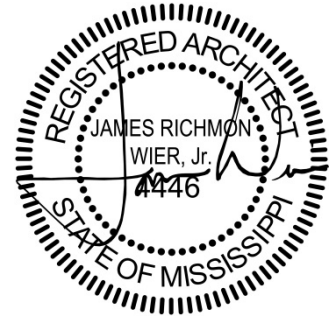




23 September 2019

TRACEWAY PARK SOFTBALL CONCESSION STAND
200 Soccer Row
Clinton, MS 39056



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.

SPECIFICATIONS

- ITEM NO. 1** **01.9000 - DIVISION 1 SUPPLEMENT - GEOTECHNICAL REPORT - "EXHIBIT A"**
ADD Section 01.9000 - Division 1 Supplement containing the Geotechnical Report – "Exhibit A" from Burns Cooley Dennis, Inc. dated July 8, 2019.
- ITEM NO. 2** **02.4000 DEMOLITION AND STRUCTURE MOVING**
REMOVE Section 02.4000 Demolition and Structure Moving (Civil). The demolition of the existing structure and site elements is no longer part of this project. Owner shall demolish existing structure and all required concrete paving and associated items referred to in sheet C-002.
- ITEM NO. 3** **08.5400 COMPOSITE WINDOWS**
Part 2, Paragraph 2.1 Manufacturer
REVISE the specification to read "A. *Quaker Windows and Doors. Website: www.quakerwindows.com OR Jeld-Wen Windows and Doors Corporation. Website: www.jeld-wen.com/en-us OR approved equal.*"
Clarification: The list of manufacturers is modified and the note of "or approved equal" is added.
- ITEM NO. 4** **08.5400 COMPOSITE WINDOWS**
Part 2, Paragraph 2.2 Aluminum-Clad Wood Windows
REVISE the specification to read
"2.2 *VINYL WINDOWS*
A – *Basis of design is Quaker- Single Hung Manchester Series with painted vinyl exterior to be dark bronze or black.*"
Clarification: The aluminum clad window specification is modified to be vinyl windows.

DRAWINGS

- ITEM NO. 5** **SHEET C-002 "REMOVAL AND DEMOLITION PLAN"**

REMOVE this sheet from the project.

Clarification: Owner will execute all work contained within sheet C-002 at no cost to the contractor.

ITEM NO. 6

SHEET C-007 "CONSTRUCTION DETAILS"

REVISE note on detail 7/C-007 to read *"1-1/2" diameter galvanized steel pipe rail, field painted with three coats of exterior metal paint."*

Revise: The requirement for a powder coated rail is removed and replaced with a galvanized rail that is painted.

Encl: [Specifications \(8.5x11\)](#):
019000 GEOTECHNICAL REPORT

cc: All Document Holders
File 2919 C2



EXHIBIT A

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

www.bcdgeo.com

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

July 8, 2019

WGK, Inc. Engineers & Surveyors
204 West Leake Street
Clinton, Mississippi 39060

Report No. 190310

Attention: Will Sanford, E.I.

**Geotechnical Exploration
Proposed Concession Stand
Traceway Park
Clinton, Mississippi**

Gentlemen:

Submitted here is the report of our geotechnical exploration for the above-captioned project. This exploration was authorized by Mr. Bill Owen's execution of our contract agreement on June 19, 2019 and was generally performed in accordance with our Proposal No. 19001P-123 dated June 13, 2019.

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

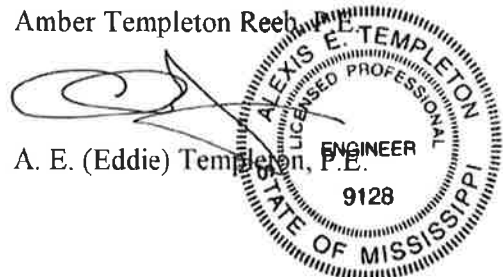
Very truly yours,

BURNS COOLEY DENNIS, INC.

Amber Templeton Reeb

Amber Templeton Reeb

A. E. (Eddie) Templeton, P.E.



AET/ATR/khb
Copy Submitted (via e-mail)

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Project Description.....	1
1.2	Purposes	1
2.0	FIELD EXPLORATION	1
2.1	General.....	1
2.2	Drilling Methods and Groundwater Observations.....	2
2.3	Sampling Methods	2
2.4	Field Classification, Sample Preservation and Borehole Abandonment	2
3.0	LABORATORY TESTING.....	3
3.1	General.....	3
3.2	Strength Tests.....	3
3.3	Classification Tests	3
3.4	Water Content Tests.....	4
4.0	GENERAL SUBSURFACE CONDITIONS.....	4
4.1	General.....	4
4.2	Soil Stratification	4
4.3	Groundwater	5
5.0	DISCUSSION	5
5.1	General Soil Conditions.....	5
5.2	Expansive Clay Considerations	5
5.3	Geotechnical-Related Design Considerations.....	6
6.0	RECOMMENDATIONS	7
6.1	Site Preparation and Earthwork Construction.....	7
6.2	Foundation Design Recommendations	9
6.3	Other Design and Construction Considerations.....	10
7.0	REPORT LIMITATIONS	11

FIGURES

1.0 INTRODUCTION

1.1 Project Description

Plans are being made for the construction of a new concession stand building in the middle of the existing softball fields at Traceway Park in Clinton, Mississippi. We understand that the new building will generally consist on a lightly loaded, two-story structure encompassing about 1,050 sq ft. Plans are to support the new building on a shallow foundation system. Details regarding grading plans have not been provided; however, we anticipate only nominal cutting and/or filling will be required to a construct level pad to provide drainage away from the building. We also understand that the proposed construction area is relatively level, currently open and covered with grass and concrete sidewalks. A site plan showing the building configuration is presented on Figure 1 of this report.

