



**AGENDA
TECHNICAL REVIEW COMMITTEE
REGULAR MEETING
MARCH 24, 2022
10:00 AM
CITY HALL COMMISSION CHAMBERS
204 ASH STREET
FERNANDINA BEACH, FL 32034**

- 1. CALL TO ORDER**
- 2. ROLL CALL**
- 3. PLEDGE OF ALLEGIANCE**
- 4. OLD BUSINESS**
 - 4.1 TRC 2022-0018: Asa Gillette with Gillette & Associates - 2754 & 2766 Bailey Rd. - Development of a 12 lot single family residential subdivision.
- 5. ADJOURNMENT**

NEXT REGULAR TRC MEETING IS SCHEDULED FOR APRIL 14, 2022

Persons with disabilities requiring accommodations in order to participate in this program or activity should contact 310-3115, TTY 711, or through the Florida Relay Services at 1-800-955-8771 (TTY number for all City offices) at least 24 hours in advance to request such accommodations.

Technical Review Committee: Application - Submission #8807

Date Submitted: 3/2/2022

Technical Review Committee: Application

USE THIS FORM TO To apply for review of site plans, preliminary subdivision plats, final subdivision plats, minor subdivisions, and amendments to previously issued local development orders, change of use, and nonresidential building expansions.

Fees

☐Initial submittal + two submittals of full site plans. \$400 + 2% of the project construction cost (whichever is greater) for up to a maximum of \$5,500.

☐3rd and subsequent resubmittals. 1/2 of original application fees

☐Change of Use Determination Letter \$50

☐Engineering Review (Consultant Hourly Rate) \$125



November 24 Meeting is cancelled in observance of Thanksgiving Day.

IMPORTANT NOTES

This application will be routed to the various departments for review of the applicable codes and design standards.

****Please note that the TRC now meets at 10:00 AM on the second and fourth Thursdays of each month (unless otherwise indicated) in City Hall Chambers.****

Please see the Land Development Code (LDC) for detailed information:



Requirements for All Site Plans – see LDC section 11.01.04



Requirements for Subdivision Plats – see LDC section 11.01.05



Determination for Completeness & sufficiency – see LDC section 11.03.01



Review and Compliance Report by the Technical Review Committee – see LDC Section 11.03.02



Construction and Improvements – see LDC section 11.05.00



Amendments to Local Development Orders – see LDC section 11.06.00

The LDC is available for review at

www.fbfl.us/LDC

Application Requirements



See Development Plan Submittal Checklist



All applications are subject to a determination of completeness as required by Land Development Code section 11.03.01.



A determination of completeness is a determination that all required documents and plans have been submitted, and whether all fees have been paid.



A determination of completeness is not a determination of compliance with substantive standards and criteria.

Key Contacts

TRC will guide your application from start to finish, engaging other City departments as needed.



PROPERTY INFORMATION

Property information can be found at the Nassau County Property Appraiser’s Website’s Map Search

Site Address*

2754 Bailey Road and 2756 Bailey Road

City*

Fernandina Beach

State*

FL

Zip*

32034

Parcel ID #(s)

00-00-31-044B-0076-0010; 00-00-30-044B-0076-0020

Lot

76

Block

Subdivision

Zoning District

R-1

Future Land Use Designation*

Low Density Residential

Overlay District*

None

Size of Property (acres)*

4.85

Present Property Use*

vacant

Wetlands*

No

Flood Zone*

X, 0.2% chance flood h

Coastal Construction Control Line (CCCL)*

No

OWNER OF RECORD

As recorded with the Nassau County Property Appraiser

First Name*

Tim

Last Name*

Ritch

Company (if applicable)

Scott Road Partners,LLC

Mailing Address*

9995 Gate Pkwy N, Ste. 400

City*

Jacksonville

State*

FL

Zip*

32246

Telephone Number*

904-928-3912

Email Address*

tim@fcginc.net

OWNER'S AGENT

If other than owner. If an agent will be representing the owner, an Owner's Authorization For Agent Representation form must be included

First Name

Asa

Last Name

Gillette

Company (if applicable)

Gillette & Associates, Inc.

Mailing Address

20 South 4th St

City

Fernandina Beach

State

FL

Zip

32034

Telephone Number

9042618819

Email Address

asa@gilletteassociates.com

PROJECT INFORMATION

Project Type*

Site Plan Review

Project Name

Island Circle

Proposed Access Road*

Bailey Road

Rd Maintenance Jurisdiction*

County Maintained

Project Estimated Cost*

400,000

Description of Request*

12 lot single family residential subdivision

Site Plan Review Checklist



The names, address, telephone number, fax number, and email address of the person preparing the plan.



The date of preparation and date(s) of any modifications, a north arrow, and a written and graphic scale.



The legal description of the property, consistent with the required survey.



A vicinity map showing the location of the property.



The location of streams, bodies of water, natural features, roads, rights-of-way, street intersections, and paved areas within the boundaries of the property.



The location of streams, bodies of water, dunes and dune systems, and other natural features within 250 feet of the boundaries of the property.



The location of the mean high-water line, if such line is within the boundaries of the property.



A topographic survey, soils report, grading plan, and an erosion control plan.



A general floodplain map indicating areas subject to inundation and high groundwater levels up to a 100-year flood classification.



A statement indicating the distances to schools and public safety facilities intended to serve the proposed development.



The name, plat book, and page number of any recorded subdivision comprising all or part of the site.



The location and use of any existing and proposed principal or accessory buildings and structures, showing proposed setbacks, building heights, and other dimensional requirements of the zoning district.



Elevations of all proposed structures.



The access points, driveway design, on-site parking, including required parking lot landscaping, internal circulation, sidewalks, and bicycle facilities.



The location of existing and proposed utilities, utility services, and easements.



A tree survey showing protected trees, proposed replacement trees, if required, and landscaping and buffering. (See Section 4.05.00.)



A soil erosion and sediment control plan compliant with Section 3.01.04.



For a PUD site plan, a detailed, written list and explanation of how the proposed PUD differs from any provision of this LDC applicable to the underlying zoning district.



For site plans and PUD site plans where development is proposed in phases, the plans shall include phase lines and the following supporting information:



- o Timeline for the development; and



- o Benchmarks for monitoring the progress of construction of each phase regarding land clearing, soil stabilization and erosion control, installation of infrastructure, and installation of landscaping.



A summary block containing:



- o Land use category from the Future Land Use Map in the comprehensive plan;



- o Zoning district;



o Total acreage;



o Total square footage for non-residential uses;



o Total density and number of units, proposed and permissible for residential uses;



o Impervious surface ratio calculation, proposed and permissible;



o Floor area ratio calculation, proposed and permissible;



o Total number of parking spaces, required and provided; and



o Number of trees required to be protected, number of trees remaining on the site, and number of trees to be planted.



Additional plans, documents, or reports that are necessary to support the application shall be submitted. Such plans, documents, or reports may include, but are not limited to:



o Subdivision Plats (subdivision plats shall contain the information set forth in Section 11.01.05.)



o Concurrency analysis (concurrency analysis reports shall contain the information set forth in Section 7.04.00.)



o Traffic analysis reports (requirements for traffic analysis reports are set forth in Section 11.01.06.)



o Parking studies (requirements for parking studies are set forth in Section 7.01.04.)



o Stormwater management plans (requirements for stormwater management plans are set forth in Section 7.03.00.)



o Environmental Impact Study (requirements for environmental impact studies are set forth by regional, State, and federal agencies with jurisdiction and in Chapter 3 of the LDC.)



o Tree Protection Plan (Section 4.05.09.)



o Landscape Plan (Section 4.05.00.)



o Lighting Plan (Section 3.05.00.), Section 7.01.04.B)



o Signage Plan (Section 5.03.00.)



o Proof of Ownership “provide a legal description, Property Identification Number (PIN) and a copy of the warranty deed.



Concurrency analysis reports shall contain the information set forth in Section 7.04.00. Requirements for traffic analysis reports are set forth in Section 11.01.06. Requirements for parking studies



“Any development application for development proposed within the Airport Overlay Zone established for the Fernandina Beach Municipal Airport shall provide confirmation of notification to the FAA as r

School Concurrency

New residential development is required to demonstrate compliance with school concurrency as regulated in the City of Fernandina Beach through the City of Fernandina Beach’s Comprehensive Plan Intergovernmental Coordination Element and the Interlocal Agreement Amendment for Public School Facility Planning adopted by the City on May 21, 2019. No new residential rezoning, preliminary plat, site plan or functional equivalent may be approved by the City unless the residential development is exempt from requirements outlined in Section 9.13 of the Amended Interlocal Agreement OR a School Concurrency Reservation Letter has been issued by the School Board indicating that adequate school facilities exist.

Certification*

☒

By signing below, I certify that the information contained in this application is true and correct to the best of my knowledge at the time of the application.

☒

I acknowledge that I understand and have complied with all of the submittal requirements and procedures.

Applicant First Name*

Tricia

Applicant Last Name*

Bowen

Today's Date*

3/2/2022

Upload Supporting Documentation*

IslandCircle-Site_03-01-22.pdf

Upload 2

IslandCircle-DrainageReport.pdf

Upload 3

AGENT FORM.pdf

Upload 4

Bailey Road.pdf

Upload 5

J19950 Artisan Bailey Subdivision with signature.pdf

Upload 6

51884 November 23, 2021.pdf

Upload 7

Choose File No file selected



DEPARTMENT OF PLANNING & CONSERVATION

204 Ash Street | Fernandina Beach, FL 32034 | 904 310-3480 | www.fbfl.us/planning



Civil & Environmental Engineering • Mechanical & Structural Engineering • Construction Management

AGENT AUTHORIZATION

I, Timothy Ritch of Scott Road Partners, LLC the owner of the following property(s) do hereby authorize, Gillette & Associates, Inc. to act as my Agent in conjunction with all site plan applications and any other Local, State and/or Federal development permits necessary for development of the following property, without any further notice.

Property ID Number(s): 00-00-31-044B-00076-0010; 00-00-30-044B-0076-0020

Location: 2754 Bailey Road and 2766 Bailey Road, Fernandina Beach

[Signature] February 3, 2022 904-928-3912
Signature Date Telephone Number

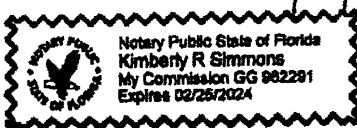
STATE OF FLORIDA
COUNTY OF DUVAL

Subscribed and sworn to before me this 3RD day of February, 2022.

Who is personally known to me Tim Ritch or has produced identification

[Signature] Kimberly R. Simmons
Notary Public: Signature Printed Name

My Commission Expires: 02/25/2024



20 SOUTH 4TH STREET • AMELIA ISLAND, FLORIDA 32034 PHONE: (904) 261-8819

PREPARED BY AND RETURN TO:

Name: Wood & Smith, PA
Address: 303 Centre Street
Suite 100
Fernandina Beach, FL 32034

File No: 21-203023

Parcel ID #00-00-30-044B-0076-0010
#00-00-30-044B-0076-0020

(Space Above This Line For Recording Data)

Personal Representative's Deed

THIS INDENTURE made on this **14th** day of **December, 2021**, by **Debra Jones Portier, Personal Representative of the Estate of Robert P. Jones, deceased**, whose address is **2669 Bailey Road, Fernandina Beach, FL 32034 ("Grantor")** to **Scott Road Partners, LLC, a Florida limited liability company**, whose address is **9995 Gate Parkway North, Suite 400, Jacksonville, FL 32246 ("Grantee")**.

WITNESSETH: That Grantor, for good and valuable consideration in hand paid, grants, bargains, sells aliens, remises, releases, conveys and confirms to the Grantee, its heirs and assigns forever, the real property lying and being in Nassau County, Florida, and more particularly described as follows:

**All of Lot 76 of OCEAN BREEZE FARMS a subdivision of a portion of Sections 3 and 5, Township 2 North, Range 28 East; Nassau County, Florida, according to plat of said Subdivision recorded in Plat Book 2, page 19, public records of said Nassau County, Florida,
Less the Westerly 10 feet of said Lot 76 which has been taken to widen Bailey Road;
and also Except that portion thereof conveyed to Nassau County in Book 77, Page 520; Book 78, Page 525; & Book 79, Page 307, public records of Nassau County, Florida.**

TOGETHER with all and singular the tenements, hereditaments and appurtenances belonging or in any way appertaining to said Property.

TO HAVE AND TO HOLD the same to the Grantee, its heirs and assigns, in fee simple forever.

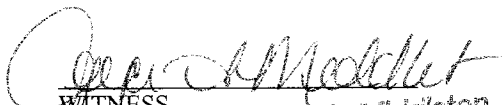
AND the Grantor does covenant to and with the Grantee, its heirs and assigns, that in all things preliminary to and in and about this conveyance that laws of the State of Florida have been followed and complied with in all respects.

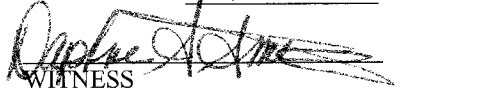
****SIGNATURE PAGE TO FOLLOW****

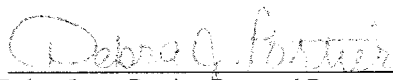
PERSONAL REPRESENTATIVE'S DEED
PAGE 2 of 2

IN WITNESS WHEREOF, the Grantor, Debra James Portier, Personal Representative of the Estate of Robert P. Jones, has set his/her hand and seal on the day and year first above written.

Signed, sealed and delivered in the presence of 2 witnesses:

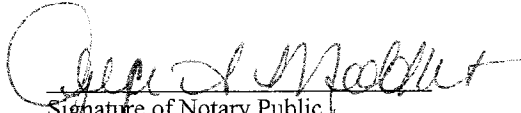

WITNESS
PRINT NAME: Joyce A. Middleton

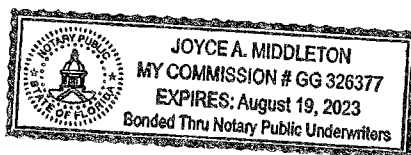

WITNESS
PRINT NAME: Daphne S. Smith

By: 
Debra Jones Portier, Personal Representative
of the Estate of Robert P. Jones

STATE OF FLORIDA
COUNTY OF NASSAU

The foregoing instrument was acknowledged before me by means of (☒) physical presence or () online notarization this 14 day of December, 2021, by Debra Jones Portier, Personal Representative of the Estate of Robert P. Jones.


Signature of Notary Public
Print, Type/Stamp Name of Notary



Personally Known: _____ OR Produced Identification: _____
Type of Identification:
Produced: Id number

ENGINEERING PLANS

FOR

ISLAND CIRCLE SUBDIVISION

FOR

ARTISAN HOMES LLC

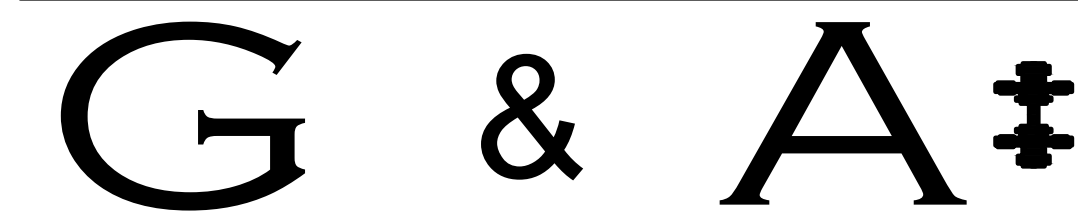
GILLETTE & ASSOCIATES, INC.

CIVIL & ENVIRONMENTAL ENGINEERING
MECHANICAL & STRUCTURAL ENGINEERING
PERMITTING & CONSTRUCTION MANAGEMENT

20 SOUTH 4TH STREET AMELIA ISLAND, FLORIDA 32034
PHONE: 904/261-8819

PERMITTING AGENCIES

CITY OF FERNANDINA BEACH
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



ISSUE DATE: 03/01/22

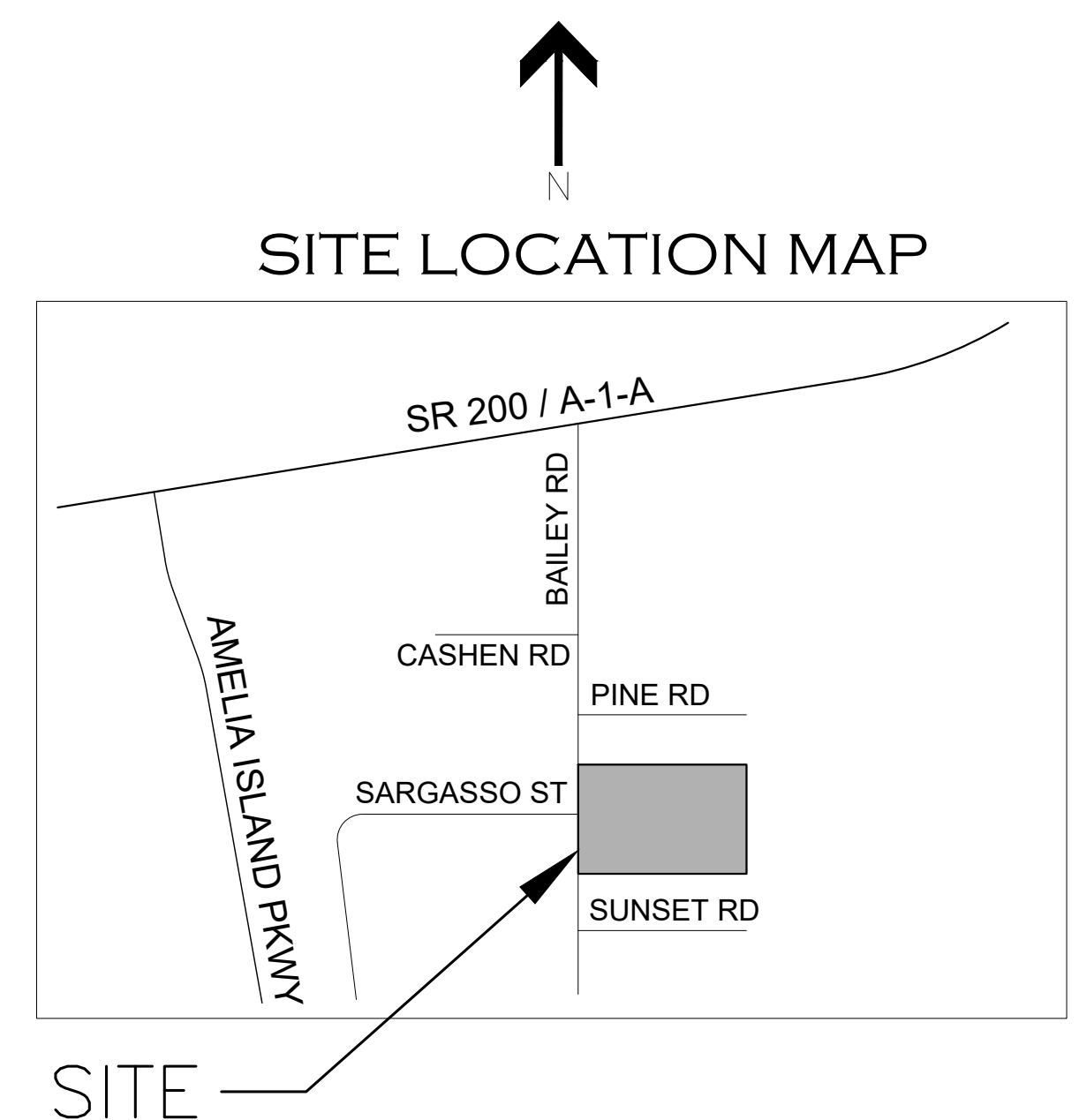
G&A Project
No.: 21-10-36

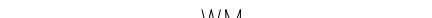
ISLAND CIRCLE SUBDIVISION

FOR

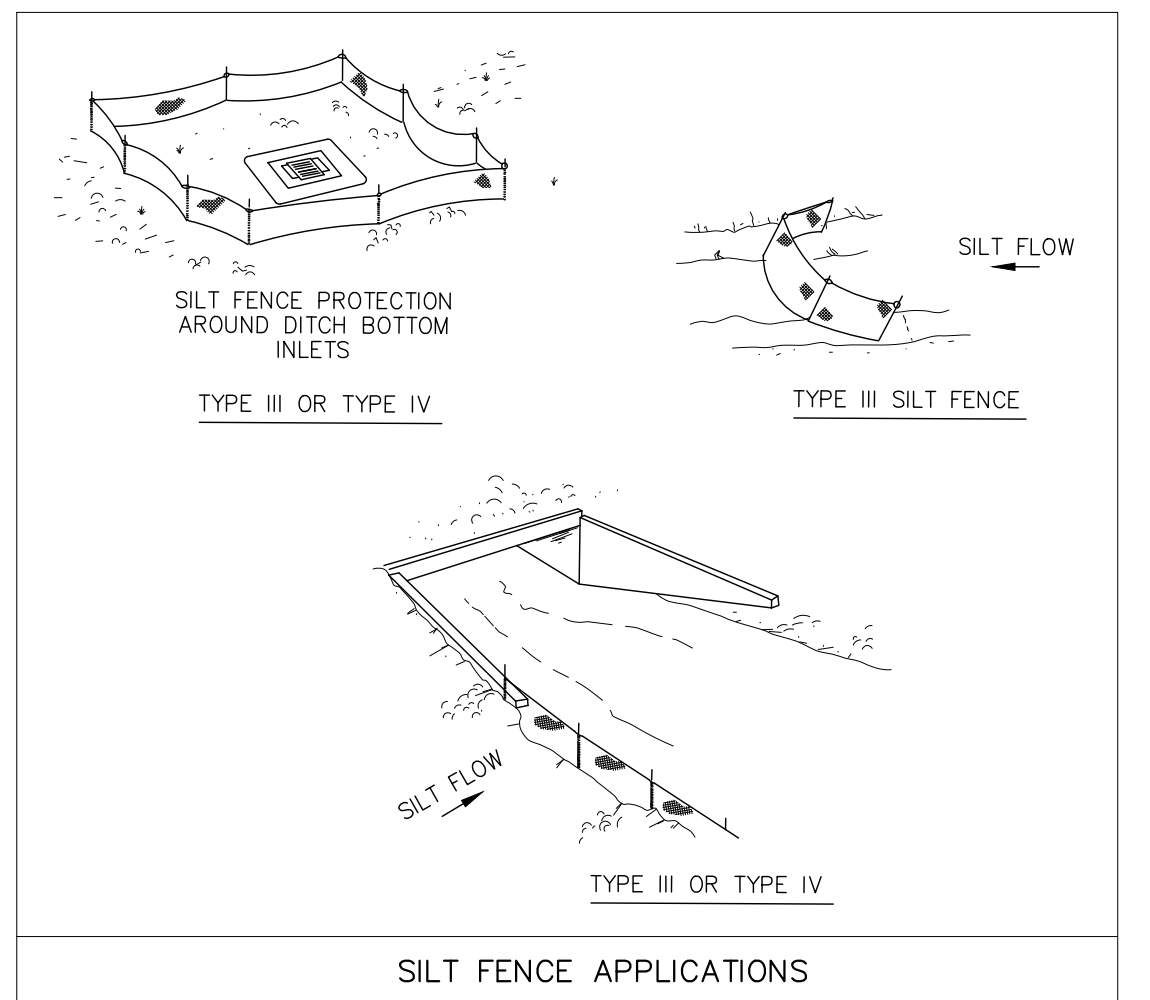
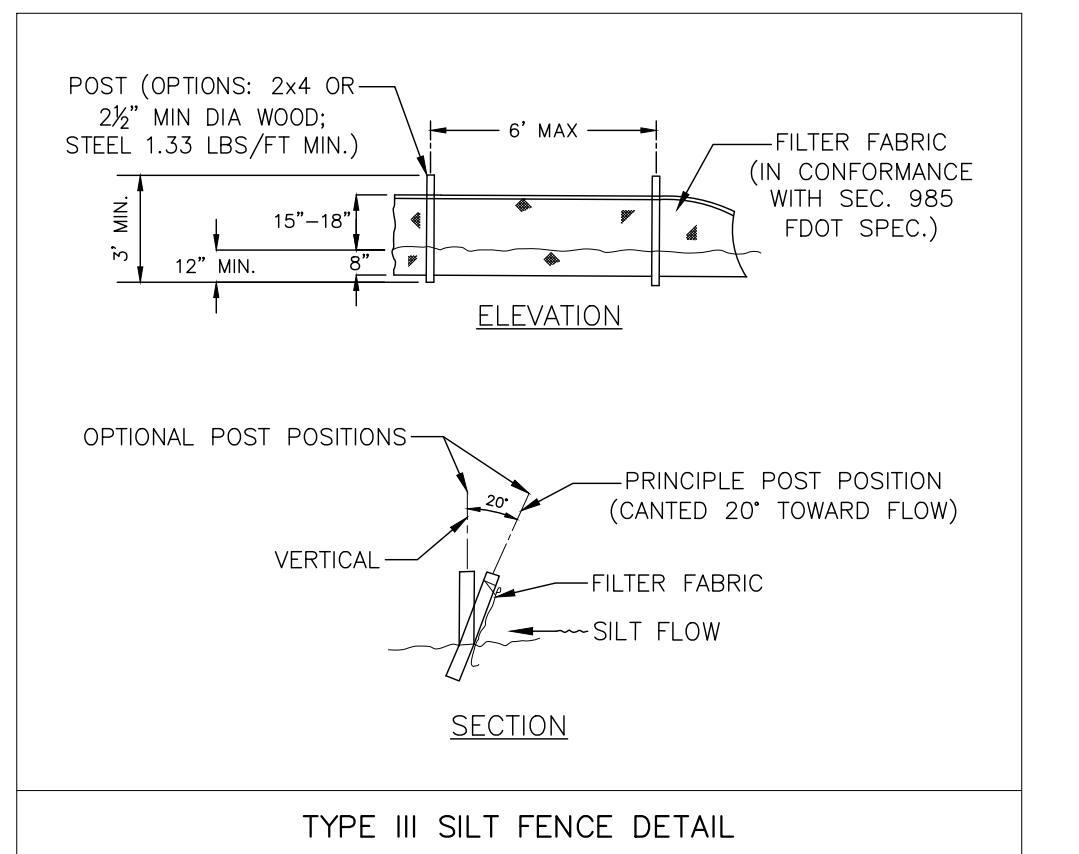
ARTISAN HOMES LLC

RELEASED FOR CONSTRUCTION BY



SITE / GEOMETRY NOTES	SITE / GEOMETRY NOTES CONT.	INDEX			
		ALL PERMITTING ENTITIES	PAGE #	SHEET	DESCRIPTION
			1	CVR	COVER SHEET
			2	IN-1	INDEX SHEET
			3	PRE-1	PREDEVELOPMENT PLAN
			4	GE-1	GEOMETRY PLAN
			5	UT-1	UTILITY PLAN
			6	DR-1	DRAINAGE PLAN
			7	PP-1	ROAD PLAN AND PROFILE
			8	LS-1	LANDSCAPE PLAN
			9	TM-1	TREE MITIGATION PLAN
			10	TM-2	TREE MITIGATION DATA
			11	TM-3	TREE MITIGATION DATA
12	DT-1		MISCELLANEOUS DETAILS		
13	DT-2	DRAINAGE DETAILS			
WATER NOTES	FIRE NOTES	1. ALL WATER & SEWER CONSTRUCTION SHALL BE ACCOMPLISHED BY AN UNDERGROUND UTILITY CONTRACTOR LICENSED UNDER THE PROVISIONS OF CHAPTER 489 FLORIDA STATUTES.			
		2. WHEN DEWATERING CAPACITY REQUIRES A PERMIT (CUP), IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE PERMIT THROUGH THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.			
		3. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SANITARY HAZARD. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. WHERE PARALLEL WATER AND SEWER MAINS HAVE LESS THAN 10 FOOT HORIZONTAL SEPARATION, 20 FOOT LENGTHS OF C900 (DR18) WATER QUALITY PIPE SHALL BE USED WITH THE JOINTS STAGGERED AT 10 FOOT INTERVALS. THE PIPES SHALL BE PLACED IN SEPARATE TRENCHES WITH THE WATER MAIN AT LEAST 18 INCHES ABOVE THE SEWER.			
		4. WATER MAINS CROSSING SANITARY HAZARDS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER MAIN. WHERE WATER AND SEWER MAINS CROSS WITH BETWEEN 18 INCHES AND 6 INCHES OF VERTICAL CLEARANCE, A 20 FOOT SECTION OF C900 (DR18) WATER QUALITY PIPE SHALL BE CENTERED ON THE POINT OF THE CROSSING. THE CONTRACTOR SHALL FIELD VERIFY THE VERTICAL SEPARATION. THE MINIMUM SEPARATION BETWEEN WATER AND SEWER PIPES IS TO BE 6 INCHES OUTSIDE DIAMETER TO OUTSIDE DIAMETER.			
		5. NO WATER MAIN PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SEWER MANHOLE.			
		6. TRACER WIRE SHALL BE PROVIDED ON ALL WATER MAINS AND FORCE MAINS. TRACER WIRE SHALL BE #10 UF SOLID COPPER WIRE, COATED, AND SUITABLE FOR BURIAL. COATING SHALL BE BLUE FOR WATER AND GREEN FOR SEWER MAIN CONNECTIONS. WIRE SHALL BE ATTACHED DIRECTLY TO TOP OF PIPE AND BROUGHT INTO EACH VALVE BOX AND COILED TO ALLOW FOR EASY ACCESS AND EXTENSION ABOVE FINISHED GRADE FOR ATTACHMENT OF LOCATING EQUIPMENT.			
		7. ALL PIPE LENGTHS ARE APPROXIMATE DIMENSIONS. ALL DRAINAGE STRUCTURES SHALL BE CONSTRUCTED TO CONFORM WITH TYPICAL SECTIONS AND DETAILS AS SHOWN ON THE MISCELLANEOUS DETAILS SHEET AND IN ACCORDANCE WITH THE SPECIFICATIONS.			
		8. ALL UNDERGROUND UTILITIES MUST BE INSTALLED PRIOR TO PREPARATION OF SUBGRADE FOR PAVEMENT.			
		LEGEND			
			EXISTING VALVE		PROPOSED SPOT ELEVATION
			EXISTING WATER LINE		PROPOSED WATER LINE
			EXISTING FIRE HYDRANT		PROPOSED FIRE HYDRANT
			EXISTING PROPERTY LINE		PROPOSED LOT LINE
	EXISTING EDGE OF PAVEMENT		PROPOSED EDGE OF PAVEMENT		
P-1	PIPE	S-5	DRAINAGE STRUCTURE		

K				Scale: NONE	Gillette & Associates, Inc. 20 South 4th Street Fernandina Beach, FL 32034	G & A[®] GILLETTE & ASSOCIATES, INC. 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 PHONE: (904) 261-8819	ARTISAN HOMES LLC 2754 BAILEY ROAD FERNANDINA BEACH, FLORIDA	ISLAND CIRCLE SUBDIVISION	INDEX SHEET	REGISTERED DESIGN PROFESSIONAL ASA R. GILLETTE, P.E. FLORIDA P.E. NO. 56177	ISSUE DATE: 03/01/22	
J				Project Mgr: AG								
I				Designed by: AG/EC	Certificate of Authorization No. 9332							
H				Drawn by: EC/AG	DO NOT SCALE THIS DRAWING — DIMENSIONS AND NOTES TAKE PREFERENCE, DRAWING IS REDUCED IF LESS THAN 22" x 34"							Page 2 of 13
G				QA/QC: NG								
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A	EC	03/01/22		ISSUE FOR C.O.F.B. REVIEW								
No.	By	Date		Revision								



