ADDENDUM NO. 3

DATE: July 8, 2024

IFB: # 4210-24-LMIG PUBLIC WORKS RESURFACING PROJECTS

Invitation for Bid (IFB) # 4210-24-LMIG PUBLIC WORKS RESURFACING PROJECTS is hereby amended as follows:

1. Modifications to bid:

   FDR Evaluation for Forest Hill Rd SW and Highview Rd added.

2. It is the responsibility of each bidder to be aware of all addenda under this IFB. Please sign and return this addendum with submitted bid. You may call Audrey Gatliff, Purchasing Agent, at 478-445-4791 before bids are due to confirm the number of addenda issued.

The above Addendum is hereby acknowledged:

_____

(NAME OF BIDDER)

_____ _____

(Signature) (Title)

July 5, 2024

Mr. Brian Wood, PE
Baldwin County Board of Commissioners
1601 N Columbia Street/Suite 230
Milledgeville, GA 31061

RE: FDR Design Recommendations
Forest Hill Road SW and Highview Road
Baldwin County
PGC# 2024035

Dear Brian:

We understand that the County intends to contract for Full Depth Pavement Reclamation of both Forest Hill Road SW and Highview Road. In an effort to provide information on existing subgrade materials and potential cement spread rates, Baldwin County contracted with Preston Geotechnical Consultants (PGC) to perform this investigation.

1. METHOD OF BORING AND SAMPLING:

On June 18, 2024, PGC mobilized to each of these two roads for the purpose of securing soil samples of the base/subgrade necessary to evaluate the anticipated cement spread rates based on the variations in the soils encountered along both roadways. A GeoProbe 3100 GT truck mounted rig, mechanically turning a 5 5/8 -inch, hollow stem auger, was used to advance ten bore holes at locations shown on the enclosed bore hole location sketches.

At borings B-1 through B-10 after auguring through the asphalt surface, the existing underlying subgrade soils were sampled in substantial accordance with ASTM D 1586 through a depth of approximately 5 feet. A boring log of each hole is attached. Disturbed samples were observed and visual classifications determined for the soil strata encountered.

2. GENERAL FINDINGS:

Borings B-1 through B-6 were advanced along Forest Hill Road SW while B-7 through B-10 were advanced along Highview Road. The borings revealed asphalt thicknesses varying from ½ inch to 2 ½ inches. Beneath the asphalt in borings B-1 and B-2, we encountered 2 ½ to 3 ½ inches of crushed stone while in borings B-7, B-8, and B-9 we encountered 6 ½ to 7 ⅔ inches of clayey sand with gravel. Otherwise, subgrade soils were found to be medium/firm to dense silty sands and clayey sands along with medium to stiff to hard sandy clays and some sandy plastic clays. Some of these soils were believed to be fills placed as the roadway was graded prior to the original paving of the roads. No subsurface water was encountered at the time of our investigation. The borings were backfilled immediately upon completion of drilling activities and the asphalt subsequently patched with cold patch.

The following table communicates the thickness of asphalt encountered at each of the borings.

Boring Number	Thickness of Asphalt (inches)
B-1	1
B-2	½
B-3	1 ½
B-4	1 ¾
B-5	1 ¾
B-6	2 ½
B-7	2
B-8	2
B-9	2
B-10	2

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.

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

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

3. LAB TESTS:

We secured bulk soil samples at all borings from subgrade soils just beneath the asphalt and crushed stone or other subgrade where present. These samples were transported back to the laboratory for analysis. Each sample was laboratory tested for the following:

- Maximum Dry Density ASTM D 698
- Material Finer Than No. 200 Sieve ASTM D 1140

Following is a summary of the soil parameters obtained through this battery of laboratory tests (full results are attached).

Sample ID	ASTM D 698 Maximum Dry Density(pcf)	Optimum Moisture (%)	ASTM D 1140 % Finer Than No. 200 Sieve	Subgrade Soil Type Encountered
B-1	115.0	12.0	45.1	Silty sand
B-2	116.5	11.0	43.9	Silty sand
B-3	**103.0**	**18.0**	**61.9**	**Sandy clay**
B-4	115.0	12.0	42.7	Clayey sand
B-5	125.5	8.5	24.8	Clayey sand
B-6	127.0	8.0	25.5	Clayey sand
B-7	133.5	6.5	31.7	Silty sand
B-8	124.0	9.0	38.7	Clayey sand
B-9	**99.5**	**20.0**	**63.6**	**Sandy plastic clay**
B-10	130.0	7.5	30.5	Clayey sand

We also performed laboratory cookouts (ASTM D 2216) on the upper level subgrade soil cuttings secured from each of the borings. These tests are helpful for the contractor in that they provide an indication of insitu moisture at the time of our investigation and a means of comparing that insitu moisture to the optimum moisture level of the existing subgrade soils. The following is a summary of our findings.

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Boring Number	Insitu Moisture Percent	+/- Percent of Optimum Moisture
B-1	12.5	+0.5
B-2	11.5	+0.5
B-3	16.5	-1.5
B-4	14	+2
B-5	5	-3.5
B-6	6.5	-1.5
B-7	4	-2.5
B-8	6.5	-2.5
B-9	17	-3
B-10	5	-2.5

4. RECOMMENDATIONS:

The following table was compiled to communicate the recommended cement requirements associated with Forest Hill Road SW and Highview Drive based upon the soils encountered in the various borings. The cement requirements were obtained utilizing short cut test procedures recognized by the Portland Cement Association.