1.2 Purposes

The specific purposes of this investigation were:

- 1) to make exploratory soil borings within the area planned for construction of the new building;
- 2) to verify field classifications and to evaluate pertinent physical properties of the soils encountered in the borings by means of visual examination of the soil samples in the laboratory and routine tests performed on the samples; and
- 3) after analysis of the soil boring and laboratory test data, to provide recommendations for site preparation, earthwork construction, and design and construction for the building foundation.

2.0 FIELD EXPLORATION

2.1 General

Subsurface soil conditions within the area planned for construction of the building were explored by means of two borings. The approximate locations of the borings are shown on Figure 1. The borings were located in the field by means of visual sighting and taped measurements from existing site features using distances scaled from the site plan we were furnished.

All soils were classified in general accordance with the Unified Soil Classification System. A synopsis of the Unified Soil Classification System is presented on Figure 2 along with symbols and terminology typically utilized on graphical soil boring logs. Graphical logs of the borings are presented on Figures 3 and 4. The graphical logs illustrate the types of soil and stratification encountered with depth below the existing ground surface at the individual boring locations. Approximate GPS coordinates for the boring locations as determined by our drilling personnel using a hand-held device are shown at the bottom of the graphical boring logs within the "Comments" section.

2.2 Drilling Methods and Groundwater Observations

The borings were made to an exploration depth of 15 ft within the planned construction area for the building. The borings were advanced full depth by dry augering. Observations were made continuously during auger drilling to detect free water entering the open boreholes. Notes pertaining to groundwater observations are included at the bottom right corner of the graphic boring logs.

2.3 Sampling Methods

Relatively undisturbed samples of the soils encountered in the borings were obtained at approximate 3-ft to 5-ft intervals of depth of depth by pushing a 3-in. OD Shelby tube sampler approximately 1.5 ft to 2 ft into the soil. The Shelby tube samples were obtained within the depth intervals illustrated as shaded portions of the "Samples" column of the graphic boring logs. Disturbed auger cutting samples were obtained near the ground surface and at selected depths in the borings. The depths at which the auger cutting samples were taken are illustrated as small I-shaped symbols under the "Samples" column of the graphic boring logs.

2.4 Field Classification, Sample Preservation and Borehole Abandonment

All soils encountered during drilling were examined and classified in the field by a geotechnical engineering technician. The Shelby tube samples were extruded from the sampling tube in the field. An approximate 6-in. long portion of each Shelby tube sample was sealed with melted paraffin in a cylindrical cardboard container to prevent moisture loss and structural disturbance. An additional portion of each Shelby tube sample and the auger cutting samples were

sealed in jars to provide material for visual examination and testing in the laboratory. Unless other disposition is requested, we routinely discard soil samples after about six months of storage. The boreholes were plugged with soil cuttings after completion of drilling and sampling.

3.0 LABORATORY TESTING

3.1 General

All of the soil samples were examined in the laboratory and tests were performed on selected samples to verify field classifications and to assist in evaluating the strengths, and volume change properties of the soils encountered. The types of laboratory tests performed are described in the following paragraphs.

3.2 Strength Tests

The undrained shear strength characteristics of the fine-grained soils encountered in the borings were investigated by means of visual estimates of consistency and from the results of unconfined compression tests performed on selected undisturbed Shelby tube samples. The results of the unconfined compression tests in terms of cohesion are plotted as small open circles in the data section of the graphic boring logs. The water content and dry density were also determined for each unconfined compression test specimen. The water contents are plotted as small shaded circles in the data section of the logs. The dry densities are tabulated to the nearest lb per cu ft under the “Dry Density” column of the graphic boring logs.

3.3 Classification Tests

The classifications and volume change properties of the fine-grained soils encountered in the borings were investigated by means of Atterberg liquid and plastic limit tests performed on selected representative samples. The results of the liquid and plastic limit tests are plotted as small crosses interconnected by dashed lines in the data section of the graphic boring logs. In accordance with the Unified Soil Classification System, fine-grained soils are classified as either clays or silts of low or high plasticity based on the results of Atterberg limit tests. The numerical difference between the liquid limit and plastic limit is defined as the plasticity index (PI). The magnitudes of the liquid limit and plasticity index and the proximity of the natural water content to the plastic

limit are indicators of the potential for a fine-grained soil to shrink or swell upon changes in moisture content or to consolidate under loading. The proximity of the natural water content to the plastic limit is also an indicator of soil strength.

3.4 Water Content Tests

Water content tests were performed on samples to corroborate field classifications and to extend the usefulness of the strength and plasticity data. The results of the water content tests are plotted as small shaded circles in the data section of the graphic boring logs. The water content data have been interconnected on the logs to illustrate a continuous profile with depth.

4.0 GENERAL SUBSURFACE CONDITIONS

4.1 General

A general description of subsurface soil and groundwater conditions revealed by the borings made for this investigation is provided in the following paragraphs. The graphical logs shown on Figures 3 and 4 should be referred to for specific soil and groundwater conditions encountered at each boring location. Stick logs of the borings are shown in profile on Figure 5 to aid in visualizing subsurface soil conditions. Tabulated adjacent to the stick logs are liquid and plastic limits, water contents, dry densities and cohesions.

4.2 Soil Stratification

The ground surface at the locations of Borings 1 and 2 was found to be directly underlain by silty clay (CL) fill materials to depths of about 1 ft and 3 ft, respectively. The silty clay (CL) fill materials are classified as stiff with respect to consistency and are considered to have moderate strength and moderate compressibility. The silty clay (CL) fill materials are considered to have low shrink/swell potential.

The fill materials encountered at Borings 1 and 2 were found to be underlain by apparent natural silty clays (CL) to a depth of about 6.5 ft. The silty clays (CL) are classified as stiff and very stiff with respect to consistency and are considered to have moderate to high strength and low to moderate compressibility. The silty clays (CL) are considered to have low shrink/swell potential.

