GEOTECHNICAL ENGINEERING TESTING, INC.

~ Geotechnical Evaluations ~ Construction Materials Testing ~ Geosciences ~ Infrastructure Management Services ~

SOILS EXPLORATIONS AND GEOTECHNICAL ENGINEERING STUDIES FOR THE PROPOSED JACKSON FIRE STATION #3 JACKSON, ALABAMA

Professional Services Since 1974

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Geotechnical Engineering-Testing, Inc.

PROFESSIONAL ENGINEERS

Geotechnical Evaluations - Geosciences - Construction Materials - Pavement Management

June 4, 2021

Alan Killen, P.E.
Civil Southeast, LLC
PO Box 1900
Andalusia, AL 36420

Via Email: **alan@civilse.com**

Re: Soils explorations and Geotechnical Engineering Studies for the Proposed Jackson Fire Station #3 in Jackson, Alabama (GET Project # 21-159)

Geotechnical Engineering-Testing, Inc. (GET) is pleased to submit this report of our soils explorations and geotechnical engineering evaluations for the proposed Jackson Fire Station #3 to be constructed on Club Wiley Road in Jackson, Alabama. This report includes the results of the soil borings and physical laboratory tests that were performed for these evaluations along with our recommendations for site preparation, and building foundation and design, and construction. These services have been performed in general accord with our verbal proposal dated April 21, 2021 that was authorized on May 3, 2021.

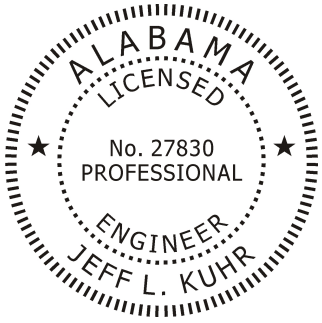
This report has been prepared to aid in the evaluation of this site and to assist in the design of the project. The recommendations provided are based in part on the project information provided to GET and only apply to the specific project and site discussed in this report.

Should there be any questions regarding this report or you need additional assistance, please contact us.

Sincerely,

GEOTECHNICAL ENGINEERING-TESTING, INC.

Jeff L. Kuhr, P.E.
Project Engineer
Alabama License No. 27830
Date: 6/4/2021



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INTRODUCTION

Geotechnical Engineering-Testing, Inc. (GET) has completed the authorized soils explorations and geotechnical engineering studies for the Jackson Fire Station #3 to be constructed at 123 Club Wiley Road in Jackson, Alabama. The soils explorations for this project have included two exploratory soil test borings, visual descriptions of the soils encountered, and laboratory testing of selected soil samples. The engineering study has included the planning, coordination, and supervision of the soils explorations program, evaluations of the results of the soils explorations, and development of recommendations for site preparation, building foundation and design, and construction, and the preparation of this report.

Based upon preliminary drawings and information provided by Mr. John Foshee of Foshee Architects on June 3, 2021, the project consists of replacing the existing fire station structure that consisted of a one-story office building on the south side and a two-story building on the north side with 4 bays. It is our understating that the new fire station will be constructed near the original footprint; however, the existing foundations will be removed prior to constructing the new fire station. The original building had approximate dimensions of 42 ft by 55 ft in the east-west direction for the front office area, and 44 ft by 100 ft in the north-south direction for the rear bay areas. The new fire station will have an overall plan dimension of 67 ft by 50 ft that will consist of front offices and two rear bays. It is our understanding no additional areas of parking/drive areas will be constructed. Parking/drive areas will consist of the existing concrete pavement.

Details of our findings and recommendations are presented in the following sections of this report.

SITE DESCRIPTION

The proposed project site lies on the previous Alabama National Guard property on the north side of Club Wiley Road approximately 700 ft west of Highway 69 in Jackson, Alabama. The proposed building will be located near the existing footprint of the previous fire station that had recently burnt down. A Highway Location Map showing the general location of the proposed project is provided in Figure 1 of this report.

General Site Description

Based on our site visit, the site (existing and proposed building locations) was bound by concrete paved parking/drives on the north, west and east sides, with grass and a ditch along the south side. Club Wiley Road also runs along the southern portion of the site. The ground surface was relatively flat, firm and well drained.

SOILS EXPLORATIONS PROGRAM

The procedures for the field exploration and laboratory testing programs utilized on this project are summarized in the following sections of this report.

Boring Locations

The locations of the borings performed for this project were selected by GET personnel based on the conversations with Mr. Alan Killen, P.E. of Civil Southeast on May 3, 2021. In the field, boring locations were established by measuring from existing site features. Approximate soil boring locations are shown on the Boring Location Plan using Google Earth is included in Appendix A of this report.

Field Explorations

The soils explorations for this project included performing two soil test borings near the proposed building area along the south side to depths of about 25 ft. A third boring that was to be located along the north side of the proposed building was eliminated due to the inability to core the existing concrete slab. The borings near the south side of the proposed building area were made with a truck-mounted Simco 2800 core-boring rig. The boreholes were advanced using solid stem auger method. Standard penetration tests were performed and split spoon soil samples were collected continuously to a depth of 10 ft and then at 5 ft center-to-center intervals to the boring termination depths. Boring and sampling operations were conducted in general accordance with standard procedures. Depths where samples were collected and the results of the standard penetration tests are shown on the Logs of Boring included in Appendix B of this report.

Split spoon samples collected during the boring operations were visually described, logged, placed in moisture tight plastic bags, and transported to the laboratory. At the laboratory, the samples were visually examined by the Project Engineer to confirm or adjust field classifications.

