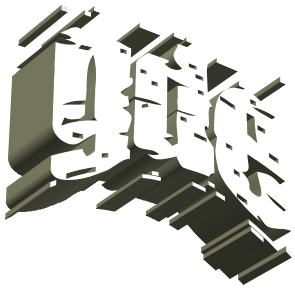

GROUND DOWN ENGINEERING, INC.

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PRELIMINARY GEOTECHNICAL EXPLORATION

SUMMERFIELD CROSSINGS SITE (NORTHERN PORTION)

HILLSBOROUGH COUNTY, FLORIDA

Prepared For:

Anderson-Moore Construction Corp.
Lake Park, Florida
March 2006

March 22, 2006

Mark Anderson
Anderson-Moore Construction Corp.
1568 Watertower Road
Winter Park, Florida 33403

Ground Down Engineering, Inc.

Report of Preliminary Geotechnical Exploration
Summerfield Crossings Site (Northern Portion)
Hillsborough County, Florida
GDE Job No. 06-232

Dear Mr. Anderson:

Ground Down Engineering, Inc. (GDE) has completed a preliminary geotechnical exploration for the referenced project that you authorized. The purposes of this study were to explore general subsurface conditions at the proposed residential subdivision site and to use the data obtained to develop preliminary engineering recommendations to guide the design of foundations, ponds and roadways. This report describes our exploration procedure, presents the data obtained, and presents our conclusions and recommendations regarding the geotechnical engineering aspects of site and foundation design. A more detailed geotechnical exploration should be performed when a final site plan showing foundation, roadway and stormwater pond locations (if necessary) is available.

In summary, based on the results of this subsurface exploration, it appears that the soils at the site are suitable for development of the proposed residential subdivision following the site preparation recommendations presented in this report.

GDE appreciates the opportunity to participate in this project and we trust that the information included in this report is sufficient for your design. If you have any questions or comments concerning the contents of this report, please contact us.

Sincerely,

Ground Down Engineering, Inc.
GDE FL Certificate of Authorization No. 9599

John C. Peak, P.E.
Vice President
FL Reg. No. 57018

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TABLE OF CONTENTS

PROJECT INFORMATION

Existing Site

Based on the project information provided for our review, we understand the proposed site is located at the end of the existing Fairway Meadows Drive in the Summerfield Subdivision, Hillsborough County, Florida. Project information was provided by Mark Anderson.

We have assumed minor earthwork will be associated with the site development and that the anticipated cut and fill quantities will be less than 2 to 3 feet.

Project Approach

The objective of the geotechnical investigation for the proposed project was to obtain information concerning the general subsurface conditions over the site in order to make preliminary geotechnical engineering estimates and recommendations in each of the following areas:

- Soil stratigraphy at the boring locations and the development of the approximate soil profile.
- General location and description of potentially deleterious materials which may interfere with construction progress or new structure performance, including buried or surficial existing fills, organics, construction debris, etc.
- Identification of some critical design or construction details, including present groundwater levels, estimated wet season levels, and seasonal fluctuations across the site.
- Suitability and availability of materials found on-site, that might be excavated or moved during site grading, for use as structural fill in the building and pavement areas and as general backfill.
- Engineering criteria and recommendations for the placement and compaction of approved fill materials (if necessary) in and around all structure areas and proposed pavement areas.

Scope of Work

In order to address the above objectives, our scope of work for this project included the following:

- Reviewed available published information on the site, including the United States Department of Agriculture (USDA) Soil Conservation Service (SCS) soil survey data for Hillsborough County.
- Conducted a subsurface exploration program consisting of soil borings, subsurface sampling, and field-testing. Our exploration program for this project consisted of conducting 6 SPT borings to depths of 20 feet widely spaced across the site. Our testing included the collection of representative soil samples and recording the SPT blow counts during the drilling of the borings.
- Measured the stabilized groundwater levels at the boring locations.

- Reviewed and visually classified the recovered soils in the laboratory using the Unified Soils Classification System. Developed the general soil stratigraphy over the site.
- Performed geotechnical engineering studies and analyses in order to develop geotechnical engineering recommendations for each of the objectives previously discussed for the proposed project.
- Prepared a geotechnical report that summarizes the course of our study, the field and laboratory data generated, the subsurface conditions encountered, and our geotechnical engineering recommendations for the proposed project.

