Main Entrance

INDEX

January 12, 2004

Baxter Evans & Company
674 Arlington Place
P.O. Box 4868
Macon, Georgia 31208

Attn: Baxter Evans

RE: Subsurface Investigation
Summit at the Mall
"Main Entrance"
Macon, Georgia
PT&E #2003-124

Gentlemen:

We completed the field portion of this subsurface investigation on December 16, 2003. The following is a report of our findings.

1. METHOD OF BORING AND SAMPLING:

A truck mounted drill, mechanically turning a 5 5/8 -inch, hollow stem auger was used to advance one bore hole at the location shown on the enclosed bore hole location sketch. In addition to the location sketch, a boring log of the hole is attached.

Boring B-5 was sampled in substantial accordance with "Penetration Test and Split Barrel Sampling of Soils", ASTM D 1586, current

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edition. The penetration recorded indicates the number of blows required to effect a 12-inch penetration into the undisturbed soil stratum, using a pin-guided, 140 pound drive hammer falling 30 inches per blow, driving a split barrel sampler having a 2-inch outside diameter. The depth to the beginning of the test is shown on the boring log. Each penetration test extends 18 inches below the indicated beginning depth. The final 12-inch penetration is reported as the blows per foot or the standard penetration.

The use of the standard penetration test (SPT) along with laboratory tests of the soil removed from the sampler enables us to make an assessment of the ability of the soil to support foundations. These tests can also provide information as to the potential stability of open excavations, the permeability of the soil and other soil index properties.

The boring was backfilled on December 16, 2003 after a final check for the presence and depth of subsurface water was made.

Soil samples obtained from the project site are the property of the client. Unless other arrangements are agreed upon in writing, Preston Testing & Engineering Company, Inc. will hold such samples for no more than 180 calendar days from the date Preston Testing & Engineering Company, Inc. issued the first document that includes the data obtained from these samples. After that date, Preston Testing & Engineering Company, Inc. will dispose of samples that are not contaminated by hazardous substances.

2. GENERAL FINDINGS:

The site is located in the Fall Line Hills District of the Coastal Plain Province in Macon, Bibb County, Georgia.

Boring B-5 represents the conditions in the proposed main entrance which will be used for both light and heavy duty traffic. At this location we found an old fill to a depth of 8.0 feet. The fill consisted of a brown, silty, fine to medium sand and was medium in consistency to a depth of 5.0 feet. Original soils were encountered at a depth of 8.0 feet. From 8.0 to 13.0 feet we noted a gray, clayey, fine to medium sand which was wet, very loose in consistency, and mixed with organics indicating the area had not been prepared prior to the placement of structural fill. From 13.0 to 15.0 feet we encountered a tan, gray, silty soil mixed with fragmented rock. Boring B-5 was terminated at a depth of 15.0 feet in dense fragmented rock.

Boring logs showing the soil profile at each bore hole are attached. The logs show changes in soil strata. The depths to changes should be considered to be approximate depths of changes based on the best estimate of the driller.

The soil profile shown on each boring log represents soil conditions at that particular boring. The soils between borings should not necessarily be assumed to be similar to those found in the borings.

The methods used indicate subsurface conditions only at the specific locations where samples were obtained, only at the time they were obtained, and only to the depths penetrated. Samples cannot be relied on to accurately represent the strata variations that usually exist between sampling locations.

It is not unusual to find unexpected conditions between test boring locations. Filled in ditches, soft backfill over utilities, rock ledges, trash pits, old fire pits, springs, and expansive clays are just a few of the unexpected conditions that might be discovered during field site preparation.

It has been our experience that shallow footings, cellars, septic tanks, utilities, wells and the like may be uncovered during construction.

Any such obstructions should be removed from the zone of construction if they interfere with the construction. All excavations to remove obstructions should be proofrolled and backfilled as described below for structural fill.

With the exception of having obtained utility clearances for drilling operations (call before you dig), Preston Testing & Engineering Company, Inc. has obtained no detailed knowledge of the on-site utilities or any other structures beneath the surface of the site.

No subsurface water was noted at the time the boring was made however at the 24 hour reading we noted subsurface water at a depth of 10.0 feet.

3. ANTICIPATED STRUCTURE:

It is our understanding that the scope of the project will consist of the following items.

Proposed paved section "Main Entrance" for the proposed Summit at the Mall development.

4. STRUCTURAL DESIGN RECOMMENDATIONS:

SUPPLEMENTAL STUDY: Once design plans are more advanced, we recommend a supplemental test pit study be performed on the site to better determine the extent of the poor fill conditions. The test pits could also help assess the extent of any groundwater related problems (if any) on the site, specifically as it pertains to site grading,

subgrade stabilization, and permanent underdrain design with the area of the proposed paved sections. We also recommend a future design meeting between the geotechnical engineer and other design team members to address geotechnical concerns at specific locations.

Overall Site Preparation Recommendations (Paved Sections)
In the event that undercut and/or structural footprints require structural fill to bring the site to grade, we suggest the following procedure.

Remove all organic matter, stumps and other deleterious matter. Predensify the areas to be filled or upon which structures are to be placed. A loaded dump truck or other rubber tired equipment should be used for the predensification. Overlapping passes of the vehicle should be made across the site in one direction and then at right angles to the original direction of rolling. A proofroll should be observed by a geotechnical engineer or his representative prior to the placement of any fill and/or crushed stone base material.

Any yielding, pumping or soft areas should be cut out and replaced with fill compacted as described below.

The proposed fill soil should be limited to soils classified in accordance with ASTM D 2487 as GM, GC, SW, SP, SM, SC, ML, and CL. Soils classified as Pt, OH, OL, CH and MH are **not** suitable for structural fill. The on-site soils from cut sections are suitable for structural fill provided they are at or near their optimum moisture content and free of all debris and/or organics.

The area fill should be spread in loose lifts (layers) of not more than 8 inches. Each lift should be rolled with a vibratory roller, a sheepsfoot roller or a loaded, rubber-tired dump truck, scraper or loader. Each lift should be compacted to a minimum density of 98.0

percent of the maximum dry density as determined in accordance with ASTM D 698, current edition.

The fill soil moisture content should be maintained within 3 percent of the optimum moisture as determined in accordance with ASTM D 698. In the event that the soil is too wet, harrowing, scarifying and aeration should be used to dry the soils to within the required moisture content. If the soil is too dry, a water truck with spreader bar or a spray hose should be used to bring the soil to the proper moisture range. The water should be thoroughly and evenly mixed within the soil prior to compaction. Backfilling of trenches, walls and structures should be done in 6-inch loose lifts. Each lift should be compacted using a mechanical tamp such as a vibratory or impact type compactor.

In general, sandy soils are best compacted with vibratory type compaction equipment. Clayey soils should be compacted with an impact type or sheepsfoot compactor.

Density tests should be taken throughout the placement of all structural fill.

5. PAVING RECOMMENDATIONS:

All proposed paved sections should be proofrolled. For light duty paving, we suggest that six inches of graded aggregate base be compacted on a prepared subbase. The base course should be compacted to 100% of the maximum dry density as determined in accordance with ASTM D 698. The graded aggregate base course should conform to GA D.O.T. specifications.

The surface course should be two inches of type "E" or "F" hot mix asphaltic concrete mixture conforming to GA D.O.T. specifications.

For heavy duty paving we recommend a 6 inch thick concrete slab 4000 psi / 650 psi flex be placed on a prepared subgrade as described for the light duty paving.

If asphalt pavement is considered for the heavy duty paved sections we recommend a minimum of 8 inches of graded aggregate base course (GAB) be compacted on a prepared subbase. The base should be compacted to 100 percent of the maximum dry density (ASTM D 698). The surface course should be 2 inches of type "E" or "F" hot mix asphalt over 2 inches of B-Binder course.

6. LIMITATIONS:

Although these findings are valid only at the locations and to the depths shown, they are useful for alerting the grading contractor to certain specific conditions pertinent to the preparation of the site.

Frequently, the grading contractor has never seen the geotechnical report or recommendations for site preparation. In addition, we see many cases where the specifications and plans do not reflect the recommendations made in the geotechnical report.

We suggest that every effort be made to alert the grading contractor so that he may avoid the problems that arise due to his lack of knowledge of potential site problems.

This report has been prepared for the exclusive use of Baxter Evans & Company for specific application to Summit at the Mall "Main Entrance" located in Macon, Georgia. Preston Testing & Engineering Company, Inc. has endeavored to comply with generally accepted

geotechnical engineering practice common to the local area. Preston Testing & Engineering Company, Inc. makes no other warranty, expressed or implied.

The analyses and [preliminary] recommendations contained in this report are based on data obtained from subsurface exploration. The methods used indicate subsurface conditions only at the specific locations where samples were obtained, only at the time they were obtained, and only to the depths penetrated. Samples cannot be relied on to accurately reflect the strata variations that usually exist between sampling locations.

The recommendations included in this report are preliminary, because they have been based in part on assumptions about strata variations that may be tested only during earthwork and foundation construction for deep foundations. Accordingly, these recommendations should not be applied in the field unless Preston Testing & Engineering Company, Inc. is retained to perform construction observation and thereby provide a complete professional geotechnical engineering service through the observational method. Preston Testing & Engineering Company, Inc. cannot assume responsibility or liability for the adequacy of its preliminary recommendations when they are used in the field without Preston Testing & Engineering Company, Inc. being retained to observe construction.

> Do not apply any of this report's conclusions or recommendations if the nature, design, or location of the facilities is changed. If changes are contemplated, Preston Testing & Engineering Company, Inc. must review them to assess their impact on this report's applicability. Also note that Preston Testing & Engineering Company, Inc. is not responsible for any claims, damages, or liability associated with any other party's interpretation of this report's subsurface data or reuse of this

report's subsurface data or engineering analyses without the express written authorization of Preston Testing & Engineering Company, Inc..

Although Preston Testing & Engineering Company, Inc. has explored subsurface conditions as part of this program, Preston Testing & Engineering Company, Inc. has not evaluated the site for the potential presence of contaminated soil.

The recommendations stated in this report are preliminary. They are based on information derived through subsurface sampling. No matter how effectively subsurface sampling may be performed, variations between exploration locations are likely and cannot be recognized until exposed during construction. Accordingly, Preston Testing & Engineering Company, Inc.'s recommendations may be finalized only through Preston Testing & Engineering Company, Inc.'s observation of the project's construction. Preston Testing & Engineering Company, Inc. accepts no responsibility or liability for any party's reliance on Preston Testing & Engineering Company, Inc.'s preliminary recommendations.

The conclusions and recommendations included in this report are based in part upon the data Preston Testing & Engineering Company, Inc. derived from a limited number of soil or groundwater samples obtained from widely spaced subsurface explorations. The nature and extent of variations between these explorations will not become evident until construction or further investigation.

If variations or other latent conditions become evident, Preston Testing & Engineering Company, Inc. will reevaluate this report's conclusions and recommendations.

Please call on us if we can be of further service to you on this project.

Very truly yours,
PRESTON TESTING & ENG. CO., INC.

Willie Goad
Managing Technician

WTG/cmd

FORM # 109-07-96

PTE NO. 2003-124

PRESTON TESTING & ENGINEERING CO., INC.

CLIENT BAXTER EVANS & COMPANY BORING NO. B-5

PROJECT NAME SUMMIT AT THE MALL - MACON, GEORGIA

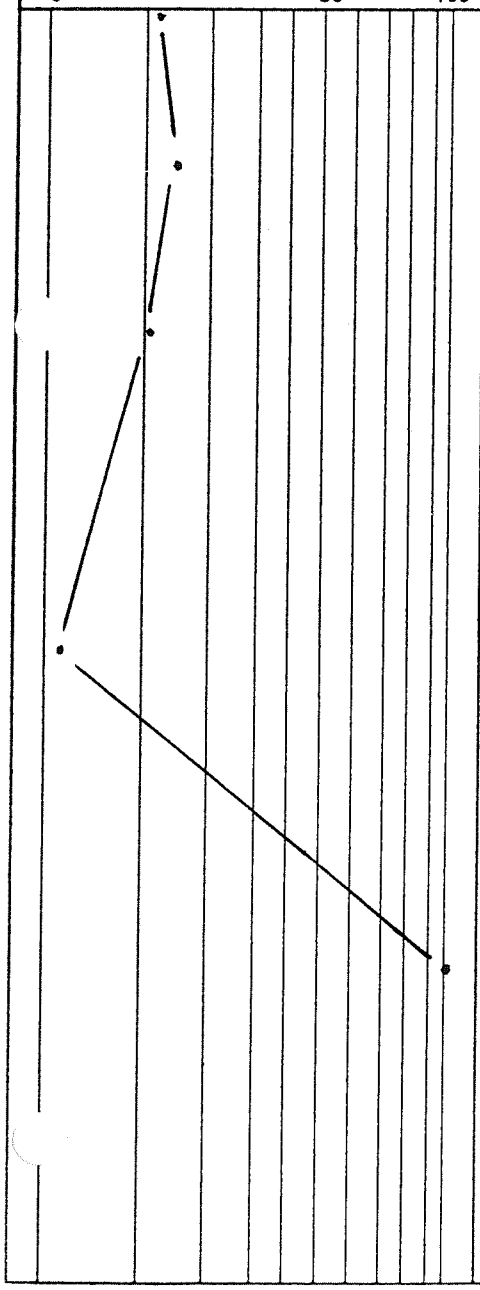
BORING LOCATION See Bore Hole Location Sketch

