REPORT OF
GEOTECHNICAL EXPLORATION

THALATTA PARK PIER
17301 OLD CUTLER ROAD
PALMETTO BAY, FLORIDA 33157

FOR

STANTEC CONSULTING SERVICES, INC.
901 PONCE DE LEON BOULEVARD, SUITE 900
CORAL GABLES, FLORIDA 33134

PREPARED BY

NUTTING ENGINEERS OF FLORIDA, INC.
2051 NW 112TH AVE, SUITE 126
MIAMI, FLORIDA 33172

PROJECT No. 1661.55

MARCH 2019 (REVISED OCTOBER 2019)

Nutting Engineers
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Your Project is Our Commitment

Geotechnical & Construction Materials
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Environmental Services

Offices throughout the state of Florida

www.nuttingengineers.com info@nuttingengineers.com

March 11, 2019 (Revised October 14, 2019)

Mr. Sean Compel
Stantec Consulting Services, Inc.
901 Ponce de Leon Boulevard, Suite 900
Coral Gables, Florida 33134
Phone: (305) 445-2900 ext 2292
Email: sean.compel@stantec.com

Subject: Report of Geotechnical Exploration
Thalatta Park Pier
17301 Old Cutler Road
Palmetto Bay, Florida 33157
Project No. 1661.55

Dear Mr. Compel:

Nutting Engineers of Florida, Inc. has performed a geotechnical exploration for the proposed pier in Palmetto Bay, Florida. This evaluation was performed to obtain information regarding subsurface soil conditions at specific test locations which along with proposed construction information provided was used to develop opinions regarding earthwork procedures and foundations for support of the proposed construction. This report presents our findings and recommendations based upon the information examined at the time of this evaluation.

PROJECT INFORMATION

Per our conversation on December 6, 2018 and review of the aerial provided, we understand that plans for this project include constructing a wood fishing pier at the referenced site. We understand the fishing pier will now be constructed on pre-cast concrete piles in lieu of wood pilings. Additional improvements will include approximately 300 feet of shoreline stabilization (rip rap) and connection of a concrete path to the existing path. After discussions with Mr. Pablo Garcia PE, SE of Stantec, we understand that the structures are planned to be supported by 12-inch square precast concrete piles with 15 tons in compressive capacity, 1 ton in tension capacity and 1 ton in lateral capacity.

We should be notified in writing by the client of any changes in the proposed construction along with a request to amend our foundation analysis and/or recommendations within this report as appropriate.

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St. Lucie 772-408-1050 · Broward 954-941-8700 · Palm Beach 561-736-4900

GENERAL SUBSURFACE CONDITIONS

Subsurface Soil Exploration

The exploration of subsurface conditions included site observation, review of available data such as the Soil Survey of Miami-Dade County and two (2) Standard Penetration Test borings (ASTM D-1586). The Standard Penetration Test borings were performed to a depth of 25 feet below the existing ground surface.

The locations of the test borings are indicated on the attached Test Boring Location Plan. Individual test boring reports are presented in the Appendix of this report. The boring locations were established in the field using approximate methods; namely, a measuring wheel and available surface controls.

The appended boring logs present information and descriptions of the subsurface conditions at the specific test boring location. Representative samples collected from the SPT boring were visually reviewed in the laboratory by a geotechnical engineer in order to confirm the field classifications. The Standard Penetration Test N-values, the number of successive blows required to drive the sampler into the soil one foot, are presented on the individual boring logs. The SPT N value has been empirically correlated with various soil properties and is considered to be indicative of the relative density of cohesionless soils and the consistency of cohesive soils. The correlation of penetration resistance with relative density is presented in the Soil Classification Criteria attached in the Appendix.

Soil Survey Maps

A review of the Soil Survey for Dade County revealed that at the time the survey was conducted, the soils at the site were described as Perrine marl, drained. This moderately deep, nearly level, poorly drained soil is on broad, low coastal flats and in transverse glades. Typically the surface layer is about 10 inches of grayish brown marl that has a texture of silt loam. The underlying layer, to a depth of about 26 inches, is light brownish gray marl that has a texture of silt loam. Few to many light gray, soft accumulations of calcium carbonate and few grayish brown stains are in pockets or around pores and root channels between depths of 11 and 26 inches. Soft, porous limestone bedrock is at a depth of about 26 inches. We note that the maximum depth of the survey is approximately 6 feet.

