

TOWN OF SOUTHWEST RANCHES, FLORIDA
Country Estates Ballfields

IFB No. 17-004

ADDENDUM 1

Provided below are responses to questions asked during the March 15, 2017 pre-bid meeting. A copy of the meeting attendee list and the soil boring report is also attached. All final questions regarding IFB 17-004 must be submitted as stated in the IFB no later than 12:00 pm on Monday March 27, 2017.

1. Revised bid schedule. Bid Add Alternate 1 for sod has been added.

(Refer to attachment on pages 2-4)

2. *What is the Town's Budget for the project?*

Answer: The estimated budget is \$150,000. Please refer to page 16 of the Town's budget book posted on the website (see link below for your convenience).

<http://southwestranches.org/wp-content/uploads/2013/05/Adopted-Budget-Fiscal-Year-2016-2017.pdf>

Attachments:

Addendum 1: Revised Bid Schedule – Add Alternate 1
Soil Boring Report
March 15, 2017 Pre-Bid Meeting Attendee List

Addendum 1

**BID/PROPOSAL SCHEDULE
TOWN OF SOUTHWEST RANCHES
BALLFIELD IMPROVEMENTS FOR
COUNTRY ESTATES PARK
PROJECT NO. S16.0003**

Notice to All Respondents

It is the intent of the OWNER to award this contract based on the Grand Total Base Bid/Proposal for all bid/proposal items. In the event of a discrepancy between written figures and numbers, the former shall govern. In the event of latent multiplication or addition errors, the Respondent recognizes that these are clerical errors and may be corrected by the Owner.

For each payment item, Respondent agrees to furnish all labor, materials, tools and equipment necessary to properly perform the work described herein and on the project drawings. A more detailed description of the Pay Items is located in the Contract Documents.

Item No.	Estimated Quantity	Description	Unit Price	Total
1	Lump Sum	Mobilization / Demobilization	\$	\$
2	Lump Sum	Temporary pollution prevention	\$	\$
3	Lump Sum	Clearing and grubbing	\$	\$
4	5300 Cubic Yards	Furnish and install clean fill (including swale) for	\$	\$
5	15,000 Square Yard	Seeding	\$	\$
6	2 Each	Concrete mitered and sections	\$	\$
7	15 Linear Feet	8 Inch DIP Drainage Culvert	\$	\$
8	20 Linear Feet	5' Wide Concrete Sidewalk (4" thick)	\$	\$
9	1 Each	8' x 8' Concrete Landing Pad (4" thick)	\$	\$
BASE BID TOTAL				\$
Add Alternate: Sod (Argentine Bahia)				\$

Add Alternate

The Contractor understands and agrees that the Town reserves the right to select an Add Alternate at the time of Contract Award, or at any time during the contract duration. Add Alternate costs shall be honored by the successful Bidder for that length of time. The Contractor understands and agrees that Add Alternates are lump sum.

The schedule of items and quantities of the principal elements provided within the Lump Sum Add Alternates are for estimation purposes only. The Contractor is solely responsible for determining all quantities and understanding that any items not included shall be considered incidental and are to be included within the Lump Sum Add Alternate price. The schedule of items is to be completed for the purpose of Bid Evaluation and when initiated by the Town, the pricing of contract/plan changes. The lump sum pricing for the Lump Sum Add Alternate shall be inclusive of General Conditions.

Sod Specifications for Add Alternate:

- ALL SOD TO BE ARGENTINE BAHIA, OR AS OTHERWISE NOTED, FREE OF PEST, DISEASE, WEED INFESTATION, OR STRESS.
- ALL SOLID SOD SHALL BE PLACED OVER WEED FREE, FINE—GRADED, AND HAND—RAKED AREAS.
- GROUND SHALL BE FREE OF ALL DEBRIS, VISIBLE ROCKS, AND LOW OR HIGH SPOTS.
- AFTER ALL GRADING HAS BEEN COMPLETED, THE SOIL SHALL BE IRRIGATED WITHIN 12 TO 24 HOURS PRIOR TO LAYING THE TURFGRASS SOD. TURFGRASS SOD SHOULD NOT BE LAID ON SOIL THAT IS DRY AND POWDERY.
- STARTER STRIP: THE FIRST ROW OF TURFGRASS SOD SHALL BE LAID IN A STRAIGHT LINE, WITH SUBSEQUENT ROWS PLACED PARALLEL TO, AND TIGHTLY AGAINST, EACH OTHER. LATERAL JOINTS SHALL BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. CARE SHALL BE EXERCISED TO INSURE THAT THE TURF IS NOT STRETCHED OR OVERLAPPED, AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS, WHICH WOULD CAUSE AIR-DRYING OF THE ROOTS.
- SOD SHALL BE WATERED IN THOUROUGHLY BEFORE TAMPING OR ROLLING.
- ON SLOPES EXCEEDING 3:1, PLACE LENGTH OF SOD PERPENDICULAR TO SLOPE DIRECTION.
- PEG SOD OR OTHERWISE ENSURE ITS ESTABLISHMENT ON SLOPES.
- SOD LEVEL SHALL NOT IMPEDE WATER FLOW FROM ADJACENT SURFACES.
- IN AREAS WHERE PAVED SURFACES ABUT SOD OR MULCH, THE FINAL GRADE LEVEL OF BOTH SURFACES SHALL BE LEVEL.

- ACCEPTANCE OF THE INSTALLED TURFGRASS SOD SHALL BE ON COMPLETION OF AN AREA OR SECTION, UNLESS OTHERWISE SPECIFIED.
- CONTRACTOR SHALL GUARANTEE WORK COVERED BY THIS SPECIFICATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE ACCEPTED SODDED TURFGRASS AREAS UNTIL COMPLETION OF PROJECT
- WATERING: CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING TURFGRASS SOD IMMEDIATELY DURING AND AFTER INSTALLATION TO PREVENT DRYING. IT SHALL THEN BE THOROUGHLY IRRIGATED TO A DEPTH SUFFICIENT THAT THE UNDERSIDE OF THE NEW TURFGRASS SOD PAD AND SOIL IMMEDIATELY BELOW THE TURFGRASS SOD ARE THOROUGHLY WET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING ADEQUATE WATER AVAILABLE AT THE SITE PRIOR TO AND DURING INSTALLATION OF THE TURFGRASS SOD.
- FIRST WEEK: IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST WEEK AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOIST SOIL TO A DEPTH OF AT LEAST 4 INCHES. IN THE SECOND AND SUBSEQUENT WEEKS, CONTRACTOR SHALL WATER THE TURFGRASS SOD AS REQUIRED TO MAINTAIN ADEQUATE MOISTURE IN THE UPPER 4 INCHES OF SOIL AS REQUIRED TO ACHIEVE WELL ROOTED, AND HEALTHY SOD.



UNIVERSAL ENGINEERING SCIENCES

**GEOTECHNICAL ENGINEERING REPORT
COUNTRY ESTATES PARK TRAIL
SEC GRIFFIN RD AND SW 190TH AVE
TOWN OF SOUTHWEST RANCHES, FLORIDA**

**UES PROJECT NO. 0630.1400120
UES REPORT NO. 13000**

Prepared For:

Ms. Emily McCord Aceti
Town of Southwest Ranches
13400 Griffin Road
SW Ranches, FL 33330
PO 15-0030

Prepared By:

Universal Engineering Sciences
1818 7th Avenue North, Unit 1
Lake Worth, Florida 33461
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- Pensacola
- Rockledge
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- Tampa
- West Palm Beach

January 28, 2015

Ms. Emily McCord Aceti
Community Services
Town of Southwest Ranches
13400 Griffin Road
Southwest Ranches, FL 33330

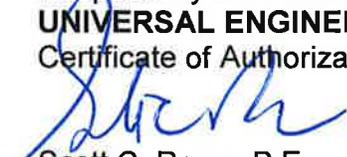
Reference: Geotechnical Engineering Report
Country Estate Park Trail
SEC Griffin Road and SW 190th Avenue
Town of Southwest Ranches, Broward County, Florida
PO 15-0030
UES Project No. 0630.1400112
UES Report No. 13000

Dear Ms. Aceti:

Universal Engineering Sciences, Inc. (UES) has completed a geotechnical exploration and engineering report at the above referenced site in The Town of Southwest Ranches, Broward County, Florida. The scope of this exploration was conducted in general accordance with UES Opportunity No. 0630.0214.00005 dated December 9, 2014. This preliminary exploration was performed in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made.

