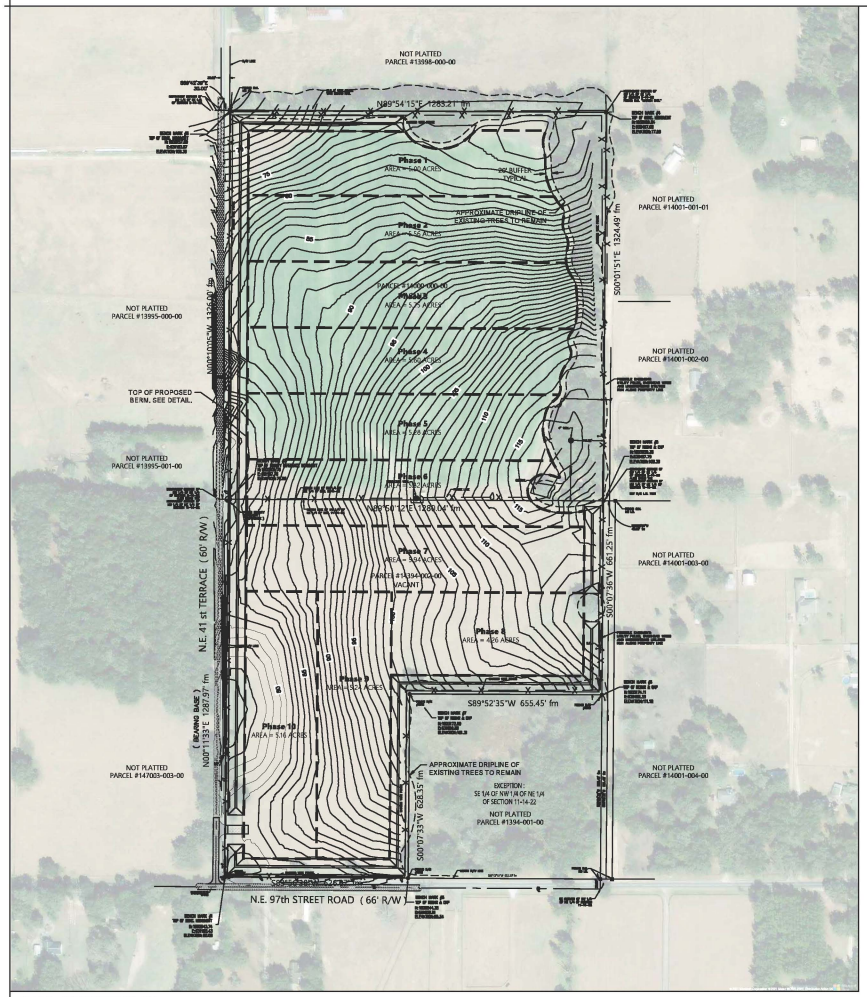
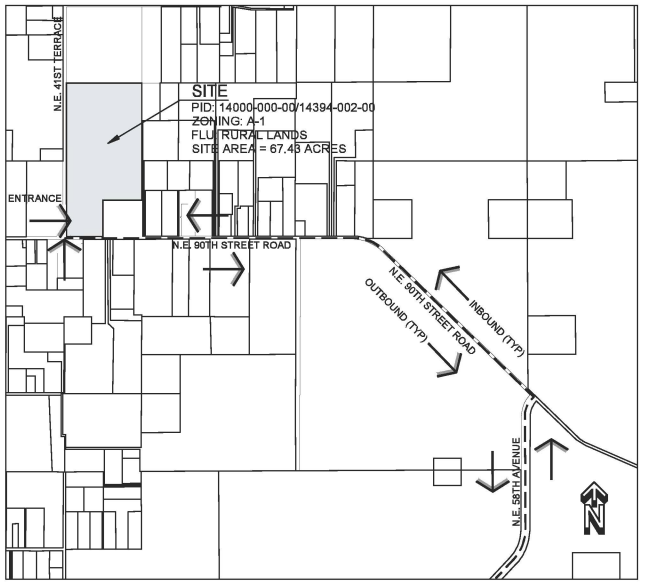
ANTHONY MATERIALS MINE - S.U.P. CONCEPT PLAN



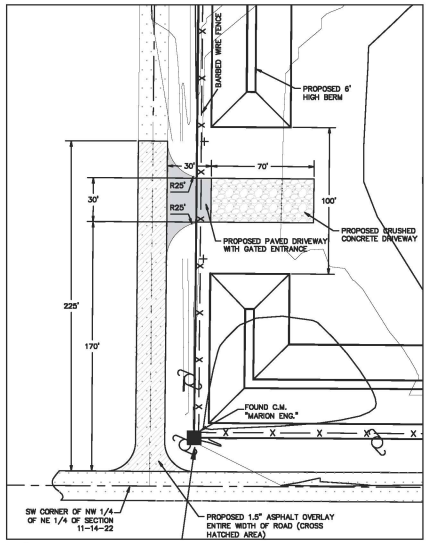
S.U.P. CONCEPT PLAN SCALE: 1" = 200'



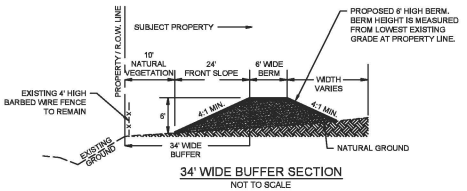
LOCATION MAP & HAUL ROUTE

SEC. 2 & 11, TWP. 14, RGE. 22
MARION COUNTY, FLORIDA

GRAPHIC SCALE IN FEET



DRIVE ACCESS PLAN SCALE: 1" = 40'



34' WIDE BUFFER SECTION
NOT TO SCALE

INDEX OF SHEETS:
C01 S.U.P. CONCEPT PLAN
C02 GRADING PLAN
C03 REMEDIATION PLAN

200 100 0 200 400 600 800
GRAPHIC SCALE IN FEET

Know what's below. Call before you dig.

DATE:	REVISION DESCRIPTION:

DESIGNED BY: PM
DRAWN BY: WPD
CHECKED BY: PM
DATE: 5-13-21

ENGINEER'S CERTIFICATION:

DATE:
PAOLO MASTROSERIO, P.E. #66691
MASTROSERIO ENGINEERING, INC. C.A.#35159
170 SE 32ND PLACE
OCALA, FL 34471

MASTROSERIO ENGINEERING, INC.
CIVIL * ENVIRONMENTAL * SITE DESIGN
170 SE 32ND PLACE
OCALA, FL 34471
PH: (352)433-2185
PAOLO@MASTROSERIOENG.COM

