PRE-MEETING AGENDA
MOUNTAIN BROOK CITY COUNCIL

CITY HALL PRE-COUNCIL ROOM (A106)
56 CHURCH STREET
MOUNTAIN BROOK, AL 35213

NOVEMBER 25, 2019, 6:00 P.M.

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1. Smyer Road Geo-Tech Report-David Marsh of ECS (See attached information.)

2. Two or four hour parking options for Westchester Road-Ted Cook and Sam Gaston (See attached map.)

3. Fire Fighter Cancer benefit-Steve Boone (See attached information. This item may be added to the formal agenda.)

4. Contract with Goodwyn, Mills and Cawood for recreational improvements in the city-Billy Pritchard (See attached information. This item may be added to the formal agenda.)

5. Contract with AO Studio for Church Street Improvement Illustrative Renderings and Presentation Graphics-Sim Johnson of the Board of Landscape Design (See attached information. This item may be added to the formal agenda.)

ECS SOUTHEAST, LLP

Geotechnical Engineering Report

Smyer Road Evaluation

Smyer Road
Mountain Brook, Jefferson County, Alabama

ECS Project Number 30:1857

November 21, 2019

November 21, 2019

Mr. Ronnie Vaughn
City of Mountain Brook
Department of Public Works
56 Church St
Mountain Brook, AL 35213

ECS Project No. 30: 1857

Reference: Report of Subsurface Exploration and Geotechnical Engineering Services
Smyer Road Evaluation
Mountain Brook, Jefferson County, Alabama 35216

Dear Mr. Vaughn:

As authorized by your acceptance of our Proposal No. 30-1356-P, dated September 27, 2019, ECS Southeast, LLP (ECS) completed a geotechnical evaluation at the above-referenced property. The enclosed report describes the exploration procedures, subsurface conditions, laboratory testing, existing roadway evaluation, and recommendations for roadway repair and/or additional evaluation. A Boring Location Diagram is included in the Appendix, along with the Boring Logs, Laboratory Testing Summary, and other supporting information.

It has been our pleasure to be of service to the City of Mountain Brook for this project. Should you have any questions concerning the information contained in this report, or if we can be of further assistance to you, please contact us.

Respectfully submitted,

ECS Southeast, LLP

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ALABAMA LICENSED No. 31636 PROFESSIONAL ENGINEER DAVID G. MARSH 11/21/19

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APPENDIX

1.0 INTRODUCTION

1.1 GENERAL

The purpose of this study was to provide geotechnical information and pavement repair recommendations for the roadway pavement failure occurring for a portion of Smyer Road within the city limits of Mountain Brook. This report contains existing road subgrade conditions, pavement repair recommendations or recommendations for additional evaluation, and the results of the subsurface exploration presented in soils boring logs and laboratory test data.

1.2 SCOPE OF SERVICES

In order to explore the subsurface soil conditions and to evaluate the pavement conditions a total of thirteen (13) soils test borings were performed within the area of apparent pavement failure along Smyer Road. These borings included three cross-sections of three borings spaced within the evaluation area. Conclusions and recommendations contained in this report are based upon our subsurface exploration consisting of these thirteen SPT soil borings, and laboratory test results of boring samples. This report discusses our exploratory and testing procedures, presents our findings and evaluations and includes the following.

- A brief review and description of our field and laboratory test procedures and the results of testing conducted.
- A review of surface topographical features and site conditions.
- A review of area and site geologic conditions.
- Thirteen (13) SPT soils borings for the current exploration.
- A review of subsurface soil stratigraphy with pertinent available physical properties.
- Recommendations for pavement repair or additional evaluation.

The recommendations contained herein were developed from the data obtained in the soil test borings, which indicate subsurface conditions at these specific locations at the time of exploration. Soil conditions may vary between the borings. If during the course of construction variations appear evident; the Geotechnical Engineer should be informed so that the conditions can be addressed.

1.3 AUTHORIZATION

Our services were provided in accordance with our Proposal No. 30:1356-P, dated September 27, 2019, as authorized by The City of Mountain Brook including the Terms and Conditions of Service outlined with our Proposal.

2.0 PROJECT INFORMATION

2.1 PROJECT LOCATION

The subject site is located along the northern portion of Smyer Road in Mountain Brook, Alabama, just west of US Highway 280 and east of the intersection of Smyer Road and Brookwood Place. The area of the evaluation starts approximately 125 feet east of the city limits, with the City of Homewood, and extends approximately 300 feet eastward in the general direction of U.S. Highway 280. This portion of the road slopes moderately downhill from Brookwood Place at the southwest end, and accesses single family residences where it dead ends at the northeast end. The road is bound on the north and south by steep, rocky wooded slopes. These slopes are typically on the order of steeper than 1H:1V downward from south to north.

2.2 PAST SITE HISTORY/USES

We understand from conversations with City of Mountain Brook personnel and the ECS Engineer's prior experience at the site that the subject roadway has experienced observed failure in the past. The City has undertaken various repair projects over time as the roadway has experienced apparent settlement and distress. Most recently, areas of the roadway had crack seal applied and various small patches applied. On the order of 10 years ago, a complete repair through implementation of dead-man anchors and tiebacks was performed for a limited section of the roadway. Of note, this section did not appear to be exhibiting signs of distress at the time of our evaluation. We understand other repairs of the roadway have been performed earlier than 10 years ago, but ECS has no direct knowledge of these and was not provided records of these repairs.

2.3 CURRENT SITE CONDITIONS

As noted previously, the area of evaluation lies parallel to a steep slope downward from south to north. Generally, the roadway appears to be constructed in a cut/fill condition where the uphill portion of the roadway is constructed in cut and the downhill (westbound) lane is constructed in fill.

Pavement rutting and tearing along this portion of Smyer Road was noted, particularly in the westbound lane of the roadway. Typical views of the pavement conditions are provided in Figures 2.3.1 and 2.3.2. The type of distress is typically evident of slope movement/settlement of the pavement subgrade soils. (This is further discussed in Section 3.3 and Section 5.)

Figure 2.3.1 – Typical View of Pavement Rutting and Tearing

Figure 2.3.2 – Typical View of Pavement Rutting and Tearing, Area of Prior Crack Seal is Visible

3.0 FIELD EXPLORATION

3.1 FIELD EXPLORATION PROGRAM

The field exploration was planned with the objective of gathering subsurface road conditions by performing SPT Soils Borings along the area of evaluation for the portion of Smyer Road in order to evaluate the soil subgrade condition in the areas of observed pavement distress and failure. This includes characterizing the project site in general geotechnical and geological terms, and evaluating subsequent field and laboratory data to assist in the determination of geotechnical recommendations.

3.1.1 Test Borings

Prior to performing the subsurface exploration, underground utilities were located through the Alabama One-Call system. Additionally, a private utility location service was provided to evaluate the boring locations for the presence of utility conflicts. The soil test borings were located in the field by an ECS representative utilizing a hand held GPS unit as reference. The Boring Location Diagram in the Appendix A indicates the approximate location of the borings. The soil test borings were completed with the following drilling and sampling equipment:

- Truck-mounted drill rig
- 3 ¼ inch hollow-stem auger drilling
- Automatic hammer
- Conventional split-spoon soil sampler

Representative soil samples were obtained by means of the split-barrel sampling procedure in accordance with ASTM Specification D 1586. In this procedure, a two-inch O.D., split-spoon sampler is driven into the soil a distance of 18 inches by a 140-pound hammer falling 30 inches. The number of blows required to drive the sampler through the final 12-inch interval, after initial setting of 6 inches, is termed the Standard Penetration Test (SPT) N-value and is indicated for each sample on the boring logs (attached in Appendix). The SPT values can be used as a qualitative indication of the in-place relative density of cohesionless soils, and as a relative indication of consistency in cohesive soils. This indication is qualitative, since many factors can significantly affect the standard penetration resistance value and prevent a direct correlation between drill crews, drill rigs, drilling procedures, and hammer-rod-sampler assemblies.

A field log of the soil encountered at each boring was maintained by the drilling crew. After recovery, each geotechnical sample was removed from the sampler and visually classified by the driller. Representative portions of each sample were then sealed in containers and transported to our laboratory in Birmingham, Alabama for further visual examination and laboratory testing. After completion of the drilling operations, the boreholes were backfilled with auger cuttings. Also, the boreholes were also patched to match the existing road grade with cold patch asphalt.

3.2 REGIONAL/SITE GEOLOGY

The subject site is underlain by the Parkwood Formation. The Parkwood Formation typically consists of interbedded layers of shale and sandstone bedrock. The soil overburden consists of residual soil weathered from the parent bedrock and is usually primarily silt and clayey sands with varying amounts of sand and clay along with clayey coal.

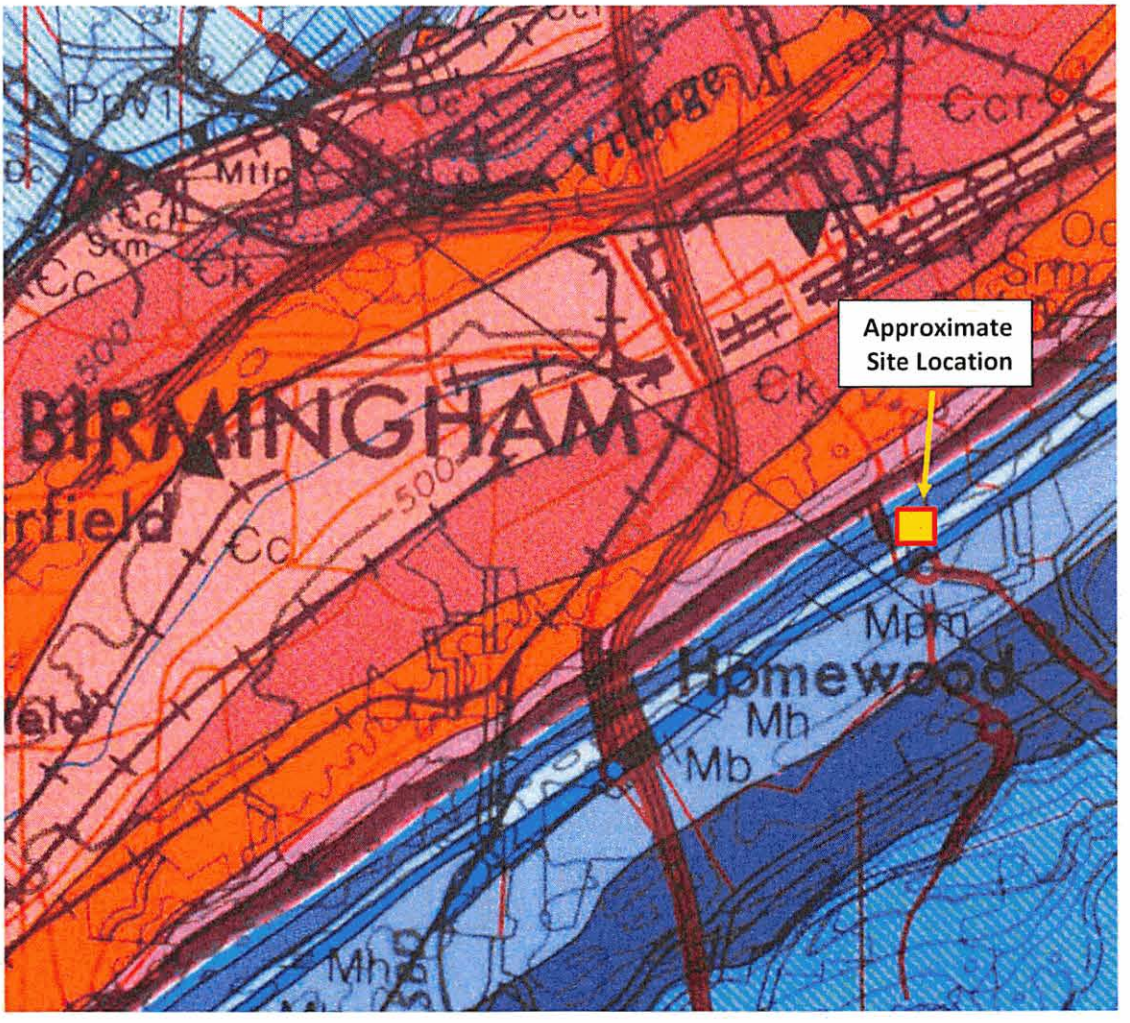

Figure 3.2.1 – Site Geology with Approximate Location of Site Highlighted
(Geologic Map of Alabama, Northwest Sheet, 1988)

3.3 SUBSURFACE CHARACTERIZATION

The site subsurface conditions were evaluated with thirteen (13) SPT borings (B-1 through B-13) at the approximate locations shown on the Boring Location Diagram in Appendix A. The quantity of borings, boring locations, and drilling depths were discussed with the project team prior to completing this subsurface exploration.

The subsurface exploration at the SPT boring locations indicated the presence of shallow bedrock at varying depths overlain with natural soil material as well as the presence of apparent fill material of varying depths below the road surface.

The existing asphalt depths encountered and measured were on average approximately four (4) inches thick, with the underlying gravel base material being approximately eight (8) inches thick where a visual distinction could be made at borings B-1, B-3, B-4, B-7 to B-9, B-11, B-17 where the gravel material laid directly below the road base material.

Borings B-1, B-3, B-4, B-7 to B-9, B-11, and B-12 encountered natural soils below the pavement generally on the eastbound/southern side of the roadway. The boring locations B-2, B-5, B-6, B-10, and B-13 encountered fill material below the pavement generally on the westbound/northern side of the roadway.

The existing fill material encountered consisted primarily of loose Well-Graded/Poorly Graded Gravel (GW/GP) material. Bulk auger samples were collected and the gravel was visually identified as a crushed limestone material. As limestone is not native to the local geology at the site, this material was imported. The depths of this gravel fill material layer ranged from 8 to 17 feet below surface elevation of the road and appeared to be consistently present in the areas of pavement failure.

The first two borings (B-2 and B-5) where this gravel material was encountered, the borings were terminated at the originally proposed depths of 10 feet. However, the subsequent borings (B-6, B-10, and B-13) were extended down through the gravel material into very dense residual Clayey Sand (SC) material where they were terminated at their respective depths. The depths of the gravel fill material at these boring locations (B-6, B-10, and B-13) were 17, 20, and 8 feet, respectively. When the drilling reached underlying residual materials the SPT N-Values within this Clayey Sand layer were high consistency with SPT N-values greater than 50 blows per foot. (bpf).