The following report presents the results of the field exploration, and our interpretation of those results with respect to the proposed development. Recommendations have been included for site preparation procedures and foundation design parameters, pavement design, groundwater considerations and other concerns as appropriate. We appreciate the opportunity to work with you on this project and look forward to a continued association. If you have any questions, or when preliminary or final project design plans are available for our recommended review, please contact the undersigned.

Respectfully submitted,
UNIVERSAL ENGINEERING SCIENCES, INC.
Certificate of Authorization No. 549


Scott C. Rowe, P.E.
Geotechnical Manager


Peter G. Read, P.E.
Regional Manager
Florida Professional Engineer No. PE 35604
1/29/2015

Dist: Client (3)

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1.0 INTRODUCTION

1.1 GENERAL

This report contains the results of a preliminary subsurface exploration conducted for the proposed improvements in Town of Southwest Ranches, Broward County, Florida. This report includes the following sections:

- SCOPE OF SERVICES - Defines what services were completed
- FINDINGS - Describes what was encountered
- RECOMMENDATIONS - Describes what we encourage you to do
- LIMITATIONS - Describes the restrictions inherent in this report
- SUMMARY - Reviews the material in this report
- APPENDICES - Presents support materials referenced in this report.

1.2 PROJECT DESCRIPTION

Our understanding of the proposed construction is based conversations with our client, and review of a site plan entitled Overall Site Improvements, Fishing Hole by Winningham & Fradley, Inc, dated August 15, 2011. The referenced property was located about 250 feet south of Griffin Road, east of the intersection with SW 190th Avenue. A Site Location Map is included as Page A-1 in Appendix A.

The referenced plan shows a multi-purpose trail and a nature trail, to encompass proposed lake, recreation and wetlands on the southern extent of the Country Estates Park property. The proposed site layout is shown on the Boring Location Plan, Page B-1 in Appendix B.

We assume that the proposed paths will be graded, may be paved with gravel or asphalt, and that portions of the paths will be used for access for service vehicles.

We note that since the applicability of geotechnical recommendations is very dependent upon project characteristics, most specifically: improvement locations, grade alterations, and actual structural loads applied, UES must review the preliminary and final site and grading plans, and structural design loads to validate all recommendations rendered herein. Without such review our recommendations should not be relied upon for final design or construction of any site improvements.



2.0 SCOPE OF SERVICES

2.1 PURPOSE

The purposes of this geotechnical exploration were:

- to explore and evaluate the subsurface conditions at the site by advancing SPT (Standard Penetration Test) soil borings with special attention to potential geotechnical considerations that may affect the proposed design, construction, and serviceability of the proposed improvements; and
- to provide geotechnical engineering recommendations for groundwater considerations, pavement design, and site preparation.

This report presents an evaluation of site conditions on the basis of traditional geotechnical procedures for site characterization. The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards. UES would be pleased to perform these services, if you desire.

2.2 FIELD EXPLORATION

The subsurface conditions at the site were explored with a total of six (6) Standard Penetration Test (SPT) borings designated B-1 thru B-6, drilled to a depth of ten (10) feet below ground surface within the areas of proposed improvement. The approximate locations of the soil borings are presented in Appendix B, Boring Location Plan. Consider the indicated locations and depths to be approximate. The boring location plan in Appendix B shows the approximate locations of the soil borings.

The SPT borings were advanced using the rotary wash method; we completed the SPT in general accordance with ASTM D-1586 guidelines, with continuous sampling from the existing grade to 10 feet. The SPT test consists of driving a standard split-barrel sampler (split-spoon) into the subsurface using a 140-pound hammer free-falling 30 inches. The number of hammer blows required to drive the sampler 12 inches, after first seating it 6 inches, is designated the penetration resistance, or SPT-N value. This value is used as an index to soil strength and consistency.

Samples collected during the SPT were placed in clean sample containers and transported to our laboratory where they were visually classified by a member of our geotechnical engineering staff in accordance with ASTM D-2488. These soil samples will be held in our laboratory for your inspection for 90 days, after which time they will be discarded unless we are otherwise notified.



3.0 FINDINGS

3.1 SOIL SURVEY

At the time of exploration, the site was vacant land, heavily overgrown. An existing canal (S.B.D.D. Canal No. 12) follows the east boundary of property. Based on the Soil Survey for Broward County, Florida, East Part as prepared by the US Department of Agriculture, Natural Resources Conservation Service (NRCS), the predominant soil type at the site is identified as Lauderhill muck. The typical profile is 2 to 3 feet of organic soil (muck) underlain by unweathered bedrock (limestone). The soil is very poorly drained, with groundwater typically at ground surface.

3.2 SUBSURFACE CONDITIONS

The results of our field exploration, together with pertinent information obtained from the SPT borings, such as soil profiles, penetration resistance and groundwater levels are shown on the boring logs included in Appendix B. The Key to Boring Logs is also included in Appendix B. The stratification lines shown on the boring logs represent the approximate boundaries between soil types, and may not depict exact subsurface soil conditions. The actual soil boundaries may be more transitional than depicted. A generalized profile of the soils found at our boring locations is presented in Table 2. The soil profile was prepared from field logs after the recovered soil samples were visually classified by a member of our geotechnical staff.

TABLE 2: GENERAL SOIL PROFILE	
Typical Depths Below Grade (feet)	Soil Description
0 – 2	Organic soil (muck, peat) [PT]
2 – 10	Loose to very dense, gray sandy and silty limerock [LIMESTONE]
* Boring Termination depth	

Groundwater was measured at a depth of approximately 1.5 to 2.0 feet below the existing land surface in the test borings. The groundwater levels at this site may be influenced by the water level in the nearby canal. Note that soils with an organic content equal to or greater than 10 percent are typically considered unsuitable for roadway support. Organic soils (10 percent organic or higher) encountered in structural areas should be removed and replaced with good quality fill according to the specifications and procedures outlined in the Site Preparation section of this report.



4.0 RECOMMENDATIONS

4.1 GENERAL

The following recommendations are made based upon the attached test borings, our stated understanding of the proposed construction, and our experience with similar projects and subsurface conditions. If subsurface conditions are encountered during construction which were not encountered in the borings, those conditions should be reported immediately to UES for evaluation and possible recommendations. In this section of the report, recommendations are presented for groundwater considerations, building foundations, pavement design, site preparation, and construction related services.

UES must review the final site and grading plans, and structural design loads to validate all recommendations rendered herein. Without such a review our recommendations may not be applicable, resulting in potentially unacceptable performance of site improvements for which UES will not be responsible or liable. No site or project facilities/improvements, other than those described herein, should be designed using the soil information presented in this report. UES will not be responsible for the performance of any site improvement so designed and constructed.

4.2 GROUNDWATER CONSIDERATIONS

The groundwater table will fluctuate seasonally depending upon local rainfall. The rainy season in South Florida is normally between May and October. Based upon the test boring data, a reasonable estimate for the seasonal high groundwater table is approximately 0 feet below existing grade. The existing and estimated seasonal high groundwater table at each location appears on the boring logs in Appendix B.

Note that our estimate of seasonal high groundwater level is based on limited data and does not provide any assurance that groundwater levels will not exceed the estimated level during any given year in the future. If the rainfall intensity and duration or total rainfall quantities exceed those normally anticipated, then groundwater levels will likely exceed the seasonal high estimate.

The estimate of seasonal high groundwater level is made for the site at the present time. Future development of adjoining or nearby properties and development on a regional scale may affect the local seasonal high groundwater table. Universal makes no warranty on the estimate of the seasonal high groundwater table.

UES recommends that all foundation and pavement design incorporate assumption of the seasonal high groundwater condition. We recommend that positive drainage be established and maintained on the site during construction. UES further recommends that permanent measures be implemented to maintain positive drainage throughout the life of the project.