Weathered Yazoo clays (CH) were encountered at a depth of about 6.5 ft at Borings 1 and 2. The weathered Yazoo clays (CH) are classified as stiff and very stiff with respect to consistency and are considered to have moderate to high strength and low to moderate compressibility. The weathered Yazoo clays (CH) were found to be slickensided. Slickensides are randomly oriented micro-failure planes within weathered Yazoo clays (CH) caused by differential shrink/swell movements. The weathered Yazoo clays (CH) are considered to have very high shrink/swell potential. The weathered Yazoo clays (CH) were encountered to the 15-ft termination depth of the borings.

4.3 Groundwater

Free water was not encountered during auger drilling for the borings. In our opinion, groundwater conditions at the site will be influenced by rainfall, surface drainage, and by the rise and fall of water levels in nearby ditches, creeks, ponds or other bodies of water. Groundwater conditions at the site can also be influenced by man-made changes. Surficial soils can become saturated and weak to relatively shallow depths during periods of prolonged and heavy rainfall.

5.0 DISCUSSION

5.1 General Soil Conditions

Subsurface soils encountered within the 15-ft exploration depth of the borings made for this investigation consist of silty clay (CL) fill materials and natural silty clays (CL) underlain by weathered Yazoo clays (CH). The subsurface soils encountered in the borings are considered to have moderate to high strength and low to moderate compressibility. The silty clay (CL) fill materials and natural soils are considered to have low shrink/swell potential.

The weathered Yazoo clays (CH) are expansive with high shrink/swell potential. Weathered Yazoo clays (CH) were encountered at a depth of about 6.5 ft at Borings 1 and 2. Free water was not encountered during auger drilling for the borings.

5.2 Expansive Clay Considerations

The expansive clay (CH) soils can experience significant shrink/swell movements associated with seasonal moisture content fluctuations. Cover materials overlying expansive clay

(CH) soils act as a buffer against seasonal moisture content changes caused by rainy weather, droughts and evapotranspiration. Thus, the potential magnitude of moisture content changes and associated shrink/swell movements within expansive clay (CH) soils is proportionate to the thickness of overlying cover materials. Seasonal moisture content changes and shrink/swell movements within expansive clay (CH) soils decrease as the thickness of cover materials increases. There is a general trend for expansive clay (CH) soils under structures to swell due to an increase in water content caused by capillary and vapor phase movement of moisture within the clays (CH). Expansive clay (CH) soils will also experience considerable swelling if directly supplied with water from rainfall, sprinkler systems, broken underground water and sewer pipes, or any other source. Trees growing adjacent to a structure can extract a considerable amount of moisture from the ground resulting in localized shrinkage of expansive clay (CH) soils accompanied by vertical and lateral movements. Overburden removal associated with the establishment of finished grades lower than existing ground elevations will cause stress relief in expansive clay (CH) soils resulting in long-term rebound. Expansive clay (CH) soils will also experience long-term downhill creep movements, depending on slope steepness.

5.3 Geotechnical-Related Design Considerations

From a geotechnical standpoint, the primary factor relevant to foundation design and construction for the proposed building is the shrinking and swelling of the highly expansive weathered Yazoo Clays (CH). A foundation should be utilized for the building that will accommodate the anticipated structural loadings and also minimize future differential vertical movements resulting from either settlement due to soil consolidation under fill and structural loads or unpredictable shrinking and swelling of the expansive clay (CH) soils. It is our opinion that a slab-on-grade foundation made relatively stiff by means of perimeter and interior grade beams could be used for support of the building, provided: 1) column loads are less than 150 kips and wall loads do not exceed 7 kips per ft; and 2) a minimum 7-ft thick buffer of low permeability and low shrink/swell potential soil is provided between the highly expansive weathered Yazoo clay (CH) soils and the bottom of the floor slab and below finished outside grades adjacent to the building. The buffer of low permeability and low shrink/swell potential soil is intended to minimize differential shrink/swell movements resulting from normal seasonal moisture content fluctuations within the expansive clays (CH).

Within the planned construction area for the building, highly expansive weathered Yazoo clays (CH) were encountered at a depth of about 6.5 ft at Borings 1 and 2. The thickness of the existing buffer at Borings 1 and 2 is slightly less than the recommended 7 ft minimum for the building foundation. Undercutting to remove about 0.5 ft of clays (CH) at the boring locations is probably not warranted. However, if the proposed finished grades are lower than existing grades at Borings 1 and 2, then undercutting and backfilling would be required to remove expansive clays (CH). The actual vertical and lateral extent of undercutting required to remove expansive clays (CH) would be dependent on the finished floor elevation. If necessary, undercutting to remove expansive clays (CH) should extend laterally not less than 7 ft beyond the edges of the building.

Details of our recommendations for site preparation, earthwork construction, and design and construction of the building foundation are included in the following subsections of this report.

6.0 RECOMMENDATIONS

6.1 Site Preparation and Earthwork Construction

As an initial step of site preparation within the planned construction area for the proposed building, existing structures, pavement, underground utilities or pipes, and any other subsurface obstructions that might interfere with earthwork and foundation construction should be removed and/or relocated. Next, excavation should be performed to remove any obviously weak soils encountered during stripping. The actual vertical and lateral extent of excavation required to remove weak soils must be determined in the field during earthwork construction. Excavation of weak soils should extend laterally not less than 5 ft beyond the edges of the building. In order to minimize the amount of any excavation, we recommend that a representative of Burns Cooley Dennis, Inc. be present during earthwork operations to evaluate the stability of the soils exposed after stripping and any excavation.

After stripping and any excavation, the surface of the exposed soils should be scarified to a minimum depth of 6 in. and compacted to not less than 95 percent of standard Proctor maximum dry density (ASTM D 698) with stability present. Stability is defined as the absence of significant pumping, yielding or rutting during compaction or proofrolling. If stability is not evident in some areas, either additional excavation, drying by processing, treatment of the in situ soils with admixtures, or a combination of these approaches, might be required to achieve stable conditions.

