Subsurface Exploration and Geotechnical Engineering Report

Proposed Hornsby Tract Project
Walker, Louisiana
F&T Project No.: 231269
Premier File No.: 24-0486

Prepared for:

Forte & Tablada, Inc.
9107 Interline Avenue
Baton Rouge, Louisiana 70809

Attention: Mr. Kresten Brown, P.E.

Prepared by:

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IN
CIVIL ENGINEERING

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Ryan A. Williamson, P.E.
Geotechnical Project Engineer

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INTRODUCTION

Premier Geotech and Testing, LLC (Premier) is pleased to present this Subsurface Exploration and Geotechnical Engineering Report for the Hornsby Tract Project located in Walker, Louisiana. Our services were performed in general accordance with the executed agreement between Premier and Forte and Tablada, Inc., signed by Mr. Chad Bacas on June 9, 2025.

PROJECT DESCRIPTION

The proposed project will consist of the design and construction of new, industrial-focused roadways with proposed reinforced concrete box (RCB) culverts (with headwalls and/or wingwalls) placed within an existing ditch at two separate crossings. The proposed project site is north of US Highway 190 (Florida Boulevard) just north of Industry Way in Walker, Louisiana.

Premier drilled and sampled four (4) soil borings to depths ranging from approximately ten (10) to twenty-five (25) feet below the existing top of pavement/grade. The borings were sampled at 2-foot intervals to 10 feet and thereafter at 5-foot intervals to boring termination depth. Sampling was completed using thin-walled Shelby tubes or split spoon samplers in general accordance with ASTM procedures. See the Test Location Plan in the Appendix for soil boring locations.

The geotechnical recommendations presented in this report are based on the available project information at the time of this report and the subsurface materials information obtained from the subsurface exploration performed for the project as described herein. If any of the information included in this report is incorrect, please inform Premier in writing so that we can amend the recommendations presented in this report if appropriate and if desired by the Client. Premier will not be responsible for the implementation of its recommendations when it is not notified of changes in the project.

SITE CONDITIONS

Subsurface Conditions

The encountered subsurface soil generally consists of alternating layers of medium stiff to very stiff lean and fat clays to a depth of about thirteen (13) feet. Below thirteen (13) feet, the soil borings showed differing soil profiles. At B-1, medium stiff fat clay was encountered from about thirteen (13) to twenty-five (25) feet, the maximum depth explored. At B-2, a very soft layer of lean clay was encountered from thirteen (13) feet to eighteen (18) feet followed by a layer of medium dense silty sand to twenty-five (25) feet, the maximum depth explored.

The above subsurface description is of a generalized nature to highlight the major subsurface stratification features and material characteristics. The boring logs included in the Appendix should be reviewed for specific information at individual boring locations. These records include soil descriptions, stratifications, and laboratory test data. The stratifications shown on the boring tables are approximate and represent the conditions at the actual boring locations only. Variations may occur and should be expected between test locations. The stratifications

represent the approximate boundary between subsurface materials, and the actual transition may be gradual. Samples not altered by laboratory testing will be retained for a period of thirty (30) days from the date on this report and then will be discarded.

Groundwater Conditions

Free groundwater was encountered at depths ranging from about **five (5) feet to eight (8) feet** below existing site grade at the time of our field exploration. However, it should be noted that groundwater level fluctuations may occur due to the water level in nearby Hornsby Creek, seasonal and climatic variations, alteration of drainage patterns, land usage, and ground cover, and could affect excavation activities. We recommend the Contractor determine the actual groundwater levels at the time construction activities begin.

CULVERT RECOMMENDATIONS

Allowable Soil Bearing Pressure

Our culvert recommendations are presented in this section. We mainly considered the subsurface soil conditions encountered in soil borings B-1 and B-2 performed near the proposed culvert locations as well as our experience with similar soil conditions and the provided/assumed design requirements to develop the recommendations discussed herein.

Based on the subsurface soil conditions encountered in our B-1 and B-2 soil boring locations and the project details discussed with the project design team, the proposed culverts may be designed for a net allowable bearing pressure as listed in the table below.

