry Wt. + Tare Wt. (g.)	<b>183.0</b>	Dry Mass of Washed Sample + Tare Wt.		<b>126.9</b>
D = (C-B) Total Specimen Dry Weight ( <b>S<sub>w</sub>M<sub>d</sub></b> )	<b>100.3</b>	Dry Mass of Washed Sample ( <b>S<sub>w</sub>M<sub>d</sub></b> )		<b>44.2</b>
E = (A-B) Moist Specimen Mass ( <b>S<sub>w</sub>M<sub>w</sub></b> )	<b>123.1</b>	Dry Mass passing #200		<b>56.1</b>
F=(E-D)/D) Water Content of Specimen	<b>22.7%</b>	% Passing #200		<b>55.9%</b>

Sieve Size		Cumulative Mass Retained	Increment Mass Retained	SPECS	% Retained	% Passing
Standard	mm.	CMR <sub>N</sub>	MR <sub>N</sub>	SCDOT	CPR <sub>N</sub>	PP <sub>N</sub> (Method A)
1.0"	25.00	0.0	0.00		0.0%	100.0%
3/4"	19.00	0.0	0.00		0.0%	100.0%
1/2"	12.50	0.0	0.00		0.0%	100.0%
3/8"	9.50	0.0	0.00		0.0%	100.0%
#4	4.750	0.0	0.00		0.0%	100.0%
#10	2.000	0.4	0.40		0.4%	99.6%
#30	0.600	7.3	6.90		7.3%	92.7%
#40	0.425	13.2	5.90		13.2%	86.8%
#60	0.250	24.3	11.10		24.2%	75.8%
#100	0.150	36.1	11.80		36.0%	64.0%
#200	0.075	44.2	8.10		44.1%	55.9%
Pan	<0.075	44.2	0.0			

Notes/Deviations/References: PP<sub>N</sub> = 100 (1-(CMR<sub>N</sub> / S<sub>w</sub>M<sub>d</sub>))

Ron Forest, P.E.  
Technical Responsibility

RPF  
Signature

Principal Engineer  
Position

6/21/2022  
Date

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### SIEVE ANALYSIS OF SOIL

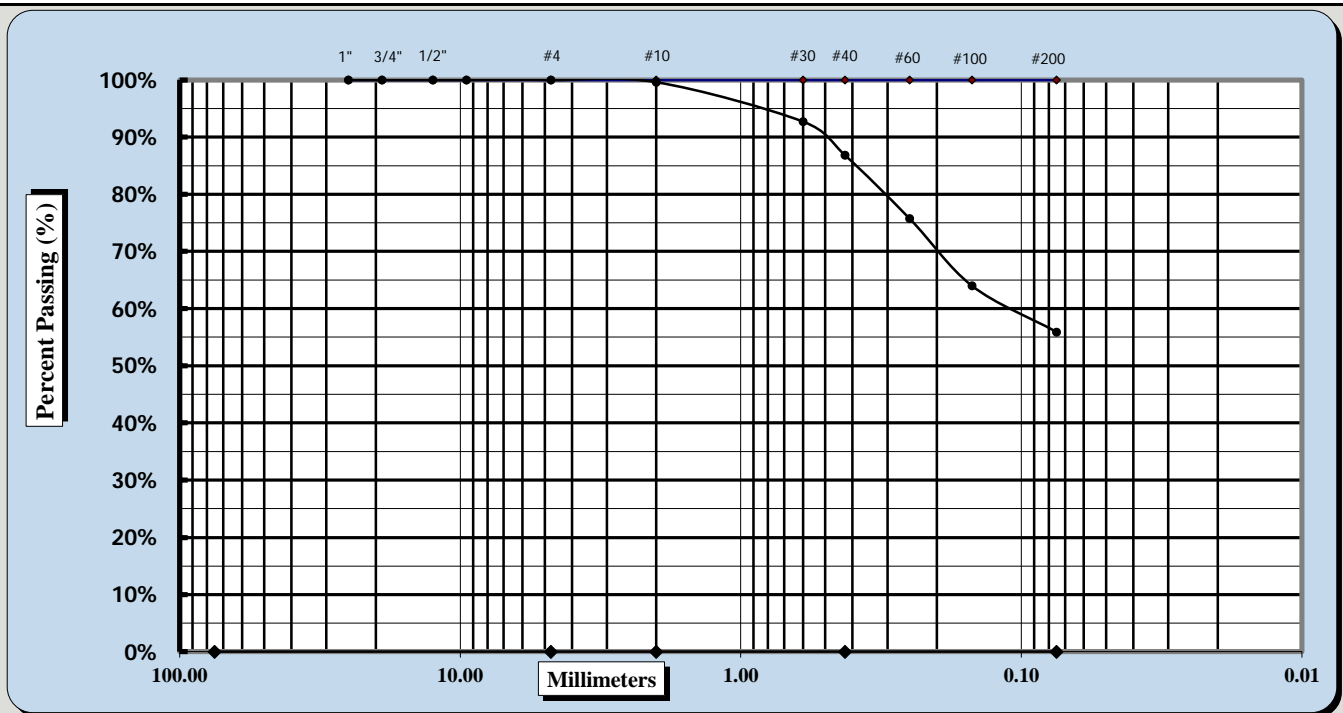


Single sieve set

ASTM D6913

S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #:	22630095	Report Date:	6/14/2022
Project Name:	Horry County HS Turf Improvements Phase 4	Lab #:	603
Client Name:	Clough, Harbour & Associates, LLP	Test Date:	6/13/2022
Client Address:	110 Traders Cross, Suite 201; Bluffton, SC 29902	Date Sampled:	6/3-7/2022
Boring #:	B-31	Sample #:	S-3
Location:	Football Fields - Conway High School	Depth:	2'-2.5'
Sample Description:	Gray with Red Sandy Lean Clay (CL)		