The on-site soils exposed after stripping and any excavation are susceptible to pumping when wet. If pumping is initiated in these soils, as a construction expedient the pumping can be counteracted by treating with hydrated lime. It is estimated that about 4 to 6 percent hydrated lime by dry weight of soil could be required. If required, lime treatment should extend 12 in. to 18 in. below the surface exposed after stripping and any excavation.

The effort required to mitigate unstable surface soils will be influenced by the season of the year when earthwork is performed. The surficial soils may be drier during the hot late summer and could weaken during heavy rain events. We recommend that earthwork be performed during a dry summer or fall season, if the schedule permits. The construction techniques, types of equipment utilized and site drainage provided during construction will also have an effect on the performance of the soils. The routing of heavy, rubber-tired equipment should be controlled to minimize, as much as possible, traffic in construction areas. All traffic should be discouraged during periods of inclement weather. It should be recognized that soils which are demonstrated to be adequately stable during stripping, and/or excavation can become unstable if they are disturbed by construction traffic or are exposed to additional rainfall prior to filling.

To minimize exposure of the on-site soils to rainfall and/or drying, we recommend that filling follow immediately after stripping and any excavation. Imported fill soils should consist of select, nonorganic and debris-free silty clays (CL) having a plasticity index (PI) within the range of 10 to 24, a liquid limit less than 45, and not less than 70 percent fines passing the No. 200 sieve. Excavated on-site silty clays (CL) that meet the Atterberg limit and minus No. 200 sieve requirements for imported fill, and that are free of organic matter and are not too wet can also be utilized as select fill. The fill soils should be compacted from lifts not exceeding 9 in. in loose thickness to not less than 95 percent of standard Proctor maximum dry density (ASTM D 698) at moisture contents within 3 percentage points of the optimum water content. Where hand-operated mechanical tampers are used for compaction, the loose lift thickness should be limited to 5 in. Stability must be evident during compaction of each lift before any subsequent lifts of fill material are added. Stability is defined as the absence of significant pumping, rutting or yielding of soils during compaction. As a construction expedient, fill soils that are unstable and/or pumping due to excessive moisture can be treated with hydrated lime in accordance with recommendations given previously for pumping on-site soils.

Laboratory classification tests, including Atterberg limit determinations and grain-size analyses, should be performed on the imported fill materials initially and routinely during earthwork operations to check for compliance with the recommendations provided herein. Field moisture/density tests should be performed in each compacted lift of fill to assist in evaluating whether the recommended moisture contents and dry densities are being achieved. As a guide for earthwork construction, we suggest one moisture/density test per lift for each 2,500 sq ft of surface area or portion thereof.

Finished site grades should be sloped to promote quick runoff of storm water away from the building. Fill materials should extend laterally not less than 5 ft beyond the building edges and then slope down to natural ground levels at an inclination not steeper than 3H:1V.

6.2 Foundation Design Recommendations

The new building could be supported by a shallow foundation system consisting of a slab-on-grade stiffened with perimeter grade beams, or turned-down edges, and interior grade or tie beams, provided column loads are less than 150 kips and wall loads do not exceed 7 kips per ft, and our recommendations for site preparation and earthwork construction are followed. Grade beams should be utilized to support all exterior walls and all interior load bearing walls, or otherwise they should be spaced in a grid pattern on not greater than about 10-ft to 15-ft centers in each direction. Any columns should be supported by widened portions of the grade beams. We recommend that grade beams or turned-down edges around the perimeter of the building be brought to bear at a depth not less than 2.0 ft below finished outside grade. Interior tie or grade beams should be brought to bear at a depth not less than 1.5 ft below the bottom of the slab. We recommend that grade beams be proportioned for critical combinations of dead, live and wind loads utilizing a net allowable soil bearing pressure of 1,500 lbs per sq ft. A net allowable soil bearing pressure of 2,000 lbs per sq ft should be utilized to dimension widened portions of grade beams used to support column loads. We recommend a minimum base width of 12 in. for the grade beams. The grade beams should be reinforced for both positive and negative bending. The floor slab should be reinforced for anticipated loading conditions and deflections and to minimize slab cracking. We recommend that the slab be reinforced with a grid of relatively closely spaced reinforcing bars in lieu of welded wire fabric.

We recommend that foundation excavations be left open for the shortest possible duration to minimize exposure of the bearing soils to rainfall. Drainage should be maintained away from the foundation excavations during construction. Soils exposed in the bottom of the excavations should be observed prior to concrete placement. If these materials are found to be weak or loose, overexcavation and backfilling will be required to provide strong soils immediately beneath foundation elements.

With proper earthwork as recommended herein and the building with column loads less than 150 kips and wall loads not greater than 7 kips per ft supported on a stiffened slab-on-grade foundation, total settlements under compressive structural loading are expected to be on the order of about 1 in. Differential vertical movements of the foundation resulting from potential long-term volumetric changes within the expansive clays (CH) cannot be predicted with any degree of accuracy; however, if proper drainage is maintained, they are estimated to be within normally tolerable structural limits for a relatively strong stiffened slab-on-grade foundation. The maximum potential long-term differential movements due to normal seasonal fluctuations in water content within the clays (CH) are generally expected to be on the order of about 3/4 in. over a horizontal distance of about 25 ft to 30 ft, provided that proper drainage is maintained and any leaks that develop in pipes are promptly repaired. It should be noted that differential movements of the magnitude stated in the preceding sentence could result in minor cracking of the foundation, walls and floor slab. The actual magnitude of the differential shrink/swell movements can be influenced by any number of events or circumstances that occur during the life of the building. For example, surface drainage conditions, broken water pipes, trees and shrubs, etc., can influence the actual shrink/swell movements which develop. We emphasize that poor drainage, groundwater or other excess water in the building area soil could result in significant differential movement, greater than several inches over a spacing of about 25 ft to 30 ft, and major cracking of the foundation, walls and floor slab, even with the recommended buffer thickness.

