



**AGENDA  
TECHNICAL REVIEW COMMITTEE  
REGULAR MEETING  
OCTOBER 28, 2021  
9:00 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 October 14, 2021 Regular Meeting.
- 5. DISCUSSION ITEMS**
  - 5.1 Pre-application Discussion - Anthony DiBuono, 115 Centre Street, to discuss adding an outdoor seating area.
  - 5.2 Pre-application Discussion - Jose Miranda, 601 Centre Street - to discuss a two-phase project to include interior renovation and enclosing a portion of covered porch area.
- 6. NEW BUSINESS**
  - 6.1 SPR 2021-0012: Wade Olszewski, CPH, Inc., agent for Property Management Support Trustee of Sadler Square Land Trust - 2112 Sadler Rd. - Demolition of existing building and associated utilities and construction of a 27,862 SF grocery store.
  - 6.2 SPR 2021-0013: Dan McCranie, McCranie & Associates, 3462 to 3426 1st Avenue - Three 2-unit townhomes and one 3-unit townhome.
- 7. OLD BUSINESS**
- 8. DEVELOPMENT INQUIRIES FROM APPLICANTS NOT ON THE AGENDA - DISCUSSION ONLY, NO ACTION TO BE TAKEN.**
- 9. COMMITTEE BUSINESS**
  - 9.1 City Tree Unit
    - 9.1.1 Interdepartmental coordination of watering methods and schedules
    - 9.1.2 Application of GIS technology

9.2 Planned Plantings

9.2.1 Housing Authority

9.2.2 Main Beach parking islands

9.2.3 Downtown

9.3 Downtown Streetscape Design Guidelines

9.3.1 Sidewalk options

**10. ADJOURNMENT**

**NEXT REGULAR TRC MEETING IS SCHEDULED FOR NOVEMBER 4, 2021**

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  
OCTOBER 14, 2021**

- 1. CALL TO ORDER 9:02**
- 2. ROLL CALL**

**MEMBERS PRESENT:**

Jacob Platt, Planning  
Michelle Forstrom, Code Enforcement  
Jason Higginbotham, Fire

Don Kukla, Building  
Andre Desilet, Stormwater/Utilities  
Charlie George, City Engineer

**OTHERS PRESENT:**

Taylor Hartmann, Recording Secretary

- 3. PLEDGE OF ALLEGIANCE**
- 4. APPROVAL OF MINUTES**

4.1 Approval of Minutes for the September 23, 2021 Regular Meeting.

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

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

- 5. NEW BUSINESS**

5.1 SPR 2021-0012: Wade Olszewski, CPH, Inc., agent for Property Management Support Trustee of Sadler Square Land Trust - 2112 Sadler Rd. - Demolition of existing building and associated utilities and construction of a 27,862 SF grocery store.

Mr. Platt stated that the applicants requested a postponement until the October 28, 2021, TRC meeting.

- 6. DEVELOPMENT INQUIRIES FROM APPLICANTS NOT ON THE AGENDA - DISCUSSION ONLY, NO ACTION TO BE TAKEN.**

Asa Gillette, was present to speak about a proposed airplane hangar off of Jamestown Rd. The interior will include a small restroom and office space.

Mr. Desilet confirmed that the proposed project will follow the existing drainage plan approved by St. John's River Water Management District.

Mr. Platt confirmed that Mr. Gillette is in communication with the airport manager regarding setback requirements.

Mr. Gillette will return for a full site plan review.

- 7. COMMITTEE BUSINESS**

**DRAFT**

7.1 SPR 2021-0011 McJunking Station\_Sign Off

**8. ADJOURNMENT 9:13**

---

**Jacob Platt**



**Print**

**Technical Review Committee (TRC): Pre-Application Meeting Request -  
Submission #8225**

**Date Submitted: 10/20/2021**

# Technical Review Committee (TRC) Pre-Application Meeting Request

USE THIS FORM TO Submit a project for input and guidance from the Technical Review Committee, the City group responsible for reviewing site plans and commercial projects. TRC pre-application meetings are a free service provided by the City of Fernandina Beach to help guide a project through the development review and permitting process. The TRC pre-application meeting is a meeting between an applicant and representatives of City departments responsible for reviewing applications for the purpose of exchanging information on the potential development of a site. This may include providing information on permissible uses of the site; required improvements; infrastructure requirements; any applicable design standards; any potential regional, state or federal standards; requirements for supporting plans, documents and studies; and any applicable design standards.

## Fees

None

## IMPORTANT NOTES

A change of use occurs when an existing use is replaced by a different use, as listed in table 2.03.02. A proposed change of use shall be subject to the pre-application conferences as set forth in 11.01.02. A change of use shall not require a local development order when all the conditions of 11.00.05 are met. The determination that a proposed use or development constitutes a change of use is an administrative decision subject to appeal. When a local development order is required due to a proposed change of use, all standards and procedures of the Comprehensive Plan and LDC shall apply to the proposed new use.

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



Local Development Orders for a Change of Use – see LDC Section 11.00.05



Pre-Application Conference – see LDC section 11.01.02

### The LDC is available for review at

[www.fbfl.us/LDC](http://www.fbfl.us/LDC)

### Application Requirements

All applications and related documents for a Pre-Application Meeting must be submitted by 12:00 p.m. five (5) business days before the scheduled meeting. Required documents are as follow:



A complete application.



Site plans or scaled drawings; and



Any other files that illustrate the proposed project.

## PROPERTY INFORMATION

[Property information can be found at the Nassau County Property Appraiser's Website's Map Search](#)

## Site Address\*

115 Centre Street

City\*

Fernandina Beach

State\*

FL

Zip\*

32034

Parcel ID #(s)\*

00-00-31-1800-0001-0310

Lot

Block

Subdivision

Zoning District\*

C-1

Future Land Use Designation\*

Central Business District

Overlay District

Downtown Historic District

Size of Property (acres)\*

.26

Present Property Use\*

Nightclub

Wetlands\*

No

Flood Zone\*

AE

Coastal Construction Control Line (CCCL)\*

No

## CONTACT INFORMATION

Applicant or interested party who will be present at the meeting.

First Name\*

Anthony

Last Name\*

DiBuono

Company (if applicable)

Amelia Underwriters

Telephone Number\*

904-432-1052

E-mail Address\*

tdibuono@ameliaunderwriters.com

## PROJECT INFORMATION

Project Name

Project Type\*

Commercial

Project Description\*

Outdoor Seating Area

Describe your project in detail

Proposed Access Road\*

North 2nd Street

Rd Maintenance Jurisdiction \*

City Maintained

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\*

Anthony

Applicant Last Name\*

DiBuono

Today's Date\*

10/20/2021

Upload Supporting Documentation\*

15146.pdf

Upload 2

Decantery.pdf

Upload 3

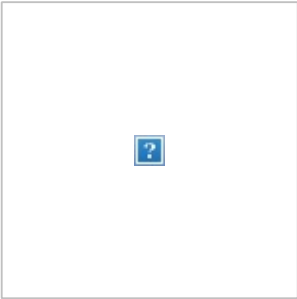
Choose File No file selecte

Upload 4

Choose File No file selecte

Upload 5

Choose File No file selecte



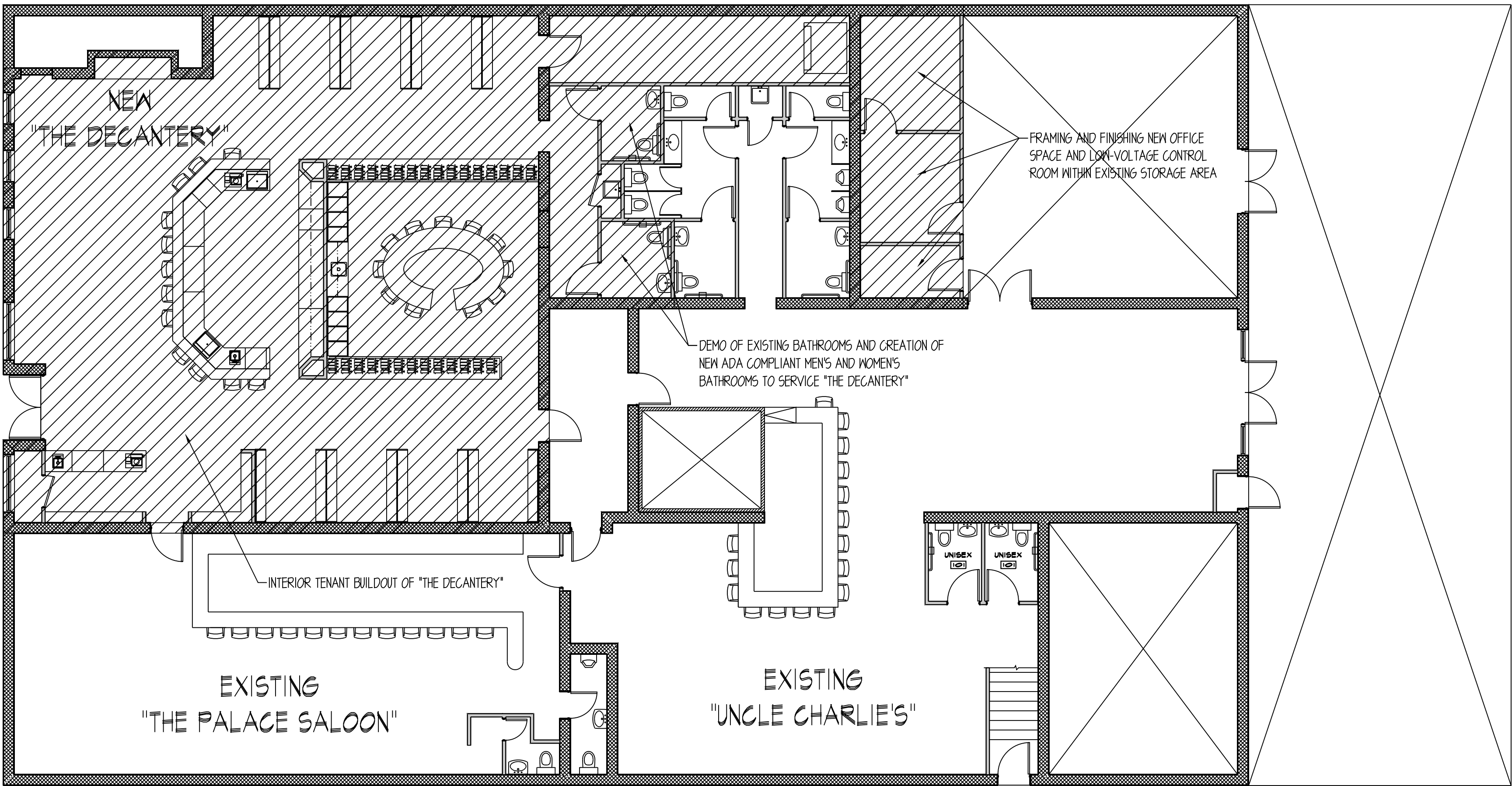
DEPARTMENT OF PLANNING & CONSERVATION

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



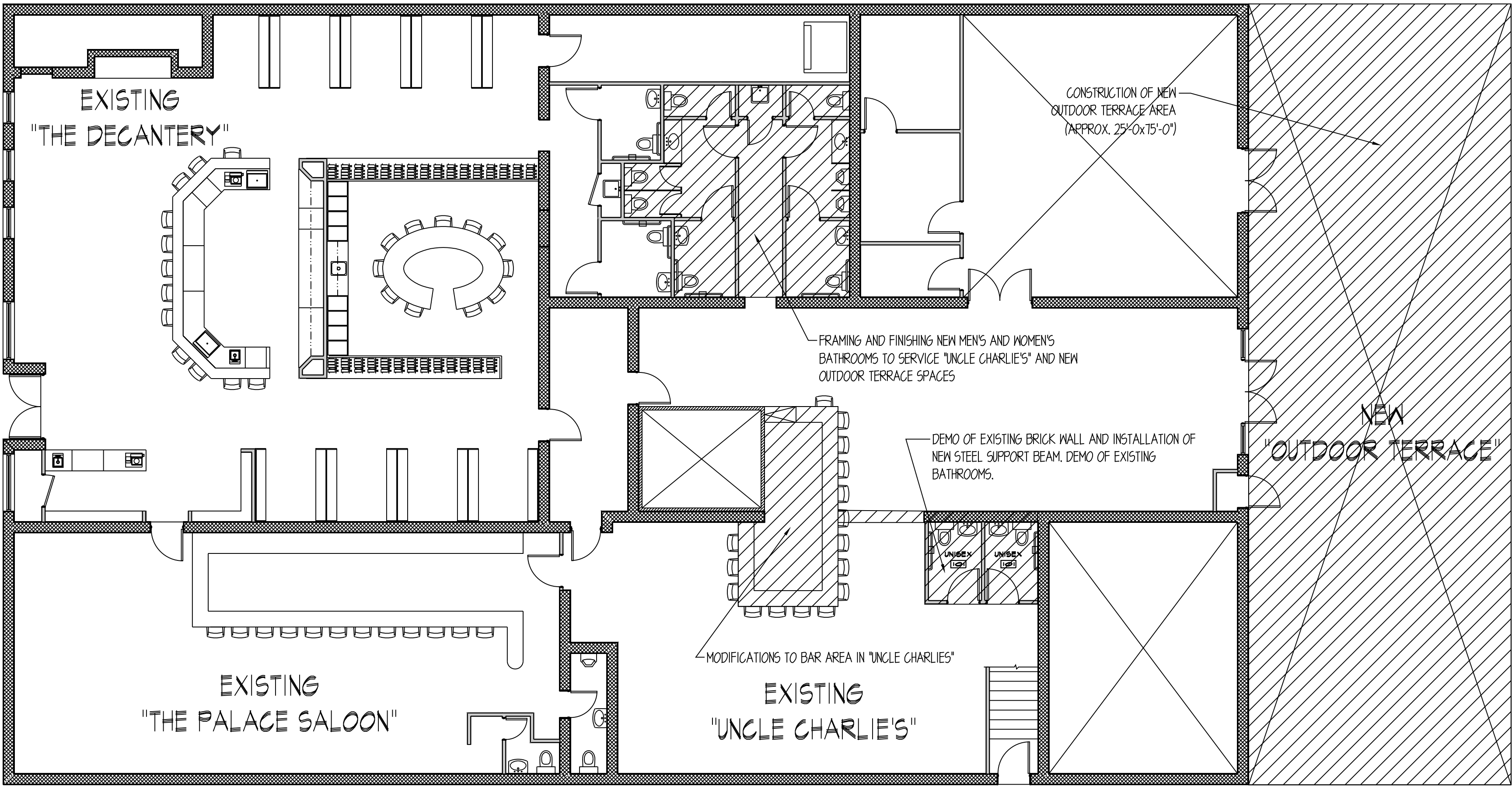
DESIGN CRITERIA

- ☒ APPLICABLE CODES:
  - ☒ FLORIDA BUILDING CODE, 5th EDITION (2014)
  - ☒ 2011 NATIONAL ELECTRIC CODE (NFPA 70)
  - ☒ FLORIDA ENERGY CONSERVATION CODE, 5th EDITION (2014)
  - ☒ A.G.I. 318-08, A.G.I. 530.08
  - ☒ ASCE 5-08
  - ☒ A.I.S.C. - 13th Ed.
- ☒ LEVEL OF ALTERATION PER FBC 2014: LEVEL 2



ONE  
A-1 1/8" = 1' - 0"

PHASE ONE



TWO  
A-1 1/8" = 1' - 0"

PHASE TWO (FUTURE PERMIT)

| Revisions |  | Description | Date |
|-----------|--|-------------|------|
| No.       |  |             |      |
|           |  |             |      |
|           |  |             |      |
|           |  |             |      |
|           |  |             |      |

| PROGRESS PRINTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               | Restrictions |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------|
| Issue Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Issued To/For |              |
| 5-4-2017                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | PERMIT SETS   |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |              |
| Not Published + All Rights Reserved<br>These drawings and specifications are instruments of service and shall remain the property of the architect unless the project for which they are prepared is completed. No part of these drawings or specifications shall be reproduced or transmitted in any form or by any means electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without written permission from the architect. |               |              |

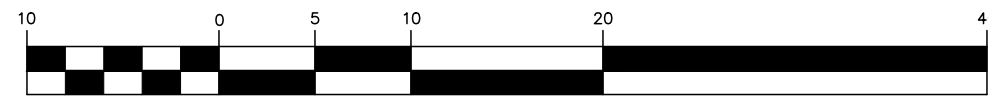


# MAP OF BOUNDARY & LIMITED TOPOGRAPHIC SURVEY

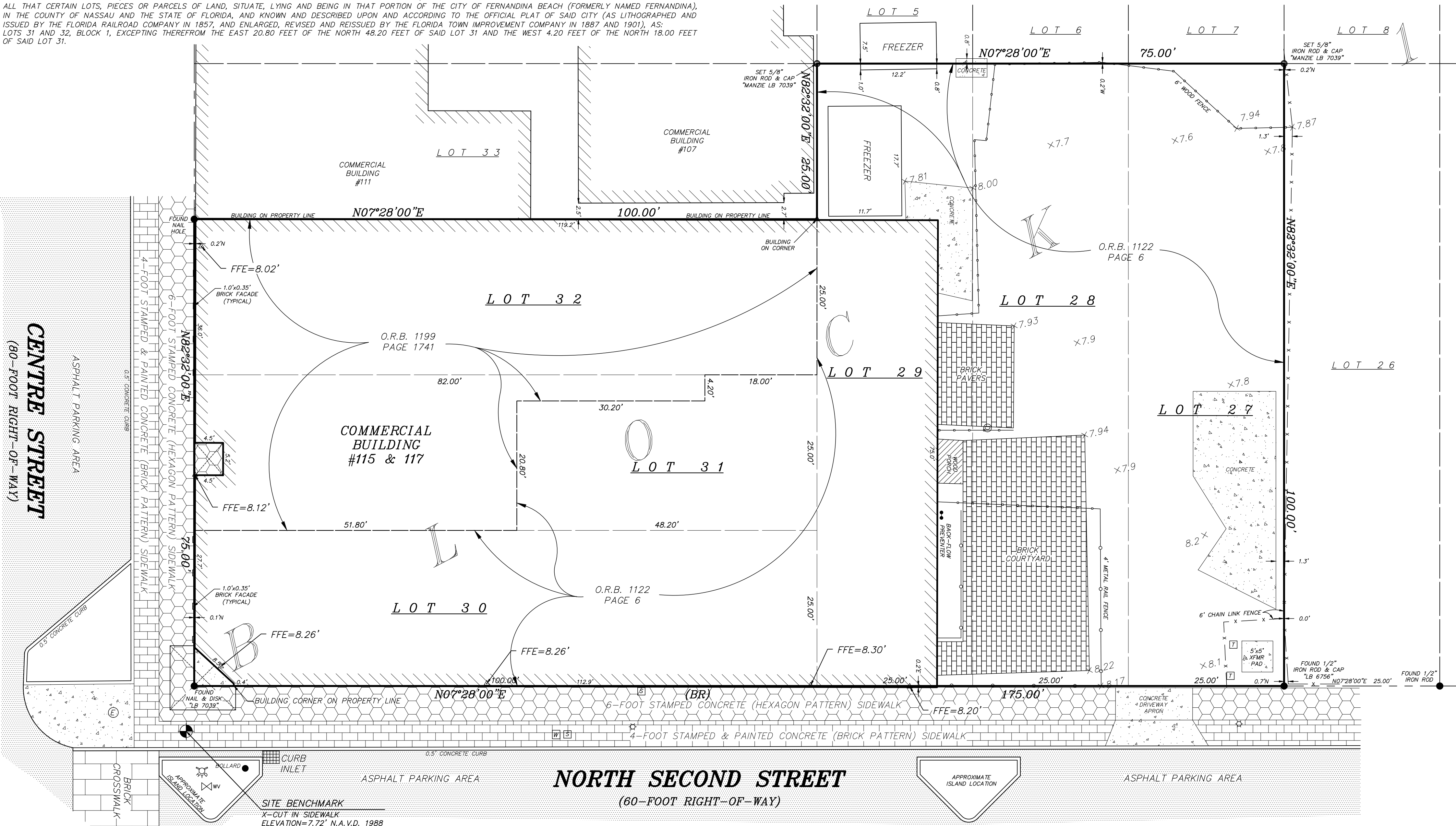
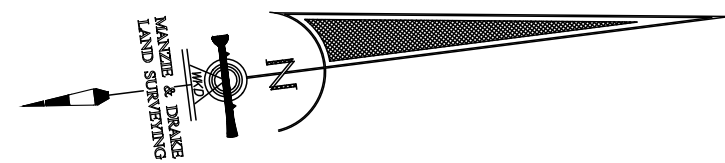
OFFICIAL RECORDS BOOK 1122, PAGES 6 THROUGH 8 OF THE PUBLIC RECORDS OF NASSAU COUNTY, FLORIDA.  
ALL THAT CERTAIN PIECE, PARCEL OR TRACT OF LAND LYING AND BEING IN THE CITY OF FERNANDINA BEACH (FORMERLY NAMED FERNANDINA), IN THE COUNTY OF NASSAU AND THE STATE OF FLORIDA, AND KNOWN AND DESCRIBED UPON AND ACCORDING TO THE OFFICIAL PLAT OF SAID CITY (AS LITHOGRAPHED AND ISSUED BY THE FLORIDA RAILROAD COMPANY IN 1857, AND ENLARGED, REVISED AND REISSUED BY THE FLORIDA TOWN IMPROVEMENT COMPANY IN 1887 AND 1901) KNOWN AND DESCRIBED AS FOLLOWS:  
LOTS 27, 28, 29 AND 30, BLOCK 1, TOGETHER WITH THE EAST 20.80 FEET OF LOT 31, BLOCK 1, TOGETHER WITH THE WEST 4.20 FEET OF THE NORTH 18.00 FEET OF LOT 31, BLOCK 1.

OFFICIAL RECORDS BOOK 1199, PAGES 1741 THROUGH 1743 OF THE PUBLIC RECORDS OF NASSAU COUNTY, FLORIDA.  
ALL THAT CERTAIN LOTS, PIECES OR PARCELS OF LAND, SITUATE, LYING AND BEING IN THAT PORTION OF THE CITY OF FERNANDINA BEACH (FORMERLY NAMED FERNANDINA), IN THE COUNTY OF NASSAU AND THE STATE OF FLORIDA, AND KNOWN AND DESCRIBED UPON AND ACCORDING TO THE OFFICIAL PLAT OF SAID CITY (AS LITHOGRAPHED AND ISSUED BY THE FLORIDA RAILROAD COMPANY IN 1857, AND ENLARGED, REVISED AND REISSUED BY THE FLORIDA TOWN IMPROVEMENT COMPANY IN 1887 AND 1901), AS:  
LOTS 31 AND 32, BLOCK 1, EXCEPTING THEREFROM THE EAST 20.80 FEET OF THE NORTH 48.20 FEET OF SAID LOT 31 AND THE WEST 4.20 FEET OF THE NORTH 18.00 FEET OF SAID LOT 31.

GRAPHIC SCALE



( IN FEET )  
1 inch = 10 ft.



## SURVEY NOTES:

- The "Legal Description" hereon is in accord with the description provided by the client
- Underground Improvements were not located or shown.
- Lands shown hereon were not abstracted by this office for easements, rights-of-way, ownership or other instruments of record.
- Bearings shown hereon are based on an assumed bearing of N07°28'00"E for the westerly right-of-way line of North Second Street. The bearing reference line is indicated as thus (BR).
- The property shown hereon lies within flood zone "AE 9" as per F.E.M.A. Flood Insurance Rate Map, Panel "12089C 0237 G", Dated "08/02/2017". Flood Zone information listed above and shown on this survey is provided as a courtesy and is approximate at best. All data should be verified by Nassau County Building Department for accuracy. We assume no liability for its accuracy. Flood Zone information is not covered by the certification hereon and is not required to be shown per Chapter 5J-17, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes.
- Site Benchmark is as shown hereon.
- Elevations shown hereon refer to North American Vertical Datum of 1988. (N.A.V.D. '88)
- The Reference Benchmark is a nail & disk stamped "Manzie LB 7039" at the southwest block corner of Block 10 (being 60' east of the southeast corner of subject property). (Manzie & Drake Project No. 16226 in Elevation Book 6, Page 54) (Elevation = 8.69' N.A.V.D. 1988)

## LEGEND

- CONCRETE FLATWORK
- ELECTRICITY METER
- FIRE HYDRANT
- LIGHT POLE
- COVERED AREA
- SEWER CLEANOUT
- TELEPHONE PEDESTAL
- WATER METER
- WOOD OR VINYL FENCE
- WOOD FLATWORK
- WATER VALVE
- ELECTRIC SERVICE MANHOLE
- BACKFLOW PREVENTION SYSTEM
- BENCHMARK
- CHAIN LINK OR WIRE FENCE
- METAL RAIL FENCE
- FINISHED FLOOR ELEVATION
- NORTH AMERICAN VERTICAL DATUM
- BEARING REFERENCE
- OFFICIAL RECORDS BOOK
- TRANSFORMER

THE INFORMATION SHOWN HEREON MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

MICHAEL A. MANZIE, P.L.S. 4069

MANZIE & DRAKE LAND SURVEYING

117 South Ninth Street, Fernandina Beach, FL 32034  
(904) 491-5700 www.ManzieAndDrake.com  
Certificate of Authorization Number "LB 7039"

"OUR SIGHTS ARE ON THE FUTURE,  
SET YOUR SITES ON US."

SCALE: 1"=10' JOB NO: 15146 DATE: 5/20/2020 CADD: WKD  
F.B. NO: X-337 PAGE NO: 20 FIELD CREW: JM FILE NO: B-1140

**Print**

**Technical Review Committee (TRC): Pre-Application Meeting Request -  
Submission #8226**

**Date Submitted: 10/20/2021**

# Technical Review Committee (TRC) Pre-Application Meeting Request

USE THIS FORM TO Submit a project for input and guidance from the Technical Review Committee, the City group responsible for reviewing site plans and commercial projects. TRC pre-application meetings are a free service provided by the City of Fernandina Beach to help guide a project through the development review and permitting process. The TRC pre-application meeting is a meeting between an applicant and representatives of City departments responsible for reviewing applications for the purpose of exchanging information on the potential development of a site. This may include providing information on permissible uses of the site; required improvements; infrastructure requirements; any applicable design standards; any potential regional, state or federal standards; requirements for supporting plans, documents and studies; and any applicable design standards.

## Fees

None

## IMPORTANT NOTES

A change of use occurs when an existing use is replaced by a different use, as listed in table 2.03.02. A proposed change of use shall be subject to the pre-application conferences as set forth in 11.01.02. A change of use shall not require a local development order when all the conditions of 11.00.05 are met. The determination that a proposed use or development constitutes a change of use is an administrative decision subject to appeal. When a local development order is required due to a proposed change of use, all standards and procedures of the Comprehensive Plan and LDC shall apply to the proposed new use.

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



Local Development Orders for a Change of Use – see LDC Section 11.00.05



Pre-Application Conference – see LDC section 11.01.02

### The LDC is available for review at

[www.fbfl.us/LDC](http://www.fbfl.us/LDC)

### Application Requirements

All applications and related documents for a Pre-Application Meeting must be submitted by 12:00 p.m. five (5) business days before the scheduled meeting. Required documents are as follow:



A complete application.



Site plans or scaled drawings; and



Any other files that illustrate the proposed project.

## PROPERTY INFORMATION

[Property information can be found at the Nassau County Property Appraiser's Website's Map Search](#)

## Site Address\*

601 Centre Street



City\*

Fernandina Beach

State\*

FL

Zip\*

32034

Parcel ID #(s)\*

00-00-31-1800-0036-0010

Lot

various

Block

36

Subdivision

Zoning District\*

C-3

Future Land Use Designation\*

Central Business District

Overlay District

Downtown Historic District

Size of Property (acres)\*

1.6

Present Property Use\*

Church, Day Care, Fellowship Hall

Wetlands\*

No

Flood Zone\*

X, area of minimal flood

Coastal Construction Control Line (CCCL)\*

No

## CONTACT INFORMATION

Applicant or interested party who will be present at the meeting.

First Name\*

Jose

Last Name\*

Miranda

Company (if applicable)

Miranda Architects

Telephone Number\*

9042614586

E-mail Address\*

jmirandaarch@gmail.com

## PROJECT INFORMATION

Project Name

Memorial UMC Maxwell Hall Renovation

Project Type\*

Commercial

Project Description\*

Two phase project to include interior renovation and enclosing portion of covered porch area.

Describe your project in detail

Proposed Access Road\*

North 6th Street

Rd Maintenance Jurisdiction \*

City Maintained

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\*

Jose

Applicant Last Name\*

Miranda

Today's Date\*

10/20/2021

Upload Supporting Documentation\*

MH1 MUMC Maxwell Hall Master Renovation Concept Plan 042319.pdf

Upload 2

Choose File No file selected

Upload 3

Choose File No file selected

Upload 4

Choose File No file selected

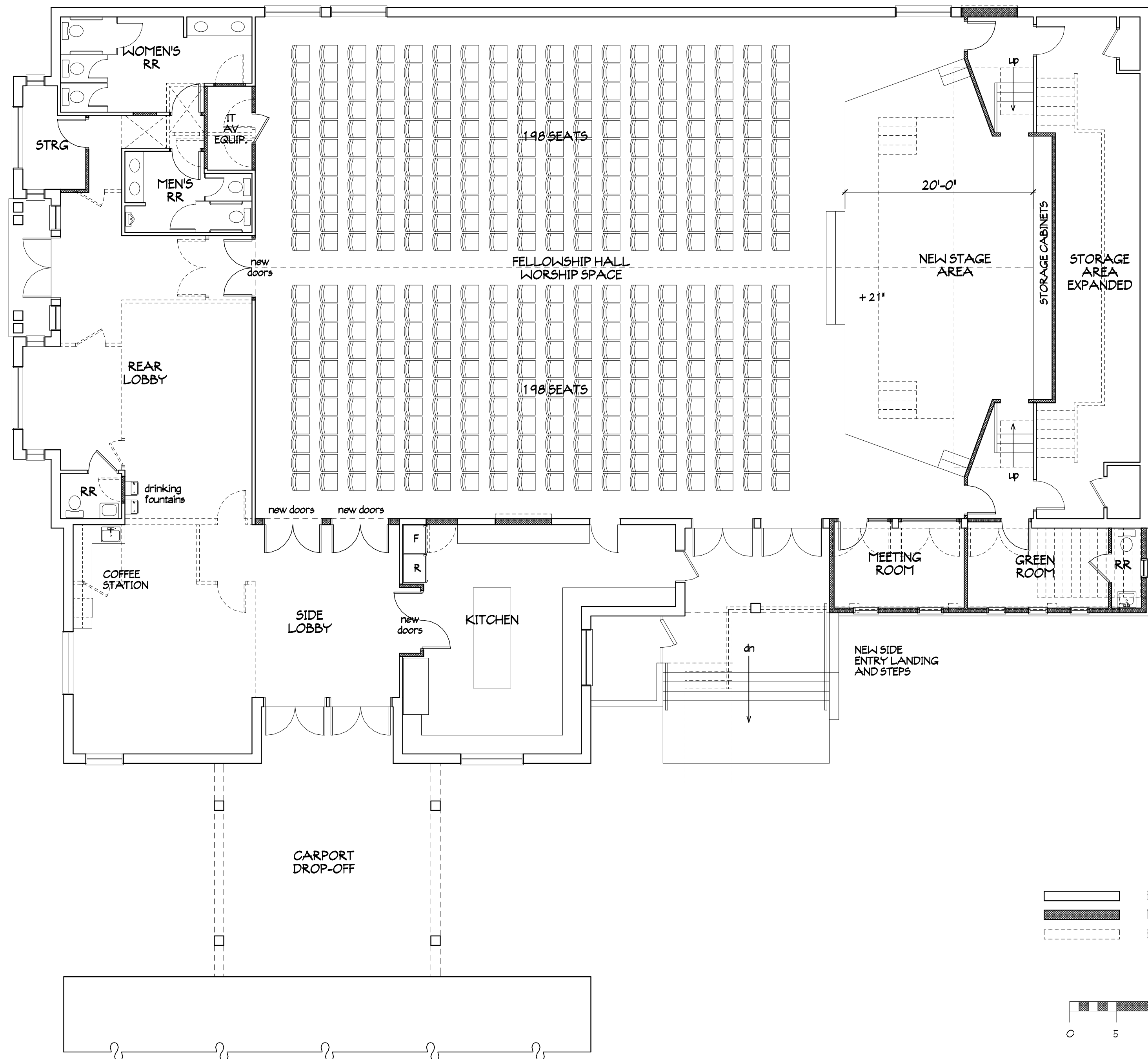
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Choose File No file selected

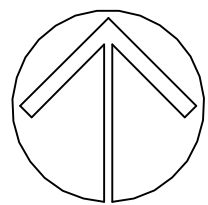
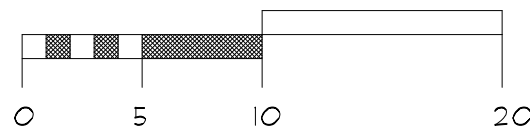


DEPARTMENT OF PLANNING & CONSERVATION

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



——— EXISTING WALLS TO REMAIN  
 ■■■ NEW WALLS  
 - - - EXISTING WALLS TO BE REMOVED



RENOVATION FLOOR PLAN -- MAXWELL HALL

1/8=1'-0"

MH 1

CONCEPTUAL DESIGN FOR THE  
**M.U.M.C. MAXWELL HALL RENOVATION**  
 NORTH 6TH STREET, FERNANDINA BEACH, FLORIDA 32034



**MIRANDA ARCHITECTS**  
 309 1/2 CENTRE STREET, SUITE 206  
 FERNANDINA BEACH, FL 32034  
 904.261.4586 TEL  
 FL. REG. NO. AA 000026

This drawing and the design  
 ideas and concepts it  
 represents is the property of  
 Jose L. Miranda, Jr., Architect,  
 P.A. and is not to be  
 reproduced or copied in whole  
 or in part. It is not to be used  
 on any other project and is  
 to be returned on request.

|         |                        |
|---------|------------------------|
| FILE    | MUMC MAXWELL HALL RENO |
| JOB NO. | M140218                |
| DRAWN   | JLM                    |
| CHECKED | JLM                    |
| DATE    | 04-23-19               |

Technical Review Committee: Application - Submission #8070

Date Submitted: 9/17/2021

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. \$400

☐Change of Use Determination Letter \$50

☐Engineering Review (Consultant Hourly Rate) \$125

## TRC\_2021 Meeting Calendar



December 2020 meeting dates are: December 10, 2020 & December 17, 2020

### IMPORTANT NOTES

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

**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**

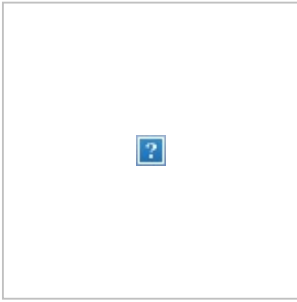
[www.fbfl.us/LDC](http://www.fbfl.us/LDC)

#### **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\***

2112 Sadler Road

**City\***

Fernandina Beach

**State\***

FL

**Zip\***

32034

**Parcel ID #(s)**

29-3N-28-0000-0004-0080

**Lot**

Govt Lot 5

**Block**

**Subdivision**

**Zoning District**

C-2

**Future Land Use Designation\***

General Commercial

**Overlay District\***

None

**Size of Property (acres)\***

12.44

**Present Property Use\***

COMMUNITY 001600

**Wetlands\***

No

**Flood Zone\***

X, area of minimal flood

**Coastal Construction Control Line (CCCL)\***

No

## OWNER OF RECORD

As recorded with the Nassau County Property Appraiser

**First Name\***

Mike

**Last Name\***

Herzberg

**Company (if applicable)**

Property Management Support Inc Trustee of Sadler Square Land Trust

**Mailing Address\***

1 Sleiman Parkway Ste #270

**City\***

Jacksonville

**State\***

Florida

**Zip\***

32216

**Telephone Number\***

9048074242

**Email Address\***

Mherzberg@sleiman.com

## 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**

Wade

**Last Name**

Olszewski

**Company (if applicable)**

CPH, Inc.

**Mailing Address**

5200 Belfort Road, Suite 220

**City**

Jacksonville

**State**

Florida

**Zip**

32256

**Telephone Number**

9043320999

**Email Address**

ksheffield@cphcorp.com

## PROJECT INFORMATION

**Project Type\***

Site Plan Review

**Project Name**

Sadler Square Improvements



Proposed Access Road\*

N/A

Rd Maintenance Jurisdiction\*

Unimproved ROW

Project Estimated Cost\*

5,000,000

Description of Request\*

Demolition of existing building and associated utilities. Construction of a 27,862 SF grocery store that includes associated utilities, parking lot improvements, and a retaining wall addition to the existing stormwater pond adjacent of the backside of the proposed building. The drainage patterns will remain the same.

