CITY OF GREEN COVE SPRINGS
PLANNING & ZONING BOARD MEETING

321 WALNUT STREET, GREEN COVE SPRINGS, FLORIDA
TUESDAY, APRIL 23, 2024 – 5:00 PM

AGENDA

GENERAL INFORMATION

Anyone wishing to address the Planning and Zoning Board regarding any topic on this evening's agenda is requested to complete a card available at the Clerk's desk. Speakers are respectfully requested to limit their comments to three (3) minutes.

The Planning and Zoning Board prohibits the use of cell phones and pagers which emit an audible sound during all meetings with the exception of Law Enforcement, Fire and Rescue, or Health Care Professionals on call. Persons in violation will be requested to leave the meeting.

ROLL CALL

APPROVAL OF MINUTES

1. Approval of the Minutes of the March 23, 2024 Meeting

PUBLIC HEARINGS

2. Ordinance O-14-2024 regarding the proposed zoning of a portion of Parcel 016564-002-00 for approximately 6.03 acres

   Zoning Amendment From: Unzoned

   To: M-1 Light Industrial

3. Ordinance # O-10-2024 for a Rezoning request for property located at the Southeast corner of US 17 and SR 16 for approximately 112 acres of parcel #016451-003-00 and 016451-000-00.

   Zoning Amendment: From: C-2, General Commercial

   To: PUD, Planned Unit Development

4. Ordinance O-13-2024 Form-Based Code Companion Ordinance

ACTION ITEMS

5. River Oaks Site Development Plan for property located on the south side of the 800 block of Cooks Lane for approximately 8.88 acres of parcel #016564-002-00.

6. Site Development Plan for the Development of Gustafson Park to the East of County Road 15A on a portion of parcel 016515-008-01

7. Review of a Site Development Plan for the Clay County Fire Station at 1305 Idlewild Avenue

BOARD BUSINESS

Board Discussion / Comments

Staff Comments

ADJOURNMENT

NEXT MEETING: TUESDAY, MAY 28, 2024 AT 5:00PM

Minutes of the Planning & Zoning Board Meeting can be obtained from the City Clerk's office. The Minutes are recorded, but are not transcribed verbatim.

Persons requiring a verbatim transcript may make arrangements with the City Clerk to duplicate the recordings, or arrange to have a court reporter present at the meeting. The cost of duplication and/or court reporter will be at the expense of the requesting party.

ADA NOTICE

In accordance with Section 286.26, Florida Statutes, persons with disabilities needing special accommodations to participate in this meeting should contact the City Clerk's office no later than 5:00 p.m. on the day prior to the meeting.

EXPARTE COMMUNICATIONS

Oral or written exchanges (sometimes referred to as lobbying or information gathering) between a Planning and Zoning Board member and others, including staff, where there is a substantive discussion regarding a quasi-judicial decision by the Planning and Zoning Board. The exchanges must be disclosed by the Planning and Zoning Board.

CITY OF GREEN COVE SPRINGS
PLANNING & ZONING BOARD MEETING

321 WALNUT STREET, GREEN COVE SPRINGS, FLORIDA
TUESDAY, MARCH 26, 2024 – 5:00 PM

MINUTES

The meeting was called to order at 5:01p.m. by Chairman Hall.

Board Members Present: Board Member Henrietta Francis, Board Member Joshua Hobbs, Chairman Justin Hall

Board Members Absent: Board Member Brian Cook, Vice Chairman Josh Danley

Staff Members Present: Steve Kennedy, City Manager, Mike Null, Assistant City Manager, Michael Daniels, Development Services Director, Lyndie Knowles, Development Services Representative, Gabriel Barro, Staff Planner

APPROVAL OF MINUTES

1. Approval of the Minutes of the February 27, 2024 Meeting

   Motion made to approve the minutes of the February 27, 2024 meeting

   Motion made by Board Member Hobbs, Seconded by Board Member Francis.
   Voting Yea: Board Member Francis, Board Member Hobbs, Chairman Hall

   Motion passed.

PUBLIC HEARINGS

2. Ordinance O-11-2024 Form-Based Code

   Director Michael Daniels presented the Ordinance O-11-2024 regarding the Form Based Code. Pat Tyjeski with Inspire Placemaking Collective present the Form Based Code to the Board.

   Chairman Hall opened the public hearing.

   Resident Daniel Jollota expressed his desire for more green space in the downtown area. Resident Kevin Hurley echoed his comments particularly as it relates to the current vacant lot adjacent to Spring Park which abuts his property. James Gay, a member of the Citizens Advisory Council, spoke regarding the use of styles reminiscent of the architecture of 1859-1950 and the preference for native plants to be used. Property owner Anthony Goria noted that he didn't feel like he received enough notice prior to the hearing for this change. He also voice concerned on stormwater requirements. Resident Jane Jollota spoke sharing the same desire to keep the vacant lot as is and that building should not be so close to the park. Resident Van Royal voiced concern regarding the Transitional area and the setbacks,

stormwater and parking in the code. Developer Kelly Hartwig had a question on parcels with split zoning.

Staff and Inspire responded to these comments.

The public hearing was closed.

Board discussion followed.

Motion was made to recommend approval of Ordinance 11-2024 Form Based Code to City Council.

Motion made by Board Member Francis, Seconded by Board Member Hobbs.
Voting Yea: Board Member Francis, Board Member Hobbs, Chairman Hall

Motion passed

3. Ordinance O-12-2024, regarding a City initiated Zoning Amendment from Central Business District, Gateway Corridor Commercial, Gateway Corridor Neighborhood, and Institutional to Form-Based Code.

Development Services Director Michael Daniels presented Ordinance O-12-2024. This is a companion ordinance to the previous ordinance. This would allow the parcels currently in the Form Based Code area currently zoned Central Business District, Gateway Corridor Commercial, Gateway Corridor Neighborhood, and Institutional to be moved to the Form Based Code zoning district.

Chairman Hall opened the public hearing.

Having no comments, the public hearing was closed.

Motion made to recommend approval to City Council the Ordinance O-12-2024, regarding a City initiated Zoning Amendment from Central Business District, Gateway Corridor Commercial, Gateway Corridor Neighborhood, and Institutional to Form-Based Code.

Motion made by Board Member Francis, Seconded by Board Member Hobbs.

Voting Yea: Board Member Francis, Board Member Hobbs, Chairman Hall

Motion passed

4. AX-24-001 Annexation Application for the Truemont property, approximately 23.37 acres located at 4169 County Road 15A

Staff planner, Gabriel Barro, presented the Ordinance O-07-2024 for the annexation of the Truemont property which is approximately 23.37 acres located at 4169 County Road 15A.

Chairman Hall opened the public hearing.

The applicant John Mahoney along with property owner Andy Mathei spoke to their current and future plans of the property.

Board discussion followed.

With no further comments, the public hearing was closed.

Motion was made to recommend approval to City Council Ordinance O-07-2024 for the annexation of the Truemont property which is approximately 23.37 acres located at 4169 County Road 15A.

Motion made by Board Member Hobbs, Seconded by Board Member Francis.
Voting Yea: Board Member Francis, Board Member Hobbs, Chairman Hall

Motion passed.

5. Ordinance O-08-2024 regarding the Amendment of the Future Land Use and Rezoning of Parcel 016515-001-00, Truemont Property (FLUS-24-001 & ZON-24-002)

Future Land Use Amendment From: Industrial (County) To: Industrial

Zoning Amendment: From: Heavy Industrial (County) To: M-2 Industrial District

The presentation for the Small Scale Future Land Use Amendment and the Rezoning was included in the presentation by Gabriel Barro regarding the Annexation of the same parcel in Item #4.

Chairman Hall opened the public hearing.

Having no public comments, the public hearing was closed.

Motion was made to recommend approval to City Council of Ordinance O-08-2024, to amend the Future Land Use of Parcel ID 016515-001-00 from Industrial (County) to Industrial and the approval of Ordinance O-09-2024, to amend the Zoning of Parcel ID 016515-001-00 from Heavy Industrial (County) to M-2 Industrial.

Motion made by Board Member Hobbs, Seconded by Board Member Francis.
Voting Yea: Board Member Francis, Board Member Hobbs, Chairman Hall

Motion passed.

6. PUD Rezoning request for property located at the Southeast corner of US 17 and SR 16 for approximately 112 acres of parcel #016451-003-00 and 016451-000-00.

   Zoning Amendment: from: C-2, General Commercial to: PUD, Planned Unit Development

   Development Services Director Michael Daniels presented the rezoning request for the property located at the Southeast corner of US 17 and SR 16 for approximately 112 acres of parcel #016451-003-00 and 016451-000-00 from C-2 to PUD.

   Chairman Hall opened the public hearing.

   The applicant, Kelly Hartwig, was present. He is open to tabling the item until after a discussion with to address staff comments.

   Resident, Van Royal spoke in support of the project.

   Upon no further comments, the public hearing was closed.

   Board discussion followed.

   Motion was made to table this item until the next regularly scheduled meeting to be held on April 23, 2024.

   Motion made by Board Member Francis, Seconded by Board Member Hobbs.
   Voting Yea: Board Member Francis, Board Member Hobbs, Chairman Hall

7. Preliminary Plat and Improvement Plan for the development of 6 single-family lots on a portion of parcel #: 016515-008-00

   Development Services Director, Michael Daniels presented the preliminary plat and improvement plan for the development of 6 single-family lots on a portion of parcel #: 016515-008-00 by Operation Lifeline.

   Applicant, Erick Saks, was presented and explained the property in detail.

   Resident Susan Jachimiec asked questions regarding the lot requirements on this property. She also expressed concerned that the lots are so close to access to the creek.

   Staff responded and board discussion followed.

   The public hearing was closed.

   Motion was made to recommend approval to City Council the Preliminary Plat and Improvement Plan for the development of 6 single-family lots on a portion of parcel #: 016515-008-00.

   Motion made by Board Member Hobbs, Seconded by Board Member Francis.
   Voting Yea: Board Member Francis, Board Member Hobbs, Chairman Hall Motion Passed

BOARD BUSINESS

Development Services Director Michael Daniels gave an update on the Live Local act, the Rivers House, the Walnut Street project and the Gustafson Park project.

Assistant City Manager, Mike Null, answered questions on the auditorium on the Augusta Savage Center and the pickleball courts.

Chairman Hall adjourned the meeting at 7:15p.m.

NEXT MEETING: Tuesday, April 23, 2024 at 5:00p.m.

CITY OF GREEN COVE SPRINGS, FLORIDA

J. Justin Hall, Chairman

Attest:

Lyndie Knowles, Development Services Rep.

STAFF REPORT

CITY OF GREEN COVE SPRINGS, FLORIDA

TO: Planning and Zoning Commission **MEETING DATE:** April 23, 2024

FROM: Gabriel Barro, Planning and Zoning

SUBJECT: Ordinance O-14-2024 regarding the proposed zoning of a portion of Parcel 016564-002-00 for approximately 6.03 acres

Zoning Amendment From: Unzoned
To: M-1 Light Industrial

PROPERTY DESCRIPTION

APPLICANT: Quoc Mai, Mai Engineering **OWNER:** 1609 S Orange Ave LLC
William Krieg

PROPERTY LOCATION: 1609 S Orange Ave

PARCEL NUMBER: 016564-002-00

FILE NUMBER: ZON-24-003

CURRENT ZONING*:* C2/Unzoned

FUTURE LAND USE DESIGNATION*:* Mixed Use Highway

SURROUNDING LAND USE

NORTH: **FLU**: Neighborhood
Z: R3 Residential High Density
Use: Residential – Multi Family

SOUTH: **FLU**: Industrial
Z: C2 Commercial High Intensive
Use: Manufacturing

EAST: **FLU**: Mixed Use
Z: C2 Commercial High Intensive
Use: Shopping Center

WEST: **FLU**: Industrial
Z: M2 Industrial District
Use: Vacant

BACKGROUND

The applicant has submitted a request for a zoning designation for 6.03 acres of the property located on Cooks Lane, identified as a portion of tax ID number 016564-002-00, from un-zoned to M-1 Light Industrial.

The property is a portion of parcel # 016564-002-00 which has access on Green Cove Avenue.

The property was originally annexed into the City in 2008 as part of the annexation of 68.6 acres of property that would become the Energy Cove Industrial Park.

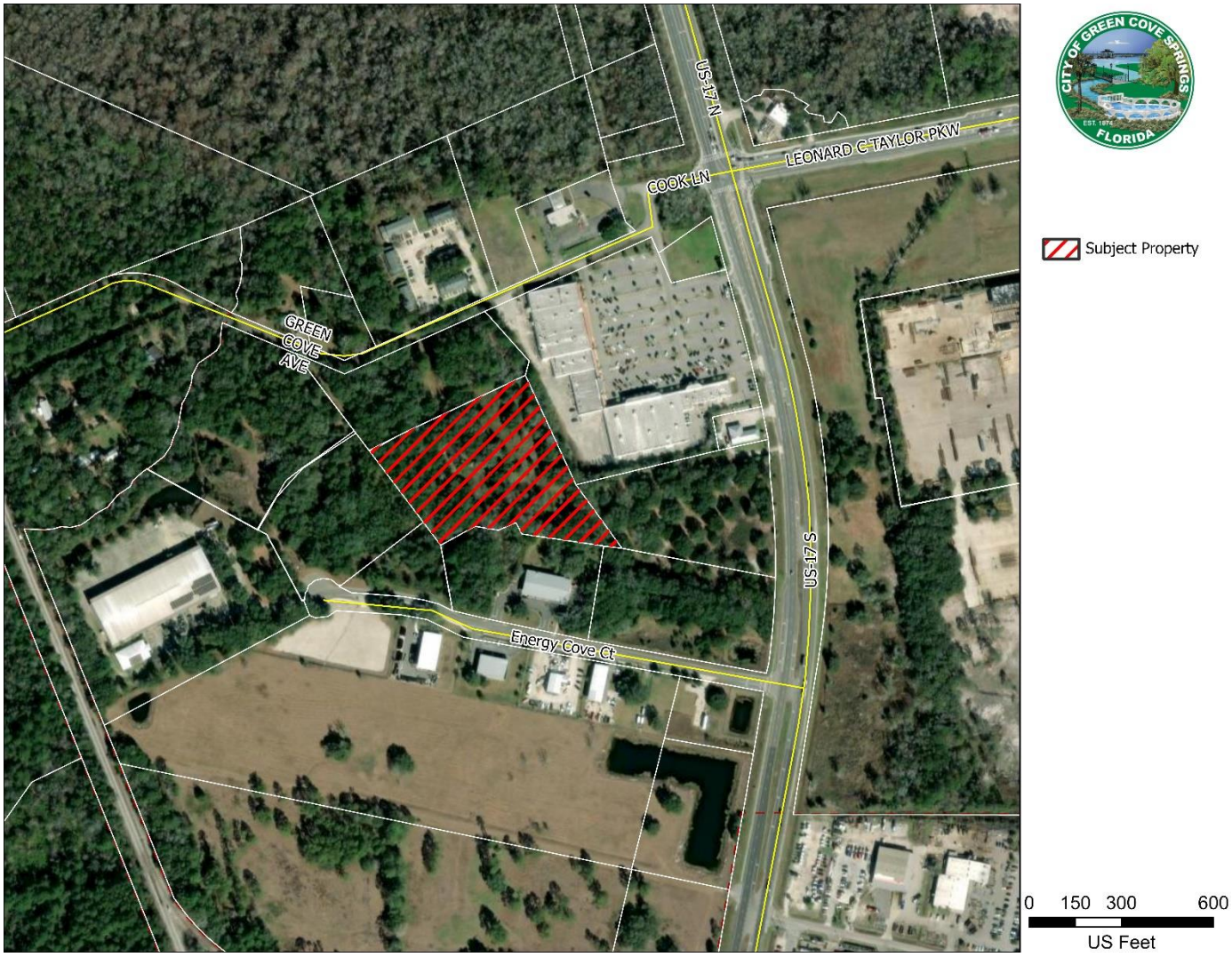
The property was never given a Future Land Use or Zoning Designation however as part of the Evaluation and Appraisal Report update to the Comprehensive Plan it was given a Future Land Use designation of Mixed Use Highway which was a predominantly industrial land use classification which is consistent all of the Energy Cove Industrial Park. As part of the Comprehensive Plan update in 2022, the future land use for this parcel was changed to Industrial. A zoning for this property was never provided and as a result, in order for the project to be developed, the property needs to secure a zoning designation.

On January 23, 2024, the portion of parcel #016564-002-00 consisting of approximately 2.85 acres that is adjacent was approved for a special exception by the Planning and Zoning Commission subject to the property being rezoned and in compliance with the following conditions:

1. Provide a 40’ landscape buffer consisting of landscaping as required by City LDC Sec. 113-244(d)(3).
2. Provide signage to limit truck traffic to ingress and egress from US 17 by requiring access limitation.
3. All outdoor storage must be completely screened from public view.
4. Buildings fronting Cooks Lane shall have a brick façade.
5. Signal timing improvements as set forth in the Traffic Study Report shall be implemented prior to development approval.
6. Additional Right of Way as shown on the attached draft site plan shall be dedicated to the City prior to development approval.

In addition, a companion site plan application (SPL22-06) has been submitted for approval as part of a separate agenda item.

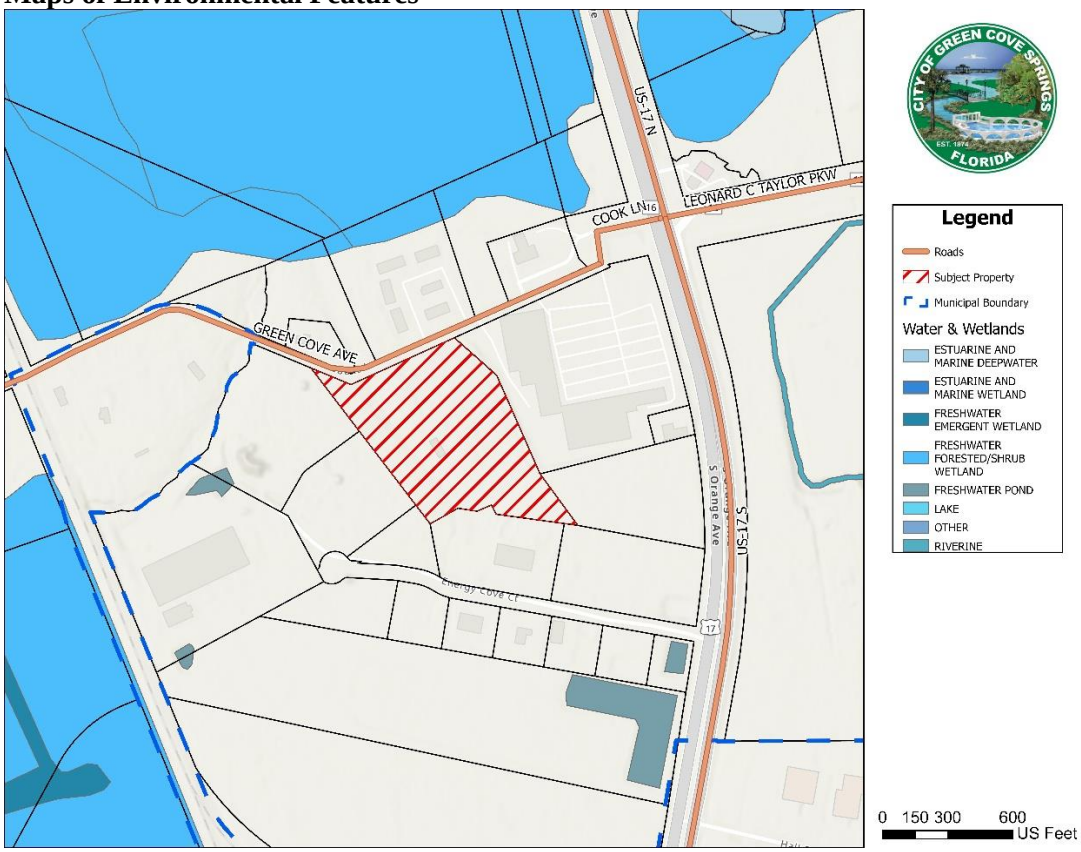
AERIAL MAP

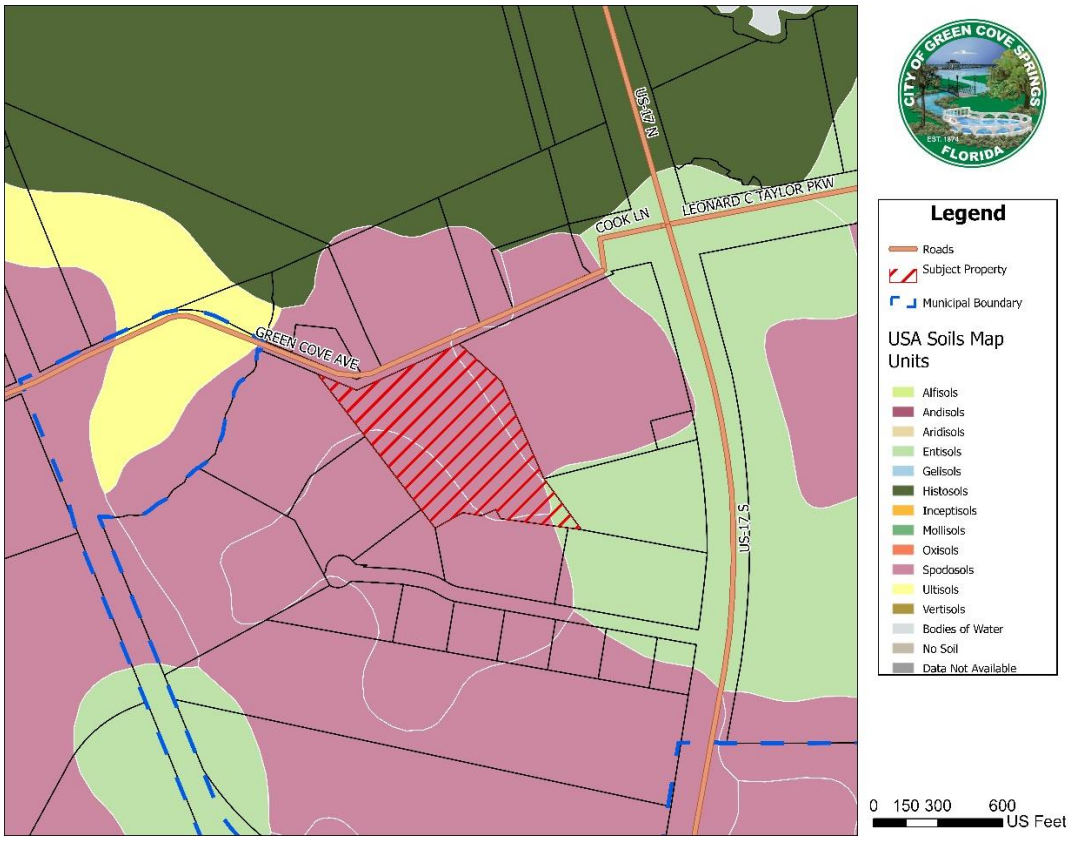


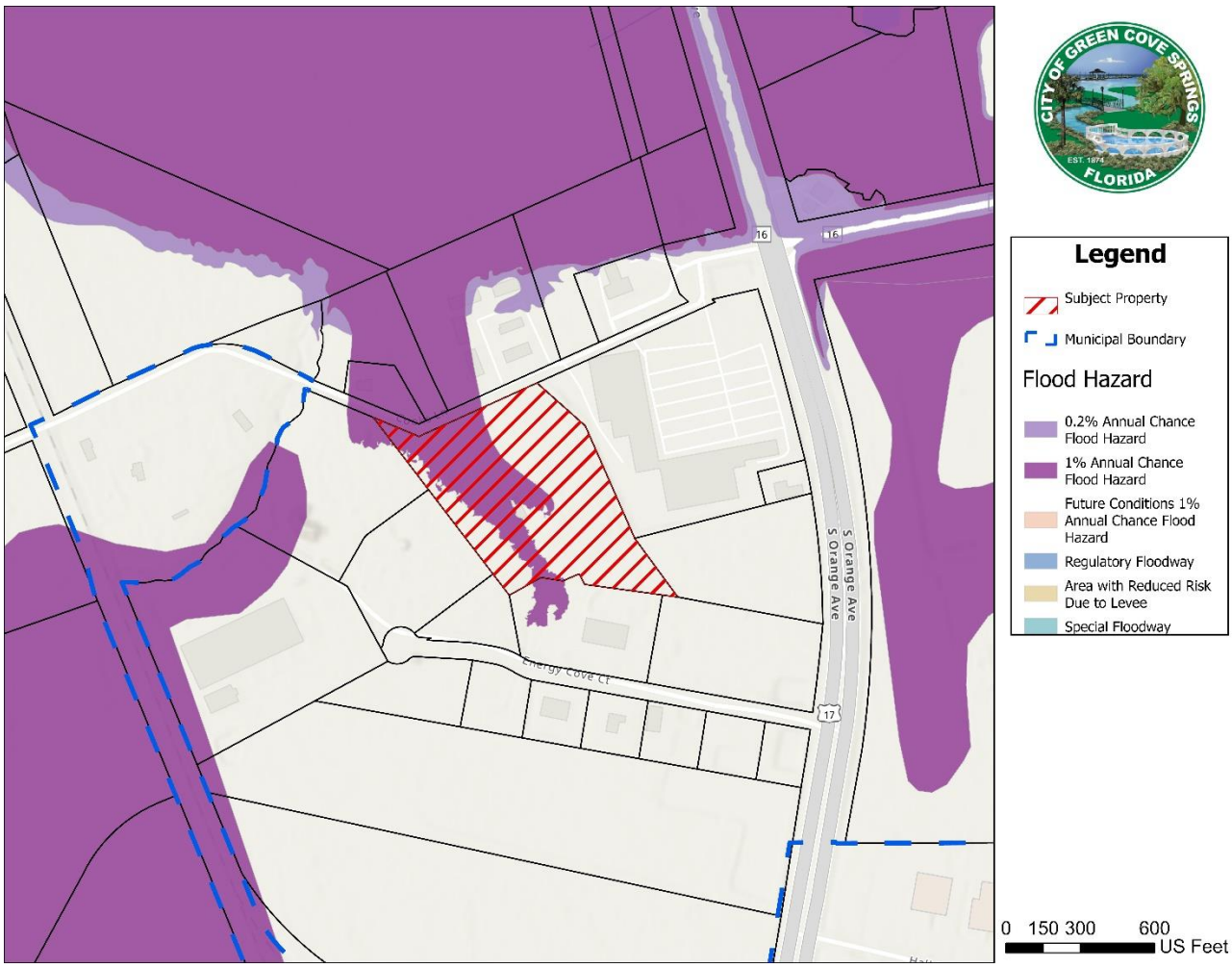
The site is located within the City's Electric Service and Water and Sewer Service Boundaries.

Environmental Conditions Analysis

Maps of Environmental Features







Soils
There are currently 2 types of soils located onsite:

- Spodosols
- Alfisols

All new development shall be required to meet the stormwater management requirements of the St John's Water Management District.

Wetlands
There are no wetlands on the property.

Flood Zones
According to the FEMA Flood Map Service Center, approximately 40% of the project site currently has a 1% annual flood chance.

Wellfield Protection Zone
The project site is not located within or adjacent to a wellfield protection zone.

Historic Structures and Markers
There are no historic structures or markers found on the site.

Compatibility

The Subject Property is located adjacent to industrial and commercial uses to the south and west within the Energy Cove Industrial Park. The property to the north is zoned C-2 and received approval for a special exception to allow a warehouse with specific conditions to allow for compatibility with the non-industrial uses along Green Cove Avenue.

The Future Land Use for this property is Industrial. The M-1 Light Industrial Zoning District is a compatible zoning district within the Industrial Future Land Use Designation.

This property should have been rezoned at the time it was annexed into the City, This rezoning is being completed to correct an error from 15 years ago when this property was originally annexed into the City.

Intent of the Existing Future Land Use Designation

Industrial (IND): This FLUC is intended to accommodate primarily light and heavy manufacturing, distribution, and storage, in addition to heavy commercial and professional office uses.

Intent of Proposed Zoning District

Light Industrial, M-1

The industrial (IND) land use category district is intended for light manufacturing, processing, storage and warehousing, wholesaling and distribution. Service and commercial activities relating to the character of the district are permitted. Location of this district must consider the provision of adequate public services, such as water, sewer, fire protection and availability to major highways, waterways and railroads.

STAFF RECOMMENDATION

Staff is recommending approval of the proposed zoning request.

RECOMMENDED MOTIONS:

Rezoning

Motion to recommend to City Council the approval of Ordinance O-14-2024, to amend the zoning of a portion of Parcel ID 016564-002-00 from Un-zoned to M-1, Light Industrial.

FOR OFFICE USE ONLY

P Z File #_____

Application Fee:_____

Filing Date: _____Acceptance Date:_____

Review Date: SRDT_____ P & Z _____ CC _____

Rezoning Application

A. PROJECT

1. Project Name: RIVER OAKS INDUSTRIAL PARK
2. Address of Subject Property: 1609 S ORANGE AVE
3. Parcel ID Number(s): 38-06-26-016564-002
4. Existing Use of Property: VACANT
5. Future Land Use Map Designation : MUH-MIXED USE HIGHWAY
6. Existing Zoning Designation: C2/UNZONED
7. Proposed Zoning Designation: M1-LIGHT INDUSTRIAL
8. Acreage: 8.92 AC

B. APPLICANT

1. Applicant's Status ☐Owner (title holder) ☑Agent
2. Name of Applicant(s) or Contact Person(s): QUOC MAI Title:_____

   Company (if applicable): MAI ENGINEERING SERVICES, INC

   Mailing address: 2510 US1 S, SUITE D

   City: ST AUGUSTINE State: FL ZIP: 32086

   Telephone: (___)_____ FAX: (___)_____ e-mail: QUOC@MAIENGINEER.COM

3. If the applicant is agent for the property owner*

   Name of Owner (titleholder):): WILLIAM KRIEG/1609 S ORANGE AVE LLC

   Mailing address: P.O. BOX 7902

   City: JACKSONVILLE State: FL ZIP: 32238

   Telephone: (___)_____ FAX: (___)_____ e-mail: will@riveroaksoutdoor.com

* Must provide executed Property Owner Affidavit authorizing the agent to act on behalf of the property owner.

C. ADDITIONAL INFORMATION

1. Is there any additional contact for sale of, or options to purchase, the subject property?

   ☐Yes ☑No If yes, list names of all parties involved:

   If yes, is the contract/option contingent or absolute?

   ☐Contingent ☐Absolute

D. ATTACHMENTS

1. Statement of proposed change, including a map showing the proposed zoning change and zoning designations on surrounding properties
2. A current aerial map (Maybe obtained from the Clay County Property Appraiser.)
3. Plat of the property (Maybe obtained from the Clay County Property Appraiser.)
4. Legal description with tax parcel number.
5. Boundary survey
6. Warranty Deed or the other proof of ownership
7. Fee.

    a. $750 plus $20 per acre over 5

    b. All applications are subject 10% administrative fee and must pay the cost of postage, signs, advertisements and the fee for any outside consultants.

No application shall be accepted for processing until the required application fee is paid in full by the applicant. Any fees necessary for technical review or additional reviews of the application by a consultant will be billed to the applicant at the rate of the reviewing entity. The invoice shall be paid in full prior to any action of any kind on the development application.

All 7 attachments are required for a complete application. A completeness review of the application will be conducted within five (5) business days of receipt. If the application is determined to be incomplete, the application will be returned to the applicant.

I/We certify and acknowledge that the information contained herein is true and correct to the best of my/our knowledge.

Signature of Applicant

Signature of Co-applicant

QUOC H. MAI

Typed or printed name and title of applicant

Typed or printed name of co-applicant

04/04/2024

Date

Date

State of Florida County of St. Johns

The foregoing application is acknowledged before me this 4th day of April, 2024 by Quoc Mai

_____, who is/are personally known to me, or who has/have produced _____

as identification.

NOTARY SEAL

_____

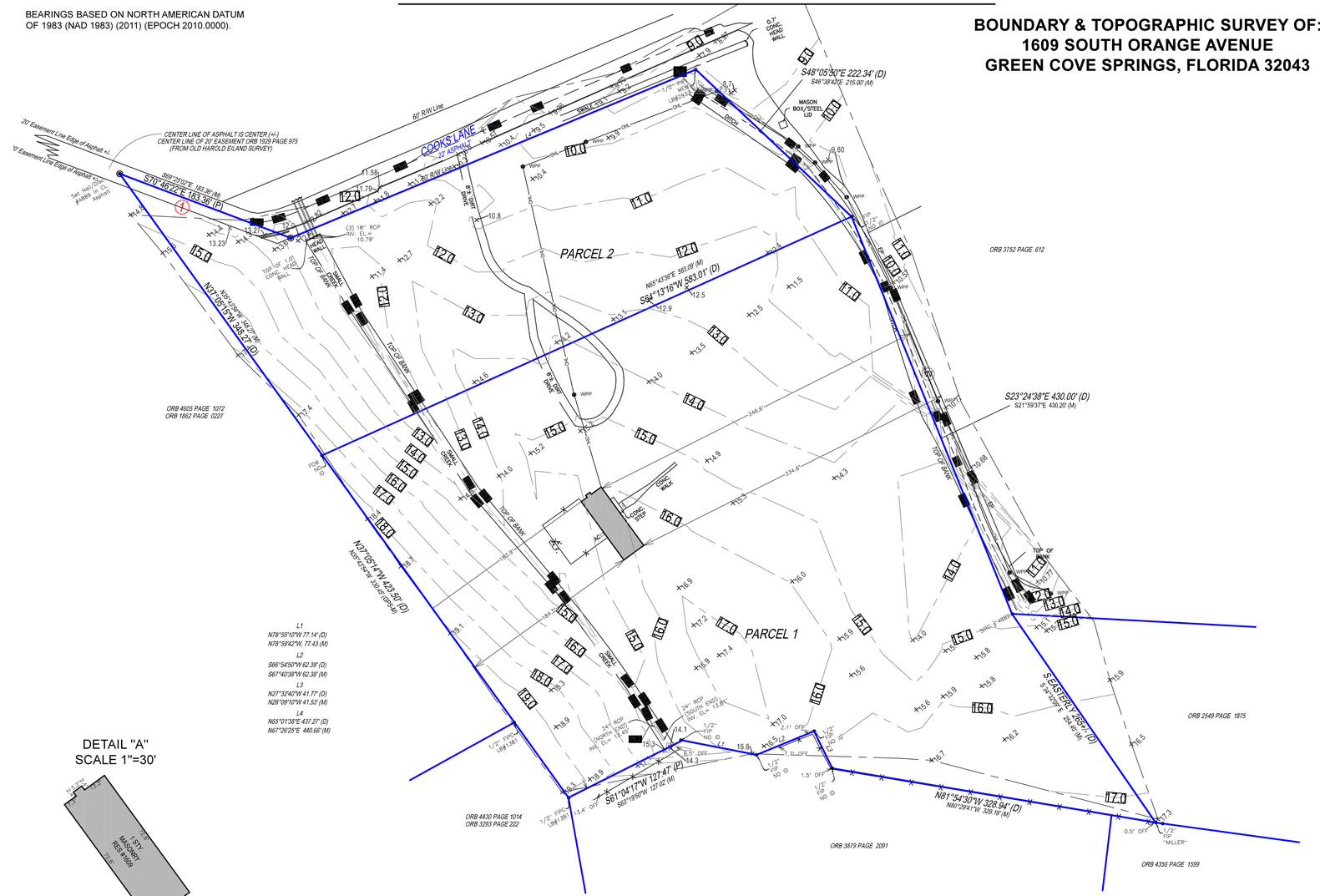
Signature of Notary Public, State of Florida

CRYSTAL ROTH
Notary Public - State of Florida
Commission # HH 484971
My Comm. Expires Jan 24, 2028
Bonded through National Notary Assn.

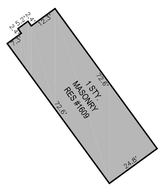
ATTACHMENT 5 - SURVEY

BEARINGS BASED ON NORTH AMERICAN DATUM
OF 1983 (NAD 1983) (2011) (EPOCH 2010.0000).

BOUNDARY & TOPOGRAPHIC SURVEY OF:
1609 SOUTH ORANGE AVENUE
GREEN COVE SPRINGS, FLORIDA 32043



DETAIL "A"
SCALE 1"=30'



L1
N78°55'10"W 77.14' (D)
N78°59'42"W, 77.43 (M)

L2
S66°54'50"W 62.39' (D)
S67°40'38"W 62.38' (M)

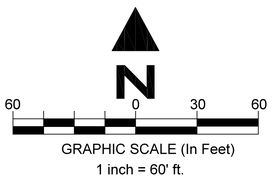
L3
N27°32'40"W 41.77' (D)
N28°09'10"W 41.53' (M)

L4
N65°01'38"E 437.27' (D)
N67°26'25"E 440.66' (M)

SURVEYOR'S LEGEND

AC	= Air Conditioner	Δ	= Delta or Central Angle
BLDG	= Building	RAD	= Radius
BRL	= Building Restriction Line	CH	= Chord Bearing Distance
CM	= Concrete Monument	L	= Arc Length
C/P	= Covered Porch	ID	= Identification
CONC	= Concrete	(P)	= Plat Call
D.B.	= Deed Book	(M)	= Field Measured Value
D.&A.E.	= Drainage & Access Easement	(C)	= Calculated Value
EC	= Edge of Concrete	(D)	= Deed Call
EP	= Edge of Asphalt/Pavement	IP	= Iron Pipe
ESMT	= Easement	IR	= Iron Rod
FT.	= Feet	LB	= Licensed Survey Business
F.I.P.	= Found Iron Pipe (Size Delineated)	LS	= Licensed Surveyor
F.I.R	= Found Iron Rod (Size Delineated)	RLS	= Registered Licensed Surveyor
LS	= Licensed Surveyor	PLS	= Professional Licensed Surveyor
nof	= now or formerly (owened by)	PSM	= Professional Licensed Mapper
OHL	= Overhead Wire/Line	CCEC	= Clay County Electric Cooperative
ORB	= Official Records Book	COJ	= City of Jacksonville
ORV	= Official Record Volume	JEA	= Jacksonville Electric Authority
PC	= Point of Curvature	FCM	= Found Concrete Monument
PCPt	= Permanent Control Point	F.A.C.	= Florida Administrative Code
Pg	= Page	F	= Face Side of Wood Fence
PI	= Point Of Intersection	FPLE	= Florida Power & Light Easement
PK	= Parker- Kalon or Mag Nail	P	= Past Side of Wood Fence
POB	= Point Of Beginning	POI	= Point Of interest
POC	= Point Of commencement	PRC	= Point of Reverse Curvature
POI	= Point Of interest	PRM	= Permanent Reference Monument
PRC	= Point of Reverse Curvature	PT	= Point Of Tangency
MF	= Metal Fence	RBL	= Reference Bearing Line
WF	= Wood Fence	PVC	= PVC/Plastic Fence
CLF	= Chain Link Fence	EL.	= Elevation
RES.	= Residence		

RCP	= Reinforced Concrete Pipe
CL	= Centerline
INV.	= Invert
EL.	= Elevation
R/W	= Right -Of -Way Line
SQ	= Square
STY	= Story
S	= Section
T	= Township
R	= Range
PF	= Pool Filter/Machinery on Pad
AC	= Air Conditioner/ Heat Pump on Pad
WPP	= Wood Power Pole
	= Guy Anchor (If - Dimension to Ground Entry Point - Underground Extent not Determined)
	= Water Meter
	= Fire Hydrant
D	= Sanitary Sewer Manhole
D	= Stormwater Drainange Manhole
JEA	= JEA Manhole
W	= Well
	= SIRC 1/2" 4889



GRAPHIC SCALE (In Feet)
1 inch = 60' ft.

Item # 2.

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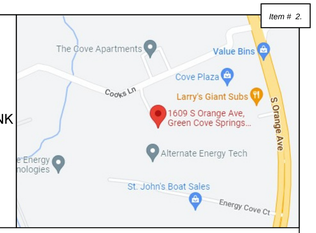


(904) 998-9733
www.landmarktitle.com

PROPERTY ADDRESS: 1609 SOUTH ORANGE AVENUE, GREEN COVE SPRINGS, FLORIDA 32043

LEGAL DESCRIPTION:

PARCEL 1
PART OF SECTIONS 29 AND 30, BLOCK 1, CLINCH ESTATES A/K/A PART OF LOTS 1 AND 2, BLOCK 1, BAYARD TRACT, AND PART OF BLOCK 3, SOUTH GREEN COVE SPRINGS, AS MORE PARTICULARLY DESCRIBED IN O. R. BOOK 330 PAGES 62 AND 63, AND O. R. BOOK 417 PAGE 451, EXCEPT THOSE PARTS DESCRIBED IN O. R. BOOK 403 PAGES 28 TO 36,0. R. BOOK 511 PAGE 397,0. R. BOOK 528 PAGE 137 AND 139,0. R. BOOK 549 PAGE 346,0. R. BOOK 653 PAGE 510, AND O. R. BOOK 1052 PAGE 51, PUBLIC RECORDS OF CLAY COUNTY, FLORIDA.