6.3 Other Design and Construction Considerations

The expansive clay (CH) soils at the site will swell considerably if directly supplied with water. If flower and shrub beds including sprinkler systems are placed adjacent to the new building, the beds should be prepared such that they do not trap water, and sprinklers should be operated only enough to satisfy the water demands of the plants and shrubs. Excessive watering and ponding

within the flower and shrub beds could result in downward percolation of water into the underlying soils causing them to lose strength and causing the expansive clays (CH) to swell. Rainwater falling on the roof of the building should be collected and prevented from reaching the ground immediately adjacent to the building. Downspouts extending from roof gutters should be equipped with extensions at ground level that are sloped to emit collected rainwater not less than 6 ft away from the building. The downspouts could be connected to solid discharge pipes buried beneath the ground. We caution that these pipes should be flexible enough to accommodate some differential movement and all pipe connections must be leak free.

Final grades around the building should provide rapid and effective drainage of rainwater and downspout water away from the building, with no areas allowed for water to pond. Underground sources of water such as leaking water lines, sewer lines, etc., should be prevented as much as possible in the initial construction, and any leaks that develop should be promptly repaired.

The site for the new concession stand building at Traceway Park in Clinton, Mississippi lies within a relatively low seismic activity region according to the seismic zone mapping referenced in the International Building Code. Given the site soil profile as revealed by the borings and anticipated for the area based on our experience, a site class D should be used in a seismic load evaluation.

7.0 REPORT LIMITATIONS

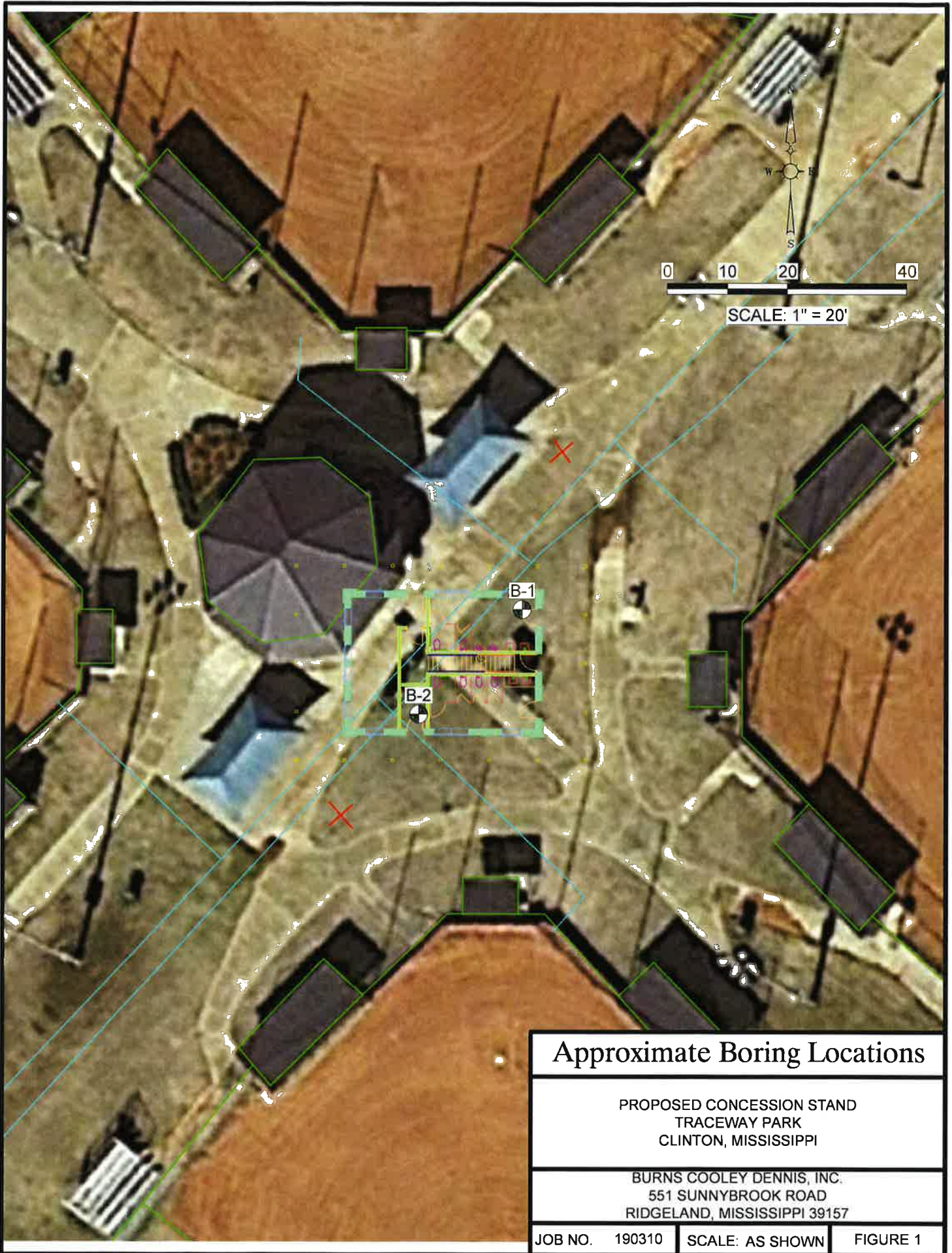
The analyses, conclusions, and recommendations discussed in this report are based on conditions as they existed at the time of our field investigation and further on the assumption that the exploratory borings are representative of subsurface conditions throughout the areas investigated. It should be noted that actual subsurface conditions between and beyond the borings might differ from those encountered at the boring locations. If subsurface 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 earthwork and foundation 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 foundation

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 WGK, INC. for specific application to the geotechnical-related aspects of design and construction for the new concession stand at Traceway Park in Clinton, Mississippi. The only warranty made by us in connection with the services provided is 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, express or implied, is made or intended.

