

Exhibit AA.

Magnolia Ridge Logistics Park

Preliminary Geotechnical

Engineering Report



**Magnolia Ridge Logistics
Park Preliminary
Geotechnical Engineering
Report**

GEOTECHNICAL EXPLORATION REPORT

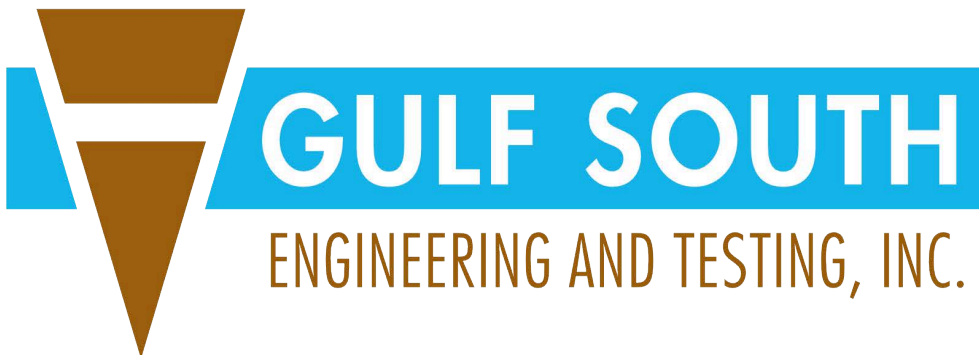
**MAGNOLIA RIDGE LOGISTICS PARK
LED SITE CERTIFICATION REPORT
ASCENSION PARISH, LA**

FOR

**BRAC
BATON ROUGE, LA**

GULF SOUTH ENGINEERING AND TESTING FILE NO. 25-094

October 15, 2025



ESTABLISHED 2011

**GEOTECHNICAL
ENGINEERING AND
CONSTRUCTION
MATERIALS TESTING**



October 15, 2025

BRAC
568 Laurel Street
Baton Rouge, LA 70805

Attn: Ms. Adeline Lepine
Email: adeline@brac.org

Re: Geotechnical Exploration Report
Magnolia Ridge Logistics Park
LED Site Certification Report
Ascension Parish, LA
Gulf South Engineering & Testing File No. 25-094

Dear Adeline,

Please find attached our geotechnical exploration report that was completed for the referenced project. We appreciate the opportunity to serve your geotechnical needs. Please contact us should you have any questions.

Sincerely,

GULF SOUTH ENGINEERING AND TESTING, INC.

CHAD M. POCHE, P.E.
Executive Vice President

BRYSON S. BEARD, P.E.
Geotechnical Engineer

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GEOTECHNICAL EXPLORATION REPORT

MAGNOLIA RIDGE LOGISTICS PARK LED REPORT ASCENSION PARISH, LA

GULF SOUTH ENGINEERING AND TESTING FILE NO. 25-094

1.0 INTRODUCTION & LIMITATIONS

This report contains the results of a geotechnical exploration made at the subject site. Instructions to proceed with the exploration were received from BRAC (Client) via approval of our proposal dated August 1, 2025.

This report is a preliminary exploration for prospective parties to use for planning purposes. A more detailed and project specific exploration should be completed once plans are finalized. Gulf South should be retained for further exploration.

The study included drilling soil test borings and the performance of soil mechanics laboratory tests to evaluate the soil's physical characteristics. Engineering analyses were made and based on the field and laboratory test data to develop recommendations for the project.

The analyses and recommendations presented in this report are based on the provided project information and the results of the exploration. While it is not likely that conditions will differ significantly from those observed during the field exploration it is always possible that variations can occur away from the borehole location(s).

If it becomes apparent during construction that subsurface conditions differing significantly from those observed in our boring(s) are encountered, Gulf South should be notified. Also, should the nature of the project change or should any of the stated assumptions be inaccurate, the recommendations provided in this report should be re-evaluated.

This report has been prepared for the exclusive use of our Client. The recommendations provided in this report are site specific and are not intended for use at any other site or for any other project. This report provides

recommendations for design and construction and should not be used as construction specifications.

Gulf South considers the materials testing and onsite inspection during construction an extension of our geotechnical exploration and a key component to ensuring the recommendations provided in this report are followed. For this type of project, these services may consist of earthwork testing and monitoring, pile/shaft inspection and monitoring, vibration monitoring, concrete testing and inspection, and steel inspection. Gulf South should be retained to provide the construction inspection services for this project.

2.0 SOIL BORINGS

Two (2) undisturbed soil borings were drilled to depths of 100 feet (Boring B-1) and 50 feet (Boring B-2) below the ground surface on September 8, 2025 and July 9, 2025. The borings were performed using an ATV mounted drilling rig. The approximate soil boring locations are shown on Figure No. 1. Historical boring data was also incorporated from Gulf South's previous exploration (GSET File No. 24-057; dated November 6, 2024) onsite to satisfy the requirements from LED. Boring R-2 was drilled to a depth of 40 feet below the ground surface on September 8, 2024. A soil design profile is provided on Figure No. 2.

Undisturbed sampling was performed continuously to the approximate 12 ft. depth then on approximate 5-foot centers in all cohesive or semi-cohesive materials with a three-inch diameter thin wall tube sampler. The samples were extruded in the field, representative portions of each sample were trimmed and placed in moisture proof containers, the samples were properly labeled, and secured for transport to the laboratory.

When cohesionless material was encountered or when soils could not be adequately sampled by undisturbed methods, the Standard Penetration Test was performed. This test consists of driving a two-inch diameter split spoon sampler a total of approximately 18 inches with a 140 lb. hammer falling 30 inches. The number of blows required to drive the sampler per 6-inch increment is recorded and gives an indication of the density of the material.

The blows per foot shown on the boring log are the total of the blow counts for the final 12 inches of penetration.

3.0 LABORATORY TESTING

Soil mechanics laboratory tests were performed on samples obtained from the borings. The testing consisted of natural moisture content, unit weight, Atterberg limits, and unconfined compression strength testing. The results of the laboratory tests are shown on the soil boring logs provided in the Appendix of this report.

4.0 SUBSOIL CONDITIONS

4.1 Subsoil Description

Reference to the borings show interbedded layers of clay and silty clay from the ground surface to the deepest boring's termination depth of 100 feet.

4.2 Groundwater

At the time of making the borings, groundwater was first encountered at Boring R-2 at the approximate 8 foot depth below the ground surface. After waiting approximately fifteen minutes, it was observed ground water rose to the approximate 6 foot depth below the ground surface. Groundwater was not encountered in Borings B-1 and B-2 before wet rotary methods were implored at the approximate 12 foot depth.

These observations were made during a short period of time and groundwater may not have become fully realized at the time of observation. Groundwater should be expected within the upper 15 to 20 feet and can fluctuate with seasonal precipitation, drainage, and prolonged drought. If the depth to groundwater is important to construction, it should be measured at that time.

5.0 FURNISHED INFORMATION AND FOUNDATION RECOMMENDATIONS

The purpose of this exploration is to provide a preliminary exploration for a Louisiana Economic Development (LED) Site Certification. We understand the

aim of the exploration is to characterize the subsoils of the site and to provide both shallow and deep foundation recommendations. The recommendations provided are generalized for this site and we recommend further exploration and testing once site plans are finalized.

If shallow foundations are selected, footings should be placed to bear at least 2 feet below the ground surface within firm in-place soils or compacted select fill. Alternatively, should the values provided in this report for bearing and settlement not be tolerable, deep foundations should be used for support. The provided borings are for general characterization of the subsurface soils and may vary within the project site. Additional borings should be completed for specific structures. Gulf South should be retained for further exploration.

Structural analyses and the structural adequacy of the foundations are outside our scope of work for the project. Utilities to and from the structures should be attached to the slabs using suitable hangers and flexible connections.

Preliminary laboratory test results indicate the near surface soils primarily consist of fat and silty clays that have slight shrink/swell potential. Care should be taken during and after construction to limit activities that could affect moisture within the soils below and around the foundations. By precluding surface waters from saturating the soils, the resulting volumetric movements will be minimized. In this regard, good surface drainage should be assured with positive collection and runoff of these waters.

6.0 SHALLOW FOUNDATIONS

6.1 Net Allowable Soil Bearing Capacity

We estimate net allowable soil bearing capacities of 1,700 lbs. per sq. ft. (psf) and 2,000 psf are available for design of shallow strip or square footings, respectively. These allowable soil bearing capacities assume the footings are seated in firm, natural, soils as described and encountered in our borings or compacted, structural, fill.

Foundation excavations should be thoroughly inspected to assure that the footings are seated in firm and well-drained soil. The allowable soil bearing capacities contain a factor of safety of at least 3.0 against failure but do not preclude settlements, as will be discussed.

6.2 Estimated Settlement

Footings. Settlement analyses were made using applied pressures equal to 100% of the allowable soil bearing values. Long-term settlement of square footings no larger than 6 feet in width and strip footings no wider than 3 feet in width is estimated to be on the order of 1 inch (or less). Settlement will increase with the size of the footing and/or loading and if larger footings are needed for support, revised settlement analyses should be made.

In view of the magnitude of the estimated settlement and to bridge any undetected soft or loose areas, good rigidity should be assured in the foundations to minimize the effects of differential settlements.

Adequate steel reinforcement should be designed and included within the foundations. If the estimated settlements for shallow footings are considered prohibitive, deep foundations should be used for support.

6.3 Site Preparation and Fill Materials

Prior to construction, the foundation areas should be stripped of all vegetation, debris, soft or loose surface soils, deleterious materials, etc., and should be well drained. Subsequent to stripping, the foundation areas should be proof rolled using a heavy wheeled vehicle.

Any “soft/loose” soils noted during the proof rolling or observed within excavations should be removed to a depth where stiffer soils are encountered or to a minimum depth of 2 feet. Excavated soils should be replaced with controlled-compacted structural fill. If fill is needed, the area should be brought to grade using a clean, select, fill material free from debris or organic matter. Based upon our experience onsite, during periods of constant or high intensity rainfall, groundwater may become perched within the upper 2 to 4 feet of the subsurface soils. The contractor onsite should be able to mitigate this potential issue if it is to arise.