The residual soils material encountered in SPT borings B-1, B-3, B-4, B-7 to B-9, B-11, and B-12 primarily consisted of Sandy Lean Clays (CL) and Clayey Sands with Gravel (SC). The residual Sandy Lean Clays (CL) were generally very stiff to hard in consistency, brown and gray in color, with SPT N-values ranging from 10 bpf to greater than 50 bpf. The Clayey Sands with Gravel (SC) were generally medium dense to very dense, grayish brown in color, with SPT N-Values ranging from 6 bpf to greater than 50 bpf. The borings not encountering fil material were terminated at their proposed depths of 10 feet except for borings (B-4, B-8, B-11, and B-12) where auger refusal was encountered at varying depths of bedrock ranging from six (6) inches to eight (8) feet below the existing roadway surface.

The subsurface conditions at each boring are summarized below in Table 3.4.1. The subsurface conditions presented in Tables 3.4.1 as well as the Boring Logs should be considered approximate, based on interpretation from the exploration data using normally accepted geotechnical engineering judgments. It should be noted that transitions between different soil strata are typically less distinct than what is shown on the exploration records. Subsurface conditions between the actual boring locations will vary.

Table 3.4.1 – Previously Reported Summary of Subsurface Conditions

Boring No.	Existing Elevation (ft)	Soil		Termination Depth (ft)	Auger Refusal Depths (ft)
		Depth	N-Values (bpf)		
B-1	680	0 – 10 ft	10-35+	10	
B-2	681	0 – 10 ft	N/A	10	
B-3	681	0 – 10 ft	11-30	10	
B-4	681	0 – 6 ft	11-50+	6	6
B-5	682	0 – 10 ft	N/A	10	
B-6	684	0 – 20 ft	50+	20	
B-7	683	0 – 10 ft	10-50+	10	
B-8	683	0 – 6 ft	20-50+	6	6
B-9	684	0 – 10 ft	6-50+	10	
B-10	682	0 – 25 ft	50+	25	
B-11	682	0 – 8 ft	7-50+	8	8
B-12	682	0 – 0.5 ft	N/A	0.5	6 inches
B-13	683	0 – 10 ft	50+	10	

3.4 GROUNDWATER OBSERVATIONS

Water levels were measured in our borings as noted on the soil boring logs in Appendix B. Groundwater was not encountered in the borings at the site. Although, due to the inconsistent placement of the fill and the presence of cobbles and boulders in the fill mass, the presence of perched or trapped water is likely.

It should be noted that variations in the location of the long-term water table may occur as a result of change in precipitation, evaporation, surface water runoff, and other factors not immediately apparent at the time of this exploration. The highest groundwater observations are normally encountered in the late winter and early spring. The current groundwater observations are expected to be near the normal to high water table.

4.0 LABORATORY TESTING

The laboratory testing performed by ECS for this project consisted of selected tests performed on samples obtained during our field exploration operations. The following paragraphs briefly discuss the results of the completed laboratory testing program.

4.1 VISUAL CLASSIFICATION

Each soil sample from the test borings was visually classified on the basis of texture and plasticity in accordance with the Unified Soil Classification System (USCS) and ASTM D 2488 (Description and Identification of Soils-Visual/Manual Procedures). After classification, the various soil types were grouped into the major zones noted on the boring logs in Appendix B. The group symbols for each soil type are indicated in parentheses following the soil descriptions on the boring logs. The stratification lines designating the interfaces between earth materials on the boring logs are approximate; in situ, the transitions may be gradual.

The soil samples from our current exploration will be retained in our laboratory for a period of six months after the subsurface exploration program is completed, after which they will be discarded unless other instructions are received as to their disposition.

4.2 INDEX TESTING

The index testing performed by ECS for this project consisted of selected tests performed on samples obtained during our field exploration operations. Index property tests were performed on representative soil samples obtained from the test borings in order to aid in classifying soils according to the Unified Soil Classification System (USCS) and to quantify and correlate engineering properties. The index testing program included the following

- Natural moisture content tests (ASTM D 2216),
- Percent of soil passing the No. 200 sieve (ASTM D 6913), and
- Atterberg Limits tests (ASTM D 4318).

The results of the laboratory testing results conducted are included in Appendix B of this report and summarized in Table 4.2.1 below.

Table 4.2.1 – Previously Reported Summary of Laboratory Test Results

Boring	Material Type	Liquid Limit	Plasticity Index	Percent of Soil Finer than No. 200 Sieve
B-1	SC	33	14	54%
B-4	SC	29	18	49%
B-11	SC	33	17	46%

Note: NP = Non-plastic

Laboratory index test results indicated that the in-situ moisture contents of the tested samples ranged from approximately 5 to 45 percent with typical values from 5 to 19 percent.

5.0 ROADWAY REPAIR CONSIDERATIONS AND RECOMMENDATIONS

The following sections provide consideration of the failure mechanisms at the site and recommendations for the patching, additional evaluation, or repair of the roadway.

5.1 POTENTIAL FAILURE MECHANISMS AT THE SITE

Based on the results of our subsurface evaluation and our observations at the site, it appears the roadway is exhibiting a wedge failure. In this failure mode, a wedge of soil placed against the slope tends to move as a single mass. This wedge appears to consist of the fill placed for the roadway from the approximate centerline of the roadway to the downslope side of the roadway.

The slope appears to be in a meta-stable condition. In other words, the factor of safety (sum of the driving forces divided by the sum of the resisting forces) with regard to slope movement is slightly higher than 1.0. When a driving force increases slightly from the typical condition, this can induce movement within the slope.

The open graded stone backfill at the site creates a subsurface collection location for groundwater, likely typically during/following rain events. The groundwater can collect within the stone and soften the slope face below the roadway as well as adding a hydrostatic load behind the slope face. When this happens, the driving forces on the slope are increased and the slope can experience movement. It is probable that this failure mechanism will slowly continue over time, though we cannot predict whether a larger movement may occur at a future time.

5.2 CONSIDERATION OF REPAIR APPROACHES

The primary purpose of this geotechnical exploration was to help identify and evaluate the general subsurface conditions relative to the roadway pavement failure occurring along the referenced area of Smyer Road. The following options have been developed on the basis of the previously described project information and subsurface conditions identified during this study.

Option 1 – Seal and Patch/Do Nothing: We understand due to the low traffic volume for Smyer Road, the City may consider a program of patching and crack sealing, as needed. This should be considered a 'Do Nothing' approach. This will require continual maintenance, generally yearly, in order to seal cracks and patch where rutting is significant. This would be performed at the direction of Public Works personnel on an as-needed basis. At a minimum, these cracks should be regularly filled in order to limit additional surface water from entering the subsurface and increasing the problem conditions at the site.

We note that when the areas of failing pavement are removed and replaced, ECS should be requested to evaluate the subsurface condition and provide recommendations for potential repair prior to the replacement of the patch.

We emphasize that this approach will not repair the soil subgrade conditions. Additional settlement of the soil subgrade/slope movement should be anticipated over time. Depending on the magnitude of movement, repair of the slope may be required at a later date.

Option 2 – Limited Depth Replacement: An intermediate option for repair that will provide some reduction in load on the slope (therefore on the driving forces on the slope movement) is a limited depth undercut of the stone backfill at the site and replacement with expanded polystyrene (EPS) block fill. EPS is used extensively worldwide in applications where the typical heavy weight of soil or stone backfill will cause failure or intolerable settlement of a structure and replaces that fill with a lightweight alternative that can support roadways. A significant example of such is the Interstate system in the area of Salt Lake City, Utah.

#57 stone weighs on the order of 110 pounds per cubic foot (pcf) and wet soil can weigh 130 pcf or more. EPS backfill for a light-duty roadway application would weight typically around 2 pcf or less. The application of the EPS would, therefore, significantly reduce the load of the roadway fill over the slope.

We anticipate that the depth of replacement of the existing stone backfill with EPS may be on the order of 5 to 8 feet but it could be deeper. Evaluation of this option will require additional information to determine the actual depth of removal and replacement. ECS should perform a Global Stability Analysis of the conditions at the site in order to evaluate the actual depth and extent of replacement. In order to perform the analysis, we also request topographical survey information of regular cross-sections along the roadway.

An important component of this repair approach would be the installation of a drainage system within the EPS backfill. Hydrostatic pressure within the subgrade is a likely driving force behind the slope movement, so installation of relief of the force is important. It should also be anticipated that this approach would require the full depth replacement of the existing pavement section at the site after the EPS backfill has been placed. Typically, a minimum of 1 foot of soil and stone backfill will be required as a cushion between the EPS and the newly replaced roadway.

Option 3 – Slope Repair: This option would require the installation of dead-man anchors and tiebacks similar to the approach from about 10 years ago or would require the installation of tieback anchors to actively tie the slope face to the bedrock at the site. This approach would require a specialty geotechnical contractor to drill from the slope face regularly spaced anchors into the bedrock. The anchors are tensioned and grouted and a plate is added at the slope face to tie the anchor from the bedrock to the slope face. This approach would be performed on a design-build basis by the specialty contractor and should be reviewed and observed by ECS.

Local reference examples include the Patton Creek Shopping Center in Hoover and the Pinnacle Shopping Center in Trussville.

Figure 5.1.1 – Example View of EPS Backfill Behind Gravity Retaining Wall (from Author's Personal Photos)

5.3 ADDITIONAL EVALUATION CONSIDERATIONS

Additional engineering observation and evaluation may be performed to further evaluate the slope movement and mechanism for such. Additional evaluation methods may include the following and can be discussed with you at a later time:

- Topographic survey – as noted in Section 5.2, topographic survey is important for Global Stability Analysis. Additionally, topographic survey performed at regular intervals or the survey of settlement monitoring points at the site may provide information regarding potential slope movement.
- Installation and monitoring using inclinometer – The inclinometer is a tool used for the measurement of slope movement. Borings would be drilled into the bedrock at the site and a semi-permanent casing is set. Then, at regular intervals, the inclinometer is mobilized to the site to read the movements in the slope. This testing would provide evaluation of the velocity of the slope movement.
- Installation of groundwater monitoring well locations – Regular measurement of groundwater levels, particularly during or following rain events may help provide additional information regarding the slope movement mechanisms.

We will be pleased to discuss these or other potential evaluation options with you and to consult with you during design and repair of the roadway.

6.0 CLOSING

This report has been prepared for the exclusive use of the City of Mountain Brook. ECS has prepared this report of findings, evaluations, and recommendations to guide geotechnical-related design and construction aspects of the project.

The description of the project is based on information provided to ECS. If any of this information is inaccurate, either due to our interpretation of the documents provided or site or design changes that may occur later, ECS should be contacted immediately in order that we can review the report in light of the changes and provide additional or alternate recommendations as may be required to reflect the proposed construction.

We recommend that ECS be allowed to review the project's plans and specifications pertaining to our work so that we may ascertain consistency of those plans/specifications with the intent of the geotechnical report.

Field observations, monitoring, and quality assurance testing during earthwork and foundation installation are an extension of and integral to the geotechnical design recommendation. We recommend that the owner retain these quality assurance services and that ECS be allowed to continue our involvement throughout these critical phases of construction to provide general consultation as issues arise. ECS is not responsible for the conclusions, opinions, or recommendations of others based on the data in this report.

The scope of this investigation was limited to the evaluation of the load-carrying capabilities and load stability of the soils and bedrock. Oil, hazardous waste, radioactivity, irritants, pollutants, radon or other dangerous substances and conditions were not the subject of this study. Their presence and/or absence are not implied, inferred or suggested by this report or results of this study.

APPENDIX A – Drawings & Photo Log

Site Location Diagram
Boring Location Diagram
Pavement Failure Location Diagram
Pavement Failure Area Details
Photo Log

Site Location Diagram
SMYER ROAD EVALUATION

SMYER ROAD, MOUNTAIN BROOK, ALABAMA
CITY OF MOUNTAIN BROOK ALABAMA

ENGINEER	DGM
SCALE	1 " = 1000 '
PROJECT NO.	30:1857
SHEET	1 OF 1
DATE	10/24/2019

Boring Location Diagram
SMYER ROAD EVALUATION

SMYER ROAD, MOUNTAIN BROOK, ALABAMA
CITY OF MOUNTAIN BROOK ALABAMA

ENGINEER	DGM
SCALE	1 " = 100 '
PROJECT NO.	30:1857
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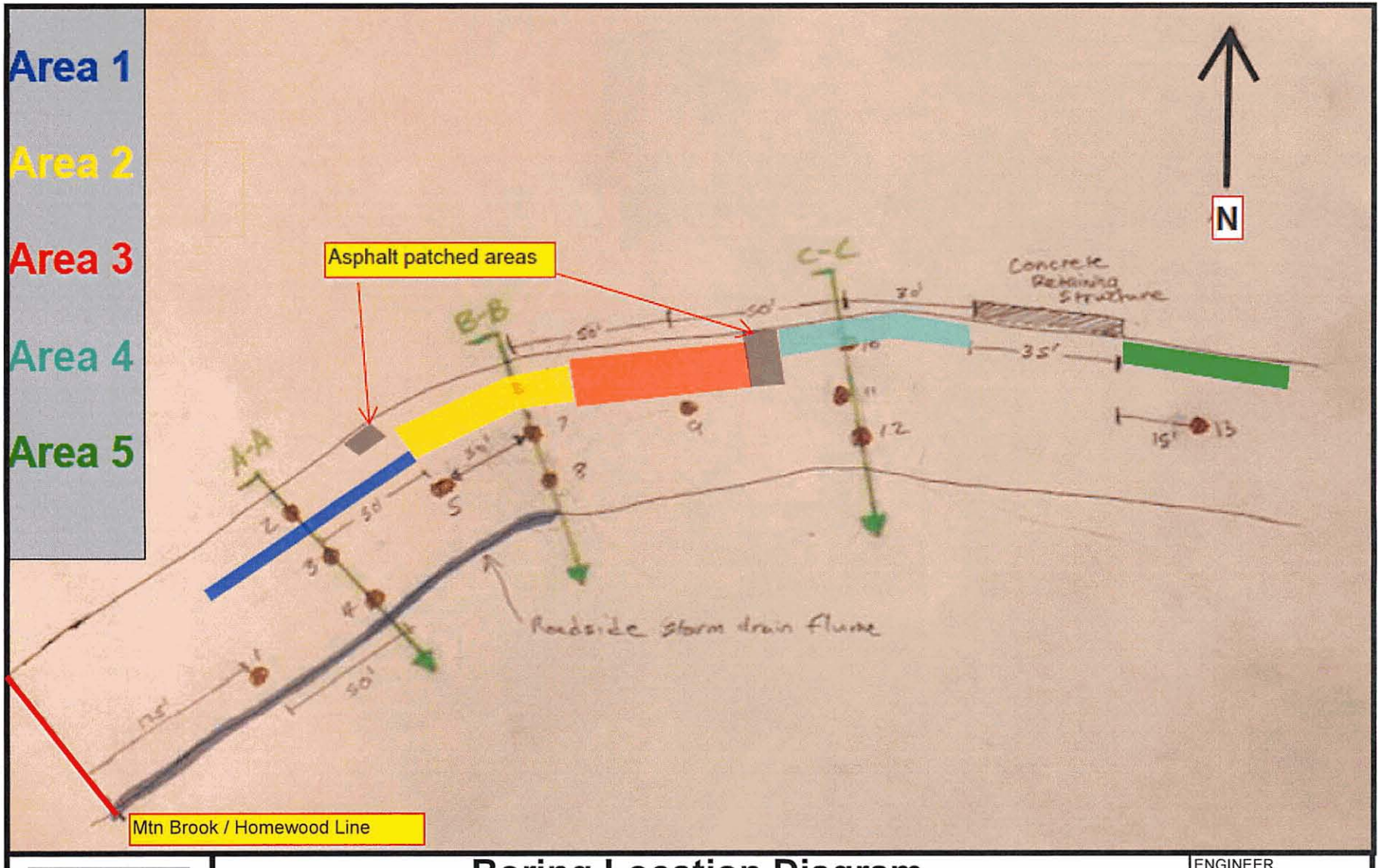

