February 28, 2020

JETZ Foods, LLC
6120 Shallowford Road, Suite 105
Chattanooga, Tennessee 37421

ATTENTION: Mr. Billy Jensen
billy@myfreshtaco.com

Subject: **REPORT OF GEOTECHNICAL EXPLORATION**
Proposed Del Taco Restaurant
Joe Frank Harris Parkway
Cartersville, Georgia
GEOServices Project No. 41-20148

Dear Mr. Jensen:

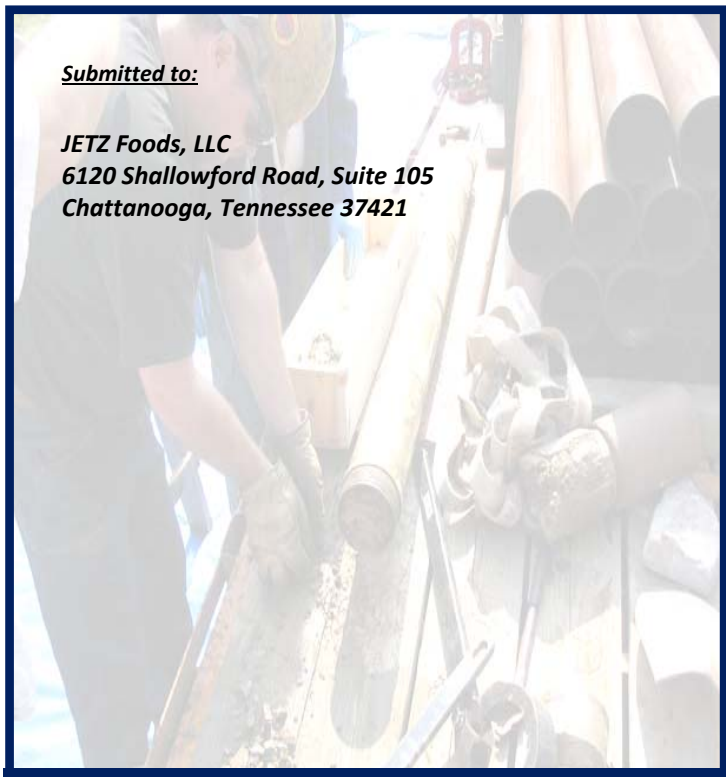
We are submitting the results of the geotechnical exploration performed for the subject project. The geotechnical exploration was performed in general accordance with our phone and email conversation. The following report presents our findings and recommendations for the proposed Del Taco Restaurant in Cartersville, Georgia.

GEOServices sincerely appreciates the opportunity to serve as your geotechnical consultant. Should you have any questions regarding this report, or if we can be of any further assistance, please contact us at your convenience.

Sincerely,
GEOServices, LLC

Derek K. Kilday, P.E. (TN)
V.P. – Chattanooga Area Manager

Dennis A. Huckaba, P.E.
Principal / Senior Engineer
GA 032462



Submitted to:

JETZ Foods, LLC
6120 Shallowford Road, Suite 105
Chattanooga, Tennessee 37421

REPORT OF GEOTECHNICAL EXPLORATION

DEL TACO RESTAURANT

Joe Frank Harris Parkway
Cartersville, Georgia

Submitted by:
GEOServices, LLC
5559 North Lee Highway
Cleveland, Tennessee 37312

Phone (423) 614-6471
FAX (423) 614-6479

GEOSERVICES, LLC
PROJECT NO. 41-20148

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APPENDICES

1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this geotechnical exploration was to characterize the subsurface conditions for the design and construction of the proposed Del Taco Restaurant in Cartersville, Georgia. This report provides recommendations for general site preparation, excavation and fill requirements, foundation recommendations, slab-on-grade construction, and pavement recommendations for the proposed restaurant development.

1.2 PROJECT INFORMATION AND SITE DESCRIPTION

Project information was provided by Mr. Billy Jensen with JETZ Foods, LLC. We were also provided with a proposed site plan prepared by Miller-McCoy, INC. The site for the proposed restaurant is located in the southeastern quadrant of the intersection of Joe Frank Harris Pkwy SE and E Felton Road. The site is bordered by E Felton Road to the north, by Joe Frank Harris Pkwy SE to the west, by a tree and dirt covered lot to the south, and by existing commercial development to the east. The site currently houses an existing gas station structure, along with the gas pump canopy and the asphalt covered parking/drive areas. We understand that this structure will be demolished prior to the proposed construction. The area around the existing building is relatively flat and asphalt covered. Grading information was not available at this time; however, based on the existing grades, we anticipate earthwork cuts and fills will be minimal (on the order of 3 feet or less) in order to establish the final grades.

We understand that the project will consist of the construction of a new single-story Del Taco restaurant and the associated parking and drive areas. Based on the provided plans, we understand that the proposed structure will have a footprint of 2,400 square feet. Detailed structural information was not available at this time; however, based on our experience with similar structures, we anticipate the structure will be a combination of CMU walls and metal stud

construction with concrete slab-on-grade. Additionally, based on our experience with similar construction, we anticipate maximum column loads will likely be on the order of 60 kips or less and maximum continuous foundation loads will likely be on the order of 2 to 3 kips per linear foot (klf) or less.

1.3 SCOPE OF STUDY

This geotechnical exploration involved a site reconnaissance, field drilling, laboratory testing, and engineering analysis. The following sections of this report present discussions of the field exploration, site conditions, and conclusions and recommendations. Following the text of this report, Appendix A presents figures and test boring records. Appendix B presents a summary of laboratory test results.

The scope of services did not include an environmental assessment for determining the presence or absence of wetlands, or hazardous or toxic materials in the soil, bedrock, surface water, subsurface water, or air, on or below, or around this site. Any statements in this report or on the boring logs regarding odors, colors, and unusual or suspicious items or conditions are strictly for informational purposes.

2.0 EXPLORATION AND TESTING PROGRAMS

2.1 FIELD EXPLORATION

The site subsurface conditions were explored with a total of seven (7) soil test borings (B-1 through B-7). Three of the borings (B-1, B-2, and B-3) were performed within the structural footprint, three of the borings (B-5, B-6, and B-7) were performed within the parking and drive areas, and one boring (B-4) was performed within the drive-thru area. The boring locations and depths were selected by GEOServices personnel in conjunction with the proposed site plan prepared by Miller-McCoy. Boring locations are shown on the Boring Location Plan, Figure 3 of Appendix A. The boring locations were located and staked in the field by GEOServices personnel. Drilling was performed on February 5, 2020. The depths reference the ground surface elevations at the site that existed at the time of the exploration. The borings were advanced using 3.25-inch inside diameter hollow stem augers (HSA) with a Geoprobe drill rig. The drill crew worked in general accordance with ASTM D6151 (HSA Drilling). Sampling of overburden soils was accomplished using the standard penetration test procedure (ASTM D1586). The borings were backfilled with soil cuttings before leaving the site. Detailed test boring records are presented in Appendix A.

In split–spoon sampling, a standard 2-inch O.D. split-spoon sampler is driven into the bottom of the boring with a 140-pound hammer falling a distance of 30 inches. The number of blows required to advance the sampler the last 12 inches of the standard 18 inches of total penetration is recorded as the Standard Penetration Resistance (N-value). These N-values are indicated on the boring logs at the testing depth and provide an indication of the relative density of granular materials and strength of cohesive materials.

2.2 LABORATORY TEST PROGRAM

Soil samples collected during drilling were transported to our laboratory for visual classification and laboratory testing. The following laboratory testing was performed on select samples to determine various properties of the soil:

- Atterberg Limits (ASTM D4318): Two Atterberg limits tests were performed for this project. These tests help us to confirm our visual classifications according to the Unified Soil Classification System (USCS). The plastic limit and liquid limit represent the moisture content at which a cohesive soil changes from a semi-solid to a plastic state and from a plastic state to liquid state, respectively.
- Natural Moisture Content (ASTM D2216): Moisture content determinations were performed on 37 samples for this project. The natural moisture content is defined as the ratio of the weight of water present in the soil to the dry weight of soil.

The test results are presented on individual laboratory data sheets and a Soil Data Summary, both enclosed in Appendix B.

3.0 SUBSURFACE CONDITIONS

3.1 GEOLOGIC CONDITIONS

The project site, as most of north Georgia, lies in the Appalachian Valley and Ridge Physiographic Province. The Province is characterized by elongated, northeasterly-trending ridges formed on highly resistant sandstones and shales. Between ridges, broad valleys and rolling hills are formed primarily on less resistant limestones, dolomites and shales.

Published geologic information indicates the site lies within the Shady Dolomite formation. The Shady Dolomite formation typically consists of white, almost pure coarse grained dolomite or silty blue-gray fine grained dolomite. Limestone beds occur in the lower portion of the section and thin layers of argillaceous shaly dolomite are common in the upper portion. Chert is found throughout the formation but is most common in the upper part. The Shady dolomite weathers to produce a thick yellow clay that grades into a reddish-brown soil at the surface. Masses of jasperoid (gray to yellow-brown fine-grained silica) are common in the yellow clay with nodules of iron and manganese oxide less common.

Since the bedrock formations underlying the site consist of dolomite, they are susceptible to the typical carbonate hazards of irregular weathering, cave and cavern conditions, and overburden sinkholes. Carbonate rock, while appearing very hard and resistant, is soluble in slightly acidic water. This characteristic, plus differential weathering of the bedrock mass, is responsible for the hazards. Of these hazards, the occurrence of sinkholes is potentially the most damaging to overlying soil supported structures. In North Georgia, sinkholes occur primarily due to differential weathering of the bedrock and "flushing" or "raveling" of overburden soils into the cavities in the bedrock. The loss of solids creates a cavity or "dome" in the overburden. Growth of the dome over time or excavation over the dome can create a condition in which rapid, local subsidence or collapse of the roof of the dome occurs.