A cohesionless soil described as clean sand with less than 10% passing the U.S. No. 200 Sieve may be used for fill. Alternatively, a lean, silty or sandy clay (CL - USCS Classification) may be used for fill. The clay fill should have a Liquid Limit of less than 40 and a Plasticity Index (PI) of less than 20.

6.4 Fill Placement and Compaction

Fill should be placed in 10 to 12-inch loose lifts. Minimum compaction criteria of a dry density at least equal to 95% of its maximum, as determined by the Standard Proctor compaction test (ASTM D698), should be used for fill that will support foundations.

7.0 DEEP FOUNDATIONS

As an alternative to shallow foundations, a deep foundation system may be used for the support of structures not feasible for shallow foundations. Consideration should be given to supporting all loads (columns, walls, and floors) on piles if deep foundations are used.

7.1 Ultimate Pile Load Capacities

Ultimate pile load capacity curves were made using Ensoft's Apile (version 2025.11.1) to determine the estimated ultimate pile load capacities for a 14-inch diameter open-ended, steel, pipe pile and a 14-inch square, pre-cast, concrete pile. Ultimate pile load capacity curves are provided on Figure Nos. 3 and 4 and consider the piles are driven from current grade with pile butts at or near the current ground surface. The piles will receive their support primarily through skin friction.

The ultimate pile load capacities provide for a 2-foot cutoff below the existing ground surface, assume the piles are vertical, and do not include the weight of the pile. The compression capacities provided are ultimate values and contain a factor of safety of 1 against failure of a single pile through the soil.

We recommend that if a load test is performed (static or dynamic), a factor of safety of 2 may be used. If no load test is performed, a factor of safety of 3 should be used. A factor of safety of 3 should be used for tension

capacities regardless of if a load test is completed. The provided capacities may be increased by 30% for transient loading conditions such as wind.

The analyses for pile capacities are based on a soil-pile relationship only. The structural capacity of the piles and their connections to transmit these loads should be determined by a structural engineer.

7.2 Pile Driving

In general, driving of SPC piles should be limited to a rate of 50 blows per foot using a minimum driving energy of 19,500 foot-pounds per blow (Vulcan No. 06 hammer, or equivalent). Driving of OSP piles should be limited to a rate of 75 blows per foot using a minimum driving energy of 24,000 foot-pounds per blow (Vulcan No. 08 hammer, or equivalent).

Care should be taken during pile driving to ensure integrity of the piles and to limit damage. A qualified technician should be present to observe and record driving.

Predrilling for pile installation does not appear to be necessary. If used, predrilling should be made with a bit that is no larger than 85% of the pile's tip diameter or side dimensions and should not penetrate to within 5 feet of the pile's design tip depth. Predrilling may also be used to reduce vibrations.

7.3 Probe Piles and Pile Load Tests

It is recommended that probe type piles be installed at the site to establish installation characteristics and pile lengths. The probe piles should be of the same type and size as the job piles and should be installed with the same equipment and techniques that will be used to install the job piles.

We recommend the probe piles be allowed to set for a period of 14 days and at least one of the probe piles be tested to failure in accordance with ASTM D 1143. Gulf South should be retained to evaluate and verify the estimated pile load capacities. If a static or dynamic load test is not used, a factor of safety of 3 should be used for the provide compression capacities.

7.4 Vibrations

Vibrations due to construction activities should be expected and they should be monitored during all construction activities. In general, consistent vibrations should be limited to 0.25 inch/sec. (average peak particle velocity) at all existing nearby sensitive structures. Construction should be stopped if peak values exceed 0.5 in./sec. and construction methods be re-evaluated.

7.5 Drag Load

When fill is placed on the site, the underlying compressible soils consolidate, resulting in surface settlement. As the compressible soils consolidate, “negative skin friction” or downdrag can be imparted on piles. This can result in a load that is additive to structural loads on the piles/shafts and will increase settlement of the piles/shafts and structures.

Drag load is dependent on the thickness of fill, compressibility of the soils, time-rate of consolidation, and pile size and length. Gulf South should be notified if more than 2 feet of fill is expected to be placed on site.

7.6 Group Effect

The effects of pile grouping on single pile load capacities is dependent on pile spacing, pile lengths, and soil characteristics throughout the pile length and below the pile tip. Assuming a minimum center to center spacing of 3 ft., group effect should be unimportant for pile clusters of up to 6 piles. Group effect may become important for larger clusters and should be evaluated when actual pile layouts are known using the criteria provided on Figure No. 5.

7.7 Estimated Settlement for Deep Foundations

Settlement of pile supported footings and slabs constructed in single, widely, spaced rows, or in clusters of up to 4 to 6 piles is estimated to be 1 inch or less for the provided capacities and tip depths. These values assume piles are driven/drilled to the specified tip depths and not loaded greater than the calculated carrying capacities.

8.0 CLOSING

Gulf South is available to answer any questions you may have concerning this report. Should additional analyses be required or requested, additional fees may be necessary.

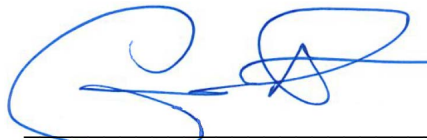
As previously discussed, Gulf South considers the materials testing and onsite inspection during construction an extension of our geotechnical exploration. Gulf South should be retained to provide the construction inspection services.

The issuance of this report completes the geotechnical exploration scope and Gulf South’s involvement on the project. Retaining Gulf South as a vital member of the design team can add considerable value. Over the next few months, the project will incur many changes, challenges, and opportunities – all of which will occur without our knowledge and in some cases rendering our recommendations compromised or irrelevant. Gulf South’s additional involvement will be a small price to pay for the peace of mind that any foundation, earthwork, and paving components of the project are fully integrated during design, resulting in potential cost savings and efficient construction. Please consider including Gulf South as a full member of your design team throughout the project duration.

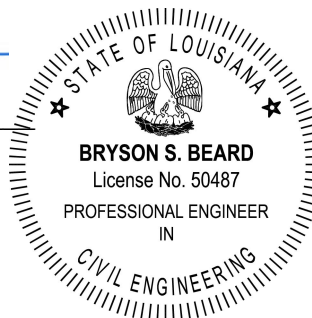
We appreciate the opportunity to provide this report and look forward to working with you again in the future.

Sincerely,

GULF SOUTH ENGINEERING AND TESTING, INC.



