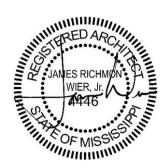


20 July 2021

Clinton High School | Athletic Field Improvements WBA Project No. 21-038



# ADDENDUM NO. 01

#### **NOTICE TO ALL DOCUMENT HOLDERS:**

The following additions, deletions, changes and clarifications to the drawings and specifications are to be included as part of the Contract Documents.

#### **GENERAL**

#### ITEM NO. 1 NOTICE FOR PRE-BID

An optional Pre-Bid meeting will be held on Tuesday, July 27, 2021, at Clinton High School at 1:30 pm. Anyone attending should check in at the front office and will be told at that point the location of the meeting being held.

#### **SPECIFICATIONS**

#### ITEM NO. 2 APPENDIX A | Subsurface Investigation

ADD: The attached Report of Geotechnical Exploration produced by Burns Cooley Dennis, Inc (dated June 28, 2021) is included in the bid documents for the Contractor's reference. Should subsurface conditions be found to vary substantially from this report, changes in the design and construction of the work will be made, with resulting credits or expenditures to the Contract Price/Sum accruing to the Owner.

Encl: Geotechnical Report by Burns Cooley Dennis dated June 28, 2021

cc: All Document Holders

File 21-038.C2

## **BURNS COOLEY DENNIS, INC.**

#### GEOTECHNICAL AND MATERIALS ENGINEERING CONSULTANTS

**Corporate Office** 

551 Sunnybrook Road Ridgeland, MS 39157 Phone: (601) 856-9911 Fax: (601) 853-2077 **Mailing Address** 

Post Office Box 12828 Jackson, MS 39236

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**Materials Laboratory** 

278 Commerce Park Drive Ridgeland, MS 39157 Phone: (601) 856-2332 Fax: (601) 856-3552

June 28, 2021

Clinton Public School District Post Office Box 300 Clinton, Mississippi 39060

Attention: Mr. Bo Barksdale

Project No. 210288

Geotechnical Exploration
Athletic Facilities Improvements – Phase I
Clinton High School
Clinton, Mississippi

#### Gentlemen:

Submitted within this report are the findings of our geotechnical exploration and our recommendations for earthwork construction for the reconstruction of the Clinton High School (CHS) tennis courts and baseball/softball fields in Clinton, Mississippi. These services were initially requested on April 14, 2021 and later authorized with a notice to proceed on April 20, 2021.

#### Scope

We understand plans are being made to rehabilitate and/or reconstruct the tennis courts and baseball/softball fields at the CHS facility in Clinton, Mississippi. It is our understanding that the tennis courts will be reconstructed with a new post-tensioned concrete slab supported by lime-treated subgrade soils and the reconstructed baseball/softball fields will consist of a new synthetic turf and subsurface drainage layer supported by lime-treated subgrade soils.

The specific purposes of this exploration were:

- 1) to determine the thickness of the existing tennis courts concrete slabs;
- 2) to explore subsurface soil conditions beneath and adjacent to the existing tennis courts and within the baseball/softball field areas;
- 3) to evaluate pertinent physical properties of the subsurface soils encountered by means of visual examination and routine laboratory tests performed on selected samples obtained from the borings;
- 4) after analysis of the soil boring findings and laboratory test data, provide guideline recommendations for earthwork construction activities for the reconstruction of the tennis courts and the resurfacing of the baseball/softball fields with synthetic turf.

#### **Field Exploration**

The field exploration included coring the existing tennis courts at three locations to evaluate typical concrete slab thickness within the tennis court areas (B-25, B-26 and B-27). The approximate corehole locations are shown on Figure 1. Four-inch diameter cores were obtained at selected locations to determine the in-place tennis court concrete slab thickness. The concrete slab thickness was determined by measuring each slab core. The concrete layer within the tennis courts ranged from about 4 in. to 8 in. with a typical thickness of about 4 in. The concrete slab thicknesses are listed in the "Comments" section of the graphical logs (Figures 27, 28 and 29).

Subgrade soil conditions within the tennis courts and baseball/softball fields were explored at twenty-seven test locations. WBA Architecture suggested boring locations and Burns Cooley Dennis selected these test locations in the field to represent the typical subgrade conditions within the CHS athletic facilities. The approximate test locations are shown graphically on Figure 1. A synopsis of the Unified Soil Classification System (USCS) is presented on Figure 2 along with symbols and terminology typically utilized on graphical logs. Logs of the soil borings are presented on Figures 3 through 29. The graphical logs illustrate the types of soil and stratification encountered with depth below the tennis court slabs and grass surfaces within the baseball/softball fields at the individual test locations. Graphical subsurface profiles of the borings illustrating typical subsurface soil conditions are presented on Figures 30 through 37.

For this exploration, all the soil borings were made with a 4-in. short-flight auger attached to a tractor mounted drill rig or a 3-in. diameter hand auger. All borings were generally drilled to a depth of about 5 ft below the ground surface, tennis court concrete slabs or the baseball/softball grass surfaces. Observations were made continuously during auger drilling to detect groundwater entering the open boreholes. Notes pertaining to groundwater observations are included at the bottom right corner of the graphic boring logs.

All soils encountered during drilling were classified in the field with respect to composition and consistency by a geotechnical engineering technician. Representative disturbed samples of the soils encountered were taken directly from auger cuttings at approximate 1 ft to 2 ft intervals of depth and sealed in plastic jars to prevent moisture loss and to provide material for visual examination and testing in the laboratory. The approximate depths at which the auger cutting samples were obtained are indicated as small I-shaped symbols under the "Samples" column of the graphic boring logs. After completion of drilling and sampling, the boreholes were filled with soil cuttings and the concrete cores were replaced with Quikrete.

## **Laboratory Testing**

An evaluation of the strengths and expansive properties of the soils encountered in the borings was considered to be of primary importance to this exploration. All of the subgrade samples were visually examined in the laboratory and routine tests were performed on selected representative samples from the borings to verify field classifications and to assist in evaluating the strengths, expansive properties and classifications of the soils encountered. The types of laboratory tests performed are described below.