Boring Number	Allowable Bearing Pressure (psf)	Approximate Bearing Depth Below Existing Ground at Soil Boring (feet)	Recommended Bedding Material Thickness (inches)	Culvert Size/Type
B-1 (western crossing)	1,150	6 to 7	12	Four (4) – 5'W x 4'H x 60'L RCB Culverts
B-2 (eastern crossing)	1,150	7 to 8	12	Three (3) – 6'W x 5'H x 60'L RCB Culverts

The culvert excavations should be observed by a representative of Premier prior to placement in order to assess the condition of the subsurface materials is consistent with the materials discussed in this report. Soft or loose soil zones encountered at the bottom of the excavations should be removed and replaced with properly compacted structural fill as directed by the Geotechnical Engineer or a representative of Forte and Tablada**.**

After opening, excavations should be observed, and the culvert bedding material (discussed in the following section) should be placed as quickly as possible to avoid exposure of the subsurface

material to wetting and drying. Surface run-off water should be drained away from the excavation and not be allowed to pond. The culvert bedding should be placed during the same day the excavation is made. If it is required that foundation excavations be left open for more than one day, they should be protected to reduce evaporation or entry of moisture.

Culvert Bedding and Backfill Recommendations

Based on the subsurface soils encountered in our soil borings, Premier recommends a geotextile/bedding system under the proposed culverts and headwalls/wingwalls consisting of one (1) layer of geofabric laid upon the exposed, stable subgrade overlaid by a geogrid (BX1200 or equivalent) overlaid by 12-inches of compacted 610 limestone bedding material. The geofabric placed on the stable subgrade should extend up the trench walls and extend/lay at least two (2) feet on top of the compacted 610 limestone base to create a 'burrito wrap' effect. Please refer to the table in the *Allowable Soil Bearing Pressure* section for anticipated culvert bearing depths. All geotextile fabric and grid installations must follow the manufacturer's recommendations.

Bedding and initial backfill material shall be placed in accordance with Section 726 and Section 701.08.3 using Type A backfill material, respectively, of the latest edition of the Louisiana Standard Specifications for Road and Bridges (LSSRB). Separating course granular backfill from fine granular backfill and separating granular backfill from natural materials in the trench sides and bottoms with geotextile fabric will prevent mixing and migration.

Bedding material should comprise of crushed limestone or RPCC and meet the requirements under Section 1003.10 in the latest edition of the LSSRB manual. Initial backfill material shall meet the requirements for Type A material as stated in Section 701.08.1 in the latest edition of the LSSRB. Both materials must be certified and approved by the Geotechnical Engineer prior to its use.

The bedding and backfill material shall be deposited in lifts of eight (8) inches of loose material. Each lift shall be compacted and certified by the Geotechnical Engineer or a representative prior to placement of other lifts. The passing criteria shall be 95% of the maximum dry density as determined by ASTM D698, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)), and a moisture content between +/- two (2) percentages of the optimum moisture content. In-place field density tests should be performed at a minimum frequency as listed in the "Fill Material Testing and Specifications" table in the *EARTHWORK RECCOMENDATIONS* section of this report. Since these testing services are within Premier's scope of activities, we urge that our firm be retained to assist during the earthwork phase of this project.

The above compaction and backfill requirements are for areas under and/or within five (5) feet from any existing infrastructure, edge of roadways or other traffic ways, and structures. For areas outside and away from the aforementioned infrastructure, the contractor should achieve no less than 90% of the maximum dry density (ASTM D698) for backfill materials.

PAVEMENT RECOMMENDATIONS

Pavement Sections

Actual anticipated traffic type and frequency were not known at the time of this report. However, based on experience with similar projects and assumptions from the ITE Trip Generation (8th edition) Warehousing (ITE Code 150), Premier assumed an **average two-way daily traffic (ADT) of 1,780 vehicles**, The ADT is assumed to consist of 70% passenger vehicles (FHWA Class 1, 2 and 3), 20% delivery truck traffic (FHWA Class 4, 5, and 6), and 10% semi-truck traffic (FHWA Class 8, 9, and 10). Premier assumed pavement-related design parameters that are considered typical for the existing soil types at the project site.

Below are project specific design parameters used to develop the recommended pavement sections using PaveXpress software and our discussion with the design team:

Rigid Pavement Design Parameters:

Design Period	20 years
Reliability	85%
Deviation	0.35
Initial Serviceability	4.2
Terminal Serviceability	2.0

Rigid Pavement Structure and Sub-Structure:

Modulus of Rupture	600 psi
Modulus of Subgrade Reactions, k	110 psi/in
Drainage Coefficient	1.0 Pavement; 0.9 Base
Base Modulus	21,000 psi – Class II Base
Slab/Base Friction Coefficient	1.1

With the aforementioned parameters, it is possible to use a typical “standard” pavement section consisting of the following:

USAGE	RIGID PAVEMENT (Concrete)
Industrial Vehicle Drives	8.5 inches of concrete over *8 inches compacted base course over **Nonwoven geotextile fabric on proof rolled stable subgrade
* See *Base and Sub-Base Recommendations* section below ** Mirafi 150N nonwoven geotextile or equivalent	

The pavement subgrade, subbase, base and pavement shall be prepared in accordance with the latest edition of the Louisiana Standard Specifications for Road and Bridges (LSSRB) and

the recommendations provided in this report. The recommended pavement thicknesses presented above are considered typical and minimum for the encountered soils and given/assumed design parameters for this site. The Client, the Owner, and the Project Designers should be aware that thinner pavement/base sections may result in increased maintenance costs and lower than anticipated pavement life.