Soil Survey Review

According to the U.S.D.A. "Soil Survey of Hillsborough County", the soil types present on the subject site are:

- Immokalee fine Sand (#21) – Consists of clean to silty sands to a depth of 80 inches. Historical seasonal high groundwater level from 0-1 feet below natural grade. Hydrologic Group = B/D. (Majority of the site)
- Seffner fine Sand (#47) – Consists of clean to slightly silty sands to a depth of 80 inches. Historical seasonal high groundwater level from 1.5-3.5 feet below natural grade. Hydrologic Group = C. (Eastern portion of the site)

USGS Topographic Map Review

The USGS topographic survey was reviewed for the site. The site is found on the Quadrangle map entitled Riverview, Florida. From this review, the site is estimated to occur between approximate elevations of +55 to +60 feet National Geodetic Vertical Datum (NGVD) of 1929.

SUBSURFACE EXPLORATION

Field Exploration

The procedures used by Ground Down Engineering, Inc. for field sampling and testing are in general accordance with industry standards of care and established geotechnical engineering practice.

A member of our staff performed a brief site reconnaissance, noting pertinent site and topographic features as well as surface indicators of the site's geology. Our staff located the borings by estimating distances from existing features on site, based on an aerial photograph downloaded from the property appraiser's website. Because of the methods used, the boring locations shown on the attached Boring Location Plan (Figure 2) should be considered approximate.

Standard Penetration Test Borings

The SPT borings were advanced by means of a truck-mounted drill rig employing wet rotary drilling techniques. The SPT borings were performed continuously in the upper ten feet and at five-foot intervals thereafter. The soil samples were obtained at the depths where the SPT borings were performed. The soil samples were then classified in the field, placed in sealed containers, and returned to our laboratory for further evaluation by our project engineer.

The SPT borings were performed in general compliance with standard field penetration test procedures. After drilling to the sampling depth and flushing the borehole, the standard two-inch O.D. split-barrel sampler was seated by driving it six inches into the undisturbed soil. Then the sampler was driven an additional 12 inches by a 140-pound hammer falling 30 inches. The number of blows required to produce the 12 inches of penetration is recorded as the standard penetration test value (N). These values are plotted on the left side of the Soil Profiles in the Appendix of this report.

Sampling performed in the upper ten feet utilized a 24 inch long split spoon. The sampler was driven 24 inches and the blows required to drive the sampler the middle six-inch increments were recorded as the N-value. Through this technique, the upper ten feet of the soil was sampled continuously. Detailed descriptions of the soils encountered during the SPT borings are presented in the Soil Profiles (Fig. 3).

Soil Sample Handling and Classification

The soil samples obtained during the SPT borings were placed in sealed containers to retain moisture and returned to our laboratory. The samples were then reviewed by our project staff to confirm classifications, visually estimate the relative percentages of the soil's constituents (sand, clay, etc.), and identify pertinent structural features. The stratification lines shown on the boring records represent our interpretation of approximate boundaries between soil types. The transition between strata may be gradual. Our classifications are based on a visual estimation of the soil properties and our engineering experience with the soils found in this geologic area.

Results

Subsurface Conditions

The borings generally encountered clean to silty sands and silty/sandy clays to approximate depths of 20 feet below existing grade. Please note that the SPT-N values are presented adjacent to the soil profiles on Figure 3. The correlation of the SPT-N values with relative density, unconfined compressive strength and consistency are provided in the following table:

Coarse-Grained Soils		**Fine Grained Soils**		
Penetration Resistance N (blows/ft)	Relative Density of Sand	Penetration Resistance N (blows/ft)	Unconfined Compressive Strength of Clay (tons/ft^2)	Consistency of Clay
0-4	Very Loose	<2	<0.25	Very Soft
4-10	Loose	2-4	0.25-0.50	Soft
10-30	Medium-Dense	4-8	0.50-1.00	Medium
30-50	Dense	8-15	1.00-2.00	Stiff
>50	Very Dense	15-30	2.00-4.00	Very Stiff
		>30	>4.00	Hard

Groundwater

Groundwater was encountered at an approximate depth of 2 feet below ground surface in the soil test borings that were performed in March of 2006. Based on our past site experience, the results of our investigation and review of the SCS soil survey, it is our opinion that the seasonal high groundwater table will vary throughout the site. **Please refer to Table 1 – Groundwater Data for groundwater levels, including estimated seasonal high groundwater levels per boring location**. Surveyed elevations were not available at the time of this report.