Test Boring Results

In general, the test borings recorded a surficial layer of topsoil followed by loose to medium dense fine sand and limestone fragments to depths of approximately four to six feet below ground surface. Beneath this, soft silt was encountered to depths of approximately six to eight feet underlain by soft to medium hard limestone to a depth of twenty-five feet, the maximum depth explored. A detailed description of the soil profile is presented in the test boring records provided in the Appendix.

Groundwater Information

The immediate groundwater level was measured at the boring locations at the time of drilling. The groundwater level was encountered at approximately two and a half to five feet below the existing ground surface at the time of drilling.

The immediate depth to groundwater measurements presented in this report will not provide a reliable indication of stabilized or more long term depth to groundwater at this site. Water table elevations can vary dramatically with time through rainfall, droughts, storm events, tidal activity, pumping and many other factors. For these reasons, this immediate depth to water data should not be relied upon alone for project design considerations.

ANALYSIS AND RECOMMENDATIONS

The borings performed for this project suggest that the subsurface soils are in a very loose to soft state in the upper eight feet at this site. Also, soft silt exists at this site at a depth of four to eight feet below the ground surface. We understand that structural loading conditions include a design compressive capcity of fifteen tons, one ton in tension capacity and one ton in lateral capacity. If other pile capacities are needed, we should be notified to provide the proper analysis. In general, this type of pile is driven into the ground, however, due to the soil conditions (limestone formation) and potential vibration concerns, pre-drilling may be required to achieve the proper tip depth. We should be informed as the project progresses to provide detailed input concerning the foundation installation.

In order to achieve fifteen tons in compressive capacity, one ton in tension capacity and one ton in lateral capacity, the 12-inch square concrete piles would need to be installed to depths of approximately 15 feet below existing site grades. We note that depending upon final pile capacity required for the project, final pile depths may vary. **Because of this a preliminary test pile should be installed to provide final pile driving/installation parameters and depths.**

The Florida Building Code (FBC) requires that any piles designed for greater than 40 tons should be load tested in order to verify the pile capacity. Therefore, a pile load test will not be required for this project as described in the FBC.

Pile Monitoring/Observations

The installation and monitoring of the production piles must be performed under the observations of Nutting Engineers. The final installed length and tip elevation of the piles may be adjusted, if necessary, in the field by the NE representative in coordination with the engineer of record.

Vibration Concerns: During the performance of pile driving vibrations will be produced. In general, the allowable peak particle velocity (PPV) one is permitted to induce at adjacent properties is 0.50 inches per second. We recommend vibrations be monitored to evaluate levels. If readings indicate above average exceedances of acceptable levels discussions should be held in order to determine the best course of action in order to try to reduce vibration levels. We

recommend that discussions with all interested parties be performed to discuss these issues prior to final implementation. The contractor should also be made aware of this condition and participate in vibration discussions.

Proposed Sidewalk

It is our opinion that the floor slab system for the proposed concrete sidewalk may be constructed as a slab on grade. Once the site preparation recommendations have been implemented as described in this report, the concrete slabs may be developed for an allowable bearing pressure of 2,000 pounds per square foot.

The thickness of the slab and adequate reinforcement must be designed by the design engineer to resist all anticipated stresses and loads. The modulus of subgrade reaction for the slabs may be taken as 100 pounds per square inch per inch (pci).

Site Preparation - General

The surficial organic soils, debris and roots from the clearing operations, and any unsuitable soils as determined by the Geotechnical Engineer will need to be completely removed within the construction area and to a lateral distance of at least 2 feet beyond the footprint limits. A Nutting Engineer's representative should be present to observe that the stripping operations are performed as we have discussed herein.

Upon approval by the geotechnical engineer, the stripped surface (no fill added at this time) should then be compacted with at least 20 overlapping passes of a vibratory compactor having a minimum dynamic force of 5 tons operated no faster than at a slow walking pace. The soils should be at an acceptable moisture content to allow for proper compaction. The compaction operations must be observed by a representative of Nutting Engineers.