The use of recycled crushed concrete is an approved aggregate base alternative to crushed stone. The aggregate base shall meet the requirements of the latest edition of the LSSRB, Sections 1003.3.3.1 and 1003.3.2.

The subbase course shall be compacted to at least 95 percent of its maximum dry density at ±2 percent for cohesive material (±3 percent for cohesionless material) of the optimum moisture content in accordance with ASTM D698, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)).

Pavement materials may be placed after the subgrade or structural fill has been properly proof rolled or compacted, and fine-graded. These activities shall be accomplished following the LSSRB construction guidelines.

Proper finishing of concrete pavement requires the use of appropriate construction joints to reduce cracking. Construction joints shall be designed in accordance with the current Portland Cement Association and the American Concrete Institute guidelines. Joints should be sealed to reduce the potential for water infiltration into the supporting soils. The design of steel reinforcement should be in accordance with current accepted codes.

Asphaltic concrete should meet the requirements of Part V of the latest edition of the LSSRB. The aggregate base should meet the requirements of Sub-Section 1003.03.1 or 1003.03.2 of the LSSRB. The base and structural fill should be compacted to at least 95 percent of the maximum dry density at ±2 percent for cohesive material (±3 percent for cohesionless material) of the optimum moisture content in accordance with ASTM D698.

Water should not be allowed to pond behind curbs and saturate the base. In down grade areas, the granular base shall extend through the slope to provide an exit path for any water accumulating under the pavement.

*Base and Sub-Base Recommendations

Crushed Stone/Recycled Concrete Aggregate Material

Properly graded crushed stone or recycled crushed concrete meeting the requirements of Class II base and Sections 1003.03.1 and 1003.03.2 of the LSSRB should be utilized beneath the pavements where specified in the *Recommended Pavement Sections* table presented in this report. The aggregate base material should be placed in accordance with LADOTD Section 302 and compacted to at least 95 percent of the maximum dry density as determined by ASTM

D698 using a smooth pad roller. Placement and compaction of the aggregate material should be near optimum moisture.

EARTHWORK RECOMMENDATIONS

Site Preparation

Silty soils and other moisture sensitive materials are commonly encountered in this area of Louisiana. Therefore, caution should be used when performing construction activities as this type of soil can become unstable, especially during the wetter portions of the year or when exposed to construction traffic. Therefore, over excavation and replacement with properly compacted structural fill material of these near surface silty and moisture sensitive soils within the roadway alignment, extending to at least (1) foot behind the back of curb, may be required to pass a proof-roll.

Premier recommends that all existing slabs, pavements, base course, topsoil, stumps, vegetation, roots, soft, organic, or unsuitable soils in the construction areas be stripped in its entirety from the site and either wasted or stockpiled for later use in non-structural areas. After stripping operations are completed, and prior to any fill placement, proof rolling of the subgrade is required as discussed later in this report. It should also be noted that it is not unusual for topsoil thickness to vary from the values stated in this report in the open field. Oftentimes, topsoil can be deeper in low-lying areas, where erosion, wind and precipitation can deposit this material. For estimating purposes, Premier anticipates an average stripping depth of approximately **4- to 8-inches**, but this shall be verified by the Contractor(s) prior to bidding and construction. There may be areas of the site that require additional, or possibly less stripping for the reasons discussed above. A representative of Premier or the design team should determine and document the depth of removal at the time of construction.

The in-situ soils encountered at this project site may undergo a significant loss of stability when construction activities are performed during wetter portions of the year. Premier anticipates that the soils in the project area can become easily disturbed if subjected to conventional rubber tire or narrow track-type equipment and excessive moisture. Soils that become disturbed would need to be excavated and replaced; however, this remedial excavation may expose progressively wetter soils with depth, thus compounding the problem condition. Thus, a normal approach to subgrade preparation may not be possible. Appropriate wide-track equipment selection should aid in minimizing potential disturbance. In addition, and for these reasons, it will be advantageous to perform earthwork and foundation construction activities during dry weather.

