



**AGENDA
TECHNICAL REVIEW COMMITTEE
REGULAR MEETING
SEPTEMBER 22, 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. APPROVAL OF MINUTES**
 - 4.1 Approval of Minutes for the March 10, 2022 Regular Meeting
 - 4.2 Approval of Minutes for the March 24, 2022 Regular Meeting.
 - 4.3 Approval of Minutes for the August 25, 2022 Regular Meeting.
- 5. NEW BUSINESS**
 - 5.1 TRC 2022-0024: Asa Gillette with Gillette & Associates - 600 Airport Rd. - Construction of 5 airport hangar units.
- 6. ADJOURNMENT**

NEXT REGULAR TRC MEETING IS SCHEDULED FOR OCTOBER 27, 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.



**MINUTES
TECHNICAL REVIEW COMMITTEE
REGULAR MEETING
MARCH 10, 2022**

1. CALL TO ORDER 10:00

2. ROLL CALL

MEMBERS PRESENT:

Don Kukla, Building

Andre Desilet, Stormwater/Utilities

Michelle Forstrom,

David Neville, Arborist

Jason Higginbotham, Fire

OTHERS PRESENT:

Taylor Hartmann, Recording Secretary

3. PLEDGE OF ALLEGIANCE

4. APPROVAL OF MINUTES

4.1 Approval of Minutes for the February 24, 2022, Regular Meeting.

ACTION TAKEN: A motion was made by Mr. Kukla, seconded by Mr. Higginbotham to approve the minutes as presented.

Vote upon passage of the motion was taken by ayes and nays and being all ayes, carried.

5. OLD BUSINESS

5.1 SPR2021-0016 - Gillette & Associates - S. 13th Street - Construct a group residential project with parking lot and dry retention.

Members agreed that this project can be issued a Local Development Order.

6. ADJOURNMENT 10:04

Andre Desilet, Director/Stormwater/Utilities



**MINUTES
TECHNICAL REVIEW COMMITTEE
REGULAR MEETING
MARCH 24, 2022**

1. CALL TO ORDER 10:00

2. ROLL CALL

MEMBERS PRESENT:

Kelly Gibson, Planning

Michelle Forstrom, Code Enforcement

Jason Higginbotham, Fire

Don Kukla, Building

Andre Desilet, Stormwater/Utilities

David Neville, Arborist

OTHERS PRESENT:

Taylor Hartmann, Recording Secretary

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.

Ms. Gibson introduced the case and provided the applicant an overview of the first round of comments received by TRC members.

Mr. Gillette confirmed that the school concurrency process has been initiated and is currently in the School Board's hands.

Mr. Higginbotham indicated that he and Mr. Gillette have already spoken about the necessity of an auto turn assessment to ensure emergency vehicles have adequate space to maneuver.

Mr. Desilet stated that the proposed retention pond needs to ensure that it does not adversely affect the other stormwater systems in the immediate area.

Mr. Gillette confirmed that the proposed structures will be built on stem wall foundations.

Ms. Gibson and Mr. Desilet expressed significant concern that the potential buyers of these lots are not being told that accessory structures, such as pools and/or sheds, will likely not be possible due to tree preservation requirements and impervious surface limitations. Mr. Gillette will discuss these issues with the developer.

Bob Weintraub, President of Isle de Mai, spoke about being concerned with stormwater drainage and the proximity of the proposed system to Isle de Mai's existing system.

5. ADJOURNMENT 10:31



**MINUTES
TECHNICAL REVIEW COMMITTEE
REGULAR MEETING
AUGUST 25, 2022
CITY HALL CHAMBERS**

1. CALL TO ORDER 10:00 AM

2. ATTENDANCE

Sal Cumella (Chair - Planning & Conservation)
Jimmy Parr (Building)
Andre Desilet (Stormwater/Street/Utilities)
David Neville (Urban Forester/Arborist)
Taylor Hartmann (City Planner)

Daphne Forehand (Planning & Conservation)
Michelle Forstrom (Code Enforcement)
Victoria Guadagnino (Stormwater/Street/Utilities)
Jason Higginbotham (Fire)

OTHERS PRESENT:

Tammi Bach (City Attorney)
Sylvie McCann (Recording Secretary)

3. PLEDGE OF ALLEGIANCE

Chair Cumella explained that this new business item would be presented as a quasi-judicial case and explained how each department will be presenting their comments to which the applicant can respond.

Ms. McCann administered the oath to all parties wishing to present testimonies during this meeting.

4. APPROVAL OF MINUTES

4.1 Approval of Meeting Minutes for June 9, 2022.

ACTION TAKEN: A motion was made by Member Desilet seconded by Member Forstrom to approve the Minutes as presented.

Vote upon passage of the motion was taken by voice vote and being all ayes, carried.

5. NEW BUSINESS

5.1 TRC 2022-0022- Asa Gillette, Gillette & Associates - 3rd/Beech Street 12-Unit Townhome Development - First Round Comments

Chair Cumella introduced the case and invited members to present the first round of comments.

Member Forehand addressed the 7 items in her first-round comments which include possibility of incorporating the structure or relocating the structure into the Historic District which would then encourage restoration. She also mentioned demolition delay for all structures, site design detail and architectural elevation, and site

DRAFT

infrastructure.

Asa Gillette, Gillette & Associates, spoke that he would provide revised site plan showing the rearrangement.

Member Neville addressed the 2 items relating to landscaping and arborist assessment.

Ron Flick, Compass Group, 961687 Gateway Suite, addressed the historic nature of the property and that they welcome the possibility to relocate the structure. Chair Cumella noted that currently, no interested parties have shown interest so far. If relocation doesn't take place, Mr. Flick stated that they would submit amended plans according to the LDC requirements. Mr. Gillette addressed the sidewalk requirements according to LDC chapter 4, and landscaping. Member Neville spoke of street trees requirement, and that there would be a credit for preserved trees.

Member Forstrom had no comments.

Mr. Gillette addressed Member Higginbotham's comments regarding height, hydrant location, and address assignment.

Member Desilet spoke of front steps requirements, existing inlets, sewer connections, and service lines.

Member Forehand brought up comments about the mechanical equipment and waste container locations and screenings.

Mr. Gillette noted he would address sidewalk and flooding comments with Member Kukla from the Building Department.

Public Hearing was opened.

Debra Winter, 132 S. 2nd Street, voiced some concerns about drainage.

Member Desilet addressed the water runoff and drainage system.

Taina Christner, 406 Beech Street, voiced concerns about changes to the neighborhood. She also noted the difference in documents presented with the application stating the number of townhomes. She spoke of the drainage issue and trash bins area. She asked about setbacks regarding lots 5 and 8.

Debbie Whiffen, 227 N. 11th Street, voice concerned about the change in the character of the neighborhood and the loss of trees.

Joan Cory, 408 Beech Street, spoke about trees located in a swale and its usefulness for drainage. She also asked about dry ponds and the number of townhomes to be built.

Leigh Anderson 227 S. 4th Street, spoke of zoning R2 and MU1. Member Forehand confirmed that R2 allows townhomes.

Chris Nicholoff, 553 Spanish Way West, asked about the engineering of drainage system and its limits. He also addressed emergency vehicle accesses.

Grace Cascone, 116 S. 4th Street, asked about drainage statistics and data collecting sources.

Alexandra Lajoux, 646 Spanish Way East, asked about the historic nature of the 4 structures. She also recommended that we encourage and urged for the structures to be relocated.

Mary Blais, 115 S. 5th Street, spoke about saving the historic value and aesthetic of the property.

DRAFT

Joyce Tuten, 2120 Beech Street, spoke of the historic nature of the island and the eminent threat of flooding created by the future increased in sea levels.

Michael Spino, 317 S. 5th Street, spoke of the historic nature of the property structures and the importance of preserving such properties.

Public Hearing was closed.

Mr. Flick spoke to the effect that they are receptive in relocating the structures. He also spoke of the original plat allowing 25 homes but that this project is reduced to 12 homes. He noted that they are trying to create compatible architectural designs so these new structure blend with the existing character of the neighborhood. He's also address compliance with the flood requirements and run offs.

Chair Cumella provided information regarding the next step. The applicant is required to resubmit amended site plans for a second round of comments, and after approval then a submission of the preliminary plat to the Planning Advisor Board.

A short recess was taken at 5:59.

The meeting resumed at 6:04.

6. COMMITTEE BUSINESS

6.1 Process and procedures for TRC meetings: Future LDC Text Amendments

Ms. Bach explained the Quasi-Judicial procedures. Members discussed the procedures and the Sunshine Law impact. Ms. Bach will do some research regarding Sunshine Law impact on First Step meetings.

7. ADJOURNMENT 11:34 AM

Sylvie McCann, Recording Secretary

Sal Cumella, Chair

Technical Review Committee: Application - Submission #9789

Date Submitted: 8/24/2022

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, unless otherwise indicated, the TRC meetings are scheduled as the following:**

TRC First Step Applications are presented at 10:00 AM on the 2nd Thursday of each month at the City Airport Conference Room;

TRC Application Review are reviewed at 10:00 AM on the 4th Thursdays of each month in City Hall Chambers.**

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



Requirements for All Site Plans â€” see LDC section 11.01.04



Requirements for Subdivision Plats â€” see LDC section 11.01.05



Determination for Completeness & sufficiency â€” see LDC section 11.03.01



Review and Compliance Report by the Technical Review Committee â€” see LDC Section 11.03.02



Construction and Improvements â€” see LDC section 11.05.00



Amendments to Local Development Orders â€” 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 Appraiserâ€™s Website â†’ Map Search](#)

Site Address*

700 Airport Road

City*

Fernandina Beach

State*

FL

Zip*

32034

Parcel ID #(s)

06-2N-28-0000-0001-0000

Lot

Block

Subdivision

Zoning District

IA

Future Land Use Designation*

Industrial

Overlay District*

Airport

Size of Property (acres)*

2.13

Present Property Use*

airport-vacant lot

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*

Dale

Last Name*

Martin

Company (if applicable)

City of Fernandina Beach

Mailing Address*

204 Ash Street

City*

Fernandina Beach

State*

FL

Zip*

32034

Telephone Number*

304-310-3100

Email Address*

dmartin@fbfl.org

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 Street

City

Fernandina Beach

State

FL

Zip

32034

Telephone Number

904-261-8819

Email Address

asa@gilletteassociates.com

PROJECT INFORMATION

Project Type*

Site Plan Review

Project Name

Bulk Aircraft Hangar for Brian Echard

Proposed Access Road*

Airport Road

Rd Maintenance Jurisdiction*

City Maintained

Project Estimated Cost*

300,000

Description of Request*

5 airport hangar units

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*

Asa

Applicant Last Name*

Gillette

Today's Date*

8/24/2022

Upload Supporting Documentation*

Agent Authorization - City of Fernandina Beach.pdf

Upload 2

Echard Bulk Hangar Drainage Report.pdf

Upload 3

ECHARD Bulk_8_22_22.pdf

Upload 4

Choose File

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Upload 5

Choose File

No file selected

Upload 6

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No file selected

Upload 7

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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, Mr. Dale L. Martin, City Manager for the City of Fernandina Beach, 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. This authorization only applies to development authorized under the ground lease between FHB Aircraft Hangars LLC and the City of Fernandina Beach, dated February 4, 2020.

