

May 19, 2017
Project No. 17-2878.91.1

David Tillman, P.E.
Tillman & Associates Engineering, LLC
1720 SE 16th Avenue, Building 100
Ocala, Florida 34471

Reference: McGinley Property, SE Highway 484, Belleview, Florida
Geotechnical Site Explorations Summary

Dear Mr. McPherson:

Geo-Technologies, Inc. (Geo-Tech) has reviewed and evaluated previously performed geotechnical site explorations at the site to aid in the guide design and construction of future development.

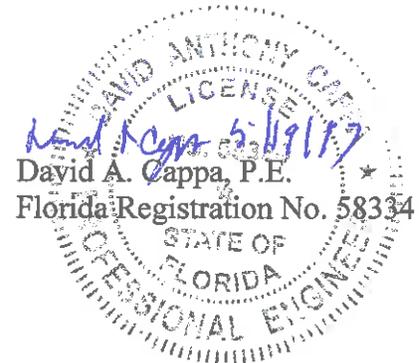
Geo-Tech appreciates the opportunity to provide our services for this project. Should you have any questions regarding the contents of this report or if we may be of further assistance, please do not hesitate to contact the undersigned.

Sincerely,



Matthew W. Holland
Geotechnical Project Manager

MWH/DAC/mh



Purposes

Purposes of this report are to characterize subsurface soil condition at the site to guide design and construction of future development based on previously performed geotechnical site explorations.

Site Exploration No. 1

On February 24, 2003, Geo-Tech performed eight (8) auger borings to depths ranging from twenty (20) to thirty (30) feet below existing site grade.

Based on the soil borings and associated laboratory testing performed, soils at the site consisted of fine sand, slightly clayey sand and clayey sand to the depths drilled. We refer the reader to Geo-Tech Report Project No. 031168.01 dated February 27, 2003 presented in Appendix I.

Site Exploration No. 2

On March 13, 2003, Geo-Tech performed ten (10) auger borings to depths ranging from twenty (20) to thirty (30) feet below existing site grade.

Based on the soil borings and associated laboratory testing performed, soils at the site consisted of fine sand, slightly clayey sand, clayey sand, sandy clay and slightly sandy clay to the depths drilled. We refer the reader to Geo-Tech Report Project No. 031168.01 dated March 21, 2003 presented in Appendix II.

Site Exploration No. 3

On June 26, 27 and 30, 2008, Geo-Tech performed three (3) Standard Penetration Test (SPT) borings to depths ranging from fifteen and one-half (15 ½) to forty (40) feet below existing site grade.

Based on the soil borings and associated laboratory testing performed, soils at the site consisted of fine sand, clayey sand, slightly sandy clay and limestone to the depths drilled. We refer the reader to Geo-Tech Report Project No. 08-135.267 dated July 7, 2008 presented in Appendix III.

Site Exploration No. 4

On October 28 and 29, 2014, Geo-Tech performed a Ground Penetrating Radar (GPR) survey throughout accessible areas of the subject site.

We refer the reader to the Sand Thickness Map Geo-Tech Geo-Tech Project No. 08-135.267 dated December 5, 2014 presented in Appendix IV.

Executive Review

The review of the four (4) previous reports for the site development area ranged from dates February 27, 2003 to December 5, 2014. These reports encompass Ground Penetrating Radar (GPR) studies, as well as, several series of auger borings and Standard Penetration Test (SPT) borings.

Based on the review of the composite services performed to date, the sites evaluated are suitable for commercial development with very limited site improvements. The near surface sand soils allow for ease of site development and add for superior site drainage characteristics. The deeper

soil borings indicated a dense confining layer which would make this area less karst sensitive for future development.

Closure/General Qualifications

This summary report has been prepared in order to aid evaluation of the project site for future development. The scope is limited to the specific project and the locations described herein.

APPENDIX I

**Geo-Tech Report Project No. 031168.01
February 27, 2003**

February 27, 2003
Project No. 031168.01

Richard McGinley
5700 SW Hwy 484
Ocala, FL 34473

Project: Site Exploration, Highway 484, Marion County, Florida

Reference: Preliminary Site Exploration

Dear Mr. McGinley:

As requested, Geo-Technologies, Inc. (GTI) has completed a preliminary geotechnical engineering evaluation at the subject site, Marion County, Florida. The purpose of the borings was to identify the subsurface soils within the proposed area and briefly comment on the suitability of the shallow soils for structural and roadway fill material.

On February 24, 2003, GTI performed eight (8) auger borings at the site to depths of about twenty (20) to thirty (30) feet below the existing site grade. The auger boring sites were staked in the field by you. Representative samples were obtained from the borings and returned to our laboratory for visual classification. General soil stratification is based on a visual review of recovered soil samples and interpretation of field boring logs by a geotechnical engineer. Based on the information obtained from our soil borings and laboratory testing, the upper sand soils are suitable for use as structural and roadway fill material. The deeper clayey sand soils would be suitable for use as stabilized subgrade material.

GTI trusts this report is sufficient to meet your immediate needs. Should you have any questions concerning this report or if we may be of further assistance, please do not hesitate to contact the undersigned.

Sincerely,

N. Jonathan Heath
N. Jonathan Heath
President

David A. Cappa 2/27/03
David A. Cappa, P.E.
Florida Registration No. 58334

Log of Borehole: AB-1

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL.

Project No: 031168.01

Boring Location: WEST CENTER AREA OF NORTH FIELD

Engineer: NJH/WES/DC

Client: RICHARD McGINLEY

Enclosure: NONE

GEO-TECH inc.
 Engineering Consultants
 3850 SE Maricamp Road
 Ocala, Florida 34471
 (352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface	0.0		
1		SAND TAN SAND (A-3)			
2					
3					
4		PERCENT PASSING 200 SIEVE = 0.9			
5					
6					
7					
8					
9					
10					
11					
12				1	
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24		SLIGHTLY CLAYEY SAND	24.0		
25		BROWN SLIGHTLY CLAYEY SAND (A-2-4)		2	
26			25.5		
27		CLAYEY SAND			
28		BROWN CLAYEY SAND (A-2-6)		3	
29					
30		End of Borehole	30.0		
31					
32					
33					
34					
35					

Depth to Ground Water: NOT FOUND

Drill Date: FEBRUARY 24, 2003

Drilled By: MK/CT

Drill Method: ASTM D-4700

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Log of Borehole: AB-2

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL.
Boring Location: EAST CENTER AREA OF NORTH FIELD
Client: RICHARD McGINLEY

Project No: 031168.01
Engineer: NJH/WES/DC
Enclosure: NONE

GEO-TECH inc.
 Engineering Consultants
 3850 SE Maricamp Road
 Ocala, Florida 34471
 (352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface	0.0		
1	[Symbol for Sand]	SAND TAN SAND (A-3)	0.0	1	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22			CLAYEY SAND		
23	[Symbol for Clayey Sand]	BROWN AND GREY CLAYEY SAND (A-2-6)			
24					
25					
26		PERCENT PASSING 200 SIEVE = 14.4			
27					
28					
29					
30			30.0		
31		End of Borehole			
32					
33					
34					
35					

Depth to Ground Water: NOT FOUND

Drill Date: FEBRUARY 24, 2003

Drilled By: MK/CT

Drill Method: ASTM D-4700

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Soil Profile : 2 OF 8

Log of Borehole: AB-3

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL.

Project No: 031168.01

Boring Location: CENTER AREA OF SOUTH FIELD

Engineer: NJH/WES/DC

Client: RICHARD McGINLEY

Enclosure: NONE

GEO-TECH inc.
 Engineering Consultants
 3850 SE Maricamp Road
 Ocala, Florida 34471
 (352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface	0.0		
1		SAND TAN TO BROWN SAND (A-3)			
2					
3					
4		PERCENT PASSING 200 SIEVE = 0.8			
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15				1	
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31		End of Borehole	30.0		
32					
33					
34					
35					

Depth to Ground Water: NOT FOUND

Drill Date: FEBRUARY 24, 2003

Drilled By: MK/CT

Drill Method: ASTM D-4700

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Soil Profile : 3 OF 8

Log of Borehole: AB-4

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL.