PARCEL 2
PORTION OF LOTS 1 AND 2, BLOCK 1, BAYARD TRACT, CLAY COUNTY, FLORIDA, ACCORDING TO MAP BY CHARLES F. SMITH RECORDED IN THE PUBLIC RECORDS OF SAID COUNTY IN DEED BOOK "J", PAGES 273 AND 274 (SAID LOT 1, BLOCK 1, IS ALSO KNOWN AS SECTION 29, BLOCK 1, CLINCH ESTATE, ACCORDING TO MAP BY GOULD T. BUTLER RECORDED IN PAID RECORDS IN PLAT BOOK 1, PAGES 31, 32, 33 AND 34, THE WEST 1/2 OF SAID LOT 2, BLOCK 1, IS ALSO KNOWN AS SECTION 30, BLOCK 1 OF SAID CLINCH ESTATE) ALL IN THE G. I. F. CLARK GRANT, SECTION 38, TOWNSHIP 6 SOUTH, RANGE 26 EAST, CLAY COUNTY, FLORIDA; SAID PARCEL. BEING MORE PARTICULARLY, DESCRIBED AS FOLLOWS: COMMENCE AT THE SOUTHWEST CORNER OF SAID LOT 1, BLOCK 1, BAYARD TRACT; THENCE ON THE WEST LINE OF SAID LOT 1 AND ON-THE CENTERLINE OF PALM AVENUE RUN, NORTH 24 DEGREES 21 MINUTES 05 SECONDS WEST 47.0 FEET THENCE NORTH 61 DEGREES 51 MINUTES 10 SECONDS EAST 1,099.34 FEET; THENCE NORTH 37 DEGREES 05 MINUTES 14 SECONDS WEST 423.50 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 37 DEGREES 05 MINUTES 14 SECONDS WEST 348.27 FEET; THENCE SOUTH 70 DEGREES 46 MINUTES 22 SECONDS EAST 183.36 FEET; THENCE NORTH 65 DEGREES 01 MINUTE 38 SECONDS EAST 437.27 FEET; THENCE SOUTH 48 DEGREES 05 MINUTES 50 SECONDS EAST 222.34 FEET; THENCE SOUTH 64 DEGREES 13 MINUTES 16 SECONDS WEST 583.01 FEET TO THE POINT OF BEGINNING.
MORE PARTICULARLY DESCRIBED AS:
BEGIN AT A 4" SQUARE CONCRETE MONUMENT AT THE SW CORNER OF SAID PARCEL 2 LANDS AS DESCRIBED ABOVE AND RUN THENCE (BEARINGS AND DISTANCE ARE NORTH AMERICAN DATUM OF 1983-2011-EPOCH 2010.0000) N35º43'54"W, 348.27' (DEED N37º05'15"W 348.27') TO A NAIL AND DISC #4889 IN THE CENTERLINE OF COOK ROAD, A 60 FOOT WIDE PUBLIC R/W TRANSITIONING INTO A 20 FOOT WIDE EASEMENT AS PER OFFICIAL RECORDS BOOK (ORB) 1929 PAGE 0975 SAID CLAY COUNTY PUBLIC RECORDS; RUN THENCE S69º25'02"E, 183.36' (DEED S70º46'22"E, 183.36') TO A ½" IRON ROD #4889 ON THE SOUTHERLY RIGHT-OF-WAY LINE OF SAID COOK LANE; RUN THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE N67º26'25"E, 440.66' (DEED N65º01'38"E, 437.27') TO A ½" IRON PIPE "MEM" #2933; RUN THENCE S46º38'42"E, 215.00' (DEED S48º05'50"E, 222.34') TO A ½" IRON PIPE-NO NUMBER IS ATTACHED AT THE EASTERNMOST CORNER OF SAID PARCEL 2 AND THE NORTHERNMOST CORNER OF SAID PARCEL 1 ABOVE; RUN THENCE S21º59'37"E, 430.20' (DEED S23º24'38"E, 430.00') ALONG THE EAST LINE OF SAID PARCEL 1 AND THE WEST LINE OF THOSE LANDS DESCRIBED IN ORB 3752, PAGE 612, SAID CLAY COUNTY PUBLIC RECORDS TO A ½" IRON ROD #4889 AT THE NW CORNER OF THOSE LANDS DESCRIBED IN ORB 2549, PAGE 1875, SAID CLAY COUNTY PUBLIC RECORDS; THENCE CONTINUING ALONG THE EAST LINE OF SAID PARCEL 1 AND THE WEST LINE OF SAID ORB 2549 PAGE 1875 LANDS, RUN THENCE S34º32'09"E, 254.40' (DEED SOUTHEREASTERLY 265' +/-) TO A ½" IRON PIPE "MILLER" AT THE SE CORNER OF SAID PARCEL 1 AND THE SW CORNER OF SAID ORB 2549 PAGE 1875 LANDS; RUN THENCE N80º29'41"W, 329.18' (DEED N81º54'30"W, 328.94') ALONG THE SOUTH LINE OF SAID PARCEL 1 AND THE NORTHERLY LINE OF ORB 4356 PAGE 1599 AND THEN ORB 3879 PAGE 2091 LANDS TO A ½" IRON PIPE; RUN THENCE THE FOLLOWING COURSES AND DISTANCES ALONG SAID DIVIDING LINE BETWEEN SAID PARCEL 1 AND THE NORTHERLY LINE OF SAID ORB 3879 PAGE 2091 LANDS: N26º09'10"W, 41.53' (DEED N27º32'40"W, 41.77') TO A ½" IRON PIPE- NO NUMBER ATTACHED; S67º40'38"W, (DEED S66º54'50"W, 62.39') TO A ½" IRON PIPE – NO NUMBER ATTACHED; N78º59'42"W, 77.43' (DEED N78º55'10"W, 77.14') TO A ½" IRON PIPE – NO NUMBER ATTACHED; S63º19'50"W, 127.02' (DEED S61º04'17", 127.47') TO A ½" IRON PIPE #1381 AT THE NW CORNER OF SAID ORB 3879 PAGE 2091 LANDS AND THE SOUTHWESTERLY CORNER OF SAID PARCEL 1; RUN THENCE N35º43'54"W, 330.45' (DEED N37º05'14"W, 423.50') ALONG THE WESTERLY LINE OF SAID PARCEL 1 TO THE POINT OF BEIGINNING. CONTAINING 8.9141 ACRES, MORE OR LESS

GENERAL SURVEYOR NOTES:

1. Legal Description has been furnished or by confirmed the Client or His/her Agents.
2. The Surveyor hereon is not responsible for easements of record other than those shown on a Plat if applicable, or in a Title Commitment provided at the time of order. Any condition that might represent an unrecorded easement is shown hereon and marked as a Point of Interest. (POI) Above-Ground evidences of Utilities may or may not represent an unrecorded easement.
3. Measurements shown hereon are in US Standard feet and decimals thereof.
4. TYPE OF SURVEY: Florida Boundary with Above-Ground Improvements shown.
5. STATED PURPOSE OF THIS SURVEY: Mortgage, Purchase, Sale, Permits, Planning.
6. Main Building and Ancillary Structure measurements are to the exterior of those buildings, so may not be adequate for Engineered or Architectural additions. Design Professionals should make their own measurements for attachments to Buildings shown hereon.
7. This survey does not show any underground improvements, foundations, or utilities, etc. No underground investigation of any feature including Septic Tank has been performed.
8. Any underground Septic or Well feature shown has been uncovered by the seller or his Agents.
9. All ABOVE-GROUND evidences of Utility Easements lie within their Respective Easements unless noted.
10. This Survey is not intended to Reflect or Determine Ownership.
11. Construct Improvements to Iron Markers as described only. Wood Laths and Wire Flags ARE NOT Property Corners.
12. This survey is COPYRIGHTED and is not intended for, nor Insured for multiple uses by multiple parties. Other than a Lender who assumes a Mortgage Note for a Certifyee hereon, use is restricted to Certifyees hereon for the Purposes listed in Note #5 above. It is illegal to copy or alter this survey drawing without permission.
13. Streets shown hereon are Centered in R/W provided unless otherwise noted and dimensioned.
14. Water shorelines shown on this drawing are current for date shown only. This is NOT a "Mean High Water Survey" as per Chapter 177.39 F.A.C. or any other relevant Local, State, or Federal rule.
15. State Plane Coordinates shown, if any, are based on the North American Datum (NAD) of 1983, Florida East Zone (941)-(2011)-(epoch 2010.0000)
16. Elevations, if shown, are based on the North American Vertical Datum (NAVD) 1988.
17. All dimensions hereon reflect the Deed/Plat call AND the corresponding field measured value. Calculated values are shown if reference irons are set.
18. Electronic (PDF) files are valid with Chapter 5J-17.032 (3) F.A.C and FS 0425.025 conforming Electronic (PDF) Seal attached. As per rules listed, the electronic signature file name/number is present on the invoice presented to the client or his/her agents. Hard sealed copies of the drawing are stored at the Surveyor's office and will be furnished on request (gratis) to certifyees hereon for 60 days from date of signature. Hard copies will be furnished to said Certifyees for an Archival Fee after 60 days.
19. Symbols hereon may differ in scale from the Legend and Abbreviations/Symbols list hereon for clarity.
20. Pursuant to F.S. 558.0035, no individual employee or Agent may be held personally liable for Negligence.
21. This drawing reflects information gathered, analyzed, presented and preserved solely by River City Surveying, LLC. Third Party references, Business Cards etc. attached do not infer or create liability in any form.
22. Fence Ownership is Not Determined

TIMOTHY L. BLACKMON · LICENSE NUMBER 4889 · STATE OF FLORIDA · PROFESSIONAL SURVEYOR & MAPPER

Timothy L. Blackmon
State of Florida Professional Surveyor and Mapper
License Number 4889
RIVER CITY SURVEYING & MAPPING I LB#8484

SURVEYORS CERTIFICATION:

REPRODUCTIONS OF THIS SKETCH ARE NOT VALID UNLESS SEALED WITH FLORIDA PSM EMBOSSED SEAL. THE SKETCH OF SURVEY DEPICTED HEREON CONFORMS TO THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA BOARD OF LAND SURVEYORS IN ACCORDANCE WITH CHAPTER 5J-17.050-17.053, PURSUANT TO CHAPTER 472, FLORIDA STATUTES, AND WAS DONE UNDER MY DIRECT SUPERVISION.

POINTS OF INTEREST:
① ASPHALT STREET IN EASEMENT ALONG NORTH LINE IN THIS AREA

DATE SIGNED: 08/17/2022
FIELD WORK DATE: 08/01/2022
REVISION DATE(S): 08/17/2022
SURVEY NUMBER: 051722.1

RIVER CITY SURVEYING & MAPPING

RIVER CITY SURVEYING & MAPPING
LB#8484
904-487-9054 | F. 904-998-9736
7220 FINANCIAL WAY | JACKSONVILLE, FL 32256

CERTIFIED TO:

FIDELITY NATIONAL TITLE INSURANCE COMPANY
BARWICK BANKING COMPANY, ISAOA ATIMA
LANDMARK TITLE

PAGE 1 OF 1

ATTACHMENT 2-AERIAL MAP

LOCATION MAP

Aerial Photo from Clay County Property Appraiser office.

Legend

Proposed Location

N
W
E
S

MAI ENGINEERING SERVICES, INC.

2510 U.S. Highway 1, Ste. D
St. Augustine, FL 32086
Ph: (904) 794-1760 • Fax: (904) 794-1768
E-mail: quoc@maiengineer.com

LOCATION MAP

1609 S ORANGE AVE.

GREEN COVE SPRINGS, FL.

CITY OF GREEN COVE SPRINGS
EST. 1874
FLORIDA

Zoning

- R1
- R1A
- R2
- R3
- RRF
- PUD
- RPO
- C1
- C2
- FBC
- FBC - Downtown Core
- FBC - Primary Corridor
- FBC - Secondary Corridor
- FBC - Transition
- FBC - Civic
- GCC
- GCN
- GCR
- M-2
- M-1
- MUH
- INS
- RC

0 137.5 275 55 US Feet

CITY OF GREEN COVE SPRINGS
EST. 1874
FLORIDA

Zoning

- R1
- R1A
- R2
- R3
- RRF
- PUD
- RPO
- C1
- C2
- FBC
- FBC - Downtown Core
- FBC - Primary Corridor
- FBC - Secondary Corridor
- FBC - Transition
- FBC - Civic
- GCC
- GCN
- GCR
- M-2
- M-1
- MUH
- INS
- RC

0 137.5 275 55 US Feet

ORDINANCE O-10-2008

INSTR # 200802814 3
OR BK 3025 Pages 1137 - 1144
RECORDED 06/06/08 11:19:52
JAMES B. JETT CLERK CIRCUIT COURT
CLAY COUNTY
DEPUTY CLERK BASKINJ GOV#1

AN ORDINANCE OF THE CITY OF GREEN COVE SPRINGS, FLORIDA, VOLUNTARILY ANNEXING APPROXIMATELY 68.6 ACRES OF REAL PROPERTY INTO THE CORPORATE LIMITS OF THE CITY; SAID PROPERTY BEING GENERALLY LOCATED ADJACENT TO THE EXISTING SOUTHERN CITY LIMITS, WESTERLY OF U.S. HIGHWAY 17 AND NORTH OF THE CSX RAILROAD SPUR; DESCRIBING SAID PROPERTY BY METES AND BOUNDS; FINDING THAT THE OWNERS OF SAID PROPERTY HAVE PETITIONED THE CITY PURSUANT TO CHAPTER 171.044, FLORIDA STATUTES, TO VOLUNTARILY ANNEX SAME; FINDING THAT THE PROPERTY IS CONTIGUOUS TO THE EXISTING CITY LIMITS AND REASONABLY COMPACT; PROVIDING FOR REPEALER AND SEVERABILITY; AND SETTING AN EFFECTIVE DATE.

WHEREAS, all owners of the property subject hereof have petitioned the City to have their property described in Composite Exhibit "A" and as also depicted in the parcel map attached hereto as Exhibit "B", to be annexed into the City limits pursuant to Chapter 171.044, Florida Statutes; and

WHEREAS, the City has determined that the property conforms to the requirements of Chapter 171.044, Florida Statutes, for real property to be voluntarily annexed; and

WHEREAS, said property is contiguous to the existing City limits and is reasonably compact; and

WHEREAS, the Clay County Board of County Commissioners has been given due notice as required in Florida Statute 171.044(6); and

WHEREAS, all other notices required by law have been given.

NOW, THEREFORE, BE IT ENACTED BY THE CITY COUNCIL OF GREEN COVE SPRINGS AS FOLLOWS:

Section 1. That pursuant to the provision of Chapter 171.044, Florida Statutes, the City Council does hereby voluntarily annex the real property described in Exhibit "A" and depicted on Exhibit "B" into the corporate limits of the City of Green Cove Springs, Florida.

Section 2. Repealer. Any ordinances or parts thereof in conflict with the provisions of this ordinance are hereby repealed to the extent of such conflict.

Section 3. Severability. The various parts, sections and clauses of this Ordinance are hereby declared to be severable. If any part, sentence, paragraph, section or clause is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of the Ordinance shall not be affected thereby.

Section 4. Effective Date. This Ordinance shall take effect immediately upon passage.

INTRODUCED AND PASSED AS TO FORM ONLY ON THE FIRST READING BY THE CITY COUNCIL OF GREEN COVE SPRINGS, FLORIDA, THIS 20th DAY OF May, 2008.

CITY OF GREEN COVE SPRINGS, FLORIDA

By: _____
Mayor

ATTEST: _____
Marjorie Robertson, City Clerk

PASSED ON SECOND AND FINAL READING BY THE CITY COUNCIL OF GREEN COVE SPRINGS, FLORIDA, THIS 3rd DAY OF June, 2008.

CITY OF GREEN COVE SPRINGS, FLORIDA

By: _____
Mayor

ATTEST: _____
Marjorie Robertson, City Clerk

Parcel No. 016564-000-00

A parcel of land being a portion of Lots 1 and 2, Block 1, Bayard Tract, Clay County, Florida, according to map by Charles F. Smith, recorded in the public records of said county in Deed Book "J", pages 273 and 274 (said Lots 1 and 2, Block 1 are also known as Sections 29 and 30, Block 1, Clinch Estate, according to map by Gould T. Butler, recorded in said records in Plat Book 1, pages 31, 32, 33 and 34) together with a portion of Block 3, South Green Cove Springs, Clay County, Florida, according to a map recorded in Deed Book "Z", page 748 of said records, all in G. I. F. Clark Grant, Section 38, Township 6 South, Range 26 East, Clay County, Florida, said parcel being more particularly described as follows:

Commence at the southwest corner of said Lot 1, Block 1, Bayard Tract; thence on West line of said Lot 1 and on the centerline of Palm Avenue run North 24 degrees 21 minutes 05 seconds West 47.00 feet; thence North 61 degrees 51 minutes 10 seconds East 1,099.34 feet to the Point of Beginning; thence South 10 degrees 19 minutes 27 seconds East 264.43 feet; thence South 79 degrees 33 minutes 05 seconds East 1,047.03 feet to the Westerly line of State Road No. 15 (U.S. Highway No. 17), last said line being the arc of a curve concave to the Westerly and having a radius of 2,804.79 feet; thence along said arc run a chord distance of 343.89 feet, the bearing of said chord being North 03 degrees 26 minutes 41 seconds East; thence North 79 degrees 10 minutes 28 seconds West 516.84 feet; thence North 81 degrees 54 minutes 30 seconds West 328.94 feet; thence North 27 degrees 32 minutes 40 seconds West 41.77 feet; thence South 66 degrees 54 minutes 50 seconds West 62.39 feet; thence North 80 degrees 41 minutes 30 seconds West 77.15 feet; thence South 61 degrees 04 minutes 17 seconds West 127.47 feet to the Point of Beginning, being 8.40 acres, more or less, in area.

The Grantor herein does not warrant title to any portion of said parcel which lies within the boundaries of any roads, public or private.

Parcel Number: **38-06-26-016564-002-00**

LEGAL DESCRIPTION:

A parcel of land consisting of a portion of Lots 1 and 2, Block 1, Bayard Tract, Clay County, Florida, according to map by Charles F. Smith recorded in the public records of said county in Deed Book "J", pages 273 and 274 (said Lot 1, Block 1 is also known as Section 29, Block 1, Clinch Estate, according to map by Gould T. Butler recorded in said public records in Plat Book 1, pages 31, 32, 33 and 34; the West ½ of said Lot 2, Block 1 is also known as Section 30, Block 1 of said Clinch Estate; and that part of the East ½ of said Lot 2, Block 1, lying westerly of the centerline of Palmetto Avenue is also known as Section 46, Block 1 of said Clinch Estate), together with a portion of Block 3, South Green Cove Springs, Clay County, Florida, according to map recorded in Deed Book "Z", page 748 of said public records, also being part of the G.I.F. Grant, Section 38, Township 6 South, Range 26 East, Clay County, Florida; said parcel of land being more particularly described as follows:

Commence at the southwest corner of said Lot 1, Block 1, Bayard Tract; thence on the west line thereof, and along the centerline of Palm Avenue, North 24 degrees 21 minutes 05 seconds West, 47.00 feet; thence North 61 degrees 51 minutes 10 seconds East, 1099.34 feet to the point of beginning; thence North 61 degrees 04 minutes 17 seconds East, 127.47 feet; thence South 80 degrees 41 minutes 30 seconds East, 77.15 feet; North 64 degrees, 54 minutes 50 seconds East, 62.39 feet; then South 27 degrees 32 minutes 40 seconds East 41.77 feet; thence 81 degrees 54 minutes 30 seconds East 328.94 feet; thence North 35 degrees 55 minutes 45 seconds 'est, 254.99 feet; thence North 23 degrees 24 minutes 38 seconds West, 430.00 feet; thence South 64 degrees 13 minutes 16 seconds West, 583.01 feet; thence South 37 degrees 05 minutes 14 seconds East, 423.50 feet to the point of beginning; being 6.03 acres, more or less, in area.

Harold T. Eiland
President

Eric V. Eiland
V. President

Eiland & Associates, Inc.
615 Blanding Blvd. Orange Park, Florida 32073
Phone (904) 272-1000 Fax 272-5443

Parcel No. 016579-000-00

May 30, 2006

Legal description for Mr. Jack Revels

A parcel of land consisting of a portion of Lot 3, Block 37, Bayard Tract, Clay County, Florida, according to map by Charles F. Smith, recorded in the public records of said county in Deed Book "J", pages 273 and 274, together with a portion of Lots 17, 18, 19 and 20, Block 1, South Green Cove Springs, according to map recorded in Deed Book "Z", page 748 of said public records, all in the G.I.F. Clark Grant, Section 38, Township 6 South, Range 26 East, Clay County, Florida, said parcel being more particularly described as follows:

Commence at the southwest corner of Lot 1, Block 1, said Bayard Tract; thence on the west line thereof, North 24 degrees 21 minutes 05 seconds West, 47.00 feet; thence South 61 degrees 51 minutes 10 seconds West, 136.06 feet to the northeasterly line of the CSX Transportation Railroad; thence on said northeasterly line, South 23 degrees 22 minutes 55 seconds East, 142.94 feet to the point of beginning; thence South 77 degrees 29 minutes 59 seconds East, 2,046.21 feet to the westerly line of State Road No. 15 (U.S. Highway No. 17); thence on said westerly line, South 09 degrees 09 minutes 52 seconds West, 576.61 feet to the northerly line of Spring Street (also being the northerly line of a railroad spur as per Judgment Lien Book No. 1, page 30 of said public records; thence on said northerly line, North 78 degrees 47 minutes 45 seconds West, 1050.24 feet; thence northwesterly along the arc of a curve concave northeasterly and having a radius of 1175.0 feet, an arc distance of 893.71 feet to the northeasterly line of said CSX Transportation Railroad, said arc being subtended by a chord bearing and distance of North 57 degrees 00 minutes 32 seconds West, 872.21 feet; thence on said northeasterly line, North 23 degrees 22 minutes 55 seconds West, 362.84 feet to the point of beginning; being 24.17 acres, more or less, in area.

COMPOSITE EXHIBIT "A"
Page 3

Parcel No. 016579-001-00

Exhibit "A"

PARCEL 1A

A PARCEL OF LAND CONSISTING OF A PORTION OF LOT 1, BLOCK, 1 BAYARD TRACT, CLAY COUNTY, FLORIDA, ACCORDING TO MAP BY CHARLES F. SMITH, RECORDED IN THE PUBLIC RECORDS OF SAID COUNTY IN DEED BOOK "J", PAGES 273 AND 274, (SAID LOT 1, BLOCK 1 ALSO KNOWN AS SECTION 29, BLOCK 1, CLINCH ESTATE, ACCORDING TO MAP BY GOULD T. BUTLER, RECORDED IN SAID PUBLIC RECORDS IN PLAT BOOK 1, PAGES 31, 32, 33 AND 34) TOGETHER WITH A PORTION OF LOTS 1, 2, 3 AND 4, BLOCK 1, AND A PORTION OF BLOCK 3, SOUTH GREEN COVE SPRINGS, ACCORDING TO MAP RECORDED IN DEED BOOK "Z", PAGE 748 OF SAID PUBLIC RECORDS, ALL IN THE G.I.F. CLARK GRANT, SECTION 38, TOWNSHIP 6 SOUTH, RANGE 26 EAST, CLAY COUNTY, FLORIDA, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A SOUTHWEST CORNER OF SAID LOT 1, BLOCK 1, BAYARD TRACT; THENCE ON THE WEST LINE THEREOF, NORTH 24 DEGREES 21 MINUTES 05 SECONDS WEST, 47.00 FEET TO THE POINT OF BEGINNING; THENCE NORTH 61 DEGREES 51MINUTES 10 SECONDS EAST, 315.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 61 DEGREES 51 MINUTES 10 SECONDS EAST, 784.34 FEET; THENCE SOUTH 10 DEGREES 19 MINUTES 27 SECONDS EAST, 264.43 FEET; THENCE SOUTH 79 DEGREES 33 MINUTES 05 SECONDS EAST, 1,047.03 FEET TO THE WESTERLY LINE OF STATE ROAD NO. 15 (U.S. HIGHWAY NO. 17); THENCE SOUTHERLY ALONG SAID WESTERLY LINE, AND ALONG THE ARC OF A CURVE CONCAVE WESTERLY AND HAVING A RADIUS OF 2804.79 FEET, AN ARC DISTANCE OF 107.94 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF SOUTH ON SAID WESTERLY LINE, SOUTH 08 DEGREES 03 MINUTES 40 SECONDS WEST, 107.93 FEET; THENCE SOUTH 09 DEGREES 09 MINUTES 52 SECONDS WEST, 130.67 FEET; THENCE NORTH 79 DEGREES 40 MINUTES 04 SECONDS WEST, 1,761.25 FEET TO THE POINT OF BEGINNING; BEING.

Parcel No. 016579-002-00

Legal description for:

Parcel 1B

A parcel of land consisting of a portion of Lot 1, Block 1 and a portion of Lots 2 and 3, Block 37, Bayard Tract, Clay County, Florida, according to map by Charles F. Smith, recorded in the public records of said county in Deed Book "J", pages 273 and 274, together with a portion of Lots 1, 2, 3, 4, 17, 18, 19 and 20, Block 1, South Green Cove Springs, according to map recorded in Deed Book "Z", page 748 of said public records, all in the G.I.F. Clark Grant, Section 38, Township 6 South, Range 26 East, Clay County, Florida, said parcel being more particularly described as follows:

Commence at the southwest corner of said Lot 1, Block 1, Bayard Tract; thence on the west line thereof, North 24 degrees 21 minutes 05 seconds West, 47.00 feet to the point of beginning; thence North 61 degrees 51 minutes 10 seconds East, 317.87 feet; thence South 79 degrees 33 minutes 05 seconds East, 1,759.05 feet to the westerly line of State Road No. 15 (U.S. Highway No. 17); thence on said westerly line, South 09 degrees 09 minutes 52 seconds West, 475.28 feet; thence North 77 degrees 29 minutes 59 seconds West, 2,046.21 feet to the northeasterly line of the CSX Transportation Railroad; thence on said northeasterly line, North 23 degrees 22 minutes 55 seconds West, 142.94 feet; thence North 61 degrees 51 minutes 10 seconds East, 136.06 feet to the point of beginning; being 20.0 acres, more or less, in area.

LOCATION MAP

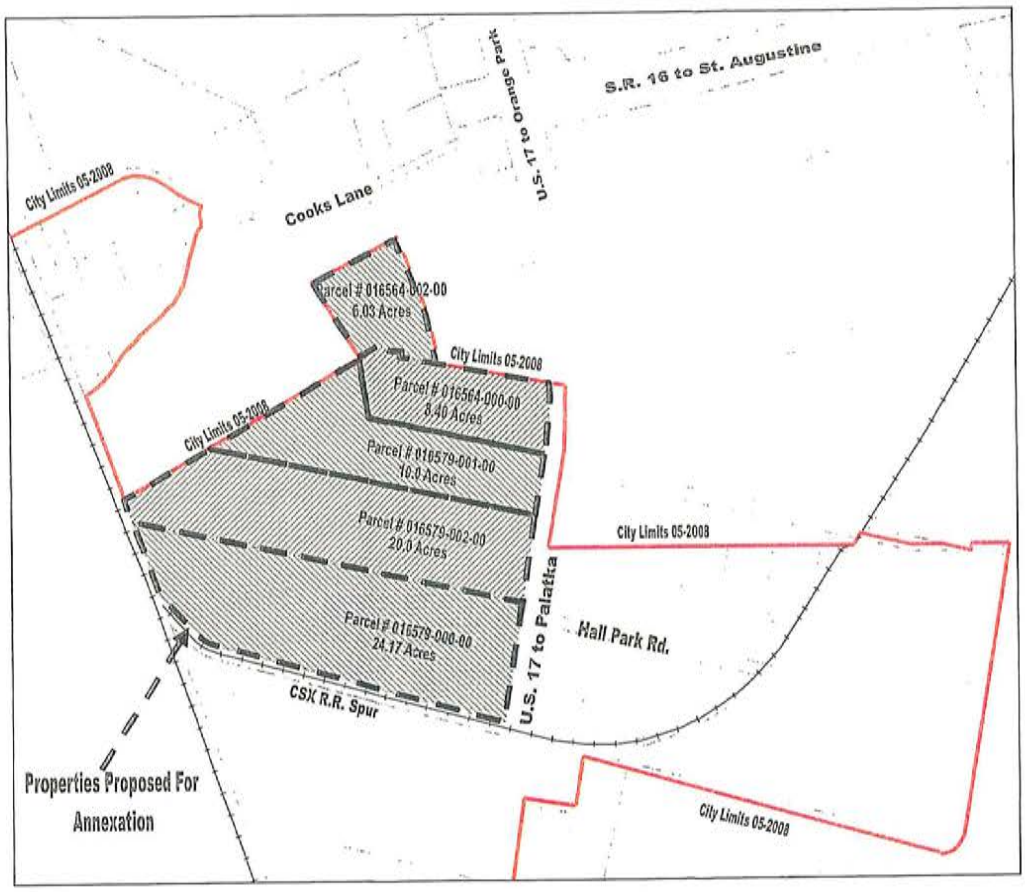


EXHIBIT "B"

STAFF REPORT

CITY OF GREEN COVE SPRINGS, FLORIDA

TO: Planning and Zoning Commission **MEETING DATE:** April 23, 2024

FROM: Michael Daniels, AICP, Planning & Zoning Director

SUBJECT: Ordinance # O-10-2024 for a Rezoning request for property located at the Southeast corner of US 17 and SR 16 for approximately 112 acres of parcel #016451-003-00 and 016451-000-00.

Zoning Amendment: from: C-2, General Commercial

to: PUD, Planned Unit Development

PROPERTY DESCRIPTION

APPLICANT: Kelly Hartwig, Cypress Management and Design

OWNER: HLM Investments

PROPERTY LOCATION: 965 Leonard C Taylor Highway

PARCEL NUMBER: 016451-003-00 & 016451-000-00

FILE NUMBER: PUD-24-0001

CURRENT ZONING*:* C-2 General Commercial

FUTURE LAND USE DESIGNATION*:* Mixed Use

SURROUNDING LAND USE

NORTH: **FLU**: MIXED USE
Z: C-2
Use: Undeveloped

SOUTH: **FLU**: INDUSTRIAL (COUNTY)
Z: Heavy Industrial (COUNTY)
Use: Undeveloped

EAST: **FLU**: MIXED USE REYNOLDS PARK
Z: M-2
Use: Reynolds Airpark

WEST: **FLU**: MIXED USE
Z: C-2
Use: Undeveloped

BACKGROUND

The applicant applied for a Future Land Use and Zoning Change for the subject property for the construction of industrial development in September of 2023. The application was approved by the Planning and Zoning Commission however due to concerns about the impact of adding industrial uses to the property, City Council recommended that the request be tabled subject to a requirement that the applicant submit a site-specific Future Land Use text amendment addressing

- Land uses
- Site Design
- Buffering
- Traffic

Subsequent to the request being tabled, the applicant submitted a Future Land Use Text Amendment which was transmitted by City Council to the State Commerce Department for review on February 6, 2024. After the completion of the state review, the request will be reviewed by City Council for adoption. The request for a PUD rezoning cannot be approved until the approval of the Future Land map and text amendment. The text amendment is enclosed.

The property includes an extension of the CSX Rail line which runs south to north located in the eastern portion of the property. The rail line is owned by the City and is in disrepair. The applicant has expressed an interest in entering an agreement with the City to repair the existing Rail line and add a Railroad spur to serve potential future Industrial users on the property. These actions would require a separate agreement to be approved by the City.

There is an existing building on the site that had been used for manufacturing plant which has been closed in 2010. However industrial businesses such as Woodford Plywood, Meever USA and Front Runner Boatworks have been located at this location as nonconforming industrial uses.

The property is sparsely wooded with the exception of the area to the east of the railroad tracks which has a thick tree cover.

The site is located within the City's Water, Sewer, and Electric Service Boundaries. It will be served by the City's sanitation services.

Aerial

.

CONSISTENCY WITH THE COMPREHENSIVE PLAN

The following Goals, Objectives, and Policies (GOPs) are not in compliance with the proposed Planned Unit Development application.

FUTURE LAND USE ELEMENT

Goal 1: To develop and maintain land use programs and activities to provide for the most appropriate use of the land and direct growth to suitable areas while protecting the public, health, safety and welfare of the public.

Objective 1.2. The City shall strive to cultivate a sustainable land use pattern by preventing the proliferation of urban sprawl, ensuring the efficient provision of services, and implementing smart growth principles.

Policy 1.2.3. The City shall promote more compact and energy resource efficient residential development where the location and surrounding infrastructure supports multiple modes of transportation.

Policy 1.2.7. The City shall condition development orders upon the provision of essential facilities and services which meet and would not result in the failure of each service's established level of service (LOS).

Policy 1.2.8. The City shall ensure the availability and protection of lands designated for the future expansion of public infrastructure.

TRANSPORTATION ELEMENT

Policy 2.1.8. The City shall ensure land uses along primary corridors support the goal of Complete Streets.

PUBLIC FACILITIES IMPACT

Traffic Impacts

Land Use[1] (ITE)	Square Footage/Dwelling Units	Daily		AM Peak		PM Peak	
		Rate	Trips	Rate	Trips	Rate	Trips
Warehousing	264,000	n/a	456	n/a	55	n/a	58
Light Industrial	130,500	n/a	542	n/a	93	n/a	49
Manufacturing	119,000	n/a	325	n/a	82	n/a	86
Shopping Center	231,200	n/a	11,900	n/a	270	n/a	1,032
Total	744,700	n/a	13,223	n/a	500	n/a	1,225

1. *Source: Institute of Transportation Engineers: Trip Generation Manual 9th Edition*

Conclusion: Pursuant to the requirements of the site-specific Future Land Use text amendment, a traffic study methodology has been submitted to staff for review. A completed methodology is required prior to zoning approval.

Potable Water Impacts
Industrial

System Category	Gallons Per Day (GPD)
Current Permitted Capacity[1]	4,200,000

Less actual Potable Water Flows[1]	1,013,000
Residual Capacity[1]	3,187,000
Projected Potable Water Demand from Proposed Project[2]	81,917
Residual Capacity after Proposed Project	3,1105,803

1. *Source: City of Green Cove Springs Public Works Department*
2. *Source: City of Green Cove Springs Comprehensive Plan. Formula Used: .11 x sq ft (based on historical data)*

Conclusion: The impact was calculated based on potential industrial uses. As shown in the table above, there is adequate capacity this use type. The City has existing water lines installed at this location.

Sanitary Sewer Impacts – South Plant WWTP

Commercial

System Category	Gallons Per Day (GPD)
Current Permitted Capacity[1]	350,000
Current Loading[1]	270,000
Committed Loading [1]	330,000
Projected Sewer Demand from Proposed Project[2]	81,917
Residual Capacity after Proposed Project	-411,917

1. *Source: City of Green Cove Springs Public Works Department*
2. *Source: City of Green Cove Springs Comprehensive Plan. Formula Used: .11 x sq ft (based on historical data)*

Conclusion: The impact was calculated based on potential commercial or residential uses. The project site is served by the South Plant Wastewater Treatment Plant (WWTP). As shown in the table above, when factoring in the current loading and the committed loading, this WWTP is over capacity to handle the estimated impacts resulting from the proposed application. The committed loading is related to the Rookery Development which will be completed in two years prior to the commencement of this project. At such time, the Rookery capacity will be served by a new wastewater treatment facility provided by the Clay County Utility Authority. Once the facility is built, the capacity temporarily reserved to the Rookery shall be available for this development. In addition, the remaining demand will be sent via force main to the Harbor Road plant, where the City has an excess capacity of approximately 700,000 gallons per day. As a result, there is adequate capacity. The City has existing sewer lines at this location.

Solid Waste Impacts

Commercial

System Category	LBs Per Day / Tons per Year
Solid Waste Generated by Proposed Project[1]	None
Solid Waste Facility Capacity[2]	Minimum 3 Years Capacity

1. *Source: City of Green Cove Springs does not provide commercial sanitation services, prospective sanitation collection franchisees shall comply with City Code Section 66-10.*

Solid Waste Impacts

The City of Green Cove Springs' solid waste is disposed of at the Rosemary Hill Solid Waste Management Facility operated by Clay County. Per the Clay County Comprehensive Plan, a minimum of three (3) years capacity shall be maintained at the County's solid waste management facility. For commercial developments, the City does not provide Curbside Service; commercial locations must instead contract with an approved franchisee for containerized collection.

Conclusion: The proposed rezoning shall provide a complete methodology prior to rezoning approval and provide a complete traffic study prior to development approval.

STAFF ANALYSIS

Compatibility

The Subject Property is located adjacent to a Mixed Use Land Use District to the north and west, to the south are industrial uses located along Hall Park Road and to the east the property is adjacent the Reynolds AirPark which is zoned Industrial. The property line of the proposed request is within 400' of an existing Runway. The Reynolds Air Park is a private airpark operated by Pegasus Technology, Inc., who is a tenant of the landowner, Clay County Port, Inc. The airpark is not open to the public and therefore is not required to have an Airport Master Plan as is required for a Public use airport pursuant to Chapter 333 of the Florida Statutes. Regardless of the fact that the Airpark is a private airport, proposed development within that area will be reviewed to ensure compatibility with the existing facility. The property along US 17 and SR 16 shall remain as commercial properties in keeping with providing a commercial gateway into the City. As a result, the proposed Future Land Use and Zoning application is suitable for the property and compatible with the surrounding uses.

The transmitted Future Land Use Text Amendment include the following requirements:

1. *Prior to the approval of a subsequent development order such as but not limited to a subdivision or site development plan, the property owner/developer must submit a developer's agreement addressing the following development requirements for the Amendment parcels that is currently owned by HLM Investments that is adjacent to SR 16 and US 17:*
   a) *Address screening and buffering requirements between the Amendment parcels or portion thereof and the remaining portion of parcel 016451-0000 and SR 16 and US 17.*
   b) *Address Building, site and streetscape design requirements for the Amendment parcels or portion thereof and the remaining portion of parcel 016451-0000 adjacent to SR 16 and US 17. These requirements shall include but are not limited to:*
      a. *Block Standards*
      b. *Building Placement*
      c. *Building Typology and Massing*
      d. *Building Frontage Design*
      e. *Façade Articulation*
      f. *Entrances*
      g. *Building Materials*
      h. *Lighting*
      i. *Service Area and Mechanical Equipment Screening*
      j. *Signage*
2. *Prior to approval of a subsequent development order, such as but not limited a zoning, subdivision or site development plan, the property owner/developer will be required to provide an Access Management Plan and Traffic Impact Analysis to address site access and traffic capacity, the plan*

must be developed in cooperation with Florida Department of Transportation, Clay County and the City of Green Cove Springs.

a. *Traffic Study shall be completed prior to issuance of building permits for new onsite development and certificate of occupancies (CO) are issued for expansion of existing development.*
b. *Traffic Study shall address truck traffic and rail traffic as part of their analysis.*
c. *Traffic Study methodology approval shall be secured prior to approval of a subsequent development order, such as but not limited to Zoning, Subdivision or Site Development Plan.*
d. *A Development Agreement shall be completed prior to issuance of building permits for new onsite development and certificate of occupancies (CO) are issued for expansion of existing development to address the timing and costs associated with offsite improvements.*

3. *Limit uses on the Amendment Parcels by allowing M-1 Uses by right and M-2 uses as a special exception.*
4. *Property shall be rezoned to a Planned Unit Development (PUD). A conceptual plan and written description shall be included with the PUD submittal.*

Pursuant to the requirements of the site-specific text amendment, the applicant has submitted a Planned Unit Development Concept Plan and Written Description. The written description includes a Project Description Uses and Restrictions, Design Guidelines, Development Plan Approval and a justification for a Planned Unit Development. The Concept Plan shows the location of commercial development along SR 16 and US 17 with the industrial uses within the interior of the development.

The applicant submitted plans initially at the end of February. The staff has gone through four rounds of review and has significant outstanding comments.

Enclosed in your packet is a list of staff deficiencies to be addressed as part of the staff review of the proposed Plan.

These items include but are not limited to:

1. Providing a master utility plan/commercial access. As part of a Planned Development, it is important to have a concept plan that provides for the efficient use of land as set forth in the Land Development Code Sec. 117-421(3)(c). Applicant is requesting that the City maintain water and sewer main lines however the submitted plans do not show which lines the City is expected to maintain. In addition, the master plan shows an internal access road however there is no information about which phase or what triggers the access road being constructed.
2. Architectural Review requirements. The applicant has provided architectural guidelines. There is no clear link that these guidelines are part of the PUD submittal. A portion of these guidelines need to be tied to the proposed PUD and not be a separate document that is outside of the City's purview to enforce which is out of compliance with item #3 in the transmitted site-specific text amendment.
3. The applicant has submitted a traffic methodology but there are outstanding comments that have not been addressed such as but not limited to information analyzing the projected distribution of the proposed traffic on the roadway network, an analysis of the projected truck

traffic projected to generated based by the proposed development or the existing or potential for increased train usage along the CSX line that could result in delays on US 17. The outstanding comments are included with the packet. In addition, the applicant has not received approval from FDOT regarding any of the proposed access locations located on US 17 or SR 16. No revisions to the traffic study methodology since March 13th. Revised comments were sent to the applicant from the City on 3/13/24 and from FDOT on 3/25/24, no revisions or changes have been provided by the applicant to the City or to FDOT since that time. A meeting has been set up by the applicant to discuss the comments with FDOT, city staff and the traffic engineer on April 24th. The applicant shall revise the methodology to address the outstanding comments so that the traffic methodology can be provided to the Planning Commission and provide the necessary traffic information to assist the board in taking action on the proposed rezoning.

Intent of Existing Zoning Districts

The commercial high intensity (CHI), C-2 general commercial zoning category district is intended for intensive commercial uses which generally require a conspicuous and accessible location convenient to streets carrying large volumes of traffic.

The M-2 industrial district is intended to be for an industrial park. A variety of industrial and supported uses are allowed.

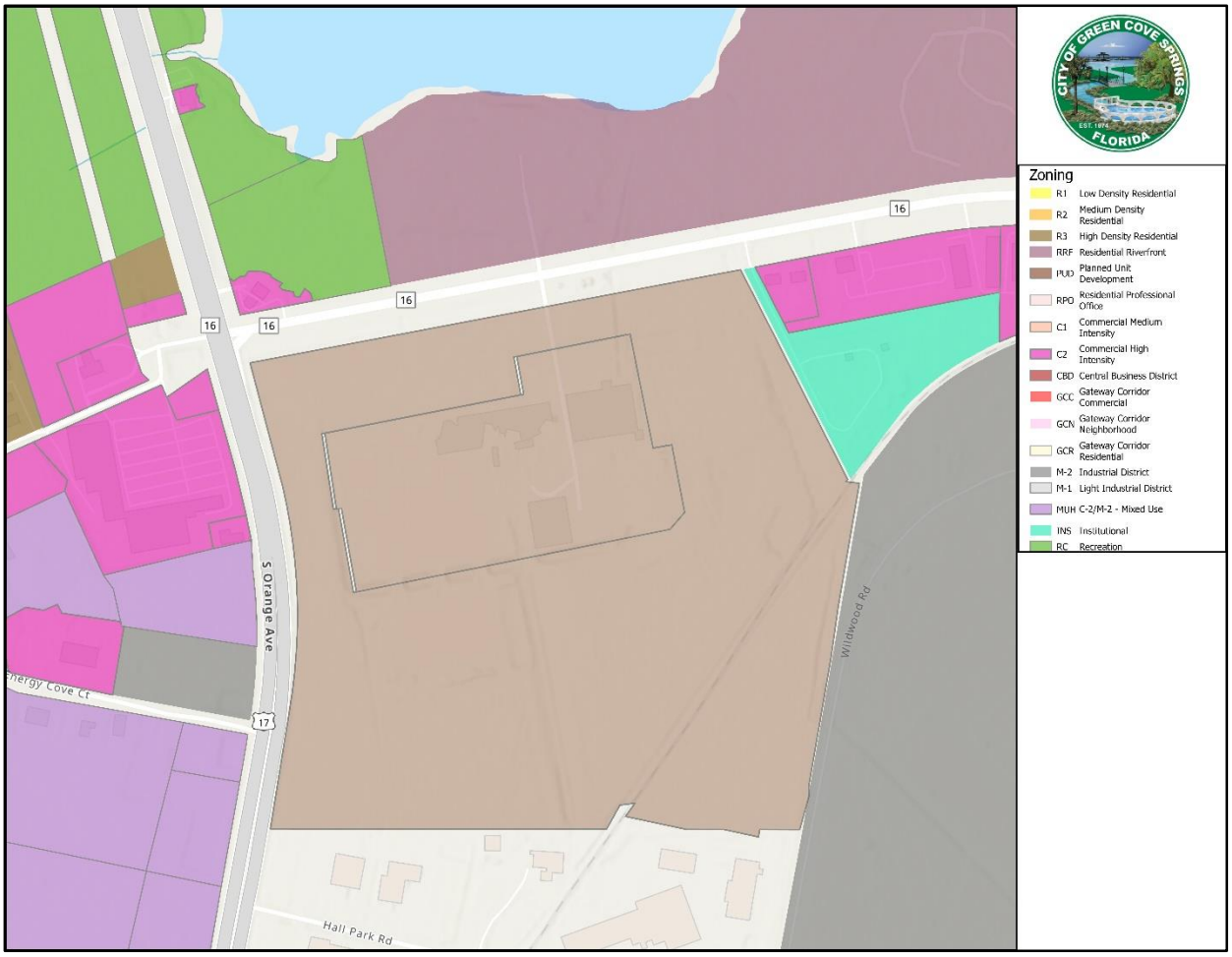
Intent of Proposed Zoning District: Planned Unit Development

It is the purpose of this part to encourage new development and redevelopment, flexibility in design with the overall development consistent with this subpart and the city comprehensive plan. A planned unit development is permitted on a parcel of land under common control or ownership, where it would be beneficial for the city and improve the quality of the development, to permit flexibility in the location of land uses that are shown on the future land use map. The density or intensity of the development shall not exceed development approved in the future land use map.

Proposed Future Land Use

Existing Zoning

Proposed Zoning



Attachments Include:

- PUD Conceptual Plan and Written Description
- Traffic Study methodology submittal and staff comments
- Staff Deficiency Comments
- Application
- Ordinance

STAFF RECOMMENDATION

Staff recommends tabling of the requested Rezoning from C-2, General Business to Planned Unit Development in order to allow the applicant to address the outstanding staff comments and non-compliance with the identified elements of the PUD Requirements as well as noncompliance with the Transmitted Site-Specific Text Amendment and the identified Comprehensive Plan Elements, Ordinance O-04-2024.

RECOMMENDED MOTIONS:

Rezoning

Motion to table the requested Rezoning from C-2, General Business to Planned Unit Development based on the factual support provided in the staff report.

Exhibit D

WRITTEN DESCRIPTION

17-16 Commerce Center
Date: 1-15-2024
Current Zoning District: CCG-2
Proposed Zoning District: PUD
Parcel #'s: 38-06-26-016451-003-00---
38-06-26-016451-000-00

I. PROJECT DESCRIPTION

It is the purpose and intent of this PUD to provide flexibility in planning, design and development; to provide a development compatible with surrounding land use; to encourage development along the 17- 16 corridor yet creating an entrance to The city of Green Cove Springs. The PUD will create a unified development plan incorporating a similar design theme and other development criteria. The property is a 120-acre site located in Green Cove Springs, Florida. The land is currently zoned Residential Light Manufacturing and Commercial.

The owner's vision of the use of the property is a multi-use facility which can provide an upscale commercial C-2 corridor along U.S 17 and State Road 16 and Industrial, both M-1 and M-2 utilizing the existing infrastructure. M-1 will be allowed. M-2 will be allowed by Special Exception.

Building constraints- all the buildings will have upscale architectural facades. Exterior portions of buildings which are visible to the 17- 16 corridor shall be enhanced with architectural features such as stucco- brick- stone.

Onsite parking and access will be asphalt paved. The main entrance and exit will be on US 17 and State Road 16. Secondary access may be allowed from neighboring property. There will be an internal access road built with curb and gutter.

Outside Storage- In order to create a upscale commercial entrance, the owners recognize that commercial outside storage will limited to retail display, and must be approved by the City of Green Cove Springs. All industrial outside storage shall be screened from US 17 and State Road 16 by either a Building façade, Masonry wall or vegetative screen.

Existing and new facilities will utilize municipal water and sewer services. The owner would design all new utility services on the site. All new services would be underground to enhance the appearance of the surrounding areas. The city and owner will share in cost associated with utilities.

The creation of a master planned development affords an efficient use of the land. Each new tenant will be required to submit a individual site plan for city approval. Attached is a preliminary masterplan. The masterplan will be updated with each site development

plan.

A. **Project Name:** **17/16 Commerce Center PUD**

B. **Current Project Manager/Planner:** **Kelly Hartwig**

C. **Project Developer:** **HLM Investments LLC**

D. **Quantitative Data Summary:**

1. Total Acreage: 112 acres

2. Proposed Number of sites may vary-

3. Total amount of active space- impervious space will be based on SJRWMD master permit.

4. Total amount of parking: - Shared parking can be used in all calculations.

5. Phase schedule of construction – Phase 1 will be restoration and upgrades to existing 80,000 Building 3. Phase 2 will be site plan submittal and approval for individual tenants. Phase 3- Site plan submittal and approval of Phase 1 Commercial Road access.