Laboratory Testing

The laboratory testing program included performing physical laboratory soil mechanics tests on selected soil samples that were recovered from the borings. The tests included moisture content, Atterberg limits, percent passing the #200 sieve, and confined shear test. Test results are shown on the Logs of Boring opposite the respective samples tested. Tests were performed in general accordance with applicable laboratory soil testing standards and laboratory test results have been included in Appendix C of this report.

SUBSURFACE CONDITIONS

Subsurface conditions encountered during the soils exploration program are summarized in the following sections.

Subsurface Soils

The subsurface soils encountered consisted of interbedded layers of medium and stiff sandy clay and firm clayey sand layers to a depth of about 12 ft. Loose and firm clayey sand was encountered from about 12 ft to about 22 ft, and then firm silty clayey sand with gravel was encountered from about 22 ft to the boring termination depths of about 25 ft. Details of the soils encountered are presented by the Logs of Boring.

The soil boring logs provided with this report are representative of subsurface conditions at their respective locations and for their respective vertical reaches. However, local variations characteristic of the subsurface materials of the region may be encountered during construction. The boring logs and related information are based on the driller's logs and visual examination of soil samples in the laboratory. The delineation between soil types shown on the logs is approximate and the description represents the interpretation of subsurface conditions at the designated boring location on the date drilled.

Groundwater was not encountered in the borings upon completion. However there is a possibility that groundwater could temporarily perch above the sandy clay/clayey sand layer following seasonal rain events.

GEOTECHNICAL RECOMMENDATIONS

The recommendations provided below are based upon our understanding of the project as described above, the subsurface data collected, our engineering evaluations regarding the geotechnical matters, and our past experience on projects in proximity to this site and the typical climate conditions of the area. If our understanding of the project is incorrect, we should be provided accurate information and should be provided the opportunity to review our recommendations taking into consideration the new project information.

General Geotechnical Site Preparation

Below are some general guidelines and recommendations for site preparations. The means and methods of construction will be the responsibility of the contractor.

- Clear the proposed building construction areas; these operations are anticipated to remove existing foundations and all deleterious items that cover the site such as organics, debris, underground utilities, asphalt, concrete, etc. The clearing activities should extend a minimum 5 ft outside the building footprints.
- For all construction areas, a qualified soils technician should inspect and probe the subgrade for zones of soft or very loose soils. Additional undercutting, if deemed necessary, should be directed by the project geotechnical engineer of record.
- Subgrade soils should be compacted to at least 100 percent standard Proctor density (SPD) or to the satisfaction of the geotechnical engineer or a representative of the geotechnical engineer. The moisture content must be maintained within +/- 3 percent of optimum moisture content.
- The subgrade soils (clayey sands and/or sandy clays) contain significant amounts of fines and are moisture sensitive. If even slightly above optimum moisture content, rubber tire equipment may disturb and/or rut the soils. Rubber tire equipment should be prohibited, to the extent practical, from trafficking on undisturbed or prepared subgrade soils.

- Where backfill/fill soils will be required within the proposed building area or within the pavement section, these materials should be granular soils that are free of organics or deleterious materials with no more than about 25 percent passing a #200 sieve, and that have a plasticity index of no more than six.
- Fill soils within the building area should be placed above the compacted subgrade in loose lifts no thicker than 8 inches and each lift should be compacted to at least 100 percent SPD. The moisture content must be maintained within +/- 3 percent of optimum moisture content.
- Representative samples of the backfill/fill soils and/or insitu subgrade soils should be collected for classification and laboratory Proctor density testing. The maximum dry density, optimum moisture content, gradation, and plasticity should be determined. These tests are needed for quality control of the subgrade and compacted fill. Field density tests should be performed on the insitu subgrade and/or compacted fill soils. One test should be performed for each 2500 square feet of general fill area per lift of backfill/fill soils or base materials.
- Where crushed aggregate will be required for this project, we recommend a crushed aggregate base (ALDOT 825 B) placed in lifts no thicker than 6 inches. Each lift should be compacted to at least 98 percent modified Proctor density (MPD).
- Groundwater was not encountered during boring operations but may perch temporarily on the sandy clay/clayey sand layers. Perched water should be removed from construction areas by pumping or by ditches prior to any attempted subgrade soil modification.

General Foundation Preparation Recommendations

Isolated column and wall footings, with a concrete slab-on-grade floor system are anticipated for this project. Below are our general guidelines and recommendations for foundation soil preparation. The means and methods of construction will be the responsibility of the contractor.

- After footing excavations have been undercut to design grades, we recommend a representative of the geotechnical engineer of record probe the bottom of footing. If soft/loose spots are observed along the bottom of footings additional undercutting may be required.

- We recommend leaving the bottom of the excavations undisturbed. However, it should be noted that if disturbed, recompacting the disturbed soils will likely be difficult.
- If disturbed, the bottom of the excavations/bottom of footings should be compacted to a depth of at least 8-inches and should be compacted to at least 100 percent SPD or to satisfactory of a representative of the geotechnical engineer of record.
- If compaction is unachievable, it may be necessary to over-excavate footing locations and then to re-place and compact the excavated soil or the foundation concrete should be thickened in accord with recommendations by the structural engineer. As an option to replacing the disturbed soils or thickening the footing, we recommend pouring a mud seal or placing a separation fabric and then placing 12-inches of crushed aggregate until firm.
- Where applicable, backfill/fill soils should consist of select materials, placed and compacted as recommended above in the General Geotechnical Site Preparation section.
- We recommend that continuous and/or isolated foundations have a width of 2.0 to 3.0 ft and that they bear at a depth between 1.5 ft and 3.0 ft below existing grade (the lowest adjacent final grade). If these recommendations are followed and excavations are followed as noted above, we recommend that foundations be designed based on an allowable bearing pressure of 2500 pound per square foot (psf).
- The allowable foundation bearing pressure value presented is based on a factor of safety of approximately 3.0 against bearing capacity failure.
- For the pressure stated, short-term foundation settlement should be less than 1 inch.
- If wider or deeper foundations are needed, to resist uplift for instance, then we should be contacted and allowed to provide additional bearing pressure recommendations.

