CHATHAM COUNTY PURCHASING & CONTRACTING DEPARTMENT

ADDENDUM NO. 1 TO **Bid No. 22-0015-4**

FOR: ISLANDS EXPRESSWAY AT OATLAND ISLAND ROAD OPERATIONAL IMPROVEMENTS AND RESURFACING

==========

PLEASE SEE THE FOLLOWING FOR ADDITIONS, CLARIFICATIONS AND/OR CHANGES:

SEE ATTACHED GEOTECHNICAL REPORT FOR ISLANDS EXPRESSWAY, MS4 PLOT TESTING LOCATIONS AND CORE SAMPLES FROM OATLAND ISLAND ROAD - *FOR INFORMATION ONLY* (22 pages)

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BID OPENING REMAINS: 2:00 PM, TUESDAY,

MARCH 8, 2022

==========

THE PROPOSER IS RESPONSIBLE FOR MAKING THE NECESSARY CHANGES AND MUST ACKNOWLEDGE RECEIPT OF ADDENDUM.

3/1/22
DATE

ROBERT E. MARSHALL
SENIOR PROCUREMENT SPECIALIST
CHATHAM COUNTY

Geotechnical Engineering Report

Islands Expressway Infiltration Testing
Savannah, Chatham County, Georgia

March 31, 2020
Terracon Project No. ES205004

Prepared for:
Chatham County Engineering
Savannah, Georgia

Prepared by:
Terracon Consultants, Inc.
Savannah, Georgia

March 31, 2020

Chatham County Engineering
124 Bull Street, Suite 430
Savannah, Georgia 31401

Attn: Ms. Pamela Bernard – P.E.
P: (912) 652 7800
E: pbernard@chathamcounty.org

Re: Geotechnical Engineering Report

Islands Expressway Infiltration Testing
Savannah, Chatham County, Georgia
Terracon Project No. ES205004

Dear Ms. Bernard:

We have completed the Geotechnical Engineering services for the above referenced project. This study was performed in general accordance with Terracon Proposal No. PES205004 dated January 9, 2020. This report presents the findings of the subsurface exploration and provides geotechnical findings concerning to the field infiltration tests performed on Islands Expressway.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.

Daniel Laitano, M.S., E.I.T.
Staff Geotechnical Engineer

Guoming Lin, Ph.D., P.E., D.GE
Senior Consultant

REPORT TOPICS

INTRODUCTION 1

SITE CONDITIONS 1

PROJECT DESCRIPTION 2

GEOTECHNICAL CHARACTERIZATION 2

GENERAL COMMENTS 4

Note: This report was originally delivered in a web-based format. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

SITE LOCATION AND EXPLORATION PLANS

EXPLORATION RESULTS

SUPPORTING INFORMATION

Note: Refer to each individual Attachment for a listing of contents.

Geotechnical Engineering Report

Islands Expressway Infiltration Testing
Savannah, Chatham County, Georgia

Terracon Project No. ES205004
March 31, 2020

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the Islands Expressway median located in Savannah, Chatham County, Georgia. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Field infiltration rates of insitu soils
- Site location and exploration plans

The geotechnical engineering Scope of Services for this project included the advancement of three Hand Auger (HA) borings to depths ranging from approximately 4 to 7 feet below existing site grades (BGS). Furthermore, three Double-Ring Infiltrometer tests were performed to approximately 1 feet BGS.

Maps showing the site and boring locations are shown in the **Site Location** and **Exploration Plan** sections, respectively. The results of the field testing performed during the field exploration are included on the boring logs and/or as separate graphs in the **Exploration Results** section.

SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Parcel Information	The project is located at Islands Expressway in Savannah, Chatham County, Georgia. Latitude: 32.0537°, Longitude: -80.0154° See **Exhibit A-1**
Existing Improvements	Highway median.
Current Ground Cover	Grassed.
Existing Topography	Site is relatively level.

PROJECT DESCRIPTION

Our initial understanding of the project was provided in our proposal and was discussed during project planning. Our final understanding of the project conditions is as follows:

Item	Description
Information Provided	We received a site plan by VHB through email communication with Chatham County on January 6, 2020.
Project Description	Per request from Ms. Bernard, the geotechnical investigation was performed to determine the infiltration rates and groundwater elevation depths (if encountered) at the requested locations along Islands Expressway.