Sample ID	Cement Content by Weight (%)	Cement Content by Volume (%)	Cement Spread Rate (lbs/square yard /6-inch depth)	Cement Spread Rate (lbs/square yard /8-inch depth)
Forest Hill Road SW				
B-1	8.5	9.5	40	54
B-2	8	9.25	39	52
B-3	**13**	**12.5**	**53**	**70**
B-4	8.5	9.5	40	54
B-5	6	7.5	32	42
B-6	6	7.5	32	42
Highview Road				
B-7	6	8	34	45
B-8	6.5	8	34	45
B-9	**14.5**	**13.5**	**57**	**76**
B-10	6	7.75	33	44

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To accommodate the variance in densities together with the variance in percent of soil finer than the number 200 sieve, we anticipate a typical fluctuation between approximately 32 and 40 pounds per square yard spread rate (to affect an 6-inch depth) and between approximately 42 and 54 pounds per square yard spread rate (to affect an 8-inch depth). However, there were isolated pockets of finer grained (clayey and plastic clays) soils that would likely require 53 to 57 pounds per square yard spread rate (to affect a 6-inch depth) and 70 to 76 pounds per square yard spread rate (to affect an 8-inch depth).

Specific application rates based on the soils encountered will require field judgment during construction. Contractors experienced in Full Depth Reclamation and Soil Cement Base Construction are typically able to field judge changes in color and texture of soils encountered. While the majority of the soils encountered in the upper base/subgrade level soils were a mix of clayey sands and silty sands, some of the finer grained soils (sandy clays and plastic clays) will exhibit lighter densities, i.e. ± 100.0 pounds per cubic foot(pcf)as opposed to densities in the 115.0 pcf to 133.0 pcf range. These lighter density soils require more cement in the blend.

.We suggest Section 301 Soil Cement Construction from the Georgia Department of Transportation Standard Specifications (Specifically, subsections 301.3.03 Preparation and 301.3.05 Construction) be considered as a general guide to contractors in construction of the cement stabilized and reclaimed base course. Should paving of the road not follow within 24 hours of the construction of the base or should traffic be allowed on the base course, we suggest that the base receive a prime coat to protect the surface from rain and light traffic. Furthermore, if traffic is allowed before paving, the road should be sanded following placement of prime coat.

We hope this information is helpful. Please call if you have any questions or if we may be of further service.

Very truly yours,
PRESTON GEOTECHNICAL CONSULTANTS, LLC

J. Michael Davis, P.E.
Laboratory Manager/Co-Owner

GEORGIA REGISTERED No. 028608 PROFESSIONAL ENGINEER JAMES MICHAEL DAVIS

Robin C. Webb, P.E.

GEORGIA REGISTERED No. 18824 PROFESSIONAL ENGINEER ROBIN C. WEBB

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FOREST HILL RD SW BORE HOLE LOCATION SKETCH
PGC# 2024035
Legend
Forest Hill Rd SW
B-1
B-2
B-3
B-4
B-5
B-6
Forest Hill Rd SW
Felton Dr
Sand Hill Cemetery
49
N
2000 ft
Google Earth


HIGHVIEW RD BORE HOLE LOCATION SKETCH
PGC# 2024035
Legend
Ato Rd
Ato Rd
B-10
B-8
B-9
B-7
Highview Rd SE
Highview Rd SE
Highview Rd SE
City-Milledgeville Waste
Pebble Hill Rd SE
Pebble Hill Rd SE
Pebble Hill Rd
Pebble Hill Rd
Google Earth
© 2023 Google
2000 ft
N

PRESTON GEOTECHNICAL CONSULTANTS, LLC

PGC No. 2024035

CLIENT: BALDWIN COUNTY BOARD OF COMMISIONERS | **BORING NO.** B-1

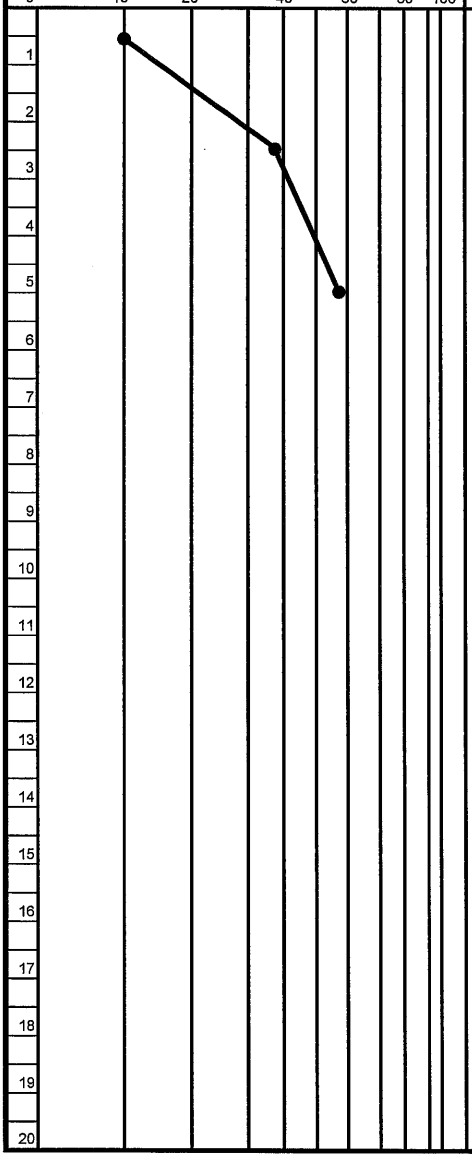
PROJECT NAME: FDR DESIGN RECOMMENDATIONS FOREST HILL RD SW & HIGHVIEW RD, BALDWIN COUNTY, GA