CHAD M. POCHE, P.E.
Executive Vice President



BRYSON S. BEARD, P.E.
Geotechnical Engineer

FIGURES



R-2

B-2

B-1

1066

W Robert Wilson Rd

W Robert Wilson Rd

W R



FIGURE NO.1


PROJECT

Name: Magnolia Ridge Logistics Park
Number: 25-094

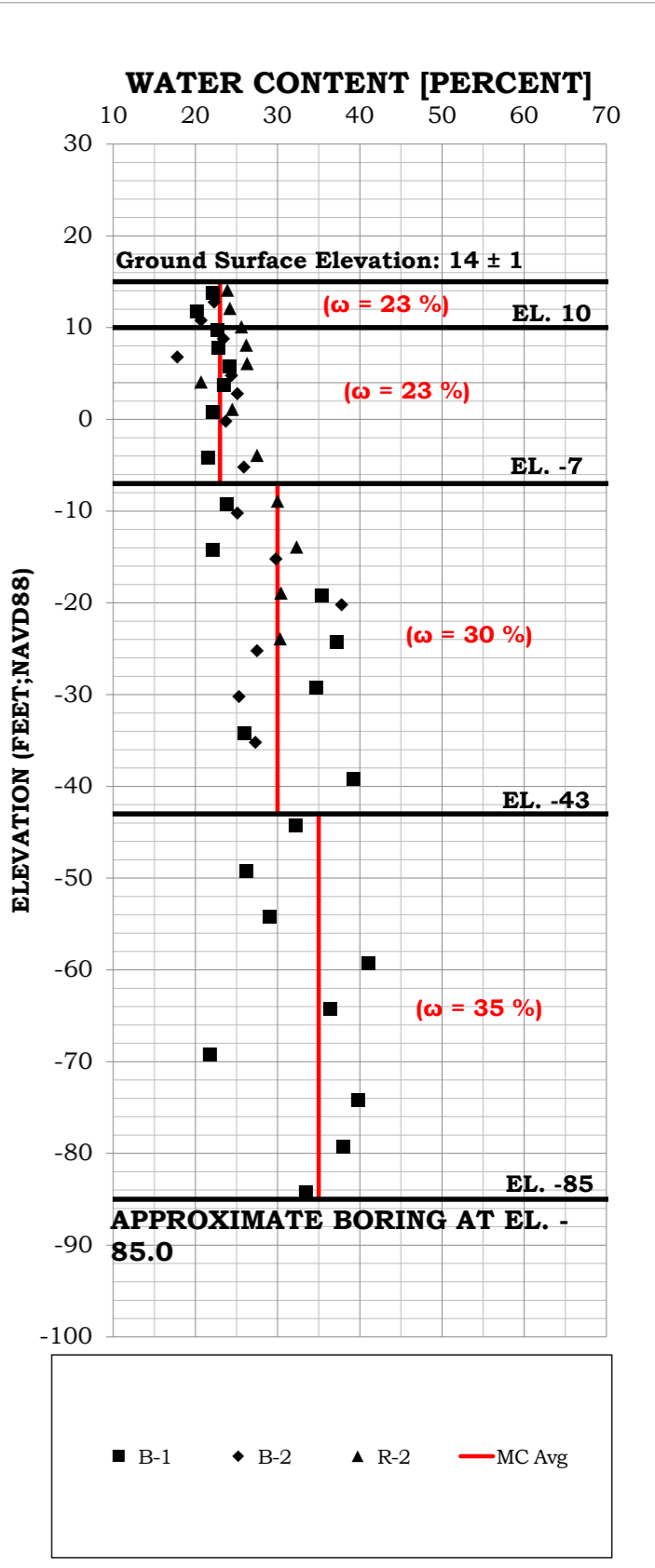
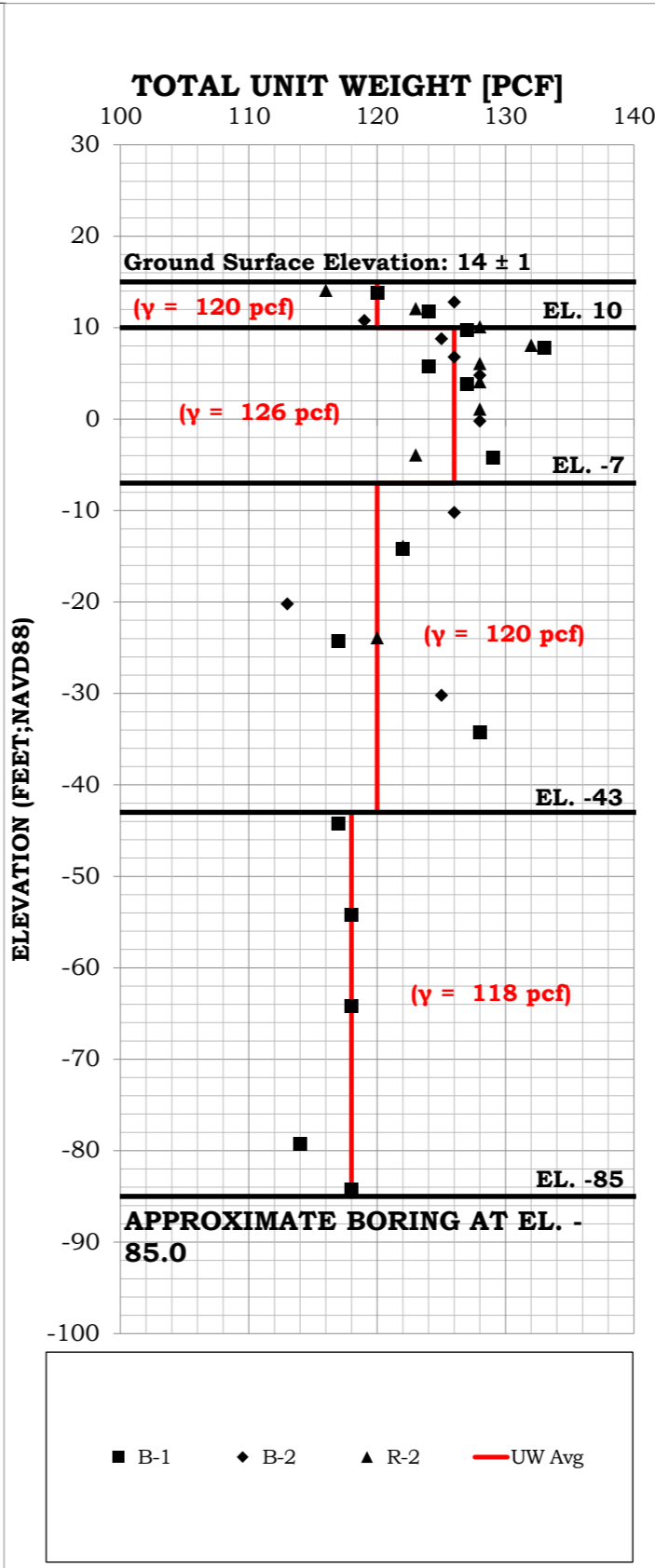
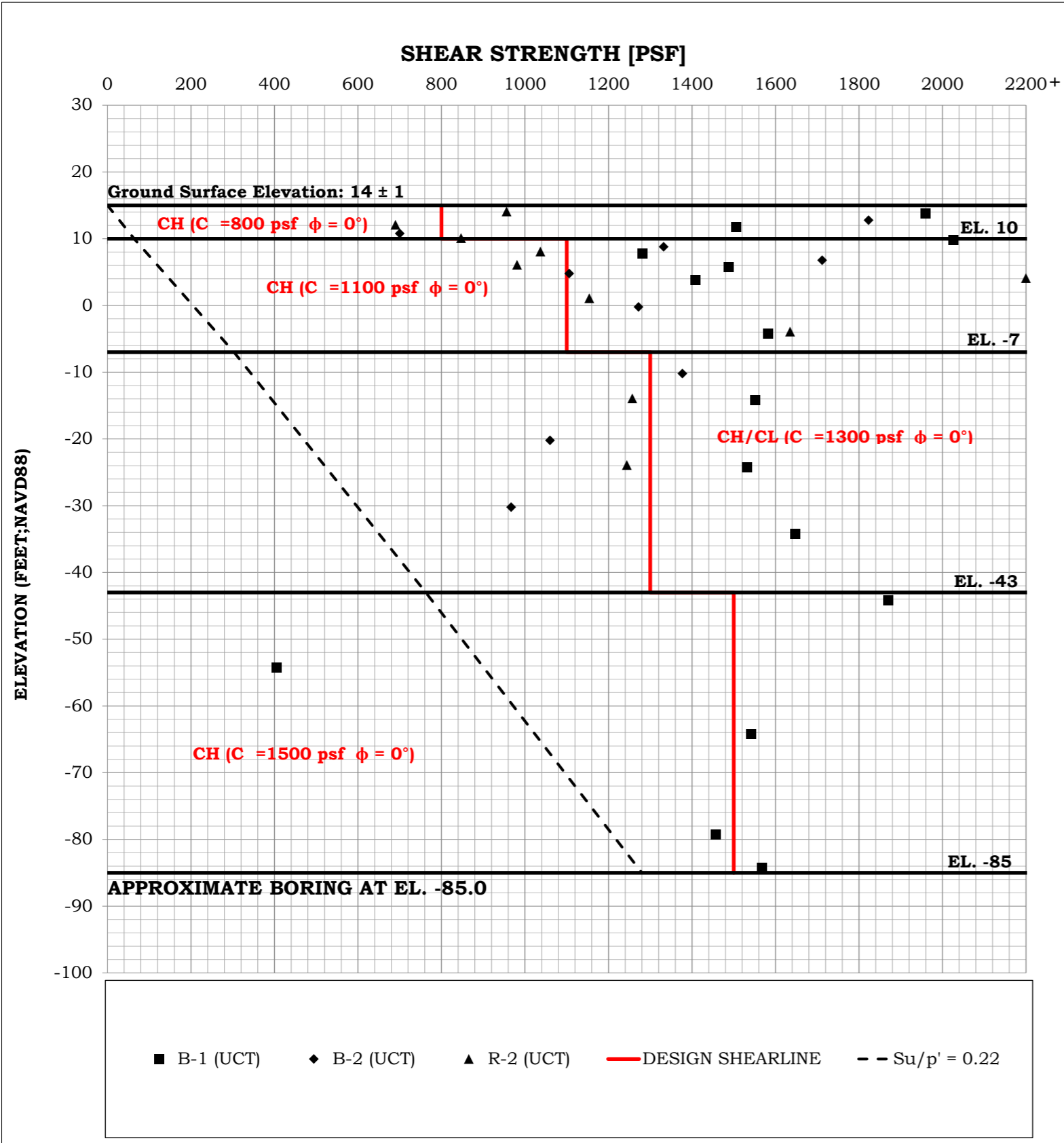
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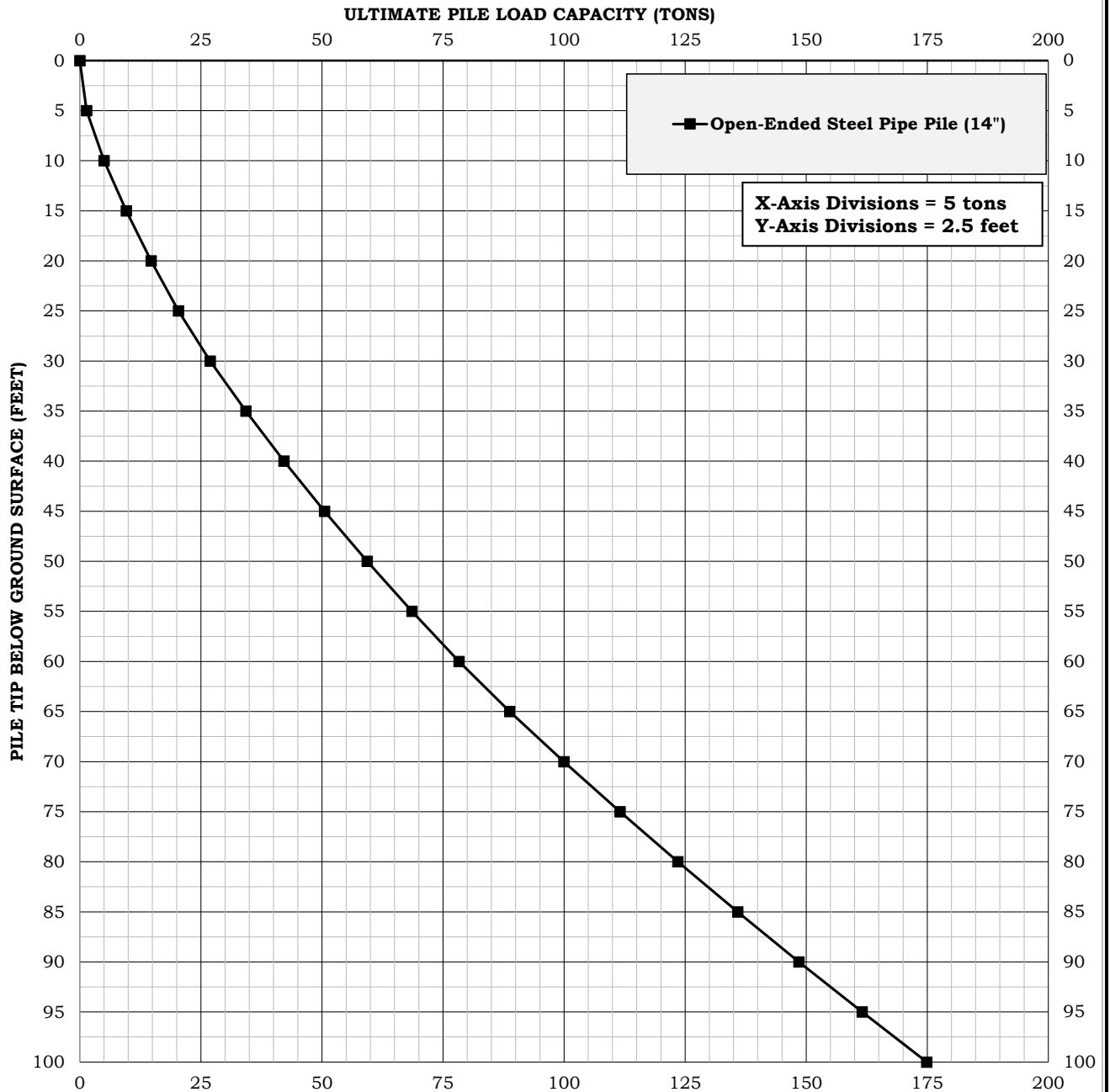
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30.218417, -90.980144