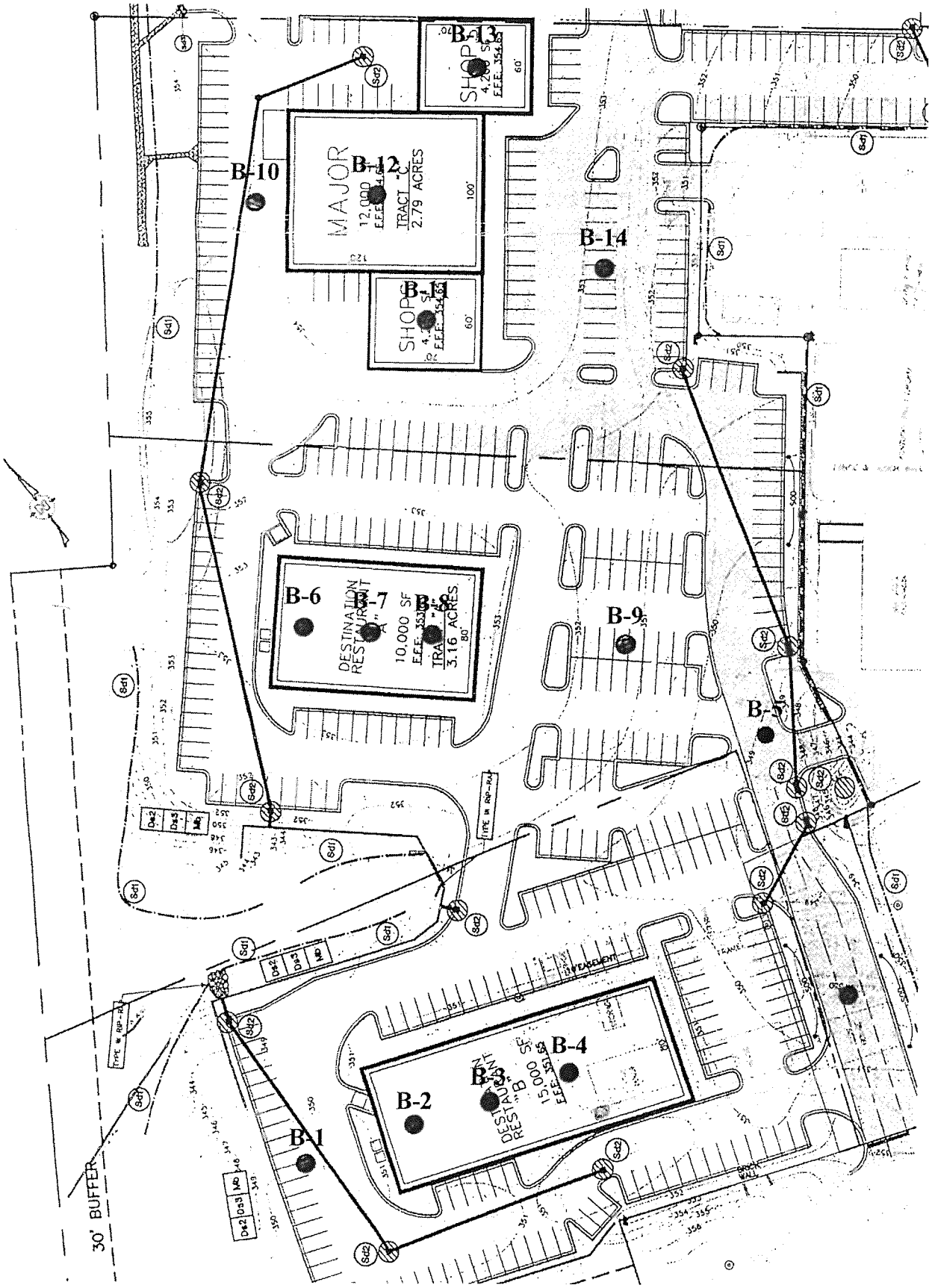
DATUM TOPO HAMMER WT. 140 Pounds HAMMER DROP 30 Inches HOLE DIA. 6 Inches

SURFACE ELEV. 344± SUBSURFACE WATER DEPTH NONE OBSERVED AT TIME OF BORING 10' 24 HOURS

DATE STARTED 12-15-03 COMPLETED 12-15-03 BORING METHOD ASTM D 1586

SAMPLES		BORING LOG
STANDARD PENETRATION (BLOWS PER FOOT) 0 50 100 / BLOWS PER FOOT	DEPTH (FEET)	DESCRIPTION
12	0	
		TAN BROWN SILTY FINE TO MEDIUM SAND (FILL) (SM)
14	2.5	
11	5.0	
	8.0	
2	10.0	GRAY CLAYEY FINE TO MEDIUM SAND, ORGANICS (ORIGINAL) (SC)
	13.0	
		TAN GRAY SILTY FRAGMENTED ROCK (ML-SW)
100+	15.0	BORING TERMINATED





BORE HOLE LOCATION SKETCH
PT&E #2003-124
SCALE 1" = 40'

DEFINITION OF TERMS

U.D. - Undisturbed sample (ASTM D 1587, Shelby Tube)

SPT - Standard Penetration Test (ASTM D 1586, Split Spoon)

L.L. - Liquid Limit (ASTM D 4318)

P.L. - Plastic Limit (ASTM D 4318)

P.I. - Plasticity Index (ASTM D 4318)

ATOB - At Time of Boring

CLAYS AND SILTS

Consistency	SPT (Blows per foot)
Very soft	Less than 2
Soft (L.L.)	2 - 4
Medium	4 - 8
Stiff	8 - 15
Very Stiff (P.L.)	15 - 30
Hard	Over 30

SANDS

Relative density	SPT (Blows per foot)
Very loose	0 - 4
Loose	4 - 10
Medium or firm	10 - 30
Dense	30 - 50
Very dense	Over 50

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U.D. - Undisturbed sample (ASTM D 1587, Shelby Tube)

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SANDS

Relative density	SPT (Blows per foot)
Very loose	0 - 4
Loose	4 - 10
Medium or firm	10 - 30
Dense	30 - 50
Very dense	Over 50

Tract A

INDEX

January 12, 2004

Baxter Evans & Company
674 Arlington Place
P.O. Box 4868
Macon, Georgia 31208

Attn: Baxter Evans

RE: Subsurface Investigation
Summit at the Mall
"Tract A"
Macon, Georgia
PT&E #2003-124

Gentlemen:

We completed the field portion of this subsurface investigation on December 16, 2003. The following is a report of our findings.

1. **METHOD OF BORING AND SAMPLING**:

A truck mounted drill, mechanically turning a 5 5/8 -inch, hollow stem auger was used to advance four bore holes at locations shown on the enclosed bore hole location sketch. In addition to the location sketch, a boring log of each hole is attached.

Borings B-6 through B-9 were sampled in substantial accordance with "Penetration Test and Split Barrel Sampling of Soils", ASTM D 1586,

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current edition. The penetration recorded indicates the number of blows required to effect a 12-inch penetration into the undisturbed soil stratum, using a pin-guided, 140 pound drive hammer falling 30 inches per blow, driving a split barrel sampler having a 2-inch outside diameter. The depth to the beginning of the test is shown on the boring log. Each penetration test extends 18 inches below the indicated beginning depth. The final 12-inch penetration is reported as the blows per foot or the standard penetration.

The use of the standard penetration test (SPT) along with laboratory tests of the soil removed from the sampler enables us to make an assessment of the ability of the soil to support foundations. These tests can also provide information as to the potential stability of open excavations, the permeability of the soil and other soil index properties.

The borings were backfilled on December 16, 2003 after a final check for the presence and depth of subsurface water was made.

Soil samples obtained from the project site are the property of the client. Unless other arrangements are agreed upon in writing, Preston Testing & Engineering Company, Inc. will hold such samples for no more than 180 calendar days from the date Preston Testing & Engineering Company, Inc. issued the first document that includes the data obtained from these samples. After that date, Preston Testing & Engineering Company, Inc. will dispose of samples that are not contaminated by hazardous substances.

2. GENERAL FINDINGS:

The site is located in the Fall Line Hills District of the Coastal Plain Province in Macon, Bibb County, Georgia.

The general area surrounding the location of these test borings is not suitable for the support of conventional shallow foundations due to the presence of old fill. The fill was placed with little or no compactive effort. There is also a substantial amount of debris and organics which is unsuitable for the use as structural fill. We encountered the old fill to a depth of 13.0 feet in this area. These type materials create voids which allow soils to migrate downward causing loss of support for structures resulting in excessive differential and total settlement.

At the location of borings B-6 and B-8 the original soils consisted of sandy silts which were hard in consistency at 15.0 feet. At deeper elevations we encountered very dense fragmented rock.

Boring B-6 was terminated at a depth of 20.0 feet. Borings B-7 and B-9 were terminated at 8.0 feet and 5.0 feet, respectively due to auger refusal in solid fill (debris). Boring B-8 was terminated at a depth of 19.0 feet due to auger refusal in very dense fragmented rock. Below is a tabulation of bore hole termination depths.

DEPTH/ELEVATION ± OF BORE HOLE TERMINATION		
Boring Number	**Existing Grade Elevation ±**	**Depth of Termination (Feet / Elevation ±)**
B-6	352	20.0 / 332
B-7	351	8.0 / 343
B-8	351	19.0 / 332
B-9	348	5.0 / 343

*Terminated in debris.

Boring logs showing the soil profile at each bore hole are attached. The logs show changes in soil strata. The depths to changes should be

considered to be approximate depths of changes based on the best estimate of the driller.

The soil profile shown on each boring log represents soil conditions at that particular boring. The soils between borings should not necessarily be assumed to be similar to those found in the borings.

The methods used indicate subsurface conditions only at the specific locations where samples were obtained, only at the time they were obtained, and only to the depths penetrated. Samples cannot be relied on to accurately represent the strata variations that usually exist between sampling locations.

It is not unusual to find unexpected conditions between test boring locations. Filled in ditches, soft backfill over utilities, rock ledges, trash pits, old fire pits, springs, and expansive clays are just a few of the unexpected conditions that might be discovered during field site preparation.

With the exception of having obtained utility clearances for drilling operations (call before you dig), Preston Testing & Engineering Company, Inc. has obtained no detailed knowledge of the on-site utilities or any other structures beneath the surface of the site.

Subsurface water was noted. The following is a tabulation of the depth (elevation) of this subsurface water.

BORING NUMBER	EXISTING GRADE ELEVATION ±	DEPTH OF SUBSURFACE WATER ATOB (FEET / ELEVATION ±)	DEPTH OF SUBSURFACE WATER 24 HOURS (FEET / ELEVATION ±)
B-6	352	No Free Water Surface Observed	15.5 / 336.5
B-7	351		No Free Water Surface Observed
B-8	351		12.2 / 338.8
B-9	348		No Free Water Surface Observed

3. ANTICIPATED STRUCTURE:

It is our understanding that the scope of the project will consist of the following items.

Various types of buildings both office and retail are proposed.

The floor slab will be at 353.65 elevation.

If any of the above proposed scope of work is not correct or has been changed, please let us know so that we can provide additional and/or amended recommendations.

4. LAB TESTS:

We secured a bulk soil sample from boring B-7 at a depth of 0 to 4.5 feet. A laboratory classification (ASTM D 2487) along with a one-point standard proctor (ASTM D 698) was performed on this sample. We found this soil to be an SM material (silty sand), with a maximum dry density of 110.0 pcf and an optimum moisture content of 13.0 percent.

5. STRUCTURAL DESIGN RECOMMENDATIONS:

SUPPLEMENTAL STUDY: Once design plans are more advanced, we recommend a supplemental test pit study be performed on the site to better determine the extent of the solid fill (debris) along with other problems associated with the fill on the site. The test pits could also help assess the extent of any groundwater related problems on the site, specifically as it pertains to site grading, subgrade stabilization, and permanent underdrain design with the area of the proposed building as well as parking lots. We also recommend a future design meeting between the geotechnical engineer and other design team members to address geotechnical concerns at specific locations. This may allow the footprint of the building to be shifted to avoid foundations being placed in the poor fill conditions. It may be that flexible and/or rigid pavement could be located in the marginal area with less preparation. If this is not an option, the old fill should be removed down to the original soils and the site brought back to the planned elevation with the use of suitable structural fill placed as described in "Site Preparation Recommendations".

Foundation Support

If several inches of settlement can be tolerated, based on the results of the subsurface investigation, our laboratory analysis and after completion of recommended site preparation, the proposed structures may be supported on a reinforced concrete slab on grade. A net maximum allowable bearing pressure of 1500 pounds per square foot may be used in the design of the shallow foundation system.

For frost protection, perimeter turn down slabs should be designed with a minimum embedment depth of 18 inches. The embedment depth should be measured from the base of the footing to the lowest adjacent outside grade.

Floor Support

A four-inch layer of compacted crushed stone should be placed beneath the floor slab to provide a protective cover as well as a uniform working surface.

Expansion and contraction joints should be used to isolate all floor slabs from the load bearing wall and/or isolated columns. This will allow for possible differential movement and diminish the potential of cracking the floor slabs. Provided the slab subgrade is prepared in accordance with our recommendations, a subgrade modulus reaction (K) of 50-75 pounds per cubic inch (pci) may be used for the slab design.