Project No: 031168.01

Boring Location: WEST CENTER AREA OF SOUTH FIELD

Engineer: NJHWES/DC

Client: RICHARD MCGINLEY

Enclosure: NONE

GEO-TECH inc.
 Engineering Consultants
 3850 SE Maricamp Road
 Ocala, Florida 34471
 (352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface	0.0		
1		SAND TAN TO BROWN SAND (A-3)			
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30		End of Borehole	30.0	1	
31					
32					
33					
34					
35					

Depth to Ground Water: NOT FOUND

Drill Date: FEBRUARY 24, 2003

Drilled By: MK/CT

Drill Method: ASTM D-4700

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Log of Borehole: AB-6

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL.

Project No: 031168.01

Boring Location: SOUTH CENTER AREA OF SOUTH FIELD

Engineer: NJH/WES/DC

Client: RICHARD McGINLEY

Enclosure: NONE

GEO-TECH inc.
Engineering Consultants
3850 SE Maricamp Road
Ocala, Florida 34471
(352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface	0.0		
1		SAND TAN SAND (A-3)			
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15				1	
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30		End of Borehole	30.0		
31					
32					
33					
34					
35					

Depth to Ground Water: NOT FOUND

Drill Date: FEBRUARY 24, 2003

Drilled By: MK/CT

Drill Method: ASTM D-4700

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Soil Profile : 6 OF 8

Log of Borehole: AB-7

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL.

Project No: 031188.01

Boring Location: EAST CENTER AREA OF SOUTH FIELD

Engineer: NJH/WES/DC

Client: RICHARD McGINLEY

Enclosure: NONE

GEO-TECH inc.
 Engineering Consultants
 3850 SE Maricamp Road
 Ocala, Florida 34471
 (352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface	0.0		
1		SAND TAN SAND (A-3)		1	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24		BROWN CLAYEY SAND (A-2-6)			
25					
26		PERCENT PASSING 200 SIEVE = 17.3			
27					
28					
29		End of Borehole	30.0		
30					
31					
32					
33					
34					
35					

Depth to Ground Water: NOT FOUND

Drill Date: FEBRUARY 24, 2003

Drilled By: MK/CT

Drill Method: ASTM D-4700

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Soil Profile : 7 OF 8

Log of Borehole: AB-8

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL

Project No: 031168.01

Boring Location: NORTH CENTER AREA OF SOUTH FIELD

Engineer: NJH/WES/DC

Client: RICHARD MCGINLEY

Enclosure: NONE

GEO-TECH Inc.
 Engineering Consultants
 3850 SE Maricamp Road
 Ocala, Florida 34471
 (352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface	0.0		
1		SAND TAN SAND (A-3)	0.0		
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12		CLAYEY SAND BROWN CLAYEY SAND (A-2-6)	11.5	1	
13					
14					
15					
16					
17					
18					
19					
20		End of Borehole	20.0	2	
21					
22					
23					
24					
25					

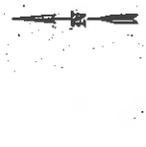
Depth to Ground Water: NOT FOUND

Drill Date: FEBRUARY 24, 2003

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Drilled By: MK/CT

Drill Method: ASTM D-4700



SURVEY REPORT
 1. LOCATION AND CONTROL LINES SHOWN
 MARION COUNTY BENCHMARK 484-484 (D.R.
 SPIND BLDG. 11.12)

2. FIELD SURVEY DATE: 5-5-2003

ADJUSTMENTS CONTINUED:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC
 SURVEY WAS MADE IN ACCORDANCE WITH THE
 TOPOGRAPHIC SURVEYING ACT AND THE
 RULES AND REGULATIONS THEREUNDER, AND
 THAT THE SAME IS TRUE AND CORRECT TO THE
 BEST OF MY KNOWLEDGE AND BELIEF, AND
 THAT I AM A LICENSED SURVEYOR IN THE
 STATE OF FLORIDA.

NOTES:
 1. THIS PROJECT HAS RECEIVED SPECIAL
 USE FROM THE COUNTY ENGINEER
 PROPERTY, AND SETBACKS ARE SPECIFIED IN
 THE PERMIT.

2. A 12" TYPE 5-3 CONCRETE PIPE WITH 12" DIA. MANHOLE SHALL BE INSTALLED AT THE POINT OF INTERSECTION OF THE PROPOSED DRIVE AND THE EXISTING DRIVE. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE.

3. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE.

4. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE.

5. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE.

6. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE.

7. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE.

8. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE.

9. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE.

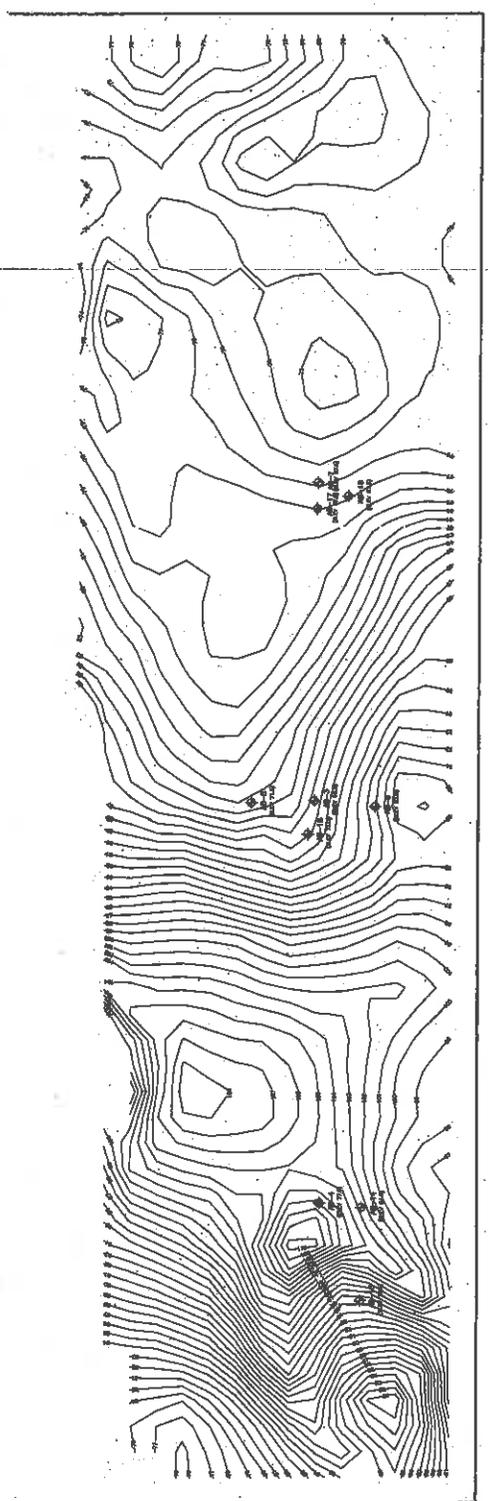
10. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE.

11. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE.

12. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE.

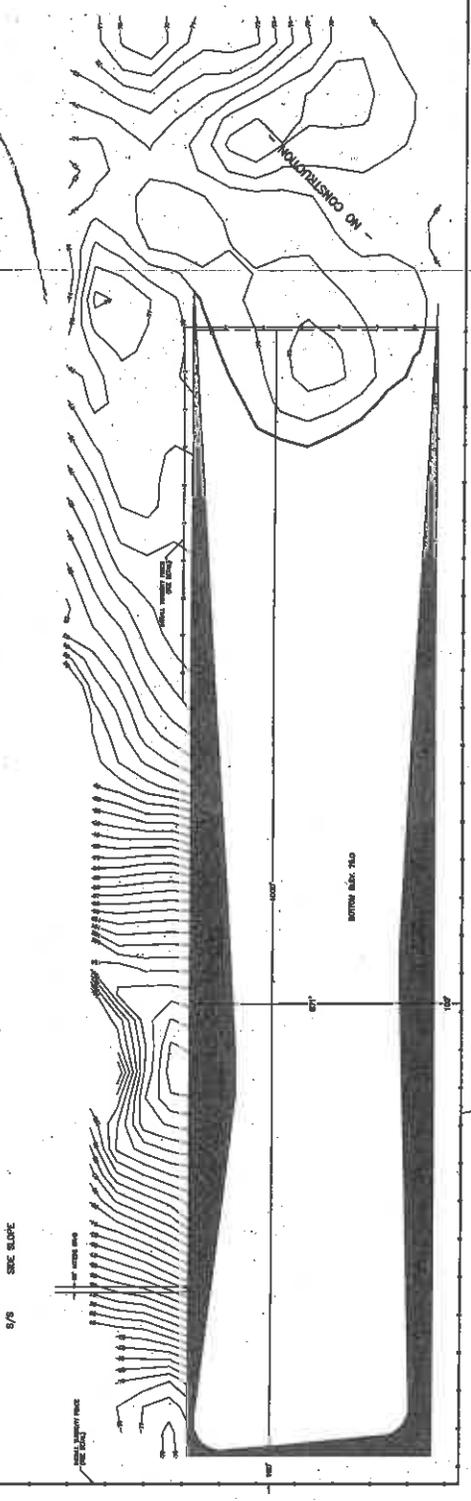
13. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE.

14. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE. THE PROPOSED DRIVE SHALL BE 12' WIDE AND SHALL BE CONSTRUCTED TO THE EXISTING DRIVE.



TOPOGRAPHIC SURVEY

LEGEND:
 EXISTING GROUND CONTOUR
 LOCATION OF SOIL BORINGS
 SEE SLOPE
 5/8"

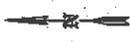


PROPOSED CONSTRUCTION

MORLEY SAND MINE SOUTH
 SEC. 9, TWP. 17 S., RGE. 21 E.
 MARION COUNTY, FLORIDA

ROBERT L. ROGERS ENGINEERING CO., INC.
 LIC. NO. 44074
 1105 S.E. 3RD AVE. SUITE 200A, FLORIDA 32401 (904) 622-8214
 1" = 200'
 6-13-03

44025742-001



NOTE:
 1. ELEVATION AND CONTOUR LINES SHOWN HEREON ARE BASED ON M.A.S.D. (S.D. 1-20) DATA SHEET 484-17.
 2. FIELD SURVEY DATES: 3-5-2003

ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THE TOPOGRAPHIC SURVEY AND CONTOUR LINES SHOWN HEREON WERE MADE BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF THEY COMPLY WITH ALL REQUIREMENTS OF THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS AND THE FLORIDA STATUTES, CHAPTER 472, F.L.S.

PROFESSIONAL SURVEYOR'S SIGNATURE
 STATE OF FLORIDA

NOTE:
 UNDER & BEHIND THE SIGNATURE AND THE SURVEYOR'S SEAL, THE SURVEYOR'S LICENSE NUMBER AND NUMBER FOR ENDORSEMENT SHOULD BE PLACED. THIS INFORMATION IS REQUIRED FOR ALL PURPOSES ONLY AND IS NOT VALID.

NOTE:
 1. THIS PROJECT HAS BEEN DESIGNED FOR THE PROPOSED ROADWAY AND THE PROPOSED DRIVEWAY AND DRIVEWAY ARE SHOWN ON THIS PLAN.
 2. THE MAIL ROAD FROM THIS PROJECT WILL BE 12' TYPE 5-3 ASPHALT OVER 6" TYPE 1-2 TYPE 5-3 GRANULAR FILL OVER 6" UNGRADED SUBGRADE.
 3. THE PAVED DRIVEWAY WILL BE 30' IN WIDTH WITH 12' TYPE 5-3 GRANULAR FILL OVER 6" UNGRADED SUBGRADE.
 4. THE PROPOSED DRIVEWAY WILL BE 12' TYPE 5-3 GRANULAR FILL OVER 6" UNGRADED SUBGRADE.
 5. THE PROPOSED DRIVEWAY WILL BE 12' TYPE 5-3 GRANULAR FILL OVER 6" UNGRADED SUBGRADE.
 6. THE PROPOSED DRIVEWAY WILL BE 12' TYPE 5-3 GRANULAR FILL OVER 6" UNGRADED SUBGRADE.
 7. THE PROPOSED DRIVEWAY WILL BE 12' TYPE 5-3 GRANULAR FILL OVER 6" UNGRADED SUBGRADE.
 8. THE PROPOSED DRIVEWAY WILL BE 12' TYPE 5-3 GRANULAR FILL OVER 6" UNGRADED SUBGRADE.
 9. THE PROPOSED DRIVEWAY WILL BE 12' TYPE 5-3 GRANULAR FILL OVER 6" UNGRADED SUBGRADE.
 10. THE PROPOSED DRIVEWAY WILL BE 12' TYPE 5-3 GRANULAR FILL OVER 6" UNGRADED SUBGRADE.

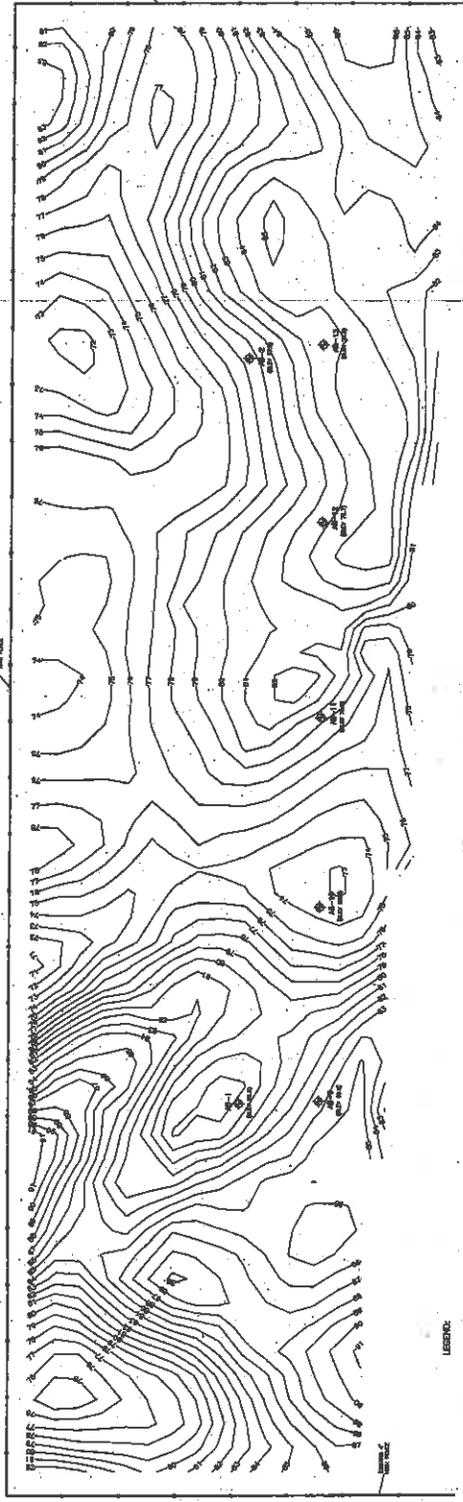


APPROVED FOR THE PROJECT
 PROFESSIONAL ENGINEER
 STATE OF FLORIDA
 LICENSE NO. 17113

MCCRALEY SAND MINE NORTH
 SEC. 9, TWP. 17 S., RGE. 10 E.
 HARRON COUNTY, FLORIDA

ROBERT L. ROGERS ENGINEERING CO., INC.
 LIC. NO. 17113
 1108 S.E. 2nd Ave. GAINESVILLE, FLORIDA 32607 (889) 822-5814
 1" = 200'
 8-13-03
 2 OF 3
 44025742.dgn