Property ID Number(s): 06-2N-28-0000-0001-0000

Location: City of Fernandina Beach Airport


Signature

08/22/22
Date

904-310-3100
Telephone Number

ATTEST:

By: 
Printed Name: Caroline Best
Title: City Clerk
Date: _____

APPROVED AS TO FORM AND LEGALITY:

CITY ATTORNEY

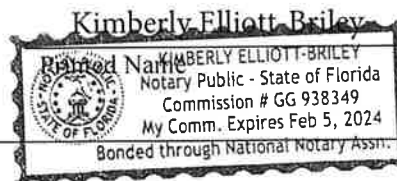
STATE OF FLORIDA
COUNTY OF Nassau

Subscribed and sworn to before me this 22nd day of August,
20 22.

Who is personally known to me X or has produced identification


Notary Public: Signature

My Commission Expires: _____



ENGINEERING PLANS

FOR

BULK AIRCRAFT HANGAR

FOR

BRIAN ECHARD

BULK AIRPORT HANGAR

FOR

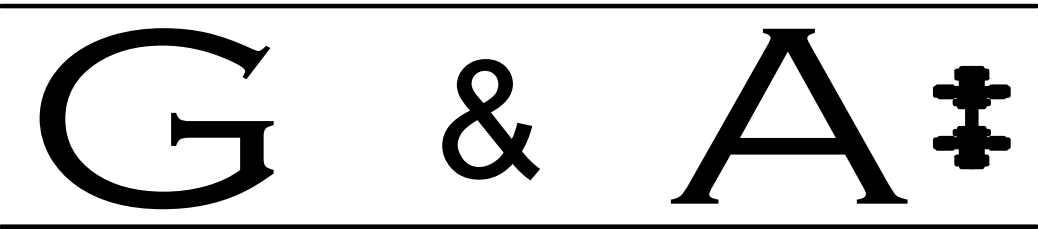
BRIAN ECHARD

RELEASED FOR CONSTRUCTION BY

GILLETTE & ASSOCIATES, INC.

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

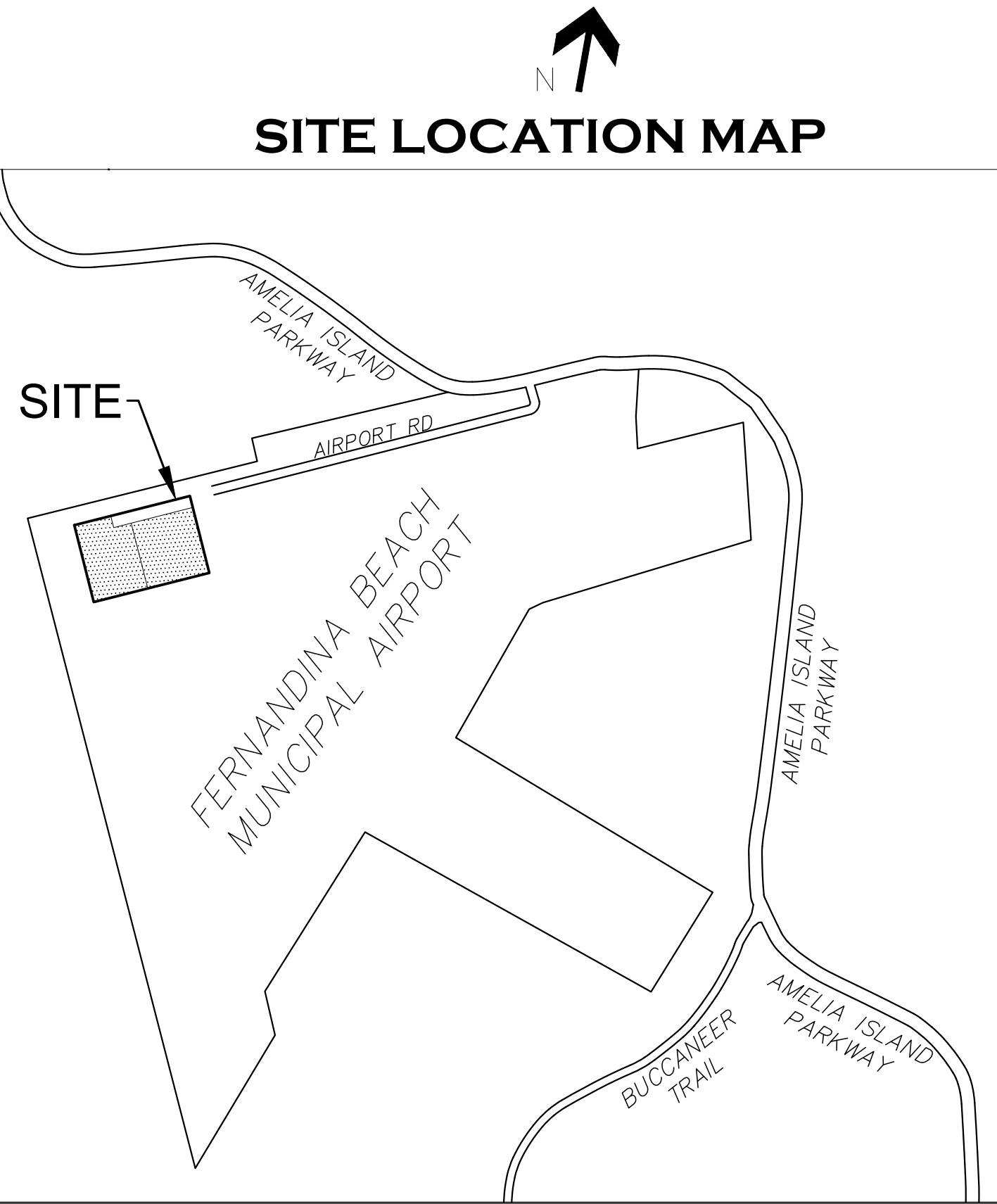
20 SOUTH 4TH STREET AMELIA ISLAND, FLORIDA 32034
PHONE: 904/261-8819



PERMITTING AGENCIES

CITY OF FERNANDINA BEACH: 904-310-3421

ISSUE DATE: AUGUST 22, 2022



- PID#: 06-2N-28-0000-0001-0000
- ACREAGE: 2.13 AC. (92,598 SF)
- LOCATION: FERNANDINA BEACH, FL
- FLOOD_ZONE: X
- ZONING: I-A

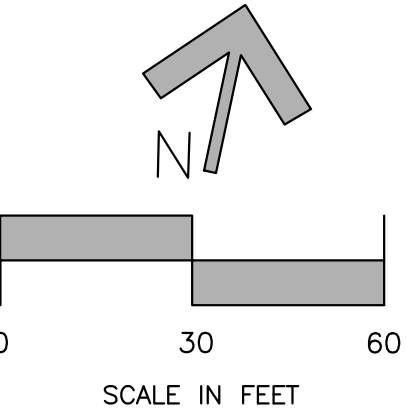
- MAX IMPERVIOUS AREA: 60%
- MAX FLOOR AREA RATIO (PERCENTAGE): 50%

SETBACK REQUIREMENTS:

- FRONT: 0 FEET
- REAR: 0 FEET
- SIDES: 0 FEET

- WATER: CITY OF FERNANDINA BEACH
- SEWER: CITY OF FERNANDINA BEACH
- POWER: F.P.U.

NEAREST FIRE HYDRANT IS 100 FEET NORTH
FROM NORTHERN PROPERTY LINE



K			
J			
H			
G			
F			
E	AB	08/18/22	TRC SUBMITTAL
D	AB	05/18/22	PRE APP SUBMITTAL
C	AB	04/26/22	OWNER REVIEW
B	AC	01/25/22	REVISED PER OWNER & AIRPORT COMMENTS
A	AG	01/24/22	DEVELOPMENT – OWNER REVIEW
No.	By	Date	Revision

Scale: 1:30	Gillette & Associates, Inc. 20 South 4th Street Fernandina Beach, FL 32034
Project Mgr: AG	
Designed by: AG	Certificate of Authorization No. 9332
Drawn by: AB	DO NOT SCALE THIS DRAWING – DIMENSIONS AND NOTES TAKE PREFERENCE, DRAWING IS REDUCED IF LESS THAN 22" x 34"
QA/QC: NG	

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

ECHARD & GILTZ BULK HANGAR
FERNANDINA BEACH MUNICIPAL AIRPORT
FERNANDINA BEACH, FLORIDA

NEW BULK HANGAR
NORTHWEST AREA

PREDEVELOPED
SITE PLAN

<u>REGISTERED DESIGN PROFESSIONAL</u>	ISSUE DATE: 08/18/22
	Sheet PRE-1
	Page 3 of 8
	Project No.: XX-XX-XX

PROPERTY INFORMATION:

- PID#: 06-2N-28-0000-0001-0000
- ACREAGE: 2.13 AC. (92,598 SF)
- LOCATION: FERNANDINA BEACH, FL
- FLOOD ZONE: X
- ZONING: I-A
- FUTURE LAND USE: INDUSTRIAL
- PROPOSED USE: AIRCRAFT HANGAR
- MAX BUILDING HEIGHT: 45 FT

DEVELOPMENT REQUIREMENTS:

- MAX IMPERVIOUS AREA: 60.0%
- PROPOSED IMPERVIOUS AREA: 60.0%
- MAX FLOOR AREA RATIO (PERCENTAGE): 50.0%
- PROPOSED FLOOR AREA RATIO (PERCENTAGE): 25.5%

SETBACK REQUIREMENTS:

- FRONT: 0 FEET
- REAR: 0 FEET
- SIDES: 0 FEET

UTILITIES:

- WATER: CITY OF FERNANDINA BEACH
- SEWER: CITY OF FERNANDINA BEACH
- POWER: F.P.U.

NEAREST FIRE HYDRANT IS 100 FEET NORTH FROM NORTHERN PROPERTY LINE

LANDSCAPING:

- PROPERTY LOCATED WITHIN THE AIRPORT OPERATIONS AREA (AOA). STANDARDS REQUIRE ONLY GRASS OR LOW-LYING VEGETATION FOR UNPAVED AREAS

PARKING REQUIREMENTS:

- (1) ONE SPACE PER 2,000 SF OF HANGAR SPACE (MIN. 3 SPOTS REQ'D)