In addition, the surface should also be compacted until a density equivalent to at least 98 percent of the modified Proctor maximum dry density (ASTM D-1557) is achieved to a depth of at least 12 inches below the compacted surface. Any structural fill needed to bring the site to construction grade may then be placed in lifts not exceeding twelve inches in loose thickness. Each lift should be thoroughly compacted until densities equivalent to at least 98 percent of the modified Proctor maximum dry density are uniformly obtained. Fill should consist of granular soil, with less than 10% passing the No. 200 sieve, free of rubble, organics (5% or less) clay, debris and other unsuitable material.

The fill should have ASTM designation (D-2487) of GP, GW, SP, or SW, with a maximum particle size of no more than 3 inches or as otherwise approved by Nutting Engineers.

GENERAL INFORMATION

Our client for this geotechnical evaluation was:

Mr. Sean Compel
Stantec Consulting Services, Inc.
901 Ponce de Leon Boulevard, Suite 900
Coral Gables, Florida 33134

The contents of this report are for the exclusive use of the client, the client's design & construction team and governmental authorities for this specific project exclusively. Information conveyed in this report shall not be used or relied upon by other parties or for other projects without the expressed written consent of NUTTING ENGINEERS OF FLORIDA, INC.

This report discusses geotechnical considerations for this site based upon observed conditions and our understanding of proposed construction for foundation support. Environmental issues including (but not limited to), soil and/or groundwater contamination are beyond our scope of service for this project.

Excavations of five feet or more in depth should be sloped or shored in accordance with OSHA and State of Florida requirements.

The Geotechnical Engineer warrants that the findings, recommendations, specifications, or professional advice contained herein, have been presented after being prepared in accordance with general accepted professional practice in the field of foundation engineering, soil mechanics and engineering geology. No other warranties are implied or expressed.

We appreciate the opportunity to be of service on this project. If we can be of any further assistance, or if you need additional information, please contact us at your convenience.

Sincerely,
NUTTING ENGINEERS OF FLORIDA, INC.

Adrian Ramirez
Engineering Intern

Richard C. Wohlfarth 10/14/19

Richard C. Wohlfarth, P.E. #50858
Director of Engineering

Attachments: Boring Location Plan
Test Boring Reports
Lateral Pile Capacity Analysis Printouts
Limitations of Liability
Soil Classification Criteria

NUTTING ENGINEERS OF FLORIDA, INC. ESTABLISHED 1967	THALATTA PARK PIER 17301 OLD CUTLER ROAD PALMETTO BAY, FLORIDA 33157	APPROXIMATE TEST LOCATIONS	NOT TO SCALE	FIGURE 1

Nutting Engineer of Florida, Inc.
1310 Neptune Drive
Boynton Beach, FL 33426
Telephone: 561.736.4900
Fax: 561.737.9975

BORING NUMBER B-1

PROJECT NUMBER 1661.55

CLIENT Stantec

PROJECT NAME Thalatta Park Pier

PROJECT LOCATION 17301 Old Cutler Road, Palmetto Bay, FL 33157

DATE STARTED 3/5/19 COMPLETED 3/5/19

SURFACE ELEVATION REFERENCE Same as road crown

DRILLING METHOD Standard Penetration Boring

GROUND WATER LEVELS:

LOGGED BY JR Precision CHECKED BY A. Ramirez

▽ AT TIME OF DRILLING 2.6 ft

APPROXIMATE LOCATION OF BORING **As located on site plan**

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	Blows	N-Value	▲ SPT N VALUE ▲ 10 20 30 40 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
0		TOPSOIL				
		Lt. brown fine SAND and LIMESTONE FRAGMENTS	SS 1	16-11-11-8	22	
		▽ Lt. brown LIMESTONE and fine SAND	SS 2	8-6-8-5	14	
5		Brown SILT	SS 3	1-4-2-1	6	
		Lt. brown LIMESTONE	SS 4	16-13-10-14	23	
10			SS 5	28-26-25-20	51	>>
15			SS 6	10-11-15-8	26	
20			SS 7	17-5-2-2	7	
25		Lt. brown to tan LIMESTONE	SS 8	30-29-41-34	70	>>
		Bottom of hole at 25.0 feet.				

