CITY OF TAMPA

Pam Iorio, Mayor **CONTRACT ADMINISTRATION DEPARTMENT**

David L. Vaughn, AIA, Director

ADDENDUM NO. 1

DATE: November 16, 2009

Project: Springhill Park Community Center

Project No. 7-C-59

Bidders on the above referenced project are hereby notified that the following addendum is made to the Contract Documents. BIDS TO BE SUBMITTED SHALL CONFORM TO THIS NOTICE.

Item 1: Replace Specifications Section 01020 with the attached Section 01020.

Item 2: Insert, after Section 16803, the attached Geotechnical Engineering Services Report dated April 7, 2008.

This addendum shall be included in and attached to the inside cover of the Contract Documents by and upon which bids are submitted.

All other provisions of the Contract Documents and Specifications not in conflict with this Addendum shall remain in full force and effect.

Questions are to be e-mailed to Contract Administration@tampagov.net.

Jim Greiner
Jim Greiner, P.E., Contract Manager

306 E. Jackson Street, 4N • Tampa, Florida 33602 • (813) 274-8456 • FAX: (813) 274-8080

TampaGov
www.tampagov.net

SECTION 01020 - ALLOWANCES

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

SUMMARY

This Section includes administrative and procedural requirements governing allowances.

Types of allowances include the following:

Contingency allowances.

SELECTION AND PURCHASE

SUBMITTALS

Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

Submit invoices or delivery slips to show the actual quantities of materials delivered to the site for use in fulfillment of each allowance.

CONTINGENCY ALLOWANCES

Use the contingency allowance only as directed by the Owner.

Work Directive Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.

At Project closeout, credit unused amounts remaining in the contingency allowance to the Owner by Change Order.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

EXAMINATION

Examine products covered by an allowance promptly upon delivery for damage or defects.

PREPARATION

Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

SCHEDULE OF ALLOWANCES

Allowance No. 1: Include a contingency allowance of $100,000.00 for use according to the Owner's instructions. The allowance shall be included in the Base Bid.

END OF SECTION 01020

GEOTECHNICAL ENGINEERING SERVICES REPORT

For the

PROPOSED SPRINGHILL COMMUNITY CENTER
1000 ESKIMO AVENUE
TAMPA, FLORIDA

Prepared for

Brooks & Amaden, Inc.
205 Ridgewood Avenue
Brandon, Florida 33510

Prepared by

Professional Service Industries, Inc.
5801 Benjamin Center Drive
Suite 112
Tampa, Florida 33634
Telephone (813) 886-1075
Fax (813) 888-6514

PSI Project No. 787-85038

April 7, 2008

Information To Build On
Engineering • Consulting • Testing

Tom Petty
Project Manager

Martin E. Millburg, P.E. 4/7/08
Senior Geotechnical Engineer
Florida License No. 36584

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1.0 PROJECT INFORMATION

1.1 PROJECT AUTHORIZATION

Authorization to proceed with this project was provided by Mr. Derek L. Doughty, Senior Project Manager of Brooks & Amaden, Inc. through written acceptance of PSI's proposal on March 25, 2008. This study was conducted in accordance with our proposal for these services dated March 21, 2008, PSI Proposal No. 787-8G0060.

1.2 PROJECT DESCRIPTION

Project information was provided by Derek L. Doughty of Brooks & Amaden, Inc. The site is currently developed with a baseball field, an existing parking area, a small one story building, a basketball court and a playground. We understand the property is to be developed as a community center. The community center is planned to include a one story building with an indoor basketball court, a stormwater pond, and associated drives and parking areas. The basketball building is to cover an area approximately 120 by 100 feet in plan.

Should any of the above information or assumptions made by PSI be inconsistent with the planned construction, we request that you contact us immediately to allow us to make any necessary modifications to the recommendations contained herein.

1.3 PURPOSE AND SCOPE OF WORK

The purpose of this study is to provide a geotechnical study for developing geotechnical design criteria for the project site. In this regard, engineering assessments of the following items have been formulated:

1. Feasibility of utilizing a shallow foundation system for support of the proposed building, with slab-on-grade floor systems.

2. Design parameters for the foundation system including allowable bearing pressures and expected settlements.

3. Soil subgrade preparation, including stripping, grubbing and compaction. Engineering criteria for placement and compaction of approved structural fill materials.

4. General location and description of potentially deleterious materials encountered in the borings which may interfere with construction progress or structure performance, including existing fills or surficial organics.

5. Identification of groundwater levels and estimated seasonal high groundwater level (SHGL).

6. Pavement design recommendations, including material types and thickness.

7. Pond design criteria including depth to the seasonal high groundwater, depth to the confining layer, infiltration rate of the soils and the fillable porosity.

The following services have been provided in order to achieve the preceding objectives:

1. Executed a requested program of subsurface exploration consisting of subsurface sampling and field-testing. We performed two (2) Standard Penetration Test (SPT) borings in the proposed building area and two (2) SPT boring in the proposed pond area. Each SPT boring was extended to a depth of 20 feet below the existing ground surface. In each boring, samples were collected for the top 10 feet and on intervals of 5 feet thereafter.

2. Performed two (2) hand auger borings to a depth of 5 feet below the existing ground surface in the proposed pavement areas.

3. One Double Ring Infiltrometer (DRI) test was performed in the proposed stormwater pond at a depth of approximately 3 feet.

4. Visually classified representative soil samples in the laboratory using the Unified Soil Classification System (USCS). Conducted a limited laboratory testing program. Identified soil conditions at each boring location and formed an opinion of the site soil stratigraphy.