BORING LOCATION: SEE BORE HOLE LOCATION SKETCH

DATUM: EXISTING GRADE | **HAMMER WT.**140 lbs | **HAMMER DROP:** 30 inches | **HOLE DIA:** 6 inches

SUBSURFACE WATER DEPTH: NONE OBSERVED @ TIME OF BORING; BACKFILLED @ TIME OF BORING

SURFACE ELEV.: N/A | **DATE STARTED**: 06-18-24 | **COMPLETED**: 06-18-24 | **BORING METHOD**: ASTM D 1586



BLOWS PER FOOT	DEPTH (FEET)	BORING LOG DESCRIPTION
10	0.3	1" ASPHALT ATOP 2.6" CRUSHED STONE
	1	RED-TAN-BROWN, SILTY FINE TO MEDIUM SAND (SM) (FILL)
	2	
36	2.5	
	3	
	4	GRAY PLASTIC CLAY (CH) WITH LIMESTONE (ORIGINAL)
58	5	
		BORING TERMINATED
	6	
	7	
	8	
	9	
	10	
	11	
	12	
	13	
	14	
	15	
	16	
	17	
	18	
	19	
	20	

PRESTON GEOTECHNICAL CONSULTANTS, LLC

PGC No. 2024035

CLIENT: BALDWIN COUNTY BOARD OF COMMISIONERS | **BORING NO.** B-2

PROJECT NAME: FDR DESIGN RECOMMENDATIONS FOREST HILL RD SW & HIGHVIEW RD, BALDWIN COUNTY, GA

BORING LOCATION: SEE BORE HOLE LOCATION SKETCH

DATUM: EXISTING GRADE | **HAMMER WT**.140 lbs | **HAMMER DROP:** 30 inches | **HOLE DIA:** 6 inches

SUBSURFACE WATER DEPTH: NONE OBSERVED @ TIME OF BORING; BACKFILLED @ TIME OF BORING

SURFACE ELEV.: N/A | **DATE STARTED**: 06-18-24 | **COMPLETED**: 06-18-24 | **BORING METHOD**: ASTM D 1586

SAMPLES STANDARD PENETRATION BLOWS PER FOOT 0 10 20 40 60 80 100	BLOWS PER FOOT	DEPTH (FEET)	BORING LOG DESCRIPTION
	22	0.25	1/2" ASPHALT ATOP 3 1/2" CRUSHED STONE
1		1	
2		2	
	20	2.5	TAN, SILTY FINE TO MEDIUM SAND (SM)
3		3	
4		4	
5	28	5	
			BORING TERMINATED
6		6	
7		7	
8		8	
9		9	
10		10	
11		11	
12		12	
13		13	
14		14	
15		15	
16		16	
17		17	
18		18	
19		19	
20		20	

PRESTON GEOTECHNICAL CONSULTANTS, LLC

PGC No. 2024035

CLIENT: BALDWIN COUNTY BOARD OF COMMISIONERS | **BORING NO.** B-3

PROJECT NAME: FDR DESIGN RECOMMENDATIONS FOREST HILL RD SW & HIGHVIEW RD, BALDWIN COUNTY, GA

BORING LOCATION: SEE BORE HOLE LOCATION SKETCH

DATUM: EXISTING GRADE | **HAMMER WT.**140 lbs | **HAMMER DROP:** 30 inches | **HOLE DIA:** 6 inches

SUBSURFACE WATER DEPTH: NONE OBSERVED @ TIME OF BORING; BACKFILLED @ TIME OF BORING

SURFACE ELEV.: N/A | **DATE STARTED**: 06-18-24 | **COMPLETED**: 06-18-24 | **BORING METHOD**: ASTM D 1586

SAMPLES STANDARD PENETRATION BLOWS PER FOOT 0 10 20 40 60 80 100	BLOWS PER FOOT	DEPTH (FEET)	BORING LOG DESCRIPTION
	15	0.4	1 1/2" ASPHALT ATOP 3 1/3" TAN, SILTY FINE TO MEDIUM SAND
1		1	
2		2	
	14	2.5	
3		3	RED, FINE SANDY CLAY (CL)
4		4	
5	12	5	
			BORING TERMINATED
6		6	
7		7	
8		8	
9		9	
10		10	
11		11	
12		12	
13		13	
14		14	
15		15	
16		16	
17		17	
18		18	
19		19	
20		20	

PRESTON GEOTECHNICAL CONSULTANTS, LLC

PGC No. 2024035

CLIENT: BALDWIN COUNTY BOARD OF COMMISIONERS | **BORING NO.** B-4

PROJECT NAME: FDR DESIGN RECOMMENDATIONS FOREST HILL RD SW & HIGHVIEW RD, BALDWIN COUNTY, GA

BORING LOCATION: SEE BORE HOLE LOCATION SKETCH

DATUM: EXISTING GRADE | **HAMMER WT**.140 lbs | **HAMMER DROP:** 30 inches | **HOLE DIA:** 6 inches