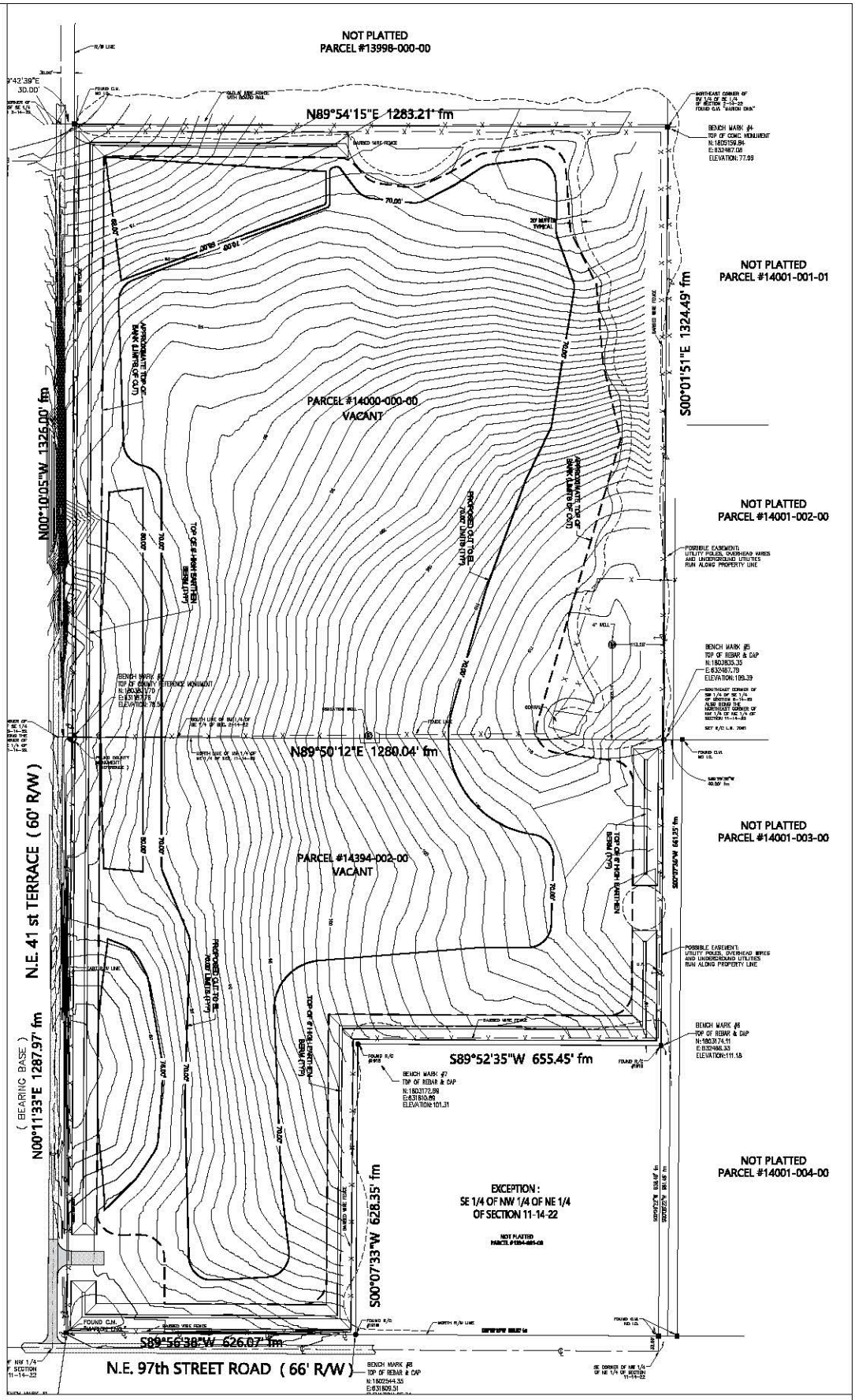
PROJECT: ANTHONY MATERIALS MINE - SPECIAL USE PERMIT PLAN
CITRUS COUNTY, FL SEC. 2 & 11, TWP. 14, RGE. 22

TITLE: SUP CONCEPT PLAN

SCALE: 1" = 200'

JOB#: 21-28

SHEET C1 OF 3



EXCAVATION DEPTH NOTE:

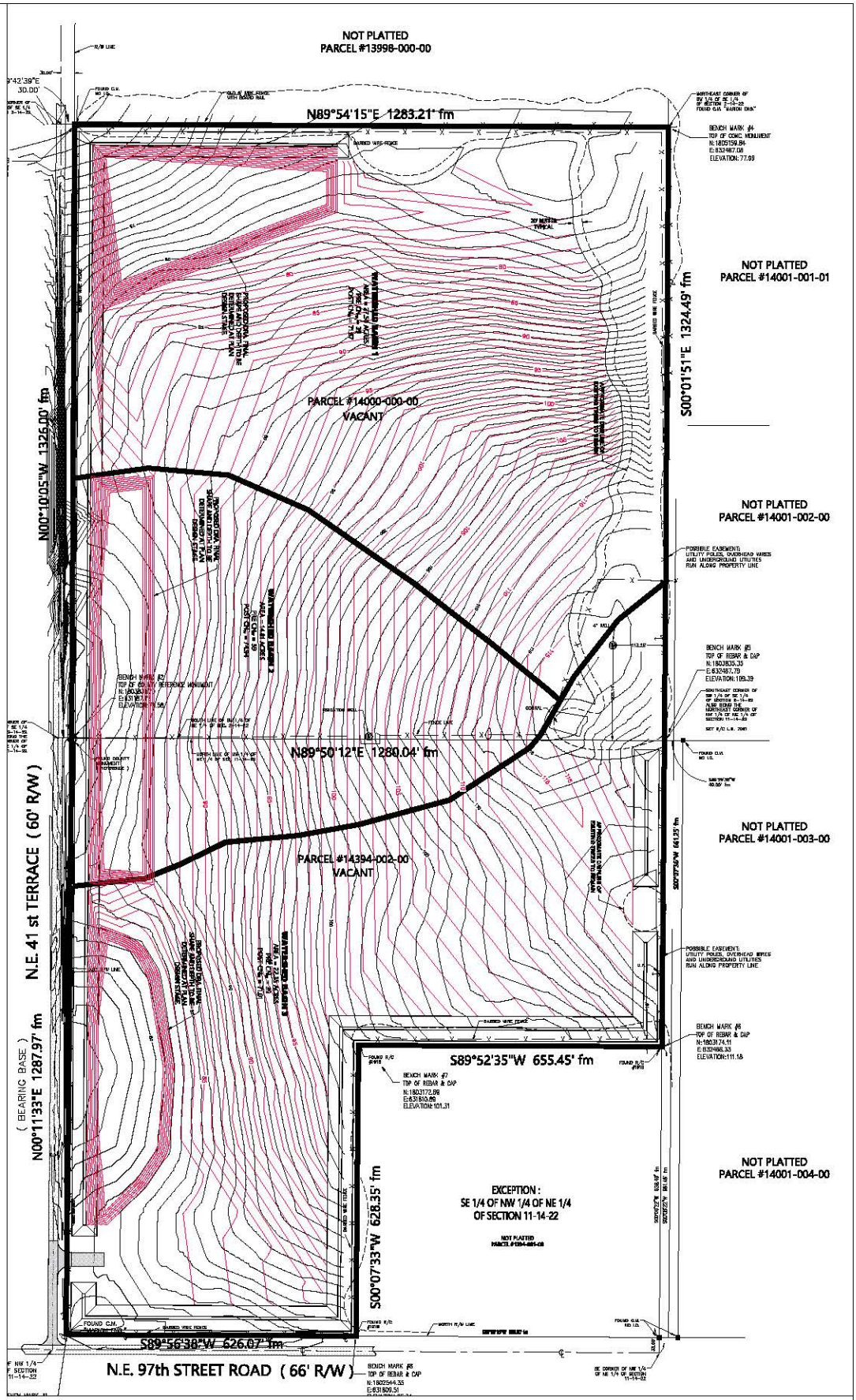
AVERAGE CONFINING LAYER ELEVATION IS 68.41 BASED ON SOIL BORINGS. NO EXCAVATION SHALL EXCEED THE 70.00' ELEVATION TO ALLOW A MINIMUM OF 3 FEET SEPARATION FROM THE BOTTOM OF THE CUT AND THE CONFINING LAYER.

AVERAGE EXCAVATION DEPTH TO THE CONFINING LAYER IS 26.81 FEET BELOW EXISTING GRADE. PROPOSED AVERAGE EXCAVATION SHALL NOT EXCEED 23 FEET BELOW EXISTING GRADE.