Site Preparation Recommendations

In the event that undercut and/or structural footprints require structural fill to bring the site to grade, we suggest the following procedure.

Remove all organic matter, stumps and other deleterious matter. Predensify the areas to be filled or upon which structures are to be placed. A loaded dump truck or other rubber tired equipment should be used for the predensification. Overlapping passes of the vehicle should be made across the site in one direction and then at right angles to the original direction of rolling. We recommend a proofroll be observed by a geotechnical engineer or his representative prior to the placement of any fill and/or the excavation of any foundations.

Any yielding, pumping or soft areas should be cut out and replaced with fill compacted as described below.

The proposed fill soil should be limited to soils classified in accordance with ASTM D 2487 as GM, GC, SW, SP, SM, SC, ML, and CL. Soils classified as Pt, OH, OL, CH and MH are **not** suitable for

structural fill. The on-site soils from cut sections are suitable for structural fill provided they are at or near their optimum moisture content and free of all debris and/or organics.

The area fill should be spread in loose lifts (layers) of not more than 8 inches. Each lift should be rolled with a vibratory roller, a sheepsfoot roller or a loaded, rubber-tired dump truck, scraper or loader. Each lift should be compacted to a minimum density of 95.0 percent of the maximum dry density as determined in accordance with ASTM D 698, current edition.

The fill soil moisture content should be maintained within 3 percent of the optimum moisture as determined in accordance with ASTM D 698. In the event that the soil is too wet, harrowing, scarifying and aeration should be used to dry the soils to within the required moisture content. If the soil is too dry, a water truck with spreader bar or a spray hose should be used to bring the soil to the proper moisture range. The water should be thoroughly and evenly mixed within the soil prior to compaction. Backfilling of trenches, walls and structures should be done in 6-inch loose lifts. Each lift should be compacted using a mechanical tamp such as a vibratory or impact type compactor.

In general, sandy soils are best compacted with vibratory type compaction equipment. Clayey soils should be compacted with an impact type or sheepsfoot compactor.

Horizontally, the compacted structural fill should extend at least as far outside the perimeter footings as the fill is in depth below the bottom of the footings.

Density tests should be taken throughout the placement of all structural fill.

The bottoms of all footing excavations should be mechanically tamped prior to placement of steel and concrete to assure a uniformly dense support for the footings.

All footing excavations should be tested for bearing value prior to the placement of the reinforcement steel and concrete.

6. PAVING RECOMMENDATIONS:

All proposed paved sections should be proofrolled. For light duty paving, we suggest that six inches of graded aggregate base be compacted on a prepared subbase. The base course should be compacted to 100% of the maximum dry density as determined in accordance with ASTM D 698. The graded aggregate base course should conform to GA D.O.T. specifications.

The surface course should be two inches of type "E" or "F" hot mix asphaltic concrete mixture conforming to GA D.O.T. specifications.

For heavy duty paving we recommend a 6 inch thick concrete slab 4000 psi / 650 psi flex be placed on a prepared subgrade as described for the light duty paving.

If asphalt pavement is considered for the heavy duty paved sections we recommend a minimum of 8 inches of graded aggregate base course (GAB) be compacted on a prepared subbase. The base should be compacted to 100 percent of the maximum dry density (ASTM D 698). The surface course should be 2 inches of type "E" or "F" hot mix asphalt over 2 inches of B-Binder course.

7. LIMITATIONS:

Although these findings are valid only at the locations and to the depths shown, they are useful for alerting the grading contractor to certain specific conditions pertinent to the preparation of the site.

Frequently, the grading contractor has never seen the geotechnical report or recommendations for site preparation. In addition, we see many cases where the specifications and plans do not reflect the recommendations made in the geotechnical report.

We suggest that every effort be made to alert the grading contractor so that he may avoid the problems that arise due to his lack of knowledge of potential site problems.

This report has been prepared for the exclusive use of Baxter Evans & Company for specific application to Summit at the Mall "Tract A" located in Macon, Georgia. Preston Testing & Engineering Company, Inc. has endeavored to comply with generally accepted geotechnical engineering practice common to the local area. Preston Testing & Engineering Company, Inc. makes no other warranty, expressed or implied.

The analyses and [preliminary] recommendations contained in this report are based on data obtained from subsurface exploration. The methods used indicate subsurface conditions only at the specific locations where samples were obtained, only at the time they were obtained, and only to the depths penetrated. Samples cannot be relied on to accurately reflect the strata variations that usually exist between sampling locations.

The recommendations included in this report are preliminary, because they have been based in part on assumptions about strata variations

that may be tested only during earthwork and foundation construction for deep foundations. Accordingly, these recommendations should not be applied in the field unless Preston Testing & Engineering Company, Inc. is retained to perform construction observation and thereby provide a complete professional geotechnical engineering service through the observational method. Preston Testing & Engineering Company, Inc. cannot assume responsibility or liability for the adequacy of its preliminary recommendations when they are used in the field without Preston Testing & Engineering Company, Inc. being retained to observe construction.

Do not apply any of this report's conclusions or recommendations if the nature, design, or location of the facilities is changed. If changes are contemplated, Preston Testing & Engineering Company, Inc. must review them to assess their impact on this report's applicability. Also note that Preston Testing & Engineering Company, Inc. is not responsible for any claims, damages, or liability associated with any other party's interpretation of this report's subsurface data or reuse of this report's subsurface data or engineering analyses without the express written authorization of Preston Testing & Engineering Company, Inc..

Although Preston Testing & Engineering Company, Inc. has explored subsurface conditions as part of this program, Preston Testing & Engineering Company, Inc. has not evaluated the site for the potential presence of contaminated soil.

The recommendations stated in this report are preliminary. They are based on information derived through subsurface sampling. No matter how effectively subsurface sampling may be performed, variations between exploration locations are likely and cannot be recognized until exposed during construction. Accordingly,

Preston Testing & Engineering Company, Inc.'s recommendations may be finalized only through Preston Testing & Engineering Company, Inc.'s observation of the project's construction. Preston Testing & Engineering Company, Inc. accepts no responsibility or liability for any party's reliance on Preston Testing & Engineering Company, Inc.'s preliminary recommendations.

The conclusions and recommendations included in this report are based in part upon the data Preston Testing & Engineering Company, Inc. derived from a limited number of soil or groundwater samples obtained from widely spaced subsurface explorations. The nature and extent of variations between these explorations will not become evident until construction or further investigation.

If variations or other latent conditions become evident, Preston Testing & Engineering Company, Inc. will reevaluate this report's conclusions and recommendations.

Please call on us if we can be of further service to you on this project.

Very truly yours,
PRESTON TESTING & ENG. CO., INC.

Willie Goad
Managing Technician

WTG/cmd

FORM # 109-07-96

PTE NO. 2003-124

PRESTON TESTING & ENGINEERING CO., INC.

CLIENT BAXTER EVANS & COMPANY BORING NO. B-6

PROJECT NAME SUMMIT AT THE MALL - MACON, GEORGIA

BORING LOCATION See Bore Hole Location Sketch

DATUM TOPO HAMMER WT. 140 Pounds HAMMER DROP 30 Inches HOLE DIA. 6 Inches

SURFACE ELEV. 352± SUBSURFACE WATER DEPTH NONE OBSERVED AT TIME OF BORING 15.5' 24 HOURS

DATE STARTED 12-11-03 COMPLETED 12-11-03 BORING METHOD ASTM D 1586

SAMPLES			BORING LOG
STANDARD PENETRATION (BLOWS PER FOOT) 0 50 100	BLOWS PER FOOT	DEPTH (FEET)	DESCRIPTION
	14	0	TAN GRAY FINE SANDY MICACEOUS SILT (FILL) (ML)
		1.0	
	15	2.5	GRAY FINE TO MEDIUM SAND, ORGANICS (FILL) (SW)
	6	5.0	
	7	10.0	
		12.0	
	52	15.0	TAN GRAY FINE SANDY MICACEOUS SILT (ORIGINAL) (ML)
		18.0	
			FRAGMENTED ROCK
	100+	20.0	BORING TERMINATED

FORM # 109-07-96

PTE NO. 2003-124

PRESTON TESTING & ENGINEERING CO., INC.

CLIENT BAXTER EVANS & COMPANY BORING NO. B-7

PROJECT NAME SUMMIT AT THE MALL - MACON, GEORGIA

BORING LOCATION See Bore Hole Location Sketch

DATUM TOPO HAMMER WT. 140 Pounds HAMMER DROP 30 Inches HOLE DIA. 6 Inches

SURFACE ELEV. 351± SUBSURFACE WATER DEPTH NONE OBSERVED AT TIME OF BORING
NONE OBSERVED 24 HOURS

DATE STARTED 12-15-03 COMPLETED 12-15-03 BORING METHOD ASTM D 1586

SAMPLES		BORING LOG	
STANDARD PENETRATION (BLOWS PER FOOT) 0 50 100	BLOWS PER FOOT	DEPTH (FEET)	DESCRIPTION
	6	0	
			TAN GRAY SILTY FINE TO MEDIUM SAND (FILL) (SM)
	13	2.5	
		4.5	
		5.0	
			BLACK SILTY FINE TO MEDIUM SAND, BRICK, CONCRETE, ORGANICS (FILL) (SM/DEBRIS)
		8.0	
			BORING TERMIANTED (AUGER REFUSAL IN CONCRETE/ SOLID (FILL)

FORM # 109-07-96

PTE NO. 2003-124

PRESTON TESTING & ENGINEERING CO., INC.

CLIENT BAXTER EVANS & COMPANY BORING NO. B-8

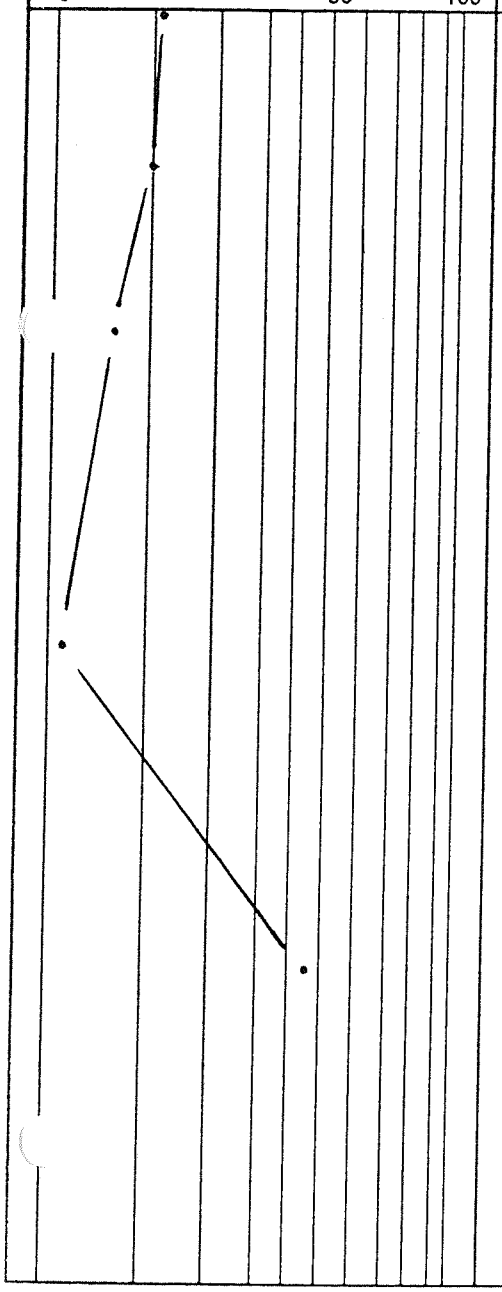
PROJECT NAME SUMMIT AT THE MALL - MACON, GEORGIA

BORING LOCATION See Bore Hole Location Sketch

DATUM TOPO HAMMER WT. 140 Pounds HAMMER DROP 30 Inches HOLE DIA. 6 Inches

SURFACE ELEV. 351± SUBSURFACE WATER DEPTH NONE OBSERVED AT TIME OF BORING 12.2' 24 HOURS

DATE STARTED 12-15-03 COMPLETED 12-15-03 BORING METHOD ASTM D 1586



BLOWS PER FOOT	DEPTH (FEET)	BORING LOG DESCRIPTION
11	0	TAN GRAY MICACEOUS SILTY FINE SAND (F8LL) (SM)
	1.0	
10	2.5	GRAY SILTY FINE TO MEDIUM SAND, ORGANICS (FILL) (SM)
	3.0	TAN GRAY FINE SANDY MICACEOUS SILT (FILL) (ML)
	4.5	
6	5.0	BROWN BLACK CLAYEY FINE TO MEDIUM SAND, ORGANICS (FILL) (SC)
	9.0	
2	10.0	GRAY FINE TO MEDIUM SAND, ORGANICS (FILL) (SW)
	13.0	
46	15.0	TAN GRAY FINE SANDY MICACEOUS SILT (ORIGINAL) (ML)
	19.0	BORING TERMINATED (AUGER REFUSAL IN ROCK)

FORM # 109-07-96

PTE NO. 2003-124

PRESTON TESTING & ENGINEERING CO., INC.