- (1) ONE SPACE PER 300 SF OF OFFICE SPACE

24,725 SF / 2,000 SF = 12.36 SPOTS

MINIMUM 13 PARKING SPOTS REQUIRED

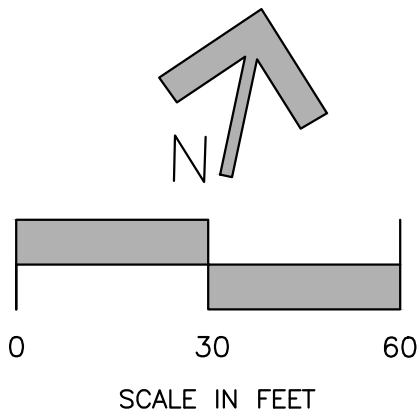
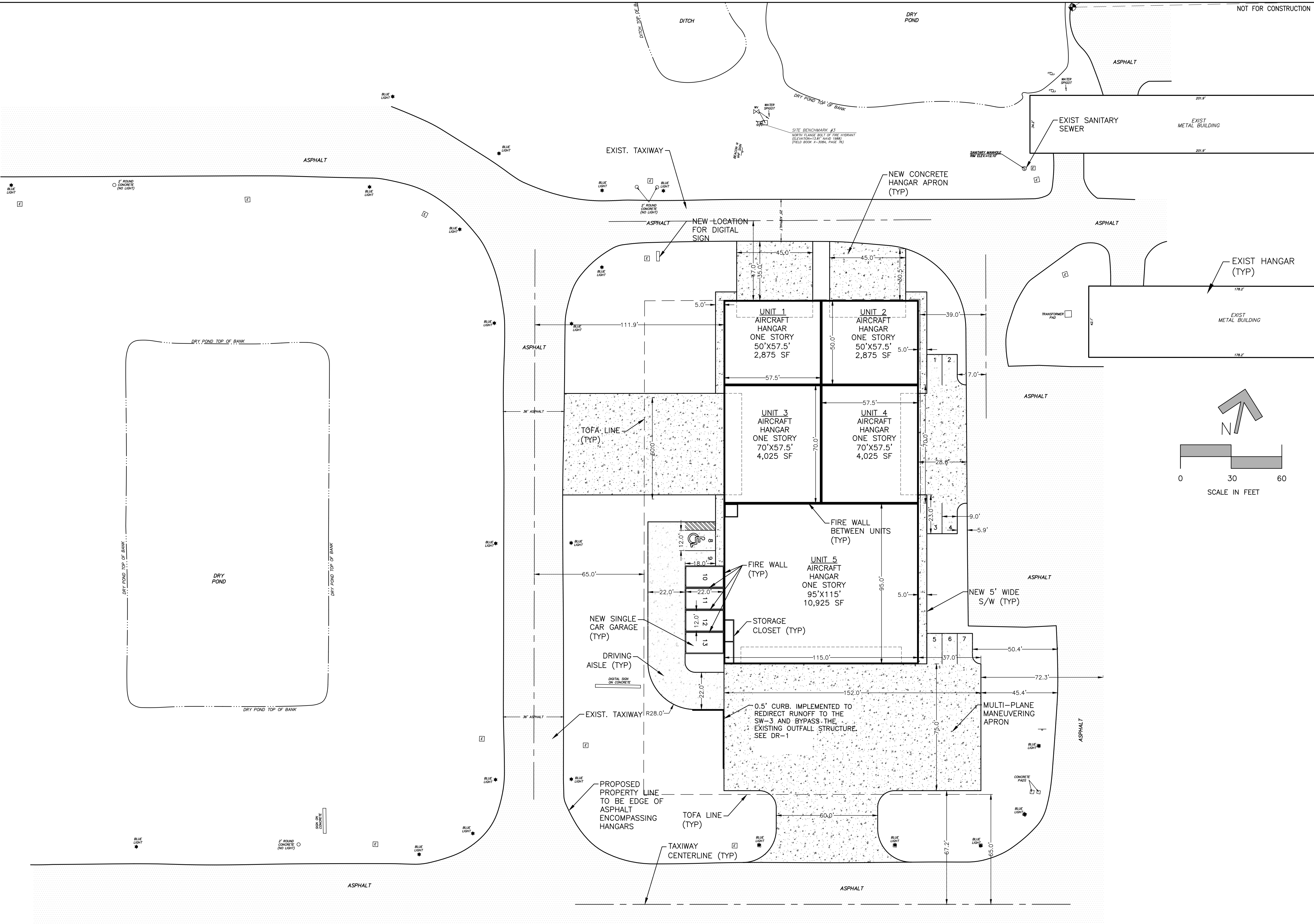
- ADA PARKING SPOT SHOWN IS 12' WIDE BY 18' STALL DEPTH

- TYPICAL PARKING SPOT DIMENSIONS ARE 9' WIDE BY 18' STALL DEPTH

NOTES:

- ROOF RUNOFF TO BE DIRECTED TO NEAREST SWALE OR STRUCTURE

EXTERIOR HANGAR MATERIAL: METAL SIDING IN NEUTRAL AIRPORT APPROVED COLOR



LEGEND	
	CONCRETE
	ASPHALT

K		
J		
I		
H		
G		
F		
E	AB	08/18/22
D	AB	05/18/22
C	AB	04/26/22
B	AG	01/25/22
A	AG	01/24/22
No.	By	Date

Scale: 1:30
Project Mgr: AG
Designed by: AG
Drawn by: AB
QA/QC: NG

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"

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

ECHARD & GILTZ BULK HANGAR
FERNANDINA BEACH MUNICIPAL AIRPORT
FERNANDINA BEACH, FLORIDA

NEW BULK HANGAR NORTHWEST AREA

GEOMETRY SITE PLAN

REGISTERED DESIGN PROFESSIONAL	ISSUE DATE: 08/18/22
Sheet GE-1	
Page 4 of 8	
Project No.: XX-XX-XX	

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

- PROPERTY INFORMATION:
- PID#: 06-2N-28-0000-0001-0000
 - ACREAGE: 2.13 AC. (92,598 SF)
 - LOCATION: FERNANDINA BEACH, FL
 - FLOOD ZONE: X
 - ZONING: I-A
 - FUTURE LAND USE: INDUSTRIAL
 - PROPOSED USE: AIRCRAFT HANGAR
 - MAX BUILDING HEIGHT: 45 FT

- DEVELOPMENT REQUIREMENTS:
- MAX IMPERVIOUS AREA: 60.0%
 - PROPOSED IMPERVIOUS AREA: 60.0%
 - MAX FLOOR AREA RATIO (PERCENTAGE): 50.0%
 - PROPOSED FLOOR AREA RATIO (PERCENTAGE): 25.5%
- SETBACK REQUIREMENTS:
- FRONT: 0 FEET
 - REAR: 0 FEET
 - SIDES: 0 FEET

- NOTES:
- DRAINAGE STRUCTURE DETAILS ON SHEET DT-1
 - WATER RUNOFF TO BE DIRECTED TO NEAREST DRAINAGE SWALE.
- DRAINAGE CALCULATIONS:
- DRAINAGE AREA: 92,598 SF
IMPERVIOUS AREA: 56,365 SF
- TOTAL LOT RUNOFF:
(92,598 SF)*(1.5")*(1/12 FT/IN) = 11,575 C.F.
- TOTAL IMPERVIOUS AREA RUNOFF:
(56,365 SF)*(2.5")*(1/12 FT/IN) + [(92,598 SF)*(0.5")*(1/12 FT/IN)] = 15,600 C.F.
- TOTAL TREATMENT VOLUME REQUIRED: 15,600 C.F.
TOTAL TREATMENT VOLUME PROVIDED: 16,529 C.F.

- SWALE NOTES:
- SWALE 1[SW-1]:
TOB: 4,833 SF
BOP: 4,033 SF
SIDESLOPE: 3:1
STORAGE: 4,433 CF
- SWALE 2[SW-2]:
TOB: 3,114 SF
BOP: 2,404 SF
SIDESLOPE: 3:1
STORAGE: 2,579 CF
- SWALE 3[SW-3]:
TOB: 6,246 SF
BOP: 5,180 SF
SIDESLOPE: 3:1
STORAGE: 5,713 CF
- SWALE 4[SW-4]:
TOB: 3,952 SF
BOP: 2,812 SF
SIDESLOPE: 3:1
STORAGE: 3,382 CF
- SWALE 5[SW-5]:
TOB: 697 SF
BOP: 147 SF
SIDESLOPE: 3:1
STORAGE: 422 CF

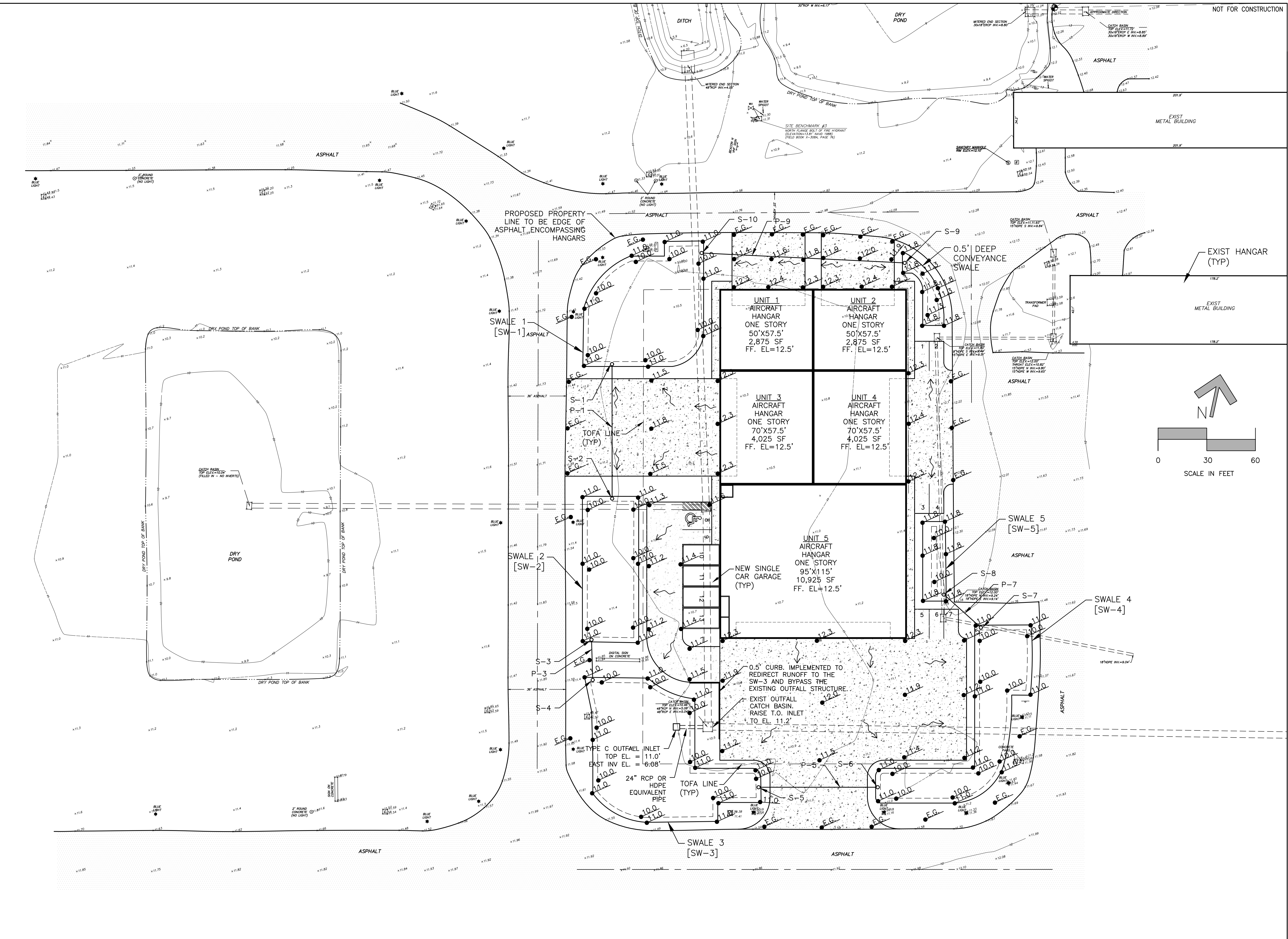
STRUCTURE TABLE						
NAME	TYPE	TOP/ INLET ELEV.	INVERT ELEVATION			
			N	S	E	W
S-1	NYOPLAST 24" DRAIN BASIN	11.0	-	10.0	-	-
S-2	NYOPLAST 24" DRAIN BASIN	11.0	10.0	-	-	-
S-3	NYOPLAST 24" DRAIN BASIN	11.0	-	10.0	-	-
S-4	NYOPLAST 24" DRAIN BASIN	11.0	10.0	-	-	-
S-5	NYOPLAST 24" DRAIN BASIN	11.0	-	-	10.0	-
S-6	NYOPLAST 24" DRAIN BASIN	11.0	-	-	-	10.0
S-7	NYOPLAST 24" DRAIN BASIN	11.0	10.0	-	-	-
S-8	NYOPLAST 24" DRAIN BASIN	11.8	-	10.4	-	-
S-9	NYOPLAST 24" DRAIN BASIN	11.8	-	-	-	10.4
S-10	NYOPLAST 24" DRAIN BASIN	11.0	-	-	10.0	-