K				Scale: 1"=30'	Gillette & Associates, Inc. 20 South 4th Street Fernandina Beach, FL 32034 Certificate of Authorization No. 9332 DO NOT SCALE THIS DRAWING -- DIMENSIONS AND NOTES TAKE PREFERENCE, DRAWING IS REDUCED IF LESS THAN 22" x 34"	 GILLETTE & ASSOCIATES, INC. 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 PHONE: (904) 261-8819	ARTISAN HOMES LLC 2754 BAILEY ROAD FERNANDINA BEACH, FLORIDA	ISLAND CIRCLE SUBDIVISION	PREDEVELOPMENT PLAN	REGISTERED DESIGN PROFESSIONAL ASA R. GILLETTE, P.E. FLORIDA P.E. NO. 56177	ISSUE DATE: 03/01/22
J				Project Mgr: AG							Sheet
I				Designed by: AG/EC							PRE-1
H				Drawn by: EC/AG							Page 3 of 13
G				QA/QC: NG							Project No. 21-10-36
F											
E											
D											
C											
B											
A	EC	03/01/22		ISSUE FOR C.O.F.B. REVIEW							
No.	By	Date		Revision							

SITE NOTES

PROPERTY PARCELS:
00-00-30-044B-0076-0010
00-00-30-044B-0076-0020
TOTAL LOT AREA: 4.85 AC
ZONING: R-1
FLOOD ZONE: X

LOTS
MINIMUM WIDTH: 75 FT
MINIMUM AREA: 0.25 AC
FRONT YARD SETBACK: 25 FT
CORNER LOT SECONDARY FRONT SETBACK: 15 FT
SIDE YARD SETBACK: 10% LOT WIDTH
REAR YARD SETBACK: 25 FT

LANDSCAPE BUFFERS
NORTH & SOUTH: NC RS-2
REQUIRED BUFFER: NONE

EAST: RS-1
REQUIRED BUFFER: NONE

WEST: RLM
REQUIRED BUFFER: NONE

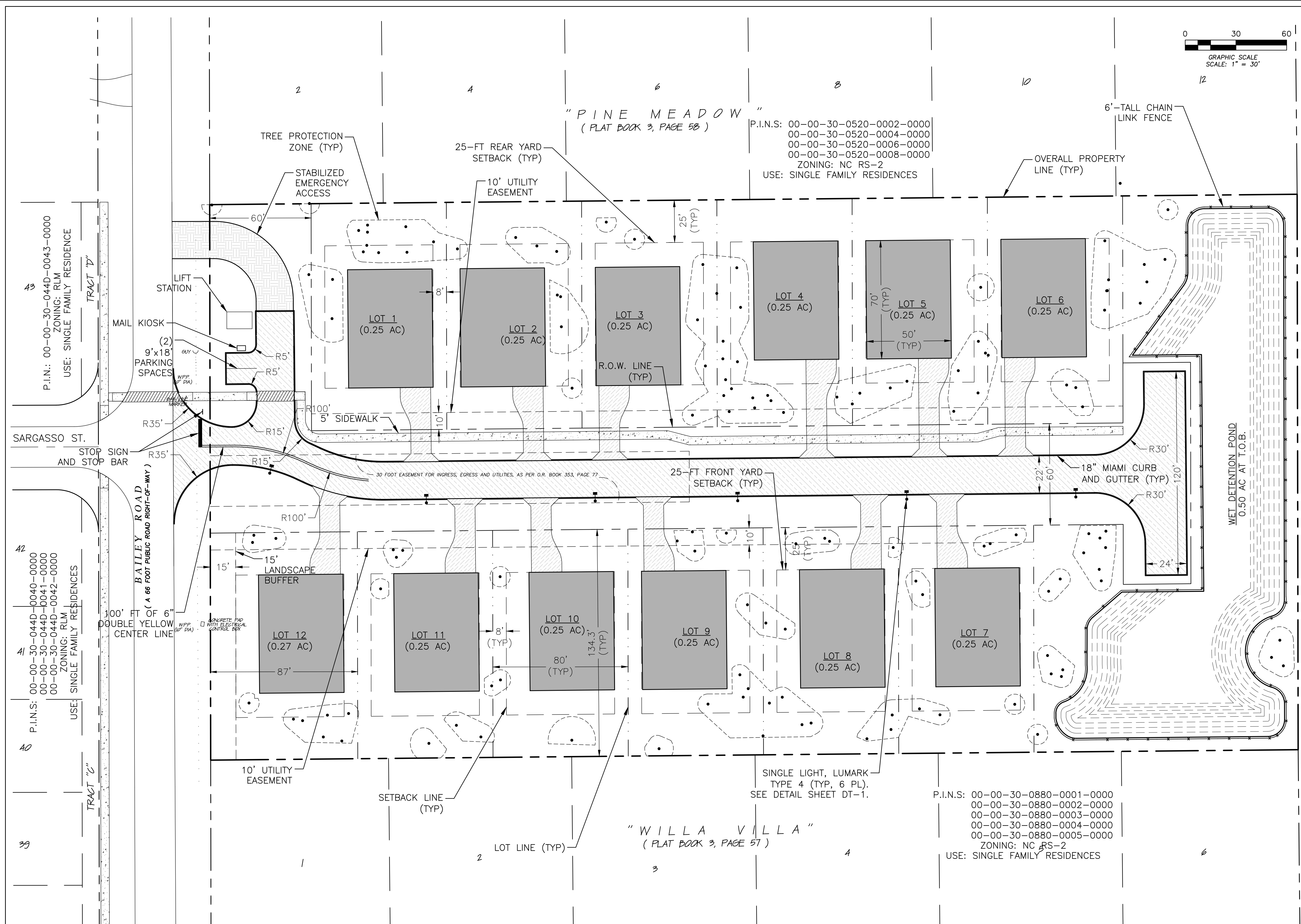
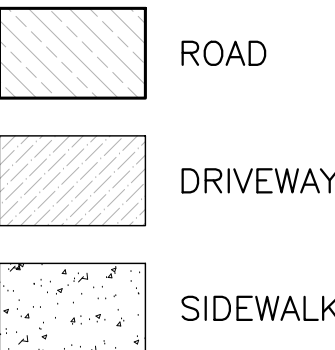
BUILDINGS
PROPOSED HOUSES: 3,500 SF
MAXIMUM FLOOR AREA RATIO: 50%
MAXIMUM PROPOSED FLOOR AREA RATIO: 33%
MAXIMUM BUILDING HEIGHT: 35 FT
PROPOSED BUILDING HEIGHT:

IMPERVIOUS AREA
MAXIMUM ISR FOR LOTS: 60%
MAXIMUM PROPOSED LOT ISR: 37%
BUILDING IMPERVIOUS AREA: 42,000 SF
PAVEMENT IMPERVIOUS AREA: 30,497 SF
POND AT N.W.L.: 15,665 SF
TOTAL IMPERVIOUS AREA: 88,162 SF
PROPOSED TOTAL ISR: 42%

UTILITIES
WATER: COFB
SEWER: COFB
ELECTRICITY: FLORIDA PUBLIC UTILITY
NO WELLS WITHIN 200' OF SITE

LOT TABLE					
LOT #	WIDTH (FT)	GROSS AREA (AC)	GROSS AREA (SF)	NET AREA (AC)	NET AREA (SF)
1	80	0.25	10,741	0.23	9,942
2	80	0.25	10,741	0.23	9,942
3	80	0.25	10,741	0.23	9,942
4	80	0.25	10,741	0.23	9,942
5	80	0.25	10,741	0.23	9,942
6	80	0.25	10,741	0.23	9,942
7	80	0.25	10,741	0.23	9,942
8	80	0.25	10,741	0.23	9,942
9	80	0.25	10,741	0.23	9,942
10	80	0.25	10,741	0.23	9,942
11	80	0.25	10,741	0.23	9,942
12	87	0.27	11,681	0.21	8,947

HATCH LEGEND



K			
J			
I			
H			
G			
F			
E			
D			
C			
B			
A	EC	03/01/22	ISSUE FOR C.O.F.B. REVIEW
No.	By	Date	Revision

Scale: 1"=30'
Project Mgr: AG
Designed by: AG/EC
Drawn by: EC/AG
QA/QC: NG

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G & A ⁺
GILLETTE & ASSOCIATES, INC.
20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034
PHONE: (904) 261-8819

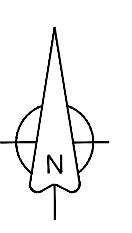
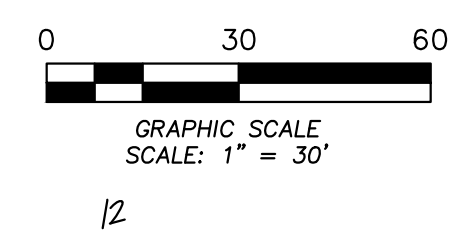
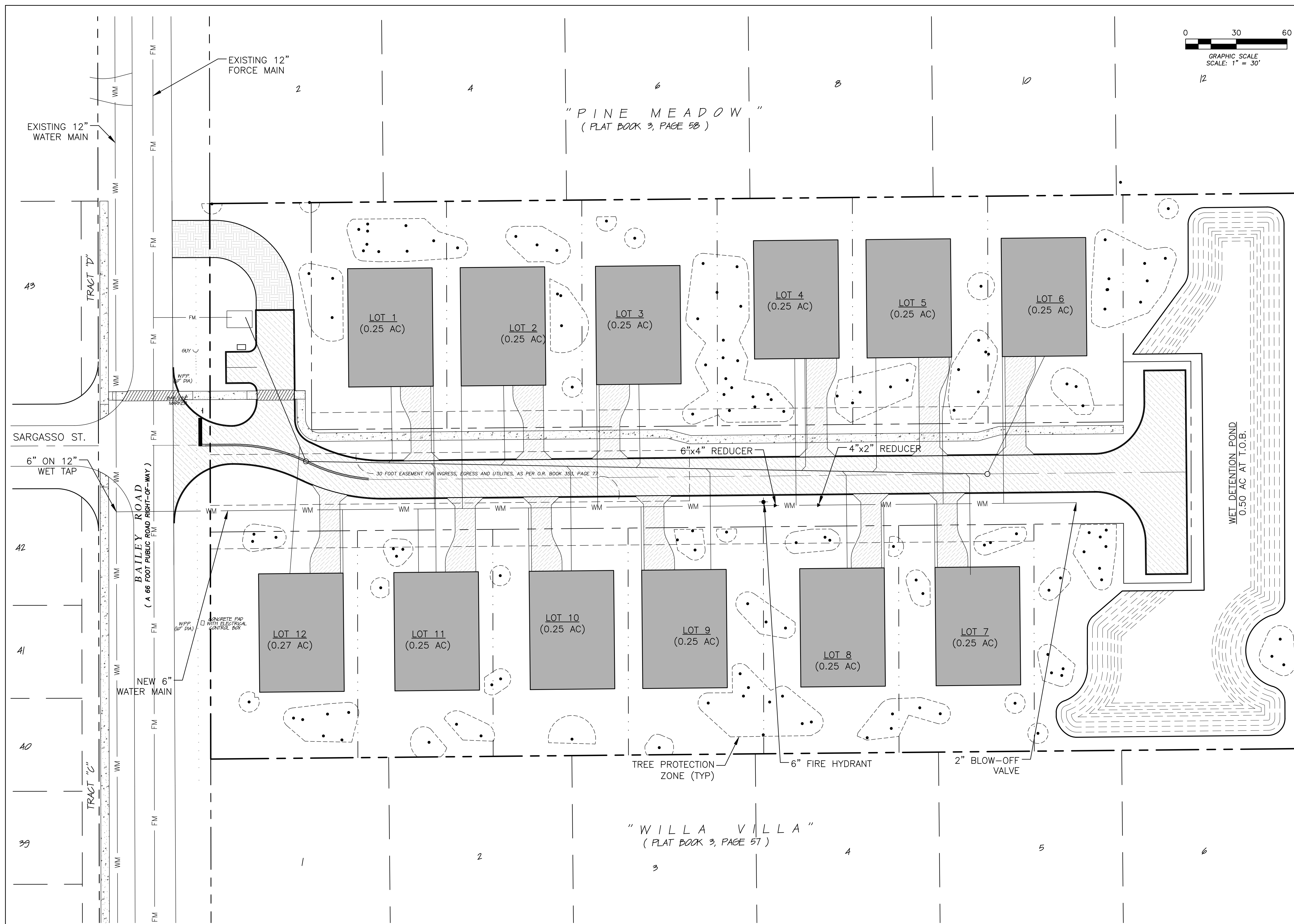
ARTISAN HOMES LLC
2754 BAILEY ROAD
FERNANDINA BEACH, FLORIDA

ISLAND CIRCLE SUBDIVISION

GEOMETRY PLAN

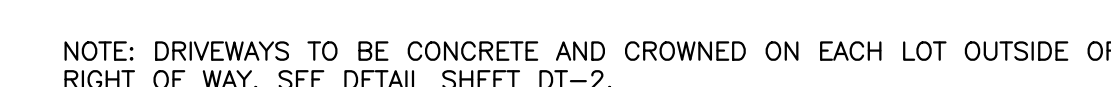
REGISTERED DESIGN PROFESSIONAL	ISSUE DATE: 03/01/22
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Project No. 21-10-36	

ASA R. GILLETTE, P.E.
FLORIDA P.E. NO. 56177



MIDWAY ROAD
(A 30 FOOT PUBLIC ROAD RIGHT-OF-WAY, AS PER
PLAT BOOK 2, PAGE 19, NOT PHYSICALLY OPENED AT THIS TIME)

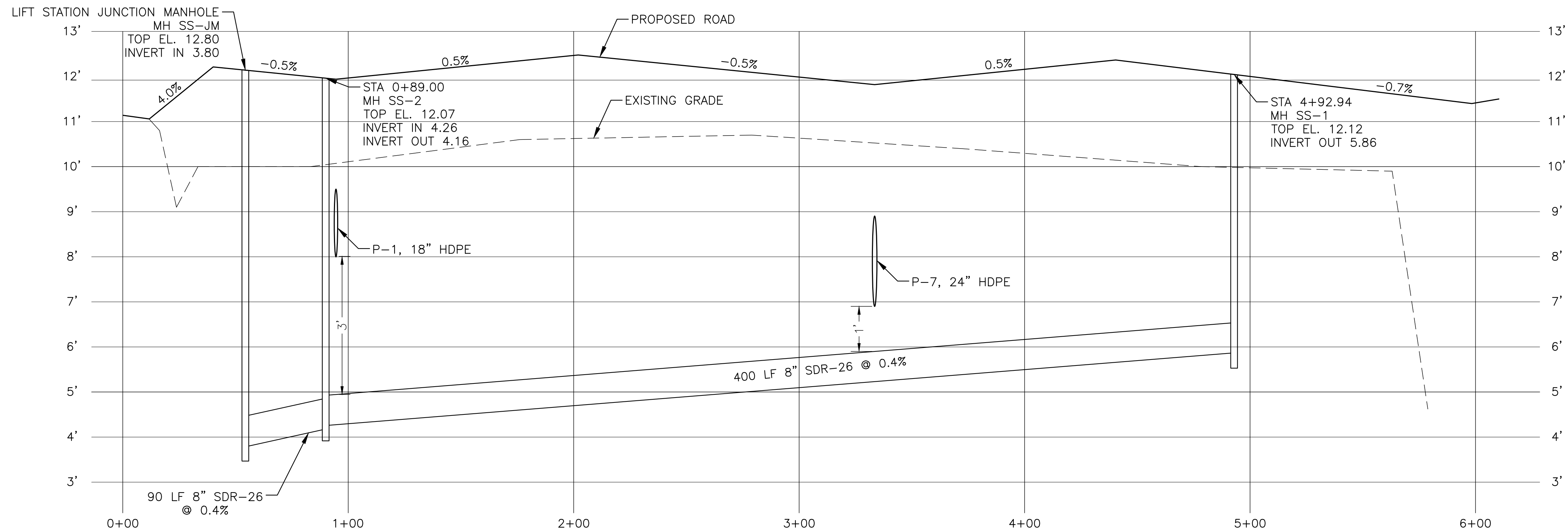
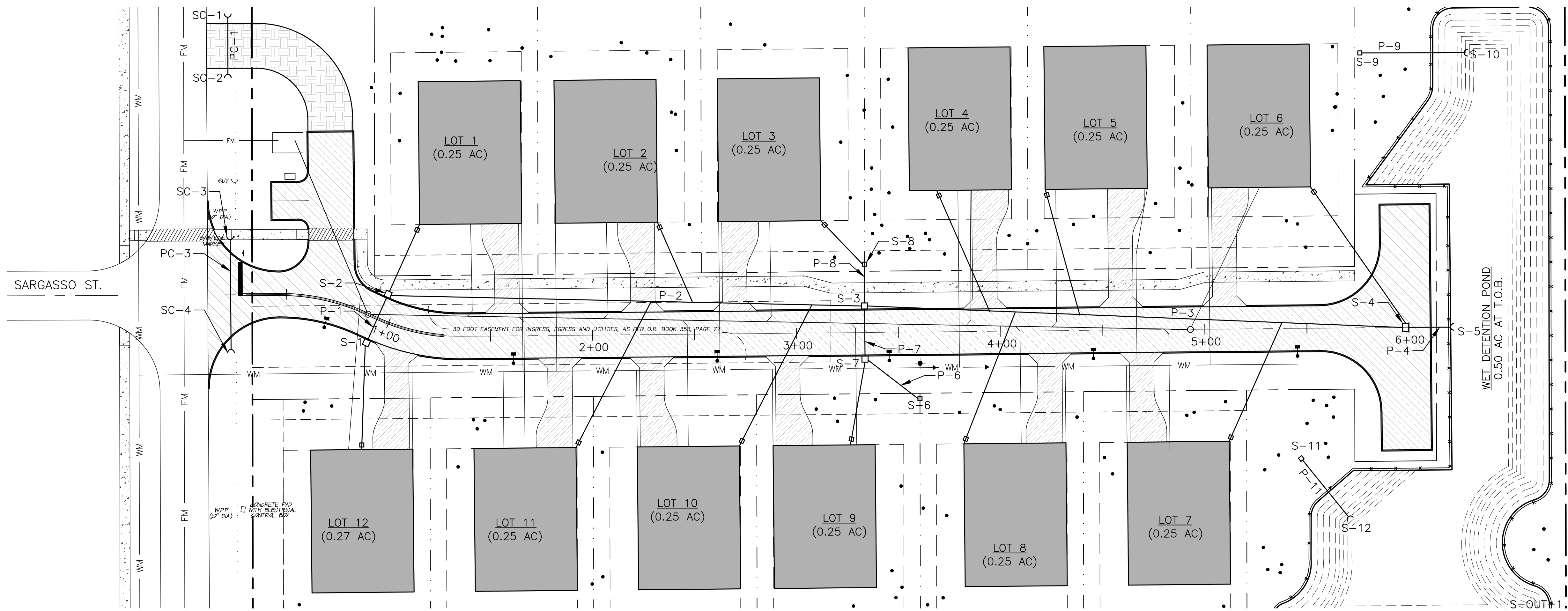
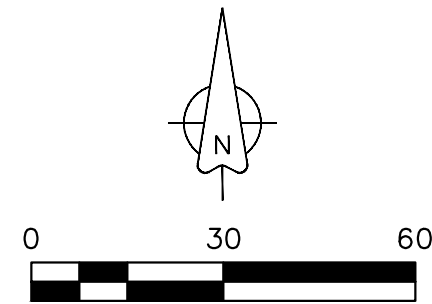
K				Scale: 1"=30'	Gillette & Associates, Inc. 20 South 4th Street Fernandina Beach, FL 32034	G & A[®] GILLETTE & ASSOCIATES, INC. 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 PHONE: (904) 261-8819	ARTISAN HOMES LLC	2754 BAILEY ROAD	FERNANDINA BEACH, FLORIDA	ISLAND CIRCLE SUBDIVISION	UTILITY PLAN	REGISTERED DESIGN PROFESSIONAL	ISSUE DATE: 03/01/22	
J				Project Mgr: AG										Sheet UT-1
I				Designed by: AG/EC										Page 5 of 13
H				Drawn by: EC/AG										Project No. 21-10-36
G				QA/QC: NG										
F				DO NOT SCALE THIS DRAWING — DIMENSIONS AND NOTES TAKE PREFERENCE. DRAWING IS REDUCED IF LESS THAN 22" x 34"										
E												ASA R. GILLETTE, P.E. FLORIDA P.E. NO. 56177		
D														
C														
B														
A	EC	03/01/22	ISSUE FOR C.O.F.B. REVIEW											
No.	By	Date	Revision											



NAME	TYPE	TOP/INLET ELEV.	INVERT ELEVATION				DRAINAGE AREA (AC)
			N	S	E	W	
S-1	CURB INLET	11.80	8.05	7.94	—	—	0.18
S-2	CURB INLET	11.80	—	7.99	7.99	—	0.24
S-3	CURB INLET	11.70	7.45	6.88	5.88	7.40	0.41
S-4	CURB INLET	11.40	7.60	—	5.62	5.62	0.74
S-5	MES	—	—	—	—	5.59	—
S-6	YARD DRAIN	10.00	—	—	—	7.50	0.76
S-7	CURB INLET	11.70	6.92	8.05	7.42	—	0.23
S-8	YARD DRAIN	10.10	—	7.50	—	8.17	0.81
S-9	YARD DRAIN	10.10	—	—	7.50	—	0.30
S-10	MES	—	—	—	—	7.37	—
S-11	YARD DRAIN	10.10	—	7.50	—	—	0.32
S-12	MES	—	7.41	—	—	—	—
SC-1	MES	—	—	9.00	—	—	—
SC-2	MES	—	8.90	—	—	—	—
SC-3	MES	—	—	9.10	—	—	—
SC-4	MES	—	8.90	—	—	—	—
S-OUT-1	MOD. TYPE E INLET	—	—	—	—	—	—
S-OUT-2	MES	—	—	—	—	—	—

NAME	FROM	TO	SIZE	LENGTH	MATERIAL
P-1	S-1	S-2	18"	23'	HDPE
P-2	S-2	S-3	18"	231'	HDPE
P-3	S-3	S-4	36"	262'	HDPE
P-4	S-4	S-5	36"	21'	HDPE
P-6	S-6	S-7	18"	31'	HDPE
P-7	S-7	S-3	24"	23'	HDPE
P-8	S-8	S-3	18"	19'	HDPE
P-9	S-9	S-10	18"	50'	HDPE
P-11	S-11	S-12	18"	35'	HDPE
PC-1	SC-1	SC-2	18"	28'	RCP
PC-3	SC-3	SC-4	18"	54'	RCP

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J				Project Mgr: AG							Sheet
I				Designed by: AG/EC							DR-1
H				Drawn by: EC/AG							Page 6 of 13
G				QA/QC: NG							Project No. 21-10-36
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No.	By	Date		Revision							



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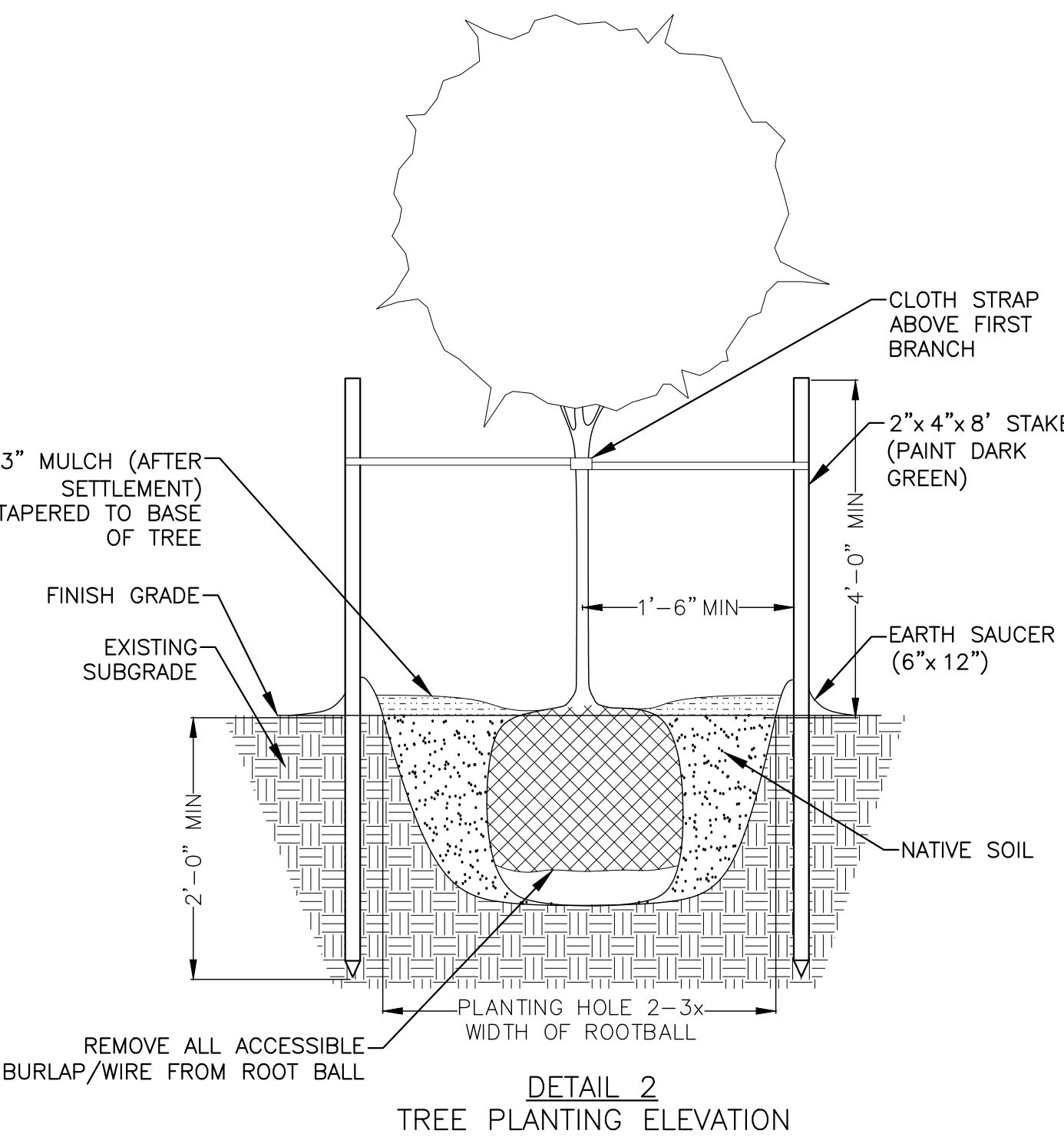
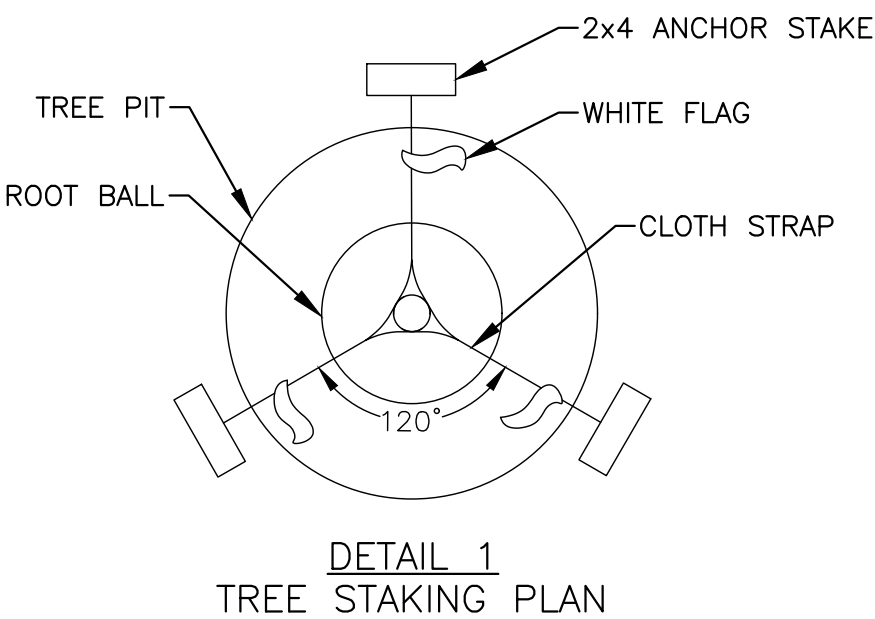
LANDSCAPE NOTES

BUFFERS
NORTH & SOUTH: NC RS-2
REQUIRED BUFFER: NONE

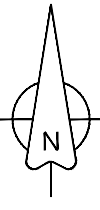
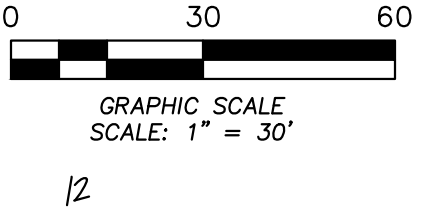
EAST: RS-1
REQUIRED BUFFER: NONE

WEST: RLM
REQUIRED BUFFER: NONE

SINGLE-FAMILY LOTS
REQUIRED TREES: 1 SHADE TREE/2,500 SF = 5 SHADE TREES
PROPOSED TREES: PRESERVE EXISTING TREES AND PLANT 2 NEW TREES



MIDWAY ROAD
(A 30 FOOT PUBLIC ROAD RIGHT-OF-WAY, AS PER
PLAT BOOK 2, PAGE 19, NOT PHYSICALLY OPENED AT THIS TIME)



"PINE MEADOW"
(PLAT BOOK 3, PAGE 58)

"WILLA VILLA"
(PLAT BOOK 3, PAGE 57)

BAILEY ROAD
(A 66 FOOT PUBLIC ROAD RIGHT-OF-WAY)



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J				Project Mgr: AG									Sheet LS-1
H				Designed by: AG/EC	Certificate of Authorization No. 9332	DO NOT SCALE THIS DRAWING – DIMENSIONS AND NOTES TAKE PREFERENCE. DRAWING IS REDUCED IF LESS THAN 22" x 34"						ASA R. GILLETTE, P.E. FLORIDA P.E. NO. 56177	Page 8 of 13
G				Drawn by: EC/AG									Project No. 21-10-36
F				QA/QC: NG									
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A	EC	03/01/22		ISSUE FOR C.O.F.B. REVIEW									
No.	By	Date		Revision									



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No.	By	Date	Revision

Scale: 1"=30'
Project Mgr: AG
Designed by: AG/EC
Drawn by: EC/AG
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G & A⁺
GILLETTE & ASSOCIATES, INC.
20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034
PHONE: (904) 261-8819