Nutting Engineer of Florida, Inc.
1310 Neptune Drive
Boynton Beach, FL 33426
Telephone: 561.736.4900
Fax: 561.737.9975

BORING NUMBER B-2

PROJECT NUMBER 1661.55

CLIENT Stantec

PROJECT NAME Thalatta Park Pier

PROJECT LOCATION 17301 Old Cutler Road, Palmetto Bay, FL 33157

DATE STARTED 3/5/19 COMPLETED 3/5/19

SURFACE ELEVATION REFERENCE Same as road crown

DRILLING METHOD Standard Penetration Boring

GROUND WATER LEVELS:

LOGGED BY JR Precision CHECKED BY A. Ramirez

▽ AT TIME OF DRILLING 5.3 ft

APPROXIMATE LOCATION OF BORING **As located on site plan**

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	Blows	N-Value	▲ SPT N VALUE ▲ 10 20 30 40 / PL MC LL 20 40 60 80 / □ FINES CONTENT (%) □ 20 40 60 80
0		TOPSOIL				
		Brown fine SAND and LIMESTONE FRAGMENTS	SS 1	6-8-5-5	13	
		Brown fine SAND and LIMESTONE	SS 2	4-4-2-3	6	
5		Lt. brown LIMESTONE ▽	SS 3	2-4-3-3	7	
		Brown SILT, trace shell	SS 4	4-1-2-2	3	
		Lt. brown LIMESTONE	SS 5	8-9-10-10	19	
10						
			SS 6	10-9-10-8	19	
15						
			SS 7	27-22-17-18	39	
20						
		Lt. brown to tan LIMESTONE	SS 8	30-42-41-36	83	>>
25		Bottom of hole at 25.0 feet.				

```
****************************************************************
                  ALLPILE 7
       LATERAL ANALYSIS SUMMARY OUTPUT
        Copyright by CivilTech Software
               www.civiltech.com
****************************************************************
Licensed to
Date: 10/11/2019  File:                 1.0

Title 1: Stantec
Title 2: Thalatta Park Pier

ALLPILE INPUT DATA:
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* Pile Type Page *
Unit: English
Displacement pile: Higher friction. Stinger helps smoothen driving.  Pile has two
sections.  H-section on tip.
Pile Type: Driving Concrete Pile

* Pile Profile *
Foundation Depth: 14.0 -ft
Top Height: 7 -ft
Slope Angle: 0
Pile Angle: 0

* Pile Properties *
Zs      Width   Area    Perim.     I       E      Weight  Mix*    Out     In
Other   Type
-ft     -in     -in2    -in      -in4    -kp/i2  -kp/f   %       Side    Side    Par.
```

```
0.0     12      576.0   96.0    27648.0 3000    0.600   0.0     4       4       0
Concrete (smooth)
14.0
Pile Tip
Note:  Mix = % of Inside material/Outside material
Other Pra. = Crack deduction (%) for concrete pile

Group Type: 0
Top Type: 2

Water Table: 0 -ft
No Elevation Input

* Soil Properties *
Zs      Gamma   Phi     C       K       E50/Dr  Nspt    Type    Soil
-ft     -lb/f3  o       -kp/f2  -lb/i3   - %
0.0     72.6    40.0    626.00  2956.0  0.03    60      5       Porous limestones
```

ALLPILE ANALYSIS AND RESULTS:

FACTORS AND CONDITIONS:
Load Factor for Vertical Loads: 2.0
Load Factor for Lateral Loads: 2.0
Loads Supported by Pile Cap: 0 %
Shear Condition: Static

SINGLE PILE:
(with Load Factor)
Vertical Load= 60.00 -kp
Shear= 4.00 -kp
Moment= 0.00 -kp-f

Results:
Top Deflection, yt= 0.01120-in
Max. Moment, M= 28.33-kp-f
Top Deflection Slope, St= -0.00019