The performance of site improvements may be sensitive to their post-construction relationship to site groundwater levels, seepage zones, or soil/rock characteristics exposed at final grades. Since horizontal and vertical control of our site borings was not provided, we do not recommend the use of our boring stratigraphy or groundwater information for final grading and improvement design purposes. Such use could result in potentially unacceptable performance of site improvements and/or additional costs for unanticipated construction modifications. UES will not be responsible or liable for the consequences of such use. UES recommends that use of boring information for final design of all site improvements be predicated on proper horizontal and vertical control of borings.

4.3 PAVEMENTS

4.3.1 GENERAL

We expect the proposed paths may be finished with either asphalt or aggregate wear surface. Unpaved graded paths may be surfaced with a screened freely-draining aggregate, for example, with 100 percent passing the 1-inch sieve, 30 percent or less passing the No. 10 sieve, and less than 10 percent passing the No. 200 sieve.

UES recommends using a flexible pavement section on this project in areas where light autos, pickup trucks and similar vehicles may travel. Flexible pavements combine the strength and durability of several layer components to produce an appropriate and cost-effective combination of available materials. In the dumpster pad areas and for any tractor trailer delivery, access and pit areas, we recommend using rigid concrete pavement made with Portland cement.

4.3.2 FLEXIBLE PAVEMENTS

For preliminary consideration, we recommend a three-layer pavement section consisting of stabilized subgrade, base course, and surface course, placed on top of existing subgrade or a compacted structural fill. The group description and the recommended component thicknesses are presented in Table 3: Pavement Component Recommendations. The structural numbers in Table 3 are based on a structural number analysis with the stated estimated daily traffic volume for a 15-year placement design life. For loading conditions greater than those presented in Table 3, a pavement design should be made for the projected traffic data.

TABLE 3: PAVEMENT COMPONENT RECOMMENDATIONS				
Traffic Group	Structural Number	Component Thickness (inches)		
		Stabilized Subgrade	Limerock Base	Asphalt Course
Parking lots - light duty	2.6	12	6	Two, 1-inch lifts



Parking lots - light duty: Auto parking areas; over eighty cars; light panel and pickup trucks; average gross weight of 4,000 pounds

4.3.3 STABILIZED SUBGRADE

We recommend that subgrade materials be compacted in place according to the requirements in the "Site Preparation" section of this report. The stabilized subgrade should be compacted to at least 98 percent of the modified Proctor maximum dry density [American Association of State Highway and Transportation Officials (AASHTO)T-180]. If in situ soils other than limestone are encountered, they should be stabilized properly with limerock or other equivalent materials, and compacted in place according to the requirements in the "Site Preparation" section of this report. The stabilized subgrade materials should achieve a minimum LBR of 40 percent, as specified by Florida Department of Transportation (FDOT) requirements for Type B or Type C Stabilized Subgrade.

The stabilized subgrade can be imported material or a blend of on-site soils and imported materials. If a blend is proposed, we recommend that the contractor perform a mix design to find the optimum mix proportions.

4.3.4 BASE COURSE

UES recommends the base course be either limerock or crushed concrete. Limerock or crushed concrete should have a minimum LBR of 100 percent. Place limerock in maximum 6-inch lifts and compact each lift to a minimum density of 98 percent of the modified Proctor maximum dry density (AASHTO T-180). The base course can also be a crushed concrete material supplied by an FDOT approved plant with quality control procedures and should have an average LBR value of not less than 100. The gradation for crushed concrete should meet the current requirements for graded aggregate base per Section 204, FDOT "Standard Specifications for Roadway and Bridge Construction" (SSRBC). Perform compliance testing for either limerock or crushed concrete at a frequency of one test per 10,000 square feet, or at a minimum of two test locations, whichever is greater.

4.3.5 SURFACE COURSE

In paved light duty areas where there is occasional vehicular traffic (primarily light trucks or passenger cars), we recommend using an asphaltic concrete, FDOT Type S-III or equivalent, which has a stability of 1,200 pounds. In heavy duty areas, where truck traffic is predominant, we recommend using an asphaltic concrete, FDOT Type S-III or S-I or equivalent, which has a minimum stability of 1,500 pounds. The asphaltic concrete course can be applied in a two, 1-inch lifts.



Asphaltic concrete mixes should be a current FDOT approved design for the materials actually used. Samples of the materials delivered to the project should be tested to verify that the aggregate gradation and asphalt content satisfies the mix design requirements. Compact the asphalt to a minimum of 95 percent of the Marshall design density. After placement and field compaction, core the wearing surface to evaluate material thickness and to perform laboratory densities. Obtain cores at frequencies of at least one core per 3,000 square feet of placed pavement or a minimum of two cores per day's production.

For extended life expectancy we recommend applying a coal tar emulsion sealer at least six months after placement of the surface course. The seal coat will help to patch cracks and voids, and protect the surface from damaging ultraviolet light and automobile liquid spillage. Please note that applying the seal coat prior to six months after placement may hinder the "curing" of the surface course, leading to its early deterioration.

4.3.6 EFFECTS OF GROUNDWATER

Adequate separation between the pavement subgrade and the seasonal high groundwater level is critical for long-term pavement performance. Many roadways and parking areas have been destroyed as a result of deterioration of the base and the base/surface course bond. Regardless of the type of pavement base selected, we recommend that the seasonal high groundwater and the bottom of the stabilized subgrade be separated by at least 18 inches.

4.3.7 CURBING

It appears that little or no curbing is planned. Most pavement curbing is currently extruded curb which lies directly atop of the final asphaltic concrete surface course. Use of extruded curb or elimination of curb entirely, can allow lateral migration of irrigation water from the abutting landscape areas into the base and/or interface between the asphaltic concrete and base. This migration of water may cause base saturation and failure, and/or separation of the asphaltic concrete wearing surface from the base with subsequent rippling and pavement deterioration. For extruded curbing, we recommend that underdrain be installed behind the curb wherever anticipated storm, surface or irrigation waters may collect. In addition, landscape islands should be drained of excess water buildup using an underdrain system.

Alternatively, curbing around any landscaped sections adjacent to the parking lots and driveways could be constructed with full-depth curb sections to reduce horizontal water migration. However, underdrains may still be required dependent upon the soil type and spatial relationships. UES should review final grading plans to evaluate the need and placement of pavement and landscape underdrains.



4.3.8 CONSTRUCTION TRAFFIC

Light duty roadways and incomplete pavement sections will not perform satisfactorily under construction traffic loadings. We recommended that construction traffic (construction equipment, concrete trucks, sod trucks, garbage trucks, moving vans, dump trucks, etc.) be routed away from these roadways or that the pavement section be designed for these loadings.

4.4 SITE PREPARATION

The test borings found organic and fine-grained materials (PT) considered unsuitable for pavement or foundation support due to low density, elevated moisture content, and high organic content.

We recommend normal, good practice site preparation procedures for the pavement areas. These procedures include: stripping the site of vegetation, topsoil, organics, and deleterious material, proof-rolling, and proof-compacting the subgrade, and filling to grade with engineered fill. A general outline of the anticipated earthwork is as follows:

1. If required, perform remedial dewatering prior to any earthwork operations.
2. Prior to construction, remnants of previous development, including foundations, pavements and underground utility lines within the construction area should be located and removed if required. Provisions should be made to relocate interfering utilities. Note that if underground pipes are not properly removed or plugged, they may serve as conduits for subsurface erosion which may lead to excessive settlement of overlying structures.
3. Strip the proposed construction limits of vegetation, topsoil, organics, and deleterious materials within and 5 feet beyond the perimeter of the proposed building and pavement areas.
4. The site should be graded to direct surface water runoff away from the construction areas. Positive drainage must be maintained throughout the design life of the project.
5. After clearing and stripping of the site is completed, the prepared subgrade soils should be observed by a qualified geotechnical engineer or his representative to locate any surficial deposits of organic soils, vegetation, excessive roots or debris. Organic soils, vegetation, or deleterious material should be undercut until clean natural soils are encountered, and the resulting excavations backfilled according to the fill placement procedures provided later in this section.