ARTISAN HOMES LLC
2754 BAILEY ROAD
FERNANDINA BEACH, FLORIDA

ISLAND CIRCLE SUBDIVISION

TREE MITIGATION PLAN

REGISTERED DESIGN PROFESSIONAL	ISSUE DATE: 03/01/22
	Sheet TM-1
	Page 9 of 13
ASA R. GILLETTE, P.E. FLORIDA P.E. NO. 56177	Project No. 21-10-36

TREE MITIGATION DATA						
TREE ID	SPECIES	DBH	HEALTH STATUS	PROTECTED DBH	RETAINED? (Y/N)	RETAINED DBH
664	Pond P	29	4	0	N	0
665	Pond P	7	3	7	N	0
666	Pond P	7	2	7	Y	7
667	Pond P	5	4	0	N	0
668	Pond P	5	4	0	N	0
669	Pond P	7	3	7	Y	7
670	Pond P	14	1	14	N	0
671	Pond P	15	4	0	N	0
672	Pond P	21	1	21	Y	21
673	Pond P	18	4	0	N	0
674	Pond P	10	2	10	N	0
675	Pond P	11	2	11	N	0
676	Pond P	8	4	0	N	0
677	Pond P	22	1	22	Y	22
678	Pond P	8	1	8	Y	8
679	Pond P	7	2	7	N	0
680	Pond P	5	4	0	N	0
681	Pond P	8	1	8	Y	8
682	Pond P	6	3	6	N	0
683	Pond P	6	2	6	Y	6
684	Pond P	6	3	6	Y	6
685	Pond P	8	3	8	Y	8
686	Pond P	7	4	0	N	0
687	Pond P	9	1	9	Y	9
688	Pond P	5	4	0	N	0
688	Pond P	5	4	0	N	0
689	Pond P	5	1	5	N	0
690	Pond P	7	4	0	N	0
691	Pond P	5	1	5	Y	5
692	Pond P	8	1	8	N	0
693	Pond P	11	2	11	N	0
694	Pond P	11	2	11	N	0
695	Pond P	10	1	10	N	0
696	Pond P	6	4	0	N	0
696	Pond P	7	2	7	N	0
697	Pond P	10	3	10	N	0
698	Pond P	22	1	22	Y	22
699	Pond P	8	4	0	N	0
699	Pond P	16	4	0	N	0
700	Pond P	10	2	10	Y	10
701	Pond P	9	1	9	Y	9
702	Pond P	19	1	19	Y	19
703	Pond P	11	2	11	Y	11
704	Pond P	5	1	5	N	0
705	Pond P	28	4	0	N	0
706	Pond P	20	4	0	N	0
707	Pond P	20	1	20	N	0
708	Pond P	14	1	14	Y	14
709	Pond P	14	2	14	Y	14
710	Pond P	17	2	17	N	0
711	Pond P	12	2	12	N	0
712	Pond P	11	2	11	Y	11
713	Pond P	13	2	13	Y	13
714	Pond P	11	1	11	Y	11
715	Pond P	14	1	14	Y	14
716	Pond P	15	3	15	N	0
717	Pond P	15	2	15	N	0
718	Pond P	17	1	17	Y	17
719	Pond P	14	1	14	Y	14
720	Pond P	18	2	18	N	0
721	Pond P	17	4	0	N	0
722	Pond P	23	5	0	N	0
723	Pond P	13	4	0	N	0
724	Pond P	15	1	15	Y	15
725	Pond P	19	1	19	N	0
726	Pond P	15	2	15	N	0
727	Pond P	17	1	17	N	0
728	Pond P	17	4	0	N	0
729	Pond P	13	1	13	N	0
730	Pond P	22	4	0	N	0
731	Pond P	16	4	0	N	0

TREE MITIGATION DATA CONTINUED						
TREE ID	SPECIES	DBH	HEALTH STATUS	PROTECTED DBH	RETAINED? (Y/N)	RETAINED DBH
732	Pond P	23	1	23	N	0
733	Pond P	16	2	16	N	0
734	Pond P	13	4	0	N	0
735	Pond P	20	1	20	Y	20
736	Pond P	19	2	19	Y	19
737	Pond P	12	4	0	N	0
738	Pond P	13	1	13	N	0
739	Pond P	22	1	22	Y	22
740	Pond P	21	4	0	N	0
741	Pond P	16	2	16	N	0
742	Pond P	11	4	0	N	0
743	Pond P	12	4	0	Y	0
744	Pond P	10	3	10	N	0
745	Pond P	15	4	0	N	0
746	Pond P	9	4	0	N	0
746	Pond P	12	4	0	N	0
747	Pond P	18	1	18	N	0
748	Pond P	13	1	13	Y	13
750	Pond P	13	1	13	N	0
751	Pond P	18	4	0	N	0
752	Pond P	15	1	15	Y	15
753	Pond P	14	4	0	N	0
754	Pond P	14	3	14	Y	14
755	Pond P	13	4	0	N	0
757	Pond P	21	4	0	N	0
757	Pond P	24	4	0	N	0
758	Pond P	20	1	20	N	0
759	Pond P	10	4	0	N	0
760	Pond P	16	1	16	N	0
762	Pond P	14	4	0	N	0
763	Pond P	11	2	11	N	0
764	Pond P	17	1	17	N	0
765	Pond P	19	4	0	N	0
766	Pond P	11	2	11	N	0
767	Pond P	12	1	12	Y	12
768	Pond P	13	4	0	N	0
768	Pond P	9	4	0	N	0
769	Pond P	15	2	15	Y	15
770	Pond P	23	4	0	N	0
771	Pond P	14	4	0	N	0
772	Pond P	16	4	0	N	0
773	Pond P	22	4	0	N	0
774	Pond P	14	1	14	N	0
775	Pond P	15	1	15	Y	15
776	Pond P	12	1	12	Y	12
777	Pond P	12	4	0	N	0
778	Pond P	20	1	20	N	0
779	Pond P	19	2	19	N	0
780	Pond P	9	4	0	N	0
780	Pond P	13	4	0	N	0
781	Pond P	15	1	15	N	0
782	Pond P	13	4	0	N	0
783	Pond P	9	4	0	N	0
784	Pond P	18	2	18	N	0
785	Pond P	14	4	0	N	0
786	Pond P	12	4	0	N	0
787	Pond P	14	4	0	N	0
788	Pond P	12	1	12	Y	12
789	Pond P	16	1	16	N	0
790	Pond P	17	4	0	N	0
791	Pond P	15	2	15	N	0
792	Pond P	15	1	15	N	0
793	Pond P	15	2	15	N	0
794	Pond P	13	4	0	N	0
795	Pond P	20	3	20	N	0
796	Pond P	7	3	7	Y	7
797	Pond P	9	1	9	N	0
798	Pond P	10	1	10	N	0
799	Pond P	5	1	5	N	0
800	Pond P	8	2	8	N	0
801	Pond P	7	2	7	N	0

TREE MITIGATION DATA CONTINUED						
TREE ID	SPECIES	DBH	HEALTH STATUS	PROTECTED DBH	RETAINED? (Y/N)	RETAINED DBH
802	Pond P	11	1	11	N	0
803	Pond P	9	4	0	N	0
804	Pond P	11	1	11	Y	11
805	Pond P	5	4	0	N	0
805	Pond P	6	4	0	N	0
806	Pond P	6	1	6	Y	6
807	Pond P	10	1	10	Y	10
808	Pond P	8	3	8	Y	8
809	Pond P	8	1	8	Y	8
810	Pond P	5	1	5	Y	5
811	Pond P	9	1	9	Y	9
812	Pond P	7	1	7	Y	7
813	Pond P	8	1	8	N	0
814	Pond P	8	1	8	N	0
815	Pond P	7	4	0	N	0
816	Pond P	6	1	6	N	0
817	Pond P	6	4	0	N	0
818	Pond P	7	1	7	N	0
819	Pond P	10	1	10	N	0
820	Pond P	8	1	8	N	0
821	Pond P	9	4	0	N	0
822	Pond P	13	4	0	N	0
823	Pond P	17	1	17	N	0
824	Pond P	12	1	12	N	0
825	Pond P	21	4	0	N	0
826	Pond P	17	1	17	N	0
827	Pond P	24	1	24	Y	24
828	Pond P	15	3	15	Y	15
829	Pond P	15	1	15	Y	15
830	Pond P	13	3	13	Y	13
831	Pond P	16	2	16	Y	16
832	Pond P	22	4	0	N	0
833	Pond P	22	1	22	Y	22
834	Pond P	8	4	0	N	0
835	Pond P	19	2	19	N	0
836	Pond P	12	2	12	Y	12
837	Pond P	18	1	18	Y	18
838	Pond P	12	4	0	N	0
838	Pond P	15	4	0	N	0
839	Pond P	28	2	28	Y	28
840	Pond P	5	1	5	Y	5
841	Pond P	5	2	5	Y	5
842	Pond P	6	4	0	N	0
843	Pond P	7	1	7	Y	7
844	Pond P	6	1	6	Y	6
845	Pond P	6	1	6	Y	6
846	Pond P	5	1	5	Y	5
847	Pond P	6	4	0	N	0
848	Pond P	6	3	6	Y	6
849	Pond P	7	4	0	N	0
850	Pond P	8	1	8	N	0
851	Pond P	7	1	7	N	0
852	Pond P	6	4	0	N	0
853	Pond P	28	1	28	Y	28
854	Pond P	14	1	14	Y	14
855	Pond P	14	4	0	N	0
856	Pond P	10	4	0	N	0
857	Pond P	19	1	19	N	0
858	Pond P	9	5	0	N	0
859	Pond P	14	1	14	Y	14
860	Pond P	28	1	28	Y	28
861	Pond P	18	1	18	Y	18
862	Pond P	9	2	9	Y	9
863	Pond P	22	2	22	N	0
864	Pond P	24	4	0	N	0
865	Pond P	24	4	0	N	0
866	Pond P	16	4	0	N	0
867	Pond P	19	5	0	N	0
867	Pond P	16	5	0	N	0
868	Pond P	20	4	0	N	0
869	Pond P	15	4	0	N	0

TREE MITIGATION DATA CONTINUED						
TREE ID	SPECIES	DBH	HEALTH STATUS	PROTECTED DBH	RETAINED? (Y/N)	RETAINED DBH
871	Pond P	22	2	22	N	0
872	Pond P	29	4	0	N	0
873	Pond P	19	2	19	Y	19
874	Pond P	22	3	22	N	0
876	CAM	48	5	0	N	0
877	MAG	6	4	0	N	0
877	MAG	5	4	0	N	0
877	MAG	4	4	0	N	0
6060	WO	8	4	0	N	0
6061	WO	10	4	0	N	0
6087	WO	14	4	0	N	0
6155	WO	4	4	0	N	0
6155	WO	9	2	9	Y	9
6164	SABAL	10	1	10	Y	10
6167	WO	4	5	0	N	0
6167	WO	14	2	14	N	0
6168	RED TIP	2	5	0	N	0
6168	RED TIP	4	5	0	N	0
6168	RED TIP	6	5	0	N	0
6169	WO	10	1	10	N	0
6170	SABAL	18	1	18	N	0
6190	CHY	11	4	0	N	0
6191	LAU	11	2	11	N	0
6192	CAM	14	4	0	N	0
6202	CAM	9	2	9	Y	9
6203	WO	14	2	14	Y	14
6204	CAM	9	4	0	N	0
6205	WO	9	4	0	N	0
6206	WO	10	4	0	N	0
6207	WO	9	4	0	N	0
6208	WO	5	4	0	N	0
6208	WO	9	4	0	N	0
6209	WO	9	3	9	Y	9
6209	WO	11	3	11	Y	11
6210	WO	10	2	10	Y	10
6214	WO	13	4	0	N	0
6226	WO	16	3	16	Y	16
6227	WO	16	2	16	Y	16
6228	WO	8	1	8	Y	8
6229	WO	9	4	0	N	0
6233	CAM	20	5	0	N	0
6234	CHY	7	4	0	N	0
6234	CHY	7	4	0	N	0
6236	LAU	38	4	0	N	0
6237	WO	14	4	0	N	0
6238	WO	3	4	0	N	0
6238	WO	8	4	0	N	0
6238	WO	9	4	0	N	0
6239	WO	9	2	9	N	0
6240	WO	13	3	13	N	0
6241	WO	5	5	0	N	0
6241	WO	10	3	10	N	0
6255	SYC	4	5	0	N	0
6255	SYC	10	1	10	Y	10
6256	WO	9	3	9	Y	9
6257	WO	16	3	16	Y	16
6258	WO	12	2	12	N	0
6259	SYC	32	1	32	Y	32
6260	WO	14	4	0	N	0
6261	WO	12	2	12	N	0
6273	WO	17	2	17	Y	17
6275	WO	9	4	0	N	0
6275	WO	16	3	16	N	0
6276	WO	12	5	0	N	0
6276	WO	14	5	0	N	0
6277	WO	20	4	0	N	0
6278	WO	8	3	8	N	0
6279	WO	8	1	8	N	0
6297	WO	11	1	11	Y	11
6298	SG	13	3	13	Y	13
6299	WO	9	1	9	N	0

TREE MITIGATION DATA CONTINUED						
TREE ID	SPECIES	DBH	HEALTH STATUS	PROTECTED DBH	RETAINED? (Y/N)	RETAINED DBH
6386	SG	11	2	11	N	0
6387	SG	4	4	0	N	0
6387	SG	13	1	13	Y	13
6388	SG	16	1	16	Y	16
6389	MA	24	3	24	Y	24
6390	SG	15	1	15	Y	15
6391	WO	6	4	0	N	0
6391	WO	9	4	0	N	0
6392	WO	8	3	8	Y	8
6393	WO	9	5	0	N	0
6394	WO	9	4	0	N	0
6396	WO	11	1	11	N	0
6397	SG	12	2	12	N	0
6398	WO	8	4	0	N	0
6399	SG	4	4	0	N	0
6399	SG	9	3	9	N	0
6400	SG	13	2	13	N	0
6401	SG	8	1	8	N	0
6402	WO	29	2	29	N	0
6403	SG	9	1	9	N	0
6404	SG	14	2	14	N	0
6405	SG	12	1	12	N	0
6406	SG	12	1	12	N	0
6407	SG	9	2	9	N	0
6408	SG	8	4	0	N	0
6408	SG	10	3	10	N	0
6409	WO	13	3	13	Y	13
6410	WO	8	4	0	N	0
6481	WO	9	4	0	N	0
6482	WO	8	1	8	N	0
6491	WO	5	5	0	N	0
6492	LAU	5	5	0	N	0
6493	LAU	6	5	0	N	0
6493	LAU	8	5	0	N	0
6494	WO	5	2	5	N	0
6495	WO	3	2	3	N	0
6496	WO	5	1	5	N	0
6497	WAX M	4	5	0	N	0
6497	WAX M	5	5	0	N	0
6499	WO	5	3	5	N	0
6500	WO	5	1	5	N	0
6501	WO	7	2	7	N	0
6502	CAM	7	5	0	N	0
6503	WO	5	1	5	Y	5
6504	WO	7	4	0	N	0
6505	LAU	5	4	0	N	0
6506	LAU	6	4	0	N	0
6506	LAU	6	4	0	N	0
6507	WO	7	4	0	N	0
6508	WO	6	1	6	Y	6
6509	LAU	7	4	0	N	0
6510	WO	5	5	0	N	0
6511	WO	9	2	9	Y	9
6512	CHY	9	3	9	Y	9
6513	WO	8	2	8	Y	8
6514	WO	6	1	6	Y	6
6515	WO	3	4	0	N	0
6515	WO	6	4	0	N	0
6516	WO	5	4	0	N	0
6516	WO	6	4	0	N	0
6517	WO	5	4	0	N	0
6517	WO	5	4	0	N	0
6518	WO	6	4	0	N	0
6519	WO	2	4	0	N	0
6519	WO	2	4	0	N	0
6519	WO	5	4	0	N	0
6520	WO	7	2	7	N	0
6521	WO	7	3	7	N	0
6522	WO	8	4	0	N	0
6523	WO	6	3	6	Y	6
6524	WO	7	2	7	Y	7

TREE MITIGATION DATA CONTINUED						
TREE ID	SPECIES	DBH	HEALTH STATUS	PROTECTED DBH	RETAINED? (Y/N)	RETAINED DBH
6525	WO	5	2	5	N	0
6526	WO	7	1	7	N	0
6527	WO	5	4	0	N	0
6527	WO	7	4	0	N	0
6529	WO	7	2	7	Y	7
6530	WO	7	1	7	N	0
6531	WO	7	1	7	N	0
6532	WO	6	4	0	N	0
6533	WO	7	2	7	Y	7
6534	WO	5	3	5	N	0
6535	WO	7	4	0	N	0
6536	WO	5	3	5	N	0
6539	CAM	7	5	0	N	0
6539	CAM	9	5	0	N	0
6541	WO	7	1	7	Y	7
6542	WO	7	2	7	Y	7
6543	WO	6	2	6	Y	6
6544	WO	7	4	0	N	0
6545	WO	7	1	7	Y	7
6546	SG	5	4	0	N	0
6547	WO	6	3	6	Y	6
6548	SG	7	5	0	N	0
6549	WO	6	2	6	N	0
6550	SG	4	4	0	N	0
6550	SG	7	2	7	N	0
6551	WO	6	4	0	N	0
6552	WO	6	4	0	N	0
6553	WO	5	4	0	N	0
6554	WO	5	4	0	N	0
6555	WO	5	1	5	N	0
6556	WO	5	1	5	N	0
6557	WO	7	2	7	N	0
6558	WO	6	3	6	N	0
6559	WO	6	4	0	N	0
6560	WO	5	4	0	N	0
6561	WO	5	3	5	N	0
6562	MA	5	3	5	Y	5
6563	SG	5	3	5	Y	5
6564	SG	5	3	5	N	0
6565	WO	6	4	0	N	0
6566	SG	7	3	7	N	0
6567	SG	7	1	7	Y	7
6568	MA	6	1	6	Y	6
6569	SG	7	2	7	N	0
6570	SG	5	1	5	N	0
6571	SG	5	1	5	N	0
6572	WO	4	4	0	N	0
6572	SG	7	3	7	Y	7
6573	SG	6	3	6	N	0
6574	WO	6	3	6	N	0
6577	WO	5	4	0	N	0
6578	WO	6	3	6	Y	6
6579	WO	7	1	7	Y	7
6580	WO	7	1	7	N	0
6581	WO	6	2	6	N	0
6582	WO	6	2	6	Y	6
6583	WO	5	3	5	N	0
6584	WO	6	4	0	N	0
6585	WO	5	3	5	Y	5
6586	WO	7	1	7	Y	7
6587	CHY	7	4	0	N	0
6588	WO	7	4	0	N	0
6589	WO	6	4	0	N	0
6590	WO	5	4	0	N	0
6591	WO	6	2	6	Y	6
6592	WO	5	2	5	N	0
6593	WO	6	2	6	N	0
6594	WO	5	3	5	Y	5
6595	WO	7	1	7	Y	7
6596	WO	6	4	0	N	0
6597	WO	6	4	0	N	0

TREE MITIGATION DATA CONTINUED						
TREE ID	SPECIES	DBH	HEALTH STATUS	PROTECTED DBH	RETAINED? (Y/N)	RETAINED DBH
6598	SG	5	3	5	N	0
6599	SG	7	1	7	Y	7
6601	WO	5	4	0	N	0
6602	SG	6	1	6	Y	6
6603	SG	6	4	0	N	0
6604	WO	7	3	7	N	0
6605	WO	6	2	6	Y	6
6606	WO	7	2	7	Y	7
6607	WO	7	1	7	N	0
6608	WO	5	3	5	N	0
6609	WO	5	4	0	N	0
6610	WO	7	4	0	N	0
6611	WO	5	4	0	N	0
6612	MA	5	1	5	Y	5
6613	WO	6	4	0	N	0
6614	WO	5	2	5	N	0
6615	WO	6	4	0	N	0
6616	SG	6	1	6	Y	6
6617	WO	7	2	7	Y	7
6618	SG	6	1	6	N	0
6619	WO	4	4	0	N	0
6619	WO	5	4	0	N	0
6620	WO	7	4	0	N	0
6621	WO	6	1	6	N	0
6622	WO	7	1	7	Y	7
6623	WO	5	2	5	Y	5
6624	WO	7	3	7	N	0
6625	WO	5	2	5	N	0
6626	WO	6	4	0	N	0
6627	WO	5	4	0	N	0
6628	WO	5	4	0	N	0
6629	WO	6	4	0	N	0
6630	WO	7	4	0	N	0
6631	WO	7	2	7	N	0
6632	WO	5	1	5	N	0
6633	SG	5	1	5	Y	5
6634	WO	5	1	5	N	0
6635	MA	6	1	6	N	0
6636	MA	6	1	6	N	0
6637	WO	5	4	0	N	0
6638	SG	5	1	5	N	0
6640	WO	6	2	6	N	0
6641	WO	5	4	0	N	0
6641	WO	5	4	0	N	0
6642	WO	6	1	6	N	0
6643	MA	5	4	0	N	0
6643	MA	6	4	0	N	0
6643	MA	7	4	0	N	0
6644	SG	7	1	7	N	0
6645	WO	4	4	0	N	0
6645	WO	6	4	0	N	0
6646	SG	6	1	6	N	0
6647	WO	7	4	0	N	0
6648	WO	7	4	0	N	0
6649	WAX M	6	5	0	N	0
6650	WO	5	4	0	N	0
6651	SG	5	1	5	N	0
6652	SG	5	1	5	N	0
6653	SG	6	1	6	N	0
6654	MA	5	4	0	N	0
6655	SG	6	1	6	N	0
6656	SG	5	4	0	N	0
6657	WO	5	4	0	N	0
6658	CHY	7	2	7	N	0
6659	WO	7	1	7	N	0
6661	SG	6	1	6	N	0
6662	MA	6	3	6	N	0
6663	WO	6	4	0	N	0
PREDEVELOPED PROTECTED TOTAL:				3503		
PRESERVED TOTAL:						1654
REQUIRED PRESERVATION (50%):				1751.5		
DEFICIT:				97.5		

HEALTH STATUS CODES		
STATUS CODE	MITIGABLE? (Y/N)	HEALTH STATUS
1	Y	NO APPARENT DEFECT
2	Y	MINOR DEFECT
3	Y	COULD KEEP TREE BUT HAS DEFECTS
4	N	POOR HEALTH AND SUGGEST REMOVAL
5	N	SEVERE DEFECT AND SHOULD BE REMOVED

EXISTING TREE LEGEND		
SYMBOL	DESCRIPTION	QTY.
LAU	LAUREL OAK	9
WO	WATER OAK	221
MA	MAPLE	17
MAG	MAGNOLIA	3
SG	SWEETGUM	72
Pond P	POND PINE	217
CHY	CHERRY	7
SABAL	SABAL PALM	2
CAM	CAMPBOR	8
SYC	SYCAMOR	3
RED TIP	RED TIP SHRUB	3
WAX M	WAX MYRTLE	3
x	TREE TO BE REMOVED	415
•	TREE TO REMAIN	150

PROPOSED MITIGATION	
PREDEVELOPED PROTECTED TOTAL (DBH):	3,503
REQUIRED PRESERVATION (50% DBH):	1,751.5
PRESERVED TOTAL (DBH):	1,654
DEFICIT (DBH):	97.5
PROPOSED PLANTINGS (3.5" SHADE TREES):	28
PROPOSED MITIGATION (DBH):	98

K			
J			
I			
H			
G			
F			
E			
D			
C			
B			
A	EC	03/01/22	ISSUE FOR C.O.F.B. REVIEW
No.	By	Date	Revision

Scale: NONE	Gillette & Associates, Inc. 20 South 4th Street Fernandina Beach, FL 32034
Project Mgr: AG	
Designed by: AG/EC	Certificate of Authorization No. 9332
Drawn by: EC/AG	DO NOT SCALE THIS DRAWING – DIMENSIONS AND NOTES TAKE PREFERENCE. DRAWING IS REDUCED IF LESS THAN 22" x 34"
QA/QC: NG	

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GILLETTE & ASSOCIATES, INC
20 SOUTH 4TH STREET
FERNANDINA BEACH, FL 32034
PHONE: (904) 261-8819

ARTISAN HOMES LLC
2754 BAILEY ROAD
FERNANDINA BEACH, FLORIDA

ISLAND CIRCLE SUBDIVISION

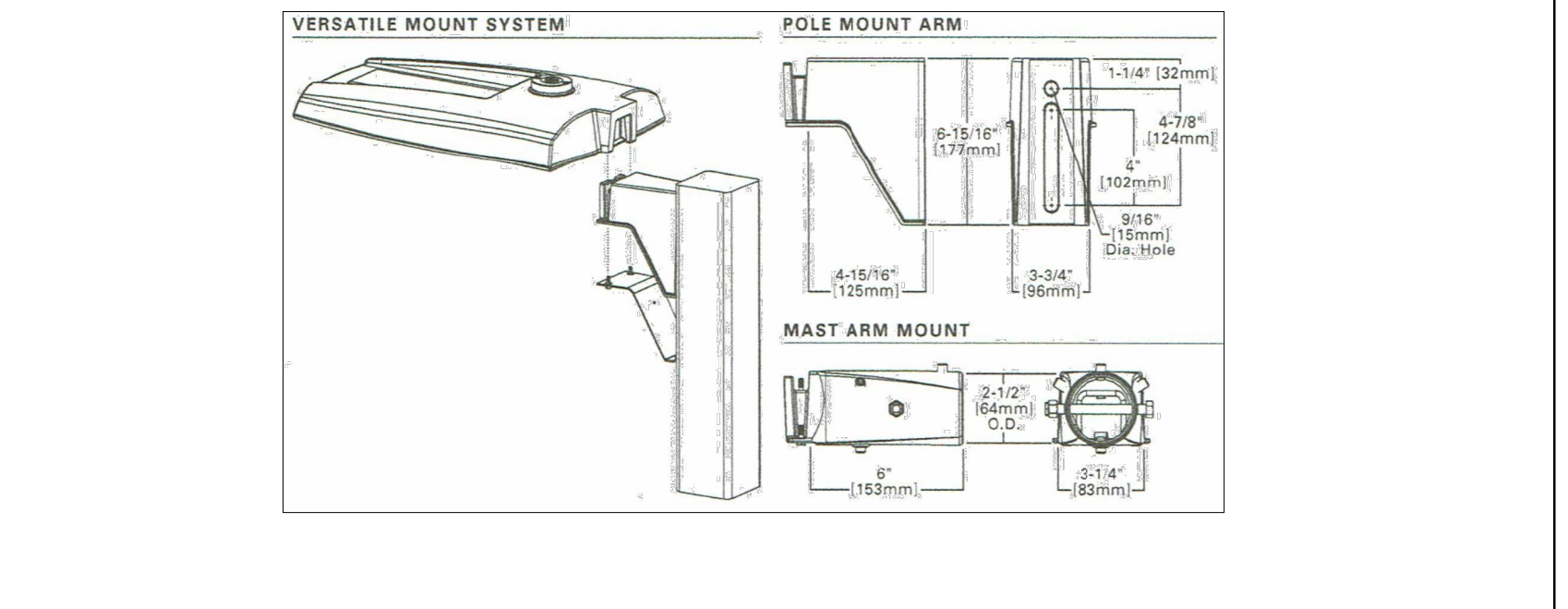
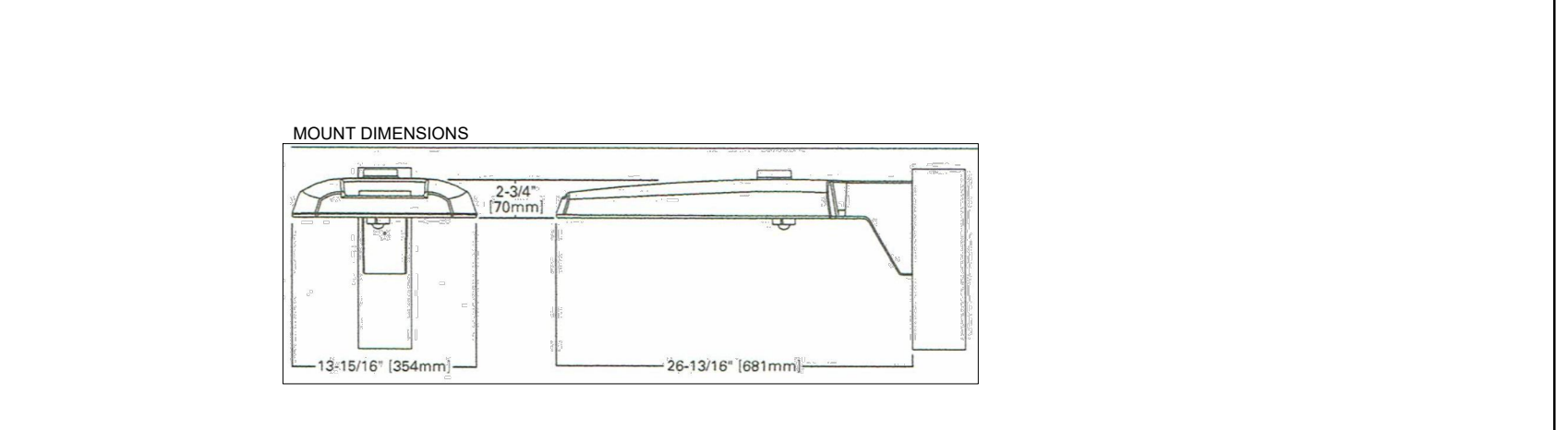
TREE MITIGATION DATA

REGISTERED DESIGN PROFESSIONAL	ISSUE DATE: 03/01/22
	Sheet TM-3
	Page 11 of 13
	Project No. 21-10-36

NOT FOR CONSTRUCTION

The diagram shows a square lift station pad. To its north is Bailey Road, indicated by an arrow and the text "BAILEY ROAD R.O.W.". A line points from the text "CHEESEWOOD SHRUB (TYP ~18 PL) SCREENING HEDGE SHRUBS TO BE AT LEAST 30" TALL AT INSTALLATION AND PLANTED AT 30" O.C." to a row of shrubs planted along the north side of the pad. Another line points from the text "LIFT STATION PAD" to the pad itself.

LIFT STATION SCREENING



The diagram shows a vertical cross-section of a light pole. At the top, there is a horizontal line labeled 'B'. Below it, a vertical line is labeled 'B'. Further down, a horizontal line is labeled 'REBAR'. At the bottom, there is a horizontal line labeled 'B'. The pole is shown with a cross-section at the bottom, indicating it is to be buried.

POLE NOTES:

1. PROVIDE POLE/LT FIXTURES WITH ALL REQUIRED HARDWARE FOR MTG.
2. PROVIDE/INSTALL CONDUIT, AND PULLSTRING, JEA SHALL PROVIDE/INSTALL CONDUCTORS, POLE, MTG ARM, AND LIGHT FIXTURE. INSTALL ALL PER UTILITY CO REQUIREMENTS.
3. PROVIDE AND INSTALL CONCRETE LIGHT POLE PER MANUFACTURERS RECOMMENDATIONS TO WITHSTAND LOCAL EPA WIND SPEED RATINGS FOR AREA OF INSTALLATION (130MPH MINIMUM).