Know what's below. Call before you dig. 811

SHEET C2 OF 3	JOB#: 21-38	SCALE: 1" = 100'	PROJECT: ANTHONY MATERIALS MINE - SPECIAL USE PERMIT PLAN CITRUS COUNTY, FL SEC. 2 & 11, TWP. 14, RGE. 22 TITLE: GRADING PLAN	MASTROSERIO ENGINEERING, INC CIVIL * ENVIRONMENTAL * SITE DESIGN 170 SE 32ND PLACE OCALA, FL 34471 PH: (352)433-2195 PAOLO@MASTROSERIOENG.COM	ENGINEER'S CERTIFICATION: DATE: PAOLO MASTROSERIO, P.E. 69811 MASTROSERIO ENGINEERING, INC. C.A.#28169 170 SE 32ND PLACE OCALA, FL 34471	DESIGNED BY: PM DRAWN BY: WPD CHECKED BY: PM DATE: 6-19-21

DATE:	REVISION DESCRIPTION:

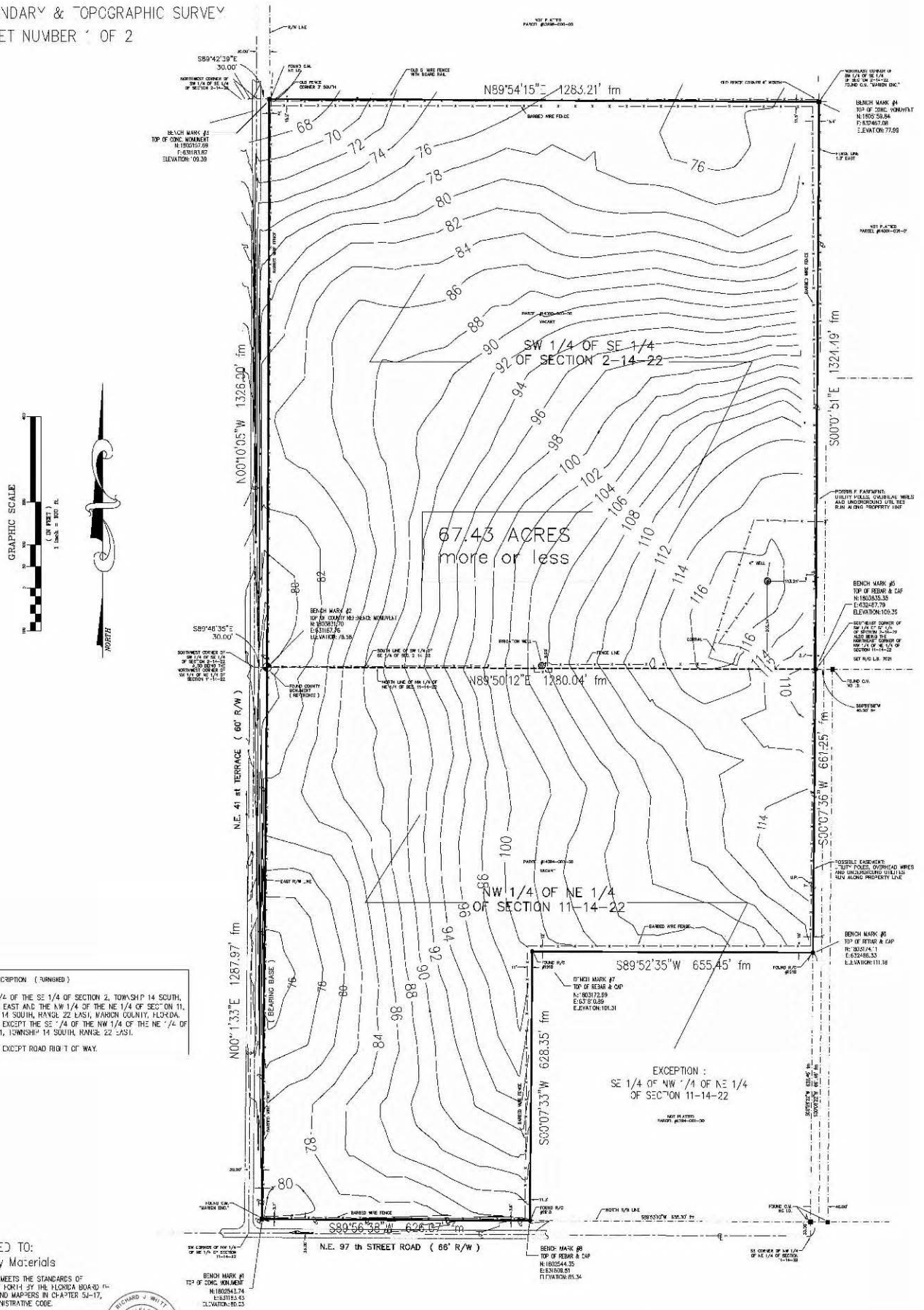


Know what's below. Call before you dig. 811

SHEET C3 OF 3	JOB#: 21-38	SCALE: 1" = 100'	PROJECT: ANTHONY MATERIALS MINE - SPECIAL USE PERMIT PLAN CITRUS COUNTY, FL SEC. 2 & 11, TWP. 14, RGE. 22 TITLE: REMEDIATION PLAN	MASTROBERIO ENGINEERING, INC CIVIL * ENVIRONMENTAL * SITE DESIGN 170 SE 32ND PLACE OCALA, FL 34471 PH: (352)433-2185 PAOLO@MASTROBERIOENG.COM	ENGINEER'S CERTIFICATION: DATE: PAOLO MASTROBERIO, P.E. 69884 MASTROBERIO ENGINEERING, INC. C.A.#29169 170 SE 32ND PLACE OCALA, FL 34471	DESIGNED BY: PM DRAWN BY: WPD CHECKED BY: PM DATE: 5-19-21

DATE:	REVISION DESCRIPTION:

BOUNDARY & TOPOGRAPHIC SURVEY
SHEET NUMBER 1 OF 2



LEGAL DESCRIPTION (FURNISHED)

THE SW 1/4 OF THE SE 1/4 OF SECTION 2, TOWNSHIP 14 SOUTH, RANGE 22 EAST AND THE NW 1/4 OF THE NE 1/4 OF SECTION 11, TOWNSHIP 14 SOUTH, RANGE 22 EAST, MARION COUNTY, FLORIDA. LESS AND EXCEPT THE SE 1/4 OF THE NW 1/4 OF THE NE 1/4 OF SECTION 11, TOWNSHIP 14 SOUTH, RANGE 22 EAST.

LESS AND EXCEPT ROAD RIGHT OF WAY.

CERTIFIED TO:
Anthony Materials

THIS SURVEY MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA BOARD OF SURVEYORS AND MAPPERS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE.