6. The subgrade should be compacted using a smooth drum vibratory roller *in the static mode*, having a minimum static, at-drum weight on the order of 10 tons and a drum diameter on the order of 3 to 4 feet making a minimum of eight overlapping passes with the second set of 4 passes perpendicular to the first set of 4 passes. Typically, the material should exhibit moisture content within +/- 2 percent of the Modified Proctor optimum moisture content (ASTM D-1557) during the compaction operations. Compaction should continue until densities of at least 95 percent of the Modified Proctor maximum dry density (ASTM D-1557) have been uniformly achieved within the upper 12 inches of the compacted natural soil surface.
7. Place fill material, as required. The fill should consist of sand with less than 10 percent soil fines. Place fill in uniform 10- to 12-inch loose lifts and compact each lift to a minimum density of at least 95 percent of the Modified Proctor maximum dry density (ASTM D1557).
8. Complete in-situ density tests on the subgrade and each lift of fill at a frequency of not less than one test per 2,500 square feet in the building areas and one test per 10,000 square feet in paved areas.
9. If difficult compaction conditions are encountered during the site work operations, the compaction efforts should stop and the geotechnical engineer should be contacted. The geotechnical engineer or his representative should observe proof-rolling of the exposed subgrade to determine if additional compaction is warranted or if any material needs to be over-excavated and replaced.

If site preparation work is performed during the rainy season (May through October), special care should be taken to maintain positive drainage from the building pad and paved areas to drains or ditches around the site. Unexpected wet periods can also occur in Florida during the "dry" season. Such events can raise water tables to levels above seasonal highs without the associated high temperatures to evaporate ponded water. Therefore, the contractor should practice wet weather means and methods for earthwork during the "dry" season as well. Groundwater and surface water control, use of granular fill material and aeration are typical means to accomplish wet weather grading.

All fill materials that are excavated from below the water table should be stockpiled for a sufficiently long period to allow drainage.

4.6 CONSTRUCTION RELATED SERVICES

We recommend the owner retain UES to perform construction material testing and observations on this project. Field tests and observations could include items such as verification of pavement subgrade, monitoring of proof-rolling operations, pile installation, and performing quality assurance tests on the placement of compacted structural fill.



The geotechnical engineering design does not end with the advertisement of the construction documents. The design is an on-going process throughout construction. Because of our familiarity with the site conditions and the intent of the engineering design, we are most qualified to address problems that might arise during construction in a timely and cost-effective manner.

5.0 LIMITATIONS

Our field exploration found unsuitable materials (PT). The test borings completed for this report were widely spaced and are not considered sufficient for reliably detecting the presence of isolated, anomalous surface or subsurface conditions, or reliably estimating unsuitable or suitable material quantities. Accordingly, UES does not recommend relying on our boring information to negate the presence of anomalous materials or for estimation of material quantities. Therefore, UES will not be responsible for any extrapolation or use of our data by others beyond the purpose(s) for which it is applicable or intended.

Geotechnical issues not addressed in this report may arise. Because of the natural limitations inherent in working with the subsurface, it is not possible for a geotechnical engineer to predict and address all possible problems. An (ASFE) publication, "Important Information About Your Geotechnical Engineering Report" appears in Appendix C, and will help explain the nature of geotechnical issues.

Further, we present documents in Appendix C: Constraints and Restrictions, to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

6.0 SUMMARY

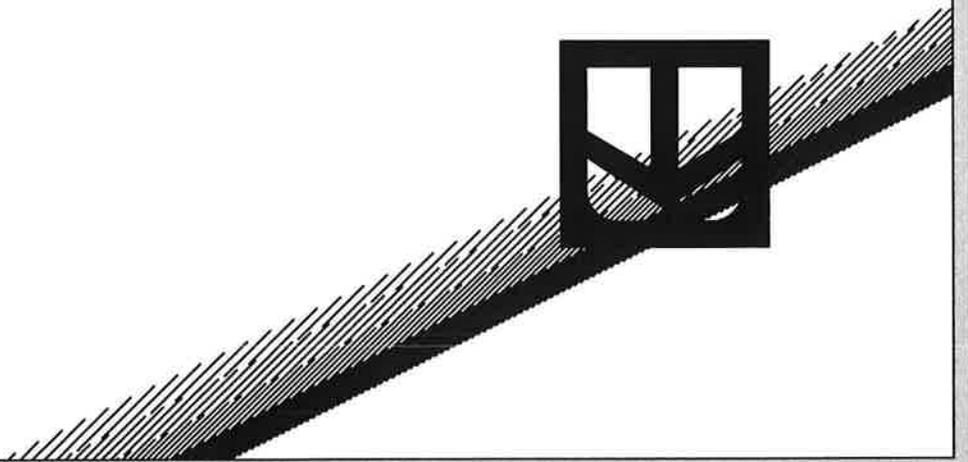
In summary, we understand that trails are planned in the Country Estates Park, located south of Griffin Road and east of SW 190th Avenue, in The Town of Southwest Ranches, Broward County, Florida. Field and laboratory tests have been performed to provide geotechnical engineering recommendations for foundation and pavement design, and site preparation.

The soils encountered generally consist of organic muck (peat) [PT] to a depth of 2 feet below land surface (bls) followed by loose to very dense light gray sandy silt with limerock, and limestone [LIMESTONE] to the maximum explored depth of 10 feet (bls).

Groundwater was measured at a depth of approximately 1.5 to 2.0 feet below the existing land surface in the test borings. A reasonable estimate for an average wet seasonal high groundwater table is approximately 0 feet below land surface (bls). UES recommends normal, good practice site preparation procedures to prepare the subgrade to support the structures and pavements.