3.2 SUBSURFACE CONDITIONS

3.2.1 Surficial Materials

A surficial layer of asphalt and gravel ranging from 7 to 9 inches in thickness was encountered in each of the seven borings (B-1 through B-7). Beneath these surficial layers, existing fill soils and residual soils were encountered to predetermined boring termination depths ranging from 10 to 25 feet.

3.2.2 Existing Fill

Beneath the surficial layer in each of the seven borings, existing fill soils were encountered to depths ranging from 3 to 5 feet. Fill is generally classified as material that has been transported and placed by man. The fill soils generally consisted of brown and red brown clays with varying amounts of rock fragments, sand, and organic staining (B-4 and B-6). The N-values of the fill soils ranged from 2 blows per foot (bpf) to 50 blows per 3 inches of penetration, indicating a consistency of very soft to very hard. The fill soils were generally firm to stiff in consistency. The very soft to soft fill soils were generally located in the areas of borings B-1 and B-7. The very hard materials were generally due to encountering heavy amounts of rock fragments in boring B-2. The natural moisture contents of the fill soils ranged from 15.7 to 30.5 percent.

3.2.3 Residual Soils

Beneath the existing fill soils in each of the seven borings, residual soils were encountered to predetermined boring termination depths ranging from 10 to 25 feet. Residual soils are generally classified as soils which have been formed in place from the weathering of the underlying bedrock. The residual soils generally consisted of brown silty clays and red brown and tan clays with varying amounts of sand and rock fragments. The N-values of the residuum ranged from 1 to 18 blows per foot (bpf), indicating a consistency of very soft to very stiff. The residuum was generally stiff to very stiff in consistency. The very soft to soft soils were generally isolated to the soils directly beneath the fill soils in the areas of borings B-1 and B-7. The natural moisture contents of the residuum ranged from 14.6 to 30.9 percent. Atterberg

limits testing on two select samples of the residuum revealed liquid limits (LL) of 37 and 41 percent and plasticity indices (PI) of 18 and 20 percent, respectively. These soils are classified as CL (lean clay) in general accordance with the Unified Soil Classification System.

3.2.4 Subsurface Water

Subsurface water was not observed in any of the seven borings at the time of drilling. Subsurface water levels may fluctuate due to seasonal changes in precipitation amounts. Additionally, discontinuous zones of perched water may exist within the overburden and/or at the contact with bedrock. The groundwater information presented in this report is the information that was collected at the time of our field activities.

3.2.5 Auger Refusal Conditions

Auger refusal materials were not encountered in any of the seven borings during field exploration. Refusal is a designation applied to any material that cannot be penetrated by the power auger. Auger refusal may indicate dense gravel or cobble layers, boulders, rock ledges or pinnacles, or the top of continuous bedrock.

3.2.6 General

The above subsurface description is of a generalized nature to highlight the major subsurface stratification features and material characteristics. The boring logs included in Appendix A should be reviewed for specific information at individual boring locations. The depth and thickness of the subsurface strata indicated on the boring cross-sections were generalized from and interpolated between test locations. The transition between materials will be more or less gradual than indicated and may be abrupt. Information on actual subsurface conditions exists only at the specific boring locations and is relevant to the time the exploration was performed. Variations may occur and should be expected between boring locations. The stratification lines were used for our analytical purposes and, unless specifically stated otherwise, should not be used as the basis for design or construction cost estimates.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 SITE ASSESSMENT

The results of the field exploration indicate that the site is adaptable for the proposed construction, however, there are some challenges associated with the development of this site. These challenges include the existing fill soils and the underlying karst geology.

4.1.1 Existing Fill Soils

Existing fill was encountered in each of the seven borings to depths ranging from 3 to 5 feet. We are not aware of, nor have we been provided with testing records for the fill. Accordingly, there are certain risks associated with construction on these types of fill. The risk primarily consists of excessive and/or non-uniform settlement caused by extensive zones or pockets of soft, loose, or uncompacted material.

The boring data indicates the fill consists of brown and red brown clays with varying amounts of rock fragments, sand, and organic staining (B-4 and B-6). The N-values of the fill soils ranged from 2 blows per foot (bpf) to 50 blows per 3 inches of penetration, indicating a consistency of very soft to very hard. The fill soils were generally firm to stiff in consistency. Typically, an engineered fill would have N-values in excess of 8 to 10 bpf and would be generally free of deleterious material. Based on our observations of the fill, the fill appears to have been subjected to only limited compactive efforts and is organic stained in areas. Therefore, we recommend that the existing fill not be relied upon for structure support of the proposed structure. There are several alternatives that can be utilized to remediate the existing fill soils. The most comprehensive and effective method of remediation would be a complete removal of the existing fill soils. With this, we would recommend that all of the fill soils within the structural footprints, plus approximately 5 feet outside the outermost foundation limit, be removed and replaced with suitable structural soil fill.

Additionally, we anticipate that the existing fill will provide adequate support of the proposed pavements with limited remediation. Consideration should be given to leaving the existing pavement section in place until after construction of the new building. It has been our experience that existing fill can change abruptly and may contain isolated pockets of unsuitable materials. As such, we recommend that the existing fill soils be subjected to a detailed proofroll prior to placement of new fill (in fill areas) or at final subgrade elevation (in cut areas) under the supervision of the geotechnical engineer or his qualified representative. Any areas judged to perform unsatisfactory during the proofroll should be remediated at the engineer's discretion. Remedial measures typically include undercutting and replacement with structural soil fill or dense graded aggregate.

It should also be noted that the residual soils directly beneath the fill soils in borings B-1, B-2, and B-7 were very soft to soft in consistency. These soils may need to be stabilized in order to achieve compaction of fill soils above this level.

4.1.2 Karst Geology

A certain degree of risk with respect to sinkhole formation and subsidence should be considered with any site located within geologic areas underlain by potentially soluble rock units. While a rigorous effort to assess the potential for sinkhole formation on this site was beyond the scope of this evaluation, our borings did not encounter obvious indications of sinkhole development. Additionally, a review of the USGS topographic map of the area did not reveal the presence of any closed depressions, which may denote past sinkhole activity, in the vicinity of the project site. Based on these findings and our experience with this formation at other sites, we consider that this site has no greater risk for sinkhole activity than other sites in the immediate vicinity of this site.

4.2 SITE PREPARATION

4.2.1 Subgrade

Gravel, topsoil, asphalt, concrete, rock fragments greater than 6 inches, unsuitable existing fill and other debris should be removed from the proposed construction areas. In previously developed areas, it is often common to find buried zones of construction debris. If these materials are encountered, they should be undercut and replaced at the discretion of the geotechnical engineer. Additionally, due to the very soft to soft residual soils beneath the fill soils in portions of the site, these soils may need to be stabilized in order to achieve compaction of the new fill soils.

After completion of any stripping operations and any required excavations to reach subgrade level, we recommend that the subgrade be proofrolled with a fully-loaded, tandem-axle dump truck or other pneumatic-tired construction equipment of similar weight. The geotechnical engineer or his qualified representative should observe proofrolling. Areas judged to perform unsatisfactorily should be remediated at the geotechnical engineer's discretion. Typically, remedial options consist of undercutting and replacement with structural soil fill or dense graded aggregate.

4.2.2 Structural Soil Fill

Material considered suitable for use as compacted fill should be clean soil free of organics, trash, and other deleterious material, containing no rock fragments greater than 6 inches in any one dimension. Preferably, borrow material to be used as structural soil fill should have a standard Proctor maximum dry density of 90 pounds per cubic foot (pcf) or greater and a plasticity index (PI) of 35 percent or less. All material being used as soil fill should be tested and confirmed by the geotechnical engineer to be in accordance with the project requirements before being placed. Based on limited laboratory testing, we anticipate the on-site soils are suitable for use as structural soil fill, as long as any deleterious material and/or debris is removed. Structural fill should be placed in loose, horizontal lifts not exceeding 8 inches in thickness. Each lift should be compacted

to at least 95 percent of maximum dry density per the standard Proctor method (ASTM D698) and within the range of minus 2 percent to plus 3 percent of the optimum moisture content. Each lift should be compacted and tested by geotechnical personnel to confirm that the contractor's method is capable of achieving the project requirements before placing any subsequent lifts. Any areas which have become soft or frozen should be removed before additional structural fill is placed.

4.2.3 Compacted Crushed Stone Fill

Compacted crushed stone fill should be Group 1 Aggregates in accordance with Section 815 of the Georgia Department of Transportation specifications. The crushed stone fill should be placed in loose, horizontal lifts not exceeding 10 inches in loose thickness. Each lift should be compacted to at least 98 percent of maximum dry density per the standard Proctor method (ASTM D698). Each lift should be compacted and tested by geotechnical personnel to confirm that the contractor's method is capable of achieving the project requirements before placing any subsequent lifts.

4.3 FOUNDATIONS

4.3.1 Shallow Foundations

Foundations for the proposed structures are anticipated to bear in stiff or better newly placed fill soils, residual soils, or remediated soils. The recommended allowable bearing capacity for design of the foundations is 2,500 pounds per square foot (psf). We recommend that continuous foundations be a minimum of 18 inches wide and isolated spread footings be a minimum of 24 inches wide to reduce the possibility of a localized punching shear failure. All exterior footings should be designed to bear at least 18 inches below finished exterior grade to protect against frost heave.