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 distr

☐

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\*

Wade

### Applicant Last Name\*

Olszewski

### Today's Date\*

9/17/2021

### Upload Supporting Documentation\*

Civil Plans SS.pdf

### Upload 2

Landscape Plans SS.pdf

### Upload 3

Owners Authorization Signed.pdf

### Upload 4

Property Card.pdf

### Upload 5

Choose File

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Upload 6

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Upload 7

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DEPARTMENT OF PLANNING & CONSERVATION

204 Ash Street | Fernandina Beach, FL 32034 | 904 310-3480 | [www.fbfl.us/planning](http://www.fbfl.us/planning)

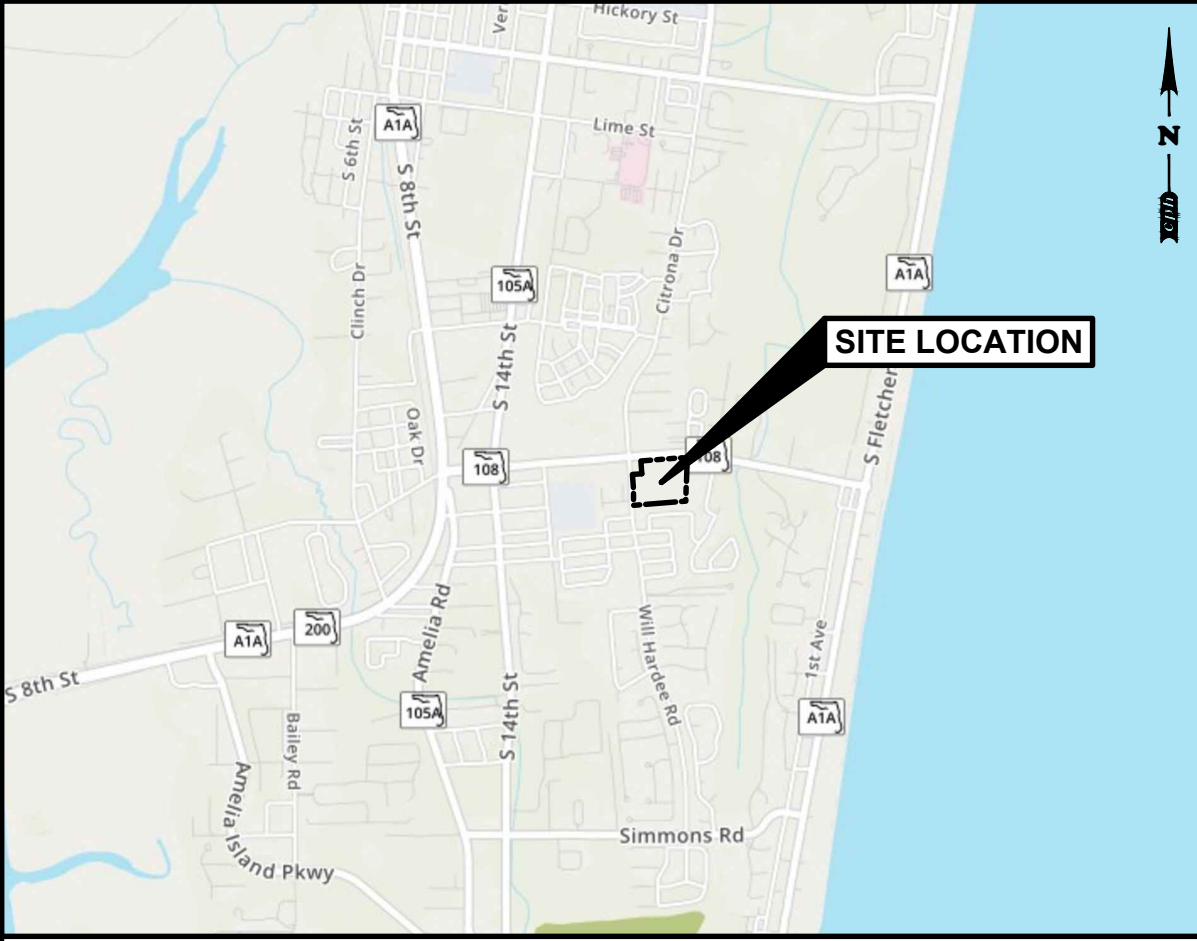


J:\T3209\Civil\DWG\_Current\_Plan\_Set\T3209-COVER.dwg, 9/17/2021 9:21:20 AM, Schneider, David, \_cph - Standard.sib

CONSTRUCTION PLANS FOR  
***SADLER SQUARE IMPROVEMENTS***

FOR  
**SLEIMAN ENTERPRISES**  
**3818 SOUTH 3RD STREET**  
**CITY OF FERNANDINA BEACH / FLORIDA**  
**SECTION 22 - TOWNSHIP 3 NORTH - RANGE 28 EAST**

PARCEL ID: 181416 1110

| ABBREVIATION/<br>SIGN LEGEND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CONSULTANTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | UTILITY<br>PROVIDERS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | APPROVAL<br>AGENCIES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | INDEX OF SHEETS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | MAPS                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <div><div><div>A/C</div><div>APPROX</div><div>ASPH</div><div>AVG</div><div>BFP</div><div>BLK</div><div>BLDG</div><div>BOC</div><div>BOW</div><div>C &amp; G</div><div>CE</div><div>CL</div><div>CMP</div><div>CO</div><div>CONC</div><div>DEPT</div><div>DS</div><div>ELEC</div><div>EM</div><div>ELEV</div><div>EOP</div><div>FDC</div><div>FDOT</div><div>FF</div><div>FG</div><div>FH</div><div>FM</div><div>FOC</div><div>FP&amp;L</div><div>GOV'T</div><div>HB</div><div>HC</div><div>HDPPE</div><div>INV</div><div>IRR</div><div>ME</div><div>MES</div><div>MH</div><div>PVC</div><div>PVMT</div><div>R</div><div>RCP</div><div>REV</div><div>R/W</div><div>SF</div><div>SW</div><div>TOB</div><div>TOE</div><div>TW</div><div>TYP</div><div>UNK</div><div>UTL</div><div>W</div><div>WV</div></div><div><div>- AIR CONDITIONER</div><div>- APPROXIMATE</div><div>- ASPHALT</div><div>- AVERAGE</div><div>- BACK FLOW PREVENTER</div><div>- BLOCK</div><div>- BUILDING</div><div>- BACK OF CURB</div><div>- BACK OF WALL</div><div>- CURB &amp; GUTTER</div><div>- CONSTRUCTION ENTRANCE</div><div>- CENTERLINE</div><div>- CORRUGATED METAL PIPE</div><div>- CLEAN OUT</div><div>- CONCRETE</div><div>- DEPARTMENT</div><div>- DOWN SPOUT</div><div>- ELECTRIC</div><div>- ELECTRICAL METER</div><div>- ELEVATION</div><div>- EDGE OF PAVEMENT</div><div>- FIRE DEPARTMENT CONNECTION</div><div>- FLORIDA DEPARTMENT OF TRANSPORTATION</div><div>- FINISH FLOOR</div><div>- FINISH GRADE</div><div>- FIRE HYDRANT</div><div>- FORCE MAIN</div><div>- FACE OF CURB</div><div>- FLORIDA POWER AND LIGHT</div><div>- GOVERNMENT</div><div>- HOSE BIB</div><div>- ADA ACCESSIBLE</div><div>- HIGH DENSITY POLYETHYLENE PIPE</div><div>- INVERT</div><div>- IRRIGATION</div><div>- MATCH EXISTING ELEVATION</div><div>- MITERED END SECTION</div><div>- MANHOLE</div><div>- POLYVINYL CHLORIDE PIPE</div><div>- PAVEMENT</div><div>- RADIUS</div><div>- REINFORCED CONCRETE PIPE</div><div>- REVISION</div><div>- RIGHT-OF-WAY</div><div>- SQUARE FEET</div><div>- SIDEWALK</div><div>- TOP OF BANK</div><div>- TOE OF SLOPE</div><div>- TOP OF WALL</div><div>- TYPICAL</div><div>- UNKNOWN</div><div>- UNDERGROUND TELEPHONE LINES</div><div>- WITH</div><div>- WATER VALVE</div></div></div> | <p><b>OWNER</b></p> <p>SADDLER SQUARE LAND TRUST<br/>1 SLEIMAN PARKWAY<br/>JACKSONVILLE, FLORIDA 32216<br/>ATTN.: DONALD J. BATEH<br/>(904) 731-4875</p> <p><b>ENGINEER</b></p> <p>CPH, INC.<br/>5200 BELFORT ROAD, SUITE 220<br/>JACKSONVILLE, FLORIDA 32256<br/>ATTN.: WADE P. OLSZEWSKI, P.E.<br/>(904) 332-0999</p> <p><b>SURVEYOR</b></p> <p>SOUTHEASTERN SURVEYING AND MAPPING CORPORATION<br/>8641 BAYPINE ROAD, SUITE 5<br/>JACKSONVILLE, FLORIDA 32256<br/>ATTN.: ROBERT W. GARDNER, PSM<br/>(904) 737-5990</p> <p><b>LANDSCAPE ARCHITECT</b></p> <p>JANET O. WHITMILL, RLA, INC.<br/>P.O. BOX 5212<br/>JACKSONVILLE, FLORIDA 32247-5212<br/>ATTN.: JANET O. WHITMILL, RLA<br/>(904) 398-7688</p> | <p><b>ELECTRIC</b></p> <p>FLORIDA PUBLIC UTILITIES<br/>P.O. BOX 418<br/>FERNANDINA BEACH, FLORIDA 32035<br/>(904) 261-3663</p> <p><b>WATER</b></p> <p>CITY OF FERNANDINA BEACH<br/>CPH, INC.<br/>204 ASH STREET<br/>FERNANDINA BEACH, FLORIDA 32034<br/>(904) 277-7305</p> <p><b>SEWER</b></p> <p>CITY OF FERNANDINA BEACH<br/>CPH, INC.<br/>204 ASH STREET<br/>FERNANDINA BEACH, FLORIDA 32034<br/>(904) 277-7305</p> <p><b>GAS</b></p> <p>FLORIDA PUBLIC UTILITIES<br/>P.O. BOX 418<br/>FERNANDINA BEACH, FLORIDA 32035<br/>(904) 261-3663</p> | <p><b>CITY OF FERNANDINA BEACH</b></p> <p>204 ASH STREET<br/>FERNANDINA BEACH, FLORIDA 32034<br/>(904) 209-0660</p> <p><b>WATER MANAGEMENT DISTRICT</b></p> <p>ST. JOHNS RIVER WATER MANAGEMENT DISTRICT<br/>7775 BAYMEADOWS WAY, SUITE 102<br/>JACKSONVILLE, FLORIDA 32256<br/>ATTN.: EVERETT FRYE<br/>(904) 448-7913</p> <p><b>STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION</b></p> <p>NORTHEAST DISTRICT<br/>8800 BAYMEADOWS WAY WEST<br/>JACKSONVILLE, FLORIDA 32256<br/>ATTN.: REVIEWER<br/>(904) 256-1700</p> <p><b>FLORIDA DEPARTMENT OF TRANSPORTATION</b></p> <p>DISTRICT 2<br/>1109 SOUTH MARION AVENUE<br/>LAKE CITY, FLORIDA 32025<br/>ATTN.: LARRY BLAND, PSM<br/>(386) 961-7461</p> | <div><div>C0.1COVER SHEET</div><div>1 OF 5TOPOGRAPHIC SURVEY</div><div>2 OF 5TOPOGRAPHIC SURVEY</div><div>3 OF 5TOPOGRAPHIC SURVEY</div><div>4 OF 5TOPOGRAPHIC SURVEY</div><div>5 OF 5TOPOGRAPHIC SURVEY</div><div>C0.2GENERAL NOTES</div><div>C0.3GENERAL NOTES</div><div>D0.1DEMOLITION PLAN</div><div>C1.1STORMWATER POLLUTION PREVENTION PLAN</div><div>C1.2STORMWATER POLLUTION PREVENTION PLAN</div><div>C1.3SITE DIMENSION PLAN</div><div>* C1.3A TRUCK TURNING PLAN</div><div>* C1.3B ACCESSIBILITY PLAN</div><div>* C1.3C TEMPORARY SITE ACCESS AND STAGING PLAN</div><div>C1.4GRADING AND STORM DRAINAGE PLAN</div><div>C1.5COMPOSITE UTILITY PLAN</div><div>C5.1CONSTRUCTION DETAIL SHEET</div><div>C5.2CONSTRUCTION DETAIL SHEET</div><div>* C5.4 AGENCY DETAILS SHEET</div><div>* LP-1 LIGHTING PLAN</div><div>L-1LANDSCAPE PLAN</div><div>L-2LANDSCAPE DETAILS PLAN</div><div>* NOT INCLUDED IN THIS SET</div></div> | <div><div><p><b>VICINITY MAP</b></p><p>SCALE: 1" = 3,000'</p></div><div><div><p><b>LOCATION MAP</b></p><p>SCALE: 1" = 500'</p></div><div><div></div></div></div></div> |
| THE SIZE OF THESE PLANS MAY HAVE BEEN SLIGHTLY ALTERED BY REPRODUCTION PROCESSES, THIS MUST BE CONSIDERED WHEN SCALING ANY REPRODUCED PLANS FOR THE PURPOSE OF COLLECTING DATA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | VERTICAL DATUM: NAVD88                                                                                                                                                                                                                                                                                                                                                                                                               |

**OWNER**

SADDLER SQUARE LAND TRUST

1 SLEIMAN PARKWAY

JACKSONVILLE, FLORIDA 32216

ATTN.: DONALD J. BATEH

(904) 731-4875

**ENGINEER**

CPH, INC.

5200 BELFORT ROAD, SUITE 220

JACKSONVILLE, FLORIDA 32256

ATTN.: WADE P. OLSZEWSKI, P.E.

(904) 332-0999

**SURVEYOR**

SOUTHEASTERN SURVEYING AND MAPPING CORPORATION

8641 BAYPINE ROAD, SUITE 5

JACKSONVILLE, FLORIDA 32256

ATTN.: ROBERT W. GARDNER, PSM

(904) 737-5990

**LANDSCAPE ARCHITECT**

JANET O. WHITMILL, RLA, INC.

P.O. BOX 5212

JACKSONVILLE, FLORIDA 32247-5212

ATTN.: JANET O. WHITMILL, RLA

(904) 398-7688

**ELECTRIC**

FLORIDA PUBLIC UTILITIES

P.O. BOX 418

FERNANDINA BEACH, FLORIDA 32035

(904) 261-3663

**WATER**

CITY OF FERNANDINA BEACH

204 ASH STREET

FERNANDINA BEACH, FLORIDA 32034

(904) 277-7305

**SEWER**

CITY OF FERNANDINA BEACH

204 ASH STREET

FERNANDINA BEACH, FLORIDA 32034

(904) 277-7305

**GAS**

FLORIDA PUBLIC UTILITIES

P.O. BOX 418

FERNANDINA BEACH, FLORIDA 32035

(904) 261-3663

**CITY OF FERNANDINA BEACH**

204 ASH STREET

FERNANDINA BEACH, FLORIDA 32034

(904) 209-0660

**WATER MANAGEMENT DISTRICT**

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

7775 BAYMEADOWS WAY, SUITE 102

JACKSONVILLE, FLORIDA 32256

ATTN.: EVERETT FRYE

(904) 448-7913

**STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION**

NORTHEAST DISTRICT

8800 BAYMEADOWS WAY WEST

JACKSONVILLE, FLORIDA 32256

ATTN.: REVIEWER

(904) 256-1700

**FLORIDA DEPARTMENT OF TRANSPORTATION**

DISTRICT 2

1109 SOUTH MARION AVENUE

LAKE CITY, FLORIDA 32025

ATTN.: LARRY BLAND, PSM

(386) 961-7461

C0.1

COVER SHEET

1 OF 5

TOPOGRAPHIC SURVEY

2 OF 5

TOPOGRAPHIC SURVEY

3 OF 5

TOPOGRAPHIC SURVEY

4 OF 5

TOPOGRAPHIC SURVEY

5 OF 5

TOPOGRAPHIC SURVEY

C0.2

GENERAL NOTES

C0.3

GENERAL NOTES

D0.1

DEMOLITION PLAN

C1.1

STORMWATER POLLUTION PREVENTION PLAN

C1.2

STORMWATER POLLUTION PREVENTION PLAN

C1.3

SITE DIMENSION PLAN

\* C1.3A

TRUCK TURNING PLAN

\* C1.3B

ACCESSIBILITY PLAN

\* C1.3C

TEMPORARY SITE ACCESS AND STAGING PLAN

C1.4

GRADING AND STORM DRAINAGE PLAN

C1.5

COMPOSITE UTILITY PLAN

C5.1

CONSTRUCTION DETAIL SHEET

C5.2

CONSTRUCTION DETAIL SHEET

\* C5.4

AGENCY DETAILS SHEET

\* LP-1

LIGHTING PLAN

L-1

LANDSCAPE PLAN

L-2

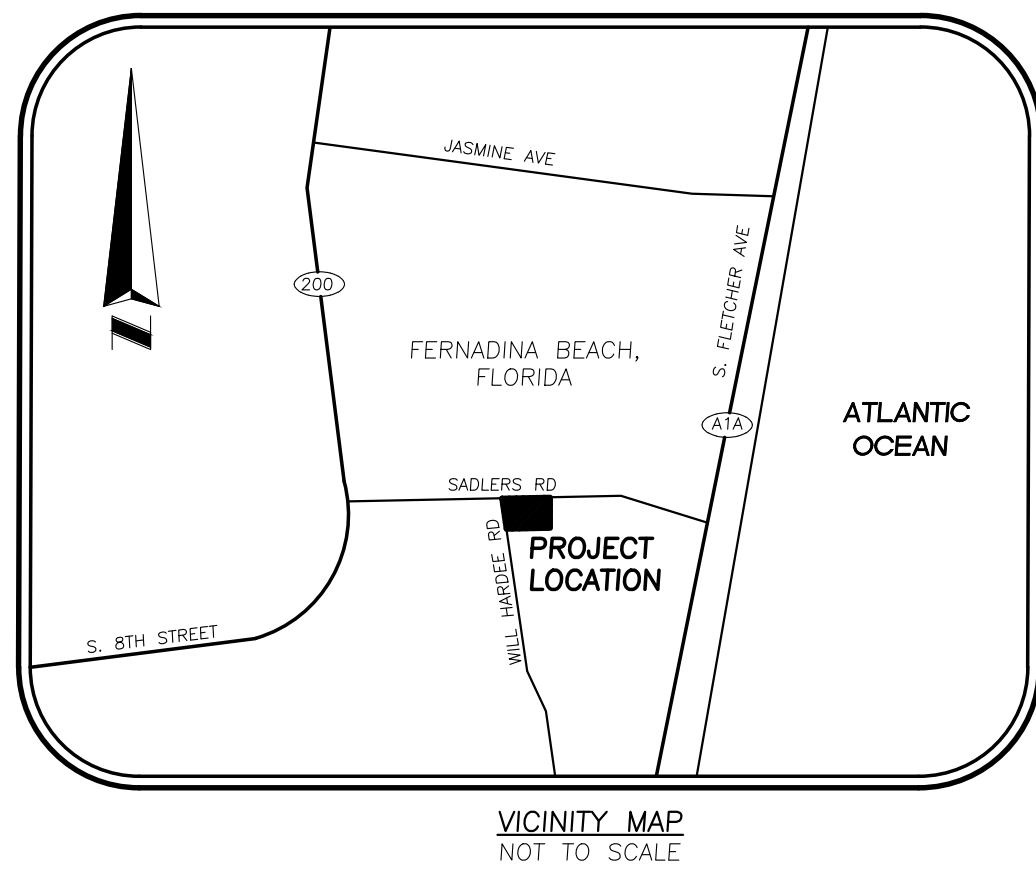
LANDSCAPE DETAILS PLAN

\* NOT INCLUDED IN THIS SET



Z:\PROJECTS\2021\06-18-2021 (66740) SADLER SQUARE TO\PROJECT DATA\66740002\_c.dwg

WILL HARDEE ROAD  
60' RIGHT OF WAY  
OFFICIAL RECORDS BOOK 475, PAGE 276



# TOPOGRAPHIC SURVEY

## SADLER SQUARE, FERNANDINA BEACH, NASSAU COUNTY, FLORIDA

FOR TOPOGRAPHIC DETAILS, SEE SHEETS 2-5

SADLER ROAD  
100' RIGHT OF WAY

PORTION OF GOVERNMENT LOT 5

1 STORY STUCCO & GLASS  
#2156  
73,595 SQ. FT. ±

SITE BENCHMARK #2  
SET NAIL AND DISK  
SSMC TRAV. PT.  
ELEV. = 18.27'

SITE BENCHMARK #1  
SET NAIL AND DISK  
SSMC TRAV. PT.  
ELEV. = 18.00'

- LEGEND & ABBREVIATIONS:**
- |   |                               |                                                                       |                                                |
|---|-------------------------------|-----------------------------------------------------------------------|------------------------------------------------|
| ⊕ | = BENCHMARK                   | ⊕                                                                     | = UNKNOWN MANHOLE                              |
| ⊖ | = BACKFLOW PREVENTER          | ⊕                                                                     | = WATER METER                                  |
| ⊕ | = CLEAN OUT                   | ⊕                                                                     | = WATER VALVE                                  |
| ⊕ | = DRAINAGE MANHOLE            | -X-                                                                   | = CHAINLINK FENCE                              |
| ⊕ | = FLAT GRATE INLET            | -OHT-                                                                 | = OVERHEAD TELEPHONE                           |
| ⊕ | = FIRE HYDRANT                | -OHE-                                                                 | = OVERHEAD ELECTRIC                            |
| ⊕ | = UNKNOWN GATE VALVE          | -GM-                                                                  | = GAS MAIN                                     |
| ⊕ | = GREASE TRAP                 | -TB-                                                                  | = TOP OF BANK                                  |
| ⊕ | = DOWN GUY                    | PVC                                                                   | = POLYVINYL CHLORIDE PIPE                      |
| ⊕ | = LIGHT POLE                  | RCP                                                                   | = REINFORCED CONCRETE PIPE                     |
| ⊕ | = MONITORING WELL             | NAD                                                                   | = NORTH AMERICAN DATUM                         |
| ⊕ | = NAIL W/DISK                 | NAVD                                                                  | = NORTH AMERICAN VERTICAL DATUM                |
| ⊕ | = POST/BOLLARD                | TRAV.PT.                                                              | = TRAVERSE POINT                               |
| ⊕ | = SANITARY MANHOLE            | SSMC                                                                  | = SOUTHEASTERN SURVEYING & MAPPING CORPORATION |
| ⊕ | = FORCEMAIN AIR RELEASE VALVE | SIZE SHOWN IS TRUNK DIAMETER<br>IN INCHES MEASURED AT CHEST<br>HEIGHT |                                                |
| ⊕ | = NON-TRAFFIC SIGN            | ⊕                                                                     | = TREE                                         |
| ⊕ | = TRANSFORMER                 | LIVE                                                                  | = LIVE OAK                                     |
| ⊕ | = UTILITY POLE (TYPICAL)      | ⊕                                                                     | = PALM                                         |

**DESCRIPTION:**  
A PORTION OF GOVERNMENT LOT 5, SECTION 29, TOWNSHIP 3 NORTH, RANGE 28 EAST, NASSAU COUNTY, FLORIDA

**SURVEYOR'S REPORT:**

- Utility locations as shown hereon are based on field location of markings by utility company representatives, surface features and construction plans furnished to the surveyor. Additional sub-surface utilities may exist that have not been field located.
- Easements or rights of way that appear on recorded plans or that have been furnished to the surveyor by others have been incorporated into this drawing with appropriate notation. Other easements may be discovered by a search of the Public Records.
- Minimum Horizontal Accuracy for this survey is in accordance with the STANDARDS OF PRACTICE set forth by the Board of Professional Surveyors and Mappers in Chapter 5J-17 requirements of Florida Administration Code. The map and measurement methods used for this survey meet or exceed this requirement. The dimensions shown hereon are in United States survey feet and decimals thereof.
- This survey does not determine ownership of the lands shown hereon.
- Underground foundations have not been located.
- Survey map and report or the copies thereof are not valid without the original signature and seal or the electronic signature and seal of a Florida Licensed Surveyor and Mapper.
- The electronic signature shown hereon is in compliance with Florida Administrative Code 5J-17.062 and Florida Statute 472.025.
- Features shown by symbol as indicated in the legend are not to scale.
- Additions or deletions to survey maps or reports by other than the signing party or parties is prohibited without written consent of the signing party or parties.
- Vertical information shown hereon refers to the North American Vertical Datum of 1988 (NAVD88) as obtained through the use of a Real Time Network and verified using redundant measures, and Set Benchmark #1, Set Nail and Disk, Elevation = 18.00' (NAVD88); and Benchmark #2 - Set Nail and Disk, Elevation = 18.27' (NAVD88).
- Horizontal positions for all features shown on the map are relative to North American Datum of 1983 (NAD83), 2011 adjustment, State Plane Coordinate System, Florida East Zone; distances shown are GRID distances.
- This Survey was performed without benefit of an abstract, title search, title opinion or title commitment. A title search may reveal additional information affecting the parcel as shown.
- Improvements and Topographic features shown hereon are limited to areas per specific instructions of the client.
- Right of Way information shown hereon was determined by found monumentation, recorded plats, and information obtained on the Nassau County Property Appraisers web site.
- Utility locations along the Right of Ways of Sadler Road and Will Hardee Road shown hereon are based on field observation by above-ground flagged monumentation. No Underground utilities were surveyed by Southeastern Surveying and Mapping Corp. Locations are approximate and Test Holes should be performed for verification.
- Underlying information shown in grayscale are features located by Tri-State Land Surveyors Inc., map dated 8-23-2005, as provided by the client. The overlaid information are features located by Southeastern Surveying & Mapping Corp., during the Topographic survey dated 08/26/2021.

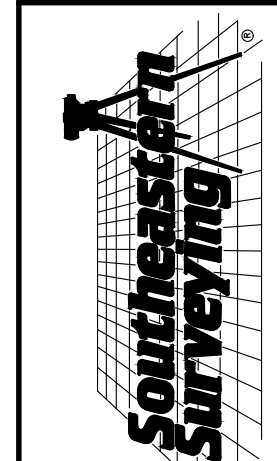
**NOTICE OF LIABILITY:**  
This survey is certified to those individuals shown on the face thereof. Any other use, benefit or reliance by any other party is strictly prohibited and restricted. Surveyor is responsible only to those certified and hereby disclaims any other liability and hereby restricts the rights of any other individual or firm to use this survey, without express written consent of the surveyor.

| BY | REVISION |
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|    |          |
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| REVISION DATE | BY | DATE |
|---------------|----|------|
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|                    |                 |                                          |
|--------------------|-----------------|------------------------------------------|
| Topographic Survey | Sadler Square   | Fernandina Beach, Nassau County, Florida |
| Project:           |                 |                                          |
| Field Date:        | August 26, 2021 | Drawn By:                                |
| Scale:             | BMD & ITA       | AS SHOWN                                 |
| DRAWING NUMBER     | 66740002_C      | SHEET NUMBER                             |
|                    |                 | 1 OF 5                                   |

**SOUTHEASTERN SURVEYING AND MAPPING CORPORATION**  
Robert W. Gardner, P.S.M.  
Surveyor  
Number 18603





















GENERAL PROVISIONS

1. THE CONTRACTOR SHALL OBTAIN FROM THE OWNER COPIES OF ALL AVAILABLE REGULATORY AGENCY PERMITS AND LOCAL AGENCY PERMITS.
2. CONTRACTOR, AS PART OF THE BASE BID, SHALL FIELD LOCATE ALL UNDERGROUND UTILITIES WITHIN THE PROJECT AREA WITHIN THE 30 DAYS OF PROJECT AWARD. CONTRACTOR SHALL REVIEW THE PLANS AND SHALL NOTE ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
3. CONTRACTORS, AS PART OF THE BASE BID, SHALL PROVIDE ALL COORDINATION WITH UTILITY PROVIDERS TO PROVIDE FOR THE MATERIALS AND WORK NEEDED TO PROVIDE SERVICES TO THE PROJECT.
4. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE FOR ALL DEMOLITION OF ABOVE GROUND AND UNDERGROUND IMPROVEMENTS IN ORDER TO CONSTRUCT THE PROPOSED IMPROVEMENTS NOTED ON THE PLANS. UNLESS APPROVED IN WRITING FROM THE OWNER, ALL MATERIALS SHALL BE REMOVED FROM THE SITE AS PART OF THE BASE BID.
5. ALL DETAILS AND REFERENCES TO FOOT REFER TO THE LATEST EDITION OF THE FOOT STANDARD PLANS.
6. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATION OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES, IN SUCH A MANNER AS TO AVOID CONFLICT AND ASSURE PROSPECTS ARE ACHIEVED AS WELL AS COORDINATING WITH UTILITY REQUIREMENTS AS TO LOCATION AND SCHEDULING FOR THE IN-S CONNECTIONS PRIOR TO CONNECTING TO EXISTING UTILITIES.
7. CONTRACTOR AND HIS SURVEYOR SHALL NOTE THE PROJECT BENCHMARK INFORMATION PROVIDED IN THE PLANS AND VERIFY PRIOR TO CONSTRUCTION.
8. ALL CONSTRUCTION PROJECTS 1 OR MORE ACRES IN SIZE THAT DISCHARGE TO OFFSITE AREAS ARE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF THE NATIONAL POLLUTANT DISCHARGE ACT (NPDES) GENERAL PERMIT FOR STORMWATER DISCHARGE FROM SMALL AND LARGE CONSTRUCTION ACTIVITIES. IN ORDER TO MEET NPDES REQUIREMENTS, THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING, INSPECTING, MAINTAINING, AND REPORTING ON ALL ELEMENTS OF SWPPP, INCLUDING THE SUBMITTING THE REQUIRED NOTICE OF INTENT (NOI) AND NOTICE OF TERMINATION (NOT), FORMS AS THE OPERATOR, AND PAYING ALL ASSOCIATED FEES. FOR PROJECTS LESS THAN 1 ACRE IN SIZE THAT ARE NOT REQUIRED TO COMPLY WITH THE NPDES GENERAL PERMIT, THE CONTRACTOR IS STILL RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO AND DURING CONSTRUCTION IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
9. UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR SHALL USE THE GEOMETRY PROVIDED ON THE CONSTRUCTION PLANS. BENCHMARK INFORMATION SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER OR OWNERS SURVEYOR. ANY DISCREPANCIES BETWEEN FIELD MEASUREMENTS AND CONSTRUCTION PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
10. BASE SURVEY INFORMATION INCLUDING BUT NOT LIMITED TO ELEVATIONS, EASEMENTS, RIGHTS OF WAY, AND OTHER TOPOGRAPHIC INFORMATION HAS BEEN PREPARED BY OTHER PROFESSIONALS. CPH, INC. ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.
11. THIS SET OF PLANS MAY CONTAIN DRAWINGS PREPARED BY OTHER PROFESSIONALS, WHICH CONTAIN THE NAME, ADDRESS, AND LOGO OF THE PROFESSIONAL. CPH, INC. IS NOT RESPONSIBLE FOR DRAWINGS PREPARED BY OTHER PROFESSIONALS.
12. THE CONTRACTOR SHALL SUBMIT ONE ELECTRONIC COPY OF SHOP DRAWINGS TO THE ENGINEER TO KEEP FOR THEIR RECORDS. THE ENGINEER WILL NOT PROVIDE FOR APPROVAL OF SHOP DRAWINGS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL MATERIALS FOR ACCURACY PRIOR TO ORDERING THE MATERIALS. ANY DISCREPANCIES IDENTIFIED BY THE CONTRACTOR SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
13. PROTECT BENCHMARKS, PROPERTY CORNERS, AND OTHER SURVEY MONUMENTS FROM DAMAGE OR DISPLACEMENT. IF MARKER NEEDS TO BE REMOVED IT SHALL BE REFERENCED BY LICENSED LAND SURVEYOR AND REPLACED, AS NECESSARY, BY SAME.
14. THE CONTRACTOR IS RESPONSIBLE FOR ALL QUALITY CONTROL TESTING. AS A MINIMUM, TESTING SHALL INCLUDE A) PIPING AND STRUCTURAL EXCAVATION, BEDDING AND BACKFILL MATERIALS AND DENSITY TESTS; B) DETERMINATION OF COMPACTIVE EFFORT NEEDED FOR COMPLIANCE WITH THE DENSITY REQUIREMENTS; C) PORTLAND CEMENT CONCRETE AND ASPHALT. THE PAYING QUALITY CONTROL TESTING INCLUDING DESIGN PLAN REVIEW, MATERIALS, FIELD SLUMP AND AIR CONTENT, AND FIELD AND LAB CURED STRENGTH SAMPLES AND TESTING.
15. IN ADDITION TO QUALITY CONTROL TESTING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REQUIRED TESTING OR APPROVALS FOR ANY WORK (OR ANY PART THEREOF) IF LAWS OR REGULATIONS OF ANY PUBLIC BODY HAVING JURISDICTION SPECIFICALLY REQUIRE TESTING, INSPECTIONS OR APPROVAL. THE CONTRACTOR SHALL PAY ALL COSTS IN CONNECTION THEREWITH AND SHALL FURNISH THE OWNER AND ENGINEER THE REQUIRED CERTIFICATES OF INSPECTION, TESTING OR APPROVAL.
16. ANY DESIGN OR TESTING LABORATORY UTILIZED BY THE CONTRACTOR SHALL BE AN INDEPENDENT LABORATORY ACCEPTABLE TO THE OWNER AND THE ENGINEER, APPROVED IN WRITING, AND COMPLYING WITH THE LATEST EDITION OF THE "RECOMMENDED REQUIREMENTS FOR INDEPENDENT LABORATORY QUALIFICATION", PUBLISHED BY THE AMERICAN COUNCIL OF INDEPENDENT LABORATORIES.
17. TESTING RESULTS SHALL BE PROVIDED TO THE OWNER/OPERATOR AND THE ENGINEER. ALL TEST RESULTS SHALL BE PROVIDED (PASSING AND FAILING) ON A REGULAR AND IMMEDIATE BASIS.
18. THE ENTIRE PROJECT SITE SHALL BE THOROUGHLY CLEANED AT THE COMPLETION OF THE WORK. CLEAN ALL INSTALLED PIPELINES, STRUCTURES, SIDEWALKS, PAVED AREAS, ACCUMULATED SILT IN PONDS, PLUS ALL ADJACENT AREAS AFFECTED BY CONSTRUCTION, AS DIRECTED BY THE OWNER OR JURISDICTIONAL AGENCY. EQUIPMENT TO CLEAN THESE SURFACES SHALL BE SUBJECT TO APPROVAL BY THE OWNER.
19. ALL DISTRIBUTED AREAS WITHIN RIGHT OF WAYS SHALL BE SODDED.
20. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION, THIS IS TO INCLUDE, BUT NOT BE LIMITED TO, ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE TO COMPLY WITH PERFORMANCE CRITERIA FOR OSHA.
21. THE CONTRACTOR SHALL RECOGNIZE AND ABIDE BY ALL OSHA EXCAVATION SAFETY STANDARDS, INCLUDING THE FLORIDA TRENCH SAFETY ACT (90-96, LAWS OF FLORIDA), ANY MATERIAL, CONSTRUCTION METHODS, OR MATERIAL COST TO COMPLY WITH THESE LAWS SHALL BE INCIDENTAL TO THE CONTRACT.
22. CONTRACTOR MUST STOP OPERATION AND NOTIFY THE OWNER FOR PROPER DIRECTION IF ANY ENVIRONMENTAL OR HEALTH RELATED CONTAMINATE IS ENCOUNTERED DURING EXCAVATION.

UTILITY GENERAL NOTES

1. THE UTILITY DATA SHOWN ON THESE PLANS WAS LOCATED BY THE RESPECTIVE UTILITY, OR IS BASED ON UTILITY DRAWINGS, MAPS, OR FIELD RECONNAISSANCE.
2. THE LOCATION, MATERIAL, TYPE, AND SIZE OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELIEF OF PIPE OR THE UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLANS OR LOCATED BY THE UTILITY COMPANY. ANY UTILITIES, WHETHER SHOWN ON THESE PLANS OR NOT, THAT INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE ENGINEER AND THE RESPECTIVE UTILITY COMPANY FOR RELOCATION OR PROPER INSTRUCTION.
3. A SINGLE POINT UTILITY IDENTIFICATION SERVICE HAS BEEN SET UP FOR EXISTING UTILITIES. THE CONTRACTOR IS TO CONTACT THE SUNSHINE STATE ONE CALL CENTER BY DIALING 811 AT LEAST TWO (2) AND NO MORE THAN FIVE (5) WORKING DAYS PRIOR TO THE SPECIFIC CONSTRUCTION ACTIVITY FOR FIELD LOCATION. NOTE THAT NOT ALL UTILITIES PARTICIPATE IN THIS PROGRAM. THE CONTRACTOR SHOULD CONTACT ALL NON-PARTICIPATING UTILITIES SEPARATELY FOR FIELD LOCATION OF THEIR FACILITIES AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.
4. THE UTILITY PROVIDERS NOTED ON THE COVER SHEET HAVE PREVIOUSLY INDICATED THAT THEY MAY HAVE FACILITIES IN THE VICINITY OF THE CONSTRUCTION AREA.
5. THE CONTRACTOR SHALL KEEP LOCATE TICKETS UP TO DATE AT ALL TIMES.
6. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH EACH UTILITY AND ALL COSTS ASSOCIATED WITH THE PROTECTION OF EXISTING FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL ALSO COORDINATE NECESSARY RELOCATIONS OR OTHER CONSTRUCTION RELATED MATTERS WITH EACH UTILITY.
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN IN SERVICE ALL EXISTING PIPING ENCOUNTERED DURING CONSTRUCTION UNLESS OTHERWISE INDICATED IN THE DRAWINGS. ANY PIPING WHICH CAN BE REMOVED DURING CONSTRUCTION WITHOUT UNDUE INTERRUPTION OF SERVICE MAY BE REMOVED AND REPLACED BY THE CONTRACTOR WITH THE PERMISSION OF THE OWNER AND THE ENGINEER.
8. TYPICAL DETAILS AND PROPOSED CONSTRUCTION AS SHOWN ILLUSTRATE THE ENGINEER'S INTENT AND ARE NOT PRESENTED AS A SOLUTION TO ALL CONSTRUCTION PROBLEMS ENCOUNTERED IN THE FIELD. THE CONTRACTOR MAY ALTER THE PROPOSED CONSTRUCTION PROVIDED IT COMPLIES WITH THE PROJECT SPECIFICATION AND THE ENGINEER'S REVIEW AND APPROVAL IS RECEIVED FROM THE ENGINEER. WHERE SUCH PROPOSED REVISIONS DEVIATE FROM THE FDEP CONSTRUCTION PERMIT, THEN SUCH REVISIONS WILL ALSO REQUIRE APPROVAL FROM FDEP.
9. FOR EACH RESPECTIVE PIPELINE CONSTRUCTION REQUIRED, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION, DEPTH, SIZE, MATERIAL, TYPE, AND ALIGNMENT OF ALL EXISTING PIPES, CABLES, ETC. TO BE CROSSED OR CONNECTED TO. IF THE CONTRACTOR DEEMS NECESSARY (A) A CHANGE IN ALIGNMENT OR DEPTH, OR THE NEED FOR ADDITIONAL FITTINGS, BENDS, OR COUPLINGS, WHICH REPAIRS OR DEPARTS FROM THE LOCATION OF THE UTILITY, THE CONTRACTOR SHALL EXERCISE CAUTION. IF EXISTING UTILITIES, THEN DETAILS OF SUCH DEPARTURES, RELOCATIONS, OR ADDITIONAL FITTINGS, INCLUDING CHANGES IN RELATED PORTIONS OF THE PROJECT AND THE REASONS THEREFORE, SHALL BE SUBMITTED WITH SHOP DRAWINGS. APPROVED DEPARTURES FOR THE CONTRACTOR'S CONVENIENCE SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
10. THE CONTRACTOR SHALL PROVIDE AT HIS OWN EXPENSE ALL NECESSARY TEST PUMPING EQUIPMENT, WATER, WATER METERS, PRESSURE GAUGES, AND OTHER EQUIPMENT, MATERIALS AND FACILITIES REQUIRED FOR ALL HYDROSTATIC, LEAKAGE, AND PRESSURE TESTING. THE CONTRACTOR SHALL CONTACT THE ENGINEER AND THE OWNER IN WRITTEN FORM, FORTY- EIGHT (48) HOURS IN ADVANCE OF PROPOSED TESTING. THE CONTRACTOR SHALL PERFORM SATISFACTORY PRE-TESTING PRIOR TO NOTIFICATION.

AS-BUILT DRAWING REQUIREMENTS

1. AS-BUILT DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER AT LEAST THREE WEEKS PRIOR TO FINAL INSPECTION. ALL AS-BUILT DATA SHALL BE PROVIDED BY A FLORIDA LICENSED SURVEYOR, SIGNED, SEALED AND DATED BY THE RESPONSIBLE PARTY. THE CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY ALL AS-BUILT SURVEY REQUIREMENTS TO THE GOVERNING AGENCIES PRIOR TO START OF CONSTRUCTION TO ENSURE THAT AS-BUILT INFORMATION IS PROVIDED FOR.
2. ALL RECORD DRAWINGS SHALL BE PREPARED BY THE CONTRACTOR IN ACAD FORMAT USING CONSTRUCTION PLAN SHEETS PROVIDED BY THE ENGINEER. AS-BUILT INFORMATION SHALL BE FIELD VERIFIED, MEASURED, ADDED TO THE ACAD FILES OF

THE CONSTRUCTION PLAN SHEETS PROVIDED BY THE ENGINEER, AND CERTIFIED, SIGNED AND SEALED BY THE CONTRACTOR'S LICENSED SURVEYOR WHO WILL BE RESPONSIBLE FOR THE ACCURACY OF ALL DIMENSIONS AND ELEVATIONS.