APPENDIX A





Z#

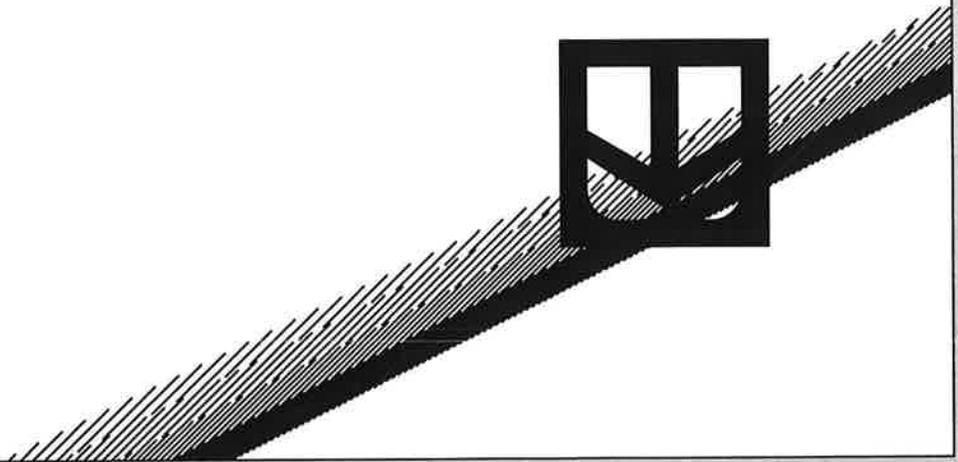


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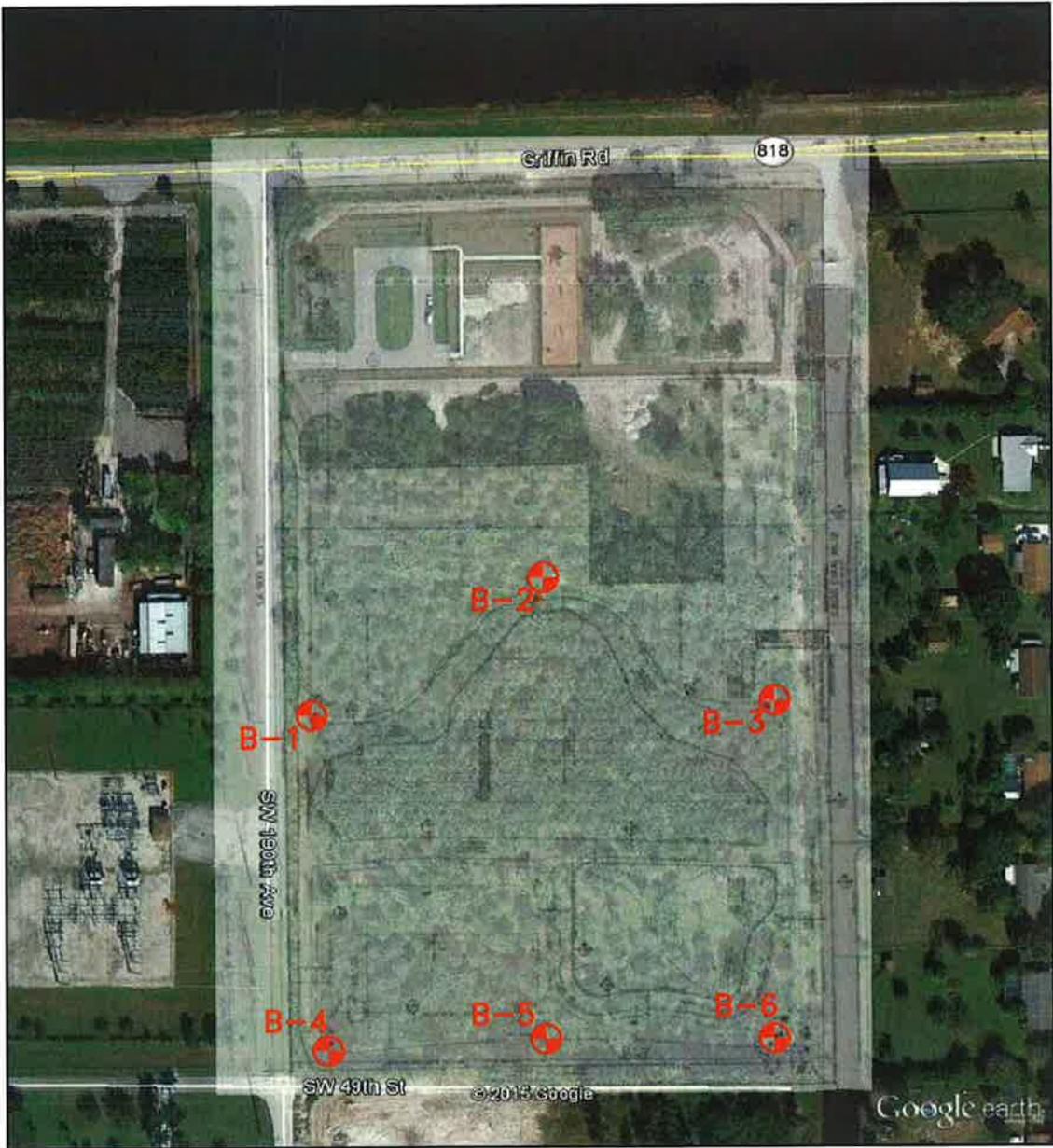
**GEOTECHNICAL EXPLORATION SERVICES
COUNTRY ESTATES PARK TRAIL
TOWN OF SOUTHWEST RANCHES, FLORIDA**

SITE LOCATION MAP

DRAWN BY:	A.G.A.	DATE:	01/28/15	CHECKED BY:	P.G.R.	DATE:	01/28/15
SCALE:	NTS	PROJECT NO:	0795.1400120	REPORT NO:	13000	PAGE NO:	A-1



7#



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**GEOTECHNICAL EXPLORATION SERVICES
COUNTRY ESTATES PARK TRAIL
TOWN OF SOUTHWEST RANCHES, FLORIDA**

BORING LOCATION MAP

DRAWN BY: A.G.A.	DATE: 01/28/2015	CHECKED BY: P.G.R.	DATE: 01/28/2015
SCALE: NTS	PROJECT NO: 0630.1400120	REPORT NO: 13000	PAGE NO: B-1



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0630.1400120

REPORT NO.: 13000

PAGE: B-2

PROJECT: Country Estates Park Trail
SWC Griffin Road and SW 190th Ave
Town of Southwest Ranches, Florida

BORING DESIGNATION: **B-1**
SECTION: TOWNSHIP:

SHEET: **1 of 1**
RANGE:

CLIENT: Town of Southwest Ranches

G.S. ELEVATION (ft): DATE STARTED: 1/21/15

LOCATION: See Boring Location Plan

WATER TABLE (ft): 2.0 DATE FINISHED: 1/21/15

REMARKS:

DATE OF READING: 1/21/2015 DRILLED BY: PG/WC

EST. W.S.W.T. (ft): 0 TYPE OF SAMPLING: SPT

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Limerock Fill						
						Peat (PT)						
		15-10-2-1	12			Light gray medium-dense to very dense sandy limestone (LIMESTONE)						
		4-3-8-7	11									
5		9-13-12-9	25									
		8-9-30-25	39									
10		15-30-24-22	54									
						Test boring terminated 10 feet below ground surface						

BL3



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.:	0630.1400120
REPORT NO.:	13000
PAGE:	B-3

PROJECT: Country Estates Park Trail
 SWC Griffin Road and SW 190th Ave
 Town of Southwest Ranches, Florida

BORING DESIGNATION: **B-2**
 SECTION: TOWNSHIP:

SHEET: **1 of 1**
 RANGE:

CLIENT: Town of Southwest Ranches

G.S. ELEVATION (ft):

DATE STARTED: 1/21/15

LOCATION: See Boring Location Plan

WATER TABLE (ft): 1.9

DATE FINISHED: 1/21/15

REMARKS:

DATE OF READING: 1/21/2015

DRILLED BY: PG/WC

EST. W.S.W.T. (ft): 0

TYPE OF SAMPLING: SPT

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0				▽		Peat (PT)						
		2-3-2-2	5	▽		Light gray medium-dense to very dense sandy limestone (LIMESTONE)						
		7-14-8-20	22									
5		24-16-13-10	29									
		6-48-55-24	103									
10		50/4"	50/4"			Test boring terminated 10 feet below ground surface						

BL3



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.:	0630.1400120
REPORT NO.:	13000
PAGE:	B-4

PROJECT: Country Estates Park Trail
 SWC Griffin Road and SW 190th Ave
 Town of Southwest Ranches, Florida

BORING DESIGNATION: **B-3**
 SECTION: TOWNSHIP:

SHEET: **1 of 1**
 RANGE:

CLIENT: Town of Southwest Ranches

G.S. ELEVATION (ft):

DATE STARTED: 1/21/15

LOCATION: See Boring Location Plan

WATER TABLE (ft): 1.8

DATE FINISHED: 1/21/15

REMARKS:

DATE OF READING: 1/21/2015

DRILLED BY: PG/WC

EST. W.S.W.T. (ft): 0

TYPE OF SAMPLING: SPT

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0				▽		Peat (PT)						
		2-3-2-2	5	▽		Light gray, loose sandy silt and limerock (SM)						
		4-6-12-13	18			Light gray medium-dense to very dense sandy limestone (LIMESTONE)						
5		22-16-15-14	31									
		13-15-38-46	53									
10		50/3"	50/3"			Test boring terminated 10 feet below ground surface						

BL3



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.:	0630.1400120
REPORT NO.:	13000
PAGE:	B-5

PROJECT: Country Estates Park Trail
 SWC Griffin Road and SW 190th Ave
 Town of Southwest Ranches, Florida

CLIENT: Town of Southwest Ranches

LOCATION: See Boring Location Plan

REMARKS:

BORING DESIGNATION: **B-4** SHEET: **1 of 1**

SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft): DATE STARTED: 1/21/15

WATER TABLE (ft): 1.9 DATE FINISHED: 1/21/15

DATE OF READING: 1/21/2015 DRILLED BY: PG/WC

EST. W.S.W.T. (ft): 0 TYPE OF SAMPLING: SPT

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0				▽		Peat (PT)						
		1-1-7-7	8	▽		Light gray, loose to medium-dense sandy silt and limerock (SM)						
		7-7-8-9	15			Light gray medium-dense to very dense sandy limestone (LIMESTONE)						
5		26-50/3"	50/3"									
		45-50/2"	50/2"									
10		8-10-10-15	20									
						Test boring terminated 10 feet below ground surface						

BL.3



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0630.1400120

REPORT NO.: 13000

PAGE: B-6

PROJECT: Country Estates Park Trail
SWC Griffin Road and SW 190th Ave
Town of Southwest Ranches, Florida

BORING DESIGNATION: **B-5**
SECTION: TOWNSHIP:

SHEET: **1 of 1**
RANGE:

CLIENT: Town of Southwest Ranches

G.S. ELEVATION (ft):

DATE STARTED: 1/21/15

LOCATION: See Boring Location Plan

WATER TABLE (ft): 1.5

DATE FINISHED: 1/21/15

REMARKS:

DATE OF READING: 1/21/2015

DRILLED BY: PG/WC

EST. W.S.W.T. (ft): 0

TYPE OF SAMPLING: SPT

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0					▽	Peat (PT)						
		1-1-1-4	5		▽							
					▽	Light gray medium-dense to very dense sandy limestone (LIMESTONE)						
		11-10-12-12	22									
5												
		12-12-30-30	42									
		36-36-40-25	76									
10		16-7-9-9	16			Test boring terminated 10 feet below ground surface						

BL3



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0630.1400120

REPORT NO.: 13000

PAGE: B-7

PROJECT: Country Estates Park Trail
SWC Griffin Road and SW 190th Ave
Town of Southwest Ranches, Florida

BORING DESIGNATION: **B-6**
SECTION: TOWNSHIP:

SHEET: **1 of 1**
RANGE:

CLIENT: Town of Southwest Ranches

G.S. ELEVATION (ft):

DATE STARTED: 1/21/15

LOCATION: See Boring Location Plan

WATER TABLE (ft): 1.5

DATE FINISHED: 1/21/15

REMARKS:

DATE OF READING: 1/21/2015

DRILLED BY: PG/WC

EST. W.S.W.T. (ft): 0

TYPE OF SAMPLING: SPT

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Peat (PT)						
		2-3-14-14	17			Light gray, medium-dense sandy silt and limerock (SM)						
		13-10-10-12	20			Light gray medium-dense to very dense sandy limestone (LIMESTONE)						
5		15-20-50/3"	50/3"									
		50/1"	50/1"									
10		40-50/2"	50/2"									
						Test boring terminated 10 feet below ground surface						

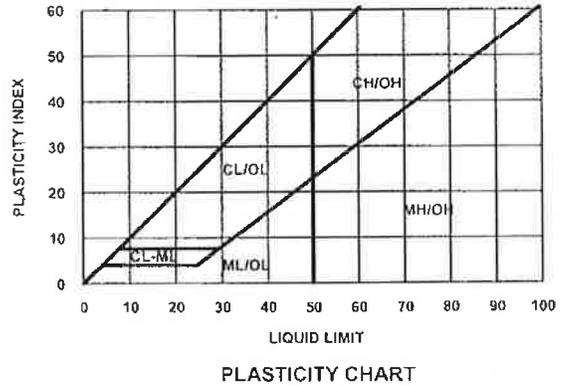
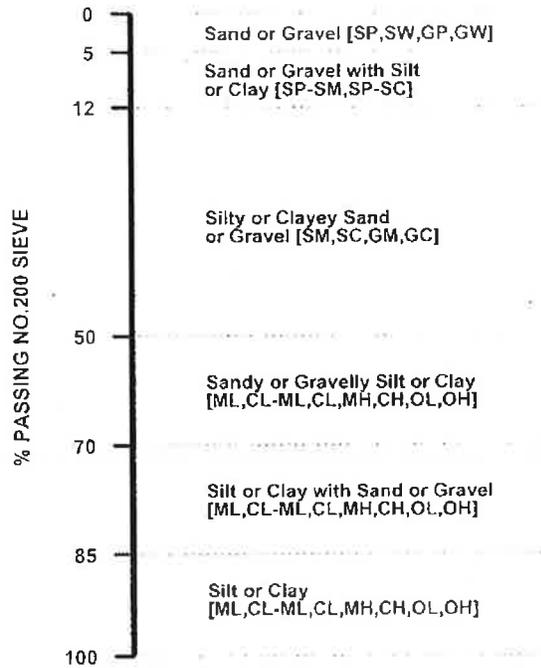
BL3

KEY TO BORING LOGS

SOIL CLASSIFICATION CHART*

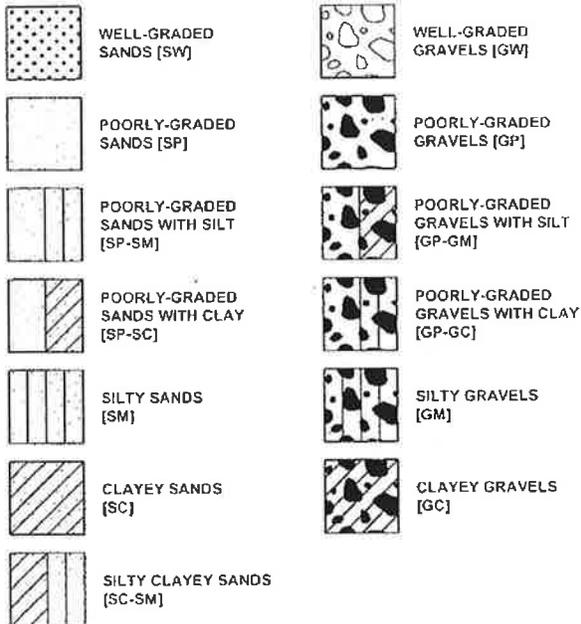


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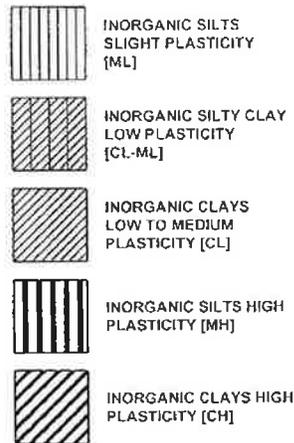


GROUP NAME AND SYMBOL

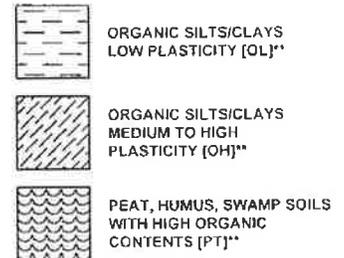
COARSE GRAINED SOILS



FINE GRAINED SOILS



HIGHLY ORGANIC SOILS



RELATIVE DENSITY (SAND AND GRAVEL)

VERY LOOSE - 0 to 4 Blows/ft.
LOOSE - 5 to 10 Blows/ft.
MEDIUM DENSE - 11 to 30 Blows/ft.
DENSE - 31 to 50 Blows/ft.
VERY DENSE - more than 50 Blows/ft.

CONSISTENCY (SILT AND CLAY)

VERY SOFT - 0 to 2 Blows/ft.
SOFT - 3 to 4 Blows/ft.
FIRM - 5 to 8 Blows/ft.
STIFF - 9 to 16 Blows/ft.
VERY STIFF - 17 to 30 Blows/ft.
HARD - more than 30 Blows/ft.

* IN ACCORDANCE WITH ASTM D 2487 - UNIFIED SOIL CLASSIFICATION SYSTEM.