5. Reviewed available published topographic and soils information. This published information was obtained from the "Sulphur Springs, Florida" Quadrangle Map published by the United States Geological Survey (USGS) and the "Soil Survey of Hillsborough County, Florida" published by the United States Department of Agriculture (USDA) Soil Conservation Service (SCS).

6. Collected groundwater level measurements and estimated normal wet seasonal high groundwater levels.

7. The results of the exploration have been used in the engineering analysis and the formulation of

recommendations. The results of the subsurface exploration, including the recommendations and the data on which they are based, are presented in this report supervised by a professional engineer.

The scope of services did not include an environmental assessment for determining the presence or absence of wetlands or hazardous or toxic materials in the soil, bedrock, ground water, or air, on or below or around this site. Any statements in this report or on the boring logs regarding odors, unusual or suspicious items or conditions are strictly for the information of our client.

2.0 SITE AND SUBSURFACE CONDITIONS

2.1 SITE DESCRIPTION

This project is located in Section 19, Township 28 South, and Range 19 East in Hillsborough County, Florida. The elevation of the site is approximately +30 to +35 feet NGVD based on the 2001 U.S. Geological Survey quadrangle map titled "Sulphur Springs". The site is currently developed as a park with an existing baseball field, parking area, small one story building, a basketball court and a playground.

2.2 HILLSBOROUGH COUNTY SOIL SURVEY

The "Soil Survey of Hillsborough County, Florida" published by the USDA, SCS, was reviewed for general near surface soil information. This information indicated the primary soil unit at the project location is Tavares-Urban land complex, 0 to 5 percent slopes (mapping unit: 55). This soil type consists of nearly level and gently sloping, moderately well drained Tavares soil and Urban land. Tavares soil is generally composed of brown fine sand in the upper 7 feet. Under natural conditions the seasonal high water table is at a depth of 40 to 80 inches for more than 6 months and may recede to a depth of greater than 80 inches during dry periods. The available water capacity is very low. Permeability is rapid. The Urban land soil type consists of land covered by streets, driveways, houses and other similar structures.

2.3 SUBSURFACE CONDITIONS

As noted above, the subsurface conditions were explored using four (4) Standard Penetration Test (SPT) borings extended to a depth of 20 feet below current ground surface; and two (2) hand auger borings extended to a depth of 5 feet below current ground surface. The boring locations were based on the site plans provided by Brooks & Amaden, Inc. The soil borings were located in the field by measuring distances from existing features, in accessible areas. Therefore the boring locations presented on Sheet 2 are approximate.

The SPT borings were advanced utilizing rotary mud drilling methods and soil samples were routinely obtained at select intervals during the drilling process. Samples obtained in the field were returned to our Tampa laboratory for visual classification and laboratory testing. Drilling and sampling techniques were accomplished in general accordance with ASTM Standards.

In general the borings encountered clean to slightly silty fine sands (Unified Classification SP/SP-SM) in upper 13½ feet with measured SPT resistances (N-values) of 3 to 11 blows per foot (BPF) indicating very loose to medium dense soils. Below the upper sands, we encountered silty fine sands to clayey fine sands (SM/SC) to the termination depth of 20 feet, with measured SPT resistances of 13 to 21 BPF indicating medium dense soils.

The description presented above is of a generalized nature to highlight the major subsurface features and material characteristics. The soil profiles included on Sheet 3 should be reviewed for specific information at individual boring locations. These profiles include soil description, stratifications, penetration resistances and laboratory classification of soils. The stratifications shown on the boring profiles represent the conditions only at the actual boring locations. Variations may occur and should be expected between boring locations. The stratifications represent the approximate boundary between subsurface materials and the actual transition may be gradual.

2.4 GROUNDWATER INFORMATION

The groundwater level was not encountered in the upper 10 feet in the borings throughout the site. Due to the use of drilling fluid below 10 feet it is not possible to determine an accurate groundwater reading below 10 feet. It should be noted that groundwater levels tend to fluctuate during periods of prolonged drought and extended rainfall and may be affected by manmade influences. In addition, a seasonal effect will also occur in which higher groundwater levels are normally recorded in rainy seasons. In this regard, it is estimated that the seasonal high groundwater table (SHGWT) is at a depth greater than 7 feet below the current ground surface.

In general, the estimated seasonal high groundwater level is not intended to define a limit or ensure that future seasonal fluctuations in groundwater levels will not exceed the estimated levels. Groundwater levels could exceed the estimated seasonal high groundwater levels as a result of a series of rainfall events, changed conditions at the site that alter surface water drainage characteristics, and/or variations in duration, intensity, or total volume of rainfall.

2.5 DOUBLE-RING INFILTROMETER TESTS

One Double Ring Infiltrometer Test (DRIT) was performed in accordance with ASTM Designation D5093-02 in the proposed stormwater pond. The test was performed March 28, 2008 and yielded a stabilized infiltration rate of approximately 18.0 inches per hour. A graph of the results are attached in the Appendix of the report.

3.0 EVALUATION AND RECOMMENDATIONS

3.1 General

Based on our observations, it is our opinion that subsurface soil conditions at the site are generally favorable for the planned development from a geotechnical engineering perspective provided that the recommendations presented herein are followed.

The following design recommendations have been developed on the basis of the previously described project characteristics and subsurface conditions encountered. If there are any changes in these project criteria, including project location on the site, a review must be made by PSI to determine if any modifications in the recommendations will be required. The findings of such a review should be presented in a supplemental report.