Long-Term Settlement

Based upon our explorations and our assumptions of limited fill soils, we do not anticipate long-term settlement based on the soil conditions and the information provided at this time.

Floor Slab

After the subgrade soils and back/fill soils are compacted and placed as noted above in the General Geotechnical Site Preparation section, we recommend that at least 4 inches of free-draining

granular soils or gravel be placed as a capillary moisture break immediately beneath the concrete floor slab. Free-draining soils should consist of non-plastic sand or gravel. The aggregate should be graded between 1/2 inch and No. 200 sieve, with no more than 85% passing the #4 sieve and no more than 5% material passing the No. 200 sieve. These materials should be compacted until firm. We also recommend a vapor barrier be placed between the free-draining granular soils and the concrete floor slab.

Truck Bay Slab

After the subgrade soils and back/fill soils are compacted and placed as noted above in the General Geotechnical Site Preparation section, we recommend the following:

- Layer of Tensar TriAx TX7 Geogrid
- 8-inches of crushed aggregate
- 7 inch thick reinforced concrete slab

The geogrid materials shall be placed in accordance with the manufacturer's recommendations.

Pavement material properties should meet and construction practices should be in accord with the most current ALDOT Standard Specifications. Minimum compaction requirements outlined in this report supersede the minimum requirements in the ALDOT specifications.

Parking and Drive Areas

As noted above, it is our understanding that the project will include no newly constructed parking and/or drive areas. We understand that the existing concrete pavement will be left undisturbed and will be reused. However, due to the newer building being smaller than the previous building, some areas along the north side will need to either be grassed or replaced with similar materials. We were unable to core through the concrete slab on the north side of the building due to the amount of rebar within the slab. The slab thickness is unknown at this time.

Even though groundwater was not encountered during boring operations, it should be anticipated that water may perch on top of the upper clay layers within the base layer. The water sources could be from seasonal rain events and/or from washing/cleaning/maintenance of the fire

department vehicles. If it is anticipated that there will be frequent washing of fire trucks within close proximity to the pavements, proper drainage of this water will be required.

If the final layout and/or design of the building changes and/or additional paved parking and drive areas are included and result in additional evaluations, additional geotechnical engineering services may be required.

Required Special Inspections

We recommend that the geotechnical engineer of record be allowed to review the project plans and specifications after further plan development to establish the required Special Inspections and inspection frequency that will be required as related to the soils and foundations.

CONSTRUCTION CONSIDERATIONS

Earthwork

Although the exposed subgrade soils may be relatively stable upon initial exposure, unstable subgrade soil conditions could develop during general construction operations, particularly if the soils are wetted and/or subjected to repetitive (rubber-tired) construction traffic. The use of light construction equipment would aid in reducing subgrade disturbance.

Upon completion of grading, care should be taken to maintain the subgrade moisture content near optimum prior to construction of pavements. Construction traffic over the completed subgrade should be avoided to the extent practical. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. If the subgrade should become frozen, desiccated, saturated, or disturbed, the affected material should be removed or these materials should be scarified, moisture conditioned and densified prior to pavement construction.

Engineering Services During Construction

The engineering recommendations provided in this report are based on the information obtained from the soils explorations, laboratory testing program, and experience on similar projects. Regardless of the thoroughness of a geotechnical exploration program, there is always a possibility

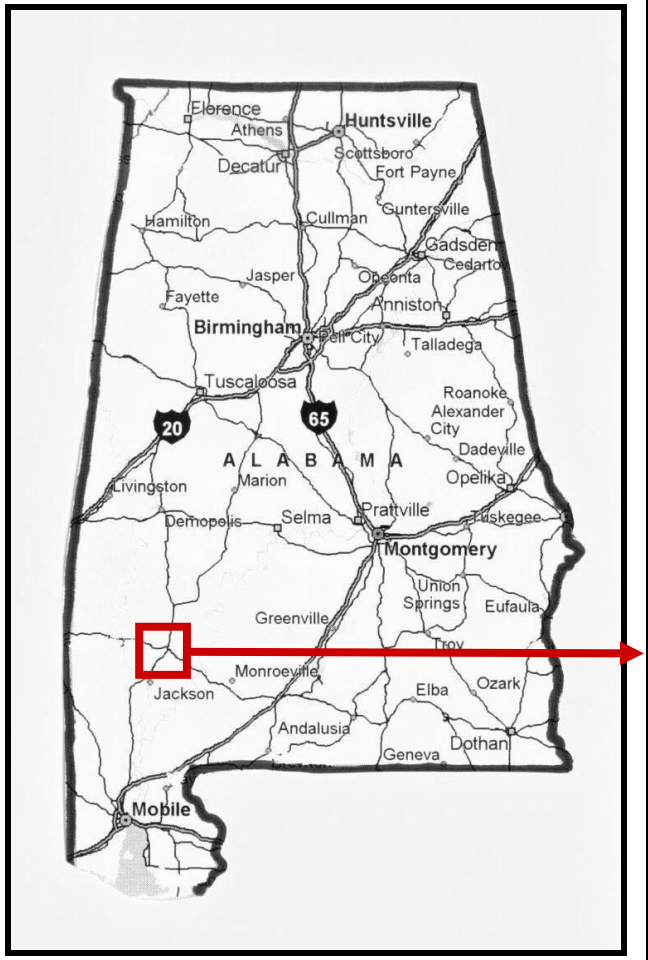
that conditions at locations remote from borings will be different from those at specific boring locations and that conditions will not be as anticipated by the designers or constructors. In addition, the construction process may itself alter soil conditions. Therefore, we recommend that a representative of the geotechnical engineer of record observe and document the construction procedures used and the conditions encountered. Unanticipated conditions and inadequate procedures should be reported to the design team along with timely recommendations to address such conditions.