Significant fluctuations in the groundwater levels should be expected due to seasonal variations in rainfall, runoff, and other site-specific factors.

Laboratory Testing

Our field representative sealed and returned the soil samples to the GDE office where a geotechnical engineer further examined them. We visually classified the soils according to the Unified Soil Classification System (ASTM D 2487). The resulting soil descriptions are shown on the attached drafted Soil Profiles (Figure 3).

RECOMMENDATIONS AND CONCLUSIONS

Site Preparation

Site Stripping

Prior to any construction, the site must be properly prepared. To prepare the site for construction, all existing topsoil, muck, debris, vegetation, and large roots down to finger-size should be removed including a 5-foot margin. The resulting excavations should be backfilled with soils as discussed in the structural fill section of this report.

Proofrolling

Following site stripping and any related excavation activity, and prior to any fill placement, proofrolling should be performed. We recommend using a vibratory roller having a static weight of at least ten tons. Compaction of the fill materials should continue until the roller has made at least ten passes over all areas of the site and the soils appear to be relatively firm and unyielding. Half of the roller passes should be perpendicular to the direction of travel of the other passes. Proofrolling should be closely monitored by our engineering technician to observe for unusual deflection of the soils beneath the compacting equipment. If unusual or excessive deflection is observed, then the areas should be undercut to firm soils and backfilled with structural fill placed in maximum one-foot thick lifts. Backfill soils should be of the same composition and be compacted to the same criteria as structural fill soils.

Structural Fill

Definition

Soil used for structural fill can be defined as clean fine sand containing less than twelve percent material by weight that is finer than a number 200 sieve (fines) (material conforming to SP to SP-SM in the Unified Soils Classification System) and less than 5 percent organics by weight. However, material containing up to 35 percent fines (materials conforming to SC or SM in the Unified Soil Classification System) may be utilized as structural fill, if their plasticity index is less than 30, and the working subgrade is at least 2 feet above water or groundwater level.

If fill material with higher fines content is used (< 35 percent fines), the materials will require the use of compaction equipment designed for clayey soils. This includes a sheeps foot or vibratory pad foot roller. In addition, a disk could be required to assist with drying the clayey soils in order to place them at or near their optimum moisture content. These materials must be placed at a 6-inch thick maximum lift so that they can be effectively compacted with a vibratory pad foot roller.

Soil Suitability

Based on our test boring results (Figure 3), the soil materials encountered in the borings to approximate depths 6 to 20 feet (excluding stratum 3) should be satisfactory as a source of structural fill (if necessary). **Strata 1 & 2 soils are recommended to be utilized as fill material.**

Placement

Fill should be placed in lifts not to exceed one foot thick. The fill material should be compacted to at least 95 percent of its modified Proctor maximum dry density (ASTM D-1557). Confined areas, such as utility trenches, should be compacted with manually operated vibratory compaction equipment.

TESTING AND MONITORING

Construction monitoring and testing are essential to proper site construction and performance. Compliance with the recommended construction specification for compaction and soil types must be verified by our engineering technician familiar with the project construction. Observation of site preparation work is an integral part of the engineering recommendations contained in this report. Density tests should be performed for each lift of structural fill placed and per Hillsborough County Specifications.

LIMITATIONS

This report has been prepared for the exclusive use of **Anderson-Moore Construction Corp.** for the specific application to the project previously discussed. Our conclusions and recommendations have been rendered using generally accepted standards of geotechnical engineering geology practice in the state of Florida. No other warranty is expressed or implied.