Once final design plans and specifications are available, a general review by PSI is strongly recommended as a means to check that the evaluations made in preparation of this report are correct and that earthwork and foundation recommendations are properly interpreted and implemented.

3.2 General Site Preparation

The following are our recommendations for overall site preparation. These recommendations should be used as a guideline for the project general specifications prepared by the design engineer.

1. Organics, vegetation or any other deleterious materials present within proposed building and pavement areas should be removed. If existing pavements, floor slabs, and foundations are at least 12 inches below the bottom of any floor slabs or foundations or at least 12 inches below the surface of any proposed pavement, those existing structures should be removed. All encountered deleterious materials should be removed and disposed of properly. At a minimum, it is recommended that the clearing operations extend at least 5 feet beyond the development perimeters.

2. Following clearing and stripping operations, it is recommended that the site be proofrolled with a heavy vibratory roller (40,000 to 60,000 ft-lbs of energy) and be compacted to a minimum depth of 1 foot below stripped grade to a dry density of at least 95% of the modified Proctor maximum dry density within the proposed structure and new pavement areas. Compaction of the construction site should continue until the roller has made at least eight passes over all areas of the site. Half of the roller passes should be perpendicular to the direction of travel of the other passes.

Any area where the recommended density has not been achieved should be undercut to firm soils and backfilled with structural fill. Excessive settlement may occur if compaction of these upper soils is not performed.

3. Following satisfactory completion of the initial compaction, the structure and pavement areas may be brought up to finished subgrade levels, if needed, using structural fill. The on-site clean to slightly silty fine sands (SP/SP-SM) are generally suitable for use as fill, if available. Off-site fill soils should be tested and approved by PSI prior to hauling to the site. Imported fill should consist of fine sand with less than 12% passing the No. 200 sieve, free of rubble, organics, clay, debris and other unsuitable material. Fill should be tested and approved prior to acquisition. Approved sand fill should be placed in loose lifts not exceeding 12 inches in thickness and should be compacted to a minimum density of 95% of the modified Proctor maximum dry density. Density tests to confirm compaction should be performed in each fill lift before the next lift is placed.

4. Prior to beginning compaction, soil moisture contents may need to be controlled in order to facilitate proper compaction. If additional moisture is necessary to achieve compaction objectives, then water should be applied in such a way that it will not cause erosion or removal of the subgrade soils. A moisture content within the percentage range needed to achieve compaction (typically +/- 3%) is recommended prior to compaction of the natural ground and fill.

5. After compaction and proofrolling, building foundation excavations can begin. All foundation excavations should be observed by the geotechnical engineer or a representative to explore the extent of any loose, soft, or otherwise undesirable materials. If the foundation excavations appear suitable as load bearing materials, the bottom of the foundation excavations should be compacted to a minimum density of 95% of the modified Proctor maximum dry density for a minimum depth of one foot below the bottom of the footing depth, as determined by field density compaction tests. Backfill soils placed adjacent to footings or walls should be carefully compacted with a light rubber-tired roller or vibratory plate compactor to avoid damaging the footings or walls. Approved sand fills to provide foundation embedment constraint should be placed in loose lifts not exceeding 12 inches and should be compacted to a minimum density of 95% of the modified Proctor maximum dry density.

6. If soft pockets or debris are encountered in the footing excavations, the unsuitable materials should be removed and the proposed footing elevation may be re-established by backfilling after the undesirable material has been removed. This backfilling may be done with a very lean concrete or with a well-compacted, suitable fill such as clean sand, gravel, or crushed FDOT

No. 57 or FDOT No. 67 stone. Backfill should be compacted to a minimum density of 95% of the modified Proctor maximum dry density.

7. Immediately prior to reinforcing steel placement, it is suggested that the bearing surfaces of all footing and floor slab areas be compacted using hand operated mechanical tampers. In this manner, any localized areas which have been loosened by excavation operations should be adequately recompacted.

8. A representative from our firm should be retained to provide on-site observation of earthwork and ground modification activities. Density tests should be performed in the top 1 foot of compacted existing ground, each fill lift, and the bottom of foundation excavations. It is important that PSI be retained to observe that the subsurface conditions are as we have discussed herein, and that foundation construction, ground modification and fill placement is in accordance with our recommendations.

3.3 Foundation Recommendations

With proper subgrade preparation, column footings and continuous wall foundations can be designed for a net allowable soil bearing pressure of 2,500 pounds per square foot, based on dead load plus design live load. Minimum dimensions of 24 inches for column footings and 18 inches for continuous footings should be used in foundation design to account for variable subsurface conditions, regardless of whether the maximum allowable foundation bearing pressures have been fully developed.

Exterior footings should be located at a depth of at least 18 inches below the final exterior grade. Interior footings can be located on properly compacted soils at nominal depths (minimum 12 inches) compatible with architectural and structural considerations.

The foundation excavations should be observed by a representative of PSI prior to steel or concrete placement to confirm that the compacted fill foundation materials are capable of supporting the design loads and are consistent with the materials discussed in this report. If the foundation excavations appear suitable as load bearing materials, the bottom of the foundation excavations should be compacted to a minimum density of 95% of the modified Proctor maximum dry density for a minimum depth of one foot below the bottom of the footing depth, as determined by field density compaction tests. Soft or loose soil zones encountered at the bottom of the footing excavations should be removed and replaced with fill soils (as directed above), lean concrete or dense graded compacted crushed stone (FDOT No. 57).