SUBSURFACE WATER DEPTH: NONE OBSERVED @ TIME OF BORING; BACKFILLED @ TIME OF BORING

SURFACE ELEV.: N/A | **DATE STARTED**: 06-18-24 | **COMPLETED**: 06-18-24 | **BORING METHOD**: ASTM D 1586

SAMPLES STANDARD PENETRATION BLOWS PER FOOT 0 10 20 40 60 80 100	BLOWS PER FOOT	DEPTH (FEET)	BORING LOG DESCRIPTION
	7	0.7	1 3/4" ASPHALT ATOP 6 2/3" TAN, SILTY FINE TO MEDIUM SAND (SM) (FILL)
1		1	
2		2	
	7	2.5	
3		3	BROWN, FINE SANDY CLAY (CL) (FILL)
4		4	
5	5	5	
			BORING TERMINATED
6		6	
7		7	
8		8	
9		9	
10		10	
11		11	
12		12	
13		13	
14		14	
15		15	
16		16	
17		17	
18		18	
19		19	
20		20	

PRESTON GEOTECHNICAL CONSULTANTS, LLC

PGC No. 2024035

CLIENT: BALDWIN COUNTY BOARD OF COMMISIONERS | **BORING NO**. B-5

PROJECT NAME: FDR DESIGN RECOMMENDATIONS FOREST HILL RD SW & HIGHVIEW RD, BALDWIN COUNTY, GA

BORING LOCATION: SEE BORE HOLE LOCATION SKETCH

DATUM: EXISTING GRADE | **HAMMER WT**.140 lbs | **HAMMER DROP:** 30 inches | **HOLE DIA:** 6 inches

SUBSURFACE WATER DEPTH: NONE OBSERVED @ TIME OF BORING; BACKFILLED @ TIME OF BORING

SURFACE ELEV.: N/A | **DATE STARTED**: 06-18-24 | **COMPLETED**: 06-18-24 | **BORING METHOD**: ASTM D 1586

SAMPLES STANDARD PENETRATION BLOWS PER FOOT 0 10 20 40 60 80 100	BLOWS PER FOOT	DEPTH (FEET)	BORING LOG DESCRIPTION
	13	0.8	1 3/4" ASPHALT ATOP 7 3/4" RED-BROWN, CLAYEY FINE TO MEDIUM SAND (SC)
		1	
		2	RED, CLAYEY FINE TO MEDIUM SAND (SC)
	12	2.5	
		3	
		4	
	15	5	
			BORING TERMINATED
		6	
		7	
		8	
		9	
		10	
		11	
		12	
		13	
		14	
		15	
		16	
		17	
		18	
		19	
		20	

PRESTON GEOTECHNICAL CONSULTANTS, LLC

PGC No. 2024035

CLIENT: BALDWIN COUNTY BOARD OF COMMISIONERS | **BORING NO.** B-6

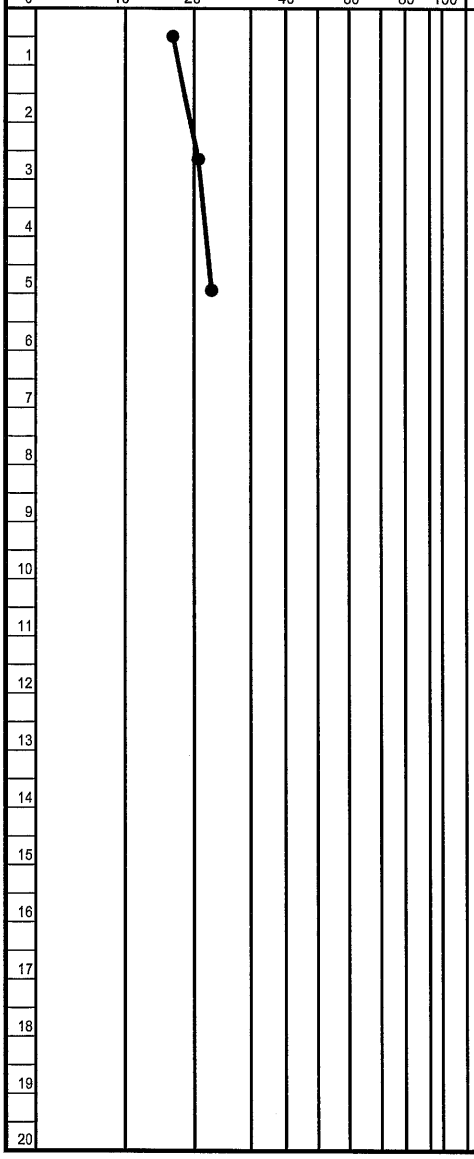
PROJECT NAME: FDR DESIGN RECOMMENDATIONS FOREST HILL RD SW & HIGHVIEW RD, BALDWIN COUNTY, GA

BORING LOCATION: SEE BORE HOLE LOCATION SKETCH

DATUM: EXISTING GRADE | **HAMMER WT**.140 lbs | **HAMMER DROP:** 30 inches | **HOLE DIA:** 6 inches