Boring Location Diagram
SMYER ROAD EVALUATION

SMYER ROAD, MOUNTAIN BROOK, ALABAMA
CITY OF MOUNTAIN BROOK ALABAMA

ENGINEER	DGM
SCALE	1 " = 100 '
PROJECT NO.	30:1857
SHEET	1 OF 1
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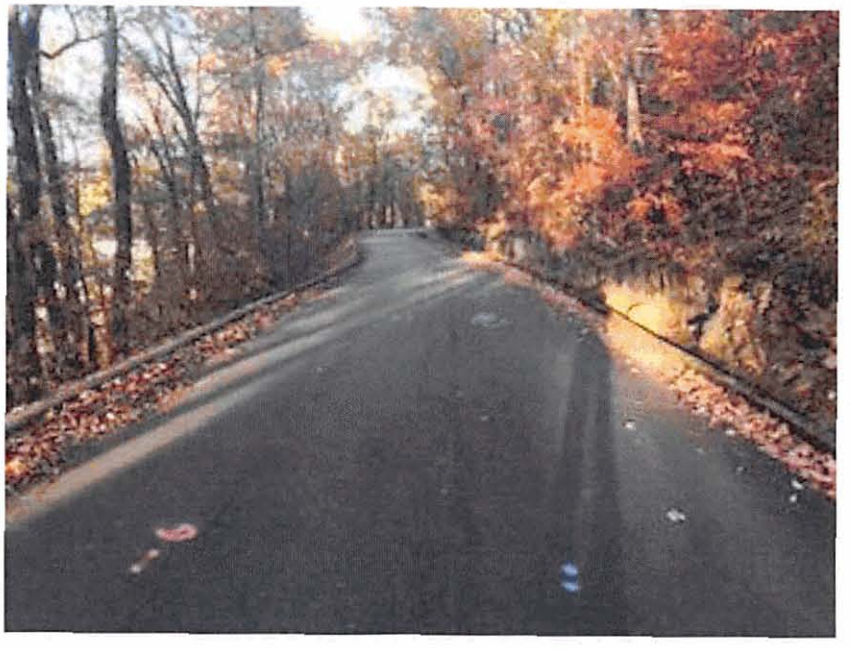
Area Name	Area Size Length x Width (ft)	Approximate Rutting Depth (in)	Approximate Road Station (Start to End)
Area 1	55' x 22'	1.5"	1+35 – 1+90
Area 2	140' x 6'	1.5"	1+90 – 3+30
Area 3	50 ' x 8'	1.5"	3+30 – 3+80
Area 4	50' x 4.5'	3.5" – 4"	3+92 – 4+42
Area 5	45' x 4.5'	0.75"	4+82 – 5+27

Note: Road Station 0+00 begins at the Mountain Brook/Homewood City line at the upper (West) portion of the area of Smyer Road evaluated. Stationing ends at the lower (East) end of the evaluated area.



Photograph 1: Beginning of Road Section at Vestavia/Mountain Brook Line

Photograph 2, Area 1: General Conditions at Road Surface

SITE PHOTOGRAPHS NOVEMBER 20, 2019	ECS	SMYER ROAD EVALUATION MOUNTAIN BROOK, ALABAMA ECS PROJECT NO. 30-1857

Photograph 3, Area 1: Rutting Depth of 1.5”

Photograph 4, Area 2: General Condition at Road Surface

SITE PHOTOGRAPHS NOVEMBER 20, 2019	ECS	SMYER ROAD EVALUATION MOUNTAIN BROOK, ALABAMA ECS PROJECT NO. 30-1857

Photograph 5, Area 2: Rutting Depth of 1.5”

Photograph 6, Area 3: General Condition at Road Surface

Photograph 7, Area 3: Rutting Depth of 1.5"

Photograph 8, Area 4: General Condition at Road Surface (Worst Area of Rutting Failure)

SITE PHOTOGRAPHS NOVEMBER 20, 2019	ECS	SMYER ROAD EVALUATION MOUNTAIN BROOK, ALABAMA ECS PROJECT NO. 30-1857

Photograph 9, Area 4: Rutting Depth of 3.75"

Photograph 10, Area 5: Rutting Depth of 0.75" (Surface Road Condition same as Area 1)

APPENDIX B – Boring and Lab Information

Reference Notes for Boring Logs
Boring Logs B-1 through B-13
Laboratory Test Results Summary

REFERENCE NOTES FOR BORING LOGS

MATERIAL[1,2]		
		ASPHALT
		CONCRETE
		GRAVEL
		TOPSOIL
		VOID
		BRICK
		AGGREGATE BASE COURSE
	FILL[3]	MAN-PLACED SOILS
	GW	**WELL-GRADED GRAVEL** gravel-sand mixtures, little or no fines
	GP	**POORLY-GRADED GRAVEL** gravel-sand mixtures, little or no fines
	GM	**SILTY GRAVEL** gravel-sand-silt mixtures
	GC	**CLAYEY GRAVEL** gravel-sand-clay mixtures
	SW	**WELL-GRADED SAND** gravelly sand, little or no fines
	SP	**POORLY-GRADED SAND** gravelly sand, little or no fines
	SM	**SILTY SAND** sand-silt mixtures
	SC	**CLAYEY SAND** sand-clay mixtures
	ML	**SILT** non-plastic to medium plasticity
	MH	**ELASTIC SILT** high plasticity
	CL	**LEAN CLAY** low to medium plasticity
	CH	**FAT CLAY** high plasticity
	OL	**ORGANIC SILT or CLAY** non-plastic to low plasticity
	OH	**ORGANIC SILT or CLAY** high plasticity
	PT	**PEAT** highly organic soils

DRILLING SAMPLING SYMBOLS & ABBREVIATIONS			
SS	Split Spoon Sampler	PM	Pressuremeter Test
ST	Shelby Tube Sampler	RD	Rock Bit Drilling
WS	Wash Sample	RC	Rock Core, NX, BX, AX
BS	Bulk Sample of Cuttings	REC	Rock Sample Recovery %
PA	Power Auger (no sample)	RQD	Rock Quality Designation %
HSA	Hollow Stem Auger		

PARTICLE SIZE IDENTIFICATION		
DESIGNATION		**PARTICLE SIZES**
Boulders		12 inches (300 mm) or larger
Cobbles		3 inches to 12 inches (75 mm to 300 mm)
Gravel:	Coarse	¾ inch to 3 inches (19 mm to 75 mm)
	Fine	4.75 mm to 19 mm (No. 4 sieve to ¾ inch)
Sand:	Coarse	2.00 mm to 4.75 mm (No. 10 to No. 4 sieve)
	Medium	0.425 mm to 2.00 mm (No. 40 to No. 10 sieve)
	Fine	0.074 mm to 0.425 mm (No. 200 to No. 40 sieve)
Silt & Clay ("Fines")		<0.074 mm (smaller than a No. 200 sieve)

COHESIVE SILTS & CLAYS		
UNCONFINED COMPRESSIVE STRENGTH, Q_P[4]	**SPT[5] (BPF)**	**CONSISTENCY[7] (COHESIVE)**
<0.25	<3	Very Soft
0.25 - <0.50	3 - 4	Soft
0.50 - <1.00	5 - 8	Firm
1.00 - <2.00	9 - 15	Stiff
2.00 - <4.00	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

GRAVELS, SANDS & NON-COHESIVE SILTS	
SPT[5]	**DENSITY**
<5	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
>50	Very Dense

RELATIVE AMOUNT[7]	COARSE GRAINED (%)[8]	FINE GRAINED (%)[8]
Trace	≤5	≤5
Dual Symbol *(ex: SW-SM)*	10	10
With	15 - 20	15 - 25
Adjective *(ex: "Silty")*	≥25	≥30

WATER LEVELS[6]		
▽	WL	Water Level (WS)(WD) (WS) While Sampling (WD) While Drilling
▽	SHW	Seasonal High WT
▼	ACR	After Casing Removal
▽	SWT	Stabilized Water Table
	DCI	Dry Cave-In
	WCI	Wet Cave-In

[1] *Classifications and symbols per ASTM D 2488-09 (Visual-Manual Procedure) unless noted otherwise.*

[2] *To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.*

[3] *Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-**FILL**)].*

[4] *Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).*

[5] *Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf).*

[6] *The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.*

[7] *Minor deviation from ASTM D 2488-09 Note 16.*

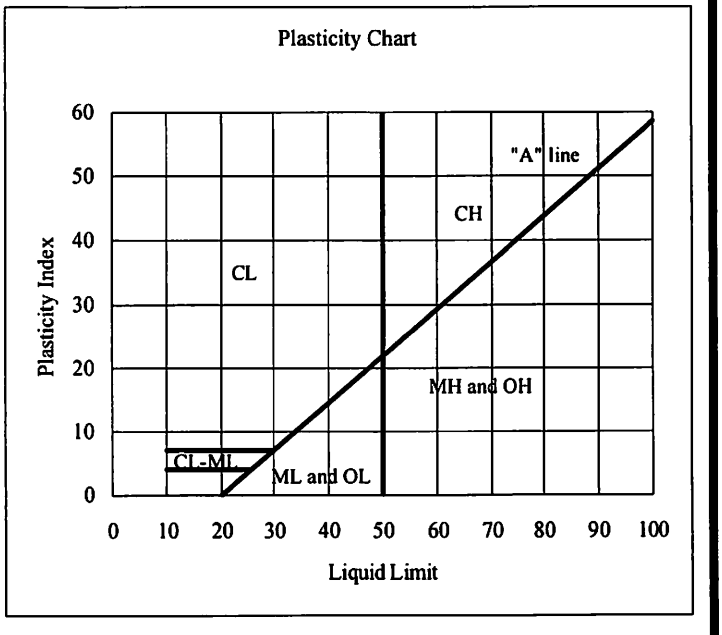
[8] *Percentages are estimated to the nearest 5% per ASTM D 2488-09.*

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487)

Major Divisions			Group Symbols		Typical Names	Laboratory Classification Criteria	
Coarse-grained soils (More than half of material is larger than No. 200 Sieve size)	Gravels (More than half of coarse fraction is larger than No. 4 sieve size)	Clean gravels (Little or no fines)	GW		Well-graded gravels, gravel-sand mixtures, little or no fines	$C_u = D_{60}/D_{10}$ greater than 4 $C_c = (D_{30})^2/(D_{10}xD_{60})$ between 1 and 3	
			GP		Poorly graded gravels, gravel-sand mixtures, little or no fines	Not meeting all gradation requirements for GW	
		Gravels with fines (Appreciable amount of fines)	GM[a]	d	Silty gravels, gravel-sand mixtures	Atterberg limits below "A" line or P.I. less than 4	Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
				u			
			GC		Clayey gravels, gravel-sand-clay mixtures	Atterberg limits below "A" line or P.I. less than 7	
	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Clean sands (Little or no fines)	SW		Well-graded sands, gravelly sands, little or no fines	$C_u = D_{60}/D_{10}$ greater than 6 $C_c = (D_{30})^2/(D_{10}xD_{60})$ between 1 and 3	
			SP		Poorly graded sands, gravelly sands, little or no fines	Not meeting all gradation requirements for SW	
		Sands with fines (Appreciable amount of fines)	SM[a]	d	Silty sands, sand-silt mixtures	Atterberg limits above "A" line or P.I. less than 4	Limits plotting in CL-ML zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
				u			
			SC		Clayey sands, sand-clay mixtures	Atterberg limits above "A" line with P.I. greater than 7	
Fine-grained soils (More than half material is smaller than No. 200 Sieve)	Silts and clays (Liquid limit less than 50)		ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity		
			CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays		
			OL		Organic silts and organic silty clays of low plasticity		
	Silts and clays (Liquid limit greater than 50)		MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts		
			CH		Inorganic clays of high plasticity, fat clays		
			OH		Organic clays of medium to high plasticity, organic silts		
	Highly Organic soils		Pt		Peat and other highly organic soils		

Determine percentages of sand and gravel from grain-size curve.
Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:

Less than 5 percent	GW, GP, SW, SP
More than 12 percent	GM, GC, SM, SC
5 to 12 percent	Borderline cases requiring dual symbols[b]



[a] Division of GM and SM groups into subdivisions of d and u are for roads and airfields only. Subdivision is based on Atterberg limits; suffix d used when L.L. is 28 or less and the P.I. is 6 or less; the suffix u used when L.L. is greater than 28.