SYMBOL KEY

 Soil Boring

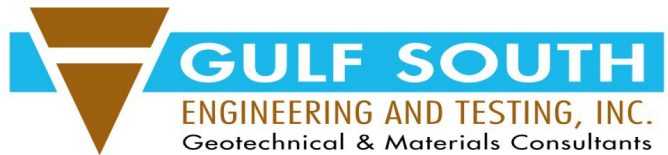
DESIGN SHEARLINE FOR MAGNOLIA RIDGE LOGISTICS PARK (BORINGS B-1, B-2, AND R-2)





DESIGN ASSUMPTIONS

1. Minimal Effects of downdrag due to fill
2. Pile Butt is Assumed at existing ground surface.
3. Neglects Upper 5 Feet of Soil
4. Assumes no soil plug to develop
5. Assumes wall thickness is 0.2 inches

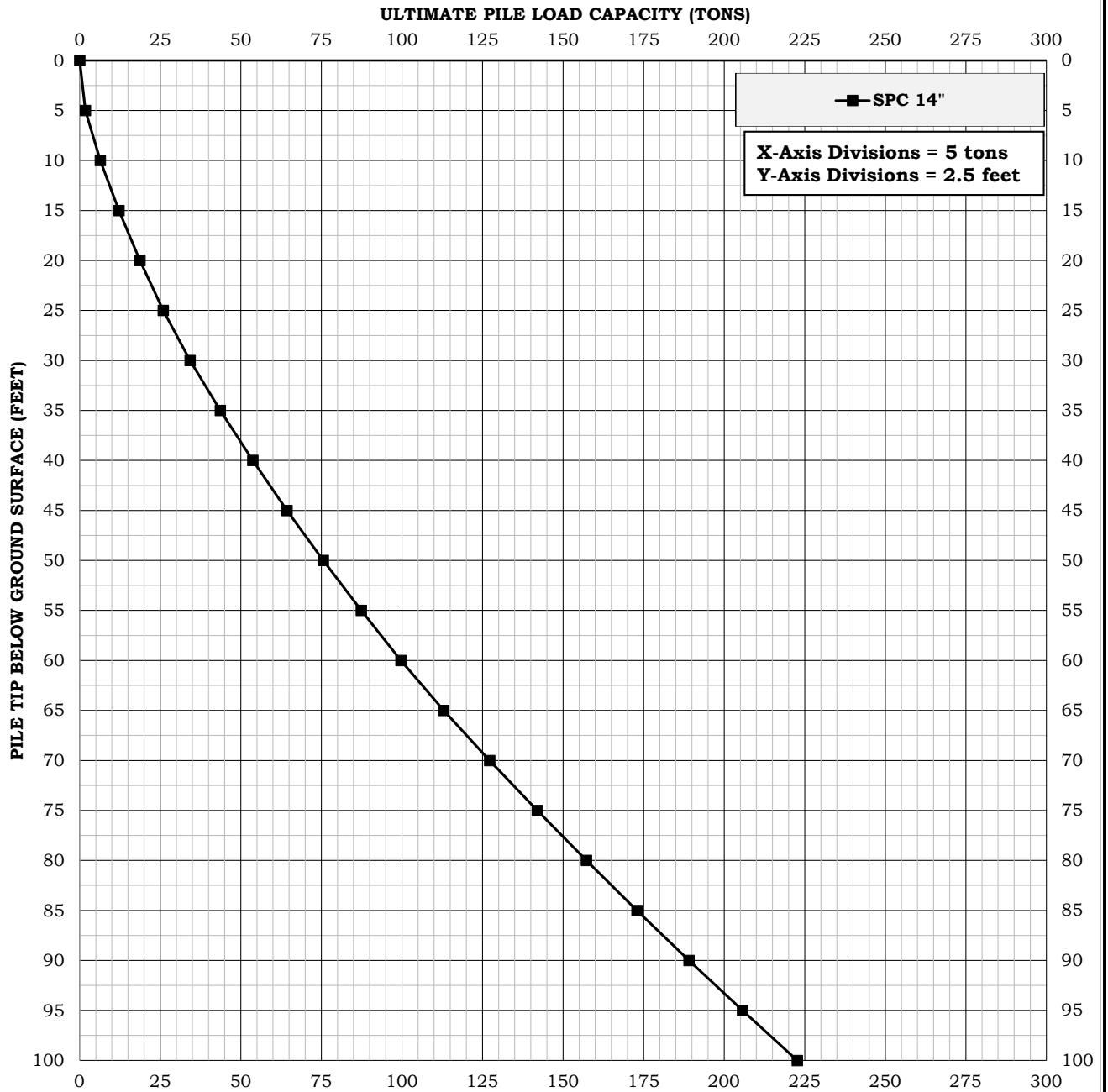


**ALLOWABLE PILE LOAD CAPACITY CURVE
OPEN-ENDED, STEEL, PIPE (OSP) PILE**

**MAGNOLIA RIDGE LOGISTICS PARK
LED SITE CERTIFICATION REPORT
ASCENSION PARISH, LA**

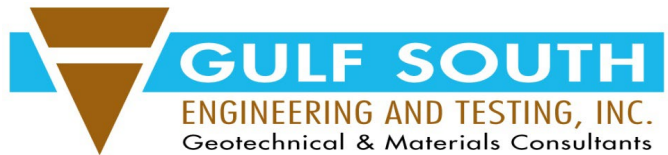
PROJECT NO.: 25-094

FIGURE NO. 3



DESIGN ASSUMPTIONS

1. Minimal Effects of downdrag due to fill
2. Pile Butt is Assumed at existing ground surface.
3. Neglects Upper 5 Feet of Soil



**ALLOWABLE PILE LOAD CAPACITY CURVE
SQUARE, PRE-CAST, CONCRETE (SPC) PILE**

**MAGNOLIA RIDGE LOGISTICS PARK
LED SITE CERTIFICATION REPORT
ASCENSION PARISH, LA**

PROJECT NO.: 25-094

FIGURE NO. 4

Minimum Pile Spacing

SP (ft.) = Center to center spacing of piles/shafts = 3*D (Min. 3.0 ft.)

D = Pile Diameter or Side Dimension

Allowable Group Capacity*

$$Q_a = \frac{P * L * c}{FSF} + \frac{2.6 * q_u * (1 + 0.2 w/b) * A}{FSB}$$

P = Average perimeter of pile/shaft group (ft.)

L = Length of piles/shafts in group (ft.)

c = Average (weighted) shear strength ($\frac{1}{2} q_u$) of soil throughout pile/shaft length (lbs./sq. ft.)

q_u = Unconfined compressive strength of soils below pile tips (lbs./sq.ft.)

w = Width of pile/shaft group at tip (ft.)

b = Length of pile/shaft group at tip (ft.)

A = Area of pile/shaft group at tip (sq. ft.)

FSF = Factor of safety for friction area = 2

FSB = Factor of safety for tip area = 3

*In no case should the cumulative single pile/shaft load capacity of the group be exceeded.

APPENDIX

BORING LOGS



Soil Boring

Project: Magnolia Ridge Logistics Park - LED Certificate
Client: BRAC
Location: 10102 Industriplex Avenue, Geismar, LA

LOG ID:

B-1

Project Number:

25-094

Drilling Firm: Gulf South Engineering and Testing
Driller: Brandon Hebert
Logged By: Kevin Daigle
Hammer Type: Cathead
Method: Mud Rotary

Date Started: 09/08/2025 **Date Ended:** 09/08/2025
Location Accuracy: Tablet GPS
Latitude: 30.215511 **Longitude:** -90.976514
Boring Depth: 100' **Boring Diameter:** 6"

Ground Water Levels

None to 12 ft.

None to 12 ft.

Depth (ft)	Sample Graphic	Pocket Penetrometer (tsf)	Blow Counts (N/Refusal)	Lab				% Fines	Graphic Log	Soil Description and Remarks
				Compressive Strength (tsf)	Confining Pressure	Moisture Content (%)	Wet Density (PCF)			
4.00				1.959		22.1	120	71-20-51		Stiff, dark gray, FAT CLAY (CH)
4.00				1.506		20.2	124			
5.00				2.026		22.7	127	39-16-23		Stiff to Very Stiff, gray and tan, SILTY LEAN CLAY (CL)
3.00				1.282		22.8	133			
3.00				1.488		24.1	124	33-19-14		
2.50				1.409		23.5	127			
2.50						22.1				
2.50										
2.50				1.582		21.5	129			
2.50						23.8				
3.00				1.552		22.1	122			Stiff, gray and tan, FAT CLAY (CH) -with organics
3.50						35.4				
3.50				1.531		37.2	117			

Graphics Legend

- CL
- CH
- ST - Shelby Tube

REMARKS

Soil boring was backfilled per LA DOTD/DEQ requirements upon completion.
 -Dry Auger Depth: 0-12 feet
 -Wet Rotary Depth: 12-100 feet



Soil Boring

Project: Magnolia Ridge Logistics Park - LED Certificate
Client: BRAC
Location: 10102 Industriplex Avenue, Geismar, LA

LOG ID: **B-1**
Project Number: 25-094

Drilling Firm: Gulf South Engineering and Testing
Driller: Brandon Hebert
Logged By: Kevin Daigle
Hammer Type: Cathead
Method: Mud Rotary

Date Started: 09/08/2025 **Date Ended:** 09/08/2025
Location Accuracy: Tablet GPS
Latitude: 30.215511 **Longitude:** -90.976514
Boring Depth: 100' **Boring Diameter:** 6"

Ground Water Levels		
	None to 12 ft.	
	None to 12 ft.	