FIGURES



Approximate Boring Locations

PROPOSED CONCESSION STAND
TRACEWAY PARK
CLINTON, MISSISSIPPI

BURNS COOLEY DENNIS, INC.
551 SUNNYBROOK ROAD
RIDGELAND, MISSISSIPPI 39157

UNIFIED SOIL CLASSIFICATION SYSTEM					
MAJOR DIVISIONS			SYMBOL & LETTER	DESCRIPTION	
COARSE-GRAINED SOILS More than half of material larger than No. 200 sieve size	GRAVELS More than half of coarse fraction larger than No. 4 sieve size	Clean Gravels (Little or no fines)	GW	WELL GRADED GRAVEL, GRAVEL-SAND MIXTURE	
			GP	POORLY GRADED GRAVEL, GRAVEL-SAND MIXTURE	
		Gravels with fines (Appreciable amount of fines)	GM	SILTY GRAVEL, GRAVEL-SAND-SILT MIXTURE	
			GC	CLAYEY GRAVEL, GRAVEL-SAND-CLAY MIXTURE	
	SANDS More than half of coarse fraction smaller than No. 4 sieve size	Clean Sands (Little or no fines)	SW	WELL GRADED SAND, GRAVELLY SAND	
			SP	POORLY GRADED SAND, GRAVELLY SAND	
		Sands with fines (Appreciable amount of fines)	SM	SILTY SAND, SAND-SILT MIXTURE	
			SC	CLAYEY SAND, SAND-CLAY MIXTURE	
		FINE-GRAINED SOILS More than half of material smaller than No. 200 sieve	SILTS AND CLAYS Liquid limit less than 50	ML	SILT WITH LITTLE OR NO PLASTICITY
				ML	CLAYEY SILT, SILT WITH SLIGHT TO MEDIUM PLASTICITY
CL	SILTY CLAY, LOW TO MEDIUM PLASTICITY				
CL	SANDY CLAY, LOW TO MEDIUM PLASTICITY (30% TO 50% SAND)				
SILTS AND CLAYS Liquid limit greater than 50	MH		SILT, FINE SANDY OR SILTY SOIL WITH HIGH PLASTICITY		
	CH		CLAY, HIGH PLASTICITY		
HIGHLY ORGANIC SOILS			OH	ORGANIC CLAY OF MEDIUM TO HIGH PLASTICITY	
			PT	PEAT, HUMUS, SWAMP SOIL	

TERMS CHARACTERIZING SOIL STRUCTURE	
Slickensided	- Clays with polished and striated planes created as a result of volume changes related to shrinking, swelling and/or changes in overburden pressure.
Fissured	- Clays with a blocky or jointed structure generally created by seasonal shrinking and swelling.
Laminated	- Composed of thin alternating layers of varying color and texture.
Calcareous	- Containing appreciable quantities of calcium carbonate.
Parting	- Paper thin (less than 1/8 inch).
Seam	- 1/8 inch to 3 inch thickness.
Layer	- Greater than 3 inches in thickness.

DENSITY AND CONSISTENCY				
COARSE-GRAINED SOILS		FINE-GRAINED SOILS		
DENSITY	PENETRATION RESISTANCE, N	CONSISTENCY	COHESION Kips/Sq.Ft	PENETRATION RESISTANCE, N
Very loose	0 - 4	Very Soft	<0.25	0 - 1
Loose	5 - 10	Soft	0.25 - 0.50	2 - 4
Medium Dense	11 - 30	Medium Stiff	0.50 - 1.00	5 - 8
Dense	31 - 50	Stiff	1.00 - 2.00	9 - 15
Very Dense	>50	Very Stiff	2.00 - 4.00	16 - 30
		Hard	>4.00	>30

PARTICLE SIZE IDENTIFICATION		RELATIVE COMPOSITION	
Cobbles	- Greater than 3 inches	Slightly	5 - 15%
Gravel	- Coarse - 3/4 inch to 3 inches	With	16 - 29%
	- Fine - 4.76 mm to 3/4 inch	Sandy	30 - 50%
Sand	- Coarse - 2 mm to 4.76mm	(or gravelly)	
	- Medium - 0.42 mm to 2 mm		
	- Fine - 0.074 mm to 0.42 mm		
Silt & Clay	- Less than 0.074 mm		