CLIENT BAXTER EVANS & COMPANY BORING NO. B-9

PROJECT NAME SUMMIT AT THE MALL - MACON, GEORGIA

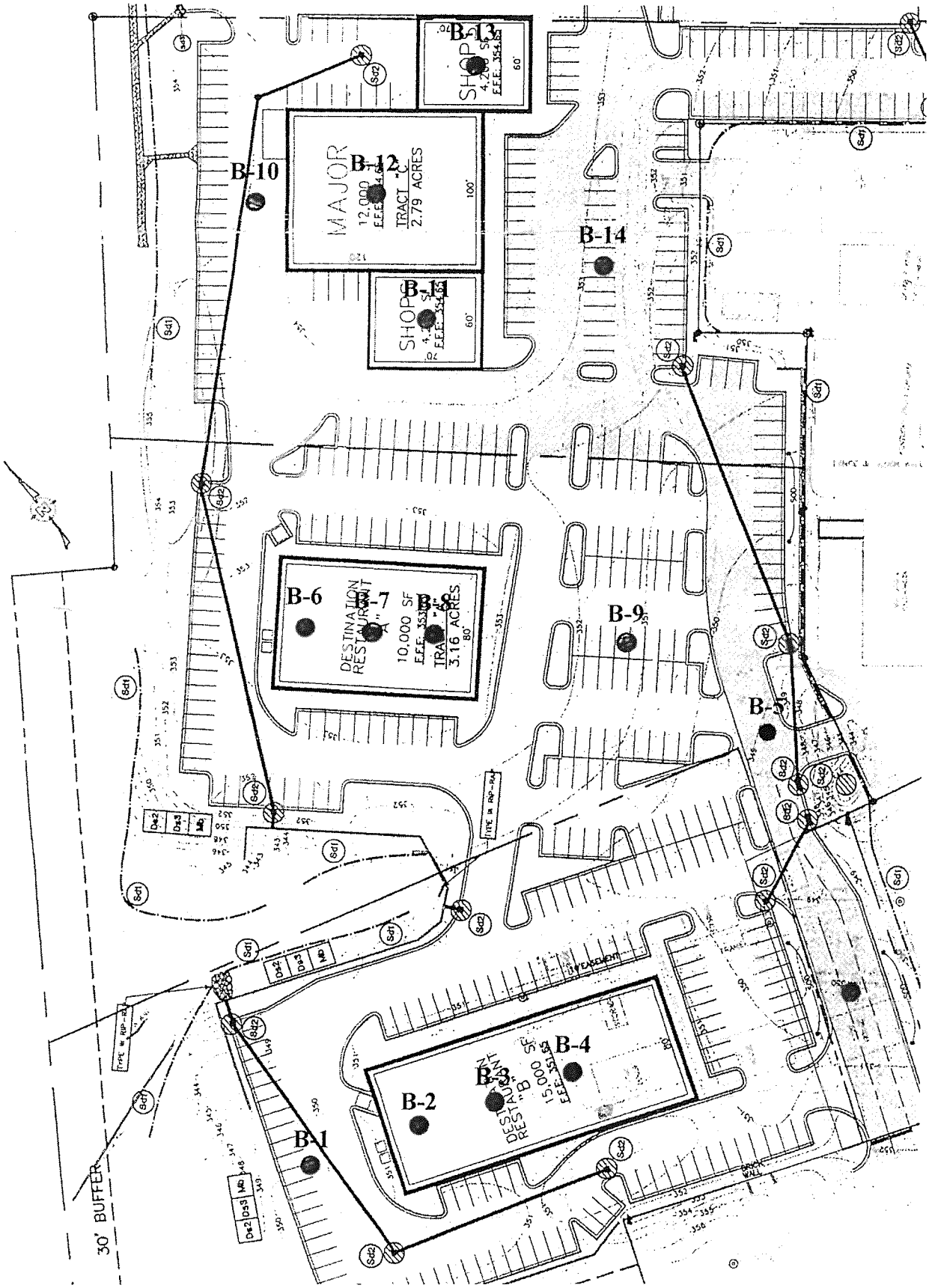
BORING LOCATION See Bore Hole Location Sketch

DATUM TOPO HAMMER WT. 140 Pounds HAMMER DROP 30 Inches HOLE DIA. 6 Inches

SURFACE ELEV. 348± SUBSURFACE WATER DEPTH NONE OBSERVED AT TIME OF BORING
NONE OBSERVED 24 HOURS

DATE STARTED 12-15-03 COMPLETED 12-15-03 BORING METHOD ASTM D 1586

SAMPLES			BORING LOG
STANDARD PENETRATION (BLOWS PER FOOT) 0 50 100	BLOWS PER FOOT	DEPTH (FEET)	DESCRIPTION
	6	0	TAN GRAY SILTY FINE SAND (FILL) (SM)
		2.0	
	10	2.5	BLACK SILTY FINE TO MEDIUM SAND, ORGANICS (FILL) (SM)
		5.0	BORING TERMINATED (AUGER REFUSAL IN CONCRETE/ SOLID FILL)



BORE HOLE LOCATION SKETCH
PT&E #2003-124
SCALE 1" = 40'

SOIL CLASSIFICATION

Client: Baxter Evans & Company — January 12, 2004

Project: Summit at the Mall "Tract A" - Macon, GA — PT&E No.: 2003-124

Date Sampled: 12-15-03 — Sampled From: B-7, 0'-4.5"

(ASTM D 4318)		
Liquid Limit 38	**Plastic Limit** 27	**Plastic Index** 11
ASTM D 1140		
Percent Finer Than No. 200 Sieve 40.9		
ASTM D 2487		
Soil Classification Group Symbol SM	**Soil Description** Silty Sand	

Remarks:

PRESTON TESTING & ENGINEERING CO., INC.

117 Preston Court • P.O. Box 7194 • Macon, Georgia 31209-7194
Phone 478-474-2941 • Fax 478-471-0202

FAMILY OF CURVES METHOD FOR DETERMINING MAXIMUM DENSITY OF SOILS

CLIENT: Baxter Evans & Company

January 12, 2004

PROJECT: Summit at the Mall "Tract A"

PT&E NO.: 2003-124

SAMPLE DESCRIPTION: Tan Gray Silty Fine to Medium Sand

TEST SPEC.: ASTM D-698

MAXIMUM DRY DENSITY FROM FAMILY OF CURVES: 110.0

OPTIMUM MOISTURE CONTENT FROM FAMILY OF CURVES: 13.0

DATE SAMPLED: 12-15-03

SAMPLED FROM: Boring B-7, 0.'-4.5'

DATE TESTED: 12-19-03

ONE POINT PROCTOR RESULTS

WET DENSITY: 121.4

MOISTURE CONTENT: 11.1

FAMILY OF CURVES USED: "B"

PRESTON TESTING & ENGINEERING CO., INC.

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Phone 478-474-2941 • Fax 478-471-0202

SOIL FRACTIONS

Term	Size Range
Cobbles	Above 3"
Gravel	
Coarse	3" to 3/4"
Fine	3/4" to No. 4 Sieve
Sand	
Coarse	No. 4 to No. 10
Medium	No. 10 to No. 40
Fine	No. 40 to No. 200
Fines	
Clay-Silt	Below No. 200 sieve

Gravel - Naturally occurring aggregates

Crushed Stone - Man-made aggregates such as crushed granite

SOIL FRACTIONS

Term	Size Range
Cobbles	Above 3"
Gravel	
Coarse	3" to 3/4"
Fine	3/4" to No. 4 Sieve
Sand	
Coarse	No. 4 to No. 10
Medium	No. 10 to No. 40
Fine	No. 40 to No. 200
Fines	
Clay-Silt	Below No. 200 sieve

Gravel - Naturally occurring aggregates

Crushed Stone - Man-made aggregates such as crushed granite

Tract B

INDEX

January 12, 2004

Baxter Evans & Company
674 Arlington Place
P.O. Box 4868
Macon, Georgia 31208

Attn: Baxter Evans

RE: Subsurface Investigation
Summit at the Mall
"Tract B"
Macon, Georgia
PT&E #2003-124

Gentlemen:

We completed the field portion of this subsurface investigation on December 16, 2003. The following is a report of our findings.

1. METHOD OF BORING AND SAMPLING:

A truck mounted drill, mechanically turning a 5 5/8 -inch, hollow stem auger was used to advance four bore holes at locations shown on the enclosed bore hole location sketch. In addition to the location sketch, a boring log of each hole is attached.

Borings B-1 through B-4 were sampled in substantial accordance with "Penetration Test and Split Barrel Sampling of Soils", ASTM D 1586,

117 PRESTON COURT • P.O. BOX 7194 • MACON, GA 31209-7194
PHONE 478-474-2941 • FAX 478-471-0202

current edition. The penetration recorded indicates the number of blows required to effect a 12-inch penetration into the undisturbed soil stratum, using a pin-guided, 140 pound drive hammer falling 30 inches per blow, driving a split barrel sampler having a 2-inch outside diameter. The depth to the beginning of the test is shown on the boring log. Each penetration test extends 18 inches below the indicated beginning depth. The final 12-inch penetration is reported as the blows per foot or the standard penetration.

The use of the standard penetration test (SPT) along with laboratory tests of the soil removed from the sampler enables us to make an assessment of the ability of the soil to support foundations. These tests can also provide information as to the potential stability of open excavations, the permeability of the soil and other soil index properties.

The borings were backfilled after a final check for the presence and depth of subsurface water was made.

Soil samples obtained from the project site are the property of the client. Unless other arrangements are agreed upon in writing, Preston Testing & Engineering Company, Inc. will hold such samples for no more than 180 calendar days from the date Preston Testing & Engineering Company, Inc. issued the first document that includes the data obtained from these samples. After that date, Preston Testing & Engineering Company, Inc. will dispose of samples that are not contaminated by hazardous substances.

2. GENERAL FINDINGS:

The site is located in the Fall Line Hills District of the Coastal Plain Province in Macon, Bibb County, Georgia.

Test borings B-1 through B-4 represent the site labeled "Tract B". Borings B-1 through B-3 represent the proposed building area and boring B-4 represents the proposed paved section. "Tract B" has existing houses along with several large trees and shrubbery. The following is a summary of our findings.

We noted a layer of well graded sand in the upper 1.0 foot. This material was loose in consistency. Beneath the sand we encountered various sandy silts to varying depths ranging from 10.0 to 18.0 feet. These soils were medium in consistency to a depth of about 5.0 feet where they became stiff to very stiff. At a depth of approximately 10.0 feet this material became very stiff to hard then hard in consistency.

Boring B-1 was terminated at a depth of 10.0 feet in very stiff sandy silts. Boring B-2 was terminated at a depth of 10.0 feet due to auger refusal in dense rock. Boring B-3 was terminated at a depth of 15.0 feet due to auger refusal in rock. Boring B-4 was terminated at a depth of 20.0 feet in very dense fragmented rock.

Boring logs showing the soil profile at each bore hole are attached. The logs show changes in soil strata. The depths to changes should be considered to be approximate depths of changes based on the best estimate of the driller.

The soil profile shown on each boring log represents soil conditions at that particular boring. The soils between borings should not necessarily be assumed to be similar to those found in the borings.

The methods used indicate subsurface conditions only at the specific locations where samples were obtained, only at the time they were obtained, and only to the depths penetrated. Samples cannot be relied

on to accurately represent the strata variations that usually exist between sampling locations.

It is not unusual to find unexpected conditions between test boring locations. Filled in ditches, soft backfill over utilities, rock ledges, trash pits, old fire pits, springs, and expansive clays are just a few of the unexpected conditions that might be discovered during field site preparation.

This site has existing structures that are to be demolished in the near future. It has been our experience that shallow footings, cellars, septic tanks, utilities, wells and the like may be uncovered during construction.

Any such obstructions should be removed from the zone of construction if they interfere with the construction. All excavations to remove obstructions should be proofrolled and backfilled as described below for structural fill.

With the exception of having obtained utility clearances for drilling operations (call before you dig), Preston Testing & Engineering Company, Inc. has obtained no detailed knowledge of the on-site utilities or any other structures beneath the surface of the site.

Surface and subsurface rock may be encountered at this site. There is always a question as to whether the "rock" encountered is rippable or must be removed by jackhammer or explosives. The best way to ascertain the quality of the "rock" is to field test it with excavation equipment.

We suggest the following procedures. If the "rock" can be excavated with conventional earth moving equipment such as scrapers, backhoes or dozers, it is unclassified (soil) excavation.

To test the material with a dozer, we suggest the following. Using a D-8 or TD25 class dozer with a single shank ripper, test the material in question by making numerous passes in two directions at 90 degrees from each other. If the shank "smokes" and merely scratches the material, it is blast rock. If the material can be ripped, it is not blast rock.

For testing with a backhoe, we suggest the following procedure. Using a Cat 225 class backhoe with a 24-inch or less bucket, make repeated attempts to dig or break out the material. If the bucket teeth "smoke" and no material can be broken out, it is blast rock.

Due to the finished subgrade elevation, the subsurface rock most likely will not have a negative impact on the site preparation.

Subsurface water was noted. The following is a tabulation of the depth (elevation) of this subsurface water.

BORING NUMBER	EXISTING GRADE ELEVATION ±	DEPTH OF SUBSURFACE WATER ATOB (FEET / ELEVATION ±)	DEPTH OF SUBSURFACE WATER 24 HOURS (FEET / ELEVATION ±)
B-1	346	No Free Water Surface Observed	8.2 / 337.8
B-2	346		No Free Water Surface Observed
B-3	346		10.0 / 336
B-4	350		15.6 / 334.4

3. <u>ANTICIPATED STRUCTURE</u>:

It is our understanding that the scope of the project will consist of the following items.