DIRECT BURY

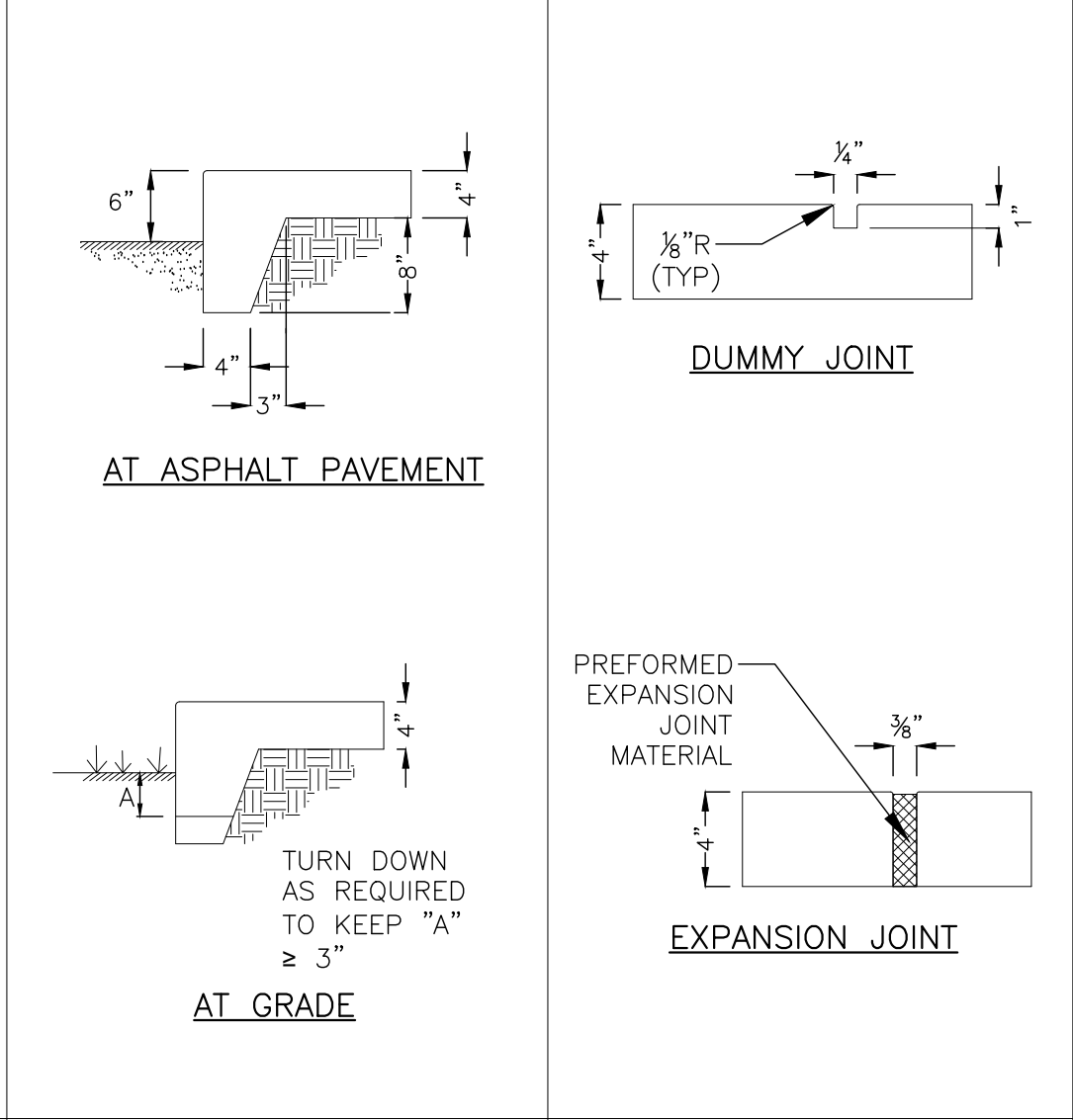
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SITE LIGHTING DETAIL			

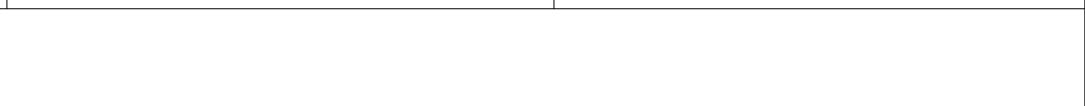
		REGISTERED DESIGN PROFESSIONAL	ISSUE DATE: 03/01/22
			Sheet DT-1

SION	MISCELLANEOUS DETAILS	DI-1
		Page 12 of 13

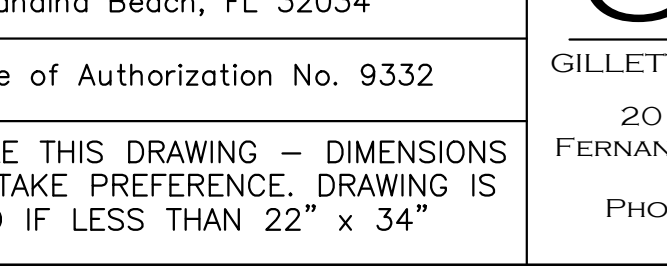
	ASA R. GILLETTE, P.E. FLORIDA P.E. NO. 56177	Project No. 21-10-36
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SIDEWALK TURNDOWN DETAILS SIDEWALK JOINT DETAILS



ette & Associates, Inc.
20 South 4th Street
Gaines, Fla. 32634



TYPICAL PAVEMENT DETAIL					
K					

K					Scale:	
J						
I						
H					Project Mgr: AG	
G						
F					Designed by: AG/EC	Ce
E						
D					Drawn by: EC/AG	
C						DO NOT
B					QA/QC: NG	AND N
A	EC	03/01/22		ISSUE FOR C.O.F.B. REVIEW		
No.	By	Date		Revision		

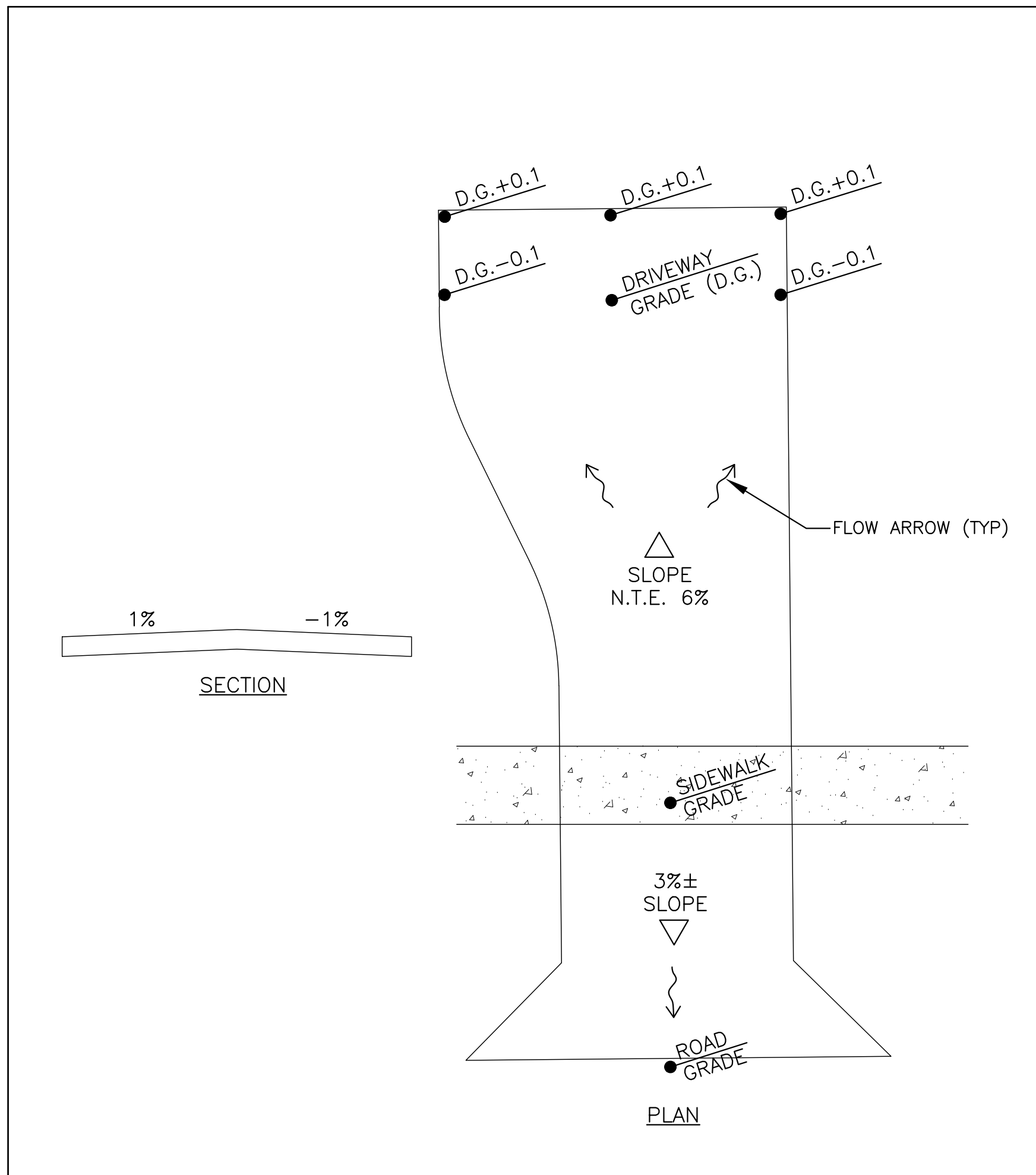
K				Scale:
J				
I				
H				Percentages

H			Project Mgr: AG	
G				
F			Designed by: AG/EC	Ge

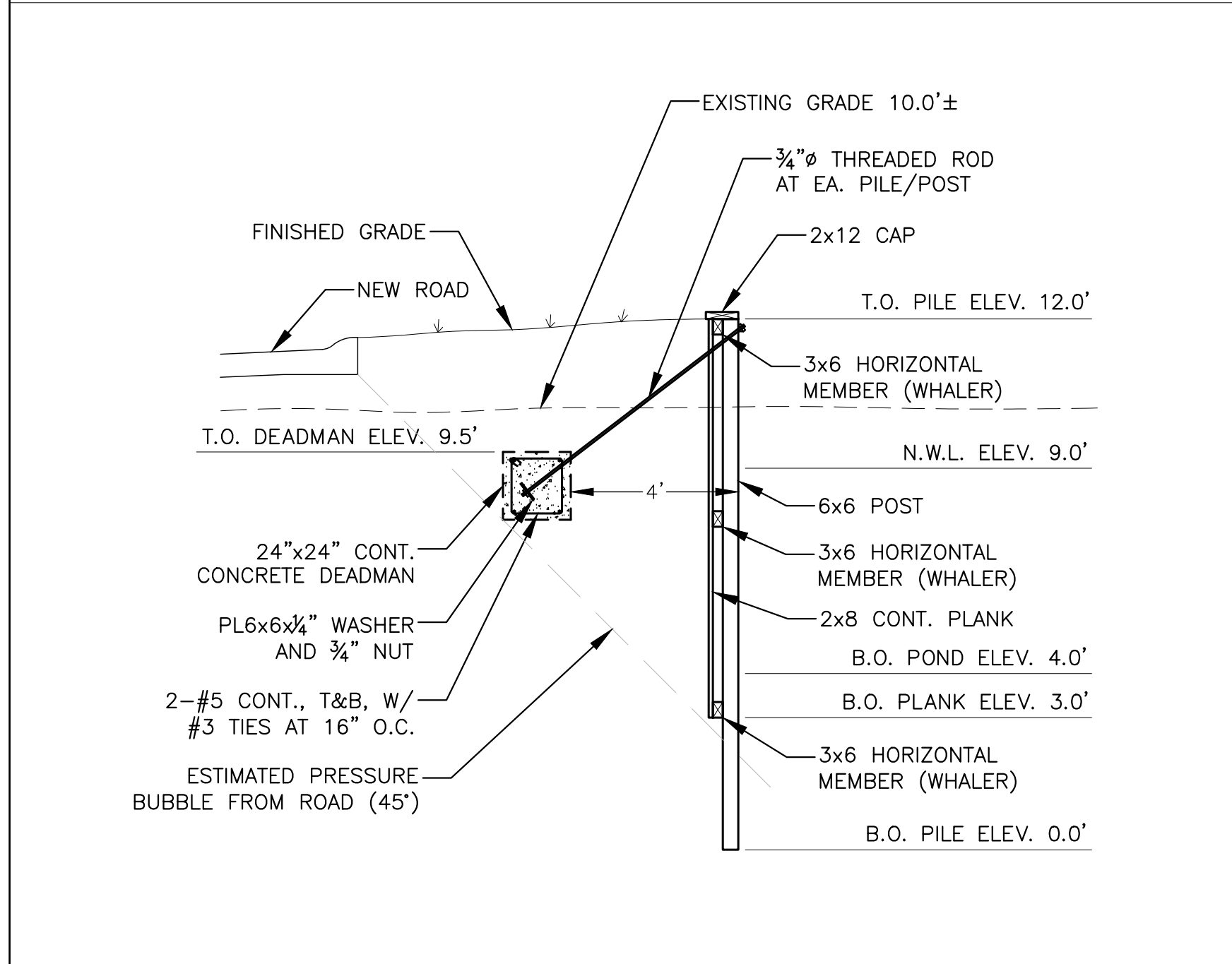
E				Drawn by: EC/AG	DO NO
D					
C					

B				QA/QC:	NG	AND N R
A	EC	03/01/22	ISSUE FOR C.O.F.B. REVIEW			
No.	Rv	Date	Revision			

1991	27	2000	1991-2000	1991-2000	1991-2000
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TYPICAL DRIVEWAY DRAINAGE DETAILS



BULKHEAD DETAIL

K				Scale:	
J				Project Mgr:	AG
I				Designed by:	AG/EC
H				Drawn by:	EC/AG
G				QA/QC:	NG
F					
E					
D					
C					
B					
A	EC	03/01/22		ISSUE FOR C.O.F.B. REVIEW	
No.	By	Date		Revision	

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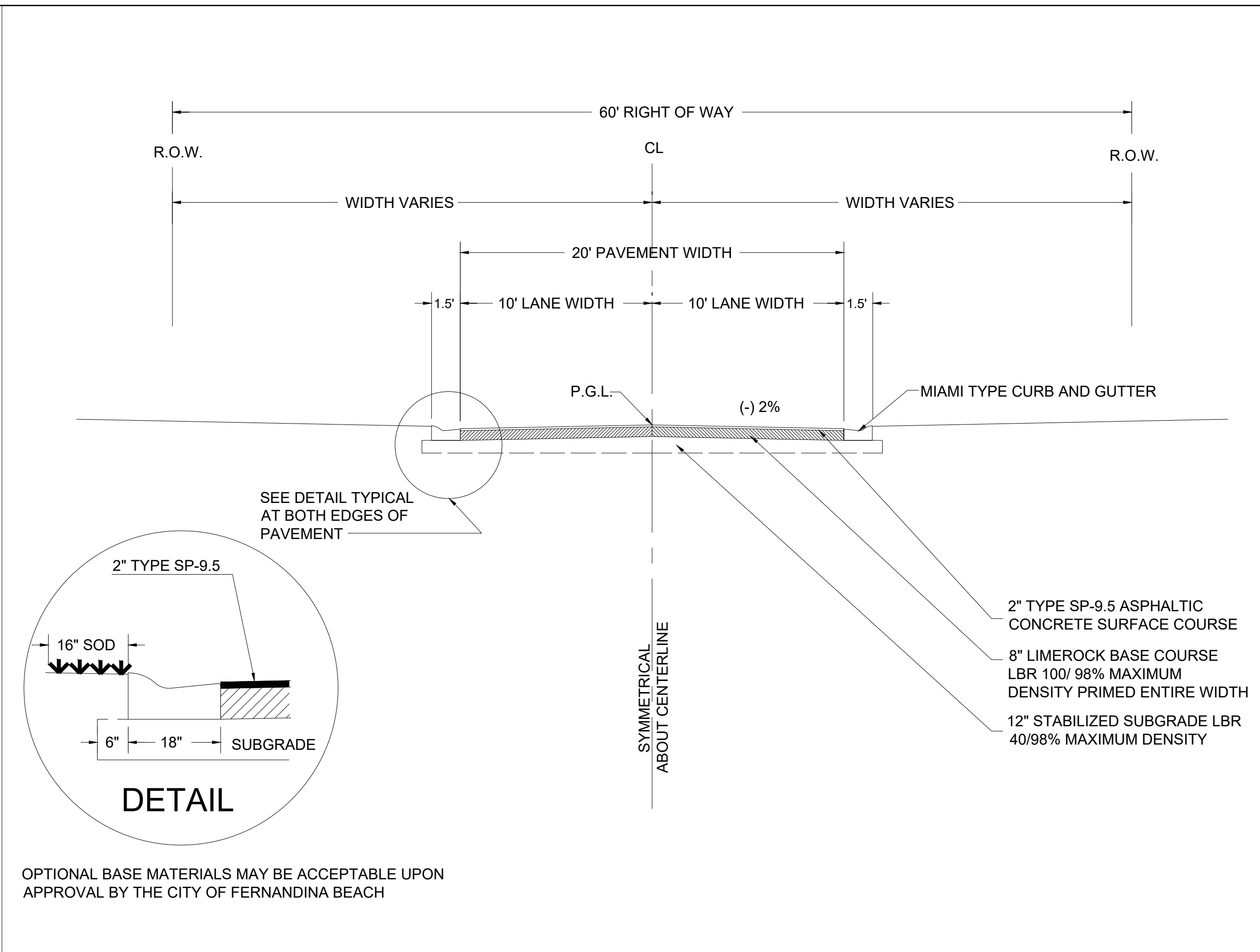
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GILLETTE & ASSOCIATES, INC.
20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034
PHONE: (904) 261-8819

ARTISAN HOMES LLC
2754 BAILEY ROAD
FERNANDINA BEACH, FLORIDA

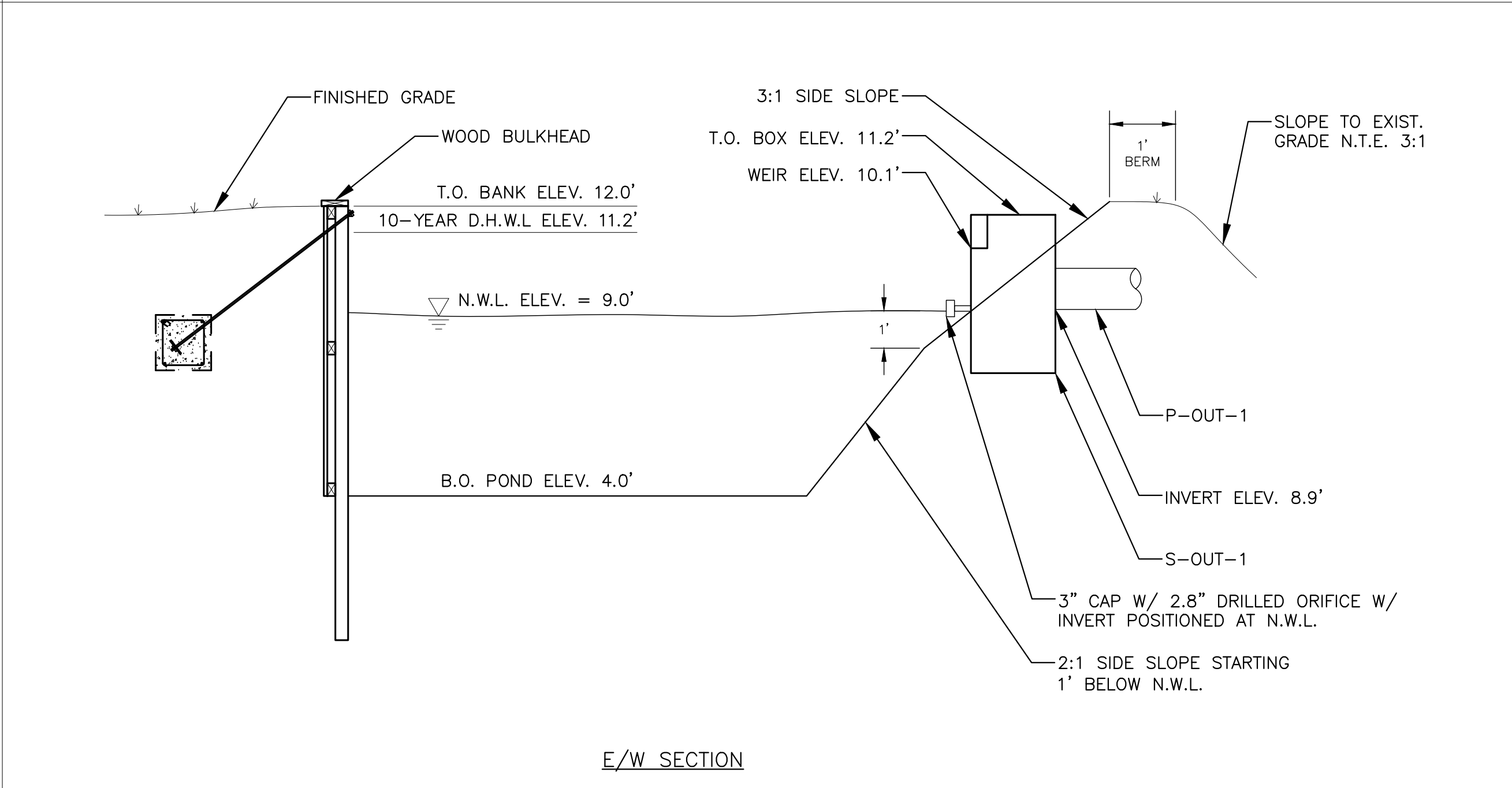
ISLAND CIRCLE SUBDIVISION

DRAINAGE DETAILS

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ASA R. GILLETTE, P.E. FLORIDA P.E. NO. 56177	Sheet DT-2 Page 13 of 13 Project No. 21-10-36

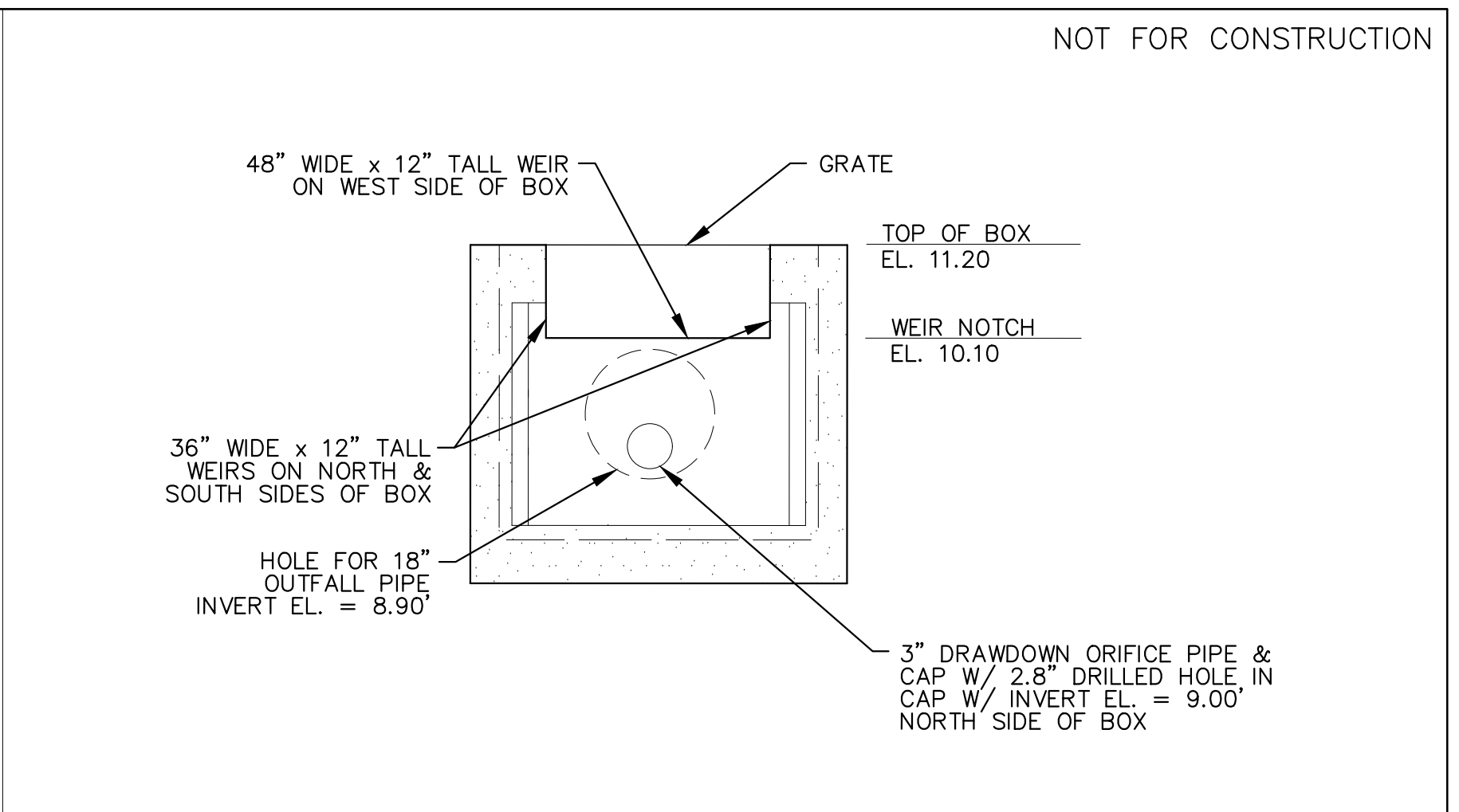


TYPICAL ROAD SECTION

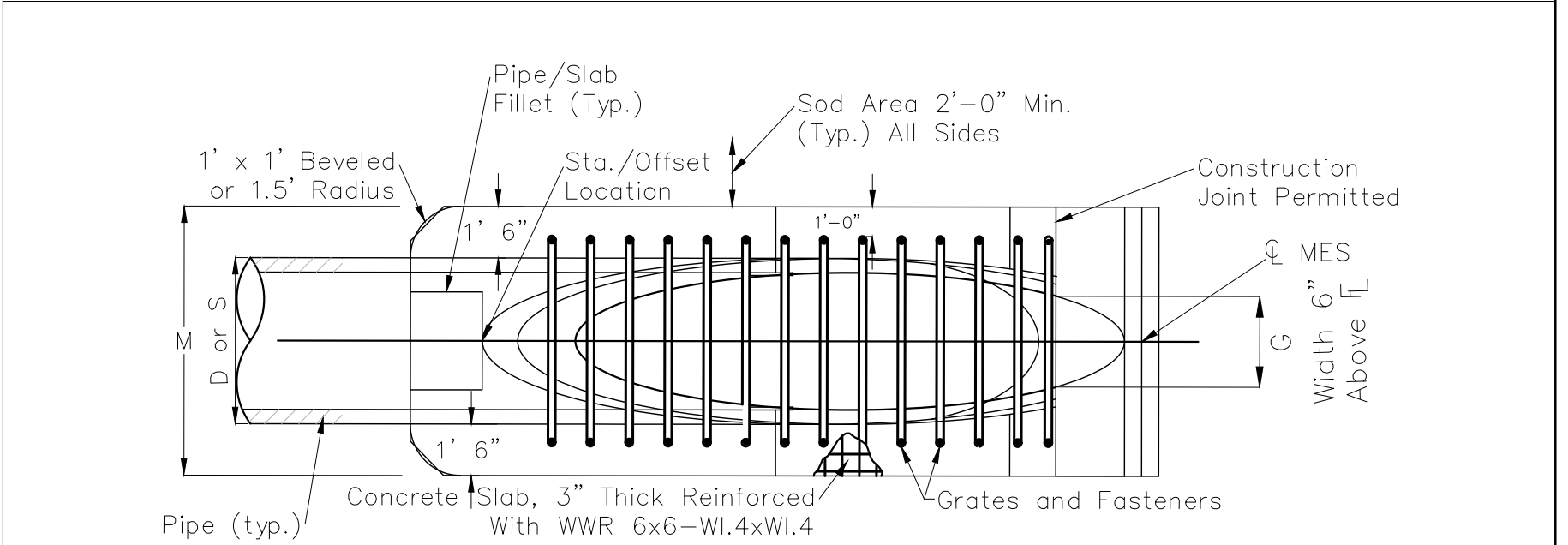


E/W SECTION

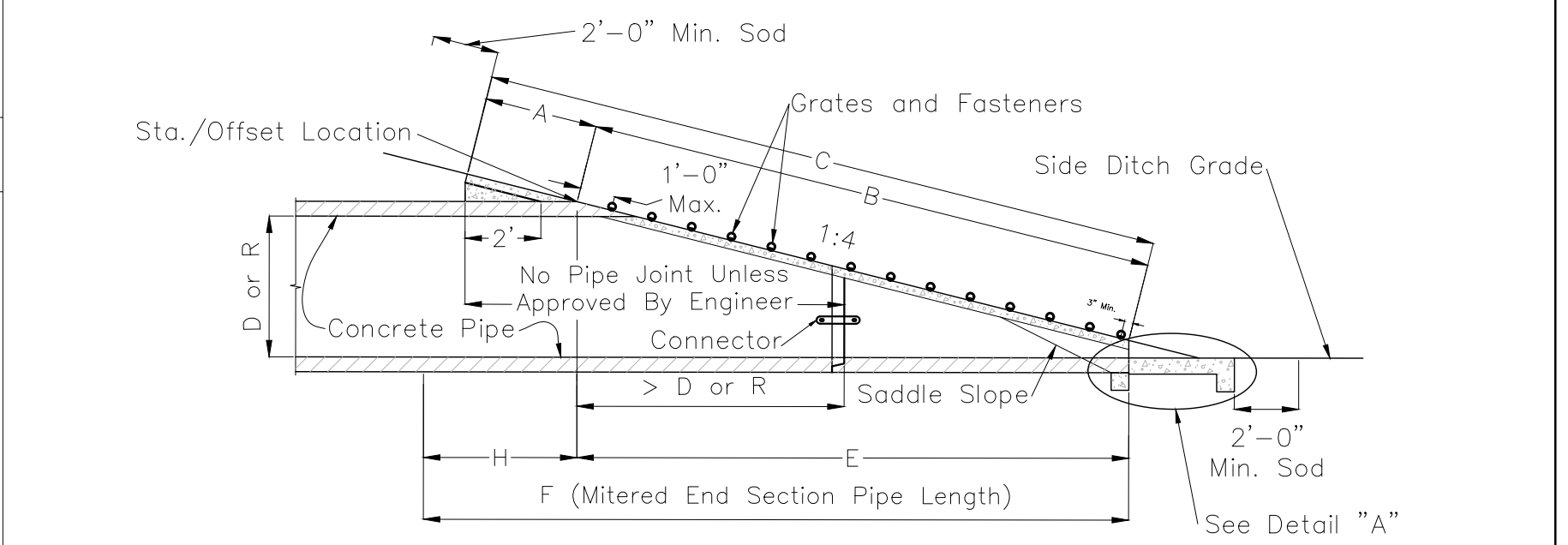
POND DETAIL



DROP STRUCTURE DETAIL

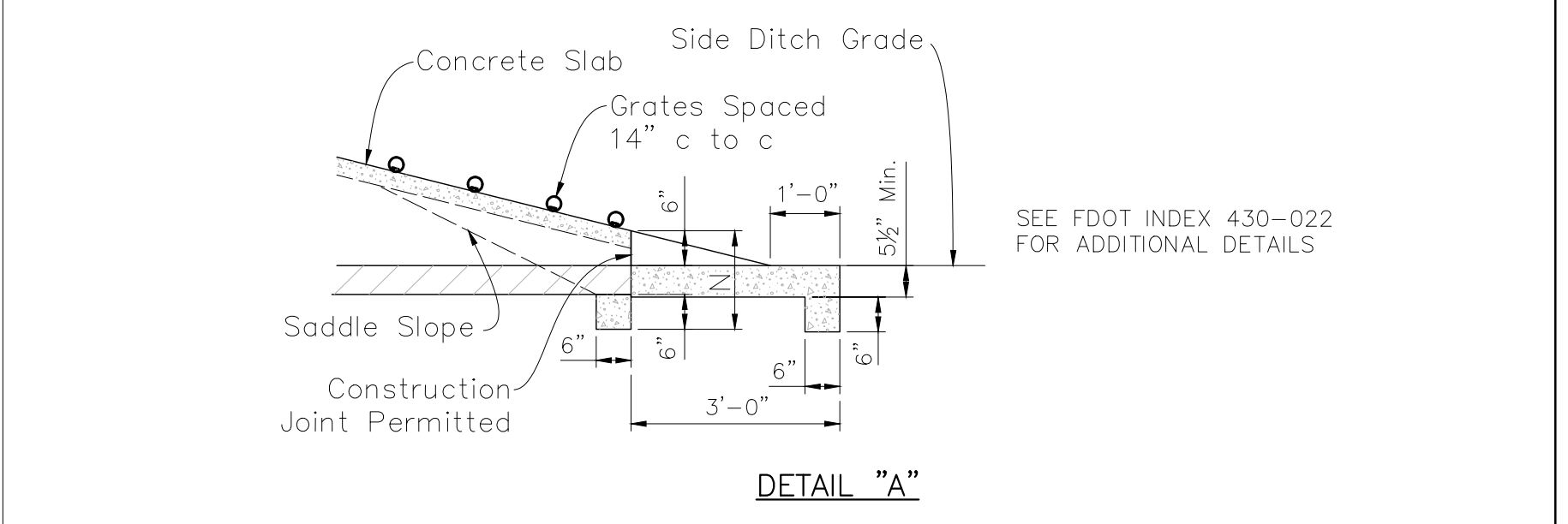


PLAN - SINGLE PIPE



ELEVATION

DIMENSIONS FOR SINGLE 24" CONCRETE PIPE												
DIA. D	X	A	B	C	E	F	G	H	M	N	3" CONC. SLAB (CY)	SODDING (SY)
24"	3'-5"	2.53'	7.18*	9.71*	7.03*	11'	1.73'	4.0'	5.50'	1.25'	1.02	10
*6.42" DIMENSIONS PERMITTED TO ALLOW USE OF 8" STANDARD PIPE LENGTHS.												