SUBSURFACE WATER DEPTH: NONE OBSERVED @ TIME OF BORING; BACKFILLED @ TIME OF BORING

SURFACE ELEV.: N/A | **DATE STARTED**: 06-18-24 | **COMPLETED**: 06-18-24 | **BORING METHOD**: ASTM D 1586



BLOWS PER FOOT	DEPTH (FEET)	BORING LOG DESCRIPTION
18	0.21	2 1/2" ASPHALT
	1	
	2	
21	2.5	
	3	RED-TAN, CLAYEY FINE TO MEDIUM SAND (SC)
	4	
22	5	
	6	BORING TERMINATED
	7	
	8	
	9	
	10	
	11	
	12	
	13	
	14	
	15	
	16	
	17	
	18	
	19	
	20	

PRESTON GEOTECHNICAL CONSULTANTS, LLC

PGC No. 2024035

CLIENT: BALDWIN COUNTY BOARD OF COMMISIONERS | **BORING NO.** B-7

PROJECT NAME: FDR DESIGN RECOMMENDATIONS FOREST HILL RD SW & HIGHVIEW RD, BALDWIN COUNTY, GA

BORING LOCATION: SEE BORE HOLE LOCATION SKETCH

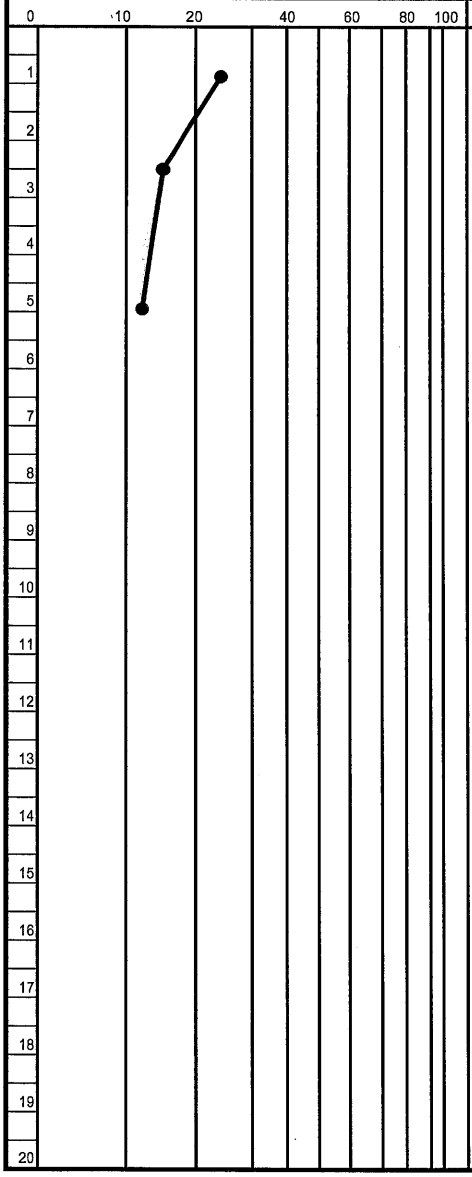
DATUM: EXISTING GRADE	**HAMMER WT**.140 lbs	**HAMMER DROP:** 30 inches	**HOLE DIA:** 6 inches

SUBSURFACE WATER DEPTH: NONE OBSERVED @ TIME OF BORING; BACKFILLED @ TIME OF BORING

SURFACE ELEV.: N/A	**DATE STARTED**: 06-18-24	**COMPLETED**: 06-18-24	**BORING METHOD**: ASTM D 1586

SAMPLES

STANDARD PENETRATION BLOWS PER FOOT



BLOWS PER FOOT	DEPTH (FEET)	BORING LOG DESCRIPTION
24	0.7	2" ASPHALT ATOP 6 1/2" BROWN CLAYEY FINE TO COARSE SAND WITH GRAVEL (SC) (FILL)
	2	
15	2.5	TAN, SILTY FINE TO MEDIUM SAND (SM) (ORIGINAL)
	3	
	4	
12	5	RED,FINE SANDY PLASTIC CLAY (CH)
	6	BORING TERMINATED
	7	
	8	
	9	
	10	
	11	
	12	
	13	
	14	
	15	
	16	
	17	
	18	
	19	
	20	

PRESTON GEOTECHNICAL CONSULTANTS, LLC

PGC No. 2024035

CLIENT: BALDWIN COUNTY BOARD OF COMMISIONERS | **BORING NO.** B-8

PROJECT NAME: FDR DESIGN RECOMMENDATIONS FOREST HILL RD SW & HIGHVIEW RD, BALDWIN COUNTY, GA

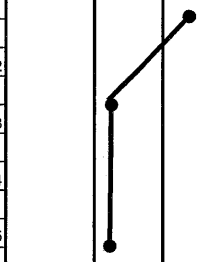
BORING LOCATION: SEE BORE HOLE LOCATION SKETCH

DATUM: EXISTING GRADE | **HAMMER WT**.140 lbs | **HAMMER DROP:** 30 inches | **HOLE DIA:** 6 inches