After opening, footing excavations should be observed and concrete placed as quickly as possible to avoid exposure of the footing bottoms to wetting and drying. Surface run-off water should be drained away from the excavations and not be allowed to pond. The foundation concrete should be placed during the same day the excavation is made.

3.4 SETTLEMENT

The settlement of shallow foundations supported on compacted sand fill should occur rapidly after loading. Thus, the expected settlement should occur during construction as structural loads are imposed. Provided the recommended site preparation operations are properly performed, any organic materials have been removed and the recommendations previously stated are utilized, the total settlement of wall and isolated column footings should not exceed approximately 1 inch. Differential settlement is estimated to be on the order of 50 percent of the total settlement. Settlement of this magnitude is usually considered tolerable for the anticipated construction; however, the tolerance of the proposed structure to the predicted total and differential settlement should be confirmed by the structural engineer.

3.5 FLOOR SLAB RECOMMENDATIONS

Slab-on-grade construction should be supported on soils compacted to a minimum dry density of at least 95% of their modified Proctor value. We have assumed no extraordinary floor slab performance requirements such as very low allowable deflections or smoothness requirements are necessary. Any cuts that are made in the building pad for utility installation should be backfilled with clean granular materials that are compacted to at least 95 percent of their ASTM D-1557 maximum dry density. Material to be placed within 12 inches of the bottom of the slab should have no single particle greater than 3 inches in size, and should meet the requirements of approved structural fill.

The floor slab should be reinforced to reduce the risk of cracking due to settlement. An impervious membrane should be installed between the soil subgrade and bottom of floor slabs to be overlain with moisture sensitive coverings to avoid slab moisture problems. Floor slab design should conform to American Concrete Institute (ACI) design standards and practices.

3.6 PAVEMENT RECOMMENDATIONS

In general, following the completion of the recommended site preparation as discussed earlier, the compacted natural and new fill soils should be acceptable for construction and support of a flexible (limerock, crushed concrete or shell base) or rigid (concrete) type pavement section.

Any fill utilized to elevate the cleared pavement areas to subgrade elevation should consist of reasonably clean (maximum 12 percent passing the No. 200 sieve) fine sands uniformly compacted to 95 percent of the modified Proctor maximum dry density (ASTM D-1557).

The following pavement recommendations are considered minimum for the site soil and limited traffic conditions expected.

ASPHALTIC CONCRETE PAVEMENT RECOMMENDATIONS		
Material	Minimum Thickness (inches)	
	Light Traffic (Parking)	Medium Traffic (Drives)
Type S-I or SP-12.5 Asphaltic Concrete	1 ½	2
Base (Minimum LBR = 100)	6	8
Stabilized Subgrade (Minimum LBR = 40)	12	12

3.6.1 BASE

The choice of pavement base type basically will depend on final pavement grades. If a minimum separation of 18-inches between the bottom of the base and the seasonal high groundwater level is maintained, then a limerock, or bank-run shell base can be utilized; otherwise, crushed concrete or asphaltic concrete base would be required. Due to the relatively deep water table at this site, we don't anticipate any groundwater related restrictions on base material types for this project.

Limerock, bank-run shell, crushed concrete and asphaltic concrete base materials should meet FDOT requirements including compaction to 98% of its maximum dry density as determined by the modified Proctor test (ASTM D-1557) and a minimum LBR of 100%. Crushed concrete should be graded in accordance with FDOT Standard Specification Section 204.

Based on the expected traffic conditions, we recommend that the base course be a minimum of six (6) inches thick in light duty areas and eight (8) inches thick in medium duty areas. The subgrade should be firm and true to line and grade prior to paving. Traffic should not be allowed on the subgrade as the base is placed to avoid rutting.

3.6.2 ASPHALTIC CONCRETE PAVEMENT

Based on the results of our evaluation, it is recommended that the total asphaltic concrete thickness consist of Type S-1 (or SP-12.5) asphaltic concrete material with a minimum of 1½ inches for parking and 2 inches for driveway areas. The asphaltic concrete should meet standard FDOT material requirements and placement procedures as outlined in the current FDOT Standard Specifications for Road and Bridge Construction. The asphaltic concrete should be compacted to a minimum of 96% of the Marshall maximum laboratory unit weight (or 93% of the maximum theoretical specific gravity (G_{mm}) if using type SP-12.5).

3.6.3 Rigid Concrete Pavement

Rigid (concrete) pavements could also be used. The concrete should have a minimum compressive strength of 4000 psi at 28 days when tested in accordance with ASTM C-39. Based on our experience, a minimal thickness of 5 inches should be utilized for light duty applications and a minimal thickness of 7 inches should be utilized for medium-duty applications. The steel reinforcement within the concrete pavement should be designed by the civil engineer. The subgrade soils should be compacted to a minimum density of 98% of the modified Proctor maximum dry density (ASTM D-1557).

All pavement materials and construction procedures should conform to Florida DOT or appropriate city and/or county requirements. Actual pavement section thickness should be provided by the design civil engineer based on traffic loads, volume and the owners design life requirements.

4.0 CONSTRUCTION CONSIDERATIONS

4.1 General

It is recommended that PSI be retained to provide observation and testing of construction activities involved in the pavement, earthwork, and related activities of this project. PSI cannot accept any responsibility for any conditions which deviate from those described in this report, if not engaged to also provide construction observation and testing for this project.