GEOTECHNICAL CHARACTERIZATION

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, geologic setting and our understanding of the project. This characterization forms the basis of our geotechnical calculations and evaluation of site preparation and foundation options. Conditions encountered at each exploration point are indicated on the individual logs. The individual logs can be found in the **Exploration Results** section of this report.

Typical Profile

Stratum	Depth to bottom of soil layer (feet, below ground surface)	Material Description
Surface	<0.5	Topsoil: sands with grass and grass roots
1	4.5 to 5	Silty sands
2	7	Clayey sands

Groundwater

Groundwater was encountered in all of the hand auger borings at the time of our field exploration.

When performing the hand auger borings, the groundwater level below ground surface was measured to be 3 to 5 feet at HA1 to HA3. Cave-in depths were encountered at IR2 and IR3 at 5

and 4 feet BGS, respectively. It should be noted that groundwater levels tend to fluctuate with seasonal and climatic variations, as well as with construction activities. As such, the possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project. The groundwater table should be checked prior to construction to assess its effect on site work and other construction activities.

Based on the mottling depths encountered during exploration, seasonal high groundwater levels are estimated to be approximately 1.5 feet BGS.

Double Ring Infiltration Test

Three Double-Ring Infiltrometer test (IR1, IR2, and IR3) were performed in general accordance to ASTM D-3358 at approximately 1 feet BGS, respectively, to determine the infiltration rate of the in-situ soils. Please see attached **Exhibit A-1 and A-2** in **Attachments** for the test location.

The test method consists of driving two open cylinders, one inside another, into the ground, partially filling the rings with water, and maintaining the water at a constant level. The volume of water added to the inner ring to maintain the water level constant is the measure of the volume of water that infiltrates the soil. The volume infiltrated during timed intervals is converted to an incremental infiltration velocity, usually in/hr. and plotted versus elapsed time. The average incremental velocity is equivalent to the infiltration rate.

Test Location	Groundwater	Test Depth	Soil Type	Infiltration rate, in/hr.
IR1	5 feet BGS	1 feet BGS	Silty to clayey sands	2.57
IR2	3.5 feet BGS	1 feet BGS	Silty sands	7.94
IR3	3 feet BGS	1 feet BGS	Silty sands	22.14

Note: BGS = Below Ground Surface

In general, the insitu soils show good permeability rates at 1 feet below ground surface. The silty sands are typically considered soils with desirable hydraulic conductivity. Unlike the latter, clayey sands are considered marginally acceptable for infiltration as these soils have lower infiltration rates.

It should be noted that saturation levels along with other factors such as siltation may affect the infiltration rates. The actual infiltration rate may vary from the values reported here.

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Number / Type of Exploration Locations	Boring Depth (feet, below ground surface)	Location
3 Double Ring Infiltration Tests	1	Highway median
3 Hand Auger (HA) borings	4 to 7	Adjacent to infiltration tests

Boring Layout and Elevations: Unless otherwise noted, Terracon personnel provided the boring layout. Coordinates were obtained with a handheld GPS unit (estimated horizontal accuracy of about ±10 feet). If elevations and a more precise boring layout are desired, we recommend borings be surveyed following completion of fieldwork.

Subsurface Exploration Procedures: Hand auger borings were conducted in general accordance with ASTM D 1452-80 to determine the subsurface conditions at shallow depths. In this test, the hand auger boring is drilled by rotating and advancing a bucket auger to the desired depths while periodically removing the auger from the hole to clear and examine the auger cuttings. The soils will be visually classified by a geotechnical engineer or geologist in accordance with ASTM D-2488.

The double ring infiltration test was conducted in general accordance with ASTM D3385. The test method consists of driving two open cylinders, one inside the other, into the ground, partially filling the rings with water, and maintaining the water at constant level. The volume of water added to the inner ring to maintain the water level constant is the measure of the volume of water that infiltrates the soil. The volume infiltrated during timed intervals is converted to an incremental infiltration velocity, usually in/hr. and plotted versus elapsed time. The average incremental velocity is equivalent to the infiltration rate.

The sampling depths, penetration distances, and other sampling information was recorded on the field boring logs. Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples.