Proof Rolling

After stripping to the proposed subgrade level as required, the proposed pavement footprint, extending to at least one (1) foot of the back of curb or edge of pavement, areas should be proof-rolled with a 20-25-ton, half-loaded tandem axle dump truck or similar

heavy rubber-tired vehicle (typically with an axial load greater than nine (9) tons) and observed by a representative from Premier. Soils that are observed to rut or deflect greater than one (1) inch under the moving load should be undercut and replaced with properly compacted structural fill material or rendered stable by using a combination of lime/ fly ash/ kiln dust. The proof-rolling and undercutting activities should be witnessed by a representative of Premier and should be performed during a period of dry weather. Care should be taken during construction activities not to allow excessive drying or wetting of exposed soils. The subgrade soils should be scarified and compacted to at least 95% of the materials' Standard Proctor maximum dry density, in general accordance with ASTM procedures, to a depth of at least twelve (12) inches below existing subgrade.

If moisture sensitive or saturated soils are encountered during the proof roll, replacing this material with a low plasticity compacted soil or a dense positively drained graded crushed stone/concrete may be required. Alternatively, lime-treatment of highly plastic clay can be accomplished to reduce the plasticity index, improve workability, promote drying, and reduce shrink/swell potential. A representative of Premier's Geotechnical Engineer should observe the subgrade soils, perform plasticity index tests, and estimate the approximate extent of the exposed fat clays. If it is desirable to modify the fat clays with a commercially available Class "C" fly ash or lime product, Premier recommends the actual application percent be determined by conducting a laboratory Class "C" fly ash or lime series test. The Geotechnical Engineer's representative should observe the remediation procedures for compliance with the project plans and specifications.

Fill Material and Placement

After subgrade preparation, and proof rolling and observation have been completed, fill placement required to obtain the proposed roadway elevation may begin. A representative of Premier should be on-site to observe, test, and document all placement of the fill. If the fill is too dry, water should be uniformly applied and thoroughly mixed into the soil by disking or scarifying. Close moisture content control will be required to achieve the recommended degree of compaction. It should be noted that high plasticity clays are typically more difficult to compact and achieve the optimum moisture content during the placement of fill. The following table details the recommended specifications for fill placement, testing, etc.

Fill Material Testing Specifications

SPECIFICATION	REQUIREMENT
Lift Thickness	Maximum 8-inch loose lifts when compacted with large heavy compaction equipment; Maximum 6-inch loose lifts when compacted with lightweight compaction equipment (thinner lifts may be required in confined locations)
Density	Minimum of 95 percent of maximum dry density as defined by ASTM D698 at all locations and depths.
Moisture	± 2 percent of optimum moisture as defined by ASTM D698 for cohesive soils. For cohesionless soils with greater than 12 percent passing the US Standard No. 200 sieve, ± 3 of optimum moisture as defined above. Moisture requirement is waived for cohesionless soils with less than 12 percent passing the No. 200 sieve.
Density Testing Frequency	One test per 2,500 square feet in pavement areas with a minimum of 3 tests per lift. One test per 200 feet of trench backfill and/or culvert bedding with minimum of 3 tests per lift, or as required by local government agencies.

Clay Structural Fill and Backfill Material

Clay fill materials used to achieve the proposed road elevation should be free of organics or other deleterious materials and have a maximum particle size of less than three (3) inches. Clay fill soils are required to have a liquid limit (LL) less than forty (40) and plasticity index (PI) between twelve (12) and twenty-two (22) and plots below the A-line on the plasticity chart, or as accepted by the Geotechnical Engineer of Record.

Granular Structural Fill and Backfill Material

Granular material may be used as an alternative to structural clay fill. Granular fill placed beneath structural features or slabs should be free of organic or other deleterious materials and have a maximum particle size of less than three (3) inches. Additionally, less than 12% of this material should pass the No. 200 sieve. Material used as structural fill should be tested and evaluated by the Geotechnical Engineer of Record.

Utility Trench and Culvert Backfill

Excavation for utility trenches shall be performed in accordance with OSHA regulations as stated in 29 CFR Part 1926. It should be noted that utility trench excavations have the potential to degrade the properties of adjacent fill materials. Utility trench walls that are allowed to move laterally can lead to reduced bearing capacity and increased settlement of adjacent structural elements and overlying slabs.