6. Restoration of Façade of Building 1 will be completed with in 3 years of start of restoration of Building 3

II. USES AND RESTRICTIONS

A. Permitted Uses and Structures

1. Commercial C-2 Per Div 4 Land Use Code City of Green Cove

2. Light Industrial M-1 Per Div 4 Land Use Code City of Green Cove

3. Industrial M-2 Per Div 4 Land Use Code City of Green Cove – By special exception

4. Essential services, including water, sewer, gas, telephone, radio, television and electric meeting the performance standards and development criteria set forth in the Land Development Regulations. All new services will be underground.

5. A Commercial association will be formed to set up guidelines and rules which all owners or tenants will be required to follow.

6. The attached Preliminary zoning map will be included as part of the PUD. But minor changes may be approved by the City Council.

B. Permitted Accessory Use and Structures.

1. All accessory Structure shall match architectural facades of building if visible for US 17 or State Road 16

III. DESIGN GUIDELINES

A. Future principal structures. Minimum lot requirements and building requirements shall be in accordance with the requirements provided herein.

(1)	Minimum lot area:	0 square feet
(2)	Minimum lot width:	0 feet
(3)	Maximum lot coverage:	70% percent
(4)	Minimum front yard:	25 feet
(5)	Minimum side yard: With a minimum separation of Buildings 20’	10’
(6)	Minimum rear yard:	10’
(7)	Maximum height of structures:	Per City of Green Cove Land Development Code

B. Architectural review/compatibility

(1) Future development shall be in accordance with City of Green Cove Springs Site Plan Review requirements. Additionally, Site Plan Review shall include an architectural sketch plan at an appropriate scale supporting consistency with the proposed architectural elements of the structures, including size, scale, façade, and color as approved by the association. Architectural guides for association (see exhibit A attached)

C. Ingress, Egress and Circulation, Storage

(1) *Parking Requirements. Will be determined by Article lll Chapter 13 Development standards except for* Parking spaces will be minimum of 9’ wide by 18’ with 24’ minimum Drive lanes. If shared

parking or reduction in parking is requested, it will be supported by a parking study created by a licensed professional – then approved by the planning and zoning board.

(2) *Vehicular Access.*

a. Primary vehicular access to the Property shall be by way of US 17 and State Road 16. A secondary main entrance will be east on State Road 16- through existing water plant entrance- This road if used will be improved to city standards. The final location of all access points is subject to the review and approval of the FDOT.
b. A complete traffic study shall be completed to determine the amount of work required for vehicles entering and leaving the site. This will be based on our tenant projections. Since this is normally paid by the Mobility fee, with city approval the owner will provide the study and the cost deducted from the Mobility fees.
c. The owner will work with the city of Green Cove Springs, The FDOT and Clay county to finalize the traffic study methodology and study limits. Based on this the study may impact access points, turning radius and other requirements determined by a complete traffic study. Once these requirements are determined, they will be incorporated into the master plan.

(3) *Pedestrian Access.*

a. Existing sidewalks are located on the north side of State Road 16. Proposed pedestrian access will be coordinated with crossings and future intermodal path (possibly in FDOT ROW) Sidewalks will be installed per city code to allow ADA pathway from all buildings to the city ROW. A sidewalk along St rd. 16 will be installed if required by city code, All sidewalks will be installed as the buildings are being constructed. Interconnected sidewalks or internal sidewalks from building to building will be encouraged and used to accommodate ADA connections.

(4) *Outdoor Storage*:

a. All outdoor storage will be screened from US 17 and State Road 16 by either a building or a 12’ architectural masonry or masonry wall with a landscape hedge at the base of the wall and trees every 40’. Trees can be ornamental or shade trees and may count as part of landscape requirements. No outdoor storage allowed within 800’ of US 17 or State Road 16.

D. Signage

Signage shall be in accordance with the Land Development Regulations by city of Green Cove Springs. Interior site signs will architectural elements (shown on association documents)

E. Landscaping

The Property will be developed in accordance with Article V of the Land Development Regulations. Tree preservation and landscape requirements will be as set forth in city codes". Except- Street trees will be a minimum of 4" caliper. Landscape Islands may be omitted every 10 spaces- if linear island is proposed parallel to parking- Parking Island shade trees may be replaced with ornamental tree- if required shade tree required is relocated to another landscape space adjacent to parking. Interior Landscape space will not be required in industrial laydown areas. Hedges located to screen Parking or vehicular access will only be required next to public ROW. Dumpsters must be screened with masonry walls and opaque gates. No chain link fences.

F. Utilities

All utilities and improvements which are being given or built for city ownership will be designed and constructed in accordance with the standards and specifications of the City of Green Cove Springs, Public Works Department. Cost of those Installation and material for utilities will be by owner. Once installed they will be maintained by the city. If primary or secondary utility's are to be privately owned, they will be built to industry standards and maintained by the owner/developer.

(1) Water mains and meter boxes will be provided by the owner. Main lines and main accessories which are to be owned and maintained by the City of Green Cove Springs. Secondary connections will be installed, maintained, and owned by the owner.

(2) Sanitary sewers will be provided by owner. If Main lines or lift stations are to be will be operated and maintained by the city. Owner will provide easements where required. Secondary connections will be installed and maintained by the landowner.

(3) Electric will be provided by City of Green Cove Springs. The owner will provide main electric conduits and transformer pads. City of Green Cove will own and maintain primary main electric lines. City of Green Cove will install main wire and transformers. Secondary electrical to the buildings will be installed, maintained, and owned by landowner.
(a). Owner will use architectural street lights which are similar to those in Spring Park in all public areas. All lights in rear of industrial building will be LED standard light poles.

G. Wetlands

Wetlands will be permitted according to local, state and federal requirements.

H. Site Plan and Modifications

The site plan approved as part of this PUD is conceptual. Final design is subject to change through final site planning, engineering design, permitting and other regulatory approvals. Deviations from the Ordinance creating the PUD may be approved by the Planning and Zoning Board. Any use not specifically listed, but similar to uses outline in the Land Development Code, in the alternative, may be permitted by the City Council. PUD amendments, including deviations or rezonings, may be sought for individual parcels or access points within the PUD. All development improvements are subject to appropriate local, State and Federal permitting agencies.

IV. DEVELOPMENT PLAN APPROVAL

With each request for certification of substantial compliance with this PUD, a preliminary development plan shall be submitted to the City of Green Cove Springs identifying all the existing and proposed uses within the Property and showing the general layout of the overall Property.

V. JUSTIFICATION FOR THE PLANNED UNIT DEVELOPMENT CLASSICATION FOR THIS PROJECT

The proposed project is compatible with the City of Green Cove Springs Comprehensive Plan. The proposed development will be beneficial to the surrounding neighborhood and community as it set forth a specific design plan. The design and layout of the PUD accomplishes the following:

A. Provide a more desirable development than would be possible through the strict application of the requirements of the Land Development Regulations;

B. More efficient use of land.

C. Provide for the redevelopment of the subject property that will continue to maintain architectural consistency with the surrounding area and improve the characteristics of the surrounding area specifically development to the immediate south.

D. Proposes land uses and intensities which will meet applicable planning goals.

VI. SUCCESSORS IN TITLE

All successors in title to the Property or any portion of the Property shall be bound to all development standards and conditions of the PUD, as contained herein and in the Ordinance approving the same.

VII. STATEMENTS

A. How does the proposed PUD differ from the usual application of the Zoning Code?

The site is designed around and along existing architectural and existing land uses. It provides architectural controls for future development.

B. Describe the intent for the continued operation and maintenance of those areas and functions described herein and facilities which are not to be provided, operated or maintained by the City.

An association document will be provided outlining maintenance.

C. A preliminary association outline and examples is included and part of this PUD

ENTRANCE

FUTURE BIG BOX AND RETAIL

M-1 WAREHOUSE

OUTSIDE STORAGE

RAIL SPURS

OUTSIDE STORAGE

M-2 INDUSTRIAL

EXISTING RETENTION

COMMERCIAL DEVELOPMENT AREA

M-1 WAREHOUSE

ENTRANCES

COMMERCIAL DEVELOPMENT AREA

NEW MAIN RETENTION AREA 1- BORE EACH

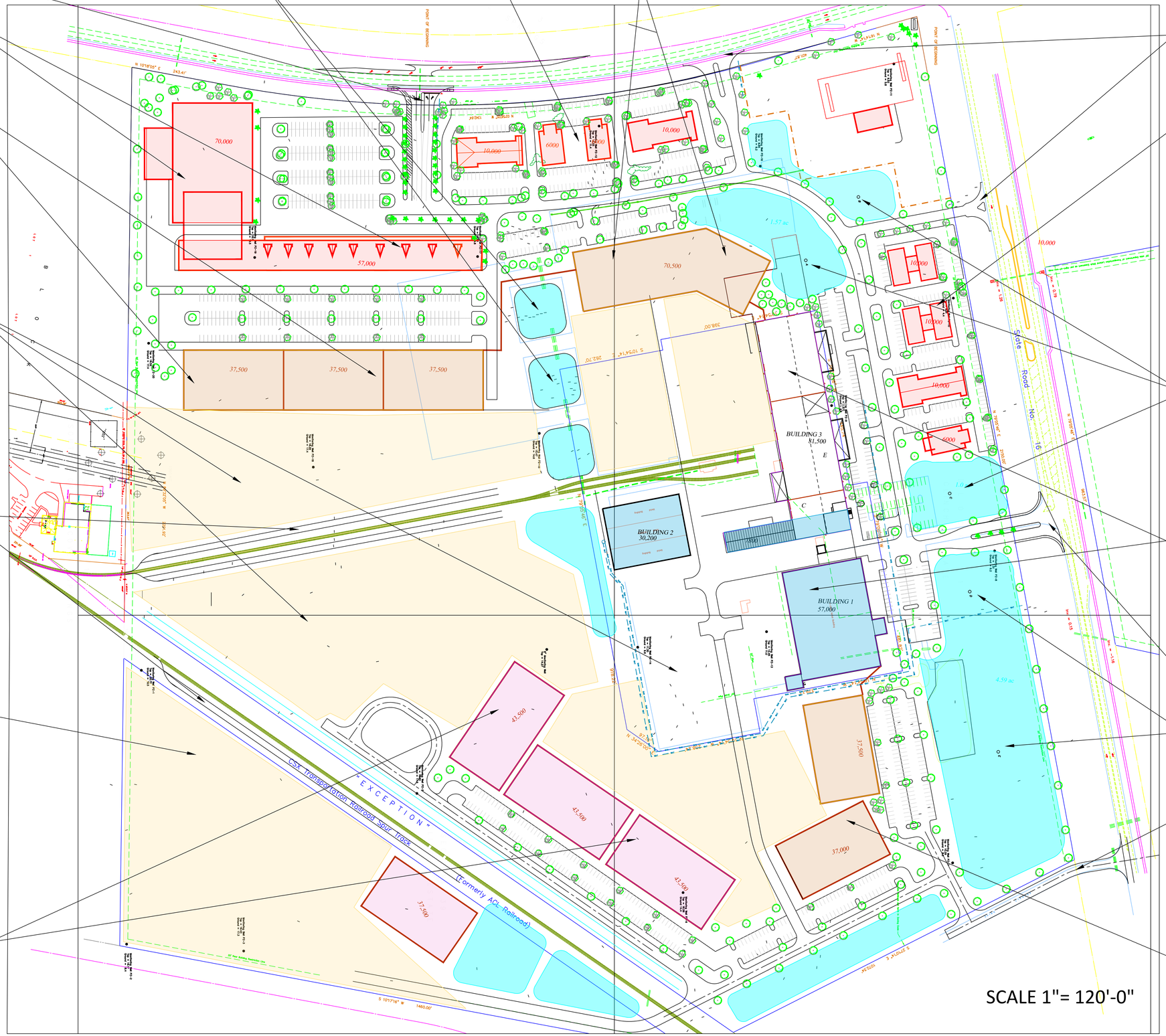
M-2 INDUSTRIAL

ENTRANCE

NEW MAIN RETENTION AREA 2- BORES

ENTRANCE

M-1 WAREHOUSE



CYPRESS MANAGEMENT AND DESIGN
P.O. BOX 8880 FLEMING ISLAND, FL. 32006
904-759-9576---- SITEOPT@BELLSOUTH.NET

DATE	REVISIONS
DATE 12-14-2023	XXX
DATE 4-10-2024	

17-16 COMMERCE PARK
PRELIMINARY MASTER
SITE PLAN

DATE 4-1-2024
DRAWN BY
CHKD. BY
JOB NO.

KELLY W HARTWIG
LA 1252

SHT. LC-1.0

AREA FOR COMMERCIAL BUILDINGS

AREA FOR COMMERCIAL - OR INDUSTRIAL BUILDINGS WHICH WILL ACT AS SCREEN TO ANY STORAGE TO REAR OF PROPERTY

AREA FOR COMMERCIAL - OR INDUSTRIAL SITES WHICH MAY HAVE OUTSIDE STORAGE NEEDS OR RAIL ACCESS

COMMERCIAL C-2

THESE AREAS USED AS FUTURE BUILDING AREAS COMMERCIAL OR LIGHT INDUSTRIAL BUILDINGS OR LARGE SCREENS FOR ANY INDUSTRIAL DEVELOPMENT

PARCEL 1 REZONE FROM C-2 TO M-2 INDUSTRIAL 15.00 ACRES

THESE AREAS USED AS FUTURE M-1 DEVELEPMENT BUT MAY HAVE M-2 WITH SPECIAL EXCEPTION FRONT RUNNER BOATS AND SEA RISE CONCRETE DISCUSS APPROVAL WILL BE DEPENDENT ON SITE PLAN SUBMITTAL

THESE AREAS USED AS FUTURE BUILDING AREAS COMMERCIAL OR LIGHT INDUSTRIAL BUILDINGS OR LARGE SCREENS FOR ANY INDUSTRIAL DEVELOPMENT

" E X C E P T I O N "

CSX Transportation Railroad Spur Track

(Formerly ACL Railroad)

State Road No. 16

THIS IS A PRELIMINARY REVIEW OF BUILDING AREAS
ALL FINAL BUILDING AREAS AND TYPES WILL BE SUBMITTED
AS SITE PLAN REVIEWS

SCALE 1"= 120'-0"

CYPRESS MANAGEMENT AND DESIGN
P.O. BOX 8880 FLEMING ISLAND, FL. 32006
904-759-9576---- SITEOPT@BELLSOUTH.NET

REVISIONS	DATE
XXX	
REVISION#1	DATE#1
4-10-2024	

17-16 COMMERCE PARK
PRELIMINARY DEVELOPMENT PLAN

DATE 4-1-2024
DRAWN BY
CHKD. BY
JOB NO.

KELLY W HARTWIG
LA 1252

SHT. LC-1.1

TRY AND DEVELOP A NEW M-1 BUILDING TO SCREEN OUTSIDE ACTIVITY- THIS IS A MAJOR COMPONENT OF OUR PHASING PLAN- PHASE 2-3 BUT IT WILL BE BASED ON TENANT NEEDS

INSTALL ENTRANCES AREAS
PHASE 2

BEGIN COMMERCIAL CONSTRUCTION
PHASE 4

MASS GRADING- INSTALL BASE RETENTION AREAS
GRADE REMAINING COMMERCIAL AREA
PHASE 2- (UPON ACCEPTABLE PERMITS)

EXISTING BUILDING 3- TO BE RENOVATED
IN PHASE 1
SEE BUILDING PHASING DRAWING LC-2.1

EXISTING LARGE SEWER PUMP STATION

THIS STATION WILL BE EVALUATED TO DETERMINE:
SIZE AND VOLUME - EXISTING USE
CAPACITY FOR FUTURE USE
SIZE OF PUMPS AND DISCHARGE
PHASE 1

BUILDING 1- EXISTING METAL BUILDING-MANUFACTURING
CERTIFICATE OF OCCUPANCY GRANTED FOR FRONT RUNNER BOATS

DEVELOP TENANT FOR USE OF
EXISTING RAIL SPUR LINES
PHASE 4

PHASE 3 OR 4- DEVELOP INDUSTRIAL SITE WHICH
INCORPORATES IMPERVIOUS CAP OVER
ENVIRONMENTAL AREAS

CYPRESS MANAGEMENT
AND DESIGN
P.O. BOX 8880 FLEMING ISLAND, FL. 32006
904-759-9576---- SITEOPT@BELLSOUTH.NET

REVISIONS
XXX

DATE
DATE 4-10-2024

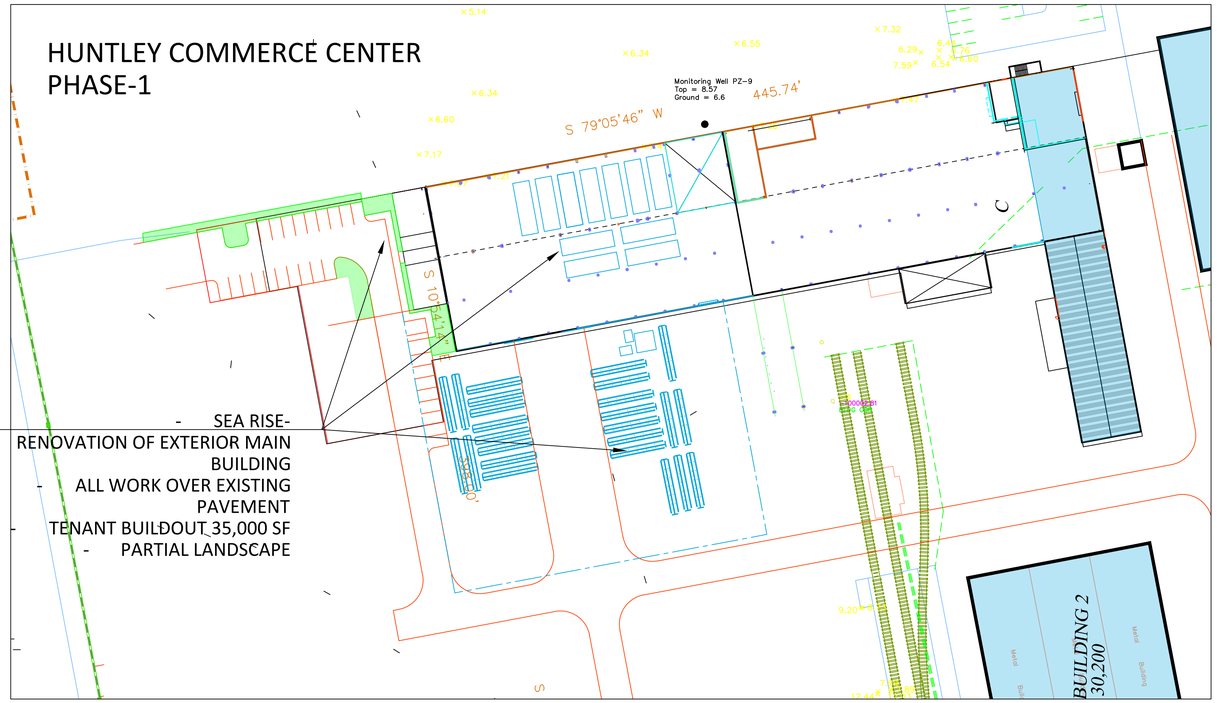
HUNTLEY COMMERCE PARK
SITE PHASING PLAN

DATE 11-12--2023
DRAWN BY
CHKD. BY
JOB NO.

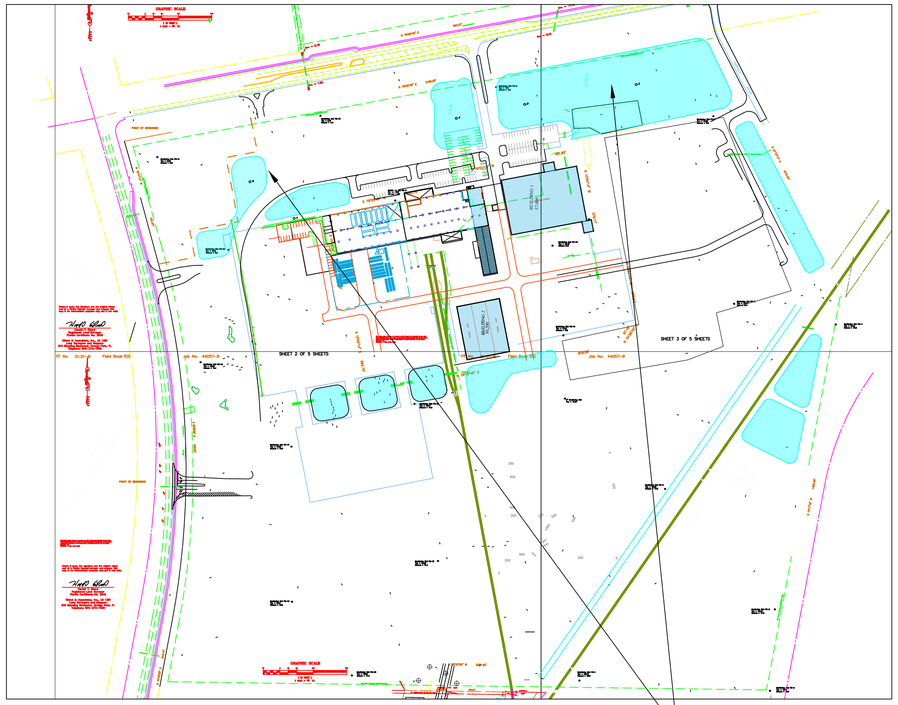
KELLY W HARTWIG
LA 1252

SHT. LC-2.0

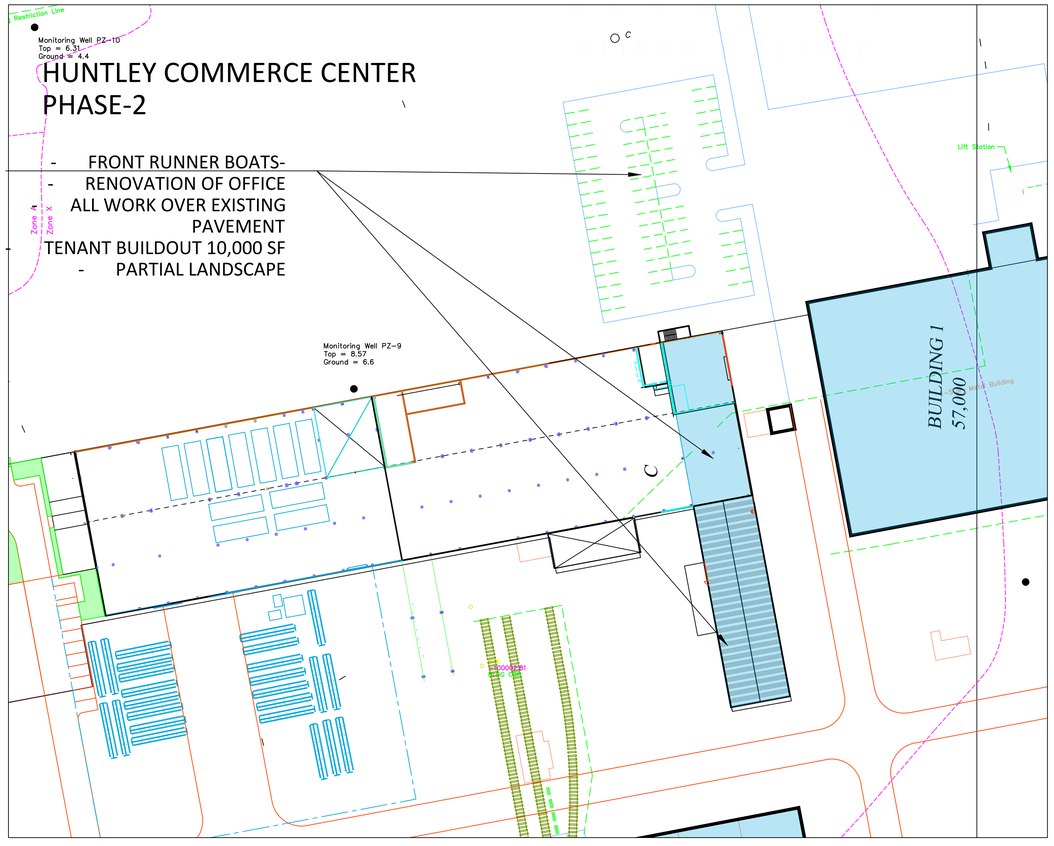
HUNTLEY COMMERCE CENTER PHASE-1



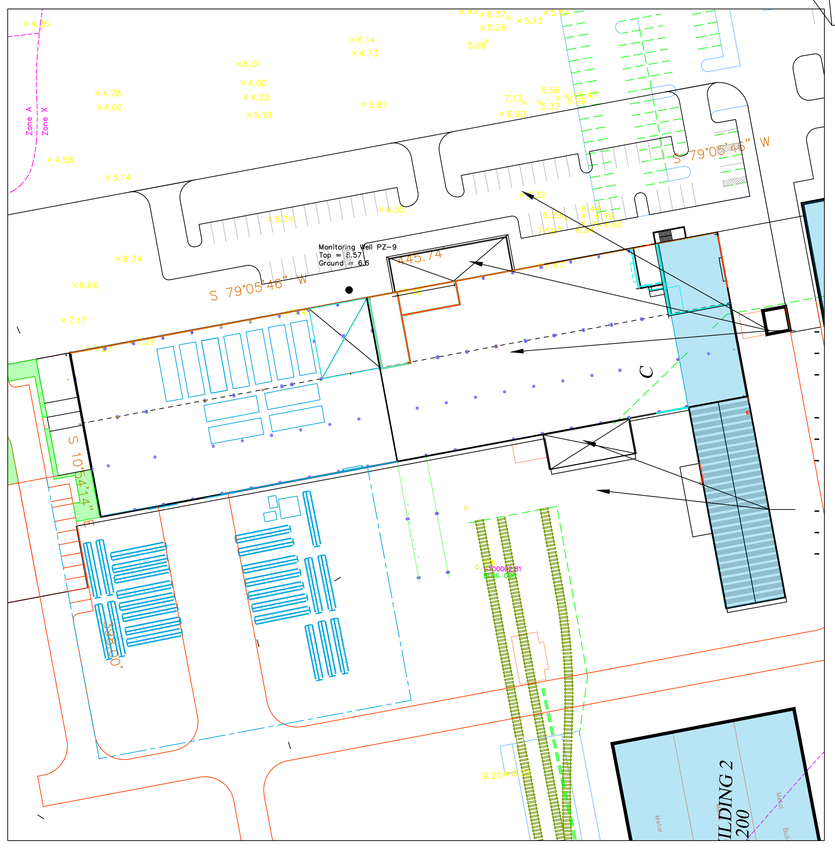
- SEA RISE-
- RENOVATION OF EXTERIOR MAIN BUILDING
- ALL WORK OVER EXISTING PAVEMENT
- TENANT BUILDOUT 35,000 SF
- PARTIAL LANDSCAPE



HUNTLEY COMMERCE CENTER PHASE-2



- FRONT RUNNER BOATS-
- RENOVATION OF OFFICE
- ALL WORK OVER EXISTING PAVEMENT
- TENANT BUILDOUT 10,000 SF
- PARTIAL LANDSCAPE



- MASTER STORM WATER PONDS
- OVERALL SITE GRADING
- CONVEYANCE SYSTEM FOR NEXT PHASE- CONSTRUCTION
- NEW FDOT ENTRANCES

HUNTLEY COMMERCE CENTER PHASE-3-OPTIONS

NEW TENANT-
NEW OFFICE- EXTENSION
EXPANDED- RENOVATED PARKING LOT
TENANT BUILDOUT
30,000-SF
PARTIAL LANDSCAPE

RENOVATION INTERIOR TOWER
NEW OFFICE- EXTENSION

30' 15' 0 30' 60'
SCALE IN FEET
1" = 30'

CYPRESS MANAGEMENT AND DESIGN
P.O. BOX 8880 FLEMING ISLAND, FL. 32006
904-759-9576------ SITEOPT@BELLSOUTH.NET

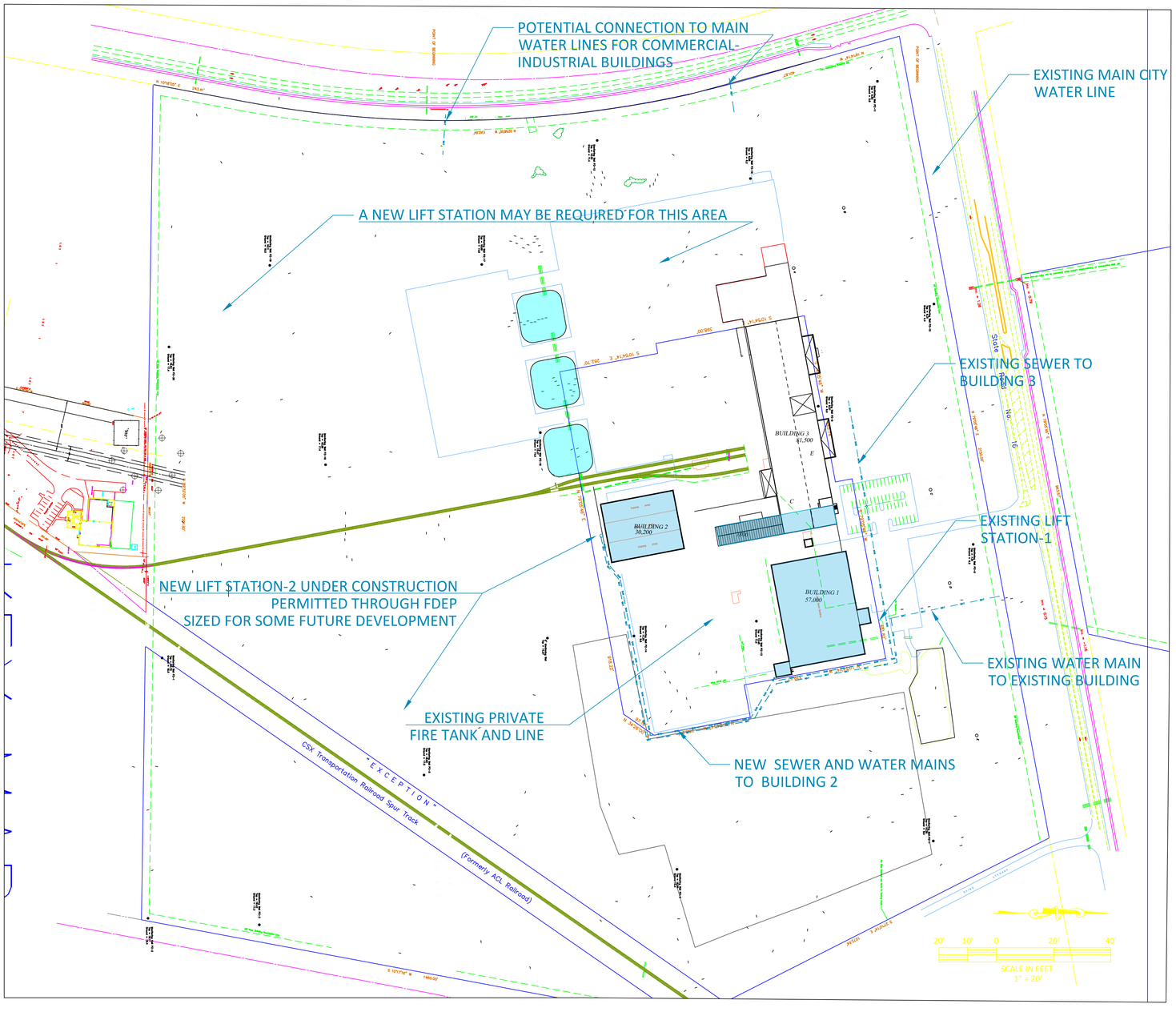
REVISIONS	DATE
XXX	
SITE PLAN REVISIONS	5-17-2023
	4-10-2024

HUNTLEY COMMERCE CENTER
PRELIMINARY PHASING PLAN
PRELIMINARY

DATE 4-1-2024
DRAWN BY
CHKD. BY
JOB NO.

KELLY W HARTWIG
LA 1252

SHT. LC-2.1



STEP 1-
A COMPLETE EVALUATION OF THE EXISTING SEWER LIFT STATION WILL BE UNDERTAKING TO DETERMINE ITS TOTAL CAPACITY AND ITS CURRENT USE

STEP 2- A EVALUATION OF LIFT STATION -2 WILL BE COMPLETED TO DETERMINE ITS TOTAL CAPACITY

ALL NEW PROJECTS WILL BE EVALUATED AND UTILITY SERVICES WILL BE DESIGNED TO:
UTILIZE EXISTING CITY UTILITY'S

ELECTRIC WILL BE INSTALLED PER NATIONAL ELECTRIC CODE AND ANY CITY CODE

ELECTRIC UTILITY INSTALLATION BY CITY WILL BE SUBJECT TO STANDARD CIAC PROVISIONS AS OUTLINED IN CITY CODE

ALL LIFT STATIONS AND FORCE MAINS AT THIS POINT WILL BE OWNED AND MAINTAINED BY OWNER

BACKFLOW PREVENTIONS WILL BE INSTALLED PER CODE ON THE INTERIOR OF SITE AND SCREENED FROM US 17 AND SR. 16

A UTILITY EASEMENT FOR A EXISTING 8" PVC PIPE CONNECTING TO THE PROPERTY TO SR 16 WILL BE OUTLINED AND BECOME PART OF PLAT FOR THIS PROJECT.

CYPRESS MANAGEMENT AND DESIGN
P.O. BOX 8880 FLEMING ISLAND, FL. 32006
904-759-9576 ---- SITEOPT@BELLSOUTH.NET

REVISIONS	DATE
XXX	
SITE PLAN REVISIONS	5-17-2023
	4-10-2024

HUNTLEY COMMERCE CENTER
PRELIMINARY UTILITY PLAN

DATE 4-1-2024
DRAWN BY
CHKD. BY
JOB NO.

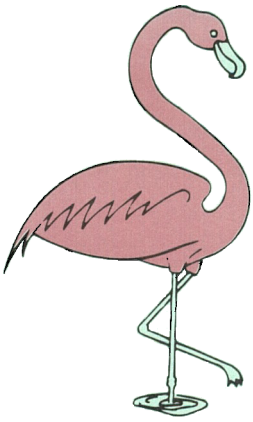
KELLY W HARTWIG
LA 1252

SHT. LC-3.0

HUNTLEY COMMERCIAL CENTER
TRAFFIC STUDY METHODOLOGY

CLAY COUNTY, FLORIDA

February 2024



BUCKHOLZ TRAFFIC

INTRODUCTION

This proposed commercial development will be located in the southeast quadrant of the US 17/SR 16 intersection in Green Cove Springs, Florida. As currently proposed, the development will have two full access driveways (one existing and one new) and one new right-in-right-out only driveway on SR 16 as well as two new full access driveways on US 17 (one opposite the entrance to the shopping center). Exclusive left turn lanes will be provided at all site driveways except driveways limited to right turns. This commercial center is planned for completion and full occupancy in 2035 and is expected to include the following new land uses:

- 119,000 sf of manufacturing space,
- 231,200 sf of retail space (including one gas station with convenience market on southeast corner of the US 17/SR 16 intersection),
- 264,000 sf of warehouse space,
- 130,500 sf of light industrial space, and
- A train-to-truck Transfer Facility.

The proposed site plan is provided in Attachment A. The development will proceed in phases with Phase 1 scheduled for completion by the end of 2025. This Phase is expected to include the following new land uses:

- 81,500 sf of manufacturing space, and
- 25,600 sf of retail space.

The proposed Phase 1 site plan is included in Attachment A. Access for this phase will be provided via the three SR 16 driveways.

The Phase 2 development is scheduled for completion in 2030 and is expected to include the following cumulative new land uses:

- 81,500 sf of manufacturing space
- 56,600 sf of retail space, and
- 70,500 sf of warehouse space
- A train-to-truck Transfer Facility.

The proposed Phase 2 site plan is included in Attachment A. Access for this phase will be provided using the same access scheme as for full development.

The existing full access driveway on SR 16 currently provides access to a boat manufacturing facility which will remain in place. The facility occupies two existing buildings (Buildings 1 and 2) that total 87,200 sf in size. The third existing building (Building 3) is 81,500 sf in size. This building will be renovated, and its square footage is included in the future manufacturing space listed above. US 17 (S. Orange Avenue) is a four-lane divided urban principal arterial with an FDOT access management classification of 3 and a posted speed limit of 45 mph in the vicinity of the site. SR 16 (Leonard C. Taylor Parkway) is also a four-lane divided urban principal arterial in the vicinity of the site with an FDOT access management classification of 3 and a posted speed limit of 45 mph.

STUDY AREA

The study area will consist of all roadway segments where site traffic represents at least 5% of the maximum service volume for the adopted level of service. An estimated pre-model trip distribution will be used to test the 5% criterion. Major intersections within these segments and all site driveway intersections will be evaluated.

FUTURE ROADWAY IMPROVEMENTS

The Outer Beltway, which is scheduled for completion in November of 2024, will be included as a future roadway for all three phases. Other future roadway improvements, as reflected in the NERPM-AB areawide model, will be included in the future road network.

EXISTING TRAFFIC VOLUMES

During February of 2024 weekday AM and PM peak period manual turning movement counts will be conducted at the existing intersections listed above - as well as at the SR 16/Existing Site Entrance intersection. The data will be recorded at 15-minute intervals and will include a separate tabulation for trucks and pedestrians. Weekday AM and PM peak hours for analysis will be identified from a review of the peak period counts. Counts will be adjusted to the peak season using the latest set of FDOT seasonal adjustment factors for Clay County.

SITE TRIP GENERATION

Trip generation calculations will be carried out using the 11th edition of ITE's Trip Generation Manual and referencing land use codes 110 (General Light Industrial), 140 (Manufacturing), 150 (Warehousing) and 820 (Shopping Center). Attached Tables 1 through 5 provide the trip generation calculations for the full development. Trip generation for the Train-to-Truck Transfer Facility was calculated using reasonable trip generation rates based on truck and employee activity. No internal trip-making reduction will be made although a reduction for retail pass-by traffic will be taken for road segments and off-site intersections. The expected total daily trip generation for the new development is 13,634 (6817 entering and 6817 exiting) with 516 trips occurring during the AM peak hour (366 entering and 150 exiting) and 1241 occurring during the PM peak hour (548 entering and 693 exiting). Expected truck trip generation will also be developed using available ITE trip rates.

SITE TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

Weekday AM and PM peak hour site trips will be directionally distributed and assigned to the future road network based on the results of an areawide model run supplemented by engineering judgment. Trucks will be distributed separately and a map provide showing expected truck volumes.

DIVERTED TRAFFIC

Opening of the Outer Beltway can be expected to significantly alter traffic patterns and traffic volumes in the study area. The NERPM-AB areawide model will be used to estimate this diversion as well as the level of anticipated traffic growth through the development of growth-diversion factors for each intersection turning movement. Future model years include 2030 and 2045. 2035 growth-diversion factors will be identified via interpolation.

FUTURE TRAFFIC VOLUMES

The expected weekday AM and PM peak hour background (No Build) traffic volumes and total (Build) traffic volumes using road segments and intersections in the study area will be calculated for 2025 (Phase 1), 2030 (Phase 2) and 2035 (Full Build-Out). These volumes will be used in subsequent analyses. Traffic associated with the planned Rookery development will be included in future No Build traffic.

TURN LANE ANALYSIS

A formal analysis will be conducted to determine if an exclusive right turn lane is warranted on US 17 or SR 16 at any of the Site Drives under Build conditions. The methodology contained in NCHRP Report 457 will be used to conduct the right turn lane evaluation.

ROADWAY LINK ANALYSIS

The expected level of service for each roadway segment will be evaluated under 2025, 2030 and 2035 No Build and Build conditions using FDOT Generalized Level of Service Tables.

INTERSECTION CAPACITY ANALYSIS

Signalized intersections will be analyzed under both Existing and Build conditions using the operational control methodology contained in the 2024 version of the Highway Capacity Software. Unsignalized intersections will be analyzed under both Existing, No Build and Build conditions using the two-way stop control methodology contained in the 2024 version of the Highway Capacity Software. The effect of truck traffic will be included in the analysis.

ACCESS MANAGEMENT EVALUATION

FDOT access management guidelines will be evaluated based on the proposed driveway and median opening locations.

TRAIN CROSSING REVIEW

Determine the number of trains expected to use the at-grade crossing on US 17 and the expected delay to US 17 traffic.

RECOMMENDED IMPROVEMENTS

Recommended mainline and intersection improvements for each of the three development phases will be identified.

FINAL REPORT

A signed and sealed traffic engineering report will be submitted.