The classifications and expansive properties of the subsurface soils encountered in the borings were investigated by means of visual examination and forty-one sets of Atterberg liquid and plastic limit tests. The numerical difference between the liquid limit and the plastic limit is defined as the plasticity index (PI). The results of the liquid and plastic limit tests performed for this exploration are presented in the data section of the graphical boring logs. The magnitudes of the liquid limit and the plasticity index and the proximity of the natural water content to the plastic limit are indicators of the potential for a clay soil to shrink or swell upon changes in moisture content or to consolidate under loading. The proximity of the water content to the plastic limit is an indicator of soil strength. Water content tests were performed on eighty-one selected soil samples to corroborate field and laboratory estimates of strength and consistency and to extend the usefulness of the plasticity data. The results of the water content tests are presented in the data section of the graphic logs. The results of the laboratory tests were utilized to verify the field classifications by the Unified Soil Classification System (USCS).

#### **Subgrade Conditions**

A description of the general subsurface conditions revealed by the borings made for this exploration is included in the following paragraphs. The typical soil conditions revealed by the borings made for this exploration are presented on the graphical logs in Figures 3 through 29. These logs should be referenced for specific soil conditions encountered at each individual test location. Graphical subsurface profiles of the borings for the tennis courts and baseball/softball fields at the CHS facility are presented on Figures 30 through 37. In general, subsurface soils encountered beneath the tennis courts and baseball/softball fields include natural soils and fill materials consisting of silty clays (CL), expansive clays (CH) and weathered Yazoo clay (CH). Weak, medium stiff and soft CL soils were encountered within the tennis court areas and the grass surfaced baseball/softball fields at many test locations. Highly expansive clay (CH) soils were encountered at nineteen test locations within the tennis courts and baseball/softball field areas.

Tennis Courts. The subsurface soils within the vicinity of the tennis courts at the CHS facility were explored at ten locations (See Figure 1). The subsurface soils were found to be silty clays (CL), expansive clays (CH) and weathered Yazoo clays (CH). Silty clays (CL) were encountered directly beneath the concrete slabs at Borings 25, 26 and 27 to depths ranging between 1.5 ft to 4 ft below the concrete slab. Silty clays (CL) were also encountered within borings adjacent to the tennis courts at Borings 2, 3, 5, 6 and 7 to depths ranging between 2 ft and 5 ft below the existing ground surface. Weak, wet CL soils were encountered at Borings 2, 3, 7 and 25. The remaining CL soils are considered to have moderate strength.

Expansive clays (CH) and weathered Yazoo clays (CH) were encountered within 9 of the 10 borings made for the tennis court areas. These highly expansive soils were encountered at various depths ranging from the ground surface at Borings 1 and 4 to a depth of about 4 ft at Boring 26. The typical depth to the highly expansive clay soils in the vicinity of the tennis courts was about 2 ft to 4 ft.

<u>Softball Field.</u> The subsurface soils within the softball field at the CHS facility were explored at seven locations (See Figure 1). The subsurface soils were found to be clayey sands (SC), silty clays (CL), expansive clays (CH) and weathered Yazoo clays (CH). The infield subsurface soils (Boring 12) were found to consist of clayey sands (SC) to a depth of about 1.5 ft that were underlain by expansive clays (CH) to the 5 ft boring completion depth.

The softball field outfield subsurface soils were generally found to be silty clays (CL), expansive clays (CH) and weathered Yazoo clay (CH). The subsurface soils were found to be both fill materials and natural soils. The ground surface within the softball field grass surface was found to be underlain by silty clays to depths ranging between 2 ft and the 5 ft boring completion depth. The strengths of the CL soils varied from moderate to very low. The CL soils classified as medium stiff and soft are considered weak and could become unstable during construction activities. The CL soils are considered weak and compressible due to the high inplace moisture conditions. Highly expansive clay (CH) soils were encountered within Borings 10 and 15 at a depth of about 2 ft below the ground surface.

<u>Baseball Field.</u> The subsurface soils within the baseball field at the CHS facility were explored at eight locations (See Figure 1). The subsurface soils were found to consist of both fill materials and natural soils. The subsurface soils were generally found to be silty clays (CL), expansive clays (CH) and weathered Yazoo clays (CH). The ground surface within the baseball field grass area was found to be underlain by silty clays (CL) at 4 locations and expansive clays (CH) at the remaining 4 locations.

The silty clay (CL) soils at Borings 17, 20, 22 and 23 were found to extend to depths ranging between about 2 ft below the ground surface to the 5 ft boring completion depth. These soils were found to have low to moderate strength. The CL soils classified as soft and medium stiff are considered weak and compressible due to high in-place moisture conditions.

The remaining subsurface soils encountered with the 5 ft borings within the grass baseball field were both natural and fill expansive clay (CH) soils. These highly expansive clay soils were encountered at the ground surface at Borings 18, 19, 21 and 24. The clay (CH) soils extended to depths ranging between 3 ft below the ground surface to the 5 ft boring completion depth. Weathered Yazoo clays (CH) were also encountered at a depth of about 2 ft below the ground surface at Boring 20. The expansive clay soils were generally found to have moderate strength at current in-place moisture conditions.

Free water was not encountered at any of the boring locations. It should be recognized that groundwater conditions within the tennis courts and baseball/softball field areas can fluctuate. In our opinion, groundwater conditions within these athletic facility areas will primarily be influenced by rainfall variations and subsurface/surface drainage. The subgrade soils beneath the tennis court slabs and grass surfaced baseball/softball fields that will be exposed are generally wet of optimum and will become unstable when disturbed by construction traffic. The subgrade soils can become saturated and weak to relatively shallow depths during periods of prolonged and heavy rainfall.