Backfill for utility/culvert trenches is as important as the original subgrade preparation or structural fill placed to support either a foundation or slab. Therefore, it is imperative that the backfill for utility trenches be placed to meet the project specifications for the structural fill for this project. If on-site soils are placed as trench backfill, the backfill for the utility trenches should be placed in four (4) to six (6) inch loose lifts and compacted to a minimum of 95% of the maximum dry density achieved by the Standard Proctor test (ASTM D698). The backfill soil should be moisture conditioned to be within 2% of the optimum moisture content as determined by the Standard Proctor test. Up to four (4) inches of bedding material placed directly under the pipes or conduits placed in the utility trench can be compacted to the 90% compaction criteria with respect to the Standard Proctor. Backfill of utility trenches should not be performed with water standing in the trench. If granular material is used for the backfill of the utility trench, the granular material should have a gradation that will filter protect the backfill material from the adjacent soils. If this gradation is not available, a geosynthetic non-woven filter fabric should be used to reduce the potential for the migration of fines into the backfill material. Granular backfill material shall be compacted to meet the above compaction criteria. The clean granular backfill material should be compacted to achieve a relative density greater than 75% or as specified by the Geotechnical Engineer for the specific material used.

Excavations

Excavations are expected to extend to a depth of six (6) to eight (8) feet below existing site grades. Free groundwater was encountered at a depth ranging from about five (5) to eight (8) feet below existing pavement at the time of our field exploration. Groundwater infiltration should be expected during construction of the culvert and could present construction challenges. Therefore, sloping or bracing should be anticipated to maintain wall stability. If braced, Premier recommends designing the bracing to resist the lateral earth pressure per foot of bracing as calculated below, assuming an in-situ soil unit weight (γ_{sat}) of 130 pounds per cubic foot (pcf), unit weight of water (γ_w) of 62.4, an at-rest earth pressure coefficient (K_0) of 0.5, and an excavation depth (z) of 8 feet.

$$\gamma_h(z) = K_0(\gamma_{sat} - \gamma_w)z + \gamma_w z = 0.5 * (130\ pcf) * 8\ ft + 62.4\ pcf * 8\ ft = 1{,}019.2\ psf$$

$$Resultant\ Force\ per\ Foot\ of\ Bracing, P = 0.5 * \gamma_h(z) * z = 0.5 * 1.019\ psf * 8\ ft = 4{,}076.8\ lb/ft$$

$$Applying\ a\ Factor\ of\ Safety\ (FS) of\ 2, P_{required} = 4{,}076.8\ lb/ft * 2 = \mathbf{8{,}153\ lb/ft}$$

$$Location\ of\ P_{required}, h = 0.33 * 8 = \mathbf{2.7\ ft}\ (\mathbf{above\ bottom\ of\ 8-foot\ excavtion})$$

In addition, the bracing load computed above includes only lateral earth and hydrostatic pressures from horizontal, existing ground and does not include any surface surcharges. Construction equipment, spoil piles, adjacent foundations, utilities, or other temporary loads near the excavation can significantly increase brace forces and deformations. The Contractor's temporary shoring designer shall identify and include all applicable and appropriate surcharges

in the design. Temporary shoring and dewatering methods of the Contractor should be designed and approved by a licensed Professional Engineer.

A sump pump, or similar, within a shallow pit or depression excavation should be used to remove surface and groundwater infiltration. Please note that bracing the excavation by installing steel sheet piling with a vibratory hammer or any pile driving operations could adversely affect the foundations of nearby structures resulting in foundation settlement. If there are structures near the proposed culvert areas, we recommend determining their foundation types prior to the installation of sheet piling and implementing vibration monitoring during pile driving activities. As an alternative to driven sheet pile, press-in-methods should be considered for installation of sheet piles.

In Federal Register, Volume 54, Number 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA) amended its "Construction Standards for Excavations, 29 CFR, part 1926, Subpart P". This document was issued to better enhance the safety of workers entering trenches or excavations. It is mandated by this federal regulation that excavations, whether they be utility trenches, basement excavation or footing excavations, be constructed in accordance with the new OSHA guidelines. It is Premier's understanding that these regulations are being strictly enforced and if they are not closely followed, the Owner and the Contractor could be liable for substantial penalties.

The Contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. Slope stability analyses and the design of sheetpile retaining structures were outside of Premier's scope of work. The Contractor's "responsible person", as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the Contractor's safety procedures. In no case should slope height, slope inclination or excavation depth, including utility trench excavation depth, exceed those specified in local, state and federal safety regulations.

Premier is providing this information solely as a service to our Client. Premier does not and will not assume responsibility for construction site safety or the Contractor's or other parties' compliance with local, state and federal safety or other regulations.