New offices and/or retail shops are proposed.

The exact type structure(s) are unknown at this time.

The floor slab will be at 351.65 elevation.

If any of the above proposed scope of work is not correct or has been changed, please let us know so that we can provide additional and/or amended recommendations.

4. LAB TESTS:

We secured a bulk soil sample from boring B-3 at a depth of 2.0 to 5.0 feet. A laboratory classification (ASTM D 2487) along with a one-point standard proctor (ASTM D 698) was performed on this sample. We found this soil to be an ML material (sandy silt), with a maximum dry density of 102.0 pcf and an optimum moisture content of 15.5 percent.

5. STRUCTURAL DESIGN RECOMMENDATIONS:

Foundation Support

Based on the results of the subsurface investigation, our laboratory analysis and after completion of recommended site preparation, the proposed structures may be supported on a reinforced concrete slab on grade. A net maximum allowable bearing pressure of 2000 pounds per square foot may be used in the design of the shallow foundation system.

To reduce the possibility of shear failure, wall bearing and column footings should be designed with a minimum width of 18 and 24 inches, respectively. For frost protection, perimeter turn down slabs should be designed with a minimum embedment depth of 18 inches. The embedment depth should be measured from the base of the footing to the lowest adjacent outside grade.

Floor Support

The building floor slabs may be directly supported on properly predensified and/or well-compacted suitable structural fill. A four-inch layer of compacted crushed stone should be placed beneath the floor slab to provide a protective cover as well as a uniform working surface.

Expansion and contraction joints should be used to isolate all floor slabs from the load bearing wall and/or isolated columns. This will allow for possible differential movement and diminish the potential of cracking the floor slabs. Provided the slab subgrade is prepared in accordance with our recommendations, a subgrade modulus reaction (K) of 100 pounds per cubic inch (pci) may be used for the slab design.

Based on our experience with similar type of soils and structural loading, we anticipate that differential and total settlement will be less than 3/8-inch and ½-inch, respectively.

Overall Site Preparation Recommendations

In the event that undercut and/or structural footprints require structural fill to bring the site to grade, we suggest the following procedure.

Remove all organic matter, stumps and other deleterious matter. Predensify the areas to be filled or upon which structures are to be placed. A large pad foot and/or smooth drum roller, a loaded dump truck or other rubber tired equipment should be used for the predensification. Overlapping passes of the vehicle should be made across the site in one direction and then at right angles to the original direction of rolling. We recommend a proofroll be observed by a geotechnical engineer or his representative.

Any yielding, pumping or soft areas should be cut out and replaced with fill compacted as described below.

The proposed fill soil should be limited to soils classified in accordance with ASTM D 2487 as GM, GC, SW, SP, SM, SC, ML, and CL. Soils classified as Pt, OH, OL, CH and MH are **not** suitable for structural fill. The on-site soils from cut sections are suitable for structural fill provided they are at or near their optimum moisture content and free of all debris.

The area fill should be spread in loose lifts (layers) of not more than 8 inches. Each lift should be rolled with a vibratory roller, a sheepsfoot roller or a loaded, rubber-tired dump truck, scraper or loader. Each lift should be compacted to a minimum density of 95.0 percent of the maximum dry density as determined in accordance with ASTM D 698, current edition.

The fill soil moisture content should be maintained within 3 percent of the optimum moisture as determined in accordance with ASTM D 698. In the event that the soil is too wet, harrowing, scarifying and aeration should be used to dry the soils to within the required moisture content. If the soil is too dry, a water truck with spreader bar or a spray hose should be used to bring the soil to the proper moisture range. The water should be thoroughly and evenly mixed within the soil prior to compaction. Backfilling of trenches, walls and structures should be done in 6-inch loose lifts. Each lift should be compacted using a mechanical tamp such as a vibratory or impact type compactor.

In general, sandy soils are best compacted with vibratory type compaction equipment. Clayey soils should be compacted with an impact type or sheepsfoot compactor.

Horizontally, the compacted structural fill should extend at least as far outside the perimeter footings as the fill is in depth below the bottom of the footings.

Density tests should be taken throughout the placement of all structural fill.

The bottoms of all footing excavations should be mechanically tamped prior to placement of steel and concrete to assure a uniformly dense support for the footings.

All footing excavations should be tested for bearing value prior to the placement of the reinforcement steel and concrete.

6. PAVING RECOMMENDATIONS:

For light duty paving, we suggest that six inches of graded aggregate base be compacted on a prepared subbase. The base course should be compacted to 100% of the maximum dry density as determined in accordance with ASTM D 698. The graded aggregate base course should conform to GA D.O.T. specifications.

The surface course should be two inches of type "E" or "F" hot mix asphaltic concrete mixture conforming to GA D.O.T. specifications.

For heavy duty paving we recommend a 6 inch thick concrete slab 4000 psi / 650 psi flex be placed on a prepared subgrade as described for the light duty paving.

If asphalt pavement is considered for the heavy duty paved sections we recommend a minimum of 8 inches of graded aggregate base course (GAB) be compacted on a prepared subbase. The base should be compacted to 100 percent of the maximum dry density (ASTM D 698). The

surface course should be 2 inches of type "E" or "F" hot mix asphalt over 2 inches of B-Binder course.

7. LIMITATIONS:

Although these findings are valid only at the locations and to the depths shown, they are useful for alerting the grading contractor to certain specific conditions pertinent to the preparation of the site.

Frequently, the grading contractor has never seen the geotechnical report or recommendations for site preparation. In addition, we see many cases where the specifications and plans do not reflect the recommendations made in the geotechnical report.

We suggest that every effort be made to alert the grading contractor so that he may avoid the problems that arise due to his lack of knowledge of potential site problems.

This report has been prepared for the exclusive use of Baxter Evans & Company for specific application to Summit at the Mall "Tract B" located in Macon, Georgia. Preston Testing & Engineering Company, Inc. has endeavored to comply with generally accepted geotechnical engineering practice common to the local area. Preston Testing & Engineering Company, Inc. makes no other warranty, expressed or implied.

The analyses and [preliminary] recommendations contained in this report are based on data obtained from subsurface exploration. The methods used indicate subsurface conditions only at the specific locations where samples were obtained, only at the time they were obtained, and only to the depths penetrated. Samples cannot be relied on to accurately reflect the strata variations that usually exist between sampling locations.

The recommendations included in this report are preliminary, because they have been based in part on assumptions about strata variations that may be tested only during earthwork and foundation construction for deep foundations. Accordingly, these recommendations should not be applied in the field unless Preston Testing & Engineering Company, Inc. is retained to perform construction observation and thereby provide a complete professional geotechnical engineering service through the observational method. Preston Testing & Engineering Company, Inc. cannot assume responsibility or liability for the adequacy of its preliminary recommendations when they are used in the field without Preston Testing & Engineering Company, Inc. being retained to observe construction.

Do not apply any of this report's conclusions or recommendations if the nature, design, or location of the facilities is changed. If changes are contemplated, Preston Testing & Engineering Company, Inc. must review them to assess their impact on this report's applicability. Also note that Preston Testing & Engineering Company, Inc. is not responsible for any claims, damages, or liability associated with any other party's interpretation of this report's subsurface data or reuse of this report's subsurface data or engineering analyses without the express written authorization of Preston Testing & Engineering Company, Inc..

Although Preston Testing & Engineering Company, Inc. has explored subsurface conditions as part of this program, Preston Testing & Engineering Company, Inc. has not evaluated the site for the potential presence of contaminated soil.

The recommendations stated in this report are preliminary. They are based on information derived through subsurface sampling. No matter how effectively subsurface sampling may be performed,

variations between exploration locations are likely and cannot be recognized until exposed during construction. Accordingly, Preston Testing & Engineering Company, Inc.'s recommendations may be finalized only through Preston Testing & Engineering Company, Inc.'s observation of the project's construction. Preston Testing & Engineering Company, Inc. accepts no responsibility or liability for any party's reliance on Preston Testing & Engineering Company, Inc.'s preliminary recommendations.

The conclusions and recommendations included in this report are based in part upon the data Preston Testing & Engineering Company, Inc. derived from a limited number of soil or groundwater samples obtained from widely spaced subsurface explorations. The nature and extent of variations between these explorations will not become evident until construction or further investigation.

If variations or other latent conditions become evident, Preston Testing & Engineering Company, Inc. will reevaluate this report's conclusions and recommendations.

Please call on us if we can be of further service to you on this project.

Very truly yours,
PRESTON TESTING & ENG. CO., INC.

Willie Goad
Managing Technician

WTG/cmd

FORM # 109-07-96

PTE NO. 2003-124

PRESTON TESTING & ENGINEERING CO., INC.

CLIENT BAXTER EVANS & COMPANY BORING NO. B-1

PROJECT NAME SUMMIT AT THE MALL - MACON, GEORGIA

BORING LOCATION See Bore Hole Location Sketch

DATUM TOPO HAMMER WT. 140 Pounds HAMMER DROP 30 Inches HOLE DIA. 6 Inches

SURFACE ELEV. 364± SUBSURFACE WATER DEPTH NONE OBSERVED AT TIME OF BORING 8.2' 24 HOURS

DATE STARTED 12-15-03 COMPLETED 12-15-03 BORING METHOD ASTM D 1586

SAMPLES			BORING LOG
STANDARD PENETRATION (BLOWS PER FOOT) 0 50 100	BLOWS PER FOOT	DEPTH (FEET)	DESCRIPTION
	6	0	BLACK FINE TO MEDIUM SAND (FILL) (SW)
		1.0	
	9	2.5	RED TAN FINE SANDY MICACEOUS SILT (ORIGINAL) (ML)
	16		
	28	10.0	BORING TERMINATED

FORM # 109-07-96

PTE NO. 2003-124

PRESTON TESTING & ENGINEERING CO., INC.

CLIENT BAXTER EVANS & COMPANY BORING NO. B-2

PROJECT NAME SUMMIT AT THE MALL - MACON, GEORGIA

BORING LOCATION See Bore Hole Location Sketch

DATUM TOPO HAMMER WT. 140 Pounds HAMMER DROP 30 Inches HOLE DIA. 6 Inches

SURFACE ELEV. 346± SUBSURFACE WATER DEPTH NONE OBSERVED AT TIME OF BORING
NONE OBSERVED 24 HOURS

DATE STARTED 12-15-03 COMPLETED 12-15-03 BORING METHOD ASTM D 1586

SAMPLES: STANDARD PENETRATION (BLOWS PER FOOT) 0 50 100	BLOWS PER FOOT	DEPTH (FEET)	BORING LOG: DESCRIPTION
	5	0	BLACK FINE TO MEDIUM SAND (FILL) (SW)
		1.0	RED TAN FINE SANDY MICACEOUS SILT (ORIGINAL) (ML)
	13	2.5	
			TAN RED GRAY FINE SANDY MICACEOUS SILT (ML)
	18	5.0	
	100+	10.0	BORING TERMINATED (AUGER REFUSAL IN ROCK)

FORM # 109-07-96

PTE NO. 2003-124

PRESTON TESTING & ENGINEERING CO., INC.

CLIENT BAXTER EVANS & COMPANY BORING NO. B-3

PROJECT NAME SUMMIT AT THE MALL - MACON, GEORGIA

BORING LOCATION See Bore Hole Location Sketch

DATUM TOPO HAMMER WT. 140 Pounds HAMMER DROP 30 Inches HOLE DIA. 6 Inches

SURFACE ELEV. 346± SUBSURFACE WATER DEPTH NONE OBSERVED AT TIME OF BORING 10' 24 HOURS

DATE STARTED 12-15-03 COMPLETED 12-15-03 BORING METHOD ASTM D 1586

SAMPLES: STANDARD PENETRATION (BLOWS PER FOOT) 0 50 100	BLOWS PER FOOT	DEPTH (FEET)	BORING LOG: DESCRIPTION
	9	0.5	GRAY FINE TO MEDIUM SAND (SW)
		2.0	TAN CLAYEY FINE TO MEDIUM SAND (SC)
	17	2.5	TAN RED GRAY FINE SANDY MICACEOUS SILT (ML)
	22	5.0	
	44	10.0	
		12.5	FRAGMENTED ROCK
	100+	15.0	BORING TERMINATED (AUGER REFUSAL IN ROCK)

FORM # 109-07-96

PTE NO. 2003-124

PRESTON TESTING & ENGINEERING CO., INC.