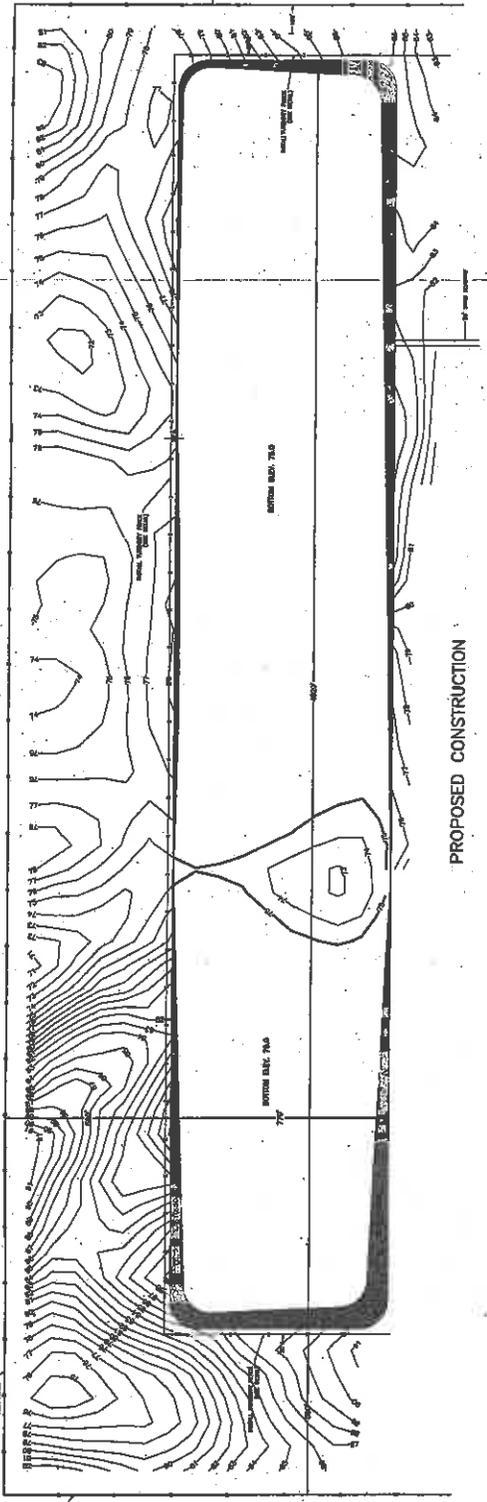
MARION OAKS UNIT 10



TOPOGRAPHIC SURVEY

LEGEND:
 - - - - - EXISTING GROUND CONTOUR
 - - - - - LOCATION OF SOIL BERM
 - - - - - SIDE SLOPE
 (ELEV. 70.0) ELEVATION OF BOTTOM OF SAND

MARION OAKS UNIT 10



PROPOSED CONSTRUCTION

APPENDIX II

Geo-Tech Report Project No. 031168.01

March 21, 2003

GEO-TECH, INC.

ENGINEERING CONSULTANTS IN GEOTECHNICAL • ENVIRONMENTAL • CONSTRUCTION MATERIALS TESTING

March 21, 2003
Project No. 031168.01

Richard McGinley
5700 SW Hwy 484
Ocala, FL 34473

Project: Site Exploration, Highway 484, Marion County, Florida

Reference: Additional Site Exploration

Dear Mr. McGinley:

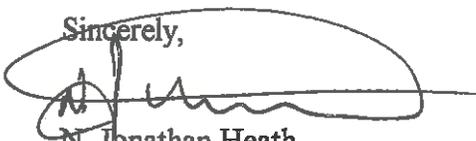
As requested, Geo-Technologies, Inc. (GTI) has completed an additional geotechnical engineering evaluation at the subject site on CR 484 in Marion County, Florida. The purpose of the borings was to identify the subsurface soils within the proposed sand mine area and briefly comment on the suitability of the shallow soils for structural and roadway fill material.

On March 13, 2003, GTI performed ten (10) additional auger borings at the site to depths of about twenty (20) to thirty (30) feet below the existing site grade. In addition, GTI performed eight (8) field horizontal permeabilities adjacent to our boring locations. The measured coefficients of horizontal permeability are reported on the soil profiles at the appropriate depths. The auger boring sites were staked in the field by you.

Representative samples were obtained from the borings and returned to our laboratory for visual classification. General soil stratification is based on a visual review of recovered soil samples and interpretation of field boring logs by a geotechnical engineer. Based on the information obtained from our soil borings, the upper sand soils are suitable for use as structural and roadway fill material. The deeper clayey sand soils would be suitable for use as stabilized subgrade material. The sandy clay and slightly sandy clay soils found are unsuitable for use as structural and roadway fill material due to their high shrink/swell behavior. Generally, these clay soils swell upon wetting and shrink upon drying thus causing movement of structures placed on or above them.

GTI trusts this report is sufficient to meet your immediate needs. Should you have any questions concerning this report or if we may be of further assistance, please do not hesitate to contact the undersigned.

Sincerely,



N. Jonathan Heath
President

David A. Cappa 03/21/03
David A. Cappa, P.E.
Florida Registration No. 58334

Log of Borehole: AB-9

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL

Project No: 031168.01

Boring Location: WEST CENTER AREA OF NORTH FIELD

Engineer: NJH/WES/DC

Client: RICHARD MCGINLEY

Enclosure: NONE

GEO-TECH inc.
 Engineering Consultants
 3850 SE Maricamp Road
 Ocala, Florida 34471
 (352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface			
0		SAND GREY TO LIGHT BROWN SAND (A-3)	0.0		
1					
2					
3					
4					
5					
6					
7					
8				1	
9					
10					
11					
12					
13					
14					
15					
16		CLAYEY SAND BROWN CLAYEY SAND (A-2-6)	15.5		
17				2	
18					
19					
20					
21		SLIGHTLY SANDY CLAY LIGHT GREY AND BROWN SLIGHTLY SANDY CLAY (A-7)	20.0		
22				3	
23					
24					
25		End of Borehole	25.0		
26					
27					
28					
29					
30					

Depth to Ground Water: NOT FOUND

Drill Date: MARCH 13, 2003

Drilled By: MK/CT

Drill Method: ASTM D-4700

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Log of Borehole: AB-10

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL.

Project No: 031168.01

Boring Location: APPROX. 1000' E OF AB-9

Engineer: NJH/WES/DC

Client: RICHARD MCGINLEY

Enclosure: NONE

GEO-TECH inc.
 Engineering Consultants
 3850 SE Maricamp Road
 Ocala, Florida 34471
 (352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface	0.0		
1	[Symbol]	SAND GREY TO LIGHT BROWN SAND (A-3)			
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15		SLIGHTLY CLAYEY SAND BROWN SLIGHTLY CLAYEY SAND (A-2-4)	14.5	1	
16				2	
17					
18		SANDY CLAY BROWN AND LIGHT GREY SANDY CLAY (A-6)	17.5	3	
19					
20		End of Borehole	20.0		
21					
22					
23					
24					
25					

FIELD HORIZONTAL PERMEABILITY @ 4.0 FEET = 34.0 FEET/DAY

Depth to Ground Water: **NOT FOUND**

Drill Date: **MARCH 13, 2003**

Drilled By: **MK/CT**

Drill Method: **ASTM D-4700**

REMARKS: **AASHTO SOIL GROUP CLASSIFICATION**

Log of Borehole: AB-11

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL

Project No: 031168.01

Boring Location: APPROX. 1000' E OF AB-10

Engineer: NJH/WES/DC

Client: RICHARD MCGINLEY

Enclosure: NONE

GEO-TECH inc.
Engineering Consultants
3850 SE Maricamp Road
Ocala, Florida 34471
(352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface			
1		SAND GREY TO LIGHT BROWN SAND (A-3)	0.0	1	FIELD HORIZONTAL PERMEABILITY @ 3.5 FEET = 28.0 FEET/DAY
2					
3					
4					
5		CLAYEY SAND BROWN AND GREY CLAYEY SAND (A-2-6)	4.5	2	
6					
7					
8					
9					
10		SLIGHTLY CLAYEY SAND BROWN AND GREY SLIGHTLY CLAYEY SAND (A-2-4)	10.0	3	
11					
12					
13					
14		CLAYEY SAND BROWN AND GREY CLAYEY SAND (A-2-6)	14.0	4	
15					
16					
17					
18					
19					
20		End of Borehole	20.0		
21					
22					
23					
24					
25					

Depth to Ground Water: NOT FOUND

Drill Date: MARCH 13, 2003

Drilled By: MK/CT

Drill Method: ASTM D-4700

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Log of Borehole: AB-12

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL.