[b] Borderline classifications, used for soils possessing characteristics of two groups, are designated by combinations of group symbols. For example: GW-GC,well-graded gravel-sand mixture with clay binder. (From Table 2.16 - Winterkorn and Fang, 1975)

CLIENT	Job #:	BORING #	SHEET
City of Mountain Brook Alabama	30:1857	B-1	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Smyer Road Evaluation	

SITE LOCATION

Smyer Road, Mountain Brook, Jefferson County, AL

NORTHING	EASTING	STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - — - REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

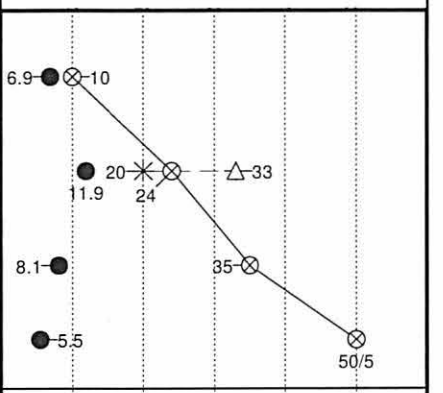
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 680

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0					Asphalt Thickness [4"]		680	
					Gravel Thickness [8"]			
	S-1	SS	18	18	(CL) SANDY LEAN CLAY, brwn, moist, stiff			6 5 5
					(CL) SANDY LEAN CLAY, tan and gray mottled black, moist, very stiff to hard			
	S-2	SS	18	18				10 10 14
5							675	
	S-3	SS	18	18				13 15 20
	S-4	SS	5	5	(CL) SANDY LEAN CLAY, gray, moist, hard			50/5
10					END OF BORING @ 10'		670	
15							665	
20							660	
25							655	
30							650	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL WS☐ WD☐	BORING STARTED 10/22/19	CAVE IN DEPTH
WL(SHW) WL(ACR)	BORING COMPLETED 10/22/19	HAMMER TYPE Auto
WL	RIG Truck FOREMAN George	DRILLING METHOD HSA

CLIENT	Job #:	BORING #	SHEET
City of Mountain Brook Alabama	30:1857	B-2	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Smyer Road Evaluation	

SITE LOCATION

Smyer Road, Mountain Brook, Jefferson County, AL

NORTHING	EASTING	STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - — - REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 681

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0						680	
5						675	
10						670	
15						665	
20						660	
25						655	
30							

Asphalt Thickness [3"]
Gravel Thickness [9"]
(GW/GP) WELL-GRADED/POORLY GRADED GRAVEL, white, dry, loose

END OF BORING @ 10'

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL	WS ☐	WD ☐	BORING STARTED 10/22/19	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED 10/22/19	HAMMER TYPE Auto
WL			RIG Truck FOREMAN George	DRILLING METHOD HSA

CLIENT	Job #:	BORING #	SHEET
City of Mountain Brook Alabama	30:1857	B-3	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Smyer Road Evaluation	

SITE LOCATION: Smyer Road, Mountain Brook, Jefferson County, AL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - — - REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

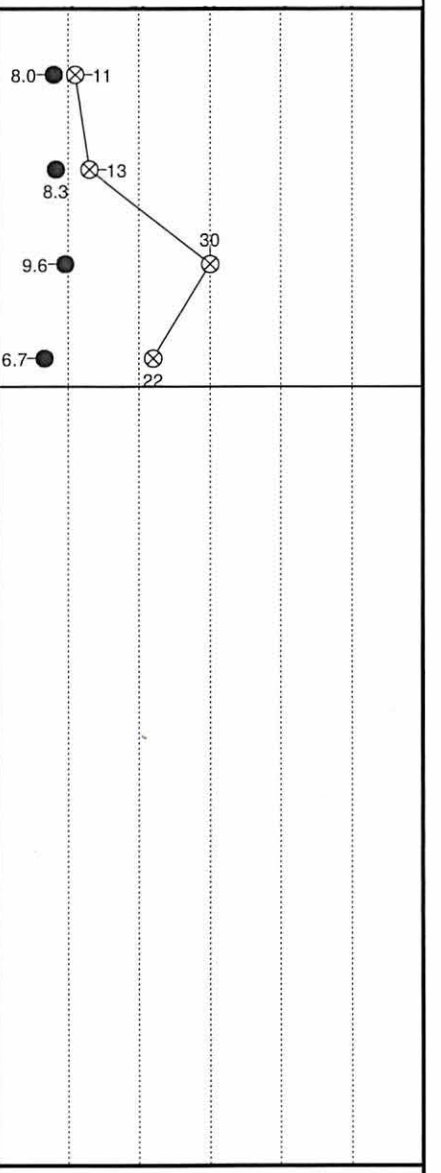
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 681

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0					Asphalt Thickness [5"]			
					Gravel Thickness [7"]		680	
	S-1	SS	18	18	(SC) CLAYEY SAND WITH GRAVEL, brown and gray, moist, stiff			5 5 6
	S-2	SS	18	18				5 5 8
5							675	
	S-3	SS	18	18	(SC) CLAYEY SAND WITH GRAVEL, brown and gray and black, moist, very stiff			11 15 15
	S-4	SS	18	18				11 10 12
10					END OF BORING @ 10'		670	
15							665	
20							660	
25							655	
30								



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL WS☐ WD☐	BORING STARTED 10/22/19	CAVE IN DEPTH
WL(SHW) WL(ACR)	BORING COMPLETED 10/22/19	HAMMER TYPE Auto
WL	RIG Truck FOREMAN George	DRILLING METHOD HSA

CLIENT	Job #:	BORING #	SHEET
City of Mountain Brook Alabama	30:1857	B-4	1 OF 1

PROJECT NAME: Smyer Road Evaluation

ARCHITECT-ENGINEER:

SITE LOCATION: Smyer Road, Mountain Brook, Jefferson County, AL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

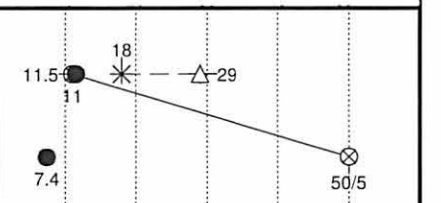
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 681

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0					Asphalt Thickness [4"]		680	
					Gravel Thickness [8"]			
	S-1	SS	18	18	(SC) CLAYEY SAND, brown and black, moist, stiff to hard			6 6 5
	S-2	SS	11	11				6 50/5
5					AUGER REFUSAL @ 6'		675	
10							670	
15							665	
20							660	
25							655	
30								



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL WS☐ WD☐	BORING STARTED 10/22/19	CAVE IN DEPTH
WL(SHW) WL(ACR)	BORING COMPLETED 10/22/19	HAMMER TYPE Auto
WL	RIG Truck FOREMAN George	DRILLING METHOD HSA

CLIENT	Job #:	BORING #	SHEET
City of Mountain Brook Alabama	30:1857	B-5	1 OF 1

PROJECT NAME: Smyer Road Evaluation

ARCHITECT-ENGINEER:

SITE LOCATION: Smyer Road, Mountain Brook, Jefferson County, AL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 682

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0						680	
5						675	
10						670	
15						665	
20						660	
25						655	
30							

Asphalt Thickness [3"]
Gravel Thickness [9"]
(GW/GP) WELL-GRADED/POORLY GRADED GRAVEL, white, dry, loose

END OF BORING @ 10'

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL WS☐ WD☐	BORING STARTED 10/22/19	CAVE IN DEPTH
WL(SHW) WL(ACR)	BORING COMPLETED 10/22/19	HAMMER TYPE Auto
WL	RIG Truck FOREMAN George	DRILLING METHOD HSA

CLIENT	Job #:	BORING #	SHEET
City of Mountain Brook Alabama	30:1857	B-6	1 OF 1

PROJECT NAME: Smyer Road Evaluation

ARCHITECT-ENGINEER:

SITE LOCATION: Smyer Road, Mountain Brook, Jefferson County, AL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - — - REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 684

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0							
						Asphalt Thickness [3"]	
						Gravel Thickness [9"]	
						(GW/GP) WELL-GRADED/POORLY GRADED GRAVEL, white, dry, medium dense	
5						680	
						675	
10							
						670	
15							
						(SC) CLAYEY SAND, gray, moist, hard	
	S-1	SS	5	5		665	50/5
20						END OF BORING @ 20'	
						660	
25							
						655	
30							

4.2

50/5

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL WS☐ WD☐	BORING STARTED 10/22/19	CAVE IN DEPTH
WL(SHW) WL(ACR)	BORING COMPLETED 10/22/19	HAMMER TYPE Auto
WL	RIG Truck FOREMAN George	DRILLING METHOD HSA

CLIENT	Job #:	BORING #	SHEET
City of Mountain Brook Alabama	30:1857	B-7	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Smyer Road Evaluation	

SITE LOCATION

Smyer Road, Mountain Brook, Jefferson County, AL

NORTHING	EASTING	STATION

CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - — - REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

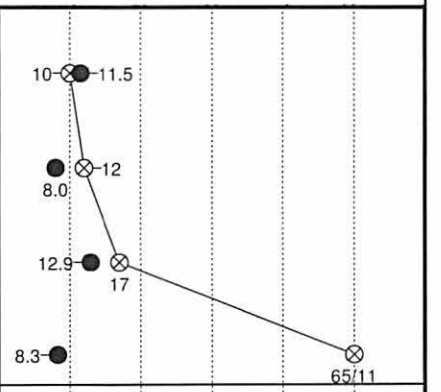
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 683

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0							
							Asphalt Thickness [3"]
							Gravel Thickness [9"]
	S-1	SS	18	18			(SC) CLAYEY SAND, tan and gray, moist, stiff — 6, 5, 5
						680	
							(SC) CLAYEY SAND, gray and tan and red mottled black, moist, stiff to hard
	S-2	SS	18	18			5, 6, 6
5							
	S-3	SS	18	18			7, 7, 10
						675	
	S-4	SS	17	17			10, 15, 50/5
10							END OF BORING @ 10'
						670	
15							
						665	
20							
						660	
25							
						655	
30							



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL WS☐ WD☐	BORING STARTED 10/22/19	CAVE IN DEPTH
WL(SHW) WL(ACR)	BORING COMPLETED 10/22/19	HAMMER TYPE Auto
WL	RIG Truck FOREMAN George	DRILLING METHOD HSA

CLIENT	Job #:	BORING #	SHEET
City of Mountain Brook Alabama	30:1857	B-8	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Smyer Road Evaluation	

SITE LOCATION: Smyer Road, Mountain Brook, Jefferson County, AL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - — - REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

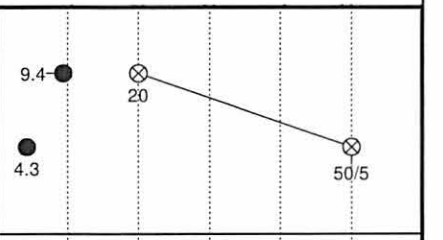
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 683

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0					Asphalt Thickness [3"]			
					Gravel Thickness [9"]			
	S-1	SS	18	18	(SC) CLAYEY SAND, brown and gray and black, moist, very stiff			7 10 10
							680	
	S-2	SS	5	5	(SC) CLAYEY SAND, brown, moist, hard			50/5
5					AUGER REFUSAL @ 6'			
							675	
10								
							670	
15								
							665	
20								
							660	
25								
							655	
30								



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL WS☐ WD☐	BORING STARTED 10/22/19	CAVE IN DEPTH
WL(SHW) WL(ACR)	BORING COMPLETED 10/22/19	HAMMER TYPE Auto
WL	RIG Truck FOREMAN George	DRILLING METHOD HSA

CLIENT	Job #:	BORING #	SHEET
City of Mountain Brook Alabama	30:1857	B-9	1 OF 1

PROJECT NAME: Smyer Road Evaluation

ARCHITECT-ENGINEER:

SITE LOCATION: Smyer Road, Mountain Brook, Jefferson County, AL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - — - REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

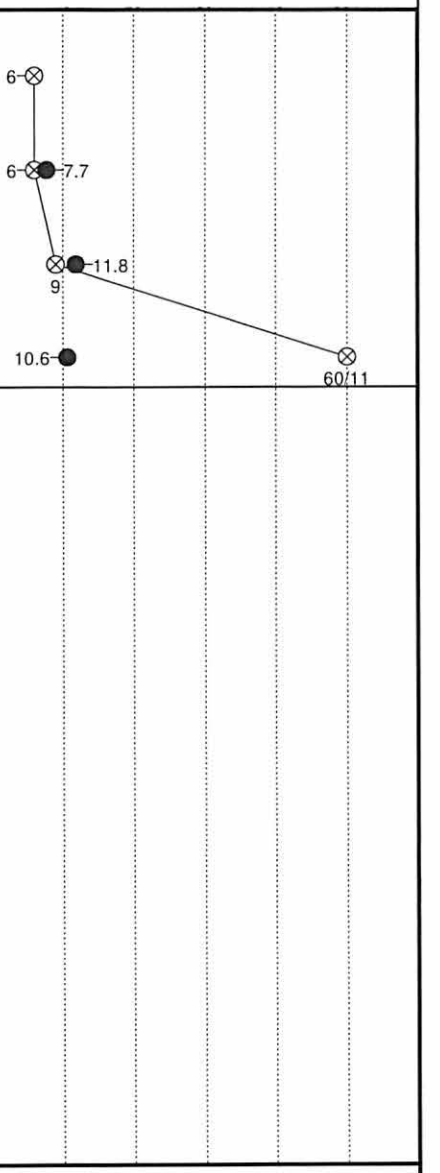
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 684

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0					Asphalt Thickness [4"]			
					Gravel Thickness [8"]			
	S-1	SS	18	18	(GW/GP) WELL-GRADED/POORLY GRADED GRAVEL, white, dry, loose			3 3 3
	S-2	SS	18	18	(SC) CLAYEY SAND WITH GRAVEL, brown, moist, firm		680	3 3 3
5	S-3	SS	18	18	(SC) CLAYEY SAND, gray and red and brown mottled, moist, stiff			3 4 5
	S-4	SS	17	17	(SC) CLAYEY SAND, brown and black, moist, hard		675	7 10 50/5
10					END OF BORING @ 10'			
							670	
15								
							665	
20								
							660	
25								
							655	
30								



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL WS☐ WD☐	BORING STARTED 10/22/19	CAVE IN DEPTH
WL(SHW) WL(ACR)	BORING COMPLETED 10/22/19	HAMMER TYPE Auto
WL	RIG Truck FOREMAN George	DRILLING METHOD HSA

CLIENT	Job #:	BORING #	SHEET
City of Mountain Brook Alabama	30:1857	B-10	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Smyer Road Evaluation	

SITE LOCATION

Smyer Road, Mountain Brook, Jefferson County, AL

NORTHING	EASTING	STATION
5	0	

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - — - REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 682

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0						682	
							Asphalt Thickness [3"]
							Gravel Thickness [9"]
							(GW/GP) WELL-GRADED/POORLY GRADED GRAVEL, white, dry, loose
5						675	
10						670	
15						665	
20						660	
							(SC) CLAYEY SAND, gray, moist, hard
	S-1	SS	5	5			50/5
25						655	END OF BORING @ 25'
30							

4.8

50/5

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL WS☐ WD☐	BORING STARTED 10/22/19	CAVE IN DEPTH
WL(SHW) WL(ACR)	BORING COMPLETED 10/22/19	HAMMER TYPE Auto
WL	RIG Truck FOREMAN George	DRILLING METHOD HSA

CLIENT	Job #:	BORING #	SHEET
City of Mountain Brook Alabama	30:1857	B-11	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Smyer Road Evaluation	

SITE LOCATION

Smyer Road, Mountain Brook, Jefferson County, AL

NORTHING	EASTING	STATION
10	0	

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - — - REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