TABLE 1

TRIP GENERATION CALCULATIONS

WAREHOUSING

Land Use Code 150

T = Number of Vehicle Trip Ends

Size of Building = 264,000 gsf (X = 264)

TIME PERIOD	TOTAL TRIP GENERATION EQUATION	TOTAL TRIP ENDS	PERCENT ENTERING	PERCENT EXITING	TOTAL TRIP ENDS ENTERING	TOTAL TRIP ENDS EXITING
AVERAGE WEEKDAY						
Daily	T = 1.58 (X) + 38.29	456	50%	50%	228	228
AM Peak Hour	T = 0.12 (X) + 23.62	55	77%	23%	42	13
PM Peak Hour	T = 0.12 (X) + 26.48	58	28%	72%	16	42

SOURCE: Institute of Transportation Engineers, "Trip Generation", 11th Edition (2021)

BUCKHOLZ TRAFFIC

TABLE 2

TRIP GENERATION CALCULATIONS

GENERAL LIGHT INDUSTRIAL

Land Use Code 110

T = Number of Vehicle Trip Ends

Size of Building = 130,500 gsf (X = 130.5)

TIME PERIOD	TOTAL TRIP GENERATION EQUATION	TOTAL TRIP ENDS	PERCENT ENTERING	PERCENT EXITING	TOTAL TRIP ENDS ENTERING	TOTAL TRIP ENDS EXITING
WEEKDAY						
Daily	T = 3.76 (X) + 50.47	542	50%	50%	271	271
AM Peak Hour	T = 0.68 (X) + 3.81	93	88%	12%	82	11
PM Peak Hour	Ln(T) = 0.72 Ln(X) + 0.38	49	14%	86%	7	42

SOURCE: Institute of Transportation Engineers, "Trip Generation", 11th Edition (2021)

BUCKHOLZ TRAFFIC

TABLE 3

TRIP GENERATION CALCULATIONS

MANUFACTURING

Land Use Code 140

T = Number of Vehicle Trip Ends

Size of Buildings = 119,000 gsf (X = 119.0 kgsf)

TIME PERIOD	TOTAL TRIP GENERATION EQUATION	TOTAL TRIP ENDS	PERCENT ENTERING	PERCENT EXITING	TOTAL TRIP ENDS ENTERING	TOTAL TRIP ENDS EXITING
WEEKDAY						
Daily	T = 3.77 (X) + 201.98	650	50%	50%	325	325
AM Peak Hour	T = 0.61 (X) + 9.54	82	76%	24%	62	20
PM Peak Hour	T = 0.87 (X) - 17.50	86	31%	69%	27	59

SOURCE: Institute of Transportation Engineers, "Trip Generation", 11th Edition (2021)

BUCKHOLZ TRAFFIC

TABLE 4
TRIP GENERATION CALCULATIONS

SHOPPING CENTER (> 150,000 gsf)

Land Use Code 820
T = Number of Vehicle Trip Ends
Size of Buildings = 231,200 gsf -----> X= 231.2

TIME PERIOD	TOTAL TRIP GENERATION EQUATION	TOTAL TRIP ENDS	PERCENT ENTERING	PERCENT EXITING	TOTAL TRIP ENDS ENTERING	TOTAL TRIP ENDS EXITING
AVERAGE WEEKDAY						
Daily	T = 26.11 (X) + 5863.73	11900	50%	50%	5950	5950
AM Peak Hour	T = 0.59 (X) + 133.55	270	62%	38%	167	103
PM Peak Hour	Ln(T) = 0.72 Ln(X) + 3.02	1032	48%	52%	495	537

SOURCE: Institute of Transportation Engineers, "Trip Generation", 11th Edition (2021)

NEW TRIPS

TIME PERIOD	PERCENT NEW TRIPS	NEW TRIP ENDS	PERCENT ENTERING	PERCENT EXITING	NEW TRIP ENDS ENTERING	NEW TRIP ENDS EXITING
AVERAGE WEEKDAY						
Daily	**71.0%**	8450	50%	50%	4225	4225
AM Peak Hour	**71.0%**	192	62%	38%	119	73
PM Peak Hour	**71.0%**	733	48%	52%	352	381

SOURCE: ITE, "Trip Generation", 11th Edition, Excel Spreadsheet (LUC 820), < 300,000 gsf

Estimated Value

BUCKHOLZ TRAFFIC

TABLE 5

TRIP GENERATION CALCULATIONS

TRAIN-TO-TRUCK TRANSFER FACILITY

T = Number of Vehicle Trip Ends

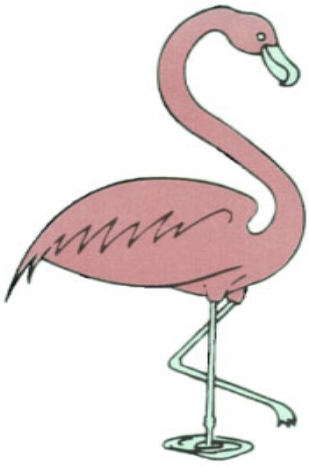
Size of Buildings = 119,000 gsf (X = 119.0 kgsf)

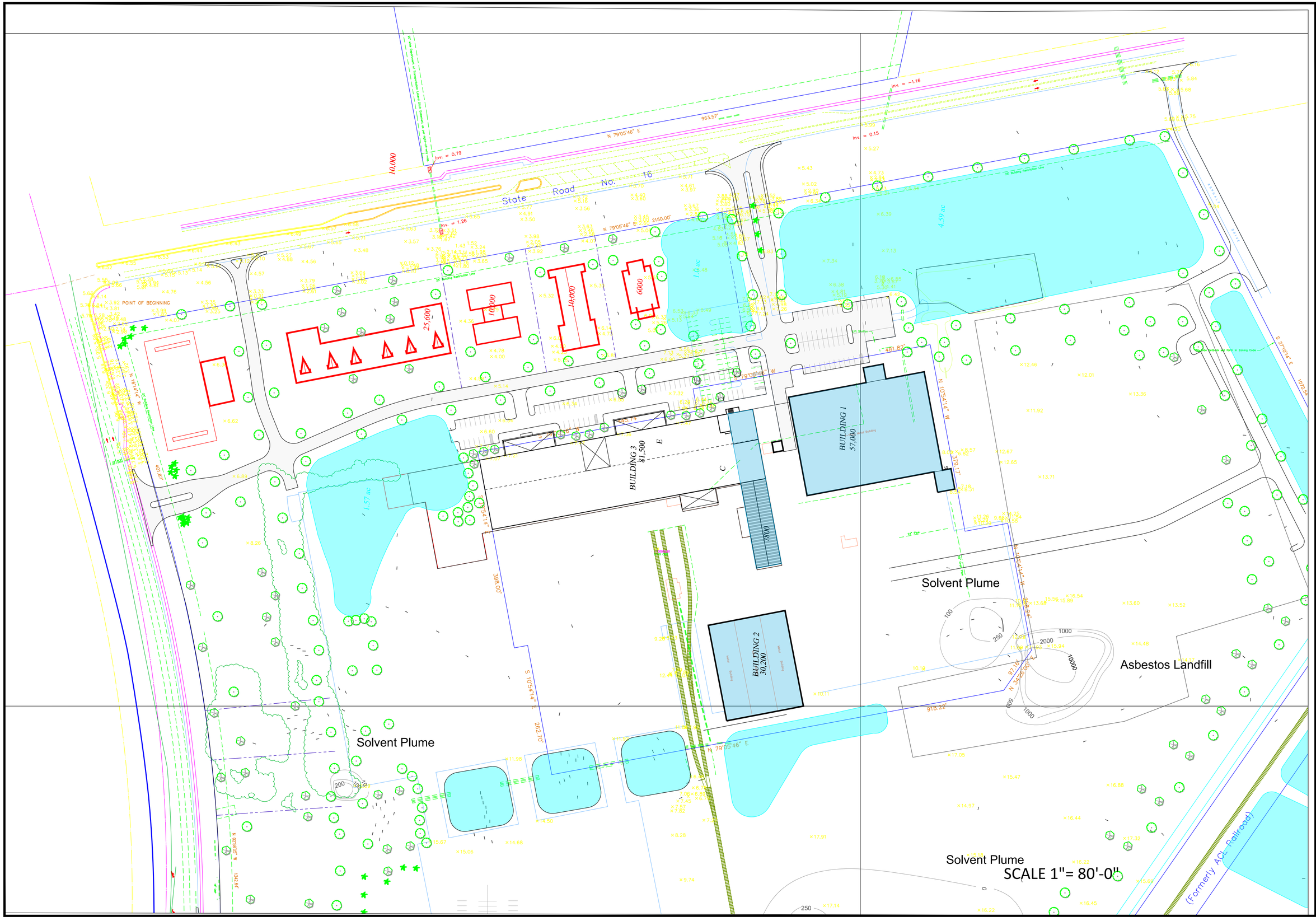
TIME PERIOD	TRIP GENERATION	TRIP ENDS	TRIP ENDS ENTERING	TRIP ENDS EXITING
WEEKDAY				
Daily	10 Employees (10 x 1.5)	**86**	15	15
	24 Trucks		24	24
	Miscellaneous		4	4
			43	**43**
AM Peak Hour	10 Employees	**16**	10	0
	24 Trucks (24 x 10%)		2	2
	Miscellaneous		1	1
			13	**3**
PM Peak Hour	10 Employees	**16**	0	10
	24 Trucks (24 x 10%)		2	2
	Miscellaneous		1	1
			3	**13**

SOURCE: Estimated From Client-Supplied Actvitty Data
TRUCKS - Average 10 per day, Maximum 24 per day
EMPLOYEES - 5 to 10
Use Max Values
Assume 10% Miscellaneous Trips

BUCKHOLZ TRAFFIC

ATTACHMENT A





CYPRESS MANAGEMENT AND DESIGN
P.O. BOX 8880 FLEMING ISLAND, FL. 32006
904-759-9576--- SITEOPT@BELLSOUTH.NET

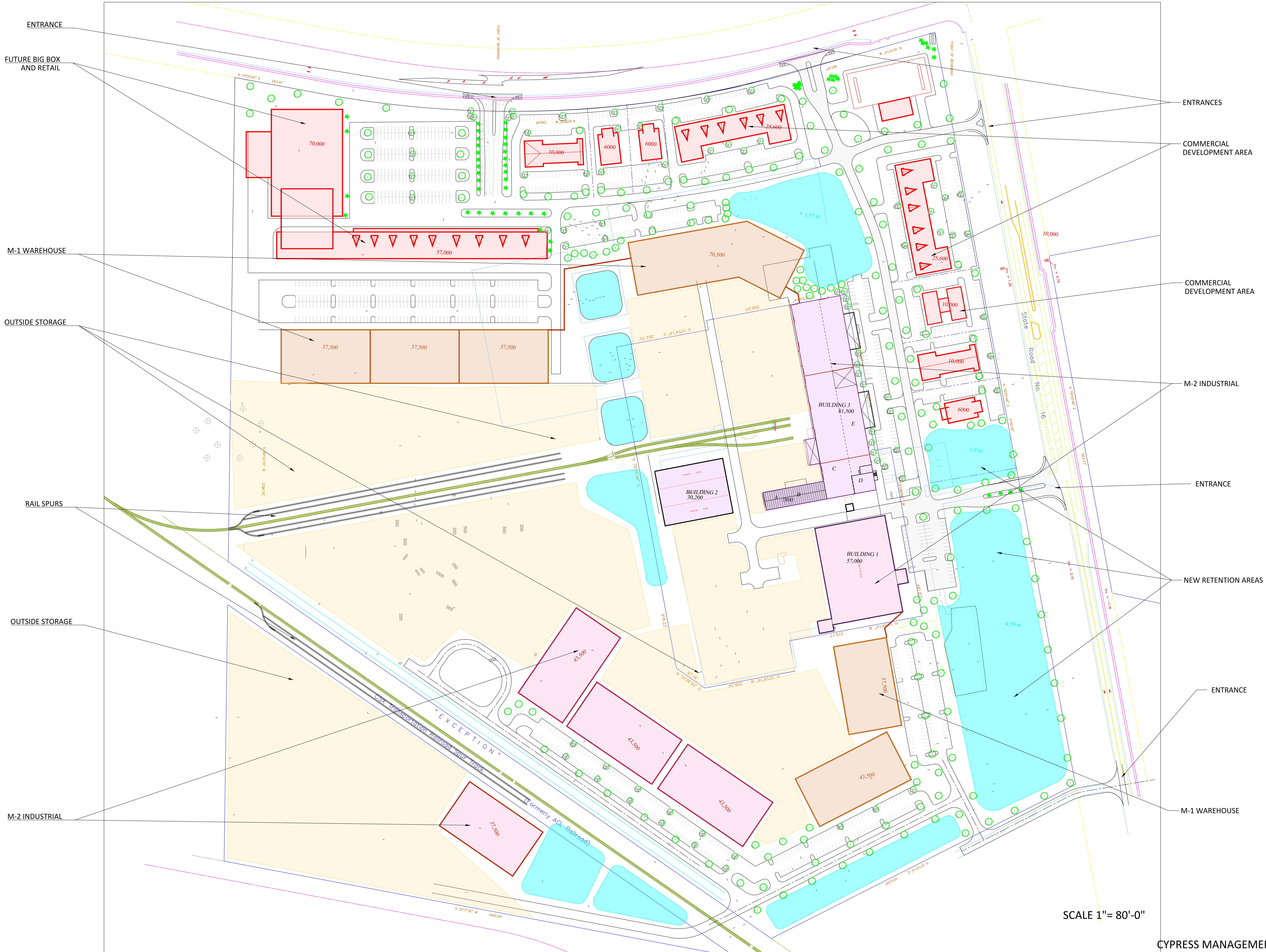
REVISIONS		
DATE	REVISION#	
DATE	REV	
6-9-2023	XXX	

17-16 COMMERCE PARK
PRELIMINARY MASTER
SITE PLAN

DATE 5-9--2023
DRAWN BY
CHKD. BY
JOB NO.

KELLY W HARTWIG
LA 1252

SHT. LC-3.1



CYPRESS MANAGEMENT AND DESIGN
P.O. BOX 8880 FLEMING ISLAND, FL. 32006
904-759-9576---- SITEOPT@BELLSOUTH.NET

CHW Professional Consultants

PLANNING.DESIGN.SURVEYING.ENGINEERING.CONSTRUCTION

February 28, 2024

Michael Daniels, AICP
Planning and Zoning Director
City of Green Cove Springs, FL

RE: Huntley Commercial Center TIA Methodology Comments

Dear Michael,

Please see comments below regarding the methodology letter.

1) Please provide the study area roadway segments based on the net new trips that exceed 5% of the service volume in accordance with the City of Green Cove Springs Traffic Impact Analysis Guidelines. Include all signalized intersections in the study area that are along the impacted roadway segments. It is acceptable to estimate the trip distribution, without running the transportation model.

2) Based on the concept plan it appears that a gas station is anticipated at the intersection of SR 16/US 17. Please update the trip generation with this land use. If other land uses are known or anticipated such as fast food or fast casual restaurant, please include these land uses in the trip generation.

3) Left turn lane warrant analyses at the site access intersections are not mentioned. As discussed during the methodology meeting, please note that the left-turn lanes at all access intersections will be recommended or state that left turn lane warrant analyses will be provided and note the method that will be used.

4) Please note in the Intersection Capacity Analysis that the background (no-build) intersection conditions will be analyzed.

5) Please note that committed trips from the Rookery will be included in the analysis.

6) Please include the truck traffic for the industrial land uses in the trip generation. Ensure that truck volumes both project and background, are applied to the intersection analysis. If the project truck distribution is expected to differ significantly from the passenger car trip distribution, please include a separate truck trip distribution. Please provide a map to illustrate the estimated buildout truck volumes along the study area segments.

Sincerely,

FDOT Comments Regarding the Huntley Commerce Park Traffic Study

3/20/24

1. US 17 and SR 16 are indicated as Access Class 3 roadways. The proposed full median openings along US 17 and SR 16 would not meet the FDOT Access Management full median opening spacing standard of 2,640 feet.
2. Consider including US 17 roadway segment and signalized intersections from SR 16 N. (Ferris Street) to Governor's Creek Bridge in the study area to capture any potential impacts to the US 17 roadway in the Green Cove Springs urban area.
3. Due to the amount of truck traffic projected to be generated by this site, consider changing the study area to include roadways where truck traffic is increased by 5% or more.
4. Consider including SR 16 N. (Ferris Street) roadway segment west of US 17 in the study area.
5. Consider including SR 16 (Shands Bridge) segment to evaluate any potential increase in traffic volumes.
6. Include US 17 and Cove Plaza Shopping Mall driveway intersection for data collection and analysis.
7. Since it is unable to verify the formula used to determine trips generated by the Train to Truck Transfer facility, consider providing a reference site to provide justification for the formula.
8. Please check that the pass-by trips reduction for the retail is less than 10% of the adjacent road traffic for daily, AM peak hour and PM peak hour periods (maximum should be 10% of the adjacent road traffic per FDOT Site Impact Handbook)

Huntley Traffic Methodology Study Comments

Planning Comments

1. Pay traffic study application fee.
2. Provide Existing Conditions Inventory and Analysis table
    a. Include adopted LOS standard, LOS capacity, existing capacity, current traffic counts, background traffic volumes, number of lanes, FDOT group classifications and existing v/c ratios for each roadway segment.
3. Provide analysis of existing and projected train traffic in terms of impact on traffic delay on US 17.

Planning & Zoning
321 Walnut Street, Green Cove Springs, FL 32043 904-297-7051

APPLICATION DEFICIENCY NOTICE

DATE: April 18, 2024

APPLICATION REFERENCE: Cypress Management and Design, PUD-24-001 - 965 LEONARD C TAYLOR PKY

Dear Applicant:

The items you submitted for the above-referenced permit have been reviewed by the City representatives responsible for approving different aspects of your application. Attached to this notice is a list of comments in response to the materials submitted.

Each of the items on the attached list require responses and revised materials be created and re-submitted before any further action can be taken on this permit. A hold is placed on this application and the time it takes you to respond to this list of items is excluded in calculating permit processing timeframes. Once corrected and/or new materials are submitted, your permit processing timeframe will begin again.

A complete response to each of the items on the attached list is required to be submitted ***at the same time.*** As applicable, a complete response is required to include:

1. A written document addressing all of your responses (one paper copy).
2. New and/or updated technical reports (one paper copy).
3. New and/or corrected plans. Please note that revisions to previously submitted plans are required to be identified by clouding, must be noted in a revision list on the plan sheet(s), and are required to be incorporated into a full set of revised plans (one paper copy).
4. A transmittal that itemizes everything being resubmitted (one paper copy).
5. A copy of the entire resubmittal must be provided electronically (either on a thumb drive or uploaded via the permit portal).

Your response must be received by our Department within 180 days of the date noted on this letter to avoid this application being withdrawn from consideration. Withdrawn application must be resubmitted as new applications requiring repayment of all applicable fees and processing requirements.

Thank you for your anticipated cooperation in submitting the items requested by staff. We look forward to working with you as this application continues to be processed.

APPLICATION DEFICIENCY NOTICE

DATE: April 18, 2024

APPLICATION REFERENCE: Cypress Management and Design, PUD-24-001

PLANNING DIVISION COMMENTS - contact Michael Daniels (mdaniels@greencovesprings.com)

1. Provide 6' sidewalk along SR 16 frontage prior to completion of phase 1 construction.
2. Provide a note that there shall be an internal sidewalk connection within the development that provides connectivity between the commercial and industrial areas and to US 17 and SR 16.
3. Section III. B. of the PUD written description should be tied to the architectural guide—differentiate between comments required by the Association vs the City. See attached comments provided with architectural guide.
4. Traffic Methodology including access locations shall be approved as part of the traffic methodology prior to PUD approval.

APPLICATION DEFICIENCY NOTICE

DATE: April 18, 2024

APPLICATION REFERENCE: Cypress Management and Design, PUD-24-001

PUBLIC WORKS DIVISION COMMENTS - contact Mike Null (mnull@greencovesprings.com)

PUD-24-001 Site Plan.pdf

1. Electric Utility installation by City will be subject to standard CIAC provisions as outlined in City Code.
2. Water lines are incorrectly shown, they are on the east side of US 17 and north side of SR 16.
3. Maintenance of the water and sewer utilities within private property shall be installed and maintained at the property owner's expense.
4. Utility drawing does not match the Master Plan.
5. Section 1.D.5 identifies a commercial access for phase 1 but this is not shown on the phasing plan or Master Plan

FOR OFFICE USE ONLY

P Z File #_____

Application Fee:_____

Filing Date: _____Acceptance Date:_____

Review Date: SRDT_____ P & Z _____ CC _____

PUD Rezoning Application

A. PROJECT

1. Project Name: Huntley Commerce Center-or 17-16 Commerce Center
2. Address of Subject Property: Leonard C Taylor Parkway
3. Parcel ID Number(s): 38-06-26-016451-000-00 and 016451-003-00
4. Existing Use of Property: Commercial
5. Future Land Use Map Designation : Pending- Industrial- Commercial
6. Existing Zoning Designation: Mixed Use Commercial
7. Proposed Zoning Designation: PUD
8. Acreage: 112

B. APPLICANT

1. Applicant's Status ☐Owner (title holder) ☐Agent
2. Name of Applicant(s) or Contact Person(s): Kelly Hartwig Title:_____

   Company (if applicable): Cypress Management and Design

   Mailing address: PO Box 8880

   City: Fleming Island State: Florida ZIP: 32006

   Telephone: (___)_____ FAX: (___)_____ e-mail: Siteopt@bellsouth.net

3. If the applicant is agent for the property owner*

   Name of Owner (titleholder):): HLM Investments

   Mailing address: 1890 Kingsley ave.

   City: Orange Park State: Florida ZIP: 32073

   Telephone: (___)_____ FAX: (___)_____ e-mail:_____

* Must provide executed Property Owner Affidavit authorizing the agent to act on behalf of the property owner.

C. ADDITIONAL INFORMATION

1. Is there any additional contact for sale of, or options to purchase, the subject property?

   ☐Yes ☐No If yes, list names of all parties involved:

   If yes, is the contract/option contingent or absolute?
   ☐Contingent ☐Absolute

D. ATTACHMENTS

1. Statement of proposed change, including a map showing the proposed zoning change and zoning designations on surrounding properties
2. A current aerial map (Maybe obtained from the Clay County Property Appraiser.)
3. Plat of the property (Maybe obtained from the Clay County Property Appraiser.)
4. Legal description with tax parcel number.
5. Boundary survey
6. Warranty Deed or the other proof of ownership
7. Site Plan
8. Written Description
9. Binding Letter
10. Fee.

    a. $2,000 plus $20 per acre

    b. All applications are subject 10% administrative fee and must pay the cost of postage, signs, advertisements and the fee for any outside consultants.

    No application shall be accepted for processing until the required application fee is paid in full by the applicant. Any fees necessary for technical review or additional reviews of the application by a consultant will be billed to the applicant at the rate of the reviewing entity. The invoice shall be paid in full prior to any action of any kind on the development application.

All 10 attachments are required for a complete application. A completeness review of the application will be conducted within five (5) business days of receipt. If the application is determined to be incomplete, the application will be returned to the applicant.

I/We certify and acknowledge that the information contained herein is true and correct to the best of my/our knowledge:

Signature of Applicant

Kelly Hartwig
Typed or printed name and title of applicant

12/14/2024
Date

Signature of Co-applicant

Typed or printed name of co-applicant

Date

State of Florida County of Clay

The foregoing application is acknowledged before me this 14 day of February, 2024 by Kelly Hartwig, who is/are personally known to me, or who has/have produced FLDL#H632519594690 as identification.

NOTARY SEAL

CHELSEA SEARLES
Notary Public - State of Florida
Commission # HH 297359
My Comm. Expires Aug 3, 2026
Bonded through National Notary Assn.

Signature of Notary Public, State of Florida

ORDINANCE NO. O-10-2024

AN ORDINANCE OF THE CITY COUNCIL OF GREEN COVE SPRINGS, FLORIDA REZONING ±112 ACRES OF PROPERTY LOCATED ON THE SOUTHEAST CORNER OF US 17 AND SR 16, IDENTIFIED AS TAX ID NUMBER 016451-003-00 AND 016451-000-00, MORE PARTICULARLY DESCRIBED BY EXHIBIT "A", FROM C-2, GENERAL COMMERCIAL TO PUD, PLANNED UNIT DEVELOPMENT.

WHEREAS, the City has received a request to rezone the subject parcel from C-2 General Commercial Residential to PUD, Planned Unit Development and

WHEREAS, the City has the authority pursuant to its home rule and other statutory powers to rezone properties within the City; and

WHEREAS, a duly advertised public hearing was conducted on the proposed rezoning on March 26, 2024 by the Planning and Zoning Board, sitting as the Local Planning Agency (LPA), and the LPA reviewed and considered comments received during the public hearing concerning the application and made its recommendation for approval to the City Council; and,

WHEREAS, the City Council considered the recommendations of the LPA at a duly advertised public hearing on March 26, 2024 provided for and received public participation; and,

WHEREAS, the City Council has determined and found said application for the amendment, to be consistent with the City of Green Cove Springs Comprehensive Plan and Land Development Regulations; and,

WHEREAS, for reasons set forth in this Ordinance that is hereby adopted and incorporated as findings of fact, that the Green Cove Springs City Council finds and declares that the enactment of this amendment is in the furtherance of the public health, safety, morals, order, comfort, convenience, appearance, prosperity, or general welfare.

NOW THEREFORE, BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF GREEN COVE SPRINGS, FLORIDA AS FOLLOWS:

Section 1. Zoning Map Amended. The Zoning Map is hereby amended for the following property from C-2 General Commercial to Planned Unit Development (PUD).

Tax Parcel ID# 016451-003-00 and 016451-00-00, in accordance with the legal description found in Exhibit "A" and map found in Exhibit "B" attached hereto.

Section 2. Ordinance to be Construed Liberally. This ordinance shall be liberally construed in order to effectively carry out the purposes hereof which are deemed to be in the best interest of the public health, safety and welfare of the citizens and residents of Green Cove Springs, Florida.

Section 3. Repealing Clause. All ordinance or parts of ordinances in conflict herewith are, to the extent of the conflict, hereby repealed.

Section 4. Severability. It is the declared intent of the City Council of the City of Green Cove Springs that, if any section, sentence, clause, phrase, or provision of this ordinance is for any reason held or declared to be unconstitutional, void, or inoperative by any court or agency of competent jurisdiction, such holding of invalidity or unconstitutionality shall not affect the remaining provisions of this ordinance, and the remainder of the ordinance after the exclusions of such part or parts shall be deemed to be valid.

Section 5. Effective Date. This Ordinance shall become effective upon passage.

INTRODUCED AND APPROVED AS TO FORM ONLY ON THE FIRST READING BY THE CITY COUNCIL OF THE CITY OF GREEN COVE SPRINGS, FLORIDA, ON THIS 2nd DAY OF APRIL 2024.

CITY OF GREEN COVE SPRINGS, FLORIDA

_____
Constance Butler, Mayor

ATTEST:

_____
Erin West, City Clerk

PASSED ON SECOND AND FINAL READING BY THE CITY COUNCIL OF THE CITY OF GREEN COVE SPRINGS, FLORIDA, THIS 16TH DAY OF APRIL 2024

CITY OF GREEN COVE SPRINGS, FLORIDA

Constance Butler, Mayor

ATTEST:

Erin West, City Clerk

APPROVED AS TO FORM:

L. J. Arnold, III, City Attorney

EXHIBIT A

Legal Discription

Parcel "A"

A tract of land in the G.I.F. Clark Grant, Section 38, Township 6 South, Range 26 East, Clay County, Florida, being a part of Section 39 and 46 and part of Lots 2, 3, 4, 5 and 6, Block 1, Gould T. Butlers survey of the Clinch Estate, according to plat recorded in Plat Book 1, pages 31 through 34 of the public records of said county, together with part of Block 3, and Lots 2, 3, 4, 5, 7, 8, 9, 10, 11, 12 and part of Lots 1, 6 and 13, Block 4, and part of Lots 5, 6, 7, 8, 9 and 10, Block 1, according to plat of South Green Cove Springs, recorded in said records in Deed Book "Z", page 748, also part of Lightwood Avenue, part of River Road, part of Plametto Street and part of Chestnut Avenue, as shown on both of said plats, said parcel being more particularly described as follows:

Begin at the intersection of the southerly line of State Road No. 16 with the easterly line of State Road No. 15; thence on the southerly line of State Road No. 16, North 79 degrees 05 minutes 46 seconds East, 2,150.00 feet; thence South 27 degrees 10 minutes 14 seconds East 1,072.54 feet; thence South 10 degrees 17 minutes 16 seconds West, 1,460.00 feet; thence North 89 degrees 32 minutes 05 seconds West, 2,201.92 feet; thence on the easterly line of State Road No. 15, North 10 degrees 18 minutes 05 seconds East, 243.41 feet; thence northerly 1,354.72 feet along the arc of a curve concave to the west and having a radius of 2,924.79 feet, said arc being a portion of the easterly line of State Road No. 15; thence continue along last said easterly line, North 16 degrees 14 minutes 14 seconds West, 401.87 feet to the point of beginning.

EXCEPTING THE FOLLOWING:

(1) A strip of land 100 feet wide lying 50 feet on either side of the centerline line of ACL Railroad spur tracks as presently located across the southeast portion of said Parcel "A".

(2) A parcel of land in Lot 13, Block 4, South Green Cove Springs, comprising approximately one acres, as more particularly described in deed recorded in Deed Book 48, page 456, EXCEPT that portion lying within the right-of-way of U.S. Highway No. 17.

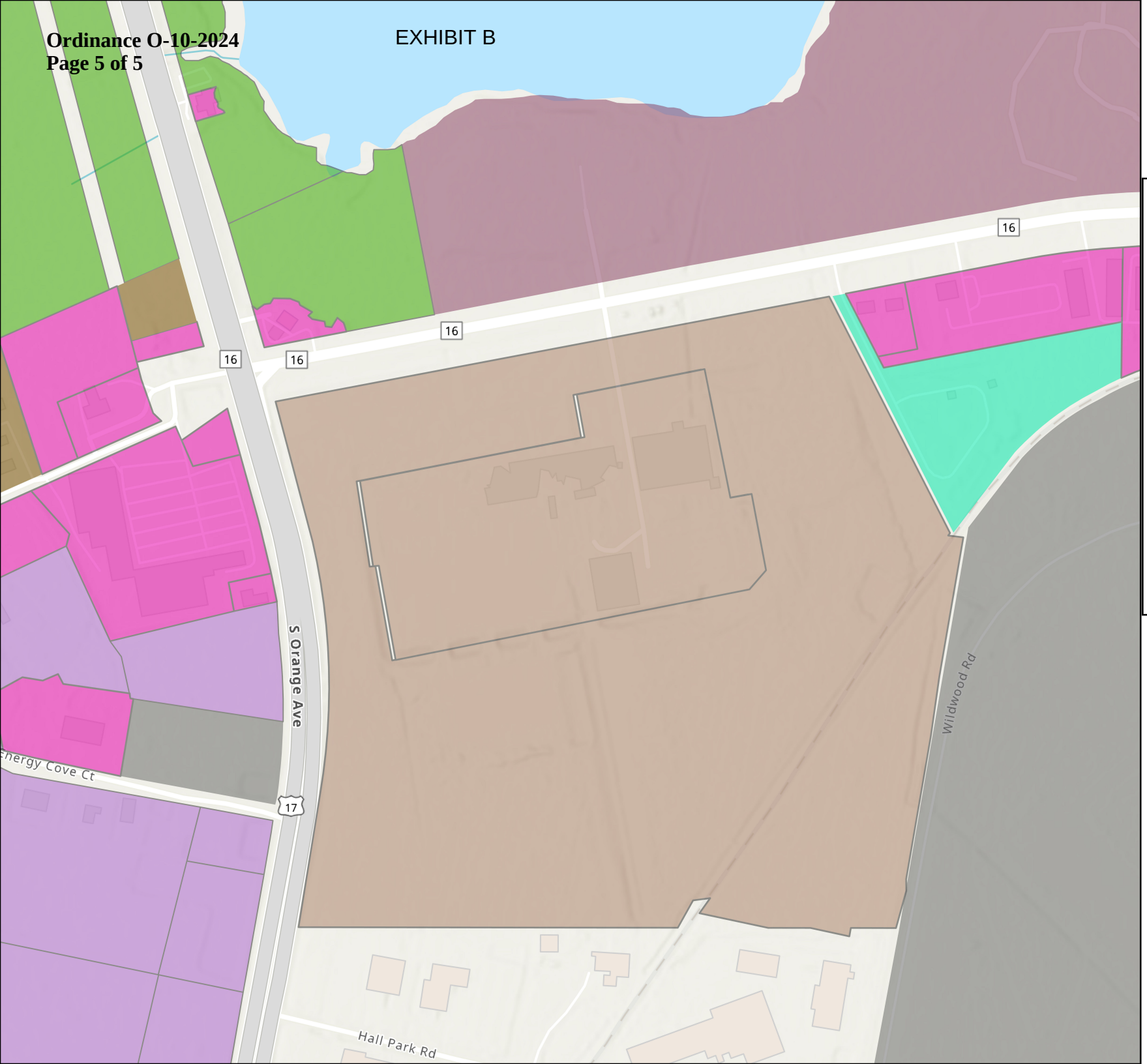
Parcel "C"

From the intersection of railroad on Spring Avenue with Green Cove Walkill and West Tocoi Road in the center of road, North 10 degrees East, 1672 feet; thence from center of Road South 80 degrees East to the beginning corner, 40 feet; thence continue South 80 degrees East, 210 feet; thence North 10 degrees East, 210 Feet; thence North 80 degrees West, 210 feet; thence South 10 degrees West, 210 feet to the beginning corner, containing one acre in Block 4, South Green Cove Springs, as recorded in the public records of Clay County, Florida, Excepting therefrom that portion lying within the right-of-way of U.S. Highway No. 17.

For: HKM Investments, LLC

Parcel Number- 38-06-26-016451-000-00 and 06451-003-00

EXHIBIT B



Zoning

R1	Low Density Residential
R2	Medium Density Residential
R3	High Density Residential
RRF	Residential Riverfront
PUD	Planned Unit Development
RPO	Residential Professional Office
C1	Commercial Medium Intensity
C2	Commercial High Intensity
CBD	Central Business District
GCC	Gateway Corridor Commercial
GCN	Gateway Corridor Neighborhood
GCR	Gateway Corridor Residential
M-2	Industrial District
M-1	Light Industrial District
MUH	C-2/M-2 - Mixed Use
INS	Institutional
RC	Recreation

STAFF REPORT

CITY OF GREEN COVE SPRINGS, FLORIDA

TO: Planning and Zoning Commission **MEETING DATE:** April 23, 2024

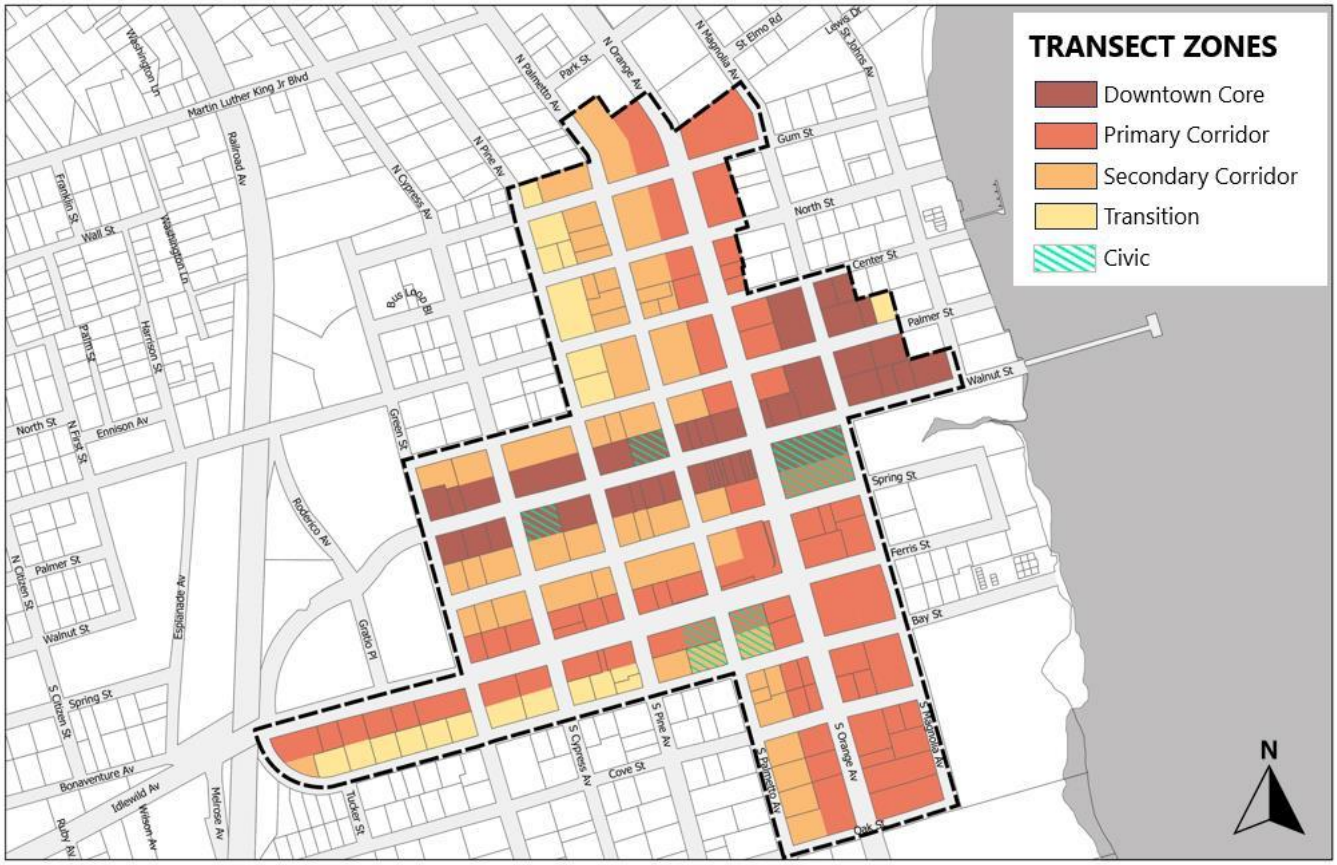
FROM: Michael Daniels, AICP, Development Services Director

SUBJECT: Ordinance O-13-2024 Form-Based Code Companion Ordinance

BACKGROUND

On April 16, 2024, the City Council adopted a Form Based Code for the downtown area. The purpose of the Form Based Code is to establish regulations in the downtown area based upon existing downtown street and block pattern and establishing standards for promoting development with a variety of uses, appropriate design, and public benefit.

Approval of the plan resulted in the elimination of the Central Business Zoning District and change the existing zoning for all of the properties within the boundary set below to Form Based Code.



With the elimination of the Central Business District (CBD) it is now necessary for staff to amend the existing city code to eliminate all references to the CBD and add, where appropriate the Form Based Code (FBC).

These sections are identified below:

- CHAPTER 78, SECTION 78-109, Permitted Zoning Districts for Transient Merchants;
- CHAPTER 101
  - SECTION 101-5, Revising the definition for mixed use building and adding a definition for Parkway;
  - SECTION 101-356 revising the definition of a major site development plan;
- CHAPTER 113
  - SECTION 113-4 adding the maximum impervious area per each FBC transect into the impervious table and eliminating the CBD
  - 113-243 revising the definition of "commercial" to include the FBC zoning district and eliminating the CBD zoning district;
- CHAPTER 117,
  - SECTION 117-2: revising the land use compatibility table to include FBC and eliminate CBD
  - SECTION 117-3: revising the use chart to eliminate CBD uses and add uses for each FBC transect;
  - SECTION 117-6: revising the Lot Requirements Table to eliminate CBD and add the FBC transects;
  - SECTION 117-792: revising Alcoholic Beverage Requirements to eliminate CBD and add the FBC transects;
  - SECTION 117-815 ROW Encroachments for Awnings: to eliminate CBD and add the FBC transects;
  - SECTION 117-816: ROW Encroachments for Signage: to eliminate CBD and add the FBC transects

- CHAPTER 125
  - SECTION 125-2: revising the Sign Definitions by removing definition of Central Business District
  - SECTION 125-14 BY REMOVING AND REPLACING "CENTRAL BUSINESS DISTRICT" AND "CBD" WITH "FORM BASED CODE" AND "FBC" regarding the special conditions for signs.

Attachments include:

- Ordinance O-13-2024

RECOMMENDATION

Motion to recommend approval to City Council of Ordinance O-13-2024, regarding amending applicable sections of City Code Chapter 78, 101, 113, 117, 125 as described herein.

ORDINANCE NO. O-13-2024

AN ORDINANCE OF THE CITY OF GREEN COVE SPRINGS, FLORIDA, AMENDING CHAPTER 78, SECTION 78-109, CHAPTER 113, SECTION 113-243, CHAPTER 117, SECTION 2, 792, 815 AND 816, AND CHAPTER 125 SECTIONS 2 AND 14 BY REMOVING AND REPLACING "CENTRAL BUSINESS DISTRICT" AND "CBD" WITH "FORM BASED CODE" AND "FBC"; AMENDING CHAPTER 101, SECTION 101-5 BY REVISING THE DEFINITION FOR MIXED USE BUILDING AND ADDING A DEFINITION FOR PARKWAY; AMENDING CHAPTER 101, SECTION 101-356 BY REVISING DESIGNATION OF A MAJOR SITE DEVELOPMENT PLAN; AMENDING CHAPTER 113 SECTION 113-4 BY ADDING MAXIMUM ALLOWED IMPERVIOUS AREA FOR FORM BASED CODE TRANSECT ZONES; AMENDING CHAPTER 117, 117-2 (C) BY ADDING FORM BASED CODE AS AN ALLOWABLE ZONING DISTRICT UNDER THE DOWNTOWN FUTURE LAND USE DESIGNATION; AMENDING CHAPTER 117, 117-3 BY ADDING COLUMNS FOR FORM BASED CODE TRANSECT ZONES IN THE PERMITTED USE TABLE; AMENDING CHAPTER 117, 117-6 BY ADDING COLUMNS FOR FORM BASED CODE TRANSECT ZONES IN THE LOT REQUIREMENTS TABLE TO SHOW FORM AND REMOVING CBD PROVIDING FOR CONFLICTS, SEVERABILITY AND SETTING AN EFFECTIVE DATE.

WHEREAS, the City desires to bring a cohesive design in the downtown core that meets the needs of residents and businesses; and

WHEREAS, the Form Based Code addresses the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks; and

WHEREAS, the creation of the Form Based Code Zoning District would allow for these design regulations to be clear defined; and

WHEREAS, the Green Cove Springs City Council has determined that this amendment is consistent with the Comprehensive Plan, is in the best interest of the public, and will promote the public health, safety, and welfare of the city.

NOW THEREFORE BE IT ENACTED BY THE CITY COUNCIL OF CITY OF GREEN COVE SPRINGS, FLORIDA, AS FOLLOWS:

Section 1. That Chapter 78, Section 78-109 shall be amended to read as follows:

Sec. 78-109. Permit—Required; grounds for denial, suspension, or revocation.

(a) No transient merchant or mobile food vendor shall engage in any of the business regulated by this article without first obtaining a permit from the department.

(b) *Permitted zoning districts.* Transient merchants and mobile food are a permitted use, in the C-1, C-2, GCN, GCC, ~~CBD~~ FBC, INS, M-1, or M-2 zoning districts, or in on-street parking areas within the ~~CBD~~ FBC zoning district subject to staff approval.

(c) *Grounds for denial.* The director shall deny a permit under this article whenever the director finds that the applicant or its principal officers:

(1) Are under 18 years of age.

(2) Have been found in noncompliance by the code enforcement special magistrate as related to this article or any similar ordinance or had a permit revoked under this article or any other similar ordinance of this or any other county or city in the state.

(3) Do not have confirmed permission in writing from the owner of the property to operate the business on the property for which the application is being made.

(4) Have requested a permit which would violate the requirements established in division 2 or division 3, below as applicable.

(5) Do not have all governmental permits for operation of the business.

(d) *Grounds for suspension or revocation.* In addition to any other penalty, the license may be suspended or revoked for:

(1) Violation of a provision of this article or violation of any provisions of the Florida Statutes relating to deceptive trade practices, including, but not limited to, F.S. ch. 501, pt. II (the Little FTC Act).

(2) Filing a false or misleading statement in an application for a permit.

(3) Conviction for:

a. Fraud or misrepresentation in the sale of merchandise.

b. A deceptive trade practice.

(4) A change in any of the conditions or circumstances under which the permit was originally issued which would constitute grounds for denial of the permit.

(5) Failure to possess a valid and required license from the state.

Section 2. That Chapter 113, Section 113-243 shall be amended to read as follows:

Sec. 113-243. Definitions.

The following words, terms, and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Berm means manmade earth contoured to form a mound above the general elevation of the adjacent ground or surface and designed to provide visual interest, screen undesirable view and/or decrease noise.

Buffer means a combination of physical space and vertical elements such as plants, berms, fences, or walls, whose purpose is to separate and screen incompatible land uses from one another.

Caliper means the diameter of a tree measured at breast height (DBH) which is approximately four and one-half feet above the ground.

Canopy or shade tree means any tree grown specifically for its shade. The term "canopy or shade tree" usually applies to large trees with spreading canopies. Canopy trees normally grow to a minimum overall height of 30 feet and an average mature crown spread of 25 feet. Oaks, maples, ashes, lindens, and elms are examples canopy/shade trees. Canopy trees shall be a minimum of 2.5 inches caliper DBH. Listed in IFAS as "Trees—Large" (https://ffl.ifas.ufl.edu/apps/plants/).

Clear trunk means the distance between the top of the root ball and the point of the trunk where lateral branching begins.

Commercial means all uses in RPO, ~~CBD~~ FBC, GCN, GCC, C-1, and C-2 zoning districts and commercial development in a PUD zoning district.

Common area means that area which will be maintained by a homeowner's association, city service area, or other form of cooperative organization.

Dangerous tree means any tree of any species which poses an immediate threat to persons or property due to disease, age, or mechanical injury. This can include damage from storms or other environmental factors.

Decorative turf means turf used purely for ornamental purposes having no use other than aesthetics.

Drip line means the vertical line running through the outermost portion of the tree crown projected vertically to the ground.

Florida Friendly Landscaping means quality landscapes that conserve water, protect the environment, are adaptable to local conditions, and are drought tolerant. The principles of such landscaping are the right plant in the right place, efficient watering, appropriate fertilization, mulching, attracting wildlife, responsible management of yard pests, recycling yard waste, reduction of storm runoff, and waterfront protection. Additional components include practices such as landscape planning and design, soil analysis, the appropriate use of solid waste compost, minimizing the use of irrigation, and proper maintenance.

Fully shielded lighting means lighting constructed in such a manner that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal. Such fixtures usually have a flat, horizontally oriented lens and opaque (usually metal) sides. They are often described as shoebox luminaries if the luminaire has a predominantly rectangular form. Fixtures that either have reflecting surfaces or lenses (clear or prismatic) located below the lamp and visible from the side or above and fixtures that can be mounted such that the shielding is ineffective are not considered fully shielded lighting.

Grasses listed in IFAS, (https://ffl.ifas.ufl.edu/apps/plants/) as "Turfgrasses."

Groundcover means a low-growing plant, including turf grass, that, by the nature of its growth characteristics, completely covers the ground and does not usually exceed two feet in height. Groundcovers are listed in IFAS as "groundcovers."

Hat racking or *topping* means pruning a tree in such a way that the majority of limbs are removed and the tree is left with only a trunk and the stumps of a few primary limbs, with little or no foliage or other trimming or pruning that has the effect of preventing a tree from attaining its natural height and/or shape.

Hedge means a row of evenly spaced shrubs planted to form a continuous unbroken visual screen.

Immediate danger of collapse means that the tree may already be leaning, with the; surrounding soil heaving, and/or there is a significant likelihood that the tree will topple or otherwise fail and cause damage before a tree removal permit could be obtained through the non-emergency process. "Immediate danger of collapse" does not include hazardous conditions that can be alleviated by pruning or treatment.

Industrial means all uses in M-1 and M-2 zoning districts and all industrial uses in a PUD zoning district.

Invasive species means plants, animals, and other living organisms (e.g., microbes), non-native (or alien) to the ecosystem under consideration and, whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

Landscape means vegetative and inert materials, including, but not limited to, grass, sod, shrubs, vines, hedges, trees, flowers, berms, and complementary structural landscape architectural features such as rocks, fountains, sculpture, decorative walls and tree wells or other hardscape features.

Landscaped area means land area to be provided with landscape.

Landscaped strip or *landscaped island* means required landscaped areas containing ground cover, shrubs, trees and/or other landscape used to divide parking areas into individual bays. Large ornamental listed in IFAS (https://ffl.ifas.ufl.edu/apps/plants/) as "Palms and Palm Like Plants."

Mitigation means the action used by an individual, company or agency to identify and minimize the risks from a proposed action that will reduce its impacts on people, property, and the environment and will restore and retain the biodiversity of the site.

Moisture sensors which means a device which has the ability to shut off an automatic irrigation controller after receiving a determined amount of rainfall.

Mulch means nonliving organic materials such as wood chips that is customarily placed around the base of trees, shrubs, and groundcovers for the purpose of retaining moisture and retarding weed infestation and soil erosion. Also, mulch is used in pathways and play areas.

Native or naturalizing plant species means plant species native to the region or introduced which once established are capable of sustaining growth and reproduction under local climatic conditions, without supplemental watering and enhance habitat for native wildlife.

Nonresidential means, pursuant to land use category headings reflected in Schedule B, Permitted Uses, in these land development regulations, all commercial, transient lodging and entertainment, automotive, miscellaneous business and services, industrial and public/semi-public uses. Ornamental landscape trees, listed in IFAS (https://ffl.ifas.ufl.edu/apps/plants/) as "Trees—Medium."