Depth (ft)	Sample Graphic	Pocket Penetrometer (tsf)	Blow Counts (N/Refusal)	Lab					Graphic Log	Soil Description and Remarks		
				Compressive Strength (tsf)	Confining Pressure	Moisture Content (%)	Wet Density (PCF)	Atterberg Limits (LL-PL-PI)			% Fines	
									Drill Rig Drill bit size/Type Surface Elevation	Ardco SD-350 6" Drag Bit ~14.8'		
45		4.00				34.7				Stiff, gray and tan, FAT CLAY (CH)		
50		2.00		1.647		26.0	128					
55		3.50				39.2		98-25-73				
60		3.50		1.870		32.2	117					
65		3.50				26.2						
70		1.00		0.405		29.0	118				68.0	
75		1.50				41.0					73.0	
		1.50		1.541		36.4	118					
												Soft, gray, FAT CLAY (CH) -Low strain value; disturbed sample
												Stiff, gray, FAT CLAY (CH)

Graphics Legend

- CH
- ST - Shelby Tube

REMARKS

Soil boring was backfilled per LA DOTD/DEQ requirements upon completion.
 -Dry Auger Depth: 0-12 feet
 -Wet Rotary Depth: 12-100 feet



Soil Boring

Project: Magnolia Ridge Logistics Park - LED Certificate
Client: BRAC
Location: 10102 Industriplex Avenue, Geismar, LA

LOG ID: **B-1**

Project Number: 25-094

Drilling Firm: Gulf South Engineering and Testing
Driller: Brandon Hebert
Logged By: Kevin Daigle
Hammer Type: Cathead
Method: Mud Rotary

Date Started: 09/08/2025 **Date Ended:** 09/08/2025
Location Accuracy: Tablet GPS
Latitude: 30.215511 **Longitude:** -90.976514
Boring Depth: 100' **Boring Diameter:** 6"

Ground Water Levels

	None to 12 ft.	
	None to 12 ft.	

Depth (ft)	Sample Graphic	Pocket Penetrometer (tsf)	Blow Counts (N/Refusal)	Lab					Graphic Log	Soil Description and Remarks
				Compressive Strength (tsf)	Confining Pressure	Moisture Content (%)	Wet Density (PCF)	Atterberg Limits (LL-PL-PI)		
									Drill Rig Drill bit size/Type Surface Elevation	Ardco SD-350 6" Drag Bit ~14.8'
									Soil Description and Remarks	
										Stiff, gray, FAT CLAY (CH)
85		1.50				21.8		55.0		Gray and tan, SANDY LEAN CLAY (CL)
90			8-9-16 (25)			39.8		100-39-61		Stiff to Very Stiff, gray and tan, FAT CLAY (CH)
95		3.50		1.457		38.0	114			
100		4.00		1.568		33.5	118			

Soil boring completed 100 feet below the ground surface.

Graphics Legend

- CH
- CL
- SPT - Standard Penetration Test
- SPT - Standard Penetration Test

REMARKS

Soil boring was backfilled per LA DOTD/DEQ requirements upon completion.
 -Dry Auger Depth: 0-12 feet
 -Wet Rotary Depth: 12-100 feet



Soil Boring

Project: Magnolia Ridge Logistics Park - LED Certificate
Client: BRAC
Location: 10102 Industriplex Avenue, Geismar, LA

LOG ID: **B-2**

Project Number: 25-094

Drilling Firm: Gulf South Engineering and Testing
Driller: Brandon Hebert
Logged By: Kevin Daigle
Hammer Type: Cathead
Method: Mud Rotary

Date Started: 09/09/2025 **Date Ended:** 09/09/2025
Location Accuracy: Tablet GPS
Latitude: 30.219058 **Longitude:** -90.975744
Boring Depth: 50' **Boring Diameter:** 4"

Ground Water Levels

	None to 12 ft.	
	None to 12 ft.	

Depth (ft)	Sample Graphic	Pocket Penetrometer (tsf)	Blow Counts (N/Refusal)	Lab					Graphic Log	Soil Description and Remarks
				Compressive Strength (tsf)	Confining Pressure	Moisture Content (%)	Wet Density (PCF)	Atterberg Limits (LL-PL-PI)		
4.00				1.823		22.3	126			Drill Rig SD-350 Drill bit size/Type 6" Drag Bit Surface Elevation ~13.8'
3.50				0.700		20.7	119	39-17-22		Stiff, dark gray, FAT CLAY (CH)
5.00				1.332		23.4	125			Medium Stiff to Stiff, gray and tan, SILTY LEAN CLAY (CL)
3.50				1.712		17.8	126	46-19-27		
2.50				1.106		24.4	128			
10.00						25.1		52-15-37		Gray and tan, FAT CLAY (CH)
2.50				1.272		23.7	128			Stiff, gray and tan, SILTY LEAN CLAY (CL)
20.00						25.9				
3.00				1.377		25.1	126			
30.00						29.8				
3.50				1.060		37.8	113			Medium Stiff to Stiff, gray and tan, FAT CLAY (CH) -Low strain; possible slick-en-sided
4.00						27.5				

Graphics Legend

- CH
- ST - Shelby Tube
- CL

REMARKS

Soil boring was backfilled per LA DOTD/DEQ requirements upon completion.
 -Dry Auger Depth: 0-12 feet
 -Wet Rotary Depth: 12-50 feet



Soil Boring

Project: Magnolia Ridge Logistics Park - LED Certificate
Client: BRAC
Location: 10102 Industriplex Avenue, Geismar, LA

LOG ID: **B-2**

Project Number: 25-094

Drilling Firm: Gulf South Engineering and Testing
Driller: Brandon Hebert
Logged By: Kevin Daigle
Hammer Type: Cathead
Method: Mud Rotary

Date Started: 09/09/2025 **Date Ended:** 09/09/2025
Location Accuracy: Tablet GPS
Latitude: 30.219058 **Longitude:** -90.975744
Boring Depth: 50' **Boring Diameter:** 4"

Ground Water Levels

	None to 12 ft.	
	None to 12 ft.	

Depth (ft)	Sample Graphic	Lab							Graphic Log	Soil Description and Remarks
		Pocket Penetrometer (tsf)	Blow Counts (N/Refusal)	Compressive Strength (tsf)	Confining Pressure	Moisture Content (%)	Wet Density (PCF)	Atterberg Limits (LL-PL-PI)		
									Drill Rig SD-350 Drill bit size/Type 6" Drag Bit Surface Elevation ~13.8'	
									Soil Description and Remarks	
									Medium Stiff to Stiff , gray and tan, FAT CLAY (CH)	
45		3.50		0.967		25.3	125			
50		3.00				27.3				

50.0

Soil boring completed 50 feet below the ground surface.

Graphics Legend

- CH
- ST - Shelby Tube

REMARKS

Soil boring was backfilled per LA DOTD/DEQ requirements upon completion.
 -Dry Auger Depth: 0-12 feet
 -Wet Rotary Depth: 12-50 feet



Soil Boring

Project: Magnolia Ridge Logistics Park - LED Certificate
Client: BRAC
Location: 10102 Industriplex Avenue, Geismar, LA

LOG ID: **R-2**

Project Number: 25-094

Drilling Firm: Gulf South Engineering and Testing
Driller: Ross White
Logged By: Kevin Daigle
Hammer Type: Auto
Method: Mud Rotary

Date Started: 07/09/2024 **Date Ended:** 07/09/2024
Location Accuracy: Tablet GPS
Latitude: 30.220456 **Longitude:** -90.980569
Boring Depth: 40' **Boring Diameter:** 6"

Ground Water Levels

	At Time of Drilling (ATD)	8'
	After 15 Min.	6'

Depth (ft)	Sample Graphic	Pocket Penetrometer (tsf)	Blow Counts (N/Refusal)	Lab					Graphic Log	Soil Description and Remarks
				Compressive Strength (tsf)	Confining Pressure	Moisture Content (%)	Wet Density (PCF)	Atterberg Limits (LL-PL-PI)		
1.25				0.956		23.9	116	43-20-23		Drill Rig: Ardco K-1000 Drill bit size/Type: 6" Drag Bit Surface Elevation: ~15.1' Soil boring completed 40 feet below the ground surface.
1.25				0.69		24.2	123			
5				0.847		25.6	128	34-19-15		
2.00				1.037		26.2	132			
2.00				0.981		26.3	128			
10				2.632		20.7	128	51-17-34	10.0	
1.00				1.154		24.5	128			
2.50				1.635		27.5	123			
3.00						30.0		77-20-57		
3.00				1.257		32.3	122			
3.00						30.4				
1.50				1.244		30.3	120			
										40.0

Graphics Legend

- After 15 Min.
- At Time of Drilling (ATD)
- CH
- CL
- ST - Shelby Tube

REMARKS

Soil boring was backfilled per LA DOTD/DEQ requirements upon completion.
 -Dry Auger Depth: 0-12 feet
 -Wet Rotary Depth: 12-40 feet



GULF SOUTH

ENGINEERING AND TESTING, INC.
Geotechnical & Materials Consultants

Corporate Office | 15 Veterans Memorial Blvd | Kenner LA 70062

Ascension Parish | 3121 S. Darla Ave | Gonzales LA 70737

North LA Office | 440 E. Washington St | Shreveport LA 71104

Mississippi Office | 1437 Old Square Rd Unit F | Jackson MS 39236

gulfsoutheng.com

GEOTECHNICAL EXPLORATION REPORT

**MAGNOLIA RIDGE LOGISTICS PARK
ROADWAY AND WET WELL
ASCENSION PARISH, LA**

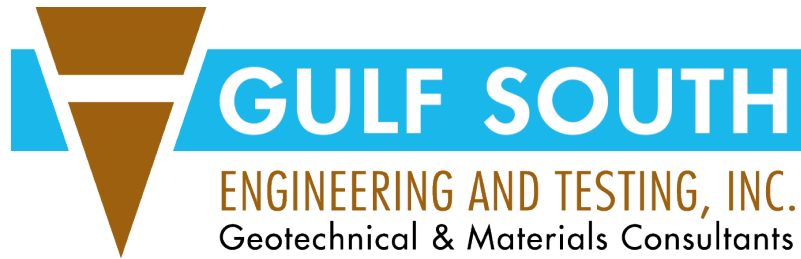
FOR

**MAGNOLIA RIDGE LOGISTICS INVESTMENT, LLC
ALEXANDRIA, LA**

GULF SOUTH ENGINEERING AND TESTING FILE NO. 24-052

August 23, 2024





15 Veterans Memorial Boulevard, Kenner, LA 70062
PN: 504-305-4401 FN: 504-305-4408 E-mail: info@gulfsoutheng.com

August 23, 2024

Magnolia Ridge Logistics Investment, LLC
3900 Lee Street
Alexandria, LA 71302

Attn: Mr. Hunter Tarver
E-mail: hunter.tarver@ratcliffdevelopment.com

Re: Geotechnical Exploration Report
Magnolia Ridge Logistics Park
Roadway and Wet Well
Ascension Parish, LA
Gulf South Engineering & Testing File No. 24-052

Dear Hunter,

Please find attached our geotechnical exploration report that was completed for the referenced project. We appreciate the opportunity to serve your geotechnical needs. Please contact us should you have any questions.