SUBSURFACE WATER DEPTH: NONE OBSERVED @ TIME OF BORING; BACKFILLED @ TIME OF BORING

SURFACE ELEV.: N/A | **DATE STARTED**: 06-18-24 | **COMPLETED**: 06-18-24 | **BORING METHOD**: ASTM D 1586

SAMPLES STANDARD PENETRATION BLOWS PER FOOT 0 10 20 40 60 80 100	BLOWS PER FOOT	DEPTH (FEET)	BORING LOG DESCRIPTION
	25	0.8	2" ASPHALT ATOP 7 2/3" BROWN, CLAYEY FINE TO COARSE SAND WITH GRAVEL (SC) (FILL)
	12	2.5	RED, FINE SANDY CLAY (CL) (ORIGINAL)
	13	5	BORING TERMINATED



PRESTON GEOTECHNICAL CONSULTANTS, LLC

PGC No. 2024035

CLIENT: BALDWIN COUNTY BOARD OF COMMISIONERS | **BORING NO.** B-9

PROJECT NAME: FDR DESIGN RECOMMENDATIONS FOREST HILL RD SW & HIGHVIEW RD, BALDWIN COUNTY, GA

BORING LOCATION: SEE BORE HOLE LOCATION SKETCH

DATUM: EXISTING GRADE | **HAMMER WT**.140 lbs | **HAMMER DROP:** 30 inches | **HOLE DIA:** 6 inches

SUBSURFACE WATER DEPTH: NONE OBSERVED @ TIME OF BORING; BACKFILLED @ TIME OF BORING

SURFACE ELEV.: N/A | **DATE STARTED**: 06-18-24 | **COMPLETED**: 06-18-24 | **BORING METHOD**: ASTM D 1586

SAMPLES STANDARD PENETRATION BLOWS PER FOOT 0 10 20 40 60 80 100	BLOWS PER FOOT	DEPTH (FEET)	BORING LOG DESCRIPTION
1	33	0.7	2" ASPHALT ATOP 6 1/2" BROWN, CLAYEY FINE TO COARSE SAND WITH GRAVEL (SC) (FILL)
2		2	
	17	2.5	
3		3	RED, FINE SANDY PLASTIC CLAY (CH) (ORIGINAL)
4		4	
5	19	5	
			BORING TERMINATED
6		6	
7		7	
8		8	
9		9	
10		10	
11		11	
12		12	
13		13	
14		14	
15		15	
16		16	
17		17	
18		18	
19		19	
20		20	

PRESTON GEOTECHNICAL CONSULTANTS, LLC

PGC No. 2024035

CLIENT: BALDWIN COUNTY BOARD OF COMMISIONERS | **BORING NO.** B-10

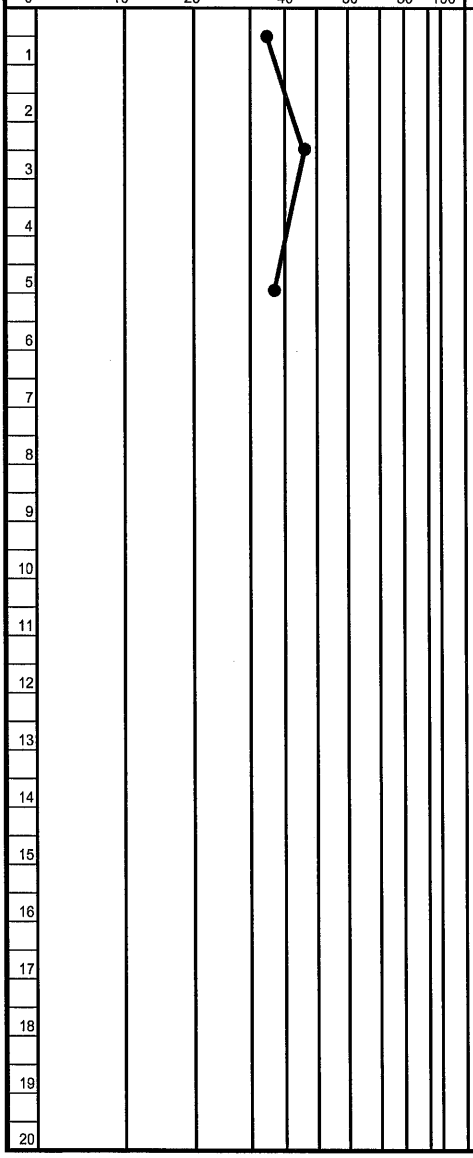
PROJECT NAME: FDR DESIGN RECOMMENDATIONS FOREST HILL RD SW & HIGHVIEW RD, BALDWIN COUNTY, GA

BORING LOCATION: SEE BORE HOLE LOCATION SKETCH

DATUM: EXISTING GRADE | **HAMMER WT.**140 lbs | **HAMMER DROP:** 30 inches | **HOLE DIA:** 6 inches

SUBSURFACE WATER DEPTH: NONE OBSERVED @ TIME OF BORING; BACKFILLED @ TIME OF BORING

SURFACE ELEV.: N/A | **DATE STARTED**: 06-18-24 | **COMPLETED**: 06-18-24 | **BORING METHOD**: ASTM D 1586



BLOWS PER FOOT	DEPTH (FEET)	BORING LOG DESCRIPTION
35	0.2	2" ASPHALT
	1	BROWN, CLAYEY FINE TO COARSE SAND (SC) (FILL)
	2	
45	2.5	RED-TAN, CLAYEY FINE TO COARSE SAND WITH GRAVEL (SC) (ORIGINAL)
	3	
	4	
37	5	BORING TERMINATED
	6	
	7	
	8	
	9	
	10	
	11	
	12	
	13	
	14	
	15	
	16	
	17	
	18	
	19	
	20	