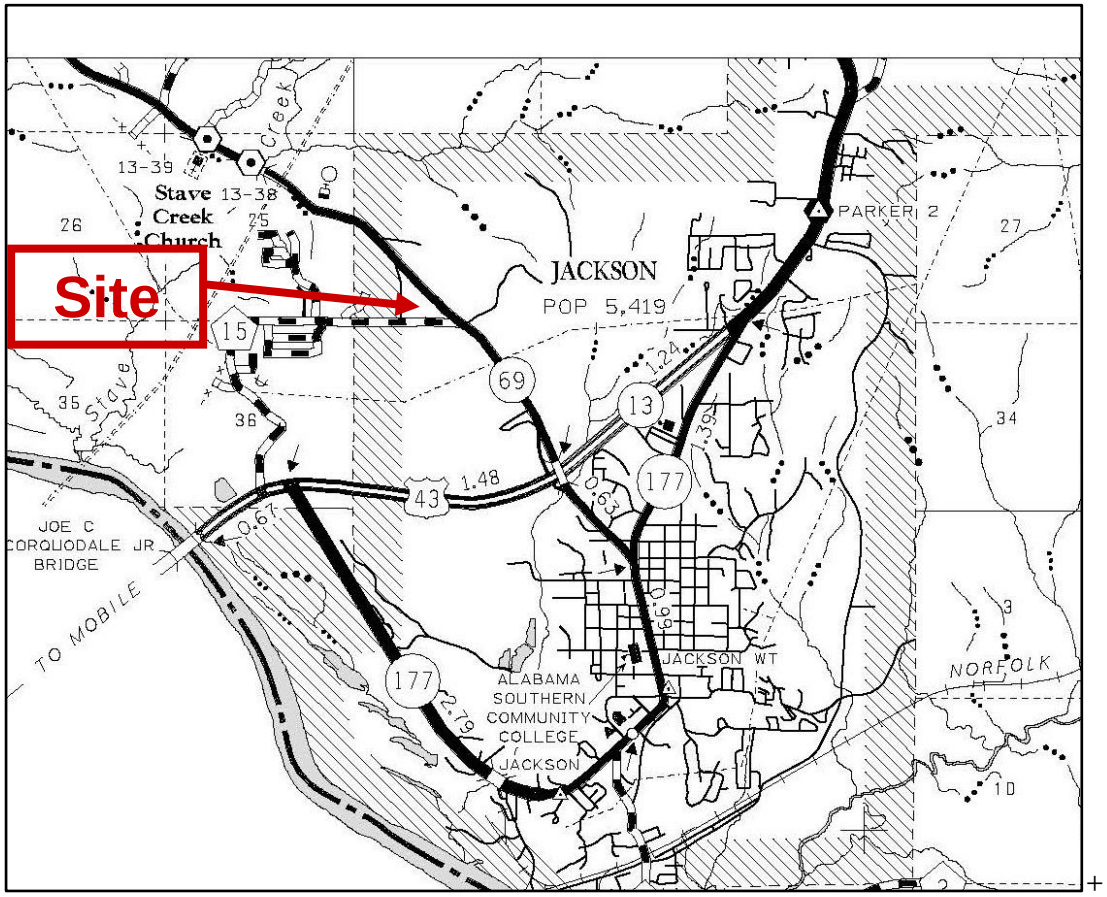
LIMITATIONS

The evaluations and recommendations presented by this report are based on the data obtained from the soil borings drilled at the locations shown on the boring location plan and the laboratory testing program performed. Additional assumptions may have been outlined in the discussions contained in previous sections of this report.

We prepared this report to aid in the evaluation of this site and to assist in the design of the project. The recommendations provided are based in part on the project information provided to GET and only apply to the specific project and site discussed in this report. If the project description or stated assumptions are incorrect or if additional information is available, correct or additional information should be conveyed to GET for review. Recommendations can then be modified if warranted.

Our professional services for this project have been performed, findings obtained, and recommendations prepared in accordance with generally accepted engineering principles and practices. The services identified herein were completed in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality and under similar conditions as this project. No other representation, express or implied, is included or intended, and no warranty or guarantee is included or intended in this report or any other instrument of service.