Top Deflection, 0.0112-in, OK with the Allowable Deflection= 1.00-in

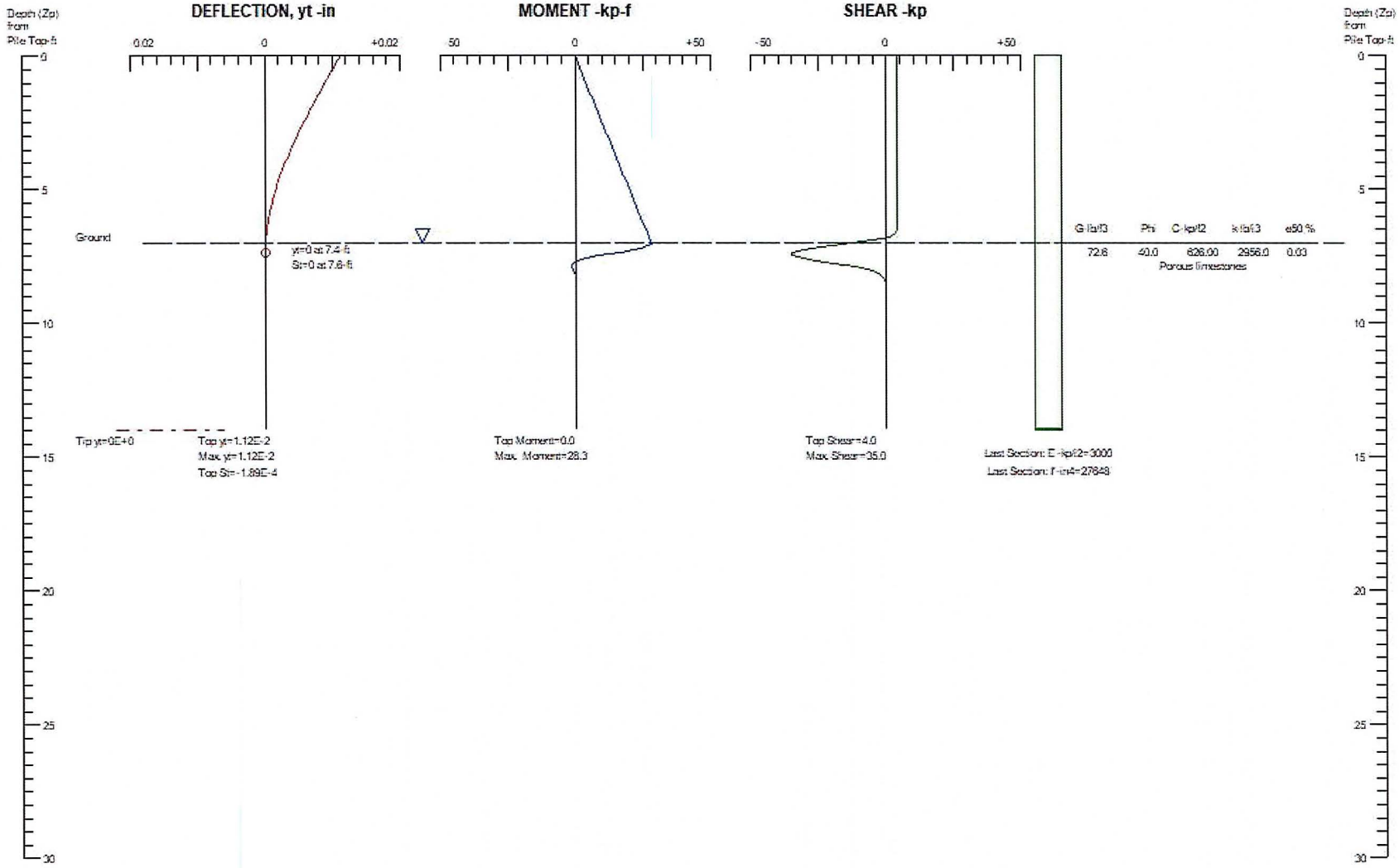
Note: If the program cannot find a result or the result exceeds the upper limit. The result will be displayed as 99999.