FAMILY OF CURVES METHOD FOR DETERMINING
MAXIMUM DENSITY OF SOILS
ASTM D 698

CLIENT: Baldwin County Board of Commissioners DATE: July 1, 2024

PROJECT: FDR Design Recommendations PGC NO.: 2024035
Forest Hill Road SW & Highview Road
Baldwin County, GA

SAMPLE DESCRIPTION: Red-tan-brown, silty fine to medium sand

MAXIMUM DRY DENSITY FROM FAMILY OF CURVES: 115.0 pcf

OPTIMUM MOISTURE CONTENT FROM FAMILY OF CURVES: 12.0 %

DATE SAMPLED: June 18, 2024

SAMPLED FROM: Boring B-1 @ 0 to 2.5' / Forest Hill Road SW

ONE POINT PROCTOR RESULTS

WET DENSITY: 126.1 pcf

MOISTURE CONTENT: 10.4 %

FAMILY OF CURVES USED: B

Material Finer than #200 Sieve (ASTM D 1140)→ 45.1 %

"Woman Owned Small Business"
4725 Ivey Drive Suite • Macon, Georgia 31206
Phone 478-474-2941 • Fax 478-471-0202

FAMILY OF CURVES METHOD FOR DETERMINING
MAXIMUM DENSITY OF SOILS
ASTM D 698

CLIENT: Baldwin County Board of Commissioners DATE: July 1, 2024

PROJECT: FDR Design Recommendations PGC NO.: 2024035
Forest Hill Road SW & Highview Road
Baldwin County, GA

SAMPLE DESCRIPTION: Tan, silty fine to medium sand

MAXIMUM DRY DENSITY FROM FAMILY OF CURVES: 116.5 pcf

OPTIMUM MOISTURE CONTENT FROM FAMILY OF CURVES: 11.0 %

DATE SAMPLED: June 18, 2024

SAMPLED FROM: Boring B-2 @ 0 to 2.5' / Forest Hill Road SW

ONE POINT PROCTOR RESULTS

WET DENSITY: 128.8 pcf

MOISTURE CONTENT: 10.9 %

FAMILY OF CURVES USED: B

Material Finer than #200 Sieve (ASTM D 1140)→ 43.9 %

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FAMILY OF CURVES METHOD FOR DETERMINING
MAXIMUM DENSITY OF SOILS
ASTM D 698

CLIENT: Baldwin County Board of Commissioners DATE: July 1, 2024

PROJECT: FDR Design Recommendations PGC NO.: 2024035
Forest Hill Road SW & Highview Road
Baldwin County, GA

SAMPLE DESCRIPTION: Red, fine sandy clay

MAXIMUM DRY DENSITY FROM FAMILY OF CURVES: 103.0 pcf

OPTIMUM MOISTURE CONTENT FROM FAMILY OF CURVES: 18.0 %

DATE SAMPLED: June 18, 2024

SAMPLED FROM: Boring B-3 @ 0 to 2.5' / Forest Hill Road SW

ONE POINT PROCTOR RESULTS

WET DENSITY: 119.5 pcf

MOISTURE CONTENT: 17.0 %

FAMILY OF CURVES USED: C

Material Finer than #200 Sieve (ASTM D 1140)→ 61.9 %

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FAMILY OF CURVES METHOD FOR DETERMINING
MAXIMUM DENSITY OF SOILS
ASTM D 698

CLIENT: Baldwin County Board of Commissioners DATE: July 1, 2024

PROJECT: FDR Design Recommendations PGC NO.: 2024035
Forest Hill Road SW & Highview Road
Baldwin County, GA

SAMPLE DESCRIPTION: Brown, clayey fine sand

MAXIMUM DRY DENSITY FROM FAMILY OF CURVES: 115.0 pcf

OPTIMUM MOISTURE CONTENT FROM FAMILY OF CURVES: 12.0 %

DATE SAMPLED: June 18, 2024

SAMPLED FROM: Boring B-4 @ 0 to 2.5' / Forest Hill Road SW

ONE POINT PROCTOR RESULTS

WET DENSITY: 121.3 pcf

MOISTURE CONTENT: 9.1 %

FAMILY OF CURVES USED: B

Material Finer than #200 Sieve (ASTM D 1140)→ 42.7 %

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FAMILY OF CURVES METHOD FOR DETERMINING
MAXIMUM DENSITY OF SOILS
ASTM D 698

CLIENT: Baldwin County Board of Commissioners DATE: July 1, 2024

PROJECT: FDR Design Recommendations PGC NO.: 2024035
Forest Hill Road SW & Highview Road
Baldwin County, GA

SAMPLE DESCRIPTION: Red, clayey fine to medium sand

MAXIMUM DRY DENSITY FROM FAMILY OF CURVES: 125.5 pcf

OPTIMUM MOISTURE CONTENT FROM FAMILY OF CURVES: 8.5 %

DATE SAMPLED: June 18, 2024

SAMPLED FROM: Boring B-5 @ 0 to 2.5' / Forest Hill Road SW

ONE POINT PROCTOR RESULTS

WET DENSITY: 131.2 pcf

MOISTURE CONTENT: 5.2 %

FAMILY OF CURVES USED: B

Material Finer than #200 Sieve (ASTM D 1140)→ 24.8 %

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FAMILY OF CURVES METHOD FOR DETERMINING
MAXIMUM DENSITY OF SOILS
ASTM D 698