PIPE TABLE					
NAME	SIZE	TYPE	LENGTH	FROM	TO
P-1	12"	HDPE	81'	S-1	S-2
P-3	12"	HDPE	24'	S-3	S-4
P-5	12"	HDPE	73'	S-5	S-6
P-7	12"	HDPE	29'	S-8	S-7
P-9	12"	HDPE	125'	S-9	S-10

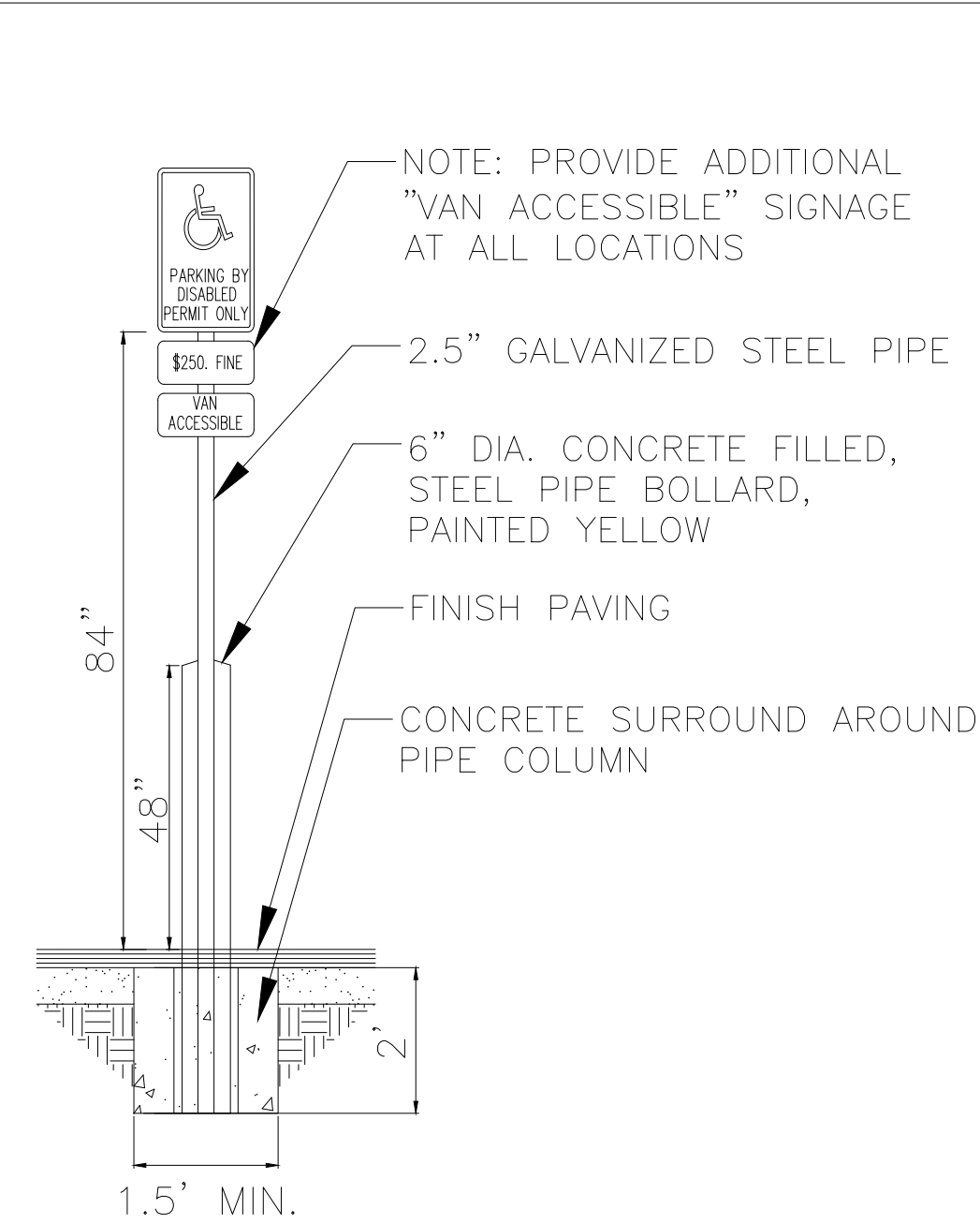
LEGEND	
	CONCRETE
	ASPHALT

K		
J		
I		
H		
G		
F		
E	AB	08/18/22
D	AB	05/18/22
C	AB	04/26/22
B	AG	01/25/22
A	AG	01/24/22
No.	By	Date

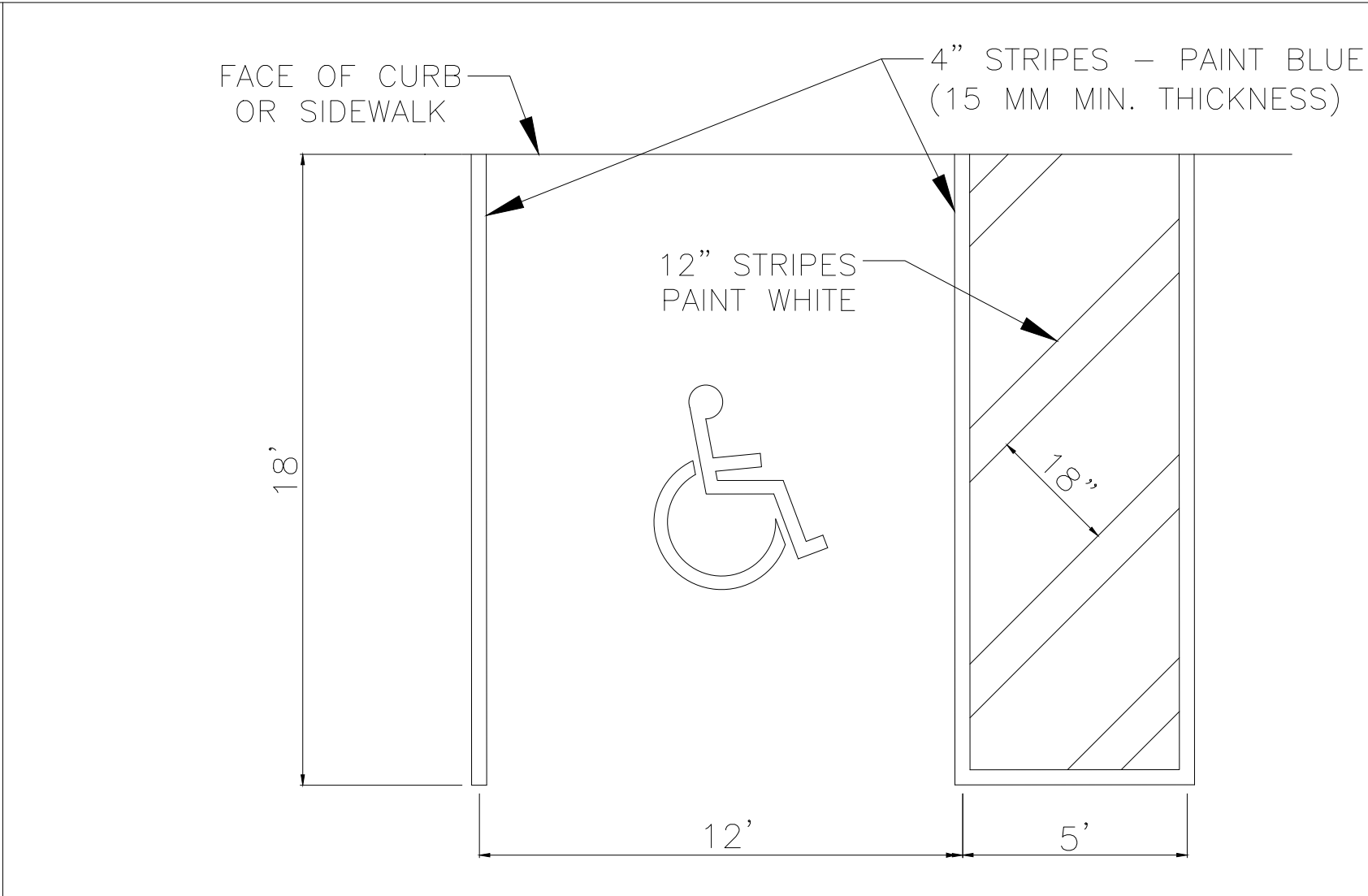
TRC SUBMITTAL
PRE APP SUBMITTAL
OWNER REVIEW
REVISED PER OWNER & AIRPORT COMMENTS
DEVELOPMENT - OWNER REVIEW
Revision



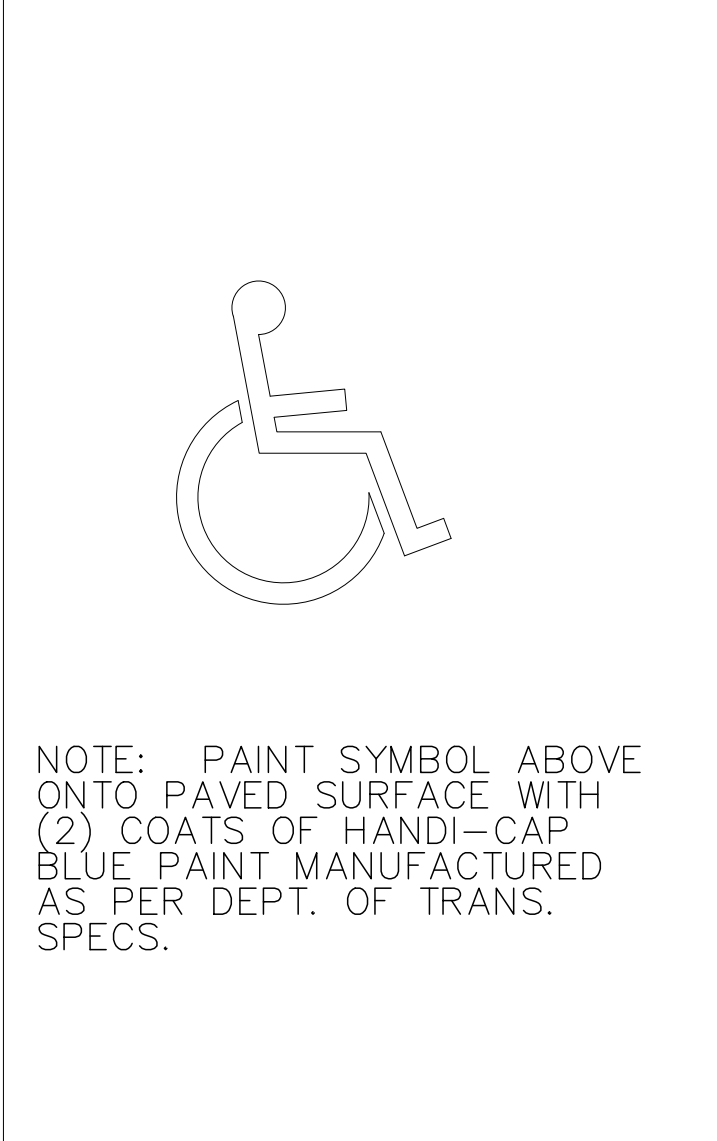
Scale: 1:30	Gillette & Associates, Inc. 20 South 4th Street Fernandina Beach, FL 32034	G & A[®] GILLETTE & ASSOCIATES, INC 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 PHONE: (904) 261-8819	ECHARD & GILTZ BULK HANGAR FERNANDINA BEACH MUNICIPAL AIRPORT FERNANDINA BEACH, FLORIDA	NEW BULK HANGAR NORTHWEST AREA	DRAINAGE PLAN	REGISTERED DESIGN PROFESSIONAL ASA R. GILLETTE, P.E. FLORIDA P.E. NO. 56177	ISSUE DATE: 08/18/22
Project Mgr: AG							Sheet DR-1
Designed by: AG	Certificate of Authorization No. 9332						Page 5 of 8
Drawn by: AB	DO NOT SCALE THIS DRAWING – DIMENSIONS AND NOTES TAKE PREFERENCE. DRAWING IS REDUCED IF LESS THAN 22" x 34"						Project No.:XX-XX-XX
QA/QC: NG							