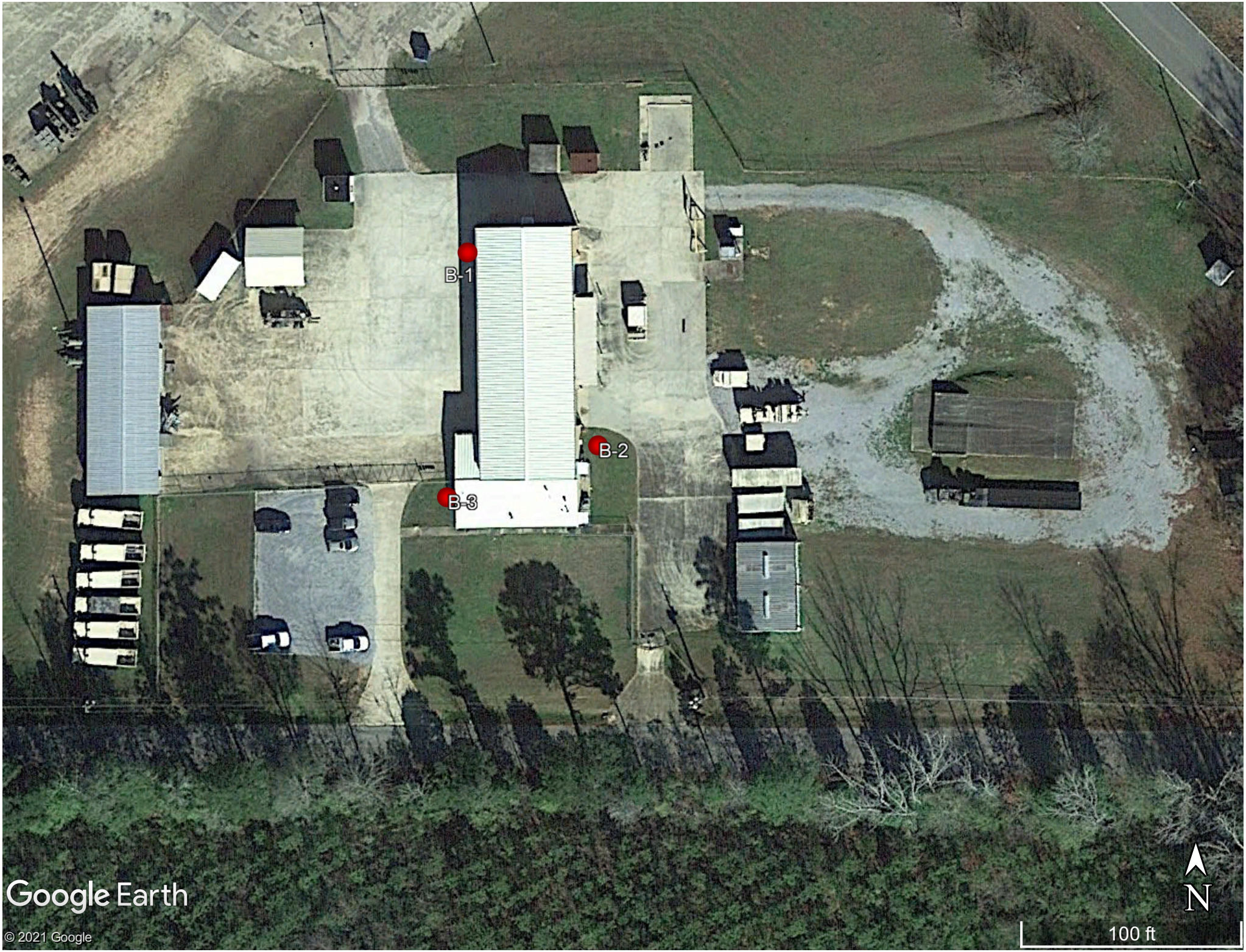


Source – General Highway Map Clarke County, Alabama, Alabama Dept. of Transportation, 2010

GEOTECHNICAL ENGINEERING TESTING, INC.	**Jackson Fire Station #3** **Jackson, Alabama**	**Highway Location Map** **Figure 1**

APPENDIX A

BORING LOCATION PLAN


B-1
B-2
B-3
Google Earth
© 2021 Google
N
100 ft

APPENDIX B

LOGS OF BORING

PROJECT NAME:

G.E.T. PROJ. NUMBER:

PROJECT LOCATION:

DRILL RIG:

DRILL METHOD:

DRILL CREW:

DATE DRILLED:

BORING DEPTH: 0 FT.

BORING ELEV.:

DATUM:

WATER DEPTH:

REMARKS:

GEOTECHNICAL ENGINEERING TESTING, INC.

BORING NUMBER: LEGEND

BORING LOCATION:

DEPTH IN FEET	LOG	DESCRIPTION	SAMPLE NO.	S.P.T. N_f	S.P.T. N_c	W.C. %	ATTERBERG LIMITS L.L.	ATTERBERG LIMITS P.I.	DRY UNIT WT. pcf	% MINUS #200	SHEAR STRENGTH tsf	UNIFIED CLASS
0		TOPSOIL		N_f - Standard penetration test value determined in the field - ASTM D1586 (WOH indicates penetration of sampler under weight of 104 lb hammer)	Nc - Standard penetration test value of sand corrected for overburden by Peck-Hansen-Thornburn, 1974	w.c. % - Percent water content based on dry soil weight	L.L. - Liquid Limit	P.I. - Plasticity Index	Unit Wt., pcf - Dry unit weight of soil, pounds per cubic ft	% Minus #200 - Percent by weight of soils finer than #200 sieve	c - Cohesion, tons per square ft Φ- Angle of Internal fiction, degrees s - Vane shear strength, tons per square ft c*- Values measure with a pocket penetrometer	Classification according to the Unified Classification System
5		SAND										
10		CLAY										
15		SILT										
20		GRAVEL										
25		ORGANICS										
30		PEAT										
35		SILTY SAND (EXAMPLE OF A SOIL MIXTURE)										
40		SPLIT-SPOON SAMPLE (STANDARD PENETRATION TEST)										
45		UNDISTURBED TUBE SAMPLE										
50		SAMPLE NOT RECOVERED										
55		VANE SHEAR										
60		B.T. @ 0 FT										
65												
70												

MOD DEEP BORING LOG W/O NC VALUES LEGEND.GPJ GETI_AL.GDT 3/27/18

NOTE: The stratification lines shown represent the approximate boundary between soil types and the transition may be gradual. The groundwater level stated is for conditions at the time of boring and the level may fluctuate large amounts for other conditions or seasons.