3. THE AS-BUILT INFORMATION IS TO INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

- A. HORIZONTAL LOCATIONS AND VERTICAL ELEVATIONS FOR ALL UTILITY AND STORM STRUCTURES INCLUDING BUT NOT LIMITED TO MANHOLES, INLETS AND CLEANOUTS, INCLUDING STRUCTURE TOP AND INVERT ELEVATIONS.
- B. DISTANCE ALONG PIPELINES BETWEEN STRUCTURES.
- C. STORMWATER POND TOP OF BERM AND POND BOTTOM ELEVATIONS AND HORIZONTAL DIMENSIONS MEASURED AT A MINIMUM OF TEN LOCATIONS PER POND, AT LOCATIONS DESIGNATED BY THE ENGINEER. TOP OF POND HORIZONTAL DIMENSIONS ARE ALSO TO BE TIED TO PROPERTY CORNERS, EASEMENTS, AND RIGHTS-OF-WAY.
- D. STORMWATER CONTROL, STRUCTURE DIMENSIONS AND ELEVATIONS, INCLUDING ALL WEIRS, SLOTS, ORIFICES, GRATES, AND SKIMMERS.
- E. STORMWATER CONVEYANCE SYSTEMS INCLUDING DIMENSIONS, ELEVATIONS, CONTOURS, AND CROSS SECTIONS.
- F. HORIZONTAL LOCATIONS AND VERTICAL ELEVATIONS OF ALL UTILITY VALVES, FITTINGS, CONNECTION POINTS, ETC.
- G. VERTICAL ELEVATIONS OF ALL PIPELINES AT CROSSINGS OF POTABLE WATER MAINS (WHETHER THE WATER MAIN IS EXISTING OR NEW) IN ORDER TO DOCUMENT THAT THE MINIMUM REQUIRED VERTICAL SEPARATION HAS BEEN MET.
- H. UTILITY PIPELINE TIED HORIZONTALLY TO EDGE OF PAVEMENT AND RIGHT-OF-WAY LINES, LOCATED EVERY 200-FT PLUS ALL CHANGES IN HORIZONTAL OFFSET.
- I. PAVEMENT WIDTH AND ELEVATIONS AT THE CENTERLINE AND EDGE OF PAVEMENT EVERY 200 FEET PLUS AT ALL CHANGES IN LONGITUDINAL SLOPE, CROSS SLOPE, INLET LOCATIONS, AND AT ALL DRIVEWAY AND STREET INTERSECTIONS, FOR PARKING LOTS, RECORD CENTERLINE AND EDGE OF PAVEMENT ELEVATIONS ALONG ALL DRIVE AISLES AND ISLANDS.
- J. ALL PARKING AREAS AND SIDEWALK RAMPS DESIGNATED FOR HANDICAP ACCESS SHALL CONTAIN HORIZONTAL AND VERTICAL MEASUREMENTS IN ORDER TO VERIFY REQUIRED WIDTHS AND SLOPES HAVE BEEN MET.
- K. HORIZONTAL AND VERTICAL DATA FOR ANY CONSTRUCTION THAT DEVIATES FROM THE APPROVED ENGINEERING DRAWINGS.
- L. WHERE THE PLANS CONTAIN SPECIFIC HORIZONTAL LOCATION DATA, SUCH AS STATION AND OFFSET, THE AS-BUILT DRAWINGS ARE TO REFLECT THE ACTUAL HORIZONTAL LOCATION.
- M. WHERE THE PLANS CONTAIN SPECIFIC VERTICAL ELEVATION DATA, THE AS-BUILT DRAWINGS ARE TO REFLECT THE ACTUAL MEASURED VERTICAL ELEVATION.
- N. ANY ADDITIONAL INFORMATION REQUIRED BY GOVERNING AGENCIES.

4. IN CASES WHERE THE OWNER DETERMINES PARTIAL CLEARANCES FROM PERMITTING AGENCIES ARE BENEFICIAL TO THE OWNER FOR COMPLETED PORTIONS OF THE PROJECT, PROVIDE PRELIMINARY AS-BUILT DRAWINGS (ACAD FORMAT) TO THE ENGINEER FOR ITS USE IN PREPARING THE PARTIAL CLEARANCE APPLICATIONS FOR THE OWNER.
5. COMPLETE AS-BUILT DRAWINGS THAT ARE FOUND TO BE SATISFACTORY AS A RESULT OF THE ENGINEER'S REVIEW WILL BE USED AS THE BASIS FOR THE FINAL PROJECT RECORD DRAWINGS PREPARED BY THE ENGINEER USING THE CONTRACTOR PROVIDED AS-BUILT DRAWINGS PLUS ENGINEER ADDED INFORMATION.

TRAFFIC CONTROL

1. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A CONTROL MAINTENANCE OF TRAFFIC (M.O.T.) PLAN PRIOR TO CONSTRUCTION. THE M.O.T. PLAN SHALL SHOW ALL PROPOSED TRAFFIC CONTROL MEASURES, INCLUDING BARRICADES, AND SHALL DETAIL ALL PROPOSED CONSTRUCTION SEQUENCING. THE M.O.T. PLAN AND INSTALLED TRAFFIC CONTROL MEASURES SHALL BE APPROVED BY THE ENGINEER, OWNER, AND ROADWAY JURISDICTIONAL AGENCY PRIOR TO CONSTRUCTION. IN GENERAL, ROADWAY AND DRIVEWAY LANE CLOSURES ARE PROHIBITED DURING CONSTRUCTION UNLESS SPECIFICALLY DETAILED ON THESE PLANS. IN THE EVENT IT IS DETERMINED THAT ROADWAY AND DRIVEWAY LANE CLOSURES WILL BE ALLOWED, THE CLOSURES SHALL BE RESTRICTED TO THE HOURS BETWEEN 9:00 A.M. AND 4:00 P.M. UNLESS OTHERWISE AUTHORIZED IN THE APPROVED M.O.T.
2. ALL TRAFFIC CONTROL MEASURES SHALL BE IN ACCORDANCE WITH FDOT STANDARD PLANS INDEX 102-600 AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL TRAFFIC CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION.
3. INSPECT TRAFFIC CONTROL DEVICES ON A DAILY BASIS TO ENSURE PLACEMENT OF BARRICADES AND FUNCTION OF LIGHTS IS MAINTAINED THROUGHOUT CONSTRUCTION.
4. CONTACT PROPERTY OWNERS AFFECTED BY CONSTRUCTION. COORDINATE TEMPORARY DRIVEWAY CLOSURES AND SEQUENCING. MAINTAIN ACCESS FOR ALL PROPERTY OWNERS DURING CONSTRUCTION.
5. WET UNSTABILIZED AREAS AS NECESSARY TO CONTROL DUST.
6. ADJUST TRAFFIC CONTROL DEVICES AS REQUIRED UNDER EMERGENCY CONDITIONS.

7. THE CONTRACTOR IS EXPECTED TO COORDINATE ITS ACTIVITIES WITH OTHER CONTRACTORS WHO MAY BE WORKING IN THE IMMEDIATE VICINITY.
8. WHEN WORK OCCURS WITHIN 15-FT OF ACTIVE ROAD TRAVEL LANES BUT NO CLOSER THAN 2-FT FROM THE EDGE OF PAVEMENT, SIGNAGE AND WARNING DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH FDOT STANDARD PLANS INDEX 102-600 AND 102-602.
9. TYPE I OR TYPE II BARRICADES AT 20-FT CENTERS SHALL BE PLACED AND MAINTAINED ALONG THE EDGE OF THE ROAD WHEREVER DROP-OFFS OR OTHER HAZARDS EXIST AND TO BLOCK ENTRANCE INTO COMPLETED OR PARTIALLY COMPLETED PAVEMENTS UNTIL SUCH PAVEMENTS ARE OPEN TO PUBLIC USE.

SITE PREPARATION

1. UNLESS OTHERWISE DIRECTED BY THE OWNER OR ENGINEER, THE CONTRACTOR IS EXPECTED TO CONTAIN ALL CONSTRUCTION ACTIVITIES WITHIN RIGHT-OF-WAY, AND EASEMENTS AS INDICATED ON THE DRAWINGS. AT NO TIME SHALL THE CONTRACTOR DISTURB SURROUNDING PROPERTIES OR TRAVEL ON SURROUNDING PROPERTIES WITHOUT WRITTEN CONSENT FROM THE PROPERTY OWNER. ANY REPAIR OR RECONSTRUCTION OF DAMAGED AREAS IN SURROUNDING PROPERTIES SHALL BE REPAIRED BY THE CONTRACTOR ON AN IMMEDIATE BASIS. ALL COSTS FOR REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION SHALL BE PROVIDED.
2. STAKE OUT THE CONSTRUCTION, ESTABLISH LINES AND LEVELS, TEMPORARY BENCH MARKS, BATTER BOARDS, CENTERLINES, BASELINES, AND REFERENCE POINTS FOR THE WORK. ADVISE ALL DIMENSIONS RELATING TO INTERCONNECTION WITH EXISTING FEATURES. REPORT ANY INCONSISTENCIES IN THE PROPOSED GRADS, LINES AND LEVELS, DIMENSIONS AND LOCATIONS TO THE ENGINEER BEFORE COMMENCING WORK.
3. PROTECT ALL TREES AND SHRUBS LOCATED OUTSIDE THE RIGHT-OF-WAY, EASEMENTS, AND OWNER SECURED PROPERTY, PARTICULARLY THOSE TREES AND SHRUBS LOCATED ADJACENT TO WORK AREAS.
4. WITHIN THE RIGHT-OF-WAY, EASEMENTS, AND OWNER SECURED PROPERTY, THE INTENT IS TO ALLOW TREES AND SHRUBS TO REMAIN IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: NEW ROADWAY CONSTRUCTION - TREES AND SHRUBS TO REMAIN WHERE LOCATED MORE THAN 15 FEET FROM THE BACK OF CURB, OR OUTSIDE THE LIMITS OF EXCAVATION OR FILL AREAS, WHICHEVER IS FURTHER. UTILITY PIPELINE CONSTRUCTION - TREES AND SHRUBS TO REMAIN OUTSIDE A 15 FOOT WIDE PATH, CENTERED ON THE PIPELINE.
5. TREES TO REMAIN IN THE CONSTRUCTION AREA SHALL BE BOXED, FENCED OR OTHERWISE PROTECTED IN ACCORDANCE WITH DETAILS ON THE DRAWINGS. DO NOT PERMIT HEAVY EQUIPMENT OR STOCKPILES WITHIN BRANCH SPREAD.
6. AREAS TO RECEIVE CLEARING AND GRUBBING SHALL INCLUDE ALL AREAS TO BE OCCUPIED BY THE PROPOSED IMPROVEMENTS, AREAS FOR FILL AND SITE GRADING, AND BORROW SITES. REMOVE TREES OUTSIDE OF THESE AREAS ONLY AS INDICATED ON THE DRAWINGS OR AS APPROVED IN WRITING BY THE ENGINEER.
7. CLEARING SHALL CONSIST OF REMOVING TREES AND BRUSH AND DISPOSAL OF OTHER MATERIALS THAT ENDOACH UPON OR OTHERWISE OBSTRUCT THE WORK.
8. EXERCISE EXTREME CARE DURING THE CLEARING AND GRUBBING OPERATIONS. DO NOT DAMAGE EXISTING STRUCTURES, PIPES OR UTILITIES.
9. GRUBBING SHALL CONSIST OF REMOVING AND DISPOSING OF STUMPS, ROOTS LARGER THAN 2" IN DIAMETER, AND MATTED ROOTS. REMOVE TO A DEPTH OF NOT LESS THAN 18" BELOW THE ORIGINAL SURFACE LEVEL OF THE GROUND.
10. ALL COMBUSTIBLE DEBRIS AND REFUSE FROM SITE PREPARATION OPERATIONS SHALL BE REMOVED TO LEGAL OFFSITE DISPOSAL AREAS.

DEWATERING

1. DESIGN AND PROVIDE A DEWATERING SYSTEM USING ACCEPTED AND PROFESSIONAL METHODS CONSISTENT WITH CURRENT INDUSTRY PRACTICE. PROVIDE A DEWATERING SYSTEM OF SUFFICIENT SIZE AND CAPACITY TO CONTROL GROUNDWATER IN A MANNER THAT PRESERVES STRENGTH OF FOUNDATION SOILS, DOES NOT CAUSE INSTABILITY OR RAVELING OF EXCAVATION SLOPES, AND DOES NOT RESULT IN DAMAGE TO EXISTING STRUCTURES. WHERE NECESSARY TO THESE PURPOSES, LOWER WATER LEVEL IN ADVANCE OF EXCAVATION, UTILIZING WELLS, WELL POINTS, OR SIMILAR POSITIVE METHODS. MAINTAIN THE GROUNDWATER LEVEL TO A MINIMUM OF 2 FEET BELOW EXCAVATIONS, PROVIDE PIEZOMETERS IF DIRECTED BY THE ENGINEER TO DOCUMENT THE GROUNDWATER LEVEL IS BEING MAINTAINED.
2. CONTROL, BY ACCEPTABLE MEANS, ALL WATER REGARDLESS OF SOURCE AND BE FULLY RESPONSIBLE FOR DISPOSAL OF THE WATER. NO ADDITIONAL PAYMENT WILL BE MADE FOR ANY SUPPLEMENTAL MEASURES TO CONTROL SEEPAGE, GROUNDWATER, OR ARTESIAN HEAD.
3. DEWATERING DISCHARGE FROM THE SITE SHALL COMPLY WITH ALL NPDES GENERAL PERMIT REQUIREMENTS AND STATE WATER QUALITY STANDARDS. PROVIDE ALL TESTING AND PERMITTING REQUIRED AND COMPLY WITH ALL TREATMENT OR DISPOSAL METHODS REQUIRED TO MEET ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.
4. OPEN PUMPING WITH SUMPS AND DITCHES SHALL BE ALLOWED, PROVIDED IT DOES NOT RESULT IN BOILS, LOSS OF FINES, AND PRESSURE TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY ALL AS-BUILT SURVEY REQUIREMENTS TO THE GOVERNING AGENCIES PRIOR TO START OF CONSTRUCTION TO ENSURE THAT AS-BUILT INFORMATION IS PROVIDED FOR.
6. CONTINUOUSLY MAINTAIN EXCAVATIONS IN A DRY CONDITION WITH POSITIVE DEWATERING METHODS DURING PREPARATION OF SUBGRADE, INSTALLATION OF PIPE, AND CONSTRUCTION OF STRUCTURES UNTIL THE CUT-AND-FILL PERIOD OF CONSTRUCTION AND/OR BACKFILL IS COMPLETED TO PREVENT DAMAGE OF SUBGRADE SUPPORT, PIPING, STRUCTURE, SIDE SLOPES, OR

ADJACENT FACILITIES FROM FLOTATION OR OTHER HYDROSTATIC PRESSURE IMBALANCE.

7. WHEN CONSTRUCTION IS COMPLETE, REMOVE ALL DEWATERING EQUIPMENT FROM THE SITE, INCLUDING WELLS AND RELATED TEMPORARY ELECTRICAL SERVICE.

GRADING

1. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CONTOURS OR SPOT ELEVATIONS AS SHOWN ON THE PLANS TO ACCOMPLISH THE GRADING INTENT. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER FINAL GRADING HAS BEEN COMPLETED. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER PRIOR TO DEMOBILIZATION OF GRADING EQUIPMENT TO DETERMINE THAT THE GRADING INTENT HAS BEEN ACHIEVED.
2. ALL PROPOSED ELEVATIONS ON THE PLANS WITHIN PAVED AREAS ARE SHOWN AT PAVEMENT, UNLESS OTHERWISE NOTED.
3. ALL PAVING SURFACES IN INTERSECTIONS AND ADJACENT SECTIONS SHALL BE GRADED TO DRAIN POSITIVELY AND TO PROVIDE A SMOOTHLY TRANSITIONED DRIVING SURFACE FOR VEHICLES WITH NO SHARP BREAKS IN GRADE, AND NO UNUSUALLY STEEP OR REVERSE CROSS SLOPES. THE STANDARD CROWN MAY HAVE TO BE CHANGED IN ORDER TO DRAIN POSITIVELY IN THE AREA OF INTERSECTIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH THE ABOVE AND THE ENGINEER SHALL BE CONSULTED SO THAT HE MAY MAKE ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS OR GIVE SUPPLEMENTARY INSTRUCTIONS TO ACCOMPLISH THE INTENT OF THE PLANS.
4. UNIFORMLY SMOOTH GRADE THE SITE. DEPRESSIONS FROM SETTLEMENT SHALL BE FILLED AND COMPACTED. TOPS OF EMBANKMENTS AND BREAKS IN GRADE SHALL BE ROUNDED. FINISHED SURFACES SHALL BE REASONABLY SMOOTH, COMPACTED, FREE FROM IRREGULAR SURFACE CHANGES AND COMPARABLE TO THE SMOOTHNESS OBTAINED BY BLADE-FREER OPERATIONS.
5. NEWLY GRADED AREAS SHALL BE PROTECTED FROM TRAFFIC AND EROSION. ALL SETTLEMENT OR WASHING AWAY THAT MAY OCCUR FROM ANY CAUSE PRIOR TO SEEDING OR ACCEPTANCE SHALL BE REPAIRED AND GRADES RE-ESTABLISHED TO THE REQUIRED ELEVATIONS AND SLOPES AT NO ADDITIONAL COST TO THE OWNER.

EXCAVATION, TRENCHING, AND FILL

1. THE CONTRACTOR SHALL RECOGNIZE AND ABIDE BY ALL OSHA EXCAVATION SAFETY STANDARDS, INCLUDING THE FLORIDA TRENCH SAFETY ACT (FS 553.60-553.64). ANY MATERIAL, CONSTRUCTION METHODS, OR MATERIAL COST TO COMPLY WITH THESE LAWS SHALL BE INCIDENTAL TO THE CONTRACT.
2. ROUGH EXCAVATE AND GRADE ANY PROPOSED STORMWATER PONDS AT THE START OF SITE GRADING ACTIVITIES. DIRECT SITE RUNOFF TO THE PONDS TO MINIMIZE RUNOFF TO OFFSITE AREAS.
3. POND CONSTRUCTION SHALL RESULT IN THE FINISHED POND HAVING SIDE SLOPES AND DIMENSIONS THAT ARE IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THAT THESE REQUIREMENTS HAVE BEEN MET. IF THE CONSTRUCTION SIDE SLOPES ARE STEEPER THAN THE REQUIRED SIDE SLOPES, OR THE POND VOLUME IS NOT WITHIN THREE (3) PERCENT OF THE DESIGN VOLUME, THE CONTRACTOR SHALL BE REQUIRED TO MAKE CORRECTIONS TO THE POND AT NO ADDITIONAL COST TO THE OWNER.
4. FIELD DENSITY TESTING FREQUENCIES: A) ONE TEST FOR EACH 10,000 SQUARE FEET OR FRACTION THEREOF PER LIFT OF GENERAL BACKFILLING; MINIMUM 2 TESTS EACH LAYER; B) ONE TEST FOR EACH 100 SQUARE FEET OR FRACTION THEREOF OF BACKFILL AROUND AND UNDER STRUCTURES; C) ONE TEST FOR EACH 300 LINEAL FEET OR FRACTION THEREOF PER LIFT OF GENERAL BACKFILLING IN THE PIPELINE TRENCH; D) ONE TEST PER LIFT PER EACH CHANGE IN TYPE OF FILL; E) ONE TEST PER 1000 SQUARE FEET OF PAVEMENT SUBGRADE, MINIMUM OF 2 TESTS.
5. IT IS INTENDED THAT PREVIOUSLY EXCAVATED MATERIALS CONFORMING TO THE FOLLOWING REQUIREMENTS BE UTILIZED WHEREVER POSSIBLE.
- A. ACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-1, A-3, A-2.4, A-2.6; ASTM D2487 CLASSIFICATION GP, GM, SM, SW, SP, UNLESS OTHERWISE DISAPPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS. NO MORE THAN 12% OF ACCEPTABLE MATERIALS SHALL PASS THE NUMBER 200 SIEVE.
- B. UNACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-2.5, A-2.7, A-4, A-5, A-6, A-7, A-8; ASTM D2487 CLASSIFICATION GC, SC, ML, MH, CL, CH, OL, PH. UNLESS OTHERWISE APPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS.
6. PROVIDE BARRIERS, WARNING LIGHTS AND OTHER PROTECTIVE DEVICES AT ALL EXCAVATIONS.
7. SIDEWALKS, ROADS, STREETS, AND PAVEMENTS SHALL NOT BE BLOCKED OR OBSTRUCTED BY EXCAVATED MATERIALS, EXCEPT AS AUTHORIZED BY THE ENGINEER. IN THE EVENT TEMPORARY PROVISIONS MUST BE MADE FOR SATISFACTORY TEMPORARY PASSAGE OF PEDESTRANS, AND VEHICLES. MINIMIZE INCONVENIENCE TO PUBLIC TRAVEL OR TO TENANTS OCCUPYING ADJOINING PROPERTY.
8. FURNISH, INSTALL, AND MAINTAIN, WITHOUT ADDITIONAL COMPENSATION, SHEETING, BRACING, AND SHORING SUPPORT REQUIRED TO KEEP EXCAVATIONS WITHIN THE PROPERTY OR EASEMENTS PROVIDED, TO SUPPORT THE SIDES OF THE EXCAVATION, AND TO PREVENT ANY MOVEMENT WHICH MAY DAMAGE ADJACENT PAVEMENTS OR STRUCTURES, DAMAGE OR DELAY THE WORK, OR ENDANGER LIFE AND HEALTH. VOIDS OUTSIDE THE SUPPORTS SHALL BE IMMEDIATELY FILLED AND COMPACTED.
9. SHEETING, SHORING, AND BRACING USED FOR THE SUPPORT OF EXCAVATIONS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED BY THE STATE OF FLORIDA.
10. ALL EXCAVATIONS SHALL BE MADE BY OPEN CUT UNLESS OTHERWISE INDICATED. SLOPE SIDES OF TRENCHES IN ACCORDANCE WITH OSHA REQUIREMENTS AND THE RECOMMENDATIONS CONTAINED WITHIN THE PROJECT GEOTECHNICAL REPORT.
11. EXCAVATE TRENCHES TO DEPTH INDICATED OR REQUIRED FOR INDICATED FLOW LINES AND INVERT ELEVATIONS. OVER EXCAVATE TRENCHES A MINIMUM OF 2 FEET WHERE EXCAVATIONS OCCUR WITHIN UNSUITABLE SOILS, AND REPLACE OVER EXCAVATED MATERIAL WITH SUITABLE SOILS.
12. TRENCH BOTTOMS AND THE BOTTOMS OF ALL STRUCTURES SHALL BE KEPT DRY, COMPACTED, AND STABLE TO A DEPTH TWO FEET BELOW THE BOTTOM OF THE TRENCH OR STRUCTURE.
13. ALL BEDDING, FILL, AND BACKFILL MATERIAL SHALL BE SUITABLE SOILS OR FLOWABLE FILL. WHERE TRENCH OR EXCAVATION IS WITHIN THE INFLUENCE AREA OF ROADWAYS, STRUCTURES, FOUNDATIONS, OR SLABS, PLACE BACKFILL IN LAYERS OF 8 INCH LOOSE DEPTH. IN ALL OTHER AREAS, PLACE FILL AND BACKFILL IN LAYERS OF 12 INCH LOOSE DEPTH.
14. MINIMUM DENSITY REQUIREMENT (ASTM D1557 OR AASHTO T1980): BACKFILL AND FILL UNDER AND WITHIN THE INFLUENCE AREA OF ROADWAYS, STRUCTURES, SLABS, FOUNDATIONS = 98 PERCENT; BACKFILL AND FILL PLACED WITHIN PUBLIC ROAD RIGHT-OF-WAY AND UTILITY EASEMENTS = 95 PERCENT; BACKFILL AND FILL PLACED WITHIN POND AND ROAD EMBANKMENT = 95 PERCENT; BACKFILL AND FILL PLACED IN ALL OTHER AREAS = 90 PERCENT.

RIPRAP

1. ALL RIPRAP CONSTRUCTION SHALL MEET THE REQUIREMENTS OF SECTION 530 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.

UTILITY SEPARATION REQUIREMENTS

1. THE HORIZONTAL SEPARATION BETWEEN WATER MAINS AND SANITARY SEWER, STORM SEWER, WASTEWATER FORCE MAINS, STORMWATER FORCE MAINS, RECLAIMED WATER MAINS AND ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
- A. THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF FIVE FEET FROM THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, VACUUM TYPE SANITARY SEWER AND RECLAIMED WATER MAIN.
- B. THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF TEN FEET FROM THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN THE OUTSIDE OF WATER MAINS AND THE OUTSIDE OF GRAVITY SANITARY SEWERS CAN BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS AT LEAST EIGHTEEN INCHES ABOVE THE TOP OF THE SEWER.
- C. THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF TEN FEET FROM ALL PARTS OF ANY EXISTING OR PROPOSED ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS, DRAINFIELDS, AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.
2. THE VERTICAL SEPARATION BETWEEN WATER MAINS AND SANITARY AND STORM SEWER, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER MAINS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
- A. WHEREVER POSSIBLE, WATER MAINS SHALL CROSS OVER EXISTING OR PROPOSED GRAVITY SANITARY SEWER, VACUUM TYPE SANITARY SEWER, AND STORM SEWER, 80 THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OUTSIDE OF THE SEWER. WHERE IT IS NOT POSSIBLE FOR THE WATER MAIN TO CROSS OVER EXISTING OR PROPOSED GRAVITY SANITARY SEWER, VACUUM TYPE SANITARY SEWER, AND STORM SEWER, THEN THE WATER MAIN CAN CROSS UNDER THESE TYPES OF PIPELINE SYSTEMS PROVIDED THE OUTSIDE OF THE WATER MAIN IS AT LEAST 18 INCHES BELOW THE OUTSIDE OF THE PIPELINE. AT THE CROSSING, THE PROPOSED WATER MAIN SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST FIVE FEET FROM VACUUM TYPE SANITARY SEWER OR STORM SEWER JOINTS, AND AT LEAST TEN FEET FROM GRAVITY SANITARY SEWER JOINTS.
- B. WHEREVER POSSIBLE, WATER MAINS SHALL CROSS OVER EXISTING OR PROPOSED RECLAIMED WATER MAINS, WASTEWATER FORCE MAINS AND STORMWATER FORCE MAINS. WHETHER THE WATER MAIN CROSSES OVER OR UNDER THESE TYPES OF PIPELINE SYSTEMS, THE OUTSIDE OF THE WATER MAIN SHALL BE AT LEAST 18 INCHES FROM THE OUTSIDE OF THE EXISTING OR PROPOSED RECLAIMED WATER MAIN, WASTEWATER FORCE MAIN AND STORMWATER FORCE MAIN. AT THE CROSSING, THE PROPOSED PIPE JOINTS SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST FIVE FEET FROM RECLAIMED WATER MAIN JOINTS AND STORMWATER FORCE MAIN JOINTS, AND AT LEAST TEN FEET FROM THE JOINTS OF WASTEWATER FORCE MAINS.
3. NO WATER MAIN SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SANITARY SEWER MANHOLE.
4. NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SUCH THAT THE UNDERGROUND DRAIN (WEEP HOLE) IS AT LEAST:
- A. FIVE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER MAIN, OR VACUUM TYPE SANITARY SEWER.
- B. TEN FEET FROM ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN.
- C. TEN FEET FROM ANY ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS, DRAINFIELDS, AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.

WATER AND RECLAIMED WATER DISTRIBUTION SYSTEMS

1. THE ENTITY THAT WILL OPERATE AND MAINTAIN THE WATER AND RECLAIMED WATER SYSTEMS SHOWN ON THESE PLANS IS SADDLER SQUARE LAND TRUST AND CITY OF FERNANDINA BEACH. THE CONTRACTOR SHALL MEET ALL THE REQUIREMENTS OF CITY OF FERNANDINA BEACH.
2. INSTALL ALL WATER AND RECLAIMED MAINS AT A MINIMUM 36 INCHES OF COVER.

3. BURIED DUCTILE IRON PIPE SHALL COMPLY WITH THE FOLLOWING PRESSURE CLASS (PC) DESIGNATIONS UNLESS OTHERWISE INDICATED ON THE DRAWINGS: A) 12" DIAMETER AND SMALLER = PC 350; B) 14" THROUGH 24" DIAMETER = PC 250; C) 30" THROUGH 64" DIAMETER = PC 200.
4. DUCTILE IRON PIPE AND FITTINGS WITHIN 10 FEET OF GAS MAINS SHALL HAVE AN 8-MIL POLYETHYLENE WRAP IN ACCORDANCE WITH ANSI/AWWA C105/A21.5.
5. PVC PIPE SHALL BE NATIONAL SANITATION FEDERATION (NSF) APPROVED. PIPE SHALL HAVE MARKINGS ON EACH SECTION SHOWING CONFORMANCE TO THE ABOVE SPECIFICATIONS. JOINTS SHALL BE RUBBER GASKETED CONFORMING TO AWWA C900 OR C905. THE BELL END SHALL BE IN LINE WITH THE PIPE AND ON THE GREATER PRESSURE RATING. THE BELL OF PIPE AND FITTINGS USING PUSH-ON JOINTS SHALL HAVE AN INTEGRAL GROOVE TO RETAIN THE GASKET IN PLACE.
6. ALL FITTINGS SHALL BE MANUFACTURED OF DUCTILE IRON, CONFORMING TO ANSI/AWWA C110/A21.5 OR ANSI/AWWA C153/A21.53. ALL FITTINGS SHALL BE PRESSURE RATED TO 250 PSI, MINIMUM. ALL COMPACT FITTINGS (C153/A21.53) SHALL BE PRESSURE RATED TO 350 PSI, MINIMUM.
7. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE LINED AND COATED. INTERIOR LINING SHALL BE STANDARD THICKNESS CEMENT MORTAR LINING PER ANSI/AWWA C104/A21.4. EXTERIOR COATING FOR BURIED PIPE AND FITTINGS SHALL BE A PETROLEUM ASPHALTIC COATING IN ACCORDANCE WITH ANSI/AWWA C110/A21.10. EXTERIOR COATING OF EXPOSED PIPE AND FITTINGS SHALL BE FACTORY APPLIED RUST INHIBITING EPOXY PRIMER, MINIMUM 3 MILS DRY FILM THICKNESS. AFTER INSTALLATION, EXTERIOR SURFACES SHALL BE PAINTED WITH A TWO COAT SYSTEM. THE FIRST COAT (INTERMEDIATE COAT) SHALL BE 4-10.0 MIL DFT NEMEC COLOR H-BUILD EPOXOLINE I SERIES N69 OR APPROVED EQUAL, AND THE FINAL COAT SHALL BE 2-0-3.0 MIL DFT NEMEC ENDURASHIELD SERIES 73 OR APPROVED EQUAL. THE FINAL COAT PAINT COLOR SHALL BE AS SELECTED BY THE LOCAL UTILITY.
8. MECHANICAL AND PUSH ON JOINTS FOR DUCTILE IRON PIPE AND FITTINGS SHALL BE RUBBER GASKETED, CONFORMING TO ANSI/AWWA C111/A21.11. LUBRICANTS OTHER THAN THAT FURNISHED BY THE PIPE MANUFACTURER WITH THE PIPE SHALL NOT BE USED.
9. RESTRAINED JOINTS FOR DUCTILE IRON PIPE BELL JOINTS SHALL BE AMERICAN FAST GRIP GASKET, MCWANE SUPER GRIP 350 GASKET, U.S. PIPE FLEX LOCK 350 GASKET, OR EBAA IRON MEGA LUG SERIES 1100HD. RESTRAINED JOINTS FOR DUCTILE IRON PIPE AND FITTINGS MECHANICAL JOINTS SHALL BE EBAA IRON MEGA LUG SERIES 1100, STAR GRIP SERIES 2000, OR TYLER UNION TUF-GRIP SERIES TLD. LOCKING BELL JOINT RESTRAINT SHALL BE AMERICAN FLEX RING JOINT, AMERICAN LOCK-RING JOINT, OR U.S. PIPE TR-FLEX. RESTRAINED JOINTS FOR PVC PIPE MECHANICAL JOINTS SHALL BE TYLER UNION SERIES 2000 TUF GRIP, TUF JOM SUR-GRIP BELL RESTRAINT, FORD UNI-FLANGE SERIES 1300, OR EBAA IRON MEGA LUG SERIES 2000P. RESTRAINED JOINTS FOR PVC PIPE PUSH ON JOINTS SHALL BE EBAA IRON MEGA LUG SERIES 1500 OR SERIES 1600 (C900 PVC), SERIES 2800 (C905 PVC), FORD UNI-FLANGE SERIES 1300, OR SMITH-BLAIR BELL-LOCK SERIES 165. PIPE JOINTS SHALL BE RESTRAINED UPSTREAM AND DOWNSTREAM OF FITTINGS IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS OR THE TABLE SHOWN IN THE DRAWINGS, WHICHEVER IS GREATER.
10. POLYETHYLENE PIPE AND TUBING SHALL BE COLOR CODED BLUE (POTABLE WATER) OR PURPLE (RECLAIMED WATER). PIPE AND FITTINGS SHALL BE NSF APPROVED FOR THE USAGE TO WHICH THEY ARE TO BE APPLIED. JOINTS IN SDR-PE PIPE SHALL BE BUTT HEAT FUSION OR SOCKET HEAT FUSION TYPE. FITTINGS SHALL BE MANUFACTURED OF THE SAME MATERIAL AS THE PIPE AND SHALL BE OF THE SAME SDR OR LESS. PROVIDE ADAPTERS AS REQUIRED TO JOIN PE PIPE TO PIPE, FITTINGS AND EQUIPMENT OF OTHER MATERIALS.
11. SERVICE SADDLES SHALL MEET THE REQUIREMENTS OF AWWA C800 AND SHALL CONSIST OF EPOXY COATED DUCTILE IRON BODIES IN ACCORDANCE WITH ASTM A536, WITH DOUBLE STAINLESS STEEL STRAPS, BOLTS, WASHERS AND NUTS. STAINLESS STEEL SHALL BE TYPE 304, AND NUTS ARE TO BE TEFELON COATED. THE DUCTILE IRON BODY IS TO BE FUSION BONDED NYLON COATED, MINIMUM THICKNESS 12 MILS. OUTLET OF SADDLE IS TO HAVE NPT THREADS. SERVICE SADDLES SHALL BE MANUFACTURED BY FORD, MUELLER, OR SMITH-BLAIR.
12. ALL SERVICES SHALL INCLUDE THE FOLLOWING: CURB STOPS, UNIONS AS REQUIRED, CORROSION STOPS, CONFORMANCE WITH AWWA C800 AND C901 IS REQUIRED. THE CONTRACTOR SHALL CUT "W" IN THE TOP CURB OF EACH WATER SERVICE AND A "V" AT ALL VALVE LOCATIONS. CUT "W'S AND V'S SHALL BE HIGHLIGHTED WITH BLUE PAINT.
13. UNLESS OTHERWISE NOTED IN THE PLANS, THE UTILITY COMPANY SHALL PROVIDE AND INSTALL WATER METERS AND RECLAIMED WATER METERS. CONTRACTOR SHALL CONSTRUCT WATER SERVICE AND RECLAIMED WATER SERVICE TO THE CORPORATION STOP.
14. UNLESS OTHERWISE INDICATED OR SPECIFIED, ALL VALVES TWO INCHES AND SMALLER SHALL BE ALL BRASS OR BRONZE; VALVES OVER TWO INCHES SHALL BE IRON BODY, FULLY BRONZE OR BRONZE MOUNTED.
15. VALVES 4 INCHES AND LARGER SHALL BE LINED AND COATED. BURIED AND EXPOSED VALVES SHALL BE COATED INSIDE AND OUT WITH A RUST INHIBITING EPOXY PRIMER, FOLLOWED BY AN EPOXY COATING MEETING THE REQUIREMENTS OF AWWA C550, APPLIED AT THE FACTORY. THE INTERIOR OF VALVES WITH A CAST IRON OR DUCTILE IRON BODY SHALL BE COATED WITH AN EPOXY PROTECTIVE COATING. VALVE BOXES SHALL BE CAST IRON OR DUCTILE IRON. AFTER INSTALLATION, EXTERIOR SURFACES SHALL BE PAINTED WITH A TWO COAT SYSTEM. THE FIRST COAT (INTERMEDIATE COAT) SHALL BE 4-10.0 MIL DFT NEMEC COLOR H-BUILD EPOXOLINE II SERIES N69 OR APPROVED EQUAL, AND THE FINAL COAT SHALL BE 2-0-3.0 MIL DFT NEMEC ENDURASHIELD SERIES 73 OR APPROVED EQUAL. THE FINAL COAT PAINT COLOR SHALL BE AS SELECTED BY THE LOCAL UTILITY.
16. ALL VALVES 12" AND SMALLER SHALL BE GATE VALVES UNLESS OTHERWISE INDICATED ON THE DRAWINGS. GATE VALVES 3 INCHES TO 12 INCHES SHALL CONFORM TO AWWA C500 OR AWWA S15.5. THE VALVES SHALL BE IRON BODY, GATE VALVE, FULLY ENCAPSULATED MOLDED RUBBER WEDGE COMPLYING WITH ASTM D2000, NON-RISING STEM WITH O-RING SEALS. VALVES SHALL OPEN COUNTERCLOCKWISE.
17. TAPPING SLEEVES ARE TO BE 18-# TYPE 304 STAINLESS STEEL AND STAINLESS STEEL OUTLET, AS MANUFACTURED BY JCM OR APPROVED EQUAL. TAPPING VALVES SHALL BE RESILIENT SEATED GATE VALVES AND SHALL CONFORM TO THE REQUIREMENTS OF AWWA C509. TAPPING VALVES SHALL BE AMERICAN FLOW CONTROL SERIES 2500, CLOUING FIRE F-6100, OR MUELLER SERIES A261.
18. VALVES 14" AND LARGER SHALL BE BUTTERFLY VALVES. BUTTERFLY VALVES SHALL MEET OR EXCEED THE DESIGN STRENGTH, TESTING AND PERFORMANCE REQUIREMENTS AWWA C504, CLASS 150. VALVE BODY SHALL BE MECHANICAL JOINT END TYPE VALVE CONSTRUCTED OF CAST IRON OR DUCTILE IRON. DISC SHALL BE ONE PIECE CAST IRON DESIGN WITH EXTERNAL RIBS TRANSVERSE TO FLOW. DISC SHALL BE CAST IRON OR DUCTILE IRON. THE RESILIENT SEAT SHALL MATE WITH A 304 OR 316 STAINLESS STEEL SURFACE.
19. VALVE SEATS SHALL BE MECHANICALLY RETAINED, AND MAY BE INSTALLED ON EITHER THE BODY OR DISC. O-RING SEATS ON VALVE DISCS ARE UNACCEPTABLE. SEATS FOR VALVES 14" DI



34. ALL APPARENT LEAKS DISCOVERED WITHIN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER SHALL BE LOCATED AND REPAIRED BY CONTRACTOR, REGARDLESS OF THE TOTAL LINE LEAKAGE RATE.
35. PRIOR TO DISINFECTION, CONDUCT FULL DIAMETER FLUSHING OF PIPELINE IN SECTIONS IN ORDER TO REMOVE ANY SOLIDS OR CONTAMINATED MATERIAL THAT MAY HAVE BECOME LODGED IN THE PIPE.
36. OBTAIN A MINIMUM FLUSHING VELOCITY OF 2.5 FEET PER SECOND PER AWWA C651.
37. ALL TAPS REQUIRED FOR FLUSHING AND THE TEMPORARY OR PERMANENT RELEASE OF AIR AS NEEDED FOR FLUSHING SHALL BE PROVIDED BY THE CONTRACTOR.
38. DISINFECT ALL POTABLE WATER LINES, FIRE LINES, VALVES, FITTINGS, HYDRANTS. THE WATER MAIN DISINFECTION AND BACTERIOLOGICAL SAMPLING AND METHODS OF DISINFECTION FOR ALL WATER CONTAINMENT DEVICES AND PIPING SYSTEMS SHALL CONFORM TO AWWA C651. THE DISCHARGE LOCATIONS FOR THE CHLORINATED WATER SHALL BE APPROVED BY THE OWNER. NEUTRALIZE THE CHLORINE RESIDUAL BY MEANS OF A REDUCING AGENT IN ACCORDANCE WITH AWWA C651.
39. ALL DISINFECTION WORK SHALL BE ACCEPTABLE TO THE STATE HEALTH AUTHORITY. IF ANY REQUIREMENTS OF THIS SECTION ARE IN CONFLICT WITH REQUIREMENTS OF THE AUTHORITY FOR DISINFECTION, THOSE OF THE AUTHORITY SHALL GOVERN. ALL BACTERIOLOGICAL TESTING SHALL BE PERFORMED BY A STATE CERTIFIED LABORATORY CONTRACTED BY THE CONTRACTOR. PROPER CHAIN OF CUSTODY PROCEDURES MUST BE FOLLOWED AND SAMPLES SHALL ONLY BE COLLECTED BY CERTIFIED LABORATORY PERSONNEL. COPIES OF ALL TESTING RESULTS AND ALL RELATED CORRESPONDENCE FROM THE TESTING LAB SHALL BE SUBMITTED TO THE OWNER, UTILITY, AND ENGINEER.