Our conclusions and recommendations are based on the design information furnished to us, the data obtained from the previously described subsurface exploration, and our experience. They do not reflect variations in the subsurface conditions that are likely to exist in the region of our borings and in unexplored areas of the site. These variations are due to the inherent variability of the subsurface conditions in this geologic region. Should variations become apparent during construction, it will be necessary to re-evaluate our conclusions and recommendations based upon our on-site observations of the conditions.

As is true of most of Florida, the site is underlain by limestone bedrock that is susceptible to dissolution and the subsequent development of karst features such as voids and sinkholes in the natural soil overburden. Construction in a sinkhole prone area is therefore accompanied by some risk that internal soil erosion and ground subsidence could affect new structures in the future. It is not possible to investigate or design to completely eliminate the possibility of future sinkhole related problems. In any event, the Owner must understand and accept this risk. This area of Florida has not historically been considered to have a high risk of sinkhole potential.

The scope of our services does not include any environmental assessments or investigations for the possible presence of hazardous or toxic materials in the soil, groundwater or surface water within or in the general vicinity of the site studied. Any statements made in this report or shown on the test boring logs regarding unusual subsurface conditions and/or composition, odor, staining, origin or other characteristics of the surface and/or subsurface materials are strictly for the information of our client and may or may not be indicative of an environmental problem.

If changes are made in the overall design or the location of the proposed facilities, or if the finish grades differ from those discussed herein, the recommendations presented in this report must not be considered valid unless the changes are reviewed by our firm and recommendations modified or verified in writing. We should be given the opportunity to review the foundation plan, grading plan and the applicable portions of the project specifications when the design is finalized. This review will allow us to check whether these documents are consistent with the intent of our recommendations.

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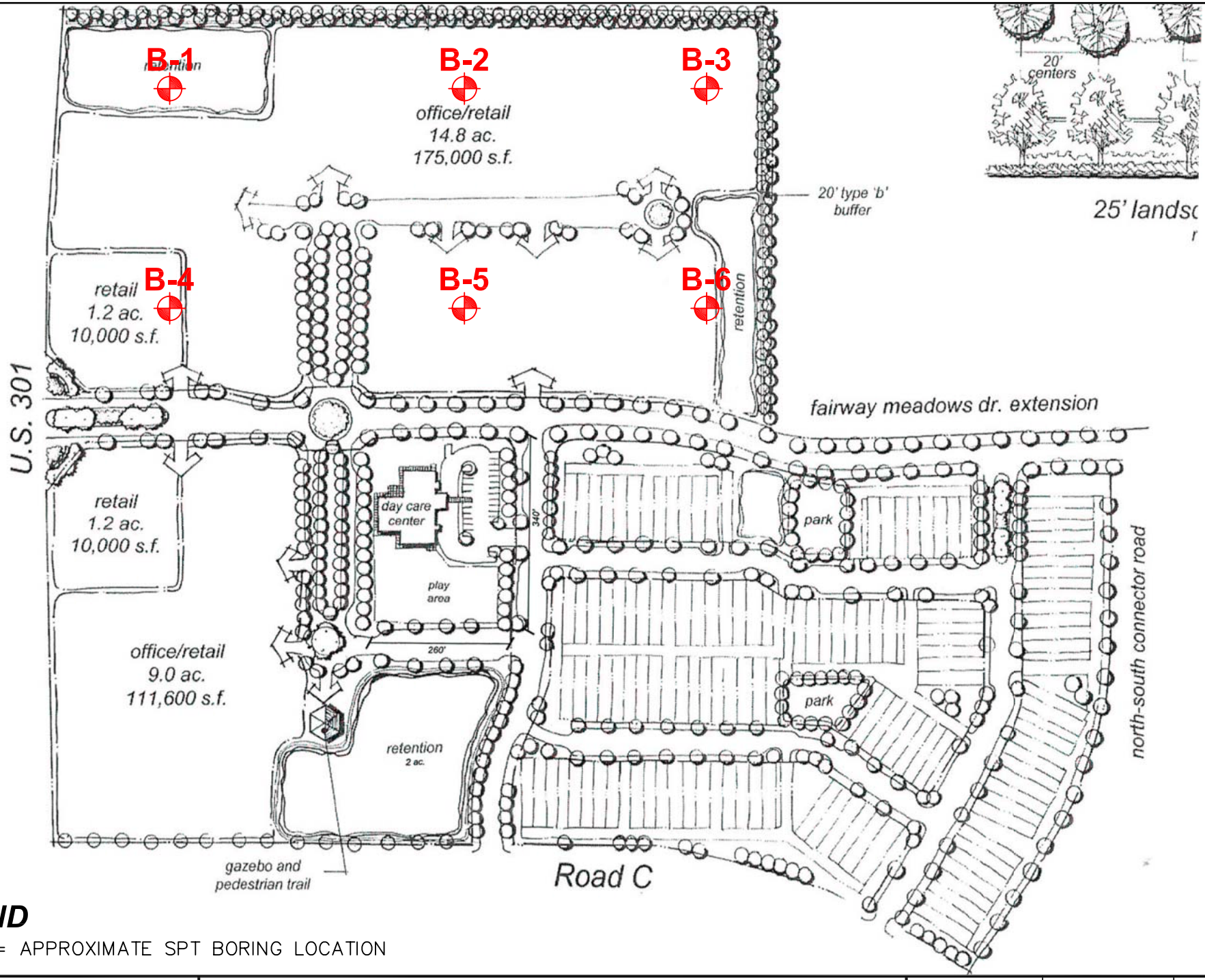
SUMMERFIELD CROSSINGS
(NORTHERN PORTION)
LOCATION MAP
HILLSBOROUGH COUNTY, FL