REPORT LIMITATIONS

The concept of risk is an important aspect of the geotechnical evaluation. The primary reason for this is that the analytical methods used to develop geotechnical recommendations do not comprise an exact science. The analytical tools which Geotechnical Engineers use are generally empirical and must be used in conjunction with engineering judgment and experience. Therefore, the solutions and recommendations presented in the geotechnical evaluation should not be considered risk-free and, more importantly, are not a guarantee that the interaction between the soils and the proposed structure will perform as planned. The engineering

recommendations presented in the preceding sections constitute Premier's professional estimate of those measures that are necessary for the proposed structure(s) to perform according to the proposed design based on the information generated and referenced during this evaluation, and Premier's experience in working with those conditions.

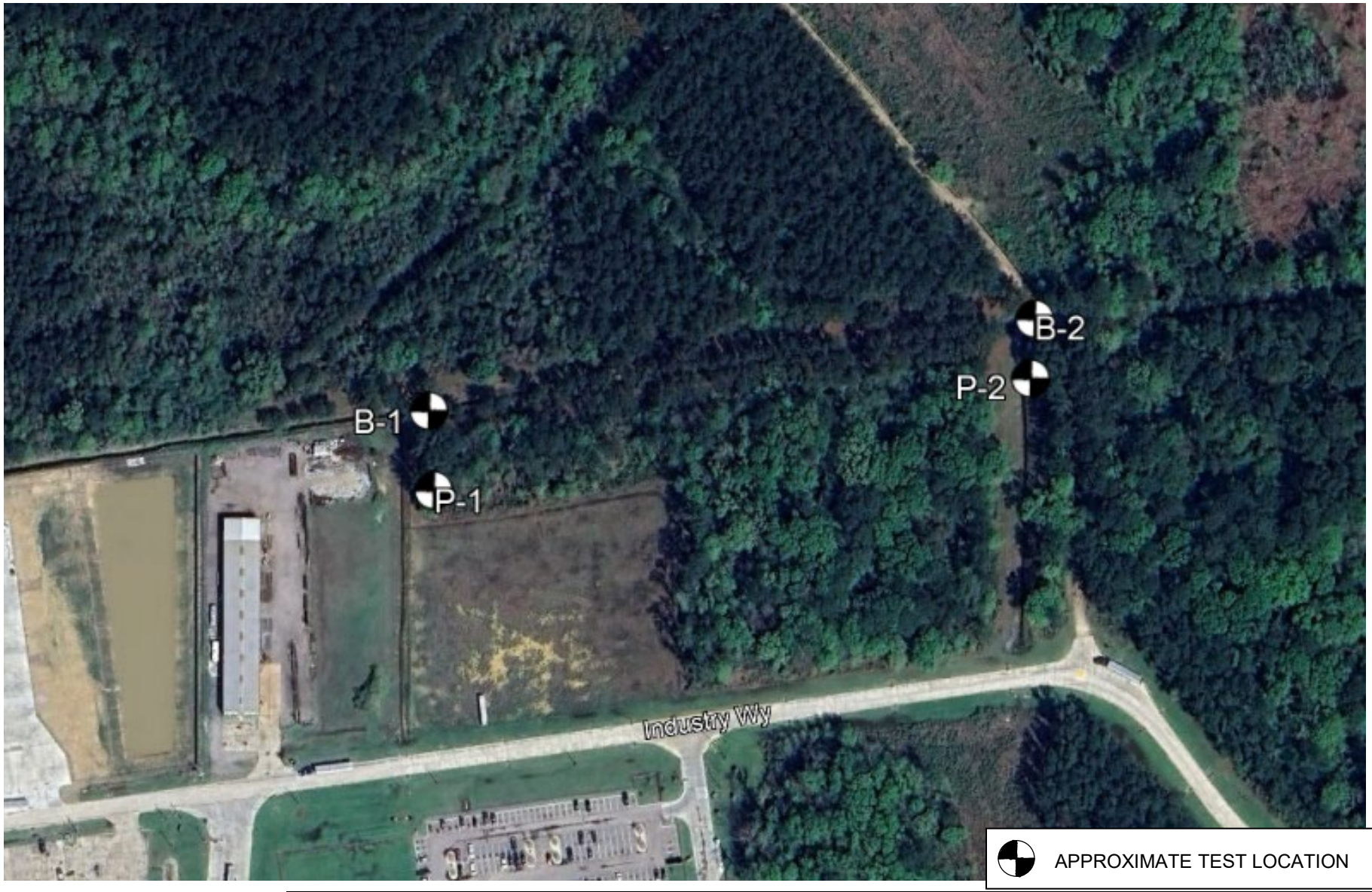
The recommendations submitted in this report are based on furnished project information by the design team and the subsurface information obtained from borings drilled by Premier. If there are any revisions to the plans for this project, or if deviations from the subsurface conditions noted in this report are encountered during construction, Premier must be notified immediately to determine if changes in the foundation recommendations are required. If Premier is not notified in writing of such changes, Premier will not be responsible for the impact of those changes on the project.