Reviewed By:

PROJECT NAME: Jackson Fire Station #3

G.E.T. PROJ. NUMBER: 21-159

PROJECT LOCATION: Jackson, Alabama

DRILL RIG: SIMCO 2800

DRILL METHOD: SOLID STEM AUGER

DRILL CREW: G&E, G&E(LOGGER)

DATE DRILLED: 6/1/21

BORING DEPTH: 25 FT.

BORING ELEV.:

DATUM:

WATER DEPTH: NWTE

REMARKS:

GEOTECHNICAL ENGINEERING TESTING, INC.

BORING NUMBER: B-2

BORING LOCATION: SEE BORING LOCATION PLAN

DEPTH IN FEET	LOG	DESCRIPTION	SAMPLE NO.	S.P.T. N_f	S.P.T. N_C	W.C. %	ATTERBERG LIMITS L.L.	ATTERBERG LIMITS P.I.	DRY UNIT WT. pcf	% MINUS #200	SHEAR STRENGTH tsf	UNIFIED CLASS
0		Firm red clayey sand	1	11		8	24	14	128	35.4	c=2.91	SC
			2	10							c*=1.10	
5			3	8		18	48	37		57.3	c*=1.20	CL
		Stiff to medium consistency red sandy clay										
			4	7							c*=1.40	
10												
			5	7								
15		Loose red clayey sand										
			6	6								
20												
		Firm light red silty clayey sand w/ gravel	7	13		8	18	4		27.4		SC-SM
25		B.T. @ 25 FT										
30												
35												

NOTE: The stratification lines shown represent the approximate boundary between soil types and the transition may be gradual. The groundwater level stated is for conditions at the time of boring and the level may fluctuate large amounts for other conditions or seasons.

Reviewed By:

MOD DEEP BORING LOG W/O NC VALUES 21-159 JACKSON FIRESTATION #3.GPJ GETI_AL.GDT 6/4/21

PROJECT NAME: Jackson Fire Station #3

G.E.T. PROJ. NUMBER: 21-159

PROJECT LOCATION: Jackson, Alabama

DRILL RIG: SIMCO 2800

DRILL METHOD: SOLID STEM AUGER

DRILL CREW: G&E, G&E(LOGGER)

DATE DRILLED: 6/1/21

BORING DEPTH: 25 FT.

BORING ELEV.:

DATUM:

WATER DEPTH: NWTE

REMARKS:

GEOTECHNICAL ENGINEERING TESTING, INC.

BORING NUMBER: B-3

BORING LOCATION: SEE BORING LOCATION PLAN

DEPTH IN FEET	LOG	DESCRIPTION	SAMPLE NO.	S.P.T. N_f	S.P.T. N_C	W.C. %	ATTERBERG LIMITS L.L.	ATTERBERG LIMITS P.I.	DRY UNIT WT. pcf	% MINUS #200	SHEAR STRENGTH tsf	UNIFIED CLASS
0			1	8							c*=1.80	
			2	6		15	34	22		50.8	c*=1.50	CL
5			3	9		18	40	18	105	56.2	c=0.77	CL
		Medium to stiff red sandy clay										
			4	14							c*=1.70	
10												
			5	12		12	30	16		34.7		SC
15												
		Firm red clayey sand										
			6	11								
20												
		Firm light red silty clayey sand w/ gravel	7	15								
25		B.T. @ 25 FT										
30												
35												

NOTE: The stratification lines shown represent the approximate boundary between soil types and the transition may be gradual. The groundwater level stated is for conditions at the time of boring and the level may fluctuate large amounts for other conditions or seasons.

Reviewed By:

APPENDIX C

LABORATORY TEST RESULTS

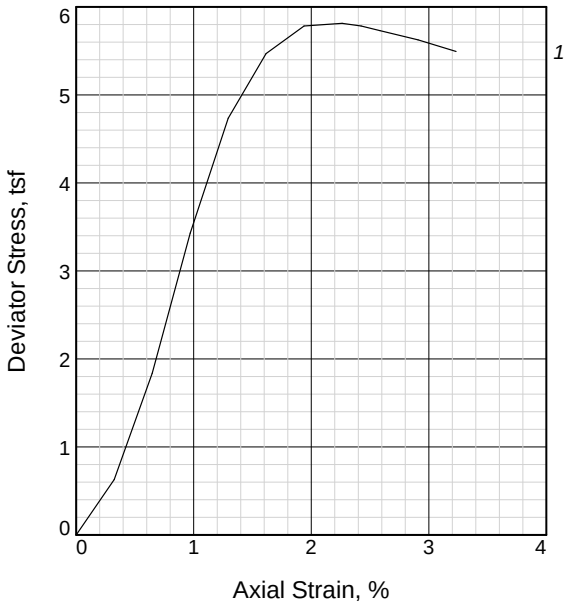
Boring Location	Boring No.	Sample ID	Depth (ft)	Water Content (%)	Atterberg Limits			% Gravel	% Sand	% Passing 200 (if hydrometer data available)		D_{50} (mm)	USCS	AASHTO Class
					LL	PL	PI			% Silt	% Clay			
SEE BORING LOCATION PLAN	B-2	1	0.5	8	24	10	14	0.0	64.6	35.4		0.192	SC	A-2-6 (1)
SEE BORING LOCATION PLAN	B-2	3	4.5	18	48	11	37	0.0	42.7	57.3			CL	A-7-6 (17)
SEE BORING LOCATION PLAN	B-2	7	23.5	8	18	14	4	14.0	58.6	27.4		0.371	SC-SM	A-2-4 (0)
SEE BORING LOCATION PLAN	B-3	2	2.5	15	34	12	22	0.3	49.0	50.8			CL	A-6 (7)
SEE BORING LOCATION PLAN	B-3	3	4.5	18	40	22	18	0.0	43.8	56.2			CL	A-6 (7)
SEE BORING LOCATION PLAN	B-3	5	13.5	12	30	14	16	0.0	65.3	34.7		0.198	SC	A-2-6 (1)

SOIL CLASSIFICATION SUMMARY 21-159 JACKSON FIRESTATION #3.GPJ GETI AL.GDT 6/4/21

GEOTECHNICAL ENGINEERING TESTING, INC.