SITE LOCATION AND EXPLORATION PLANS

Contents:

- **Exhibit A-1** Site Location Map
- **Exhibit A-2** Exploration Plan

EXHIBIT A-1 - SITE LOCATION MAP

Islands Expressway Infiltration Tests ■ Savannah, Chatham County, Georgia
March 30, 2020 ■ Terracon Project No. ES205004

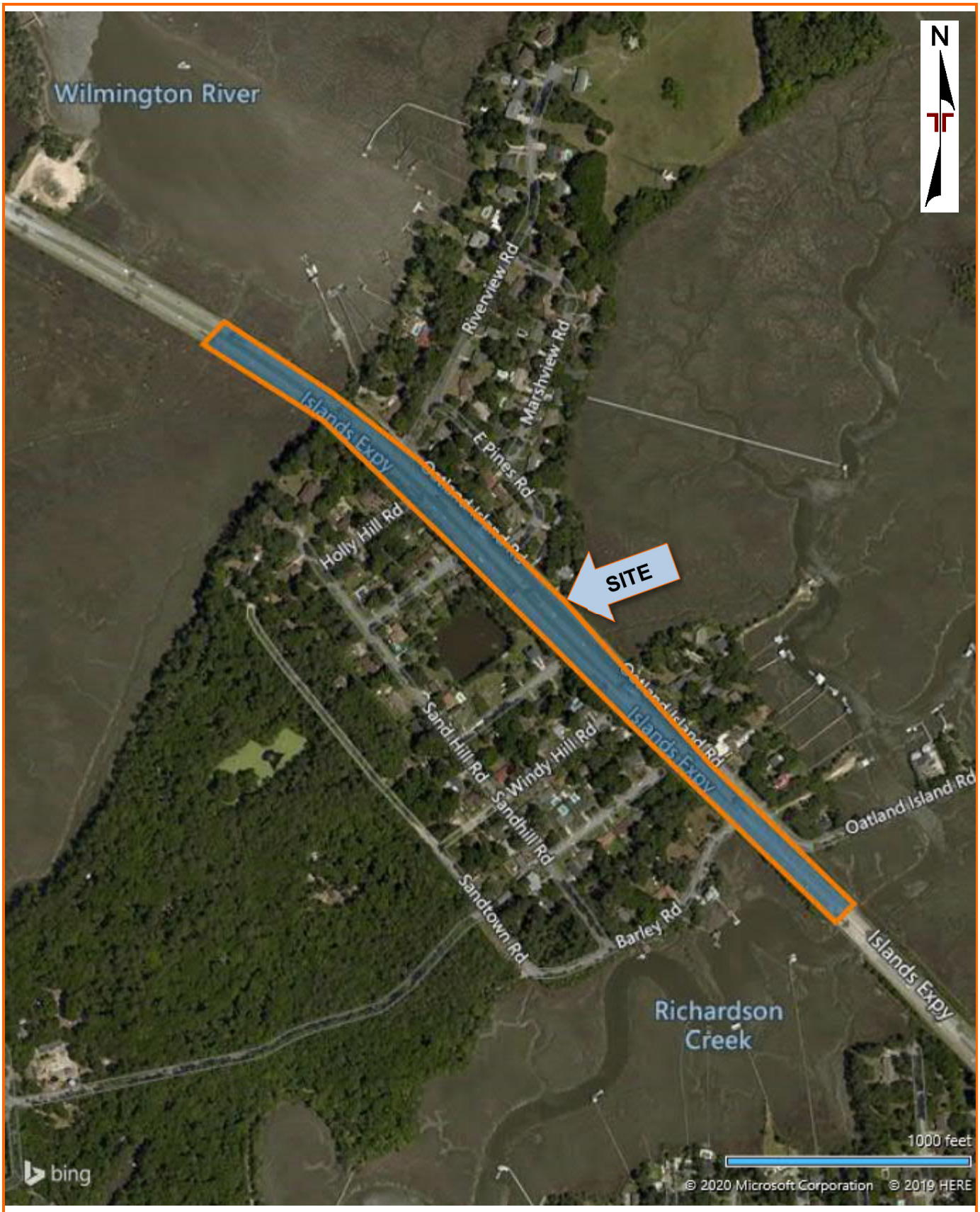


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY GOOGLE EARTH

EXHIBIT A-2 - EXPLORATION PLAN

Islands Expressway Infiltration Tests ■ Savannah, Chatham County, Georgia

March 30, 2020 ■ Terracon Project No. ES205004

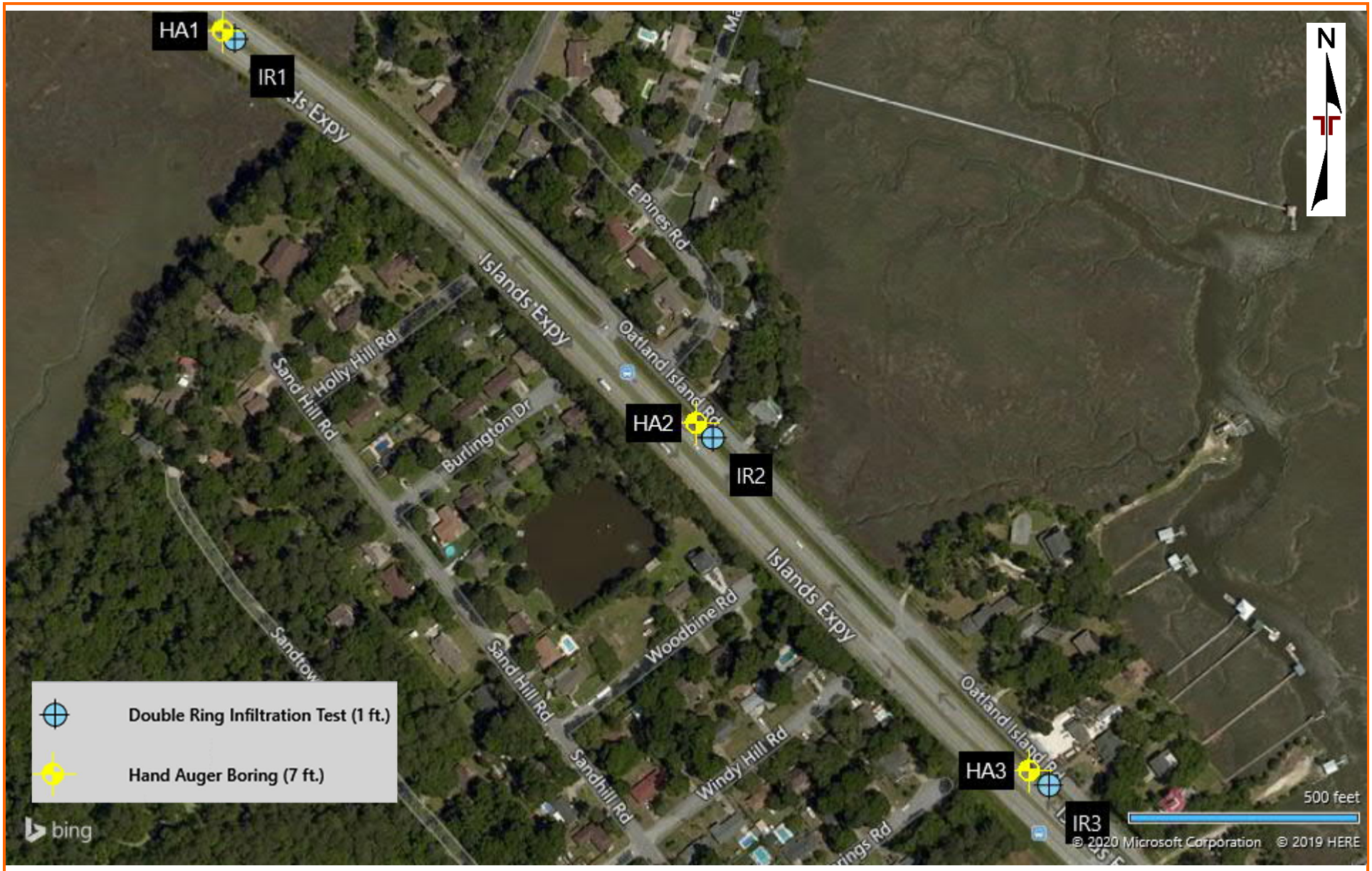