LIENT BAXTER EVANS & COMPANY BORING NO. B-4

PROJECT NAME SUMMIT AT THE MALL - MACON, GEORGIA

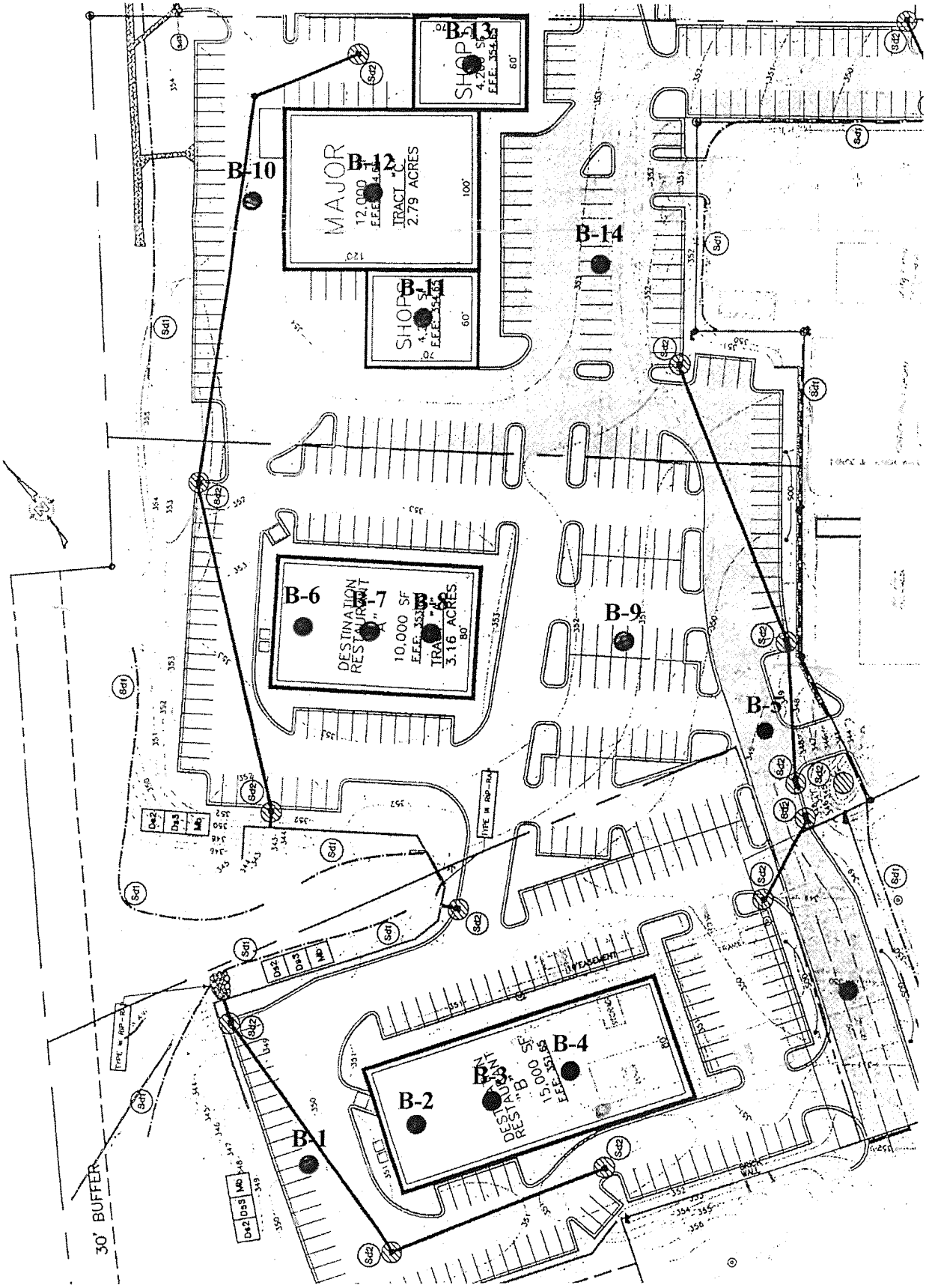
BORING LOCATION See Bore Hole Location Sketch

DATUM TOPO HAMMER WT. 140 Pounds HAMMER DROP 30 Inches HOLE DIA. 6 Inches

SURFACE ELEV. 350± SUBSURFACE WATER DEPTH NONE OBSERVED AT TIME OF BORING 15.6' 24 HOURS

DATE STARTED 12-15-03 COMPLETED 12-15-03 BORING METHOD ASTM D 1586

SAMPLES: STANDARD PENETRATION (BLOWS PER FOOT) 0 – 50 – 100	BLOWS PER FOOT	DEPTH (FEET)	BORING LOG DESCRIPTION
	5	0	GRAY FINE TO MEDIUM SAND (SW)
		.5	TAN FINE SANDY SILT (ML)
	16	2.5	TAN RED GRAY FINE SANDY MICACEOUS SILT (ML)
	22	5.0	
	26	10.0	
	44	15.0	GRAY FINE SANDY MICACEOUS SILT (ML)
		18.0	FRAGMENTED ROCK
	100+	20.0	BORING TERMINATED



BORE HOLE LOCATION SKETCH
PT&E #2003-124
SCALE 1" = 40'

SOIL CLASSIFICATION

Client: Baxter Evans & Company — January 12, 2004

Project: Summit at the Mall "Tract B" - Macon, GA — PT&E No.: 2003-124

Date Sampled: 12-15-03 — Sampled From: B-3, 2.0'-5.0'

(ASTM D 4318)		
Liquid Limit	**Plastic Limit**	**Plastic Index**
48	30	18
ASTM D 1140		
Percent Finer Than No. 200 Sieve		
60.2		
ASTM D 2487		
Soil Classification Group Symbol	**Soil Description**	
ML	Sandy Silt	

Remarks:

PRESTON TESTING & ENGINEERING CO., INC.

117 Preston Court • P.O. Box 7194 • Macon, Georgia 31209-7194
Phone 478-474-2941 • Fax 478-471-0202

FAMILY OF CURVES METHOD FOR DETERMINING MAXIMUM DENSITY OF SOILS

CLIENT: Baxter Evans & Company

January 12, 2004

PROJECT: Summit at the Mall "Tract B"

PT&E NO.: 2003-124

SAMPLE DESCRIPTION: Tan Red Gray Fine Sandy Micaceous Silt

TEST SPEC.: ASTM D-698

MAXIMUM DRY DENSITY FROM FAMILY OF CURVES: 102.0

OPTIMUM MOISTURE CONTENT FROM FAMILY OF CURVES: 15.5

DATE SAMPLED: 12-15-03

SAMPLED FROM: Boring B-3, 2.0'-5.0'

DATE TESTED: 12-19-03

ONE POINT PROCTOR RESULTS

WET DENSITY: 117.2

MOISTURE CONTENT: 14.9

FAMILY OF CURVES USED: "B"

PRESTON TESTING & ENGINEERING CO., INC.

117 Preston Court • P.O. Box 7194 • Macon, Georgia 31209-7194
Phone 478-474-2941 • Fax 478-471-0202

DEFINITION OF TERMS

U.D. - Undisturbed sample (ASTM D 1587, Shelby Tube)

SPT - Standard Penetration Test (ASTM D 1586, Split Spoon)

L.L. - Liquid Limit (ASTM D 4318)

P.L. - Plastic Limit (ASTM D 4318)

P.I. - Plasticity Index (ASTM D 4318)

ATOB - At Time of Boring

CLAYS AND SILTS

Consistency	SPT (Blows per foot)
Very soft	Less than 2
Soft (L.L.)	2 - 4
Medium	4 - 8
Stiff	8 - 15
Very Stiff (P.L.)	15 - 30
Hard	Over 30

SANDS

Relative density	SPT (Blows per foot)
Very loose	0 - 4
Loose	4 - 10
Medium or firm	10 - 30
Dense	30 - 50
Very dense	Over 50

DEFINITION OF TERMS

U.D. - Undisturbed sample (ASTM D 1587, Shelby Tube)

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SANDS

Relative density	SPT (Blows per foot)
Very loose	0 - 4
Loose	4 - 10
Medium or firm	10 - 30
Dense	30 - 50
Very dense	Over 50

Tract C

INDEX

January 12, 2004

Baxter Evans & Company
674 Arlington Place
P.O. Box 4868
Macon, Georgia 31208

Attn: Baxter Evans

RE: Subsurface Investigation
Summit at the Mall
"Tract C"
Macon, Georgia
PT&E #2003-124

Gentlemen:

We completed the field portion of this subsurface investigation on December 16, 2003. The following is a report of our findings.

1. METHOD OF BORING AND SAMPLING:

A truck mounted drill, mechanically turning a 5 5/8 -inch, hollow stem auger was used to advance five bore holes at locations shown on the enclosed bore hole location sketch. In addition to the location sketch, a boring log of each hole is attached.

Borings B-10 through B-14 were sampled in substantial accordance with "Penetration Test and Split Barrel Sampling of Soils", ASTM D 1586,

117 PRESTON COURT • P.O. BOX 7194 • MACON, GA 31209-7194
PHONE 478-474-2941 • FAX 478-471-0202

current edition. The penetration recorded indicates the number of blows required to effect a 12-inch penetration into the undisturbed soil stratum, using a pin-guided, 140 pound drive hammer falling 30 inches per blow, driving a split barrel sampler having a 2-inch outside diameter. The depth to the beginning of the test is shown on the boring log. Each penetration test extends 18 inches below the indicated beginning depth. The final 12-inch penetration is reported as the blows per foot or the standard penetration.

The use of the standard penetration test (SPT) along with laboratory tests of the soil removed from the sampler enables us to make an assessment of the ability of the soil to support foundations. These tests can also provide information as to the potential stability of open excavations, the permeability of the soil and other soil index properties.

The borings were backfilled on December 16, 2003 after a final check for the presence and depth of subsurface water was made.

Soil samples obtained from the project site are the property of the client. Unless other arrangements are agreed upon in writing, Preston Testing & Engineering Company, Inc. will hold such samples for no more than 180 calendar days from the date Preston Testing & Engineering Company, Inc. issued the first document that includes the data obtained from these samples. After that date, Preston Testing & Engineering Company, Inc. will dispose of samples that are not contaminated by hazardous substances.

2. GENERAL FINDINGS:

The site is located in the Fall Line Hills District of the Coastal Plain Province in Macon, Bibb County, Georgia.

Test borings B-11 through B-13 represent the proposed buildings footprint while borings B-10 and B-14 represent the proposed paved sections for "Tract C". The following is a summary of our findings.

Borings B-10 and B-14 (proposed paved sections)

The old fill at the location of test boring B-10 was to a depth of 5.0 feet and consisted of silty sands which were loose in consistency. Original soil was encountered at a depth of 5.0 feet. From 5.0 to 8.0 feet we found silty sand with some organics near the 5.0 foot depth range. From 8.0 to 10.0 feet we found a sandy silt which was stiff in consistency at a depth of 10.0 feet.

At the location of boring B-14 we found the encountered the old fill to a depth of 3.0 feet. The fill consisted of a clayey sand of medium consistency. Original soils were encountered at a depth of 3.0 feet. From 3.0 to 5.0 feet we found silty sands and from 5.0 to 10.0 feet we noted various sandy silts which were very stiff in consistency.

Borings B-11 through B-13 (proposed buildings footprint)

At these locations we found the old fill to a depth of 0.5 feet, 2.5 feet, and 3.0 feet, respectively. The fill consisted of various clayey sands, silty sands and sands which were medium in consistency. The original soils consisted of various clayey sands and sands of medium to firm consistency. The original soils were various clayey sands and sands of medium to firm consistency to an average depth of approximately 7.5 feet. At this depth we encountered various sandy silts of medium to very stiff to hard consistency.

Borings B-10 and B-14 were terminated at a depth of 10.0 feet. Borings B-11 through B-13 were terminated at a depth of 20.0 feet.

Boring logs showing the soil profile at each bore hole are attached. The logs show changes in soil strata. The depths to changes should be

considered to be approximate depths of changes based on the best estimate of the driller.

The soil profile shown on each boring log represents soil conditions at that particular boring. The soils between borings should not necessarily be assumed to be similar to those found in the borings.

The methods used indicate subsurface conditions only at the specific locations where samples were obtained, only at the time they were obtained, and only to the depths penetrated. Samples cannot be relied on to accurately represent the strata variations that usually exist between sampling locations.

It is not unusual to find unexpected conditions between test boring locations. Filled in ditches, soft backfill over utilities, rock ledges, trash pits, old fire pits, springs, and expansive clays are just a few of the unexpected conditions that might be discovered during field site preparation.

With the exception of having obtained utility clearances for drilling operations (call before you dig), Preston Testing & Engineering Company, Inc. has obtained no detailed knowledge of the on-site utilities or any other structures beneath the surface of the site.

Subsurface water was noted. The following is a tabulation of the depth (elevation) of this subsurface water.

BORING NUMBER	EXISTING GRADE ELEVATION ±	DEPTH OF SUBSURFACE WATER ATOB (FEET / ELEVATION ±)	DEPTH OF SUBSURFACE WATER 24 HOURS (FEET / ELEVATION ±)
B-10	356	No Free Water Surface Observed	9.0 / 347
B-11	354		13.2 / 340.8
B-12	356		9.0 / 347
B-13	354		9.0 / 345
B-14	351		No Free Water Surface Observed

3. ANTICIPATED STRUCTURE:

It is our understanding that the scope of the project will consist of the following items.

New offices and retail structures for the Summit at the Mall is proposed.

The floor slab will be at 354.65 elevation.

If any of the above proposed scope of work is not correct or has been changed, please let us know so that we can provide additional and/or amended recommendations.

4. LAB TESTS:

We secured a bulk soil sample from boring B-12 at a depth of 2.0 to 5.0 feet. A laboratory classification (ASTM D 2487) along with a one-point standard proctor (ASTM D 698) was performed on this sample. We found this soil to be an SC material (clayey sand), with a maximum dry density of 117.5 pcf and an optimum moisture content of 11.0 percent.