#### FIRE PROTECTION SYSTEMS

1. COMBUSTIBLE CONSTRUCTION CANNOT OCCUR UNTIL PROPER DOCUMENTATION HAS BEEN SUBMITTED TO THE LOCAL FIRE MARSHAL. DOCUMENTATION SHALL SHOW THAT HYDRANTS HAVE BEEN INSTALLED, TESTED, AND ARE IN PROPER WORKING ORDER.
2. INSTALL ALL FIRE LINE PIPING AT A MINIMUM 36 INCHES OF COVER.
3. THE CONTRACTOR INSTALLING THE UNDERGROUND FIRE PROTECTION PIPING SHALL HOLD A CLASS I, II, OR LEVEL V CERTIFICATION AS ISSUED BY THE STATE OF FLORIDA, AS REQUIRED BY FS 633.02(15).
4. ALL FIRE PROTECTION SPRINKLER SYSTEMS INSTALLED SHALL COMPLY WITH NFPA 13, AND SHALL BE MONITORED BY A COMPANY LISTED AS A CENTRAL STATION.
5. HYDRANTS SHALL CONFORM TO AWWA C502 AND SHALL BE FURNISHED COMPLETE WITH WRENCH AND OTHER APPURTENANCES. MANUFACTURERS CERTIFICATION OF COMPLIANCE WITH AWWA C502 AND TESTS LISTED THEREIN WILL BE REQUIRED.
6. ALL HYDRANTS SHALL BE OF BREAKABLE TYPE, WITH THE BREAKABLE SECTION LOCATED SLIGHTLY ABOVE THE FINISH GROUND LINE. HYDRANTS SHALL CONTAIN TWO-TWO AND A HALF INCH (2-1/2") HOSE CONNECTIONS AND ONE-FOUR AND A HALF INCH (4-1/2") STEAMER CONNECTIONS WITH NATIONAL STANDARD FIRE HOSE COUPLING SCREW THREADS, FIVE AND ONE QUARTER INCH (5-1/4") VALVE OPENING, SIX INCH (6") DIAMETER MECHANICAL JOINT INLET, ONE AND ONE-HALF INCH (1-1/2") PENTAGON OPERATING NUT. THE HYDRANTS SHALL OPEN COUNTERCLOCKWISE.
7. ALL HYDRANTS SHALL BE PAINTED IN AN APPROVED MANNER WITH THE PRIMER PAINT BEING KOPPER'S "GLAMORTEX" NO. 622 RUST PRIMER AND THE FINISH PAINT SHALL BE TWO COATS OF ENAMEL OR SPECIAL COATING TO COLOR AS REQUIRED BY THE LOCAL FIRE DEPARTMENT.
8. BLUE PAVEMENT REFLECTORS (CAT EYES) SHALL BE PLACED IN THE CENTERLINE OF THE DRIVING LANE DIRECTLY IN FRONT OF ALL FIRE HYDRANTS. THERE SHALL BE NO TREES, SHRUBS, OR LANDSCAPING PLANTED AROUND THE FIRE HYDRANTS OR IN AREAS DESIGNATED AS FIRE LANES.
9. NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SUCH THAT THE UNDERGROUND DRAIN (WEEP HOLE) IS AT LEAST: THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER MAIN, OR VACUUM TYPE SANITARY SEWER; SIX FEET FROM ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN; AND TEN FEET FROM ANY ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS, DRAINFIELDS, AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.
10. THE SEQUENCE OF TESTING AND DISINFECTION SHALL BE AS FOLLOWS: 1) CONDUCT FIRE FLOW, PRESSURE AND LEAKAGE TESTING; 2) PERFORM FLUSHING PER UTILITY REQUIREMENTS AND AWWA C651; 3) DISINFECT THE WATER MAIN, INCLUDING VALVES AND FITTINGS; AND 4) FLUSH AFTER DISINFECTION.
11. THE CONTRACTOR SHALL PROVIDE A POST-CONSTRUCTION FIRE FLOW TEST WITNESSED AND APPROVED BY THE ENGINEER AND THE UTILITY. HYDRANTS SHALL DELIVER A MINIMUM OF 1250 GPM WITH A RESIDUAL PRESSURE OF 20 PSI.
12. APPLY HYDROSTATIC TEST PRESSURE OF 200 PSI (FIRE MAINS) FOR 10 MINUTES AND FOR SUCH ADDITIONAL PERIOD NECESSARY FOR THE ENGINEER TO COMPLETE THE INSPECTION OF THE LINE UNDER TEST. DO NOT EXCEED PIPE MANUFACTURER'S SUGGESTED TIME DURATION AT THE TEST PRESSURE. IF DEFECTS ARE NOTED, REPAIRS SHALL BE MADE AND THE TEST REPEATED UNTIL ALL PARTS OF THE LINE WITHSTAND THE TEST PRESSURE.
13. APPLY LEAKAGE TEST PRESSURE OF 200 PSI (FIRE MAINS) MAINTAIN PRESSURE AT A MAXIMUM VARIATION OF 5% DURING THE ENTIRE LEAKAGE TEST. THE DURATION OF THE LEAKAGE TEST SHALL BE TWO HOURS MINIMUM, AND FOR SUCH ADDITIONAL TIME NECESSARY FOR THE ENGINEER TO COMPLETE INSPECTION OF THE SECTION OF LINE UNDER TEST. LEAKAGE MEASUREMENTS SHALL NOT BE STARTED UNTIL A CONSTANT TEST PRESSURE HAS BEEN ESTABLISHED. THE LINE LEAKAGE SHALL BE MEASURED BY MEANS OF A WATER METER INSTALLED ON THE SUPPLY SIDE OF THE PRESSURE PUMP.
14. NO LEAKAGE IS ALLOWED IN EXPOSED PIPING, BURIED PIPING WITH FLANGED, THREADED, OR WELDED JOINTS OR BURIED NON-POTABLE PIPING IN CONFLICT WITH POTABLE WATER LINES.
15. TESTED SECTIONS OF BURIED PIPING WITH SLIP-TYPE OR MECHANICAL JOINTS WILL NOT BE ACCEPTED IF IT HAS A LEAKAGE RATE IN EXCESS OF THAT RATE DETERMINED BY THE FORMULA  $L = \frac{SDP \times 48000}{P}$  WHERE: L = MAXIMUM PERMISSIBLE LEAKAGE RATE, IN GALLONS PER HOUR, THROUGHOUT THE ENTIRE LENGTH OF LINE BEING TESTED; S = LENGTH OF LINE TESTED (IN FEET); D = NOMINAL INTERNAL DIAMETER (IN INCHES) OF THE PIPE; AND P = THE SQUARE ROOT OF THE ACTUAL PRESSURE IN PSIG ON ALL JOINTS IN THE TESTED PORTION OF THE LINE. THIS ACTUAL PRESSURE SHALL BE DETERMINED BY FINDING THE DIFFERENCE BETWEEN THE AVERAGE ELEVATION OF ALL TESTED PIPE JOINTS AND THE ELEVATION OF THE PRESSURE GAUGE AND ADDING THE DIFFERENCE IN ELEVATION HEAD TO THE AUTHORIZED TEST PRESSURE.
16. DISINFECT ALL POTABLE WATER LINES, FIRE LINES, VALVES, FITTINGS, HYDRANTS.

#### SANITARY SEWER SYSTEMS

1. THE ENTITY THAT WILL OPERATE AND MAINTAIN THE SEWER SYSTEM SHOWN ON THESE PLANS IS SADLER SQUARE LAND TRUST AND CITY OF FERNANDINA BEACH. THE CONTRACTOR SHALL MEET ALL THE REQUIREMENTS OF CITY OF FERNANDINA BEACH.
2. INSTALL ALL SEWER MAINS AT A MINIMUM 36 INCHES OF COVER.
3. JOINTS SHALL MEET THE REQUIREMENTS OF ASTM D3212 USING RUBBER GASKETS CONFORMING TO ASTM F477.
4. FITTINGS SHALL CONFORM TO THE SAME REQUIREMENTS AS THE PIPE. PROVIDE ADAPTERS AS REQUIRED TO JOIN PVC PIPE TO PIPE, FITTINGS AND EQUIPMENT OF OTHER MATERIALS. SOLVENT CEMENT SHALL BE AS RECOMMENDED BY THE PIPE MANUFACTURER.
5. SEWER PIPE SHALL BE COLOR CODED GREEN, STENCILED "SEWER LINE" (2" LETTERING ON TWO SIDES OF THE PIPE IN AT LEAST THREE AREAS PER PIPE SECTION).
6. INSTALL ADHESIVE IDENTIFICATION TAPE ALONG PIPELINE. TAPE SHALL BE MINIMUM THICKNESS 4 MILS, WIDTH 6 INCHES, LETTER SIZE 1 INCH. TAPE COLOR AND LETTERING SHALL BE "SEWER LINE", BLACK PRINTING ON GREEN BACKGROUND. PLACE TAPE AS FOLLOWS: 2" PIPE - CENTER ALONG TOP HALF OF PIPE; 10" - 18" PIPE - PLACE ALONG BOTH SIDES OF THE TOP HALF OF PIPE; 20" PIPE AND LARGER - PLACE ON BOTH SIDES OF TOP HALF OF PIPE WITH A THIRD STRIP CENTERED ALONG TOP HALF OF PIPE.
7. INSTALL WARNING TAPE ALONG ALL SEWER PIPELINES. TAPE SHALL BE 6-INCH WIDE VINYL CONTINUOUS TAPE, COLORED GREEN WITH BLACK LETTERING CODED AND WORDED "CAUTION: SEWER BURIED BELOW". INSTALL ALONG PIPELINE, 2 FEET ABOVE PIPE, MINIMUM OF 1 FOOT BELOW GRADE.
8. CONNECTIONS TO EXISTING SEWER SHALL BE CONDUCTED IN SUCH A MANNER THAT THE EXISTING SEWER REMAINS IN OPERATION. PROVIDE BY PASS PUMPING OF EXISTING FLOWS OR COLLECT AND LEGALLY DISPOSE OF EXISTING SEWER FLOW AS NEEDED TO ACCOMMODATE CONSTRUCTION WHILE KEEPING EXISTING SEWER IN SERVICE.
9. PRIOR TO INSPECTIONS AND TESTING, CLEAN ALL INSTALLED LINES AND MANHOLES. TEST PROCEDURES SHALL BE APPROVED BY THE ENGINEER. ALL TESTS SHALL BE MADE IN THE PRESENCE OF THE ENGINEER AND UTILITY. NOTIFY THE ENGINEER AND THE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY WORK IS TO BE INSPECTED OR TESTED.
10. PROVIDE ALL EQUIPMENT FOR TESTING. INCREMENTS ON GAGES USED FOR LOW PRESSURE AIR TESTING SHALL BE OF SCALED TO THE NEAREST 0.1 PSI. GAGES, PUMPS, AND HOSES SHALL BE IN GOOD WORKING ORDER WITH NO NOTICEABLE LEAKS.
11. ALL SERVICE LATERALS SHALL BE COMPLETED PRIOR TO TESTING, AND ARE SUBJECT TO THE SAME TESTING REQUIREMENTS AS THE MAIN LINE.
12. PROVIDE LIGHT SOURCE AND MIRRORS FOR LAMPING OF SEWER. ANY SEWER IN WHICH THE DIRECT LIGHT OF A LAMP CANNOT BE VIEWED IN EITHER DIRECTION, FULL CIRCLE, BETWEEN ADJACENT MANHOLES SHALL BE CONSIDERED UNSATISFACTORY, UNLESS THE LINE IS DESIGNED WITH HORIZONTAL DEFLECTIONS, AND SHALL BE REPAIRED BY THE CONTRACTOR WITHOUT ADDITIONAL COMPENSATION.
13. CONDUCT LOW PRESSURE AIR TESTING (4.0 PSI INITIAL PRESSURE) OF INSTALLED SEWER PIPING IN ACCORDANCE WITH ASTM F1417. MAXIMUM ALLOWABLE LEAKAGE IS 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE AREA BEING TESTED. ALLOWABLE AIR PRESSURE DROP DURING THE TEST IS 0.5 PSIG. MINIMUM REQUIRED TEST TIME (DURATION) IS: A) 4" PIPE = 1 MIN 53 SEC; B) 6" PIPE = 2 MIN 50 SEC, OR 0.427 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; C) 8" PIPE = 3 MIN 47 SEC, OR 0.760 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; D) 10" PIPE = 4 MIN 43 SEC, OR 1.187 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; E) 12" PIPE = 5 MIN 40 SEC, OR 1.709 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER.
14. CONDUCT DEFLECTION TESTING OF PIPELINE AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. MAXIMUM ALLOWABLE PIPE DEFLECTION IS 5%. MEASURE DEFLECTION BY MANUALLY PULLING A MANHOLE THROUGH THE PIPE. THE MINIMUM MANHOLE OUTLET DIAMETER SHALL BE IN ACCORDANCE WITH THE FOLLOWING: 6" SEWER = 5.45" MANHOLE; 8" SEWER = 7.28" MANHOLE; 10" SEWER = 9.08" MANHOLE; 12" SEWER = 10.79" MANHOLE; 15" SEWER = 13.20" MANHOLE; 18" SEWER = 16.13" MANHOLE; 21" SEWER = 19.00" MANHOLE; 24" SEWER = 21.38" MANHOLE; 27" SEWER = 24.08" MANHOLE.
15. DEFLECTION TESTING IS CONSIDERED SATISFACTORY IF THE MANHOLE CAN BE PULLED BY HAND THROUGH THE PIPE BEING TESTED. IF THE MANHOLE CANNOT BE PULLED THROUGH THE PIPE, REPLACE OR CORRECT THE PIPE AND RETEST UNTIL TESTING IS SATISFACTORY. ANY PIPE REMOVED OR CORRECTED DUE TO FAILING DEFLECTION TESTING SHALL ALSO BE RE-TESTED FOR LEAKAGE.

#### FORCE MAIN SYSTEMS

1. THE ENTITY THAT WILL OPERATE AND MAINTAIN THE FORCE MAIN SYSTEM SHOWN ON THESE PLANS IS CITY OF FERNANDINA BEACH. THE CONTRACTOR SHALL MEET ALL THE REQUIREMENTS OF CITY OF FERNANDINA BEACH.
2. INSTALL ALL FORCE MAINS AT A MINIMUM 36 INCHES OF COVER.
3. DUCTILE IRON PIPE AND FITTINGS WITHIN 10 FEET OF GAS MAINS SHALL HAVE AN 8-MIL POLYETHYLENE WRAP IN ACCORDANCE WITH ANSI/AWWA C105/A21.5.
4. PVC PIPE JOINTS SHALL BE RUBBER GASKETED CONFORMING TO AWWA C900 OR C905. THE BELL SHALL BE INTEGRAL WITH THE PIPE AND OF EQUAL OR GREATER PRESSURE RATING. THE BELL OF PIPE AND FITTINGS USING PUSH-ON JOINTS SHALL HAVE AN INTEGRAL GROOVE TO RETAIN THE GASKET IN PLACE.
5. ALL FITTINGS SHALL BE MANUFACTURED OF DUCTILE IRON, CONFORMING TO ANSI/AWWA C110/A21.10 OR ANSI/AWWA C153/A21.53. ALL FULL BODY (C110/A21.10) FITTINGS SHALL BE PRESSURE RATED TO 250 PSI, MINIMUM. ALL COMPACT FITTINGS (C153/A21.53) SHALL BE PRESSURE RATED TO 350 PSI, MINIMUM.
6. INTERIOR LINING FOR PIPES AND FITTINGS SHALL BE EITHER MINIMUM 40 MILS DRY FILM THICKNESS (60 MILS NOMINAL) OF CERAMIC EPOXY LINING, AS MANUFACTURED UNDER THE NAME OF "PROTECTO 401", OR MINIMUM 40 MILS DRY FILM THICKNESS (60 MILS NOMINAL) OF FUSION BONDED EPOXY AND POLYETHYLENE LINING, AS MANUFACTURED UNDER THE NAME OF "POLYBOND PLUS", OR EQUAL. EXTERIOR COATING FOR BURIED PIPE AND FITTINGS SHALL BE A PETROLEUM ASPHALTIC COATING IN ACCORDANCE WITH ANSI/AWWA C110/A21.10. EXTERIOR COATING OF EXPOSED PIPE AND FITTINGS SHALL BE FACTORY APPLIED RUST INHIBITING EPOXY PRIMER, MINIMUM 3 MILS DRY FILM THICKNESS. AFTER INSTALLATION, EXTERIOR SURFACES SHALL BE PAINTED WITH A TWO COAT SYSTEM. THE FIRST COAT (INTERMEDIATE COAT) SHALL BE 4.0-10.0 MIL DFT TMEMEC COLOR HI-BUILD EPOXOLINE II SERIES N69 OR APPROVED EQUAL, AND THE FINAL COAT SHALL BE 2.0-3.0 MIL DFT TMEMEC ENDURASHIELD SERIES 73 OR APPROVED EQUAL. THE FINAL COAT PAINT COLOR SHALL BE AS SELECTED BY THE LOCAL UTILITY.
7. MECHANICAL AND PUSH ON JOINTS FOR DUCTILE IRON PIPE AND FITTINGS SHALL BE RUBBER GASKETED, CONFORMING TO ANSI/AWWA C111/A21.11. LUBRICANTS OTHER THAN THAT FURNISHED BY THE PIPE MANUFACTURER WITH THE PIPE SHALL NOT BE USED.
8. RESTRAINED JOINTS FOR DUCTILE IRON PIPE BELL JOINTS SHALL BE AMERICAN FAST GRIP GASKET, MCWANE SURE GRIP 350 GASKET, U.S. PIPE FIELD LOK 360 GASKET, OR EBAA IRON MEGA LUG SERIES 1100HD. RESTRAINED JOINTS FOR DUCTILE IRON PIPE AND FITTING MECHANICAL JOINTS SHALL BE EBAA IRON MEGA LUG SERIES 1100, STAR GRIP SERIES 3000, OR TYLER UNION TUF-GRIP SERIES 12D. LOCKING BELL JOINT RESTRAINT SHALL BE AMERICAN FLEX RING JOINT, AMERICAN LOK-RING JOINT, OR U.S. PIPE TR-FLEX. RESTRAINED JOINTS FOR PVC PIPE MECHANICAL JOINTS SHALL BE TYLER UNION SERIES 2000 TUF GRIP TLP, JCM SUR-GRIP BELL RESTRAINER, FORD UNI-FLANGE SERIES 1500 CIRCLE LOCK, OR EBAA IRON MEGA LUG SERIES 2000PV. RESTRAINED JOINTS FOR PVC PIPE PUSH ON JOINTS SHALL BE EBAA IRON MEGA LUG SERIES 1500 OR SERIES 1600 (2000 PVC), SERIES 2800 (C905 PVC), FORD UNI-FLANGE SERIES 1390, OR SMITH-BLAIR BELL-LOK SERIES 165. PIPE JOINTS SHALL BE RESTRAINED UPSTREAM AND DOWNSTREAM OF FITTINGS IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS OR THE TABLE SHOWN IN THE DRAWINGS, WHICHEVER IS GREATER.
9. INTERIOR LINING FOR VALVES 4 INCH AND LARGER SHALL BE EITHER MINIMUM 40 MILS DRY FILM THICKNESS (60 MILS NOMINAL) OF CERAMIC EPOXY LINING, AS MANUFACTURED UNDER THE NAME OF "PROTECTO 401", OR MINIMUM 40 MILS DRY FILM THICKNESS (60 MILS NOMINAL) OF FUSION BONDED EPOXY AND POLYETHYLENE LINING, AS MANUFACTURED UNDER THE NAME OF "POLYBOND PLUS", OR EQUAL. EXTERIOR COATING FOR BURIED VALVES SHALL BE RUST INHIBITING EPOXY PRIMER, FOLLOWED BY A COAL TAR EPOXY, TOTAL MINIMUM DRY FILM THICKNESS OF 16 MILS. APPLIED AT THE FACTORY. EXTERIOR COATING OF EXPOSED VALVES SHALL BE FACTORY APPLIED RUST INHIBITING EPOXY PRIMER, MINIMUM 3 MILS DRY FILM THICKNESS. AFTER INSTALLATION, EXTERIOR SURFACES SHALL BE PAINTED WITH A TWO COAT SYSTEM. THE FIRST COAT (INTERMEDIATE COAT) SHALL BE 4.0-10.0 MIL DFT TMEMEC COLOR HI-BUILD EPOXOLINE I SERIES N69 OR APPROVED EQUAL, AND THE FINAL COAT SHALL BE 2.0-3.0 MIL DFT TMEMEC ENDURASHIELD SERIES 73 OR APPROVED EQUAL. THE FINAL COAT PAINT COLOR SHALL BE AS SELECTED BY THE LOCAL UTILITY.
10. ALL FORCE MAIN VALVES SHALL BE CAST IRON SUITABLE FOR WASTEWATER SERVICE WITH PRESSURES UP TO 250 PSIG, AND SHALL BE QUARTER-TURN, NON-SUBJECT TO AIR LOCK, AND SHALL BE QUARTER-TURN, NON-SUBJECT TO AIR LOCK, AND TESTED IN ACCORDANCE WITH AWWA C517. PORT AREAS OF NOT LESS THAN 100% OF PIPE AREA SHALL BE SUPPLIED ON ALL VALVES. STANDARD PLUG VALVES SHALL BE CLOW F5412 / F5413, VALMATIC 5600 / 5800, DEZURICK SERIES PEC, M&H 1820, PRATT PV, OR APPROVED EQUAL.
11. TAPPING SLEEVES ARE TO BE 18-8 TYPE 304 STAINLESS STEEL AND STAINLESS STEEL OUTLET, AS MANUFACTURED BY JCM OR APPROVED EQUAL. TAPPING VALVES SHALL BE RESILIENT SEATED GATE VALVES AND SHALL CONFORM TO THE REQUIREMENTS OF AWWA C509. TAPPING VALVES SHALL BE AMERICAN FLOW CONTROL SERIES 2500, CLOW SERIES F-6100, OR MUELLER SERIES A2361.
12. AIR RELEASE VALVES SHALL BE COMBINATION CAPABLE OF DISCHARGING ACCUMULATED AIR IN THE LINE WHILE THE LINE IS OPERATING UNDER A PRESSURE OF 150 PSI. COAT MATERIAL SHALL BE STAINLESS STEEL. AIR RELEASE VALVES SHALL HAVE A STAINLESS STEEL BODY AND SHALL BE MANUFACTURED BY ARI (NO. ARI-D-220) OR VENT-O-MAT RSG SERIES. ENCLOSURES FOR AIR RELEASE VALVES SHALL BE POLYETHYLENE WITH STAINLESS STEEL HARDWARE, AND SHALL BE PROVIDED WITH A TAMPER PROOF LOCKING MECHANISM. ENCLOSURES SHALL BE AS MANUFACTURED BY WATER PLUS CORPORATION (MODEL 18285S) OR APPROVED EQUAL, AND SHALL HAVE VENTS AND SHALL BE GREEN IN COLOR.
13. ALL BURIED VALVES SHALL BE PROVIDED WITH ADJUSTABLE VALVE BOXES APPROXIMATELY 5 INCHES IN DIAMETER WITH A MINIMUM THICKNESS OF 3/16 INCH CAST IRON. BOXES SHALL BE OF SUFFICIENT LENGTH TO OPERATE ALL VALVES BURIED IN THE GROUND, CONSISTING OF BASE, CENTER SECTION, AND TOP SECTION WITH COVER. VALVE BOXES LOCATED IN UNPAVED AREAS SHALL BE SLIP TYPE DESIGN TO PERMIT MOVEMENT OF THE TOP SECTION WITHOUT TRANSMITTING FORCES ONTO THE VALVE BODY. VALVE BOXES CAST INTO CONCRETE OR ASPHALT SURFACING SHALL HAVE BRASS COVERS. ALL VALVE BOX COVERS SHALL BE INTERNALLY CHAINED TO VALVE BOXES WITH AN APPROXIMATELY 1/8 INCH GALVANIZED CHAIN. VALVE BOX COVERS SHALL BE CAST WITH THE INSCRIPTION "SEWER".
14. PVC PIPE SHALL BE COLOR CODED GREEN AND STENCILED (0.75-INCH LETTERING ON THE PIPE IN AT LEAST THREE AREAS PER PIPE SECTION) "SEWER FORCE MAIN".
15. INSTALL IDENTIFICATION TAPE ALONG ALL DUCTILE IRON PIPE AND PVC PIPE, MINIMUM THICKNESS 4 MILS, WIDTH 6 INCHES, LETTER SIZE 1 INCH, TEXT TO BE "SEWER FORCE MAIN". APPLY TAPE TO SURFACE OF PIPE, CONTINUOUSLY EXTENDING FROM JOINT TO JOINT. TAPE COLOR AND LETTERING SHALL BE BLACK PRINTING ON GREEN BACKGROUND. PLACE TAPE AS FOLLOWS: 2" - 8" PIPE - CENTER ALONG TOP HALF OF PIPE; 10" - 18" PIPE - PLACE ALONG BOTH SIDES OF THE TOP HALF OF PIPE; 20" PIPE AND LARGER - PLACE ON BOTH SIDES OF TOP HALF OF PIPE WITH A THIRD STRIP CENTERED ALONG TOP HALF OF PIPE.
16. INSTALL WARNING TAPE ALONG ALL PIPELINES, PLACED 2 FEET ABOVE PIPE. TAPE SHALL BE 6-INCH WIDE VINYL CONTINUOUS TAPE. TAPE SHALL BE COLORED BROWN WITH BLACK LETTERING, CODED AND WORDED "CAUTION: FORCE MAIN BURIED BELOW".
17. INSTALL LOCATING WIRE ALONG ALL PVC PIPELINES. WIRE SHALL BE COLOR-CODED 10 GAUGE CONTINUOUS INSULATED WIRE. COLOR CODING TO WARN SIGNALS AND WARNING TAPE COLORS. INSTALL LOCATOR WIRE ALONG ALL PRESSURIZED PIPELINES 2" AND LARGER. LOOP WIRE INTO ALL VALVE BOXES. LOOPING TO OCCUR EVERY 500 FEET MINIMUM, WHERE THERE ARE NO VALVE BOXES TO ALLOW LOOPING, PROVIDE ACCESS BOXES PER UTILITY REQUIREMENTS. CHECK WIRE FOR ELECTRICAL CONTINUITY.
18. ALL CHANGES IN DIRECTION SHALL BE MADE WITH FITTINGS OR APPROVED JOINT DEFLECTION. BENDING OF PIPE, EXCEPT COPPER AND POLYETHYLENE, IS PROHIBITED. JOINT DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURER'S RECOMMENDED MAXIMUM DEFLECTION.
19. TEST PROCEDURES SHALL BE APPROVED BY THE ENGINEER. ALL TESTS SHALL BE MADE IN THE PRESENCE OF THE ENGINEER AND UTILITY. NOTIFY THE ENGINEER AND THE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY WORK IS TO BE INSPECTED OR TESTED.
20. PROVIDE ALL EQUIPMENT FOR TESTING. INCREMENTS ON GAGES USED FOR LOW PRESSURE AIR TESTING SHALL BE OF SCALED TO THE NEAREST 0.1 PSI. GAGES, PUMPS, AND HOSES SHALL BE IN GOOD WORKING ORDER WITH NO NOTICEABLE LEAKS.
21. APPLY HYDROSTATIC TEST PRESSURE OF 100 PSI FOR 10 MINUTES AND FOR SUCH ADDITIONAL PERIOD NECESSARY FOR THE ENGINEER TO COMPLETE THE INSPECTION OF THE LINE UNDER TEST. DO NOT EXCEED PIPE MANUFACTURER'S SUGGESTED TIME DURATION AT THE TEST PRESSURE. IF DEFECTS ARE NOTED, REPAIRS SHALL BE MADE AND THE TEST REPEATED UNTIL ALL PARTS OF THE LINE WITHSTAND THE TEST PRESSURE.
22. APPLY LEAKAGE TEST PRESSURE OF 100 PSI, MAINTAIN PRESSURE AT A MAXIMUM VARIATION OF 5% DURING THE ENTIRE LEAKAGE TEST. THE DURATION OF THE LEAKAGE TEST SHALL BE TWO HOURS MINIMUM, AND FOR SUCH ADDITIONAL TIME NECESSARY FOR THE ENGINEER TO COMPLETE INSPECTION OF THE SECTION OF LINE UNDER TEST. LEAKAGE MEASUREMENTS SHALL NOT BE STARTED UNTIL A CONSTANT TEST PRESSURE HAS BEEN ESTABLISHED. THE LINE LEAKAGE SHALL BE MEASURED BY MEANS OF A WATER METER INSTALLED ON THE SUPPLY SIDE OF THE PRESSURE PUMP.
23. NO LEAKAGE IS ALLOWED IN EXPOSED PIPING, BURIED PIPING WITH FLANGED, THREADED, OR WELDED JOINTS OR BURIED NON-POTABLE PIPING IN CONFLICT WITH POTABLE WATER LINES.
24. TESTED SECTIONS OF BURIED PIPING WITH SLIP-TYPE OR MECHANICAL JOINTS WILL NOT BE ACCEPTED IF IT HAS A LEAKAGE RATE IN EXCESS OF THAT RATE DETERMINED BY THE FORMULA  $L = \frac{SDP \times 48000}{P}$  WHERE: L = MAXIMUM PERMISSIBLE LEAKAGE RATE, IN GALLONS PER HOUR, THROUGHOUT THE ENTIRE LENGTH OF LINE BEING TESTED; S = LENGTH OF LINE TESTED (IN FEET); D = NOMINAL INTERNAL DIAMETER (IN INCHES) OF THE PIPE; AND P = THE SQUARE ROOT OF THE ACTUAL PRESSURE IN PSIG ON ALL JOINTS IN THE TESTED PORTION OF THE LINE. THIS ACTUAL PRESSURE SHALL BE DETERMINED BY FINDING THE DIFFERENCE BETWEEN THE AVERAGE ELEVATION OF ALL TESTED PIPE JOINTS AND THE ELEVATION OF THE PRESSURE GAUGE AND ADDING THE DIFFERENCE IN ELEVATION HEAD TO THE AUTHORIZED TEST PRESSURE.
25. ALL APPARENT LEAKS DISCOVERED WITHIN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER SHALL BE LOCATED AND REPAIRED BY CONTRACTOR, REGARDLESS OF THE TOTAL LINE LEAKAGE RATE.

#### PAVING, SIDEWALKS, AND CURBING

1. MATERIALS AND CONSTRUCTION METHODS FOR THE ROADWAY AND PAVING CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
2. ROADWAY PAVING, BASE, AND SUBGRADE THICKNESSES SHALL BE IN ACCORDANCE WITH DETAILS ON THESE DRAWINGS.
3. SIDEWALKS ARE TO BE CONSTRUCTED IN THE AREAS AS SHOWN ON THE CONSTRUCTION PLANS. HANDICAPPED RAMPS SHALL BE PROVIDED AT ALL INTERSECTIONS AND SHALL BE IN ACCORDANCE WITH THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION, LATEST EDITION.
4. CURBING SHALL BE CONSTRUCTED WHERE NOTED ON THE CONSTRUCTION PLANS. ALL CURBS SHALL HAVE SAW CUT CONTRACTION JOINTS AND SHALL BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 10'-0" ON CENTER. CONSTRUCTION OF CURBS SHALL BE IN CONFORMANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION) SECTION 520 AND DETAILS PROVIDED ON THE CONSTRUCTION PLANS.
5. FIELD COMPACTION DENSITY, STABILITY, AND THICKNESS TESTING FREQUENCIES OF SUB-BASE, BASE, AND ASPHALT SHALL BE TESTED ONCE EVERY 300 LINEAR FEET OF PAVING PER 24-FT WIDE STRIP, STAGGERED LEFT, CENTER AND RIGHT OF CENTERLINE. WHERE LESS THAN 300 LINEAR FEET OF SUB-BASE, BASE, AND ASPHALT IS PLACED IN ONE DAY, PROVIDE MIN. OF ONE TEST FOR EACH PER DAY'S CONSTRUCTION AT A LOCATION DESIGNATED BY THE ENGINEER. ASPHALT EXTRACTION GRADATION SHALL BE TESTED FROM GRAB SAMPLES COLLECTED ONCE EVERY 1800 SQUARE YARDS OF ASPHALT DELIVERED TO THE SITE (OR A MINIMUM OF ONCE PER DAY).

#### PRECAST STRUCTURES AND APPURTENANCES

1. ALL MANHOLES SHALL BE PRECAST CONSTRUCTION. THE MINIMUM SIZE DIAMETER OF MANHOLES SHALL BE 48" FOR SEWER LINES 24" IN DIAMETER OR LESS. INTEGRALLY CAST STEPS WITHIN PRECAST STRUCTURES ARE NOT ALLOWED.
2. BASES SHALL BE ONE-PIECE PRECAST BASE SECTIONS CONSISTING OF INTEGRALLY CAST SLAB, BOTTOM RING SECTION AND CONCRETE FLOW CHANNELS. BASE SECTIONS SHALL HAVE INTEGRAL INVERTS WITH GASKETS TO MATCH THE PIPE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ALL INVERT ANGLES. PROVIDE OUTLET STUBS WITH JOINTS TO MATCH THE PIPE.
3. RISERS SHALL BE PRECAST REINFORCED CONCRETE PER ASTM C478, MANUFACTURED USING SULFATE RESISTANT CEMENT (ASTM C150, TYPE II). RISERS SHALL BE 48-INCH DIAMETER UNLESS OTHERWISE INDICATED AND SHALL HAVE A MINIMUM WALL THICKNESS OF 5 INCHES.
4. GASKETS FOR SEATING PRECAST SECTIONS SHALL BE COLD ADHESIVE PREFORMED PLASTIC GASKETS CONFORMING TO FDOT SPECIFICATION 942-2, UNLESS OTHERWISE INDICATED.
5. UNLESS OTHERWISE INDICATED, CONE TOP SECTIONS SHALL BE PRECAST, ECCENTRIC TYPE WITH 24-INCH DIAMETER TOP OPENING CONFORMING TO ASTM C478. PROVIDE 8-INCH MINIMUM THICKNESS FLAT SLAB TOPS WITH ECCENTRIC 24 INCH DIAMETER OPENING, UNLESS OTHERWISE INDICATED.
6. PROVIDE A FLEXIBLE WATERTIGHT SEAL OF THE PIPE TO THE MANHOLE. CONNECTION OF CONCRETE PIPE TO THE MANHOLE SHALL BE MADE WITH NON-SHRINK METALLIC GROUT. CONNECTION OF DUCTILE IRON OR PVC PIPE TO THE MANHOLE SHALL PROVIDE A WATERTIGHT CONNECTION PER ASTM C923. WHERE CONNECTORS ARE USED, THEY SHALL BE INSTALLED IN THE MANHOLE WALL BY ACTIVATING THE EXPANDING MECHANISM IN STRICT ACCORDANCE WITH THE RECOMMENDATION OF THE CONNECTOR MANUFACTURER. THE USE OF ADHESIVES OR LUBRICANTS FOR INSTALLATION OF RUBBER CONNECTORS IS PROHIBITED.
7. FRAMES AND COVERS SHALL BE GREY IRON PER ASTM A48, CLASS 30B AND SHALL BE U.S. FOUNDRY TYPE 227AS, TRAFFIC BEARING (ASHTO H-20 LOADING), UNLESS OTHERWISE NOTED IN THE DRAWINGS. CASTINGS SHALL BE SMOOTH, CLEAN, FREE FROM BLISTERS, BLOWHOLES, AND SHRINKAGE. RAISED LETTERING ON COVERS SHALL BE "STORM", "SEWER", OR AS DETAILED ON THE DRAWINGS.
8. PROVIDE INLETS, FRAMES, AND GRATES IN ACCORDANCE WITH DETAILS ON THE DRAWINGS. ALL FRAMES AND INLET GRATES SHALL BE PRODUCTS OF U.S. FOUNDRY & MANUFACTURING CORPORATION, OR EQUAL.
9. ALL INLET GRATES SHALL BE SECURED BY CHAIN AND EYEBOLT TO THE TOP OF THE STRUCTURE.
10. THE TOP ELEVATION OF MANHOLES CONSTRUCTED IN PAVED AREAS SHALL MATCH FINISHED GRADE. THE TOP ELEVATION OF MANHOLES CONSTRUCTED IN GRASSED AREAS SHALL BE 4" ABOVE FINISHED GRADE (UNLESS NOTED OTHERWISE).
11. ALL MANHOLES AND CLEAN OUTS CONSTRUCTED WITHIN PAVED AREAS SHALL BE INSTALLED WITH TRAFFIC BEARING RINGS AND COVERS.
12. MANHOLE COATINGS AND FINISHES SHALL BE:
- A. SANITARY SEWER MANHOLE INTERIOR - BITUMINOUS EPOXY COATING, MINIMUM DRY FILM THICKNESS = 16 MILS.
- B. INTERIOR OF MANHOLES WHICH RECEIVE FORCE MAIN DISCHARGE - INTEGRALLY ATTACHED INTERIOR LINER, FULL HEIGHT, FIBERGLASS LINER. LINER THICKNESS TO BE IN ACCORDANCE WITH THE DRAWINGS.
- C. EXTERIOR - BITUMINOUS EPOXY COATING, MINIMUM DRY FILM THICKNESS = 16 MILS.

#### STORM SEWER SYSTEMS

1. REINFORCED CONCRETE PIPE (RCP) JOINTS SHALL COMPLY WITH ASTM C443 AND FDOT SPECIFICATION SECTION 430, AND RUBBER GASKETS SHALL COMPLY WITH FDOT SPECIFICATION SECTION 942. MINIMUM COVER OVER THE PIPE, INCLUDING COVER OVER THE BELL OF THE PIPE WHERE APPLICABLE, SHALL BE 30 INCHES.
2. RCP PIPE SHALL NOT BE SHIPPED FROM MANUFACTURER UNTIL THE COMPRESSIVE STRENGTH OF THE PIPE HAS REACHED 4000 PSI AND A MINIMUM OF 5 DAYS HAVE PASSED SINCE THE MANUFACTURING OR REPAIR OF THE PIPE HAS BEEN COMPLETED.
3. UNDERDRAIN PIPE SHALL BE PERFORATED POLYVINYL CHLORIDE PIPE IN ACCORDANCE WITH ASTM F758. FILTER FABRIC UNDERDRAIN SOCK SHALL BE TYPE D-3 IN ACCORDANCE WITH SPECIFICATIONS SECTION 985.
4. ALL PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC. FILTER FABRIC SHALL BE IN ACCORDANCE WITH FDOT INDEX NO. 199, TYPE D-3, A.O.S. 70-100. INSTALL IN ACCORDANCE WITH FDOT STANDARD PLANS INDEX 430-001. PROVIDE MINIMUM 12" OVERLAP.
5. INSTALL POLYETHYLENE PIPE IN ACCORDANCE WITH ASTM D2321. BACKFILL AND COMPACT EVENLY ON EACH SIDE TO PREVENT DISPLACEMENT. MINIMUM COVER OVER POLYETHYLENE PIPE SHALL BE AS FOLLOWS: A) PIPE UNDER FLEXIBLE PAVEMENT, RIGID PAVEMENT, OR UNPAVED AREAS WHERE BEDDING IS SUITABLE SOILS AS DEFINED IN THE GENERAL NOTES: MINIMUM COVER SHALL BE 36 INCHES OR ONE PIPE DIAMETER, WHICHEVER IS GREATER; B) PIPE UNDER FLEXIBLE PAVEMENT, RIGID PAVEMENT, OR UNPAVED AREAS WHERE BEDDING IS MANUFACTURED AGGREGATES CLASS 1A OR 1B AS DEFINED IN ASTM D2321: MINIMUM COVER SHALL BE 30 INCHES OR ONE PIPE DIAMETER, WHICHEVER IS GREATER.
6. INSTALL UNDERDRAINS IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 440. INSTALL CLEANOUTS AS SHOWN ON THE DRAWINGS.
7. PRIOR TO INSPECTIONS AND TESTING, CLEAN ALL INSTALLED LINES AND STRUCTURES.