#### **Summary**

Subsurface soils encountered within the 5 ft boring depths made for this exploration indicate the in-place existing soils vary and are inconsistent. These subsurface soils were found to be both natural soils and fill materials. The subsurface soils generally consist of silty clays (CL), expansive clays (CH) and weathered Yazoo clays (CH). These CL and CH soils were found to have strengths that varied from moderate/high (adequate) to low (inadequate). Expansive clays with high to very high swell potential were encountered at various depths that will influence the performance of the reconstructed tennis courts and baseball/softball fields.

Due to the presence of near surface weak and expansive subsurface soils, overexcavation and backfilling will be required for the reconstruction of the tennis courts and baseball/softball fields to established a unifrom firm subgrade foundation that minimizes future differential movement for the new post-tensioned concrete slab tennis courts and the synthetic turf baseball/softball fields.

#### Recommendations

From a geotechnical standpoint, the primary factors relevant to the reconstruction of the tennis courts and baseball/softball fields are the strength and expansive properties of the subgrade soils. As previously mentioned, the in-place subsurface soils are inconsistent and will require overexcavation and backfilling to produce a stable, uniform subgrade foundation for the reconstructed tennis courts and baseball/softball fields. Existing exposed soils should be evaluated during reconstruction to determine the lateral and vertical extents of any unstable materials beneath the tennis courts and grass surfaced fields. Excavation and backfilling, bridging chemical treatment or a combination of these approaches may be required to provide a stable working platform. Details of our recommendations for subgrade preparation and earthwork construction are included in the following subsections of this report.

In order to provide a stable, uniform subgrade foundation that minimizes future differential movement, it is our opinion that nonexpansive CL soil buffers be established beneath the new post-tensioned concrete slab tennis courts and the synthetic turf baseball/softball fields. BCD recommends that a 5 ft buffer of CL soils be constructed for the new tennis courts. This CL buffer should extend at least 5 ft beyond the edge of the tennis courts and adjacent sidewalks. BCD also recommends that a 3 ft buffer of CL soils be constructed for the new synthetic turf baseball/softball fields. This CL buffer should also extend at least 3 ft beyond the subsurface perimeter drainage system.

The first step in reconstruction activities should be to remove existing tennis court slabs, fences, sidewalks, grass fields, granular infields and all underground utilities. Then each athletic area should be excavated to adequate depths to establish the recommended CL soil buffer. After excavation, in-place existing soils should be evaluated to determine current stability and to determine lateral and vertical extents of any unstable materials beneath the tennis courts and baseball/softball fields.

Due to the high moisture contents encountered within some areas, some of the subsurface soils are currently considered to be weak and unstable. Depending on the time of year when earthwork construction is initiated, the weak soils could dry and become stronger. This could particularly be the case during the summer and early fall. If the in-place soils at the time earthwork construction begins are wet and unstable or become wet and unstable during construction, additional excavation will be required to expose firm, stable soils that are capable of supporting compaction of fill materials with stability. Stability is defined as the absence of significant pumping or yielding of soils during compaction and proofrolling. If stability is not evident in some areas, either additional excavation, construction of a bridging layer or chemical treatment of the in-situ soils, or a combination of these approaches, might be required to achieve stable conditions. The lateral and vertical extent of excavation required to remove weak soils must be determined in the field during earthwork construction. Excavation required to achieve planned elevations should be conducted, and undercutting should be performed as required.

Following the excavation to establish CL buffers and/or remove weak, unstable soils, borrow soils should be placed within the excavation areas. The borrow soils should consist of select nonorganic, debris-free, silty clays (CL) having a liquid limit less than 45 and a plasticity index (PI) within the range of 10 to 24 and at least 70% passing the No. 200 sieve. Borrow soils should be compacted to 95 percent standard Proctor density with stability present. Following the borrow placement in the reconstruction area, the CL subgrade soils should be chemically stabilized to a depth of at least 12 in. with 5 percent hydrated lime by dry weight of soils. The lime treatment of the subgrade soils should be performed in general accordance with Section 307 of the 2017 Edition of the Mississippi Department of Transportation Standard Specifications. The lime-treated subgrade soils should be compacted to 95 percent of standard Proctor density with stability present.

## **Report Limitations**

The analyses and recommendations discussed in this report are based on conditions that existed at the time of our field exploration (May 2021) and further on the assumption that the exploratory test locations are representative of subgrade conditions within the tennis courts and baseball/softball fields. It should be noted that actual subgrade conditions between and beyond the test locations might differ from those encountered at the test locations. The nature and extent of variations in the vicinity of or between the borings may not become evident until earth-related construction is performed. If pavement or subgrade conditions are encountered during construction that vary from those discussed in this report, Burns Cooley Dennis, Inc. should be notified immediately in order that we may evaluate the effects, if any, on design and construction.

Burns Cooley Dennis, Inc. should be retained for a general review of final design drawings and specifications. It is advised that we be retained to observe earthwork and pavement construction for the project in order to help confirm that our recommendations are valid or to modify them accordingly. Burns Cooley Dennis, Inc. cannot assume responsibility or liability for the adequacy of recommendations if we do not observe construction.

This report has been prepared for the exclusive use of Clinton Public School District for specific application to the geotechnical-related aspects of rehabilitation and reconstruction of Clinton High School tennis courts and baseball/softball fields in Clinton, Mississippi. The only warranty made by us in connection with the services provided is that we have used that degree of care and skill ordinarily exercised under similar conditions by reputable members of our profession practicing in the same or similar locality. No other warranty, expressed or implied, is made or intended.

We appreciate the opportunity to be of service. If you should have any questions concerning this report, please do not hesitate to call us.

Very truly yours,

BURNS COOLEY DENNIS, INC.