Foundation subgrade observations should be performed by a GEOServices geotechnical engineer, or his qualified representative, so that the recommendations provided in this report are consistent with the site conditions encountered. This is of elevated importance due to the existing fill soils

encountered at the project site. A dynamic cone penetrometer (DCP) is commonly utilized to provide information that is compared to the data obtained in the geotechnical report. Where unacceptable materials are encountered, the material should be excavated to stiff, suitable soils or remediated at the geotechnical engineer's direction. Typical remedial measures consist of undercutting, overexcavation, or combinations thereof.

4.3.2 Seismic Conditions

International Building Code, 2012

The project site is located approximately 317 miles from the New Madrid seismic source zone as designated by the United States Geologic Survey. In accordance with the International Building Code, 2012, we have provided the following table of seismic design information. After evaluating the subsurface conditions at each boring individually, it was determined that each structure would be located within seismic site class D and seismic design category C. A table follows, showing the calculated spectral response accelerations for both a short and 1-second period.

Table 1 – Seismic Conditions Summary

Structure	S_s g	S_1 g	S_{DS} g	S_{D1} G
Del Taco Restaurant	0.258	0.102	0.274	0.163

4.3.3 Slabs-on-Grade

For slab-on-grade construction, the site should be prepared as described previously. We recommend that the subgrade be topped with a minimum 4-inch layer of crushed stone (mineral aggregate base or a dense graded aggregate base) in the building area to act as a capillary moisture layer. The subgrade should be proofrolled and approved prior to the placement of the crushed stone. Based on the conditions encountered on this site, we recommend that the floor slabs bearing in soil be designed using a subgrade modulus of 125 pounds per cubic inch (pci). This modulus is based on a 1 foot by 1 foot area and should be adjusted for wider loads.

4.3.4 Settlement

We have estimated the total and differential settlements expected at this site based on the Federal Highways Administration (FHWA) Empirical Settlement Analysis Procedure. This FHWA empirical method allows the use of the SPT N-values in this calculation and includes the type of soil encountered. Based on the conditions encountered in our borings, the assumed structural loading, and the assumption that the existing fill soils are remediated as outlined; maximum total settlements of less than 1 inch and maximum differential settlements of less than ¾ inches in 40 feet should be expected. If the loads vary greatly from those assumed at the time of this analysis, GEOServices should be contacted to provide updated anticipated settlements.

4.4 PAVEMENT DESIGN RECOMMENDATIONS

4.4.1 Flexible Pavement Design

AASHTO flexible pavement design methods have been utilized for pavement recommendations. Our recommendations are based on the assumptions that the subgrade has been properly prepared as described previously. Traffic loading had not been provided at the time this report was prepared; however, we anticipate that it will be mainly passenger cars with some heavier delivery trucks. Based on our experience with similar projects with flexible pavement, we recommend the following light duty and medium duty flexible pavement section:

Table 2 – Flexible Pavement Section Summary

Recommended Thickness (Inches)		
Pavement Materials	**Light Duty**	**Medium Duty**
Bituminous Asphalt Surface Mix	1.0	1.5
Bituminous Asphalt Base Mix	2.0	2.5
Compacted Crushed Aggregate Base	6.0	8.0

We recommend a base stone equivalent to a Group 1 Aggregate in accordance with Section 815 of the Georgia Department of Transportation specifications. The bituminous asphalt pavement

should be 9.5mm Super Pave as per Section 400 for the surface mix and 19mm Super Pave as per Section 400 for the binder mix. Compaction requirements for the crushed aggregate base and the bituminous asphalt pavement should generally follow Georgia Department of Transportation specifications.

The recommended pavement thickness' presented in this report section are considered typical and minimum for the assumed parameters in the general site area. We understand that budgetary considerations sometimes warrant thinner pavement sections than those presented. However, the client, the owner, and the project designers should be aware that thinner pavement sections may result in increased maintenance costs and lower than anticipated pavement life.

4.4.2 Rigid Pavement Design

If areas could possibly be subjected to heavy vehicle loads, these areas may require the use of rigid pavement. If rigid pavement is required, we recommend the following rigid pavement section:

Table 3 – Rigid Pavement Section Summary

Pavement Materials	Recommended Thickness (Inches)
4,000 psi Type I Concrete	5.0
Compacted Crushed Aggregate Base	6.0

Consideration should be given to adjusting the thickness of the compacted crushed aggregate base to match the total thickness of the adjacent asphalt areas so that the soil subgrade is at the same elevation for both the concrete and medium duty asphalt pavement. Also, consideration should be given to extending the concrete dumpster pad the full length of the garbage truck, so the all the tires of the truck are able to sit on the concrete pad while dumping the dumpster. Concrete should be reinforced with welded wire fabric or reinforcing bars to assist in controlling cracking from drying shrinkage and thermal changes. Sawed or formed control joints should be included for each 225 square feet of area or less (15 feet by 15 feet). Saw cuts should not cut through the welded wire fabric or reinforcing steel and dowels should be utilized at formed and/or cold joints.

4.4.3 General

Our recommendations are based upon the assumption that the subgrade has been properly prepared as described in previous report sections and that any off-site soil borrow to be used to backfill to the final subgrade meets the requirements for structural soil fill.

All paved areas should be constructed with positive drainage to direct water off-site and to minimize surface water seeping into the pavement subgrade. The subgrade should have a minimum slope of 1 percent. In down grade areas, the basestone should extend through the slope to allow any water entering the basestone a path to exit. For rigid pavements, water-tight seals should also be provided at formed construction and expansion joints.

5.0 CONSTRUCTION CONSIDERATIONS

5.1 EXCAVATIONS

Excavations should be sloped or shored in accordance with local, state, and federal regulations, including OSHA (29 CFR Part 1926) excavation trench safety standards. The contractor is usually solely responsible for site safety. This information is provided only as a service and under no circumstances should GEOServices be assumed to be responsible for construction site safety.

5.2 MOISTURE SENSITIVE SOILS

The fine-grained soils encountered at this site will be sensitive to disturbances caused by construction traffic and changes in moisture content. During wet weather periods, increases in the moisture content of the soil can cause significant reduction in the soil strength and support capabilities. Construction traffic patterns should be varied to prevent the degradation of previously stable subgrade. In addition, plastic soils which become wet, may be slow to dry and thus significantly retard the progress of grading and compaction activities. We caution if site grading is performed during the wet weather season, methods such as discing and allowing the material to dry will be required to meet the required compaction recommendations. It will, therefore, be advantageous to perform earthwork and foundation construction activities during dry weather. Climate data for Cartersville, Georgia obtained from Weatherbase indicate in the following table the average monthly precipitation. The average amount of precipitation does not vary much throughout the year. However, December through March is typically the difficult grading period due to the limited drying conditions that exist.

Table 4 – Average Precipitation Summary

Month	Monthly Precipitation Average (Inches)	Month	Monthly Precipitation Average (Inches)
January	3.9	July	4.3
February	4.2	August	3.5
March	5.3	September	3.4
April	4.2	October	2.5
May	3.4	November	3.3
June	3.2	December	4.0

5.3 DRAINAGE AND SURFACE WATER CONCERNS

To reduce the potential for undercut and construction induced sinkholes, water should not be allowed to collect in the foundation excavations, on floor slab areas, or on prepared subgrades of the construction area either during or after construction. Undercut or excavated areas should be sloped toward one corner to facilitate removal of any collected rainwater, subsurface water, or surface runoff. Positive site surface drainage should be provided to reduce infiltration of surface water around the perimeter of the building and beneath the floor slabs. The grades should be sloped away from the building and surface drainage should be collected and discharged such that water is not permitted to infiltrate the backfill and floor slab areas of the building.

5.4 SINKHOLE CONSIDERATIONS

There is some inherent risk associated with building on any site underlain by carbonate rock. This risk can be reduced but not eliminated by preparing the site as described in this report. At this site, control of surface water during construction and over the project life will be very important to reduce the potential for sinkhole development. If a sinkhole develops, the appropriate corrective action is dependent on the size and location of the sinkhole. As

described herein, GEOServices should be retained to observe site and subgrade preparation activities. If sinkhole conditions are observed, the type of corrective action is most appropriately determined by GEOServices on a case-by-case basis.

6.0 LIMITATIONS

This report has been prepared in accordance with generally accepted geotechnical engineering practice for specific application to this project. This report is for our geotechnical work only, and no environmental assessment efforts have been performed. The conclusions and recommendations contained in this report are based upon applicable standards of our practice in this geographic area at the time this report was prepared. No other warranty, express or implied, is made.

The analyses and recommendations submitted herein are based, in part, upon the data obtained from the exploration. The nature and extent of variations between the borings will not become evident until construction. We recommend that GEOServices be retained to observe the project construction in the field. GEOServices cannot accept responsibility for conditions which deviate from those described in this report if not retained to perform construction observation and testing. If variations appear evident, then we will re-evaluate the recommendations of this report. In the event that any changes in the nature, design, or location of the project are planned, the conclusions and recommendations contained in this report will not be considered valid unless the changes are reviewed and conclusions modified or verified in writing. Also, if the scope of the project should change significantly from that described herein, these recommendations may have to be re-evaluated.