Sincerely,

GULF SOUTH ENGINEERING AND TESTING, INC.

CHAD M. POCHE, P.E.
Executive Vice President

BRYSON S. BEARD, E.I.
Associate Geotechnical Engineer

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FIGURE – No. 1 Boring Plan

APPENDIX – Boring Logs

GEOTECHNICAL EXPLORATION REPORT

MAGNOLIA RIDGE LOGISTICS PARK ROADWAY AND WET WELL ASCENSION PARISH, LA

GULF SOUTH ENGINEERING AND TESTING FILE NO. 24-052

1.0 INTRODUCTION & LIMITATIONS

This report contains the results of a geotechnical exploration made at the subject site. Instructions to proceed with the exploration were received from Magnolia Ridge Logistics Investment, LLC (Client) via approval of our proposals dated July 31, 2023 and May 16, 2024.

The study included drilling soil test borings and the performance of soil mechanics laboratory tests to evaluate the soil's physical characteristics. Engineering analyses were made and based on the field and laboratory test data to develop recommendations for the project.

The analyses and recommendations presented in this report are based on the provided project information and the results of the exploration. While it is not likely that conditions will differ significantly from those observed during the field exploration it is always possible that variations can occur away from the borehole location(s).

If it becomes apparent during construction that subsurface conditions differing significantly from those observed in our boring(s) are encountered, Gulf South should be notified. Also, should the nature of the project change or should any of the stated assumptions be inaccurate, the recommendations provided in this report should be re-evaluated.

This report has been prepared for the exclusive use of our Client. The recommendations provided in this report are site specific and are not intended for use at any other site or for any other project. This report provides recommendations for design and construction and should not be used as construction specifications.

Gulf South considers the materials testing and onsite inspection during construction an extension of our geotechnical exploration and a key component

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to ensuring the recommendations provided in this report are followed. For this type of project, these services may consist of earthwork testing and monitoring, vibration monitoring, concrete testing and inspection, and steel inspection. Gulf South should be retained to provide the construction inspection services for this project.

2.0 SOIL BORINGS

Five (5) undisturbed soil boring were each drilled to a depth of 8 feet below the ground surface on August 30, 2023. Three (3) additional undisturbed soil borings were drilled to depths of 40 feet (Boring R-2) and 20 feet (Borings R-1 and R-3) below the ground surface on July 7 through July 9, 2024. The borings were drilled with an ATV mounted drilling rig at the designated locations as approximately shown on Figure No. 1.

Undisturbed sampling was performed continuously or on approximate 5 foot centers in all cohesive or semi-cohesive materials with a three inch diameter thin wall tube sampler. The samples were extruded in the field, representative portions of each sample were trimmed and placed in moisture proof containers, the samples were properly labeled, and secured for transport to the laboratory.

When cohesionless material was encountered or when soils could not be adequately sampled by undisturbed methods, the Standard Penetration Test was performed. This test consists of driving a two-inch diameter split spoon sampler a total of approximately 18 inches with a 140 lb. hammer falling 30 inches. The number of blows required to drive the sampler per 6 inch increment is recorded and gives an indication of the density of the material. The blows per foot shown on the boring log are the total of the blow counts for the final 12 inches of penetration.

3.0 LABORATORY TESTING

Soil mechanics laboratory tests were performed on samples obtained from the borings. The testing consisted of natural moisture content, unit

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weight, Atterberg limits, and unconfined compression and tri-axial strength testing. The results of the laboratory tests are shown on the soil boring logs provided in the Appendix of this report.

4.0 SUBSOIL CONDITIONS

4.1 Subsoil Description

Reference to the borings shows interbedded layers of soft to very stiff silty clay and clay are present from the ground surface to the deepest boring's termination depth of 40 feet.

4.2 Groundwater

At the time of making the borings, groundwater was first encountered at the approximate 8 to 9 foot depths below the ground surface in Borings R-1 and R-2. After waiting approximately 15 minutes, it was observed that groundwater rose to the approximate 6 to 8 foot depths. No groundwater was encountered in Borings B-1 through B-5 and Boring R-3. These observations were made during a short period of time and groundwater may not have become fully realized at the time of observation. Groundwater should be expected within the upper 20 feet and can fluctuate with seasonal precipitation, drainage, and prolonged drought. If the depth to groundwater is important to construction, it should be measured at that time.

5.0 FURNISHED INFORMATION AND FOUNDATION RECOMMENDATIONS

Furnished information indicates the construction of an approximate 7,500 linear foot roadway and wet well for Magnolia Ridge Logistics Park are planned in Ascension Parish, LA. The focus of our exploration is for the roadway design and wet well installation. We assume the wet well will be no greater than 6 feet in diameter and installed at no more than 20 feet below the ground surface. No traffic data was furnished. We understand that at the time of this report, the project is in the preliminary stages and many details have yet to be finalized. This report is preliminary in nature and should the details or project scope change, Gulf South should be notified as additional analyses or further exploration may be warranted.

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In general, the below grade soils encountered in the borings are adequate for support of the proposed wet well using grade support. Should the values provided in this report for bearing and settlement not be tolerable, deep foundations should be used for support. Structural analyses and the structural adequacy of the foundations are outside our scope of work for the project.

Preliminary laboratory test results indicate the near surface soils appear to have a slight shrink/swell potential. Care should be taken during and after construction to limit activities that could affect moisture within the soils below and around the foundations. By precluding surface waters from saturating the soils, the resulting volumetric movements will be minimized.

6.0 BELOW GRADE FOUNDATIONS

We understand that the foundations for the proposed wet well will be below grade and should be founded on a proper base.

6.1 Net Allowable Soil Bearing Capacity

We estimate a net allowable soil bearing capacity of 1,500 psf is available for design of below grade foundations. This value is based on a factor of safety (FOS) of 3. The net allowable soil bearing capacity assumes the foundations are seated up to 20 feet below grade and within firm soils as described and encountered in our borings.

Foundation excavations should be thoroughly inspected to assure that the footings are seated in firm and well drained soil. The soil bearing capacity does not preclude settlements, as will be discussed.

6.2 Estimated Settlement

Settlement of the foundations will occur when the weight of the structure and backfill exceed the weight of material removed. Estimates of settlement for various applied loads are provided on the following table.

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Table No. 1 – Estimated Settlement

Net Applied Soil Pressure (psf)	Estimated Center Settlement for Wet Well 6 ft. in Diameter
Up to 500	½ or less
500 to 1,000	½ to ¾
1,000 to 1,500	¾ to 1

Our analyses assume the foundations are founded at no greater than 20 feet below the existing ground surface and the wet well is no wider than 6 feet in diameter. Settlement will increase with the diameter of the wet wells. If greater widths are needed for support, additional settlement analyses should be made. Our settlement estimates are based on a long-term design period and do not include settlement due to ground water lowering or areal subsidence.

6.3 Bedding

It is recommended that the proposed wet well be underlain by a minimum bedding thickness of 18 inches (for up to 6-foot diameter wet well). Bedding should consist of well graded limestone or equivalent (crushed concrete, etc.). The material properties of the bedding material should be in accordance with the State of Louisiana Department of Transportation (LADOTD) Specifications for crushed stone base material.

6.4 Uplift Pressures

The bottom of the foundations will be below the existing ground surface elevation and subjected to uplift pressures due to unbalanced water pressure below and above the foundation. A minimum factor of safety against uplift of 1.1 should be maintained during construction.

6.5 Fill Placement and Compaction

Fill above and around the well should consist of clean, select, cohesionless sand fill with less than 10% passing the U.S. No. 200 Sieve. Alternatively, a lean, silty clay or sandy clay (USCS classification = CL) may be used for fill. The fill may be placed in 10 to 12 inch loose lifts and compacted. The bedding and backfill should be compacted to minimum criteria of a dry

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density at least equal to 95% of its maximum as determined by the Standard Proctor compaction test (ASTM D698).

6.6 Inspection and Protection of the Bearing Surface

Inspection of the foundation excavations by a qualified geotechnical engineer or technician should be performed prior to bedding and backfill placement to ensure that the proper bearing surface is present. The soils that form the bearing stratum are clays which can undergo loss of strength when wetted.

Foundation excavations deeper than four (4) feet should be made within a sheeted and/or braced excavation and should not be made during periods of inclement weather and should conform to all applicable local, state, and federal safety regulations. Dewatering for excavations is expected to consist of sumps and pumps. Well points may be required to prevent seepage of water into the excavation if sumps and pumps are not adequate. Sheet piling and dewatering operations for the excavations should be designed by a registered professional engineer and should follow all applicable local, state, or federal safety codes. Excavation shoring should be the responsibility of the contractor.

6.7 Vibrations

Vibrations due to construction activities should be expected and they should be monitored during all construction activities. In general, vibrations should be limited to about 0.25 inch/sec. (average peak particle velocity) at all existing nearby sensitive structures. Construction should be stopped if peak values exceed about 0.5 in./sec.

7.0 PAVEMENTS

Flexible (asphalt) or rigid (concrete) surface paving for the proposed roadway will be constructed at the site. Based upon our understanding of the proposed site usage, we anticipate that the paved areas will be used primarily by automobiles and light trucks with an occasional passage of a delivery type vehicle and/or garbage collection vehicle. Our design does not account for

MAGNLIA RIDGE LOGISTICS INVESTMENT, LLC – ALEXANDRIA, LA

construction traffic. Our designs are valid for up to 660,000 and 300,000 ESAL passes (20 year) for rigid and flexible pavements, respectively.