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY GOOGLE EARTH

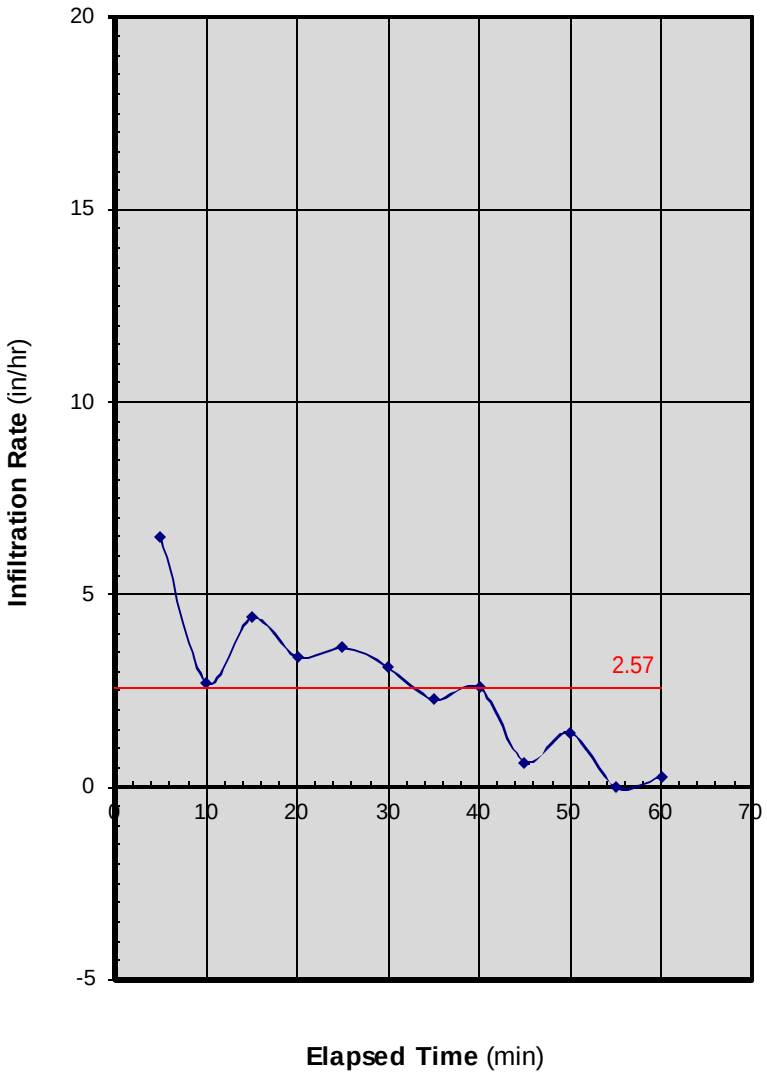
EXPLORATION RESULTS

Contents:

- **Exhibit A-3** Double Ring Infiltration Test Results

DOUBLE RING INFILTROMETER TEST RESULT

Elapsed Time (min)	Quantity of Water (ml)	Infiltration Rate (in/hr)
5	1000	6.47
10	420	2.72
15	680	4.40
20	520	3.37
25	560	3.63
30	480	3.11
35	350	2.27
40	400	2.59
45	100	0.65
50	220	1.42
55	0	0.00
60	40	0.26
Average (in/hr)		2.57



Soil Profile	
Depth (inch, BGS)	**Soil Description**
0 to 6	Topsoil: Dark brown fine silty SAND (SM) with grass roots
6 to 12	Dark brown fine silty SAND (SM)
12 to 18	Light brown fine silty SAND (SM)
18 to 36	Light brown / gray fine silty SAND (SM)
36 to 54	Gray fine silty SAND (SM)
54 to 84	Gray fine clayey SAND (SC)
Boring Terminated @ 84" BGS.	
Groundwater encountered @ 60" BGS	
Mottling noted @ 18" BGS	
Note: BGS = Below Ground Surface	

Test Data
Test Location : IR1
Diameter of Inner Ring (in)**: 12**
Diameter of Outer Ring (in)**: 24**
Test Depth (in)**: 12**
Head Maintained Above Test Depth (in)**: 10**
Date Performed: March 13, 2020
Performed By: JS
Infiltration Rate (in/hr)**: 2.57**