APPENDIX A

Figures and Test Boring Records

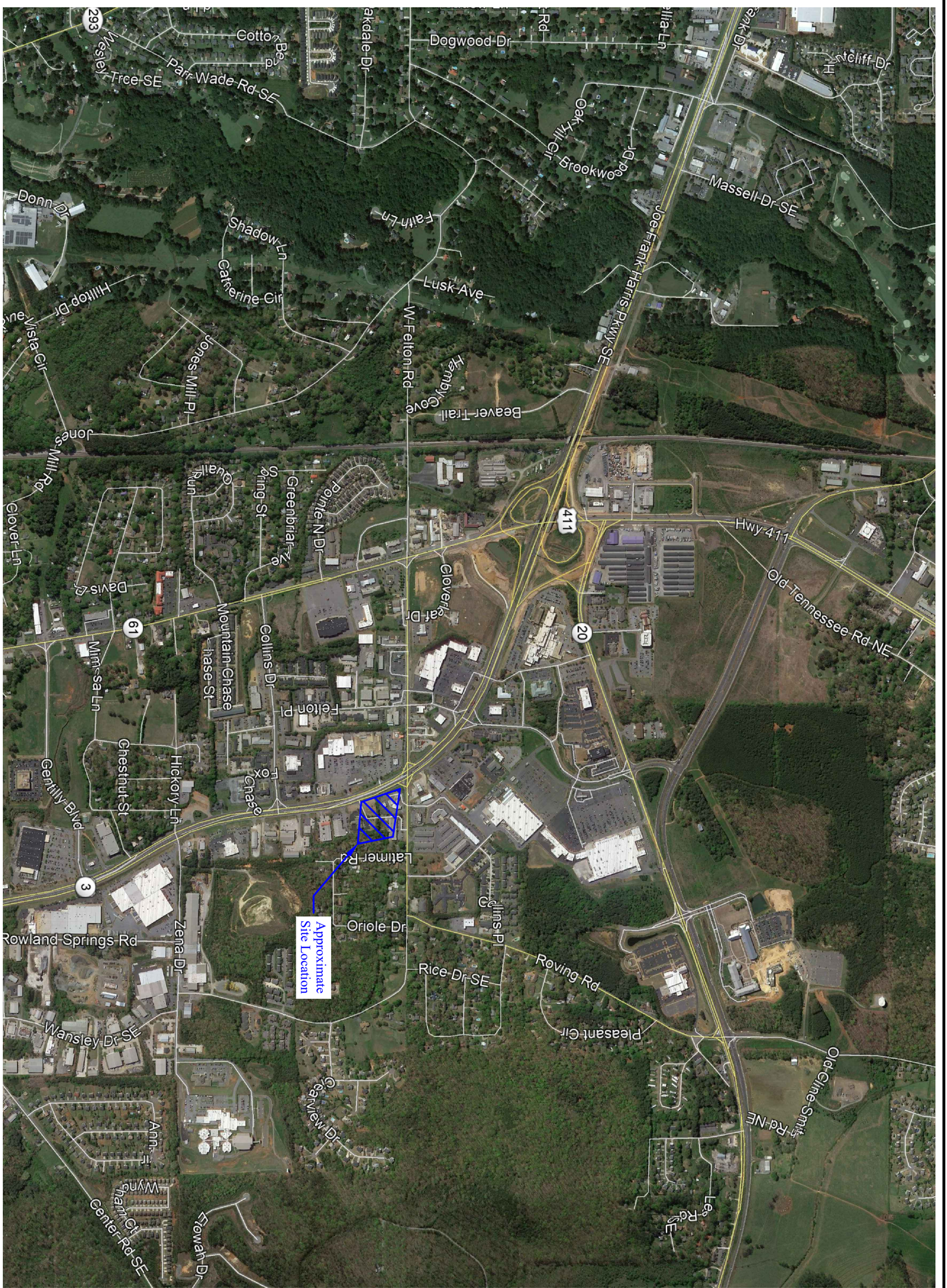

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FIGURE 1

GEOS
GEOServices, LLC-Geotechnical and Materials Engineers
5559 North Lee Highway
Cleveland, Tennessee 37312
Phone: (423) 614-6471
Fax: (423) 614-6479

DRAWN BY:	AET
APPROVED BY:	JTH
SCALE:	NTS
JOB NO.:	41-20148
DATE:	2/19/2020

SITE VICINITY MAP

Del Taco - Joe Frank Harris Pkwy

Cartersville, Georgia

NOTES:

1.) BASE MAP PROVIDED BY GOOGLE EARTH PRO (04/11/18).

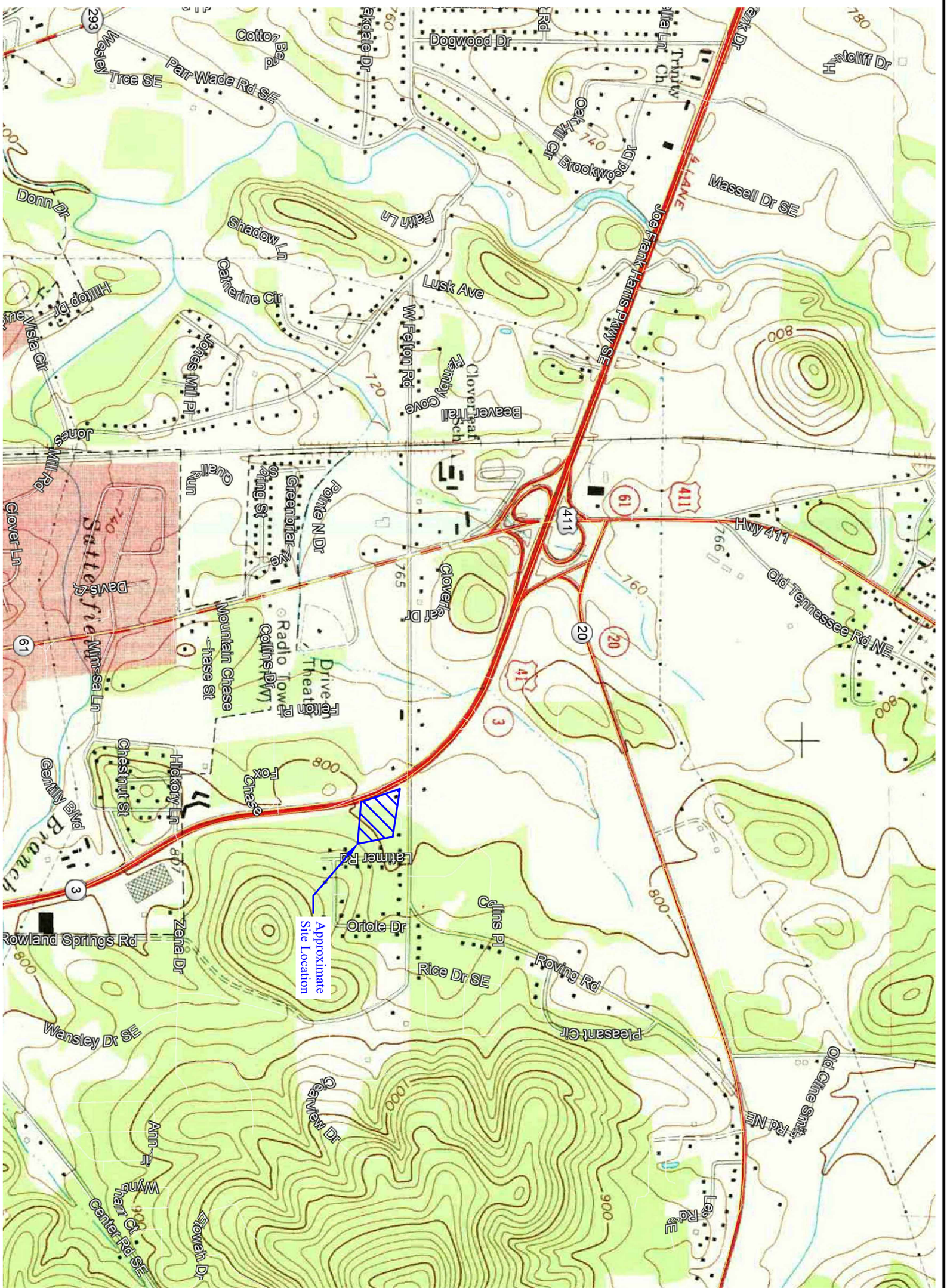

FIGURE 2

GEOS
GEOServices, LLC-Geotechnical and Materials Engineers
5559 North Lee Highway
Cleveland, Tennessee 37312
Phone: (423) 614-6471
Fax: (423) 614-6479

DRAWN BY:	AET
APPROVED BY:	JTH
SCALE:	NTS
JOB NO.:	41-20148
DATE:	2/19/2020

USGS TOPOGRAPHIC MAP

Del Taco - Joe Frank Harris Pkwy

Cartersville, Georgia

NOTES:

1.) BASE MAP PROVIDED BY USGS TOPOGRAPHIC MAP (1972) - CARTERSVILLE QUADRANGLE (GA).