** LOCALLY MAY BE KNOWN AS MUCK.

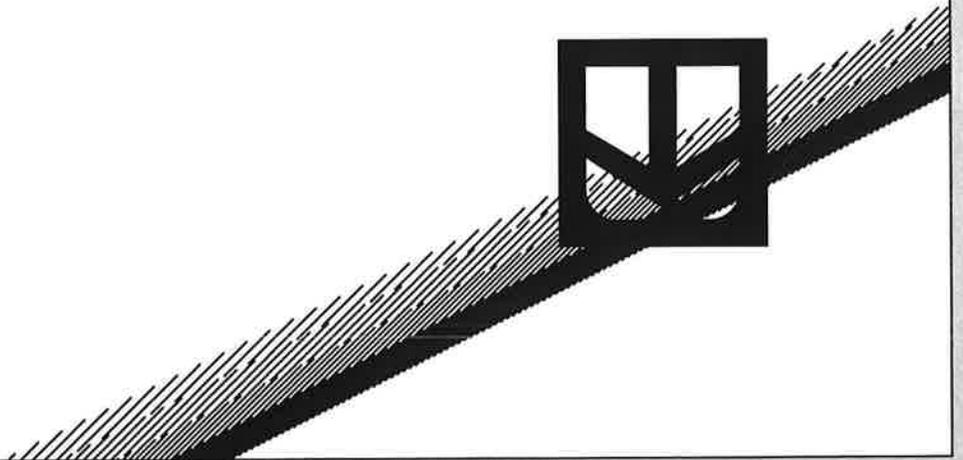
NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS	
			GRAPH	LETTER		
<p>COARSE GRAINED SOILS</p> <p>MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE</p>	<p>GRAVEL AND GRAVELLY SOILS</p> <p>MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE</p>	<p>CLEAN GRAVELS</p> <p>(LITTLE OR NO FINES)</p>		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES	
		<p>GRAVELS WITH FINES</p> <p>(APPRECIABLE AMOUNT OF FINES)</p>		GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES	
		<p>GRAVELS WITH FINES</p> <p>(APPRECIABLE AMOUNT OF FINES)</p>		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES	
		<p>GRAVELS WITH FINES</p> <p>(APPRECIABLE AMOUNT OF FINES)</p>		GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES	
	<p>SAND AND SANDY SOILS</p> <p>MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE</p>	<p>CLEAN SANDS</p> <p>(LITTLE OR NO FINES)</p>		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
		<p>CLEAN SANDS</p> <p>(LITTLE OR NO FINES)</p>		SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES	
		<p>SANDS WITH FINES</p> <p>(APPRECIABLE AMOUNT OF FINES)</p>		SM	SILTY SANDS, SAND - SILT MIXTURES	
		<p>SANDS WITH FINES</p> <p>(APPRECIABLE AMOUNT OF FINES)</p>		SC	CLAYEY SANDS, SAND - CLAY MIXTURES	
		<p>FINE GRAINED SOILS</p> <p>MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE</p>	<p>SILTS AND CLAYS</p> <p>LIQUID LIMIT LESS THAN 50</p>		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
					CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
	OL			ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY		
<p>SILTS AND CLAYS</p> <p>LIQUID LIMIT GREATER THAN 50</p>	<p>SILTS AND CLAYS</p> <p>LIQUID LIMIT GREATER THAN 50</p>		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS		
			CH	INORGANIC CLAYS OF HIGH PLASTICITY		
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS		
<p>HIGHLY ORGANIC SOILS</p>				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	

USCS LEGEND 10/02/07

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS



Important Information about Your Geotechnical Engineering Report

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

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

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

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. No one except you should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you — should apply the report for any purpose or project except the one originally contemplated.*

Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,

- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ—sometimes significantly—from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual

subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.*

A Geotechnical Engineering Report Is Subject to Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time* to perform additional study. Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that

have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations" many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, a number of mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; ***none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.***

Rely on Your ASFE-Member Geotechnical Engineer for Additional Assistance

Membership in ASFE/THE BEST PEOPLE ON EARTH exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your ASFE-member geotechnical engineer for more information.

ASFE THE GEOPROFESSIONAL BUSINESS ASSOCIATION

8811 Colesville Road/Suite G106, Silver Spring, MD 20910

Telephone: 301/565-2733 Facsimile: 301/589-2017

e-mail: info@asfe.org www.asfe.org

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CONSTRAINTS AND RESTRICTIONS

WARRANTY

UES has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until excavation begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify Universal Engineering Sciences, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and UES of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of UES to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

UES is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data presented are made by others, those conclusions or recommendations are not the responsibility of UES.

CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by UES.

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations. Bidders are urged to make their own soil borings, test pits, test caissons or other investigations to determine those conditions that may affect construction operations. UES cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING

Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of driving resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS

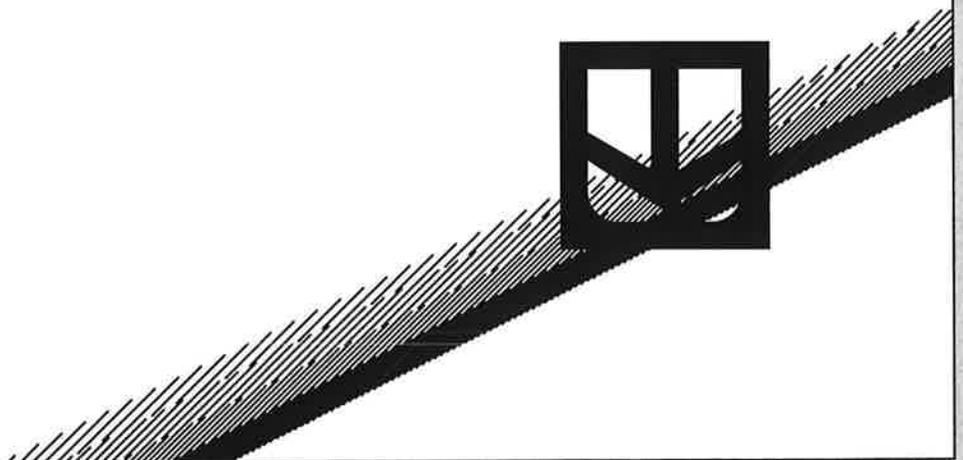
Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water levels may not have been stabilized at the last reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides, and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.

LOCATION OF BURIED OBJECTS

All users of this report are cautioned that there was no requirement for UES to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by UES to locate any such buried objects. UES cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME

This report reflects the soil conditions at the time of investigation. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional reviews may be required.



Universal Engineering Sciences, Inc.
GENERAL CONDITIONS

SECTION 1: RESPONSIBILITIES

- 1.1 *Universal Engineering Sciences, Inc.*, ("UES"), has the responsibility for providing the services described under the Scope of Services section. The work is to be performed according to accepted standards of care and is to be completed in a timely manner. The term "UES" as used herein includes all of *Universal Engineering Sciences, Inc's* agents, employees, professional staff, and subcontractors.
- 1.2 The Client or a duly authorized representative is responsible for providing UES with a clear understanding of the project nature and scope. The Client shall supply UES with sufficient and adequate information, including, but not limited to, maps, site plans, reports, surveys and designs, to allow UES to properly complete the specified services. The Client shall also communicate changes in the nature and scope of the project as soon as possible during performance of the work so that the changes can be incorporated into the work product.
- 1.3 The Client acknowledges that UES's responsibilities in providing the services described under the Scope of Services section is limited to those services described therein, and the Client hereby assumes any collateral or affiliated duties necessitated by or for those services. Such duties may include, but are not limited to, reporting requirements imposed by any third party such as federal, state, or local entities, the provision of any required notices to any third party, or the securing of necessary permits or permissions from any third parties required for UES's provision of the services so described, unless otherwise agreed upon by both parties.
- 1.4 **PURSUANT TO FLORIDA STATUTES §558.0035, ANY INDIVIDUAL EMPLOYEE OR AGENT OF UES MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.**

SECTION 2: STANDARD OF CARE

- 2.1 Services performed by UES under this Agreement will be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of UES's profession practicing contemporaneously under similar conditions in the locality of the project. No other warranty, express or implied, is made.
- 2.2 The Client recognizes that subsurface conditions may vary from those observed at locations where borings, surveys, or other explorations are made, and that site conditions may change with time. Data, interpretations, and recommendations by UES will be based solely on information available to UES at the time of service. UES is responsible for those data, interpretations, and recommendations, but will not be responsible for other parties' interpretations or use of the information developed.
- 2.3 Execution of this document by UES is not a representation that UES has visited the site, become generally familiar with local conditions under which the services are to be performed, or correlated personal observations with the requirements of the Scope of Services. It is the Client's responsibility to provide UES with all information necessary for UES to provide the services described under the Scope of Services, and the Client assumes all liability for information not provided to UES that may affect the quality or sufficiency of the services so described.
- 2.4 Should UES be retained to provide threshold inspection services under Florida Statutes §553.79, Client acknowledges that UES's services thereunder do not constitute a guarantee that the construction in question has been properly designed or constructed, and UES's services do not replace any of the obligations or liabilities associated with any architect, contractor, or structural engineer. Therefore it is explicitly agreed that the Client will not hold UES responsible for the proper performance of service by any architect, contractor, structural engineer or any other entity associated with the project.

SECTION 3: SITE ACCESS AND SITE CONDITIONS

- 3.1 Client will grant or obtain free access to the site for all equipment and personnel necessary for UES to perform the work set forth in this Agreement. The Client will notify any and all possessors of the project site that Client has granted UES free access to the site. UES will take reasonable precautions to minimize damage to the site, but it is understood by Client that, in the normal course of work, some damage may occur, and the correction of such damage is not part of this Agreement unless so specified in the Proposal.
- 3.2 The Client is responsible for the accuracy of locations for all subterranean structures and utilities. UES will take reasonable precautions to avoid known subterranean structures, and the Client waives any claim against UES, and agrees to defend, indemnify, and hold UES harmless from any claim or liability for injury or loss, including costs of defense, arising from damage done to subterranean structures and utilities not identified or accurately located. In addition, Client agrees to compensate UES for any time spent or expenses incurred by UES in defense of any such claim with compensation to be based upon UES's prevailing fee schedule and expense reimbursement policy.