4.2 Drainage and Groundwater Concerns

Water should not be allowed to collect in or on the prepared subgrades of the construction area either during or after construction. Undercut or excavated areas should be sloped toward one corner to facilitate removal of any collected rainwater, groundwater, or surface runoff. Positive site drainage should be provided to reduce infiltration of surface water within the construction area.

4.3 Pond Design Recommendations

4.3.1 Base of Aquifer

For the design of the stormwater pond, the base of the aquifer can be determined by the depth to the confining layer. A confining layer is generally regarded as a soil stratum that will significantly impede the infiltration of water. In this regard, we believe the silty to clayey fine sand

(SM/SC) found at 13 feet below the current ground surface can be considered to be a confining layer.

4.3.2 Fillable Porosity

The porosity of a soil is the percentage of the total volume of the material that is occupied by pores or interstices. These pores may be filled with water or air and are referred to as void space. Generally, it is assumed 90 percent of the unsaturated void space is available for filling. From St. Johns Water Management District, special publication SJ93-SP10 (1993), the value for fillable porosity for fine sands can be expected to vary from 20 to 30 percent. Based on the soil profile encountered, we believe a value on the order of 20% should be assumed for the fillable porosity.

4.3.4 Summary of Stormwater Pond Design Recommendations

Approximate Base of Aquifer Depth	< 13 feet
Estimated Seasonal High Groundwater Depth	> 7 feet
Stabilized Infiltration Rate	18.0 inches/hour
Fillable Porosity	20%

4.4 Fill Availability

The fine to slightly silty fine sands (SP/SP-SM) encountered from the ground surface to a depth of approximately 13 feet in the borings can be used as structural fill material provided it is free of significant clay, organics or deleterious materials.

4.5 Excavations

In Federal Register, Volume 54, No. 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA) amended its "Construction Standards for Excavations, 29 CFR, Part 1926, Subpart P". This document was issued to better insure the safety of workmen entering trenches or excavations. It is mandated by this federal regulation that excavations, whether they be utility trenches, basement excavations or footing excavations, be constructed in accordance with the current OSHA guidelines. It is our understanding that these regulations are being strictly enforced and if they are not closely followed, the owner and the contractor could be liable for substantial penalties.

The contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The contractors "responsible person", as defined in 29 CFR, Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in all local, state, and federal safety regulations.

We are providing this information solely as a service to our client. PSI does not assume responsibility for construction site safety or the contractor's or other party's compliance with local, state, and federal safety or other regulations.

5.0 REPORT LIMITATIONS

The recommendations submitted are based on the available subsurface information obtained by PSI and design details furnished by Brooks & Amaden, Inc. for the proposed project. If there are any revisions to the plans for this project or if deviations from the subsurface conditions noted in this report are encountered during construction, PSI should be notified immediately to determine if changes in the foundation recommendations are required.

Much of the State of Florida is underlain by a soluble limestone foundation. This limestone can dissolve, resulting in the formation of a sinkhole. An evaluation of the risk of sinkhole development was not included in the Scope of work for this study.

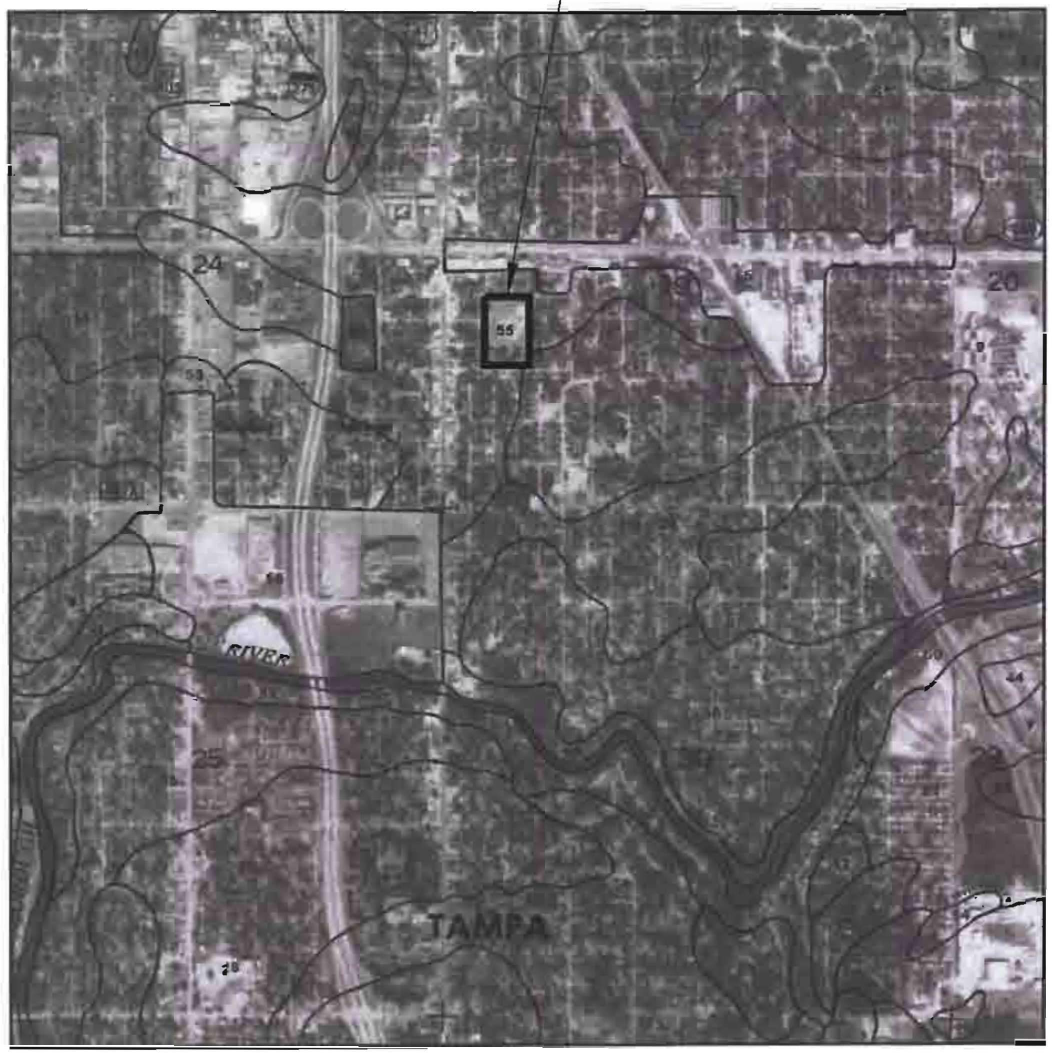
PSI did not provide any service to investigate or detect the presence of moisture, mold or other biological contaminant in or around any structure, or any service that was designed or intended to prevent or lower the risk of the occurrence of the growth of the same. Mold is common to the environment with mold growth occurring when building materials are impacted by moisture. Client acknowledges that site conditions are outside of PSI's control, and that mold growth will likely occur, or continue to occur, in the presence of moisture. As such, PSI cannot and shall not be held responsible for the occurrence or recurrence of mold.