SOIL CLASSIFICATION SUMMARY

GET PROJECT NUMBER: 21-159
PROJECT NAME: Jackson Fire Station #3
COUNTY: Clarke



Sample No.		1
Initial	Water Content, %	7.7
	Dry Density, pcf	123.3
	Saturation, %	57.8
	Void Ratio	0.3573
	Diameter, in.	1.38
	Height, in.	3.09
At Test	Water Content, %	13.3
	Dry Density, pcf	123.3
	Saturation, %	100.0
	Void Ratio	0.3573
	Diameter, in.	1.38
	Height, in.	3.09
Strain rate, in./min.		0.03
Back Pressure, psi		0.00
Cell Pressure, psi		0.80
Fail. Stress, tsf		5.81
Strain, %		2.3
Ult. Stress, tsf		5.81
Strain, %		
σ_1 Failure, tsf		5.87
σ_3 Failure, tsf		0.06

Type of Test:
Unconsolidated Undrained
Sample Type: Split Spoon
Description: Dusky Red Clayey Sand

LL= 24 **PL=** 10 **PI=** 14
Specific Gravity= 2.68
Remarks:

Figure _____

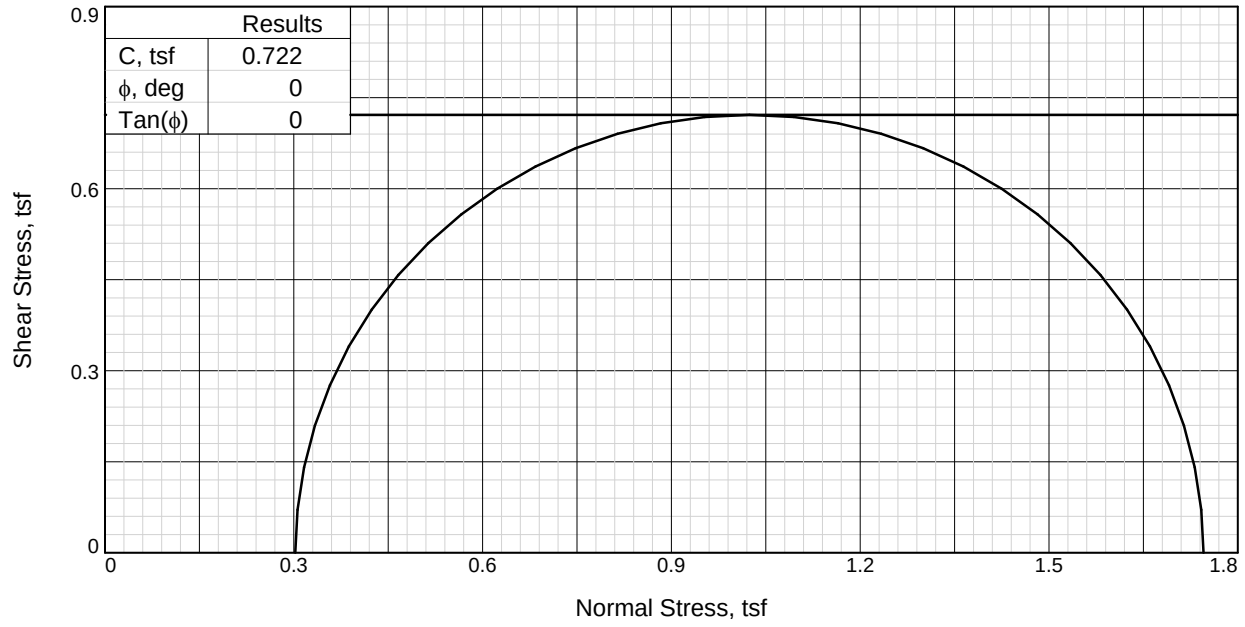
Client:

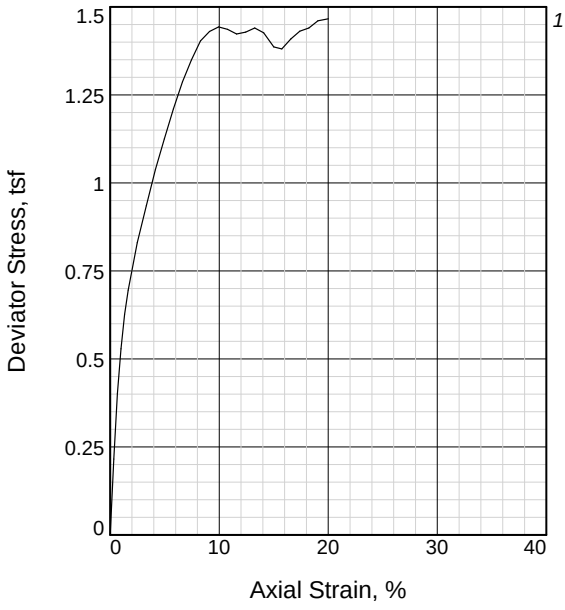
Project: Jackson Firestation #3
Jackson, Alabama
Sample Number: B-2, S-1 **Depth:** 0.0'-2.0'