Cobbles	< 300 mm (12") and > 75 mm (3")	Fine Sand	< 0.425 mm and > 0.075 mm (#200)
Gravel	< 75 mm and > 4.75 mm (#4)	Silt	< 0.075 and > 0.005 mm
Coarse Sand	< 4.75 mm and > 2.00 mm (#10)	Clay	< 0.005 mm
Medium Sand	< 2.00 mm and > 0.425 mm (#40)	Colloids	< 0.001 mm

Method: A Procedure for obtaining Specimen: Moist

Maximum Particle Size	#4	Coarse Sand	0%	Fine Sand	37%
Gravel	0%	Medium Sand	7%	Silt & Clay	56%
Liquid Limit	43	Plastic Limit	19	Plastic Index	24

Notes / Deviations / References:

Ron Forest, P.E.

Technical Responsibility

**RPE**

Signature

Principal Engineer

Position

6/21/2022

Date

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## LIQUID LIMIT, PLASTIC LIMIT, & PLASTIC INDEX



ASTM D 4318  AASHTO T 89  AASHTO T 90

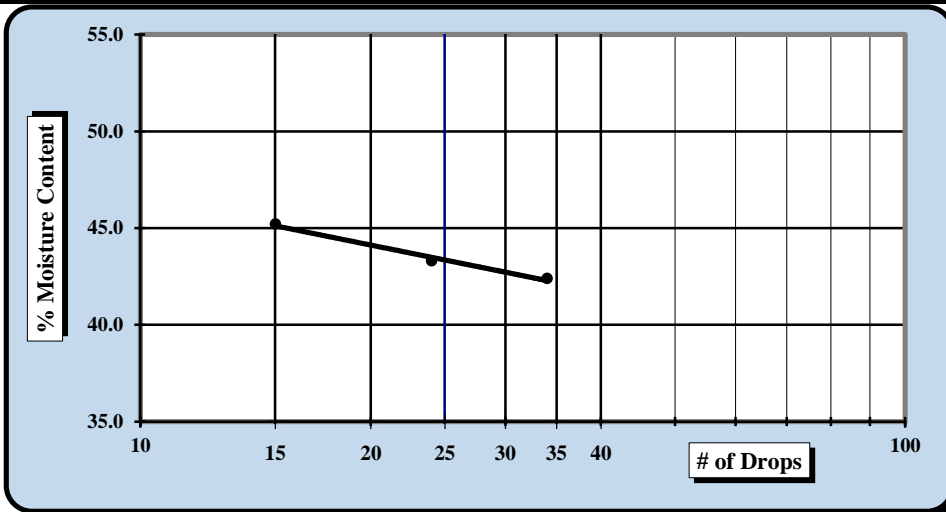
S&ME, Inc. - Myrtle Beach: 1330 Highway 501 Business, Conway, SC 29526

Project #: 22630095	Report Date: 6/14/2022
Project Name: Horry County HS Turf Improvements Phase 4	Test Date(s) 6/13/2022
Client Name: Clough, Harbour & Associates, LLP	
Client Address: 110 Traders Cross, Suite 201; Bluffton, SC 29902	
Boring #: B-31	Sample #: S-3
Sample Date: 6/3-7/2022	
Location: Football Fields-Conway H.S.	Depth: 2'-2.5'

Sample Description: Gray with Red Sandy Lean Clay (CL)

Type and Specification	S&ME ID #	Cal Date:	Type and Specification	S&ME ID #	Cal Date:
Balance (0.01 g)	00401	2/25/2022	Grooving tool	11368	9/1/2021
LL Apparatus	18801	9/1/2021			
Oven	17745	4/5/2022			

Pan #	Tare #:	Liquid Limit				Plastic Limit		
		22	18	16		58	31	
A	Tare Weight	14.58	14.62	14.61		14.58	14.59	
B	Wet Soil Weight + A	31.85	31.71	31.92		21.66	21.72	
C	Dry Soil Weight + A	26.71	26.55	26.53		20.55	20.59	
D	Water Weight (B-C)	5.14	5.16	5.39		1.11	1.13	
E	Dry Soil Weight (C-A)	12.13	11.93	11.92		5.97	6.00	
F	% Moisture (D/E)*100	42.4%	43.3%	45.2%		18.6%	18.8%	
N	# OF DROPS	34	24	15		Moisture Contents determined by ASTM D 2216		
LL	LL = F * FACTOR							
Ave.	Average					<b>18.7%</b>		



One Point Liquid Limit			
N	Factor	N	Factor
20	0.974	26	1.005
21	0.979	27	1.009
22	0.985	28	1.014
23	0.99	29	1.018
24	0.995	30	1.022
25	1.000		

NP, Non-Plastic	<input type="checkbox"/>
Liquid Limit	<b>43</b>
Plastic Limit	<b>19</b>
Plastic Index	<b>24</b>
Group Symbol	<b>CL</b>

Multipoint Method   
 One-point Method

Wet Preparation  Dry Preparation  Air Dried

Notes / Deviations / References:

ASTM D 4318: Liquid Limit, Plastic Limit, & Plastic Index of Soils

Ron Forest, P.E.  
 Technical Responsibility

RPF  
 Signature

Principal Engineer  
 Position

6/21/2022  
 Date

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