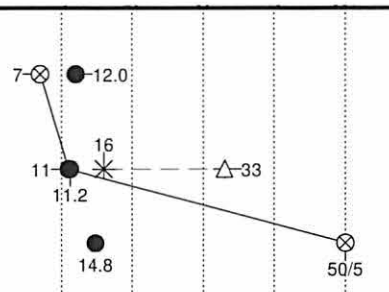
BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 682

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0							
	S-1	SS	18	18		680	3 3 4
	S-2	SS	18	18			5 5 6
5							
	S-3	SS	5	5			50/5
						675	
10						670	
15						665	
20						660	
25						655	
30							

Asphalt Thickness [5"]
Gravel Thickness [7"]
(SC) CLAYEY SAND WITH GRAVEL, brown and red and gray mottled, moist, firm to hard

AUGER REFUSAL @ 8'



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL WS☐ WD☐	BORING STARTED 10/22/19	CAVE IN DEPTH
WL(SHW) WL(ACR)	BORING COMPLETED 10/22/19	HAMMER TYPE Auto
WL	RIG Truck FOREMAN George	DRILLING METHOD HSA

CLIENT	Job #:	BORING #	SHEET
City of Mountain Brook Alabama	30:1857	B-12	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Smyer Road Evaluation	

SITE LOCATION: Smyer Road, Mountain Brook, Jefferson County, AL

NORTHING	EASTING	STATION
15	0	

CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - — - REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 682

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0						682	
5						675	
10						670	
15						665	
20						660	
25						655	
30							

Asphalt Thickness [4"]
Gravel Thickness [2"]
AUGER REFUSAL @ 6"

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

▽ WL WS☐ WD☐	BORING STARTED 10/22/19	CAVE IN DEPTH
▽ WL(SHW) ▼ WL(ACR)	BORING COMPLETED 10/22/19	HAMMER TYPE Auto
▽ WL	RIG Truck FOREMAN George	DRILLING METHOD HSA

CLIENT	Job #:	BORING #	SHEET
City of Mountain Brook Alabama	30:1857	B-13	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Smyer Road Evaluation	

SITE LOCATION

Smyer Road, Mountain Brook, Jefferson County, AL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

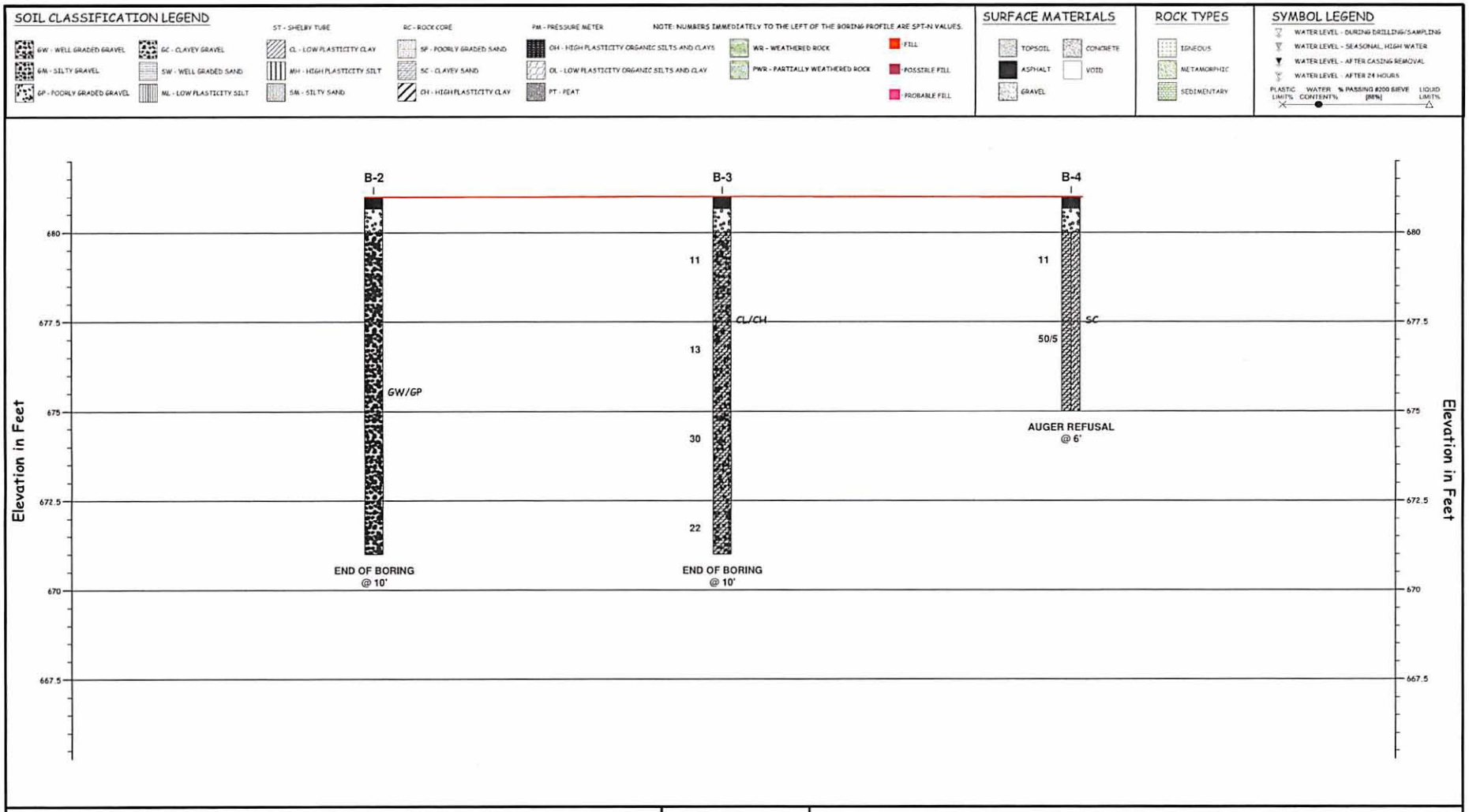
SURFACE ELEVATION 683

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0					Asphalt Thickness [4"]			
					Gravel Thickness [8"]			
					(GW/GP) WELL-GRADED/POORLY GRADED GRAVEL, white, dry, medium dense		680	
5								
							675	
	S-1	SS	11	11	(SC) CLAYEY SAND, gray and tan and red mottled, moist, hard			17 50/5
10					END OF BORING @ 10'			
							670	
15								
							665	
20								
							660	
25								
							655	
30								

10.0 ● ⊗ 50/5

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

▽ WL WS☐ WD☐	BORING STARTED 10/22/19	CAVE IN DEPTH
▽ WL(SHW) ▽ WL(ACR)	BORING COMPLETED 10/22/19	HAMMER TYPE Auto
▽ WL	RIG Truck FOREMAN George	DRILLING METHOD HSA

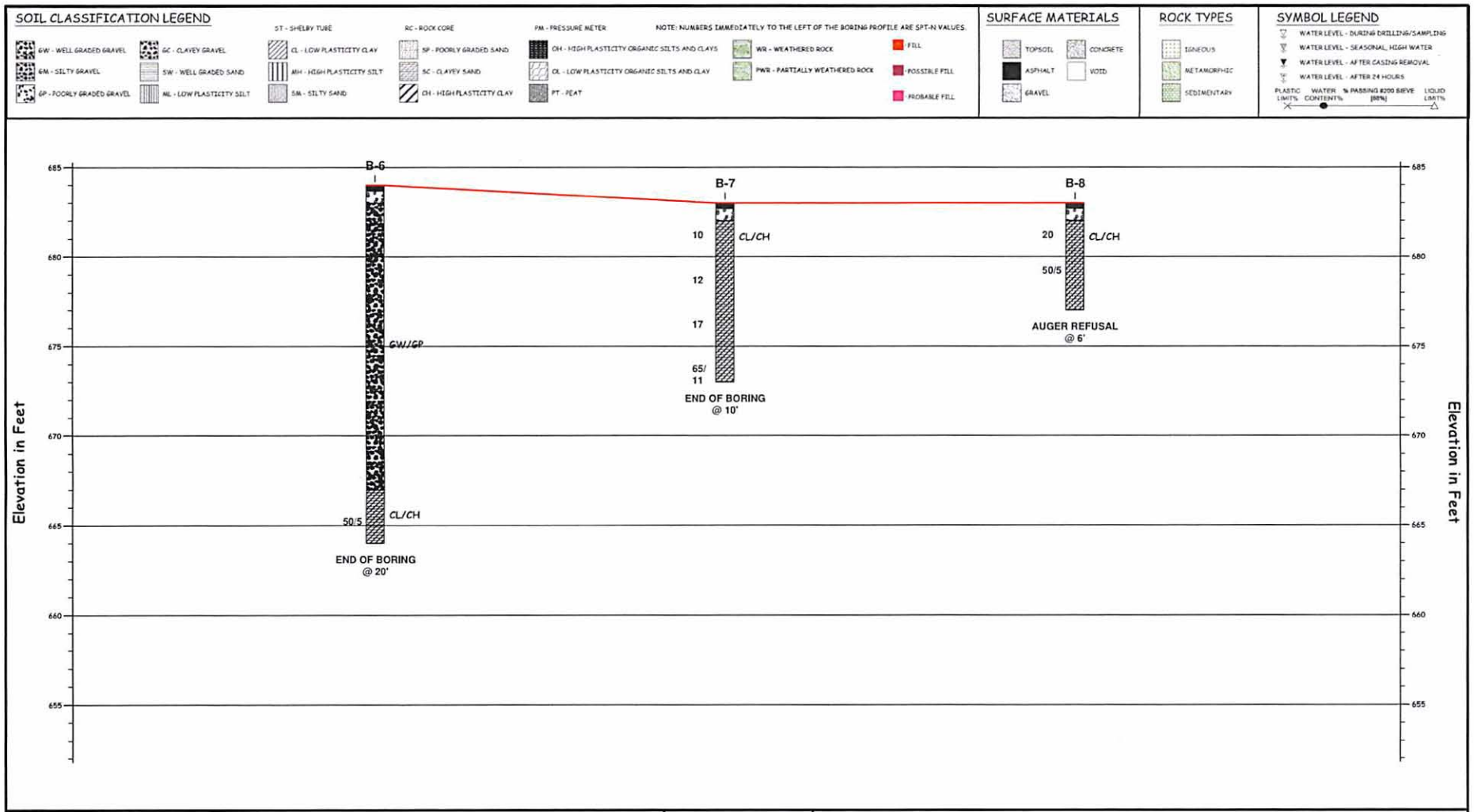


NOTES:
1 SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
2 PENETRATION TEST RESISTANCE IN BLOWS PER FOOT (ASTM D1586).

Subsurface Soil Profile A

Smyer Road Evaluation
City of Mountain Brook Alabama
Smyer Road, Mountain Brook, Jefferson County, AL

PROJECT NO.: 1857 | DATE: 11/20/2019 | VERTICAL SCALE: 1"=2.5' | VERTICAL SCALE: 1"=2.5'

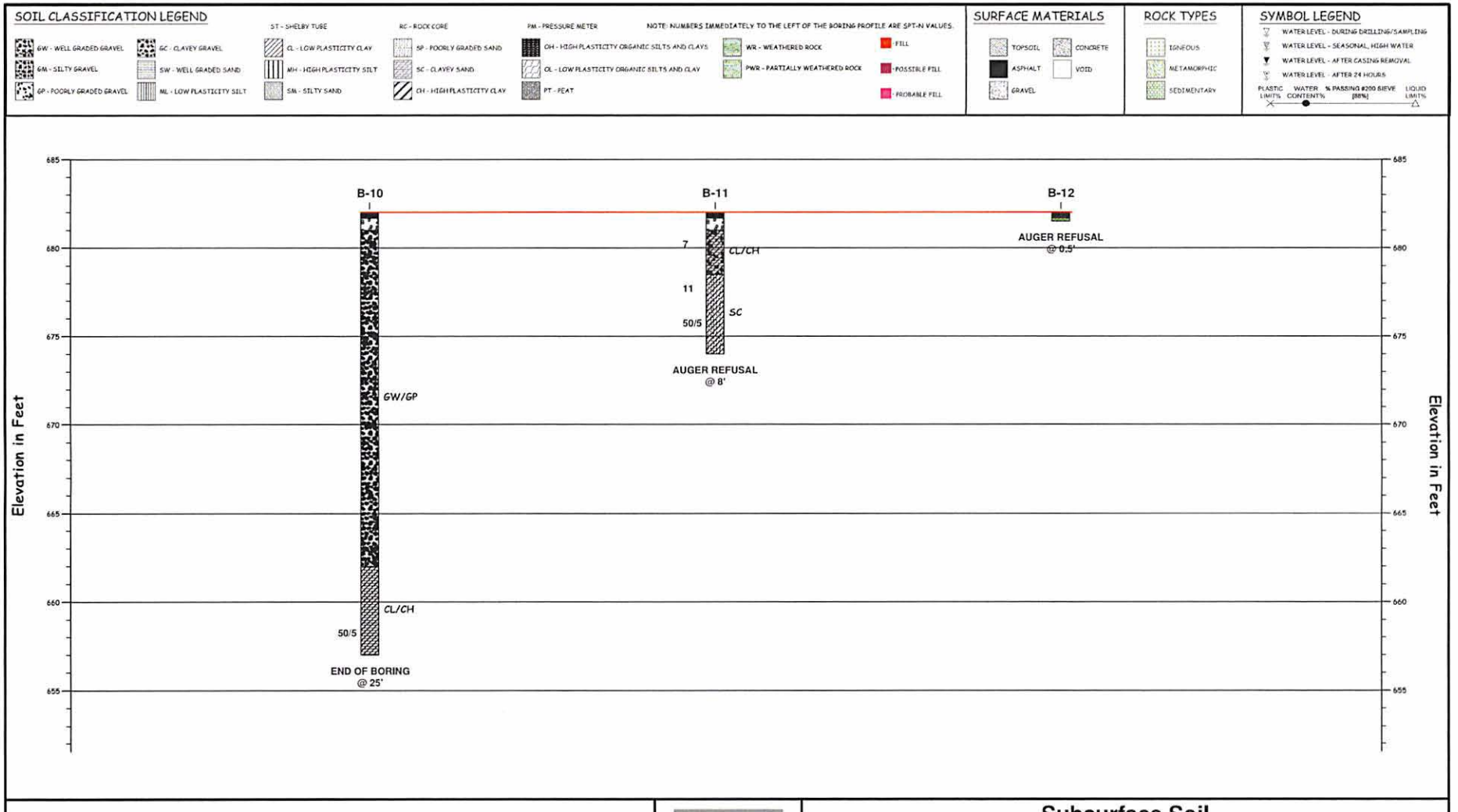


NOTES:
1 SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
2 PENETRATION TEST RESISTANCE IN BLOWS PER FOOT (ASTM D1586).