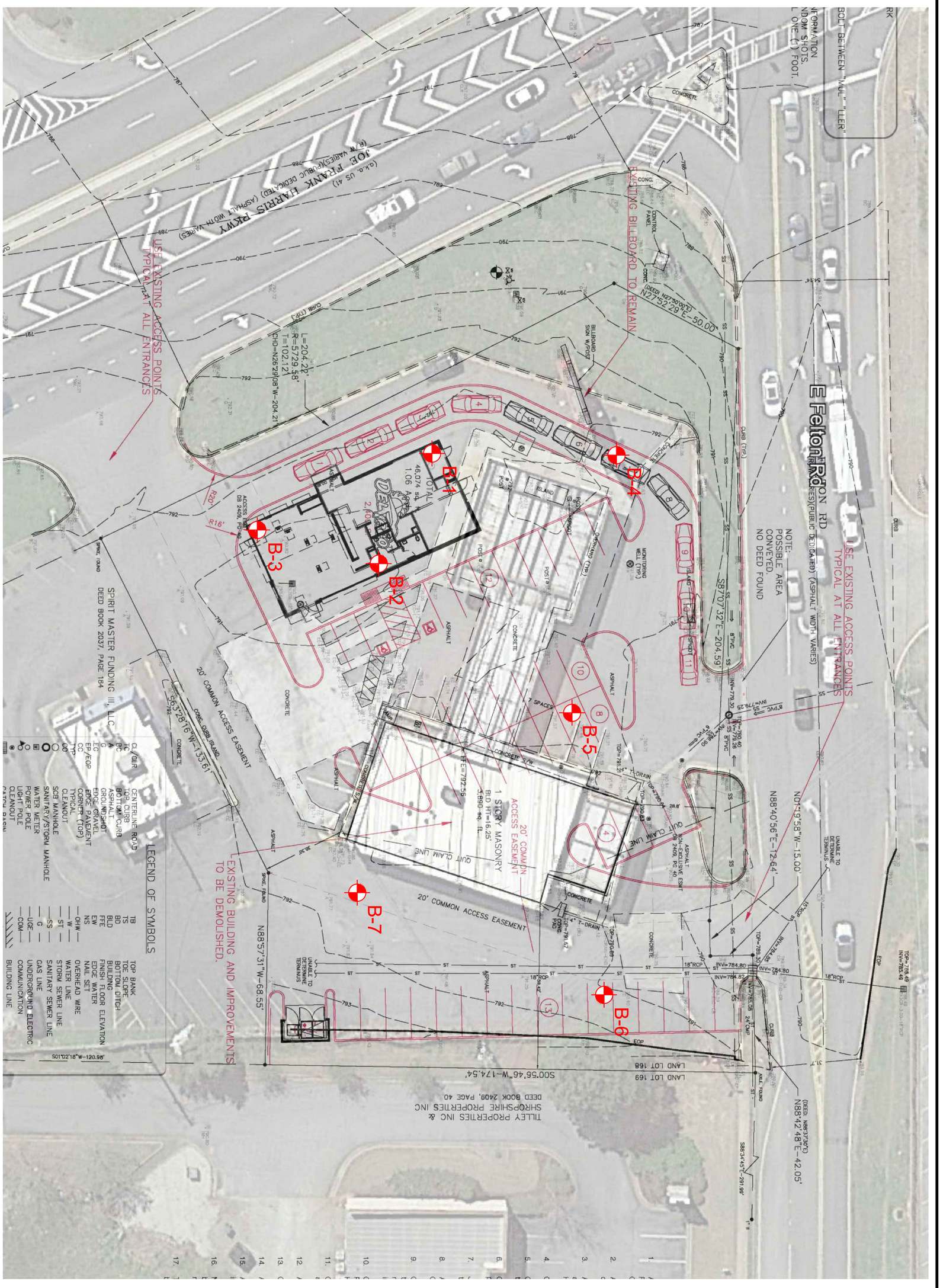

FIGURE 3

GEOServices, LLC-Geotechnical and Materials Engineers
5559 North Lee Highway
Cleveland, Tennessee 37312
Phone: (423) 614-6471
Fax: (423) 614-6479

DRAWN BY:	AET
APPROVED BY:	JTH
SCALE:	NTS
JOB NO.:	41-20148
DATE:	2/19/2020

BORING LOCATION PLAN

Del Taco - Joe Frank Harris Pkwy

Cartersville, Georgia

NOTES:

1.) BORING LOCATIONS ARE SHOWN IN GENERAL ARRANGMENT ONLY.
2.) DO NOT USE BORING LOCATIONS FOR DETERMINATIONS OF DISTANCES OR QUANTITIES.
3.) BASE MAP PROVIDED BY MILLER-MCCOY, INC.

LOCATION OF SOIL TEST BORING

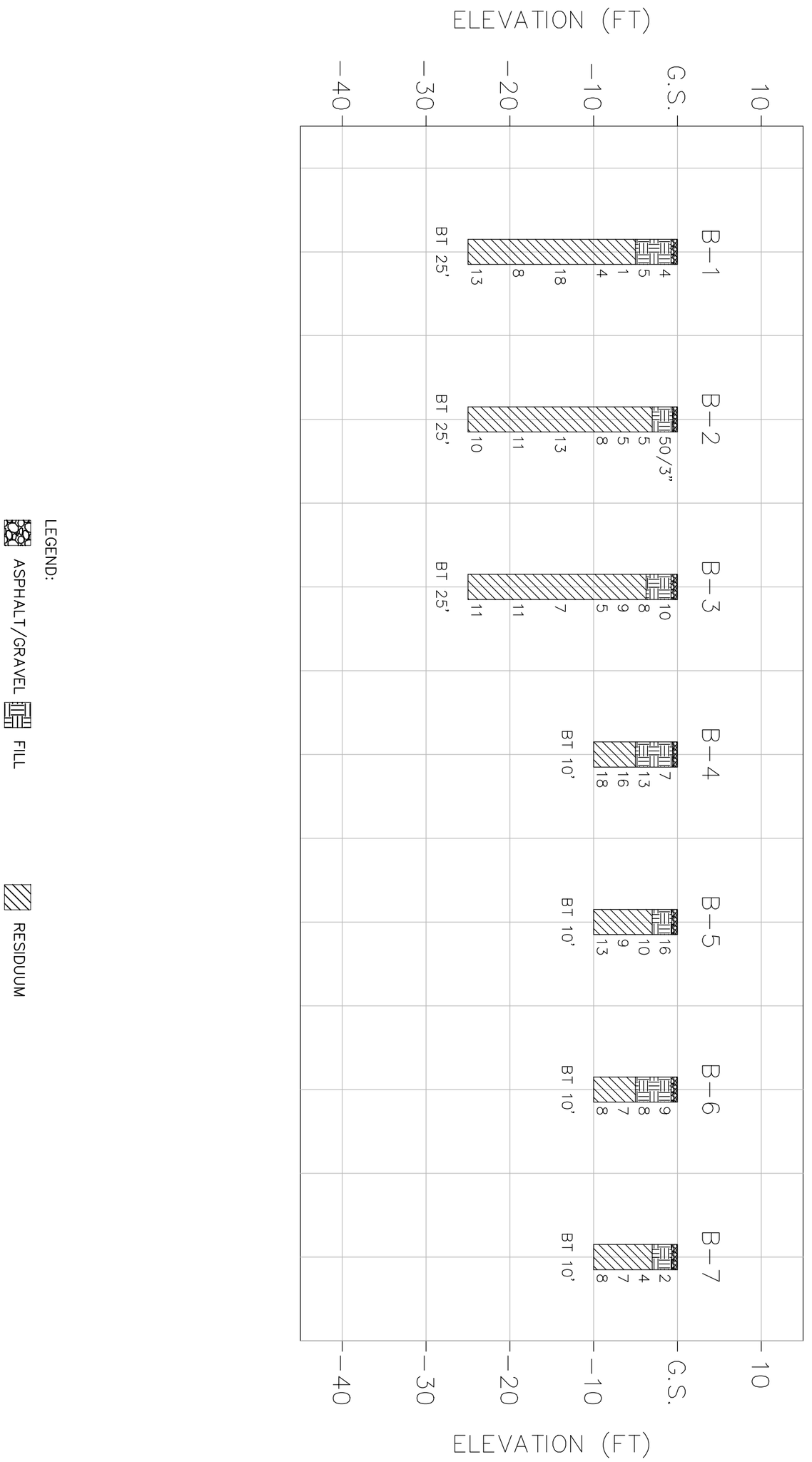

FIGURE 4

GEOServices, LLC-Geotechnical and Materials Engineers
5559 North Lee Highway
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Phone: (423) 614-6471
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DRAWN BY:	AET
APPROVED BY:	JTH
SCALE:	NTS
JOB NO.:	41-20148
DATE:	2/19/2020

SOIL BORING PROFILES

Del Taco - Joe Frank Harris Pkwy

Cartersville, Georgia

NOTES:

1.) BORING LOCATIONS ARE SHOWN IN GENERAL ARRANGMENT ONLY.
2.) DO NOT USE BORING LOCATIONS FOR DETERMINATIONS OF DISTANCES OR QUANTITIES.
3.) BORING ELEVATIONS WERE NOT AVAILABLE THEREFORE AN ASSUMED DATUM OF 0 FEET WAS SET AS THE EXISTING GROUND SURFACE.