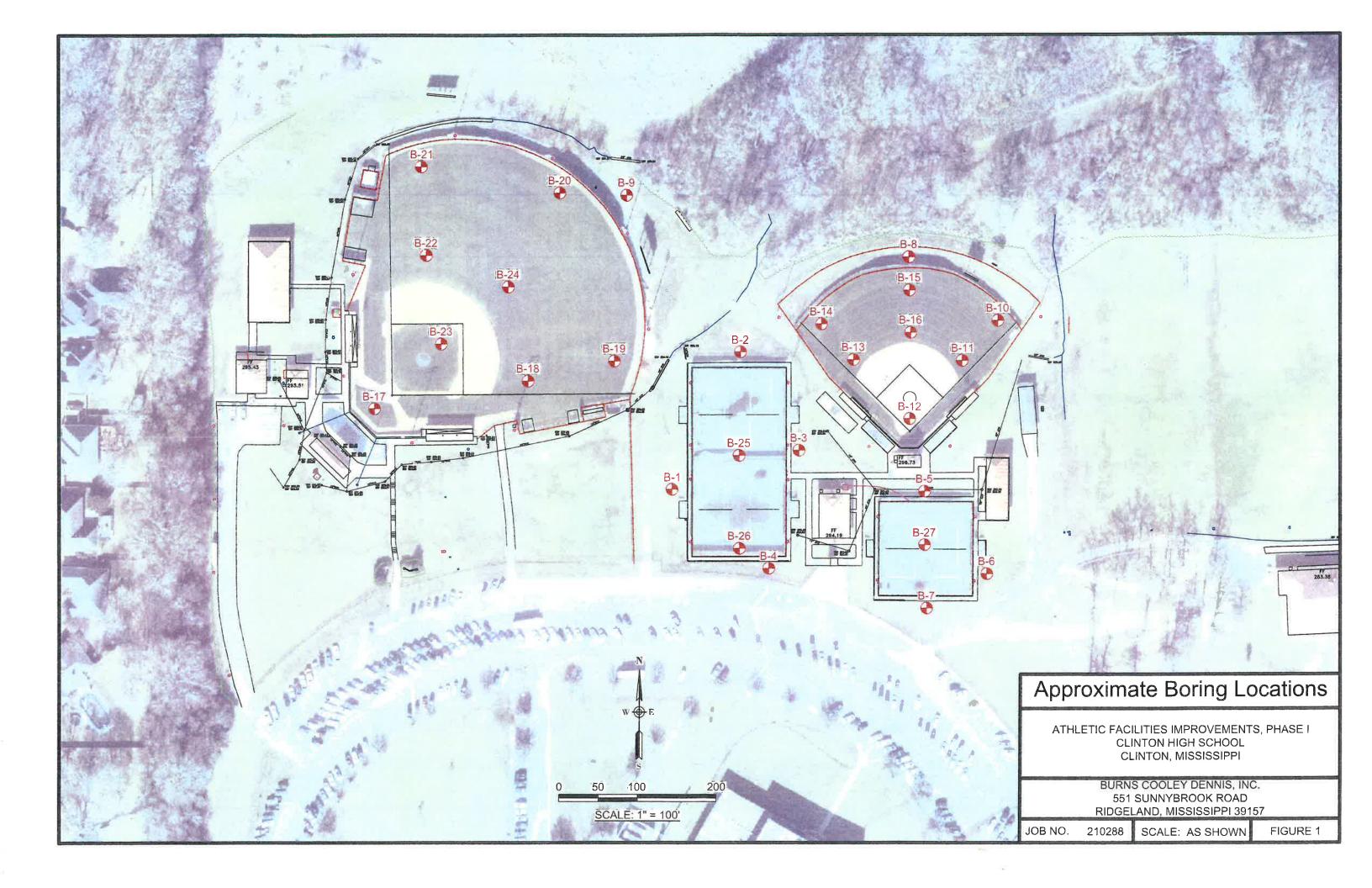
Chris Camp, P.E.

R. C. Ahlrich, Ph. D., P.E.

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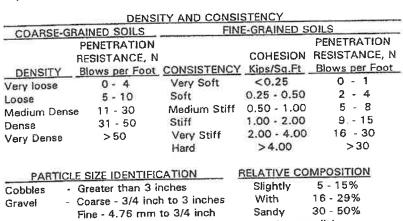
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# **FIGURES**