Subsurface Soil Profile B

Smyer Road Evaluation
City of Mountain Brook Alabama
Smyer Road, Mountain Brook, Jefferson County, AL

PROJECT NO.: 1857	DATE: 11/20/2019	VERTICAL SCALE: 1"=5'	VERTICAL SCALE: 1"=5'



NOTES:
1 SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
2 PENETRATION TEST RESISTANCE IN BLOWS PER FOOT (ASTM D1586).

Subsurface Soil Profile C

Smyer Road Evaluation
City of Mountain Brook Alabama
Smyer Road, Mountain Brook, Jefferson County, AL

PROJECT NO.: 1857	DATE: 11/20/2019	VERTICAL SCALE: 1"=5'	VERTICAL SCALE: 1"=5'

Laboratory Testing Summary

Sample Source	Sample Number	Start Depth (feet)	End Depth (feet)	Sample Distance (feet)	MC[1] (%)	Soil Type[2]	Atterberg Limits[3]			Percent Passing No. 200 Sieve[4]	Moisture - Density (Corr.)[5]		CBR Value[6]	Other
							LL	PL	PI		Maximum Density (pcf)	Optimum Moisture (%)		
B-1														
	S-1	1.0	2.5	1.5	6.9									
	S-2	3.5	5.0	1.5	11.9	CL	33	20	13	54.2				
	S-3	6.0	7.5	1.5	8.1									
	S-4	8.5	8.9	0.4	5.5									
B-4														
	S-1	1.0	2.5	1.5	11.5	SC	29	18	11	49.4				
	S-2	3.5	4.4	0.9	7.4									
B-11														
	S-1	1.0	2.5	1.5	12.0									
	S-2	3.5	5.0	1.5	11.2	SC	33	16	17	46.2				
	S-3	6.0	6.4	0.4	14.8									

Notes: 1. ASTM D 2216, 2. ASTM D 2487, 3. ASTM D 4318, 4. ASTM D 1140, 5. See test reports for test method, 6. See test reports for test method

Definitions: MC: Moisture Content, Soil Type: USCS (Unified Soil Classification System), LL: Liquid Limit, PL: Plastic Limit, PI: Plasticity Index, CBR: California Bearing Ratio, OC: Organic Content (ASTM D 2974)

Project No. 30:1857
Project Name: Smyer Road Evaluation
PM: Danny Trawick
PE: David G. Marsh
Printed On: Thursday, October 31, 2019

ECS SOUTHEAST, LLP
133 W. Oxmoor Road, Suite 205
Birmingham, AL 35209
Phone: (205) 588-5099
Fax: (205) 944-1068

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Geotechnical-Engineering Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled.* No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

This Report May Not Be Reliable

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be*, and, in general, *if you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying it. A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

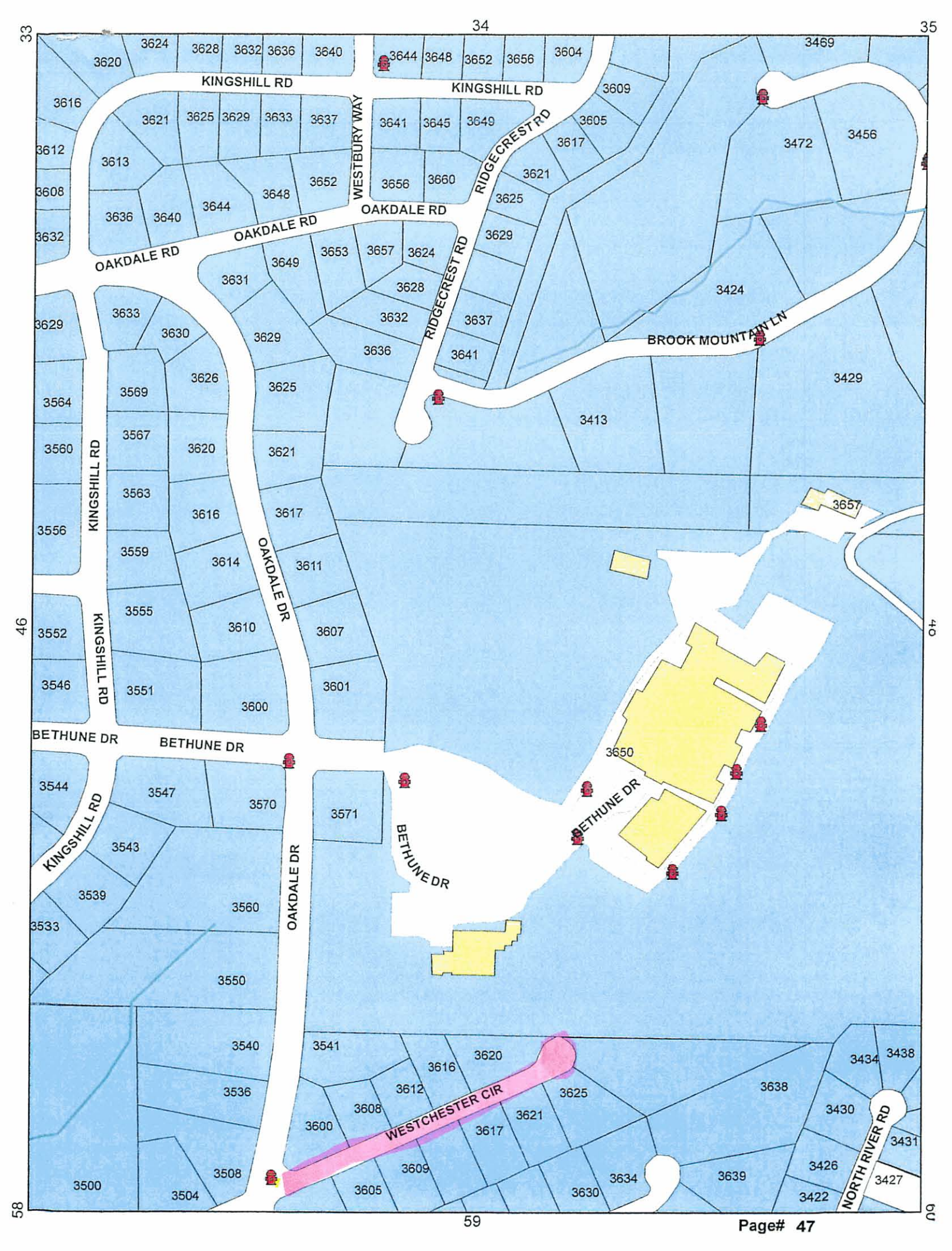
The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old.*

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration.*** Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org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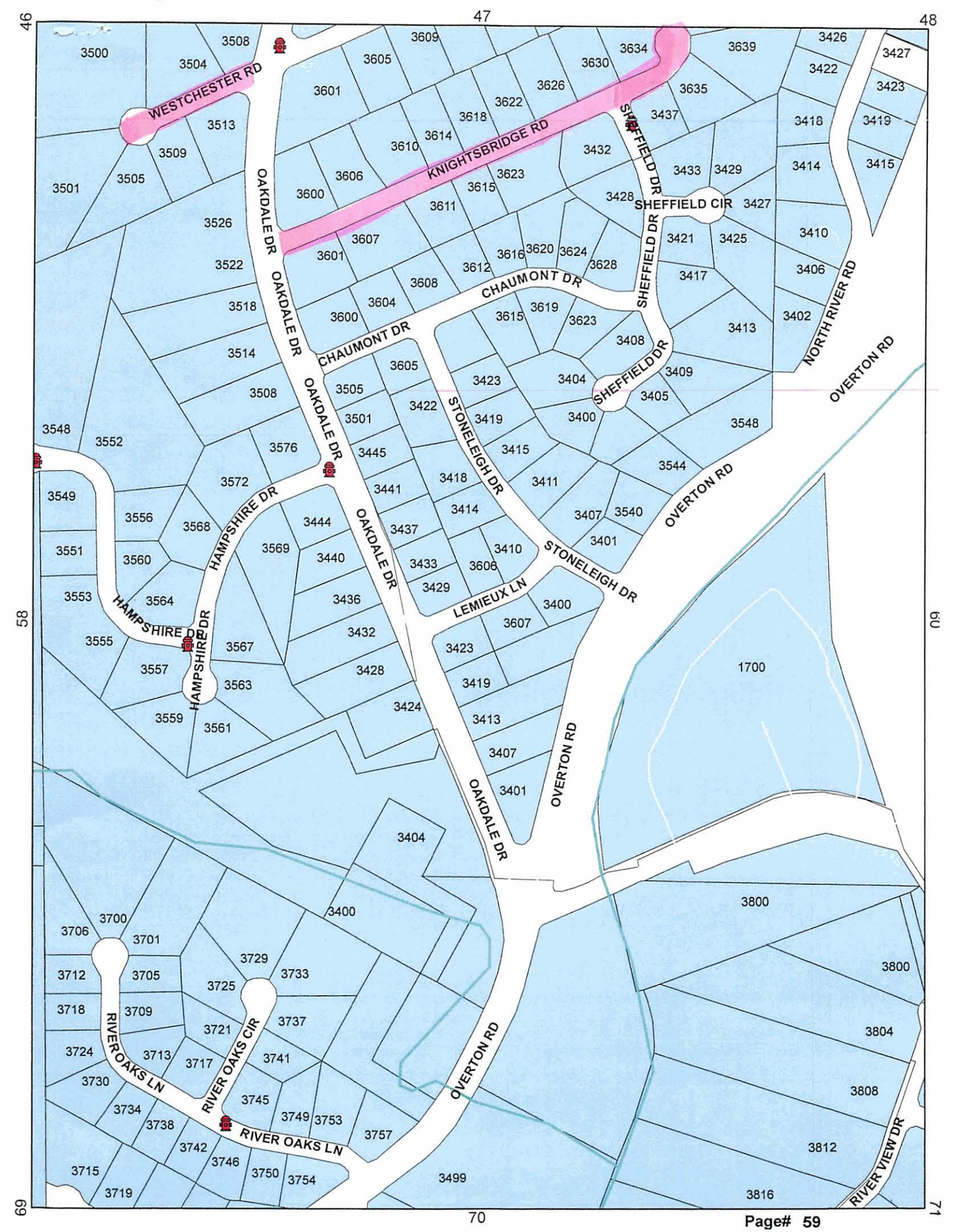
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RESOLUTION NO. 2019-172

WHEREAS, the Alabama Legislature passed into law HB360, Supplemental [Cancer] Insurance for Firefighters, during the 2019 regular session; and

WHEREAS, HB360 requires Alabama cities to provide supplemental cancer coverage and long-term disability (resulting from cancer) coverage for firefighters; and

WHEREAS, the City currently provides group long-term disability coverage to all employees which, in many respects, exceeds the mandated long-term disability (resulting from cancer) coverage required by HB360; and

WHEREAS, the City has determined that the primary coverage gaps between the City's group long-term disability policy and the disability benefit required by HB360 include:

1. For firefighters earning less than $60,000 annually (grade 17, steps 1-8 without a qualifying degree or paramedic certification) the difference between $3,000/month (HB360 required minimum benefit) and 60% of the disabled firefighters salary[1], and

2. Possibly a 12-month period commencing after the group long-term disability 24-month "own-occupation" benefit period and HB360 36-month required minimum benefit period assuming a disabled firefighter is determined by the City's group long-term disability carrier to no longer be disabled for any occupation ; now, therefore

BE IT RESOLVED by the City Council of the City of Mountain Brook, Alabama that the City Council hereby authorizes the City Manager to acquire the mandated supplemental cancer coverage through the First Responders Benefits Program, such coverage to be effective for eligible firefighters on January 1, 2020; and

BE IT FURTHER RESOLVED by the City Council of the City of Mountain Brook, Alabama that the City Council elects to self-insure for gaps in coverage between the group long-term disability policy and the long-term disability (resulting from cancer) coverage required for firefighters.

ADOPTED: This 25th day of November, 2019.

_____

Council President

APPROVED: This 25th day of November, 2019.

_____

Mayor

[1] As of November 25, 2019, the City employs 63 qualifying firefighters. Of the 63, there are 13 earning less than $60,000 annually (ranging from $48,006 to $58,344 annually). The resulting coverage gap ranges from less than $100 up to $600 per month starting after the HB360 180-day waiting period. The coverage gap for the 12-month period between 24 and 36-months is $3,000 per month and only applies if the group long-term disability carrier determines that the disabled firefighter is capable of working in any occupation (other than the fire service).

CITY OF MOUNTAIN BROOK

P. O. Box 130009
Mountain Brook, Alabama 35213-0009
Telephone: 205.802.2400
www.mtnbrook.org

To: Sam Gaston, City Manager
From: Steven Boone
C: Chris Mullins, Fire Chief
Date: October 30, 2019
Subject: HB360 Supplemental [Cancer] Insurance for Firefighters

HB360 requires employers to provide supplemental cancer insurance to firefighters commencing January 1, 2020. A program underwritten by Hartford Insurance and sponsored by the Alabama League of Municipalities has been approved and certified to satisfy the requirements of the new law.

Issues

1. The new supplemental insurance required for firefighters includes 1) a lump sum benefit to be paid upon a qualifying (or any) cancer diagnosis and 2) a $3,000 minimum monthly long-term disability (LTD) benefit to be paid after a 180-day waiting period for a disability that results from a cancer diagnosis
2. The supplemental LTD benefit must be paid for the greater of 3-years or until the firefighter is no longer disabled
3. The City's group LTD pays a 60% non-taxable benefit after the disabled workers satisfies a 90-day waiting period. This benefit lasts the greater of 2-years (disabled for the employee's specific occupation after which the employee may continue to qualify for LTD benefits if they are determined by the underwriter to be unable to work in any occupation), eligible for social security disability benefits or the employee is no longer disabled.
4. The two LTD benefits cannot stack meaning the employee's disability benefit will be offset for defined outside income.
5. Group LTD coverage gaps with respect to the coverage required under HB360 include: 1) for firefighters earning less than $60,000/year, their group LTD benefit will be less than the required $3,000 monthly benefit and 2) a firefighter could be determined ineligible for LTD benefits under the group LTD policy after the 2-year own occupation period but before the 3-year period required under the HB360 requirements.

Currently, the City pays $17,500 annually for the group LTD benefits provided to 59 firefighters (only those with more than 12 months of service are eligible for coverage under both the group and supplemental plans). There are currently 9 eligible firefighters who earn less than $60,000 annually[(1)]. The additional premiums for the supplemental cancer/LTD benefit ranges from $11,000 to $11,700 (depending on whether the City purchases the minimum (21 defined cancers or the all cancers policy.