Project No: 031168.01

Boring Location: APPROX. 1000' E OF AB-11

Engineer: NJH/WES/DC

Client: RICHARD MCGINLEY

Enclosure: NONE

GEO-TECH Inc.
 Engineering Consultants
 3850 SE Maricamp Road
 Ocala, Florida 34471
 (352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface	0.0		
1		SAND GREY TO LIGHT BROWN SAND (A-3)			
2					
3					
4					
5					
6				1	
7					
8					
9					
10					
11					
12		CLAYEY SAND TO SANDY CLAY BROWN AND LIGHT GREY CLAYEY SAND TO SANDY CLAY (A-6)	11.5		
13					
14					
15					
16				2	
17					
18					
19					
20		End of Borehole	20.0		
21					
22					
23					
24					
25					

FIELD HORIZONTAL PERMEABILITY @ 4.0 FEET = 33.6 FEET/DAY

Depth to Ground Water: NOT FOUND

Drill Date: MARCH 13, 2003

Drilled By: MK/CT

Drill Method: ASTM D-4700

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Soil Profile : 4 OF 10

Log of Borehole: AB-13

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL.

Project No: 031168.01

Boring Location: APPROX. 1000' E. OF AB-12

Engineer: NJH/WES/DC

Client: RICHARD MCGINLEY

Enclosure: NONE

GEO-TECH inc.
 Engineering Consultants
 3850 SE Maricamp Road
 Ocala, Florida 34471
 (352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface	0.0		
1		SAND GREY TO LIGHT BROWN SAND (A-3)			
2					
3					
4					
5					
6					
7				1	
8					
9					
10					
11					
12					
13					
14					
15		SLIGHTLY CLAYEY SAND BROWN SLIGHTLY CLAYEY SAND (A-2-4)	14.0	2	
16					
17		CLAYEY SAND BROWN CLAYEY SAND (A-2-6)	16.0		
18				3	
19					
20					
21		End of Borehole	20.0		
22					
23					
24					
25					

FIELD HORIZONTAL PERMEABILITY @ 4.0 FEET = 32.1 FEET/DAY

Depth to Ground Water: NOT FOUND

Drill Date: MARCH 13, 2003

Drilled By: MK/CT

Drill Method: ASTM D-4700

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Log of Borehole: AB-14

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL.

Project No: 031168.01

Boring Location: WEST CENTER AREA OF SOUTH FIELD

Engineer: NJH/WES/DC

Client: RICHARD MCGINLEY

Enclosure: NONE

GEO-TECH inc.
Engineering Consultants
3850 SE Maricamp Road
Ocala, Florida 34471
(352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface			
1		SAND GREY TO LIGHT BROWN SAND (A-3)	0.0	1	FIELD HORIZONTAL PERMEABILITY @ 4.0 FEET = 32.1 FEET/DAY
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19		SLIGHTLY CLAYEY SAND	19.0	2	
20		BROWN SLIGHTLY CLAYEY SAND (A-2-4)	20.0		
21		CLAYEY SAND BROWN AND GREY CLAYEY SAND (A-2-6)		3	
22					
23					
24					
25		End of Borehole	25.0		
26					
27					
28					
29					
30					

Depth to Ground Water: NOT FOUND

Drill Date: MARCH 13, 2003

Drilled By: MK/CT

Drill Method: ASTM D-4700

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Log of Borehole: AB-15

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL.

Project No: 031168.01

Boring Location: APPROX. 500' W OF AB-14

Engineer: NJH/WES/DC

Client: RICHARD MCGINLEY

Enclosure: NONE

GEO-TECH inc.
 Engineering Consultants
 3850 SE Maricamp Road
 Ocala, Florida 34471
 (352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface			
1		SAND GREY TO LIGHT BROWN SAND (A-3)	0.0	1	FIELD HORIZONTAL PERMEABILITY @ 4.0 FEET = 33.2 FEET/DAY
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24		SLIGHTLY CLAYEY SAND BROWN SLIGHTLY CLAYEY SAND (A-2-4)	23.0	2	
25					
26					
27					
28					
29		CLAYEY SAND BROWN AND GREY CLAYEY SAND (A-2-6)	28.5	3	
30			30.0		
31					
32		End of Borehole			
33					
34					
35					

Depth to Ground Water: NOT FOUND

Drill Date: MARCH 13, 2003

Drilled By: MK/CT

Drill Method: ASTM D-4700

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Soil Profile : 7 OF 10

Log of Borehole: AB-16

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL.

Project No: 031168.01

Boring Location: APPROX. CENTER AREA OF SOUTH FIELD

Engineer: NJH/WES/DC

Client: RICHARD MCGINLEY

Enclosure: NONE

GEO-TECH inc.
 Engineering Consultants
 3850 SE Maricamp Road
 Ocala, Florida 34471
 (352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface			
0		SAND GREY TO LIGHT BROWN SAND (A-3)	0.0		
1					
2					
3					
4					
5					
6					
7				1	
8					
9					
10					
11					
12					
13					
14		CLAYEY SAND	14.0		
15		BROWN AND GREY CLAYEY SAND (A-2-6)		2	
16					
17		SANDY CLAY	17.0		
18		BROWN AND GREY SANDY CLAY (A-6)		3	
19					
20		End of Borehole	20.0		
21					
22					
23					
24					
25					

FIELD HORIZONTAL PERMEABILITY @ 4.0 FEET = 33.4 FEET/DAY

Depth to Ground Water: NOT FOUND

Drill Date: MARCH 13, 2003

Drilled By: MK/CT

Drill Method: ASTM D-4700

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Log of Borehole: AB-17

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL.

Project No: 031168.01

Boring Location: APPROX. EAST CENTER AREA OF SOUTH FIELD

Engineer: NJH/WES/DC

Client: RICHARD MCGINLEY

Enclosure: NONE

GEO-TECH inc.
 Engineering Consultants
 3850 SE Maricamp Road
 Ocala, Florida 34471
 (352) 694-7711

SUBSURFACE PROFILE				SAMPLE		
Depth	Symbol	Description	Depth/Elev.	Number	Remarks	
0		Ground Surface				
1		SAND GREY TO LIGHT BROWN SAND (A-3)	0.0	1	FIELD HORIZONTAL PERMEABILITY @ 4.0 FEET = 33.6 FEET/DAY	
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13			SLIGHTLY CLAYEY SAND			13.0
14		BROWN SLIGHTLY CLAYEY SAND (A-2-4)				
15						
16						
17		SAND	17.0	3		
18		LIGHT BROWN SAND (A-3)				
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31		End of Borehole	30.0			
32						
33						
34						
35						

Depth to Ground Water: NOT FOUND

Drill Date: MARCH 13, 2003

Drilled By: MK/CT

Drill Method: ASTM D-4700

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Soil Profile : 9 OF 10

Log of Borehole: AB-18

Project: PROPOSED SAND MINE, CR 484, MARION COUNTY, FL.

Project No: 031168.01

Boring Location: APPROX. EAST AREA OF SOUTH FIELD

Engineer: NJH/WES/DC

Client: RICHARD MCGINLEY

Enclosure: NONE

GEO-TECH inc.
Engineering Consultants
3850 SE Maricamp Road
Ocala, Florida 34471
(352) 694-7711

SUBSURFACE PROFILE				SAMPLE	
Depth	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface			
0		SAND GREY TO LIGHT BROWN SAND (A-3)	0.0		
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11				1	
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22		CLAYEY SAND	22.0		
23		BROWN CLAYEY SAND (A-2-6)		2	
24					
25					
26		SANDY CLAY	26.0		
27		BROWN AND GREY SANDY CLAY (A-6)		3	
28					
29					
30					
31		End of Borehole	30.0		
32					
33					
34					
35					

Depth to Ground Water: NOT FOUND

Drill Date: MARCH 13, 2003

Drilled By: MK/GT

Drill Method: ASTM D-4700

REMARKS: AASHTO SOIL GROUP CLASSIFICATION

Soil Profile : 10 OF 10

APPENDIX III

**Geo-Tech Report Project No. 08-135.267
July 7, 2008**

July 7, 2008
Project No. 08-135.267

Mr. Joe London, P.E.
London Engineering & Associates, Inc.
2201 SE 30th Avenue, Suite 101
Ocala, FL 34471

Project: Proposed Single Story Masonry Structure with Mezzanine, Sites 3, 4 & 5,
Marion County, Florida
Preliminary Geotechnical Site Exploration

Dear Mr. London:

As requested, Geo-Technologies, Inc. (Geo-Tech) has completed a preliminary geotechnical engineering evaluation at three (3) project sites. The purpose of the borings was to identify the subsurface soils within the proposed building site and briefly comment on the suitability of the soils for conventional foundation systems, roadways and drainage retention areas (DRA).