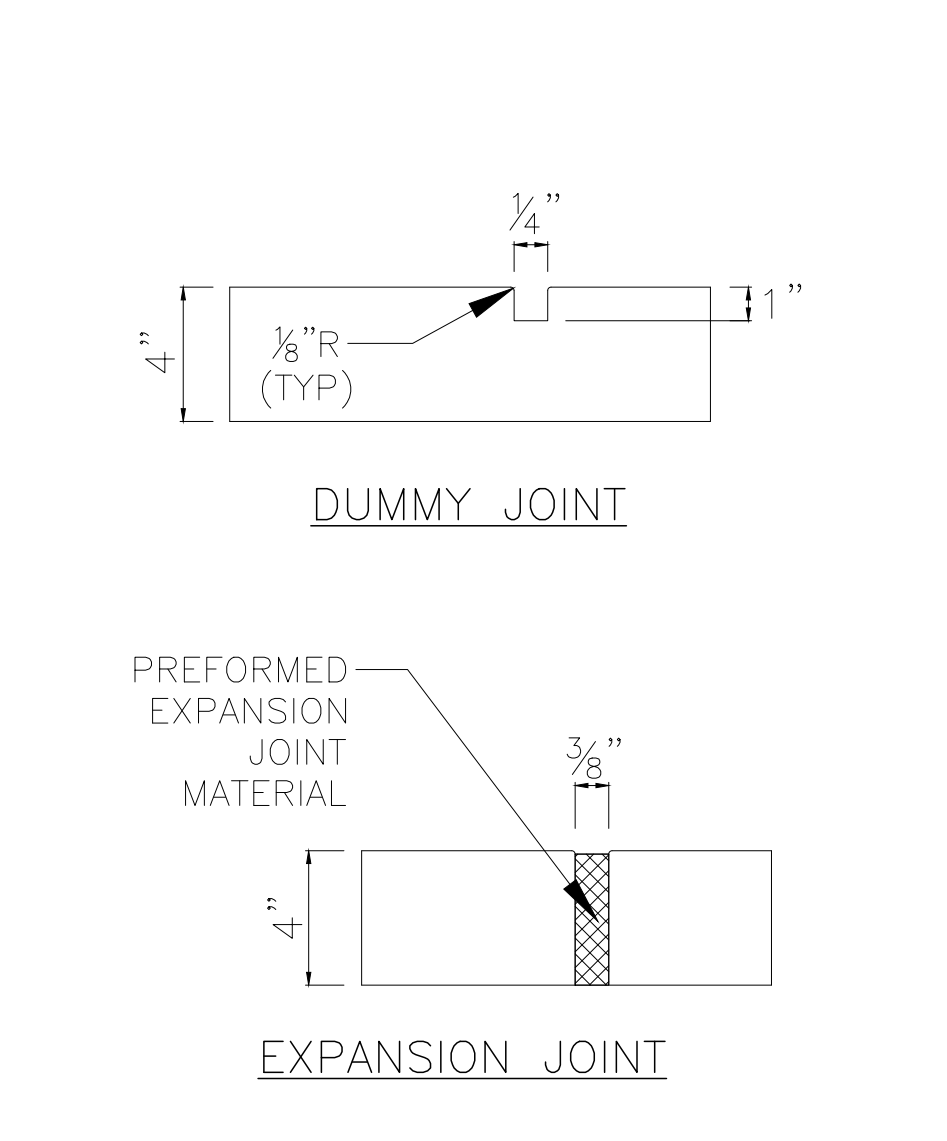
- NOTES:
1. ALL SIGNS SHOWN SHALL CONFORM TO FEDERAL ACCESSIBILITY SPECIFICATIONS.
 2. ALL SIGNS SHOWN SHALL BE REFLECTORIZED TO SHOW THE SAME COLOR BY NIGHT AS BY DAY.
 3. ALL SIGNS SHALL BE SECURELY MOUNTED ON GALVANIZED STEEL CHANNEL POSTS.
 4. INSTALL QUANTITY AND AT LOCATIONS REQUIRED BY CODE AND/OR AS INDICATED ON DRAWINGS. CONFIRM ALL HANDICAPPED SIGNAGE CODES.



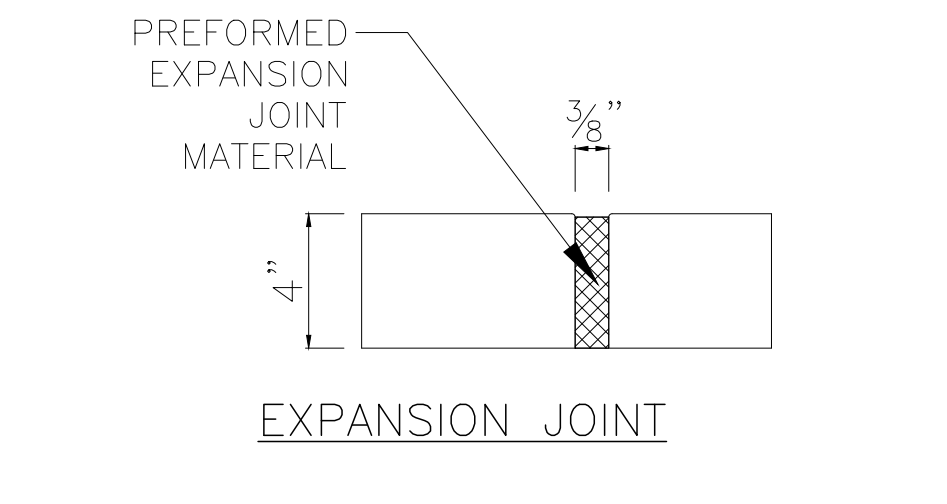
TYPICAL DISABLED PARKING



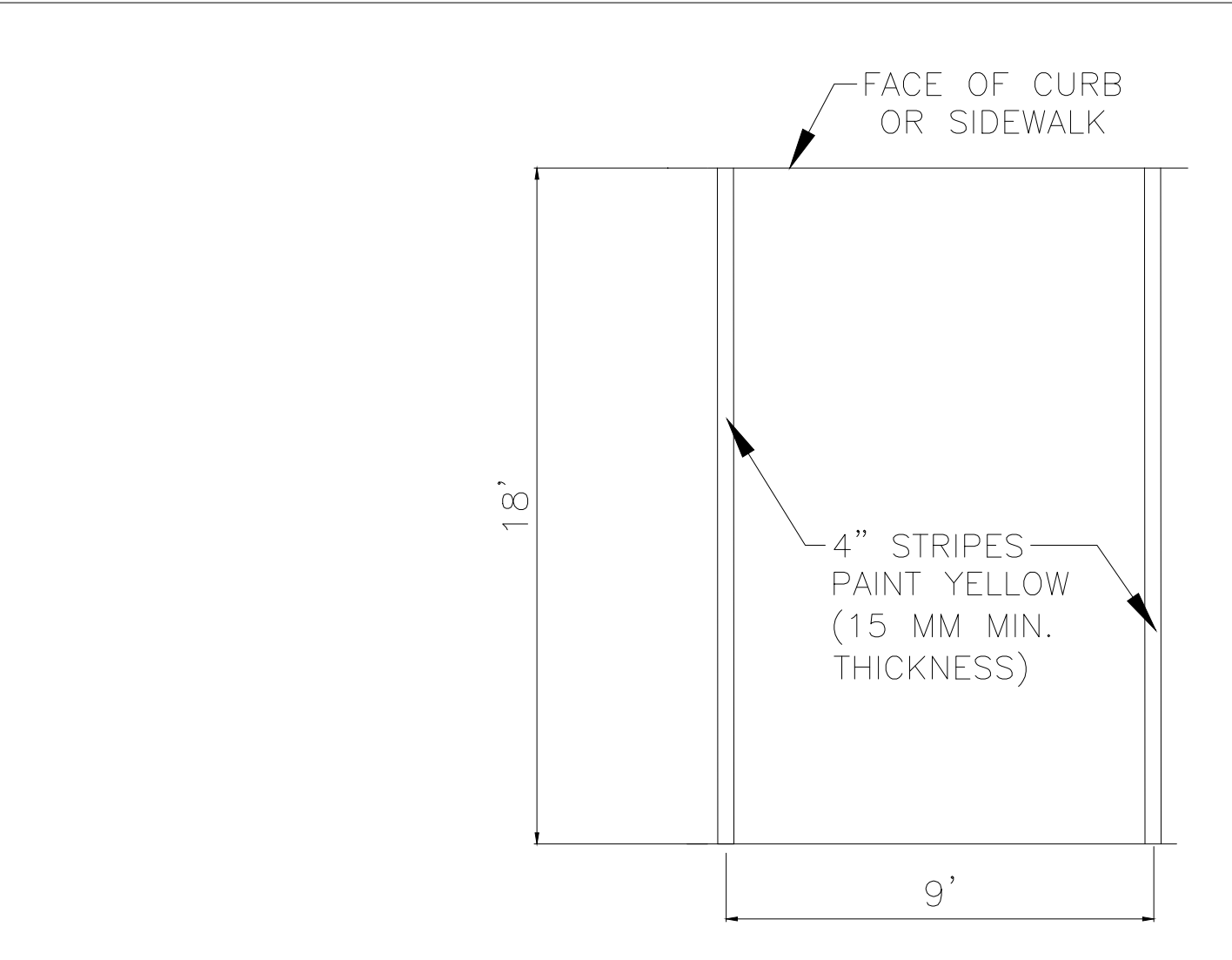
NOTE: PAINT SYMBOL ABOVE
ONTO PAVED SURFACE WITH
(2) COATS OF HANDI-CAP
BLUE PAINT MANUFACTURED
AS PER DEPT. OF TRANS.
SPECS.