The City's decision includes:

1. Purchase the required cancer/LTD benefit to satisfy the coverage gaps. With respect to the added $11,000-$11,700 annual cost:
   a. The City could absorb the cost
   b. The City could charge the firefighters up to the $17,500 cost (or any portion thereof) of the group LTD policy (NOT THE STATE MANDATED SUPPLEMENTAL POLICY). These premiums are based on each employee's salary and range from $16.80 to $33.33 per month.
2. Purchase only the Cancer supplement in which case the City could self-insure for the coverage gaps (i.e., the LTD benefit shortfall to satisfy the $3,000 monthly minimum benefit and/or the 12-month period between 24-month and 36-months described above. Pricing for the cancer only is $87.48/employee/year (21 defined cancers) or $99.24/employee/year (all cancers) or $5,200-$5,900/year total.

I am recommending that the City purchase only the cancer policy and self-insure for the cancer-related LTD benefit. In the last 20+ years, there have only been three cancer related disabilities—all were terminal. None of these LTD claims involved firefighters and none earned less than $60,000 annually (or would have, based their tenure with the City, had they been firefighters). None of these three claims would have resulted in a City pay-out were these qualifying claims under the HB360 and the City were self-insured.

(1) The City employs 63 qualifying firefighters of which 12 earn less than $60,000 annually.

(1)

B.C. Project No. _____

To be completed using ABC Form B-3, "Checklist for Preparation of Agreement Between Owner and Architect"

AGREEMENT BETWEEN OWNER AND ARCHITECT

• Supplemented by ABC Form B-2A, Standard Articles of the Agreement Between Owner and Architect •

(2) **DATE of this AGREEMENT: The Thirteenth day of November, Two Thousand Nineteen**

(3) **The OWNER(s):** **City of Mountain Brook**
P.O. Box 130009
Mountain Brook, Alabama 35213

(4) **The** ☒ **ARCHITECT** ☐ **ENGINEER** (substitute "Engineer" for "Architect" hereinafter)
Goodwyn, Mills and Cawood, Inc.
2660 Eastchase Lane, Suite 200
Montgomery, AL 36117

FEIN 63-0906620

(5) **The PROJECT:** (*Insert full description of Project, Location, Address, and Scope*)
Various projects to include:

Design for Field 1 at Mountain Brook High School. Project to include complete renovation of existing baseball/softball field. Field to be converted to synthetic turf, excavation of entire field, perimeter concrete curb, fencing, backstop netting, lighting, synthetic turf and concrete walks.
(GMC Proj. No. LBHM19XXXX) [Local Funds]

Design for the four Youth Baseball Fields at Mountain Brook. Project to include excavation of all four infields and replace with synthetic turf for the infield areas extending from backstop and both dugouts to the perimeter of the skinned infields.
(GMC Proj. No. LBHM19XXXX) [Local Funds]

Design for Youth Recreation fields at Cherokee Bend Elementary School. Project to include reconfiguration of the Recreation fields, irrigation, Bermuda sodding, fencing, batting cages, netting and sports field lighting.
(GMC Proj. No. LBHM19XXXX) [Local Funds]

(6) **BUDGET:** The ☒ Tentative ☐ Fixed amount budgeted by the Owner for the Cost of the Work is
See Special Provisions; Architect only authorized through Design Phase

BASIC SERVICES: Unless otherwise provided in the Special Provisions, the Architect shall render Basic Services A, B, and C for the above described Project in accordance with the "Standard Articles of the Agreement Between Owner and Architect".

(7) **BASIC FEE:** The Basic Fee to be paid the Architect shall be:

☐ the Fixed Fee of _____ Dollars ($_____).

☒ determined as a percentage of the Cost of the Work, at the Basic Fee Rate of * percent.

*See Special Provisions

(8) **PROJECT CLASSIFICATION:** As defined in the current edition of Chapter 4 - Supplement of the "Manual of Procedures of the Alabama Building Commission" this Project is classified as follows:

☒ The Projects are classified in Building Group III

☐ The Project is divided into Building Groups as stated in the Special Provisions of this Agreement

☐ The Project does not fall within a Building Group; see the Special Provisions of this Agreement

(9) **DETERMINATION of the BASIC FEE:**

☒ The Basic Fees have been determined in accordance with the current edition of Chapter 4 - Supplement of the "Manual of Procedures of the Alabama Building Commission"

☐ The Project is also classified as Major Renovation and the Basic Fee includes a 0% increase of the "Schedule of Basic Fee Rates" for Major Renovation per Chapter 4 - Supplement, Section D.

☐ The Basic Fee has been negotiated on the basis stated in the Special Provisions of this Agreement.

TIME PERIODS of the AGREEMENT:

(10) **a.** Pursuant to Standard Article 9, the Architect may terminate the Agreement if the Project is postponed or delayed by the Owner for more than 12 months.

b. The Design Schedule of Standard Article 11: 10 calendar days for Schematic Drawings;
15 calendar days for Preliminary Drawings
30 calendar days for Final Drawings.

(11) **STANDARD ARTICLES:**

By reference, the current edition of "Standard Articles of the Agreement Between Owner and Architect" (ABC Form B-2A) is incorporated herein as the terms, conditions, and requirements of this Agreement, subject only to such modifications or supplementation of the "Standard Articles" as may be stated as Special Provisions below.

(12) **SPECIAL PROVISIONS:**

12.0 Basic Fee Calculation-Group III per ABC Basic Fee Rates; See attached Timeline of each project

Project	Tentative Budget	Fee
1.**Field 1 Baseball/Softball**	$1,595,000	7.0% ($111,650.00)
Field 1 Surveying		$4,000
Preliminary Drawings	25%	$27,912.50
Construction Documents	50%	$55,825.00
Design Fee Sub-total		**$87,737.50**
Architect only authorized through Design Phase		
(Architect will not Advertise for bid until authorized by Owner)		
Bidding	5%	$5,582.50
Construction Administration	20%	$22,330.00
2. **Youth Baseball Fields**	$750,000	7.5% ($56,250.00)
Youth Baseball Field Surveying		$3,500
Preliminary Drawings	25%	$14,062.50
Construction Documents	50%	$28,125.00
Design Fee Sub-total		**$45,687.50**
Architect only authorized through Design Phase		
(Architect will not Advertise for bid until authorized by Owner)		
Bidding	5%	$2,812.50
Construction Administration	20%	$11,250.00
3. **Cherokee Bend Fields**	$737,500	7.5% (55,312.50)
Cherokee Bend Fields Surveying		$6,500
Preliminary Drawings	25%	$13,828.13
Construction Documents	50%	$27,656.25
Design Fee Sub-total		**$47,984.38**
Architect only authorized through Design Phase		
(Architect will not Advertise for bid until authorized by Owner)		
Bidding	5%	$2,765.62
Construction Administration	20%	$11,062.50

12.1 Fees for alternates approved by the Owner, designed or bid but not accepted, will be paid to the Architect to the extent Basic Services are completed.

12.2 Article 3.D.2 is hereby amended to provide reimbursement to Architect for cost of printing, shipping and handling, when these costs were not paid by the recipient.

12.3 Article 3 is hereby amended as follows:

1. Specialty consultants and other work, which is reimbursable to the Architect under this article, shall include in part, soils testing, land surveying, environmental surveys and engineering, and similar services, when performed under the direction of the Architect and as approved by the Owner.
2. For the purpose of Owner's reimbursement from the Contractor, and reimbursement payment to the Architect for additional construction administration time and expenses incurred by the Architect (if any), due to repetitive submittals and/or the Contractor's not completing this project by their contractual completion date, the Owner agrees to add to charges and liquidated damages chargeable to the Contractor under the Owner-Contractor Agreement (i.e.: "Construction Contract"), as follows:
   1) For review of any of the Contractor's shop drawings and submittals more than two times, and
   2) For construction administration and observation expenses incurred by the Architect after Construction Contract completion date (other than one final inspection, one follow-up final inspection, one year-end/warranty inspection, and one follow-up year/end inspection).

12.4 The Architect/Engineer will be paid based on the cost of the Work of the project, as indicated, including in part, alternates approved by the Owner to the extent services are completed; and the actual fair market value of goods and services donated to or by the Owner. Cost of the work shall include taxes.

12.5 There shall be no reduction in fee for actual services provided due to deductive change order items, except in the case of unused contingency amounts.

12.6 Additional Services and Reimbursables: The Architect and design team may assist the Owner with other tasks upon mutual agreement and at the direction of the Owner. Fees, possible services and estimates shall be mutually agreed upon based on services selected. Advertisement for Construction shall be a reimbursable expense if not paid directly by the owner.

12.7 Construction Time Overrun: Inasmuch as the project Contractor's failure to perform in a timely manner is beyond the control of the Architect, it is hereby agreed that any Construction Administration Phase Services provided by the Architect beyond a period equal to 120% of a reasonable construction period, as mutually agreed upon by the Owner and Architect, will be deemed an Extra Service, provided said cost is reasonable and is recoverable by the Owner from the Contractor by way of liquidated damages or penalty as provided for in the Construction Contract.

12.8 The duty of preparing and assembling record drawings can be transferred to the Contractor via contract provisions. Delete the words Architect's inspection fee and substitute Architect's fee for administration of the Construction Contract. Reference to the Architect making "at least one inspection each week" is modified to indicate "at least an average of one site visit per week". Mechanical, electrical and plumbing engineers shall include a total of 2 site visits including above ceiling and final inspection.

12.9 The Architect shall not have control over or charge of and shall not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the work, since these are solely the Contractor's responsibility under the Contract for Construction. The Architect shall not be responsible for the Contractor's schedules or failure to carry out the Work in accordance with the Contract Documents. The Architect shall not have control over or charge of acts or omissions of the Contractor, Subcontractors, or their agents or employees or of any other persons performing portions of the Work. Neither the professional activities of the Architect, nor the presence of the Architect or its employees and consultants at the construction site, shall relieve the General Contractor and any other entity of their obligations, duties, and responsibilities including but not limited to, construction means, methods, sequence, techniques or procedures necessary for performing, superintending or coordinating all portions of the work of construction in accordance with the Contract Documents and any health or safety precautions required by any regulatory agencies. The Architect and its personnel have no authority to exercise any control over any construction contractor or other entity or their employees in connection with their work or any health or safety precautions. The Owner agrees that the General Contractor is solely responsible for jobsite safety, and warrants that this intent shall be made evident in the Owner's Agreement with the General Contractor.

12.10 Project Betterment: If, due to the Architect's error or omission, any required item or component of the project is omitted from the Architect's construction documents, the Architect shall not be responsible for paying the actual cost to add such item or component to the extent that such item or component would have been otherwise necessary for the project or otherwise adds value or betterment to the project. In no event will the Architect be responsible for any cost or expense that provides betterment, upgrade, or enhancement of the project.

12.11 By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the state of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.

12.12 Waivers of Subrogation: To the extent that loss or damage is covered by property insurance during construction, the Owner and Architect waive all rights against each other and against the contractors, consultants, agents and employees of the other for damages, except such rights as they may have to proceeds of such insurance held by the Owner, Architect, or Contractor as fiduciary. The Owner or Architect, as appropriate, shall require of the contractors, consultants, agents and employees of any of them similar waivers in favor of the other parties enumerated herein. This waiver shall not be applicable to loss or damage that occurs after final acceptance of the Work.

12.13 In compliance with Act 2016-312, the contractor hereby verifies that it is not currently engaged in, and will not engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which this state can enjoy open trade.

(If Special Provisions must be continued in an attachment, identify the attachment above.)

(13) **CONSULTANTS:** Pursuant to Standard Article 10, the consultants to be employed by the Architect are:
(Insert Name, Alabama Registration Number, Address, and Telephone Number)

Civil Engineer
Goodwyn Mills & Cawood, Inc.
2701 1st Avenue South, Suite 100
Birmingham, AL 36117
Cole Williams, PE, AL Reg. #24119

The Owner does hereby certify that the terms and commitments of this Agreement do not constitute a debt of the State of Alabama in violation of Article 11, Section 213 of the Constitution of Alabama, 1901, as amended by Amendment Number 26.

(14)

APPROVALS	CONTRACTING PARTIES
_____	**Goodwyn, Mills and Cawood, Inc.** Architect
By _____	By _____ Signature of Officer of Firm
	Name & Title **John Bricken, PLA, Vice President, Landscape Architecture**
STATE OF ALABAMA BUILDING COMMISSION *(Not required for locally-funded SDE projects)*	**City of Mountain Brook** Owner
By _____ Director, Technical Staff	By _____
	Name & Title **Mr. Stewart Welch, Mayor**

GMC

Mountain Brook Athletic Fields

(Approximate Timelines for each project)

1. Field 1 Baseball/Softball convert to all Synthetic Turf

Release GMC for Design in December or sooner

Released on Topographic survey on December 1st or sooner

Design time & Ala. Building Commission submittal in January

Advertise for Bid – February 15th

Open bids March 15 – 30th

Award April 1st – Construction Contract signed

Contractor Mobilize – May 1, 2020 (4 to 5 months Construction time)

Contractor complete September 2020

1. **Field 1 Baseball/Softball**	$1,595,000 @ 7.0%		($111,650.00)
Field 1 Surveying			$4,000
Preliminary Drawings	25%		$27,912.50
Construction Documents	50%		$55,825.00
Design Fee Sub-total			**$87,737.50**

*****Architect only authorized through Design Phase*****

(Architect will not Advertise for bid until authorized by Owner)

Bidding	5%	$5,582.50
Construction Administration	20%	$22,330.00

Goodwyn Mills Cawood

2701 1st Avenue South
Suite 100
Birmingham, AL 35233

T (205) 879-4462
F (205) 879-4493

www.gmcnetwork.com

GMC

2. Mountain Brook Youth Baseball Fields

Youth fields infield only to be converted to Synthetic Turf

Release GMC for Design in June 2020 or sooner

Topographic survey's in June or sooner

Design time & Ala. Building Commission submittal July 2020

Advertise for Bid – August 1, 2020

Open bids end of August 2020

Award September 15th – Construction Contract signed

Contractor Mobilize – October 1, 2020 (3 months Construction time)

Contractor complete January 2021

2. **Youth Baseball Fields**	$750,000 @ 7.5%		($56,250.00)
Youth Baseball Field Surveying			$3,500
Preliminary Drawings	25%		$14,062.50
Construction Documents	50%		$28,125.00
Design Fee Sub-total			**$45,687.50**

*****Architect only authorized through Design Phase*****

(Architect will not Advertise for bid until authorized by Owner)

Bidding	5%	$2,812.50
Construction Administration	20%	$11,250.00

GMC

3. Cherokee Bend Athletic Fields

Re-configuration of the Recreation fields, irrigation, Bermuda sodding, fencing, batting cages, netting and sports field lighting.