The subgrade should first be prepared in accordance with the recommendations of this report. Base course and pavement materials should conform to the requirements of LA DOTD Standard Specifications, latest edition.

7.1 Flexible Pavement

For flexible pavements, an asphalt surface thickness of at least five (5) inches is recommended. The base course beneath the asphalt surface should consist of at least twelve (12) inches of crushed stone or soil-cement. A geotextile paving fabric is recommended between base materials and the natural subgrade if crushed stone is used.

We recommend the asphalt courses be placed as late as possible in the project so that the effects of settlement can be reduced. Proper drainage during and after construction is essential to the success of flexible asphaltic pavement systems.

Flexible pavements are susceptible to failures due to poor surface and subsurface drainage. Asphalt pavement generally requires surface sealing with a thin ($\frac{1}{2}$ inch) hot mix asphaltic concrete or an asphalt slurry seal at a 4 to 5 year interval to maintain a good pavement system because the local climate tends to weaken and oxidize the surface.

7.2 Rigid Pavement

For rigid pavements, the pavement surface should consist of at least six (6) inches of concrete. Upon completion of subgrade preparation, a minimum ten (10) inch thick layer of sand or six (6) inches of crushed stone is recommended for the base course. A geotextile fabric should be placed beneath the pavement joints, at a minimum.

The provided concrete thickness assumes an ultimate flexural strength for the concrete of at least 600 psi or 3,000 psi compressive strength.

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Expansion and construction joints should be doweled or keyed for good transfer of load and should be well sealed to prevent the intrusion of surface waters into the pavement base and natural subgrade. The use of wire mesh is left up to the designer.

7.3 Pavement Materials and Construction

Poor site conditions will develop unless good drainage is provided throughout the project duration. Proper site drainage should be maintained prior to, during, and after construction. Providing drainage during the construction process will facilitate construction by reducing the potential for compaction problems. Maintaining the drainage after construction will improve the life of the pavement by avoiding water softening of the foundation soils.

Prior to pavement construction, the site should be stripped of all debris, vegetation, etc., and proof rolled with a heavy wheeled vehicle to detect any “soft” spots. Any soft spots should be undercut at least 1 foot and backfilled with a structural fill. The geotextile fabric should be a nonwoven fabric with an apparent opening size (AOS) smaller than a U.S. No. 70 sieve.

The sand or stone should be compacted to a dry density at least equal to 95 percent of its maximum as determined by the Modified Proctor compaction test (ASTM D1557), or to a minimum relative density of 75 percent in accordance with ASTM D4253 and D4254. In-place density measurements should be taken to assure that this degree of compaction is achieved. The base may be placed and compacted in maximum 8 inch loose lifts and it should meet LA DOTD specifications for base course.

Lime treatment of the subgrade soils should be expected if soil-cement is used for the base. Lime and soil cement mix designs should be performed prior to construction. Typically, lime and cement percentages of 8% to 12% should be expected.

The methods, means, and sequence of construction are the responsibility of the contractor. It should be noted that our recommendations regarding concrete and material thicknesses are based on the assumed traffic loading

MAGNLIA RIDGE LOGISTICS INVESTMENT, LLC – ALEXANDRIA, LA

conditions. Appropriate measures should be taken by the contractor to assure the integrity and performance of the pavements during and after construction.

8.0 CLOSING

Gulf South is available to answer any questions you may have concerning this report. Should additional analyses be required or requested, additional fees may be necessary.

As previously discussed, Gulf South considers the materials testing and onsite inspection during construction an extension of our geotechnical exploration. Gulf South should be retained to provide the construction inspection services.

The issuance of this report completes the geotechnical exploration scope and Gulf South’s involvement on the project. Retaining Gulf South as a vital member of the design team can add considerable value. Over the next few months, the project will incur many changes, challenges, and opportunities – all of which will occur without our knowledge and in some cases render our recommendations compromised or irrelevant. Gulf South’s additional involvement will be a small price to pay for the peace of mind that any foundation, earthwork, and paving components of the project are fully integrated during design, resulting in potential cost savings and efficient construction. Please consider including Gulf South as a full member of your design team and throughout the project duration.

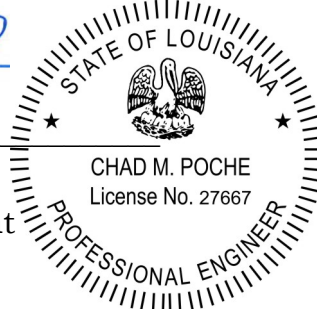
We appreciate the opportunity to provide this report and look forward to working with you again in the future.

Sincerely,

GULF SOUTH ENGINEERING AND TESTING, INC.



CHAD M. POCHE, P.E.
Executive Vice President



BRYSON S. BEARD, E.I.
Associate Geotechnical Engineer

FIGURE



R-3

R-2

R-1

B-5

B-4

B-3

B-2

B-1

1066


W Robert Wilson Rd
W Robert Wilson Rd



FIGURE NO. 1

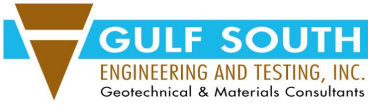
PROJECT
Name: Magnolia Ridge Logistics Park -
Additional Roadway
Number: 24-052

LOCATION
30.218522, -90.978139
30.218522, -90.978139

SYMBOL KEY
 Soil Borings

APPENDIX

BORING LOGS



15 Veterans Memorial Blvd,
Kenner, LA
Office: +1 (504) 305-4401

Magnolia Ridge Logistics Park - Additional Roadway

Lat/Lon: 30.21508333/-90.97329444

SOIL BORING: B-1

Date Started: 08/30/2023 Date Completed: 08/30/2023 Lat Lng: 30.215083, -90.973294
 Location Accuracy: Tablet GPS Project No: 24-052 Client Name: Magnolia Ridge Logistics Investment, LLC
 Boring Diameter: 4 in Drilling Firm: Gulf South Engineering and Testing Hammer Drop: 30
 Hammer Type: Cathead Hammer Weight: 140 Logged By: Ian Poche
 Method: Auger

Depth (ft)	Sample Type	Lab							Soil Graphic	Rig Type Tooling Surface Elevation	Ardco K-1000 4" Solid Stem Auger ~14.9'
		Pocket Penetrometer (tsf)	Blow Counts (N/Refusal)	Compressive Strength (tsf)	Confining Pressure (PSI)	Moisture Content (%)	Wet Density (PCF)	Atterberg Limits (LL-PL-P)			
3.00				1.952		24.4	127			Stiff, tan, SILTY LEAN CLAY (CL) , with gravel	2.0
1.00				0.668		23.4	120	46-N-25		Medium Stiff, tan and gray, SILTY LEAN CLAY (CL) , with trace gravel	
2.00						25.2		32-N-12		-Low strain value; possible disturbed sample	6.0
0.50				0.263		27.3	123			Soft, tan, SILTY LEAN CLAY (CL)	8.0

Boring completed at 8 feet below the ground surface

Graphics Legend



CL



ST - Shelby Tube

REMARKS

Borehole was backfilled per LA DOTD/DEQ requirements upon completion



15 Veterans Memorial Blvd,
Kenner, LA
Office: +1 (504) 305-4401

Magnolia Ridge Logistics Park - Additional Roadway

Lat/Lon: 30.21596944/-90.97337222

SOIL BORING: B-2

Date Started: 08/30/2023 Date Completed: 08/30/2023 Lat Lng: 30.215969, -90.973372
 Location Accuracy: Tablet GPS Project No: 24-052 Client Name: Magnolia Ridge Logistics Investment, LLC
 Boring Diameter: 4 in Drilling Firm: Gulf South Engineering and Testing Hammer Drop: 30
 Hammer Type: Cathead Hammer Weight: 140 Logged By: Ian Poche
 Method: Auger

Depth (ft)	Sample Type	Lab							Soil Graphic	Rig Type Tooling Surface Elevation	Ardco K-1000 4" Solid Stem Auger ~14.1'
		Pocket Penetrometer (tsf)	Blow Counts (N/Refusal)	Compressive Strength (tsf)	Confining Pressure (PSI)	Moisture Content (%)	Wet Density (PCF)	Atterberg Limits (LL-PL-Pi)			
2.00				1.361		20.3	130	52-N-31		Visual Classification and Remarks Stiff, tan and gray, FAT CLAY (CH) , with silt and gravel -Low strain value; possible disturbed sample 2.0 Stiff, tan and gray, SILTY LEAN CLAY (CL) -Low strain value; possible disturbed sample 8.0	
4.50				1.03		21.6	131				
1.50				1.664		24.1	133				
1.00						24.9		32-N-15			

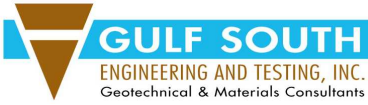
Boring completed at 8 feet below the ground surface

Graphics Legend

-  CH
-  ST - Shelby Tube
-  CL

REMARKS

Borehole backfilled per LA DOTD/DEQ requirements.