Proj. No.: 21-159 **Date Sampled:** 06-02-2021

TRIAXIAL SHEAR TEST REPORT
Geotechnical Engineering-Testing, Inc.
Mobile, AL

Tested By: RGP





Sample No.		1
Initial	Water Content, %	18.5
	Dry Density, pcf	104.6
	Saturation, %	82.6
	Void Ratio	0.5995
	Diameter, in.	1.40
	Height, in.	3.02
At Test	Water Content, %	22.4
	Dry Density, pcf	104.6
	Saturation, %	100.0
	Void Ratio	0.5995
	Diameter, in.	1.40
	Height, in.	3.02
Strain rate, in./min.		0.03
Back Pressure, psi		0.00
Cell Pressure, psi		4.20
Fail. Stress, tsf		1.44
Strain, %		9.9
Ult. Stress, tsf		1.44
Strain, %		
σ_1 Failure, tsf		1.75
σ_3 Failure, tsf		0.30

Type of Test:
Unconsolidated Undrained
Sample Type: Split Spoon
Description: Dusky Red Sandy Lean Clay

LL= 40 **PL=** 22 **PI=** 18
Specific Gravity= 2.68
Remarks:

Figure _____

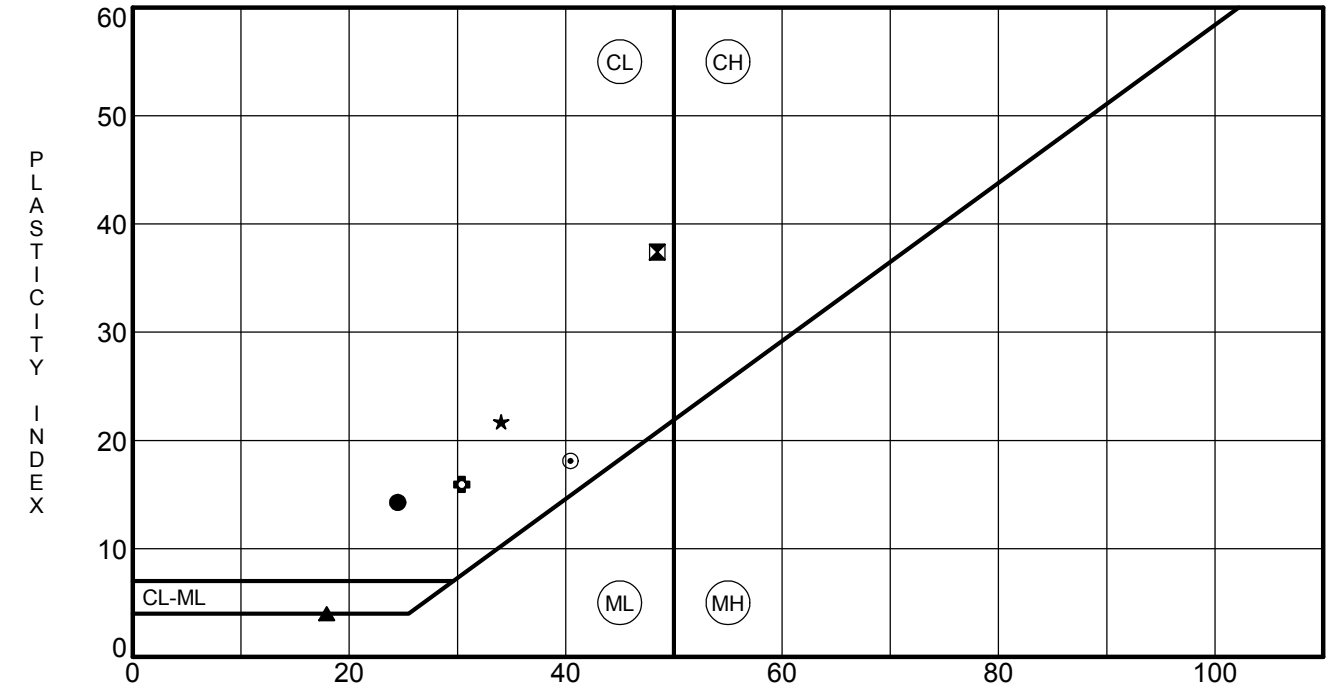
Client:

Project: Jackson Firestation #3
Jackson, Alabama
Sample Number: B-3, S-3 **Depth:** 4.0'-6.0'

Proj. No.: 21-159 **Date Sampled:** 06-02-2021

TRIAXIAL SHEAR TEST REPORT
Geotechnical Engineering-Testing, Inc.
Mobile, AL

Tested By: RGP



Test Method: _____

Boring ID		Depth (ft.)	LL	PL	PI	Fines	Classification
●	B-2	0.5	24	10	14	35.4	CLAYEY SAND (SC)
⊠	B-2	4.5	48	11	37	57.3	SANDY LEAN CLAY (CL)
▲	B-2	23.5	18	14	4	27.4	SILTY, CLAYEY SAND (SC-SM)
★	B-3	2.5	34	12	22	50.8	SANDY LEAN CLAY (CL)
⊙	B-3	4.5	40	22	18	56.2	SANDY LEAN CLAY (CL)
✿	B-3	13.5	30	14	16	34.7	CLAYEY SAND (SC)

GEOTECHNICAL ENGINEERING TESTING, INC.

ATTERBERG LIMITS RESULTS

PROJECT NAME: Jackson Fire Station #3
G.E.T. PROJ. NUMBER: 21-159
PROJECT LOCATION: Jackson, Alabama