05-21-21

RICHARD J. WHITT
PROFESSIONAL SURVEYOR AND MAPPER
REGISTRATION NO. 5456
STATE OF FLORIDA

RICHARD J. WHITT CERTIFICATE NO. 5456 STATE OF FLORIDA PROFESSIONAL SURVEYOR & MAPPER

BOUNDARY & TOPOGRAPHIC SURVEY
Prepared by
Rick Whitt Surveying, Inc.
licensed business Certificate #7021
Surveyocala@gmail.com
352-624-1813
3423 E. Silver Springs Blvd. #1
Ocala, FL 34470

Scale: 1" = 100'	Survey Date: 05/21/21	Sheet 1 of 2
COPYRIGHT © 2021 RICK WHITT SURVEYING, INC.		Job: 21-565

Elevations based on GPS, RTK Network
NAD83, Florida West Zone. / Verified
County Bench Mark 90ST-12

ABBREVIATIONS
FIC FOUND 5/8" REBAR & CAP
SIC SET 5/8" REBAR & CAP
CM 4"x4" CONCRETE MONUMENT
R/C 5/8" REBAR & CAP
P.R.C. POINT OF REVERSE CURVE
P.C.C. POINT OF COMPOUND CURVE
P.T. POINT OF TANGENT
P.C. POINT OF CURVATURE
P.C.P. PERMANENT CONTROL POINT
P.R.M. PERMANENT REFERENCE MONUMENT
C/L CENTERLINE - 1/4 RIGHT OF WAY
(PLAT OR CALCULATED USING PLAT DATA)
(FIELD MEASURED / C PER DESCRIPTION OR FIELD
CONC. CONCRETE - ASP. ASPHALT

' DESIGNATES ' MINUTES WHEN USED IN A BEARING
" SECONDS WHEN USED IN A BEARING
' FEET WHEN USED IN A DISTANCE
N - NORTH S - SOUTH E - EAST W - WEST
(+) PLUS OR MINUS or MORE OR LESS
I.R. IRON/STD. REBAR/PIPE
P.L.S. PROFESSIONAL LAND SURVEYOR
R.L.S. REGISTERED LAND SURVEYOR
P.S.M. PROFESSIONAL SURVEYOR & MAPPER
BOUNDARY LINE - NOT TO SCALE
WPF WOOD PRIVACY FENCE / CLF CHAIN LINK FENCE
U.B. UTILITY BOX / T.R. TELEPHONE RISER
U.P. UTILITY POLE / O.H. O/H WIRE
W.M. WATER METER / S.T. SEPTIC TANK
UTILITY POLE

NOTES
1. BEARINGS SHOWN HEREON ARE BASED ON GPS, RTK NETWORK, NAD83/FLORIDA WEST ZONE. THE PARTICULAR LINE IS INDICATED BY "(BEARING BASE)" ON SKETCH.
2. SURVEY & FIELD DATE: JUNE 21, 2013.
3. NO TITLE INFORMATION IS REFLECTING OWNERSHIP, RIGHT OF WAY, OR EASEMENTS OF RECORD WERE FURNISHED TO THIS SURVEYOR UNLESS SHOWN OR NOTED HEREON.
4. UNDERGROUND IMPROVEMENTS, IF ANY, WERE NOT LOCATED.
5. THE DESCRIPTION SHOWN HEREON WAS FURNISHED BY THE CLIENT.
6. ALL RIGHTS OF WAY SHOWN HEREON ARE PHYSICALLY OPEN UNLESS OTHERWISE STATED.
7. THE FLOOD ZONE HAS NOT BEEN DETERMINED BY THIS SURVEY.
8. THIS SURVEY IS ONLY VALID FOR THE ENTITIES NAMED IN THE CERTIFICATION.
9. NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

BORE SITE & TREE LOCATION
SHEET NUMBER 2 OF 2

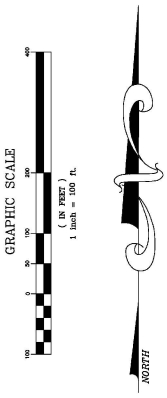
TREE DATA

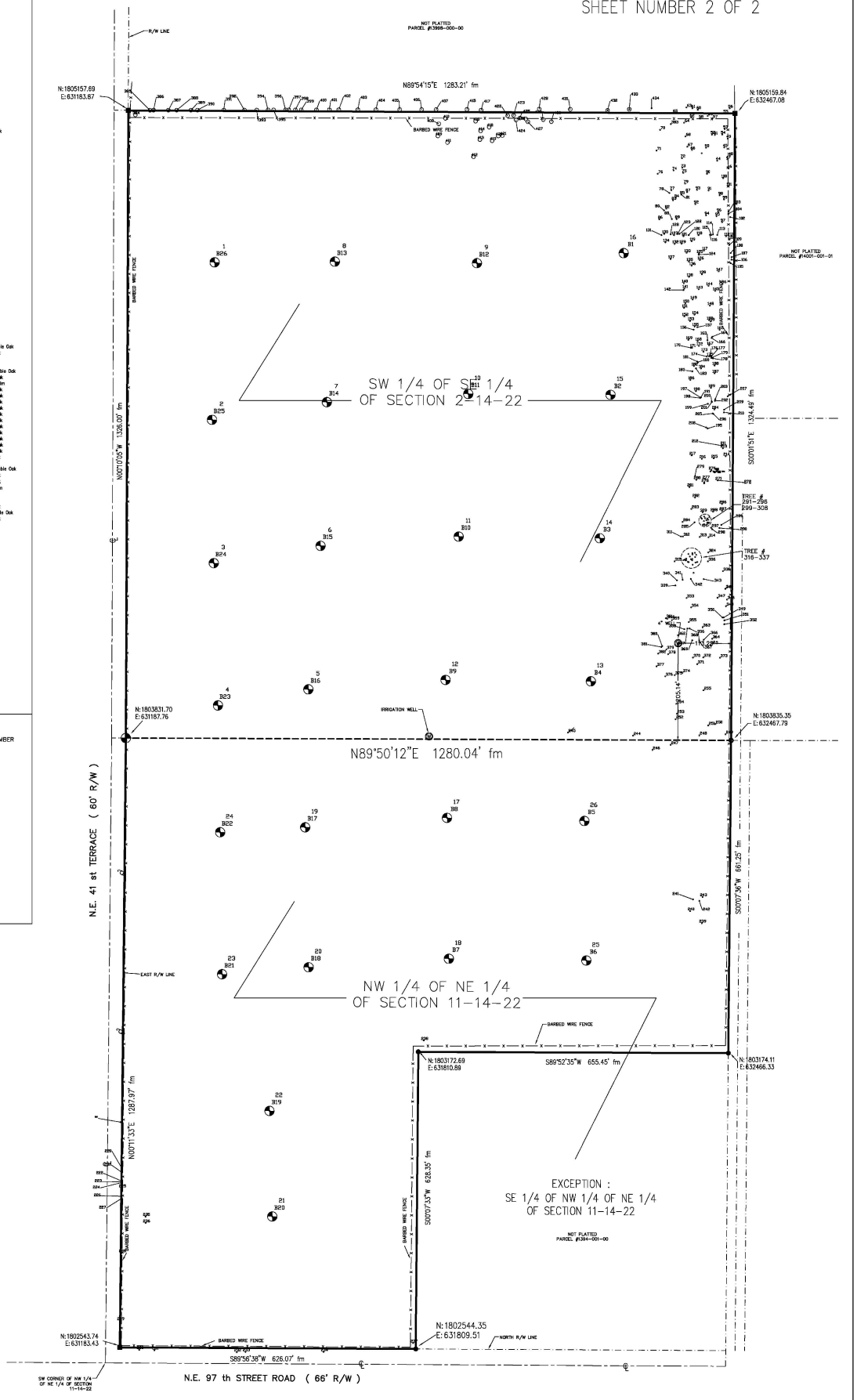
44	5" Oak	101	24" Triple Oak	158	18" Oak
45	36" Oak	102	18" Oak	159	30" Oak
46	18" oak	103	12" Oak	163	12" Oak
47	12 Oak	104	12" Oak	164	6" Oak
48	18" Oak	105	18" Oak	165	6" Oak
49	12"Oak	106	18" Oak	166	6" Oak
50	12" Oak	107	18" Oak	167	24" Oak
51	12"Oak	108	24" Oak	168	18" Oak
52	15 Oak	109	12" Double Oak	169	6" Oak
53	12"Oak	110	18" Oak	170	9" Oak
54	36 Double Oak	111	18" Oak	171	12" Oak
55	12"Oak	112	12" Double Oak	172	24" Oak
56	12" Triple Oak	113	48 Double Oak	173	9" Oak
57	36" Oak	114	18" Oak	174	18" Oak
58	12" Oak	115	24" Oak	175	9" Oak
59	12"Oak	116	18" Oak	176	15" Oak
60	24" Oak	117	12" Oak	177	18" Oak
61	12"Oak	118	36" Double Oak	178	12" Oak
62	18" Oak	119	36" Double Oak	179	12" Oak
63	12" Oak	120	24" Oak	180	9" Oak
64	18" Oak	121	18" Double Oak	181	12" Oak
65	18" Oak	122	12" Oak	182	18" Oak
66	18" Oak	123	12" Oak	183	24" Oak
67	18" Oak	124	12" Oak	184	12" Oak
68	18" Oak	125	6" Oak	185	36" Oak
69	18" Oak	126	12" Oak	186	30" Double Oak
70	18" Oak	127	12" Oak	187	18" Oak
71	48" Oak	128	12" Triple Oak	188	12" Oak
72	12" Oak	129	12" Oak	189	24" Triple Oak
73	12" Oak	130	12" Oak	190	9" Oak
74	12" Oak	131	36" Oak	191	9" Oak
75	12" Oak	132	36" Oak	195	36" Oak
76	48" Double Oak	133	12" Oak	196	6" Oak
77	12" Oak	134	12" Triple Oak	197	12" Oak
78	12" Double Oak	135	18" Oak	198	9" Oak
79	12" Oak	136	18" Oak	199	9" Oak
80	36" Oak	137	30" Oak	200	6" Oak
81	12" Oak	138	24" Oak	201	9" Oak
82	18" Oak	139	24" Oak	202	12" Double Oak
83	10" Oak	140	12" Oak	203	12" Double Oak
84	18" Oak	141	12" Oak	204	6" Oak
85	12" Oak	142	12" Oak	205	6" Oak
86	18" Oak	143	24" Oak	206	9" Oak
87	12" Oak	144	12" Quad Oak	207	24" Oak
88	18" Oak	145	16" Oak	209	12" Triple Oak
89	24" Oak	146	12" Oak	209	6" Double Oak
90	12" Oak	147	12" Oak	210	9" Oak
91	36" Oak	148	18" Oak	211	6" Oak
92	24" Oak	149	16" Oak	212	6" Oak
93	24" Oak	150	18" Oak	213	12" Double Oak
94	12" Double Oak	151	8" QUAD OAK	214	24" Oak
95	24" Oak	152	24" Oak	215	18" Oak
96	12" Oak	153	12" Oak	216	9" Oak
97	24 Oak	154	24" Oak	217	12" Oak
98	36" Oak	155	18" Triple Oak	218	18" Oak
99	18" Oak	156	12" Oak	220	18" Oak
100	18" Oak	157	18" Oak	221	12" Quad Oak