#### SIGNS AND PAVEMENT MARKINGS

1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE LATEST IMPLEMENTED EDITION OF FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS.
2. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC WITH RAISED PAVEMENT MARKERS (TYPE 911, 4" x 4"). RAISED PAVEMENT MARKERS ARE TO BE INSTALLED IN ACCORDANCE WITH THESE PLANS AND FDOT STANDARD PLANS INDEX 706-001.
3. PARKING STALL PAVEMENT MARKINGS SHALL BE PAINTED. PAINT SHALL MEET THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 971, NON-REFLECTIVE WHITE TRAFFIC PAINT, TWO COATS.
4. ALL ROADWAY TRAFFIC SIGNS SHALL BE MANUFACTURED USING HIGH INTENSITY RETROREFLECTIVE MATERIALS. THE BACK OF ALL FINISHED PANELS SHALL BE STENCILED WITH THE DATE OF FABRICATION, THE FABRICATOR'S INITIALS, AND THE NAME OF THE SHEETING IN THREE-INCH LETTERS.
5. INTERNAL SITE TRAFFIC SIGNS ARE NOT REQUIRED TO BE RETROREFLECTIVE.
6. THE CONTRACTOR SHALL VERIFY THE REQUIRED LENGTH OF THE SIGN COLUMN SUPPORTS IN THE FIELD PRIOR TO FABRICATION.
7. CONTRACTOR SHALL PROVIDE AND INSTALL ALL SIGNS, BASES, ANCHOR BOLTS, CONDUITS, WIRING, ETC.
8. ALL PAVEMENT MARKINGS REQUIRE LAYOUT APPROVAL IN THE FIELD BY THE ENGINEER PRIOR TO INSTALLATION.
9. PRIOR TO FINAL PAVEMENT MARKING INSTALLATION, A TWO WEEK CURE TIME OF THE ASPHALT IS REQUIRED.

#### JACKING AND BORING

1. STEEL CASING PIPE SHALL CONFORM TO ASTM A139, GRADE "B" WITH MINIMUM YIELD STRENGTH OF 35,000 PSI. INTERIOR LINING OF PIPE SHALL BE A COAL TAR LINING CONFORMING TO AWWA C203. EXTERIOR COATING OF PIPE SHALL BE MULTIPLE COATS OF HEAVY DUTY COAL TAR BASE COATING BUILT UP TO 30 MILS TOTAL DRY THICKNESS AND APPLIED IN ACCORDANCE WITH THE COATING MANUFACTURER'S RECOMMENDATIONS.
2. EACH SPACER SHALL BE 12 INCHES WIDE AND MANUFACTURED OF MINIMUM 14 GAUGE TYPE 304 STAINLESS STEEL OR 14 GAUGE STEEL WITH FUSION BONDED PVC COATING. SPACERS SHALL BE LINED WITH A 90 MIL PVC LINER. ALL NUTS AND BOLTS SHALL BE T-304 STAINLESS STEEL. EACH SPACER SHALL HAVE A MINIMUM OF 4 RUNNER SUPPORTS MANUFACTURED OF A HIGH MOLECULAR WEIGHT POLYMER PLASTIC. THE RUNNER SUPPORTS SHALL BE T304 STAINLESS STEEL, MINIMUM 10 GAUGE, OF ADEQUATE RIGIDITY TO POSITION THE CARRIER PIPE IN THE CENTER OF CASING WITH A MINIMUM TOP CLEARANCE OF 0.5 INCHES.
3. ADD ON SECTIONS OF CASING PIPE SHALL BE FULL-RING WELDED TO THE PRECEDING LENGTH, DEVELOPING WATER-TIGHT TOTAL PIPE-STRENGTH JOINTS. ALL WELDING OF STEEL PIPE SHALL BE DONE BY COMPETENT, EXPERIENCED WELDERS. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWWA C206.
4. CASING PIPE WALL MINIMUM WALL THICKNESS SHALL BE AS FOLLOWS: 16" THROUGH 24" = 0.250"; 30" = 0.312"; 36" = 0.375"; 42" AND 48" = 0.500". AT RAILROAD CROSSINGS, CASING PIPE WALL THICKNESS SHALL BE AS FOLLOWS: 16" THROUGH 18" = 0.250"; 20" = 0.281"; 24" = 0.312"; 30" = 0.406"; 36" = 0.469". UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS, THE MINIMUM CASING PIPE DIAMETER SHALL BE BASED ON THE SIZE OF THE CARRIER PIPE NOMINAL DIAMETER AS FOLLOWS: WHERE CARRIER IS 6", THEN MINIMUM CASING IS 18"; WHERE CARRIER IS 8", THEN MINIMUM CASING IS 20"; WHERE CARRIER IS 10", THEN MINIMUM CASING IS 24"; WHERE CARRIER IS 12" OR 16", THEN MINIMUM CASING IS 30"; WHERE CARRIER IS 20", THEN MINIMUM CASING IS 36".
5. BORED INSTALLATIONS SHALL HAVE A HOLE DIAMETER WHICH SHALL NOT EXCEED THE O.D. OF THE CASING PIPE (INCLUDING COATING) BY MORE THAN ONE INCH. WHERE UNSTABLE SOIL CONDITIONS ARE FOUND TO EXIST, BORING OPERATIONS SHALL BE CONDUCTED IN SUCH MANNER AS NOT TO BE DETRIMENTAL TO THE FACILITY BEING CROSSED. IF EXCESSIVE VOIDS OR TOO LARGE A BORED HOLE RESULTS, OR IT IS NECESSARY TO ABANDON A BORED HOLE, PROMPT REMEDIAL MEASURES SHALL BE TAKEN BY THE CONTRACTOR, SUBJECT TO APPROVAL BY THE ENGINEER AND THE CONTROLLING AGENCY OF THE FACILITY BEING CROSSED.
6. CORRECT LINE AND GRADE SHALL BE MAINTAINED. ADD ON SECTIONS OF CASING PIPE SHALL BE FULL RING WELDED TO THE PRECEDING LENGTH, DEVELOPING WATERTIGHT TOTAL PIPE STRENGTH JOINTS. FOLLOWING PLACEMENT OF THE CARRIER PIPE, MASONRY PLUGS SHALL BE INSTALLED AT EACH OPEN END, WITH A WEEP HOLE INSTALLED NEAR THE BOTTOM OF THE PLUG.
7. UNLESS OTHERWISE SHOWN ON THE PLANS, INSTALL CASING AT MINIMUM OF 36-INCH COVER.
8. CARRIER PIPES INSIDE OF STEEL CASING PIPE SHALL BE SUPPORTED BY CASING SPACERS. CARRIER PIPE JOINTS INSIDE OF STEEL CASING PIPE SHALL BE RESTRAINED.
9. SPACERS ALONG DUCTILE IRON CARRIER PIPE SHALL BE PLACED NO MORE THAN 2 FEET FROM THE END OF THE CASING, WITH SUBSEQUENT SPACER PLACEMENT AT INTERVALS OF NO MORE THAN 10 FEET.
10. SPACERS ALONG PVC CARRIER PIPE SHALL BE PLACED NEAR THE SPOOT END OF EACH SEGMENT OF PIPE. WHEN THE JOINT IS COMPLETE, THE SPACER SHALL BE IN CONTACT WITH THE JOINT RESTRAINT ASSEMBLY SO THAT THE SPACER PUSHES THE RESTRAINT ASSEMBLY. SUBSEQUENT SPACER PLACEMENT ALONG PVC PIPE SHALL BE AT INTERVALS OF NO MORE THAN 6 FEET.
11. THE USE OF WOOD SKIDS IN LIEU OF SPACERS IS NOT ALLOWED.
12. THE CARRIER MAY BE PUSHED OR PULLED (DEPENDING UPON PIPING MATERIAL, JOINT TYPE AND METHOD OF PIPE SUPPORT)

INTO THE CASING AS PIPE LENGTHS ARE ASSEMBLED. THE CARRIER SHALL BE ADEQUATELY BLOCKED ALL AROUND TO PREVENT ANY MOVEMENT AND TO ATTAIN THE SPECIFIED GRADE FOR GRAVITY LINES. THE PROPOSED METHOD OF CARRIER PIPE INSTALLATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO STARTING THE CROSSING.

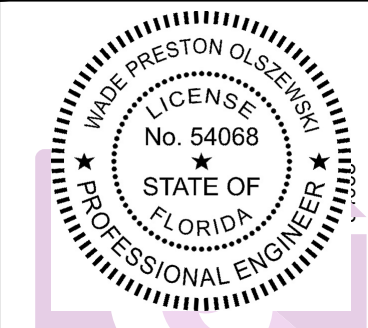
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Plans Prepared By:  
CPH, Inc.  
State of Florida Licenses:  
Engineer No. 3215  
Surveyor No. LB7143  
Architect No. AA26000296  
Landscape No. LC000298



Digitally signed by Wade P. Olaszewski  
DN: c=US, o=CPH, ou=CPH, email=W.Olaszewski@cphe.com, cn=Wade P. Olaszewski  
Reason: I am approving this document and only by the original signature and seal of the Professional Engineer. I am not responsible for any electronic copies.

Date: 2021.08.10 11:48:51 AM

Revision

Date

No.

Designed: P. Ranucci

Drawn: D. Schneider

Checked: W. Olaszewski

Job No.: T3209

Date: 08/10/21

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GENERAL NOTES

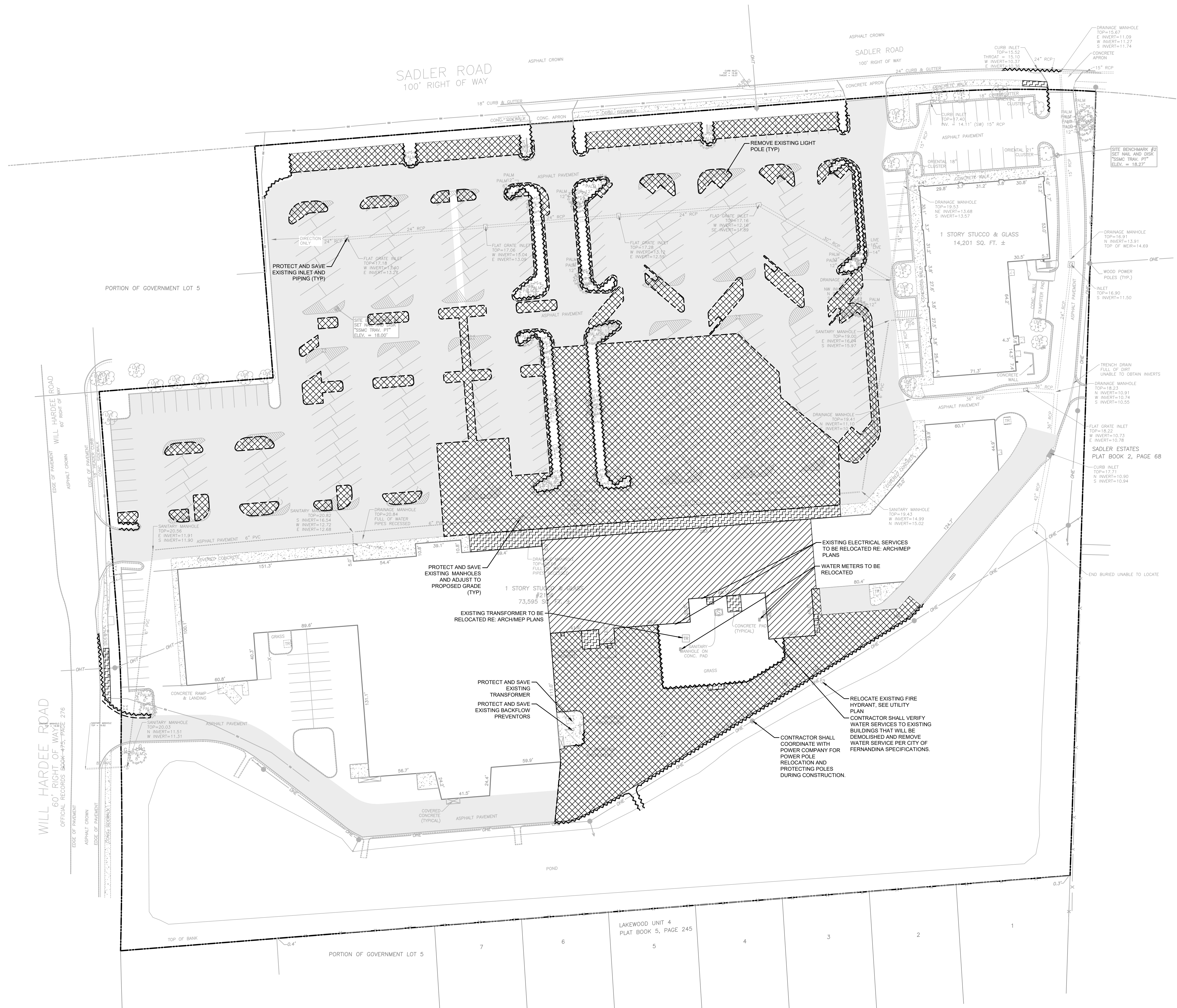
SLEIMAN ENTERPRISES

SADLER SQUARE

C



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LEGEND

- APPROX. LIMITS OF DEMOLITION TO REMOVE EXISTING ASPHALT & BASE
- APPROX. LIMITS OF BUILDING DEMOLITION. REFER TO ARCH. PLANS FOR DETAILED BUILDING DEMOLITION.
- APPROX. LIMITS OF CONCRETE DEMOLITION.
- APPROX. LIMITS OF MILLING AND RESURFACING
- LIMITS OF CURBING REMOVAL
- SAW CUT LIMITS

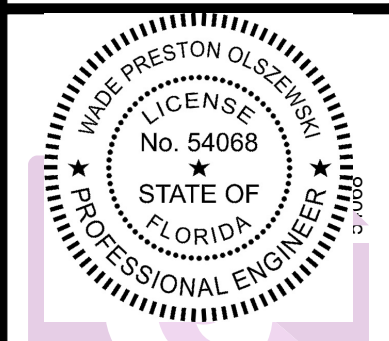


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Landscape No. LC000298



Digitally signed by Wade P Olszewski  
C=US, O=Unaffiliated,  
OU=A01410D000001756A9841E800  
00D18, CN=Wade P Olszewski  
Reason: I am approving this  
plan and the work shown on it.  
I have reviewed the plan and the  
information signed and sealed and the  
accuracy of the work shown on it  
date: 2021-08-10 10:21:00

| No. | Date | Revision |
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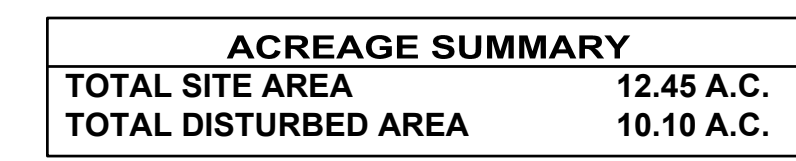
Designed: P. Ranucci  
Drawn: D. Schneider  
Checked: W. Olszewski  
Job No.: T3209  
Date: 08/10/21 © 2021

**DEMOLITION PLAN**  
**SLEIMAN ENTERPRISES**  
**SADLER SQUARE**  
**CITY OF FERNANDINA BEACH / FLORIDA**

THIS SHEET NOT VALID FOR  
CONSTRUCTION WITHOUT  
COMPLETE SET OF PLANS.

Sheet No.  
**D0.1**





|                                              |      |
|----------------------------------------------|------|
| Name (Operator and/or Responsible Authority) | Date |
| Project Name and location information:       |      |

Sheet No.  
**C1.1**



## STORMWATER POLLUTION PREVENTION NOTES

THESE PLANS HAVE BEEN PREPARED TO ASSIST THE CONTRACTOR IN OBTAINING COVERAGE UNDER THE FDEP GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE PERMIT REQUIREMENTS AND MODIFY THESE PLANS AS NEEDED TO BE IN COMPLIANCE WITH THE PERMIT REQUIREMENTS.

### SITE DESCRIPTION

A. SITE LOCATION  
THE SITE IS LOCATED AT 2100 SADLER SQUARE, IN THE CITY OF FERNANDINA BEACH, FLORIDA  
SECTION 29, TOWNSHIP 3 NORTH, RANGE 28 EAST  
LATITUDE: 30° 36'20.02"N LONGITUDE: 81° 25'26.65"W

B. SITE CONDITIONS & ACTIVITIES NARRATIVE:  
THE EXISTING CONSTRUCTION OF THE SITE IS DEVELOPED. DURING CONSTRUCTION THE SITE WILL BE DISTURBED BUT REMAIN AT RELATIVELY THE SAME GRADE. THIS PROJECT WILL HAVE NO MAJOR EFFECT ON ANY THE ADJUTING PROPERTIES.

### WETLANDS/BUFFERS

NO WETLANDS OR BUFFERS ARE ASSOCIATED WITH THIS PROJECT.

### SWPPP INTENT

THE INTENT OF THIS SWPPP IS TO COMPLY WITH THE INTENT OF THE GENERIC PERMIT AND TO PREVENT THE RELEASE OF SOILS, TRASH, CHEMICALS, TOXINS AND OTHER POLLUTANTS, BY WATER, AIR, VEHICLE TRANSPORT OR OTHER MEANS THAT CAN IMPACT STORM WATER QUALITY. THE CONTRACTOR SHALL OBTAIN A COPY OF THE GENERIC PERMIT AND RETAIN ON-SITE FOR FUTURE REFERENCE. THE CONTRACTOR SHALL READ AND UNDERSTAND THE PERMIT, AND ENSURE THAT THE BMPs ARE INSTALLED AND THE EXECUTION OF THE WORK IS PERFORMED TO MEET THE INTENT OF THE GENERIC PERMIT AND THE SWPPP.

### POTENTIAL SOURCES OF POLLUTION

THE POTENTIAL SOURCES OF POLLUTION THAT MAY REASONABLY BE EXPECTED TO AFFECT THE QUALITY OF STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES INCLUDE: EROSION, SEDIMENT, FERTILIZER, PESTICIDES, PLASTER, CLEANING SOLVENTS, ASPHALT, CONCRETE, GLUE, ADHESIVES, PAINTS, CURING COMPOUNDS, WOOD PRESERVATIVES, HYDRAULIC OIL FLUIDS, GASOLINE, DIESEL FUEL AND KEROSENE.

### SEQUENCE OF CONSTRUCTION

THE SEQUENCE OF CONSTRUCTION HAS BEEN DEVELOPED AS A GUIDE FOR THE CONTRACTOR. THE CONTRACTOR SHALL SEQUENCE THE CONSTRUCTION AS NEEDED BASED ON BEST MEANS AND METHODS IN ORDER TO BE IN COMPLIANCE WITH STATE AND LOCAL REQUIREMENTS. THE INSTALLATION OR REMOVAL OF BMPs, EARTH DISTURBANCE, GRADING, TEMPORARY STABILIZATION AND PERMANENT STABILIZATION SHALL BE IMMEDIATELY NOTED IN THE SWPPP. PERMIT SECTION 10. ALL TEMPORARY BMPs SHALL BE REPAIRED AND MAINTAINED UNTIL STABILIZATION HAS OCCURRED AND THERE IS NO RISK OF DISCHARGE. TEMPORARILY SEED, IMMEDIATELY AND THROUGHOUT CONSTRUCTION, DENUDATED AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.

1. POST A COPY OF THE NOI OR LETTER FROM FDEP CONFIRMING COVERAGE UNDER THE GENERIC PERMIT, AND THE NAME AND PHONE NUMBER OF THE CONTRACTOR'S REPRESENTATIVE RESPONSIBLE FOR EROSION AND SEDIMENTATION CONTROL, INSTALLATION AND MAINTENANCE ON A 24 HOUR BASIS.
2. INSTALL PERIMETER CONTROLS IMMEDIATELY DOWNSTREAM OF THE PLANNED LOCATION OF THE CONSTRUCTION EXIT.
3. INSTALL STABILIZED CONSTRUCTION EXIT.
4. INSTALL PERIMETER CONTROLS. THE CONTRACTOR SHALL INSTALL THE REMAINING BMPs AS SHOWN AND AS REQUIRED TO MEET PERMIT REQUIREMENTS. SOME BMP INSTALLATIONS MAY NOT BE POSSIBLE AT THE BEGINNING OF THE PROJECT BUT MUST BE INSTALLED AS SOON AS POSSIBLE TO ENSURE COMPLIANCE.
5. INSTALL TEMPORARY STAGINGS AND STORAGE AREAS.
6. CONSTRUCT AND STABILIZE THE SEDIMENT BASINS AND SEDIMENT TRAPS WITH APPROPRIATE OUTFALL STRUCTURES, IF REQUIRED.
7. CONSTRUCT AND STABILIZE HYDRAULIC CONTROLS (DITCHES, SWALES, DIKES, CHECK DAMS, ETC.) IF REQUIRED.
8. BEGIN DEMOLITION, CLEARING AND GRUBBING OPERATIONS AS APPLICABLE.
9. BEGIN CONSTRUCTION OF SITE IMPROVEMENTS.
10. PAVE SITE AND STABILIZE PER PLAN.
11. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER SITE HAS ACHIEVED FINAL STABILIZATION.
12. SUBMIT NOTICE OF TERMINATION (NOT) ONCE ALL CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED PER PLAN.

### GENERAL NOTES

A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FILE "NOTICE OF INTENT TO USE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES" (DEP FORM 62-621.300A(B)) OR LATEST VERSION) TO FDEP TO THE FOLLOWING ADDRESS OR THROUGH THE FDEP ON-LINE SYSTEM AT LEAST TWO (2) DAYS BEFORE COMMENCEMENT OF CONSTRUCTION:

NPDES STORMWATER NOTICES CENTER, MS #2510 FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, 2600 BLAIR STONE ROAD, TALLAHASSEE, FLORIDA 32309-2400

THE CONTRACTOR SHALL SUBMIT A NOTICE OF TERMINATION (NOT) WITHIN 14 CALENDAR DAYS AFTER THE SITE HAS ACHIEVED FINAL STABILIZATION (I.E. ALL DISTURBED SOILS AT THE SITE HAVE BEEN FINAL STABILIZED). TEMPORARY BMPs HAVE BEEN REMOVED, AND STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM THE SITE AUTHORIZED BY THE PERMIT HAVE BEEN ELIMINATED.

AN ENVIRONMENTAL RESOURCE PERMIT IS REQUIRED FOR THE PROJECT. CONTRACTOR SHALL PROVIDE THE PERMIT INFORMATION ON THE NOI APPLICATION.

MS4 OPERATOR NAME (IF ANY): XXXXXX

THE CONTRACTOR SHALL PROVIDE A COPY OF THE NOI AND SUBSEQUENT NOT OR THE ACKNOWLEDGEMENT LETTERS FOR THE NOI OR NOT TO THE MS4 WITHIN 7 DAYS OF RECEIPT. THE CONTRACTOR SHALL ALSO COORDINATE WITH THE MS4 TO ENSURE THAT ALL SPECIFIC REQUIREMENTS ARE MET.

B. WHERE PRACTICAL, STORMWATER SHALL BE CONVEYED BY SWALES. SWALES SHALL BE CONSTRUCTED AS SHOWN ON PLANS.

C. EROSION CONTROL MEASURES SHALL BE EMPLOYED TO MINIMIZE TURBIDITY OF SURFACE WATERS LOCATED DOWNSTREAM OF ANY CONSTRUCTION ACTIVITY. WHILE THE VARIOUS MEASURES REQUIRED WILL BE SITE SPECIFIC, THEY SHALL BE EMPLOYED AS NEEDED IN ACCORDANCE WITH THE FOLLOWING:

- I. IN GENERAL, EROSION SHALL BE CONTROLLED AT THE FURTHEST PRACTICAL UPSTREAM LOCATION.
- II. NEW AND EXISTING STORMWATER INLETS AND OUTFALL STRUCTURES SHALL BE PROTECTED DURING CONSTRUCTION. PROTECTION MEASURES SHALL BE EMPLOYED IMMEDIATELY AS REQUIRED DURING THE VARIOUS STAGES OF CONSTRUCTION.
- III. PERIMETER EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL FINAL SITE STABILIZATION HAS BEEN ESTABLISHED.

D. CLEARING AND GRUBBING OPERATIONS SHALL BE CONTROLLED SO AS TO MINIMIZE UNPROTECTED ERODIBLE AREAS EXPOSED TO WEATHER. GENERAL EROSION CONTROL MEASURES SHALL BE EMPLOYED TO MINIMIZE SOIL EROSION AND OFF-SITE SEDIMENTATION. WHILE THE VARIOUS TECHNIQUES REQUIRED WILL BE SITE AND PLAN SPECIFIC, THEY SHALL BE EMPLOYED PRIOR TO ANY CONSTRUCTION ACTIVITY.

E. THE CONTRACTOR SHALL FURNISH, INSTALL PER THE SEQUENCE OF CONSTRUCTION, MAINTAIN AND SUBSEQUENTLY REMOVE, ALL NECESSARY TEMPORARY BMPs. THE CONTRACTOR WILL FURNISH AND INSTALL ALL NECESSARY PERMANENT BMPs.

F. THE CONTRACTOR SHALL ADJUST, ADD OR MODIFY BMPs AS NECESSARY TO COMPLY WITH THE INTENT OF THE GENERIC NPDES PERMIT AND THE SWPPP FOR NO ADDITIONAL COMPENSATION. THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER PRIOR TO ADJUSTING, ADDING OR MODIFYING BMPs THAT AFFECT THE HYDRAULICS OF THE SITE OR BEFORE ADDING BMPs NOT DETAILED IN THE SWPPP.

G. THE CONTRACTOR IS ADVISED THAT THE CONTRACT DRAWINGS ONLY INDICATE EROSION, SEDIMENT, AND TURBIDITY CONTROLS AT LOCATIONS DETERMINED IN THE DESIGN PROCESS. HOWEVER, THE CONTRACTOR IS REQUIRED TO PROVIDE ANY ADDITIONAL CONTROLS NECESSARY TO PREVENT THE POSSIBILITY OF SILTING ANY ADJACENT LOWLAND PARCEL OR RECEIVING WATER.

H. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP IN CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. THE EROSION CONTROL SYSTEM DESCRIBED WITHIN THE CONSTRUCTION MEASURES IS SHOWN TO REPRESENT THE MINIMUM ACCEPTABLE STANDARDS FOR THIS PROJECT. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDENT UPON THE STAGE OF CONSTRUCTION, THE SEVERITY OF THE RAINFALL EVENT AND/OR AS DEEMED NECESSARY AS A RESULT OF INSPECTION AND INSPECTION THROUGHOUT THE PROJECT AND AS NECESSARY FOR EACH SPECIFIC APPLICATION. IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO ASSURE THAT THE STORMWATER DISCHARGE FROM THE SITE DOES NOT EXCEED THE TOLERANCES ESTABLISHED BY ANY OF THE APPLICABLE JURISDICTIONAL AUTHORITIES.

- I. THE CONTRACTOR SHALL KEEP THE SWPPP CURRENT AT ALL TIMES. THE CONTRACTOR SHALL SIGN AND DATE ANY CHANGES TO THE SWPPP AND KEEP THEM AS ATTACHMENTS TO THE ORIGINAL PLAN. WHENEVER ANY OF THE FOLLOWING EVENTS OCCUR, THE CONTRACTOR SHALL UPDATE THE SWPPP WITHIN 7 DAYS:
  - II. THERE IS A CHANGE IN THE CONSTRUCTION OPERATION OR MAINTENANCE THAT HAS A SIGNIFICANT EFFECT ON THE DISCHARGE FROM THE PROJECT
  - III. THERE IS A NEW DISCHARGE POINT OUR OUTFALL
  - IV. THERE IS A CHANGE IN THE LOCATION OF A DISCHARGE POINT OF OUTFALL
  - V. THERE IS A CHANGE IN THE LOCATION OF A DISCHARGE POINT OF OUTFALL
  - VI. THERE IS A NEW SUBCONTRACTOR IMPLEMENTING ANY PORTION OF THE SWPPP
  - VII. A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR GREATER THAN A REPORTABLE QUANTITY OCCURS DURING A 24-HOUR PERIOD

J. THE CONTRACTOR SHALL ENSURE THAT THE CONTRACTOR AND ALL SUBCONTRACTORS RESPONSIBLE FOR IMPLEMENTING SWPPP CONTROL MEASURES FILL OUT THE CONTRACTOR / SUBCONTRACTOR CERTIFICATION TABLE INCLUDED IN THIS SWPPP.

K. THE CONTRACTOR SHALL COMPLETE THE CONSTRUCTION SEQUENCE TABLE INCLUDING IN THIS SWPPP PRIOR TO PROCEEDING WITH THE INSTALLATION OF BMPs AND PRIOR TO GROUND DISTURBING ACTIVITIES. THE CONTRACTOR SHALL COMPLETE THE TABLE WITH ANTICIPATED DATES IN WHICH THE BMP WILL BE UTILIZED OR THE ACTIVITY WILL OCCUR.

### TURBIDITY

- A. TURBIDITY REDUCTION TO NO MORE THAN 29 NTUs ABOVE BACKGROUND LEVEL PRIOR TO DISCHARGE OFF SITE.
- B. CONTRACTOR TO FILE FOR A FDEP NOTICE OF INTENT (NOI) WITHIN 14 DAYS OF CONSTRUCTION COMPLETION.

### STABILIZATION



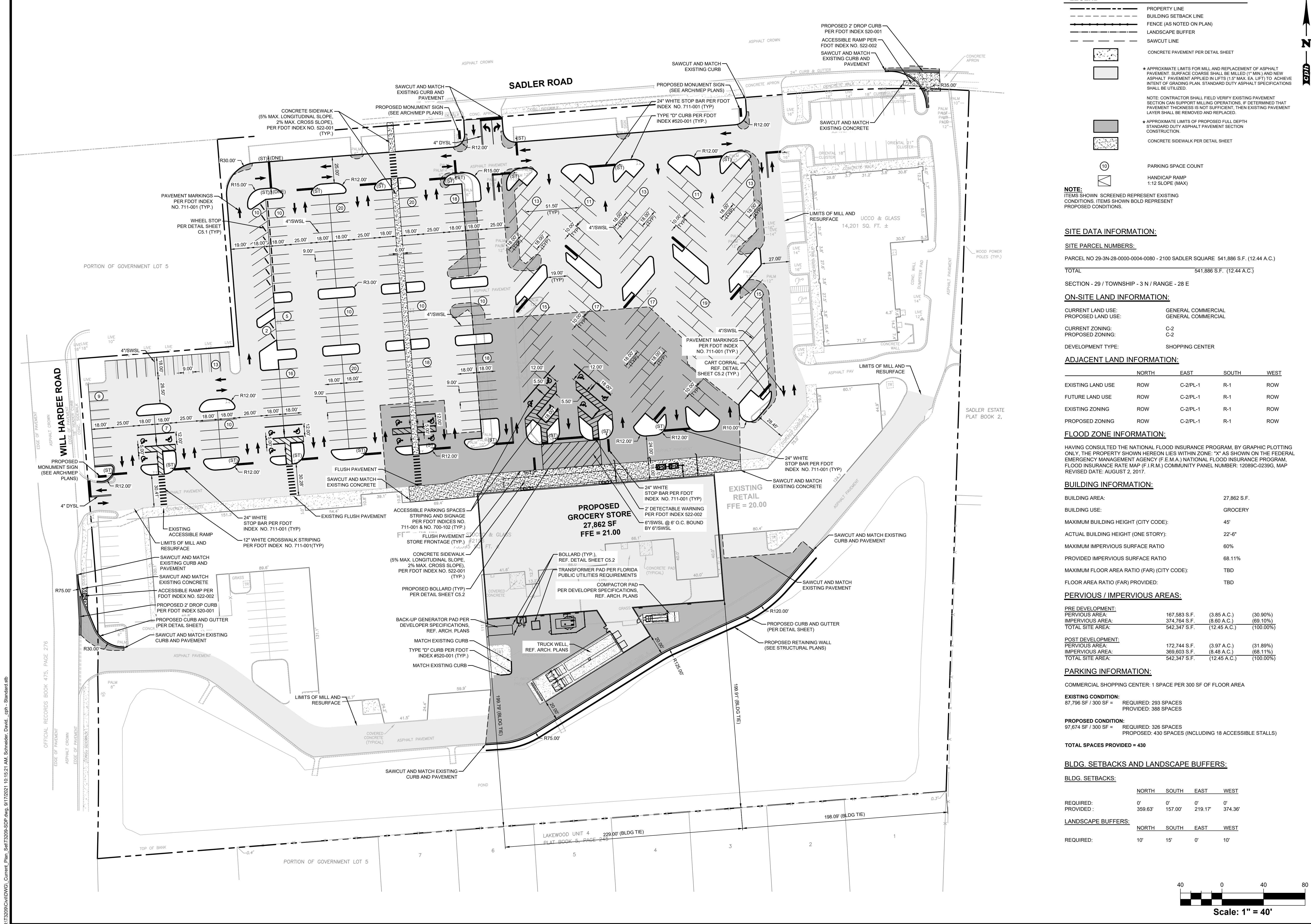
N.T.S.

The contractor shall complete this table identifying the individuals of the stormwater team and their responsibilities.

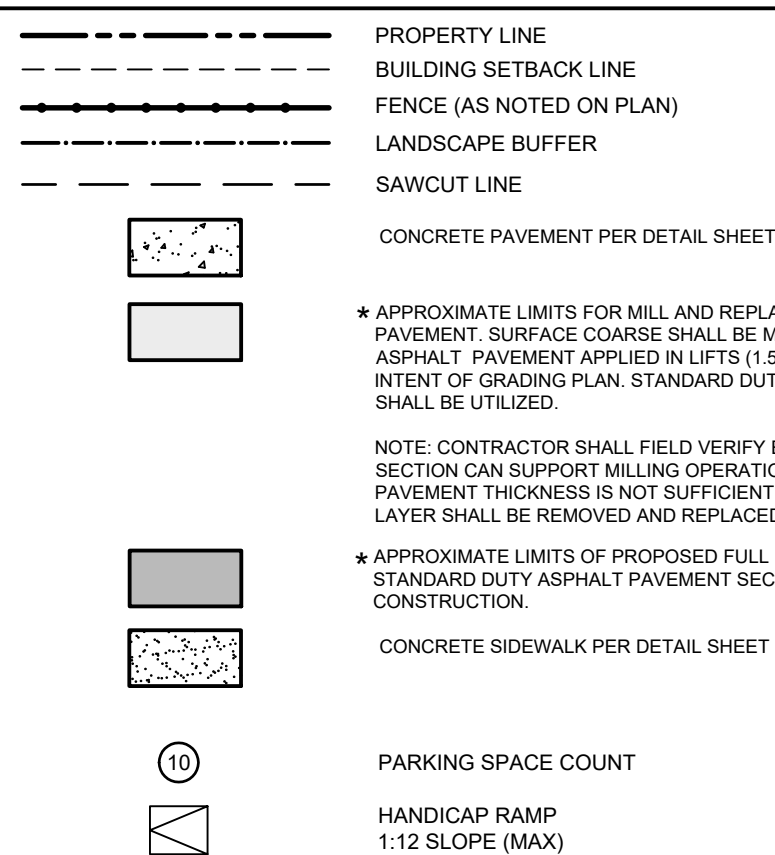
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CONSTRUCTION WITHOUT  
COMPLETE SET OF PLANS.

Sheet No.  
**C1.2**





## LEGEND



**NOTE:**  
ITEMS SHOWN SCREENED REPRESENT EXISTING  
CONDITIONS. ITEMS SHOWN BOLD REPRESENT  
PROPOSED CONDITIONS.

#### SITE DATA INFORMATION:

**SITE PARCEL NUMBERS:**

PARCEL NO 29-3N-28-0000-0004-0080 - 2100 SADLER SQUARE 541,886 S.F. (12.44 A.C.)

|       |                           |
|-------|---------------------------|
| TOTAL | 541,886 S.F. (12.44 A.C.) |
|-------|---------------------------|

## SECTION - 29 / TOWNSHIP - 3 N / RANGE - 28 E

#### ON-SITE LAND INFORMATION:

CURRENT LAND USE: GENERAL COMMERCIAL  
PROPOSED LAND USE: GENERAL COMMERCIAL

CURRENT ZONING: C-2  
PROPOSED ZONING: C-2

DEVELOPMENT TYPE: SHOPPING CENTER

## ADJACENT LAND INFORMATION:

|                   | NORTH | EAST     | SOUTH | WEST |
|-------------------|-------|----------|-------|------|
| EXISTING LAND USE | ROW   | C-2/PL-1 | R-1   | ROW  |
| FUTURE LAND USE   | ROW   | C-2/PL-1 | R-1   | ROW  |
| EXISTING ZONING   | ROW   | C-2/PL-1 | R-1   | ROW  |
| PROPOSED ZONING   | ROW   | C-2/PL-1 | R-1   | ROW  |

### FLOOD ZONE INFORMATION

HAVING CONSULTED THE NATIONAL FLOOD INSURANCE PROGRAM, BY GRAPHIC PLOTTING ONLY, THE PROPERTY SHOWN HEREON LIES WITHIN ZONE: "X" AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A.) NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP (F.I.R.M.) COMMUNITY PANEL NUMBER: 12089C-0239G, MAP REVISED DATE: AUGUST 2, 2017.

### BUILDING INFORMATION:

BUILDING AREA: 27,862 S.F.