On June 26, 27 and 30, 2008, Geo-Tech performed nine (9) Standard Penetration Test (SPT) borings at the sites to depths ranging from fifteen and one-half (15 ½) to forty (40) feet below the existing site grade in the planned building areas. The building areas were determined from the site plans provided by you, site locations are listed on Figure 1. Representative samples were obtained from the borings and returned to our laboratory for visual classification. General soil stratification is based on a visual review of recovered soil samples and interpretation of field boring logs by a geotechnical engineer.

Sampling & Testing Descriptions

Standard Penetration Testing

A Standard Penetration Test (SPT) boring (ASTM D-1586) is defined as a standard split-barrel sampler driven into the soil by a one hundred and forty (140) pound hammer falling thirty (30) inches. The number of blows required to drive the sampler one (1) foot, after seating six (6) inches, is designated resistance, or "N"-Value is an index to soil strength and consistency.

Samples recovered during performance of our SPT borings were visually classified in the field and representative portions of the samples were placed in containers and transported to our laboratory for further analysis.

Gradation (-200) Testing

A specimen of soil is washed over a 75- μ m (No. 200) sieve. Clay and other particles that are dispersed by the wash water, as well as water-soluble materials, are removed from the soil during the test. The loss in mass resulting from the wash treatment is calculated as mass percent of the original sample and is reported as the percentage of material finer than a 75- μ m (No. 200) sieve by washing.

Atterberg Limits Testing

Atterberg Limits are used to determine the state of consistency for fine grain soils. There are four (4) states which are used to define the consistency of the soil. These states are liquid, plastic, semi-solid, and solid. The point of transition from one state to the next is identified as the Liquid Limit (LL), Plastic Limit (PL), and Shrinkage Limit (SL), respectively. Clay soils which are initially very high in moisture content transition from a liquid state to a plastic state as moisture content decreases.

Generally, soils with high liquid limits are clays and have poor engineering properties. Soils with a high clay content are cohesive (stick together), plastic (moldable), very compressible (able to consolidate), and nearly impervious (impenetrable by water).

Clay soils become unstable with changes in moisture content. Soils with high clay content also are subject to swelling and shrinking during normal changes in moisture content. The swell/shrinkage cycle will lead to foundation failure.

The range of moisture contents at which a soil is considered to be plastic are those which fall between the liquid limit and the plastic limit. The Liquid Limit test measures the moisture content at which a cohesive or clay soil changes from a plastic to a liquid state. The Plastic Limit tests measures the moisture content at which the clay soil changes from a semi-solid state to a plastic state. Plasticity Index (PI) is the difference between the liquid limit and the plastic limit. Plasticity Index is an indication of the tendency of a soil to absorb water on the particle surfaces. Some clayey soils swell when wetted and shrink when dried. The larger the plastic index the greater the shrink/swell tendency. Plasticity Index is an indicator of the suitability of the clay fraction of a soil or soil-aggregate for use in construction.

U.S. Department of Agriculture Soil Conservation Survey

Site 5

According to the U.S. Department of Agriculture Soil Conservation Survey for Marion County, Florida, the soils at Site 5 are mapped as Apopka sand, 0 to 5 percent slopes, Candler sand, 0 to 5 percent slopes, and Candler sand 5 to 12 percent slopes.

Apopka Sand, 0 to 5 percent slopes

According to the U.S. Department of Agriculture Soil Conservation Survey for Marion County, Florida, the soils at the project site are Apopka Sand with 0 to 5 percent slopes. Apopka soils are nearly level to gently sloping, well drained soil that generally occurs as small areas in the uplands. The estimated seasonal high water table is at a depth of more than 72 inches. Permeability is rapid in the upper 55 inches, and moderate below. The soil hydrologic group for Apopka soils is group A.

Candler sand, 0 to 5 percent slopes

Candler soils are nearly level to gently sloping, excessively drained sandy soil that occurs as small and large areas on sandy ridges in the uplands. The estimated seasonal high water table is at a depth of more than 72 inches. Permeability is very rapid to a depth of 67 inches, rapid from 67 to 109 inches, and moderately rapid below. The soil hydrologic group for Candler soils is group A.

Candler sand, 5 to 12 percent slopes

Candler soils are sloping to strongly sloping, excessively drained sandy soil that occurs as small and large areas on sandy ridges in the uplands. The estimated seasonal high water table is at a depth of more than 72 inches. Permeability is very rapid to a depth of 67 inches, rapid from 67 to 109 inches, and moderately rapid below. The soil hydrologic group for Candler soils is group A.

Subsurface Conditions

Site 5

Boring locations and general subsurface conditions found in our soil borings (B-7 thru B-9) at Site 5 are graphically presented on the soil profiles in Appendix I. Horizontal lines designating the interface between differing materials found represent approximate boundaries. Transition between soil layers is typically gradual.

Soils found at our boring locations generally consisted of a surficial layer of fine sand ranging from approximately eight and one-half (8 ½) to thirteen and one-half (13 ½) feet thick underlain by slightly clayey sand, clayey sand, slightly sandy clay, and limestone to the depths drilled.

Shallow sandy soils found at our SPT borings from existing site grade to approximately ten (10) feet below existing site grade were typically very loose to loose with SPT "N"-values ranging from one (1) to six (6) blows per foot (bpf). Deeper sandy soils found at our SPT borings from approximately ten (10) to forty (40) feet below existing site grade were typically loose to dense with SPT "N"-values ranging from five (5) to thirty-two (32) blows per foot (bpf). Deep clay soils found at our SPT borings from approximately twenty-three (23) to forty (40) feet below existing site grade were typically stiff to hard with SPT "N"-values ranging from fourteen (14) to thirty-five (35) blows per foot (bpf). Limestone was found at our SPT boring B-7 at a depth of approximately twenty-four and one-half (24 ½) feet below existing site grade.

The free ground water level was not found at our boring locations at the time of drilling.

Gradation (-200)

Fine sand, clayey sand, and slightly sandy clay soils found at our boring locations B-7, B-8, and B-9 yielded passing fines ranging from four (4) to ninety-four (94) percent on the samples tested. We refer the reader to the attached soil profiles for the various soils found.

Atterberg Limits

Clayey sand and slightly sandy clay soils found at our boring location B-7, B-8, and B-9 were moderately to highly plastic with liquid limits ranging from twenty-four (24) to eighty-seven (87) and plasticity indices ranging from eleven (11) to fifty-four (54) on the samples tested. We refer the reader to the attached soil profiles for the various soils found.

Preliminary Evaluation and Recommendations

Site 5

Soil borings B-7 thru B-9 were performed at the proposed Site 5. Preconstruction concerns for Site 5 is the very loose sand soils found at our boring locations B-7, B-8 and B-9. Typically, these very loose sand soils are overexcavated below the footings and floor slabs and compacted in lifts as the desired elevation is achieved. The sand soils found at our boring locations B-7, B-8 and B-9 were approximately eight and one-half (8 ½) to thirteen and one-half (13 ½) feet thick and are suitable for conventional footings, drainage retention areas and underground utilities. The sand soils may need to be stabilized in the roadway and parking lot area to be utilized as subgrade.

Geo-Tech recommends that additional soil borings be performed to aid in the design of the buildings, parking lots, roadways, drainage retention areas, septic drainfield, ect. These borings should be performed after a conceptual plan is developed for the proposed building sites, roadways, parking lots, drainage retention areas, septic systems, ect.

Closure

Preliminary recommendations and conclusions presented in this report are based on the data obtained from the SPT soil borings. Variations in soils may be present adjacent to or between the borings which were not apparent in the boring logs presented. If variations are found during construction of the project, it will be necessary to review the preliminary recommendations found in this report.