		UNIFIED SOIL CLA	SSIFIC	AI	ON SYSTEM								
	MAJOR DIVIS	SIONS	SYMBO		DESCRIPTION								
	GRAVELS	Clean Gravels (Little or no fines)	0.0.	GW	WELL GRADED GRAVEL, GRAVEL-SAND MIXTURE								
2	More than half of coarse fraction larger	no tines/	. 0	GP	DRLY GRADED GRAVEL, GRAVEL-SAND MIXTURE								
f of than size	than No. 4 sieve size	Gravels with fines (Appreciable amount of	plad	GM	SILTY GRAVEL, GRAVEL-SAND-SILT MIXTURE								
in hal arger sieve		fines)	6/	GC	CLAYEY GRAVEL, GRAVEL-SAND-CLAY MIXTURE								
More than half of Material larger than No. 200 sieve size	SANDS More than half of	Clean Sands (Little or no fines)		\$W	WELL GRADED SAND, GRAVELLY SAND								
More than half of material larger than No. 200 sieve size	coarse fraction			SP	POORLY GRADED SAND, GRAVELLY SAND								
3	smaller than No. 4 sieve size	Sands with fines (Appreciable amount of		SM	SILTY SAND, SAND-SILT MIXTURE								
		fines)	1//	SC	CLAYEY SAND, SAND-CLAY MIXTURE								
		Liquid limit	1	ML	SILT WITH LITTLE OR NO PLASTICITY								
FINE-GRAINED SOILS More than half of material smaller than No. 200 sieve	SILTS AND	less		ML	CLAYEY SILT, SILT WITH SLIGHT TO MEDIUM PLASTICITY  SILTY CLAY, LOW TO MEDIUM PLASTICITY								
	CLAYS	than 50	1	CL	SANDY CLAY, LOW TO MEDIUM PLASTICITY (30% TO 50% SAND								
		Liquid limit		MH	SILT, FINE SANDY OR SILTY SOIL WITH HIGH PLASTICITY								
NE-GRAI More the material than No.	SILTS AND	greater	777	СН	CLAY, HIGH PLASTICITY								
ĬĬ.	CLAYS	than 50	Ø	ОН	ORGANIC CLAY OF MEDIUM TO HIGH PLASTICITY								
	HIGHLY ORGA	ANIC SOILS		PT	PEAT, HUMUS, SWAMP SOIL								
	TERMS OLIABACTER	IZING SOIL STRUCTURE			PLASTICITY CHART								
Slickensic	led - Clavs with po	dished and striated planes	created		60								
	as a result of	volume changes related to	shrinkir		50 CH								
	swelling and/	or changes in overburden p blocky or jointed structure	)  635U1 G.	•	8 40								
Fissured	generally crea	ated by seasonal shrinking			A-LINE								
	and swelling.				30 CL MH & OH								
Laminate	d - Composed of	thin alternating layers of			20								
	varying color	and texture. opreciable quantities of											
Calcareou	calcium carbo				10 CL ML ML								
Parting	Paper thin (le	ss than 1/8 inch).			0								
Seam	- 1/8 inch to 3	inch thickness.			0 10 20 30 40 50 60 70 80 90 100 LIQUID LIMIT								
Layer	- Greater than	3 inches in thickness.			FOR CLASSIFICATION OF FINE GRAINED SOILS								
		Y AND CONSISTENCY			SAMPLE TYPES								
COARS	SE-GRAINED SOILS	FINE-GRAINED	SOILS PENET	D A T	(Shown in Sample Column)								
	PENETRATION	COHESION			ION								
551160	RESISTANCE, N	CONSISTENCY Kips/Sq.Ft		per	Foot Shelby Tube								
Very loos		Very Soft <0.25		- 1									
Loose	5 - 10	Soft 0.25 - 0.50	_	- 4	111								
Medium		Medium Stiff 0.50 - 1.00		- 8	A								
Dense	31 - 50	Stiff 1.00 - 2.00 Very Stiff 2.00 - 4.00		,,- 1!	No Recovery								
			16										

(or gravelly)



- Coarse - 2 mm to 4.76mm

Medium - 0.42 mm to 2 mm Fine - 0.074 mm to 0.42 mm No Recovery Auger Dennison Barrell

CLASSIFICATION, SYMBOLS AND TERMS USED ON GRAPHICAL **BORING LOGS** 

Sift & Clay - Less than 0.074 mm

Sand

# ATHLETIC FACILITIES IMPROVEMENTS, PHASE I **CLINTON HIGH SCHOOL**

CLINTON, MISSISSIPPI **Tennis Courts** LOCATION: See Figure 1 4" Short-flight auger TYPE: DRY DENSITY, PCF VOLUME CHANGE % **WATER CONTENT** POCKET PENETROMETER % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) DEPTH, ft SAMPLES **AASHTO** SYMBOL **DESCRIPTION OF MATERIAL** LL PL PI SURFACE EL: ±ft Stiff tan and light gray clay (CH) 33 (WEATHERED YAZOO) 77 18 59 39 53 Boring completed at 5' GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling.

DATE: 05/06/21

# LOG OF BORING NO. 2 ATHLETIC FACILITIES IMPROVEMENTS, PHASE I **CLINTON HIGH SCHOOL** CLINTON, MISSISSIPPI

**Tennis Courts** LOCATION: See Figure 1 4" Short-flight auger TYPE: VOLUME CHANGE % DRY DENSITY, PCF POCKET PENETROMETER WATER CONTENT % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) SAMPLES AASHTO DEPTH, ft SYMBOL **DESCRIPTION OF MATERIAL** LL PL ы SURFACE EL: ±ft Stiff tan silty clay (CL) 22 - medium stiff 2' to 4' 18 25 36 18 - stiff below 4' 24 Boring completed at 5' 10 -GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling. DATE: 05/06/21

# ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL

CLINTON, MISSISSIPPI **Tennis Courts** 4" Short-flight auger TYPE: LOCATION: See Figure 1 DRY DENSITY, PCF VOLUME CHANGE % POCKET PENETROMETER WATER CONTENT % PASSING NO. 200 SIEVE BLOWS PER FT SAMPLES CBR (EST.) DEPTH, ft **AASHTO** SYMBOL **DESCRIPTION OF MATERIAL** PL Pl LL SURFACE EL: ±ft Stiff tan silty clay (CL) 23 34 22 12 - medium stiff below 2' 27 Very stiff tan and light gray clay (CH) (WEATHERED YAZOO) 26 90 56 116 Boring was completed at 5' 10 GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling. DATE: 05/06/21

#### ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON, MISSISSIPPI

Tennis Courts LOCATION: See Figure 1 4" Short-flight auger TYPE: DRY DENSITY, PCF VOLUME CHANGE % **MATER CONTENT** POCKET PENETROMETER % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) SAMPLES SYMBOL **AASHTO** DEPTH, 1 **DESCRIPTION OF MATERIAL** PL LL ы SURFACE EL: Stiff tan and light gray clay (CH) 37 (WEATHERED YAZOO) 58 120 25 95 51 Boring completed at 5' 10 GROUNDWATER DATA: No free water encountered BORING DEPTH: 5 ft COMMENTS: during auger drilling. DATE: 05/06/21

# ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL

CLINTON, MISSISSIPPI **Tennis Courts** 4" Short-flight auger LOCATION: See Figure 1 TYPE: DRY DENSITY, PCF VOLUME CHANGE % WATER CONTENT POCKET PENETROMETER % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) DEPTH, ft **AASHTO** SYMBOL **DESCRIPTION OF MATERIAL** PL ы LL SURFACE EL: ±ft Stiff tan silty clay (CL) 23 Stiff tan and light gray clay (CH) 36 (WEATHERED YAZOO) 51 108 24 84 Boring completed at 5' 10 GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling. DATE: 05/06/21