BUILDING USE: GROCERY

MAXIMUM BUILDING HEIGHT (CITY CODE)

ACTUAL BUILDING HEIGHT (ONE STORY):

MAXIMUM IMPERVIOUS SURFACE RATIO

PROVIDED IMPERVIOUS SURFACE RATIO

MAXIMUM FLOOR AREA RATIO (FAR) (CITY CODE): TBD

FLOOR AREA RATIO (FAR) PROVIDED: TBD

PERVIOUS / IMPERVIOUS AREAS:

|                                 |              |              |           |
|---------------------------------|--------------|--------------|-----------|
| <b><u>PRE DEVELOPMENT:</u></b>  |              |              |           |
| IMPERVIOUS AREA:                | 167,583 S.F. | (3.85 A.C.)  | (30.90%)  |
| IMPERVIOUS AREA:                | 374,764 S.F. | (8.60 A.C.)  | (69.10%)  |
| TOTAL SITE AREA:                | 542,347 S.F. | (12.45 A.C.) | (100.00%) |
| <b><u>POST DEVELOPMENT:</u></b> |              |              |           |
| IMPERVIOUS AREA:                | 172,744 S.F. | (3.97 A.C.)  | (31.89%)  |
| IMPERVIOUS AREA:                | 369,603 S.F. | (8.48 A.C.)  | (68.11%)  |
| TOTAL SITE AREA:                | 542,347 S.F. | (12.45 A.C.) | (100.00%) |

**PARKING INFORMATION:**

COMMERCIAL SHOPPING CENTER: 1 SPACE PER 300 SF OF FLOOR AREA

**EXISTING CONDITION:**  
37,796 SF / 300 SF =      REQUIRED: 293 SPACES  
                                         PROVIDED: 388 SPACES

**PROPOSED CONDITION:**  
 97,674 SF / 300 SF = REQUIRED: 326 SPACES  
 PROPOSED: 430 SPACES (INCLUDING 18 ACCESSIBLE STALLS)

TOTAL SPACES PROVIDED = 430

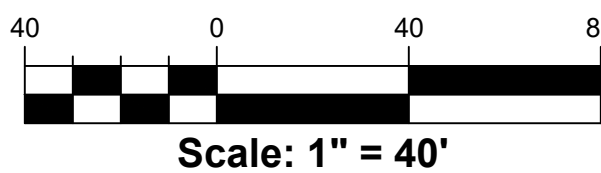
## BLDG. SETBACKS AND LANDSCAPE BUFFERS

## BLDG. SETBACKS

|            | NORTH   | SOUTH   | EAST    | WEST    |
|------------|---------|---------|---------|---------|
| REQUIRED:  | 0'      | 0'      | 0'      | 0'      |
| PROVIDED : | 359.63' | 157.00' | 219.17' | 374.36' |

## LANDSCAPE BUFFERS

|           |     |     |    |     |
|-----------|-----|-----|----|-----|
| REQUIRED: | 10' | 15' | 0' | 10' |
|-----------|-----|-----|----|-----|









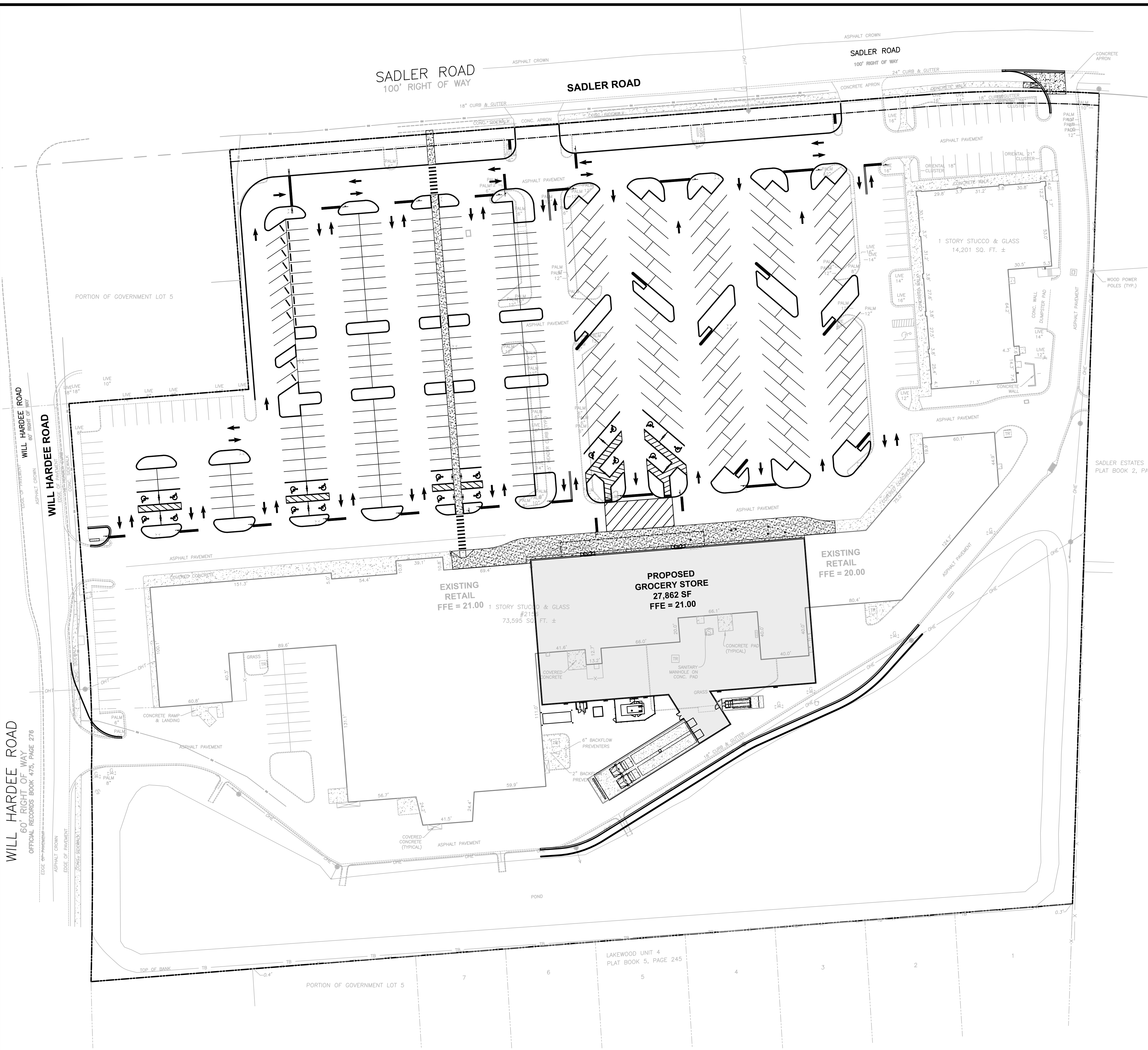




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WILL HARDEE ROAD  
60' RIGHT OF WAY  
OFFICIAL RECORDS BOOK 475, PAGE 278

WILL HARDEE ROAD  
60' RIGHT OF WAY  
OFFICIAL RECORDS BOOK 475, PAGE 278



**LEGEND**

--- PROPERTY LINE

MAINTAIN EXISTING PUBLIC ACCESS AT ALL TIMES WITH ADJUSTMENT AS NEEDED

CONSTRUCTION FENCE (CONTRACTOR TO PROVIDE GATES AND ADJUST FENCES AS NEEDED TO MAINTAIN TENANT ACCESS)

**NOTE:**  
ITEMS SHOWN SCREENED REPRESENT EXISTING CONDITIONS. ITEMS SHOWN BOLD REPRESENT PROPOSED CONDITIONS.

**GENERAL NOTES:**

- CONTRACTOR TO KEEP PARKING LOT CLEAN OF MUD AND DEBRIS FROM CONSTRUCTION ACTIVITIES.
- FENCE GATES TO BE LOCATED AWAY FROM FRONT OF STORE OR AS DIRECTED BY THE OWNER. CHAIN LINK FENCE SHALL BE WITH ENDURO SHADE CLOTH BY HENDEE ENTERPRISES, INC., OR APPROVED EQUIVALENT. GATES SHALL BE (2) 8' GATES WITH LOCK. CONTRACTOR TO PROVIDE OWNER WITH CODE OR KEY TO ALL LOCKS.
- CONTRACTOR TO REMOVE (GRIND OR BEAD BLAST) PAVEMENT MARKINGS WHEN REQUIRED.
- CONTRACTOR SHALL COORDINATE WITH THE FIRE MARSHALL REGARDING FIRE ACCESS DURING ALL CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL MAINTAIN SAFE PEDESTRIAN ACCESS IN FRONT OF RETAIL STORES STORE AT ALL TIMES DURING NORMAL OPERATIONAL HOURS.
- CONTRACTOR SHALL SECURE ALL EQUIPMENT AND SUPPLIES WITHIN STAGING AREA AS DIRECTED BY THE OWNER. APPROPRIATE SIGNAGE SHALL BE DISPLAYED ALONG PERIMETER OF THE STAGING AREA DURING THE CONSTRUCTION.
- FINAL CONSTRUCTION PHASES SHALL BE COORDINATED THROUGH THE OWNER 2 WEEKS PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL MAINTAIN TRUCK DELIVERY ACCESS AT ALL TIMES TO OPERATING RETAIL STORES.
- CONTRACTOR IS ONLY ALLOWED TO CLOSE ONE VEHICULAR ENTRANCE ANYTIME DURING CONSTRUCTION. CONTRACTOR SHALL INFORM OWNER AND ANY AFFECTED BUSINESS AT LEAST 48 HOUR PRIOR TO CLOSING ENTRANCE.
- CONSTRUCTION OF PARKING LOT SHALL NOT INTERRUPT THE PARKING LOT LIGHTING SYSTEM. CONTRACTOR SHALL MAINTAIN PARKING LOT LIGHTING AT ALL TIMES EXCEPT WITHIN THE AREAS UNDER CONSTRUCTION.
- CONTRACTOR SHALL RELOCATE EXISTING HANDICAP PARKING SPACES AT EACH PHASE TO ENSURE ENOUGH HANDICAP PARKING SPACES AT ALL TIMES FOR OPERATING RETAIL STORES.
- CONTRACTOR TO REMOVE ALL CONSTRUCTION DEBRIS, MUD, TEMPORARY FENCING, ETC. UPON COMPLETION OF FINAL CONSTRUCTION.
- CONTRACTOR SHALL INSTALL TEMPORARY SAFETY FENCE AROUND PERIMETER OF EACH PHASE OF CONSTRUCTION AREA. FENCING SHALL MEET ALL REQUIREMENTS OF THE LOCAL JURISDICTION
- CONTRACTOR SHALL CONDUCT THE SITE WORK CONSTRUCTION IN A WAY TO MAINTAIN CUSTOMER PARKING AND MINIMIZE INCONVENIENCE.
- CONTRACTOR SHALL RE-STRIP THE ENTIRE PARKING LOT ONCE ALL CONSTRUCTION IS COMPLETE, INCLUDING PREVIOUSLY STRIPED AREA PRIOR TO RE-STRIPING, REMOVE TEMPORARY ADA STRIPING.
- CONTRACTOR SHALL MAKE NECESSARY REPAIRS TO ANY PAVING AND/OR CURB & GUTTER DAMAGED DURING CONSTRUCTION.
- CONTRACTOR SHALL ADJUST TEMPORARY FENCE FOR THE BUILDING CONSTRUCTION PER BUILDING PHASING PLAN BY ARCHITECTS.
- RELOCATION OF STAGING AREA TO BE APPROVED BY OWNER.
- CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS TO ALL OUTPARCELS DURING THEIR NORMAL OPERATIONAL HOURS.
- CONTRACTOR TO MAINTAIN UTILITY SERVICE TO ALL OPERATING BUSINESSES THROUGHOUT ALL PHASES OF CONSTRUCTION.
- CONTRACTOR TO INSTALL AND MAINTAIN SILT FENCE TO THE EXTENT CALLED FOR ON THE SWPPP (SHEET C-4) FOR THE DURATION OF CONSTRUCTION ACTIVITIES.
- CONTRACTOR TO DEVELOP AND MAINTAIN ON SITE AN MOT (MAINTENANCE OF TRAFFIC) PLAN FOR EACH PHASE OF CONSTRUCTION.
- CONTRACTOR TO CONSTRUCT AND MAINTAIN ONE CONSTRUCTION SIGN (MAX. 32SF) DETAILING THE PROJECT TO THE PUBLIC.

**CONSTRUCTION SEQUENCE:**

**PHASE I NOTES:**

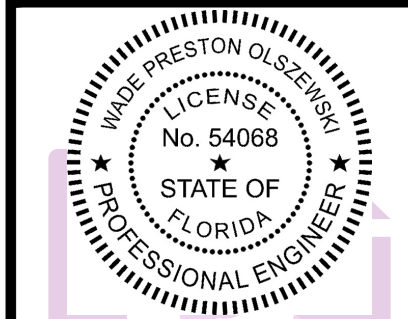
- CONTRACTOR SHALL INSTALL TEMPORARY FENCE TO ENCLOSE CONSTRUCTION AREA AS NOTED ON THIS PLAN. PROVIDE (2) 45° ANGLES AT CORNERS WHERE 90° ANGLES WILL OBSTRUCT THE VIEW OF PEDESTRIAN AND VEHICULAR TRAFFIC.
- INSTALL TEMPORARY SIGNAGE AS REQUIRED FOR PUBLIC SAFETY AND TO MAINTAIN TRAFFIC FLOW.
- INSTALL AND/OR ADJUST EROSION CONTROL DEVICES AS REQUIRED.
- DEMOLISH EXISTING STRUCTURES SCHEDULED FOR REMOVAL.
- BEGIN CONSTRUCTION OF NEW STRUCTURES
- CONSTRUCT UTILITY IMPROVEMENTS.
- CONSTRUCT REAR DRIVE AND PARKING LOT IMPROVEMENTS.
- REMOVE TEMPORARY FENCE AND TEMPORARY SIGNAGE ONCE CONSTRUCTION OF PHASE I IS COMPLETE.
- PHASE I SHALL BE COMPLETE WHEN PUBLIC IS OPENED.

**PHASE II NOTES:**

- CONTRACTOR SHALL INSTALL TEMPORARY FENCE TO ENCLOSE CONSTRUCTION AREA AS NOTED ON THIS PLAN. PROVIDE (2) 45° ANGLES AT CORNERS WHERE 90° ANGLES WILL OBSTRUCT THE VIEW OF PEDESTRIAN AND VEHICULAR TRAFFIC.
- INSTALL TEMPORARY SIGNAGE AS REQUIRED FOR PUBLIC SAFETY AND TO MAINTAIN TRAFFIC FLOW.
- INSTALL AND/OR ADJUST EROSION CONTROL DEVICES AS REQUIRED.
- BEGIN CONSTRUCTION OF FACADE IMPROVEMENTS.
- CONSTRUCT PARKING LOT IMPROVEMENTS.
- CONSTRUCT MADRID BOULEVARD IMPROVEMENTS.
- REMOVE TEMPORARY FENCE AND TEMPORARY SIGNAGE ONCE CONSTRUCTION OF PHASE II IS COMPLETE.
- PHASE II SHALL BE COMPLETE WHEN WORK IS COMPLETE WITHIN PHASE II AREA.



**cph**  
www.cphcorp.com  
**A Full Service A & E Firm**  
5200 Belfort Road, Suite 220  
Jacksonville, FL 32256  
Ph: 904.332.0999  
Plans Prepared By:  
CPH, Inc.  
State of Florida Licenses:  
Engineer No. 3215  
Surveyor No. LB7143  
Architect No. AA26000926  
Landscape No. LC000298



Digitally signed by Wade P. Olszewski  
DN: cn=Wade P. Olszewski, o=Unaffiliated  
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00D18, CN=Wade P. Olszewski  
Reason: I am approving this  
document with my electronic signature.  
The digital signature of this document is not  
signed and sealed and the  
location of the signature must be verified on any  
Date: 2021.08.10 12:02:00 -0400

| No. | Date | Revision |
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Designed: P. Ranucci  
Drawn: D. Schneider  
Checked: W. Olszewski  
Job No.: T3209  
Date: 08/10/21 © 2021

TEMPORARY SITE ACCESS AND STAGING PLAN

**SLEIMAN ENTERPRISES**  
SADLER SQUARE  
CITY OF FERNANDINA BEACH / FLORIDA

THIS SHEET NOT VALID FOR  
CONSTRUCTION WITHOUT  
COMPLETE SET OF PLANS.

Sheet No.  
**C1.3C**





NOTES:  
1. SEE SHEET C-5.1 FOR PAVEMENT MATERIALS  
2. SOD/SEED ALL SIDE SLOPES AND ALL DISTURBED AREAS

**NOTE:**  
ITEMS SHOWN SCREENED REPRESENT EXISTING  
CONDITIONS. ITEMS SHOWN BOLD REPRESENT  
PROPOSED CONDITIONS.

### STORMWATER PIPE

PCP PIPE SHALL COMPLY WITH ASTM C76  
 RCP PIPE SHALL COMPLY WITH ASTM C507  
 DPE PIPE SHALL COMPLY WITH ASTM D3350  
 VC PIPE SHALL COMPLY WITH ASTM D3034, SDR 35

**GRADING NOTES:**

GRADING SHOWN ON THESE PLANS IS PROVIDED TO THE CONTRACTOR TO EXPRESS THE GENERAL GRADING INTENT OF THE PROJECT. THE CONTRACTOR SHALL BE EXPECTED TO GRADE THE ENTIRE SITE TO ENSURE POSITIVE DRAINAGE IN ALL AREAS THROUGHOUT THE SITE. THE FOLLOWING MINIMUM SLOPES SHALL BE PROVIDED BY THE CONTRACTOR:

CONCRETE PAVEMENT: MIN. 1% SLOPE  
GUTTERS: MIN 0.5%

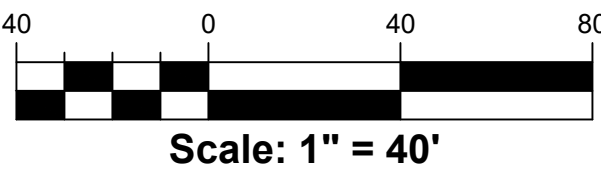
STRUCTURE BOTTOMS SHALL BE TYPE 'P' BOTTOMS PER FDOT REQUIREMENTS, UNLESS PIPE SIZES AND LOCATION REQUIRE A TYPE 'J' BOTTOM. CONTRACTOR SHALL REVIEW DESIGN AND PROVIDE APPROPRIATELY SIZED BOTTOMS PER FDOT REQUIREMENTS.

CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ADA AREAS ARE CONSTRUCTED IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION. IF THE CONTRACTOR DETERMINES THAT ANY INFORMATION SHOWN ON THIS PLAN MAY NOT BE IN COMPLIANCE THEY SHALL NOTIFY THE ENGINEER PRIOR TO THE WORK BEING COMPLETED.

| PROPOSED DOWNSPOUT SCHEDULE |                                                                                           |
|-----------------------------|-------------------------------------------------------------------------------------------|
| STRUCTURE NUMBER            | TYPE                                                                                      |
| DS-1                        | 4 F.L. 10" STORM @ 1.00% MIN. SEE ARCH/MEP PLANS FOR BUILDING CONNECTION (TYP. OF 5)      |
| DS-2                        | 6" WYE W/CLEANOUT F.L. = 15.25                                                            |
| DS-3                        | 35 F.L. 10" STORM @ 1.00% MIN                                                             |
| DS-4                        | 6" WYE W/CLEANOUT F.L. = 15.25                                                            |
| DS-5                        | 35 F.L. 10" STORM @ 1.00%                                                                 |
| DS-6                        | 2 - 10" WYE                                                                               |
| DS-7                        | 30 F.L. 12" STORM @ 1.00%                                                                 |
| DS-8                        | 6" WYE W/CLEANOUT F.L. = 14.60                                                            |
| DS-9                        | 45 F.L. 12" STORM @ 1.00%                                                                 |
| DS-10                       | 6" WYE W/CLEANOUT F.L. = 14.15                                                            |
| DS-11                       | 37 F.L. 12" STORM @ 1.08%                                                                 |
| DS-12                       | 6" WYE W/CLEANOUT F.L. = 13.75                                                            |
| DS-13                       | 48 F.L. 12" STORM @ 1.00%                                                                 |
| DS-14                       | 15 F.L. 6" STORM @ 1.00% CONNECT TO TRENCH DRAIN AT TRUCK WELL AND DS-13 WITH 12"x10" WYE |
| DS-15                       | 6" WYE W/CLEANOUT F.L. = 14.50                                                            |
| DS-16                       | 54 F.L. 10" STORM @ 1.09%                                                                 |
| DS-17                       | 6" WYE W/CLEANOUT F.L. = 13.90                                                            |
| DS-18                       | 27 F.L. 10" STORM @ 1.11%                                                                 |

| STORM STRUCTURE SCHEDULE |                                                                                             |               |                                                                      |
|--------------------------|---------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------|
| STRUCTURE NUMBER         | TYPE                                                                                        | RIM ELEVATION | INVERTS                                                              |
| S-1                      | TYPE 'C' INLET PER FDOT INDEX NO. 425-052                                                   | 17.13         | F.L. S.E. = 10.65<br>F.L. W. = 13.25 (12')                           |
| S-2                      | 15" MES PER FDOT INDEX NO. 430-021                                                          | N/A           | F.L. = 10.50                                                         |
| S-3                      | TYPE 'C' INLET PER FDOT INDEX NO. 425-052                                                   | 17.50         | F.L. S.E. = 10.65<br>F.L. N.W. = 13.30 (10')<br>F.L. W. = 15.20 (2') |
| S-4                      | 15" MES PER FDOT INDEX NO. 430-021                                                          | N/A           | F.L. = 10.50                                                         |
| S-5                      | TRUCK WELL CATCH BASIN WITH 6" DRAIN LINE. SEE ARCH/MEP PLANS                               | 16.75         | F.L. S.E. = 14.00±                                                   |
| S-6                      | 4" DIA. MANHOLE PER FDOT WITH SUMP PUMP. SEE DETAIL SHEET                                   | 18.50         | F.L. N.W. = 14.00                                                    |
| S-7                      | REMOVE EXISTING CURB INLET TOP AND INSTALL TYPE 'V' GUTTER INLET PER FDOT INDEX NO. 425-041 | 15.40         | F.L. W. = 10.37 (EXIST)<br>F.L. E. = 10.36 (EXIST)                   |

**NOTE:**  
ALL GRADES TO BE MATCH EXISTING  
UNLESS OTHERWISE NOTED ON PLAN  
EXISTING DRAINAGE PATTERNS AND  
BASINS TO BE MAINTAINED



Digitally signed by Wade P Olszewski  
DN: C=US, O=Unaffiliated,  
OU=A01410D000001756A9841E800  
0018, CN=Wade P Olszewski  
Reason: I am approving this  
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signature. Printed copies of this document are not  
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|-----------------------|--------|
| Designed: P. Ranucci  |        |
| Drawn: D. Schneider   |        |
| Checked: W. Olszewski |        |
| Job No.: T3209        |        |
| Date: 08/10/21        | © 2021 |

**SLEIMAN ENTERPRISES**  
SADLER SQUARE  
CITY OF FERNANDINA BEACH / FLORIDA

THIS SHEET NOT VALID FOR  
CONSTRUCTION WITHOUT  
COMPLETE SET OF PLANS.

Sheet No.  
**C1.4**









- ### TYPE D CURB DETAIL

\* FOR LOW POINT OF MIAMI CURB.  
\*\* FOR LOW POINT OF TYPE F CURB.

- SPILL TYPE CURB AND GUTTER**

\* WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT. THE THICKNESS OF THE LIP SHALL BE 6", UNLESS OTHERWISE SHOWN ON PLANS.

- ## STANDARD CONCRETE CURB AND GUTTER

ELEVATION VIEW

### NOSE DOWN CURB DETAIL

NOTE:  
STRIPING TO BE SOLID WHITE.

NOTE:  
STRIPING TO BE SOLID WHITE.

### CROSS WALK STRIPING DETAIL

**NOTE:**

## STANDARD SIGN BASE

## WHEEL STOP

N.T.S.



## ***A Full Service***

**A & E Firm**

**5200 Belfort Road, Suite 220  
Jacksonville, FL 32256  
Ph: 904.332.0999**

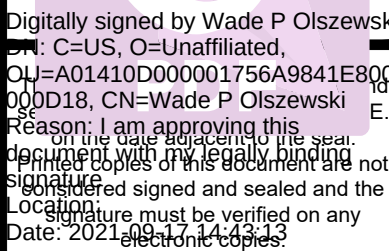
Plans Prepared By:

CPH, Inc.  
State of Florida Licenses:

State of Florida Licenses.  
Engineer No. 3215

Surveyor No. LB7143  
Architect. No. AA26000926

Landscape No. LC000298

[illegible]

Designed: P. Ranucci

Drawn: D. Schneider

Checked: W. Olszewski

Job No : T3209

Date: 08/10/21

© 2002

## CONSTRUCTION DETAILS SHEET

# SLEIMAN ENTERPRISES

**SADLER SQUARE  
CITY OF FERNANDINA BEACH / FLORIDA**

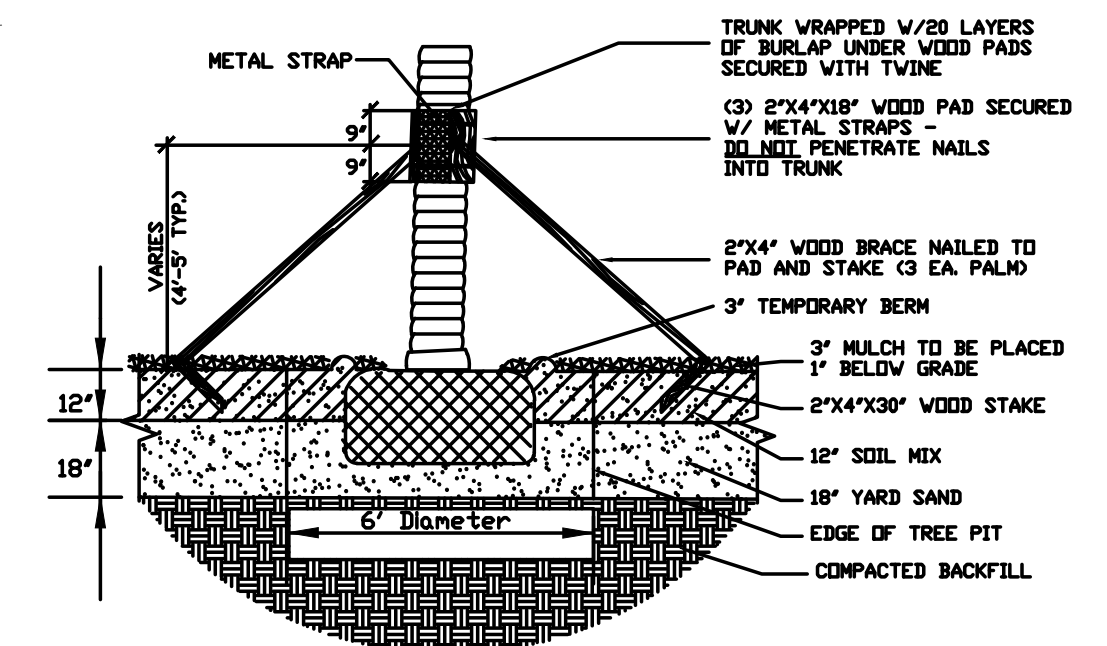
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Sheet No.  
**C5.1**





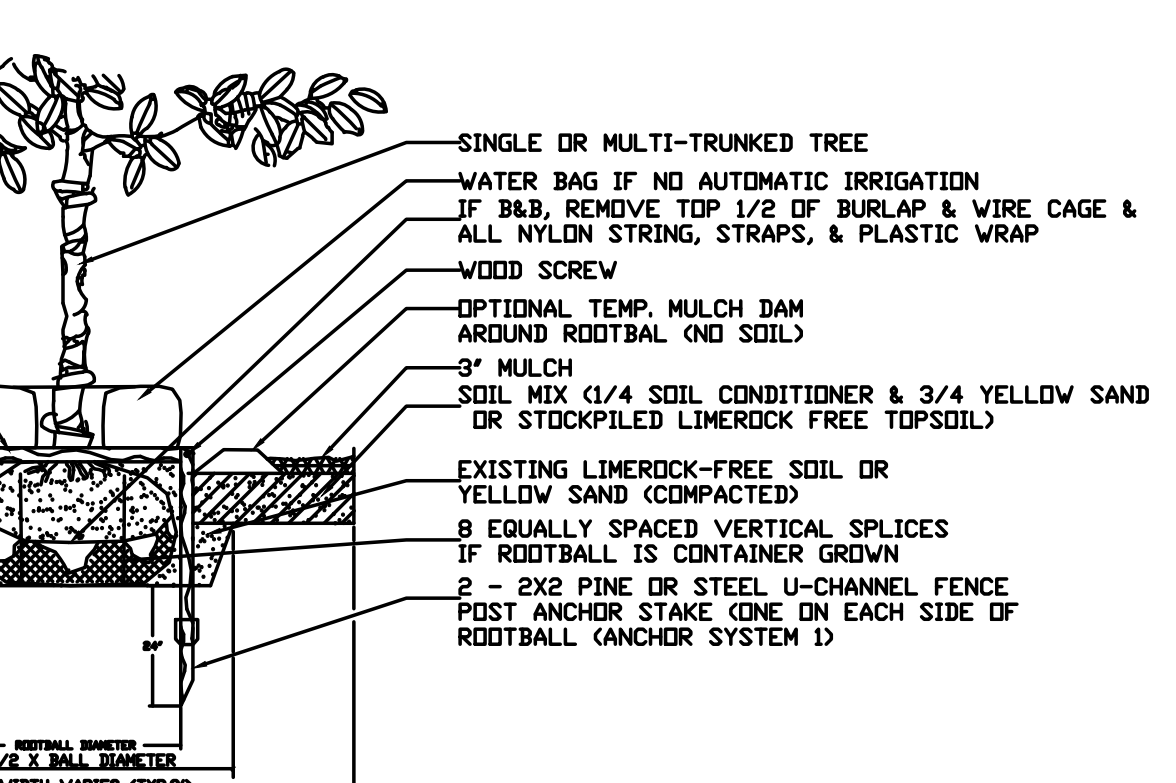




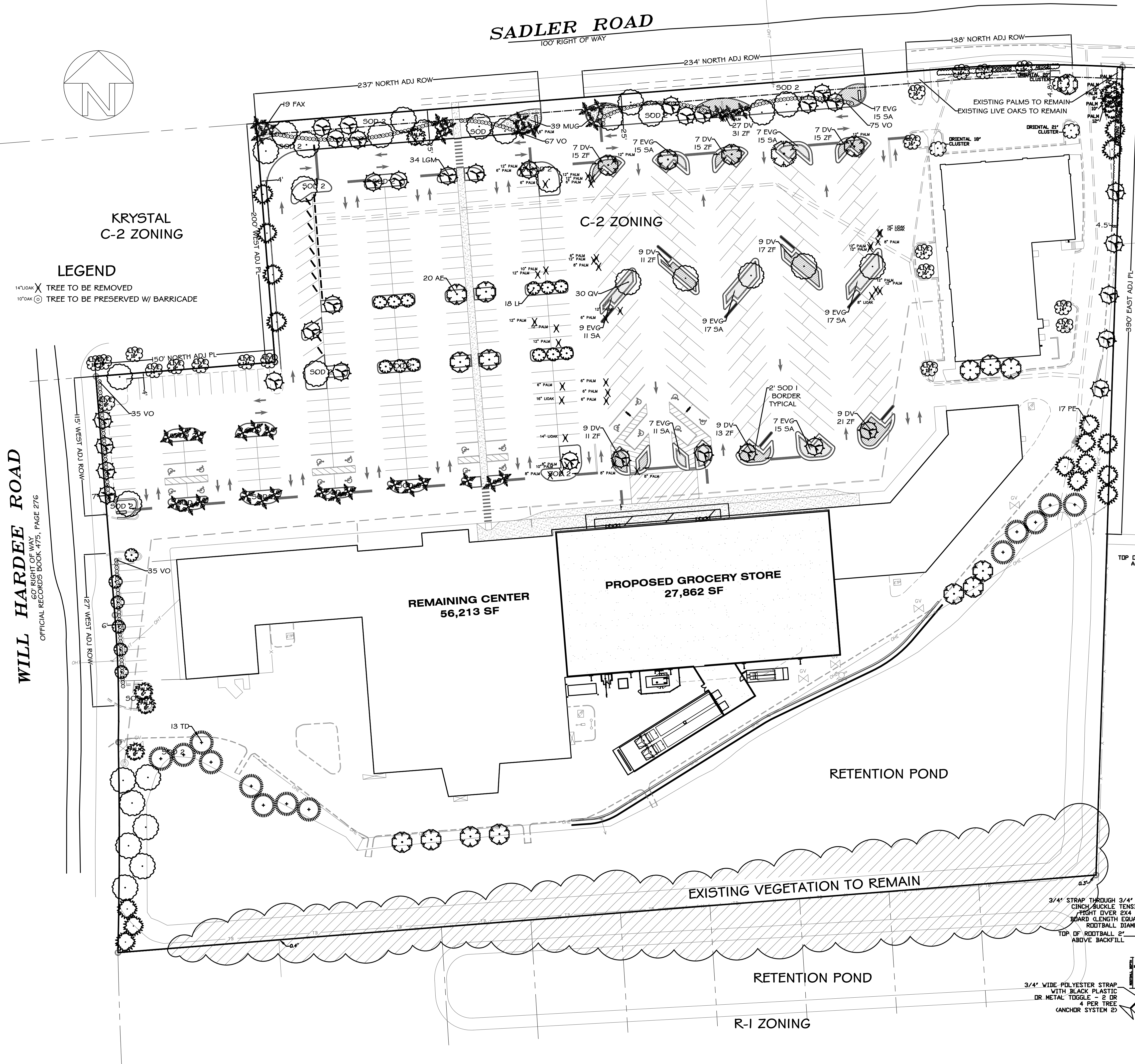
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## OWNER'S AUTHORIZATION FOR AGENT REPRESENTATION

I /WE Property Management Support Inc, Trustee of Sadler Square Land Trust  
(print name of property owner(s))

hereby authorize: Wade Olszewski  
(print name of agent)

to represent me/us in processing an application for: TRC  
(type of application)

on our behalf. In authorizing the agent to represent me/us, I/we, as owner/owners, attest that the application is made in good faith and that any information contained in the application is accurate and complete.

(Signature of owner)

(Signature of owner)

(Print name of owner)

(Print name of owner)

STATE OF FLORIDA

COUNTY OF NASSAU

Sworn to (or affirmed) and subscribed before me by means of ☒ physical presence or ☐ online notarization, this 18<sup>th</sup> day

of September, 2021, by Michael W. Herzberg.

Barbara A Humphrey  
Notary Public

Barbara A Humphrey  
Printed Name

3/25/25  
My Commission Expires

Personally Known X OR Produced Identification \_\_\_\_\_ ID Produced: \_\_\_\_\_





A. Michael Hickox, CFA  
Cert. Res. RD1941

NASSAU COUNTY  
PROPERTY APPRAISER



Change of Address

Envelope icon

Calculator icon

Document icon

Dollar sign icon

FAQ icon

Briefcase icon

PROPERTY INFORMATION

Parcel Number 29-3N-28-0000-0004-0080

|                  |                                                                                                    |
|------------------|----------------------------------------------------------------------------------------------------|
| Owner Name       | PROPERTY MANAGEMENT SUPPORT                                                                        |
| Mailing Address  | INC TRUSTEE OF SADLER SQUARE<br>LAND TRUST<br>1 SLEIMAN PARKWAY STE #270<br>JACKSONVILLE, FL 32216 |
| Location Address | 2100 SADLER SQ<br>FERNANDINA BEACH 32034                                                           |
| Tax District     | FERNANDINA BEACH                                                                                   |
| Millage          | 19.5052                                                                                            |
| Homestead        | No                                                                                                 |
| Property Usage   | COMMUNITY 001600                                                                                   |
| Deed Acres       | 0                                                                                                  |
| Short Legal      | PT OF GOV'T LOT 5 OR 1548/1576 FOOD LION LEASED PROPERTY                                           |

2021 Preliminary Values

|                                        |             |
|----------------------------------------|-------------|
| Land Value                             | \$1,491,109 |
| (+) Improved Value                     | \$3,226,418 |
| (=) Market Value                       | \$4,717,527 |
| (-) Agricultural Classification        | \$0         |
| (-) SOH or Non-Hx* Capped Savings      | \$0         |
| (=) Assessed Value                     | \$4,717,527 |
| (-) Homestead                          | \$0         |
| (-) Additional Exemptions              | \$0         |
| (=) School Taxable Value               | \$4,717,527 |
| (-) Non-School HX & Other Exempt Value | \$0         |
| (=) County Taxable Value               | \$4,717,527 |

Note - \*10% Cap does not apply to School Taxable Value

Property Search

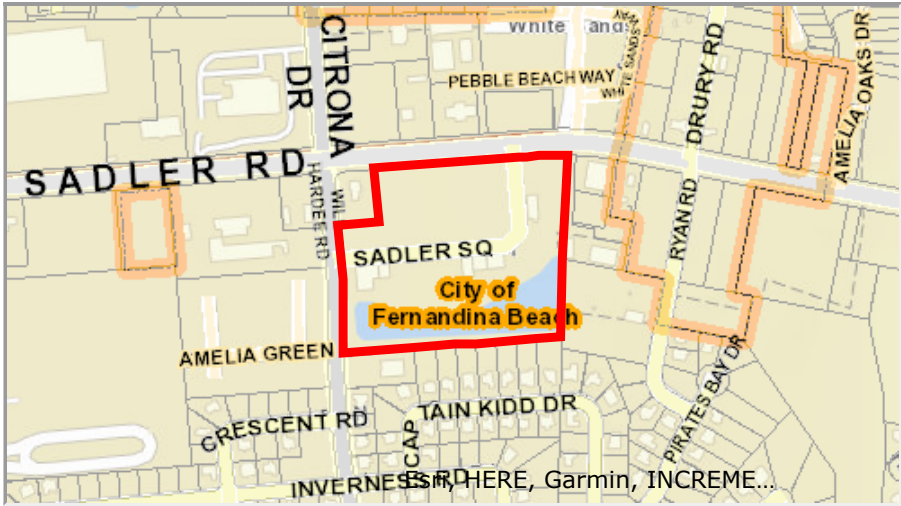
Map This Parcel

GIS Report

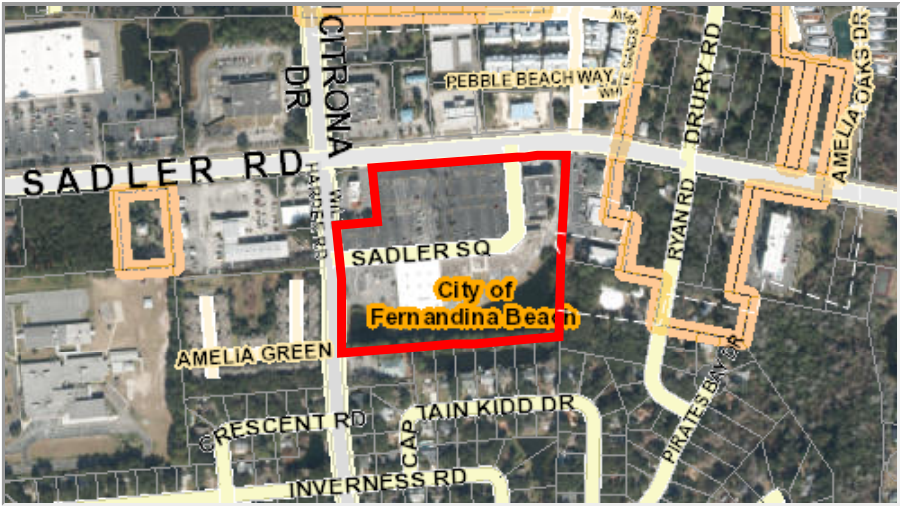
Property Record Card

Print Friendly Page

PARCEL MAP



2021 AERIAL MAP

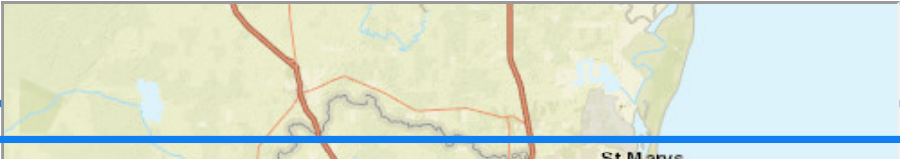


PROPERTY PHOTO



If this picture is incorrect, please email info@nassauflpa.com

LOCATION MAP



BUILDING INFORMATION

| Type       | Total Area | Heated Area | Bedrooms | Baths | Primary Exterior | Secondary Exterior | Heating    | Cooling    | Actual Year Built | Building Sketch |
|------------|------------|-------------|----------|-------|------------------|--------------------|------------|------------|-------------------|-----------------|
| SHOP COMTY | 12790      | 11440       | 0        | 0     | CONC BLOCK       | CB STUCCO          | AIR DUCTED | AIR DUCTED | 1987              |                 |
| SHOP COMTY | 34172      | 30084       | 0        | 0     | CONC BLOCK       | GLASS THRM         | AIR DUCTED | AIR DUCTED | 1987              |                 |
| SHOP COMTY | 32964      | 28644       | 0        | 0     | CONC BLOCK       |                    | AIR DUCTED |            | 1987              |                 |

MISCELLANEOUS INFORMATION



| Description | Dimensions L X W | Units  | Year Built |
|-------------|------------------|--------|------------|
| CONCRETE B  | 0 X 0            | 706    | 1987       |
| CONCRETE B  | 0 X 0            | 550    | 1987       |
| ASPHALT D   | 0 X 0            | 254167 | 1987       |
| ST LGHT UN  | 0 X 0            | 21     | 1987       |
| CONC CURB   | 0 X 0            | 4526   | 1987       |

SALES INFORMATION

| Sale Date  | Book Page                   | Price       | Instr | Qual | Imp | Grantor                                       | Grantee                                       |
|------------|-----------------------------|-------------|-------|------|-----|-----------------------------------------------|-----------------------------------------------|
| 2008-01-31 | <a href="#">1548 / 1576</a> | \$100       | WD    | U    | Y   | SOUTHEASTERN PROPERTY INVESTMENTS LLC TRUSTEE | PROPERTY MANAGEMENT SUPPORT INC TRUSTEE       |
| 2006-05-16 | <a href="#">1412 / 959</a>  | \$5,425,000 | WD    | U    | Y   | QUINLIVAN J MARK &                            | SOUTHEASTERN PROPERTY INVESTMENTS LLC TRUSTEE |
| 2006-05-16 | <a href="#">1412 / 959</a>  | \$5,425,000 | WD    | Q    | Y   | QUINLIVAN J MARK ETAL                         | SOUTHEASTERN PROPERTY INVESTMENTS LLC TRUSTEE |
| 2004-12-20 | <a href="#">1282 / 746</a>  | \$4,500,000 | WD    | Q    | Y   | TRANSCONTINENTAL SADLER                       | QUINLIVAN J MARK ETAL                         |
| 1999-04-14 | <a href="#">878 / 1453</a>  | \$100       | WD    | U    | Y   | TRANSCONTINENTAL REALTY INVESTORS INC         | TRANSCONTINENTAL SADLER SQUARE INC            |
| 1993-11-24 | <a href="#">692 / 1735</a>  | \$3,225,000 | WD    | U    | Y   | SADLER SQUARE PARTNERS                        | TRANSCONTINENTAL REALTY                       |
| 1989-11-06 | <a href="#">583 / 119</a>   | \$1,875,000 | WD    | U    | Y   | FIRST FEDERAL SAVING                          | SADLER SQUARE PARTNR                          |
| 1989-11-06 | <a href="#">583 / 119</a>   | \$1,875,000 | WD    | U    | Y   | FIRST FEDERAL SAVINS                          | SADLER SQUARE PARTNR                          |
| 1989-06-09 | <a href="#">571 / 872</a>   | \$4,200,000 | WD    | U    | Y   | SADLER SQUARE LTD                             | 1ST FEDERAL SAVINGS                           |
| 1989-06-02 | <a href="#">571 / 872</a>   | \$4,200,000 | WD    | U    | Y   | SADLER SQUARE LTD                             | 1ST FEDERAL SAVINGS                           |
| 1987-05-11 | <a href="#">517 / 256</a>   | \$975,000   | WD    | Q    | N   | SADLER DEV CO                                 | SADLER SQUARE LTD                             |

**Prepared By and Return To:**

Coastal Living Title, LLC  
5472 1st Coast Hwy, Suite 4  
Amelia Island, FL 32034

Order No.: C21-026

Property Appraiser's Parcel I.D.: 00-00-31-1680-0011-0200

Consideration: \$200,000.00

**WARRANTY DEED**

THIS WARRANTY DEED dated March 29, 2021, by

**Leroy Leek and Priscilla F. Leek**, husband and wife, whose post office address is 2332 B 1st Avenue, Fernandina Beach, Florida 32034 (the "Grantor"), to

**ARMG2020 LLC**, a Florida limited liability company whose post office address is 3222 Amelia Road, Fernandina Beach, Florida 32034 (the "Grantee").