5. STRUCTURAL DESIGN RECOMMENDATIONS:

Foundation Support

Based on the results of the subsurface investigation, our laboratory analysis and after completion of recommended site preparation, the proposed structures may be supported on a reinforced concrete slab on grade. A net maximum allowable bearing pressure of 2500 pounds per square foot may be used in the design of the shallow foundation system.

To reduce the possibility of shear failure, wall bearing and column footings should be designed with a minimum width of 18 and 24 inches, respectively. For frost protection, perimeter turn down slabs should be designed with a minimum embedment depth of 18 inches. The embedment depth should be measured from the base of the footing to the lowest adjacent outside grade.

Floor Support

The building floor slabs may be directly supported on properly predensified residual and/or well-compacted suitable structural fill. A four-inch layer of compacted crushed stone should be placed beneath the floor slab to provide a protective cover as well as a uniform working surface.

Expansion and contraction joints should be used to isolate all floor slabs from the load bearing wall and/or isolated columns. This will allow for possible differential movement and diminish the potential of cracking the floor slabs. Provided the slab subgrade is prepared in accordance with our recommendations, a subgrade modulus reaction (K) of 100 pounds per cubic inch (pci) may be used for the slab design.

Based on our experience with similar type of soils and structural loading, we anticipate that differential and total settlement will be less than 3/8-inch and ½-inch, respectively.

SUPPLEMENTAL STUDY: Once design plans are more advanced, we recommend a supplemental test pit study be performed on the site to better determine the extent of loose soil conditions at the location of boring B-10 (proposed paved section). The test pits could also help assess the extent of any groundwater related problems (if any) on the site, specifically as it pertains to site grading, subgrade stabilization, and permanent underdrain design with the area of the proposed parking lots. We also recommend a future design meeting between the geotechnical engineer and other design team members to address geotechnical concerns at specific locations.

Overall Site Preparation Recommendations

In the event that undercut and/or structural footprints require structural fill to bring the site to grade, we suggest the following procedure.

Remove all organic matter, stumps and other deleterious matter. Predensify the areas to be filled or upon which structures are to be placed. A loaded dump truck or other rubber tired equipment should be used for the predensification. Overlapping passes of the vehicle should be made across the site in one direction and then at right angles to the original direction of rolling. We recommend a proofroll be observed on the entire site once it is cleared and predensified and prior to the placement of any fill and/or the excavation of any foundations.

Any yielding, pumping or soft areas should be cut out and replaced with fill compacted as described below.

The proposed fill soil should be limited to soils classified in accordance with ASTM D 2487 as GM, GC, SW, SP, SM, SC, ML, and CL. Soils classified as Pt, OH, OL, CH and MH are **not** suitable for structural fill. The on-site soils from cut sections are suitable for structural fill provided they are at or near their optimum moisture content and free of all debris and/or organics.

The area fill should be spread in loose lifts (layers) of not more than 8 inches. Each lift should be rolled with a vibratory roller, a sheepsfoot roller or a loaded, rubber-tired dump truck, scraper or loader. Each lift should be compacted to a minimum density of 95.0 percent of the maximum dry density as determined in accordance with ASTM D 698, current edition.

The fill soil moisture content should be maintained within 3 percent of the optimum moisture as determined in accordance with ASTM D 698. In the event that the soil is too wet, harrowing, scarifying and aeration should be used to dry the soils to within the required moisture content. If the soil is too dry, a water truck with spreader bar or a spray hose should be used to bring the soil to the proper moisture range. The water should be thoroughly and evenly mixed within the soil prior to compaction. Backfilling of trenches, walls and structures should be done in 6-inch loose lifts. Each lift should be compacted using a mechanical tamp such as a vibratory or impact type compactor.

In general, sandy soils are best compacted with vibratory type compaction equipment. Clayey soils should be compacted with an impact type or sheepsfoot compactor.

Horizontally, the compacted structural fill should extend at least as far outside the perimeter footings as the fill is in depth below the bottom of the footings.

Density tests should be taken throughout the placement of all structural fill.

The bottoms of all footing excavations should be mechanically tamped prior to placement of steel and concrete to assure a uniformly dense support for the footings.

All footing excavations should be tested for bearing value prior to the placement of the reinforcement steel and concrete.

6. PAVING RECOMMENDATIONS:

For light duty paving, we suggest that six inches of graded aggregate base be compacted on a prepared subbase. The base course should be compacted to 100% of the maximum dry density as determined in accordance with ASTM D 698. The graded aggregate base course should conform to GA D.O.T. specifications.

The surface course should be two inches of type "E" or "F" hot mix asphaltic concrete mixture conforming to GA D.O.T. specifications.

For heavy duty paving we recommend a 6 inch thick concrete slab 4000 psi / 650 psi flex be placed on a prepared subgrade as described for the light duty paving.

If asphalt pavement is considered for the heavy duty paved sections we recommend a minimum of 8 inches of graded aggregate base course (GAB) be compacted on a prepared subbase. The base should be compacted to 100 percent of the maximum dry density (ASTM D 698). The surface course should be 2 inches of type "E" or "F" hot mix asphalt over 2 inches of B-Binder course.

7. LIMITATIONS:

Although these findings are valid only at the locations and to the depths shown, they are useful for alerting the grading contractor to certain specific conditions pertinent to the preparation of the site.

Frequently, the grading contractor has never seen the geotechnical report or recommendations for site preparation. In addition, we see many cases where the specifications and plans do not reflect the recommendations made in the geotechnical report.

We suggest that every effort be made to alert the grading contractor so that he may avoid the problems that arise due to his lack of knowledge of potential site problems.

This report has been prepared for the exclusive use of Baxter Evans & Company for specific application to Summit at the Mall "Tract C" located in Macon, Georgia. Preston Testing & Engineering Company, Inc. has endeavored to comply with generally accepted geotechnical engineering practice common to the local area. Preston Testing & Engineering Company, Inc. makes no other warranty, expressed or implied.

The analyses and [preliminary] recommendations contained in this report are based on data obtained from subsurface exploration. The methods used indicate subsurface conditions only at the specific locations where samples were obtained, only at the time they were obtained, and only to the depths penetrated. Samples cannot be relied on to accurately reflect the strata variations that usually exist between sampling locations.

The recommendations included in this report are preliminary, because they have been based in part on assumptions about strata variations

that may be tested only during earthwork and foundation construction for deep foundations. Accordingly, these recommendations should not be applied in the field unless Preston Testing & Engineering Company, Inc. is retained to perform construction observation and thereby provide a complete professional geotechnical engineering service through the observational method. Preston Testing & Engineering Company, Inc. cannot assume responsibility or liability for the adequacy of its preliminary recommendations when they are used in the field without Preston Testing & Engineering Company, Inc. being retained to observe construction.

Do not apply any of this report's conclusions or recommendations if the nature, design, or location of the facilities is changed. If changes are contemplated, Preston Testing & Engineering Company, Inc. must review them to assess their impact on this report's applicability. Also note that Preston Testing & Engineering Company, Inc. is not responsible for any claims, damages, or liability associated with any other party's interpretation of this report's subsurface data or reuse of this report's subsurface data or engineering analyses without the express written authorization of Preston Testing & Engineering Company, Inc..

Although Preston Testing & Engineering Company, Inc. has explored subsurface conditions as part of this program, Preston Testing & Engineering Company, Inc. has not evaluated the site for the potential presence of contaminated soil.

The recommendations stated in this report are preliminary. They are based on information derived through subsurface sampling. No matter how effectively subsurface sampling may be performed, variations between exploration locations are likely and cannot be recognized until exposed during construction. Accordingly,

Preston Testing & Engineering Company, Inc.'s recommendations may be finalized only through Preston Testing & Engineering Company, Inc.'s observation of the project's construction. Preston Testing & Engineering Company, Inc. accepts no responsibility or liability for any party's reliance on Preston Testing & Engineering Company, Inc.'s preliminary recommendations.

The conclusions and recommendations included in this report are based in part upon the data Preston Testing & Engineering Company, Inc. derived from a limited number of soil or groundwater samples obtained from widely spaced subsurface explorations. The nature and extent of variations between these explorations will not become evident until construction or further investigation.

If variations or other latent conditions become evident, Preston Testing & Engineering Company, Inc. will reevaluate this report's conclusions and recommendations.

Please call on us if we can be of further service to you on this project.

Very truly yours,
PRESTON TESTING & ENG. CO., INC.

Willie Goad
Managing Technician

WTG/cmd

FORM # 109-07-96

PTE NO. 2003-124

PRESTON TESTING & ENGINEERING CO., INC.

CLIENT BAXTER EVANS & COMPANY BORING NO. B-10

PROJECT NAME SUMMIT AT THE MALL - MACON, GEORGIA

BORING LOCATION See Bore Hole Location Sketch

DATUM TOPO HAMMER WT. 140 Pounds HAMMER DROP 30 Inches HOLE DIA. 6 Inches

SURFACE ELEV. 356± SUBSURFACE WATER DEPTH NONE OBSERVED AT TIME OF BORING 9' 24 HOURS

DATE STARTED 12-15-03 COMPLETED 12-15-03 BORING METHOD ASTM D 1586

SAMPLES			BORING LOG
STANDARD PENETRATION (BLOWS PER FOOT) 0 50 100	BLOWS PER FOOT	DEPTH (FEET)	DESCRIPTION
	10	0	
			TAN BROWN SILTY FINE TO MEDIUM SAND (FILL) (SM)
	7	2.5	
	6	5.0	
			GRAY SILTY FINE SAND, ORGANICS (ORIGINAL) (SM)
		8.0	
			TAN GRAY FINE SANDY MICACEOUS SILT (ML)
	12	10.0	
			BORING TERMINATED

FORM # 109-07-96

PTE NO. 2003-124

PRESTON TESTING & ENGINEERING CO., INC.

_IENT BAXTER EVANS & COMPANY BORING NO. B-11

PROJECT NAME SUMMIT AT THE MALL - MACON, GEORGIA

BORING LOCATION See Bore Hole Location Sketch

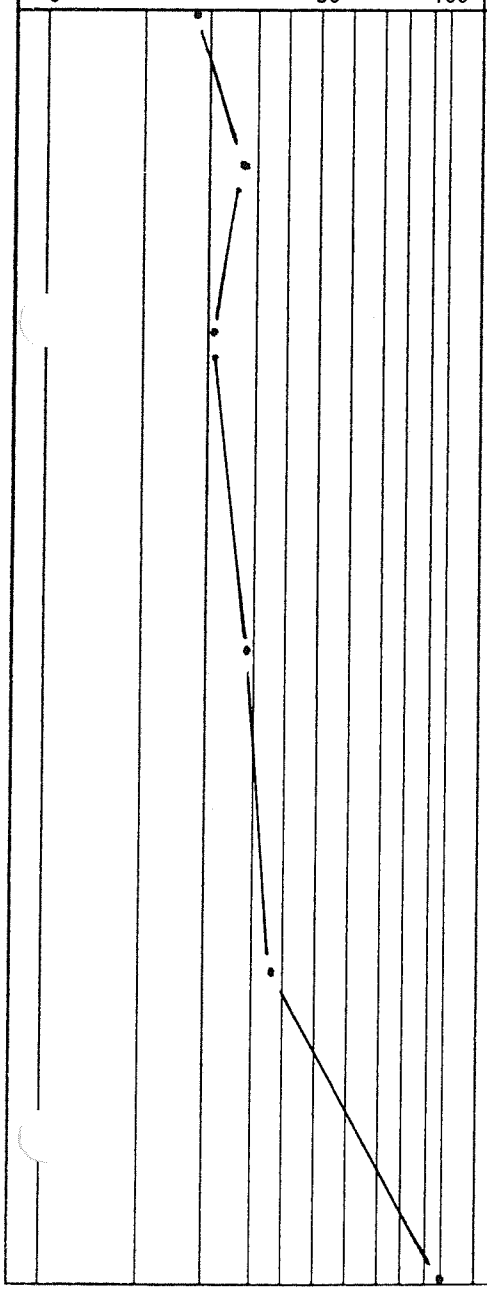
DATUM TOPO HAMMER WT. 140 Pounds HAMMER DROP 30 Inches HOLE DIA. 6 Inches

NONE OBSERVED AT TIME OF BORING

SURFACE ELEV. 354± SUBSURFACE WATER DEPTH 13.2' 24 HOURS

DATE STARTED 12-11-03 COMPLETED 12-11-03 BORING METHOD ASTM D 1586

SAMPLES | **BORING LOG**



BLOWS PER FOOT	DEPTH (FEET)	DESCRIPTION
18	0	BROWN CLAYEY FINE TO MEDIUM SAND (FILL) (SC)
	.5	TAN RED GRAY CLAYEY FINE TO COARSE SAND (ORIGINAL) (SC)
27	2.5	TAN GRAY FINE SAND (SP)
21	5.0	TAN GRAY FINE TO COARSE SAND, GRAVEL (SW)
	6.0	RED TAN GRAY SILTY FINE SAND (SM)
	9.0	
29	10.0	TAN GRAY FINE SANDY MICACEOUS SILT (ML)
	14.0	
37	15.0	GRAY FINE SANDY MICACEOUS SILT (ML)
	18.0	
		FRAGMENTED ROCK
100+	20.0	BORING TERMINATED

FORM # 109-07-96

PTE NO. 2003-124

PRESTON TESTING & ENGINEERING CO., INC.