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue
Savannah, Georgia 31404

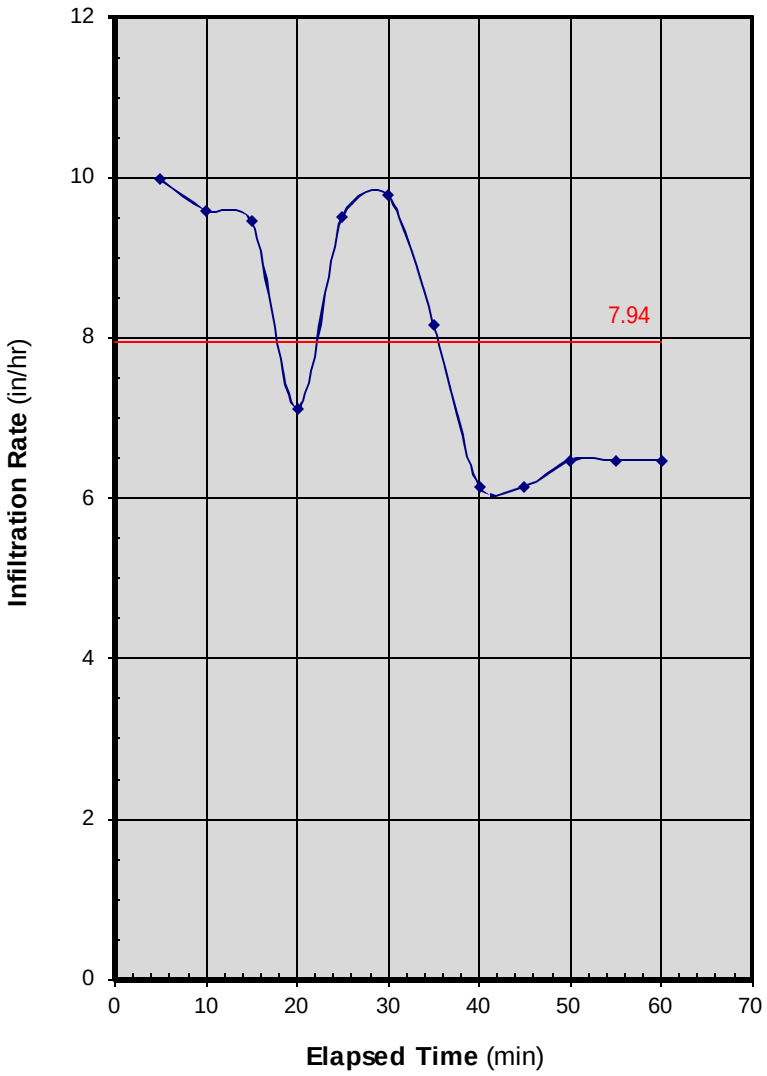
Project Name: Islands Expressway Infiltration Testing

Project No.: ES205004

Location: Savannah, Chatham County, Georgia

DOUBLE RING INFILTROMETER TEST RESULT

Elapsed Time (min)	Quantity of Water (ml)	Infiltration Rate (in/hr)
5	1540	9.97
10	1480	9.58
15	1460	9.45
20	1100	7.12
25	1470	9.52
30	1510	9.78
35	1260	8.16
40	950	6.15
45	950	6.15
50	1000	6.47
55	1000	6.47
60	1000	6.47
Average (in/hr)		7.94



Soil Profile	
Depth (inch, BGS)	**Soil Description**
0 to 12	Topsoil: Brown fine silty SAND (SM) with grass roots
12 to 42	Light gray / light brown fine silty SAND (SM)
42 to 60	Light gray fine silty SAND (SM)
at 60	Cave-in

Boring Terminated @ 60" BGS.

Groundwater encountered @ 42" BGS

No mottling noted

Note: BGS = Below Ground Surface

Test Data
Test Location : IR2
Diameter of Inner Ring (in)**: 12**
Diameter of Outer Ring (in)**: 24**
Test Depth (in)**: 12**
Head Maintained Above Test Depth (in)**: 10**
Date Performed: March 13, 2020
Performed By: JS
Infiltration Rate (in/hr)**: 7.94**

Terracon Consulting Engineers & Scientists
2201 Rowland Avenue
Savannah, Georgia 31404