222	18" Double Oak	284	12" Oak	354	48" Triple Oak
223	9" Oak	285	12" Oak	355	36" Oak
224	18" Oak	286	6" Oak	356	18" Oak
225	6" Oak	287	6" Oak	357	12" Oak
226	9"Oak	288	6" Oak	358	14" Double Oak
227	12" Oak	289	6" Oak	359	36" Oak
228	24" Double Oak	300	9" Oak	360	18" Palm
229	18" Oak	301	9" Oak	361	30" Oak
230	24" Oak	302	9" Oak	362	30" Oak
231	24" Triple Oak	303	6" Oak	363	18" Oak
232	9" OAK	304	6" Oak	364	24" Oak
233	24" Oak	305	9" Oak	365	18" Oak
234	36" Oak	306	9" Oak	366	12" Oak
235	15" Oak	307	6" Oak	367	24" Oak
236	36" Double Oak	308	12" Oak	368	15" Oak
237	30" Oak	309	9" Oak	369	24" Oak
238	48" Oak	311	6" Oak	370	24" Oak
239	48"Triple Oak	312	36" Triple Oak	371	24" Oak
240	48" Double Oak	313	9" Oak	372	6" Oak
241	9" Oak	314	12" Oak	373	16" Oak
242	12" Oak	315	18" Oak	374	30" Double Oak
243	24" Oak	316	9" Oak	375	24" Oak
244	9" Oak	317	12" Oak	376	36" Oak
245	12" Oak	318	12" Double Oak	377	18" Palm
246	24" Palm	319	12" Oak	378	36" Oak
247	36" Oak	320	9" Oak	379	16" Oak
248	30" Oak	321	6" Oak	380	6" Oak
249	24" Oak	322	12" Oak	381	48" Triple Oak
250	48" Oak	323	6" Oak	383	30" Oak
251	8" Oak	324	9" Oak		
252	48" Oak	325	9" Oak		
253	6" Oak	326	9" Oak		
254	40" Oak	327	9" Oak		
255	48" Oak	328	9" Oak		
270	18" Oak	329	12" Oak		
272	18" Oak	330	9" Oak		
273	12" Oak	331	6" Oak		
274	12" Oak	332	6" Oak		
275	9" Oak	333	6" Oak		
276	9" Oak	334	9" Oak		
277	9" Oak	335	6" Oak		
278	9" Double Oak	336	9" Oak		
279	6" Oak	337	12" Oak		
280	12" Oak	338	36" Oak		
281	30" Oak	339	36" Triple Oak		
282	16" Double Oak	340	12" Oak		
283	16" Oak	341	9" Oak		
284	9" Oak	342	12" Oak		
285	9" Oak	343	24" Oak		
286	9" Oak	344	9" Oak		
287	9" Oak	345	6" Oak		
288	9" Oak	346	18" Oak		
289	12" Oak	347	12" Oak		
290	6" Oak	348	9" Oak		
291	9" Oak	349	24" Oak		
292	9" Oak	350	12" Oak		
293	9" Oak	351	24" Oak		
		352	24" Oak		
		353	30" Oak		

BORE SITE DATA

REFERENCE #	NORTHING	EASTING	SURFACE ELEVATION	BORE NUMBER
1	1804636.26	631374.42	80.70	B26
2	1804503.21	631368.94	85.83	B25
3	1804201.48	631372.72	83.94	B24
4	1803900.57	631381.47	84.82	B23
5	1803934.57	631572.76	92.33	B16
6	1804238.10	631598.50	91.71	B15
7	1804540.65	631611.78	88.33	B14
8	1804637.61	631628.68	82.49	B13
9	1804634.47	631929.19	81.66	B12
10	1804558.05	631910.82	94.02	B11
11	1804257.70	631890.57	100.71	B10
12	1803954.50	631882.92	105.65	B9
13	1803951.59	632170.05	114.94	B4
14	1804254.11	632189.07	110.82	B3
15	1804556.14	632211.64	96.78	B2
16	1804655.89	632238.50	90.09	B1
17	1803662.85	631865.88	103.39	B8
18	1803365.00	631866.79	103.26	B7
19	1803642.83	631568.04	90.22	B17
20	1803347.06	631573.28	92.09	B18
21	1802920.50	631496.31	86.70	B20
22	1803043.18	631490.50	85.42	B19
23	1803332.19	631390.24	81.79	B21
24	1803632.43	631386.14	86.57	B22
25	1803361.19	632160.49	109.19	B6
26	1803636.31	632156.32	111.24	B5