Parking area means a paved ground surface area used for the temporary parking and maneuvering of vehicles by employees or customers, either for compensation or to provide an accessory service to a commercial, industrial, institutional or residential use.

Paved ground surface area. See section 101-5.

Poodle cut means stripping off the lower branches of a tree and rounding or shearing the ends of the greenery to create an unnatural shape.

Protected area means an existing natural area that has been determined by the City of Green Cove Springs, to be of significant aesthetic, environmental, or monetary value or which affords collective protection for the city from extreme weather events, and has been designated as protected by the city council.

Protected tree means a particularly fine or unusual example of any tree due to its age, size, rarity, environmental or historical value or exceptional aesthetic quality. A tree may also be designated a specimen due to its association with historic events or persons. A specimen tree cannot be of a non-native species, is approved or denied. Designation will be annotated on the title to the property. Reversal of this determination will require action by the city council.

Required landscaped area means any landscaped area required in this Code.

Residential means all uses in R-1, R-2, R-3, and PUD zoning districts; one-family, two-family and multiple-family dwellings.

Shrub means a self-supporting woody species of plant characterized by persistent stems and branches springing from the base. Shrubs and requirements for visual screens listed in IFAS (https://ffl.ifas.ufl.edu/apps/plants/) as "Shrubs—Large" spaced on center per guidance under "appearance."

Tree means a self-supporting woody plant of a species that normally grows to a minimum overall height of 15 feet and has an average mature crown spread greater than 15 feet within the city.

Turf means upper layer of soil bound by grass and plant roots into a thick mat.

Understory, sub-canopy trees means trees which normally grow to a maximum overall height of 15 feet and an average mature crown spread of 15 feet. Understory trees listed in IFAS (https://ffl.ifas.ufl.edu/apps/plants/) as "Trees—Small"

Vehicular circulation area means streets, rights-of-way, access ways, parking spaces, parking, loading, and unloading, and other similar or related functions.

Viable tree is a tree that is in compliance with Florida Friendly Landscaping as provided for zip code 32043 on the Institute of Food and Agricultural Sciences, University of Florida web site, which is capable of growing and developing in its natural form upon completion of development of a site. Trees that are dead, dying, or have their root systems or crowns severely altered during construction or are dangerous because of their growth habits are not a viable tree.

Section 3. That Chapter 117, Section 2 shall be amended to read as follows:

Sec. 117-2. Land use districts, generally.

(a) Land use districts for the city are established in the comprehensive plan, future land use element, including the future land use map of the city comprehensive plan. The land use districts and classifications defined in the future land use element of the city comprehensive plan and delineated on the future land use map are the general determinant of permissible activities in the jurisdiction. Specific determinations on allowable uses on a parcel-by-parcel basis is established in this subpart and delineated on the tables in the applicable district. Allowable uses are shown in articles II through VI of this chapter to correlate individual land use activities with land use classifications included on the future land use map.

(b) The city is divided into the following land use districts:

Downtown	DT
Industrial	IND
Mixed-Use	MU
Mixed-Use Reynolds Park	MURP
Neighborhood	NBHD
Public	PUB

(c) These districts have corresponding zoning categories that are consistent with the future land use and promote the implementation of the comprehensive plan. The planned unit development zoning category (PUD) is an allowable zoning category for all land use districts. The uses allowed in the PUD zoning district must be consistent with the future land use designation, promote the implementation of the comprehensive plan, and meet the requirements for a planned unit development included in this subpart.

Future Land Use and Zoning Capability Table

Neighborhood	Downtown	Mixed Use	MURP	Industrial	Public
R-1	~~CBD~~ FBC	RRF	M-2	C-2	INS
R-2	GCC	RPO		M-1	~~Rec~~ RC
R-3		GCC		M-2	
GCR		GNC			
		C-1			
		C-2			

Section 4. That Chapter 117, Section 117-792 shall be amended to read as follows:

Sec. 117-792. Alcoholic beverages.

(a) *Distance from schools and churches.* No business selling alcoholic beverages for on-premises consumption shall be allowed to operate within the city within 1,000 feet of any established school or church ground.

(b) *Exceptions.* The following shall be allowable exceptions to the above distance limitations:

(1) Businesses licensed and operating closer than 1,000 feet to any established school or church ground as of the effective date of the ordinance from which this subpart is derived shall be exempt from this requirement until such time as the business ceases to operate. No new license will be issued to businesses in the location.

(2) Notwithstanding the foregoing to the contrary,

a. Licensed restaurants holding a state SRX alcoholic beverage license or other type state alcoholic beverage license wherein alcoholic beverage sales comprise less than 50 percent of total sales for any calendar year may be located anywhere within the gateway corridor district (GCD), or within a commercial shopping center under one common ownership in the C-2 zoning district, as described in this subpart, provided it is otherwise allowed and no closer than 200 feet from the nearest church or school ground or is separated from them by a street or highway. Such restaurants shall offer meals at all times that they sell, serve, or allow consumption of alcohol.

b. Within the ~~Central Business District (CBD)~~ Form Based Code area, alcoholic beverages for on-premises consumption are permitted without spacing requirements provided it is otherwise allowed.

(c) *Measurement.* The distance provided for in this section shall be measured by following the shortest route of ordinary pedestrian travel from the main entrance of the church to the main entrance of the business and from the nearest point of a school's grounds to the main entrance of the business.

(d) *Hours of operation.* Alcoholic beverages may be sold, consumed or served within the city by all establishments holding a state beverage license for the location of said establishment, daily, from 7:00 a.m. until the following day at 2:00 a.m.

Section 5. That Chapter 117, Section 117-815 shall be amended to read as follows:

Sec. 117-815. Encroachments, awnings, etc.

This article shall apply to the following zoning districts: ~~central business district~~ form based code. Encroachments into the public right-of-way for awnings, architectural features and decorations may be authorized administratively through a commercial site plan review process to be established by city council resolution and the encroachments whether existing or proposed shall, unless a waiver is granted, comply with the following specific criteria:

(1) The bottom most portion of the encroachment shall be a minimum of eight feet above grade. There is no maximum projection into the right-of-way; however, no encroachment may project within two feet, six inches of that portion of the right-of-way intended for vehicular use.

(2) Building columns or support poles are prohibited from projecting into the right-of-way.

(3) Encroachments shall leave street corners free of obstruction to allow for safe traffic movement and proper placement of utilities.

(4) Lighting underneath encroachments shall be provided and maintained by the property owner and comply with all applicable electrical codes.

(5) If the right-of-way is needed by the city for any reason, the owner shall remove or relocate the encroachment at his expense within 45 business days of written notice by the city.

(6) Temporary holiday decorations may be installed for periods not to exceed 60 continuous days or a total of 60 days in any calendar year. Such decorations may be displayed without the city permitting, but such decorations must not be a safety hazard or interfere with pedestrian traffic. The city may limit the size of the decorations.

(7) A hold harmless agreement in a form acceptable to the city must be signed by the owner and submitted to the city prior to the issuance of permits.

(8) The city council shall establish a permit fee amount and the length and conditions of such permit by resolution.

(9) Existing encroachments shall not be required to pay for a permit or waiver, but shall be required to otherwise comply with this article.

Section 6. That Chapter 117, Section 117-816 shall be amended to read as follows:

Sec. 117-816. Sign encroachments.

(a) ~~*Sign standards.* The sign standards in this section shall apply to new buildings or structures and major renovations or where new signs are erected in the central business district.~~

~~(b) *Central business district.* These sign standards shall be in addition to the sign regulations set forth in this subpart and, when in conflict, these regulations shall apply:~~

~~(1) No signs are to abut the corner of a building. A minimum clearance of ten feet shall be required between such signs. A minimum clearance of four feet shall be maintained between signs on the same facade.~~

~~(2) Pole signs at or near the street rights-of-way are prohibited. It is strongly recommended that all signs be located or placed on building facades. Exceptions to this would include small directional, entrance or exit signs where warranted.~~

~~(3) Awning signs may be located at a tenant's main entry under an awning and is intended for pedestrian communication. The sign must be at a right angle (perpendicular) to the exterior wall. Each tenant is allowed one non-illuminated sign only. The tenant name may be placed on both faces of the sign. The maximum dimensions for the sign are as follows: four feet long, one foot high and six inches thick. The maximum height for the lettering shall be six inches. The bottom of the sign must be a minimum of 7½ feet above the sidewalk.~~

~~(4)~~ Signs and awnings extending into the City right-of-way require a hold harmless agreement in a form acceptable to the city must be signed by the owner and submitted to the city prior to approval and shall meet the requirements set in Section 125 and Chapter 117 Article XIV.

Section 7. That Chapter 125, Section 2 shall be amended to read as follows:

Sec. 125-2. Definitions.

The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Abandoned sign means a sign on which a business advertised on that sign is no longer licensed, no longer has a certificate of occupancy or is no longer an ongoing business at that location for a period of six months.

Accessory sign means a permanent ground or building sign that is permitted under this subpart as incidental to an existing or proposed use of land, identifying or advertising a business, person, activity, goods, product, commodity, service or entertainment located on the premises where the sign is installed and maintained.

Administrator means the city manager or planning and zoning director as his designee.

Advertising message means that copy on a sign describing products or services being offered to the public or describing matters related thereto.

Animated message sign means any sign which includes action or motion, excluding flashing, changing, or indexing, as otherwise defined herein.

Apartment means a building or portion thereof used to provide three or more separate dwelling units which may share means of ingress/egress and other essential facilities and which are usually renter-occupied rather than owner-occupied.

Architectural blade means a roof sign or projecting sign lacking a stand or brace lying entirely above the lowest eaves elevation of the building to which it is attached, and designed as or appearing to comprise a part of the structural facade of the building.

Area of building face or wall means all window and wall area of a building in one plane or elevation.

Area of copy means the entire area contained within a rectangle, the length and width of which correspond to the maximum horizontal length and vertical height of the advertising message, announcement, or decoration on a single face of a fascia or wall sign, exclusive of any illuminated background.

Area of sign means the entire area contained within a rectangle, the length and width of which correspond to the maximum horizontal length and vertical height of the largest single face of the sign, including any frame which forms an integral part of the display, excluding the necessary supports or uprights on which the sign may be placed, and including only one face of any double-faced projecting sign, or the larger face of two poster panels or bulletins installed back-to-back.

Awning means an architectural projection that provides weather protection, identity or decoration and is wholly supported by the building to which it is attached and may also be retractable. An awning is comprised of a lightweight, rigid skeleton structure over which a rigid covering is attached.

Background area means the entire area of a sign on which copy could be placed, as opposed to the copy area, when referred to in connection with fascia or wall signs, computed in the same manner as copy area.

Back-to-back sign means a sign constructed as a single device or on a single sign structure with two faces of substantially the same size oriented in generally opposing directions and at no point more than four feet apart.

Banner sign means any sign composed of lightweight material either enclosed or not enclosed in a rigid frame, secured or mounted so as to allow movement of the sign caused by movement of the atmosphere, possessing characters, letters, illustrations, or ornamentations applied to paper, flexible plastic, or fabric of any kind. National flags and flags of political subdivisions shall not be considered banners for the purpose of this Code.

Bench sign means a sign attached or applied to a seat or bench intended for human occupancy.

Billboard means any off-premises sign, as defined in this chapter, and not otherwise exempted or accepted from regulation hereunder.

Building frontage means the linear length of the side of the principal building on a premise, which faces the frontage of that premises, measured in a straight line, and excluding any canopy or other portion of the building extending beyond its foundation.

Building glass area means an opening in a building, typically, but not necessarily, covered by transparent or translucent material, as a window or glass door. The term "building glass area" includes an open door, passage, window or similar opening in a building.

Building sign means a sign displayed upon or attached to any part of the exterior of a building, including walls, windows, doors, parapets, marquees and roof slopes.

Bunting means any festive decorations made of fabric, or of plastic, paper or even cardboard in imitation of fabric. Typical forms of bunting are strings of colorful triangular flags and lengths of fabric in the colors of national flags gathered and draped into swags or pleated into fan shapes.

Canopy means a permanent roof-like shelter extending from part or all of a building face and constructed in conformity with the standard building code, as adopted by the city council and as amended from time to time.

Canopy sign means a sign painted, sewn or attached to, or supported by, a covered structure, which structure projects horizontally from and is supported, at least in part, by a building.

~~*Central business district* means those parcels designated for commercial use by the designated parcels in section 117-442, geographical boundaries.~~

Changeable copy sign means a sign on which a message is periodically changed mechanically or manually in the field through utilization of mechanical devices, attachable letters, numbers or symbols, or other similar characters or changeable pictorial panels.

Changing sign (automatic) means any sign mechanically, electronically or electrically controlled to display time, temperature, date or public service announcements.

Chief building official means the official or other designated authority appointed by the city manager, or their duly authorized representative, charged with the administration and enforcement of the building code.

Comprehensive design plan means an architectural plan, otherwise complete in building, structural and electrical requirements, which integrates any sign as a part thereof.

Construction sign means any sign located on premises upon which construction is commencing or has commenced pursuant to a valid identification of the contractor, the subcontractors, the owners, the project name, and any financing information.

Copy (permanent and temporary) means the text, graphics and/or logo depicted on a sign face either permanently or otherwise.

Corner premises means a premises with an improved street bordering at least one side and intersecting its frontage street.

Credit card sign means any sign identifying the availability of any credit card services provided on the premises in connection with the commercial.

Detached sign. See *Ground sign.*

Dilapidated sign means any sign which is structurally unsound, fails to meet applicable building, electrical and safety codes, has defective parts or is in need of painting or maintenance.

Directional sign means any sign which serves solely to designate the location of, or directions to, any place or area.

Directly illuminated sign means any sign designed to provide artificial light either through exposed lighting on the sign face or through transparent or translucent material from a light source within the sign.

Double-faced sign means a sign with two or more adjacent sign faces on a single sign structure or separate structures with such faces oriented in one point, and not more than ten feet apart at the nearest point between the two faces. A double-faced sign may be referred to as a side-by-side or stacked sign. A double-faced sign shall constitute one sign.

Electrical sign means any sign containing electrical wiring which is attached or intended to be attached to an electrical energy source.

Electronic sign or reader board means an electrical sign on which stationary symbols are displayed by non-flashing lights or other electrical impulses forming alphabetic or pictorial symbols or representations and periodically changed electronically.

Embellishment means letters, figures, characters, or representations in cut-outs or irregular forms or similar ornaments attached to or superimposed upon the sign.

Erect means to attach, alter, build, construct, reconstruct, convert, enlarge or move any sign, or to paint any wall sign; provided, however, the term "erect" shall not include the simple changing of moveable copy.

Exempt sign means any sign exempted from permit requirements hereunder.

Facade means the entire front of a building, including wall face and parapet, fascia, soffit, mansard, roof, windows, doors and canopy, as would be shown on any complete elevation drawing, which faces the frontage of the premises on which the building is situated. Every building has only one facade.

Fascia sign or wall sign means any sign attached to or erected against a wall of a building, with the face in a parallel plane to the building wall.

Fence sign means that portion of any fence containing a sign face which is attached to the fence; provided that the fence is intended and used primarily to enclose or screen real property, and the fence length is greater than the horizontal dimension of the sign face, including the cabinet or any structure in which the sign is located.

Flag means a flexible, graphic device representing a government, business or other identifiable entity.

Flashing sign means any illuminated sign on which the artificial source of light is not maintained stationary or constant in intensity and color at all times when such sign is illuminated. Illuminated signs which indicate the time and/or temperature shall not be considered flashing signs, provided that the total area of the sign so used shall not exceed ten square feet in size. For the purposes of this definition, any moving illuminated sign affected by intermittent lighting shall be deemed a flashing sign.

Free-oriented sign means any sign identifying premises where food, lodging, or places of business are located that engage in supplying goods and services essential to a controlled access highway travel and normal operation of motor vehicles, whereby such places are directly dependent upon the adjacent public right-of-way for business.

Freestanding sign means a sign supported by a sign structure secured in the ground and which is essentially structurally independent of any building, structure or vehicle, excluding a monument sign.

Frontage means the linear length of a property line of any one premises abutting a street, or public right-of-way and parallel to and along each public right-of-way it borders.

Fuel pump signs means signs placed on or above a fuel pump providing information to the public regarding safety, the generic type of fuel, self- or full-service, self-service instructions, price, octane rating, additives, or other similar information relating only to safety or method of delivery, and excluding any advertising material.

Future-site sign means any sign not exceeding 32 square feet in area designating any premises as a future site or declaring that facilities are to be constructed on the premises, and the like.

Ground level means street grade.

Ground sign means a sign that is movable or permanently erected on a freestanding frame, mast, or pole and not attached to any building with a surface area of less than 100 square feet per side, exclusive of base, but including ornamentation.

Height of sign means the vertical distance measured from the adjacent street grade or upper surface of the nearest street curb or shoulder other than an elevated roadway, which permits the greatest height to the highest point of said sign.

Identification sign means a sign which is limited to the name, address, and/or number of a building, institution, or person, and to the activity carried on in the building or institution or the occupancy thereof.

Illegal sign means a sign erected, attached, placed, or situated in violation of this Code.

Illuminated sign means a sign which contains a source of light or which is designed or arranged to reflect light from an artificial source, including indirect lighting, neon, incandescent lights, and backlighting, and also includes signs with reflectors that depend upon automobile headlights for an image.

Illuminated sign, external, means any sign which is directly lighted by an external source.

Illuminated sign, internal, means any sign which generates or transmits light either by means of exposed tubing or lamps on its surface or light is generated between and transmitted through any portion of its sign face.

Indexing means turning and stopping action of the triangular vertical sections of a multi-prism sign designed to show three messages in the same area.

Indirectly illuminated sign means any sign which reflects light from a source intentionally directed upon it, for example, by means of floodlights, gooseneck reflectors, externally-mounted fluorescent light fixtures, and the like.

Individual letter sign means any sign comprised solely of letters without background that are mounted or located on the face of a building, top of a parapet, roof edge of a building, or on top of or below a marquee.

Inflatable sign means a sign or sign statuary that is either expended to its full dimensions or supported by gases contained within the sign, or sign parts, at a pressure greater than atmospheric pressure.

Interior property line means any property line other than one fronting on a public right-of-way.

Legal sign means a sign which meets the standards and criteria specified in this Code.

Lintel means the line above the display windows and below the transom window, if any, on a commercial building.

Mailbox sign means a sign attached or applied to a United States mailbox which serves a residence.

Maintain means to cause or allow any sign, structure, or any part of either to continue in existence, or to repair or refurbish any sign, sign structure, or any part of either.

Marquee. See *Changeable copy sign.*

Marquee sign means a roof like structure, often bearing a signboard, projecting over an entrance, as to a theater or hotel.

Message. See *Copy.*

Mobile sign means any sign which is not permanently attached to a ground location or a structure and is capable of moving or being moved.

Monument sign means any freestanding, essentially solid monument structure containing a sign face which is supported solely by its own ground-mounted base and which is not attached or affixed in any way to a building, fence, or other structure, provided that the ground-mounted base is substantially equal to or greater than the horizontal dimension of the sign face, including any cabinet or any structure within which the sign face is located.

Multi-prism sign means any sign made with a series of triangular vertical sections that turn and stop, or index, to show two or more different sets of pictures, messages or copy in the same area.

Nameplate means any nonelectric sign identifying only the name and occupation or profession of the occupant of the premises on which the sign is located. If any premises includes more than one occupant, the term "nameplate" refers to all names and occupations or professions, as well as the name of the building and directional information.

Nonelectrical sign means any sign that does not contain electrical wiring or is not attached or intended to be attached to any electrical energy source.

Nonconforming sign means any sign or structure related thereto which was lawfully erected in 2000 and maintained prior to the adoption of the ordinance from which this chapter is derived and which fails to conform to all applicable regulations and restrictions of this chapter.

Off-premises sign means any sign identifying or advertising a business, person, activity, goods, product, commodity, service, or entertainment not related to the premises on which the sign is located, or to a business, person, activity, goods, product, commodity, service, or entertainment which is conducted, sold, or offered at a location other than on the premises on which the sign is located, e.g., billboards or outdoor advertising. For purposes of this definition, easements and other appurtenances shall be considered to be outside such premises, and any sign located or proposed to be located in an easement or other appurtenance shall be considered an off-premises sign, specifically including, but not limited to:

(1) Poster panels or bulletins normally mounted on a building wall or freestanding structure with advertising copy in the form of pasted paper.

(2) Multi-prism signs, as defined herein.

(3) Painted bulletins, whereby the message is painted directly on the background of a wall-mounted or freestanding display area.

(4) Billboards.

Onsite sign. See *Accessory sign.*

Owner means a person who, or entity which, alone, jointly or severally with others, or in a representative capacity (including, without limitation, an authorized agent, attorney, executor, personal representative or trustee) has legal or equitable title to any property in question, or a tenant, if the tenancy is chargeable under his lease for the maintenance of the property.

Parapet or *parapet wall* means a false front or wall extension of a building that extends or rises above the lowest level of the eaves or the roof of a building.

Pennant, streamer or*balloon* means any fluttering or nonstationary device made of flexible materials designed, intended or used primarily to attract attention.

Permit means an authorization issued by the city and required by this Code in order to erect, display, relocate or alter a sign.

Person means any individual, association, partnership, firm or corporation and the like, singular or plural, and includes any officer, employee, department, agency, or instrumentality of the United States, the state, or any political subdivision thereof.

Pole sign. See *Ground sign.*

Political sign means a sign identifying and urging voter support for or opposition to a particular issue, political party or candidate for public office, not exceeding 32 square feet in sign area and four feet in sign height.

Portable sign means any sign which is not permanently affixed to a building, structure or the ground, or which is attached to a vehicle or, whether on its own trailer, wheels, or otherwise, is designed or intended to be transported from one place to another. It is characteristic of a portable sign that the space provided for advertising messages may be changed at will by the replacement of lettering or symbols.

Premises means any lot, plot, parcel or tract of land described in a deed or plat appearing in the public records as of the effective date of the ordinance from which this chapter is derived. The subdivision of any such lot, plot, parcel or tract by lease, sale or conveyance subsequent to the effective date of the ordinance from which this chapter is derived shall not result in separate premises for purposes of this chapter, if the results thereof exceed the limitations set forth in this chapter.

Project sign means any temporary sign erected and displayed on premises then under construction and advertising an architect, contractor, developer, financial organization, subcontractor or materials vendor furnishing labor, services or materials for such construction.

Projection sign means any sign affixed to the wall of any building or structure and extending beyond the building wall, structure, building line or property line more than 12 inches, and a surface area of less than six square feet.

Real estate sign means any temporary sign erected by the owner, or his exclusive agent, advertising that the real property upon which the sign is located, or any portion thereof, is for sale or for rent and not located within the public right-of-way.

Roof means the exterior covering of the top of a building.

Roof sign means a sign erected over or on, and wholly or partially dependent upon, the roof of any building for support, or attached to the roof in any way.

Sandwich board means a type of advertisement composed of two boards, holding a message or graphic set up next to a business, restaurant or store advertising its goods or services in a triangle shape, hinged along the top.

Shopping center means two or more retail, service, professional, or other commercial establishments with separate external entrances which share the same parking facilities or other common areas and frequently which, taken separately, would not all meet the minimum parking requirements established by law.

Sidewalk or sandwich sign means a movable sign not secured or attached to the ground or any building or structure and displayed in or proximate to areas of pedestrian traffic.

Sign means any letter, number, symbol, figure, character, mark, plane, point, design, stroke, strike, line, illuminated surface, light, string of lights, graphic, picture, mural, or any random or ordered variation of colors or dimensional textures, which shall be so constructed, placed, attached, painted, erected, or fastened in any manner whatsoever so that the same shall be used or intended to either convey information or attract the attention of the public to any place, item or idea, and which is visible by a pedestrian at ground level on any street, or water's edge of the St. Johns River, Governors Creek, or any adjoining premises; provided, however, that nothing in this definition shall be construed to make unlawful one or more dimensional architectural components or dimensional architectural details constructed as an integral part of a building and not used or intended to convey any information or depict any item or idea, or any such dimensional architectural component or dimensional architectural detail being consistently colored a color that is different from the color of such building or the color of another such component or detail (for example, roof versus fascia, fascia versus soffit, soffit versus wall, wall versus trim, trim versus window, window versus door). Signs consisting of a group of detached letters, or two or more panels on the same support presented as a single advertisement, shall be considered as one sign.

Sign face area means the area of any regular geometric shape which contains the entire surface area of a sign upon which alphabetic or pictorial symbols or representations may be placed.

Sign height means the vertical distance measured from the average elevation of the ground to the top of the sign face or sign structure, whichever is greater.

Sign statuary means any three dimensional, manmade representation of a plant, animal, or other thing, intended primarily to attract attention, and not intended and used primarily to entertain or amuse customers of the business of which the statuary forms a part.

Special event sign means an event sign of special significance usually intended to attract large numbers of people and which is held for a specified (usually one week or less) duration of time. Temporary holiday and seasonal decorations are also included in this definition.

Snipe sign means a sign of any material that is attached in any way to a utility pole, tree, fence post, or other similar object, located on public or private property. The term "snipe sign" shall not include small directional signs and "No Trespassing," etc., signs exempted from this law.

Street means a public thoroughfare that affords principal means of access to abutting property.

Swinging sign means a sign installed on an arm, mast, or spar, in which the sign is not permanently fastened to an adjacent wall or upright pole to prevent movement.

Temporary sign means a sign intended to display either commercial or noncommercial messages of a transitory or temporary nature. A portable sign or any sign not permanently embedded in the ground, or not permanently affixed to a building or a sign structure that is permanently embedded in the ground, is considered a temporary sign, excluding a window sign.

Vehicle sign means a permanent or temporary sign affixed, painted on or placed in or upon any parked vehicle, parked trailer, or other parked device capable of being towed, which is displayed in public view under such circumstances as to location on the premises, time of day, duration, availability of other parking space on the premises and the proximity of the vehicle to the area on the premises where it is loaded, unloaded or otherwise carries out its principal function, which circumstances indicate that the primary

purpose of said display is to attract the attention of the public rather than to serve the business of the owner thereof in the manner which is customary for such a vehicle.

Wall sign means any outdoor advertising display sign painted on or erected parallel to and not more than 12 inches from the wall or facade or any building to which it is attached, with surface area of less than 100 square feet, and supported throughout its entire length by the facade of the building and not extending above or beyond the building facade, excluding window signs.

Window sign means any opaque or translucent sign of any material which is painted on, applied to, attached to or projected upon or within the exterior or interior of a building glass area, or located within two feet of the interior side of a building glass area and displayed under circumstances indicating that the primary purpose of such sign is to attract the attention of the public through the window, whose alphabetic or pictorial symbols or representations are visible by a pedestrian at ground level on any street, the water's edge of the St. Johns River, Governors Creek, or any adjoining premises.

Section 8. That Chapter 125, Section 14 shall be amended to read as follows:

Sec. 125-14. Sign restrictions.

(a) *Sign area.* The area of a sign shall be the area within the smallest square, rectangle, parallelogram, triangle, circle or semicircle, the sides of which touch the extreme points or edges of the sign face.

(b) *Number of signs.* In general, the number of signs shall be the number of noncontiguous sign faces. Multiple noncontiguous sign faces may be counted as a single sign if all the sign faces are included in the geometric figure used for determining the sign area.

(c) *Sign height.* The height of a sign shall be measured as the vertical distance from the finished grade at the base of the supporting structure to the top of the sign, or its frame or supporting structure, whichever is higher.

(d) *Prohibited signs.* Certain signs are prohibited in the city, specifically: projecting signs, roof signs, signs located on trees, snipe signs within rights-of-way, on telephone poles, temporary flashing lighted signs, offsite signs, and abandoned signs.

(e) *Special conditions for signs ~~within the central business district (CBD), gateway corridor neighborhood (GCN) and gateway corridor commercial (GCC) areas.~~*

(1) ~~The following signs normally prohibited in the city are permitted in the designated central business district and gateway corridor neighborhood and gateway corridor commercial areas:~~

~~a. Projecting signs that project no more than two feet from the building.~~

~~b. Signs in the right-of-way, if the sign is located on an awning or canopy.~~

Special conditions for signs within the form based code area are found in Chapter 117, Article XIV.

(2) ~~There are no requirements for setback signs only within the central business district.~~ Special conditions for signs within the gateway corridor neighborhood (GCN) and gateway corridor commercial (GCC) areas are found in Article IX, Division 9.

~~(3) Businesses only in the central business district may place a double-sided directional sign not to exceed 14 square feet offsite.~~

(f) *Sandwich board signs.* Sandwich board signs shall be permitted in the ~~central business district~~ form based code, gateway corridor neighborhood and gateway corridor commercial areas between 8:00 a.m. and 9:00 p.m. Sandwich board signs shall be permitted only on the sidewalks in front of the business and may not be larger than 12 square feet and may contain two sign fronts.

(g) *Temporary banners and special signs.*

(1) Temporary banners and special signs, not specifically provided for herein, may be erected noting public parade, public event, or public celebration of a period not to exceed 14 days; provided,

however, the erection of such banner or special sign shall be approved by the administrator with a permit and displayed only at areas designated by the city manager or his designee under the following terms and conditions:

a. Only county-based nonprofit organizations approved as section 501(c)(3) organizations under the Internal Revenue Code, county governmental entities and recognized churches located within the city limits may be allowed to erect temporary banners and special signs.

b. An administrative fee must be paid to the city before erecting a temporary banner or special sign.

c. The size, shape and material of the banner or special sign shall not exceed 32 square feet for signs, and banners shall comply with current FDOT standards.

d. Temporary banners and special signs may be displayed for no longer than 14 days.

e. The applicant must sign a hold harmless agreement with the city for any and all damages related to the banner or special sign.

f. While the banner or special sign is installed, displayed and removed, the city shall be named as an additional insured on any general liability insurance policy held by the applicant.

g. The city reserves the right to limit the number of banners and special signs displayed at one time.

h. Acceptance of applications for the display of banners and special signs shall be first-come, first-served.

i. If banner or special sign are not picked up by the owner within 14 days, the banner or special sign will be destroyed.

(2) Temporary banners or special signs for city sponsored activities may be located in any city right-of-way.

(h) *Electronic reader board (ERB) signs.* Electronic reader board (ERB) signs shall be permissible, provided that they conform to the following standards:

(1) *Interference.* They do not interfere with the effectiveness of or obscure an official traffic sign, device or signal.

(2) *Duration of message on-time.* The duration of a message on-time shall not be shorter than ten seconds, and scrolling or flashing shall not be permitted.

(3) *Luminance.* Luminance of the sings shall be as follows: Day 600—1,000 cd/m2; night 100—350 cd/m2.

(4) *Animation.* Signs which convey the appearance of movement or animation in any form shall not be permitted, and scrolling or flashing shall not be permitted. The message shall only consist of words and static logos.

(5) *Maintenance.* ERB signs shall be maintained in good repair at all times. When any part of the message display is not working properly, the use of the electronic reader board sign will be discontinued until the repairs are made.

(6) *Contrast and contrast orientation.* ERB sign displays shall have a black on white or white on black background.

(7) *Height.* ERB signs shall be limited to 12 feet in height.

(8) *Facade.* ERB signs shall be designed so that the sign pole assemblies and supports are not visible and must be screened with brick, masonry or stucco.

(9) *Size.* ERB signs shall be limited to 25 square feet of display area.

(10) *Color.* ERB signs shall be limited to one of the following colors: red, orange or yellow.

(11) *Separation.* ERB signs shall have a minimum separation distance of 100 linear feet from any other ERB sign located along the same street right-of-way.

Section 9. That Chapter 101, Section 101-5 shall be amended to read as follows:

Sec. 101-5. Definitions.

The following words, terms and phrases, when used in this subpart, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

A-weighted sound level means the sound pressure level in decibels as measured on a sound level meter using the A-weighting network. The level so read is designated dB(A).

Abandoned motor vehicle means a motor vehicle that is in a visible state of disrepair and incapable of being moved under its own power and which does not have a current vehicle registration certificate and license plate. This definition does not apply to a vehicle that is not visible from public or private streets.

Abandoned sign means a sign on which a business advertised on that sign is no longer licensed, no longer has a certificate of occupancy or is no longer an ongoing business at that location for a period of six months.

Abandoned sign face means the area of a sign on which graphics, letters, figures, symbols, trademark or written copy is placed advertising a business that is no longer licensed, no longer has a certificate of occupancy or is no longer an ongoing business at that location for a period of six months.

Abandonment means the intentional and willful termination, relinquishment or cessation of an existing use or occupation of property. Any termination, relinquishment or cessation for a six-month period shall be considered an intentional and willful abandonment.

Abut means to physically touch or border upon, or to share a common property line.

Abutting or adjacent property means property that is immediately contiguous to the property being considered under these land development regulations. Adjacent property may be contiguous, across a right-of-way, or close enough to be directly impacted by a use or proposed use on the property being considered under these land development regulations meaning the distance for adjacency varies with the degree of impact.

Access way means a paved area intended to provide ingress and egress of vehicular traffic from a public right-of-way to an off-street parking area or loading area.

Accessory sign means a permanent ground or building sign permitted under this subpart as incidental to an existing or proposed use of land, identifying or advertising a business, person, activity, goods, product, commodity, service or entertainment located on the premises where the sign is installed and maintained.

Accessory use or structure means any use or attached or detached structure clearly incidental, subordinate and related to the principal use or structure and located on the same lot with such principal use or structure not to exceed 50 percent of the principal use. Examples of accessory uses in a single-family residential zoning district include, but are not limited to, storage buildings and detached garages; provided, however, a recreational vehicle; motor vehicle; mobile home; trailer or semi-trailer; railroad car; bus, truck or automobile body, or other similar unit shall not be used as an accessory structure or converted into an accessory structure even when altered, stripped, or otherwise rebuilt.

Addition means an extension or increase in floor area or height of a building or structure.

Administrator means the planning and zoning director designated by the city manager for the administration and enforcement of land development regulations.

Adult arcade amusement center means a business that is located on the premises of a facility that is licensed by the state pursuant to F.S. ch. 550, and operates an adult arcade amusement machine that complies with F.S. § 849.161(1)(a)1 and is also defined in the county Ordinance Number 2012-02.

Adult arcade amusement machine means an electronic, mechanical, computer or other device which operates by the insertion of coin and may also operate by the use or insertion of other type of monetary consideration or requires the payment of monetary consideration, ticket, token, or card that activates the play of a game or multiple games which, by application of skill, may entitle the person operating the machine to receive points representing a unit of game play on the machine or coupons which may be exchanged for merchandise available for sale to the general public on the premises of the adult arcade amusement center or via catalogs or kiosks produced by an adult arcade amusement center, other than alcoholic beverages and cash, provided the value of the merchandise does not exceed the amount set forth in F.S. § 849.161(1)(a)1. The presence of a device as described herein that requires the payment of monetary consideration for its operation shall result in the presumption that such machine is an adult arcade amusement machine as defined herein.

Adult day care means any building, or part of a building, whether operated for profit or not, in which is provided through its ownership or management, for a part of a day, basic services to three or more persons who are 18 years of age or older, who are not related to the owner or operator, and who require such services. The adult day care center must maintain the required licensing from the state agency for health care administration and shall comply with the requirements of F.S. ch. 400, pt. V. The approval for this type of care shall be by special exception within each residential zoning category.

Adult living facility (ALF) means a type of residential care facility, as provided for in F.S. ch. 429, pt. I (F.S. § 429.01 et seq.).

Adversely affected person means any person who is suffering or will suffer an adverse effect to an interest protected or furthered by the local government comprehensive plan, including, but not limited to, interests related to health and safety; police and fire protection services; densities or intensities of development; transportation facilities; recreational facilities; educational facilities; health care facilities, equipment, or services; and environmental or natural resources. The alleged adverse effect may be shared in common with other members of the community at large, but it must exceed in degree the general interest in community good shared by all persons.

Adverse effect includes, but is not necessarily limited to, increases in flood elevations on adjacent properties attributed to physical changes in the characteristics of the official 100-year flood area due to development.

Advertising means sign copy intended to directly or indirectly promote the sale or use of a product, service, commodity, entertainment, or real or personal property.

Agent means a representative of an owner who performs any services for the owner with respect to the real estate of the owner.

Alley or *service drive* means a roadway dedicated to public use that affords only a secondary means of access to abutting property and is not intended for general traffic circulation.

Alter or alteration of a stormwater management system means any change or modification in work done other than that necessary to maintain the system's original design and function.

Alteration means any change in size, shape, occupancy, character or use of a building or structure.

Antenna means an arrangement of wires or metal rods used in transmitting or receiving electromagnetic waves.

Applicant means the record owner, or his authorized representative, of a tract of land which is the subject of a request for a change in zoning classification, an exception, a variance or an appeal.

Aquifer or *aquifer system* means a geologic formation, group of formations, or part thereof that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Area of shallow flooding means a designated AO zone on the city's flood insurance rate map (FIRM)with base flood depths from one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

Area of special flood hazard means the area designated within the V zones on the FEMA (Federal Emergency Management Agency) maps.

Arterial streets means streets (roads) which conduct large volumes of traffic over long distances and are functionally classified as such on the state department of transportation current highway functional classification and systems map for the city, as amended, and in the city's comprehensive plan.

Attic means the space between the top story and a pitched roof.

Auditorium means the room, hall, building or part of a building used for public gatherings.

Automobile service station means an establishment whose principal business is the dispensing at retail of alternative fuels, diesel fuel, electric and gasoline and oil and where grease, batteries, tires and automobile accessories may be supplied and dispensed at retail, principally for automobiles and not for trucks (or in connection with a private operation where the general public is excluded from the use of the facilities), and where, in addition, the following services may be rendered and sales made, and no other:

(1) Sales and servicing of spark plugs, batteries and distributors and distributor parts;

(2) Tire servicing and repair, but not recapping or regrooving;

(3) Replacement of water hoses, fan belts, brake fluid, light bulbs, fuses, floor mats, seat covers, windshield wipers and wiper blades, grease retainers, wheel bearings, mirrors, and the like;

(4) Radiator cleaning and flushing; provision of water, antifreeze and the like;

(5) Washing and polishing and sale of automotive washing and polishing materials;

(6) Providing and repairing fuel pumps and lines;

(7) Minor servicing and repair of carburetors;

(8) Emergency wiring repairs;

(9) Adjusting and emergency repair of brakes;

(10) Minor motor adjustments not involving removal of the head or crankcase;

(11) Greasing and lubrication;

(12) Sales of cold drinks, package foods, tobacco and similar convenience goods for service station customers, but only as accessory and incidental to the principal business operation;

(13) Provision of road maps and other informational material to customers; provision of restroom facilities;

(14) Uses permissible at a service station do not include major mechanical and body work, straightening of frames or body parts, steam cleaning, painting, welding, storage of automobiles not in operating condition, operation of a commercial parking lot or commercial garage as an accessory use, or other work involving undue noise, glare, fumes, smoke or other characteristics to an extent greater than normally found in service stations;

(15) A service station is not a repair garage, a body shop, or a truck stop;

(16) Rental of luggage or utility trailers, trucks, but not rental of automobiles. All such allowed servicing shall be done in an enclosed building; however, minor adjustments and replacements of minor parts, e.g., replacing a windshield wiper blade, shall be permitted while a vehicle is being serviced at a pump island;

(17) Work bays of up to three spaces are allowed.

Automobile wrecking or storage yard means the dismantling or disassembling of used motor vehicles or trailers, or the storage, sale or dumping of dismantled, partially dismantled, obsolete or wrecked motor vehicles, trailers or their parts.

Awning means an architectural projection that provides weather protection, identity or decoration and is wholly supported by the building to which it is attached and may also be retractable. An awning is comprised of a lightweight, rigid skeleton structure over which a rigid covering is attached.

Awning sign or *canopy sign* means any shelter, supported partially or entirely from the exterior wall of a building, which is used for advertising. Such sign may be constructed of canvas, plastic, metal, or other similar material.

Balcony means an exterior platform that projects from or into the facade of a building and is surrounded by a railing, handrail, or parapet.

Banner sign means any sign composed of lightweight material either enclosed or not enclosed in a rigid frame, secured or mounted so as to allow movement of the sign caused by movement of the atmosphere, possessing characters, letters, illustrations, or ornamentations applied to paper, flexible plastic, or fabric of any kind. National flags and flags of political subdivisions shall not be considered banners for the purpose of this Code.

Barbershop or *beauty shop* or *salon* means an establishment whose sole business is a combination of shaving or trimming the beards, cutting or dressing hair of the heads, or cosmetology services and manicuring the nails of its customers.

Bar, cocktail lounge, saloon, or *tavern* means any establishment devoted primarily to the retailing and on-premises drinking of malt, vinous, or other alcoholic beverages. All establishments requiring an SRX license shall conform to F.S. § 561.20(2)(a)(4) which requires that 51 percent of monthly receipts come from the sale of food and nonalcoholic beverages.

Base flood elevation means the elevation designated by FEMA (Federal Emergency Management Agency) as the level above the 100-year flood zone (see definition for Area of special flood hazard).

Basement means that portion of a building between floor and ceiling, which is partly below and partly above grade, but so located that vertical distance from grade to the floor below is less than the vertical distance from grade to ceiling; provided, however, that the distance from grade to ceiling shall be at least four feet, six inches.

Bed and breakfast means a limited occupancy visitor accommodation facility consisting of a residential building or group of residential buildings containing a total of not less than four and not greater than ten guest rooms and a manager's residence, where visitor occupancy is limited to a maximum of seven consecutive days, where such lodging and daily meals are provided for compensation, and said meals are served only to resident guests of the inn. Bed and breakfast inns are limited to the adaptive conversion and reuse of, or reproductions of, historically or architecturally unique residential structures, which are compatible with the surrounding neighborhood.

Bicycle and pedestrian ways means any road, path or way which is open to bicycle travel and traffic a foot and from which motor vehicles are excluded.

Billboard means a sign structure, including a building, for any sign advertising an establishment, merchandise, service or entertainment, which is sold, produced, manufactured and/or furnished at a place other than on the property on which such sign is located.

Blight, blighting influence or *blighting factor* means either that which endangers life or property by fire or other causes that which substantially impairs or arrests property values or the sound growth of the city and is a menace to the public health, safety, morals, or welfare in its present condition and use.

Block includes tier or group means a group of lots existing with well-defined and fixed boundaries, usually being an area surrounded by streets or other physical barriers and having an assigned number, letter, or other name through which it may be identified.

Boardinghouse means an establishment with lodging for four or more persons, where meals are regularly prepared and served for compensation and where food is placed upon the table family-style, without service or ordering of individual portions from a menu.

Boat slips at marinas means an accessory structure designed solely for the parking or storage of watercraft. Such slip can be no smaller than eight feet by 20 feet. Boat slips must be transient in nature and cannot have electrical or water hookups.

Body shop means any enclosed structure used for the alteration, repairs, restoration and refinishing of the body parts or appurtenances of a motor vehicle body.

Borrow pit means an excavation from which natural materials are removed for use elsewhere, leaving a hole (pit).

Boutique means any retail establishment selling clothing, specialty food goods, gifts, coffees and antiques, located in a freestanding building not more than two stories in height and not containing more than 2,000 square feet on either floor.

Breakaway wall means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or to the supporting foundation system.

Breakpoint means the location on a communication tower of a designed feature which, in the event of a tower failure, would result in the tower falling entirely within the boundaries of the property on which it is located.

Brewpub means an establishment where food and beer are duly licensed to be made on the premises and where 50 percent or more of the beer produced on site is sold and/or consumed on site. This use is primarily a retail commercial use with a secondary light manufacturing component. While these uses are generally appropriate in zones that allow commercial uses, the industrial components are regulated to ensure compatibility with neighboring uses.

Buildable area means the portion of developable land within a lot remaining after required yards, parking and landscaping areas have been provided. Buildings may be placed in any part of the buildable area, but limitations on percent of the lot which may be covered by buildings may require open space within the buildable area.

Building means any structure, either temporary or permanent, having a roof impervious to weather and used or built for the shelter or enclosure of persons, animals, chattels or property of any kind. This definition shall include tents, awnings, cabanas or vehicles such as manufactured or mobile homes situated on private property and serving, in any way, the function of a building, but does not include recreational vehicles such as campers, motor homes or pop-up trailers and screened enclosures not having a roof impervious to weather (recreational vehicles shall not be allowed for permanent habitable use).

Building arcade means a covered walkway attached to a building and supported on the sides but not attached to the building by columns.

Building front yard setback line means the rear edge of a required front yard as specified within these land development regulations.

Building height means the vertical distance from grade to the highest finished roof surface. The height of a building in stories does not include basements and cellars, except as specifically provided otherwise, and does not exceed 35 feet.

Building line means a line across a parcel of land that is the distance a structure must be set back from a lot boundary line, street center line or right-of-way, as defined in chapter 117, for the zoning district in which the parcel is located.

Building permit means, for purposes of this subpart, a development permit is that official city document which authorizes the commencement of construction or land alteration without need for further application or approval. Development permits include all types of construction permits (plumbing, electrical, foundation, mechanical, and so forth, in addition to the building permit itself), grading and clearing permits, septic tank permits, tree removal permits, sign permits, etc.

Building sign means a sign displayed upon or attached to any part of the exterior of a building, including walls, windows, doors, parapets, marquees and roof slopes.