The geotechnical engineer warrants that the findings, recommendations, specifications, or professional advice contained herein have been made in accordance with generally accepted professional geotechnical engineering practices in the local area. No other warranties are implied or expressed.

After the plans and specifications are more complete, the geotechnical engineer should be retained and provided the opportunity to review the final design plans and specifications to check that our engineering recommendations have been properly incorporated into the design documents. This report has been prepared for the exclusive use of Brooks & Amaden, Inc. and its consultants for the specific application to the proposed Springhill Community Center located in Tampa, Florida.

APPENDIX

APPROXIMATE SITE LOCATION

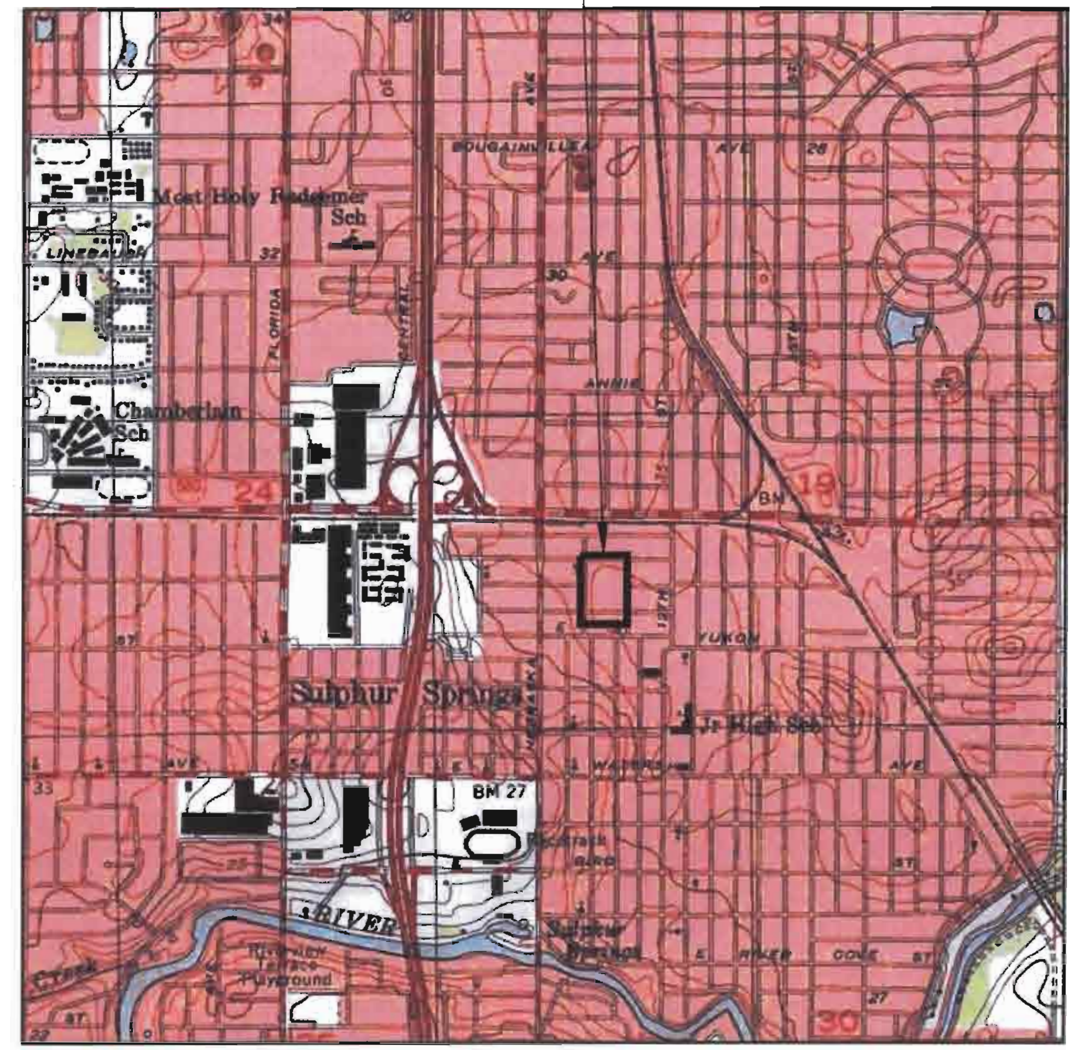


REFERENCE: USDA SCS, "SOIL SURVEY OF HILLSBOROUGH COUNTY, FLORIDA"