(Wherever used herein the terms "Grantor" and "Grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

WITNESSETH: That the Grantor, for and in consideration of the sum of Ten And No/100 Dollars (\$10.00) and other valuable consideration, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys, and confirms unto the Grantee, all that certain land situated in County of Nassau, State of Florida, viz:

Lot 20 and 21, Block 11, Seaview, according to the map or plat thereof, as recorded in Plat Book 1, Page(s) 7, of the Public Records of Nassau County, Florida.

Subject to easements, restrictions, reservations and limitations of record, if any.

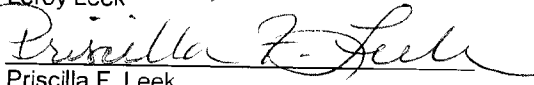
TOGETHER with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

TO HAVE AND TO HOLD the same in Fee Simple forever.

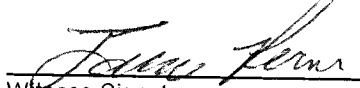
AND the Grantor hereby covenants with said Grantee that the Grantor is lawfully seized of said land in fee simple; that the Grantor has good right and lawful authority to sell and convey said land; that the Grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to: December 31, 2021.

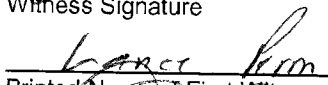


IN WITNESS WHEREOF, the said Grantor has signed and sealed these presents the day and year first above written.

  
Leroy Leek  
  
Priscilla F. Leek

Signed, sealed and delivered in presence of:

  
Witness Signature

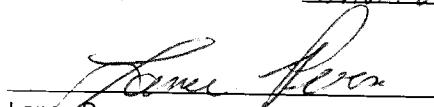
  
Printed Name of First Witness

  
Witness Signature

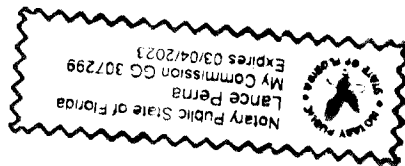
**AMBER LOFTIN**  
Printed Name of Second Witness

State of Florida  
County of Nassau

The foregoing instrument was acknowledged before me by means of ( ☒ ) physical presence or ( ) online notarization, this 29th day of March, 2021, by Leroy Leek and Priscilla F. Leek, who are personally known to me or who have produced a valid Driver License as identification.

  
Lance Perna  
Notary Public

Affix stamp/seal:



Prepared by and Return to:  
Alan Almand  
Landmark Title, LLC  
4540 Southside Blvd., Suite 202  
Jacksonville, Florida 32216

### **SPECIAL WARRANTY DEED**

THIS SPECIAL WARRANTY DEED is made the 3rd day of May, 2021 by First Avenue Amelia LLC, a Florida Limited Liability Company ("Grantor"), whose address is 301 Centre Street, Suite 200, Fernandina Beach, FL 32034, to and in favor of Bluff Runners FLA, LLC, a Florida Limited Liability Company, ("Grantee"), whose address is 100 Riverview Drive, Savannah, GA 31404.

(Whenever used herein the term "Grantor" and "Grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

WITNESSETH, That the Grantor, for \$10.00 and other valuable consideration, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto Grantee, their heirs, successors and assigns forever, that real property located in Nassau County, Florida, which is described as follows:

Lots 22, 23, 24, 25, 26, 27 and 28, Block 11, Seaview, according to the map or plat thereof, as recorded in Plat Book 1, Page(s) 7, of the Public Records of Nassau County, Florida.

Real Estate Parcel Number: 00-00-31-1680-0011-0220, 00-00-31-1680-0011-0230, 00-00-31-1680-0011-0240, 00-00-31-1680-0011-0250, 00-00-31-1680-0011-0260, 00-00-31-1680-0011-0270, and 00-00-31-1680-0011-0280

Property Address: Lots 22-28, Block 11, Seaview Subdivision, Fernandina Beach, FL 32034

SUBJECT TO taxes for the year 2020 and subsequent years.

SUBJECT TO all covenants, conditions, restrictions, reservations, and easements of record, if any; provided however that this mention shall not serve to reimpose the same.

TOGETHER with all the tenements, hereditaments and appurtenances thereunto belonging or in anywise appertaining.

TO HAVE AND TO HOLD the same in fee simple forever.

AND the Grantor hereby covenants with the Grantee, that it is lawfully seized of said land in fee simple; that it has good right and lawful authority to sell and convey said land; that it hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons claiming by, through or under the Grantor.



IN WITNESS WHEREOF, Grantor has signed and sealed these present the date set forth above.

Brett Manzie  
Witness 1 signature

BRETT MANZIE  
Witness 1 print name

CM Stott  
Witness 2 signature

Claire Stott  
Witness 2 print name

First Avenue Amelia LLC, a Florida  
Limited Liability Company

By: Daniel I. McCranie  
Daniel I. McCranie, Manager

STATE OF FLORIDA  
COUNTY OF DADE 195594

The foregoing instrument was acknowledged before me by means of (x) physical presence or ( ) online notarization this 3<sup>rd</sup> day of May 2021 by Daniel I. McCranie Manager of First Avenue Amelia LLC, a FL Limited Liability Company, on behalf of the Limited Liability Company.

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



Personally known: ✓  
OR Produced Identification: \_\_\_\_\_

Type of Identification Produced: \_\_\_\_\_

CITY OF FERNANDINA BEACH

ENGINEERING PLANS

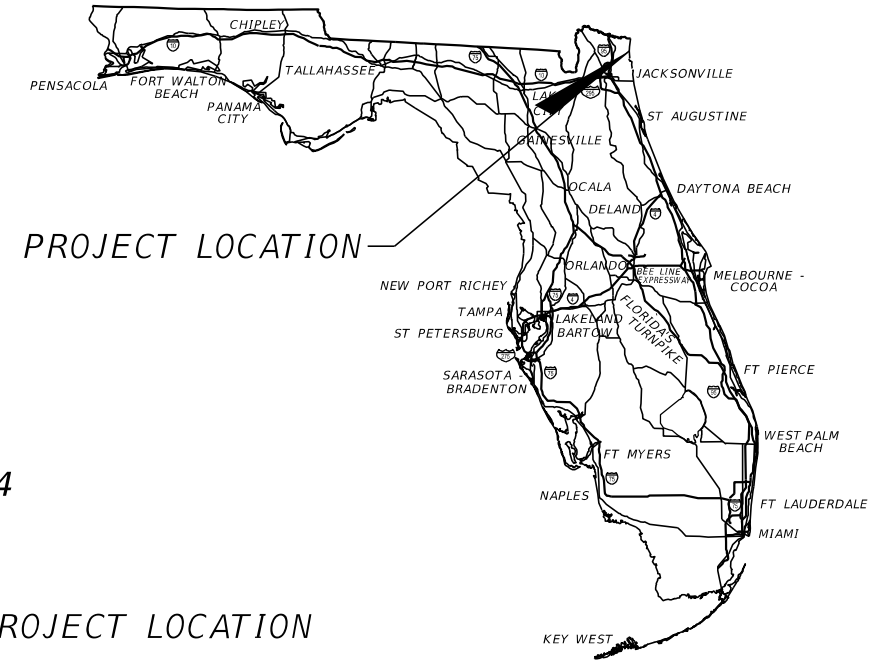
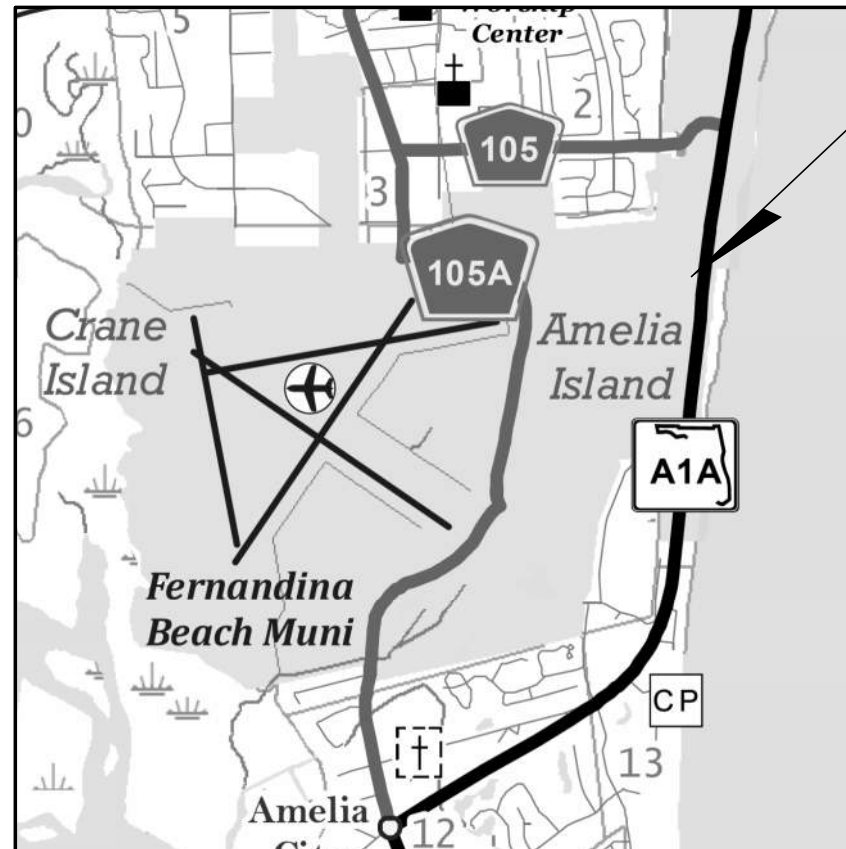
FIRST AVENUE AMELIA TOWNHOMES

BLUFF RUNNERS FLA, LLC  
100 Riverview Dr.  
Savannah, Ga. 31404

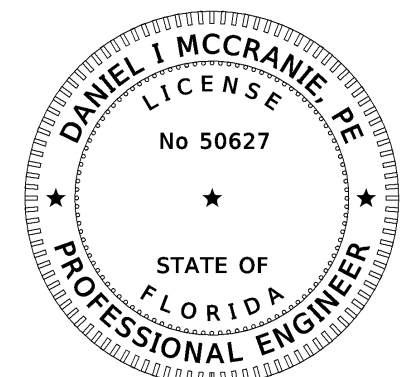
ARMG2020, LLC  
3222 Amelia Road  
Amelia Island, Fl. 32034

INDEX OF PLANS

| SHEET NO. | SHEET DESCRIPTION |
|-----------|-------------------|
| C-1       | KEY SHEET         |
| C-2       | SITE PLAN         |
| C-3       | DRAINAGE PLAN     |
| C-4 - C-5 | LANDSCAPE PLAN    |



DANIEL I  
MCCRANIE  
2021.09.23  
15:49:11 -04'00'



ROADWAY PLANS  
ENGINEER OF RECORD:

DANIEL I MCCRANIE, PE  
P.E. LICENSE NUMBER 50627  
MCRANIE & ASSOCIATES, INC.  
301 CENTRE ST. SUITE 200  
FERNANDINA BEACH, FL. 32034  
904-753-8777  
DAN@MCCRANIE-ENGINEERS.COM

SUBMITTAL DATE:

SEPTEMBER 24, 2021



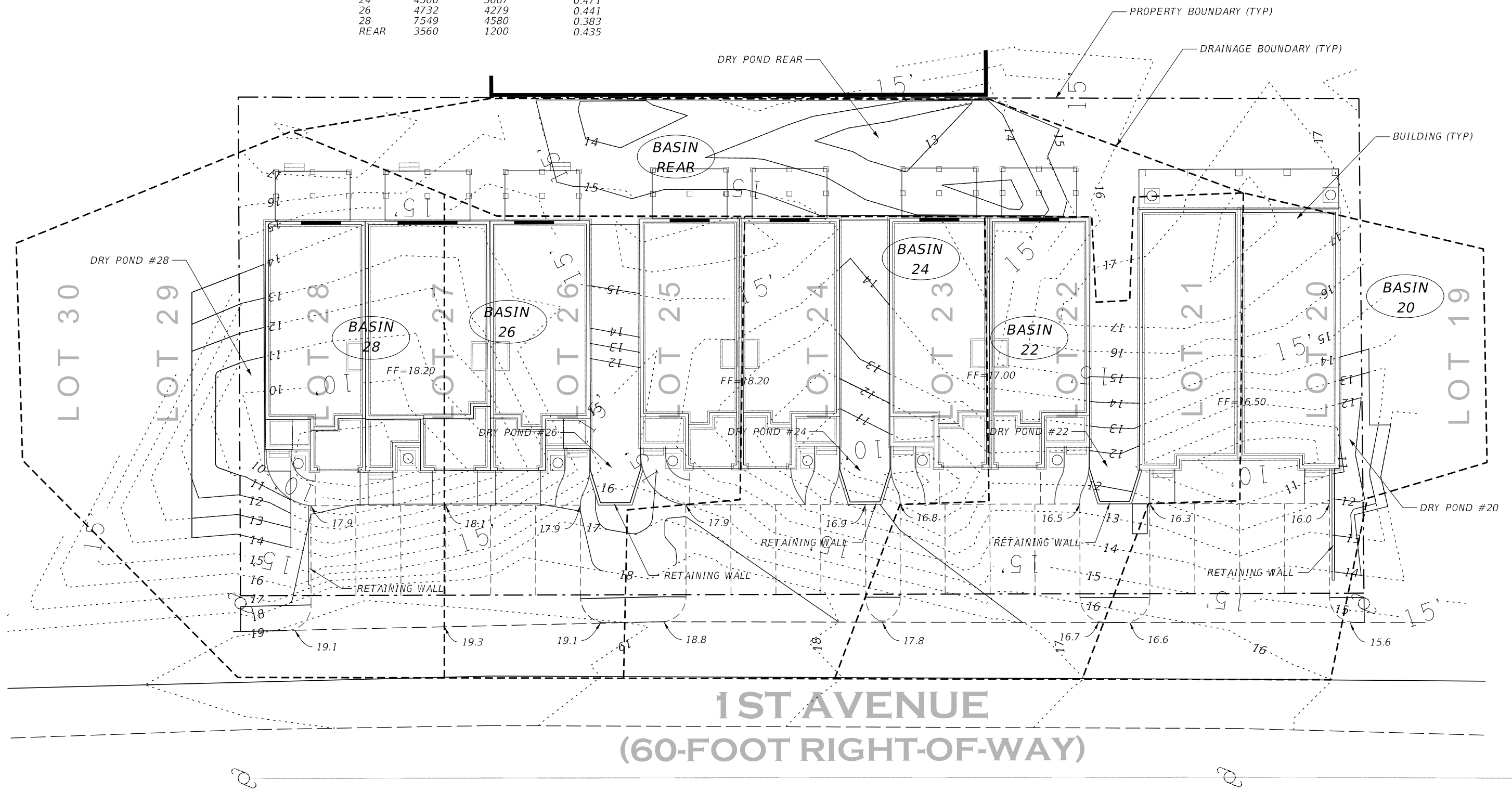
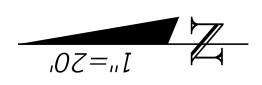
SHEET  
NO.

C-1





| DRAINAGE DATA |           |               |                      |
|---------------|-----------|---------------|----------------------|
| BASIN         | AREA (SF) | IMP AREA (SF) | DRAWDOWN TIME (DAYS) |
| 20            | 4304      | 1602          | 0.401                |
| 22            | 4641      | 3930          | 0.431                |
| 24            | 4506      | 3687          | 0.471                |
| 26            | 4732      | 4279          | 0.441                |
| 28            | 7549      | 4580          | 0.383                |
| REAR          | 3560      | 1200          | 0.435                |



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| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |



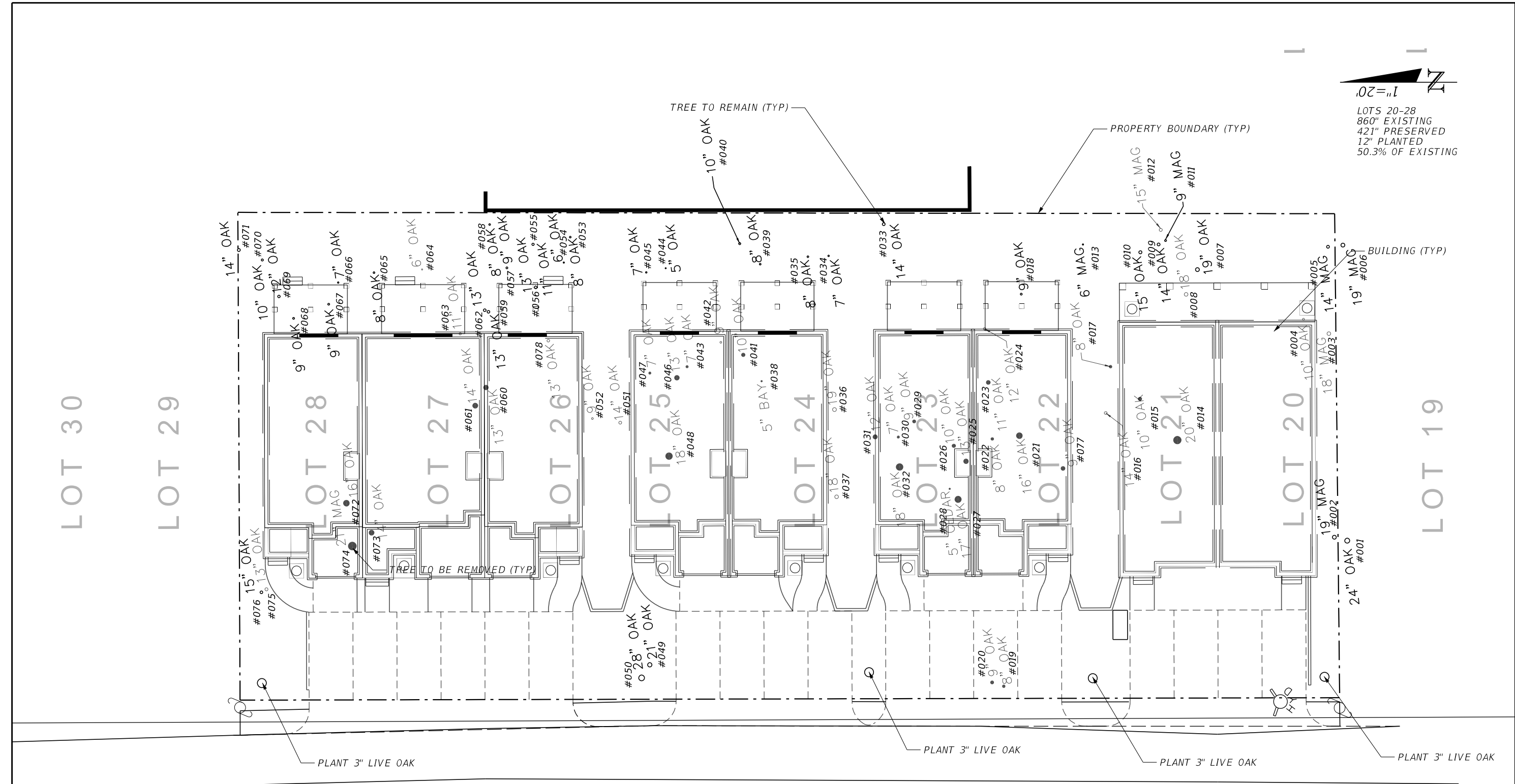
| STATE OF FLORIDA<br>CITY OF FERNANDINA BEACH |        |            |
|----------------------------------------------|--------|------------|
| ROAD NO.                                     | COUNTY | PROJECT ID |
| 1st AVE                                      | NASSAU |            |

**DRAINAGE PLAN**

| SHEET NO. |
|-----------|
| C-3       |



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LOTS 20-28  
860" EXISTING  
421" PRESERVED  
12" PLANTED  
50.3% OF EXISTING

# 1ST AVENUE (60-FOOT RIGHT-OF-WAY)

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |



| STATE OF FLORIDA<br>CITY OF FERNANDINA BEACH |        |            |
|----------------------------------------------|--------|------------|
| ROAD NO.                                     | COUNTY | PROJECT ID |
| 1st AVE                                      | NASSAU |            |

## LANDSCAPE PLAN

| SHEET NO. |
|-----------|
| C-4       |

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| Tree ID | Surveyor Species | DBH | Real Species | Saved | DBH Saved | DBH Removed | Health (1-5) | Comment                                                       |
|---------|------------------|-----|--------------|-------|-----------|-------------|--------------|---------------------------------------------------------------|
| 1       | O                | 24  | LO           | Y     | 24        | 0           | 2            | joined at the base with #2.                                   |
| 2       | MAG              | 19  | MAG          | Y     | 19        | 0           | 2            | Joined at the base with #1.                                   |
| 3       | MAG              | 18  | MAG          | N     | 0         | 18          | 1            |                                                               |
| 4       | O                | 10  | WO           | N     | 0         | 10          | 2            | forked                                                        |
| 5       | MAG              | 14  | MAG          | Y     | 14        | 0           | 2            | joined at the base with #6 and straighter                     |
| 6       | MAG              | 19  | MAG          | Y     | 19        | 0           | 3            | joined at the base with #5 and leans                          |
| 7       | O                | 19  | LO           | Y     | 19        | 0           | 1            |                                                               |
| 8       | O                |     | LO           |       | 0         | 0           | 4            | root failure - leans toward where building will be            |
| 9       | O                | 14  | LO           | Y     | 14        | 0           | 2            | one dead limb - forked                                        |
| 10      | O                | 15  | LO           | Y     | 15        | 0           | 2            | leans                                                         |
| 11      | MAG              | 9   | MAG          | Y     | 9         | 0           | 2            | rubs on #9 - could be corrected                               |
| 12      | MAG              |     | MAG          |       | 0         | 0           | 4            | leans ovr the property line                                   |
| 13      | MAG              | 6   | MAG          | Y     | 6         | 0           | 2            | leans                                                         |
| 14      | O                |     | LAU          |       | 0         | 0           | 4            | decay at the base                                             |
| 15      | O                | 10  | LO           | N     | 0         | 10          | 3            | bent at the base                                              |
| 16      | O                | 14  | LO           | N     | 0         | 14          | 3            | bent at the base                                              |
| 17      | O                | 8   | LO           | N     | 0         | 8           | 3            | forked and one half is dead                                   |
| 18      | O                | 9   | LO           | Y     | 9         | 0           | 1            |                                                               |
| 19      | O                | 8   | LAU          | N     | 0         | 8           | 2            | leans toward the road                                         |
| 20      | O                | 9   | LAU          | N     | 0         | 9           | 2            | leans toward the road                                         |
| 21      | O                | 16  | LO           | N     | 0         | 16          | 3            | leans                                                         |
| 22      | O                | 8   | LO           | N     | 0         | 8           | 1            |                                                               |
| 23      | O                |     | LO           |       | 0         | 0           | 4            | decay in the stem                                             |
| 24      | O                | 12  | LO           | N     | 0         | 12          | 1            |                                                               |
| 25      | O                | 13  | LO           | N     | 0         | 13          | 1            |                                                               |
| 26      | O                | 10  | LO           | N     | 0         | 10          | 1            |                                                               |
| 27      | O                | 17  | LO           | N     | 0         | 17          | 1            |                                                               |
| 28      | CDR              | 5   | CDR          | N     | 0         | 5           | 1            |                                                               |
| 29      | O                |     | LO           |       | 0         | 0           | 5            | decay in the stem                                             |
| 30      | O                | 7   | LO           | N     | 0         | 7           | 1            |                                                               |
| 31      | O                | 12  | LO           | N     | 0         | 12          | 1            |                                                               |
| 32      | O                | 18  | LO           | N     | 0         | 18          | 1            |                                                               |
| 33      | O                | 14  | LO           | Y     | 14        | 0           | 3            | close to the building wall of neighbors property in the back. |
| 34      | O                | 7   | LO           | Y     | 7         | 0           | 1            |                                                               |
| 35      | O                | 8   | LO           | Y     | 8         | 0           | 1            |                                                               |
| 36      | O                | 19  | LO           | N     | 0         | 19          | 1            |                                                               |
| 37      | O                | 18  | LO           | N     | 0         | 18          | 1            |                                                               |
| 38      | BAY              | 5   | BAY          | N     | 0         | 5           | 1            |                                                               |
| 39      | O                | 8   | LO           | Y     | 8         | 0           | 1            |                                                               |
| 40      | O                | 10  | LO           | Y     | 10        | 0           | 1            |                                                               |
| 41      | O                | 10  | LO           | N     | 0         | 10          | 1            |                                                               |
| 42      | O                | 9   | LO           | N     | 0         | 9           | 2            | forked at 12 feet                                             |
| 43      | O                | 7   | LO           | N     | 0         | 7           | 3            | poor base                                                     |
| 44      | O                | 5   | LO           | Y     | 5         | 0           | 3            | supressed understory tree                                     |
| 45      | O                | 7   | LO           | Y     | 7         | 0           | 1            |                                                               |
| 46      | O                | 13  | LO           | N     | 0         | 13          | 1            |                                                               |
| 47      | O                | 7   | LO           | N     | 0         | 7           | 1            |                                                               |
| 48      | O                | 18  | MAG          | N     | 0         | 18          | 1            |                                                               |
| 49      | O                | 21  | LO           | Y     | 21        | 0           | 1            |                                                               |
| 50      | O                | 28  | LO           | Y     | 28        | 0           | 1            |                                                               |
| 51      | O                | 14  | LO           | N     | 0         | 14          | 2            | leans                                                         |
| 52      | O                | 9   | LO           | N     | 0         | 9           | 2            | leans                                                         |
| 53      | O                | 8   | LO           | Y     | 8         | 0           | 1            |                                                               |

| Tree ID | Surveyor Species | DBH | Real Species | Saved | DBH Saved | DBH Removed | Health (1-5) | Comment                                                       |
|---------|------------------|-----|--------------|-------|-----------|-------------|--------------|---------------------------------------------------------------|
| 54      | O                | 6   | LO           | Y     | 6         | 0           | 1            |                                                               |
| 55      | O                | 11  | LO           | Y     | 11        | 0           | 1            |                                                               |
| 56      | O                | 13  | LO           | Y     | 13        | 0           | 1            |                                                               |
| 57      | O                | 9   | LO           | Y     | 9         | 0           | 1            |                                                               |
| 58      | O                | 8   | LO           | Y     | 8         | 0           | 2            | close to the building wall of neighbors property in the back. |
| 59      | O                | 13  | LO           | Y     | 13        | 0           | 1            |                                                               |
| 60      | O                | 13  | LO           | N     | 0         | 13          | 1            |                                                               |
| 61      | O                | 14  | LO           | N     | 0         | 14          | 1            |                                                               |
| 62      | O                | 13  | LO           | Y     | 13        | 0           | 1            |                                                               |
| 63      | O                | 11  | LO           | N     | 0         | 11          | 1            |                                                               |
| 64      | O                | 0   | LO           |       | 0         | 0           | 4            | supressed understory tree                                     |
| 65      | O                | 8   | LO           | Y     | 8         | 0           | 3            | decay hole in the side                                        |
| 66      | O                | 7   | LO           | Y     | 7         | 0           | 1            |                                                               |
| 67      | O                | 9   | LO           | Y     | 9         | 0           | 1            |                                                               |
| 68      | O                | 9   | LO           | Y     | 9         | 0           | 2            | small crown                                                   |
| 69      | O                | 12  | LO           | Y     | 12        | 0           | 1            |                                                               |
| 70      | O                | 10  | LO           | Y     | 10        | 0           | 1            |                                                               |
| 71      | O                | 14  | LO           | Y     | 14        | 0           | 1            |                                                               |
| 72      | O                | 16  | LO           | N     | 0         | 16          | 1            |                                                               |
| 73      | O                | 14  | LO           | N     | 0         | 14          | 1            |                                                               |
| 74      | MAG              | 21  | MAG          | N     | 0         | 21          | 1            |                                                               |
| 75      | O                | 13  | LO           | N     | 0         | 13          | 2            | vines - connected at the base to #76                          |
| 76      | O                | 15  | LO           | Y     | 15        | 0           | 1            | vines - connected at the base to #76                          |
| 77      | O                |     | LO           |       | 0         | 0           | 4            | decay in the stem and bent severely                           |
| 78      | O                | 13  | LO           | N     | 0         | 13          | 1            |                                                               |

|                       |                                        |
|-----------------------|----------------------------------------|
| <b>Health Status</b>  | 3=keep tree but has defects            |
| 1= no apparent defect | 4=poor health and suggest removal      |
| 2=minor defects       | 5=severe defect and should be removed. |

| Code | Species    | # TREES |
|------|------------|---------|
| LO   | Live Oak   | 63      |
| LAU  | Laurel Oak | 3       |
| WO   | Water Oak  | 1       |
| MAG  | Magnolia   | 9       |
| CDR  | Red Cedar  | 1       |
| BAY  | Red Bay    | 1       |
|      |            | 78      |

|                     |     |               |
|---------------------|-----|---------------|
| DBH                 |     | DBH           |
| Total healthy       | 860 |               |
| Total saved         | 421 | 49% Preserved |
| Removed             | 439 |               |
| Required Mitigation | 9   |               |

Notes : Locations with two stems have two record lines.

| REVISIONS |             |      |             |
|-----------|-------------|------|-------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |
|           |             |      |             |



|                                              |        |            |                |           |
|----------------------------------------------|--------|------------|----------------|-----------|
| STATE OF FLORIDA<br>CITY OF FERNANDINA BEACH |        |            | LANDSCAPE PLAN | SHEET NO. |
| ROAD NO.                                     | COUNTY | PROJECT ID |                |           |
| 1st AVE                                      | NASSAU |            |                | C-5       |



# First Avenue Amelia Townhomes

## Post Developed Drainage Calculation

### Basin Calculations (note, elevations in 1988, NAVD)

On-Line Dry Retention must provide for percolation of the runoff of the 10 year 24 hour storm

#### Basin 20 - Lots 19-20

Step 1 - Determine the peak runoff rate (Qp) and the Volume of Runoff (Vr)

Total Drainage Area = 4304 ft<sup>2</sup>  
 Impervious Area = 1602 ft<sup>2</sup> 37% Impervious  
 Pervious Area = 2702 ft<sup>2</sup>  
 Impervious c= 0.95  
 Pervious c = 0.10  
 Composite c = 0.42  
 From FDOT IDF Curves (Zone 4), I= 0.31 in/hr  
 Basin Area (A) = 0.0988 Acres  
 Qp=cIA = 0.01 cfs  
 Rainfall Duration (D)(24 hour) = 86400 sec  
 Vr=Qp \* D = 1103.6 ft<sup>3</sup>

Step 2 - Input pond information

#### Pond Information

| El.<br>(ft.) |                | Area<br>ft <sup>2</sup> | Volume<br>ft <sup>3</sup> |
|--------------|----------------|-------------------------|---------------------------|
| 14.00        | Top of Bank    | 312.0                   | 443                       |
| 13.00        |                | 199.0                   | 188                       |
| 13.00        |                | 199.0                   | 188                       |
| 13.00        |                | 199.0                   | 188                       |
| 12.00        |                | 86.0                    | 45                        |
| 11.00        | Bottom of Pond | 4.0                     |                           |

Show that the available storage volume is greater than the unsaturated volume.

443 > 331.07 TRUE

Step 3 - Check Drawdown time

See next sheet for calculations

Check that the drawdown is less than 3 days with a factor of safety of 2

Drawdown time = 0.4007 days

OK

## Drawdown Calculation - Basin 20

Underlined # are Inputed

| Abbriviation          | #            | Description                                                                                               |
|-----------------------|--------------|-----------------------------------------------------------------------------------------------------------|
| TV =                  | 1104         | Treatment Volume (ft <sup>3</sup> )                                                                       |
| TV <sub>el</sub> =    | 14.00        | Treatment Volume Elevation (ft)                                                                           |
| h <sub>v</sub> =      | 3.00         | Treatment Volume Depth (ft)                                                                               |
| El <sub>gwt</sub> =   | <u>4</u>     | Elevation of the Groundwater Table (ft)                                                                   |
| El <sub>bb</sub> =    | <u>11.00</u> | Elevation of the Basin Bottom (ft)                                                                        |
| El <sub>aq</sub> =    | <u>-10</u>   | Elevation of the Aquifer (ft)                                                                             |
| h <sub>b</sub> =      | 7            | Height of Basin Bottom Above Groundwater Table (ft)                                                       |
| f =                   | <u>0.3</u>   | Fillable Porrosity (.2 to .3)                                                                             |
| h <sub>u</sub> =      | 2.1          | Height of Water to Saturate the Soil (ft)                                                                 |
| L =                   | <u>25</u>    | Equivalent Pond Length (ft)                                                                               |
| W =                   | 14.7         | Equivalent Pond Width (ft)                                                                                |
| A <sub>b</sub> =      | 367.9        | Area of Basin Bottom (ft <sup>2</sup> )                                                                   |
| V <sub>u</sub> =      | 772.5        | Volume of Water Required to Saturate Soil below the Basin Bottom (ft <sup>3</sup> )                       |
| K <sub>vs</sub> =     | <u>20.00</u> | Saturated Vertical Hydraulic Conductivity (ft/day) (from SCS soils map)                                   |
| K <sub>vu</sub> =     | 13.3         | Unsaturated Vertical Hydraulic Conductivity (ft/day)                                                      |
| I <sub>d</sub> =      | 6.7          | Design Infiltration Rate (ft/day)                                                                         |
| FS =                  | <u>2</u>     | Factor of Safety                                                                                          |
| t <sub>sat</sub> =    | 0.32         | Time to Saturate Soil (days)                                                                              |
| V <sub>rem</sub> =    | 331          | Remaining Volume to be Infiltrated Under Saturated Lateral Flow (ft <sup>3</sup> )                        |
| V <sub>rem-el</sub> = | 14.01        | Remaining Volume to be Infiltrated Under Saturated Lateral Flow Elevation (ft)                            |
| h <sub>c</sub> =      | 7            | Height of Water in Basin Above the Initial Ground Water Table at Recovery (ft)                            |
| h <sub>2</sub> =      | 3.01         | Height of Water in Basin at Start of Saturated Lateral Flow (ft)                                          |
| H <sub>i</sub> =      | 10.01        | Height of Water in Basin Above the Initial Ground Water Table at the Start of Saturated Lateral Flow (ft) |
| F <sub>y</sub> =      | 0.70         | Dimensionless parameter                                                                                   |
| F <sub>x</sub> =      | 1.9          | Dimensionless parameter                                                                                   |
| H =                   | 14           | Initial Saturated Thickness of Aquifer (ft)                                                               |
| D =                   | 17.5         | Average Saturated Thickness of Aquifer (ft)                                                               |
| K <sub>h</sub> =      | <u>10.00</u> | Saturated Horizontal Hydraulic Conductivity (ft/day)                                                      |
| t =                   | 0.086        | Cumulative Time Since Saturated Lateral Flow Started (days)                                               |
| t <sub>total</sub> =  | 0.401        | Total Drawdown Time (days)                                                                                |

Step 1 Calculate Required Volume to be Drawn Down

$$TV = 1104 \text{ (ft}^3\text{), from previous sheet}$$

Step 2 Calculate the height of the Treatment Volume in the Basin

$$TV_{el} = 14.00 \text{ (ft), by interpolation}$$

Step 3 Determine if Saturated Lateral Flow Will Occur

$$h_v = 3.00 \text{ (ft), } = TV_{el} - El_{bb}$$

$$h_u = 2.1 \text{ (ft), } = f * h_b$$

Saturated Lateral Flow Will Occur

Step 4 Calculate the Volume of Water Infiltrated in Unsaturated Vertical Flow and the Time to Infiltrate this Volume

$$A_b = 367.853 \text{ (ft}^2\text{), } = \text{Equivalent Pond Length} * \text{Equivalent Pond Width}$$

$$V_u = 772.492 \text{ (ft}^3\text{), } = A_b * h_b * f$$

$$K_{vu} = 13.3333 \text{ (ft/day), } = 2/3 * K_{vs}$$

$$I_d = 6.66667 \text{ (ft/day), } = K_{vu}/FS$$



$$t_{sat} = 0.315 \quad (\text{days}), = f * h_b / I_d$$

Step 5 Calculate the Remaining Treatment Volume to be Recovered under Saturated Lateral Flow

$$V_{rem} = 331 \quad (\text{ft}^3), = TV - V_a$$

$$V_{rem-cl} = 14.01 \quad (\text{ft}), \text{ by interpolation}$$

Step 6 Calculate  $F_y$  and  $F_x$

$$H_i = 10.01 \quad (\text{ft}), = H_b + H_2$$

$$F_y = 0.6995 = h_c / H_i$$

$$L/W = 1.70 = \text{Basin Length to Width Ratio}$$

$$F_x = 1.9 \quad \text{From Figure 26-7, given } f \text{ and } F_y$$

Step 7 Calculate the time to Recover the Remaining Treatment Volume Under Saturated Lateral Flow

$$D = 17.5 \quad (\text{ft}), = H + h_c/2$$

$$t = 0.09 \quad (\text{days}), = W^2 / (4 * K_h * D * F_x^2)$$

Step 8 Total time to Recover the Treatment Volume

$$t_{total} = 0.401 \quad (\text{days}), = t_{sat} + t$$

# First Avenue Amelia Townhomes

## Post Developed Drainage Calculation

### Basin Calculations (note, elevations in 1988, NAVD)

On-Line Dry Retention must provide for percolation of the runoff of the 10 year 24 hour storm

#### Basin 22 - Lots 21-22

Step 1 - Determine the peak runoff rate (Qp) and the Volume of Runoff (Vr)

|                                   |        |       |                |
|-----------------------------------|--------|-------|----------------|
| Total Drainage Area =             | 4641   | ft^2  |                |
| Impervious Area =                 | 3930   | ft^2  | 85% Impervious |
| Pervious Area =                   | 711    | ft^2  |                |
| Impervious c=                     | 0.95   |       |                |
| Pervious c =                      | 0.10   |       |                |
| Composite c =                     | 0.82   |       |                |
| From FDOT IDF Curves (Zone 4), I= | 0.31   | in/hr |                |
| Basin Area (A) =                  | 0.1065 | Acres |                |
| Qp=clA =                          | 0.03   | cfs   |                |
| Rainfall Duration (D)(24 hour) =  | 86400  | sec   |                |
| Vr=Qp * D =                       | 2340   | ft^3  |                |

Step 2 - Input pond information

#### Pond Information

| El.<br>(ft.) |                | Area<br>ft^2 | Volume<br>ft^3 |
|--------------|----------------|--------------|----------------|
| 15.00        | Top of Bank    | 236.0        | 475            |
| 14.00        |                | 186.0        | 264            |
| 14.00        |                | 186.0        | 264            |
| 14.00        |                | 186.0        | 264            |
| 13.00        |                | 136.0        | 103            |
| 12.00        | Bottom of Pond | 70.0         |                |

Show that the available storage volume is greater than the unsaturated volume.