15 Veterans Memorial Blvd,
Kenner, LA
Office: +1 (504) 305-4401

Magnolia Ridge Logistics Park - Additional Roadway

Lat/Lon: 30.21722778/-90.97355833

SOIL BORING: B-3

Date Started: 08/30/2023 Date Completed: 08/30/2023 Lat Lng: 30.217228, -90.973558
 Location Accuracy: Tablet GPS Project No: 24-052 Client Name: Magnolia Ridge Logistics Investment, LLC
 Boring Diameter: 4 in Drilling Firm: Gulf South Engineering and Testing Hammer Drop: 30
 Hammer Type: Cathead Hammer Weight: 140 Logged By: Ian Poche
 Method: Auger

Depth (ft)	Sample Type	Lab							Soil Graphic	Rig Type Tooling Surface Elevation	Ardco K-1000 4" Solid Stem Auger ~12.8'
		Pocket Penetrometer (tsf)	Blow Counts (N/Refusal)	Compressive Strength (tsf)	Confining Pressure (PSI)	Moisture Content (%)	Wet Density (PCF)	Atterberg Limits (LL-PL-Pi)			
2.00				1.915		23.7	126	53-N-34		Stiff to Very Stiff, tan and gray, FAT CLAY (CH)	
2.00				2.18		22.9	127				4.0
5.00						25.4		44-N-24		Stiff, tan and gray, SILTY LEAN CLAY (CL)	
1.00				1.128		25.3	129				8.0

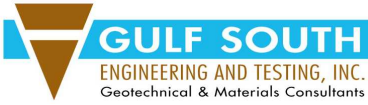
Boring completed at 8 feet below the ground surface

Graphics Legend

- CH
- ST - Shelby Tube
- CL

REMARKS

Borehole backfilled per LA DOTD/DEQ requirements



15 Veterans Memorial Blvd,
Kenner, LA
Office: +1 (504) 305-4401

Magnolia Ridge Logistics Park - Additional Roadway

Lat/Lon: 30.21720833/-90.97540833

SOIL BORING: B-4

Date Started: 08/30/2023 Date Completed: 08/30/2023 Lat Lng: 30.217208, -90.975408
 Location Accuracy: Tablet GPS Project No: 24-052 Client Name: Magnolia Ridge Logistics Investment, LLC
 Boring Diameter: 4 in Drilling Firm: Gulf South Engineering and Testing Hammer Drop: 30
 Hammer Type: Cathead Hammer Weight: 140 Logged By: Ian Poche
 Method: Auger

Depth (ft)	Sample Type	Lab							Soil Graphic	Rig Type Tooling Surface Elevation	Ardco K-1000 4" Solid Stem Auger ~13.7'
		Pocket Penetrometer (tsf)	Blow Counts (N/Refusal)	Compressive Strength (tsf)	Confining Pressure (PSI)	Moisture Content (%)	Wet Density (PCF)	Atterberg Limits (LL-PL-P)			
3.50				2.789		21.3	126	51-N-33		Very Stiff, dark gray and tan, FAT CLAY (CH) , with silt	2.0
2.00				2.06		16	122	38-N-21		Stiff to Very Stiff, tan and gray, SILTY LEAN CLAY (CL)	
3.00						18.4					
2.00				1.573		22.5	126				8.0

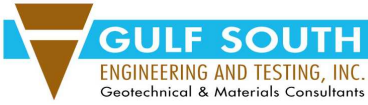
Boring completed at 8 feet below the ground surface

Graphics Legend

-  CH
-  ST - Shelby Tube
-  CL

REMARKS

Borehole backfilled per LA DOTD/DEQ requirements



15 Veterans Memorial Blvd,
Kenner, LA
Office: +1 (504) 305-4401

Magnolia Ridge Logistics Park - Additional Roadway

Lat/Lon: 30.21754167/-90.97701111

SOIL BORING: B-5

Date Started: 08/30/2023 Date Completed: 08/30/2023 Lat Lng: 30.217542, -90.977011
 Location Accuracy: Tablet GPS Project No: 24-052 Client Name: Magnolia Ridge Logistics Investment, LLC
 Boring Diameter: 4 in Drilling Firm: Gulf South Engineering and Testing Hammer Drop: 30
 Hammer Type: Cathead Hammer Weight: 140 Logged By: Ian Poche
 Method: Auger

Depth (ft)	Sample Type	Lab							Soil Graphic	Rig Type Tooling Surface Elevation	Ardco K-1000 4" Solid Stem Auger ~14.8'
		Pocket Penetrometer (tsf)	Blow Counts (N/Refusal)	Compressive Strength (tsf)	Confining Pressure (PSI)	Moisture Content (%)	Wet Density (PCF)	Atterberg Limits (LL-PL-P)			
4.00				3.358		17	117	52-N-31		Visual Classification and Remarks	Very Stiff, dark gray and tan, FAT CLAY (CH) , with silt and gravel Stiff, tannish brown and gray, FAT CLAY (CH) , with silt
2.50				1.271		21.1	116		2.0		
2.00						23.1		51-N-30			
1.00						20.3	111				

Boring completed at 8 feet below the ground surface

Graphics Legend



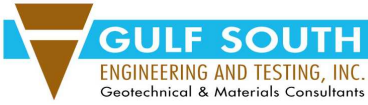
CH



ST - Shelby Tube

REMARKS

Borehole backfilled per LA DOTD/DEQ requirements



15 Veterans Memorial Blvd,
Kenner, LA
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Magnolia Ridge Logistics Park - Additional Roadway

Lat/Lon: 30.218522/-90.978139

SOIL BORING: R-1

Date Started: 07/08/2024 Date Completed: 07/08/2024 Lat Lng: 30.218522, -90.978139
 Location Accuracy: Tablet GPS Project No: 24-052 Client Name: Magnolia Ridge Logistics Investment, LLC
 Boring Diameter: 4 in Driller: Ross White Drilling Firm: Gulf South Engineering and Testing
 Hammer Drop: 30 Hammer Type: Auto Hammer Weight: 140
 Logged By: Kevin Daigle Method: Auger Depth: 20'

Depth (ft)	Sample Type	Lab							Soil Graphic	Rig Type Tooling Surface Elevation	Ardco K-1000 Rotary Drill ~15.2'
		Pocket Penetrometer (tsf)	Blow Counts (N/Refusal)	Compressive Strength (tsf)	Confining Pressure (PSI)	Moisture Content (%)	Wet Density (PCF)	Atterberg Limits (LL-PL-Pi)			
2.00				1.562		21.6	121	52-18-34		Stiff, dark gray and tan, FAT CLAY (CH) , with trace silt and organics	2.0
1.50				0.393		26.6	116	39-20-19		Soft, tan and gray, SILTY LEAN CLAY (CL)	4.0
1.50				1.377		24.9	120			Stiff, tan and gray, SILTY LEAN CLAY (CL)	
1.00						24.6					8.0
1.50				0.314		26.8	122	32-20-12		Soft to Medium Stiff, tan and gray, SILTY LEAN CLAY (CL)	
1.25				0.662		26.1	128				
1.25						26.1		41-20-21			
1.50				1.27		24.2	127			Stiff, tan and gray, FAT CLAY (CH) , with silt	20.0

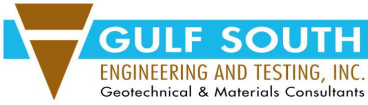
Boring completed 20 feet before the ground surface.

Graphics Legend

- At Time of Drilling (ATD)
- At Time of Drilling (ATD)
- CH
- CL
- ST

REMARKS

Borehole backfilled per LA DOTD / LA DEQ requirements upon completion.



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Magnolia Ridge Logistics Park - Additional Roadway

Lat/Lon: 30.220456/-90.980569

SOIL BORING: R-2

Date Started:	07/09/2024	Date Completed:	07/09/2024	Lat Lng:	30.220456, -90.980569
Location Accuracy:	Tablet GPS	Project No:	24-052	Client Name:	Magnolia Ridge Logistics Investment, LLC
Boring Diameter:	4 in	Driller:	Ross White	Drilling Firm:	Gulf South Engineering and Testing
Hammer Drop:	30	Hammer Type:	Auto	Hammer Weight:	140
Logged By:	Kevin Daigle	Method:	Mud Rotary	Depth:	40'

Depth (ft)	Sample Type	Lab							Soil Graphic	Rig Type Tooling Surface Elevation	Ardco K-1000 Rotary Drill ~15.1'
		Pocket Penetrometer (tsf)	Blow Counts (N/Refusal)	Compressive Strength (tsf)	Confining Pressure (PSI)	Moisture Content (%)	Wet Density (PCF)	Atterberg Limits (LL-PL-Pi)			
0											
1.25				0.956		23.9	116	43-20-23		Visual Classification and Remarks Medium Stiff to Stiff, tan and gray, SILTY LEAN CLAY (CL) - Brown and Dark Gray - with trace gravel 10.0 Stiff to Very Stiff, tan and gray, FAT CLAY (CH) - with trace gravel - with silt - with trace calcium 40.0 Boring completed 40 feet below the ground surface.	
1.25			0.69		24.2	123					
1.50			0.847		25.6	128	34-19-15				
2.00			1.037		26.2	132					
2.00			0.981		26.3	128					
2.00			2.632		20.7	128	51-17-34				
1.00			1.154		24.5	128					
2.50			1.635		27.5	123					
3.00					30.0		77-20-57				
3.00			1.257		32.3	122					
3.00					30.4						
1.50			1.244		30.3	120					

Graphics Legend

- At Time of Drilling (ATD)
- After Drilling (AD)
- CH
- ST - Shelby Tube
- CL

REMARKS

Borehole backfilled per LA DOTD / LA DEQ requirements upon completion.



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Magnolia Ridge Logistics Park - Additional Roadway

Lat/Lon: 30.222025/-90.982644

SOIL BORING: R-3

Date Started:	07/07/2024	Date Completed:	07/07/2024	Lat Lng:	30.222025, -90.982644
Location Accuracy:	Tablet GPS	Project No:	24-052	Client Name:	Magnolia Ridge Logistics Investment, LLC
Boring Diameter:	4 in	Driller:	Ross White	Drilling Firm:	Gulf South Engineering and Testing
Hammer Drop:	30	Hammer Type:	Auto	Hammer Weight:	140
Logged By:	Ross White	Method:	Auger	Depth:	20'

Depth (ft)	Sample Type	Pocket Penetrometer (tsf)	Blow Counts (N/Refusal)	Lab					% Fines	Soil Graphic	Rig Type Tooling Surface Elevation	Ardco K-1000 Rotary Drill ~14.8'
				Compressive Strength (tsf)	Confining Pressure (PSI)	Moisture Content (%)	Wet Density (PCF)	Atterberg Limits (LL-PL-P)				
0.50						24.5			50-19-31		Stiff, tan and gray, FAT CLAY (CH) , with silt - Dark Gray and Brown - with trace gravel	6.0
0.75				1.104		25.1	126		51-20-31			8.0
1.75				1.432		23.3	128					10.0
2.00				1.565		23.6	129					13.0
1.00				1.142		24.8	130					
1.00						26.4			43-18-25			
1.00				1.487		24.2	130				Stiff to Very Stiff, tan and gray, FAT CLAY (CH) - with trace silt and gravel	
1.00				2.084		21.8	131					20.0

Boring completed 20 feet below the ground surface.

Graphics Legend

- CH
- ST - Shelby Tube
- CL

REMARKS

Boring backfilled per LA DOTD / LA DEQ requirements upon completion.



GULF SOUTH

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