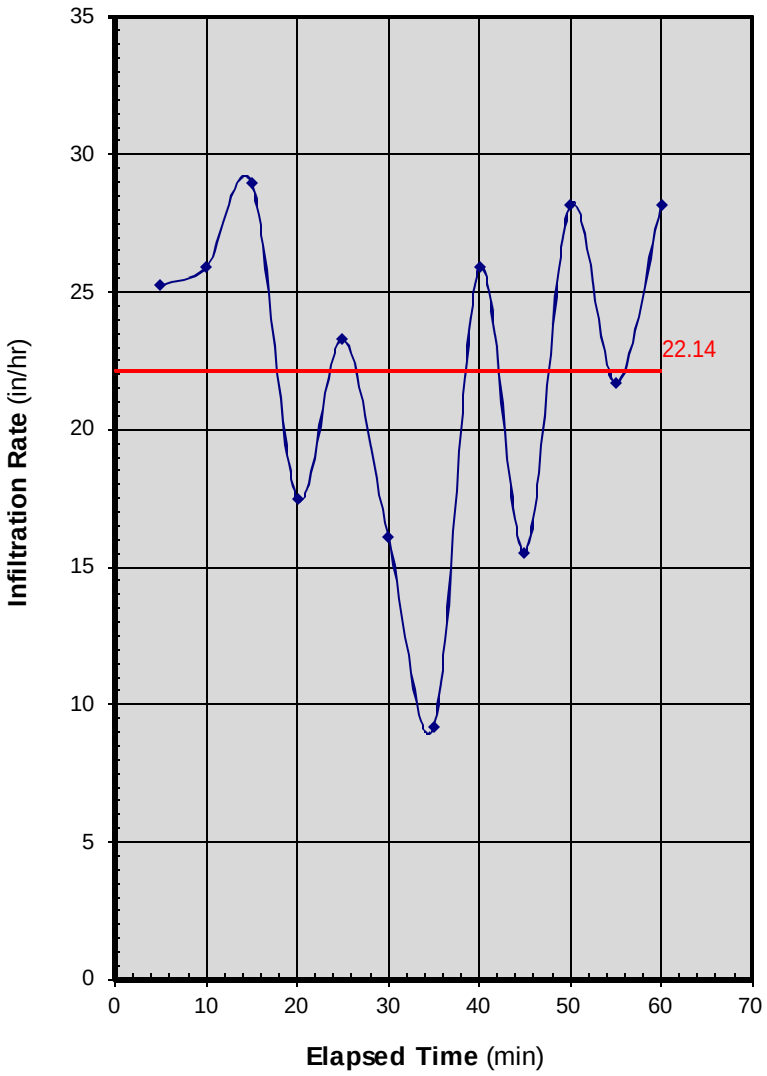
Project Name: Islands Expressway Infiltration Testing

Project No.: ES205004

Location: Savannah, Chatham County, Georgia

DOUBLE RING INFILTROMETER TEST RESULT

Elapsed Time (min)	Quantity of Water (ml)	Infiltration Rate (in/hr)
5	3900	25.25
10	4000	25.90
15	4470	28.94
20	2700	17.48
25	3600	23.31
30	2490	16.12
35	1420	9.19
40	4000	25.90
45	2400	15.54
50	4350	28.17
55	3350	21.69
60	4350	28.17
Average (in/hr)		22.14



Soil Profile	
Depth (inch, BGS)	**Soil Description**
0 to 6	Topsoil: Dark brown fine silty SAND (SM) with grass roots
6 to 48	Light brown / brown fine silty SAND (SM)
at 48	Cave-in

Boring Terminated @ 48" BGS.

Groundwater encountered @ 36" BGS

No mottling noted

Note: BGS = Below Ground Surface

Test Data
Test Location : IR3
Diameter of Inner Ring (in)**: 12**
Diameter of Outer Ring (in)**: 24**
Test Depth (in)**: 12**
Head Maintained Above Test Depth (in)**: 10**
Date Performed: March 13, 2020
Performed By: JS
Infiltration Rate (in/hr)**: 22.14**

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue
Savannah, Georgia 31404

Project Name: Islands Expressway Infiltration Testing

Project No.: ES205004

Location: Savannah, Chatham County, Georgia

SUPPORTING INFORMATION

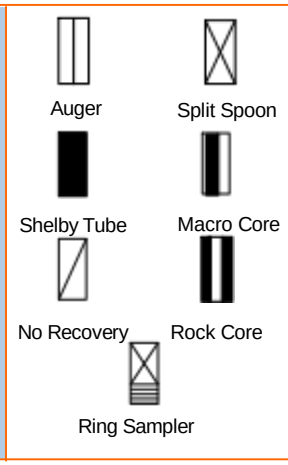
Contents:

- **Exhibit B-1** General Notes
- **Exhibit B-2** Unified Soil Classification System

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING



GROUNDWATER

- Groundwater Initially Encountered
- Groundwater Level After a Specified Period of Time
- Static Groundwater Level After a Specified Period of Time
- No Groundwater Observed

Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.

FIELD TESTS

(HP)	Hand Penetrometer
(T)	Torvane
(b/f)	Standard Penetration Test (blows per foot)
(PID)	Photo-Ionization Detector
(OVA)	Organic Vapor Analyzer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance Includes gravels, sands and silts.		CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Descriptive Term (Density)	Std. Penetration Resistance (blows per foot)	Descriptive Term (Consistency)	Undrained Shear Strength (kips per square foot)	Std. Penetration Resistance (blows per foot)
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4
Medium Dense	10 - 29	Medium-Stiff	0.50 to 1.00	5 - 7
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 14
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30
		Hard	above 4.00	> 30