DETAIL "A"

MES DETAIL



**REPORT OF PRELIMINARY GEOTECHNICAL EXPLORATION
& ENGINEERING EVALUATION
PROPOSED 12-LOT ARTISAN BAILEY RESIDENTIAL SUBDIVISION - LOTS, ROAD AND POND
SE QUADRANT OF BAILEY AND PINE ROADS
FERNANDINA BEACH, FLORIDA
AGES JOB NO. J19950, REPORT NO. 001**

**FOR
GILLETTE & ASSOCIATES
20 SOUTH 4TH STREET
FERNANDINA BEACH, FLORIDA 32034
ATTN: MR. ALEX BOLTON**

SEPTEMBER 3, 2021

AGES of JAX, Inc.
P O Box 24008, Jacksonville FL 32241-4008
9556 Historic Kings Road South, Suite 201 ● Jacksonville, Florida 32257-2010
(904) 886-0766 ● (904) 880-5190 (FAX)



OF JAX, INC.

September 3, 2021

GILLETTE & ASSOCIATES

20 South 4th Street
Fernandina Beach, Florida 32034
Attn: Alex Bolton

Re: Report of Preliminary Geotechnical Exploration & Engineering Evaluation
Proposed 12-lot Artisan Bailey Residential Subdivision - Lots, Road and Pond
SE Quadrant of Bailey and Pine Roads
Fernandina Beach, Florida
AGES Job No. J19950, Report 001

Ladies & Gentlemen:

AGES OF JAX (AGES), Inc. has completed a preliminary geotechnical exploration of the subsurface conditions beneath the construction area for the referenced project. Our services were performed in accordance with **AGES'** Service Authorization which was dated July 19, 2021. Formal authorization of our services was provided by Mr. Asa Gillette, P.E. on July 20, 2021. This report includes: (1) a brief description of the planned construction, (2) a summary of the field exploration performed and results that were obtained, (3) our recommendations for foundation design and construction of the proposed residential structures, (4) guideline pavement design and construction recommendations, (5) evaluation of the suitability of barrow soil located at the site, and (6) parameters for use in stormwater pond design and permitting.

The site preparation recommendations and foundation design recommendations presented herein are specific to the tested lots. Soil conditions on untested lots could be markedly different and the recommendation presented herein may or may not be applicable. If a higher confidence level is desired concerning the soil conditions on the untested lots, then we recommend that **AGES** be retained to perform supplemental penetration test borings prior to initiation of building construction.

We appreciate the opportunity to be of service as the geotechnical consultant during this phase of your project. Should you have any questions concerning this report or if we may be of any further service to you, please feel free to contact us.

Very truly yours,

AGES of JAX, INC.

Bill C. McMahan, Jr., P.E.
Principal Engineer/Vice-President
Registered, Florida No. 42677

BCM/bcm/J19950 Artisan Bailey Subdivision.wpd
Attachments
Distribution: Addressee (1) Via Email

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REPORT ATTACHMENTS

1.0 PROJECT BACKGROUND INFORMATION

General information has been provided by Gillette & Associate Alex Bolton during recent telephone and email conversations. We have been provided with: (1) a Site Plan which shows the property boundaries, the planned site development and the requested preliminary boring locations (prepared by Gillette & Associates, undated; and (2) a Boundary and Topo Survey (prepared by Bowman Surveyors, undated).

We understand that a new 12-lot single family residential subdivision is being planned on a +/- 5-acre parcel of land located near the southeast corner of the Bailey Road and Pine Road in Fernandina Beach, Florida. The site is occupied by several mobile homes and pond. The western half of the site is grass covered. The eastern half of the site is wooded. The proposed development will include 12 - lots, asphalt paved roadways and the existing pond will be expanded to store/treat stormwater runoff. Detailed structural information has not been provided however we have assumed that the buildings will be wood or block framed and that column and wall loads will be on the order of 75 kips and 2 klf, respectively. Existing and proposed grading information has also not been provided. However we have assumed that 2 feet or less of elevating fill will be added to the site.

2.0 PRELIMINARY GEOTECHNICAL EXPLORATION

2.1 Purpose of Exploration

The objective of this geotechnical exploration was to obtain site and subsurface data for use in: (1) the preliminary evaluation of the site with respect to the proposed development, (2) the development of preliminary site preparation and foundation design recommendations for the planed residential structures, (3) the development of pavement design and construction recommendations, (4) the stormwater pond design and permitting processes, and (5) the evaluation of the pond areas soils for use as barrow fill and backfill. The geotechnical exploration should therefore consist of field exploration borings and a geotechnical engineering analysis of the collected test data.

2.2 Subsurface Testing

The field testing program, which was conducted on August 17 and 18, included: seven(7) 15-foot deep penetration test borings (B1 - B7) in the lot areas (one boring every other lot), three(3) 6-foot deep auger borings in the roadway areas (A1 - A3), and two(2) 15-foot deep auger borings in the planned pond expansion areas

The soil borings were located in the field by our personnel using GPS based locators with a 10 to 15 foot horizontal accuracy. The borings were drilled according to applicable standards. The boring locations are shown on the attached Field Exploration Plan should be considered approximate. The ground surface elevations at the boring locations were not determined.

The attached Test Boring Records and Auger Boring Records present the descriptions of the subsurface soils encountered, the groundwater levels encountered, and the penetration resistance values recorded when drilling and sampling the test borings. The subsurface conditions are graphically illustrated on the attached Generalized Subsurface Profile sheet. The stratification lines and depth designations on the boring records and profile represent the approximate boundary between the various soils encountered, as determined in the field by our drillers, and the transition from one strata to the next should be considered approximate. A brief discussion of the drilling, sampling, and field testing techniques used during the geotechnical exploration is provided in the attached Field Exploration Procedures section.

3.0 GEOTECHNICAL FINDINGS

3.1 Site Conditions

The subject site was visited by **AGES** personnel to identify site conditions which could impact our site preparation and foundation design recommendations. The site which is located in the southeast corner of the Bailey Road and Pine Road in Fernandina Beach, Florida, is occupied by several mobile homes and pond. The western half of the site is grass covered. The eastern half of the site is wooded. No standing water was observed on the site at the time of our visit.

3.2 Subsurface Conditions

The subsurface conditions outlined below highlight the major subsurface stratifications encountered during our geotechnical exploration of the site. When reviewing the boring records, the attached Generalized Subsurface Profile and the subsurface conditions outlined below, it should be understood that the subsurface conditions will vary across the proposed construction area and between the boring locations.

3.2.1 Soil Conditions - The lot penetration test borings (B1 - B7) typically encountered a 2 to 8 feet thick surface stratum of very loose to loose slightly silty fine sand (SP-SM). Penetration resistance values within this stratum ranged from 2 to 9 blows/foot. The surface stratum was underlain by alternating strata firm to very firm to dense slightly silty fine sand (SP-SM) and dense cemented slightly silty fine sand (SP-SM, Hardpan) which extended to the boring termination depth of 15 feet. The penetration resistance values typically ranged from 14 to 46 blows/foot.

Roadway auger borings A1 - A3 encountered slightly silty fine sand (SP-SM, A-3) which extended to the maximum boring termination depth of 6 feet.

Lake auger borings LA1 and LA2 encountered slightly silty fine sand (SP-SM, A-3) which extended to the maximum boring termination depth of 15 feet.

3.2.2 Groundwater Conditions - The groundwater levels encountered at the time of drilling ranged from approximately 1 to 2 feet below the ground surface. These water levels are estimated to be at the Seasonal High Groundwater Levels. The groundwater level should be expected to fluctuate due to seasonal climatic variations, changes in surface water runoff patterns across the site, construction activity and the subsequent development as planned, and other interrelated factors. Since groundwater variations are anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based on the assumption that variations will occur.

4.0 PRELIMINARY GEOTECHNICAL ENGINEERING EVALUATION

4.1 Basis of Evaluation & Recommendations

Our geotechnical engineering evaluation of the site and subsurface conditions with respect to the planned construction, and our recommendations for foundation design and site preparation/earthwork construction, are based upon: (1) our site observations; (2) the field test data obtained during this geotechnical exploration of the site; and (3) our understanding of the project information and structural loading conditions as presented in this report. If the structural information or the Site Plan are altered, please contact us so we may review our recommendations. If any site or subsurface conditions are encountered during construction which appear to deviate from data obtained during this geotechnical exploration (as documented herein), please contact us so that we may visit the site, observe the differing conditions, and evaluate the new information relative to our geotechnical evaluation and recommendations.

4.2 Foundation System Evaluation

Based upon our geotechnical findings and our understanding of the proposed construction, we consider the site and subsurface conditions adaptable for support of the proposed structures upon a properly designed and constructed shallow foundation. The shallow foundation system may be designed using an allowable bearing pressure of 3,000 psf. Provided that the design and construction recommendations outlined subsequently are implemented, we estimate that total structural settlement due to fill and structural loads should be on the order of one inch or less. In addition, post construction differential settlements should be within tolerable magnitudes ($< \frac{1}{2}$ inch). The settlements should occur concurrently with construction due to the generally sandy nature of the soils encountered. Site preparation necessary for proper foundation performance includes:

- * Clearing and grubbing the existing vegetation (and their root systems) and stripping of surficial topsoil from within the construction areas.
- * Compaction of the exposed natural soils using a 10 ton vibratory drum roller to improve the bearing capacity and reduce settlement potential of the upper 2 to 6 feet of very loose to loose fine sand;
- * Placement and compaction of any required elevating fill to densities equivalent to 95 percent of the Modified Proctor maximum dry density (ASTM D 1557) within the building areas.

4.3 Evaluation of Barrow Soil Suitability

The evaluation of barrow soil suitability depends upon: (1) the planned soil usage, (2) proposed construction methods, (3) the time of year during which site work construction will occur, (4) economic considerations, and (5) other factors. From a building pad perspective, we typically recommend that all fill and backfill soils consist of clean sands (fine sand to slightly silty fine sand) containing less than 12% fines (SP and SP-SM). Higher fines content sandy soils including: silty sands and clayey sands (SM and SC) can also be used in building pad development. However, these soils are more moisture sensitive and re-compaction in Florida during the wet summer months and/or use of the fill on wet sites will significantly increase re-compaction effort and could result in construction delays. Very silty sands, very clayey sands, and/or silts/clays (CH and CL), are not considered to be usable for building pad construction in Florida.

Based upon a review of borings LA1 and LA2, it is our opinion that the fine sands and slightly silty fine sands (SP to SP-SM, A-3) which were encountered in the upper 15 feet of profile will be usable as Class I structural fill/backfill.

5.0 PRELIMINARY FOUNDATION DESIGN & SITE PREPARATION RECOMMENDATIONS

5.1 Foundation Design Recommendations

5.1.1 Foundation Type - We consider a conventional shallow foundation system applicable for this project if the site preparation recommendations presented in section 5.2 of this report are performed.

5.1.2 Bearing Pressure & Depth - The maximum allowable soil bearing pressure for use in shallow foundation design should not exceed 3,000 psf. The foundations should be designed based upon the maximum load which could be imposed by all loading conditions. The exterior footings should bear at a depth of at least 12 inches below the exterior final grades and the interior footings should bear at least 12 inches below the interior floor slab. These minimum bearing depths should provide the necessary confinement for the soils at the foundation bearing levels.

5.1.3 Foundation Size - The minimum widths recommended for isolated spread-type footings and continuous wall footings are 24 and 18 inches, respectively. Even though the maximum allowable soil bearing pressure may not be achieved, these minimum width recommendations should still control the size of the foundations.

5.1.4 Bearing Material - The foundations may bear in either the compacted suitable natural granular soils or compacted structural backfill or fill. The bearing level soils, after compaction, should exhibit densities equivalent to 95 percent of the Modified Proctor maximum dry density (ASTM D 1557) to a depth of at least one-foot below the foundation bearing levels.

5.2 Site Preparation Recommendations

5.2.1 Temporary Groundwater Control - During our geotechnical exploration, the groundwater level was encountered at depths of 1 to 2 feet below the existing site grades. Dependent upon the groundwater levels encountered at the time of construction, temporary de-watering may be required in some areas of the site. The groundwater should be controlled at all times at a depth of at least two feet below the construction level. Groundwater drawdowns on the order of one to two feet, if required, can probably be best achieved using temporary perimeter drainage ditches, four to five feet deep, which are graded: (1) to a positive gravity outfall away from the site; or (2) to sumps where the collected groundwater and surface water runoff can be removed by pumping.

5.2.2 Site Clearing & Stripping - Initial site preparation should consist of clearing existing trees, vegetation, root systems and surficial topsoil from within the planned construction area. The clearing/stripping work should be performed within and to a distance of at least five feet beyond the perimeter of the planned building areas and three feet beyond the perimeter of the proposed pavement areas. It should be anticipated that surficial topsoil will be encountered in thicknesses of up to 6 inches. The perimeter areas may then need to be graded to help direct surface water runoff away from the construction areas.

5.2.3 Site & Fill Compaction - After completing the initial site preparation, the exposed sandy soils should be compacted to densities of at least 95 percent of the Modified Proctor maximum dry density to a depth of 24 inches using a vibratory drum roller which has a minimum at-drum weight on the order of 10 tons and a minimum drum diameter on the order of five feet, with the exception that a lightweight vibratory drum or sled compactor having a maximum static weight on the order of 1000 pounds should be used within 50 feet of existing structures. The roller will be required to improve the density of the upper approximate two feet of loose fine sands at this site. The structural fill required to raise the site to the planned finished grades may then be placed in loose lifts not exceeding 12 inches in thickness, and should be compacted to densities as recommended above. Loose lifts should not exceed eight inches in areas of the site in which lightweight vibratory equipment is used. Structural fill is defined as a non-plastic, inorganic, granular soil containing less than 12 percent material passing the No. 200 mesh sieve (i.e. a relatively clean sand).

5.2.4 Disturbed Soil Conditions - Should the near-surface soils and/or structural fill material experience "pumping" and subsequent soil strength loss during site work construction, work upon these areas should be immediately terminated and: (1) the disturbed soils removed and backfilled with "dry" structural fill soils, (i.e. percent water content on the order of five to 10 percent) which are then compacted; or (2) the excess moisture content within the disturbed soils allowed to dissipate before recompacting. Furthermore, the groundwater table should be checked and controlled as necessary to help insure proper draw-down of any high groundwater conditions that may be causing the "pumping" conditions during compaction or construction activity upon these soils.

5.2.5 Foundation Areas - After placement and compaction of all structural fill, the foundations may be excavated to their planned bearing levels using a "smoothed" bucket backhoe. All fine sandy soils present at the bearing level should be compacted to densities equal to 95% of the Modified Proctor maximum dry density. Compaction of the fine sandy bearing level soils in the small footing areas may be

best achieved using lightweight, walk-behind sleds, rollers, or tampers having a minimum total weight of 100 lbs. Loose lifts of backfilled fine sandy soil in the footing excavations, if needed, should be placed in thicknesses of up to 6 inches, prior to densification with the lightweight compaction equipment.

6.0 PRELIMINARY GUIDELINE PAVEMENT DESIGN AND CONSTRUCTION RECOMMENDATIONS

6.1 General

The subsurface conditions at this site appear favorable for use of flexible and/or rigid pavements in the parking lot and drive-through areas. Guideline pavement design and construction recommendations applicable to this project are presented below. The pavement thickness recommendations and construction recommendations presented in this report are based upon our past experience on similar paving projects. Detailed flexible pavement design calculations have not been performed to verify adequacy of the recommended pavement sections since detailed traffic loading information is unavailable at this time. We request that **AGES** be retained to review the final pavement design, paving and drainage plans, and specifications to evaluate whether our guideline recommendations have been properly interpreted and implemented into the project design.

6.2 Guideline Pavement Design Recommendations

The recommended minimum flexible pavement structure thicknesses for the subject project are provided in the following table.

<u>PAVEMENT COURSE</u>	<u>Automobiles & Light Truck Traffic</u>	<u>Moderate to Heavy Traffic</u>
Asphalt Wearing Surface(In.)*	1.5	2.0
Limerock Base Course (In.)**	6.0	8.0
Prepared Subgrade(In.)***	12.0	12.0

* Superpave 9.5 Asphaltic Concrete or Type SIII, as defined by the Florida DOT Standard Specifications for Road and Bridge Construction Manual.

** Florida Limerock, exhibiting an LBR Value of 100, and meeting the specifications outlined in the Florida DOT manual (Section 200).

*** Stabilized and compacted subgrade should exhibit a Maximum LBR value of at least 30. Subgrade stabilization should be performed in accordance with Section 160 of the standard FDOT specifications.

6.3 Guideline Pavement Construction Recommendations

6.3.1 Pavement Subgrade Preparation - Site preparation in the pavement areas should be performed in accordance with the guideline procedures outlined above, and should include: (1) clearing/stripping surface vegetation, (2) compaction of the exposed soils using a 10 ton vibratory drum roller, and (3) placement/compaction of backfill and any required structural fill (if any) to densities equivalent to 95 percent of the Modified Proctor maximum dry density. In addition, the upper one foot of subgrade in the pavement areas should be compacted to 98 percent of the Modified Proctor maximum dry density. Shell and or clay additives may be required to obtain the required design LBRs required. Also, the pavement structure should be designed to provide at least 30-inches of fine sands separating the limerock subgrade and any underlying clayey/silty soils. This will help to prevent "pumping" and reduce the chance of premature pavement failures which are caused by "perched" groundwater levels.

6.3.2 Limerock Base Course Preparation - The limerock base course should be placed and compacted to densities equivalent to 100 percent of the Modified Proctor maximum dry density (ASTM D 1557). The surface of the limerock base course material should be "primed" with any of the following cutback asphalt grades: RC-70, RC-250, MC-70, or MC-250. Approximately 0.15 gallons per square yard should be applied to the base course surface. Care should be exercised to prevent over-priming of the base course surface. Prior to asphalt placement, the prime coat should be fully set and cured. The specifications governing the placement of prime coats on pavement base course surfaces and sanding is outlined in Section 300 of the Florida DOT Standard Specifications for Road and Bridge Construction (1986).

The primed base course should be sanded if: (1) more than one day (24 hours) will elapse prior to laying the asphalt wearing surface and excess prime is not absorbed, or (2) construction equipment will operate over the unprotected primed base course. If sanding is required, approximately 10 pounds of sand per square yard of surface (i.e., about 1/4 inch of sand) should be spread over the primed base course. The sand surface coating should contain less than 10 percent fines (i.e., material passing the No. 200 sieve) and be composed of non-elastic, inorganic, granular soil. If krushcrete is substituted for the limerock base, then priming and sanding will not be required.

6.3.3 Asphalt Preparation - The placement and compaction of an asphaltic concrete wearing surface should be performed in general accordance with specifications outlined in the Florida DOT Road and Bridge Construction manual. Prior to asphalt placement, the base course should be broomed to remove any excess sand and then tacked with a bituminous binder.

6.4 Permanent Groundwater Control Measures

Groundwater control is of utmost importance in maintaining the integrity of flexible pavement structures. In areas where groundwater is anticipated to exist within 24 inches of the bottom of the pavement base course, a properly designed and constructed under drain system will be necessary to maintain this 24-inch separation between the pavement base course and the groundwater level. After finalizing the civil grading plan, we would be pleased to review this plan and evaluate the need for an under drain system. If required, we can design an under drain system for this site.

7.0 QUALITY CONTROL TESTING GUIDELINES

Prior to initiating compaction operations, we recommend that representative samples of the structural fill material and exposed in-place fine sandy soils be collected and tested to determine their compaction and classification characteristics. The maximum dry density, optimum moisture content gradation and plasticity characteristics should be determined. These tests are needed for compaction quality control of the structural fill and existing soils and to determine if the fill material is acceptable.

A representative number of field in-place density tests should be performed in the compacted existing soils and in each one foot lift of structural fill/backfill to confirm that the required degree of compaction has been obtained. At each test level, we recommend one density test be performed for every 5,000 square feet of building area (minimum of three locations). In-place density tests should also be performed at representative locations in the bearing level soils of the footings. We recommend that at least one density test be performed at a minimum of 25 percent of the isolated column footing bearing areas, and for every 100 linear feet of continuous footing bearing surface. In addition, in-place density tests should be performed at one location for every 10,000 square feet of pavement area (minimum of three locations).

8.0 CONSTRUCTION PLANS & SPECIFICATIONS REVIEW

We recommend that **AGES** be provided the opportunity to review the plans and the specifications prepared from the recommendations presented in this report. If necessary, we will suggest any modifications that may be required to verify that our recommendations have been properly interpreted and implemented. Our report has been written in a guideline recommendation format and is not appropriate for use as (or inclusion into) the specifications without being reworded in a specification type format. It is recommended that this report not be made part of the contract documents. However, it should be made available to prospective contractors for information purposes only.

DATA ATTACHMENTS

Site Location Map

Field Exploration Plan

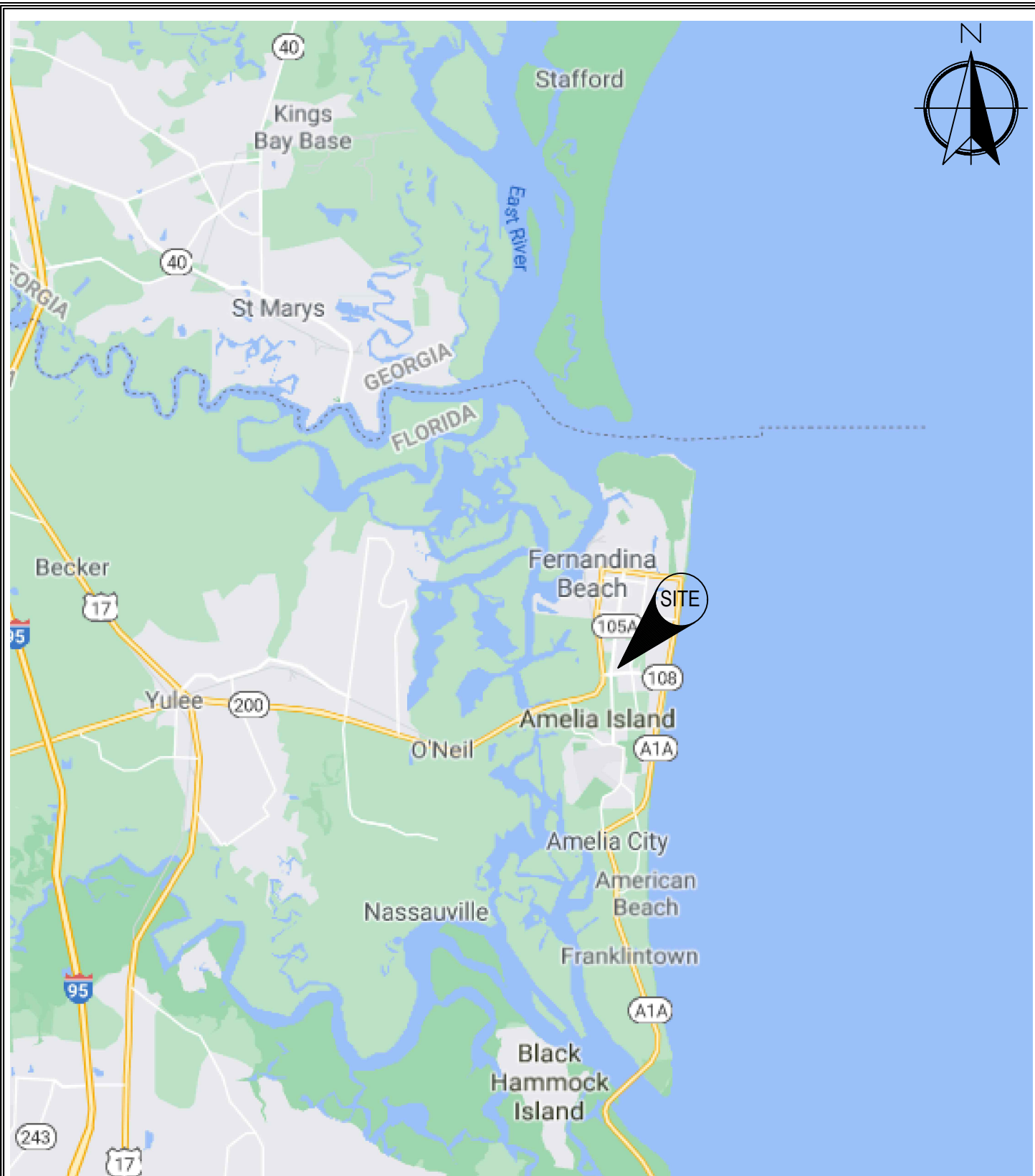
Generalized Subsurface Profile

Key to Soil Classification

Test Boring Records

Auger Boring Records

Field Exploration Procedures



REFERENCE:

Google.com



AGES of JAX Inc.
9556 Historic Kings Rd.
Jacksonville, Florida 32257

SITE LOCATION MAP

Artisan Bailey Subdivision
Fernandina Beach, Florida

DRAWN: DEP

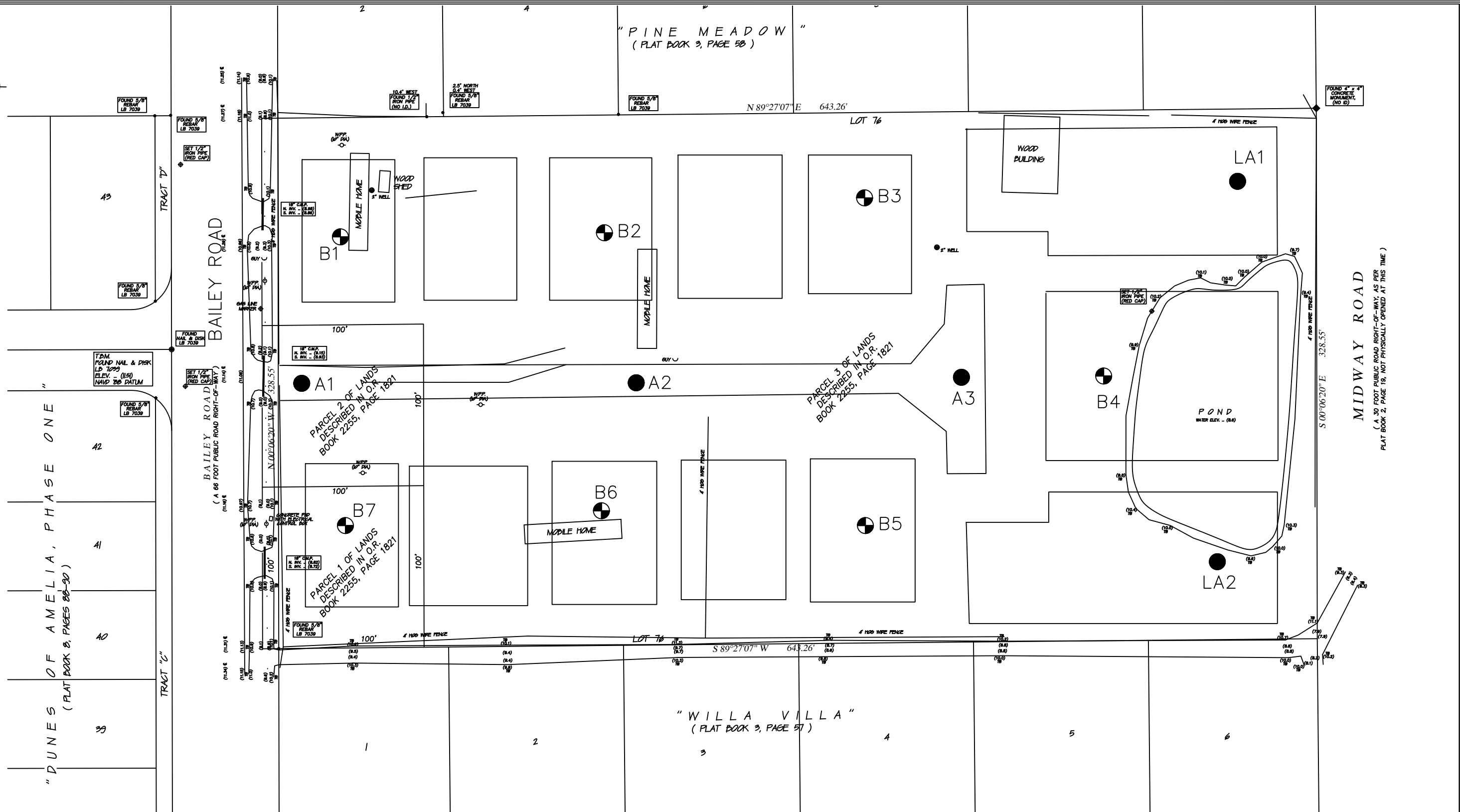
DATE: 09/01/21

SCALE:

CHECKED: BCM

JOB NO: J19950

NTS

**LEGEND:**

- ⊕ Penetration Test Boring Location (approximate)
- Auger Boring Location (approximate)

REFERENCE:

Site Plan provided by Gillette & Associates, undated.