Notes:
Q - Vertical Load at pile top
P - Lateral Shear Load at pile top
M - Moment at pile top
Xtop - Pile top total settlement
yt - Pile top deflection
St - Pile top deflection slope (deflection/unit length)

The Max. Moment calculated by program is an internal moment of shaft due to the loading. Egineers
have to check whether the pile has enough moment capacity to resist the Max. Moment with adequate
factor of safety. If not, the pile may be damaged under the loading.
1 1 1 1 1

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=2, Kbc=1



CivilTech Software

Stantec
Thalatta Park Pier

Figure 2

SOIL AND ROCK CLASSIFICATION CRITERIA

SAND/SILT

N-VALUE (bpf)	RELATIVE DENSITY
0 – 4	Very Loose
5 – 10	Loose
11 – 29	Medium
30 – 49	Dense
>50	Very dense
100	Refusal

CLAY/SILTY CLAY

N-VALUE (bpf)	UNCONFINED COMP. STRENGTH (tsf)	CONSISTENCY
<2	<0.25	v. Soft
2 – 4	0.25 – 0.50	Soft
5 – 8	0.50 – 1.00	Medium
9 – 15	1.00 – 2.00	Soft
16 – 30	2.00 – 4.00	v. Stiff
>30	>4.00	Hard

ROCK

N-VALUE (bpf)	RELATIVE HARDNESS	ROCK CHARACTERISTICS
N≥ 100	Hard to v. hard	Local rock formations vary in hardness from soft to very hard within short vertical and horizontal distances and often contain vertical solution holes of 3 to 36 inch diameter to varying depths and horizontal solution features. Rock may be brittle to split spoon impact, but more resistant to excavation.
25≤ N ≤ 100	Medium hard to hard	
5≤ N ≤ 25	Soft to medium hard	

PARTICLE SIZE

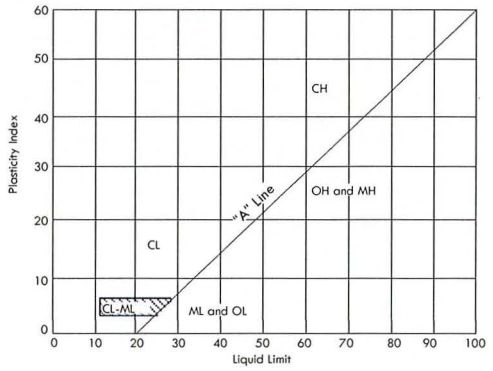
Boulder	>12 in.
Cobble	3 to 12 in.
Gravel	4.76 mm to 3 in.
Sand	0.074 mm to 4.76 mm
Silt	0.005 mm to 0.074 mm
Clay	<0.005 mm

DESCRIPTION MODIFIERS

0 – 5%	Slight trace
6 – 10%	Trace
11 – 20%	Little
21 – 35%	Some
>35%	And

Major Divisions			Group Symbols	Typical names	Laboratory classification criteria
Coarse-grained soils (More than half of material is *larger* than No. 200 sieve size)	Gravels (More than half of coarse fraction is larger than No. 4 sieve size)	Clean gravels (Little or no fines)	GW	Well-graded gavels, gravel-sand mixtures, little or no fines	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_z = \frac{(D_{30})^2}{D_{10} x D_{60}}$ *between* 1 and 3
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines	Not meeting all gradation requirements for GW
		Gravels with fines (Appreciable amount of fines)	GW* d / u	Silty gravels, gravel-sand-silt mixtures	Atterberg limits below "A" line or P.I. less than 4 / Above "A" line with P.I. between 4 and 7 are *borderline* cases requiring use of dual symbols.
			GC	Clayey gravels, gravel-sand-clay mixtures	Atterberg limits above "A" line with P.I. greater than 7
	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Clean sands (Little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines	$C_u = \frac{D_{60}}{D_{10}}$ greater than 6; $C_z = \frac{(D_{30})^2}{D_{10} x D_{60}}$ *between* 1 and 3
			SP	Poorly graded sands, gravelly sands, little or no fines	Not meeting all gradation requirements for SW
		Sands with fines (Appreciable amount of fines)	SM* d / u	Silty sands, sand-silt mixtures	Atterberg limits below "A" line or P.I. less than 4 / Limits plotting in hatched zone with P.I. between 4 and 7 are *borderline* cases requiring use of dual system.
			SC	Clayey sands, sand-clay mixtures	Atterberg limits above "A" line with P.I. more than 7
Fine-grained soils (More than half of material is *smaller* than No. 200 sieve size)	Silts and clays (Liquid limit less than 50)		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	
	Silts and clays (Liquid limit greater than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
			CH	Inorganic clays or high plasticity, fat clays	
			OH	Organic clays of medium to high plasticity, organic silts	
	Highly organic soils		PT	Peat and other highly organic soils	