475 > 468.00 TRUE

Step 3 - Check Drawdown time

See next sheet for calculations

Check that the drawdown is less than 3 days with a factor of safety of 2

Drawdown time = 0.4309 days

OK



## Drawdown Calculation - Basin 22

Underlined # are Inputed

| Abbriviation          | #            | Description                                                                                               |
|-----------------------|--------------|-----------------------------------------------------------------------------------------------------------|
| TV =                  | 2340         | Treatment Volume (ft <sup>3</sup> )                                                                       |
| TV <sub>el</sub> =    | 15.00        | Treatment Volume Elevation (ft)                                                                           |
| h <sub>v</sub> =      | 3.00         | Treatment Volume Depth (ft)                                                                               |
| El <sub>gwt</sub> =   | <u>4</u>     | Elevation of the Groundwater Table (ft)                                                                   |
| El <sub>bb</sub> =    | <u>12.00</u> | Elevation of the Basin Bottom (ft)                                                                        |
| El <sub>aq</sub> =    | <u>-10</u>   | Elevation of the Aquifer (ft)                                                                             |
| h <sub>b</sub> =      | 8            | Height of Basin Bottom Above Groundwater Table (ft)                                                       |
| f =                   | <u>0.3</u>   | Fillable Porrosity (.2 to .3)                                                                             |
| h <sub>u</sub> =      | 2.4          | Height of Water to Saturate the Soil (ft)                                                                 |
| L =                   | <u>78</u>    | Equivalent Pond Length (ft)                                                                               |
| W =                   | 10.0         | Equivalent Pond Width (ft)                                                                                |
| A <sub>b</sub> =      | 780.0        | Area of Basin Bottom (ft <sup>2</sup> )                                                                   |
| V <sub>u</sub> =      | 1872.0       | Volume of Water Required to Saturate Soil below the Basin Bottom (ft <sup>3</sup> )                       |
| K <sub>vs</sub> =     | <u>20.00</u> | Saturated Vertical Hydraulic Conductivity (ft/day) (from SCS soils map)                                   |
| K <sub>vu</sub> =     | 13.3         | Unsaturated Vertical Hydraulic Conductivity (ft/day)                                                      |
| I <sub>d</sub> =      | 6.7          | Design Infiltration Rate (ft/day)                                                                         |
| FS =                  | <u>2</u>     | Factor of Safety                                                                                          |
| t <sub>sat</sub> =    | 0.36         | Time to Saturate Soil (days)                                                                              |
| V <sub>rem</sub> =    | 468          | Remaining Volume to be Infiltrated Under Saturated Lateral Flow (ft <sup>3</sup> )                        |
| V <sub>rem-el</sub> = | 15.27        | Remaining Volume to be Infiltrated Under Saturated Lateral Flow Elevation (ft)                            |
| h <sub>c</sub> =      | 8            | Height of Water in Basin Above the Initial Ground Water Table at Recovery (ft)                            |
| h <sub>2</sub> =      | 3.27         | Height of Water in Basin at Start of Saturated Lateral Flow (ft)                                          |
| H <sub>i</sub> =      | 11.27        | Height of Water in Basin Above the Initial Ground Water Table at the Start of Saturated Lateral Flow (ft) |
| F <sub>y</sub> =      | 0.71         | Dimensionless parameter                                                                                   |
| F <sub>x</sub> =      | 1.4          | Dimensionless parameter                                                                                   |
| H =                   | 14           | Initial Saturated Thickness of Aquifer (ft)                                                               |
| D =                   | 18           | Average Saturated Thickness of Aquifer (ft)                                                               |
| K <sub>h</sub> =      | <u>10.00</u> | Saturated Horizontal Hydraulic Conductivity (ft/day)                                                      |
| t =                   | 0.071        | Cumulative Time Since Saturated Lateral Flow Started (days)                                               |
| t <sub>total</sub> =  | 0.431        | Total Drawdown Time (days)                                                                                |

Step 1 Calculate Required Volume to be Drawn Down

$$TV = 2340 \text{ (ft}^3\text{), from previous sheet}$$

Step 2 Calculate the height of the Treatment Volume in the Basin

$$TV_{el} = 15.00 \text{ (ft), by interpolation}$$

Step 3 Determine if Saturated Lateral Flow Will Occur

$$h_v = 3.00 \text{ (ft), } = TV_{el} - El_{bb}$$

$$h_u = 2.4 \text{ (ft), } = f * h_b$$

Saturated Lateral Flow Will Occur

Step 4 Calculate the Volume of Water Infiltrated in Unsaturated Vertical Flow and the Time to Infiltrate this Volume

$$A_b = 779.995 \text{ (ft}^2\text{), } = \text{Equivalent Pond Length} * \text{Equivalent Pond Width}$$

$$V_u = 1871.99 \text{ (ft}^3\text{), } = A_b * h_b * f$$

$$K_{vu} = 13.3333 \text{ (ft/day), } = 2/3 * K_{vs}$$

$$I_d = 6.66667 \text{ (ft/day), } = K_{vu}/FS$$

$$t_{sat} = 0.360 \quad (\text{days}), = f * h_b / I_d$$

Step 5 Calculate the Remaining Treatment Volume to be Recovered under Saturated Lateral Flow

$$V_{rem} = 468 \quad (\text{ft}^3), = TV - V_a$$

$$V_{rem-cl} = 15.27 \quad (\text{ft}), \text{ by interpolation}$$

Step 6 Calculate  $F_y$  and  $F_x$

$$H_i = 11.27 \quad (\text{ft}), = H_b + H_2$$

$$F_y = 0.7100 = h_c / H_i$$

$$L/W = 7.80 = \text{Basin Length to Width Ratio}$$

$$F_x = 1.4 \quad \text{From Figure 26-7, given } f \text{ and } F_y$$

Step 7 Calculate the time to Recover the Remaining Treatment Volume Under Saturated Lateral Flow

$$D = 18 \quad (\text{ft}), = H + h_c/2$$

$$t = 0.07 \quad (\text{days}), = W^2 / (4 * K_h * D * F_x^2)$$

Step 8 Total time to Recover the Treatment Volume

$$t_{total} = 0.431 \quad (\text{days}), = t_{sat} + t$$



# First Avenue Amelia Townhomes

## Post Developed Drainage Calculation

### Basin Calculations (note, elevations in 1988, NAVD)

On-Line Dry Retention must provide for percolation of the runoff of the 10 year 24 hour storm

#### Basin 24 - Lots 23-24

Step 1 - Determine the peak runoff rate (Qp) and the Volume of Runoff (Vr)

|                                   |        |       |                |
|-----------------------------------|--------|-------|----------------|
| Total Drainage Area =             | 4506   | ft^2  |                |
| Impervious Area =                 | 3687   | ft^2  | 82% Impervious |
| Pervious Area =                   | 819    | ft^2  |                |
| Impervious c=                     | 0.95   |       |                |
| Pervious c =                      | 0.10   |       |                |
| Composite c =                     | 0.80   |       |                |
| From FDOT IDF Curves (Zone 4), I= | 0.31   | in/hr |                |
| Basin Area (A) =                  | 0.1034 | Acres |                |
| Qp=clA =                          | 0.03   | cfs   |                |
| Rainfall Duration (D)(24 hour) =  | 86400  | sec   |                |
| Vr=Qp * D =                       | 2205.4 | ft^3  |                |

Step 2 - Input pond information

#### Pond Information

| El.<br>(ft.) |                | Area<br>ft^2 | Volume<br>ft^3 |
|--------------|----------------|--------------|----------------|
| 15.00        | Top of Bank    | 551.0        | 1267           |
| 14.00        |                | 435.0        | 774            |
| 13.00        |                | 273.0        | 420            |
| 12.00        |                | 209.0        | 179            |
| 11.00        |                | 148.0        | 0              |
| 11.00        | Bottom of Pond | 148.0        |                |

Show that the available storage volume is greater than the unsaturated volume.

1267 > 1047.58 TRUE

Step 3 - Check Drawdown time

See next sheet for calculations

Check that the drawdown is less than 3 days with a factor of safety of 2

Drawdown time = 0.4708 days

OK

## Drawdown Calculation - Basin 24

Underlined # are Inputed

| Abbriviation          | #            | Description                                                                                               |
|-----------------------|--------------|-----------------------------------------------------------------------------------------------------------|
| TV =                  | 2205         | Treatment Volume (ft <sup>3</sup> )                                                                       |
| TV <sub>el</sub> =    | 15.00        | Treatment Volume Elevation (ft)                                                                           |
| h <sub>v</sub> =      | 4.00         | Treatment Volume Depth (ft)                                                                               |
| El <sub>gwt</sub> =   | <u>4</u>     | Elevation of the Groundwater Table (ft)                                                                   |
| El <sub>bb</sub> =    | <u>11.00</u> | Elevation of the Basin Bottom (ft)                                                                        |
| El <sub>aq</sub> =    | <u>-10</u>   | Elevation of the Aquifer (ft)                                                                             |
| h <sub>b</sub> =      | 7            | Height of Basin Bottom Above Groundwater Table (ft)                                                       |
| f =                   | <u>0.3</u>   | Fillable Porrosity (.2 to .3)                                                                             |
| h <sub>u</sub> =      | 2.1          | Height of Water to Saturate the Soil (ft)                                                                 |
| L =                   | <u>44</u>    | Equivalent Pond Length (ft)                                                                               |
| W =                   | 12.5         | Equivalent Pond Width (ft)                                                                                |
| A <sub>b</sub> =      | 551.4        | Area of Basin Bottom (ft <sup>2</sup> )                                                                   |
| V <sub>u</sub> =      | 1157.8       | Volume of Water Required to Saturate Soil below the Basin Bottom (ft <sup>3</sup> )                       |
| K <sub>vs</sub> =     | <u>20.00</u> | Saturated Vertical Hydraulic Conductivity (ft/day) (from SCS soils map)                                   |
| K <sub>vu</sub> =     | 13.3         | Unsaturated Vertical Hydraulic Conductivity (ft/day)                                                      |
| I <sub>d</sub> =      | 6.7          | Design Infiltration Rate (ft/day)                                                                         |
| FS =                  | <u>2</u>     | Factor of Safety                                                                                          |
| t <sub>sat</sub> =    | 0.32         | Time to Saturate Soil (days)                                                                              |
| V <sub>rem</sub> =    | 1048         | Remaining Volume to be Infiltrated Under Saturated Lateral Flow (ft <sup>3</sup> )                        |
| V <sub>rem-el</sub> = | 15.06        | Remaining Volume to be Infiltrated Under Saturated Lateral Flow Elevation (ft)                            |
| h <sub>c</sub> =      | 7            | Height of Water in Basin Above the Initial Ground Water Table at Recovery (ft)                            |
| h <sub>2</sub> =      | 4.06         | Height of Water in Basin at Start of Saturated Lateral Flow (ft)                                          |
| H <sub>i</sub> =      | 11.06        | Height of Water in Basin Above the Initial Ground Water Table at the Start of Saturated Lateral Flow (ft) |
| F <sub>y</sub> =      | 0.63         | Dimensionless parameter                                                                                   |
| F <sub>x</sub> =      | 1.2          | Dimensionless parameter                                                                                   |
| H =                   | 14           | Initial Saturated Thickness of Aquifer (ft)                                                               |
| D =                   | 17.5         | Average Saturated Thickness of Aquifer (ft)                                                               |
| K <sub>h</sub> =      | <u>10.00</u> | Saturated Horizontal Hydraulic Conductivity (ft/day)                                                      |
| t =                   | 0.156        | Cumulative Time Since Saturated Lateral Flow Started (days)                                               |
| t <sub>total</sub> =  | 0.471        | Total Drawdown Time (days)                                                                                |

Step 1 Calculate Required Volume to be Drawn Down

$$TV = 2205 \text{ (ft}^3\text{), from previous sheet}$$

Step 2 Calculate the height of the Treatment Volume in the Basin

$$TV_{el} = 15.00 \text{ (ft), by interpolation}$$

Step 3 Determine if Saturated Lateral Flow Will Occur

$$h_v = 4.00 \text{ (ft), } = TV_{el} - El_{bb}$$

$$h_u = 2.1 \text{ (ft), } = f * h_b$$

Saturated Lateral Flow Will Occur

Step 4 Calculate the Volume of Water Infiltrated in Unsaturated Vertical Flow and the Time to Infiltrate this Volume

$$A_b = 551.356 \text{ (ft}^2\text{), } = \text{Equivalent Pond Length} * \text{Equivalent Pond Width}$$

$$V_u = 1157.85 \text{ (ft}^3\text{), } = A_b * h_b * f$$

$$K_{vu} = 13.3333 \text{ (ft/day), } = 2/3 * K_{vs}$$

$$I_d = 6.66667 \text{ (ft/day), } = K_{vu}/FS$$



$$t_{sat} = 0.315 \quad (\text{days}), = f * h_b / I_d$$

Step 5 Calculate the Remaining Treatment Volume to be Recovered under Saturated Lateral Flow

$$V_{rem} = 1048 \quad (\text{ft}^3), = TV - V_a$$

$$V_{rem-cl} = 15.06 \quad (\text{ft}), \text{ by interpolation}$$

Step 6 Calculate  $F_y$  and  $F_x$

$$H_i = 11.06 \quad (\text{ft}), = H_b + H_2$$

$$F_y = 0.6327 \quad = h_c / H_i$$

$$L/W = 3.51 \quad = \text{Basin Length to Width Ratio}$$

$$F_x = 1.2 \quad \text{From Figure 26-7, given } f \text{ and } F_y$$

Step 7 Calculate the time to Recover the Remaining Treatment Volume Under Saturated Lateral Flow

$$D = 17.5 \quad (\text{ft}), = H + h_c/2$$

$$t = 0.16 \quad (\text{days}), = W^2 / (4 * K_h * D * F_x^2)$$

Step 8 Total time to Recover the Treatment Volume

$$t_{total} = 0.471 \quad (\text{days}), = t_{sat} + t$$

# First Avenue Amelia Townhomes

## Post Developed Drainage Calculation

### Basin Calculations (note, elevations in 1988, NAVD)

On-Line Dry Retention must provide for percolation of the runoff of the 10 year 24 hour storm

#### Basin 26 - Lots 25-26

Step 1 - Determine the peak runoff rate (Qp) and the Volume of Runoff (Vr)

|                                   |        |       |                |
|-----------------------------------|--------|-------|----------------|
| Total Drainage Area =             | 4732   | ft^2  |                |
| Impervious Area =                 | 4279   | ft^2  | 90% Impervious |
| Pervious Area =                   | 453    | ft^2  |                |
| Impervious c=                     | 0.95   |       |                |
| Pervious c =                      | 0.10   |       |                |
| Composite c =                     | 0.87   |       |                |
| From FDOT IDF Curves (Zone 4), I= | 0.31   | in/hr |                |
| Basin Area (A) =                  | 0.1086 | Acres |                |
| Qp=clA =                          | 0.03   | cfs   |                |
| Rainfall Duration (D)(24 hour) =  | 86400  | sec   |                |
| Vr=Qp * D =                       | 2528.4 | ft^3  |                |

Step 2 - Input pond information

#### Pond Information

| El.<br>(ft.) |                | Area<br>ft^2 | Volume<br>ft^3 |
|--------------|----------------|--------------|----------------|
| 16.00        | Top of Bank    | 542.0        | 1438           |
| 15.00        |                | 412.0        | 961            |
| 14.00        |                | 326.0        | 592            |
| 13.00        |                | 296.0        | 281            |
| 12.00        |                | 266.0        | 0              |
| 12.00        | Bottom of Pond | 266.0        |                |

Show that the available storage volume is greater than the unsaturated volume.

1438 > 1011.37 TRUE

Step 3 - Check Drawdown time

See next sheet for calculations

Check that the drawdown is less than 3 days with a factor of safety of 2

Drawdown time = 0.4409 days

OK



## Drawdown Calculation - Basin 26

Underlined # are Inputed

| Abbriviation          | #            | Description                                                                                               |
|-----------------------|--------------|-----------------------------------------------------------------------------------------------------------|
| TV =                  | 2528         | Treatment Volume (ft <sup>3</sup> )                                                                       |
| TV <sub>cl</sub> =    | 16.00        | Treatment Volume Elevation (ft)                                                                           |
| h <sub>v</sub> =      | 4.00         | Treatment Volume Depth (ft)                                                                               |
| El <sub>gwt</sub> =   | <u>4</u>     | Elevation of the Groundwater Table (ft)                                                                   |
| El <sub>bb</sub> =    | <u>12.00</u> | Elevation of the Basin Bottom (ft)                                                                        |
| El <sub>aq</sub> =    | <u>-10</u>   | Elevation of the Aquifer (ft)                                                                             |
| h <sub>b</sub> =      | 8            | Height of Basin Bottom Above Groundwater Table (ft)                                                       |
| f =                   | <u>0.3</u>   | Fillable Porrosity (.2 to .3)                                                                             |
| h <sub>u</sub> =      | 2.4          | Height of Water to Saturate the Soil (ft)                                                                 |
| L =                   | <u>69</u>    | Equivalent Pond Length (ft)                                                                               |
| W =                   | 9.2          | Equivalent Pond Width (ft)                                                                                |
| A <sub>b</sub> =      | 632.1        | Area of Basin Bottom (ft <sup>2</sup> )                                                                   |
| V <sub>u</sub> =      | 1517.1       | Volume of Water Required to Saturate Soil below the Basin Bottom (ft <sup>3</sup> )                       |
| K <sub>vs</sub> =     | <u>20.00</u> | Saturated Vertical Hydraulic Conductivity (ft/day) (from SCS soils map)                                   |
| K <sub>vu</sub> =     | 13.3         | Unsaturated Vertical Hydraulic Conductivity (ft/day)                                                      |
| I <sub>d</sub> =      | 6.7          | Design Infiltration Rate (ft/day)                                                                         |
| FS =                  | <u>2</u>     | Factor of Safety                                                                                          |
| t <sub>sat</sub> =    | 0.36         | Time to Saturate Soil (days)                                                                              |
| V <sub>rem</sub> =    | 1011         | Remaining Volume to be Infiltrated Under Saturated Lateral Flow (ft <sup>3</sup> )                        |
| V <sub>rem-cl</sub> = | 15.16        | Remaining Volume to be Infiltrated Under Saturated Lateral Flow Elevation (ft)                            |
| h <sub>c</sub> =      | 8            | Height of Water in Basin Above the Initial Ground Water Table at Recovery (ft)                            |
| h <sub>2</sub> =      | 3.16         | Height of Water in Basin at Start of Saturated Lateral Flow (ft)                                          |
| H <sub>i</sub> =      | 11.16        | Height of Water in Basin Above the Initial Ground Water Table at the Start of Saturated Lateral Flow (ft) |
| F <sub>y</sub> =      | 0.72         | Dimensionless parameter                                                                                   |
| F <sub>x</sub> =      | 1.2          | Dimensionless parameter                                                                                   |
| H =                   | 14           | Initial Saturated Thickness of Aquifer (ft)                                                               |
| D =                   | 18           | Average Saturated Thickness of Aquifer (ft)                                                               |
| K <sub>h</sub> =      | <u>10.00</u> | Saturated Horizontal Hydraulic Conductivity (ft/day)                                                      |
| t =                   | 0.081        | Cumulative Time Since Saturated Lateral Flow Started (days)                                               |
| t <sub>total</sub> =  | 0.441        | Total Drawdown Time (days)                                                                                |

Step 1 Calculate Required Volume to be Drawn Down

$$TV = 2528 \text{ (ft}^3\text{), from previous sheet}$$

Step 2 Calculate the height of the Treatment Volume in the Basin

$$TV_{cl} = 16.00 \text{ (ft), by interpolation}$$

Step 3 Determine if Saturated Lateral Flow Will Occur

$$h_v = 4.00 \text{ (ft), } = TV_{cl} - El_{bb}$$

$$h_u = 2.4 \text{ (ft), } = f * h_b$$

Saturated Lateral Flow Will Occur

Step 4 Calculate the Volume of Water Infiltrated in Unsaturated Vertical Flow and the Time to Infiltrate this Volume

$$A_b = 632.109 \text{ (ft}^2\text{), } = \text{Equivalent Pond Length} * \text{Equivalent Pond Width}$$

$$V_u = 1517.06 \text{ (ft}^3\text{), } = A_b * h_b * f$$

$$K_{vu} = 13.3333 \text{ (ft/day), } = 2/3 * K_{vs}$$

$$I_d = 6.66667 \text{ (ft/day), } = K_{vu}/FS$$

$$t_{sat} = 0.360 \quad (\text{days}), = f * h_b / I_d$$

Step 5

Calculate the Remaining Treatment Volume to be Recovered under Saturated Lateral Flow

$$V_{rem} = 1011 \quad (\text{ft}^3), = TV - V_a$$

$$V_{rem-cl} = 15.16 \quad (\text{ft}), \text{ by interpolation}$$

Step 6

Calculate  $F_y$  and  $F_x$

$$H_i = 11.16 \quad (\text{ft}), = H_b + H_2$$

$$F_y = 0.7170 \quad = h_c / H_i$$

$$L/W = 7.53 \quad = \text{Basin Length to Width Ratio}$$

$$F_x = 1.2 \quad \text{From Figure 26-7, given } f \text{ and } F_y$$

Step 7

Calculate the time to Recover the Remaining Treatment Volume Under Saturated Lateral Flow

$$D = 18 \quad (\text{ft}), = H + h_c/2$$

$$t = 0.08 \quad (\text{days}), = W^2 / (4 * K_h * D * F_x^2)$$

Step 8

Total time to Recover the Treatment Volume

$$t_{total} = 0.441 \quad (\text{days}), = t_{sat} + t$$



# First Avenue Amelia Townhomes

## Post Developed Drainage Calculation

### Basin Calculations (note, elevations in 1988, NAVD)

On-Line Dry Retention must provide for percolation of the runoff of the 10 year 24 hour storm

#### Basin 28 - Lots 27-28

Step 1 - Determine the peak runoff rate (Qp) and the Volume of Runoff (Vr)

Total Drainage Area = 7549 ft<sup>2</sup>  
 Impervious Area = 4580 ft<sup>2</sup> 61% Impervious  
 Pervious Area = 2969 ft<sup>2</sup>  
 Impervious c = 0.95  
 Pervious c = 0.10  
 Composite c = 0.62  
 From FDOT IDF Curves (Zone 4), I = 0.31 in/hr  
 Basin Area (A) = 0.1733 Acres  
 Qp=cIA = 0.03 cfs  
 Rainfall Duration (D)(24 hour) = 86400 sec  
 Vr=Qp \* D = 2859.3 ft<sup>3</sup>

Step 2 - Input pond information

#### Pond Information

| El.<br>(ft.) |                | Area<br>ft <sup>2</sup> | Volume<br>ft <sup>3</sup> |
|--------------|----------------|-------------------------|---------------------------|
| 14.00        | Top of Bank    | 828.0                   | 1693                      |
| 13.00        |                | 659.0                   | 949                       |
| 12.00        |                | 498.0                   | 371                       |
| 12.00        |                | 498.0                   | 371                       |
| 11.00        |                | 243.0                   | 0                         |
| 11.00        | Bottom of Pond | 243.0                   |                           |

Show that the available storage volume is greater than the unsaturated volume.

1693 > 857.79 TRUE

Step 3 - Check Drawdown time

See next sheet for calculations

Check that the drawdown is less than 3 days with a factor of safety of 2

Drawdown time = 0.3831 days

OK

## Drawdown Calculation - Basin 28

Underlined # are Inputed

| Abbriviation          | #            | Description                                                                                               |
|-----------------------|--------------|-----------------------------------------------------------------------------------------------------------|
| TV =                  | 2859         | Treatment Volume (ft <sup>3</sup> )                                                                       |
| TV <sub>el</sub> =    | 14.00        | Treatment Volume Elevation (ft)                                                                           |
| h <sub>v</sub> =      | 3.00         | Treatment Volume Depth (ft)                                                                               |
| El <sub>gwt</sub> =   | <u>4</u>     | Elevation of the Groundwater Table (ft)                                                                   |
| El <sub>bb</sub> =    | <u>11.00</u> | Elevation of the Basin Bottom (ft)                                                                        |
| El <sub>aq</sub> =    | <u>-10</u>   | Elevation of the Aquifer (ft)                                                                             |
| h <sub>b</sub> =      | 7            | Height of Basin Bottom Above Groundwater Table (ft)                                                       |
| f =                   | <u>0.3</u>   | Fillable Porrosity (.2 to .3)                                                                             |
| h <sub>u</sub> =      | 2.1          | Height of Water to Saturate the Soil (ft)                                                                 |
| L =                   | <u>60</u>    | Equivalent Pond Length (ft)                                                                               |
| W =                   | 15.9         | Equivalent Pond Width (ft)                                                                                |
| A <sub>b</sub> =      | 953.1        | Area of Basin Bottom (ft <sup>2</sup> )                                                                   |
| V <sub>u</sub> =      | 2001.5       | Volume of Water Required to Saturate Soil below the Basin Bottom (ft <sup>3</sup> )                       |
| K <sub>vs</sub> =     | <u>20.00</u> | Saturated Vertical Hydraulic Conductivity (ft/day) (from SCS soils map)                                   |
| K <sub>vu</sub> =     | 13.3         | Unsaturated Vertical Hydraulic Conductivity (ft/day)                                                      |
| I <sub>d</sub> =      | 6.7          | Design Infiltration Rate (ft/day)                                                                         |
| FS =                  | <u>2</u>     | Factor of Safety                                                                                          |
| t <sub>sat</sub> =    | 0.32         | Time to Saturate Soil (days)                                                                              |
| V <sub>rem</sub> =    | 858          | Remaining Volume to be Infiltrated Under Saturated Lateral Flow (ft <sup>3</sup> )                        |
| V <sub>rem-el</sub> = | 12.81        | Remaining Volume to be Infiltrated Under Saturated Lateral Flow Elevation (ft)                            |
| h <sub>c</sub> =      | 7            | Height of Water in Basin Above the Initial Ground Water Table at Recovery (ft)                            |
| h <sub>2</sub> =      | 1.81         | Height of Water in Basin at Start of Saturated Lateral Flow (ft)                                          |
| H <sub>i</sub> =      | 8.81         | Height of Water in Basin Above the Initial Ground Water Table at the Start of Saturated Lateral Flow (ft) |
| F <sub>y</sub> =      | 0.79         | Dimensionless parameter                                                                                   |
| F <sub>x</sub> =      | 2.3          | Dimensionless parameter                                                                                   |
| H =                   | 14           | Initial Saturated Thickness of Aquifer (ft)                                                               |
| D =                   | 17.5         | Average Saturated Thickness of Aquifer (ft)                                                               |
| K <sub>h</sub> =      | <u>10.00</u> | Saturated Horizontal Hydraulic Conductivity (ft/day)                                                      |
| t =                   | 0.068        | Cumulative Time Since Saturated Lateral Flow Started (days)                                               |
| t <sub>total</sub> =  | 0.383        | Total Drawdown Time (days)                                                                                |

Step 1 Calculate Required Volume to be Drawn Down

$$TV = 2859 \text{ (ft}^3\text{), from previous sheet}$$

Step 2 Calculate the height of the Treatment Volume in the Basin

$$TV_{el} = 14.00 \text{ (ft), by interpolation}$$

Step 3 Determine if Saturated Lateral Flow Will Occur

$$h_v = 3.00 \text{ (ft), } = TV_{el} - El_{bb}$$

$$h_u = 2.1 \text{ (ft), } = f * h_b$$

Saturated Lateral Flow Will Occur

Step 4 Calculate the Volume of Water Infiltrated in Unsaturated Vertical Flow and the Time to Infiltrate this Volume

$$A_b = 953.096 \text{ (ft}^2\text{), } = \text{Equivalent Pond Length} * \text{Equivalent Pond Width}$$

$$V_u = 2001.5 \text{ (ft}^3\text{), } = A_b * h_b * f$$

$$K_{vu} = 13.3333 \text{ (ft/day), } = 2/3 * K_{vs}$$

$$I_d = 6.66667 \text{ (ft/day), } = K_{vu}/FS$$



$$t_{sat} = 0.315 \quad (\text{days}), = f * h_b / I_d$$

Step 5 Calculate the Remaining Treatment Volume to be Recovered under Saturated Lateral Flow

$$V_{rem} = 858 \quad (\text{ft}^3), = TV - V_a$$

$$V_{rem-cl} = 12.81 \quad (\text{ft}), \text{ by interpolation}$$

Step 6 Calculate  $F_y$  and  $F_x$

$$H_i = 8.81 \quad (\text{ft}), = H_b + H_2$$

$$F_y = 0.7948 \quad = h_c / H_i$$

$$L/W = 3.78 \quad = \text{Basin Length to Width Ratio}$$

$$F_x = 2.3 \quad \text{From Figure 26-7, given } f \text{ and } F_y$$

Step 7 Calculate the time to Recover the Remaining Treatment Volume Under Saturated Lateral Flow

$$D = 17.5 \quad (\text{ft}), = H + h_c/2$$

$$t = 0.07 \quad (\text{days}), = W^2 / (4 * K_h * D * F_x^2)$$

Step 8 Total time to Recover the Treatment Volume

$$t_{total} = 0.383 \quad (\text{days}), = t_{sat} + t$$

# First Avenue Amelia Townhomes

## Post Developed Drainage Calculation

### Basin Calculations (note, elevations in 1988, NAVD)

On-Line Dry Retention must provide for percolation of the runoff of the 10 year 24 hour storm

#### Basin Rear - Lots 20-28

Step 1 - Determine the peak runoff rate (Qp) and the Volume of Runoff (Vr)

Total Drainage Area = 3560 ft<sup>2</sup>  
 Impervious Area = 1200 ft<sup>2</sup> 34% Impervious  
 Pervious Area = 2360 ft<sup>2</sup>  
 Impervious c= 0.95  
 Pervious c = 0.10  
 Composite c = 0.39  
 From FDOT IDF Curves (Zone 4), I= 0.31 in/hr  
 Basin Area (A) = 0.0817 Acres  
 Qp=cIA = 0.01 cfs  
 Rainfall Duration (D)(24 hour) = 86400 sec  
 Vr=Qp \* D = 847.13 ft<sup>3</sup>

Step 2 - Input pond information

#### Pond Information

| El.<br>(ft.) |                | Area<br>ft <sup>2</sup> | Volume<br>ft <sup>3</sup> |
|--------------|----------------|-------------------------|---------------------------|
| 15.00        | Top of Bank    | 3,413.0                 | 3147                      |
| 14.00        |                | 1,327.0                 | 777                       |
| 14.00        |                | 1,327.0                 | 777                       |
| 14.00        |                | 1,327.0                 | 777                       |
| 13.00        |                | 227.0                   | 0                         |
| 13.00        | Bottom of Pond | 227.0                   |                           |

Show that the available storage volume is greater than the unsaturated volume.

3147 > 0.00 TRUE

Step 3 - Check Drawdown time

See next sheet for calculations

Check that the drawdown is less than 3 days with a factor of safety of 2

Drawdown time = 0.4349 days

OK



## Drawdown Calculation - Basin Rear

Underlined # are Inputed

| Abbriviation          | #            | Description                                                                                               |
|-----------------------|--------------|-----------------------------------------------------------------------------------------------------------|
| TV =                  | 847          | Treatment Volume (ft <sup>3</sup> )                                                                       |
| TV <sub>el</sub> =    | 14.20        | Treatment Volume Elevation (ft)                                                                           |
| h <sub>v</sub> =      | 1.20         | Treatment Volume Depth (ft)                                                                               |
| El <sub>gwt</sub> =   | <u>4</u>     | Elevation of the Groundwater Table (ft)                                                                   |
| El <sub>bb</sub> =    | <u>13.00</u> | Elevation of the Basin Bottom (ft)                                                                        |
| El <sub>aq</sub> =    | <u>-10</u>   | Elevation of the Aquifer (ft)                                                                             |
| h <sub>b</sub> =      | 9            | Height of Basin Bottom Above Groundwater Table (ft)                                                       |
| f =                   | <u>0.3</u>   | Fillable Porrosity (.2 to .3)                                                                             |
| h <sub>u</sub> =      | 2.7          | Height of Water to Saturate the Soil (ft)                                                                 |
| L =                   | <u>15</u>    | Equivalent Pond Length (ft)                                                                               |
| W =                   | 47.1         | Equivalent Pond Width (ft)                                                                                |
| A <sub>b</sub> =      | 705.9        | Area of Basin Bottom (ft <sup>2</sup> )                                                                   |
| V <sub>u</sub> =      | 1906.0       | Volume of Water Required to Saturate Soil below the Basin Bottom (ft <sup>3</sup> )                       |
| K <sub>vs</sub> =     | <u>20.00</u> | Saturated Vertical Hydraulic Conductivity (ft/day) (from SCS soils map)                                   |
| K <sub>vu</sub> =     | 13.3         | Unsaturated Vertical Hydraulic Conductivity (ft/day)                                                      |
| I <sub>d</sub> =      | 6.7          | Design Infiltration Rate (ft/day)                                                                         |
| FS =                  | <u>2</u>     | Factor of Safety                                                                                          |
| t <sub>sat</sub> =    | 0.41         | Time to Saturate Soil (days)                                                                              |
| V <sub>rem</sub> =    | -1059        | Remaining Volume to be Infiltrated Under Saturated Lateral Flow (ft <sup>3</sup> )                        |
| V <sub>rem-el</sub> = | 11.64        | Remaining Volume to be Infiltrated Under Saturated Lateral Flow Elevation (ft)                            |
| h <sub>c</sub> =      | 9            | Height of Water in Basin Above the Initial Ground Water Table at Recovery (ft)                            |
| h <sub>2</sub> =      | -1.36        | Height of Water in Basin at Start of Saturated Lateral Flow (ft)                                          |
| H <sub>1</sub> =      | 7.64         | Height of Water in Basin Above the Initial Ground Water Table at the Start of Saturated Lateral Flow (ft) |
| F <sub>y</sub> =      | 1.18         | Dimensionless parameter                                                                                   |
| F <sub>x</sub> =      | 10           | Dimensionless parameter                                                                                   |
| H =                   | 14           | Initial Saturated Thickness of Aquifer (ft)                                                               |
| D =                   | 18.5         | Average Saturated Thickness of Aquifer (ft)                                                               |
| K <sub>h</sub> =      | <u>10.00</u> | Saturated Horizontal Hydraulic Conductivity (ft/day)                                                      |
| t =                   | 0.030        | Cumulative Time Since Saturated Lateral Flow Started (days)                                               |
| t <sub>total</sub> =  | 0.435        | Total Drawdown Time (days)                                                                                |

Step 1 Calculate Required Volume to be Drawn Down

$$TV = 847 \text{ (ft}^3\text{), from previous sheet}$$

Step 2 Calculate the height of the Treatment Volume in the Basin

$$TV_{el} = 14.20 \text{ (ft), by interpolation}$$

Step 3 Determine if Saturated Lateral Flow Will Occur

$$h_v = 1.20 \text{ (ft), } = TV_{el} - El_{bb}$$

$$h_u = 2.7 \text{ (ft), } = f * h_b$$

Saturated Lateral Flow Will Not Occur

Step 4 Calculate the Volume of Water Infiltrated in Unsaturated Vertical Flow and the Time to Infiltrate this Volume

$$A_b = 705.939 \text{ (ft}^2\text{), } = \text{Equivalent Pond Length} * \text{Equivalent Pond Width}$$

$$V_u = 1906.04 \text{ (ft}^3\text{), } = A_b * h_b * f$$

$$K_{vu} = 13.3333 \text{ (ft/day), } = 2/3 * K_{vs}$$

$$I_d = 6.66667 \text{ (ft/day), } = K_{vu}/FS$$

$$t_{sat} = 0.405 \quad (\text{days}), = f * h_b / I_d$$

Step 5 Calculate the Remaining Treatment Volume to be Recovered under Saturated Lateral Flow

$$V_{rem} = -1059 \quad (\text{ft}^3), = TV - V_a$$

$$V_{rem-cl} = 11.64 \quad (\text{ft}), \text{ by interpolation}$$

Step 6 Calculate  $F_y$  and  $F_x$

$$H_i = 7.64 \quad (\text{ft}), = H_b + H_2$$

$$F_y = 1.1784 \quad = h_c / H_i$$

$$L/W = 0.32 \quad = \text{Basin Length to Width Ratio}$$

$$F_x = 10 \quad \text{From Figure 26-7, given } f \text{ and } F_y$$

Step 7 Calculate the time to Recover the Remaining Treatment Volume Under Saturated Lateral Flow

$$D = 18.5 \quad (\text{ft}), = H + h_c/2$$

$$t = 0.03 \quad (\text{days}), = W^2 / (4 * K_h * D * F_x^2)$$

Step 8 Total time to Recover the Treatment Volume

$$t_{total} = 0.435 \quad (\text{days}), = t_{sat} + t$$



# Print

## Technical Review Committee: Application - Submission #8092

Date Submitted: 9/23/2021

## 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. \$400
- ☐ Change of Use Determination Letter \$50
- ☒ Engineering Review (Consultant Hourly Rate) \$125

## TRC\_2021 Meeting Calendar



December 2020 meeting dates are: December 10, 2020 & December 17, 2020

### **IMPORTANT NOTES**

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

**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](http://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.

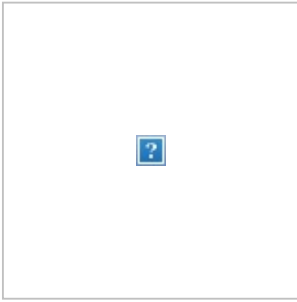


A determination of completeness is not a determination of compliance with substantive standards and criteria.

#### **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\***

3462 to 3426 1st Avenue

**City\***

Fernandina Beach

**State\***

Florida

**Zip\***

32034

**Parcel ID #(s)**

00-00-31-1680-0011-0200 to 00-00-31-1680-0011-0280

**Lot**

20-28

**Block**

11

**Subdivision**

Seaview

**Zoning District**

R-3

**Future Land Use Designation\***

High Density Residential

**Overlay District\***

None

**Size of Property (acres)\***

0.51

**Present Property Use\***

Vacant

**Wetlands\***

No

**Flood Zone\***

X, area of minimal flood

**Coastal Construction Control Line (CCCL)\***

No

## OWNER OF RECORD

As recorded with the Nassau County Property Appraiser

**First Name\***

Bluff Runners

**Last Name\***

FI, LLC

**Company (if applicable)**

Bluff Runners FL, LLC

**Mailing Address\***

100 Riverview Dr

**City\***

Savannah

**State\***

Ga

**Zip\***

31404

**Telephone Number\***

904-753-8777

**Email Address\***

jim@newatlanticbuilders.com

## 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**

Daniel

**Last Name**

McCranie

**Company (if applicable)**

McCranie & Associates Inc

**Mailing Address**

301 Centre St

**City**

Fernandina Beach

**State**

FL

**Zip**

32034

**Telephone Number**

9043358685

**Email Address**

Dan@mccranie-engineers.com

## PROJECT INFORMATION

**Project Type\***

Site Plan Review

**Project Name**

First Avenue Amelia Townhomes

**Proposed Access Road\*****Rd Maintenance Jurisdiction\*****Project Estimated Cost\*****Description of Request\***

Site plan approval for the 8 lots. There will be 4 buildings. Three of the buildings are 2-unit townhomes. One building is a 3-unit townhome.

**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\*

Dan

### Applicant Last Name\*

McCranie

### Today's Date\*

9/23/2021

### Upload Supporting Documentation\*

FIRSTAVEAMELIA-SITEPLAN01.pdf

### Upload 2

Retention.pdf

### Upload 3

DEED1.pdf

### Upload 4

DEED2.pdf

### Upload 5

No file selected

### Upload 6

No file selected

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](http://www.fbfl.us/planning)