TOWNSHIP:	28 SOUTH	ISSUED:	1989
RANGE:	19 EAST	PHOTO:	1982
SECTION:	19	SCALE:	1" = 2000'

USDA VICINITY MAP

APPROXIMATE SITE LOCATION



REFERENCE: USGS "SULPHUR SPRING, FLORIDA" QUADRANGLE MAP

TOWNSHIP:	28 SOUTH	ISSUED:	2001
RANGE:	19 EAST	PHOTOREVISED:	–
SECTION:	19	SCALE:	1" = 2000'

USGS VICINITY MAP

DRAWN	AN	
CHECKED	TP	
APPROVED	MEM	
SCALE	NOTED	

USDA & USGS VICINITY MAPS
PROPOSED SPRINGHILL COMMUNITY CENTER
TAMPA, FLORIDA

psi *Information To Build On*
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DATE	PROJ. NO.	
APR 08	787-85038	SHEET 1

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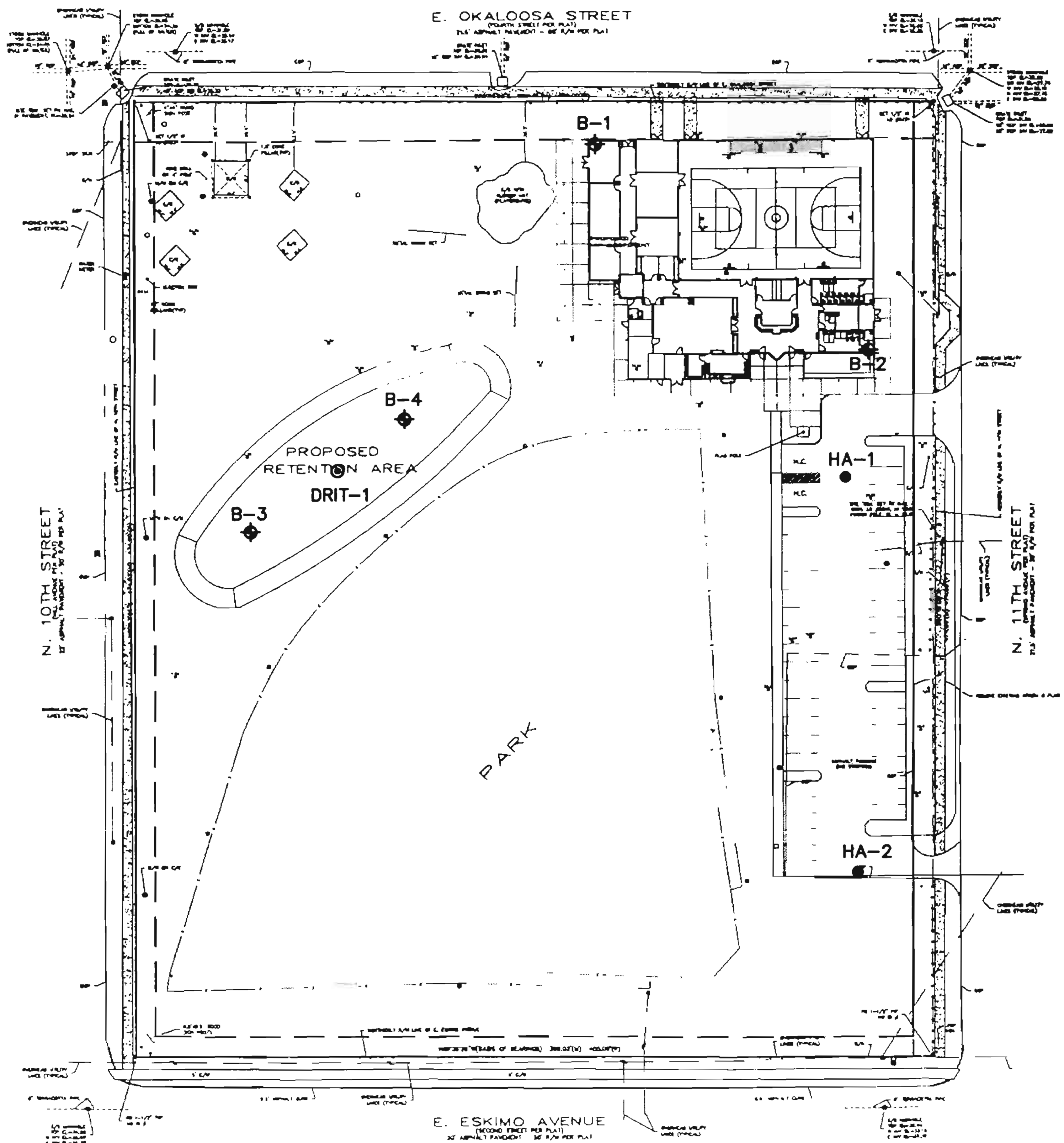