The Geotechnical Engineer warrants that the findings, recommendations, specifications, or professional advice contained herein have been made in accordance with generally accepted professional geotechnical engineering practices in the local area. No other warranties are implied or expressed.

After the plans and specifications are complete, the Geotechnical Engineer should be retained and provided the opportunity to review the final design plans and specifications to check that our geotechnical engineering recommendations have been properly incorporated into the design documents.

The scope of Premier's services did not include any geologic fault study, environmental assessment or investigation for the presence or absence of asbestos or hazardous or toxic materials in the soil, groundwater, or surface water within or beyond the site studied. Any statements in this report regarding odors, staining of soils, or other unusual conditions observed are strictly for the information of our Client.

This report and the information/data provided have been prepared for the exclusive use of Forte and Tablada, Inc., their design team, and their contractor for the specific application to the Hornsby Tract Project located in Walker, Louisiana. The information and data obtained and prepared (i.e., Instrument of Service) by Premier Geotech and Testing, LLC may not be used or relied on by any other entity, now or at any point in the future, without the express, written consent from Premier Geotech and Testing, LLC.



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PROPOSED HORNSBY TRACT
WALKER, LOUISIANA
PREMIER FILE NO.:24-0486

Premier GEOTECH AND TESTING, LLC

TEST LOCATION PLAN

KEY TO SYMBOLS

Symbol	Description
Strata symbols	
	Low plasticity clay
	High plasticity clay
	Silty sand
Misc. Symbols	
	Water table during drilling
■	Unconfined Shear Strength
Soil Samplers	
■	Undisturbed thin wall Shelby tube
	Standard penetration test

Notes:

1. Boring locations were located using handheld GPS technology.

2. These logs are subject to the limitations, conclusions, and recommendations in this report.

3. Results of tests conducted on samples recovered are reported on the logs.

PREMIER FILE# 24-0486

Premier GEOTECH AND TESTING, LLC

LOCATION: WALKER, LOUISIANA
COORDINATES: 30°30'16.11"N 90°49'15.24"W

SURFACE EL.: EXISTING GRADE

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)
0					Tan and Light Gray LEAN CLAY (CL) with silt pockets				19.0	43	19	24
					Tan and Light Gray FAT CLAY (CH)	2.0			18.2			
5					Stiff, Tan and Light Gray LEAN CLAY (CL)	4.0	109.3		18.5	30	16	14
					Tan and Light Gray FAT CLAY (CH) with silt pockets	6.0			17.1			
	▽				Stiff, Tan and Light Gray LEAN CLAY (CL) with silt pockets	8.0	110.8		19.0	31	16	15
10												
15					Tan and Light Gray FAT CLAY (CH)	13.0			19.4			
20					Medium, Tan and Light Gray FAT CLAY (CH) with silt pockets		102.9		23.4			
					Tan and Light Gray FAT CLAY (CH)				21.0			
25					Boring Terminated at 25 Feet	25.0						
30												
35												

SHEAR STRENGTH

Penetrometer ■ Unconfined
Torvane ● Triaxial
Field Vane ▲ Miniature Vane

TONS PER SQ FT
0.5 1 1.5 2 2.5

NOTES:

DRILLED DATE: 6/20/2025
DRILLER: PREMIER GEOTECH
LOGGER: T.G.
TOTAL DEPTH (Ft): 25
WATER LEVEL: 8'
BACKFILL: NATIVE SOIL CUTTINGS

LOG OF BORING B-1
PROPOSED HORNSBY TRACT PROJECT

PLATE

PREMIER FILE# 24-0486

Premier GEOTECH AND TESTING, LLC

LOCATION: WALKER, LOUISIANA
COORDINATES: 30°30'17.39"N 90°49'5.47"W

SURFACE EL.: EXISTING GRADE

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	CLASSIFICATION: UNIT DRY WT, PCF	CLASSIFICATION: PASSING NO 200 SIEVE, %	CLASSIFICATION: WATER CONTENT, %	CLASSIFICATION: LIQUID LIMIT	CLASSIFICATION: PLASTIC LIMIT	CLASSIFICATION: PLASTICITY INDEX (PI)	SHEAR STRENGTH (TONS PER SQ FT)
0					Brown LEAN CLAY (CL)				30.9				
					Medium, Brown, Tan and Light Gray LEAN CLAY (CL)		101.4		22.8	35	21	14	
5	▽				Tan and Light Gray FAT CLAY (CH)	4.0			17.8				
					Medium, Tan and Light Gray LEAN CLAY (CL)	6.0	100.6		24.1	38	21	17	
					Tan and Light Gray FAT CLAY (CH) with sand	8.0			15.2				
10													
					Very Soft, Tan, Brown and Light Gray LEAN CLAY (CL) BECOMING Tan and Light Gray SILTY SAND (SM)	13.0	105.8		20.0	34	18	16	
15													
				13	Medium Dense, Tan and Light Gray SILTY SAND (SM)	18.0		16.7	17.6				
20													
				12	Medium Dense, Tan and Light Gray SILTY SAND (SM)			41.2	20.6				
25					Boring Terminated at 25 Feet	25.0							
30													
35													