Building story height means the vertical distance from top to top of two successive finished floor surfaces.

Bulkhead means the part of a storefront that forms a base for one or more display windows.

Business day means every working day of the official workweek, as designated by the city council, and does not include public holidays and weekends.

Cafe means a small informal restaurant, generally consisting of a seating capacity of 30 or less where food items, drinks and snacks are sold.

Capital budget means the portion of the city's annual budget which reflects capital improvements scheduled for a fiscal year.

Capital improvements means physical assets constructed or purchased to provide, improve or replace a public facility and which are large-scale and high in cost. The cost of a capital improvement is generally nonrecurring and may require multi-year financing. For purposes of these land development regulations, physical assets which have been identified as existing or projected needs in the individual comprehensive plan elements are considered capital improvements.

Canopy means a permanent roof-like shelter extending from part or all of a building face and constructed in conformity with the standard building code, as adopted by the city council and as amended from time to time.

Car wash means a facility where vehicles are cleaned, washed, waxed, vacuumed, or otherwise detailed. This includes, but is not limited to, a coin-operated, self-service, full-service, or an automatic carwash. A car wash can be freestanding or part of a service station. Car washes are restricted to use by vehicles of size and weight no greater than 22 feet long by 12 feet high and 8,000 pounds (gross weight), respectively.

Carport means an accessory structure or portion of a principal structure, consisting of a roof and supporting members such as columns or beams, unenclosed from the ground to the roof on at least one side, and designed or used for the storage of motor driven vehicles owned and used by occupants of the building to which it is accessory.

Certificate of completion means a written document required prior to occupancy, issued for a use upon a developer's compliance with the provisions of this Code and any applicable development agreement.

Certificate of compliance means a statement signed by an administrative officer, setting forth that a building, structure, or use complies with the zoning ordinance and building codes and that the same maybe used for the purposes stated on the permit.

Certificate of occupancy means a document issued by the proper authority allowing occupancy or use of a building and certifying that the structure or use has been constructed or will be used in compliance with all applicable municipal codes and ordinances.

Change of occupancy means discontinuance of an existing use and the substitution of a different kind or class of use.

Child care center means a facility holding a license with the state, as per F.S. § 402.302, as amended, for the care, protection, and supervision of a child, for a period of less than 24 hours a day on are gular basis, which supplements parental care, enrichment, and health supervision for the child, in accordance with his individual needs, and for which a payment, fee, or grant is made for care.

Church means all houses of worship.

Cigar and smoke shops means a retail sales or wholesale establishment primarily engaged in selling tobacco and/or tobacco products. A retail sales or wholesale establishment which maintains 20 percent or more of the floor area is dedicated to tobacco and/or tobacco products shall be considered a cigar and smoke shop for the purposes of this chapter.

City engineer means the individual designated as such by the city council or city manager.

Clinic/office/lab, medical or dental, means an establishment where patients, who are not lodged overnight, are admitted for examination and treatment by one person or a group of persons practicing any form of the healing arts, whether such persons be medical doctors, chiropractors, osteopaths, chiropodists, naturopaths, optometrists, dentists, or any such profession, the practice of which is regulated by the state.

Club, night, means a restaurant, dining room, or other facility serving alcoholic beverages where in paid floor shows or other forms of paid entertainment are provided for customers as a part of the commercial enterprise.

Club, private, means an organization, whether incorporated or not, which is the owner, lessee, or occupant of a building or portion thereof used for club purposes, which is operated solely for a social, educational, recreational, patriotic, benevolent, athletic or fraternal purpose, but not for pecuniary gain, and if food and alcoholic beverages are sold, such sale is incidental to its operation. The affairs and management of the organization are conducted by a board of directors, executive committee, or similar body chosen by the members at an annual meeting. The organization has established bylaws and/or a constitution to govern its activities. The organization has been granted an exemption from the payment of federal income tax as a club under 26 USC 501. The term "private club" also includes the term "lodge."

Club, tennis, means any associated, chartered or incorporated club owning or leasing and maintaining any bona fide tennis club or four-wall indoor racquetball club consisting of not less than ten regulation size four-wall indoor racquetball courts, or ten of any combination of such courts, with clubhouse facilities, pro shop, locker rooms and attendant facilities, all located on a contiguous tract of land owned or leased by such club.

Collector street, major, means a major collector street carries medium volumes of traffic collected primarily from minor collector streets and delivering the traffic to arterial streets.

Collector street, minor, means a minor collector street carries relatively light volumes of traffic primarily from minor streets to major collector streets.

Combined use building means a use which contains a mixture of one or more residential units and commercial business uses within the same building.

Commercial vehicle means any motor vehicle licensed by the state as a commercial vehicle or any vehicle designed for a commercial or industrial function.

Communication antenna means an antenna designed to transmit or receive communications as authorized by the Federal Communications Commission. The term "communication antenna" shall not include CB, marine band, or class C commercial antennas less than 20 feet in height or direct broad cast antennas less than 12 feet and less than 39 inches in diameter.

Communication tower means a tower greater than 35 feet in height (including antenna) which supports communication (transmission or receiving) equipment. The term "communication tower" shall not include amateur radio operators' equipment, as licensed by the Federal Communications Commission(FCC). No tower shall exceed 200 feet in height (including antenna) when freestanding, or 20 feet over the building height, when placed on top of buildings.

Community residential home means a dwelling unit licensed to serve clients of the state department of health and rehabilitative services, and which provides a living environment for seven to 14 unrelated residents who operate as the functional equivalent of a family, including such supervision and care by supportive staff as may be necessary to meet the physical, emotional, and social needs of the residents.

Community theaters means a profit or nonprofit organization to produce live onstage performances for the cultural benefit of the city.

Completely enclosed building means a building separated on all sides from adjacent open space, or from other buildings or other structures, by a permanent roof and by solid exterior walls or solid party walls which are pierced only by windows and normal entrance or exit doors.

Comprehensive plan means the local government comprehensive plan, which was adopted by codes consistent with F.S. § 163.3161, as amended, and serves as the legal guideline for the future development of the local government.

Concurrency means a condition in which specified facilities and services have or will have the necessary capacity to meet the adopted level of service standard at the time of impact of the development project.

Condominium means a type of ownership in which buildings are divided into separate, individual units, such as apartments or office suites, which may be sold and owned separately, while common areas and some outdoor areas may be owned in common.

Cone of influence means an area around one or more major water wells, the boundary of which is determined by the city based on groundwater travel or drawdown depth.

Construction, actual or start, means and includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling, nor does it include the installation of streets and/or walkways, nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms, nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.

Contiguous means a sharing of a common border at more than a single point of intersection.

Convenience store means a retail, self-service store, usually open extended hours, that typically sells limited lines of food items, household goods, and snacks oriented to daily convenience, including fueling stations.

County health department means the health department of the county.

Court means an area open to the sky or having a glass roof and mostly or entirely surrounded by buildings, walls or other improvement of a similar nature.

Crown means the main mass of branching of a plant above the ground.

Cul-de-sac means a local street of relatively short length with one end open and the other end terminating in a vehicular turnaround.

Curb break means a driveway or other opening for vehicles entering a public street.

Curb level means the elevation of the street curb established by the city.

Decay-resistant woods means those woods that are known to be resistant to moisture and insect damage because of their natural properties, such as cypress, redwood and preservative-treated lumber.

Decibel (dB) means a unit describing the amplitude of sound, equal to 20 times the logarithm to the base ten of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro new tons per square meter.

Deck means a paved or wooden horizontal platform without a roof or covering of any description, and attached or unattached to a building.

Density or *gross density* means the total number of dwelling units divided by the total site area, exclusive of dedicated public rights-of-way, holding ponds, canals, drainage ditches, lakes and rivers except in previously platted subdivisions. Alleys are included in density calculations.

Department means the building, code enforcement, planning, and zoning department.

Detention means the collection and storage of surface water for subsequent gradual discharge.

Developable land means all of a parcel of land except:

(1) Lands lying within proposed public rights-of-way;

(2) Marshlands, swamps, floodplains or other environmentally sensitive lands where local, state or federal regulations otherwise prohibit development;

(3) Bodies of water such as ponds, lakes and reservoirs, either natural or manmade; and

(4) Alleyways, easements, streets, public rights-of-way and trails.

Developed area means that portion of a plot or parcel upon which a building, structure, paved ground surface area, gravel landscaping or other improvements have been placed.

Developer means any person, including a governmental agency, undertaking development as defined in F.S. ch. 163, part II and F.S. § 380.031, as amended, who engages in or proposes to engage in a development activity either as the owner or as the agent of an owner of property.

Development or *development activity* means any of the following activities:

(1) Construction, clearing, filling, excavating, grading, paving, dredging, mining, drilling or otherwise significantly disturbing the soil of a site.

(2) Building, installing, enlarging, replacing or substantially restoring a structure, impervious surface, or water management system, and including the long-term storage of materials.

(3) Subdividing land into two or more parcels.

(4) A tree removal for which authorization is required under this subpart.

(5) Erection of a permanent sign unless expressly exempted by chapter 125.

(6) Alteration of a historic property for which authorization is required under this subpart.

(7) Changing the use of a site so that the need for parking is increased.

(8) Construction, elimination, or alteration of a driveway onto a public street.

Developer's agreement means a legislatively approved agreement or contract between the city and a developer that clearly establishes the developer's responsibility regarding project phasing, the provision of public and private facilities, and improvements and any other mutually agreed to conditions, requirements and terms that are in the best interests of the city and will promote the public interest and welfare of the city.

Development order means an order granting, denying, or granting with conditions an application for a development permit and includes any building permit, subdivision approval, rezoning, certification or designation, special exception, variance, special or temporary permit, or other official action of the appropriate city approval body or land development regulation administrator having the effect of permitting the development of land.

Diameter at breast height (DBH) means the average diameter of tree measured four and one-half feet above ground level.

District means a section or sections of the city for which the zoning regulations governing the use of buildings and premises, the height of buildings, the size of yards, and the intensity of use are uniform.

Dock means a structure built on pilings over the water which is designed or used to provide anchorage for and access to one or more boats at anchorage. Necessary services such as water and other utilities are considered a part of a dock.

Drainage basin means the area defined by topographic boundaries which contributes stormwater to a drainage system, estuarine waters, or oceanic waters, including all areas artificially added to the basin.

Drainage detention structure means a structure which collects and temporarily stores stormwater for its gradual release. The stormwater may receive prior purpose treatment through physical, chemical, or biological processes with subsequent gradual release of the stormwater.

Drainage facilities means a system of manmade structures designed to collect, convey, hold, divert or discharge stormwater and includes stormwater sewers, canals, detention structures, and retention structures.

Drainage retention structure means a structure designed to collect and prevent the release of a given volume of stormwater by complete onsite storage.

Drive-in restaurant or *refreshment stand* means any place or premises where provision is made on the premises for the selling, dispensing or serving of food, refreshments or beverages to persons in automobiles and/or in other than a completely enclosed building on the premises, including those establishments where customers may serve themselves and may eat or drink the food, refreshments, or beverages in automobiles on the premises. A restaurant that provides drive-in facilities of any kind in connection with regular restaurant activities shall be deemed a drive-in restaurant. A barbecue stand or pit having the characteristics noted in this definition shall be deemed a drive-in restaurant. A drive-in restaurant, as defined herein, is not a restaurant.

Driveways means access ways that connect streets to drives or parking areas on individual parcels.

Drugs or *drug sales* means those substances that can affect a human's or animal's biological or neurological state and are sold by a pharmacy with a physician's prescription. This definition shall include medical marijuana being lawfully sold by an approved Medical Marijuana Treatment Center Dispensing Facility (MMTC).

Dwelling means a building or portion thereof designed or used exclusively for residential occupancy but not including campers, hotels, motels, motor homes (also referred to as trailer coaches), motor lodges, boarding houses and lodging houses, tents, tourist courts, tourist homes, dormitories, fraternity or sorority houses, hospitals, nursing homes or portable building.

Dwelling, mobile home, means a structure including the plumbing, heating, air conditioning, and electrical components contained therein, built on an integral chassis, transportable in one or more sections which structure is eight feet (two and four-tenths meters) or more in width and over 40 feet in length, or which, when erected onsite, is 320 or more square feet designed to be used as a dwelling unit with or without a permanent foundation when connected the required utilities. If fabricated after June 15, 1976, each section should bear a HUD label certifying that it is built in compliance with the Federal Manufactured Home Construction and Safety Standards, 42 USC 5401 and 24 CFR 3282 and 3283. This use does not include manufactured buildings meeting the criteria contained in the definition of the term "single-family dwelling." This use includes manufactured single-family units certified by the state department of community affairs to be in compliance with the Florida Manufactured Building Act of 1979, F.S. ch. 553, pt. IV. This definition does not include recreational vehicle, manufactured home or modular home.

Dwelling, multiple-family, for the purposes of these LDRs, means a dwelling containing two or more individual dwelling units for families living independently of each other, within individual dwelling units, with separate cooking and toilet facilities within the units, often stacked one above the other in a vertical configuration, sharing common vertical walls and/or horizontal floors and ceilings. Each individual unit being two stories or more with independent entrances. The term "multiple-family dwelling" includes apartments, condominiums, group homes, row houses, town homes and housing for the aged (which does not provide for routine nursing and/or medical care).

Dwelling, single-family, attached, means two dwelling units, each owned in fee and located on individual lots but joined along a single lot line, each of which is totally separated from the other by an un-pierced wall extending from ground to roof.

Dwelling, single-family, detached, means a residential building containing not more than one dwelling unit to be occupied by one family, not physically attached to any other principal structure. For regulatory purposes, the term "single-family detached dwelling" does not include mobile homes, recreational vehicles or other forms of temporary or portable housing. Manufactured buildings constructed for use as single-family dwelling units (manufactured home dwellings) are treated similarly to single-family detached dwellings.

Dwelling, townhouse, means a type of multifamily dwelling, in which five or more individual dwelling units are attached by one or more vertical party walls, with the habitable spaces of different dwelling units

arranged on a side-by-side, rather than a stacked, configuration, and each individual unit being two stories or more. Each individual townhouse dwelling unit has its own front and rear access to the outside.

Dwelling unit (D.U.) means a single housing unit providing complete, independent living facilities for one housekeeping unit, including permanent provisions for living, sleeping, eating, cooking and sanitation.

Easement means the right to use the land of another for a limited purpose, all other rights and title remaining in the owner.

Electronic equipment means any electronic or mechanical device intended and used for a single player at a time provided by or on behalf of an operator of an electronic game promotion that is used or adapted for use to conduct and/or reveal the results of a game promotion or sweepstakes or drawing by chance conducted in connection with the sale of a consumer product or service that displays results by simulating a game or games ordinarily played on a slot machine.

Electronic game promotion center means any place or premises where an electronic game promotion is conducted and is permitted.

Electronic game promotion means a sweepstakes or other game promotion which utilizes electronic equipment and a drawing by chance conducted in connection with the sale of a consumer product or service which utilizes electronic equipment.

Elevation means height in feet above mean sea level as established by the National Geodetic Vertical Datum (NGVD) of 1929 and or NAVD 88.

Elevated building means a non-cellar building built to have the lowest floor elevated above the ground level by means of fill, solid foundation perimeter walls, pilings, columns (posts and piers), shear walls, or breakaway walls.

Emergency shelter means a facility providing short-term housing not to exceed 90 consecutive days per person within a year, for one or more individuals who are otherwise homeless. Facility will be prohibited from housing individuals convicted of violent crimes. Ancillary activities may include:

• Onsite counseling services;

• Onsite career and life skills training;

• Onsite benefits application assistance (social security, food stamps, Medicare etc.).

Emergency work means any work performed for the purpose of preventing or alleviating physical trauma or property damage threatened or caused by an existing or imminent peril.

EMF means electromagnetic field.

Engineer means a professional engineer registered to practice engineering by the state and who is in good standing with the state board of professional engineers.

Encroachment means a protrusion into a vehicular access way, pedestrian way, or landscaped area.

Environmentally sensitive lands means areas designated on the future land use map as conservation.

Erected means and includes built, constructed, reconstructed, moved upon, or any physical operation on the premises required for building; or excavations, fill, drainage, demolition of an existing structure, in conjunction with erection.

Essential services means public utility facilities either underground or overhead and related to the transmission or distribution systems of water, sanitary or storm sewerage, telephone, gas, electricity, solid waste disposal, cable or community television and public safety, including poles, wires, mains, hydrants, drains, pipes, conduits, police or fire call boxes, traffic signals and other similar equipment necessary for the furnishing of adequate service, but not including buildings, provided that:

(1) This section shall be deemed to permit the location in a district of such major installations as electrical or gas generating plants, sewage treatment plants, water pumping or aeration facilities

and other similar major installation, unless such facilities were constructed, or construction was started prior to the adoption of this zoning ordinance; that:

(2) This section shall not be deemed to permit the erection of structures for commercial activities such as sales of related merchandise or collection of bills in districts from which such activities would otherwise be prohibited. Construction of appropriate buildings with appropriate screening and/or landscaping shall be compatible with surrounding neighborhood.

Existing means the condition immediately before development or redevelopment commences.

Exterior walls. Exterior walls of a principal structure shall be constructed of finished materials such as stuccos, natural brick or stone, finished concrete, wood or other similar material on all sides.

Facility means a building, appurtenant structures, surrounding land area, the system or location used by a single business private entity or governmental unit or sub-unit to provide for the collection, treatment or disposal of solid waste, potable water, drainage and sewage.

Family means one person or a group of two or more persons living together and interrelated by bonds of consanguinity, marriage, civil union, or legal adoption, or a group of persons not more than three in number who are not so interrelated, occupying the whole or part of a dwelling as a separate housekeeping unit with a single set of culinary facilities. An unrelated roomer, boarder, or tenant is not a member of a family.

Fence means any barrier, defined herein, as something which hinders and/or restricts that is naturally grown or constructed.

Fenestration means the placement of window openings in a building wall, one of the important elements in controlling the exterior appearance of a building.

Fill means any materials deposited for the purpose of raising the level of natural land surface.

Flammable liquids means liquids having a flash point below 200 degrees Fahrenheit, closed cup tester. Class 1 flammable liquids (e.g., gasoline) have a flash point of 25 to 69 plus degrees Fahrenheit.

Flashing sign means any illuminated sign on which the artificial source of light is not maintained stationary or constant in intensity and color at all times when such sign is illuminated. Illuminated signs which indicate the time and/or temperature shall not be considered flashing signs, provided that the total area of the sign so used shall not exceed ten square feet in size. For the purposes of this definition, any moving illuminated sign affected by intermittent lighting shall be deemed a flashing sign.

Flat or wall sign means any sign erected parallel to the face or the outside wall of any building that is supported throughout its length by the wall of the building.

Flood means the unusual and rapid accumulation or runoff of surface water of any source.

Flood elevation of record means the maximum flood elevation for which historical records exist.

Flood insurance rate map (FIRM) means an official map of a community issued by FEMA (the Federal Emergency Management Agency), on which the Federal Insurance Administration has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

Flood insurance study means a study provided by FEMA (the Federal Emergency Management Agency) containing flood profiles as well as the flood boundary floodway map and the water surface elevation of the base flood, and is the official such report for the city.

Flood protection elevation means the elevation of the base flood plus two feet in the V zones as defined by FEMA (the Federal Emergency Management Agency).

Flood zones means areas where there is wetland vegetation, the areas of transition between wetland vegetation and upland areas, and those areas outlined in the federal insurance flood prone maps.

Floodplain means land which will be inundated by floods known to have occurred or reasonably characteristic of what can be expected to occur (during a 100-year flood event) from the overflow of inland or tidal waters and the accumulation of runoff of surface waters from rainfall or identified by FEMA (the

Federal Emergency Management Agency) as an A zone on flood insurance rate maps or flood hazard boundary maps.

Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

Floor area, except as may be otherwise specifically indicated in relation to particular districts and uses, shall be construed as the sum of the gross horizontal areas of the several floors of a building measured from the exterior faces of the exterior walls or from the centerline of walls separating two buildings, excluding attic areas with a headroom of less than seven feet, unenclosed stairs or fire escapes, elevator structures, cooling towers, areas devoted to air conditioning, ventilating or heating or other building machinery and equipment, parking structures, and basement space where the ceiling is not more than an average of 48 inches above the general finished and graded level of the lot.

Floridan aquifer system means the thick carbonate sequence which includes all or part of the Paleocene to early Miocene Series and functions regionally as a water-yielding hydraulic unit. Where overlaid by either the intermediate aquifer system or the intermediate confining unit, the Floridan contains water under confined conditions. Where overlaid directly by the surficial aquifer system, the Floridan may or may not contain water under confined conditions, depending on the extent of low permeability materials in the surficial aquifer system.

Where the carbonate rocks crop out, the Floridan generally contains water under unconfined conditions near the top of the aquifer system, but, because of vertical variations in permeability, deeper zones may contain water under confined conditions. The Floridan aquifer is the deepest part of the active groundwater flow system. The top of the aquifer system generally coincides with the absence of significant thicknesses of plastics from the section and with the top of the vertically persistent permeable carbonate section. For the most part, the top of the aquifer system coincides with the top of the Suwannee Limestone, where present, or the top of the Ocala Group. Where these are missing, the Avon Park Limestone or permeable carbonate beds of the Hawthorn Formation form the top of the aquifer system. The base of the aquifer system coincides with the appearance of a regionally persistent sequence of anhydride beds that lie near the top of the Cedar Keys Limestone.

Food and grocery stores means stores primarily engaged in retailing a general line of food items, such as canned and frozen foods, fresh fruits and vegetables, and fresh and prepared meats, fish, and poultry. Included in this industry are delicatessen-type establishments primarily engaged in retailing a general line of food and which typically also offer other home care and personal care products and which are substantially larger and carry a broader range of merchandise than convenience stores.

Foster home means any establishment that provides care for children unrelated to the operator in adherence to current regulations established by the state department of children and families and which receives a payment, fee or grant for any of the children receiving care, wherever operated and whether or not operated for a profit.

Foundation systems means those structural members of a building consisting of piers, sills, girders, joists, concrete slabs or any other members designed and used to support a building upon, in or under the ground.

Freestanding sign means a sign supported by a sign structure secured in the ground and which is essentially structurally independent of any building, structure or vehicle, excluding a monument sign.

Frontage means the linear length of a property line of any one premises abutting a street or public right-of-way and parallel to and along each public right-of-way it borders.

Frontage, street, means all the property on one side of a street between two streets, which intersects such street (crossing or termination), measured along the line of the street, or if the street is dead ended, then all of the property abutting on one side between a street, which intersects such street and the dead end of the street.

Functionally dependent facility means a facility which cannot be used for its intended purpose unless it is located or carried out in close proximity to water such as a docking facility necessary for the loading or unloading of cargo or passengers, boat building, boat repair, or fishery processing facilities. The term "functionally dependent facility" does not include long term storage, manufacture, sales or service facilities.

Garage apartment means a single dwelling unit located over a private detached garage and containing square footage no greater than that of the garage.

Garage, parking, means a building or portion thereof designed or used for temporary parking of motor vehicles.

Garage, private, means a structure designed or used for inside private parking of private passenger vehicles by the occupants of the main building. A private garage attached to or a part of the main structure is considered part of the main building. An unattached private garage is considered an accessory building.

Garage, public, means a building, or portion thereof, other than a private garage, designed or used for equipment servicing, repairing, hiring, selling or storing of motor-driven vehicles, but not including the storage of wrecked or junked vehicles.

Garage, repair means a building or portion thereof, other than a private residential garage, designed or used for repairing, equipping or servicing of motor vehicles.

Garage, storage, means a building or portion thereof designed and used exclusively for the storage of motor vehicles, and within which temporary parking may also be permitted.

Garbage means every refuse accumulation of animal, fruit or vegetable matter that attends the preparation, use in cooking and dealing in or storage of meats, fish, fowl, fruit or vegetables; any matter of any nature whatsoever which is subject to decay and the generation of noxious or offensive gases or odors, or which, during or after decay, may serve as breeding or feeding material for flies, or other germ-carrying insects; and any bottles, cans or other containers, utilized in normal household use which, due to their facility to retain water, may serve as breeding places for mosquitoes or other insects.

Grade, average, means the elevation determined by averaging the highest and lowest elevations of a parcel, building site or other defined area of land.

Grade, finish, means the ground elevation at any point after final grading immediately adjacent to a building or structure.

Grading means the filling, excavation or other movement of earth for any purpose.

Grandfathered means or describes the status accorded certain properties, use, and activities that are legally existing prior to the date of adoption of the zoning ordinance or provisions of the zoning ordinance that is allowed to remain, as long as it is continuously used and not expanded.

Gross floor area means the sum of the gross horizontal areas of the several floors of a building measured from the exterior face of exterior walls, or from the centerline of a wall separating two buildings, but not including interior parking spaces, loading space for motor vehicles, or any space where the floor-to-ceiling height is less than six feet.

Gross vehicle weight rating (GVWR) means the value specified by the manufacturer as the recommended maximum loaded weight of a single motor vehicle. In cases where trailers and tractors are separable, the gross combination weight rating (GCWR), which is the value specified by the manufacturer as the recommended maximum loaded weight of the combination vehicle, shall be used.

Ground cover means low growing plants planted in such a manner as to form a continuous cover over the ground, such as Liriope, English Ivy, or like material.

Ground sign means a sign that is movable or permanently erected on a freestanding frame, mast, or pole and not attached to any building with a surface area of less than 100 square feet per side, exclusive of base, but including ornamentation.

Groundwater means water in saturated zones or stratum beneath the surface of land or water, whether or not it is relatively stationary or flowing through channels.

Group living facility means an establishment where lodging is provided:

(1) For four or more persons who are not a family or for three or more roomers or boarders;

(2) For residents rather than transients;

(3) On a weekly or longer basis; and

(4) In which residents may share common sleeping or kitchen facilities.

The term "group living facility" includes dormitories, fraternities, sororities, rooming houses or boardinghouses, convents or monasteries, orphanages, and housing for other institutional groups. For purposes of these land development regulations, community residential homes and one-, two-, or multiple-family dwellings which constitute separate housekeeping establishments for individual families are not considered group living facilities.

Group ownership (condominium) means any type of property ownership where common land is held by some other person, association, or corporation other than the dwelling unit owner.

Guest house or *guest cottage* means a dwelling unit in a building separate from and in addition to the main residential building on a lot, intended for intermittent or temporary occupancy by a nonpaying guest; provided, however, that such quarters shall have separate utility meters.

Guyed tower means a communication tower that is supported, in whole or in part, by guy wires and ground anchors.

Habitable room means a space in a structure for living, sleeping, eating or cooking. Bathrooms, toilet compartments, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.

Habitable story means any story used or to be used for living purposes which includes working, sleeping, eating, cooking, recreation, or a combination thereof. A story used only for storage purposes and having only non-load-bearing walls (e.g., breakaway lattice-work, wall, or screen) is not a habitable story.

Handicap requirements means providing provisions for any person who has anatomical or physiological deficiency restricting or preventing movement without the aid of a mechanical device, wheelchair, walker, cane or canes, crutch, invalid tricycle or any similar device. Any person unable to climb stairs, any blind person and any other person with any physical handicap interfering with the person's ability to walk or travel on a surface other than a level surface.

Hazardous waste means solid waste, or a combination of solid wastes which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or may pose a substantial present or potential hazard to human health or the environment when improperly transported, disposed of, stored, treated or otherwise managed.

Home for the aged means a facility for the care of the aged with routine nursing or medical care provided known as a nursing home as defined by F.S. ch. 400.

Home improvement center means an establishment whose principal business is the retail sale of merchandise customary to the repair, maintenance and improvement of residential and business structures, including repairs, maintenance and improvements of the properties on which these structures are located. For the purpose of this zoning ordinance, a home improvement center shall not be deemed a business which sells merchandise in large quantities to builders and/or contractors. All materials shall be stored in a completely enclosed structure.

Home occupation means any occupation performed in a dwelling unit in which there is no stock kept or sold on the premises. No person is employed unless he is a member of the immediate family residing upon the premises. No mechanical equipment is used except as is necessary for purely domestic or household purposes. There is no sign other than an unlighted name plate not more than one foot square in area, or a display that will indicate from the exterior of the building that it is being used for any purpose other than a dwelling.

Hospital means a building or group of buildings having facilities for overnight care of one or more human patients, providing services to in-patients and medical care to the sick and injured, and which may include as related facilities: laboratories, out-patient services, sanitarium, sanatorium, preventorium, clinic, rest home, nursing home, convalescent home and any other place for the diagnosis, treatment or other care of ailments, and shall be deemed to be limited to places for the diagnosis, treatment or other care of ailments training facilities, central service facilities, and staff facilities; provided, however, that any related facility shall be incidental and subordinate to principal hospital use and operation. Only those buildings licensed as a hospital under the laws of the state shall be included within this definition.

Hospital, general medical and surgical only, means a hospital other than for mental patients, contagious or infectious diseases, or liquor or drug addicts.

Hotel/motel/motor lodge means a structure or group of attached or detached buildings containing individual sleeping units, with automobile storage or parking spaces provided. It is kept, used, maintained, advertised as or held out to the public to be a place where sleeping accommodations are supplied for pay to guests or tenants. Sleeping accommodations and any dining room, restaurant or cafe is in the same building or in an accessory building.

Housing for the elderly means a facility defined as an adult congregate living facility or an adult daycare center under F.S. ch. 400 in the nature of multiple-family housing, with no provision for routine nursing or medical care. Where this zoning ordinance permits housing for the elderly, such housing shall be used only for this purpose; if housing for the elderly is changed to multiple-family use, then the provisions of this subpart shall be met before such multiple-family use is permitted.

Illuminated sign means a sign which contains a source of light or which is designed or arranged to reflect light from an artificial source including indirect lighting, neon, incandescent lights, backlighting, and shall also include signs with reflectors that depend upon automobile headlights for an image.

Impervious surface means a surface that has been compacted or covered with a layer of material so that it is highly resistant to infiltration by water. The term "impervious surface" includes, but is not limited to, semi-impervious surfaces such as compacted clay, as well as most conventionally surfaced streets, driveways, roofs, sidewalks, parking lots and other similar surfaces.

Improvement means any manmade, immovable item which becomes part of, is placed upon, or is affixed to real estate.

Infestation means the presence within or around a dwelling of any insects, rodents or other pests.

Junk yard means a place, structure or lot where junk, waste, discarded, salvaged or similar materials such as old metals, wood, slush, lumber, glass, paper, rags, cloth, bagging, cordage, barrels, containers, etc., are brought, bought, sold, exchanged, baled, packed, disassembled, sorted or handled, including used lumber and building material yards, house wrecking yards, heavy equipment wrecking yards, and yards or places for the storage, sale or handling of salvaged house wrecking or structural steel materials. This definition shall not include automobile wrecking and automobile storage yards, or pawnshops and establishments for the sale, purchase or storage of secondhand cars, clothing, salvaged machinery, furniture, radios, stoves, refrigerators or similar household goods and appliances, all of which shall be usable, nor shall it apply to the processing of used, discarded or salvaged materials incident to manufacturing activity. However, establishments for the sale, purchase or storage of secondhand refrigerators, stoves, plumbing fixtures and similar merchandise shall be considered a junk yard for the sole purpose of requiring that such establishments display their merchandise behind a visual barrier as required for junk yards by this zoning ordinance.

Kennel means any place or premises where four or more household pets over four months of age are kept for pay or for sale. This definition shall not apply to veterinarians operating under license from the state who board household pets on the same premises in conjunction with their practice incidental to observation and treatment.

Landscape development means trees, shrubs, ground cover, vines, or grass installed in planting areas for the purpose of fulfilling the requirements of this subpart.

Landscape dividing strip means a landscape area containing ground cover, shrubs and trees, or other landscaping used to partition parking areas into individual bays.

Laundry, self-service, means a business that renders a retail service by renting to the individual customer equipment for the washing, drying, and otherwise processing laundry, with the equipment serviced by and its use and operation supervised by an attendant.

Linear park means linear open spaces that can follow canals, rivers, shorelines, power transmission line rights-of-way, streets and highways or even bicycle paths. Names frequently given to this concept include parkways, boulevards or greenbelts. Regardless of the form they take, linear parks are intended to make movement from one part for the city to another more pleasant. Because of linear form, they are particularly conducive to recreational activities such as hiking, bicycling, horseback riding or driving for pleasure.

Loading space, off-street, means an on-the-property space, logically and conveniently located for pickups or deliveries or for loading and unloading of vehicles scaled to delivery vehicles expected to be used, and accessible to such vehicles when required off-street parking spaces are filled. Such space shall measure not less than 12 feet by 25 feet excluding surfaced area necessary for access and maneuvering.

Long-term rental means any residential rental that is rented for a period of six months or longer.

Lot means any discrete piece, parcel, plot, or tract of land shown on a recorded plat or any piece of land specifically described in a deed appearing in the public records occupied. For the purpose of this chapter, the term "lot" shall be taken to mean any number of contiguous lots or portions thereof, upon which one or more main structures for a single use are erected or are to be erected or which has the potential for occupancy by a building together with its accessory buildings, including the open space required under this chapter and includes the following:

(1) Corner lot. Any lot situated at the junction of and abutting on two or more intersecting streets, roads, or highways, unless the angle of intersection is more than 135 degrees.

(2) Double frontage. An interior lot having frontage on two parallel or approximately parallel streets, roads, or other thoroughfares streets, other than a corner lot.

(3) Interior lot. A lot other than a corner lot having frontage on one street.

Lot coverage means the number determined by dividing that area of a lot which is occupied or covered by the total horizontal projected surface of all buildings, including covered porches, and accessory buildings, driveways, and paved, bricked, or wooden walkways, pool decks and patios, by the lot area.

Lot depth means the distance measured in the mean direction of the side lines of the lot from the midpoint of the front line to the midpoint of the opposite rear line of the lot.

Lot, flag means a parcel of land that is situated generally behind a lot or lots fronting on the street; does not meet the required lot width requirements at the required front yard setback as per the Density Control Regulations as set forth for each specified zoning district in Chapter 117 of the City Code but does maintain a narrow street frontage along the width of the access strip.

Lot lines mean the lines bounding a lot, dividing one lot from another.

Lot line, front means that property line that abuts a public street. If a lot abuts on two or more streets, the front lot line shall be that property line abutting a street that has been so designated by the owner at the time of an application for a building permit, provided such lot is not thereby made nonconforming.

Lot line, side means any property line which is not a front lot line or a rear lot line. A side lot line separating a lot from another lot or lots is an interior side lot line.

Lot line, rear means that property line that is most distant from and is, or is most nearly, parallel to the front lot line.

Lot of record means a lot whose existence, location and dimensions have been legally recorded as part of a subdivision or registered in a deed or on a plat which has been legally recorded in the office of the clerk of the circuit court of the county prior to the effective date of this zoning ordinance. If a portion of a lot or

parcel has been conveyed at the time of the adoption of the land development code, the remaining portion of said lot or parcel shall be considered a lot of record.

Lot width means the horizontal distance between the side lot lines of a lot at the depth of the required front yard setback where the lot abuts a street, or at the front lot line where no front yard setback is required.

Lowest floor means the lowest enclosed floor of a structure, including a basement, but not including the floor of an area enclosed only with insect screening or wood lattice as permitted by the flood damage prevention regulations in this subpart.

Maintenance means that action taken to restore or preserve the original design and function.

Major thoroughfare means a multi-lane divided roadway with more than one lane in each direction.

Manufactured housing means it is mass-produced in a factory and is designed and constructed for transportation to a site. It is installed onsite and available for use as a dwelling when connected to required utilities. It can be constructed either as an independent, individual building or as a module for combination with other elements to form a building on the site.

Marina means a waterfront facility providing one or more of the following:

(1) Docking and/or wet or dry storage of boats for a fee;

(2) Sales of marine supplies, parts and fuel;

(3) Boat sales, rental and/or charter;

(4) Boat service and repair.

Marina accessory uses means uses normally ancillary and subordinate to a marina, including, but not limited to, live aboard facilities, if permitted, restaurants, gift shops, offices, self-service laundries, water taxi dockage and other commercial activities such as the ship's store, which shall be designed and situated within the marina facility to serve the boating community.

Marquee sign means a roof-like structure, often bearing a signboard, projecting over an entrance, as to a theater or hotel.

Massing means the overall bulk, size, physical volume, or magnitude of a structure or project.

Maximum lot/site coverage means the highest allowed percentage of a lot to be covered by structures.

Medical marijuana treatment center dispensing facility (MMTC) means a retail facility established by a licensed medical marijuana treatment center that sells or dispenses medical marijuana, products containing marijuana, or related supplies, but does not engage in any other activity related to the preparation, wholesale storage, distribution, transfer, cultivation, or processing of any form of marijuana, marijuana products, or related supplies.

Mini-warehouses means and includes personal property storage establishments in which storage space for personal property is provided and offered to the public for monetary compensation. Storage of goods shall be limited to personal property or business with no retail sales, repairs or manufacturing service establishments, offices, and apartments (no commercial distribution, assembly of finished goods or warehousing allowed).

Minor replat means the subdivision of a single lot or parcel of land into two lots or parcels, or the subdivision of a parcel into two or more lots solely for the purpose of increasing the area of two or more adjacent lots or parcels of land, where there are no roadway, drainage or other required improvements, and where the resultant lots comply with the standards of this subpart.

Mixed-use building means a ~~use which contains a mixture of one or more residential units and commercial businesses within the same building.~~ building where two or more uses are layered vertically and are physically and functionally integrated within a single building. Land uses, which when combined constitute a mixed-use development, exclude parks, schools, and public facilities (fire stations, utility substations, etc.) but include residential (a minimum of 5 dwelling units), commercial, office, and industrial uses. For a development to qualify as a "mixed-use," the secondary use may not be reserved for use only by

the principal user (for example, a residents-only gym, an employee cafeteria, or the leasing office of a residential development).

Mobile home park means a parcel of land set aside and rented by any person for the parking and accommodation of mobile homes which are to be occupied for sleeping or eating in exchange for a consideration or benefit to the owner of the mobile home park. This includes all land, buildings, structures or facilities used by occupants of mobile homes on such premises.

Modular home means any single-family residential dwelling unit constructed in a controlled factory environment in accordance with the provisions of the state minimum building, plumbing, electrical, fire, accessibility and energy codes, and which has building plans. A modular home can be shipped as a vehicle with wheels or may be delivered on a truck and may or may not be required to be constructed on an integral chassis. Modular homes are governed by F.S. §§ 553.35 through 553.41, regulated by the state department of community affairs and bear such an insignia over the electrical panel cover.

Modular office buildings/manufactured building means a closed structure, building assembly, or system of assemblies, which may include structural, electrical, plumbing, heating, ventilating, or other service systems manufactured in manufacturing facilities for installation or erection, with or without specified components, as a finished building or part of a finished building, which shall include, but not be limited to, residential, commercial, institutional, storage, or industrial structures. Manufactured building may also mean, at the option of the manufacturer, any building of open construction made or assembled in manufacturing facilities away from the building site for installation, or assembly and installation, on the building site.

Monopole tower means a communication tower consisting of a single pole, constructed without guy wires and ground anchors.

Motor vehicle means any vehicle which is propelled or drawn on land by a motor, such as, but not limited to, passenger cars, trucks, truck-trailers, semi-trailers, campers, go-carts, amphibious craft on land, dune buggies, or racing vehicles, but not including motorcycles.

Natural systems means systems which predominantly consist of or are used by those communities of plants, animals, bacteria and other flora and fauna which occur endogenously on the land, in the soil or in the water.

New construction means structures or substantial improvements for which the start of construction occurred on or after the effective date of the ordinance from which this subpart is derived, and any alteration, repair, reconstruction or improvements to a structure which is in compliance with these flood damage prevention regulations.

Noise control officer (NCO) means the chief of police, or person designated by the chief of police, shall be the noise control officer.

Noise sensitive zone means those zones that are created from time to time by resolution of the city council upon a finding that the subject area contains a land use which is sensitive to or subject to adverse reactions from noise.

Nonconforming development means development that does not conform to the land use regulations in chapter 117 and/or the development design and improvement standards in chapter 113.

Nonconforming sign means any sign or structure related thereto within the city which was lawfully erected and maintained prior to the effective date of the ordinance from which this subpart is derived which is prohibited by or fails to conform to all applicable regulations, requirements, and restrictions of this subpart; except that signs that are within ten percent of the height and size limitations of this Code, and that in all other respects conform to the requirements of this subpart, shall be deemed to be in conformity with this subpart.

Nonconforming use of building means use of a building or portion thereof, or land or portion thereof, which does not conform with the land use regulations of the district in which the building is located, the use of which was legally established and existed prior to the effective date of such use regulation.

Nursing home means a public or private home, institution, building, residence or other place, profit or nonprofit, which undertakes through its ownership or management to provide for a period exceeding 24 hours, maintenance, personal care, or nursing for three or more persons not related by blood or marriage to the operator, who by reason of illness or physical infirmity or advanced age are unable to care for themselves; provided that this definition includes homes offering services for less than three persons when the homes are held out to the public to be establishments which regularly provide nursing and custodial services. Only those homes, buildings or places licensed under F.S. ch. 400, pts. I, II and IV, as nursing homes, adult congregate living facilities, and adult day care centers, respectively, shall be included within this definition.

Nuisance trees means trees that are exempted from the tree protection requirements of this subpart as defined in chapter 113.

100 percent clear zone means the requirement that in the event of a tower failure, the entire height of the tower would fall completely within the boundaries of the property on which it is located.

Occupied means arranged, designed, built, altered, converted to, or intended to be used or occupied.

Office, business or professional, means an office for such operations as accounting services, auditing and bookkeeping services, employment service agencies (permanent job placement), insurance offices, manufacturer's representative, mortgage broker, real estate offices, stockbroker's office, telephone answering and referral service, travel agency, and the like; or an office for the use of persons generally classified as professionals such as architects, attorneys, clinics, chiropractors, dentists, doctors, engineers (including surveyors), interior designers, land planners, licensed masseurs, medical and dental laboratories, ophthalmologists, osteopaths, psychiatrists, psychologists and other mental health services, veterinarians (but not including treatment or boarding of animals on the premises), and the like.

Open patio means an outdoor area or structure that, for the purposes of this subpart, adjoins or is adjacent to a restaurant, saloon, tavern, bar, cafe, cocktail lounge, delicatessen, food service type establishment or the like.

Open space means areas defined as undeveloped lands suitable for passive recreation without structures or buildings either in its natural state or landscaped with vegetation and/or grasses.

Operator means any person who has charge, care or control of a building or part thereof, in which dwelling units or rooming units are let.

Outdoor advertising display means any letter, figure, character, mark, plane, point, marquee sign, design, poster, pictorial, picture, stroke, stripe, line, trademark, reading matter or illuminated service, which shall be so constructed, placed, attached, painted, erected, fastened or manufactured in any manner whatsoever, so that the display shall be used for the attraction of the public to any place, subject, person, firm, corporation, public performance, article, machine or merchandise, whatsoever, which are displayed in any manner whatsoever out-of-doors.

Outdoor entertainment means the provision of onsite amplified or non-amplified music, song, and/or spoken word for the enjoyment of patrons associated with a permitted business use or activity. Outdoor entertainment may be permanent or restricted.

Outdoor seating means secondary seating solely to serve patrons with food/beverage, stored and/or prepared in the adjacent establishment.

Outdoor storage means the storage, keeping, maintaining or allowing the existence of merchandise, building materials, wood, junk, trash, debris or other similar items outside of a completely enclosed building.

Owner means a person who, or entity which, alone, jointly or severally with others, or in a representative capacity (including, without limitation, an authorized agent, attorney, executor, personal representative or trustee) has legal or equitable title to any property in question, or a tenant, if the tenancy is chargeable under his lease for the maintenance of the property.

Package store/liquor store means a place where alcoholic beverages with an alcoholic content in excess of 14 percent are dispensed or sold in containers for consumption off the premises.

Parcel means a unit of land within legally established property lines. If, however, the property lines are such as to defeat the purposes of this subpart or lead to absurd results, a parcel may be as designated for a particular site by the building official.

Parking area means a paved ground surface area used for the temporary parking and maneuvering of vehicles by employees or customers, either for compensation, or to provide an accessory service to a commercial, industrial, institutional or residential use.

Parking bays means a parking area subdivided into uninterrupted rows of parking spaces which are generally separated by only single or double painted lines.

Parking lot means an area or plot of land used exclusively for the storage or parking of motor vehicles, but no vehicles are equipped, repaired, rented or sold.

Parking space means a ground surface area used for the temporary storage of a single vehicle to serve a primary use. Groups of spaces and abutting access ways are called parking bays.

Parking space, off-street, means marked or unmarked parking located within a parcel and outside a private or public right-of-way supportive of needs of adjacent facility or facilities, adequate for parking a standard size motor vehicle with room for opening doors on both sides. Such space shall also be surfaced with erosion-resistant material in accordance with city specifications.

Parking space, on-street, means marked or unmarked parking located within a private or public right-of-way and outside of a parcel adequate for parking a standard size motor vehicle.

Parkway means the portion of a public street right-of-way lying between the curb and sidewalk.

Patio home means a single-family attached/detached home; this style may be one- or two-story with windows facing protected enclosed spaces, the court or enclosed patio provides additional living space incomplete privacy. Front and rear yard setbacks give the opportunity for additional fenced or walled private patio.