NOTES:

The boring locations were established by AGES personnel using handheld GPS Locator Units. Boring locations as shown on this plan are approximate.



AGES of JAX Inc.
9556 Historic Kings Rd.
Jacksonville, Florida 32257

FIELD EXPLORATION PLAN

Artisan Bailey Subdivision
Fernandina Beach, Florida

DRAWN: DEP

DATE: 09/01/21

SCALE:

CHECKED: BCM

JOB NO: J19950

1"=120'

KEY TO SOIL CLASSIFICATION

CORRELATION OF N-VALUE WITH RELATIVE DENSITY & CONSISTENCY

SANDS AND GRAVEL	
NO. OF BLOWS, N'	RELATIVE DENSITY
0 - 4	VERY LOOSE
5 - 10	LOOSE
11 - 20	FIRM
21 - 30	VERY FIRM
31 - 50	DENSE
OVER 50	VERY DENSE

SILTS AND CLAYS	
NO. OF BLOWS, N*	CONSISTENCY
0 - 2	VERY SOFT
3 - 4	SOFT
5 - 8	FIRM
9 - 15	STIFF
16 - 30	VERY STIFF
31 - 50	HARD
OVER 50	VERY HARD

PARTICLE SIZE IDENTIFICATION (UNIFIED SOIL CLASSIFICATION SYSTEM)

CATEGORY	DIMENSIONS
Boulders	Diameter exceeds 12 inches
Cobbles	3 to 12 inches
Gravel	Coarse - 0.75 to 3 inches in diameter
Sand	Coarse - 2.0 mm to 4.76 mm diameter Medium - 0.42 mm to 2.0 mm diameter
Silt and Clay	Less than 0.074 mm (Invisible to the naked eye)

MODIFIERS

These modifiers provide our estimate of the amount of minor constituents (sand silt or clay size particles) in the soil sample.

PERCENTAGE OF MINOR CONSTITUENT	MODIFIERS
5% to 12%	Slightly Silty, Slightly Clayey, Slightly Sandy Silty, Clayey, Sandy Very Silty, Very Clayey, Very Sandy
12% to 30%	
30% to 50%	

These modifiers provide our estimate of the amount of other components in the soil sample.

APPROXIMATE CONTENT OF OTHER COMPONENTS (SHELL, GRAVEL, ETC.)	MODIFIERS	APPROXIMATE CONTENT OF ORGANIC COMPONENTS
0% to 5%	TRACE FEW SOME MANY	1% to 2%
5% to 12%		2% to 4%
12% to 30%		4% to 8%
30% to 50%		>8%



TEST BORING RECORD

Project Artisan Bailey Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 1.5' Time: Drilling Date: 08/17/21
 Lat/Long N 30.67906° / W 81.46594°

JOB NO J19950
 BORING NO B1
 Sheet 1 of 1
 Boring Begun 08/17/21
 Boring Completed 08/17/21
 Driller AW & CB
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST					
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT	
	0								
		VERY LOOSE Dark Grey Brow Slightly Silty Fine SAND (SP-SM)	1		1	2	1	3	3
		VERY LOOSE Grey Brown Slightly Silty Fine SAND (SP-SM)							
		LOOSE Brown Slightly Silty Fine SAND (SP-SM)	2		3	4	5	5	9
	5		3		6	8	24	26	32
		DENSE Brown Slightly Silty Fine SAND (SP-SM) (HARDPAN)							
			4		12	30	16	30	46
			5		7	10	16		26
	10	VERY FIRM Brown Slightly Silty Fine SAND (SP-SM)							
		FIRM Brown Slightly Silty Fine SAND (SP-SM)							
	15		6		4	4	7		11
		BORING TERMINATED							
	20								
25									
30									

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

J19950 B1



TEST BORING RECORD

Project Artisan Bailey Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 1.0' Time: Drilling Date: 08/17/21
 Lat/Long N 30.62909° / W 81.46533°

JOB NO J19950
 BORING NO B2
 Sheet 1 of 1
 Boring Begun 08/17/21
 Boring Completed 08/17/21
 Driller AW & CB
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST					
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT	
	0								
		VERY LOOSE Dark Brown Slightly Silty Fine SAND (SP-SM)	1		1	1	2	2	3
		VERY LOOSE Grey Brown Slightly Silty Fine SAND (SP-SM)							
		FIRM Brown Slightly Silty Fine SAND (SP-SM)	2		9	5	6	6	11
	5	DENSE Dark Brown Slightly Silty Fine SAND (SP-SM) (HARDPAN)	3		7	19	12	16	31
		VERY FIRM Dark Brown Slightly Silty Fine SAND (SP-SM)	4		13	13	13	13	26
			5		8	8	10	12	18
	10								
		FIRM Brown Slightly Silty Fine SAND (SP-SM)							
	15		6		3	5	9		14
		BORING TERMINATED							
	20								
25									
30									

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

J19950 B2



TEST BORING RECORD

Project Artisan Bailey Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 1.0' Time: Drilling Date: 08/16/21
 Lat/Long N 30.62902° / W 81.46495°

JOB NO J19950
 BORING NO B3
 Sheet 1 of 1
 Boring Begun 08/16/21
 Boring Completed 08/16/21
 Driller AW & CB
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST				
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT
	0							
		VERY LOOSE Dark Brown Slightly Silty Fine SAND (SP-SM)	1	1	1	1	1	2
		VERY LOOSE Dark Brown Slightly Silty Fine SAND (SP-SM)						
		VERY LOOSE Brown Slightly Silty Fine SAND (SP-SM)	2	1	1	1	4	2
	5		3	2	8	8	11	16
		FIRM to VERY FIRM Light Brown Slightly Silty Fine SAND (SP-SM)	4	5	6	8	8	14
			5	7	10	11		21
	10							
		FIRM Grey Brown Slightly Silty Fine SAND (SP-SM)						
	15		6	4	7	5		12
		BORING TERMINATED						
	20							
	25							
	30							

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

J19950 B3



TEST BORING RECORD

Project Artisan Bailey Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 2.0' Time: Drilling Date: 08/16/21
 Lat/Long N 30.62887° / W 81.46439°

JOB NO J19950
 BORING NO B4
 Sheet 1 of 1
 Boring Begun 08/16/21
 Boring Completed 08/16/21
 Driller AW & CB
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST				
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT
	0							
		VERY LOOSE Brown Slightly Silty Fine SAND (SP-SM)	1	1	1	2	2	3
		VERY LOOSE Dark Grey Slightly Silty Fine SAND (SP-SM)						
			2	2	3	3	2	6
		LOOSE Dark Brown Slightly Silty Fine SAND (SP-SM)						
	5		3	2	4	4	10	8
			4	6	8	10	10	18
		FIRM Brown Slightly Silty Fine SAND (SP-SM)	5	5	8	8		16
	10							
		LOOSE Grey Brown Slightly Silty Fine SAND (SP-SM)						
	15		6	4	4	4		8
		BORING TERMINATED						
	20							
	25							
	30							

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

J19950 B4



TEST BORING RECORD

Project Artisan Bailey Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 1.0' Time: Drilling Date: 08/16/21
 Lat/Long N 30.62852° / W 81.46460°

JOB NO J19950
 BORING NO B5
 Sheet 1 of 1
 Boring Begun 08/16/21
 Boring Completed 08/16/21
 Driller AW & CB
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST					
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT	
	0								
		LOOSE Dark Grey Brown Slightly Silty Fine SAND (SP-SM)	1	1	2	3	1	5	
		LOOSE Dark Brown Slightly Silty Fine SAND (SP-SM)	2	2	2	4	6	6	
	5		3	5	7	11	15	18	
		FIRM to VERY FIRM Brown Slightly Silty Fine SAND (SP-SM)	4	8	12	12	12	24	
			5	9	7	11		18	
	10	FIRM Brown Slightly Silty Fine SAND (SP-SM)							
		FIRM Grey Brown Slightly Silty Fine SAND (SP-SM)							
	15		6	5	7	8		15	
		BORING TERMINATED							
	20								
	25								
	30								

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

J19950 B5



TEST BORING RECORD

Project Artisan Bailey Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 1.0' Time: Drilling Date: 08/16/21
 Lat/Long N 30.62861° / W 81.46526°

JOB NO J19950
 BORING NO B6
 Sheet 1 of 1
 Boring Begun 08/16/21
 Boring Completed 08/16/21
 Driller AW & CB
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST					
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT	
	0								
		VERY LOOSE Dark Brown Slightly Silty Fine SAND (SP-SM)	1		1	1	1	4	2
		LOOSE Brown Slightly Silty Fine SAND (SP-SM)	2		4	5	4	5	9
	5	FIRM Dark Brown Slightly Silty Fine SAND (SP-SM)	3		4	5	9	13	14
			4		8	9	12	12	21
		VERY FIRM Brown Slightly Silty Fine SAND (SP-SM)	5		15	11	10	10	21
	10								
		LOOSE Grey Slightly Silty Fine SAND (SP-SM)							
	15		6		3	3	6		9
		BORING TERMINATED							
	20								
	25								
	30								

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

J19950 B5



TEST BORING RECORD

Project Artisan Bailey Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 1.0' Time: Drilling Date: 08/17/21
 Lat/Long N 30.62864° / W 81.46571°

JOB NO J19950
 BORING NO B7
 Sheet 1 of 1
 Boring Begun 08/17/21
 Boring Completed 08/17/21
 Driller AW & CB
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST					
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT	
	0								
		LOOSE Dark Grey Brown Slightly Silty Fine SAND w/ Brick Debris (SP-SM)	1	1	1	4	4	5	
		VERY LOOSE Brown Slightly Silty Fine SAND (SP-SM)	2	4	2	2	2	4	
	5	LOOSE Dark Brown Slightly Silty Fine SAND w/ Tr Small Rts (SP-SM)	3	2	3	5	10	8	
		FIRM Brown Slightly Silty Fine SAND (SP-SM)	4	5	10	10	10	20	
		BORING TERMINATED							
	10								
	15								
	20								
25									
30									

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

J19950 B7



AUGER BORING RECORDS
Artisan Bailey Subdivision
Fernandina Beach, Florida
AGES Job No. J19950; Report No. 001

Date Performed: 08/17/21

Performed By: J. Mardini

Auger ID Lat/Long	Depth (Feet) ^a	SOIL DESCRIPTION (USCS/ AASHTO CLASSIFICATION)
----------------------	---------------------------	--

Roadway

A1 N 30.62884° W 81.46592°	0.0 - 0.5	Dark Brown Silty Fine SAND w/ Many Roots (PT/ A-8)
	0.5 - 1.5	Dark Brown Slightly Silty Fine SAND w/ Some Rocks (SP-SM/ A-3)
	1.5 - 2.5	Grey Slightly Silty Fine SAND (SP-SM/ A-3)
	2.5 - 6.0	Dark Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	<u>A.B.T.^b</u>	GWL^c= 1.5'

A2 N 30.62882° W 81.46495°	0.0 - 0.5	Dark Brown Silty Fine SAND w/ Many Roots (PT/ A-8)
	0.5 - 1.0	Dark Grey Slightly Silty Fine SAND w/ Trace Small Roots (SP-SM/ A-3)
	1.0 - 1.5	Grey Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	1.5 - 2.0	Dark Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	2.0 - 6.0	Brown Slightly Silty Fine SAND (SP-SM/ A-3)
<u>A.B.T.^b</u>	GWL^c= 1.5'	

A3 N 30.62909° W 81.46439°	0.0 - 1.0	Dark Grey Silty Fine SAND w/ Some Roots (SM/ A-2-4)
	1.0 - 1.5	Grey Slightly Silty Fine SAND w/ Trace Roots (SP-SM/ A-2-4)
	1.5 - 6.0	Dark Brown Slightly Silty Fine SAND (SP-SM/ A-3)
<u>A.B.T.^b</u>	GWL^c= 1.5'	

Stormwater Management Pond

LA1 N 30.62918° W 81.46408°	0.0 - 1.0	Dark Grey Brown Silty Fine SAND w/ Some Roots (SM/ A-2-4)
	1.0 - 3.5	Dark Grey Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	3.5 - 7.0	Dark Brown Slightly Silty Fine SAND w/ Trace Organics (SP-SM/ A-3)
	7.0 - 13.0	Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	13.0 - 15.0	Grey Brown Slightly Silty Fine SAND (SP-SM/ A-3)
<u>A.B.T.^b</u>	GWL^c= 1.0'	Estimated Seasonal High GWL^c= 1.0'

LA2 N 30.62856° W 81.46420°	0.0 - 0.5	Brown Slightly Silty Fine SAND (SP-SM/ A-3/ A-3)
	0.5 - 1.0	Dark Grey Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	1.0 - 3.0	Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	3.0 - 5.0	Dark Brown Slightly Silty Fine SAND w/ Trace Small Roots (SP-SM/ A-3)
	5.0 - 14.0	Brown Slightly Silty Fine SAND w/ Trace Wood (SP-SM/ A-3)
	14.0 - 15.0	Grey Brown Slightly Silty Fine SAND (SP-SM/ A-3)
<u>A.B.T.^b</u>	GWL^c= 1.0'	Estimated Seasonal High GWL^c= 1.0'

a - Depth measured below ground surface existing at boring location at time of drilling

b - Auger Boring Terminated (A.B.T.)

c - Groundwater Level (GWL) depth below existing ground surface, recorded at time of drilling, unless otherwise noted
J19950 aug 1.wpd

FIELD EXPLORATION PROCEDURES

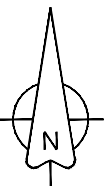
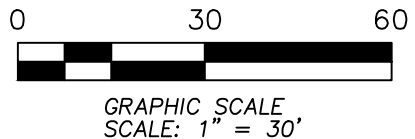
Penetration Borings

The penetration borings were made in general accordance with ASTM D 1586-67, "Penetration Test and Split-Barrel Sampling of Soils". The borings were advanced to the water table by augering and, after encountering the groundwater table, further advanced by rotary drilling techniques using a circulating bentonite fluid for borehole flushing and stability. At two-foot intervals within the upper 10 feet and at five-foot intervals thereafter, the drilling tools were removed from the borehole and a split-barrel sampler inserted to the borehole bottom and driven 18 inches into the material using a 140-pound SPT hammer falling, on the average, 30 inches per hammer blow. The number of hammer blows for the final 12 inches of penetration is termed the "penetration resistance, blow count, or N-value". This value is an index to several in-place geotechnical properties of the material tested, such as relative density and Young's Modulus.

After driving the sampler 18 inches (or less, if in hard rock or rock-like material) at each test interval, the sampler was retrieved from the borehole and a representative sample of the material within the split-barrel was placed in a glass jar and sealed. After completing the drilling operations, the samples for the borings were transported to our laboratory where they were examined by our engineer in order to verify the driller's field classifications. The samples will be kept in our laboratory for a period of two months after submittal of formal written report, unless otherwise directed by the client.

Auger Borings

The auger borings were performed manually using a post-hole auger. The auger borings were drilled in general accordance with ASTM D 1452-80 ("Soil Investigation and Sampling by Auger Borings"). Representative samples of the soils brought to the ground surface by the augering process were placed in glass jars, sealed, and transported to our laboratory where they were examined by a geotechnical engineer to verify the driller's field classification.



SURVEYOR'S NOTE:
THE "LESS AND EXCEPT" PARCELS DEED TO
NASSAU COUNTY IN OFFICIAL RECORDS BOOK 77,
PAGE 520, (AS TO PARCEL 2); OFFICIAL RECORDS
BOOK 78, PAGE 525, (AS TO PARCEL 3); AND
OFFICIAL RECORDS BOOK 79, PAGE 307, (AS TO
PARCEL 1), ARE NOT AVAILABLE ONLINE AT THE
NASSAU COUNTY CLERK OF THE CIRCUIT COURTS
OFFICE. THEREFORE WITHOUT A TITLE COMMITMENT,
AND A COPY OF THESE INSTRUMENTS, THIS FIRM CAN
NOT PLOT THESE "LESS AND EXCEPTS".

MAP SHOWING SURVEY OF BOUNDARY, TOPOGRAPHIC AND TREE SURVEY OF

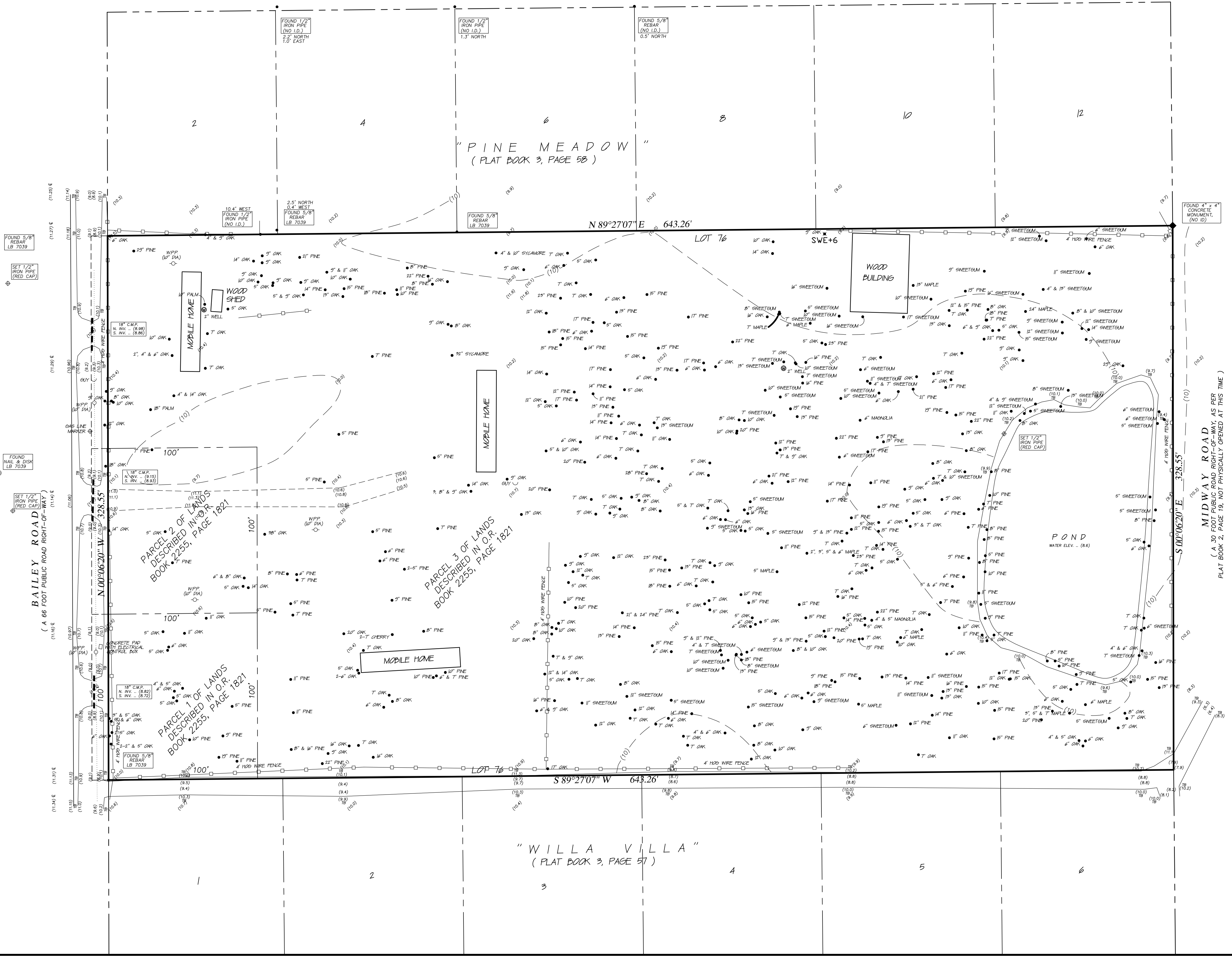
Legal description obtained from Quit-Claim Deed recorded in Official Records Book 2255, page 1821

All of Lot 76 of OCEAN BREEZE FARMS, a subdivision of a portion of Sections 3 and 5, Township 2 North, Range 28 East, Nassau County, Florida, according to plat of said Subdivision recorded in Plat Book 2, page 19, public records of said Nassau County, Florida, less the Westerly 100 feet of said Lot 76 which was taken to widen Bailey Road, and also except that portion thereof conveyed to Nassau County under O.R. Book 78, page 525, public records of Nassau County, Florida.

Surveyor's Note regarding the Legal Description contained in Official Records Book 2255, page 1821

The Legal Descriptions contained within this deed as Parcel 1 ad Parcel 2 are the same lands as described as a LESS AND EXCEPT in Parcel 3, ("and also less the Easterly 100 feet of the Westerly 110 feet of the Southerly 200 of said Lot 76).

- GENERAL NOTES:
- 1) BEARINGS SHOWN HEREON ARE BASED ON THE EASTERLY RIGHT-OF-WAY LINE OF "BAILEY ROAD", AS N 00°06'20" W, AS MONUMENTED AND ARE BASED ON THE U.S. DEPARTMENT OF COMMERCE, NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL GEODETIC SURVEY (NGS) DATUM, NORTH AMERICA DATUM OF 1983 (2011), OR NAD83 (2011), FOR THE STATE OF FLORIDA, STATE PLANE COORDINATE SYSTEM, FOR ZONE 901(FL. EST.).
 - 2) THIS SURVEY IS PROTECTED BY COPYRIGHT AND IS CERTIFIED ONLY TO THE ENTITIES LISTED ON THIS SURVEY AND ONLY FOR THIS PARTICULAR TRANSACTION AND SCOPE OF WORK. ANY USE OF THIS SURVEY WITHOUT THE EXPRESS WRITTEN PERMISSION OF THIS SURVEYOR AND/OR FIRM IS STRICTLY PROHIBITED. USE OF THIS SURVEY IN ANY SUBSEQUENT TRANSACTIONS IS EXPRESSLY PROHIBITED AND IS NOT AUTHORIZED BY THIS SURVEYOR AND/OR FIRM. THIS SURVEYOR AND/OR FIRM EXPRESSLY DISCLAIMS ANY CERTIFICATION TO ANY PARTIES IN FUTURE TRANSACTIONS. NO ENTITY OTHER THAN THOSE LISTED ON THIS SURVEY SHOULD RELY UPON THIS SURVEY FOR ANY PURPOSE.
 - 3) UNLESS A TITLE COMMITMENT IS REFERENCED GRAPHICALLY ON THE FACE OF THIS SURVEY/SKETCH, THERE MAY BE ADDITIONAL COVENANTS AND RESTRICTIONS, EASEMENTS OF RECORD, BUILDING RESTRICTION/SETBACK LINES, RESTRICTIONS, AND OTHER MATTERS, EVIDENCED BY TITLE EXAMINATION BY A TITLE COMPANY, THAT HAVE NOT BEEN SHOWN HEREON. THESE ITEMS ARE NOT REQUIRED OR A PART OF A STATE OF FLORIDA MINIMUM TECHNICAL STANDARDS SURVEY, AS OUTLINED IN THE STATE OF FLORIDA, ADMINISTRATIVE CODE, 55-17.051.
 - 4) NOTE: NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER. ADDITIONS AND/OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OF PARTIES IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
 - 5) NOTICE OF LIABILITY: THIS SURVEY IS CERTIFIED TO THOSE INDIVIDUALS, ENTITIES AND/OR FIRMS AS SHOWN ON THE FACE OF THIS SURVEY. ANY OTHER USE, BENEFIT OR RELIANCE BY ANY OTHER PARTY IS STRICTLY PROHIBITED AND RESTRICTED. THIS SURVEYING FIRM AND THE SIGNING SURVEYOR IS RESPONSIBLE ONLY TO THOSE THAT APPEAR IN THE CERTIFICATION AND HEREBY DISCLAIMS ANY OTHER LIABILITY AND HEREBY RESTRICTS THE RIGHTS OF OTHERS, (INDIVIDUAL OR ENTITIES) TO USE THIS SURVEY WITHOUT THE EXPRESS WRITTEN CONSENT OF THIS FIRM AND/OR SURVEYOR.
 - 6) ELEVATIONS SHOWN HEREON ARE BASED ON THE U.S. DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL GEODETIC SURVEY (NGS) DATUM, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88). THE NORTH AMERICAN VERTICAL DATUM OF 1988 IS THE CURRENT VERTICAL CONTROL DATUM OF ORTHOMETRIC HEIGHT ESTABLISHED FOR VERTICAL CONTROL SURVEYING IN THE UNITED STATES BASED UPON THE GENERAL ADJUSTMENT OF THE NORTH AMERICAN DATUM OF 1988, AND USES THE HELMERT ORTHOMETRIC HEIGHT, WHICH CALCULATES THE LOCATION OF THE GEOD (WHICH APPROXIMATES SEA LEVEL) FROM MODELED LOCAL GRAVITY.
 - 7) THIS DRAWING MAY HAVE BEEN ENLARGED OR REDUCED FROM THE ORIGINAL DRAWING. THEREFORE THE GRAPHIC SCALE SHOULD BE UTILIZED TO DETERMINE IF THIS MAP IS TO THE ORIGINAL SIZE AND SCALE.
 - 8) UNLESS OTHERWISE NOTED, ANY PORTION OF THE SUBJECT PROPERTY GRAPHICALLY SHOWN HEREON, MAY BE DEEMED WETLANDS, BY LOCAL, STATE OR FEDERAL GOVERNMENTAL AGENCIES. UNLESS AND ENVIRONMENTAL WETLAND JURISDICTIONAL DETERMINATION SURVEY WAS PERFORMED BY THIS FIRM, AT THIS TIME, THE DETERMINATION OF THE ENVIRONMENTAL WETLAND JURISDICTIONAL WETLAND LINE(S) AND APPROVAL BY THE APPOINTED GOVERNMENTAL AGENCIES, IS THE RESPONSIBILITY OF THE OWNER(S), HIS OR HER AGENTS, AND ANY PARTY/PARTIES THAT UTILIZE THIS SURVEY WITHOUT OBTAINING AN ENVIRONMENTAL WETLAND JURISDICTIONAL LINE DETERMINATION AND APPROVAL BY THE APPROPRIATE GOVERNMENTAL AGENCIES DO SO AT THEIR OWN RISK.
 - 9) EVERY ATTEMPT WAS MADE BY THIS FIRM TO CORRECTLY IDENTIFY THE TREES SHOWN HEREON BY SIZE AND SPECIES TYPE, (I.E. HICKORY, LIVE OAK, ETC.). HOWEVER, THIS FIRM DOES NOT HAVE ON ITS STAFF A BOTANIST OR DENDROLOGIST, NOR DOES IT PRACTICE IN THE FIELDS OF BOTANY OR DENDROLOGY, OR REPRESENTS ITSELF AS AN EXPERT IN TREE IDENTIFICATION, WHICH IS NOT A SURVEYING FUNCTION. THEREFORE, THERE MAY BE MIS-IDENTIFIED TREES SHOWN ON THIS SURVEY.



JONATHAN B. BOWAN
STATE OF FLORIDA
REGISTERED LAND SURVEYOR
CERTIFICATE No. 4600

JOB No. 51884
FIELD BOOK 588, PAGE 39
CAD FILE NAME: ARTISAN\OCEAN BREEZE FARMS\51884.Dwg

FIELD DATE: MARCH 12, 2021
MAP DATE: APRIL 6, 2021
REVISED JUNE 23, 2021 (MAP), JUNE 21 (FIELD)
ADDED TREES 5" AND LARGER
JOB No. 53838- ADDED PINES

Prepared by
A & J Land Surveyors, Inc.
3847 Luella Street
Jacksonville, Florida 32207
T 904.346.1733
F 904.346.1736



Civil & Environmental Engineering • Mechanical & Structural Engineering • Construction Management

SITE DRAINAGE EVALUATION

**Island Circle Subdivision
Bailey Road
Fernandina Beach, Florida**

BY

**Gillette & Associates, Inc.
20 South 4th Street
Fernandina Beach, FL**

Issue Date: March 1, 2022

EXISTING CONDITIONS

The site consists of 4.85 acres of land with frontage along Bailey Road in Fernandina Beach, Florida. The property currently drains to a wetland area just east of the property. The property is currently partially developed with mobile homes and a pond. A copy of the geotechnical report is included with this submittal. A curve number of 74 was chosen for the pre-development basin based on the soil types. In the pre-developed state, a time of concentration of 20 minutes was calculated based upon a length of overland flow of 550 feet at 1.0 fps.

PROPOSED CONDITIONS

The proposed development for this property includes the construction of 12 3,500 s.f. footprint homes accessed from a new 600-foot long road. The road and homes will be served by a s.f. wet pond that provides stormwater retention for the entire site. Stormwater runoff from the proposed improvements is routed to the pond through a series of storm water pipes and structures.

The pond has been designed with a top of bank elevation of 12.00' and a normal water level elevation of 9.00' based on geotechnical data provided in the geotechnical report (see attached). The western side of the pond is bulkheaded down to the bottom of the pond, and the rest of the pond banks slope at 3:1 from the top of bank to 1' below the normal water level and then at 2:1 from 1' below the normal water level to the bottom of the pond at elevation 4.00'.

Stormwater runoff from the proposed improvements is routed to the pond through a series storm water pipes and structures. The proposed outfall for the pond is a drop structure on the southeast side of the pond. The weir elevation is 10.1' in an effort to minimize the discharge to the boundary and meet the pre-vs-post condition for the project.

A composite curve number of 84.3 was used in the ICPR analysis based on a weighted average of the curve numbers for the impervious area, pervious area, and pond area. This calculation is shown in the pond spreadsheet within this report.

A Time of Concentration of 17 minutes was used in the ICPR analysis. The factors considered for this calculation are a Minimum Time of Concentration of 10 minutes, a maximum of 203 feet of overland flow at 1 foot per second, and 440 feet of pipe flow at 2.5 feet per second. The calculation is shown below. After rounding up to the nearest whole number, 17 minutes was determined as the ToC value for the analysis.

$$\text{ToC} = \text{Min. ToC} + [(\text{Length of Overland Flow}/1 \text{ fps}) + (\text{Length of Pipe flow}/2.5 \text{ fps})]/60 \text{ s} = 17 \text{ Min.}$$

The site was modeled with ICPR and the results are summarized on the following page. The pre-development discharge for the project is represented in the Hydrology Report by the "Flow Max cfs" value for the basin "pre-1", for the respective storm event. The post-development discharge is represented by the "Max Outflow cfs" value of the "pond-1" basin in the Node Report. A node reach diagram has been included in this report to illustrate how ICPR was modeled.