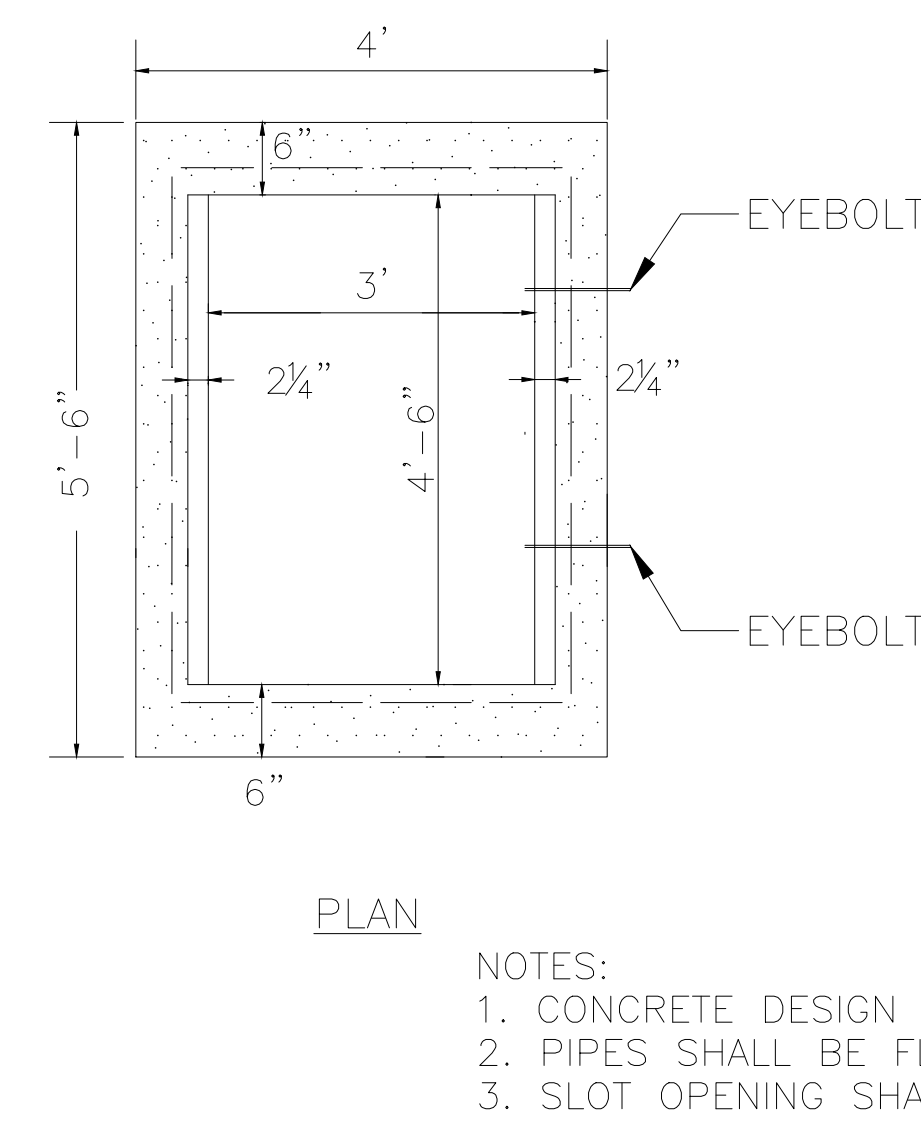
DUMMY JOINT



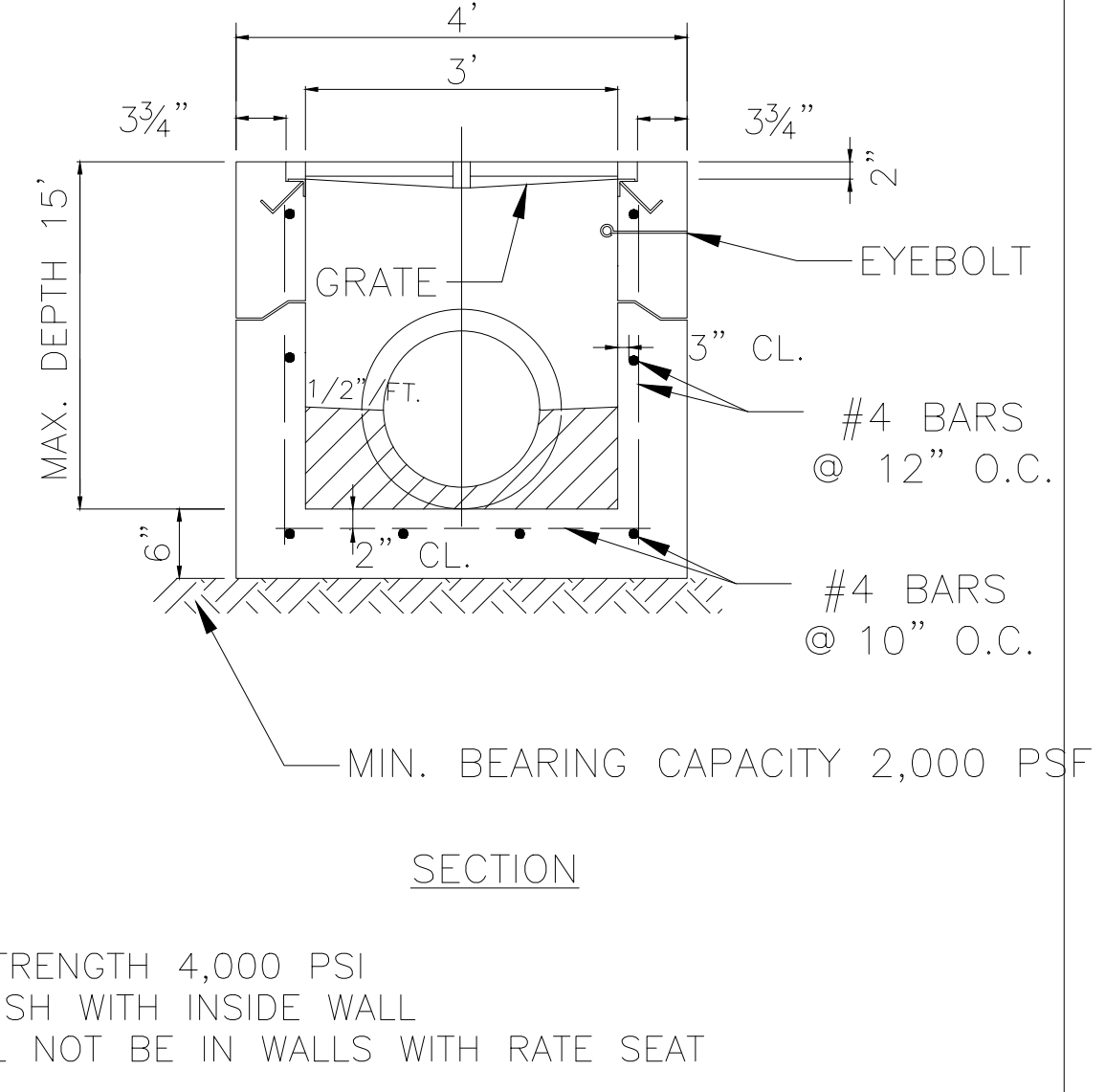
EXPANSION JOINT



TYPICAL PARKING DETAIL



PLAN



SECTION

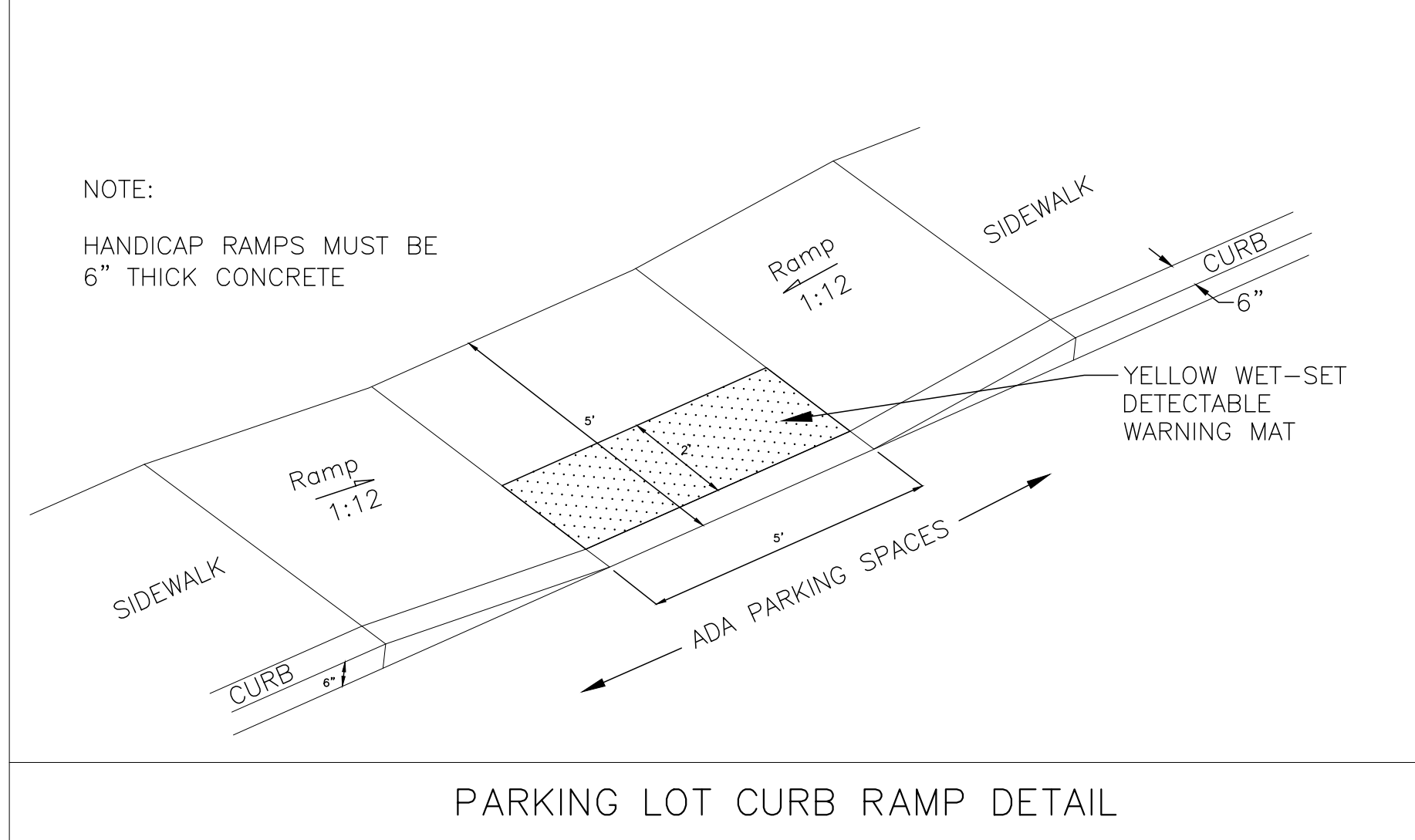
- NOTES:
1. CONCRETE DESIGN STRENGTH 4,000 PSI
 2. PIPES SHALL BE FLUSH WITH INSIDE WALL
 3. SLOT OPENING SHALL NOT BE IN WALLS WITH RATE SEAT