# ATHLETIC FACILITIES IMPROVEMENTS, PHASE I **CLINTON HIGH SCHOOL**

CLINTON, MISSISSIPPI

**Tennis Courts** 4" Short-flight auger LOCATION: See Figure 1 TYPE: DRY DENSITY, PCF ATTERBERG LIMITS VOLUME CHANGE % WATER CONTENT POCKET PENETROMETER % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) SAMPLES SYMBOL **AASHTO DESCRIPTION OF MATERIAL** PL Ы LL SURFACE EL: Stiff tan silty clay (CL) 21 Very stiff tan clay (CH) 49 29 65 16 Very stiff tan and light gray clay (CH) (WEATHERED YAZOO) 78 104 26 39 Boring completed at 5' GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling. DATE: 05/06/21

#### ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON MISSISSIPPI

CLINTON, MISSISSIPPI Tennis Courts 4" Short-flight auger LOCATION: See Figure 1 TYPE: DRY DENSITY, PCF ATTERBERG LIMITS VOLUME CHANGE **WATER CONTENT** POCKET PENETROMETER % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) DEPTH, ft SAMPLES **AASHTO** SYMBOL DESCRIPTION OF MATERIAL PL Ы LL SURFACE EL: Medium stiff tan silty clay (CL) 23 Very stiff tan clay (CH) 57 34 77 20 Very stiff tan and light gray clay (CH) (WEATHERED YAZOO) 33 Boring completed at 5' GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling. DATE: 05/06/21

#### ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON MISSISSIPPI

CLINTON, MISSISSIPPI Softball Field LOCATION: See Figure 1 4" Short-flight auger TYPE: VOLUME CHANGE % DRY DENSITY, PCF POCKET PENETROMETER **MATER CONTENT** % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) SAMPLES **AASHTO** SYMBOL DEPTH, ( DESCRIPTION OF MATERIAL PL LL SURFACE EL: Medium stiff tan silty clay (CL) 26 24 39 18 21 - soft below 4' 29 Boring completed at 5' GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling. DATE: 05/06/21

# LOG OF BORING NO. 9 ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON, MISSISSIPPI

Baseball Field LOCATION: See Figure 1 4" Short-flight auger

1 7	TYPE:	4'	' Short-flight au	ger					LOCA.	TION:	See F	igure 1			
DЕРТН, ft	SYMBOL	SAMPLES	DESCRI SURFACE EL:	PTION OF MATERIAL ±ft	AASHTO	BLOWS PER FT	POCKET PENETROMETER	WATER CONTENT	LL	T ATTERBERG	PI	VOLUME CHANGE	DRY DENSITY, PCF	CBR (EST.)	% PASSING NO. 200 SIEVE
	///	1	Stiff tan clay (C												
- - - 1 - -			Still tall day (C	,				26	68	21	47				
- - - - - 3								26	50	17	33				
- - 4 · - - - - 5 ·			Boring comple					22							
- - - - - - 7			Borning comple	ied at 3											
- 8 - 9 - 10															
	NG DEI		: 5 ft :: 05/06/21	COMMENTS:				J DUND\ ng aug			A: No	free wat	er enc	ounte	red
210288	FIGURE 44											F 11			
211	DMC COL	I EV	DENNIS, INC.										171	JUL	·- ' ' '

#### ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON, MISSISSIPPI

Softball Field 4" Short-flight auger LOCATION: See Figure 1 TYPE: DRY DENSITY, PCF ATTERBERG LIMITS VOLUME CHANGE % POCKET PENETROMETER MATER CONTENT % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) SAMPLES **AASHTO** SYMBOL **DESCRIPTION OF MATERIAL** PL LL ы SURFACE EL: Soft tan silty clay (CL) 27 (FILL) Stiff tan and light gray clay (CH) 48 110 24 86 (WEATHERED YAZOO) (FILL) Soft tan silty clay (CL) 21 25 38 17 Boring completed at 5' GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling. DATE: 05/06/21

#### ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON MISSISSIPPI

CLINTON, MISSISSIPPI Softball Field LOCATION: See Figure 1 3" Hand auger TYPE: DRY DENSITY, PCF **VOLUME CHANGE** POCKET PENETROMETER WATER CONTENT % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) SAMPLES **AASHTO** SYMBOL **DESCRIPTION OF MATERIAL** PL LL ы SURFACE EL: ±ft Medium stiff tan silty clay (CL) 24 - tan and light gray below 2.5' 25 40 18 22 - soft below 4.5' 27 Boring completed at 5' 10 GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling. DATE: 05/06/21

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FIGURE 13

## LOG OF BORING NO. 12 ATHLETIC FACILITIES IMPROVEMENTS, PHASE I **CLINTON HIGH SCHOOL** CLINTON, MISSISSIPPI

Softball Field LOCATION: See Figure 1 3" Hand auger TYPE: DRY DENSITY, PCF VOLUME CHANGE % POCKET PENETROMETER **MATER CONTENT** % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) SAMPLES **AASHTO** SYMBOL **DESCRIPTION OF MATERIAL** PL LL Ы SURFACE EL: ±ft Medium dense red clayey sand (SC) **FILL** 25.1 11 Very stiff tan and light gray clay (CH) 30 60 19 41 52 31 70 18 Boring completed at 5' 10 GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling. DATE: 05/06/21

# LOG OF BORING NO. 13 ATHLETIC FACILITIES IMPROVEMENTS, PHASE I **CLINTON HIGH SCHOOL** CLINTON, MISSISSIPPI

Т	YPE:	3"	Hand auger						LOCA	TION: \$	Softba See F	all Field igure 1			
DEPTH, ft	SYMBOL	SAMPLES	DESCRI SURFACE EL:	DESCRIPTION OF MATERIAL  JRFACE EL: ±ft			POCKET PENETROMETER	WATER CONTENT	LL	ATTERBERG LIMITS	PI	VOLUME CHANGE %	DRY DENSITY, PCF	CBR (EST.)	% PASSING NO. 200 SIEVE
- 1 -				n and light gray silty				27							
- 3 -			·					21	42	17	25				
- 4 -			- stiff below 4					25							
- 6 - - 7 - - 8 -															
- 9 - - 10 -															
BORIN BORIN	BORING DEPTH: 5 ft  DATE: 05/06/21			COMMENTS:				OUND\ ng aug			A: No	free wat	er enc	ounte	red