Geo-Tech trusts this report is sufficient to meet your immediate needs. Should you have any questions concerning this report or if we may be of further assistance, please do not hesitate to contact the undersigned.

Sincerely,



Gerald W. Green, Jr.
Soil & Water Scientist

GWG/DAC/jm



APPENDIX I
SOIL PROFILES, SITE MAP
&
BORING LOCATION PLANS

Log of Borehole: B-7

Project: PROPOSED SITE 5, MARION COUNTY, FL

Project No: 08-135.267

Boring Location: (SEE SITE PLANS)

Engineer: NJH/DAC

Client: LONDON ENGINEERING & ASSOCIATES, INC.

Enclosure: SITE PLANS

GEO-TECH
ENGINEERING CONSULTANTS
3850 SE Maricamp Road
Ocala, Florida 34471

Depth (ft)	Symbol	Description	Consistency	Depth/Elev.	Number	Type	Blows/ft	Standard Penetration Test									
								10	20	30	40	50	60				
0		Ground Surface															
1		<i>FINE SAND</i>	VERY LOOSE	1.5	1		2										
2		DARK BROWN FINE SAND (SP)	VERY LOOSE		2		3										
3		<i>FINE SAND</i>	VERY LOOSE		3		2										
4		TAN FINE SAND (SP)	VERY LOOSE		4		4										
5		<i>LABORATORY TESTING @ APPROX 2.0 FEET</i> % PASSING #200 SIEVE = 5 % NATURAL MOISTURE = 0	VERY LOOSE		5		3										
6			VERY LOOSE														
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14		<i>CLAYEY SAND</i>	LOOSE	13.5	6		5										
15		BROWN CLAYEY SAND (SC)															
16		<i>LABORATORY TESTING @ APPROX 14.0 FEET</i> % PASSING #200 SIEVE = 15 % NATURAL MOISTURE = 12															
17																	
18																	
19		<i>CLAYEY SAND</i>	MEDIUM DENSE	19.0	7		18										
20		TAN AND BROWN CLAYEY SAND (SC)															
21																	
22																	
23																	
24		<i>SLIGHTLY SANDY CLAY</i>	HARD	23.0													
25		BROWN SLIGHTLY SANDY CLAY (CH)	28 BLOWS FOR 12"	24.5	8		35										
26		<i>LABORATORY TESTING @ APPROX 24.0 FEET</i> ATTEBERG LIMITS: LL=67, PL=33, PI=54 % PASSING #200 SIEVE = 34 % NATURAL MOISTURE = 45			9		28										
27					10		0										
28			W.O.H.		11		6										
29			6 BLOWS FOR 12"		12		4										
30		<i>LIMESTONE</i>	4 BLOWS FOR 12"		13		9										
31		LIGHT BROWN LIMESTONE	9 BLOWS FOR 12"														
32			50 BLOWS FOR 6"	34.5													
33																	
34																	
35		End of Borehole															
36																	
37																	
38																	
39																	
40																	
41																	
42																	
43																	
44																	
45																	
46																	
47																	

Ground Water Depth: NOT FOUND

Drill Date: JUNE 30, 2008

Drilled By: LA/AW

Drill Method: ASTM D-1586

Remarks: (SP) UNIFIED SOIL CLASSIFICATION SYMBOL AS DETERMINED BY VISUAL REVIEW

Soil Profile : 7 OF 9

Log of Borehole: B-8

Project: PROPOSED SITE 5, MARION COUNTY, FL

Project No: 08-135.267

Boring Location: (SEE SITE PLANS)

Engineer: NJH/DAC

Client: LONDON ENGINEERING & ASSOCIATES, INC.

Enclosure: SITE PLANS

GEO-TECH
ENGINEERING CONSULTANTS
3850 SE Maricamp Road
Ocala, Florida 34471

Depth (ft)	Symbol	Description	Consistency	Depth/Elev.	Number	Type	Blows/ft	Standard Penetration Test									
								10	20	30	40	50	60				
0		Ground Surface															
1		FINE SAND	VERY LOOSE	2.0	1		2										
2		DARK BROWN FINE SAND (SP)	VERY LOOSE	4.0	2		2										
3		FINE SAND	VERY LOOSE														
4		LIGHT BROWN FINE SAND (SP)	VERY LOOSE		3		2										
5		FINE SAND	VERY LOOSE														
6		TAN FINE SAND (SP)	LOOSE		4		6										
7			LOOSE	8.5	5		5										
8		CLAYEY SAND	LOOSE														
9		BROWN CLAYEY SAND (SC)															
10		LABORATORY TESTING @ APPROX 9.0 FEET % PASSING -200 SIEVE = 21 % NATURAL MOISTURE = 15		13.0													
11		CLAYEY SAND	MEDIUM DENSE		6		13										
12		TAN AND LIGHT BROWN CLAYEY SAND (SC)		16.5													
13		CLAYEY SAND	MEDIUM DENSE														
14		REDDISH BROWN, GREY AND TAN CLAYEY SAND (SC)			7		27										
15			MEDIUM DENSE	23.5													
16		SLIGHTLY CLAYEY SAND	MEDIUM DENSE		8		20										
17		LIGHT GREY AND LIGHT BROWN SLIGHTLY CLAYEY SAND (SP-SC)		27.0													
18		CLAYEY SAND	MEDIUM DENSE														
19		LIGHT GREY CLAYEY SAND (SC)			9		17										
20			MEDIUM DENSE	32.0													
21		CLAYEY SAND	MEDIUM DENSE														
22		LIGHT GREY AND REDDISH BROWN CLAYEY SAND (SC)			10		14										
23			MEDIUM DENSE	35.5													
24		SLIGHTLY SANDY CLAY															
25		GREEN AND BROWN SLIGHTLY SANDY CLAY (CH)															
26		LABORATORY TESTING @ APPROX 39.0 FEET ATTERBERG LIMITS LL=84 PL=27 PI=37 % PASSING -200 SIEVE = 68 % NATURAL MOISTURE = 55		40.0	11		14										
27			STIFF														
28		End of Borehole															

Ground Water Depth: NOT FOUND

Drill Date: JUNE 30, 2008

Drilled By: LA/AW

Drill Method: ASTM D-1586

Remarks: (SP) UNIFIED SOIL CLASSIFICATION SYMBOL AS DETERMINED BY VISUAL REVIEW

Soil Profile : 8 OF 9

Project: PROPOSED SITE 5, MARION COUNTY, FL

Project No: 09-100-007

Boring Location: (SEE SITE PLANS)

Engineer: NJH/DAG

Client: LONDON ENGINEERING & ASSOCIATES, INC.

Enclosure: SITE PLANS

ENGINEERING CONSULTANTS
3850 SE Maricamp Road
Ocala, Florida 34471

Depth (ft)	Symbol	Description	Consistency	Depth/Elev.	Number	Type	Blows/ft	Standard Penetration Test									
								10	20	30	40	50	60				
0		Ground Surface															
1.5		DARK BROWN FINE SAND (SP)	VERY LOOSE	1.5	1		2										
2		LIGHT BROWN FINE SAND (SP)	VERY LOOSE		2		2										
3			VERY LOOSE		3		1										
4			VERY LOOSE		4		2										
5			VERY LOOSE		5		2										
10.5				10.5													
13		REDDISH BROWN CLAYEY SAND (SC)	MEDIUM DENSE		6		25										25
18			DENSE		7		32										32
23.5				23.5													
25		REDDISH BROWN AND TAN CLAYEY SAND (SC)	MEDIUM DENSE		8		20										20
29			MEDIUM DENSE		9		18										18
32.0				32.0													
34		BROWN AND REDDISH BROWN CLAYEY SAND (SC)	MEDIUM DENSE		10		22										22
40.0			MEDIUM DENSE	40.0	11		25										25
41		End of Borehole															