GENERAL NOTES

FINE AND COARSE GRAINED SOIL PROPERTIES

PARTICLE SIZE

BOULDERS:	GREATER THAN 300 mm
COBBLES:	75 mm to 300 mm
GRAVEL:	4.74 mm to 75 mm
COARSE SAND:	2 mm to 4.74 mm
MEDIUM SAND:	0.425 mm to 2 mm
FINE SAND:	0.075 mm to 0.425 mm
SILTS & CLAYS:	LESS THAN 0.075 mm

COARSE GRAINED SOILS (SANDS & GRAVELS)

N-VALUE	RELATIVE DENSITY
0 - 4	VERY LOOSE
5 - 10	LOOSE
11 - 30	MEDIUM DENSE
31 - 50	DENSE
OVER 50	VERY DENSE

FINE GRAINED SOILS (SILTS & CLAYS)

N-VALUE	CONSISTENCY	Qu, PSF
0 - 2	VERY SOFT	0 - 500
3 - 4	SOFT	500 - 1000
5 - 8	FIRM	1000 - 2000
9 - 15	STIFF	2000 - 4000
16 - 30	VERY STIFF	4000 - 8000
OVER 31	HARD	8000 +

STANDARD PENETRATION TEST (ASTM D1586)

THE STANDARD PENETRATION TEST AS DEFINED BY ASTM D1586 IS A METHOD TO OBTAIN A DISTURBED SOIL SAMPLE FOR EXAMINATION AND TESTING AND TO OBTAIN RELATIVE DENSITY AND CONSISTENCY INFORMATON. THE 1.4 INCH I.D./2.0 INCH O.D. SAMPLER IS DRIVEN 3-SIX INCH INCREMENTS WITH A 140 LB. HAMMER FALLING 30 INCHES. THE BLOW COUNTS REQUIRED TO DRIVE THE SAMPLER THE FINAL 2 INCREMENTS ARE ADDED TOGETHER AND DESIGNATED THE N-VALUE. AT TIMES, THE SAMPLER CAN NOT BE DRIVEN THE FULL 18 INCHES. THE FOLLOWING REPRESENTS OUR INTERPRETATION OF THE STANDARD PENETRATION TEST WITH VARIATIONS.

BLOWS/FOOT (N-VALUE)	DESCRIPTION
25	25 BLOWS DROVE SAMPLER 12" AFTER INITIAL 6" SEATING
75/10"	75 BLOWS DROVE SAMPLER 10" AFTER INITIAL 6" SEATING
50/PR	PENETRATION REFUSAL OF SAMPLER AFTER INITIAL 6" SEATING

SAMPLING SYMBOLS

ST:	UNDISTURBED SAMPLE
SS:	SPLIT SPOON SAMPLE
CORE:	ROCK CORE SAMPLE
AU:	AUGER OR BAG SAMPLE

SOIL PROPERTY SYMBOLS

N:	STANDARD PENETRATION, BPF
M:	MOISTURE CONTENT %
LL:	LIQUID LIMIT %
PI:	PLASTICITY INDEX %
Qp:	POCKET PENETROMETER VALUE, TSF
Qu:	UNCONFINED COMPRESSIVE STRENGTH, TSF
DUW:	DRY UNIT WEIGHT, PCF

ROCK PROPERTIES

ROCK QUALITY DESIGNATION (RQD)

PERCENT	QUALITY
90 TO 100	EXCELLENT
75 TO 90	GOOD
50 TO 75	FAIR
25 TO 50	POOR
0 TO 25	VERY POOR

ROCK HARDNESS

VERY SOFT:	ROCK DISINTEGRATES OR EASILY COMPRESSES TO TOUCH: CAN BE HARD TO VERY HARD SOIL.
SOFT:	ROCK IS COHERANT BUT BREAKS EASILY TO THUMB PRESSURE AT SHARP EDGES AND CRUMBLES WITH FIRM HAND PRESSURE.
MODERATELY HARD:	SMALL PIECES CAN BE BROKEN OFF ALONG SHARP EDGES BY CONSIDERABLE HARD THUMB PRESSURE: CAN BE BROKEN BY LIGHT HAMMER BLOWS.
HARD:	ROCK CAN NOT BE BROKEN BY THUMB PRESSURE, BUT CAN BE BROKEN BY MODERATE HAMMER BLOWS.
VERY HARD:	ROCK CAN BE BROKEN BY HEAVY HAMMER BLOWS.

GEOServices, LLC-Geotechnical and Meterials Engineers

GEOServices, LLC-Geotechnical and Materials Engineers

Del Taco - Joe Frank Harris Parkway
Cartersville, Georgia
GEOServices Project No.: 41-20148

LOG OF BORING B-1
SHEET 1 OF 2

DRILLER Sawyer Blevins
ON-SITE REP. N/A

BORING NO. / LOCATION B-1
DRY ON COMPLETION ? Yes

DATE February 5, 2020
REFUSAL: No
SAMPLED 25.0 FT. 7.6 M
TOP OF ROCK
BEGAN CORING
FOOTAGE CORED (LF)
BOTTOM OF HOLE DEPTH 25.0 FT.

SURFACE ELEV. FT.
DEPTH FT. ELEV. FT.
DEPTH FT. ELEV. FT.
DEPTH FT. ELEV. FT.
FT.
ELEV. -25.00 FT.

WATER LEVEL DATA (IF APPLICABLE)
COMPLETION: DEPTH Dry FT.
ELEV. FT.
AFTER 24 HRS. DEPTH TNP FT.
ELEV. FT.

BORING ADVANCED BY: POWER AUGERING X WASHBORING

STRATUM DEPTH FT.	STRATUM DEPTH ELEV.	SAMPLE DEPTH FROM FT.	SAMPLE DEPTH TO FT.	SAMPLE OR RUN NO.	SAMPLE TYPE	FIELD RESULTS N-Value	Qp	LABORATORY RESULTS LL	PI	%M	STRATUM DESCRIPTION
											Asphalt (5 inches) / Gravel (4 inches)
		1.0	2.5	1	SS	**4**				27.8	
2.5	-2.5										**Lean CLAY (CL)** with rock fragments - brown and dark red brown; firm to very soft; moist to very moist **(FILL)**
		3.5	5.0	2	SS	**5**				26.7	
5.0	-5.0										
		6.0	7.5	3	SS	**1**				27.7	
7.5	-7.5										**Silty CLAY (CL)** with trace sand - brown; very soft to soft; moist **(RESIDUUM)**
		8.5	10.0	4	SS	**4**				27.4	
10.0	-10.0										
12.5	-12.5										
		13.5	15.0	5	SS	**18**				28.3	
15.0	-15.0										**Lean to Fat CLAY (CL to CH)** with sand and water staining - red brown and tan; very stiff to firm; moist **(RESIDUUM)**
17.5	-17.5										
		18.5	20.0	6	SS	**8**				27.8	
20.0	-20.0										

REMARKS:

GEOServices, LLC-Geotechnical and Materials Engineers

Del Taco - Joe Frank Harris Parkway
Cartersville, Georgia
GEOServices Project No.: 41-20148

LOG OF BORING B-1
SHEET 2 OF 2

DRILLER Sawyer Blevins
ON-SITE REP. N/A

BORING NO. / LOCATION B-1
DRY ON COMPLETION ? Yes

DATE February 5, 2020
SURFACE ELEV. ____ FT.
REFUSAL: No DEPTH ____ FT. ELEV. ____ FT.
SAMPLED 25.0 FT. 7.6 M
TOP OF ROCK DEPTH ____ FT. ELEV. ____ FT.
BEGAN CORING DEPTH ____ FT. ELEV. ____ FT.
FOOTAGE CORED (LF) ____ FT.
BOTTOM OF HOLE DEPTH 25.0 FT. ELEV. -25.00 FT.

WATER LEVEL DATA (IF APPLICABLE)
COMPLETION: DEPTH Dry FT.
ELEV. ____ FT.
AFTER 24 HRS. DEPTH TNP FT.
ELEV. ____ FT.

BORING ADVANCED BY: POWER AUGERING X WASHBORING ____

STRATUM DEPTH FT.	STRATUM DEPTH ELEV.	SAMPLE DEPTH FROM FT.	SAMPLE DEPTH TO FT.	SAMPLE OR RUN NO.	SAMPLE TYPE	FIELD RESULTS N-Value	Qp	LABORATORY RESULTS LL	PI	%M	STRATUM DESCRIPTION
22.5	-22.5	23.5	25.0	7	SS	**13**				24.9	**Lean to Fat CLAY (CL to CH)** with trace amounts of sand - tan; stiff; moist **(RESIDUUM)**
25.0	-25.0										**Boring Terminated at 25 Feet**
27.5	-27.5										
30.0	-30.0										
32.5	-32.5										
35.0	-35.0										
37.5	-37.5										
40.0	-40.0										

REMARKS: ____

GEOServices, LLC-Geotechnical and Materials Engineers

Del Taco - Joe Frank Harris Parkway
Cartersville, Georgia
GEOServices Project No.: 41-20148

LOG OF BORING B-2
SHEET 1 OF 2

DRILLER Sawyer Blevins
ON-SITE REP. N/A

BORING NO. / LOCATION B-2
DRY ON COMPLETION ? Yes

DATE February 5, 2020
REFUSAL: No
SAMPLED 25.0 FT. 7.6 M
TOP OF ROCK
BEGAN CORING
FOOTAGE CORED (LF)
BOTTOM OF HOLE DEPTH 25.0 FT.

SURFACE ELEV. FT.
DEPTH FT. ELEV. FT.
DEPTH FT. ELEV. FT.
DEPTH FT. ELEV. FT.
FT.
ELEV. -25.00 FT.

WATER LEVEL DATA (IF APPLICABLE)
COMPLETION: DEPTH Dry FT.
ELEV. FT.
AFTER 24 HRS. DEPTH TNP FT.
ELEV. FT.