CLIENT: Baldwin County Board of Commissioners DATE: July 1, 2024

PROJECT: FDR Design Recommendations PGC NO.: 2024035
Forest Hill Road SW & Highview Road
Baldwin County, GA

SAMPLE DESCRIPTION: Red-tan, clayey fine to medium sand

MAXIMUM DRY DENSITY FROM FAMILY OF CURVES: 127.0 pcf

OPTIMUM MOISTURE CONTENT FROM FAMILY OF CURVES: 8.0 %

DATE SAMPLED: June 18, 2024

SAMPLED FROM: Boring B-6 @ 0 to 2.5' / Forest Hill Road SW

ONE POINT PROCTOR RESULTS

WET DENSITY: 133.9 pcf

MOISTURE CONTENT: 5.9 %

FAMILY OF CURVES USED: B

Material Finer than #200 Sieve (ASTM D 1140)→ 25.5 %

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FAMILY OF CURVES METHOD FOR DETERMINING
MAXIMUM DENSITY OF SOILS
ASTM D 698

CLIENT: Baldwin County Board of Commissioners DATE: July 1, 2024

PROJECT: FDR Design Recommendations PGC NO.: 2024035
Forest Hill Road SW & Highview Road
Baldwin County, GA

SAMPLE DESCRIPTION: Tan, silty fine to medium sand

MAXIMUM DRY DENSITY FROM FAMILY OF CURVES: 133.5 pcf

OPTIMUM MOISTURE CONTENT FROM FAMILY OF CURVES: 6.5 %

DATE SAMPLED: June 18, 2024

SAMPLED FROM: Boring B-7 @ 0 to 2.5' / Highview Road

ONE POINT PROCTOR RESULTS

WET DENSITY: 141.7 pcf

MOISTURE CONTENT: 6.4 %

FAMILY OF CURVES USED: B

Material Finer than #200 Sieve (ASTM D 1140)→ 31.7 %

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FAMILY OF CURVES METHOD FOR DETERMINING
MAXIMUM DENSITY OF SOILS
ASTM D 698

CLIENT: Baldwin County Board of Commissioners DATE: July 1, 2024

PROJECT: FDR Design Recommendations PGC NO.: 2024035
Forest Hill Road SW & Highview Road
Baldwin County, GA

SAMPLE DESCRIPTION: Red, clayey fine sand

MAXIMUM DRY DENSITY FROM FAMILY OF CURVES: 124.0 pcf

OPTIMUM MOISTURE CONTENT FROM FAMILY OF CURVES: 9.0 %

DATE SAMPLED: June 18, 2024

SAMPLED FROM: Boring B-8 @ 0 to 2.5' / Highview Road

ONE POINT PROCTOR RESULTS

WET DENSITY: 130.9 pcf

MOISTURE CONTENT: 6.3 %

FAMILY OF CURVES USED: B

Material Finer than #200 Sieve (ASTM D 1140)→ 38.7 %

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FAMILY OF CURVES METHOD FOR DETERMINING
MAXIMUM DENSITY OF SOILS
ASTM D 698

CLIENT: Baldwin County Board of Commissioners DATE: July 1, 2024

PROJECT: FDR Design Recommendations PGC NO.: 2024035
Forest Hill Road SW & Highview Road
Baldwin County, GA

SAMPLE DESCRIPTION: Red, fine sandy plastic clay

MAXIMUM DRY DENSITY FROM FAMILY OF CURVES: 99.5 pcf

OPTIMUM MOISTURE CONTENT FROM FAMILY OF CURVES: 20.0 %

DATE SAMPLED: June 18, 2024

SAMPLED FROM: Boring B-9 @ 0 to 2.5' / Highview Road

ONE POINT PROCTOR RESULTS

WET DENSITY: 110.2 pcf

MOISTURE CONTENT: 16.7 %

FAMILY OF CURVES USED: C

Material Finer than #200 Sieve (ASTM D 1140)→ 63.6 %

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FAMILY OF CURVES METHOD FOR DETERMINING
MAXIMUM DENSITY OF SOILS
ASTM D 698

CLIENT: Baldwin County Board of Commissioners DATE: July 1, 2024

PROJECT: FDR Design Recommendations PGC NO.: 2024035
Forest Hill Road SW & Highview Road
Baldwin County, GA

SAMPLE DESCRIPTION: Brown, clayey fine to coarse sand

MAXIMUM DRY DENSITY FROM FAMILY OF CURVES: 130.0 pcf

OPTIMUM MOISTURE CONTENT FROM FAMILY OF CURVES: 7.5 %

DATE SAMPLED: June 18, 2024

SAMPLED FROM: Boring B-10 @ 0 to 2.0' / Highview Road

ONE POINT PROCTOR RESULTS

WET DENSITY: 138.1 pcf

MOISTURE CONTENT: 6.5 %

FAMILY OF CURVES USED: B

Material Finer than #200 Sieve (ASTM D 1140)→ 30.5 %

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DEFINITION OF TERMS

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

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

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

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