Paved ground surface area means any paved ground surface area (excepting public rights-of-way) constructed from concrete, asphalt, brick pavers, millings, or other surface material intended to withstand vehicular traffic without erosion and which does not include grass, dirt, wood chips, lime rock and the like used for the purpose of driving, parking, storing or display of vehicles, boats, trailers and mobile homes, including new and used car lots and other open-lot uses. Parking structures, covered drive-in parking areas to the drip line of the covering or garages, shall not be considered as paved ground surface areas.

Any off-street parking or loading space required under this subpart shall be considered as paved ground surface area for purposes of this subpart whether or not the off-street parking or loading space is paved.

Pawn shops means a business that lends money at high interest rates in exchange for collateral such as jewelry, electronic items, or anything else that is judged to have a resale value. The pawn shop keeps the collateral, and if the loan is repaid, the item is returned. If the money is not repaid, the item is sold and the pawn shop keeps the proceeds.

Pergola means an arbor or a passageway of columns supporting a roof of trelliswork on which climbing plants are trained to grow. Pergolas are usually a separate structure from the main building.

Permanent means designed, constructed and intended for more than short-term use.

Person means any individual, association, partnership or corporation, and includes any officer, employee, department, agency, or instrumentality of the United States, the state, or any political subdivision thereof.

Pet, household, means any domestic live creature normally owned or kept as a pet, including cats, dogs, rabbits, reptiles, various small animals (such as hamsters and white mice) and birds, but excluding livestock and any breed of animals, such as, but not limited to, horses, cattle, swine, sheep, goats, chickens, geese, and ducks. Outdoor pens, cages, yards, etc., shall not exceed accommodations for more than a total of four.

Planning and architectural review board means the city planning advisory board as legally constituted for the city when so designated by the city council.

Planning and zoning director means the official designated by the city manager as the individual responsible for the administration of the city planning and zoning regulation matters.

Planned unit development means the development of land under unified control that is planned and developed as a whole in a single or programmed series of operations with uses and structures substantially related to the character of the entire development. A planned unit development must also include a program for the provision, maintenance and operation of all areas, improvements, facilities and necessary services for the common use of all occupants thereof.

Planting area means any area designed for landscape planting having a minimum of ten square feet of actual plan table area and a minimum inside dimension of 18 inches on any side.

Porch, enclosed and open, means an enclosed porch is a roofed space attached to the outside of the outer wall of the building, open on one or more sides, which has railings or screened enclosures. An open or unenclosed porch is a roofed space attached to an outer wall of a building open on one or more sides without railing, glass, canvas, screen or similar materials on the open sides.

Portable sign means any sign which is not permanently affixed to a building, structure or the ground, or which is attached to a vehicle or, whether on its own trailer, wheels, or otherwise, is designed or intended to be transported from one place to another. It is characteristic of a portable sign that the space provided for advertising messages may be changed at will by the replacement of lettering or symbols.

Portable storage unit means any container designed for the storage of personal property which is typically rented to owners or occupants of property for their temporary use and which is delivered and removed by truck or other means of conveyance.

Post, pedestal or column sign, means every sign mounted on a post, pedestal or column, with surface area of less than 140 square feet per side, exclusive of post, pedestal or column.

Poultry means any chickens, turkeys, ducks, geese, guineas or other fowl.

Premises means an improved area of land, a lot, plot or parcel of land with its appurtenances and buildings which, because of its unity of current use, may be regarded as the smallest conveyable unit of real estate, exclusive of easements where the premises is the dominant parcel.

Primary front facade means the facade of a building fronting onto a public or private street or pedestrian access way.

Professional office and services means a business that offers any type of personal service to the public in an approved zoning classification and building which requires as a condition precedent to the rendering of such service by obtaining of a license or other legal authorization. By way of example, and without limiting the generality of this definition, professional services includes services rendered by certified public accountants, public accountants, engineers, chiropractors, dentists, osteopaths, chiropodists, architects, veterinarians, attorneys at law, physical therapists and life insurance agents.

Projection sign means any sign affixed to the wall of any building or structure and extending beyond the building wall, structure, building line or property line more than 12 inches, and a surface area of less than six square feet.

Protected tree means any tree that has a diameter at breast height of more than eight inches, and which is not otherwise exempted from this subpart. For the purpose of this subpart, all mangroves are hereby declared to be protected trees. In addition, all palms with at least four and one-half feet of clear trunk between the ground level and the lowest branch are declared to be protected trees.

Public administrative and service facilities means any publicly-owned property and structures necessary to provide services to the surrounding area such as fire and police protection or other normal community service.

Rate means volume per unit of time.

Real estate sign means any temporary sign erected by the owner, or his exclusive agent, advertising that the real property upon which the sign is located, or any portion thereof, is for sale or for rent and not located within the public right-of-way.

Reconstruction means rehabilitation or replacement of a structure or structures which either have been removed or damaged, or altered to an extent of 70 percent or more of the assessed valuation of such structure or structures or 70 percent of the combined assessed valuation of such structure and land as shown on the most recent tax roll of the county.

Recreational facility means a place designed and equipped for the conduct of sports, exercise, dance, gymnastics, and/or leisure time activities.

Recreational vehicle means a vehicular portable structure built on a chassis with its own wheels, either self-propelled or towed by another vehicle designed to be used as a temporary dwelling for travel, vacation, camping or recreational purposes and including travel trailers, camping trailers, pickup campers, converted buses, motor homes, tent trailers, pop-up trailers, boats and boat trailers, and similar devices being more specifically described as:

(1) Camping trailer means a canvas, folding structure, mounted on wheels and designed for travel, recreation and vacation uses.

(2) Motorized home means a portable dwelling designed and constructed as an integral part of a self-propelled vehicle.

(3) Pickup coach means a structure designed primarily to be mounted on a pickup or truck chassis and with sufficient equipment to render it suitable for use as a temporary dwelling for travel, recreational and vacation uses.

(4) Self-contained travel trailer means a travel trailer which may operate independently of connections to electricity, water and sewers for a period of from one to seven days. Such a travel trailer has its own battery and/or LP gas to operate lights, refrigerator, stove, and heater; a large water tank with pressure systems; and a holding tank with a toilet.

(5) Travel trailer means a vehicular, portable structure built on a chassis, standing on wheels, whether self-propelled or requiring a separate vehicle for power designed to be used for temporary or recreational living or sleeping purposes for travel, recreational, and vacation uses, permanently identified as travel trailer by the manufacturer on the trailer and, when factory equipped for the road, having body width not exceeding eight feet, and provided its gross weight does not exceed 4,500 pounds, or its body length does not exceed 29 feet.

Remove means to relocate, cut down, damage, poison, or in any other manner destroy, or cause to be destroyed, a tree.

Resort condominium means any unit or group of units in a condominium, cooperative, or timeshare plan which is rented less than six months or rented more than three times in a calendar year for periods of less than 30 days or one calendar month, whichever is less, or which is advertised or held out to the public as a place regularly rented for periods of less than 30 days or one calendar month, whichever is less.

Resort dwelling means any single-family dwelling that is rented less than six months or rented more than three times in a calendar year for periods of less than 30 days or which is advertised or held out to the public as a place regularly rented to guests.

Restaurant means an establishment where food is generally ordered from a menu, prepared, and served for pay, primarily for consumption on the premises in a completely enclosed room, under the roof of the main structure, or with secondary seating typically in an adjacent patio or open patio area. All establishments requiring an SRX license shall conform to F.S. § 561.20(2)(a)(4) which requires 51 percent of monthly receipts come from the sale of food and nonalcoholic beverages.

Roof line means a horizontal line intersecting the highest point or points of a roof.

Roof sign means a sign erected over or on, and wholly or partially dependent upon, the roof of any building for support, or attached to the roof in any way.

Rubbish means combustible and noncombustible waste materials, except garbage including the residue from the burning of wood, coal, coke or other combustible material, paper, rags, cartons, boxes, wood, excelsior, rubber, leather, tree branches, yard trimmings, tin cans, metal mineral matter, glassware, and scrap lumber or other building debris.

Runoff coefficient means ratio of the amount of rain which runs off a surface to that which falls on it; a factor from which runoff can be calculated.

School means an institution for the teaching of children or adults, including primary and secondary schools, colleges, professional schools, dance schools, business schools, trade schools, art schools, and similar facilities.

Screen enclosure means a structural network of metal or wood members with open mesh panels for both walls and roof.

Sediment means the mineral or organic particulate material that is in suspension or has settled in surface waters or ground waters.

Self-support tower means a communication tower that is constructed without guy wires and ground anchors including lattice towers.

Service station, with major mechanical repairs, means a building or lot which, in addition to providing the sale of gasoline, diesel or other alternative fuels and normal accessories, provides in an enclosed structure major mechanical and body work, straightening of frames or body parts, steam cleaning, painting, minor welding and storage of automobiles not in operating condition.

Service station, without major mechanical repairs, means a building or lot that has as its primary purpose the sale of gasoline, diesel or other alternative fuels and normal accessories for passenger vehicles, and which may also provide not more than three work bays for minor repairs and maintenance to automobiles.

Setback means the required minimum distance between buildings and structures and the related front, side or rear lot line over which no part of any building or structure may extend, except as otherwise provided.

Shared parking means parking that is utilized by two or more uses taking into account the variable peak demand times of each use; the uses can be located on more than one parcel.

Shingle sign means a projection or wall sign with a surface area of less than six square feet, constructed of metal or other noncombustible material attached securely to a building.

Ship's store means a facility that may provide bait, tackle, nautical supplies, snacks, soft drinks, beer and a variety of sundry items.

Shopping center, mall, or *urban center* means a group of retail stores or service establishments planned and developed as a unit by one operator, owner, organization, or corporation for sale or for lease on the site upon which they are built.

Sign means any letter, number, symbol, figure, character, mark, plane, point, design, stroke, strike, line, illuminated surface, light, string of lights, graphic, picture, mural, or any random or ordered variation of colors or dimensional textures, which shall be so constructed, placed, attached, painted, erected, or fastened in any manner whatsoever so that the same shall be used or intended to either convey information or attract the attention of the public to any place, item or idea, and which is visible by a pedestrian at ground level on any street, or water's edge of the St. Johns River, Governors Creek, or any adjoining premises; provided, however, that nothing in this definition shall be construed to make unlawful:

(1) One or more dimensional architectural components or dimensional architectural details constructed as an integral part of a building and not used or intended to convey any information or depict any item or idea; or

(2) Any such dimensional architectural component or dimensional architectural detail being consistently colored a color that is different from the color of such building or the color of

another such component or detail (for example: roof versus fascia, fascia versus soffit, soffit versus wall, wall versus trim, trim versus window, window versus door).

Signs consisting of a group of detached letters, or two or more panels on the same support presented as a single advertisement, shall be considered as one sign.

Sign face area means the area of any regular geometric shape which contains the entire surface area of a sign upon which alphabetic or pictorial symbols or representations may be placed.

Site means generally, any tract, lot or parcel of land or combination of tracts, lots, or parcels of land that are in one ownership, or in diverse ownership but contiguous, and which are to be developed as a single unit, subdivision, or project.

Site plan means a scaled plan of the property to be developed, showing the locations of all structures and buildings, required yards, required parking, surface drive areas, loading spaces, stacking spaces, planting areas (both buffer yards and interior), dumpsters, exterior mechanical equipment, storm drainage retention areas, and all trees three inches or larger DBH, by species and DBH (both to be removed and to be retained), and any other necessary details required for review. Site plan shall comply with the requirements of article II of this chapter; this includes compliance with the checklist of requirements for submittal and approval of a site plan.

Sound level means the A-weighted sound pressure level obtained by the use of a sound level meter and frequency weighting network, such as A, B or C as specified in American National Standards Institute specification for sound level meters (ANSI S1.4-1971, Type 2 or the latest approved version thereof). If the frequency weighting employed is not indicated, the A-weighting shall apply.

Sound level meter means an instrument which includes a microphone, amplifier, RMS detector, response dampening circuit, output meter, and A-weighting network used to measure sound pressure levels.

Sound pressure level means 20 times the logarithm to the base ten of the ratio of the RMS sound pressure to the reference of 20 micro new tons per square meter. RMS sound pressure means the square root of the time averaged square of the sound pressure.

Soundproofed means sound baffled sufficiently to render all noise within the structure inaudible from adjoining properties and public rights-of-way.

Special exception means a use that would not be appropriate generally or without restriction throughout the zoning division or district, but which, if controlled as to number, area, location, or relation to the neighborhood, would promote the public health, safety, welfare, morals, order, comfort, convenience, appearance, prosperity or general welfare. Such uses may be permitted in such zoning division or district as exceptions, subject to the provisions of this chapter and in accordance with the procedures as set forth in section 101-352.

Start of construction means the first placement of permanent construction of a building (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or the placement of a manufactured homed on a foundation.

Stormwater means the flow of water which results from, and that occurs immediately following, a rainfall.

Stormwater management system means the system, or combination of systems, designed to treat stormwater, or collect, convey, channel, hold, inhibit, or divert the movement of stormwater on, through and from a site.

Stormwater runoff means that portion of the stormwater that flows from the land surface of a site either naturally, in manmade ditches, or in a closed conduit system.

Story means that portion of a building included between the surface of any floor and the surface of the next floor above it, then the space between such floor and the ceiling next above it or roof next above.

Story, half. means a story under a gabled, hipped or gambrel roof, the wall plates of which on at least two opposite exterior walls are not more than three feet above the finished floor of the story.

Story height means the vertical distance from top to top of two successive finished floor surfaces.

Street means a public thoroughfare that affords principal means of access to abutting property.

Street line means the line between the street and abutting property. The term "street line" also is referred to as right-of-way line.

Structural alterations means any change, except for repair or replacement, in the supporting members of a building, such as bearing walls, columns, beams or girders, floor joists or roof joists.

Structure means anything which is built, constructed or erected, the use of which requires permanent location in or upon the ground, an edifice of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner, or attachment to something having permanent location on the land. The term "structure" shall be construed as if followed by the words "or part thereof and includes a building and any tents, lunch wagons, diners, camp cars or trailers on wheels or other supports, intended for business use or for use as living quarters.

Structural alterations means any change, except the repair or replacement, in the supporting members of a building, such as bearing walls, columns, beams or girders or the rearrangement of any interior partitions affecting more than five percent of the floor area of the building.

Subdivision means a division of a lot, tract or parcel of land or water into more than two lots, plats, sites or other subdivisions of land or water for the purpose, whether immediate or future, of sale, rent, lease, building development, anchorage, right-of-way dedication, or other use.

Substantial improvement means expansion of a building by more than 25 percent or more than 4,000 square feet, whichever is less (refers to section 101-158(d)(1)a).

Supplied means paid for, furnished or provided by or under control of the owner or operator.

Surface water means water above the surface of the ground whether or not flowing through definite channels. This includes any natural or artificial pond, lake, reservoir, or other area which ordinarily or intermittently contains water and which has a discernible shoreline; or any natural or artificial stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, gully, ravine, street, roadway, swale or wash in which water flows in a definite direction, either continuously or intermittently, and which has a definite channel, bed or banks. All wetlands are classified as surface water.

Swimming pool means a structure of concrete, masonry or other approved material and finish, located either indoors or outdoors, used or designed to be used for bathing or swimming purposes, having a water holding capacity of more than two feet deep, and filled with a controlled water supply, together with buildings, appurtenances and equipment used in connection therewith.

Temporary housing means tents, plastic or tar paper lean-to and similar structures of a temporary nature not meeting any of the requirements of this subpart.

Tree protection zone means a circular zone around each protected tree. If the drip line is less than six feet from the trunk of the tree, the zone shall be that area within a radius of six feet around the tree. If the drip line is more than six feet from the trunk of the tree, but less than 20 feet, the zone shall be that area within a radius of the full drip line around the tree. If the drip line is 20 feet or more from the trunk of the tree, the zone shall be that area within a radius of 20 feet around the tree.

Use means the purpose for which land or water or a structure thereon or therein is designated, arranged or intended to be occupied or utilized or for which it is occupied or maintained.

Use of land means use of land, water, water surface, and land under water to the extent covered by zoning districts, and over which the city has jurisdiction.

Vacant land means any lot or parcel of land which is completely open, has no use associated with or upon it and is not utilized as the required yard area for any adjoining uses.

Vape shop/electronic cigarette store means a business establishment for which more than 20 percent of the floor area is dedicated to the storage, mixing, display, on-site consumption, and/or retail sale of electronic cigarette devices, nicotine-enriched solutions, and/or liquid products that are manufactured for use with e-cigarettes.

Variance means a modification or relaxation from the literal interpretation of the provisions or terms of the zoning ordinance where such variance will not be contrary to the public interest and where owing to conditions peculiar to the property and not the result of the actions of the applicant, a literal enforcement of the ordinance would result in unnecessary and undue hardship. As used in this subpart, a variance is authorized for height, area and size of structure, size of lot, yards and open spaces, establishment or expansion of a use within an approved zoning district. A variance shall not be granted because of the presence of nonconformities within a zoning district or uses in an adjoining zoning district.

Vehicle means a form of transportation, including motorized and non-motorized vehicles designed and required to be licensed for use upon a highway in the state.

Vehicle use area means an area used for circulation, parking, and/or display of motorized vehicles, except junk or automobile salvage yards.

Vine means any of a group of woody or herbaceous plants that may climb by twining, by means of aerial rootlets or by means of tendrils, or which may simply sprawl over the ground or other plants.

Visual barrier means any manmade or natural structure, including, but not limited to, a fence, wall, bush, tree or other item which prevents or restricts visual access, passage, interchange or freedom of movement.

Wall height means the vertical distance to the top, measured from the foundation wall or from a girder or other intermediate support of such wall.

Wetland is as defined in F.S. ch. 373.

Yard means a required open space other than a court on the same lot with a building, unoccupied and unobstructed from the ground upward, except by trees, or shrubbery, driveways, parking areas and related curbing or signage, or as otherwise allowed in this subpart; provided, however, that fences, walls, poles, posts, and other customary yard accessories, ornaments, and furniture may be allowed in any yard subject to height limitations and requirements limiting obstruction of visibility.

Yard, front, means an open unoccupied space across the full width of the lot extending from the front building line (front building line includes open porches) to the front line of the lot. On corner lots, the front yard is the lesser of the width/depth dimension.

Yard, rear, means an open unoccupied space extending across the full width of the lot and measured between the rear line of the lot and the rear building line of the main building.

Yard, side, means an open unoccupied space on the same lot with a building between the building line and the side line of the lot extending through from the front building to the rear yard or to the rear line of the lot where no rear yard is required. Width of a required side yard shall be measured in such a manner that the yard established is a strip of the minimum width required by district regulations with its inner edge parallel with the side lot line.

Yard, waterfront, means a lot where any of its boundary lines abut or are contiguous to any body of water, natural or artificial, not including a swimming pool. The waterfront yard shall be measured from the portion of said lot which borders the water, regardless of how any structure is situated on the lot.

Zero lot line means the location of a building on a lot in such a manner that one or more of the building's sides rest directly on a side lot line.

Section 10. That Chapter 101, Section 101-356 shall be amended to read as follows:

Sec. 101-356. Site ~~plane~~ plan—Designation as major development.

A development plan shall be designated as a major development if it satisfies one or more of the following criteria:

(1) The activity involves combined land and water area which exceeds one acre (43,560 square feet).

(2) The development involves more than 5,000 square feet of nonresidential floor space.

(3) Any project that requires a variance from this subpart or received a special exception.

(4) Any development that the development services department designates as a major development project. ~~because:~~

~~a. The proposed development is part of a larger parcel for which additional development is anticipated that, when aggregated with the project in question, exceeds the limits of subsection (1), (2) or (3) of this section;~~

~~b. The proposed development should be more thoroughly and publicly reviewed because of its complexity, hazardousness, or location; or~~

~~c. The proposed development is one which is likely to be controversial despite its small size, and should thus be more thoroughly and publicly reviewed.~~

A major modification shall be defined as any repair, reconstruction, rehabilitation, addition, or improvement which costs 50% or more of the "Just Market Value" of the property, as noted in the Clay County Property Appraiser's Office records or the increase or replacement of more than 50% of the existing building floor area. Replacement, in this instance, entails demolishing both interior and exterior portions of the building to build new. When calculating the cost of the improvement, it shall include the cost of improvements made over the preceding five years.

a. Existing buildings not proposed to be expanded shall not be required to meet building setbacks (Sec. 117-836.B), minimum building and ceiling height (Sec. 117-837.C), and frontage requirements (Sec. 117-837.D). All other site and building provisions shall apply.

b. If the major modification involves building a new structure on the site and not making any changes to the existing building(s), the existing buildings will not be required to meet the requirements of this form-based code. The new building and the site, however, will be required to meet all the provisions of this code.

Section 11. That Chapter 113, Section 113-4 shall be amended to read as follows:

Sec. 113-4. Impervious surface coverage.

(a) *Generally.* Impervious surface on a development site shall not exceed the ratios provided in the table in subsection (d) of this section.

(b) *Ratio calculation.* The impervious surface ratio is calculated by dividing the total impervious surface by the gross site area.

(c) *Alternative paving materials.* If porous paving materials are used in accordance with the construction manual, then the area covered with porous paving materials shall not be counted as impervious surface.

(d) *Table of impervious surface ratios.*

Land Use District	Maximum Impervious Percent*
Residential low density	40
Residential medium	50
Residential high density	70
Commercial low intensity	70

Commercial medium intensity	70
Commercial high intensity	70
Industrial/warehousing and light manufacturing	70
Mixed use highway (MUH)	70
Public, semi-public	70
Downtown Core	100
Primary Corridor	80
Secondary Corridor	70
Transition	50
*The maximum impervious surface ratio is given for each district, regardless of the type of use proposed and allowable pursuant to chapter 117.	

Section 12. That Chapter 117, Section 117-2(c) shall be amended to read as follows:

(c) These districts have corresponding zoning categories that are consistent with the future land use and promote the implementation of the comprehensive plan. The planned unit development zoning category (PUD) is an allowable zoning category for all land use districts. The uses allowed in the PUD zoning district must be consistent with the future land use designation, promote the implementation of the comprehensive plan, and meet the requirements for a planned unit development included in this subpart.

Future Land Use and Zoning Capability Table

Neighborhood	Downtown	Mixed Use	MURP	Industrial	Public
R-1	~~CBD~~ FBC	RRF	M-2	C-2	INS
R-1A	GCC	RPO		M-1	~~Rec~~ RC
R-2		GCC		M-2	
R-3		GNC			
GCR		C-1			
RPO		C-2			
		R-3			

Section 13. That Chapter 117, Section 117-3 shall be amended to read as follows:

Sec. 117-3. Specific allowed uses, generally.

This chapter defines and prescribes the specific uses allowed within each land use district described in the comprehensive plan and this subpart.

(a) *Permitted use table.*

Use Category	Use Type	R-1	R-1A	R-2	R-3	RRF[5]	RPO[6]	C-1[8]	C-2	~~REC~~ RC[29]	GCR (RLD)	GCR (RMD)	GCN[20]	GCC	INS[26]	M-1	M-2	FBC Downtown Core	FBC Primary Corridor	FBC Secondary Corridor	FBC Transition
Residential Operation	Home Occupation[1]	SE	SE	SE	SE		P	P	P		SE	SE	P	P					P	P	P
Residential Type	Mobile Home Park				SE[3]																
	Multifamily Dwelling			SE[2]	P[4] /SE[32]	P						SE[2]	P[2]	P[23]				P	P	P	P
	Single-family Dwelling, Detached	P	P	P	P	P	P	P	P		P	P	P	P				P	P	P	P
	Single-family Dwelling, Attached			SE[2]	SE[2]	P	P	P	P			SE[2]	P[2]	P[2]				P	P	P	P
	Two-family dwelling			SE[2]	P	P														P	P
General Retail	Antiques							P[13]	P				P	P				P	P	P	P
	Appliance Sales and Rentals								P					P				P	P	P	P
	Art Supplies						SE[7]	P[13]	P				P	P				P	P	P	P
	Automobile Parts								P				SE	SE					SE	SE	SE
	Bait and Tackle								P												
	Bakery						SE[12]		P					P				P	P	P	P
	Bicycle Sales and Service								P					P				P	P	P	P
	Billiards								P					P				P	P	SE	SE
	Book/Stationery Store							P[13]	P				P	P				P	P	P	P
	Brewpub																	P	P	P	SE
	Bowling Alley								P										P		
	Building Supplies and Materials								P												
	Cabinet Shops								P												
	Cameras and Photographic Supplies						SE[7]	P[13]	P				P	P				P	P	P	P
	Carpet Outlets								P												
	Ceramic Sales and Studios								P					P				P	P	P	P
	Cigar and Smoke Shops							P[13]	P				P	P				P	P	SE	
	Clock Shops							P[13]	P				P	P				P	P	P	P
	Clothing Shops								P					P				P	P	P	P
	Commercial Retail Packaging and Mail													P				P	P	P	P
	Convenience Stores (no gas pumps)							P[13]	P				P	P				P	P	P	P
	Convenience Stores (with gas pumps)							SE	P				SE	SE					SE	SE	

General Retail	Curio Shops								P					P				P	P	P	P
	Decorating Studio/Shop								P					P				P	P	P	P
	Delicatessen						SE[7]											P	P		
	Department Store								P					P				P	P	P	P
	Drapery Shops							P[13]	P				P	P				P	P	P	P
	Drug Sales (including medical marijuana treatment center dispensing facilities)						SE[7]	SE	P				P	P				P[34]	P	P	P[34]
	Electrical Shops								P												
	Florist						SE[7]	P[13]	P				P	P				P[34]	P	P	P[34]
	Food Outlet Store						SE[7]	SE					P	P					P	P	P
	Fruit and Vegetables Sales (retail, no packing)								P									P	P	P	P
	Furniture Store								P					P				P	P	P	P
	Game Room								P					P				P	P	P	P
	Gift Shop						SE[7]	P[13]	P				P	P				P	P	P	P
	Grocery Store								P					P				P	P	P	P
	Gun Sales and Repair							P[13]	P				P	P				P	P	P	P
	Hardware Store								P					P				P	P	P	P
	Heating and Air Conditioning Sales and Service								P										P		
	Hobby and Craft						SE[7]	P[13]	P				P	P				P	P	P	P
	Interior Decorating							P[13]	P				P	P				P	P	P	P
	Janitorial Supplies								P										P		
	Jewelry Store						SE[7]	P[13]	P				P	P				P	P	P	P
	Leather Goods and Luggage						SE[7]	P[13]	P				P	P				P	P	P	P
	Locksmiths							P[13]	P				P	P				P	P	P	P
	Meat Markets								P									P	P	P	P
	Medical Supplies								P					P				P	P	P	P
	Mobile Home Sales and Service								P												
	Motorcycle Sales and Service								P												
	Music Store						SE[10]														
	Newsstands							P[13]	P				P	P				P	P	P	P
	Nurseries								P												
	Office and/or Business Machines							P[13]	P				P	P				P	P	P	P
	Office and/or Business Supplies							P[13]	P				P	P				P	P	P	P
	Optical Shops								P					P				P	P	P	P
	Opticians							P[13]	P				P	P				P	P	P	P
	Outdoor Sales																	SE	SE	SE	SE
	Outdoor Pool Sales							P					SE						SE	SE	
	Paint/Wallpaper							P[13]	P				P	P				P	P	P	P

General Retail	Pawn Shops							P				P	P				P	P	P	P	
	Pet Grooming							P					P				P	P	P	P	
	Pet Shops						SE[9]	P					P					P	P	P	
	Pool Supplies							P													
	Printing Shops							P					P				P	P	P	P	
	Professional Offices						P	P[13]	P				P	P				P	P	P	P
	Rentals								P								P[24]	P	P	P	
	Second Hand Retail													P				P	P	P	
	Shoe Repair							P[13]	P				P	P				P	P	P	P
	Shoe Store								P					P				P	P	P	P
	Shopping Center								P									P			
	Skating Rink								P					P				P			
	Sporting Goods Store						SE[7]		P					P				P	P	P	P
	Sundries and Notions Shops							SE	P					P				P	P	P	P
	Tailor/Dressmaker							P[13]	P				P	P				P	P	P	P
	Television and Radio Sales and Service								P					P				P	P	P	P
	Theaters								P					P				P	P	P	P
	Toy Stores								P					P				P	P	P	P
	Upholstery Shops								P												
	Utility Building Sales								P												
	Vape Shop/E-Cigarette Store																	SE	SE	SE	
	Watch Repair						SE[7]	P[13]	P				P	P				P	P	P	P
	Wearing Apparel Shops								P					P				P	P	P	P
	Wholesaling from Sample Stock							SE[14]													
Vehicular Sales	Automobile Sales, Service, Repair, and Rentals							SE[15]	P				SE[21]	SE[22]					SE	SE	SE
	Boat and Motor Sales and Service								P												
	Tire Sales and Service								P										P		
Agricultural Use	Timber Growing, Tree Farming, Nursery, or Agricultural Related Businesses																SE				
Business Service	Parking Lot				SE				P									SE	SE		
	Parking Garage								P									SE	P		
	Pest Control Service Establishments															P	P				
	Radio or TV Broadcasting Offices, Studios, Transmitters, or Antennas															P	P				
	Television and Radio Studios (excluding transmission equipment)						SE[11]		P												

Eating or Drinking Establishment	Alcoholic beverages (all types, sale and service) for on-premises consumption								SE					SE			SE	P	P	SE	SE
	Alcoholic beverages for off-premises consumption							SE					SE[31]	SE					P	SE	SE
	Brewpub																	P	P	SE	SE
	Restaurants (with drive-through)								P				SE	P					P		
	Restaurants (without drive-through)						SE[7]	SE	P				P	P			SE	P	P	P	P
Hospitality and Tourism	Art Gallery or Studio												P	P				P	P	P	P
	Hotel/Motel								P					P				P	P	P	P
	Museum												P	P				P	P	P	P
Office Use	Building Trade Contractors with Fleet Parking On-Site																			P	P
	Financial Institutions (with drive-through)								P					P							
	Financial Institutions (without drive-through)							P[13]	P				P	P					P	P	
	Office Space for Building Trades Contractor with No Fleet Parking On-Site																	P	P	P	P
	Professional Offices						P	P[13]	P				P	P		P	P	P	P	P	P
Personal Service	Barbershops/Beauty Shops							P[13]	P				P	P				P	P	P	P
	Dry Cleaners						SE[7]		P					P				P	P	P	P
	Funeral Homes							P[13]	P				P	P							
	Health Spa								P					P				P[34]	P	P	P
	Laundries/Laundromats								P									P	P	P	P
	Licensed Masseurs								P									P	P	P	P
	Mini-Warehouse								SE							P	P	SE	P	SE	SE
	Palmist/Psychic								SE												
	Well Drilling and Pump Services								P												
Community Service	Adult Day Care	SE	SE	SE	SE		SE	SE	SE		SE	SE			P				P	SE	SE
	Child Care	SE	SE	SE	SE		SE	SE	SE		SE	SE	P	P	P			SE[33]	P	P	P
	Church	SE	SE	SE	SE	P	SE	SE	SE		SE	SE	P	P	P			SE[33]	P	SE	SE
	Group Care Home				SE																
	Nursing Home				SE				SE									SE	SE	SE	SE
Educational Use	Pre-school			SE	SE		SE					SE	P	P	P				P	P	P
	Private School														P			SE	P	SE	SE
	School, elementary & secondary						SE								P				P		
	School, post-secondary						SE								P				P		
	Vocational, Technical, Trade, or Industrial School														P	P	P		P		

Recreational Use	Adult Arcade/Electronic Game Center								SE												
	Athletic Complex								SE												
	Clubs/Lodges/Fraternal Organizations						SE											P	P		
	Country club	P	P	P	P						P	P									
	Dance/Music/Gymnastics Studio								P					P				P	P	P	P
	Go-Cart Track								SE												
	Golf Course	P	P	P	P						P	P					SE[28]				
	Public Recreational Uses									P								P	P	P	P
	Race Tracks								SE[18]												
	Recreational Facility														P			P	P		
Public Use	Bus Passages, Parcel Pick-ups and terminals								SE												
	Governmental Uses													P	P			P	P	P	P
	Public Utilities													P	P			SE	P	P	P
	Ancillary Public Facilities													P	P				P	P	P
Health Care Use	Convalescence Facility				SE				SE									SE[33]	P	SE	P
	Dental Clinic						SE	P[13]	P				P	P				P	P	P	P
	Emergency Shelter														SE[32]						
	Hospital						SE	SE	SE				SE	P	P				SE	SE	SE
	Medical/Dental Laboratories						SE	P[13]	P				P	P				P	P	P	P
	Medical Clinic						SE	P[13]	P				P	P				P	P	P	P
	Nursing Home				SE				SE									SE	P	SE	SE
	Veterinarian Clinics							P[13]	P				P	P				P[25]	P	P	P
High-Impact Industrial Use	Boat and Ship Manufacturing, Distributions, Sales, and Storage																P				
	Container Manufacturing																P				
	Fuel Sales and Services																P				
	Manufacturing, Sales, and Distribution of Concrete Products, Plastic Products, Fiberglass Products, Wood Products, Gypsum Products, and Foam Products;																P				
	Metal Fabrication Shops																P				
	Port and Related Activities																P				

Low-Impact Industrial Use	Aviation Related Facilities, Storage, and Production																P				
	Boatyard								SE												
	Building Trades Contractor with Outside Storage Yard and Heavy Construction Equipment								SE												
	Bulk Storage Yard								SE[17]							P	P				
Clinics, in connection with industrial activity															P	P					
	Distribution Establishment															P	P				
	Fabricators								SE[19]												
	Food Processing, Storage and Distribution																P				
	Light Manufacturing								SE[16]							P	P				
	Outdoor Storage															P[27]	P[27]				
	Packaging Facilities																P				
	Printing/Lithographing/Publishing															P	P				
	Railroad Rights-of-Way															P	P				
	Research, experimental testing laboratories															P	P				
	Storage Trailers for sale or rental																P				
	Truck Facilities																P				
	Warehouse/Storage								SE							P	P				
	Welding Shop								SE												
	Wholesale								SE							P	P				

(b) *Zoning district description.*

Zoning District	Abbreviation
Residential Low Density	R-1
Residential Medium Density	R-2
Residential High Density	R-3
Riverfront Residential Land Use	RRF
Residential Professional Office	RPO
Neighborhood Commercial	C-1
General Commercial	C-2
Recreation and Conservation	~~REC~~ RC
Form Based Code	FBC
Gateway Corridor Residential Low Density	GCR (RLD)
Gateway Corridor Residential Medium Density	GCR (RMD)
Gateway Corridor Neighborhood	GCN
Gateway Corridor Commercial	GCC
Institutional	INS
Light Industrial	M-1
Industrial Park	M-2

(c) *Permitted use table footnotes.*

P - Permitted. SE—Allowed by Special Exception.

1. Subject to the conditions set forth in section 117-789.
2. Single-family attached dwellings, up to four units.
3. Subject to the conditions in section 117-122(4)(a)—(j).
4. Multifamily dwelling units may omit garages through a special exception.
5. Subject to development criteria in section 117-148. Each RRF parcel requires a PUD rezoning in compliance with section 117-421 in order to be developed.
6. All permitted uses are subject to the conditions set forth in section 117-199.
7. Subject to the limitations in section 117-200(7).
8. Subject to the limitations in section 117-226.
9. No kennels. Subject to the limitations in section 117-200(7).
10. Musical instruments. Subject to the limitations in section 117-200(7).
11. Including repair incidental to sales. Subject to the limitations in section 117-200(7).
12. Not wholesale bakeries. Subject to the limitations in section 117-200(7).
13. Subject to the limitations of [section] 117-226.
14. Provided no manufacturing or storage for distribution is permitted on-premises.
15. Subject to the limitations outlined in section 117-228(10).
16. Light manufacturing, processing (including food processing but not slaughterhouse), packaging or fabricating.
17. Bulk storage yards, not including bulk storage of flammable liquids.
18. Race tracks for animals or vehicles.
19. Plumbing, electrical, mechanical, and sheet metal.

20. All uses must be in a totally enclosed building and no more than 20 percent of floor space to be devoted to storage. The permitted uses per section 117-540 are subject to the limitations in section 117-541(5)(b).
21. Automobile rental not included as a use permitted by special exception.
22. Establishments or facilities for automobile parts, sales, and service without use of an outdoor intercom or public address system or speakers, and no vehicle display racks that tilt vehicles in any way to show underside, unless they are located inside a show room.
23. Through special exception, multifamily dwelling units can be built without garages.
24. Rentals, excluding heavy equipment.
25. Veterinarian clinics within enclosed buildings.
26. The following are permitted uses in the institutional land use category, institutional zoning category: Any lawful civic, governmental, religious, public utility, and other public necessity uses or activities.
27. Subject to the limitations of section 117-297(5).
28. Golf courses and pro shop allowed by special exception.
29. Pursuant to section 117-355: Allowable uses are public recreation uses that are compatible with the environmental characteristics of the property and, if purchased with grant funds, are consistent with grant conditions. No development potential is associated with these lands; however, recreation facilities may be constructed as a part of recreation uses that are consistent with the land use category.
30. Subject to the conditions in section 117-796.
31. Beer and wine sales only.
32. Multifamily dwellings greater than 35 feet in building height.
33.

Section 14. That Chapter 117, Section 117-6 shall be amended to read as follows:

Section 117-6. – Lot requirements table.

(a) Lot requirements table.

	R-1	R-1A	R-2	R-3	RPO	C-1	C-2	REC	GCR[2] RLD	GCR[2] RMD	GCN	GCC	INS	M-1	M-2	FBC[1]				M-2
																Downtown	Primary	Secondary	Transition	
FRONT YARD (Minimum feet):																				
Single-family dwelling unit, detached	20	20	20	20	20	20	20		20	20	10	10								
Single-family dwelling unit, attached			20	20	20	20	20			20	10	10								
Multi-family dwelling unit				3025								1025								
Mobile Home Park/Subdivision				15																
Nonresidential uses					20	25	25				10	10	20	25	25	0' Min 6' Max	6' Min 10' Max	10' Min No Max	15' Min No Max	25
INTERIOR SIDE YARD:																				
Single-family dwelling unit, detached	10	7.5	7.5	7.5	7.5	7.5	7.5		10	7.5	5	5								
Single-family dwelling unit, attached			10 or 10%[3]	7.5 or 10%[3]	10 or 10%[3]	10 or 10%[3]	10 or 10%[3]			10 or 10%[3]	10	5								
Multi-family dwelling unit				10[4 & 25]								5[9 & 25]								
Mobile Home Park/Subdivision				7.5																
Nonresidential uses					7.5 or 10%[3]	NMR[8]	NMR[8]				10	10	NMR[8]	15	15	0'/6'[11]	0'/6'[11]	6' min	6' min	15
STREET SIDE YARD:																				
Single-family dwelling unit, detached	15	15	15	15	15	15	15		15	15	10	10								

Single-family dwelling unit, attached			15 or 10%[3]	15 or 10%[3]	15 or 10%[3]	15 or 10%[3]	15 or 10%[3]			15 or 10%[3]	10	10								
Multi-family dwelling unit				1525								1025								
Mobile Home Park/Subdivision				15																
Nonresidential uses					15 or 10%[3]	NMR[8]	NMR[8]				10	10	NMR[8]	15	15	0' Min 6' Max	6' Min 10' Max	10' Min No Max	10' Min No Max	15
REAR YARD:																				
Single-family dwelling unit, detached	10	10	10	10	10	10	10		10	10	10	10								
Single-family dwelling unit, attached			10	10	10	10	10			10	10	10								
Multi-family dwelling unit				20[5 & 25]								10[5 & 25]								
Mobile Home Park/Subdivision				10																
Nonresidential uses					10	107	107				10	10	107	20	20	10	10	10	10	20
LOT WIDTH (Minimum feet):																				
Single-family dwelling unit, detached	70	50	50	50	50	50	50		70	50	50	50								
Single-family dwelling unit, attached			7511	75	7511	7511	7511			7511	7511	100								
Multi-family dwelling unit				10025								10025								
Mobile Home Park/Subdivision				10010																
Nonresidential uses					50	NMR	NMR				NMR	NMR	NMR	100	100					100

LIVING AREA (Minimum square feet):																				
Single-family dwelling unit, detached	1,250	1,250	1,000	1,000	1,000	1,000	1,000		1,250	1,000	1000	1000					1000	1000	1000	
Single-family dwelling unit, attached			1,000	70014	1,000	1,000	1,000			1,000	1,000	750								
Multi-family dwelling unit				80012								75013								
Mobile Home Park/Subdivision				NMR																
Nonresidential uses					NMR	NMR	NMR	NMR			NMR	NMR	NMR	NMR	NMR					NMR
LOT AREA (Minimum-1,000 square feet):																				
Single-family dwelling unit, detached	7	5	5	5	5	5	5		7	5	5	5								
Single-family dwelling unit, attached			8.517	7.5	8.517	8.517	8.517			8.517	8.517	7.5								
Multi-family dwelling unit				7.5[15 & 25]								7.5[15 & 25]								
Mobile Home Park/Subdivision				435.6																
Nonresidential uses					6	NMR	NMR				NMR	NMR	NMR	NMR	NMR					NMR
BUILDING COVERAGE (%) or Floor Area Ratio (FAR):																				
Single-family dwelling unit, detached	35%	35%	35%	35%	35%	35%	35%		35%	35%	MP[19]	MP[19]					35%	35%	35%	

Single-family dwelling unit, attached			35%	35%	35%	35%	35%			35%	MP[18]	MP[20]								
Multi-family dwelling unit				40%[25]								MP[20 & 25]								
Mobile Home Park/Subdivision				40%																
Nonresidential uses					0.2	0.25	0.35	0.2			MP[18]	MP[20]	0.3	0.6	0.6					0.6
BUILDING HEIGHT (Maximum feet):	35	35	35	3525	35	35	35		35	35	3522	5423	8521	5524	5524	20' Min 2 Stories Max[1]	20' Min 3 Stories Max[1]	16' Min 2 Stories Max[1]	16' Min 2 Stories Max[1]	5524

(b) Lot requirements notes.

NMR—No minimum required **MP**—Minimum pervious

Districts.

1. Form Based Code – Refer to Section Chapter 117 Article XIV

   A. New Development.

      The provisions contained in this article apply to all new developments within the Form-Based Code area depicted in Figure XIV-1.

   B. Existing Development.

      1. Existing developments shall not be required to meet code unless site or building modifications are proposed. Sign permits shall not trigger the requirements of this section.

      2. Existing developments undergoing a major modification shall be required to bring the entire site up to code, except for the following. Major modification shall be defined as any repair, reconstruction, rehabilitation, addition, or improvement which costs 50% or more of the "Just Market Value" of the property, as noted in the Clay County Property Appraiser's Office records or the increase or replacement of more than 50% of the existing building floor area. Replacement, in this instance, entails demolishing both interior and exterior portions of the building to build new. When calculating the cost of the improvement, it shall include the cost of improvements made over the preceding five years.

         a. Existing buildings not proposed to be expanded shall not be required to meet building setbacks (Sec. 117-836.B), minimum building and ceiling height (Sec. 117-837.C), and frontage requirements (Sec. 117-837.D). All other site and building provisions shall apply.

         b. If the major modification involves building a new structure on the site and not making any changes to the existing building(s), the existing buildings will not be required to meet the requirements of this form-based code. The new building and the site, however, will be required to meet all the provisions of this code.

      3. Existing developments undergoing minor modifications shall not be required to bring the entire site up to code. The specific changes to the site or building, however, shall be required to meet the standards of this article. Should the minor modification require additional parking spaces, the parking lot and parking lot landscaping shall be brought up to code. Dumpster screening, site/accent lighting, and landscaping not meeting current regulations shall be modified to meet code. Minor Modifications are those that do not meet the definition of Major.

2. Gateway Corridor Residential Zoning Category: section 117-515.

   1. The gateway corridor residential zoning category is intended for all property located in the gateway corridor and designated as RLD (residential low density) and RMD (residential medium density) on the future land use map. The permitted uses, special exceptions, and density controls are R-1, single-family residential, for the RLD (residential low density) property and R-2, single-family multifamily residential, for the RMD (residential medium density) property.

   2. Where structures are in existence and situated in the gateway corridor residential zoning category at the time of the adoption of the ordinance from which this section is derived and are demolished or destroyed, the structures shall be allowed to be rebuilt to the same footprints and density as existed at the time of adoption of the ordinance from which this section is derived, provided the construction of the new structure meets current building codes.

Setbacks.

3. Ten percent of lot width (the greater amount must be chosen).

4. Not less than ten feet for the first two stories. For each story in excess of two, the required side yards shall be increased by five feet for each story so added.

5. 20 feet for the first two stories. For each story in excess of two, the required rear yards shall be increased by five feet for each story so added.

6. Section 117-123(5)(c)—(e):

   (c) Minimum required from side and rear yard of the structure: Not less than 25 feet for the first two stories. For each story in excess of two, the required front, side and rear yards shall be increased by one foot horizontally for every one foot of vertical building rise;

   (d) Minimum required rear yard: 25 feet unless it fronts a state-owned property (St. Johns River or Governors Creek) then a minimum of 30 feet setback;

   (e) Minimum required side yard on each side of the structure: Not less than 25 feet for the first two stories. For each story in excess of two, the required side yards shall be increased by one foot horizontally for every one foot of vertical building rise.