BORING ADVANCED BY: POWER AUGERING X WASHBORING

STRATUM DEPTH FT.	STRATUM DEPTH ELEV.	SAMPLE DEPTH FROM FT.	SAMPLE DEPTH TO FT.	SAMPLE OR RUN NO.	SAMPLE TYPE	FIELD RESULTS N-Value	Qp	LABORATORY RESULTS LL	PI	%M	STRATUM DESCRIPTION
											Asphalt (4 inches) / Gravel (3 inches)
		1.0	2.5	1	SS	**50/3"**				30.5	**Lean CLAY (CL)** with gravel - red brown; very hard; moist **(FILL)**
2.5	-2.5										
		3.5	5.0	2	SS	**5**				29.8	
5.0	-5.0										
		6.0	7.5	3	SS	**5**				20.5	**Silty CLAY (CL)** - brown and red brown; firm; moist **(RESIDUUM)**
7.5	-7.5										
		8.5	10.0	4	SS	**8**				23.4	
10.0	-10.0										
12.5	-12.5										
		13.5	15.0	5	SS	**13**				24.8	**Lean CLAY (CL)** with sand and rock fragments - tan and red brown; stiff; moist **(RESIDUUM)**
15.0	-15.0										
17.5	-17.5										
		18.5	20.0	6	SS	**11**				25.9	
20.0	-20.0										

REMARKS:

GEOServices, LLC-Geotechnical and Materials Engineers

Del Taco - Joe Frank Harris Parkway
Cartersville, Georgia
GEOServices Project No.: 41-20148

LOG OF BORING B-2
SHEET 2 OF 2

DRILLER Sawyer Blevins
ON-SITE REP. N/A

BORING NO. / LOCATION B-2
DRY ON COMPLETION ? Yes

DATE February 5, 2020
SURFACE ELEV. _____ FT.
REFUSAL: No DEPTH _____ FT. ELEV. _____ FT.
SAMPLED 25.0 FT. 7.6 M
TOP OF ROCK DEPTH _____ FT. ELEV. _____ FT.
BEGAN CORING DEPTH _____ FT. ELEV. _____ FT.
FOOTAGE CORED (LF) _____ FT.
BOTTOM OF HOLE DEPTH 25.0 FT. ELEV. -25.00 FT.

WATER LEVEL DATA (IF APPLICABLE)
COMPLETION: DEPTH Dry FT.
ELEV. _____ FT.
AFTER 24 HRS. DEPTH TNP FT.
ELEV. _____ FT.

BORING ADVANCED BY: POWER AUGERING X WASHBORING _____

STRATUM DEPTH FT.	STRATUM DEPTH ELEV.	SAMPLE DEPTH FROM FT.	SAMPLE DEPTH TO FT.	SAMPLE OR RUN NO.	SAMPLE TYPE	FIELD RESULTS N-Value	Qp	LABORATORY RESULTS LL	PI	%M	STRATUM DESCRIPTION
22.5	-22.5	23.5	25.0	7	SS	**10**				26.7	**Lean CLAY (CL)** with sand and rock fragments - tan and red brown; stiff; moist **(RESIDUUM)**
25.0	-25.0										**Boring Terminated at 25 Feet**
27.5	-27.5										
30.0	-30.0										
32.5	-32.5										
35.0	-35.0										
37.5	-37.5										
40.0	-40.0										

REMARKS: _____

GEOServices, LLC-Geotechnical and Materials Engineers

Del Taco - Joe Frank Harris Parkway
Cartersville, Georgia
GEOServices Project No.: 41-20148

LOG OF BORING B-3
SHEET 1 OF 2

DRILLER Sawyer Blevins
ON-SITE REP. N/A

BORING NO. / LOCATION B-3
DRY ON COMPLETION ? Yes

DATE February 5, 2020
SURFACE ELEV. ____ FT.
REFUSAL: No DEPTH ____ FT. ELEV. ____ FT.
SAMPLED 25.0 FT. 7.6 M
TOP OF ROCK DEPTH ____ FT. ELEV. ____ FT.
BEGAN CORING DEPTH ____ FT. ELEV. ____ FT.
FOOTAGE CORED (LF) ____ FT.
BOTTOM OF HOLE DEPTH 25.0 FT. ELEV. -25.00 FT.

WATER LEVEL DATA (IF APPLICABLE)
COMPLETION: DEPTH Dry FT.
ELEV. ____ FT.
AFTER 24 HRS. DEPTH TNP FT.
ELEV. ____ FT.

BORING ADVANCED BY: POWER AUGERING X WASHBORING ____

STRATUM DEPTH FT.	STRATUM DEPTH ELEV.	SAMPLE DEPTH FROM FT.	SAMPLE DEPTH TO FT.	SAMPLE OR RUN NO.	SAMPLE TYPE	FIELD RESULTS N-Value	FIELD RESULTS Qp	LABORATORY RESULTS LL	LABORATORY RESULTS PI	LABORATORY RESULTS %M	STRATUM DESCRIPTION
											Asphalt (4 inches) / Gravel (5 inches)
		1.0	2.5	1	SS	**10**				19.6	**Lean CLAY (CL)** with rock fragments and black mottling - brown; stiff; moist **(FILL)**
2.5	-2.5										
		3.5	5.0	2	SS	**8**		41	20	22.5	
5.0	-5.0										
		6.0	7.5	3	SS	**9**				28.0	**Silty CLAY (CL)** with sand - brown; stiff to firm; moist **(RESIDUUM)**
7.5	-7.5										
		8.5	10.0	4	SS	**5**				24.8	
10.0	-10.0										
12.5	-12.5										
		13.5	15.0	5	SS	**7**				18.1	**Lean CLAY (CL)** with trace amounts of rock - red brown; firm to stiff; moist **(RESIDUUM)**
15.0	-15.0										
17.5	-17.5										
		18.5	20.0	6	SS	**11**				23.7	
20.0	-20.0										

REMARKS: ____

GEOServices, LLC-Geotechnical and Materials Engineers

Del Taco - Joe Frank Harris Parkway
Cartersville, Georgia
GEOServices Project No.: 41-20148

LOG OF BORING B-3
SHEET 2 OF 2

DRILLER Sawyer Blevins
ON-SITE REP. N/A

BORING NO. / LOCATION B-3
DRY ON COMPLETION ? Yes

DATE February 5, 2020
SURFACE ELEV. ____ FT.
REFUSAL: No DEPTH ____ FT. ELEV. ____ FT.
SAMPLED 25.0 FT. 7.6 M
TOP OF ROCK DEPTH ____ FT. ELEV. ____ FT.
BEGAN CORING DEPTH ____ FT. ELEV. ____ FT.
FOOTAGE CORED (LF) ____ FT.
BOTTOM OF HOLE DEPTH 25.0 FT. ELEV. -25.00 FT.

WATER LEVEL DATA (IF APPLICABLE)
COMPLETION: DEPTH Dry FT.
ELEV. ____ FT.
AFTER 24 HRS. DEPTH TNP FT.
ELEV. ____ FT.

BORING ADVANCED BY:
POWER AUGERING X
WASHBORING ____

STRATUM DEPTH FT.	STRATUM DEPTH ELEV.	SAMPLE DEPTH FROM FT.	SAMPLE DEPTH TO FT.	SAMPLE OR RUN NO.	SAMPLE TYPE	FIELD RESULTS N-Value	Qp	LABORATORY RESULTS LL	PI	%M	STRATUM DESCRIPTION
22.5	-22.5	23.5	25.0	7	SS	**11**				28.9	**Lean CLAY (CL)** with sand - tan and red brown; stiff; moist **(RESIDUUM)**
25.0	-25.0										**Boring Terminated at 25 Feet**
27.5	-27.5										
30.0	-30.0										
32.5	-32.5										
35.0	-35.0										
37.5	-37.5										
40.0	-40.0										

REMARKS: ____

GEOServices, LLC-Geotechnical and Materials Engineers

Del Taco - Joe Frank Harris Parkway
Cartersville, Georgia
GEOServices Project No.: 41-20148

LOG OF BORING B-4
SHEET 1 OF 1

DRILLER Sawyer Blevins
ON-SITE REP. N/A

BORING NO. / LOCATION B-4
DRY ON COMPLETION ? Yes

DATE February 5, 2020
SURFACE ELEV. ____ FT.
REFUSAL: No DEPTH ____ FT. ELEV. ____ FT.
SAMPLED 10.0 FT. 3.0 M
TOP OF ROCK DEPTH ____ FT. ELEV. ____ FT.
BEGAN CORING DEPTH ____ FT. ELEV. ____ FT.
FOOTAGE CORED (LF) ____ FT.
BOTTOM OF HOLE DEPTH 10.0 FT. ELEV. -10.00 FT.

WATER LEVEL DATA (IF APPLICABLE)
COMPLETION: DEPTH Dry FT.
ELEV. ____ FT.
AFTER 24 HRS. DEPTH TNP FT.
ELEV. ____ FT.