Release GMC for Design in January 2020 or sooner

Topographic survey's in January or sooner

Design time & Ala. Building Commission submittal February 2020

Advertise for Bid – March 2020

Open bids April 1, 2020

Award April 15th – Construction Contract signed

Contractor Mobilize – May 15, 2020 (3 months Construction time)

Contractor complete August 31, 2020

3. **Cherokee Bend Fields**	$737,500 @ 7.5% (55,312.50)	
Cherokee Bend Fields Surveying		$6,500
Preliminary Drawings	25%	$13,828.13
Construction Documents	50%	$27,656.25
Design Fee Sub-total		**$47,984.38**

*****Architect only authorized through Design Phase*****

(Architect will not Advertise for bid until authorized by Owner)

Bidding	5%	$2,765.62
Construction Administration	20%	$11,062.50

GMC

2019
Standard Rate and Fee Schedule

Standard Hourly Rates

Principal (Architect/ Engineer/ Interior Designer/ Scientist)	$ 250.00
Executive VP/ Senior VP	$ 200.00
Vice President	$ 190.00
Senior Professional (Architect, Engineer, Interior Design, Scientist)	$ 190.00
Professional II (Architect, Engineer, Interior Design, Scientist)	$ 175.00
Professional I (Architect, Engineer, Interior Design, Scientist)	$ 150.00
Intern II (Architecture, Engineering, Interior Design, Environmental Sciences)	$ 130.00
Intern I (Architecture, Engineering, Interior Design, Environmental Sciences)	$ 110.00
Technical III (Contract Spec., CADD Tech., Designer, Drafting, CA, ROW Acq., Field Tech.)	$ 140.00
Technical II (Contract Spec., CADD Tech., Designer, Drafting, CA, ROW Acq., Field Tech.)	$ 110.00
Technical I (Contract Spec., CADD Tech., Designer, Drafting, CA, ROW Acq., Field Tech.)	$ 80.00
Executive Administrative Assistant	$ 80.00
Administrative Assistant II	$ 70.00
Administrative Assistant I	$ 60.00
Surveying:	
Professional Land Surveyor	$ 170.00
Field Crew Supervisor	$ 150.00
Survey Crew (two-man survey crew)	$ 135.00
Survey Crew (three-man survey crew)	$ 180.00
Survey Crew (four-man survey crew)	$ 210.00

Reimbursable Expenses

Travel Expenses	
Vehicle Transport	$0.54 per mile
Travel/ Meals/ Lodging	Cost plus twenty percent
Sub-Consultant/ Sub-Contractors	Cost plus twenty percent
Sub-Consultant/Sub-Contractors reimbursable expenses	Cost plus twenty percent
Printing & Shipping	
Out of house reprographic services	Cost plus twenty percent
In-House B&W reprographic services (small format)	$0.09/ sheet (8.5 x 11)
	$0.15/ sheet (11 x 17)
In-House Color reprographic services (small format)	$0.09/ sheet (8.5 x 11)
	$0.15/ sheet (11 x 17)
In-House B&W reprographic services (large format)	$0.15/ sf
In-House Color reprographic services (large format)	$0.20/ sf
GPS equipment	$250.00 per day

Sam Gaston

From: Simeon Johnson <simeonjohnson@msn.com> on behalf of Simeon Johnson
Sent: Wednesday, November 20, 2019 8:21 PM
To: Sam Gaston
Subject: Crestline Streetscape watercolor renderings contract for Nov. 25 city council consideration
Attachments: 19-003 Mt Brook - Church St Watercolors.pdf

Sam,
I am forwarding you Bram Odrezin's email below and attached proposed contract for two watercolor renderings of the Crestline Streetscape with focus on the building from Ollie Irene to Vogue Cleaners. The 10"x14" renderings would cost no more than $1,200 total and the City of Mountain Brook would have the rights to reproduction of the renderings if we so choose. Bram is a landscape architect as well as an illustrator and he is uniquely suited to visualize the design details the Board of Landscape Design is proposing for Church Street to be exemplified in the renderings. The BLD voted unanimously last night to recommend the city council commission these renderings. Thank you and the council for your consideration of this expenditure and please let me know if my attendance at Pre-Meeting or the council meeting is requested to answer any questions.

Sim S.W. Johnson
Chair, Mountain Brook Board of Landscape Design
Instagram @simswjohnson

From: AOstudio <bram@aostudiollc.com>
Sent: Wednesday, November 20, 2019 9:49 AM
To: Simeon Johnson <simeonjohnson@msn.com>
Subject: Presentation Graphic Proposal for services

Sim,

Good morning and I hope all is well.

Please see attached draft proposal for Presentation Graphic services.

I have set it at a lump sum not to exceed $1,200 ($600/ea.) for the two requested watercolor renderings. I don't expect any additional services, reimbursables nor admin fees, but only leave them for information and if further perspectives are required. I'm always willing to fine tune anything and let me know your thoughts or depending on any concerns or issues from last night's meeting, let me know how I can adjust or discuss anything further.

Again, I appreciate your consideration for presentation graphic services and allowing me to provide a proposal for this exciting improvement project. Please let me know if I can answer or clarify anything in the meantime.

Thank you and talk soon.
Bram

--
Abraham Odrezin, P.L.A., ASLA

Landscape Architect, Photographer
AO Studio, LLC
200 28th Street South
Birmingham, AL 35233
205.909.7804 tel.
912.655.8134 c.

November 20, 2019
City of Mountain Brook
Attn: Sam Gaston, City Manager
56 Church Street
Mountain Brook, AL 35213

Re: Church Street Improvement Illustrative Renderings and Presentation Graphics

Mr. Gaston,
Thank you for considering using AO Studio (AOS) to assist you in providing Illustrative renderings to help guide proposed improvements to the streetscape improvements. I know that I can provide a creative solution in portraying the potential unification of the storefronts and help illustrate streetscape experience.

It is my understanding that the City, via the Board of Landscape Design, would like to focus on the following areas:

- *Two Perspectives for the Exterior StreetScape and storefront façade improvements, highlighting the future storefront unification efforts.*

With this understanding of the scope of work our proposal for the above services is as follows:

Illustrative Watercolor Renderings — *Lump Sum (not to exceed): $1,200.00*

Provide 2 (two) Watercolor Perspectives, sized roughly 10x14 each. Depicting views of the proposed Church Street Improvements for Crestline Village, based on Information provided by the Mt. Brook Board of Landscape Design. Studies/Proofs will be provided for each, prior to finalizing and Hardcopies will be made available for Scanning, for storage on digital media for use by the Board of Landscape Design. Original Hardcopies will be retained by AO Studio and made available for marketing and conceptual design uses by the City of Mountain Brook.

Revisions or additional services — *To be billed at our hourly rate: ($180.00)*

Additional Edits or additional views at Client's request, please provide a written request to initiate.

The following items are not included in this proposal: *fees for Scans/large format prints, Presentation Boards or Mounting of Documents. Obtaining approval from Planning & Zoning or Design Review Committee, major revisions or additions to the project, or significant changes to the scope of work after proofs are accepted.* Additional services, post-production or additional Pieces can be provided, upon written request from Client, at an hourly rate of ($180.00/hr) No reimbursable expenses are expected nor any administrative fees, but if required, reimbursable expenses [*travel expenses, costs of scanning/reproduction, postage, Mounting for presentation, etc...*] shall be billed as they are incurred. Reimbursable expenses may be subject to a 10% administrative fee.

I am thoroughly excited about being considered to assist the City of Mt Brook with the afore mentioned presentation graphics for the Church Street improvements. Please do not hesitate to contact me with any questions or concerns you may have in regards to this proposal. If the terms of this proposal are acceptable, please sign the attached agreement, provided below.

Agreement for Services

Date
This agreement is made on November 20, 2019, between The City of Mountain Brook and AO Studio, LLC (AOS) for Presentation Graphic Services as provided herein.

Client
City of Mountain Brook, Attn: Sam Gaston, City Manager
NAME
56 Church Street Mountain Brook, AL 35213
ADDRESS/CITY/STATE/ZIP

Project
To provide Illustrative renderings for Presentation Graphic services for **The City of Mountain Brook, AL.**

Fee Arrangement:
I propose to provide these services to be billed as a lump sum of **$600/ea.** per watercolor presentation graphic. Two are being requested Initially. Additional Post-production or Additional Pieces will be provided, upon written request, at an hourly rate of ($180.00/hr) No reimbursable expenses are expected nor any administrative fees.

Article 1
Presentation Graphic Services

1.Standard of Care
The Presentation Graphic Services shall be performed with care and diligence in accordance with the professional standards appropriate for a project of the nature and scope of this Project.

2. Scope of Services
Presentation Graphics - Conceptual and Marketing Purposes in digital format:
Provide 2 (two) Watercolor Perspectives, sized roughly 10x14 each. Depicting views of the proposed Church Street Improvements for Crestline Village, based on Information provided by the Mt. Brook Board of Landscape Design. Studies/Proofs will be provided for each, prior to finalizing and Hardcopies will be made available for Scanning, for storage on digital media for use by the Board of Landscape Design. Hardcopies will be retained by AOS and available for marketing and conceptual design uses by the City of Mountain Brook.

3. Additional Services
Additional Services are beyond the basic Scope of Services, and when requested in writing by the Client, shall entail additional compensation beyond the Compensation stated above.

4. Changes to Approved Services
Revisions to drawings or other documents shall constitute Additional Services when made necessary because of Client-requested changes to previously approved drawings or other documents, or because of Client changes to previous budget parameters and/or Project requirements. All changes must be communicated in writing. Compensation for Additional Services can be made at our hourly rate or, if the proposed changes are significant as deemed by the Artist, then the original fee can be renegotiated.

5. Schedule of Performance
The Client's signature on this Agreement shall be the basis for AOS to begin providing services for the Project and shall perform the services as expeditiously as is consistent with professional quality.

Article 2
Client's Responsibilities

2.1 Information
The Client shall provide site and other information on which the design is to be based as well as Client's budget parameters for the Project. AOS shall be entitled to rely on the accuracy and completeness of information provided by the client.

2.2 Approvals
The Client's decisions, approvals or disapprovals, reviews, and responses shall be communicated, in writing, to AOS in a timely manner, so as not to delay preparing any sketches, proofs, final pieces or post production editing.

Article 3

Ownership of Documents

3.1 AOS and/or the Artist shall be deemed the author and owner of all documents and retain all exclusive rights, developed pursuant to this Agreement and provided to the Client by AOS (collectively, the "Presentation Graphics"). Subject to payment by the Client of all fees and costs owed to AOS. AOS grants to the Client limited use, nonexclusive license to promote, post or display the Presentation Graphics solely for the marketing and conceptual design purposes. Hardcopies will be retained by AOS, but made available for scanning and provided via digital storage media.

3.2 AOS will be given proper credit and acknowledgements for all services rendered. Proper credit will be defined as being named by Client in project identification boards, published articles, promotional brochures, marketing photographs of work, social media or similar communications where applicable.

Article 4

Artist Compensation

4.1 Compensation for the Presentation Graphic Services performed under this Agreement shall be the stipulated sum(s) indicated above under "Compensation", plus Reimbursable Expenses as defined below. Additional Services, when requested in writing by the Client, shall entail additional compensation to be determined at an hourly rate of $180/hour.

4.2 Reimbursable Expenses are expenditures for the Project made by AOS, its employees, and consultants in the interest of the Project. Reimbursable Expenses include but are not limited to travel expenses, costs of reproduction, postage, services of professional consultants (which cannot be quantified at the time of contracting) and other, similar direct Project-related expenditures. Reimbursable expenses may be subject to an administrative fee of 10%.

4.3 Monthly payments to the Landscape Photographer shall be based on (1) the percentage of the Scope of Services completed, and shall include payments for (2) Additional Services performed, and (3) Reimbursable Expenses incurred.

4.4 Payments are due and payable immediately upon receipt of AOS invoice. Invoiced amounts unpaid 30 days after the invoice date shall be deemed overdue and shall accrue 3.5% interest per month. Overdue payments after 90 days may be grounds for termination or suspension of services.

4.5 If, through no fault of AOS, the Scope of Services to be provided under this Agreement has not been completed within 90 days of the initial notice to proceed, the compensation for services rendered after that time period shall be equitably adjusted.

Article 5

Indemnification

5.1 Client and AOS each agree to indemnify and hold harmless the other, and their respective officers, employees, agents, and representatives, from and against liability for all claims, losses, damages, and expenses, including reasonable attorneys' fees, to the extent such claims, losses, damages, or expenses are caused by the indemnifying party's negligent acts, errors, or omissions. In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of Client and AOS, they shall be borne by each party in proportion to its negligence.

Article 6

Dispute Resolution

6.1 If a dispute arises out of or relates to this Agreement, the parties shall endeavor to resolve their differences first through direct discussions. If the dispute has not been settled within 14 days of the initial discussions, the parties shall submit the dispute to mediation, the cost of which shall be shared equally by the parties.

6.2 Nothing in these provisions shall limit rights or remedies not expressly waived under applicable lien laws.

Article 7

Suspension/Termination

7.1 This Agreement may be terminated by either party on 7 days' written notice should the other party fail substantially to perform in accordance with its terms through no fault of the party initiating the termination, provided the defaulting party has not cured or in good faith diligently commenced to cure the breach during the 7-day notice period.

Article 8

Other Terms and Conditions

8.1 Assignment

Neither party shall assign their interest in this Agreement without the express written consent of the other, except as to the assignment of proceeds.

8.2 Governing Law

The law in effect at the Landscape Photographer's principal place of business shall govern this Agreement.

8.3 Complete Agreement

This Agreement represents the entire understanding between the Client and AOS and supersedes all prior negotiations, representations, or agreements, whether written or oral. This agreement may be amended only in a writing signed by both the Client and AOS.

Article 9

Limitation of Liability

In recognition of the relative risks and benefits of the Project to both the Client and the Consultant, the risks have been allocated such that the Client agrees, to the fullest extent permitted by law, to limit the liability of the Consultant and Consultants officers, directors, partners, employees, shareholders, owners and subconsultants for any and all claims, losses, costs, damages of any nature whatsoever or claims expenses from any cause or causes, including attorneys' fees and costs and expert-witness fees and costs, so that the total aggregate liability of the Consultant and Consultants officers, directors, partners, employees, shareholders, owners and subconsultants shall not exceed the Landscape Photographer's fee (exclusive of expenses) plus one dollar ($1.00), or the Consultant's total fee for services rendered on this Project, whichever is greater. It is intended that this limitation apply to any and all liability or cause of action however alleged or arising, unless otherwise prohibited by law.

City of Mountain Brook, AL

Date:

Abraham Odrezin, Owner/Operator AO Studio, LLC
Landscape Architect, ASLA, CLARB

Date: November 20, 2019