Ground Water Depth: NOT FOUND

Drill Date: JUNE 30, 2008

Remarks: (SP) UNIFIED SOIL CLASSIFICATION SYMBOL AS DETERMINED BY VISUAL REVIEW

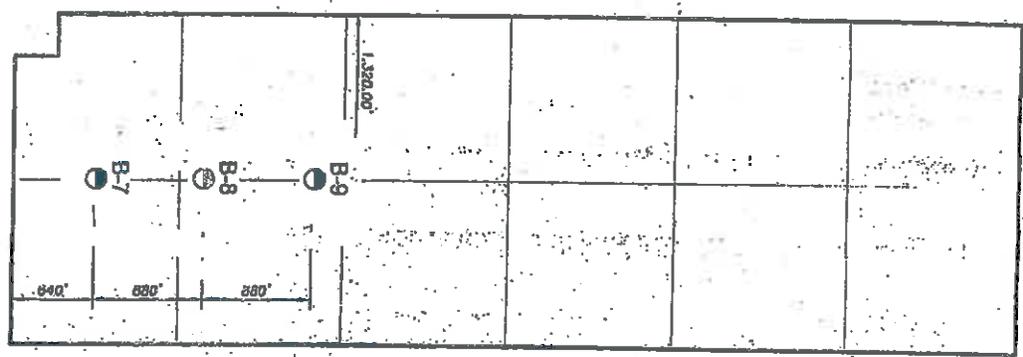
Drilled By: LA/AW

Drill Method: ASTM D-1586

Soil Profile : 9 OF 9



S.W. HWY. 484



SITE 5

● = STANDARD PENETRATION TEST (SPT) BORING LOCATION

NOTE

BORING LOCATIONS WERE MEASURED FROM APPROXIMATE PROPERTY CORNERS USING A MEASURING WHEEL.

LONDON ENGINEERING & ASSOCIATES, INC.
 SITES 3, 4 & 5
 MARION COUNTY, FLORIDA

BORING LOCATION PLAN

GEO-TECH
 ENGINEERING CONSULTANTS

■ GEOTECHNICAL ■ ENVIRONMENTAL
 ■ CONSTRUCTION MATERIALS TESTING ■ GEOPHYSICAL EXPLORATION
 3850 S.E. MARICAMP RD - OCALA, FLORIDA 34711 - (352) 684-7711

REV. A 7/3/06

PROJECT NO.
08-135,267

SCALE: N.T.S.

SHEET 4 OF 7



Marion County Property Appraisers
Mapping Application



SITE 5

⊕ = STANDARD PENETRATION TEST (SPT) BORING LOCATION

NOTE

BORING LOCATIONS WERE MEASURED FROM APPROXIMATE PROPERTY CORNERS USING A MEASURING WHEEL.

LONDON ENGINEERING & ASSOCIATES, INC.
SITES 3, 4 & 5
MARION COUNTY, FLORIDA

AERIAL IMAGE W/ USDA SOIL SERIES DESIGNATIONS & BORING LOCATION PLAN

GEO-TECH

ENGINEERING CONSULTANTS

■ GEOTECHNICAL ■ ENVIRONMENTAL
■ CONSTRUCTION MATERIALS TESTING ■ GEOPHYSICAL EXPLORATION
3850 S.E. MARICAMP RD - OCALA, FLORIDA 34471 - (352) 694-7711

REV. A 7/3/08

PROJECT NO.

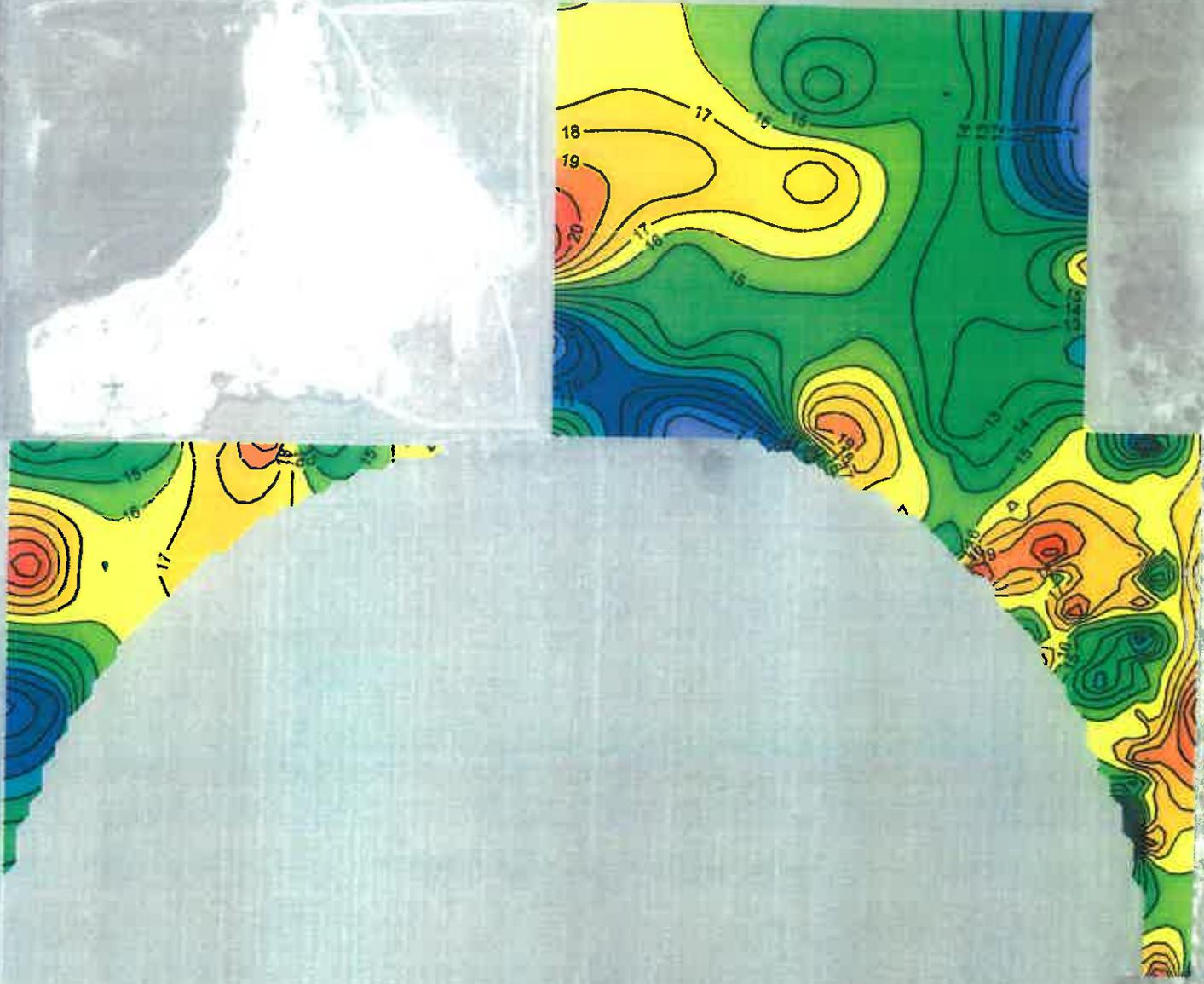
08-135.267

SCALE: N.T.S.

SHEET 7 OF 7

APPENDIX IV

Geo-Tech Project No. 08-135.267
December 5, 2014



ACME FILL
ACME PIT
SE HIGHWAY 484
MARION OAKS, FLORIDA

SAND THICKNESS MAP

GEO-TECH INC.

■ GEOTECHNICAL ■ ENVIRONMENTAL
■ CONSTRUCTION MATERIALS TESTING ■ GEOPHYSICAL EXPLORATION
1016 SE 3rd AVENUE, OCALA, FLORIDA 34471 ~ (352) 694-7711

PROJECT NO.
14-3021.03.1

SCALE: N.T.S.

DATE: 12-5-14

FIGURE: 1

APPENDIX V

Site Explorations Map



TILLMAN AND ASSOCIATES ENGINEERING, LLC

McGINLEY PROPERTY
SE HIGHWAY 484
OCALA, FLORIDA

GEO-TECH, Inc.

■ GEOTECHNICAL ■ ENVIRONMENTAL
■ CONSTRUCTION MATERIALS TESTING ■ GEOPHYSICAL EXPLORATION
1016 SE 3rd AVENUE, OCALA, FLORIDA 34471 ~ (352) 694-7711

PROJECT NO.
17-2878.91.1

SCALE: N.T.S.

DATE: 5-19-17

FIGURE: 1

SITE EXPLORATION MAP