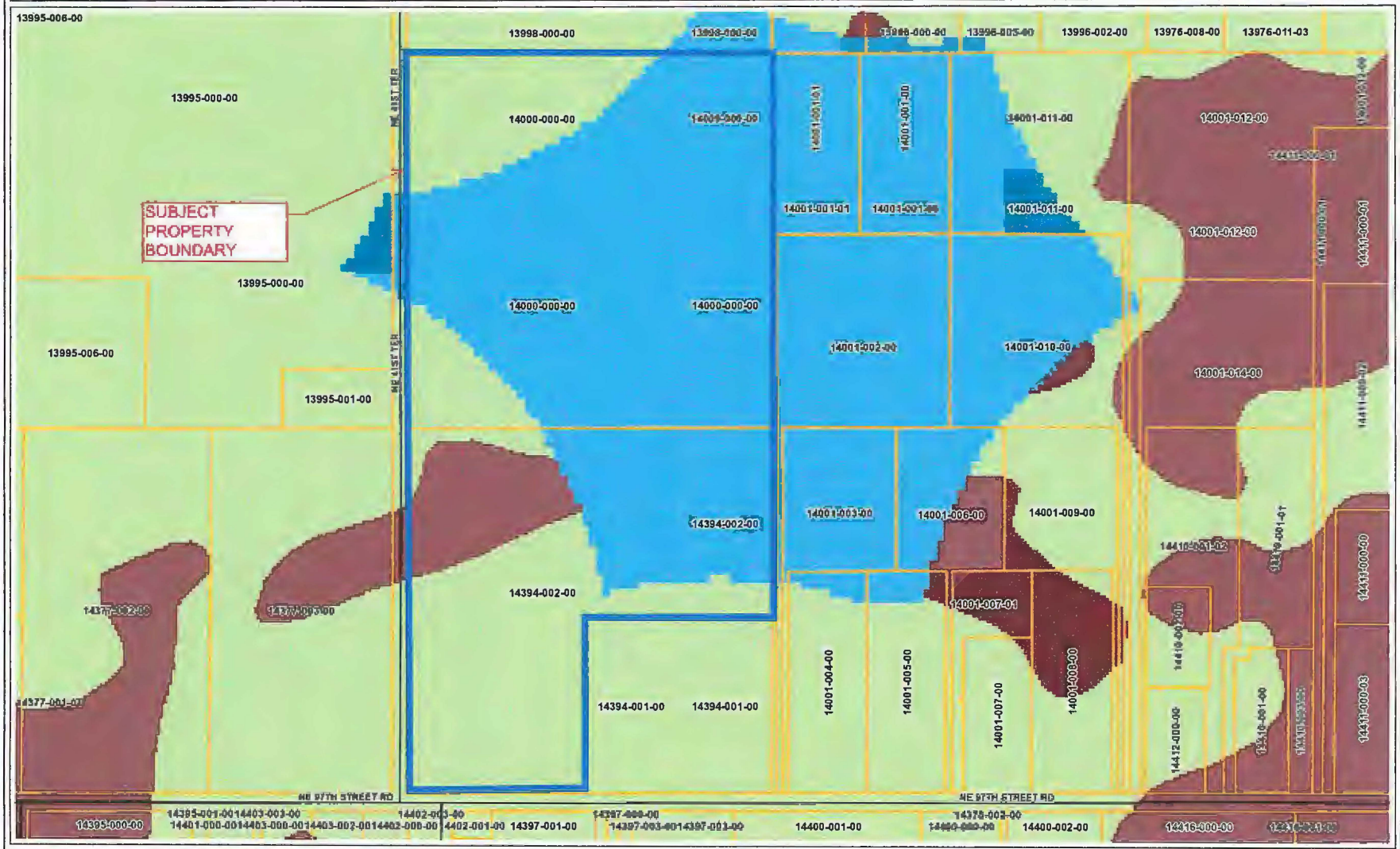


BORE SITE & TREE LOCATION SHEET
Prepared by
Rick Whitt Surveying, Inc.
Licensed business Certificate #7021
Surveyocala@gmail.com
352-624-1513
3423 E. Silver Springs Blvd. #7
Ocala, Fl 34470

Scale: 1"=100' | Survey Date: 05/21/21 | Sheet 2 of 2

 | Job: 21-585

Marion County Interactive Map | Map Title



Legend

- Urban Growth Boundary
- Address Search Results
- Streets
- Parcels
- MCAVA
  - Most Vulnerable
  - More Vulnerable
  - Vulnerable
  - Less Vulnerable
- Municipalities
- Marion County

1: 4,079

1 In = 0.06 Miles

Notes

Creation Date: 5/2/2021

0.1 0 0.06 0.1 Miles

Projected Coordinate System: NAD_1983_StatePlane_Florida_West_FIPS_0902_Feet

Created online at: http://maps.marioncountyfl.org/interactivemap/

GEO-TECH, INC.

ENGINEERING CONSULTANTS IN GEOTECHNICAL • ENVIRONMENTAL • CONSTRUCTION MATERIALS TESTING

May 27, 2021
Project No. 21-7686.01

Christopher G. Bennett, Sr.
Anthony Materials
P.O. Box 532
Ocala, Florida 34478

Reference: Proposed Sand Mine, PID No. 14000-000-00 and 14394-002-00
NE 97th Street Road, Anthony, Florida
Karst Sensitive and Geologic Assessment

Dear Mr. Bennett:

As requested, Geo-Technologies, Inc. (Geo-Tech) has performed a karst sensitive and geologic assessment at the site. Services were conducted in accordance with our conversations.

Geo-Tech appreciates the opportunity to provide our services for this project. Should you have any questions regarding the contents of this report or if we may be of further assistance, please do not hesitate to contact the undersigned.

Sincerely,

Gerald W. Green, Jr.
Soil & Water Scientist

GWG/CAH/ca

CRAIG AUSTIN HAMPY LICENSE No 83240 STATE OF FLORIDA PROFESSIONAL ENGINEER

Craig A. Hampy, P.E.
Florida Registration No. 83240

Purposes of Assessment
Purposes of this assessment were to observe and determine karst sensitivity of the site.

Site Description
The site is located on the northeast corner of the intersection located at NE 97th Street Road and NE 41st Terrace in Anthony, Florida. At the time of our site exploration, the southern portion of the site consisted of open pasture land with native grasses and northern portion of the site consisted of a planted peanut field.

Exploration Program
Geo-Tech performed a geotechnical site exploration on May 17, 2021 and is to be outlined in a following report.

On May 5, 2021 Geo-Tech performed a site visit to determine if any karst features could be observed at or within two hundred (200) feet of the site boundaries. Based on our observations, no karst features were found at or within two hundred (200) feet of the project site boundaries.

Published Data
According to the U.S. Department of Agriculture (USDA) Soil Conservation Survey for Marion County, Florida, soils at the site are mapped as Arredondo sand, 0 to 5 percent slopes and Candler sand, 0 to 5 percent slopes. Review of the USDA Soil Resource Report did not indicate any rock outcroppings or sinkholes at or within two hundred (200) feet of the project site. We refer the reader to the Custom Soils Resource Report presented in Appendix I.

A review of the USGS Topographic Map did not indicate any rock outcroppings or sinkholes at or within two hundred (200) feet of project site. We refer the reader to the USGS Topographic Map presented in Appendix II.

A review of the Potentiometric Surface Map indicated that the project site is approximately forty (40) to forty-one (41) feet (NGVD 29). In addition, the Potentiometric Surface Map did not indicate any mapped sinkholes at or within two hundred (200) feet of the site boundaries. We refer the reader to the USGS Potentiometric Surface Map presented in Appendix II.

Evaluations
Based on our site exploration, observations and review of the published data at or within two hundred (200) feet of the project site, it is Geo-Tech's opinion that this site is average in karst sensitivity within a reasonable professional probability.

Closure/General Qualifications
This report has been prepared in order to aid evaluation of the site and to assist various design professionals in the design of the site. The scope is limited to the specific project and the location described herein.