Summary of Design – Mean Annual Storm Event

Predevelopment Discharge (Total):	7.95 cfs
Post Development Discharge (Total):	7.94 cfs
Max Stage Elevation Pond:	10.76 ft
Top of Bank Elevation Pond:	12.00 ft

Summary of Design – 10 year Storm Event

Predevelopment Discharge (Total):	12.59 cfs
Post Development Discharge (Total):	9.99 cfs
Max Stage Elevation Pond:	11.26 ft
Top of Bank Elevation Pond:	12.00 ft

POND CALCULATIONS

Island Circle Post Developed Wet Pond

Basin Calculations

Basin 1

Composite Cn

Total Drainage Area =	4.85	Ac.	
Impervious Area =	1.69	Ac.	38% (not including pond area)
Pond Area =	0.36	Ac.	
Pervious Area =	2.80	Ac.	
Impervious Cn =	98.0		
Pond Cn =	100.0		
Pervious Cn =	74.0		
Composite Cn =	84.3		

Time of Concentration, Tc

Minimum Time of Concentration =	10	min.
Length of Overland Flow @ 1ft/sec. =	230	ft.
Length of Pipe Flow @ 2.5 ft/sec. =	440	ft.
Tc =	17	min.

Equivalent Runoff Coefficient, Ct

Soil Storage, S = 1000/Cn -10 =	1.86	in.
Precipitation Depth, Pt =	7.68	(Zone 5)

$$Ct = 1 - S/Pt * (1.2 - S/(Pt + .8S)) = 0.76$$

Pond Information

El. (ft.)		Area (Ac.)	Volume (Ac.-ft.)
12.00	TOB	0.50	2.67
11.00		0.45	2.19
10.10	Weir	0.41	1.80
10.00		0.41	1.76
9.00	NWL	0.36	1.38
8.00		0.32	1.04
7.00		0.29	0.74
6.00		0.26	0.47
5.00		0.23	0.22
4.00		0.21	0.00

Treatment Volume Required, TVR

TVR = 1" * (1/12")*Total Drainage Area =	0.40	Ac.-ft.
or		
TVR = 2.5" * (1/12")*Total Impervious Drainage Area =	0.35	Ac.-ft.
TVR =	0.40	Ac.-ft.

Treatment Volume Provided, TVP

TVP = Vol @ Weir - Vol @ NWL =	0.42	Ac.-ft.	OK
--------------------------------	------	---------	----

Permanent Pool Volume Required, PPV

Drainage Area, Da =	4.85	Ac.
Ct =	0.76	
Wet Season Rainfall Depth, R =	28	in.
Residence Time, RT =	21	days
Length of Wet Season, WS =	153	days

$$PPV \text{ Required} = Da * Ct * R * RT / (WS * 12) = 1.18 \text{ Ac.-ft.}$$

Permanent Pool Volume Provided, PPV

PPV Provided = Vol @ NWL =	1.38	Ac.-ft.	OK
----------------------------	------	---------	----

Pond Geometry Checks

Depth =	5.00 ft.	OK	
Mean Depth =	3.84 ft.	OK	OK
Average length =	300 ft.		
Average width =	80 ft.		
Ave Length to Width Ratio	3.8 :1	OK	

Sizing Bleed-Down Orifice for Residency Time

Formulas:

$$Q = .6 \cdot A (2 \cdot 32.2 \cdot h)^{1/2}$$

$$A = D^2 \cdot \pi / 4$$

$$t = TV / (2 \cdot Q \cdot 3600)$$

$$h = (h_1 + h_2) / 2$$

Where

Q = Rate of Discharge (cfs)

A = Orifice Area (ft²)

D = Orifice Diameter (ft)

π = 3.14159

h = Depth of Water Above the Flowline of the Orifice (ft)

t = Recovery Time (hrs)

TV = Treatment Volume Required (ft³)

h₁ = elevation @ TV - NWL Elevation

h₂ = elevation when 1/2 TV has been released - NWL Elevation

Treatment Volume (Ac.-ft.)	0.42	
Weir Elevation (ft.)	10.00	(minimum diameter for 6 in ² area is 2.8 inches)
NWL Elevation (ft.)	9.00	is value < 2.8 " in diameter? YES
Orifice Diameter (in.)	2	Orifice Diameter 2.8

Calculated Values:

h (ft)	0.79
A (ft ²)	0.02
Q (cfs)	0.09

t	27.46
---	-------

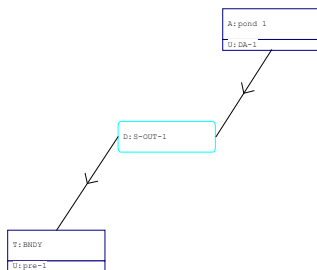
t Should be between 24 and 30 hrs.	TRUE	(minimum diameter for 6 in ² area is 2.8 inches)
------------------------------------	------	---

NODE DIAGRAM

Nodes
 A Stage/Area
 V Stage/Volume
 T Time/Stage
 M Manhole

 Basins
 O Overland Flow
 U SCS Unit CN
 S SBUH CN
 Y SCS Unit GA
 Z SBUH GA

 Links
 P Pipe
 W Weir
 C Channel
 D Drop Structure
 B Bridge
 R Rating Curve
 H Breach
 E Percolation
 F Filter
 X Exfil Trench



ICPR ANALYSIS
(MEAN ANNUAL AND 10-YEAR STORM EVENTS)

```
=====
==== Basins =====
=====
```

```

Name: DA-1                      Node: pond 1                      Status: Onsite
Group: BASE                     Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh484          Peaking Factor: 484.0
Rainfall File: Flmod           Storm Duration(hrs): 24.00
Rainfall Amount(in): 9.000     Time of Conc(min): 17.00
Area(ac): 4.850               Time Shift(hrs): 0.00
Curve Number: 84.30          Max Allowable Q(cfs): 999999.000
DCIA(%): 38.00

```

```
-----
Name: pre-1                      Node: BNDY                      Status: Onsite
Group: BASE                     Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323          Peaking Factor: 323.0
Rainfall File: Flmod           Storm Duration(hrs): 24.00
Rainfall Amount(in): 9.000     Time of Conc(min): 20.00
Area(ac): 4.850               Time Shift(hrs): 0.00
Curve Number: 74.40          Max Allowable Q(cfs): 999999.000
DCIA(%): 1.90

```

```
=====
==== Nodes =====
=====
```

```

Name: BNDY                      Base Flow(cfs): 0.000          Init Stage(ft): 9.000
Group: BASE                     Warn Stage(ft): 10.000
Type: Time/Stage

```

Time(hrs)	Stage(ft)
0.00	9.000
12.00	9.500
24.00	10.000

```
-----
Name: pond 1                    Base Flow(cfs): 0.000          Init Stage(ft): 9.000
Group: BASE                     Warn Stage(ft): 12.000
Type: Stage/Area

```

Stage(ft)	Area(ac)
2.000	0.1100
3.000	0.1400
4.000	0.1700
5.000	0.2000
6.000	0.2400
7.000	0.2800
8.000	0.3200
9.000	0.3600
10.000	0.4100
11.000	0.4500
12.000	0.5000

```
=====
==== Drop Structures =====
=====
```

```

      Name: S-OUT-1          From Node: pond 1          Length(ft): 20.00
      Group: BASE           To Node: BNDY              Count: 1

      UPSTREAM      DOWNSTREAM      Friction Equation: Automatic
      Geometry: Circular      Circular      Solution Algorithm: Most Restrictive
      Span(in): 18.00      18.00      Flow: Both
      Rise(in): 18.00      18.00      Entrance Loss Coef: 0.000
      Invert(ft): 8.900      8.700      Exit Loss Coef: 1.000
      Manning's N: 0.013000      0.013000      Outlet Ctrl Spec: Use dc or tw
      Top Clip(in): 0.000      0.000      Inlet Ctrl Spec: Use dc
      Bot Clip(in): 0.000      0.000      Solution Incs: 10

```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

*** Weir 1 of 2 for Drop Structure S-OUT-1 ***

```

Count: 1          Bottom Clip(in): 0.000      TABLE
Type: Horizontal      Top Clip(in): 0.000
Flow: Both          Weir Disc Coef: 3.200
Geometry: Rectangular      Orifice Disc Coef: 0.600

Span(in): 120.00      Invert(ft): 10.100
Rise(in): 12.00      Control Elev(ft): 10.100

```

*** Weir 2 of 2 for Drop Structure S-OUT-1 ***

```

Count: 1          Bottom Clip(in): 0.000      TABLE
Type: Vertical: Mavis      Top Clip(in): 0.000
Flow: Both          Weir Disc Coef: 3.200
Geometry: Circular      Orifice Disc Coef: 0.600

Span(in): 2.80      Invert(ft): 9.000
Rise(in): 2.80      Control Elev(ft): 9.000

```

```
=====
==== Hydrology Simulations =====
=====
```

Name: 10-year
Filename: X:\CIVIL\artisan\Bailey Road\Drainage\ICPR\10year.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 7.25

```

Time(hrs)      Print Inc(min)
-----
30.000      5.00

```

Name: mean
Filename: X:\CIVIL\artisan\Bailey Road\Drainage\ICPR\mean.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: FLMOD
Rainfall Amount(in): 5.40

```

Time(hrs)      Print Inc(min)
-----
30.000      5.00

```

```

=====
==== Routing Simulations =====
=====

```

Name: 10-year Hydrology Sim: 10-year
 Filename: X:\CIVIL\artisan\Bailey Road\Drainage\ICPR\10year.I32

Execute: Yes Restart: No Patch: No
 Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
 Time Step Optimizer: 0.000
 Start Time(hrs): 0.000 End Time(hrs): 30.00
 Min Calc Time(sec): 0.2500 Max Calc Time(sec): 300.0000
 Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
11.000	30.000
16.000	5.000
24.000	15.000
30.000	30.000

Group	Run
BASE	Yes

```

-----
Name: mean                      Hydrology Sim: mean
Filename: X:\CIVIL\artisan\Bailey Road\Drainage\ICPR\mean.I32

```

Execute: Yes Restart: No Patch: No
 Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
 Time Step Optimizer: 0.000
 Start Time(hrs): 0.000 End Time(hrs): 30.00
 Min Calc Time(sec): 0.2500 Max Calc Time(sec): 300.0000
 Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
11.000	30.000
16.000	5.000
24.000	15.000
30.000	30.000

Group	Run
BASE	Yes

Simulation	Basin	Group	Time Max hrs	Flow Max cfs	Volume in	Volume ft3
10-year	DR-1	BASE	12.05	21.495	6.064106751	619
10-year	pre-1	BASE	12.13	12.592	4.361	76768.976
mean	DR-1	BASE	12.05	15.288	4.282	75390.213
mean	pre-1	BASE	12.13	7.945	2.773	48825.725

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
BNDY	BASE	10-year	24.06	10.000	10.000	0.0035	0	12.17	21.734	0.00	0.000
pond 1	BASE	10-year	12.39	11.260	12.000	0.0050	20167	12.08	21.348	12.39	9.999
BNDY	BASE	mean	24.01	10.000	10.000	0.0035	0	12.17	15.311	0.00	0.000
pond 1	BASE	mean	12.36	10.762	12.000	0.0050	19187	12.08	15.199	12.36	7.940

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
S-OUT-1	BASE	10-year	12.39	9.999	0.182	12.39	11.260	24.06	10.000
S-OUT-1	BASE	mean	12.36	7.940	0.144	12.36	10.762	24.01	10.000

STORMWATER PIPE CALCULATIONS

Gillette & Associates, Inc.

STORM SEWER TABULATION FORM

PROJ #:

PROJECT: Bailey Road Island Circle

COUNTY: Nassau

DATE: 03/01/22

BY: AG

SHEET 1 OF 1

MINOR LOSSES HAVE BEEN CONSIDERED

STRUCT. NO.	STRUCT. TYPE	LINE TYPE	LINE LENGTH (FT)	DRAINAGE AREA (ACRES)		SUBTOTAL CA	TIME OF CONC. (MIN)	TIME OF FLOW IN SECTION (MIN)	i (IN/HR)	TOTAL CA	TOTAL RUNOFF (CFS)	INLET ELEV. (FT)	H.G. ELEV.			DIA. (IN.)	SLOPE (%)	V (FPS)	CAPACITY (CFS)	NOTES & REMARKS
				CROWN ELEV.																
				INVERT ELEV.																
				UPPER END	LOWER END								FALL (FT.)							
				INCRMNT	SUBTOTAL															
																				n= 0.013
																				ZONE: 4
																				FREQUENCY: 10
S-1	C.B.	HDPE	23	0.18	0.18	0.16	10.00	0.13	7.01	0.16	1.14	11.80	11.79	11.78	0.01	18	0.01	0.6	1.1	
S-2													9.55	9.49	0.06					
													8.05	7.99	0.06		0.25	3.0	5.3	
S-2	C.B.	HDPE	231	0.24	0.42	0.38	10.13	1.28	6.98	0.38	2.64	11.80	11.78	11.59	0.19	18	0.06	1.5	2.6	
S-3													9.49	8.90	0.59					
													7.99	7.40	0.59		0.25	3.0	5.3	
S-3	C.B.	HDPE	262	1.21	1.90	2.13	11.41	1.46	6.69	2.13	14.24	11.70	11.59	11.38	0.21	36	0.05	2.0	14.2	
S-4													8.88	8.62	0.26					
													5.88	5.62	0.26		0.10	3.0	21.2	
S-4	C.B.	HDPE	21	0.74	2.64	2.80	12.87	0.12	6.39	2.80	17.88	11.40	11.38	11.22	0.16	36	0.07	2.5	17.9	
S-5													8.62	8.59	0.02					
													5.62	5.59	0.02		0.10	3.0	21.2	Tailwater 11.22
S-7	C.B.	HDPE	23	0.98	0.98	0.78	10.00	0.13	7.01	0.78	5.50	11.70	11.67	11.59	0.08	24	0.06	1.7	5.5	
S-3													8.92	8.88	0.04					
													6.92	6.88	0.04		0.17	3.0	9.4	



**REPORT OF PRELIMINARY GEOTECHNICAL EXPLORATION
& ENGINEERING EVALUATION
PROPOSED 12-LOT ARTISAN BAILEY RESIDENTIAL SUBDIVISION - LOTS, ROAD AND POND
SE QUADRANT OF BAILEY AND PINE ROADS
FERNANDINA BEACH, FLORIDA
AGES JOB NO. J19950, REPORT NO. 001**

**FOR
GILLETTE & ASSOCIATES
20 SOUTH 4TH STREET
FERNANDINA BEACH, FLORIDA 32034
ATTN: MR. ALEX BOLTON**

SEPTEMBER 3, 2021

**AGES of JAX, Inc.
P O Box 24008, Jacksonville FL 32241-4008
9556 Historic Kings Road South, Suite 201 ● Jacksonville, Florida 32257-2010
(904) 886-0766 ● (904) 880-5190 (FAX)**



OF JAX, INC.

September 3, 2021

GILLETTE & ASSOCIATES

20 South 4th Street
Fernandina Beach, Florida 32034
Attn: Alex Bolton

Re: Report of Preliminary Geotechnical Exploration & Engineering Evaluation
Proposed 12-lot Artisan Bailey Residential Subdivision - Lots, Road and Pond
SE Quadrant of Bailey and Pine Roads
Fernandina Beach, Florida
AGES Job No. J19950, Report 001

Ladies & Gentlemen:

AGES OF JAX (AGES), Inc. has completed a preliminary geotechnical exploration of the subsurface conditions beneath the construction area for the referenced project. Our services were performed in accordance with **AGES'** Service Authorization which was dated July 19, 2021. Formal authorization of our services was provided by Mr. Asa Gillette, P.E. on July 20, 2021. This report includes: (1) a brief description of the planned construction, (2) a summary of the field exploration performed and results that were obtained, (3) our recommendations for foundation design and construction of the proposed residential structures, (4) guideline pavement design and construction recommendations, (5) evaluation of the suitability of barrow soil located at the site, and (6) parameters for use in stormwater pond design and permitting.

The site preparation recommendations and foundation design recommendations presented herein are specific to the tested lots. Soil conditions on untested lots could be markedly different and the recommendation presented herein may or may not be applicable. If a higher confidence level is desired concerning the soil conditions on the untested lots, then we recommend that **AGES** be retained to perform supplemental penetration test borings prior to initiation of building construction.

We appreciate the opportunity to be of service as the geotechnical consultant during this phase of your project. Should you have any questions concerning this report or if we may be of any further service to you, please feel free to contact us.

Very truly yours,

AGES of JAX, INC.

Bill C. McMahan, Jr., P.E.
Principal Engineer/Vice-President
Registered, Florida No. 42677

BCM/bcm/J19950 Artisan Bailey Subdivision.wpd
Attachments
Distribution: Addressee (1) Via Email

AGES of JAX, Inc.

P O Box 24008, Jacksonville FL 32241-4008
9556 Historic Kings Road South, Suite 201 ● Jacksonville, Florida 32257-2010
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Site Location Map	
Field Exploration Plan	
Generalized Subsurface Profile	
Key to Soil Classification	
Test Boring Records	
Auger Boring Records	
Field Exploration Procedures	

REPORT ATTACHMENTS

1.0 PROJECT BACKGROUND INFORMATION

General information has been provided by Gillette & Associate Alex Bolton during recent telephone and email conversations. We have been provided with: (1) a Site Plan which shows the property boundaries, the planned site development and the requested preliminary boring locations (prepared by Gillette & Associates, undated; and (2) a Boundary and Topo Survey (prepared by Bowman Surveyors, undated).

We understand that a new 12-lot single family residential subdivision is being planned on a +/- 5-acre parcel of land located near the southeast corner of the Bailey Road and Pine Road in Fernandina Beach, Florida. The site is occupied by several mobile homes and pond. The western half of the site is grass covered. The eastern half of the site is wooded. The proposed development will include 12 - lots, asphalt paved roadways and the existing pond will be expanded to store/treat stormwater runoff. Detailed structural information has not been provided however we have assumed that the buildings will be wood or block framed and that column and wall loads will be on the order of 75 kips and 2 klf, respectively. Existing and proposed grading information has also not been provided. However we have assumed that 2 feet or less of elevating fill will be added to the site.

2.0 PRELIMINARY GEOTECHNICAL EXPLORATION

2.1 Purpose of Exploration

The objective of this geotechnical exploration was to obtain site and subsurface data for use in: (1) the preliminary evaluation of the site with respect to the proposed development, (2) the development of preliminary site preparation and foundation design recommendations for the planed residential structures, (3) the development of pavement design and construction recommendations, (4) the stormwater pond design and permitting processes, and (5) the evaluation of the pond areas soils for use as barrow fill and backfill. The geotechnical exploration should therefore consist of field exploration borings and a geotechnical engineering analysis of the collected test data.

2.2 Subsurface Testing

The field testing program, which was conducted on August 17 and 18, included: seven(7) 15-feet deep penetration test borings (B1 - B7) in the lot areas (one boring every other lot), three(3) 6-feet deep auger borings in the roadway areas (A1 - A3), and two(2) 15-feet deep auger borings in the planned pond expansion areas

The soil borings were located in the field by our personnel using GPS based locators with a 10 to 15 foot horizontal accuracy. The borings were drilled according to applicable standards. The boring locations are shown on the attached Field Exploration Plan should be considered approximate. The ground surface elevations at the boring locations were not determined.

The attached Test Boring Records and Auger Boring Records present the descriptions of the subsurface soils encountered, the groundwater levels encountered, and the penetration resistance values recorded when drilling and sampling the test borings. The subsurface conditions are graphically illustrated on the attached Generalized Subsurface Profile sheet. The stratification lines and depth designations on the boring records and profile represent the approximate boundary between the various soils encountered, as determined in the field by our drillers, and the transition from one strata to the next should be considered approximate. A brief discussion of the drilling, sampling, and field testing techniques used during the geotechnical exploration is provided in the attached Field Exploration Procedures section.

3.0 GEOTECHNICAL FINDINGS

3.1 Site Conditions

The subject site was visited by **AGES** personnel to identify site conditions which could impact our site preparation and foundation design recommendations. The site which is located in the southeast corner of the Bailey Road and Pine Road in Fernandina Beach, Florida, is occupied by several mobile homes and pond. The western half of the site is grass covered. The eastern half of the site is wooded. No standing water was observed on the site at the time of our visit.

3.2 Subsurface Conditions

The subsurface conditions outlined below highlight the major subsurface stratifications encountered during our geotechnical exploration of the site. When reviewing the boring records, the attached Generalized Subsurface Profile and the subsurface conditions outlined below, it should be understood that the subsurface conditions will vary across the proposed construction area and between the boring locations.

3.2.1 Soil Conditions - The lot penetration test borings (B1 - B7) typically encountered a 2 to 8 feet thick surface stratum of very loose to loose slightly silty fine sand (SP-SM). Penetration resistance values within this stratum ranged from 2 to 9 blows/foot. The surface stratum was underlain by alternating strata firm to very firm to dense slightly silty fine sand (SP-SM) and dense cemented slightly silty fine sand (SP-SM, Hardpan) which extended to the boring termination depth of 15 feet. The penetration resistance values typically ranged from 14 to 46 blows/foot.

Roadway auger borings A1 - A3 encountered slightly silty fine sand (SP-SM, A-3) which extended to the maximum boring termination depth of 6 feet.

Lake auger borings LA1 and LA2 encountered slightly silty fine sand (SP-SM, A-3) which extended to the maximum boring termination depth of 15 feet.

3.2.2 Groundwater Conditions - The groundwater levels encountered at the time of drilling ranged from approximately 1 to 2 feet below the ground surface. These water levels are estimated to be at the Seasonal High Groundwater Levels. The groundwater level should be expected to fluctuate due to seasonal climatic variations, changes in surface water runoff patterns across the site, construction activity and the subsequent development as planned, and other interrelated factors. Since groundwater variations are anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based on the assumption that variations will occur.

4.0 PRELIMINARY GEOTECHNICAL ENGINEERING EVALUATION

4.1 Basis of Evaluation & Recommendations

Our geotechnical engineering evaluation of the site and subsurface conditions with respect to the planned construction, and our recommendations for foundation design and site preparation/earthwork construction, are based upon: (1) our site observations; (2) the field test data obtained during this geotechnical exploration of the site; and (3) our understanding of the project information and structural loading conditions as presented in this report. If the structural information or the Site Plan are altered, please contact us so we may review our recommendations. If any site or subsurface conditions are encountered during construction which appear to deviate from data obtained during this geotechnical exploration (as documented herein), please contact us so that we may visit the site, observe the differing conditions, and evaluate the new information relative to our geotechnical evaluation and recommendations.

4.2 Foundation System Evaluation

Based upon our geotechnical findings and our understanding of the proposed construction, we consider the site and subsurface conditions adaptable for support of the proposed structures upon a properly designed and constructed shallow foundation. The shallow foundation system may be designed using an allowable bearing pressure of 3,000 psf. Provided that the design and construction recommendations outlined subsequently are implemented, we estimate that total structural settlement due to fill and structural loads should be on the order of one inch or less. In addition, post construction differential settlements should be within tolerable magnitudes ($< \frac{1}{2}$ inch). The settlements should occur concurrently with construction due to the generally sandy nature of the soils encountered. Site preparation necessary for proper foundation performance includes:

- * Clearing and grubbing the existing vegetation (and their root systems) and stripping of surficial topsoil from within the construction areas.
- * Compaction of the exposed natural soils using a 10 ton vibratory drum roller to improve the bearing capacity and reduce settlement potential of the upper 2 to 6 feet of very loose to loose fine sand;
- * Placement and compaction of any required elevating fill to densities equivalent to 95 percent of the Modified Proctor maximum dry density (ASTM D 1557) within the building areas.

4.3 Evaluation of Barrow Soil Suitability

The evaluation of barrow soil suitability depends upon: (1) the planned soil usage, (2) proposed construction methods, (3) the time of year during which site work construction will occur, (4) economic considerations, and (5) other factors. From a building pad perspective, we typically recommend that all fill and backfill soils consist of clean sands (fine sand to slightly silty fine sand) containing less than 12% fines (SP and SP-SM). Higher fines content sandy soils including: silty sands and clayey sands (SM and SC) can also be used in building pad development. However, these soils are more moisture sensitive and re-compaction in Florida during the wet summer months and/or use of the fill on wet sites will significantly increase re-compaction effort and could result in construction delays. Very silty sands, very clayey sands, and/or silts/clays (CH and CL), are not considered to be usable for building pad construction in Florida.

Based upon a review of borings LA1 and LA2, it is our opinion that the fine sands and slightly silty fine sands (SP to SP-SM, A-3) which were encountered in the upper 15 feet of profile will be usable as Class I structural fill/backfill.

5.0 PRELIMINARY FOUNDATION DESIGN & SITE PREPARATION RECOMMENDATIONS

5.1 Foundation Design Recommendations

5.1.1 Foundation Type - We consider a conventional shallow foundation system applicable for this project if the site preparation recommendations presented in section 5.2 of this report are performed.

5.1.2 Bearing Pressure & Depth - The maximum allowable soil bearing pressure for use in shallow foundation design should not exceed 3,000 psf. The foundations should be designed based upon the maximum load which could be imposed by all loading conditions. The exterior footings should bear at a depth of at least 12 inches below the exterior final grades and the interior footings should bear at least 12 inches below the interior floor slab. These minimum bearing depths should provide the necessary confinement for the soils at the foundation bearing levels.

5.1.3 Foundation Size - The minimum widths recommended for isolated spread-type footings and continuous wall footings are 24 and 18 inches, respectively. Even though the maximum allowable soil bearing pressure may not be achieved, these minimum width recommendations should still control the size of the foundations.

5.1.4 Bearing Material - The foundations may bear in either the compacted suitable natural granular soils or compacted structural backfill or fill. The bearing level soils, after compaction, should exhibit densities equivalent to 95 percent of the Modified Proctor maximum dry density (ASTM D 1557) to a depth of at least one-foot below the foundation bearing levels.

5.2 Site Preparation Recommendations

5.2.1 Temporary Groundwater Control - During our geotechnical exploration, the groundwater level was encountered at depths of 1 to 2 feet below the existing site grades. Dependent upon the groundwater levels encountered at the time of construction, temporary de-watering may be required in some areas of the site. The groundwater should be controlled at all times at a depth of at least two feet below the construction level. Groundwater drawdowns on the order of one to two feet, if required, can probably be best achieved using temporary perimeter drainage ditches, four to five feet deep, which are graded: (1) to a positive gravity outfall away from the site; or (2) to sumps where the collected groundwater and surface water runoff can be removed by pumping.

5.2.2 Site Clearing & Stripping - Initial site preparation should consist of clearing existing trees, vegetation, root systems and surficial topsoil from within the planned construction area. The clearing/stripping work should be performed within and to a distance of at least five feet beyond the perimeter of the planned building areas and three feet beyond the perimeter of the proposed pavement areas. It should be anticipated that surficial topsoil will be encountered in thicknesses of up to 6 inches. The perimeter areas may then need to be graded to help direct surface water runoff away from the construction areas.

5.2.3 Site & Fill Compaction - After completing the initial site preparation, the exposed sandy soils should be compacted to densities of at least 95 percent of the Modified Proctor maximum dry density to a depth of 24 inches using a vibratory drum roller which has a minimum at-drum weight on the order of 10 tons and a minimum drum diameter on the order of five feet, with the exception that a lightweight vibratory drum or sled compactor having a maximum static weight on the order of 1000 pounds should be used within 50 feet of existing structures. The roller will be required to improve the density of the upper approximate two feet of loose fine sands at this site. The structural fill required to raise the site to the planned finished grades may then be placed in loose lifts not exceeding 12 inches in thickness, and should be compacted to densities as recommended above. Loose lifts should not exceed eight inches in areas of the site in which lightweight vibratory equipment is used. Structural fill is defined as a non-plastic, inorganic, granular soil containing less than 12 percent material passing the No. 200 mesh sieve (i.e. a relatively clean sand).

5.2.4 Disturbed Soil Conditions - Should the near-surface soils and/or structural fill material experience "pumping" and subsequent soil strength loss during site work construction, work upon these areas should be immediately terminated and: (1) the disturbed soils removed and backfilled with "dry" structural fill soils, (i.e. percent water content on the order of five to 10 percent) which are then compacted; or (2) the excess moisture content within the disturbed soils allowed to dissipate before recompacting. Furthermore, the groundwater table should be checked and controlled as necessary to help insure proper draw-down of any high groundwater conditions that may be causing the "pumping" conditions during compaction or construction activity upon these soils.

5.2.5 Foundation Areas - After placement and compaction of all structural fill, the foundations may be excavated to their planned bearing levels using a "smoothed" bucket backhoe. All fine sandy soils present at the bearing level should be compacted to densities equal to 95% of the Modified Proctor maximum dry density. Compaction of the fine sandy bearing level soils in the small footing areas may be

best achieved using lightweight, walk-behind sleds, rollers, or tampers having a minimum total weight of 100 lbs. Loose lifts of backfilled fine sandy soil in the footing excavations, if needed, should be placed in thicknesses of up to 6 inches, prior to densification with the lightweight compaction equipment.

6.0 PRELIMINARY GUIDELINE PAVEMENT DESIGN AND CONSTRUCTION RECOMMENDATIONS

6.1 General

The subsurface conditions at this site appear favorable for use of flexible and/or rigid pavements in the parking lot and drive-through areas. Guideline pavement design and construction recommendations applicable to this project are presented below. The pavement thickness recommendations and construction recommendations presented in this report are based upon our past experience on similar paving projects. Detailed flexible pavement design calculations have not been performed to verify adequacy of the recommended pavement sections since detailed traffic loading information is unavailable at this time. We request that **AGES** be retained to review the final pavement design, paving and drainage plans, and specifications to evaluate whether our guideline recommendations have been properly interpreted and implemented into the project design.

6.2 Guideline Pavement Design Recommendations

The recommended minimum flexible pavement structure thicknesses for the subject project are provided in the following table.

<u>PAVEMENT COURSE</u>	<u>Automobiles & Light Truck Traffic</u>	<u>Moderate to Heavy Traffic</u>
Asphalt Wearing Surface(In.)*	1.5	2.0
Limerock Base Course (In.)**	6.0	8.0
Prepared Subgrade(In.)***	12.0	12.0

* Superpave 9.5 Asphaltic Concrete or Type SIII, as defined by the Florida DOT Standard Specifications for Road and Bridge Construction Manual.

** Florida Limerock, exhibiting an LBR Value of 100, and meeting the specifications outlined in the Florida DOT manual (Section 200).

*** Stabilized and compacted subgrade should exhibit a Maximum LBR value of at least 30. Subgrade stabilization should be performed in accordance with Section 160 of the standard FDOT specifications.