SECTION 4: SAMPLE OWNERSHIP AND DISPOSAL

- 4.1 Soil or water samples obtained from the project during performance of the work shall remain the property of the Client.
- 4.2 UES will dispose of or return to Client all remaining soils and rock samples 60 days after submission of report covering those samples. Further storage or transfer of samples can be made at Client's expense upon Client's prior written request.
- 4.3 Samples which are contaminated by petroleum products or other chemical waste will be returned to Client for treatment or disposal, consistent with all appropriate federal, state, or local regulations.

SECTION 5: BILLING AND PAYMENT

- 5.1 UES will submit invoices to Client monthly or upon completion of services. Invoices will show charges for different personnel and expense classifications.
- 5.2 Payment is due 30 days after presentation of invoice and is past due 31 days from invoice date. Client agrees to pay a finance charge of one and one-half percent (1 ½ %) per month, or the maximum rate allowed by law, on past due accounts.
- 5.3 If UES incurs any expenses to collect overdue billings on invoices, the sums paid by UES for reasonable attorneys' fees, court costs, UES's time, UES's expenses, and interest will be due and owing by the Client.

SECTION 6: OWNERSHIP AND USE OF DOCUMENTS

- 6.1 All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by UES, as instruments of service, shall remain the property of UES.
- 6.2 Client agrees that all reports and other work furnished to the Client or his agents, which are not paid for, will be returned upon demand and will not be used by the Client for any purpose.
- 6.3 UES will retain all pertinent records relating to the services performed for a period of five years following submission of the report, during which period the records will be made available to the Client at all reasonable times.
- 6.4 All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by UES, are prepared for the sole and exclusive use of Client, and may not be given to any other party or used or relied upon by any such party without the express written consent of UES.

SECTION 7: DISCOVERY OF UNANTICIPATED HAZARDOUS MATERIALS

- 7.1 Client warrants that a reasonable effort has been made to inform UES of known or suspected hazardous materials on or near the project site.
- 7.2 Under this agreement, the term hazardous materials include hazardous materials (40 CFR 172.01), hazardous wastes (40 CFR 261.2), hazardous substances (40 CFR 300.6), petroleum products, polychlorinated biphenyls, and asbestos.
- 7.3 Hazardous materials may exist at a site where there is no reason to believe they could or should be present. UES and Client agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work. UES and Client also agree that the discovery of unanticipated hazardous materials may make it necessary for UES to take immediate measures to protect health and safety. Client agrees to compensate UES for any equipment decontamination or other costs incident to the discovery of unanticipated hazardous waste.
- 7.4 UES agrees to notify Client when unanticipated hazardous materials or suspected hazardous materials are encountered. Client agrees to make any disclosures required by law to the appropriate governing agencies. Client also agrees to hold UES harmless for any and all consequences of disclosures made by UES which are required by governing law. In the event the project site is not owned by Client, Client recognizes that it is the Client's responsibility to inform the property owner of the discovery of unanticipated hazardous materials or suspected hazardous materials.
- 7.5 Notwithstanding any other provision of the Agreement, Client waives any claim against UES, and to the maximum extent permitted by law, agrees to defend, indemnify, and save UES harmless from any claim, liability, and/or defense costs for injury or loss arising from UES's discovery of unanticipated hazardous materials or suspected hazardous materials including any costs created by delay of the project and any cost associated with possible reduction of the property's value. Client will be responsible for ultimate disposal of any samples secured by UES which are found to be contaminated.

SECTION 8: RISK ALLOCATION

- 8.1 Client agrees that UES's liability for any damage on account of any breach of contract, error, omission or other professional negligence will be limited to a sum not to exceed \$50,000 or UES's fee, whichever is greater. If Client prefers to have higher limits on contractual or professional liability, UES agrees to increase the limits up to a maximum of \$1,000,000.00 upon Client's written request at the time of accepting our proposal provided that Client agrees to pay an additional consideration of four percent of the total fee, or \$400.00, whichever is greater. The additional charge for the higher liability limits is because of the greater risk assumed and is not strictly a charge for additional professional liability insurance.

SECTION 9: INSURANCE

- 9.1 UES represents and warrants that it and its agents, staff and consultants employed by it, is and are protected by worker's compensation insurance and that UES has such coverage under public liability and property damage insurance policies which UES deems to be adequate. Certificates for all such policies of insurance shall be provided to Client upon request in writing. Within the limits and conditions of such insurance, UES agrees to indemnify and save Client harmless from and against loss, damage, or liability arising from negligent acts by UES, its agents, staff, and consultants employed by it. UES shall not be responsible for any loss, damage or liability beyond the amounts, limits, and conditions of such insurance or the limits described in Section 8, whichever is less. The Client agrees to defend, indemnify and save UES harmless for loss, damage or liability arising from acts by Client, Client's agent, staff, and other UESs employed by Client.

SECTION 10: DISPUTE RESOLUTION

- 10.1 All claims, disputes, and other matters in controversy between UES and Client arising out of or in any way related to this Agreement will be submitted to alternative dispute resolution (ADR) such as mediation or arbitration, before and as a condition precedent to other remedies provided by law, including the commencement of litigation.
- 10.2 If a dispute arises related to the services provided under this Agreement and that dispute requires litigation instead of ADR as provided above, then:
 - (a) the claim will be brought and tried in judicial jurisdiction of the court of the county where UES's principal place of business is located and Client waives the right to remove the action to any other county or judicial jurisdiction, and
 - (b) The prevailing party will be entitled to recovery of all reasonable costs incurred, including staff time, court costs, attorneys' fees, and other claim related expenses.

SECTION 11: TERMINATION

- 11.1 This agreement may be terminated by either party upon seven (7) days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof. Such termination shall not be effective if that substantial failure has been remedied before expiration of the period specified in the written notice. In the event of termination, UES shall be paid for services performed to the termination notice date plus reasonable termination expenses.
- 11.2 In the event of termination, or suspension for more than three (3) months, prior to completion of all reports contemplated by the Agreement, UES may complete such analyses and records as are necessary to complete its files and may also complete a report on the services performed to the date of notice of termination or suspension. The expense of termination or suspension shall include all direct costs of UES in completing such analyses, records and reports.

SECTION 12: ASSIGNS

- 12.1 Neither the Client nor UES may delegate, assign, sublet or transfer their duties or interest in this Agreement without the written consent of the other party.

SECTION 13. GOVERNING LAW AND SURVIVAL

- 13.1 The laws of the State of Florida will govern the validity of these Terms, their interpretation and performance.
- 13.2 If any of the provisions contained in this Agreement are held illegal, invalid, or unenforceable, the enforceability of the remaining provisions will not be impaired. Limitations of liability and indemnities will survive termination of this Agreement for any cause.

SECTION 14. INTEGRATION CLAUSE

- 14.1 This Agreement represents and contains the entire and only agreement and understanding among the parties with respect to the subject matter of this Agreement, and supersedes any and all prior and contemporaneous oral and written agreements, understandings, representations, inducements, promises, warranties, and conditions among the parties. No agreement, understanding, representation, inducement, promise, warranty, or condition of any kind with respect to the subject matter of this Agreement shall be relied upon by the parties unless expressly incorporated herein.
- 14.2 This Agreement may not be amended or modified except by an agreement in writing signed by the party against whom the enforcement of any modification or amendment is sought.



Town of Southwest Ranches

13400 Griffin Road
 Southwest Ranches, FL 33330
 Phone: (954) 434-0008
 Fax: (954) 434-1490
 Website: www.southwestranches.org

IFB/ Pre-bid meeting

Project: Country Estates Ballfields

Date: March 15, 2017

Time: 11:00 AM

Please Print:

Company	Contact Name	Title	Number	E-mail
WEEKLEY ASPHALT PAVING	JOSEPH BOZEMAN	ESTIMATOR	954-680-8005	joseph@weekleyasp.com
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