# LOG OF BORING NO. 14 ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON, MISSISSIPPI

TYPE:	3" Hand auger						LOCA	TION:	Softba See F	all Field igure 1			
	DESCR	IPTION OF MATERIAL	AASHTO	BLOWS PER FT	POCKET PENETROMETER	WATER CONTENT	LL	ATTERBERG LIMITS	Pl	VOLUME CHANGE %	DRY DENSITY, PCF	CBR (EST.)	% PASSING NO. 200 SIEVE
2 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 -		iht gray silty clay				23							
4 -	- very stiff beli					24	40	23	17				
- 6					GRO	DUNDV	VATE	R DATA	A: No	free wat	er enc	ounte	red
BORING DEPT	TH: 5 ft TE: 05/06/21	COMMENTS:				DUND\ ng aug			A: NO	iree wat	er enc	ounte	ieu

#### ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON MISSISSIPPI

CLINTON, MISSISSIPPI Softball Field LOCATION: See Figure 1 3" Hand auger TYPE: DRY DENSITY, PCF VOLUME CHANGE % POCKET PENETROMETER **NATER CONTENT** % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) DEPTH, ft SAMPLES **AASHTO** SYMBOL **DESCRIPTION OF MATERIAL** PL LL Ы SURFACE EL: ±ft Medium stiff tan and light gray silty clay (CL) 25 Stiff tan and light gray clay (CH) 24 53 19 34 - very stiff below 4' 39 56 17 37 Boring completed at 5' 10 GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling. DATE: 05/06/21

# LOG OF BORING NO. 16 ATHLETIC FACILITIES IMPROVEMENTS, PHASE I **CLINTON HIGH SCHOOL** CLINTON, MISSISSIPPI

	TYPE:	3"	' Hand auger		_				LOCA	TION:	Softba See F	all Field igure 1			
рертн, <del>ft</del>	SYMBOL	SAMPLES	DESCRI SURFACE EL:	PTION OF MATERIAL	AASHTO	BLOWS PER FT	POCKET PENETROMETER	WATER CONTENT	LL	ATTERBERG LIMITS	PI	VOLUME CHANGE %	DRY DENSITY, PCF	CBR (EST.)	% PASSING NO. 200 SIEVE
- 1 - 2 - 3 - 4			Stiff tan and lig (CL)	ht gray silty clay				24	35	22	13				
_ 5 - 6 - 7 - 8 - 9 - 10			Boring comple	ted at 5'				24							
210288 BOF	RING DE		: 5 ft :: 05/06/21	COMMENTS:				OUND\ ng aug			A: No	free wat	er enc	ounte	rea
2											_				PF 18

# LOG OF BORING NO. 17 ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON, MISSISSIPPI

Т	YPE:	4'	' Short-flight au	ger					LOCA	TION:	Basel See F	oall Fiel igure 1			
DEPTH, ft	SYMBOL	SAMPLES	DESCR	PTION OF MATERIAL ±ft	AASHTO	BLOWS PER FT	POCKET PENETROMETER	WATER CONTENT	LL	ATTERBERG LIMITS	PI	VOLUME CHANGE	DRY DENSITY, PCF	CBR (EST.)	% PASSING NO. 200 SIEVE
- 1				nd light gray silty				23	33	17	16				
- 5			Very stiff tan a (CH) Boring comple					26	60	16	44				
BORIN	2.22 22/22/24			COMMENTS:				OUND\ ng aug			A: No	free wat	er enc	ounte	red
ê l															

#### ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON MISSISSIPPI

CLINTON, MISSISSIPPI Baseball Field LOCATION: See Figure 1 4" Short-flight auger TYPE: ATTERBERG LIMITS VOLUME CHANGE % DRY DENSITY, PCF POCKET PENETROMETER WATER CONTENT % PASSING NO, 200 SIEVE **BLOWS PER FT** CBR (EST.) SAMPLES DEPTH, ft **AASHTO** SYMBOL **DESCRIPTION OF MATERIAL** PL ы LL SURFACE EL: ±ft Very stiff tan and light gray clay (CH) (FILL) 28 35 80 20 60 Soft light gray silty clay (CL) Stiff tan clay (CH) 37 55 18 33 Boring completed at 5' 10 GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling. DATE: 05/07/21

# LOG OF BORING NO. 19 ATHLETIC FACILITIES IMPROVEMENTS, PHASE I **CLINTON HIGH SCHOOL**

CLINTON, MISSISSIPPI Baseball Field LOCATION: See Figure 1 4" Short-flight auger TYPE: DRY DENSITY, PCF VOLUME CHANGE % POCKET PENETROMETER **MATER CONTENT** % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) DEPTH, ft SAMPLES **AASHTO** SYMBOL **DESCRIPTION OF MATERIAL** LL PLы ±ft SURFACE EL: Very stiff tan clay (CH)
- possible fill to 3' 41 29 67 18 49 26 Boring completed at 5' 10 GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling. DATE: 05/07/21

#### ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON MISSISSIPPI

CLINTON, MISSISSIPPI Baseball Field LOCATION: See Figure 1 4" Short-flight auger TYPE: VOLUME CHANGE % DRY DENSITY, PCF ATTERBERG LIMITS POCKET PENETROMETER WATER CONTENT % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) SAMPLES AASHTO DEPTH, ft SYMBOL DESCRIPTION OF MATERIAL LL PL ы **SURFACE EL:** ±ft Medium stiff tan silty clay (CL) 26 Very stiff tan and light gray clay (CH) 19 55 35 74 (WEATHERED YAZOO) 32 Boring completed at 5' GROUNDWATER DATA: No free water encountered BORING DEPTH: 5 ft COMMENTS: during auger drilling. DATE: 05/07/21

#### ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON MISSISSIPPI

CLINTON, MISSISSIPPI Baseball Field 4" Short-flight auger LOCATION: See Figure 1 TYPE: DRY DENSITY, PCF VOLUME CHANGE % POCKET PENETROMETER WATER CONTENT % PASSING NO, 200 SIEVE **BLOWS PER FT** CBR (EST.) SAMPLES DEPTH, ft SYMBOL **AASHTO DESCRIPTION OF MATERIAL** ΡL LL PΙ SURFACE EL: Very stiff tan clay (CH) 22 69 22 47 Very stiff light gray and tan clay (WEATHERED YAZOO) 53 100 127 27 56 Boring completed at 5' GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling. DATE: 05/07/21

# ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON MISSISSIPPI

CLINTON, MISSISSIPPI Baseball Field 4" Short-flight auger LOCATION: See Figure 1 TYPE: VOLUME CHANGE % DRY DENSITY, PCF POCKET PENETROMETER WATER CONTENT % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) SAMPLES **AASHTO** SYMBOL **DESCRIPTION OF MATERIAL** PL LL Ы SURFACE EL: ±ft Stiff tan and light gray silty clay (CL) 19 39 20 24 21 Very stiff tan clay (CH) 37 16 23 53 Boring completed at 5' GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling. DATE: 05/07/21

#### ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON MISSISSIPPI

CLINTON, MISSISSIPPI Baseball Field LOCATION: See Figure 1 4" Short-flight auger TYPE: DRY DENSITY, PCF VOLUME CHANGE % POCKET PENETROMETER **MATER CONTENT** % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) SAMPLES DEPTH, ft **AASHTO** SYMBOL DESCRIPTION OF MATERIAL PL Ы LL SURFACE EL: ±ft Stiff tan and light gray silty clay 24 - medium stiff 2' to 4' 27 41 17 24 - soft, gray and damp below 4' 29 Boring completed at 5' -10 GROUNDWATER DATA: No free water encountered COMMENTS: BORING DEPTH: 5 ft during auger drilling. DATE: 05/07/21

#### ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON, MISSISSIPPI

Baseball Field 4" Short-flight auger LOCATION: See Figure 1 TYPE: DRY DENSITY, PCF ATTERBERG LIMITS VOLUME CHANGE % POCKET PENETROMETER WATER CONTENT % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) DEPTH, ft SAMPLES SYMBOL **AASHTO DESCRIPTION OF MATERIAL** LL PL PI SURFACE EL: Very stiff tan and light gray clay (CH) 35 (FILL) - stiff below 2' 38 61 18 43 Soft tan silty clay (CL) - damp below 3' 29 36 23 13 Boring completed at 5' 10 GROUNDWATER DATA: No free water encountered BORING DEPTH: 5 ft COMMENTS: during auger drilling. DATE: 05/07/21

ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON MISSISSIPPI

CLINTON, MISSISSIPPI Tennis Courts 3" Hand auger TYPE: LOCATION: See Figure 1 DRY DENSITY, PCF ATTERBERG LIMITS VOLUME CHANGE % POCKET PENETROMETER **MATER CONTENT** % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) DEPTH, ft SYMBOL AASHTO **DESCRIPTION OF MATERIAL** LL PL ы SURFACE EL: ±ft Medium stiff tan and gray silty clay (CL) 37 13 24 24 Very stiff tan and light gray clay (CH) (WEATHERED YAZOO) 40 112 27 85 51 Boring completed at 5' 10 GROUNDWATER DATA: No free water encountered BORING DEPTH: 5 ft COMMENTS: 8" Concrete slab during auger drilling. DATE: 05/07/21

# LOG OF BORING NO. 26 ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL

				ON HIGH ON, MIS			•							
TYPE	3	" Hand auger						LOCA	TION:	Tenni See F	s Court	s		
DEPTH, ft	SAMPLES	}	RIPTION OF MATERIAL	AASHTO	BLOWS PER FT	POCKET PENETROMETER	WATER CONTENT	LL	ATTERBERG LIMITS	PI	VOLUME CHANGE	DRY DENSITY, PCF	CBR (EST.)	% PASSING NO. 200 SIEVE
100		Stiff gray and	±ft tan silty clay (CL)				>				>			
- 1 -		oun gial, and	(° )				25	38	21	17				
- 2 -  - 3 -		- soft below 2	2'				27							
4 -		Many atiff ton a	and light aroundou											
		(CH) (WEATH	and light gray clay				52	140	29	111			O O	
- 5		Boring comple												
BORING DE	PTH:	: 5 ft	COMMENTS: 4.3" Concre	ete slab				VATER er drillir		: No	free wate	er enco	unter	ed
	ATE:	: 05/07/21											CLIB	

ATHLETIC FACILITIES IMPROVEMENTS, PHASE I CLINTON HIGH SCHOOL CLINTON MISSISSIPPI

CLINTON, MISSISSIPPI **Tennis Courts** LOCATION: See Figure 1 3" Hand auger TYPE: DRY DENSITY, PCF ATTERBERG LIMITS VOLUME CHANGE % POCKET PENETROMETER WATER CONTENT % PASSING NO. 200 SIEVE **BLOWS PER FT** CBR (EST.) DEPTH, ft SAMPLES **AASHTO** SYMBOL **DESCRIPTION OF MATERIAL** PL LL ы SURFACE EL: ±ft Stiff tan and light gray silty clay (CL) 24 23 13 28 36 Very stiff tan and light gray clay (CH) (WEATHERED YAZOO) 139 32 107 57 Boring completed at 5' 10 -GROUNDWATER DATA: No free water encountered COMMENTS: 4" Concrete slab BORING DEPTH: 5 ft during auger drilling. DATE: 05/07/21