LEGEND

- Approximate SPT boring location
- Approximate Hand Auger boring location
- Approximate Double Ring Infiltrometer Test location

BORING LOCATION PLAN

0 60'
PLAN SCALE

DRAWN	AN
CHECKED	TP
APPROVED	MEM
SCALE	NOTED

GEOTECHNICAL SERVICES
PROPOSED SPRINGHILL COMMUNITY CENTER
TAMPA, FLORIDA

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DATE	PROJ. NO.	
APR 08	787-85038	SHEET 2

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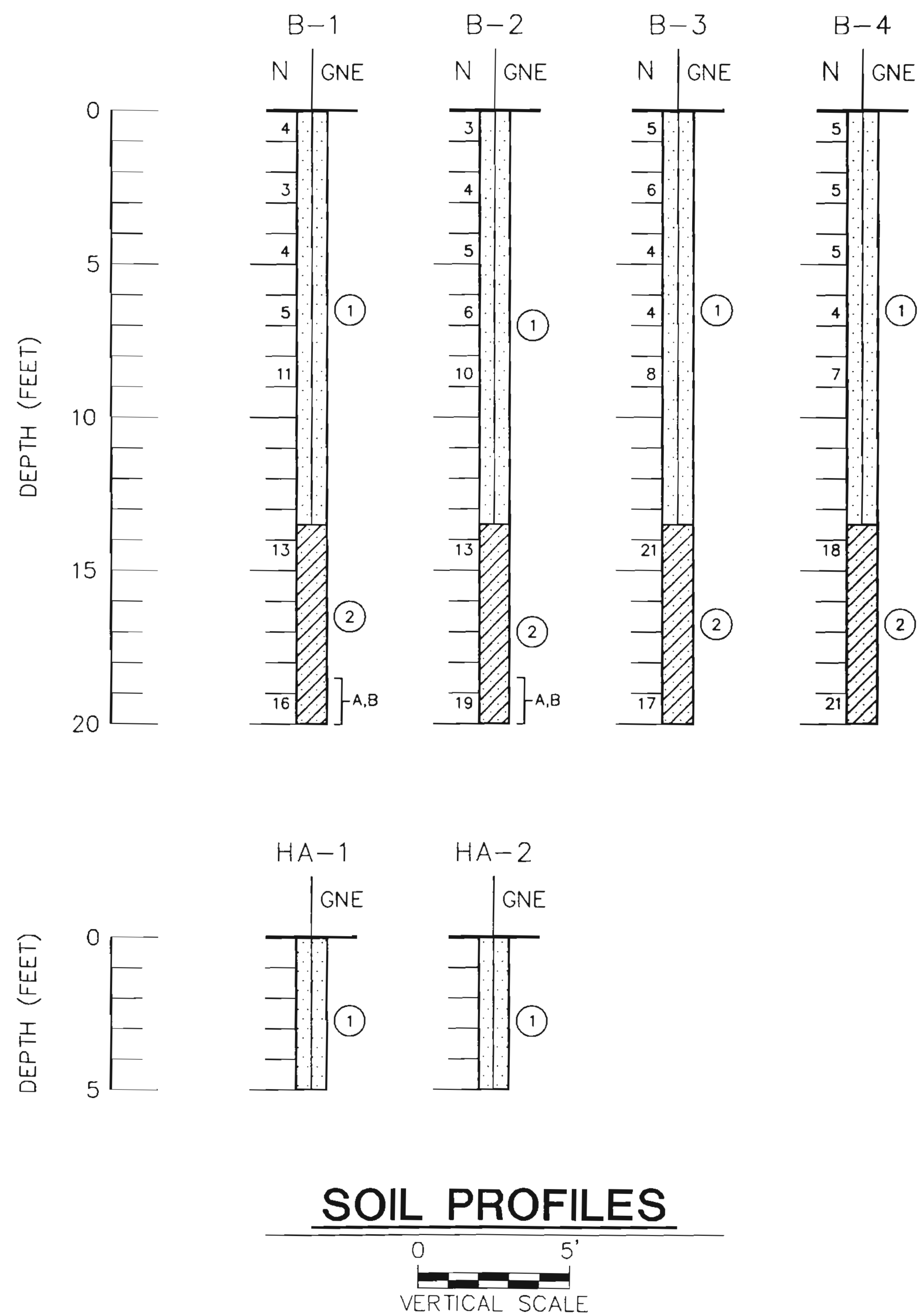

SOIL PROFILES

LEGEND

①	Light gray to brown fine SAND to slightly silty fine SAND (SP/SP-SM)
②	Light gray and orange silty fine SAND to clayey fine SAND (SM/SC)
A	Trace shell fragments
B	Lenses of sandy clay
SP	Unified Soil Classification System (ASTM D 2487) group symbol as determined by visual review
N	SPT N-value in blows/foot
GNE	Groundwater level not encountered in upper 10' of the boring

DRAWN	AN
CHECKED	TP
APPROVED	MEM
SCALE	NOTED

GEOTECHNICAL SERVICES
PROPOSED SPRINGHILL COMMUNITY CENTER
TAMPA, FLORIDA

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DATE APR 08	PROJ. NO. 787-85038	SHEET 3

P:\787 Geo Commercial\2008\85038 Springhill Community Center\85038s2

DOUBLE-RING INFILTROMETER TEST

Proposed Springhill Community Center, DRIT-1

PSI Project No. 787-85038 Stabalized Infiltration Rate = 18 in/hr at 36 in. below grade