APPENDIX I

CUSTOM SOILS RESOURCE REPORT

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Marion County Area, Florida

Anthony Materials Site

May 26, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

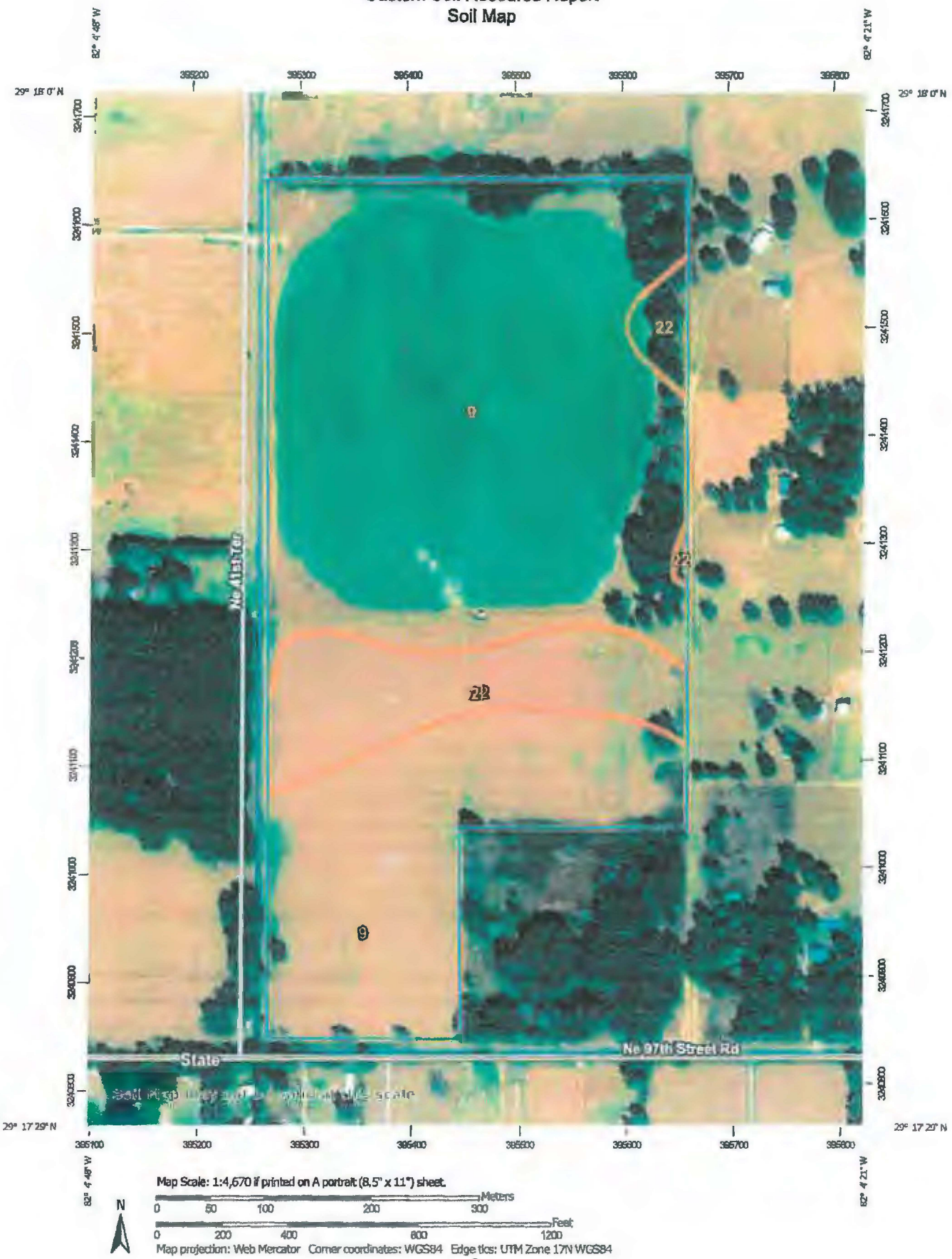
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Marion County Area, Florida
Survey Area Data: Version 18, Jun 9, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 9, 2016—Nov 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
9	Arredondo sand, 0 to 5 percent slopes	57.4	85.7%
22	Candler sand, 0 to 5 percent slopes	9.6	14.3%
Totals for Area of Interest		67.0	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Marion County Area, Florida

9—Arredondo sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2ttlt
Elevation: 40 to 150 feet
Mean annual precipitation: 46 to 54 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 276 to 306 days
Farmland classification: Not prime farmland

Map Unit Composition

Arredondo and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arredondo

Setting

Landform: Hills on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 7 inches: sand
E - 7 to 65 inches: sand
Bt1 - 65 to 70 inches: loamy sand
Bt2 - 70 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)

Hydric soil rating: No

Minor Components

Candler

Percent of map unit: 7 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve, side slope, tread
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G154XB111FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL), Longleaf Pine-Turkey Oak Hills (R155XY002FL)
Hydric soil rating: No

Gainesville

Percent of map unit: 7 percent
Landform: Ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Sparr

Percent of map unit: 4 percent
Landform: Rises on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve, tread, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G154XB131FL), Upland Hardwood Hammock (R154XY008FL)
Hydric soil rating: No

Sinkhole

Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Forage suitability group not assigned (G154XB999FL)
Hydric soil rating: Unranked

Rock outcrop

Percent of map unit: 1 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Forage suitability group not assigned (G154XB999FL)
Hydric soil rating: Unranked

22—Candler sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2t3z1
Elevation: 10 to 260 feet
Mean annual precipitation: 47 to 56 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 280 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Candler and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Candler

Setting

Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve, side slope, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Eolian deposits and/or sandy and loamy marine deposits

Typical profile

A - 0 to 6 inches: sand
E - 6 to 63 inches: sand
E and Bt - 63 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A

Forage suitability group: Sandy soils on ridges and dunes of xeric uplands (G154XB111FL), Sandy soils on ridges and dunes of xeric uplands (G155XB111FL)
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G154XB111FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL), Longleaf Pine-Turkey Oak Hills (R155XY002FL), Sandy soils on ridges and dunes of xeric uplands (G155XB111FL)
Hydric soil rating: No

Minor Components

Tavares

Percent of map unit: 5 percent
Landform: Ridges on marine terraces
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex, concave
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL)
Hydric soil rating: No

Millhopper

Percent of map unit: 5 percent
Landform: Ridges on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL)
Hydric soil rating: No