DATE:	SCALE:	JOB NO.
3-21-06	AS SHOWN	06-232
DRAWN BY: S. CAMACHO		FIGURE 1
CK'D BY: J. PEAK		SHEET 1 OF 1



LEGEND

B-1 = APPROXIMATE SPT BORING LOCATION

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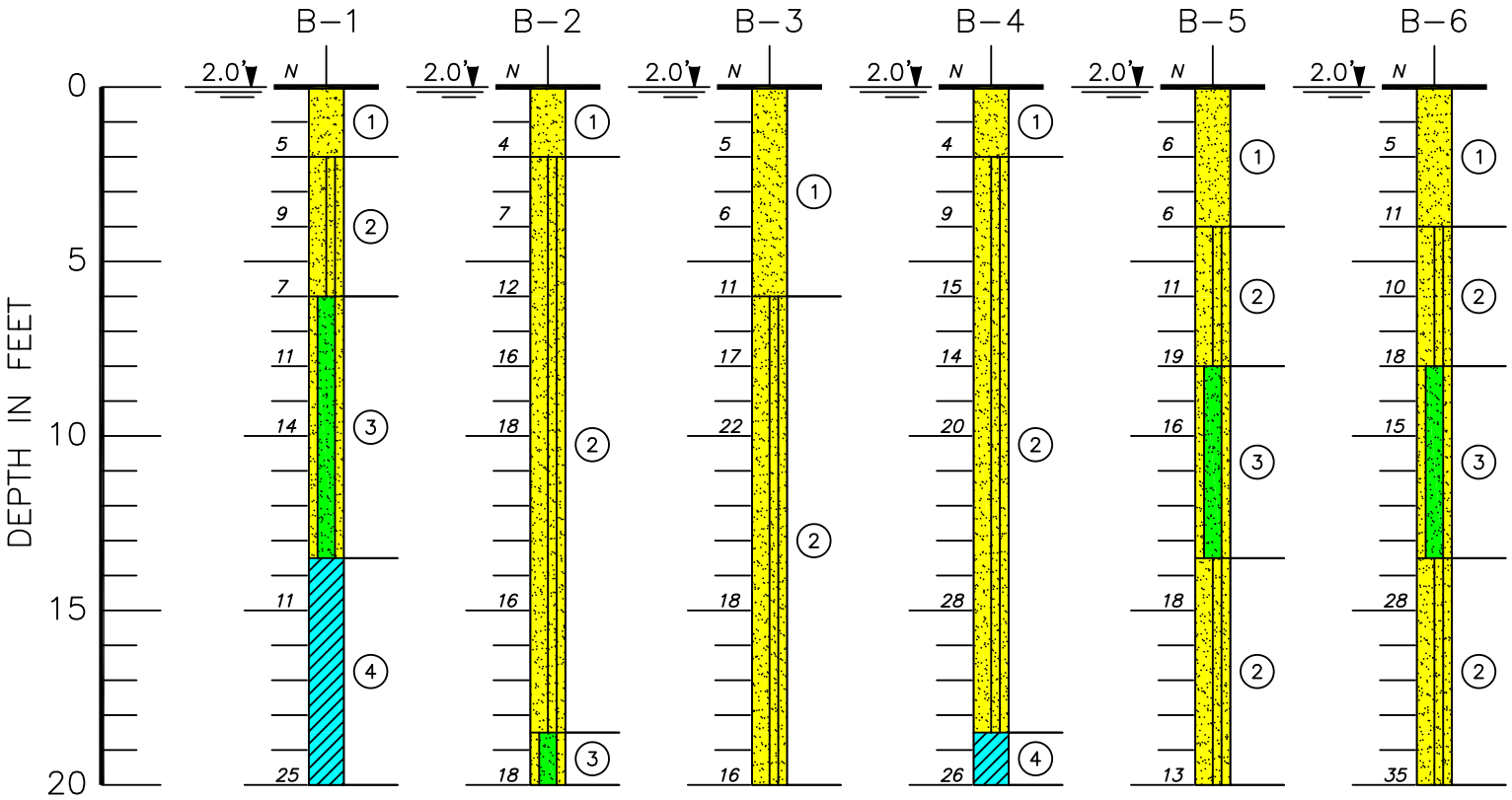
SUMMERFIELD CROSSINGS
(NORTHERN PORTION)
BORING LOCATION PLAN
HILLSBOROUGH COUNTY, FL