FOR CLASSIFICATION OF FINE GRAINED SOILS

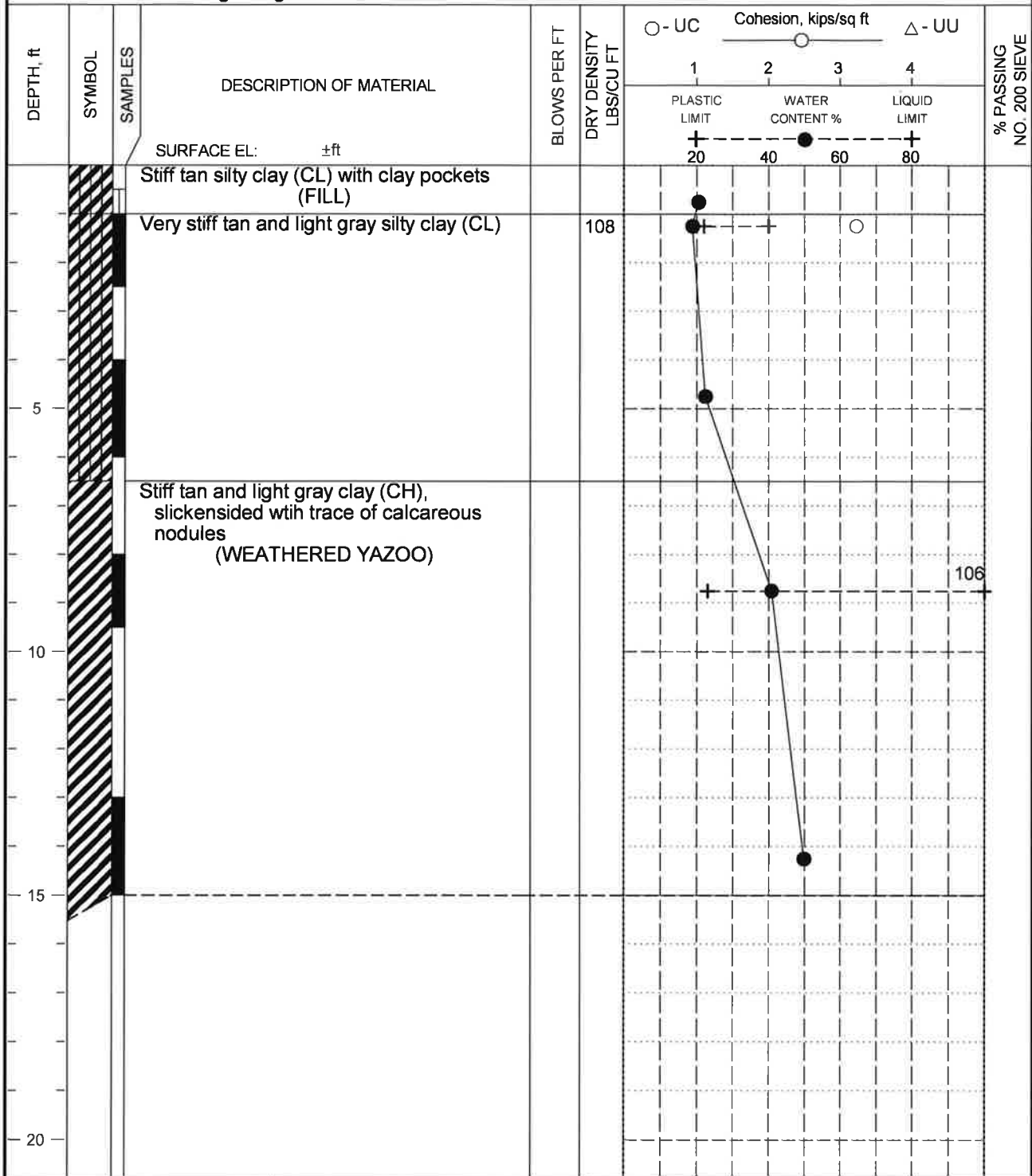
SAMPLE TYPES
(Shown in Sample Column)

CLASSIFICATION, SYMBOLS AND TERMS USED ON GRAPHICAL BORING LOGS

LOG OF BORING NO. 1
PROPOSED CONCESSION STAND
TRACEWAY PARK
CLINTON, MISSISSIPPI

TYPE: 4" Short-flight auger

LOCATION: See Figure 1



BORING DEPTH: 15 ft

COMMENTS:

GROUNDWATER DATA: No free water encountered during auger drilling.