CLIENT BAXTER EVANS & COMPANY BORING NO. B-12

PROJECT NAME SUMMIT AT THE MALL - MACON, GEORGIA

BORING LOCATION See Bore Hole Location Sketch

DATUM TOPO HAMMER WT. 140 Pounds HAMMER DROP 30 Inches HOLE DIA. 6 Inches

SURFACE ELEV. 356± SUBSURFACE WATER DEPTH NONE OBSERVED AT TIME OF BORING 9' 24 HOURS

DATE STARTED 12-11-03 COMPLETED 12-11-03 BORING METHOD ASTM D 1586

SAMPLES		BORING LOG	
STANDARD PENETRATION (BLOWS PER FOOT) 0 50 100	BLOWS PER FOOT	DEPTH (FEET)	DESCRIPTION
	35	0	TAN GRAY SILTY FINE TO MEDIUM SAND (FILL) (SM)
	20	2.5	TAN CLAYEY FINE TO COARSE SAND, GRAVEL (ORIGINAL) (SC)
	11	5.0	TAN GRAY FINE SANDY MICACEOUS SILT (ML)
	26	10.0	
	72	15.0	
	76	20.0	BORING TERMINATED

FORM # 109-07-96

PTE NO. 2003-124

PRESTON TESTING & ENGINEERING CO., INC.

CLIENT BAXTER EVANS & COMPANY BORING NO. B-13

PROJECT NAME SUMMIT AT THE MALL - MACON, GEORGIA

BORING LOCATION See Bore Hole Location Sketch

DATUM TOPO HAMMER WT. 140 Pounds HAMMER DROP 30 Inches HOLE DIA. 6 Inches

SURFACE ELEV. 354± SUBSURFACE WATER DEPTH NONE OBSERVED AT TIME OF BORING 9' 24 HOURS

DATE STARTED 12-11-03 COMPLETED 12-11-03 BORING METHOD ASTM D 1586

SAMPLES: STANDARD PENETRATION (BLOWS PER FOOT) 0 50 100	BLOWS PER FOOT	DEPTH (FEET)	BORING LOG: DESCRIPTION
	13	0	TAN BROWN SILTY FINE TO MEDIUM SAND (FILL) (SM)
	8	2.5	RED TAN BROWN FINE SANDY MICACEOUS SILT (FILL) (ML)
	6	5.0	
		6.0	GRAY SILTY FINE SAND, ORGANICS (ORIGINAL) (SM)
		8.5	
	7	10.0	TAN GRAY FINE SANDY MICACEOUS SILT (ML)
	34	15.0	
	35	20.0	BORING TERMINATED

FORM # 109-07-96

PTE NO. 2003-124

PRESTON TESTING & ENGINEERING CO., INC.

LIENT BAXTER EVANS & COMPANY BORING NO. B-14

PROJECT NAME SUMMIT AT THE MALL - MACON, GEORGIA

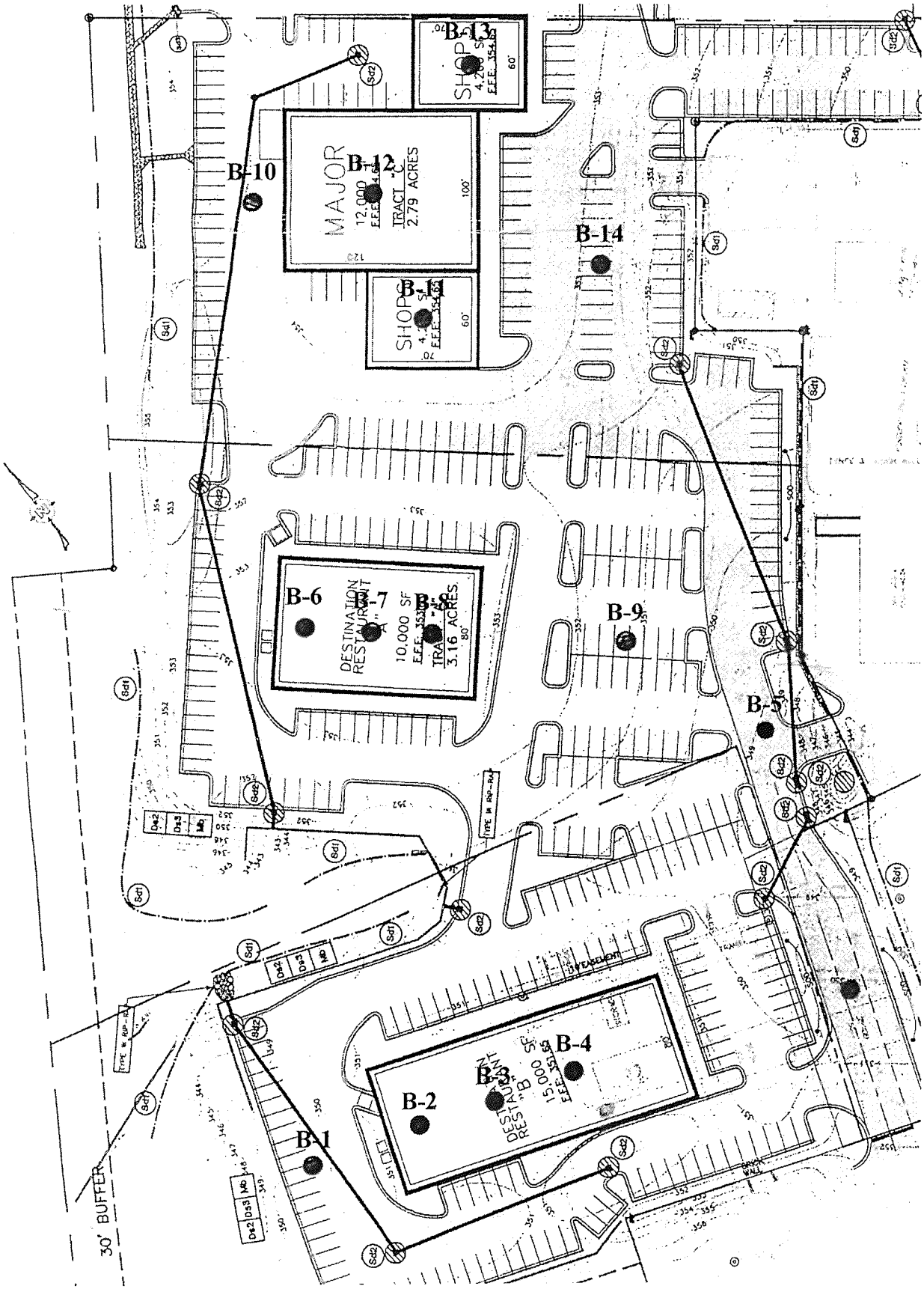
BORING LOCATION See Bore Hole Location Sketch

DATUM TOPO HAMMER WT. 140 Pounds HAMMER DROP 30 Inches HOLE DIA. 6 Inches

SURFACE ELEV. 351± SUBSURFACE WATER DEPTH NONE OBSERVED AT TIME OF BORING
NONE OBSERVED 24 HOURS

DATE STARTED 12-15-03 COMPLETED 12-15-03 BORING METHOD ASTM D 1586

SAMPLES			BORING LOG
STANDARD PENETRATION (BLOWS PER FOOT) 0 50 100	BLOWS PER FOOT	DEPTH (FEET)	DESCRIPTION
	11	0	BROWN CLAYEY FINE TO MEDIUM SAND (FILL) (SC)
	12	2.5	BROWN CLAYEY FINE TO MEDIUM SAND (FILL) (SC)
		3.0	TAN GRAY SILTY FINE SAND (ORIGINAL) (SM)
	23	5.0	TAN GRAY FINE SANDY MICACEOUS SILT (ML)
	26	10.0	BORING TERMINATED



BORE HOLE LOCATION SKETCH
PT&E #2003-124
SCALE 1" = 40'

SOIL CLASSIFICATION

Client: Baxter Evans & Company — January 12, 2004

Project: Summit at the Mall "Tract C" - Macon, GA — PT&E No.: 2003-124

Date Sampled: 12-11-03 — Sampled From: B-12, 2.5'-5.0'

(ASTM D 4318)		
Liquid Limit 24	**Plastic Limit** 13	**Plastic Index** 11
ASTM D 1140		
Percent Finer Than No. 200 Sieve 35.1		
ASTM D 2487		
Soil Classification Group Symbol SC	**Soil Description** Clayey Sand	

Remarks:

PRESTON TESTING & ENGINEERING CO., INC.

117 Preston Court • P.O. Box 7194 • Macon, Georgia 31209-7194
Phone 478-474-2941 • Fax 478-471-0202

preston
testing and engineering co. inc.

FAMILY OF CURVES METHOD FOR DETERMINING MAXIMUM DENSITY OF SOILS

CLIENT: Baxter Evans & Company

January 12, 2004

PROJECT: Summit at the Mall "Tract C"

PT&E NO.: 2003-124

SAMPLE DESCRIPTION: Tan Brown Clayey Fine to Coarse Sand, Trace of Gravel

TEST SPEC.: ASTM D-698

MAXIMUM DRY DENSITY FROM FAMILY OF CURVES: 117.5

OPTIMUM MOISTURE CONTENT FROM FAMILY OF CURVES: 11.0

DATE SAMPLED: 12-11-03

SAMPLED FROM: Boring B-12, 2.5'-5.0'

DATE TESTED: 12-12-03

ONE POINT PROCTOR RESULTS

WET DENSITY: 128.9

MOISTURE CONTENT: 9.8

FAMILY OF CURVES USED: "B"

PRESTON TESTING & ENGINEERING CO., INC.

117 Preston Court • P.O. Box 7194 • Macon, Georgia 31209-7194
Phone 478-474-2941 • Fax 478-471-0202

SOIL FRACTIONS

Term	Size Range
Cobbles	Above 3"
Gravel	
Coarse	3" to 3/4"
Fine	3/4" to No. 4 Sieve
Sand	
Coarse	No. 4 to No. 10
Medium	No. 10 to No. 40
Fine	No. 40 to No. 200
Fines	
Clay-Silt	Below No. 200 sieve

Gravel - Naturally occurring aggregates

Crushed Stone - Man-made aggregates such as crushed granite

SOIL FRACTIONS

Term	Size Range
Cobbles	Above 3"
Gravel	
Coarse	3" to 3/4"
Fine	3/4" to No. 4 Sieve
Sand	
Coarse	No. 4 to No. 10
Medium	No. 10 to No. 40
Fine	No. 40 to No. 200
Fines	
Clay-Silt	Below No. 200 sieve

Gravel - Naturally occurring aggregates

Crushed Stone - Man-made aggregates such as crushed granite

On Site Stockpile

January 12, 2004

Baxter Evans & Company
674 Arlington Place
P.O. Box 4868
Macon, Georgia 31208

Attn: Baxter Evans

RE: Laboratory Testing Analysis
Summit at the Mall
"On-Site Stockpile"
Macon, Georgia
PT&E #2003-124

Gentlemen:

During the subject site investigation we secured a soil sample from the on-site stockpile located at the northern end of the property to determine its suitability for use as structural fill. Below is a report of our findings

A laboratory classification (ASTM D 2487) along with a one-point standard proctor (ASTM D 698) was performed on the above referenced sample. We found this soil to be a CL (sandy lean clay) with a maximum dry density of 109.0 pcf and an optimum moisture content of 15.5 percent. This type soil is best compacted with a large vibratory pad foot roller, a loaded dump truck or other rubber tired equipment.

117 PRESTON COURT • P.O. BOX 7194 • MACON, GA 31209-7194
PHONE 478-474-2941 • FAX 478-471-0202

Please call on us if we can be of further service to you on this project.

Very truly yours,
PRESTON TESTING & ENG. CO., INC.

Willie Goad
Managing Technician

WTG/cmd

preston
testing and engineering co. inc.

SOIL CLASSIFICATION

Client: Baxter Evans & Company January 12, 2004

Project: Summit at the Mall On-Site Stock Pile - Macon, GA PT&E No.: 2003-124

Date Sampled: 12-11-03 Sampled From: On-Site Stockpile

(ASTM D 4318)		
Liquid Limit 38	**Plastic Limit** 18	**Plastic Index** 20
ASTM D 1140		
Percent Finer Than No. 200 Sieve 55.8		
ASTM D 2487		
Soil Classification Group Symbol CL	**Soil Description** Sandy Lean Clay	

Remarks:

PRESTON TESTING & ENGINEERING CO., INC.

117 Preston Court • P.O. Box 7194 • Macon, Georgia 31209-7194
Phone 478-474-2941 • Fax 478-471-0202

FAMILY OF CURVES METHOD FOR DETERMINING MAXIMUM DENSITY OF SOILS

CLIENT: Baxter Evans & Company — January 12, 2004

PROJECT: Summit at the Mall On-Site Stockpile — PT&E NO.: 2003-124

SAMPLE DESCRIPTION: Tan Fine to Medium Sandy Clay — TEST SPEC.: ASTM D-698

MAXIMUM DRY DENSITY FROM FAMILY OF CURVES: 109.0

OPTIMUM MOISTURE CONTENT FROM FAMILY OF CURVES: 15.5

DATE SAMPLED: 12-11-03

SAMPLED FROM: On-Site Stockpile

DATE TESTED: 12-12-03

ONE POINT PROCTOR RESULTS

WET DENSITY: 124.7

MOISTURE CONTENT: 14.9

FAMILY OF CURVES USED: "C"

PRESTON TESTING & ENGINEERING CO., INC.

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