HANDICAP SIGN DETAIL

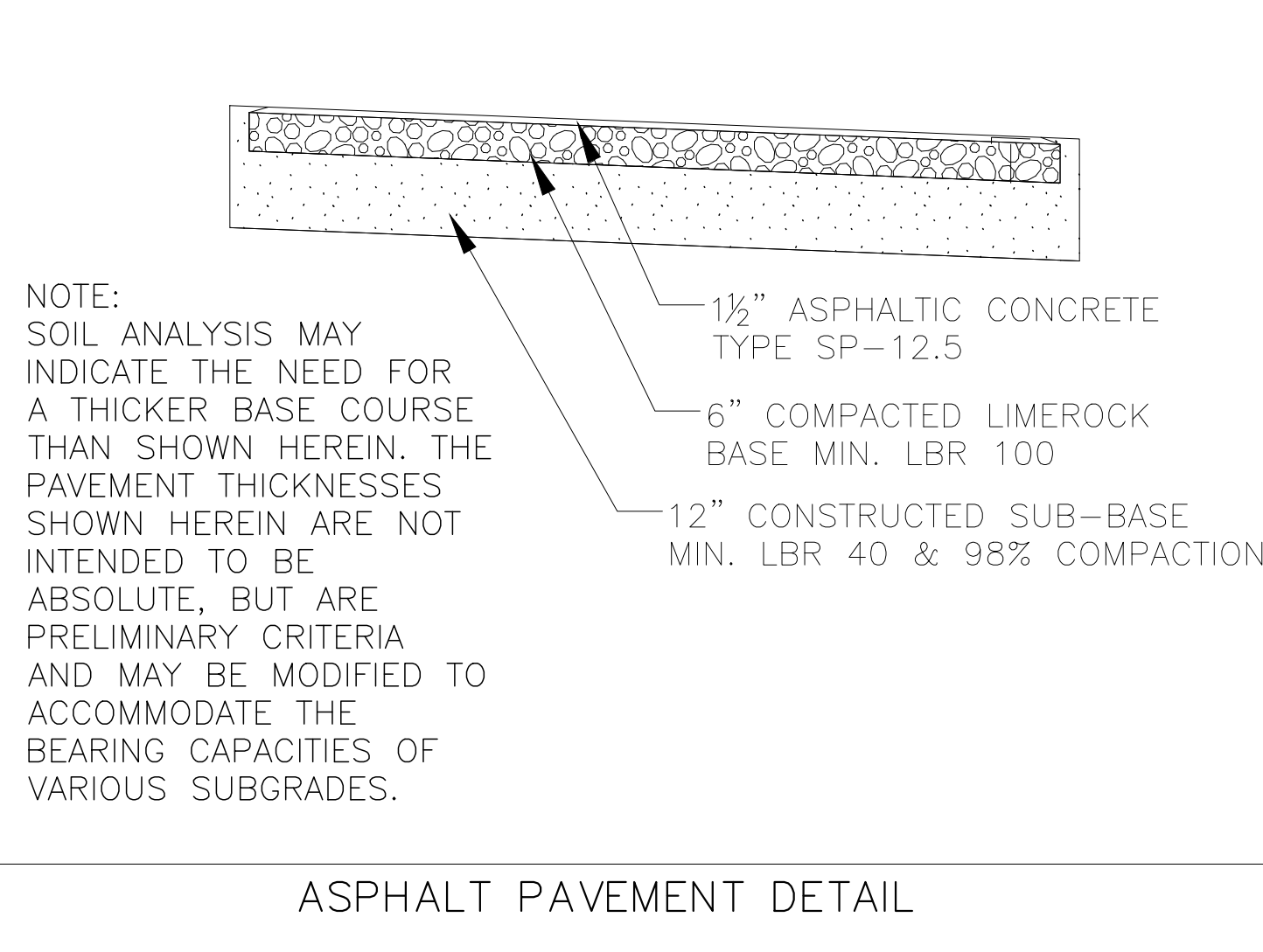
HANDICAPPED SYMBOL

SIDEWALK JOINT DETAILS

TYPE E INLET DETAIL

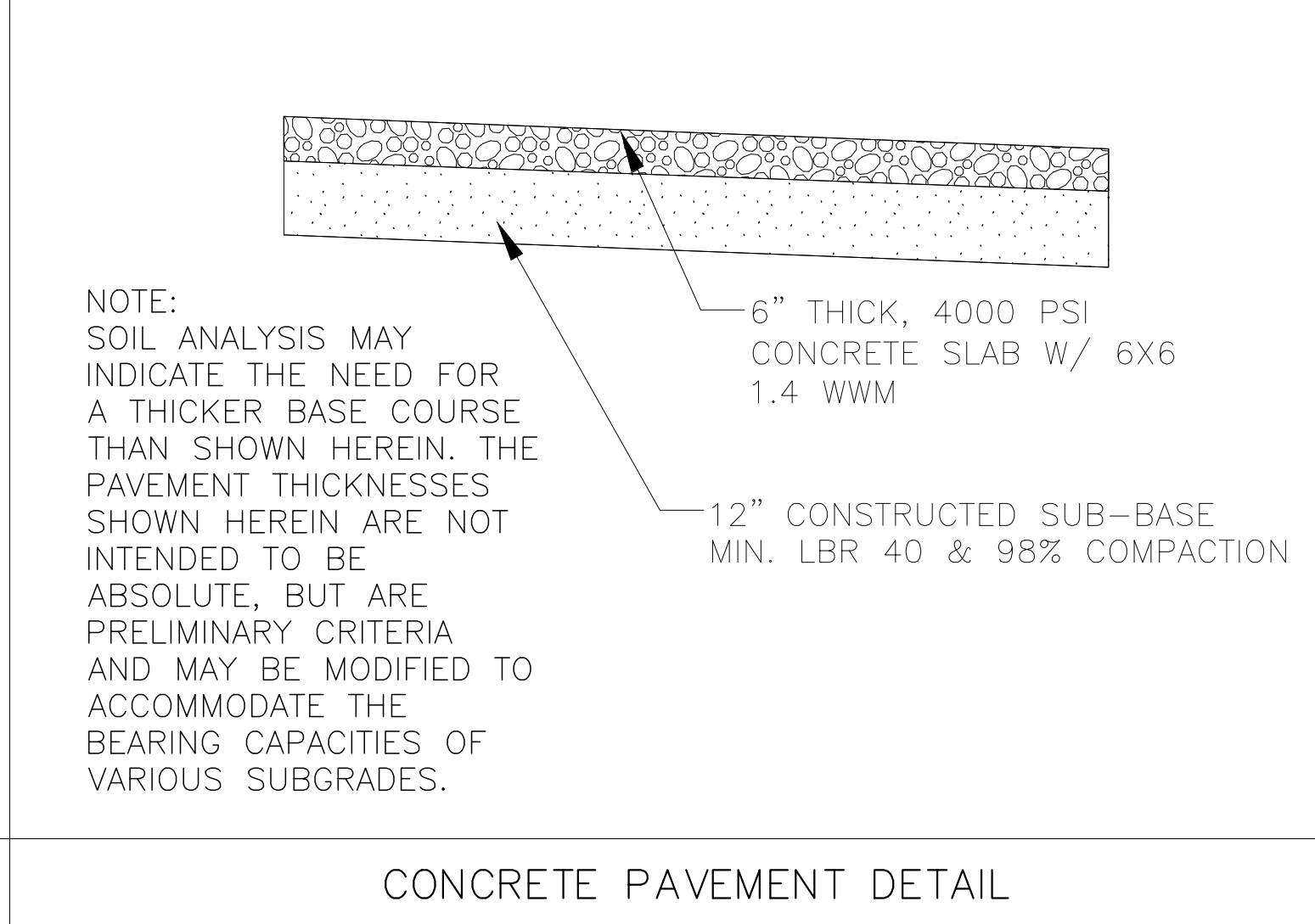


PARKING LOT CURB RAMP DETAIL



- NOTE:
SOIL ANALYSIS MAY
INDICATE THE NEED FOR
A THICKER BASE COURSE
THAN SHOWN HEREIN. THE
PAVEMENT THICKNESSES
SHOWN HEREIN ARE NOT
INTENDED TO BE
ABSOLUTE, BUT ARE
PRELIMINARY CRITERIA
AND MAY BE MODIFIED TO
ACCOMMODATE THE
BEARING CAPACITIES OF
VARIOUS SUBGRADES.
- 1½" ASPHALTIC CONCRETE
TYPE SP-12.5
 - 6" COMPACTED LIMEROCK
BASE MIN. LBR 100
 - 12" CONSTRUCTED SUB-BASE
MIN. LBR 40 & 98% COMPACTION