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:
Less than five percent.....GW, GP, SW, SP
More than 12 percent.....GM, GC, SM, SC
5 to 12 percent.....*Borderline* cases requiring dual systems**



Plasticity Chart

LIMITATIONS OF LIABLILITY

WARRANTY

We warranty that the services performed by Nutting Engineers of Florida, Inc. are conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession in our area currently practicing under similar conditions at the time our services were performed. ***No other warranties, expressed or implied, are made***. While the services of Nutting Engineers of Florida, Inc. are a valuable and integral part of the design and construction teams, we do not warrant, guarantee or insure the quality, completeness, or satisfactory performance of designs, construction plans, specifications we have not prepared, nor the ultimate performance of building site materials or assembly/construction.

SUBSURFACE EXPLORATION

Subsurface exploration is normally accomplished by test borings; test pits are sometimes employed. The method of determining the boring location and the surface elevation at the boring is noted in the report. This information is represented in the soil boring logs and/or a drawing. The location and elevation of the borings should be considered accurate only to the degree inherent with the method used and may be approximate.

The soil boring log includes sampling information, description of the materials recovered, approximate depths of boundaries between soil and rock strata as encountered and immediate depth to water data. The log represents conditions recorded specifically at the location where and when the boring was made. Site conditions may vary through time as will subsurface conditions. The boundaries between different soil strata as encountered are indicated at specific depths; however, these depths are in fact approximate and dependent upon the frequency of sampling, nature and consistency of the respective strata. Substantial variation between soil borings may commonly exist in subsurface conditions. Water level readings are made at the time and under conditions stated on the boring logs. Water levels change with time, precipitation, canal level, local well drawdown and other factors. Water level data provided on soil boring logs shall not be relied upon for groundwater based design or construction considerations.

LABORATORY AND FIELD TESTS

Tests are performed in *general* accordance with specific ASTM Standards unless otherwise indicated. All criteria included in a given ASTM Standard are not always required and performed. Each test boring report indicates the measurements and data developed at each specific test location.

ANALYSIS AND RECOMMENDATIONS

The geotechnical report is prepared primarily to aid in the design of site work and structural foundations. Although the information in the report is expected to be sufficient for these purposes, it shall not be utilized to determine the cost of construction nor to stand alone as a construction specification. Contractors shall verify subsurface conditions as may be appropriate prior to undertaking subsurface work.

Report recommendations are based primarily on data from test borings made at the locations shown on the test boring reports. Soil variations commonly exist between boring locations. Such variations may not become evident until construction. Test pits sometimes provide valuable supplemental information that derived from soil borings. If variations are then noted, the geotechnical engineer shall be contacted in writing immediately so that field conditions can be examined and recommendations revised if necessary.

The geotechnical report states our understanding as to the location, dimensions and structural features proposed for the site. ***Any significant changes of the site improvements or site conditions must be communicated in writing to the geotechnical engineer immediately*** so that the geotechnical analysis, conclusions, and recommendations can be reviewed and appropriately adjusted as necessary.

CONSTRUCTION OBSERVATION

Construction observation and testing is an important element of geotechnical services. The geotechnical engineer's field representative (G.E.F.R.) is the "owner's representative" observing the work of the contractor, performing tests and reporting data from such tests and observations. ***The geotechnical engineer's field representative does not direct the contractor's construction means, methods, operations or personnel.*** The G.E.F.R. does not interfere with the relationship between the owner and the contractor and, except as an observer, does not become a substitute owner on site. The G.E.F.R. is responsible for his/her safety, but has no responsibility for the safety of other personnel at the site. The G.E.F.R. is an important member of a team whose responsibility is to observe and test the work being done and report to the owner whether that work is being carried out in general conformance with the plans and specifications. The enclosed report may be relied upon solely by the named client.