DATE: 06/27/19

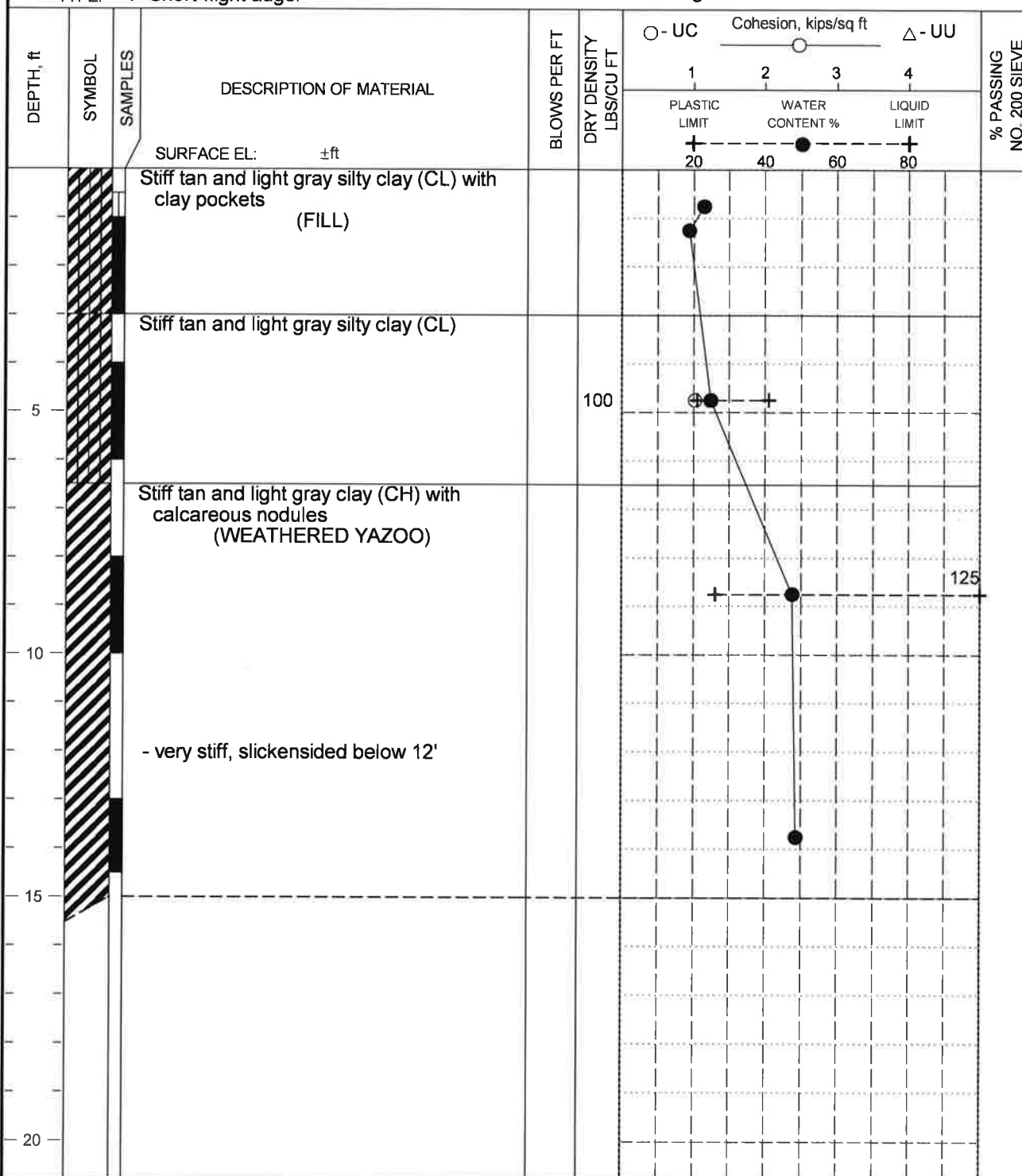
190310 7/8/2019 8:16:59 AM

FIGURE 3

LOG OF BORING NO. 2
PROPOSED CONCESSION STAND
TRACEWAY PARK
CLINTON, MISSISSIPPI

TYPE: 4" Short-flight auger

LOCATION: See Figure 1



190310 7/8/2019 8:16:59 AM

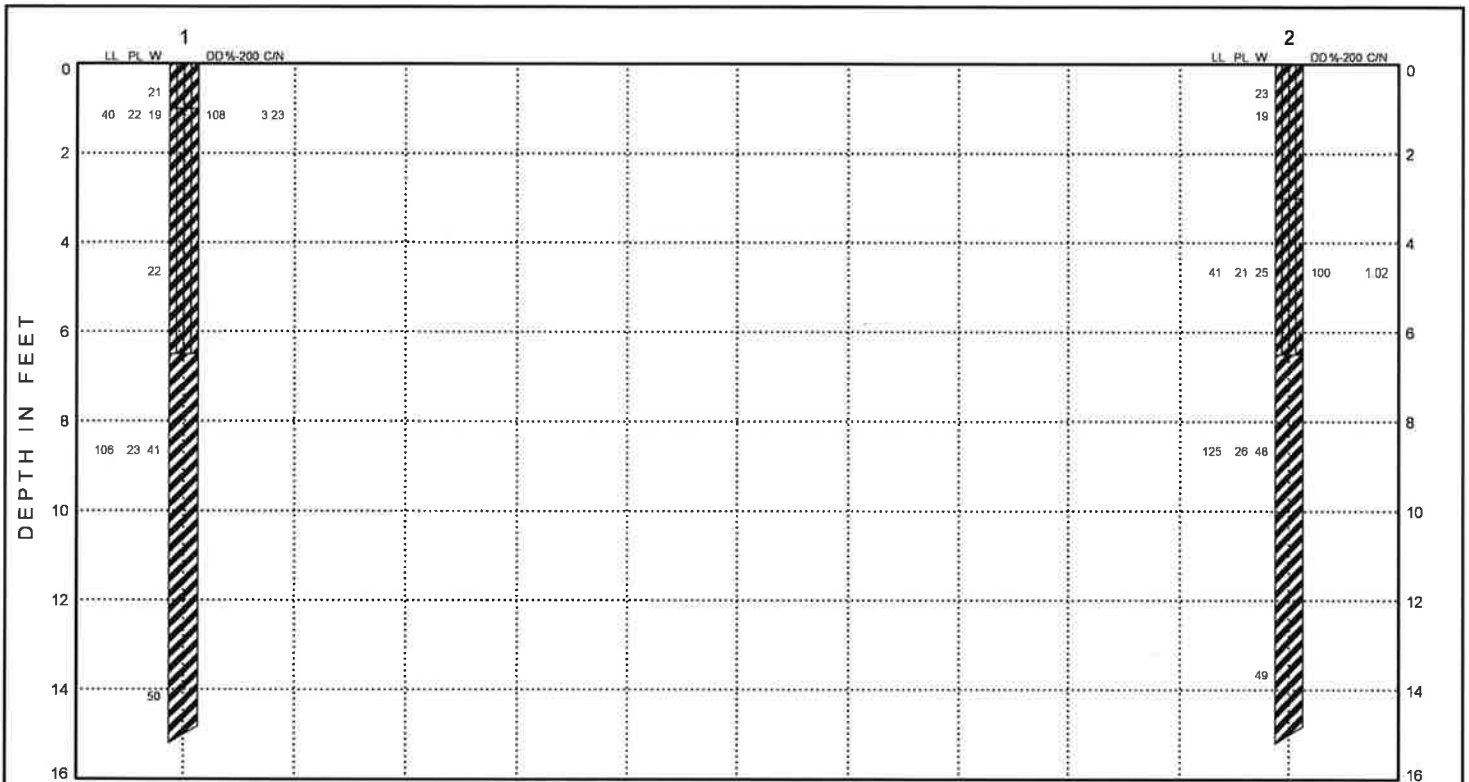
BORING DEPTH: 15 ft

COMMENTS:

GROUNDWATER DATA: No free water encountered during auger drilling.

DATE: 06/27/19

FIGURE 4



LEGEND:
 LL = Liquid Limit
 PL = Plastic Limit
 W = Water Content
 DD = Dry Density (pcf)
 C/N = Cohesion (ksf)/Penetration
 Resistance, N (blows/ft)
 in the same column
 MS = Matric Suction (tsf)
 %-200 = % Passing No. 200 Sieve

NOTE: See Figure 2 for boring log legend.

SUBSURFACE SOIL PROFILE		
PROPOSED CONCESSION STAND TRACEWAY PARK CLINTON, MISSISSIPPI		
Job No. 190310	Date 7/8/19	Figure 5