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

Descriptive Term(s) of other constituents	Percent of Dry Weight
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm
Silt or Clay	Passing #200 sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 5
With	5 - 12
Modifier	> 12

PLASTICITY DESCRIPTION

Term	Plasticity Index
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]					Soil Classification	
					Group Symbol	Group Name [B]
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines [C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$ [E]		GW	Well-graded gravel [F]
			$Cu < 4$ and/or [Cc<1 or Cc>3.0] [E]		GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH		GM	Silty gravel [F, G, H]
			Fines classify as CL or CH		GC	Clayey gravel [F, G, H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines [D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$ [E]		SW	Well-graded sand [I]
			$Cu < 6$ and/or [Cc<1 or Cc>3.0] [E]		SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH		SM	Silty sand [G, H, I]
			Fines classify as CL or CH		SC	Clayey sand [G, H, I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	PI > 7 and plots on or above "A"		CL	Lean clay [K, L, M]
			PI < 4 or plots below "A" line [J]		ML	Silt [K, L, M]
		Organic:	Liquid limit - oven dried / Liquid limit - not dried	< 0.75	OL	Organic clay [K, L, M, N] / Organic silt [K, L, M, O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above "A" line		CH	Fat clay [K, L, M]
			PI plots below "A" line		MH	Elastic Silt [K, L, M]
		Organic:	Liquid limit - oven dried / Liquid limit - not dried	< 0.75	OH	Organic clay [K, L, M, P] / Organic silt [K, L, M, Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor				PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve.

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

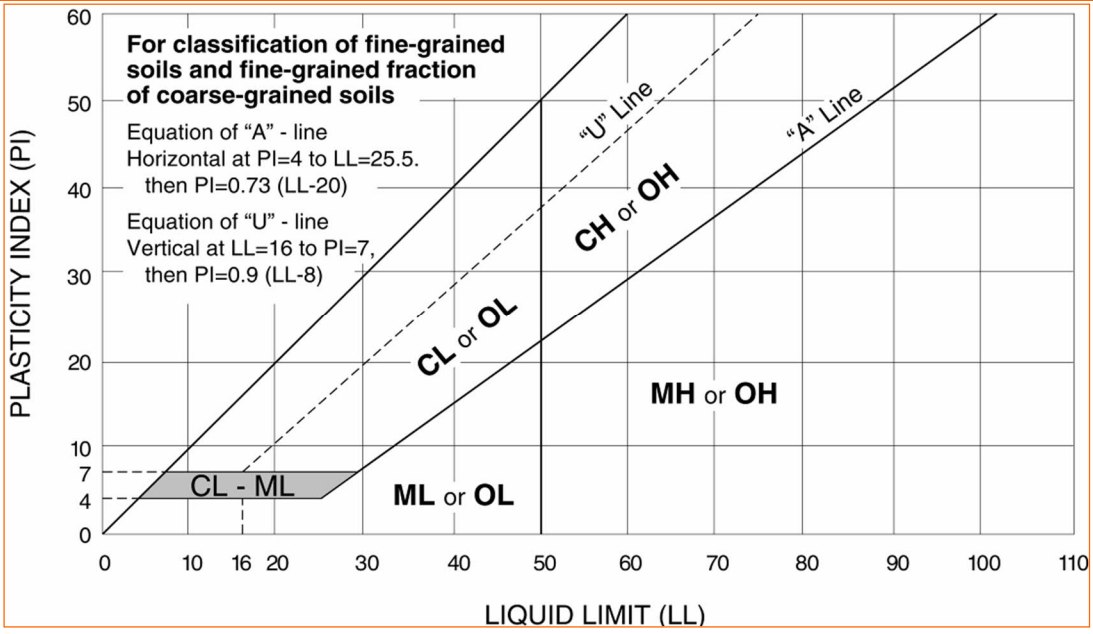
[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.



ISLANDS EXPRESSWAY AT OATLAND ISLAND
ROAD OPERATIONAL IMPROVEMENTS MS4 EXHIBIT
AUGUST 2019

LEGEND

- EXISTING PROPERTY LINE
- APPROX. CONSTRUCTION LIMITS
- SOIL TYPES
- DRAINAGE AREAS
- POTENTIAL INFILTRATION TRENCH
- WETLAND
- ENVIRONMENTALLY SENSITIVE AREA
- POTENTIAL INFILTRATION TESTING LOCATION

vhb

SCALE IN FEET
0 50 100 200


STANLEY
2
3
4
5
6
7
8
9
10
11