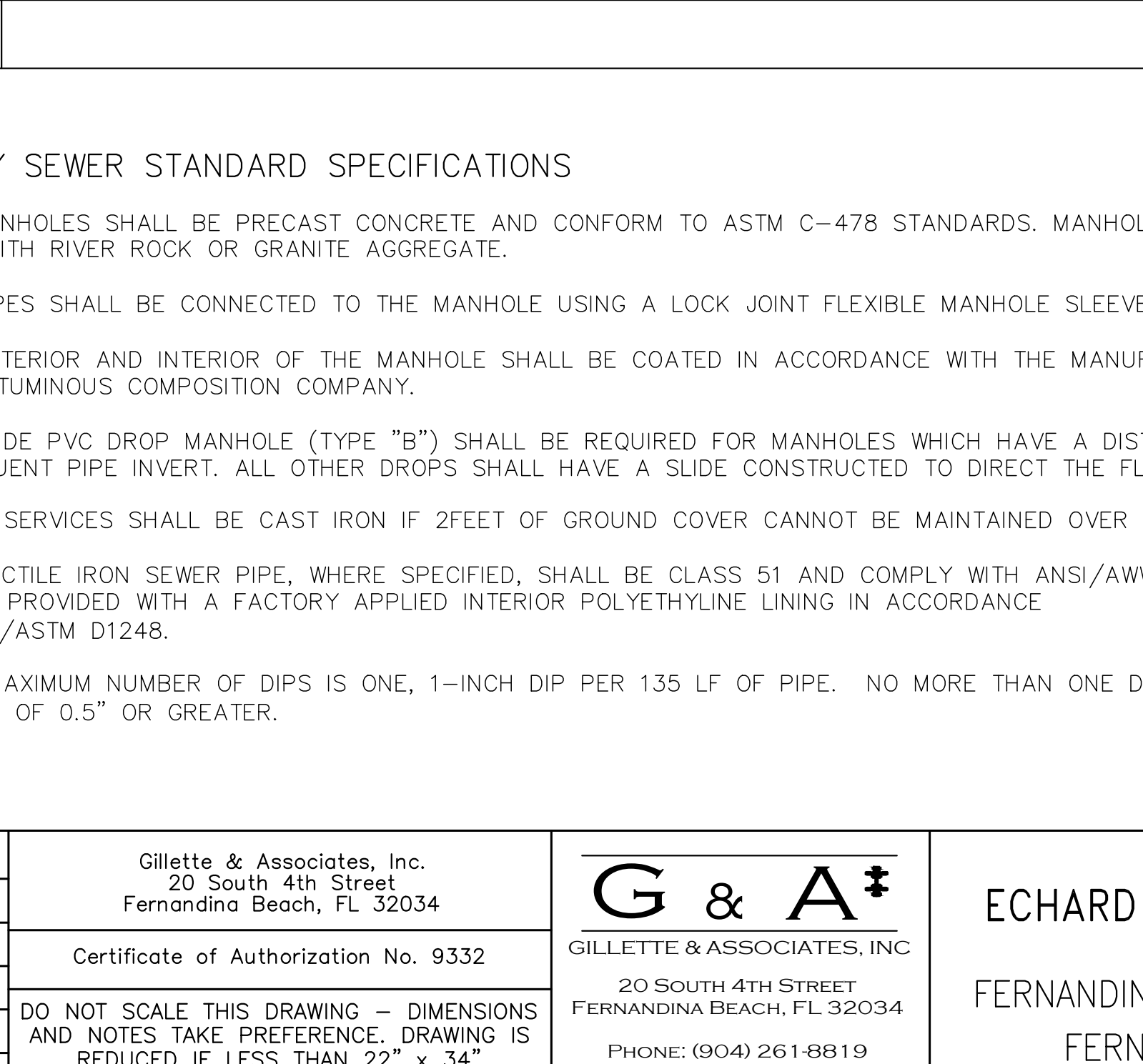
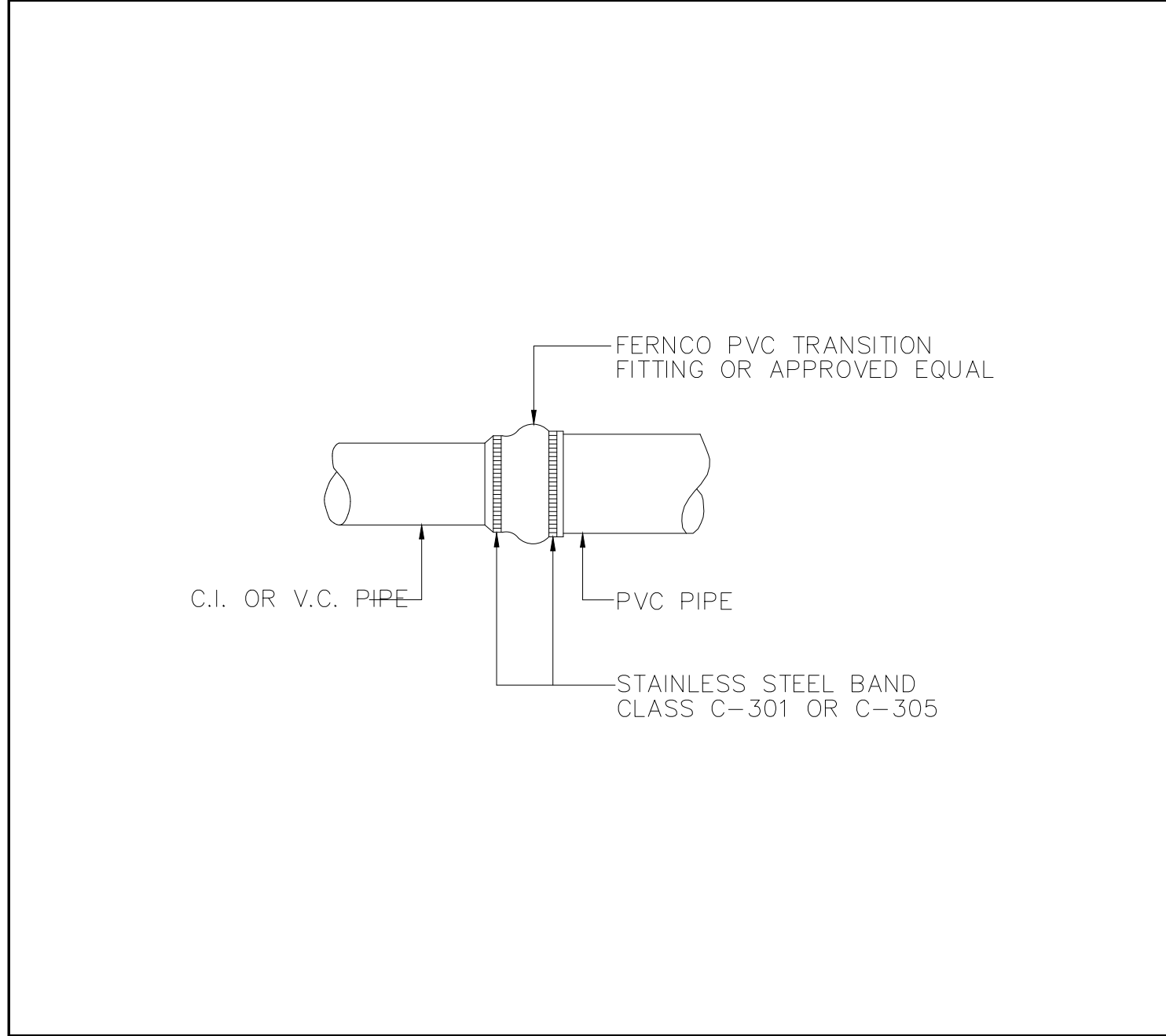
ASPHALT PAVEMENT DETAIL



- NOTE:
SOIL ANALYSIS MAY
INDICATE THE NEED FOR
A THICKER BASE COURSE
THAN SHOWN HEREIN. THE
PAVEMENT THICKNESSES
SHOWN HEREIN ARE NOT
INTENDED TO BE
ABSOLUTE, BUT ARE
PRELIMINARY CRITERIA
AND MAY BE MODIFIED TO
ACCOMMODATE THE
BEARING CAPACITIES OF
VARIOUS SUBGRADES.

CONCRETE PAVEMENT DETAIL

K				Scale: N/A	Gillette & Associates, Inc. 20 South 4th Street Fernandina Beach, FL 32034	 GILLETTE & ASSOCIATES, INC. 20 SOUTH 4TH STREET FERNANDINA BEACH, FL 32034 PHONE: (904) 261-8819	ECHARD & GILTZ BULK HANGAR FERNANDINA BEACH MUNICIPAL AIRPORT NORTHWEST AREA FERNANDINA BEACH, FLORIDA	NEW BULK HANGAR NORTHWEST AREA	MISCELLANEOUS DETAILS	REGISTERED DESIGN PROFESSIONAL ASA R. GILLETTE, P.E. FLORIDA P.E. NO. 56177	ISSUE DATE: 08/18/22
J				Project Mgr: AG							Sheet DT-1
I				Designed by: AG							Page 6 of 8
H				Drawn by: AB							Project No.: XX-XX-XX
G				QA/QC: NG	DO NOT SCALE THIS DRAWING - DIMENSIONS AND NOTES TAKE PREFFERENCE. DRAWING IS REDUCED IF LESS THAN 22" x 34"						
F	AB	08/18/22		TRC SUBMITTAL							
E	AB	05/18/22		PRE APP SUBMITTAL							
D	AB	04/26/22		OWNER REVIEW							
C	AB	01/25/22		REVISED PER OWNER & AIRPORT COMMENTS							
B	AG	01/24/22		DEVELOPMENT - OWNER REVIEW							
A	By	Date		Revision							



Project No.: XX-XX-XX



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

SITE DRAINAGE EVALUATION

**Echard Airport Bulk Hangar Development
700 Airport Road
Fernandina Beach, Florida**

BY

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

Issue Date: August 23, 2022

EXISTING CONDITIONS

The site consists of 2.13 acres of land at the Fernandina Beach Airport in Nassau County, Florida. The site is currently undeveloped with four (4) existing storm structures on the property. A copy of the soils report is included. The soils report assessment of the subsurface was found to be leon fine sand.

PROPOSED CONDITIONS

The proposed development for this property includes the construction of five airport hangar units, associated concrete aprons, and required asphalt parking. The property will be served by five (5) dry swales, hydraulically connected, that provide stormwater retention for the developed area.

Swales 1-4 have been designed with a top of bank elevation of 11.00' and a bottom of pond elevation of 10.00'. Swale 5 has been designed with a top of bank elevation of 11.80' and a bottom of pond elevation of 10.00'. The banks of the swales have a 3:1 slope. The dry retention ponds together provide 16,529 cubic feet of stormwater treatment volume. The seasonal high groundwater level was found to be 3-4 feet beneath the existing ground surface. See SJRWMD permit number 40-089-19837-2, for additional details on the existing storm system and existing soils data.

Stormwater runoff from the proposed improvements is routed to the ponds through proper grading and sheet flow. The proposed outfall for the ponds is a type C inlet with a top elevation of 11.0', which resides within Swale 3. The outfall will be connected to the existing outfall system on site.

Stormwater calculations included determining the greatest required treatment volume for the site. Treatment volume was calculated for the total lot runoff and the total impervious area runoff. See attached dry pond calculations.

The required treatment volume calculated was 15,600 cubic feet of volume. The provided treatment volume from onsite retention was 16,529 cubic feet of volume; thus meeting the required calculations.

DRY POND CALCULATIONS

Echard Hangar Development Post Developed - Total Area

Basin Calculations

Basin 1

Composite Cn

Total Drainage Area = 92598 ft^2
 Impervious Area = 56365 ft^2
 Pond Area = 0 ft^2

 Impervious Cn = 98.0
 Pond Cn = 100.0
 Pervious Cn = 39.0

 Composite Cn = 74.9

Pond Information (Swales)

El. (ft.)		Area ft^2	Volume ft^3
11.00	TOB	18842	16529
10.00		14576	0

Treatment Volume Required, TVR

(on-line retention)

TVR = 1.5" * (1/12")*Total Drainage Area = 11575 ft^3
 or

TVR = 2.5" * (1/12")*Total Impervious Drainage Area + (0.5")*(1/12")*Total Drainage Area = 15600 ft^3

Treatment Volume Provided, TVP

TVR = 15600 ft^3

TVP = 16529 ft^3 OK

SOILS REPORT DATA



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

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

Custom Soil Resource Report for Nassau County, Florida



August 19, 2022

Preface

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

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

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

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

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

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

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

Custom Soil Resource Report

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

Soil Map

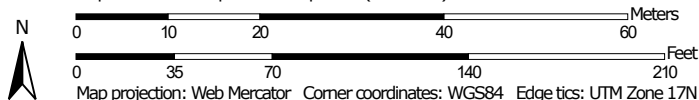
The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.

Map Scale: 1:822 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Nassau County, Florida
Survey Area Data: Version 21, Sep 1, 2021

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

Date(s) aerial images were photographed: Jan 7, 2022—Feb 14, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
9	Leon fine sand, 0 to 2 percent slopes	2.1	94.9%
17	Urban land	0.1	5.1%
Totals for Area of Interest		2.2	100.0%

Map Unit Descriptions

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

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

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

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

Custom Soil Resource Report

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

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

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

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

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

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

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

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

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

Nassau County, Florida

9—Leon fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2sxqv
Elevation: 0 to 250 feet
Mean annual precipitation: 47 to 61 inches
Mean annual air temperature: 55 to 81 degrees F
Frost-free period: 267 to 347 days
Farmland classification: Not prime farmland

Map Unit Composition

Leon, non-hydric, and similar soils: 89 percent
Minor components: 11 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leon, Non-hydric

Setting

Landform: Flatwoods
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 8 inches: fine sand
E - 8 to 18 inches: fine sand
Bh - 18 to 37 inches: fine sand
E' - 37 to 45 inches: fine sand
B'h - 45 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.06 to 2.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands
(G153AA141FL)
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands
(G153AA141FL)
Hydric soil rating: No

Minor Components

Leon, hydric

Percent of map unit: 5 percent
Landform: Flatwoods
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Mandarin

Percent of map unit: 3 percent
Landform: Rises
Landform position (three-dimensional): Rise, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G153AA131FL)
Hydric soil rating: No

Mascotte

Percent of map unit: 3 percent
Landform: Flatwoods
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

17—Urban land

Map Unit Composition

Urban land: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform: Marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: No parent material

Interpretive groups

Land capability classification (irrigated): None specified
Forage suitability group: Forage suitability group not assigned (G153AA999FL)
Other vegetative classification: Forage suitability group not assigned (G153AA999FL)
Hydric soil rating: Unranked

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Custom Soil Resource Report

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