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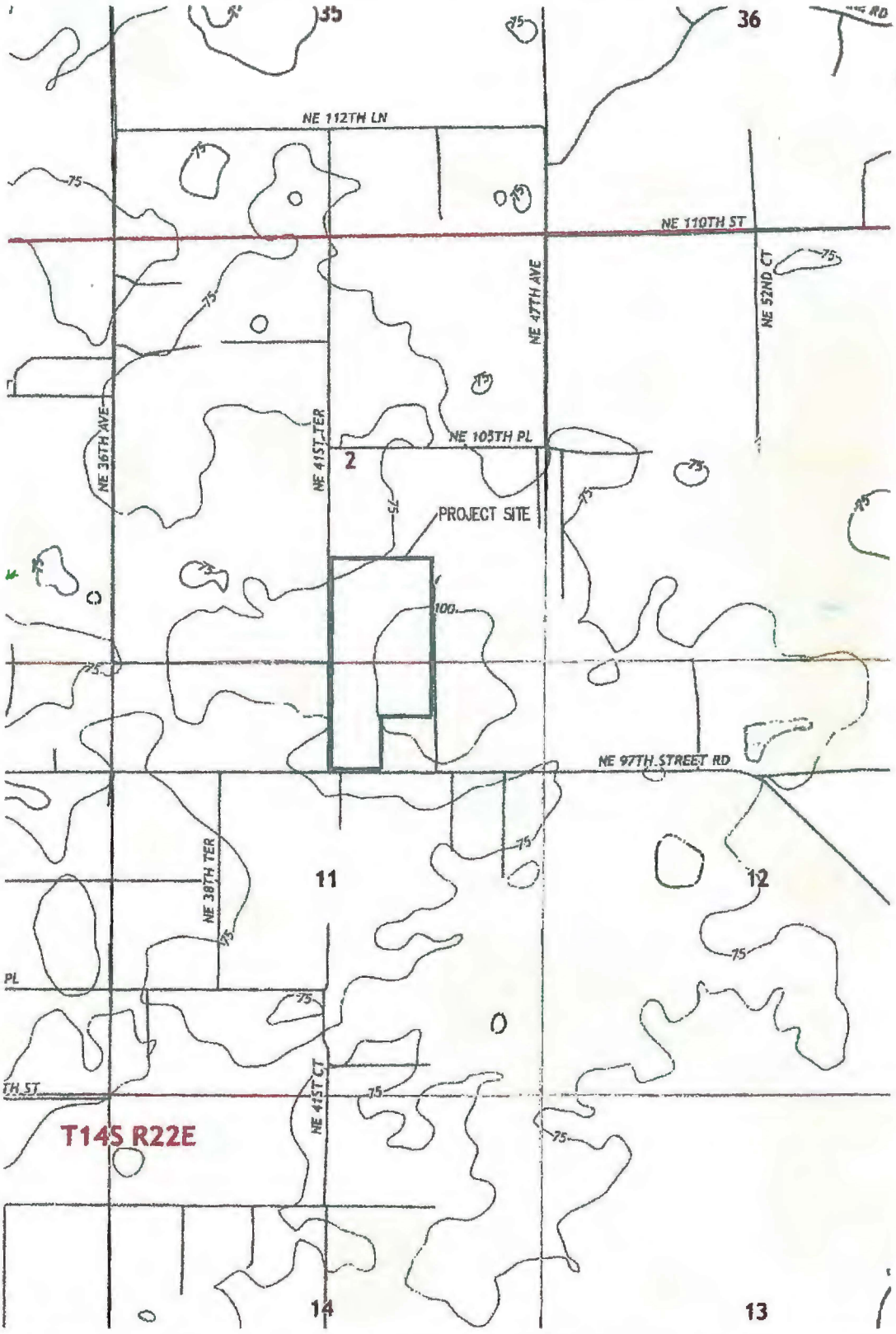
APPENDIX II

USGS TOPOGRAPHIC MAP
&
USGS POTENTIOMETRIC SURFACE MAP



ANTHONY MATERIALS

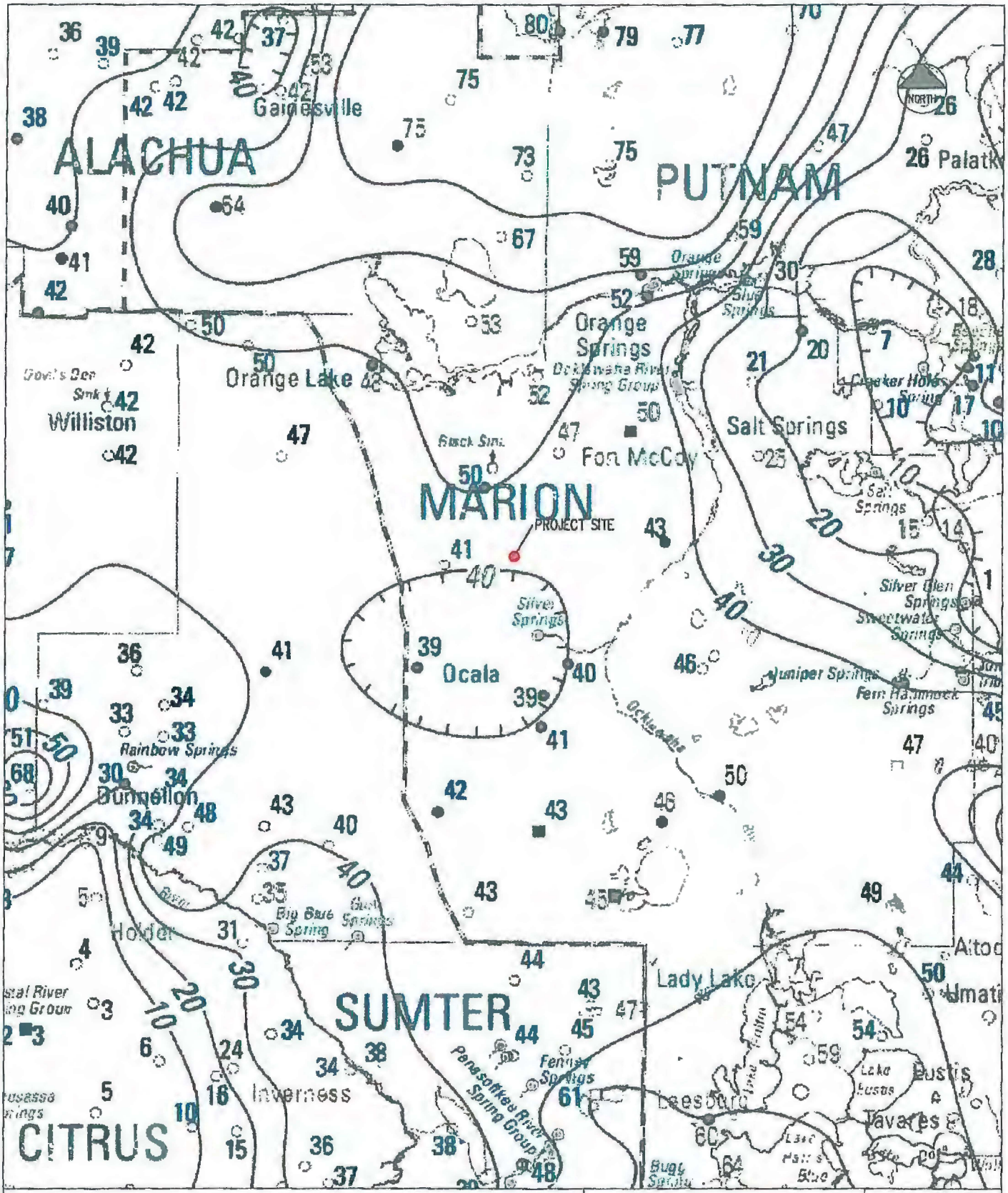
PROPOSED SAND MINE
PID#'S 14000-000-00 & 14394-002-00
NE 97TH STREET ROAD, ANTHONY, FLORIDA

USGS TOPOGRAPHIC MAP

GEO-TECH, INC.

GEOTECHNICAL ENVIRONMENTAL
CONSTRUCTION MATERIALS TESTING GEOPHYSICAL EXPLORATION
1018 SE 3rd AVENUE, OCALA, FLORIDA 34471 ~ (352) 694-7711

PROJECT NO.	20-7686.01
SCALE:	N.T.S.
DATE:	5-26-21
FIGURE:	1



ANTHONY MATERIALS

PROPOSED SAND MINE
PID#S 14000-000-00 & 14394-002-00
NE 97TH STREET ROAD, ANTHONY, FLORIDA

USGS POTENTIOMETRIC MAP

GEO-TECH, INC.

GEOTECHNICAL ENVIRONMENTAL
CONSTRUCTION MATERIALS TESTING GEOPHYSICAL EXPLORATION
1016 SE 3rd AVENUE, OCALA, FLORIDA 34471 ~ (352) 694-7711

PROJECT NO.	21-7686.01
SCALE:	N.T.S.
DATE:	5-26-21
FIGURE:	2