SHEAR STRENGTH: □ Penetrometer ■ Unconfined ◇ Torvane ● Triaxial △ Field Vane ▲ Miniature Vane
TONS PER SQ FT: 0.5 1 1.5 2 2.5

NOTES:

DRILLED DATE: 6/20/2025
DRILLER: PREMIER GEOTECH
LOGGER: T.G.
TOTAL DEPTH (Ft): 25
WATER LEVEL: 5'
BACKFILL: NATIVE SOIL CUTTINGS

LOG OF BORING B-2
PROPOSED HORNSBY TRACT PROJECT

PREMIER FILE# 24-0486

Premier GEOTECH AND TESTING, LLC

LOCATION: WALKER, LOUISIANA
COORDINATES: 30°30'15.01"N 90°49'15.16"W

SURFACE EL.: EXISTING GRADE

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	CLASSIFICATION: UNIT DRY WT, PCF	PASSING NO 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	SHEAR STRENGTH
0					Tan, Brown and Light Gray FAT CLAY (CH) with silt pockets				16.4				
					Very Stiff, Tan and Light Gray LEAN CLAY (CL)	2.0	109.0		20.4	44	18	26	
5	▽				Tan and Light Gray FAT CLAY (CH)	4.0			19.2				
					Tan and Light Gray LEAN CLAY (CL) with calcium nodules	6.0			19.3	36	18	18	
					Tan and Light Gray FAT CLAY (CH)	8.0			18.0				
10					Boring Terminated at 10 Feet	10.0							
15													
20													
25													
30													
35													

SHEAR STRENGTH

□ Penetrometer ■ Unconfined
◇ Torvane ● Triaxial
△ Field Vane ▲ Miniature Vane

TONS PER SQ FT
0.5 1 1.5 2 2.5

NOTES:

DRILLED DATE: 6/20/2025
DRILLER: PREMIER GEOTECH
LOGGER: T.G.
TOTAL DEPTH (Ft): 10
WATER LEVEL: 5'
BACKFILL: NATIVE SOIL CUTTINGS

LOG OF BORING P-1
PROPOSED HORNSBY TRACT PROJECT

PLATE

PREMIER FILE# 24-0486

Premier GEOTECH AND TESTING, LLC

LOCATION: WALKER, LOUISIANA
COORDINATES: 30°30'16.56"N 90°49'5.54"W

SURFACE EL.: EXISTING GRADE

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	CLASSIFICATION: UNIT DRY WT, PCF	CLASSIFICATION: PASSING NO 200 SIEVE, %	CLASSIFICATION: WATER CONTENT, %	CLASSIFICATION: LIQUID LIMIT	CLASSIFICATION: PLASTIC LIMIT	CLASSIFICATION: PLASTICITY INDEX (PI)
0					Stiff, Tan and Brown LEAN CLAY (CL)		100.8		20.4	40	21	19
					Tan and Light Gray FAT CLAY (CH)	2.0			18.9			
5					Tan and Brown LEAN CLAY (CL) with ferrous nodules	4.0			20.5	40	18	22
	▽				Tan and Light Gray FAT CLAY (CH) with sand pockets	6.0			15.4			
					Tan and Light Gray LEAN CLAY (CL) with sand	8.0			21.1	35	14	21
10					Boring Terminated at 10 Feet	10.0						
15												
20												
25												
30												
35												

SHEAR STRENGTH

□ Penetrometer ■ Unconfined
◇ Torvane ● Triaxial
△ Field Vane ▲ Miniature Vane

TONS PER SQ FT
0.5 1 1.5 2 2.5

NOTES:

DRILLED DATE: 6/20/2025
DRILLER: PREMIER GEOTECH
LOGGER: T.G.
TOTAL DEPTH (Ft): 10
WATER LEVEL: 6'
BACKFILL: NATIVE SOIL CUTTINGS

LOG OF BORING P-2
PROPOSED HORNSBY TRACT PROJECT

PLATE