BORING ADVANCED BY:
POWER AUGERING X
WASHBORING ____

STRATUM DEPTH FT.	STRATUM DEPTH ELEV.	SAMPLE DEPTH FROM FT.	SAMPLE DEPTH TO FT.	SAMPLE OR RUN NO.	SAMPLE TYPE	FIELD RESULTS N-Value	FIELD RESULTS Qp	LABORATORY RESULTS LL	LABORATORY RESULTS PI	LABORATORY RESULTS %M	STRATUM DESCRIPTION
											Asphalt (4 inches) / Gravel (3 inches)
		1.0	2.5	1	SS	**7**				18.9	
2.5	-2.5										**Lean CLAY (CL)** with rock fragments and organic staining - dark red brown; firm to stiff; moist **(FILL)**
		3.5	5.0	2	SS	**13**				21.1	
5.0	-5.0										
		6.0	7.5	3	SS	**16**				20.9	
7.5	-7.5										**Lean CLAY (CL)** with trace amounts of rock - red brown and tan; very stiff; moist **(RESIDUUM)**
		8.5	10.0	4	SS	**18**				24.9	
10.0	-10.0										**Boring Terminated at 10 Feet**
12.5	-12.5										
15.0	-15.0										
17.5	-17.5										
20.0	-20.0										

REMARKS: ____

GEOServices, LLC-Geotechnical and Materials Engineers

Del Taco - Joe Frank Harris Parkway
Cartersville, Georgia
GEOServices Project No.: 41-20148

LOG OF BORING B-5
SHEET 1 OF 1

DRILLER Sawyer Blevins
ON-SITE REP. N/A

BORING NO. / LOCATION B-5
DRY ON COMPLETION ? Yes

DATE February 5, 2020
SURFACE ELEV. ____ FT.
REFUSAL: No DEPTH ____ FT. ELEV. ____ FT.
SAMPLED 10.0 FT. 3.0 M
TOP OF ROCK DEPTH ____ FT. ELEV. ____ FT.
BEGAN CORING DEPTH ____ FT. ELEV. ____ FT.
FOOTAGE CORED (LF) ____ FT.
BOTTOM OF HOLE DEPTH 10.0 FT. ELEV. -10.00 FT.

WATER LEVEL DATA (IF APPLICABLE)
COMPLETION: DEPTH Dry FT.
ELEV. ____ FT.
AFTER 24 HRS. DEPTH TNP FT.
ELEV. ____ FT.

BORING ADVANCED BY: POWER AUGERING X WASHBORING ____

STRATUM DEPTH FT.	STRATUM DEPTH ELEV.	SAMPLE DEPTH FROM FT.	SAMPLE DEPTH TO FT.	SAMPLE OR RUN NO.	SAMPLE TYPE	FIELD RESULTS N-Value	FIELD RESULTS Qp	LABORATORY RESULTS LL	LABORATORY RESULTS PI	LABORATORY RESULTS %M	STRATUM DESCRIPTION
											Asphalt (4 inches) / Gravel (4 inches)
		1.0	2.5	1	SS	**16**				21.6	**Lean CLAY (CL)** with rock fragments - red brown to brown; very stiff; moist **(FILL)**
2.5	-2.5										
		3.5	5.0	2	SS	**10**				22.5	
5.0	-5.0										**Silty CLAY (CL)** with rock fragments and black mottling - brown; very stiff to stiff; moist **(RESIDUUM)**
		6.0	7.5	3	SS	**9**				21.9	
7.5	-7.5										
		8.5	10.0	4	SS	**13**				14.6	**Lean CLAY (CL)** with sand - red brown and tan; stiff; moist **(RESIDUUM)**
10.0	-10.0										**Boring Terminated at 10 Feet**
12.5	-12.5										
15.0	-15.0										
17.5	-17.5										
20.0	-20.0										

REMARKS: ____

GEOServices, LLC-Geotechnical and Materials Engineers

Del Taco - Joe Frank Harris Parkway
Cartersville, Georgia
GEOServices Project No.: 41-20148

LOG OF BORING B-6
SHEET 1 OF 1

DRILLER Sawyer Blevins
ON-SITE REP. N/A

BORING NO. / LOCATION B-6
DRY ON COMPLETION ? Yes

DATE February 5, 2020
SURFACE ELEV. ____ FT.
REFUSAL: No DEPTH ____ FT. ELEV. ____ FT.
SAMPLED 10.0 FT. 3.0 M
TOP OF ROCK DEPTH ____ FT. ELEV. ____ FT.
BEGAN CORING DEPTH ____ FT. ELEV. ____ FT.
FOOTAGE CORED (LF) ____ FT.
BOTTOM OF HOLE DEPTH 10.0 FT. ELEV. -10.00 FT.

WATER LEVEL DATA (IF APPLICABLE)
COMPLETION: DEPTH Dry FT.
ELEV. ____ FT.
AFTER 24 HRS. DEPTH TNP FT.
ELEV. ____ FT.

BORING ADVANCED BY: POWER AUGERING X WASHBORING ____

STRATUM DEPTH FT.	STRATUM DEPTH ELEV.	SAMPLE DEPTH FROM FT.	SAMPLE DEPTH TO FT.	SAMPLE OR RUN NO.	SAMPLE TYPE	FIELD RESULTS N-Value	Qp	LABORATORY RESULTS LL	PI	%M	STRATUM DESCRIPTION
											Asphalt (4 inches) / Gravel (5 inches)
		1.0	2.5	1	SS	**9**				20.2	
2.5	-2.5										**Lean CLAY (CL)** with rock fragments, sand, and organic staining - dark red brown; stiff to firm; moist **(FILL)**
		3.5	5.0	2	SS	**8**				18.8	
5.0	-5.0										
		6.0	7.5	3	SS	**7**		37	18	21.0	**Lean CLAY (CL)** - red brown; firm; moist **(RESIDUUM)**
7.5	-7.5										
		8.5	10.0	4	SS	**8**				22.3	
10.0	-10.0										**Boring Terminated at 10 Feet**
12.5	-12.5										
15.0	-15.0										
17.5	-17.5										
20.0	-20.0										

REMARKS: ____

GEOServices, LLC-Geotechnical and Materials Engineers

Del Taco - Joe Frank Harris Parkway
Cartersville, Georgia
GEOServices Project No.: 41-20148

LOG OF BORING B-7
SHEET 1 OF 1

DRILLER Sawyer Blevins
ON-SITE REP. N/A

BORING NO. / LOCATION B-7
DRY ON COMPLETION ? Yes

DATE February 5, 2020
SURFACE ELEV. ____ FT.
REFUSAL: No DEPTH ____ FT. ELEV. ____ FT.
SAMPLED 10.0 FT. 3.0 M
TOP OF ROCK DEPTH ____ FT. ELEV. ____ FT.
BEGAN CORING DEPTH ____ FT. ELEV. ____ FT.
FOOTAGE CORED (LF) ____ FT.
BOTTOM OF HOLE DEPTH 10.0 FT. ELEV. -10.00 FT.

WATER LEVEL DATA (IF APPLICABLE)
COMPLETION: DEPTH Dry FT.
ELEV. ____ FT.
AFTER 24 HRS. DEPTH TNP FT.
ELEV. ____ FT.

BORING ADVANCED BY: POWER AUGERING X WASHBORING ____

STRATUM DEPTH FT.	STRATUM DEPTH ELEV.	SAMPLE DEPTH FROM FT.	SAMPLE DEPTH TO FT.	SAMPLE OR RUN NO.	SAMPLE TYPE	FIELD RESULTS N-Value	FIELD RESULTS Qp	LABORATORY RESULTS LL	LABORATORY RESULTS PI	LABORATORY RESULTS %M	STRATUM DESCRIPTION
											Asphalt (4 inches) / Gravel (4 inches)
		1.0	2.5	1	SS	**2**				15.7	**Lean CLAY (CL)** with sand **-** red brown and tan; very soft; moist **(FILL)**
2.5	-2.5										
		3.5	5.0	2	SS	**4**				23.2	
5.0	-5.0										
		6.0	7.5	3	SS	**7**				23.6	**Silty CLAY (CL) -** brown; soft to firm; moist **(RESIDUUM)**
7.5	-7.5										
		8.5	10.0	4	SS	**8**				30.9	
10.0	-10.0										**Boring Terminated at 10 Feet**
12.5	-12.5										
15.0	-15.0										
17.5	-17.5										
20.0	-20.0										

REMARKS: ____

APPENDIX B

Soil Laboratory Data

SOIL DATA SUMMARY
Del Taco - Joe Frank Harris Parkway - Cartersville, Georgia
GEOServices Project No. 41-20148
February 13, 2020

Boring Number	Sample Number	Depth (feet)	Natural Moisture Content	Atterberg Limits			Soil Type
				LL	PL	PI	
B-1	1	1.0-2.5	27.8%				
	2	3.5-5.0	26.7%				
	3	6.0-7.5	27.7%				
	4	8.5-10.0	27.4%				
	5	13.5-15.0	28.3%				
	6	18.5-20.0	27.8%				
	7	23.5-25.0	24.9%				
B-2	1	1.0-2.5	30.5%				
	2	3.5-5.0	29.8%				
	3	6.0-7.5	20.5%				
	4	8.5-10.0	23.4%				
	5	13.5-15.0	24.8%				
	6	18.5-20.0	25.9%				
	7	23.5-25.0	26.7%				
B-3	1	1.0-2.5	19.6%				
	2	3.5-5.0	22.5%	41	21	20	CL
	3	6.0-7.5	28.0%				
	4	8.5-10.0	24.8%				
	5	13.5-15.0	18.1%				
	6	18.5-20.0	23.7%				
	7	23.5-25.0	28.9%				
B-4	1	1.0-2.5	18.9%				
	2	3.5-5.0	21.1%				
	3	6.0-7.5	20.9%				
	4	8.5-10.0	24.9%				
B-5	1	1.0-2.5	21.6%				
	2	3.5-5.0	22.5%				
	3	6.0-7.5	21.9%				
	4	8.5-10.0	14.6%				
B-6	1	1.0-2.5	20.2%				
	2	3.5-5.0	18.8%				
	3	6.0-7.5	21.0%	37	19	18	CL
	4	8.5-10.0	22.3%				
B-7	1	1.0-2.5	15.7%				
	2	3.5-5.0	23.2%				
	3	6.0-7.5	23.6%				
	4	8.5-10.0	30.9%				