6.3 Guideline Pavement Construction Recommendations

6.3.1 Pavement Subgrade Preparation - Site preparation in the pavement areas should be performed in accordance with the guideline procedures outlined above, and should include: (1) clearing/stripping surface vegetation, (2) compaction of the exposed soils using a 10 ton vibratory drum roller, and (3) placement/compaction of backfill and any required structural fill (if any) to densities equivalent to 95 percent of the Modified Proctor maximum dry density. In addition, the upper one foot of subgrade in the pavement areas should be compacted to 98 percent of the Modified Proctor maximum dry density. Shell and or clay additives may be required to obtain the required design LBRs required. Also, the pavement structure should be designed to provide at least 30-inches of fine sands separating the limerock subgrade and any underlying clayey/silty soils. This will help to prevent "pumping" and reduce the chance of premature pavement failures which are caused by "perched" groundwater levels.

6.3.2 Limerock Base Course Preparation - The limerock base course should be placed and compacted to densities equivalent to 100 percent of the Modified Proctor maximum dry density (ASTM D 1557). The surface of the limerock base course material should be "primed" with any of the following cutback asphalt grades: RC-70, RC-250, MC-70, or MC-250. Approximately 0.15 gallons per square yard should be applied to the base course surface. Care should be exercised to prevent over-priming of the base course surface. Prior to asphalt placement, the prime coat should be fully set and cured. The specifications governing the placement of prime coats on pavement base course surfaces and sanding is outlined in Section 300 of the Florida DOT Standard Specifications for Road and Bridge Construction (1986).

The primed base course should be sanded if: (1) more than one day (24 hours) will elapse prior to laying the asphalt wearing surface and excess prime is not absorbed, or (2) construction equipment will operate over the unprotected primed base course. If sanding is required, approximately 10 pounds of sand per square yard of surface (i.e., about 1/4 inch of sand) should be spread over the primed base course. The sand surface coating should contain less than 10 percent fines (i.e., material passing the No. 200 sieve) and be composed of non-elastic, inorganic, granular soil. If krushcrete is substituted for the limerock base, then priming and sanding will not be required.

6.3.3 Asphalt Preparation - The placement and compaction of an asphaltic concrete wearing surface should be performed in general accordance with specifications outlined in the Florida DOT Road and Bridge Construction manual. Prior to asphalt placement, the base course should be broomed to remove any excess sand and then tacked with a bituminous binder.

6.4 Permanent Groundwater Control Measures

Groundwater control is of utmost importance in maintaining the integrity of flexible pavement structures. In areas where groundwater is anticipated to exist within 24 inches of the bottom of the pavement base course, a properly designed and constructed under drain system will be necessary to maintain this 24-inch separation between the pavement base course and the groundwater level. After finalizing the civil grading plan, we would be pleased to review this plan and evaluate the need for an under drain system. If required, we can design an under drain system for this site.

7.0 QUALITY CONTROL TESTING GUIDELINES

Prior to initiating compaction operations, we recommend that representative samples of the structural fill material and exposed in-place fine sandy soils be collected and tested to determine their compaction and classification characteristics. The maximum dry density, optimum moisture content gradation and plasticity characteristics should be determined. These tests are needed for compaction quality control of the structural fill and existing soils and to determine if the fill material is acceptable.

A representative number of field in-place density tests should be performed in the compacted existing soils and in each one foot lift of structural fill/backfill to confirm that the required degree of compaction has been obtained. At each test level, we recommend one density test be performed for every 5,000 square feet of building area (minimum of three locations). In-place density tests should also be performed at representative locations in the bearing level soils of the footings. We recommend that at least one density test be performed at a minimum of 25 percent of the isolated column footing bearing areas, and for every 100 linear feet of continuous footing bearing surface. In addition, in-place density tests should be performed at one location for every 10,000 square feet of pavement area (minimum of three locations).

8.0 CONSTRUCTION PLANS & SPECIFICATIONS REVIEW

We recommend that **AGES** be provided the opportunity to review the plans and the specifications prepared from the recommendations presented in this report. If necessary, we will suggest any modifications that may be required to verify that our recommendations have been properly interpreted and implemented. Our report has been written in a guideline recommendation format and is not appropriate for use as (or inclusion into) the specifications without being reworded in a specification type format. It is recommended that this report not be made part of the contract documents. However, it should be made available to prospective contractors for information purposes only.

DATA ATTACHMENTS

Site Location Map

Field Exploration Plan

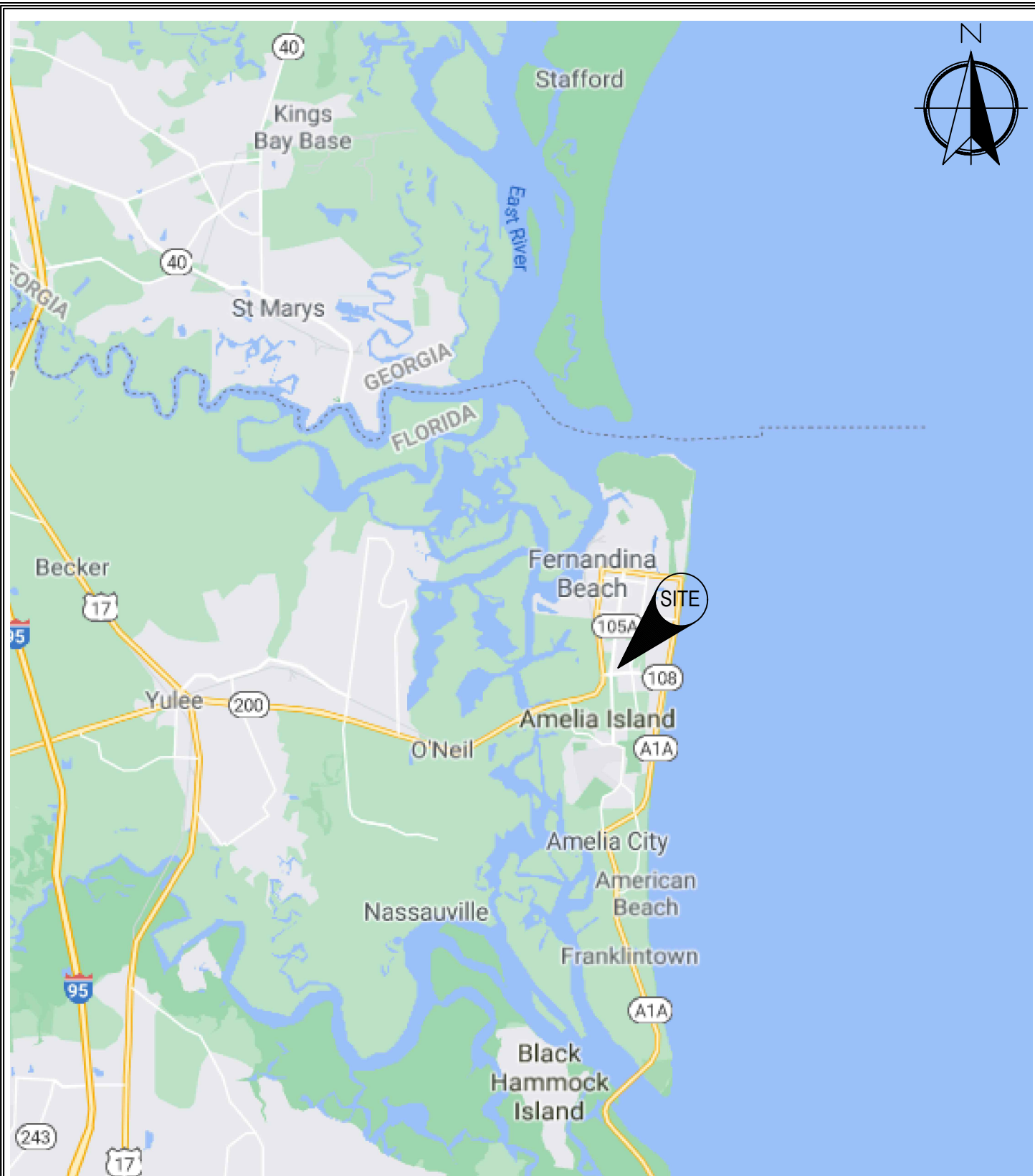
Generalized Subsurface Profile

Key to Soil Classification

Test Boring Records

Auger Boring Records

Field Exploration Procedures



REFERENCE:

Google.com



AGES of JAX Inc.
9556 Historic Kings Rd.
Jacksonville, Florida 32257

SITE LOCATION MAP

Artisan Bailey Subdivision
Fernandina Beach, Florida

DRAWN: DEP

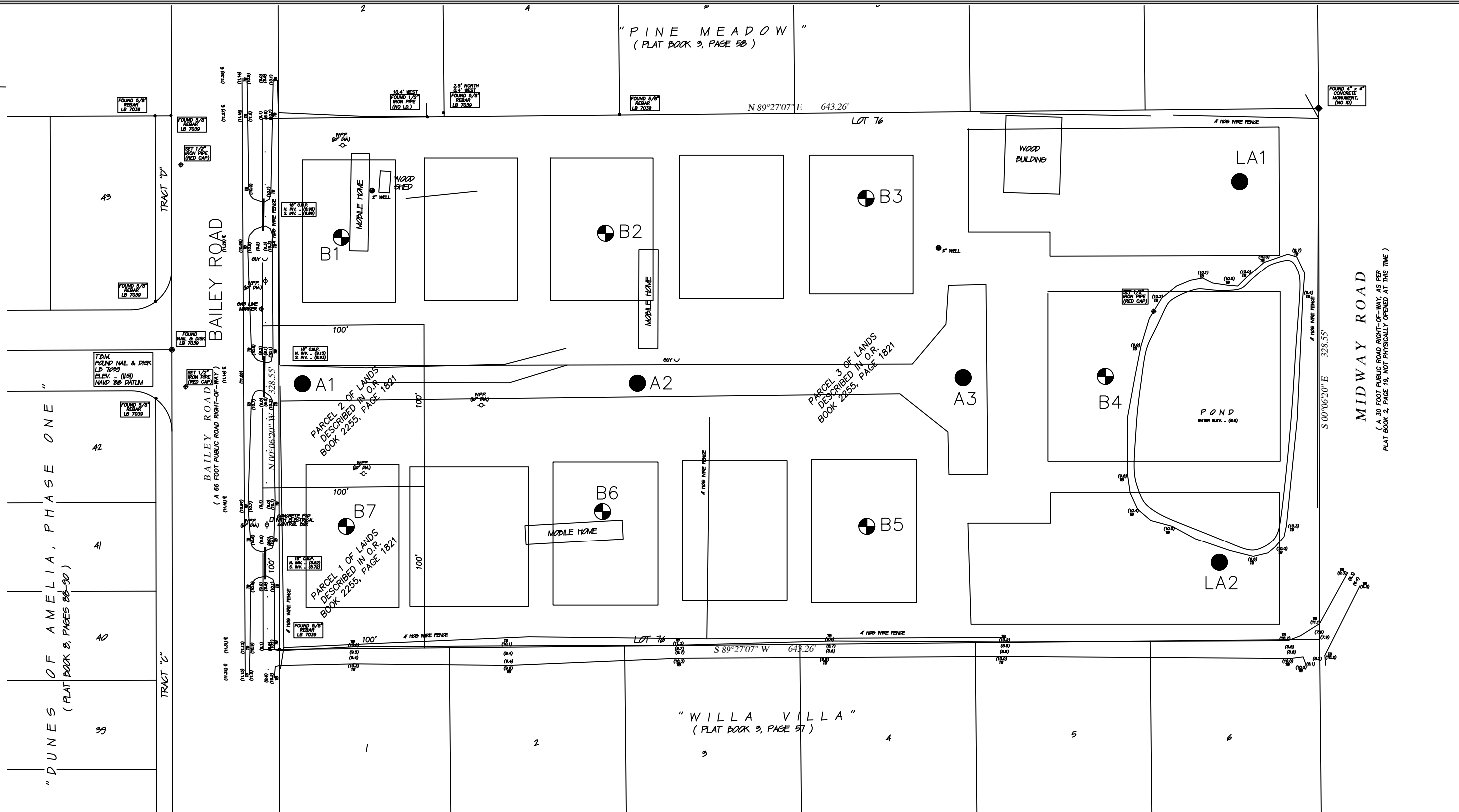
DATE: 09/01/21

SCALE:

CHECKED: BCM

JOB NO: J19950

NTS

**LEGEND:**

- ⊕ Penetration Test Boring Location (approximate)
- Auger Boring Location (approximate)

REFERENCE:

Site Plan provided by Gillette & Associates, undated.

NOTES:

The boring locations were established by AGES personnel using handheld GPS Locator Units. Boring locations as shown on this plan are approximate.



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9556 Historic Kings Rd.
Jacksonville, Florida 32257

FIELD EXPLORATION PLAN

Artisan Bailey Subdivision
Fernandina Beach, Florida

DRAWN: DEP

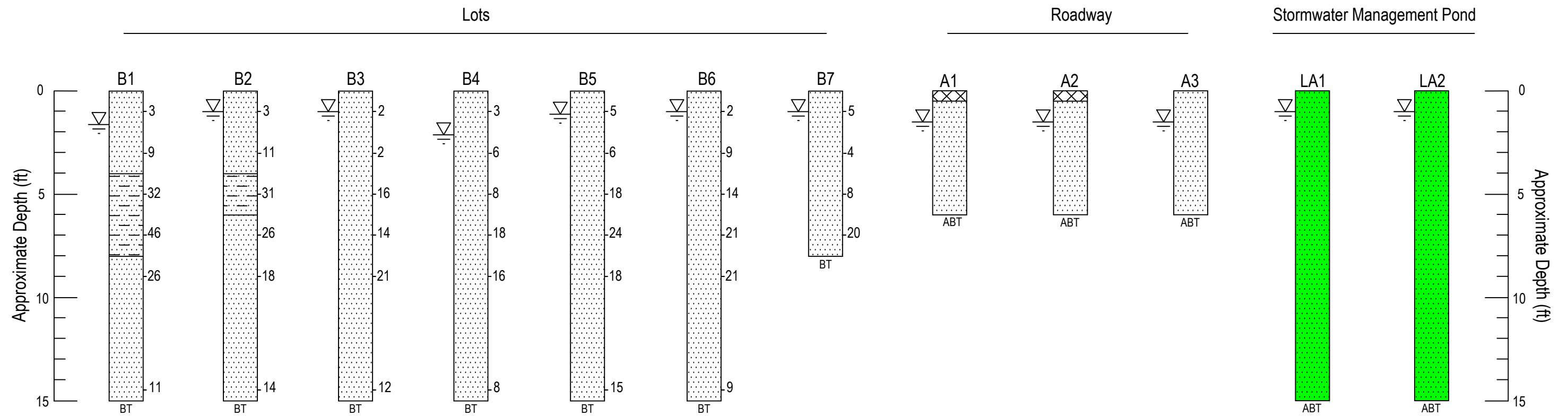
DATE: 09/01/21

SCALE:

CHECKED: BCM

JOB NO: J19950

1"=120'



FILL/BACKFILL CLASSIFICATION

- | | |
|---|---|
|  | CLASS I FILL/BACKFILL - Use as Trench Backfill, Elevating Fill in Roadway & Building Pads Areas |
|  | CLASS II FILL - Use as Elevating Fill in Building Pad Areas & Green Areas |
|  | UNSUITABLE - Not Suitable For Use as fill or backfill |

LEGENDS & SYMBOLS (USCS/AASHTO CLASSIFICATION)

- | | | | | | |
|---|--------------------------------------|---|--|---|--|
|  | Fine SAND (SP/A-3) |  | Silty CLAY (CH/A-7) |  | Standard Penetration Resistance (blows/ft) |
|  | Slightly Silty Fine SAND (SP-SM/A-3) |  | Sandy CLAY (CL/A-7) | | |
|  | Silty Fine SAND (SM/A-2-4) |  | Sandy SILT (MH/ML/A-4) | | |
|  | Very Silty Fine SAND (SM/A-4) |  | Variably Cemented
Fine SAND (HARDPAN) |  | Boring Terminated |
|  | Clayey Fine SAND (SC/A-2-6) |  | Groundwater Level
Not Encountered |  | Topsoil |
|  | Silty Clayey Fine SAND (SM-SC/A-2-5) |  | Fine SAND with Many Organics (A-8) |  | Groundwater Level
at Time of Drilling |
|  | Very Clayey Fine SAND (SC/A-6) | | | | |



AGES of JAX Inc.
9556 Historic Kings Rd.
Jacksonville, Florida 32257

GENERALIZED SUBSURFACE PROFILE

Artisan Bailey Subdivision
Fernandina Beach, Florida

DRAWN: DEP

DATE: 09/01/21

SCALE:

CHECKED: BCM

JOB NO: J19950

 $1''=5'$

KEY TO SOIL CLASSIFICATION

CORRELATION OF N-VALUE WITH RELATIVE DENSITY & CONSISTENCY

SANDS AND GRAVEL	
NO. OF BLOWS, N'	RELATIVE DENSITY
0 - 4	VERY LOOSE
5 - 10	LOOSE
11 - 20	FIRM
21 - 30	VERY FIRM
31 - 50	DENSE
OVER 50	VERY DENSE

SILTS AND CLAYS	
NO. OF BLOWS, N*	CONSISTENCY
0 - 2	VERY SOFT
3 - 4	SOFT
5 - 8	FIRM
9 - 15	STIFF
16 - 30	VERY STIFF
31 - 50	HARD
OVER 50	VERY HARD

PARTICLE SIZE IDENTIFICATION (UNIFIED SOIL CLASSIFICATION SYSTEM)

CATEGORY	DIMENSIONS
Boulders	Diameter exceeds 12 inches
Cobbles	3 to 12 inches
Gravel	Coarse - 0.75 to 3 inches in diameter
Sand	Coarse - 2.0 mm to 4.76 mm diameter Medium - 0.42 mm to 2.0 mm diameter
Silt and Clay	Less than 0.074 mm (Invisible to the naked eye)

MODIFIERS

These modifiers provide our estimate of the amount of minor constituents (sand silt or clay size particles) in the soil sample.

PERCENTAGE OF MINOR CONSTITUENT	MODIFIERS
5% to 12%	Slightly Silty, Slightly Clayey, Slightly Sandy Silty, Clayey, Sandy Very Silty, Very Clayey, Very Sandy
12% to 30%	
30% to 50%	

These modifiers provide our estimate of the amount of other components in the soil sample.

APPROXIMATE CONTENT OF OTHER COMPONENTS (SHELL, GRAVEL, ETC.)	MODIFIERS	APPROXIMATE CONTENT OF ORGANIC COMPONENTS
0% to 5%	TRACE FEW SOME MANY	1% to 2%
5% to 12%		2% to 4%
12% to 30%		4% to 8%
30% to 50%		>8%



TEST BORING RECORD

Project Artisan Bailey Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 1.5' Time: Drilling Date: 08/17/21
 Lat/Long N 30.67906° / W 81.46594°

JOB NO J19950
 BORING NO B1
 Sheet 1 of 1
 Boring Begun 08/17/21
 Boring Completed 08/17/21
 Driller AW & CB
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST					
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT	
	0								
		VERY LOOSE Dark Grey Brow Slightly Silty Fine SAND (SP-SM)	1	1	2	1	3		3
		VERY LOOSE Grey Brown Slightly Silty Fine SAND (SP-SM)							
		LOOSE Brown Slightly Silty Fine SAND (SP-SM)	2	3	4	5	5		9
	5		3	6	8	24	26		32
		DENSE Brown Slightly Silty Fine SAND (SP-SM) (HARDPAN)							
			4	12	30	16	30		46
			5	7	10	16			26
	10	VERY FIRM Brown Slightly Silty Fine SAND (SP-SM)							
		FIRM Brown Slightly Silty Fine SAND (SP-SM)							
	15		6	4	4	7			11
		BORING TERMINATED							
	20								
	25								
	30								

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

J19950 B1



TEST BORING RECORD

Project Artisan Bailey Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 1.0' Time: Drilling Date: 08/17/21
 Lat/Long N 30.62909° / W 81.46533°

JOB NO J19950
 BORING NO B2
 Sheet 1 of 1
 Boring Begun 08/17/21
 Boring Completed 08/17/21
 Driller AW & CB
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST					
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT	
	0								
		VERY LOOSE Dark Brown Slightly Silty Fine SAND (SP-SM)	1		1	1	2	2	3
		VERY LOOSE Grey Brown Slightly Silty Fine SAND (SP-SM)							
		FIRM Brown Slightly Silty Fine SAND (SP-SM)	2		9	5	6	6	11
	5	DENSE Dark Brown Slightly Silty Fine SAND (SP-SM) (HARDPAN)	3		7	19	12	16	31
		VERY FIRM Dark Brown Slightly Silty Fine SAND (SP-SM)	4		13	13	13	13	26
			5		8	8	10	12	18
	10								
		FIRM Brown Slightly Silty Fine SAND (SP-SM)							
	15		6		3	5	9		14
		BORING TERMINATED							
	20								
25									
30									

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

J19950 B2



TEST BORING RECORD

Project Artisan Bailey Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 1.0' Time: Drilling Date: 08/16/21
 Lat/Long N 30.62902° / W 81.46495°

JOB NO J19950
 BORING NO B3
 Sheet 1 of 1
 Boring Begun 08/16/21
 Boring Completed 08/16/21
 Driller AW & CB
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST				
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT
	0							
		VERY LOOSE Dark Brown Slightly Silty Fine SAND (SP-SM)	1	1	1	1	1	2
		VERY LOOSE Dark Brown Slightly Silty Fine SAND (SP-SM)						
		VERY LOOSE Brown Slightly Silty Fine SAND (SP-SM)	2	1	1	1	4	2
	5		3	2	8	8	11	16
		FIRM to VERY FIRM Light Brown Slightly Silty Fine SAND (SP-SM)	4	5	6	8	8	14
			5	7	10	11		21
	10							
		FIRM Grey Brown Slightly Silty Fine SAND (SP-SM)						
	15		6	4	7	5		12
		BORING TERMINATED						
	20							
	25							
	30							

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

J19950 B3



TEST BORING RECORD

Project Artisan Bailey Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 2.0' Time: Drilling Date: 08/16/21
 Lat/Long N 30.62887° / W 81.46439°

JOB NO J19950
 BORING NO B4
 Sheet 1 of 1
 Boring Begun 08/16/21
 Boring Completed 08/16/21
 Driller AW & CB
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST					
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT	
	0								
		VERY LOOSE Brown Slightly Silty Fine SAND (SP-SM)	1	1	1	2	2		3
		VERY LOOSE Dark Grey Slightly Silty Fine SAND (SP-SM)							
			2	2	3	3	2		6
		LOOSE Dark Brown Slightly Silty Fine SAND (SP-SM)							
	5		3	2	4	4	10		8
			4	6	8	10	10		18
		FIRM Brown Slightly Silty Fine SAND (SP-SM)	5	5	8	8			16
	10								
		LOOSE Grey Brown Slightly Silty Fine SAND (SP-SM)							
	15		6	4	4	4			8
		BORING TERMINATED							
	20								
	25								
	30								

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

J19950 B4



TEST BORING RECORD

Project Artisan Bailey Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 1.0' Time: Drilling Date: 08/16/21
 Lat/Long N 30.62852° / W 81.46460°

JOB NO J19950
 BORING NO B5
 Sheet 1 of 1
 Boring Begun 08/16/21
 Boring Completed 08/16/21
 Driller AW & CB
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST					
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT	
	0								
		LOOSE Dark Grey Brown Slightly Silty Fine SAND (SP-SM)	1	1	2	3	1	5	
		LOOSE Dark Brown Slightly Silty Fine SAND (SP-SM)	2	2	2	4	6	6	
	5		3	5	7	11	15	18	
		FIRM to VERY FIRM Brown Slightly Silty Fine SAND (SP-SM)	4	8	12	12	12	24	
			5	9	7	11		18	
	10	FIRM Brown Slightly Silty Fine SAND (SP-SM)							
			FIRM Grey Brown Slightly Silty Fine SAND (SP-SM)						
	15		6	5	7	8		15	
			BORING TERMINATED						
	20								
	25								
30									

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

J19950 B5



TEST BORING RECORD

Project Artisan Bailey Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 1.0' Time: Drilling Date: 08/16/21
 Lat/Long N 30.62861° / W 81.46526°

JOB NO J19950
 BORING NO B6
 Sheet 1 of 1
 Boring Begun 08/16/21
 Boring Completed 08/16/21
 Driller AW & CB
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST				
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT
	0							
		VERY LOOSE Dark Brown Slightly Silty Fine SAND (SP-SM)	1	1	1	1	4	2
		LOOSE Brown Slightly Silty Fine SAND (SP-SM)	2	4	5	4	5	9
	5	FIRM Dark Brown Slightly Silty Fine SAND (SP-SM)	3	4	5	9	13	14
			4	8	9	12	12	21
		VERY FIRM Brown Slightly Silty Fine SAND (SP-SM)	5	15	11	10	10	21
	10							
		LOOSE Grey Slightly Silty Fine SAND (SP-SM)						
	15		6	3	3	6		9
		BORING TERMINATED						
	20							
	25							
	30							

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

J19950 B5



TEST BORING RECORD

Project Artisan Bailey Subdivision
 Boring Location (See Field Exploration Plan)
 Ground Elevation NA Datum NA
 Groundwater Depth 1.0' Time: Drilling Date: 08/17/21
 Lat/Long N 30.62864° / W 81.46571°

JOB NO J19950
 BORING NO B7
 Sheet 1 of 1
 Boring Begun 08/17/21
 Boring Completed 08/17/21
 Driller AW & CB
 Soil Inspected By B. McMahan

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION (USCS CLASSIFICATION)	SAMPLE NO.	STANDARD PENETRATION TEST					
				BLOWS PER 6-IN. INTERVAL				BLOW COUNT	
	0								
		LOOSE Dark Grey Brown Slightly Silty Fine SAND w/ Brick Debris (SP-SM)	1	1	1	4	4	5	
		VERY LOOSE Brown Slightly Silty Fine SAND (SP-SM)	2	4	2	2	2	4	
	5	LOOSE Dark Brown Slightly Silty Fine SAND w/ Tr Small Rts (SP-SM)	3	2	3	5	10	8	
		FIRM Brown Slightly Silty Fine SAND (SP-SM)	4	5	10	10	10	20	
		BORING TERMINATED							
	10								
	15								
20									
25									
30									

REMARKS:

BORING & SAMPLING, ASTM D1586/CORE DRILLING, ASTM D213
 BLOW COUNT IS THE NUMBER OF BLOWS OF A 140 LB. HAMMER
 FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

J19950 B7



AUGER BORING RECORDS
Artisan Bailey Subdivision
Fernandina Beach, Florida
AGES Job No. J19950; Report No. 001

Date Performed: 08/17/21

Performed By: J. Mardini

Auger ID Lat/Long	Depth (Feet) ^a	SOIL DESCRIPTION (USCS/ AASHTO CLASSIFICATION)
----------------------	---------------------------	--

Roadway

A1 N 30.62884° W 81.46592°	0.0 - 0.5	Dark Brown Silty Fine SAND w/ Many Roots (PT/ A-8)
	0.5 - 1.5	Dark Brown Slightly Silty Fine SAND w/ Some Rocks (SP-SM/ A-3)
	1.5 - 2.5	Grey Slightly Silty Fine SAND (SP-SM/ A-3)
	2.5 - 6.0	Dark Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	A.B.T. ^b	GWL ^c = 1.5'
A2 N 30.62882° W 81.46495°	0.0 - 0.5	Dark Brown Silty Fine SAND w/ Many Roots (PT/ A-8)
	0.5 - 1.0	Dark Grey Slightly Silty Fine SAND w/ Trace Small Roots (SP-SM/ A-3)
	1.0 - 1.5	Grey Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	1.5 - 2.0	Dark Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	2.0 - 6.0	Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	A.B.T. ^b	GWL ^c = 1.5'
A3 N 30.62909° W 81.46439°	0.0 - 1.0	Dark Grey Silty Fine SAND w/ Some Roots (SM/ A-2-4)
	1.0 - 1.5	Grey Slightly Silty Fine SAND w/ Trace Roots (SP-SM/ A-2-4)
	1.5 - 6.0	Dark Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	A.B.T. ^b	GWL ^c = 1.5'

Stormwater Management Pond

LA1 N 30.62918° W 81.46408°	0.0 - 1.0	Dark Grey Brown Silty Fine SAND w/ Some Roots (SM/ A-2-4)
	1.0 - 3.5	Dark Grey Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	3.5 - 7.0	Dark Brown Slightly Silty Fine SAND w/ Trace Organics (SP-SM/ A-3)
	7.0 - 13.0	Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	13.0 - 15.0	Grey Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	A.B.T. ^b	GWL ^c = 1.0'
		Estimated Seasonal High GWL ^c = 1.0'
LA2 N 30.62856° W 81.46420°	0.0 - 0.5	Brown Slightly Silty Fine SAND (SP-SM/ A-3/ A-3)
	0.5 - 1.0	Dark Grey Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	1.0 - 3.0	Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	3.0 - 5.0	Dark Brown Slightly Silty Fine SAND w/ Trace Small Roots (SP-SM/ A-3)
	5.0 - 14.0	Brown Slightly Silty Fine SAND w/ Trace Wood (SP-SM/ A-3)
	14.0 - 15.0	Grey Brown Slightly Silty Fine SAND (SP-SM/ A-3)
	A.B.T. ^b	GWL ^c = 1.0'
		Estimated Seasonal High GWL ^c = 1.0'

a - Depth measured below ground surface existing at boring location at time of drilling

b - Auger Boring Terminated (A.B.T.)

c - Groundwater Level (GWL) depth below existing ground surface, recorded at time of drilling, unless otherwise noted
J19950 aug 1.wpd

FIELD EXPLORATION PROCEDURES

Penetration Borings

The penetration borings were made in general accordance with ASTM D 1586-67, "Penetration Test and Split-Barrel Sampling of Soils". The borings were advanced to the water table by augering and, after encountering the groundwater table, further advanced by rotary drilling techniques using a circulating bentonite fluid for borehole flushing and stability. At two-foot intervals within the upper 10 feet and at five-foot intervals thereafter, the drilling tools were removed from the borehole and a split-barrel sampler inserted to the borehole bottom and driven 18 inches into the material using a 140-pound SPT hammer falling, on the average, 30 inches per hammer blow. The number of hammer blows for the final 12 inches of penetration is termed the "penetration resistance, blow count, or N-value". This value is an index to several in-place geotechnical properties of the material tested, such as relative density and Young's Modulus.

After driving the sampler 18 inches (or less, if in hard rock or rock-like material) at each test interval, the sampler was retrieved from the borehole and a representative sample of the material within the split-barrel was placed in a glass jar and sealed. After completing the drilling operations, the samples for the borings were transported to our laboratory where they were examined by our engineer in order to verify the driller's field classifications. The samples will be kept in our laboratory for a period of two months after submittal of formal written report, unless otherwise directed by the client.

Auger Borings

The auger borings were performed manually using a post-hole auger. The auger borings were drilled in general accordance with ASTM D 1452-80 ("Soil Investigation and Sampling by Auger Borings"). Representative samples of the soils brought to the ground surface by the augering process were placed in glass jars, sealed, and transported to our laboratory where they were examined by a geotechnical engineer to verify the driller's field classification.