DATE:	SCALE:	JOB NO.
3-21-06	AS SHOWN	06-232

DRAWN BY: S. CAMACHO
CK'D BY: J. PEAK

FIGURE 2
SHEET 1 OF 1

BORING LOGS



LEGEND

1 = TAN, BROWN, GRAY FINE SAND (SP)

2 = BROWN, GRAY SLIGHTLY SILTY FINE SAND (SP-SM)

3 = TAN, BROWN, GRAY, DARK BROWN/ GRAY SILTY FINE SAND (SM)

4 = GRAY/ GREEN, GRAY, TAN SILTY/ SANDY CLAY (CL)

(SP) = UNIFIED SOIL CLASSIFICATION GROUP SYMBOL

N = STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT

0.0' = DEPTH TO EXISTING GROUNDWATER MARCH, 2006

NOTE: BORINGS PERFORMED ON MARCH 8th, 2006

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SUMMERFIELDS CROSSINGS (NORTHERN POTION) HILLSBOROUGH COUNTY, FL

DATE:	SCALE:	JOB NO.
3-21-06	AS SHOWN	06-232

DRAWN BY: S. CAMACHO
CK'D BY: J. PEAK

FIGURE 3
SHEET 1 OF 1

TABLE 1 GROUNDWATER DATA SUMMERFIELD CROSSINGS SITE HILLSBOROUGH COUNTY, FLORIDA		
BORING NO.	**APPROXIMATE DEPTH TO GROUNDWATER BELOW EXISTING GRADE (DRILLING TIME) (FT.)**	**ESTIMATED DEPTH TO SEASONAL HIGH WATER TABLE (FT.)**
B-1	2	1
B-2	2	1
B-3	2	1
B-4	2	0.5
B-5	2	0.5
B-6	2	0

TABLE 2 ESTIMATED DEPTH OF USEABLE FILL SUMMERFIELD CROSSINGS SITE HILLSBOROUGH COUNTY, FLORIDA		
BORING NO.	**ESTIMATED DEPTH OF USEABLE FILL (FT.)**	**COMMENTS**
B-1	6	
B-2	18.5	
B-3	20	
B-4	18.5	
B-5	0 – 8 & 13.5 – 20	Excluding Stratum 3 from 8 to 13.5 feet
B-6	0 – 8 & 13.5 – 20	Excluding Stratum 3 from 8 to 13.5 feet

NOTE: STRATA 1 & 2 SOILS ARE RECOMMENDED AS SUITABLE FILL MATERIAL