7. If abutting a dedicated alley, only five feet are required.

8. No minimum required (NMR), except 15 feet on corner lots and 15 feet on interior lots when abutting a residential zone.

9. Minimum required side yard on each side of the structure: Not less than five feet for the first two stories. For each story in excess of two, the required side yards shall be increased by five feet for each story so added.

Lot Width.

10. 100 feet on a public street.

11. Minimum required lot width:

    1. Two-family: 75 feet

    2. Three-family: 100 feet

    3. Four-family: 150 feet

Living Area.

12. Section 117-123(3)(f)(1)-(4)

    f. Minimum required living areas:

    1. Efficiency apartment: 800 square feet;

    2.One bedroom apartment: 800 square feet;

    3.Two bedroom apartment: 900 square feet;

    4.Three or more bedroom apartment: 900 square feet plus an additional 100 square feet for each bedroom over two bedrooms.

13. Section 117-123(f)(1)—(4) and section 117-566(2)(f)(1)—(4).

    f. Minimum required living areas:

    1. Efficiency apartment: 800 square feet;

    2.One bedroom apartment: 800 square feet;

    3.Two bedroom apartment: 900 square feet;

    4.Three or more bedroom apartment: 900 square feet plus an additional 100 square feet for each bedroom over two bedrooms.

14. Minimum required living area: 700 square feet per family.

Lot Area.

15. 7,500 square feet for the first two dwelling units and 2,700 square feet for each additional unit that is added.
16. Minimum required lot area shall be 7,260 square feet for the first two dwelling units and 3,630 square feet for each additional unit that is added;
17. Minimum required lot area:

    1.Two-family: 8,500 square feet;

    2.Three-family: 12,500 square feet;

    3.Four-family: 16,500 square feet.

Minimum Pervious.

18. Minimum Pervious is 30%.
19. Minimum pervious surface: 40%.
20. Minimum pervious surface: 20%.

Structure Height.

21. Mirror industrial height for utility structures i.e., elevated water storage tanks.
22. Maximum number of stories: three. Maximum structure height: 35 feet. For commercial and professional offices: The maximum height may be increased to 50 feet. The building must be tiered back one foot for every foot over 35 feet.
23. Maximum structure height: 54 feet. Maximum height may be increased to 70 feet. The building must be tiered back one foot for every foot over 54 feet. Maximum number of stories: four. For a single-family detached dwelling permitted by special exception, maximum height would be 35 feet and the maximum number of stories is three.
24. Maximum structure height (buildings): 55 feet. Maximum accessory height (towers only): 85 feet.
25. Building height can be increased subject to approval of a special exception as set forth in section 117-122(7).

Section 15. Repealer. Any ordinances or parts thereof in conflict with the provisions of this ordinance are hereby repealed to the extent of such conflict.

Section 16. Severability. The various parts, sections and clauses of this Ordinance are hereby declared to be severable. If any part, sentence, paragraph, section or clause is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of the Ordinance shall not be affected thereby.

Section 17. Effective Date. This Ordinance shall take effect immediately upon passage.

INTRODUCED AND APPROVED AS TO FORM ONLY ON THE FIRST READING BY THE CITY COUNCIL OF THE CITY OF GREEN COVE SPRINGS, FLORIDA, ON THIS 7TH DAY OF MAY 2024.

CITY OF GREEN COVE SPRINGS, FLORIDA

_____

Constance W. Butler, Mayor

ATTEST:

_____

Erin West, City Clerk

PASSED ON SECOND AND FINAL READING BY THE CITY COUNCIL OF THE CITY OF GREEN COVE SPRINGS, FLORIDA, THIS 21ST DAY OF MAY 2024.

CITY OF GREEN COVE SPRINGS, FLORIDA

_____

, Mayor

ATTEST:

_____

Erin West, City Clerk

APPROVED AS TO FORM ONLY:

_____

L.J. Arnold, III, City Attorney

STAFF REPORT

CITY OF GREEN COVE SPRINGS, FLORIDA

TO: Planning and Zoning Commission **MEETING DATE:** April 23, 2024

FROM: Michael Daniels, AICP, Development Services Director

SUBJECT: River Oaks Site Development Plan for property located on the south side of the 800 block of Cooks Lane for approximately 8.88 acres of parcel #016564-002-00.

PROPERTY DESCRIPTION

APPLICANT: Quoc Mai, Mai Engineering Services, Inc.

OWNER: William Kreig
1609 South Orange Ave LLC

PROPERTY LOCATION: 800 Block of Cooks Lane

PARCEL NUMBER: 016564-002-00

FILE NUMBER: SE-23-003

CURRENT ZONING: C-2, General Commercial/M-2 Heavy Industrial

FUTURE LAND USE DESIGNATION: Mixed Use/Industrial

SURROUNDING LAND USE

NORTH:
FLU: Neighborhood
Z: R-3, R-2
Use: Apartments/Single Family

SOUTH:
FLU: INDUSTRIAL
Z: MUH
Use: Undeveloped

EAST:
FLU: Mixed Use
Z: C-2
Use: Undeveloped

WEST:
FLU: INDUSTRIAL/Mixed Use
Z: M-2/R-3
Use: Industrial / Undeveloped

BACKGROUND

The property has a split zoning with the northern 2.85 zoned C-2, General Commercial and the southern 6.03 acres do not currently have a zoning district. The property was originally annexed into the City in 2008 as part of the annexation of 68.6 acres of property that would become the Energy Cove Industrial Park.

The property was never given a Future Land Use or Zoning Designation however as part of the Evaluation and Appraisal Report update to the Comprehensive Plan it was given a Future Land Use designation of Mixed Use Highway which was a predominantly industrial land use classification which is consistent all of the Energy Cove Industrial Park. As part of the Comprehensive Plan update in 2022, the future land use for this parcel was changed to Industrial. A zoning for this property was never provided and as a result, in order for the project to be developed, the property needs to secure a zoning designation, which has been applied for under a separate agenda item.

The property is a portion of parcel # 016564-002-00 which has access on Green Cove Avenue.

On January 23, 2024, the portion of parcel #016564-002-00 consisting of approximately 2.85 acres that is adjacent was approved for a special exception by the Planning and Zoning Commission subject to the property being rezoned and in compliance with the following conditions:

1. Provide a 40’ landscape buffer consisting of landscaping as required by City LDC Sec. 113-244(d)(3).
2. Provide signage to limit truck traffic to ingress and egress from US 17 by requiring access limitation.
3. All outdoor storage must be completely screened from public view.
4. Buildings fronting Cooks Lane shall have a brick façade.
5. Signal timing improvements as set forth in the Traffic Study Report shall be implemented prior to development approval.
6. Additional Right of Way as shown on the attached draft site plan shall be dedicated to the City prior to development approval.

A copy of the approval letter, traffic study and renderings from the special exception are enclosed.

PROPERTY DESCRIPTION

The property is located within Energy Cove and has approximately 625’ of frontage on Cooks Lane. The property is heavily wooded with a mixture of hardwood and pine trees.

Figure 1. Aerial Map

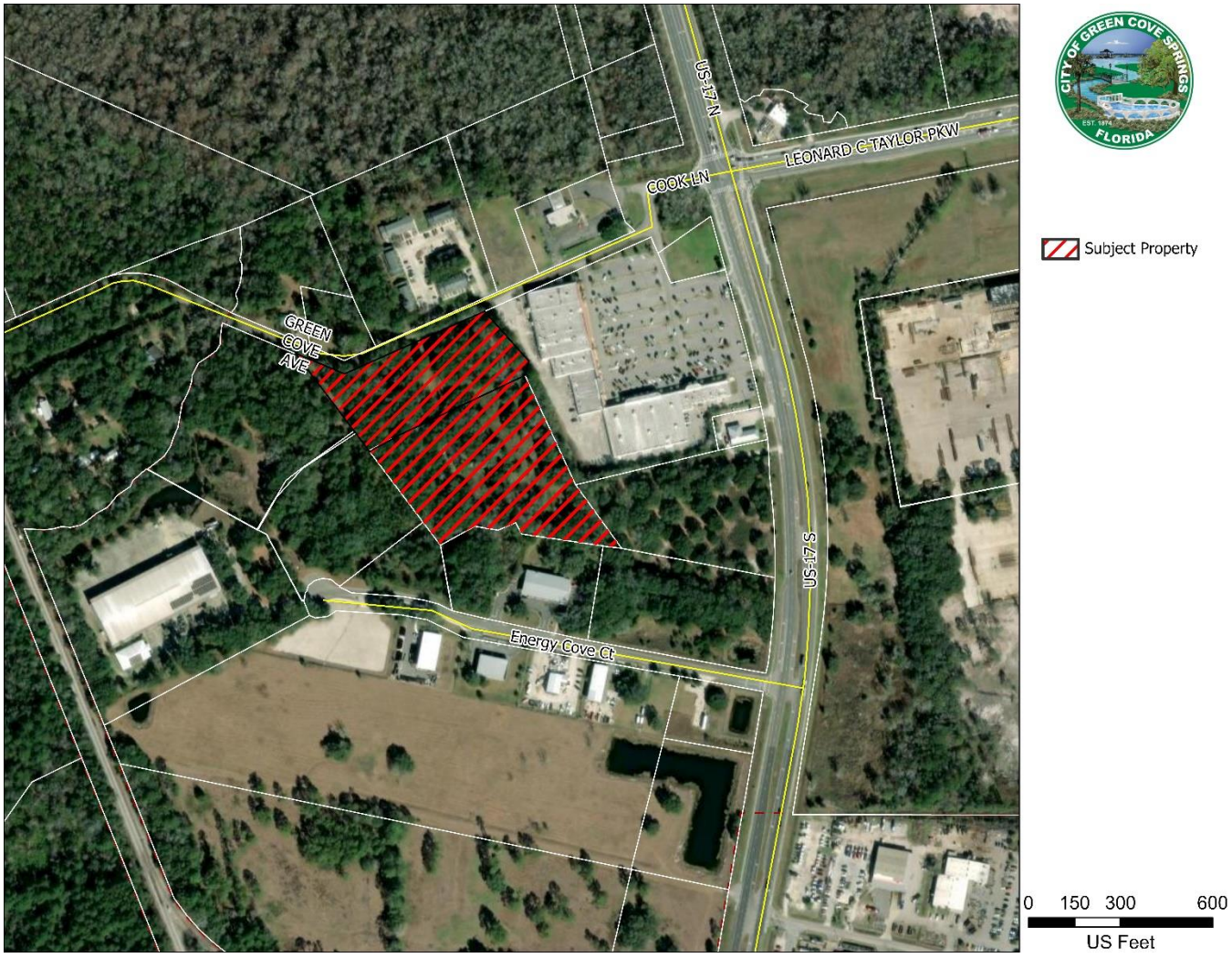


Figure 2. Future Land Use

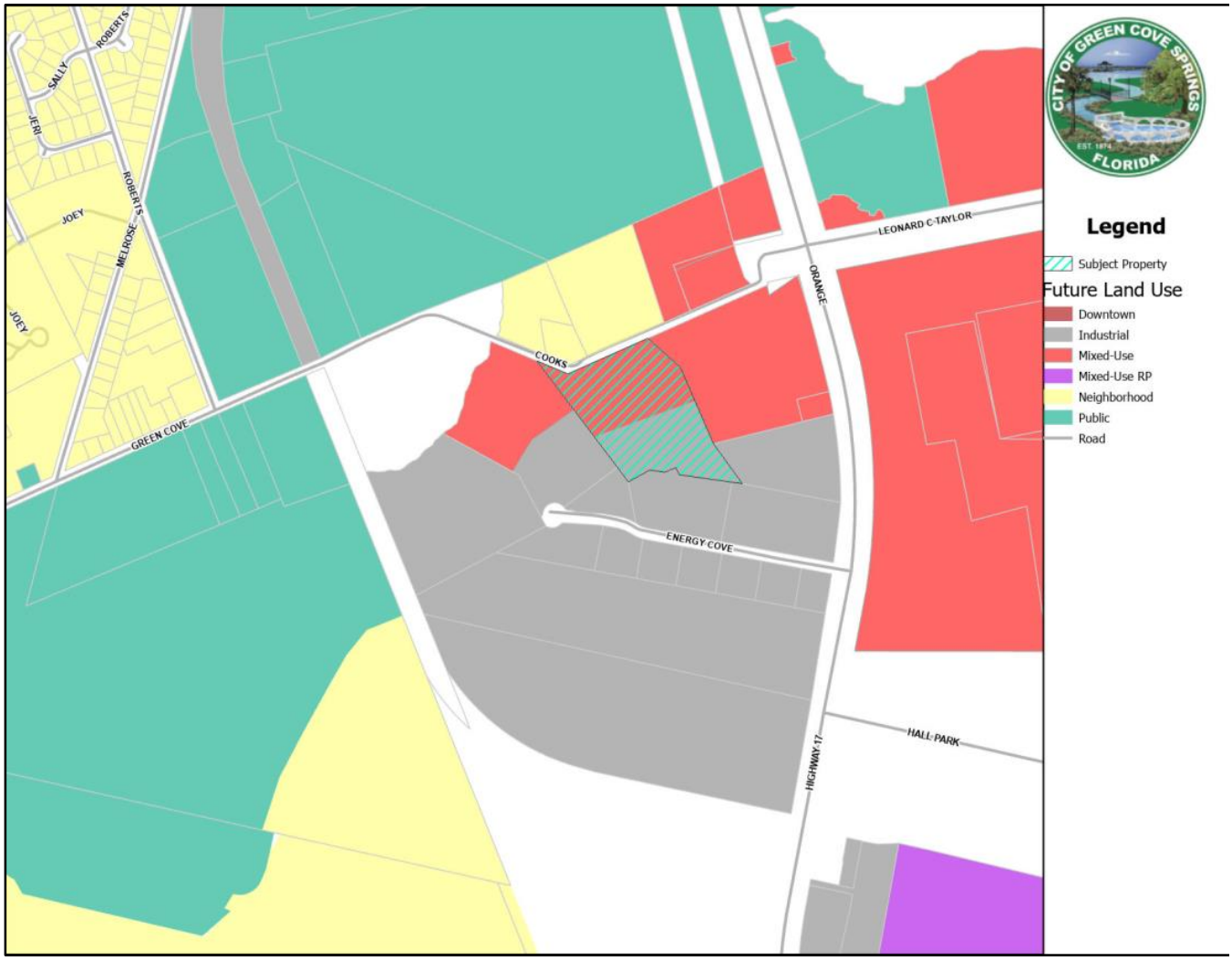


Figure 3. Zoning

DEVELOPMENT DESCRIPTION

The applicant has submitted a site development plan for 4 warehouse/special trades contractors buildings totaling 76,000 square feet—51,000 square feet of warehousing and 25,000 square feet of office.

PARKING, LOADING, & STACKING

The plan shows 169 onsite parking spaces and 9 handicapped spaces. City Parking requirements require 114 parking spaces.

DRAINAGE RETENTION

A drainage retention plan has been provided showing that a drainage retention system will drain to a proposed retention pond onsite. within Energy Cove Court. In addition, the applicant is required to secure a stormwater permit from the St Johns River Water Management District prior to moving forward with project development. The drainage plan will be designed to ensure that no additional runoff is sent to adjacent properties.

TRAFFIC AND ACCESS

The plan shows one vehicular access point on Cooks Lane.

Pursuant to the attached traffic study, the project will generate 176 total trips and 33 pm peak hour trips. Pursuant to the attached traffic study, they are showing failures of several turning

movements at the intersection of US 17 and SR 16. However, with signal timing adjustments the intersection can operate at an acceptable Level of Service. These trip thresholds are typically below the requirements required for a traffic study. In addition, the applicant shall be required to pay mobility fees as part of the building permit approval process.

Truck traffic is limited to ingress and egress off from Cooks Lane east to US 17. pursuant to the 5-ton weight limit to the west of the site on Cooks Lane. As part of the approved Special Exception, the signal timing adjustments identified in the traffic intersection analysis shall be provided in order to ensure an adequate level of service at the intersection of US 17 and SR 16 prior to project completion.

LANDSCAPE AND SCREENING REQUIREMENTS

The current landscape plan is showing that 1390 inches of trees being removed and 1135 inches of trees being credit as being saved with an additional 468 inches of trees being planted in order which is incompliance with the City's tree requirements.

In addition to the site plan requirements for tree planting, the applicant is required to have 40' landscape buffer along Cooks Lane with the following landscape buffer meeting the requirements set forth in Sec. 113-244(d)(3).

- 1 canopy tree a minimum of every 50' lineal feet,
- 2 understory trees every 50' lineal feet
- A continuous hedge row.

PUBLIC FACILITIES IMPACT

Potable Water Impacts

System Category	Gallons Per Day (GPD)
Current Permitted Capacity[1]	4,200,000
Less actual Potable Water Flows[1]	1,013,000
Residual Capacity[1]	3,187,000
Projected Potable Water Demand from Proposed Project[2]	10,034
Residual Capacity after Proposed Project	3,176,966

1. *Source: City of Green Cove Springs Public Works Department*
2. *Source: City of Green Cove Springs Comprehensive Plan. Formula Used: .11 gallons per 1,000 sq ft.*

Sanitary Sewer Impacts – South Plant WWTP

System Category	Gallons Per Day (GPD)
Current Permitted Capacity[1]	350,000
Current Loading[1]	264,000
Committed Loading [1]	62,000
Residual Capacity[1]	46,000
Percentage of Permitted Design Capacity Utilized[1]	103%
Projected Sewer Demand from Proposed Project[2]	8,360
Residual Capacity after Proposed Project	37,640

1. *Source: City of Green Cove Springs Public Works Department*
2. *Source: City of Green Cove Springs Comprehensive Plan. Formula Used: .11 gallons per 1,000 square feet*

Conclusion: The project site is served by the South Plant Wastewater Treatment Plant (WWTP). As shown in the table above, when factoring in the current loading and the committed loading, this WWTP has the capacity to handle the estimated impacts resulting from the proposed application. When the committed flows for the Rookery are going to be served by Clay County utility Authority there will be adequate capacity for this project.

Solid Waste Impacts

Conclusion: The City of Green Cove Springs does not provide solid waste for nonresidential users. Private providers subject to the franchise requirements set forth in Sec 66-10 of the City Code.

STAFF COMMENTS

This property is part of the Energy Cove Industrial Park. The surrounding uses within the Park are industrial uses. However, this property borders existing and proposed residential uses to the north and west. In order to make this use compatible additional conditions have been placed on the property to ensure that the look and function of the property is compatible with the surrounding area. These include a landscape buffer, traffic improvements, right-of-way dedication, building material requirements to address compatibility with the surrounding area.

Attachments include:

1. Site Plan
2. Property Rendering
3. Traffic Study
4. Application
5. Site Plan Deficiency Report

STAFF RECOMMENDATION

RECOMMENDED MOTION:

Motion to recommend approval to City Council of the River Oaks Site Development Plan subject to addressing the outstanding staff comments that are provided with the 4/17/2024 deficiency notice.

OWNER:

WILL KRIEG
P.O. BOX 7902
JACKSONVILLE, FL 32210
OFFICE 904-379-9242
WWW.RIVEROAKSOUTDOOR.COM
WILL@RIVEROAKSOUTDOOR.COM

ENGINEER:

MAI ENGINEERING SERVICES, INC
2510 US 1 S, SUITE D
ST. AUGUSTINE, FL 32086
PHONE: (904) 794-1760
FAX: (904)-794-1768
ATTN. QUOC H. MAI, P.E.

TOPO SURVEYOR

FRANK JONES & ASSOCIATES
6015 CHESTER CIRCLE
JACKSONVILLE, FLORIDA 32217
PH: (904) 448-5424

GEOTECHNICAL ENGINEER

ELLIS - ECS FLORIDA
7064 DAVIS CREEK RD.
JACKSONVILLE, FLORIDA 32256
PH: (904) 880-0960
FX: (904) 880-0970

ELECTRIC:

GREEN COVE SPRINGS ELECTRIC
321 WALNUT ST.
GREEN COVE SPRINGS, FL 32043
PHONE: (904)-297-7500

COMMUNICATION

AT&T
8171 BAYMEADOWS WAY W. 3RD FLOOR
JACKSONVILLE, FL 32256
PHONE: (904) 407-2549
ATTN:KEVIN DOW

WATER & SEWER:

CITY OF GREEN COVE SPRINGS UTILITIES
321 WALNUT ST
GREEN COVE SPRINGS, FL 32043

THE CITY OF GREEN COVE SPRINGS

321 WALNUT ST
GREEN COVE SPRINGS, FL 32043
904-297-7500

ST JOHNS RIVER WATER MANAGEMENT DISTRICT

7775 BAYMEADOWS WAY, SUITE 102
JACKSONVILLE, FL 32256
904-730-6270
800-852-1563

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION:

FDEP-NORTHEAST DISTRICT
8800 BAYMEADOWS WAY WEST, SUITE 100
JACKSONVILLE, FLORIDA 32256
(904) 256-1700

SITE DEVELOPMENT PLANS FOR

RIVER OAKS INDUSTRIAL PARK

PARCEL ID. NO. : 38-06-26-016564-002

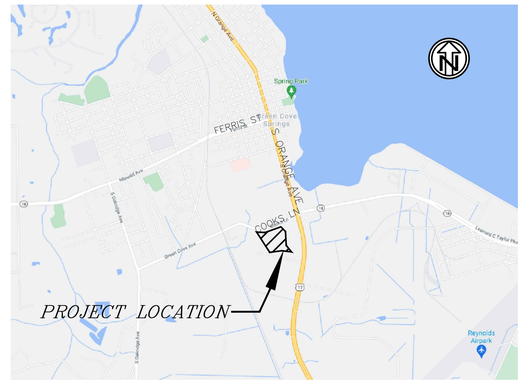
SITE ADDRESS: 1609 COOKS LANE., GREEN COVE SPRINGS, FLORIDA

PREPARED BY:

MAI ENGINEERING SERVICES, INC.
2510 US 1 SOUTH SUITE D
ST. AUGUSTINE, FL 32086
PHONE (904)794-1760
FAX (904)794-1768
quoc@maiengineer.com

DRAWING INDEX

LOCATION MAP (NTS)



ARIAL MAP (NTS)

Sunshine 811

2510 US 1 SOUTH SUITE D
ST. AUGUSTINE, FL 32086
PHONE (904)794-1760
FAX (904)794-1768
quoc@maiengineer.com
MAI ENGINEERING SERVICES, INC.
LICENSED ENGINEER
QUOC H. MAI
FL.#64006 CA#28162

REVISIONS

#	DATE	REVISION
0	12/17/20	REVISION PER CITY REQUEST
1	04/26/2023	REVISION PER CITY AND RWD #4
2	06/28/2023	REVISION PER CITY COMMENTS
3	01/02/2024	REVISION PER RWD COMMENTS
4	04/04/2024	REVISION PER CITY COMMENTS
5	04/17/2024	REVISION PER CITY COMMENTS

SHEET TITLE: COVER SHEET

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA
PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DSGN BY:	QHM
DWG BY:	GMG
CHK BY:	QHM
DATE:	4/18/2024
JOB No.:	1369
SHEET No.:	1

GENERAL NOTES:

1. ALL WORK SHALL BE COMPLETED IN CONFORMANCE AS APPLICABLE WITH FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," LATEST EDITION

2. SHOP DRAWINGS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO MANUFACTURE.

3. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ANY EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL LINE AND GRADE STAKES IN THE FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ENGINEER OR THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY ERRORS.

5. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO START OF CONSTRUCTION FOR LOCATION OF EXISTING UTILITIES, IN ORDER TO PREVENT DAMAGE AND COORDINATE ADJUSTMENT AND/OR RELOCATION OF SAME IF REQUIRED.

6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER AND OWNER OF ANY CHANGES OR DEVIATIONS FROM THE ORIGINAL PLANS PRIOR TO CONSTRUCTION OF SAID CHANGE OR DEVIATION.

7. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING STRUCTURES AND UTILITIES. ANY DAMAGES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

8. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY INSURANCE AND BONDS REQUESTED BY THE OWNER FOR THIS PROJECT.

9. THE OWNER WILL PROVIDE THE SELECTED CONTRACTOR WITH COPIES OF ALL PERMITS RECEIVED FOR THE PROJECT.

10. THE CONTRACTOR SHALL PROTECT AND USE CAUTION WHEN WORKING IN OR AROUND AREAS OF OVERHEAD TRANSMISSION LINES OR UNDERGROUND UTILITIES.

11. ALL PROPERTY CORNERS AND SURVEY MONUMENTS WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE PROTECTED. IF A MONUMENT IS IN DANGER OF BEING DESTROYED, THE PROJECT ENGINEER AND OWNER SHOULD BE NOTIFIED IMMEDIATELY IN ORDER THAT THE COUNTY MAY HAVE A SURVEYOR REFERENCE SAID POINT PRIOR TO DISTURBANCE. ALSO, ALL G.P.S. CONTROL POINTS ARE TO BE PROTECTED. IF DESTROYED DURING CONSTRUCTION IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO REPLACE THE CONTROL POINT(S) AT THEIR EXPENSE.

12. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE, AT ALL TIMES, ONE COPY OF APPROVED CONSTRUCTION PLANS, SPECIFICATIONS ANY SPECIAL PROVISIONS, AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS IN COMPLIANCE WITH THE TOWN OF MARINELAND LAND DEVELOPMENT CODE.

13. SUBMITTAL OF AS-BUILT SITE SURVEY, INCLUDING BENCH MARKS, IS REQUIRED.

14. THE CONTRACTOR SHALL CONTACT THE TOWN OF MARINELAND DEVELOPMENT SERVICES INSPECTOR 24 HOURS PRIOR TO ALL NECESSARY SITE WORK INSPECTIONS AND 5 DAYS PRIOR TO THE FINAL INSPECTION.

15. ANY CHANGES TO THE EXISTING BUILDING (INCLUDING BUT NOT LIMITED TO RE-ROOF AND PAINT COLOR CHANGES) LANDSCAPING, AND FENCES/WALL REQUIRES THE APPROVAL BY THE TOWN OF MARINELAND.

EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION CONTROL WITHIN BEST MANAGEMENT PRACTICES FOR THE DURATION OF THE PROJECT UNTIL SUCH TIME AS THE PROJECT HAS BEEN CERTIFIED AS COMPLETE.

2. THE CONTRACTOR SHALL SEED & MULCH OR SOD ALL OPEN SPACE AREAS TO BE GRASSED IMMEDIATELY FOLLOWING FINAL GRADING AND COMPLETION OF ALL UNDERGROUND UTILITIES.

3. SILT FENCES SHALL BE INSTALLED ALONG LIMITS OF CONSTRUCTION .

4. SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND REPAIRED IMMEDIATELY IF DAMAGED.

5. ALL SIDE SLOPES OF STORM WATER MANAGEMENT AREAS SHALL BE SODDED UPON COMPLETION OF FINAL GRADING.

6. ALL INLETS SHALL BE PROTECTED FROM COLLECTION OF ERODED MATERIALS BY INSTALLATION OF TEMPORARY FILTER FABRIC AND/OR HAYBALES.

7. FLOATING TURBIDITY BARRIERS SHALL BE INSTALLED WITHIN ALL WATER BODIES DOWNSTREAM OF CONSTRUCTION ACTIVITIES WHERE PROTECTION AGAINST TURBID WATERS DISCHARGE MAY OCCUR.

MAINTENANCE OF TRAFFIC NOTES:

1. ADVANCE CONSTRUCTION SIGNAGE INDEX 602 SHALL BE POSTED.

2. TRAFFIC SHALL BE RESTRICTED TO A SINGLE LANE WHEN ANY WORK ENCROACHES THE AREA BETWEEN THE CENTERLINE AND 2 FEET OUTSIDE THE EDGE OF PAVEMENT. ONE-LANE CLOSURES SHALL BE IN ACCORDANCE WITH F.D.O.T. STANDARD INDEX No. 603.

3. ALL WORK WITHIN THE FDOT RIGHT OF WAY SHALL CONFORM TO THE MOST CURRENT FDOT STANDARDS AND SPECIFICAATIONS.

4. ALL CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE STORED A MINIMUM OF 30 FEET FROM THE EDGE OF EXISTING PAVEMENT AND SHALL BE PROTECTED BY TYPE II BARRICADES WITH FLASHING YELLOW LIGHTS.

5. THERE SHALL BE NO EXCAVATIONS LEFT OPEN AFTER DARK.

6. CONTRACTOR SHALL NOTIFY CITY OF GREEN COVE SPRINGS PERMITTING OFFICE.

7. IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT THE SUNSHINE STATE ONE CALL SYSTEM AT (800)-432-4770 FOR LOCATION OF UNDERGROUND UTILITIES.

TRAFFIC CONTROL/STRIPING NOTES:

1. SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE FLORIDA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE JURISDICTIONAL TRAFFIC DEPARTMENT TYPICAL DRAWINGS FOR ROADWAY SIGNING, STRIPING & GEOMETRICS

2. ALL PAVEMENT MARKINGS ARE TO CONSIST OF 90 MIL. THERMOPLASTIC.

3. REPLACE ALL EXISTING RPM'S REMOVED OR DAMAGED BY THIS PROJECT, TO MEET 2015 FDOT STANDARDS.

4. SIGNS THAT REQUIRE RELOCATION TO BE RELOCATED PER CURRENT STANDARDS 11860 AND 17302.

SITE PREPARATION NOTES:

1. NORMAL, GOOD PRACTICE SITE PREPARATION PROCEDURES SHALL BE USED FOR THIS PROJECT. THESE PROCEDURES INCLUDE: STRIPPING THE SITE OF EXISTING VEGETATION AND TOPSOIL, COMPACTING THE SUBGRADE AND PLACING NECESSARY FILL OR BACKFILL TO GRADE WITH ENGINEERED FILL. A MORE DETAILED SYNOPSIS OF THIS WORK IS AS FOLLOWS:

2. PRIOR TO CONSTRUCTION, THE LOCATION OF ANY EXISTING UNDERGROUND UTILITY LINES WITHIN THE CONSTRUCTION AREA SHOULD BE ESTABLISHED. PROVISIONS SHOULD THEN BE MADE TO RELOCATE INTERFERING UTILITIES TO APPROPRIATE LOCATIONS. ABANDONED PIPES SHALL BE PROPERLY REMOVED OR PLUGGED, AS THEY MAY SERVE AS CONDUITS FOR SUBSURFACE EROSION WHICH MAY SUBSEQUENTLY LEAD TO EXCESSIVE SETTLEMENT OF OVERLAY STRUCTURE(S).

3. STRIP THE PROPOSED CONSTRUCTION LIMITS OF ALL GRASS, ROOTS, TOPSOIL AND OTHER DELETERIOUS MATERIALS WITHIN AND FOR 3 FEET BEYOND THE PERIMETER OF THE PROPOSED PAVED AREAS. SOME ISOLATED AREAS MAY REQUIRE MORE THAN 12 INCHES OF STRIPPING OR UNDERCUTTING. TYPICAL STRIPPING AT THIS SITE TO DEPTHS OF 6 TO 12 INCHES.

4. IT IS RECOMMENDED THE TOP OF THE CLAYEY SANDS BE MAINTAINED A MINIMUM OF 2 FEET BELOW THE PROPOSED BOTTOM OF THE BASE MATERIAL OR CONCRETE PAVEMENT. IF THE SITE GRADING IS SUCH THAT THE MINIMUM SEPARATION DOES NOT EXIST, WE RECOMMEND UNDERCUTTING THE CLAYEY MATERIALS TO MAINTAIN THIS SEPARATION AND BACKFILLING WITH CLEAN STRUCTURAL FILL, AS DESCRIBED BELOW.

5. THE SEASONAL HIGH GROUNDWATER LEVEL IS ESTIMATED TO BE ONE FOOT BELOW THE EXISTING GROUND. FOR PLANNING PURPOSES, GROUNDWATER CONTROL MEASURES (DEWATERING) SHOULD BE ANTICIPATED FOR THE STRIPPING AND EARTHWORK OPERATIONS. TEMPORARY GROUNDWATER CONTROL MAY BE ACHIEVED BY PUMPING FROM SUMPS LOCATED IN PERIMETER DITCHES. EACH SUMP SHOULD BE LOCATED OUTSIDE THE ROADWAY AREAS TO AVOID LOOSENING OF THE FINE SANDY SUBGRADE SOILS.

6. COMPACT THE SUBGRADE FROM THE SURFACE WITH A LIGHT WEIGHT VIBRATORY ROLLER (A 2 TO 3 TON ROLLER, STATIC WEIGHT AND 3 FOOT DRUM DIAMETER) OR TRACKED DOZER EQUIPMENT UNTIL A MINIMUM DENSITY OF AT LEAST 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557), TO A DEPTH OF 12 INCHES BELOW THE COMPACTED SURFACE IS OBTAINED. A MINIMUM OF EIGHT (8) COMPLETE COVERAGES SHOULD BE MADE IN THE PAVEMENT CONSTRUCTION AREA WITH A ROLLER TO IMPROVE THE UNIFORMITY AND INCREASE THE DENSITY OF THE UNDERLYING SANDY SOILS. THE USE OF HEAVY VIBRATORY COMPACTION EQUIPMENT SHALL NOT BE UTILIZED DUE TO THE POTENTIAL FOR PUMPING OF THE NEAR-SURFACE CLAYEY SOILS ENCOUNTERED, UNLESS APPROVED BY THE ENGINEER.

7. SHOULD THE SUBGRADE SOILS EXPERIENCE PUMPING AND SOIL STRENGTH LOSS DURING THE COMPACTION OPERATIONS, COMPACTION WORK SHOULD BE IMMEDIATELY TERMINATED AND (1) THE DISTURBED SOILS REMOVED AND BACKFILLED WITH DRY STRUCTURAL FILL SOILS WHICH ARE THEN COMPACTED, OR (2) THE EXCESS PORE PRESSURES WITHIN THE DISTURBED SOILS ALLOWED TO DISSIPATE BEFORE RECOMPACTING.

8. TO AVOID PUMPING OF THE UNDERLAYING CLAYEY SOILS, SELF PROP-ELLED VIBRATING EQUIPMENT SHALL REMAIN A MINIMUM OF 2 FEET ABOVE THE CLAYEY SOILS. THE SANDY SOILS WITHIN 2 FEET OF THE CLAYEY SOILS MAY BE COMPACTED WITH A VIBRATORY ROLLER.

9. OPERATE IN THE STATIC MODE OR WITH A TRACK-MOUNTED DOZER TO AVOID DISTURBING THE CLAYEY SOILS. A MINIMUM OF 18 INCHES OF SAND SHALL OVERLAY THE CLAYEY SOILS PRIOR TO OPERATION OF ANY TYPE OF CONSTRUCTION EQUIPMENT. EXCESS DISTURBANCE OF THE CLAYEY SOILS WILL DEGRADE THE STRENGTH CHARACTERISTICS OF THE SOIL AND MAY RESULT IN AN UNSUITABLE SOIL WHICH WILL REQUIRE OVER-EXCAVATION AND SUBSEQUENT BACKFILLING WITH CLEAN FINE SAND FILL MATERIAL. IN AREAS WHERE CLAYEY SOILS ARE ENCOUNTERED NEAR THE GROUND SURFACE OR ARE EXPOSED BY OVER EXCAVATION, AN INITIAL LIFT OF STRUCTURAL FILL MAY BE PLACED PRIOR TO COMPACTION OF THE SUBGRADE SOILS.

10. DUE TO THE PRESENCE OF THE NEAR SURFACE CLAYEY SOILS, THE SITE MAY BECOME DIFFICULT TO WORK DURING WET WEATHER. IF CONSTRUCTION IS BEGUN DURING WET WEATHER, IT IS RECOMMENDED THE BUILDING AND PAVEMENT SUBGRADES NOT BE DISTURBED OTHER THAN TO STRIP VEGETATION. FILL AND GRADING OPERATIONS SHOULD BE PERFORMED WITH A MINIMUM DISTURBANCE TO THE SURFICIAL SOILS. IN THIS REGARD, IT IS RECOMMENDED THAT TRACK-MOUNTED EQUIPMENT BE USED ON SITE.

11. TEST THE SUBGRADE FOR COMPACTION AT A FREQUENCY OF NOT LESS THAN ONE TEST PER 10,000 SQUARE FEET.

12. PLACE FILL MATERIAL, AS REQUIRED. THE FILL SHOULD CONSIST OF CLEAN, FINE SAND WITH LESS THAN 10 PERCENT SOIL FINES. PLACE FILL IN UNIFORM 10 TO 12 INCH LOOSE LIFTS AND COMPACT EACH LIFT TO A MINIMUM DENSITY OF 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY.

2510 US 1 SOUTH SUITE D
ST. AUGUSTINE, FL 32086
PHONE (904)794-1760
FAX (904)794-1768
quoc@maiengineer.com

MAI ENGINEERING SERVICES, INC.

LICENSED ENGINEER
QUOC H. MAI
FL.#64006 CA#28162

REVISIONS

#	DATE	REVISION
0	12/21/22	REVISION PER CITY REVISET
1	04/20/2023	REVISION PER CITY AND RND MAI
2	09/20/2023	REVISION PER CITY COMMENTS
3	01/22/2024	REVISION PER RND COMMENTS
4	04/04/2024	REVISION PER CITY COMMENTS
5	04/17/2024	REVISION PER CITY COMMENTS

SHEET TITLE: GENERAL NOTES

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA
PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DSGN BY:	QHM
DWG BY:	GMG
CHK BY:	QHM
DATE:	4/18/2024
JOB No.:	1369
SHEET No.:	2

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THIS SPACE INTENTIONALLY LEFT BLANK

(904) 998-9733
www.landmarktitle.com

PROPERTY ADDRESS: 1609 SOUTH ORANGE AVENUE, GREEN COVE SPRINGS, FLORIDA 32043

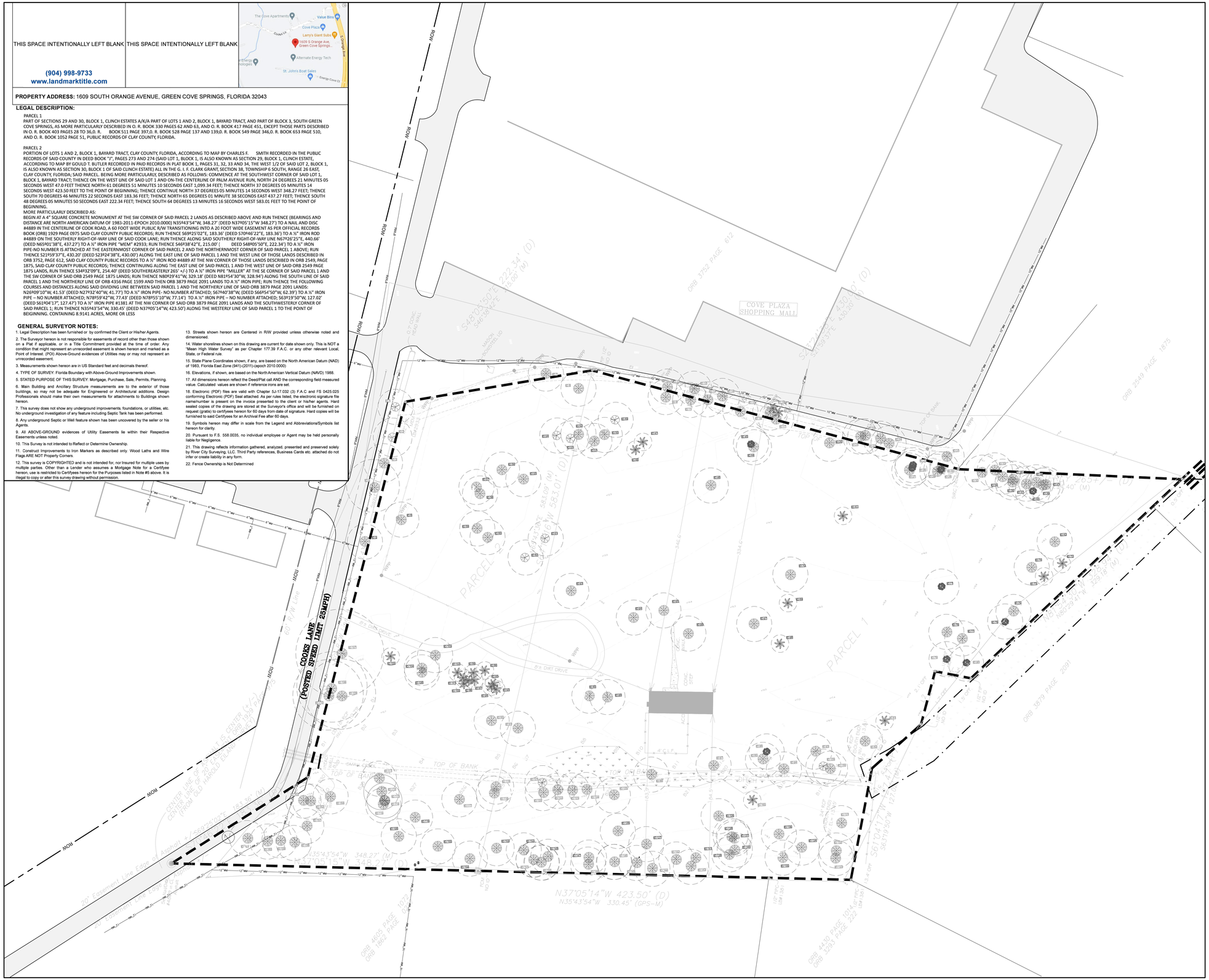
LEGAL DESCRIPTION:

PARCEL 1
PART OF SECTIONS 29 AND 30, BLOCK 1, CLINCH ESTATES A/K/A PART OF LOTS 1 AND 2, BLOCK 1, BAYARD TRACT, AND PART OF BLOCK 3, SOUTH GREEN COVE SPRINGS, AS MORE PARTICULARLY DESCRIBED IN O. R. BOOK 330 PAGES 62 AND 63, AND O. R. BOOK 417 PAGE 451, EXCEPT THOSE PARTS DESCRIBED IN O. R. BOOK 403 PAGES 28 TO 36,0. R. BOOK 511 PAGE 397,0. R. BOOK 528 PAGE 137 AND 139,0. R. BOOK 549 PAGE 346,0. R. BOOK 653 PAGE 510, AND O. R. BOOK 1052 PAGE 51, PUBLIC RECORDS OF CLAY COUNTY, FLORIDA.

PARCEL 2
PORTION OF LOTS 1 AND 2, BLOCK 1, BAYARD TRACT, CLAY COUNTY, FLORIDA, ACCORDING TO MAP BY CHARLES F. SMITH RECORDED IN THE PUBLIC RECORDS OF SAID COUNTY IN DEED BOOK "J", PAGES 273 AND 274 (SAID LOT 1, BLOCK 1, IS ALSO KNOWN AS SECTION 29, BLOCK 1, CLINCH ESTATE, ACCORDING TO MAP BY GOULD T. BUTLER RECORDED IN PAID RECORDS IN PLAT BOOK 1, PAGES 31, 32, 33 AND 34, THE WEST 1/2 OF SAID LOT 2, BLOCK 1, IS ALSO KNOWN AS SECTION 30, BLOCK 1 OF SAID CLINCH ESTATE) ALL IN THE G. I. F. CLARK GRANT, SECTION 38, TOWNSHIP 6 SOUTH, RANGE 26 EAST, CLAY COUNTY, FLORIDA; SAID PARCEL, BEING MORE PARTICULARLY, DESCRIBED AS FOLLOWS: COMMENCE AT THE SOUTHWEST CORNER OF SAID LOT 1, BLOCK 1, BAYARD TRACT; THENCE ON THE WEST LINE OF SAID LOT 1 AND ON-THE CENTERLINE OF PALM AVENUE RUN, NORTH 24 DEGREES 21 MINUTES 05 SECONDS WEST 47.0 FEET THENCE NORTH 61 DEGREES 51 MINUTES 10 SECONDS EAST 1,099.34 FEET; THENCE NORTH 37 DEGREES 05 MINUTES 14 SECONDS WEST 423.50 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 37 DEGREES 05 MINUTES 14 SECONDS WEST 348.27 FEET; THENCE SOUTH 70 DEGREES 46 MINUTES 22 SECONDS EAST 183.36 FEET; THENCE NORTH 65 DEGREES 01 MINUTE 38 SECONDS EAST 437.27 FEET; THENCE SOUTH 48 DEGREES 05 MINUTES 50 SECONDS EAST 222.34 FEET; THENCE SOUTH 64 DEGREES 13 MINUTES 16 SECONDS WEST 583.01 FEET TO THE POINT OF BEGINNING.
MORE PARTICULARLY DESCRIBED AS:
BEGIN AT A 4" SQUARE CONCRETE MONUMENT AT THE SW CORNER OF SAID PARCEL 2 LANDS AS DESCRIBED ABOVE AND RUN THENCE (BEARINGS AND DISTANCE ARE NORTH AMERICAN DATUM OF 1983-2011-EPOCH 2010.0000) N35°43'54"W, 348.27' (DEED N37°05'15"W 348.27') TO A NAIL AND DISC #4889 IN THE CENTERLINE OF COOK ROAD, A 60 FOOT WIDE PUBLIC R/W TRANSITIONING INTO A 20 FOOT WIDE EASEMENT AS PER OFFICIAL RECORDS BOOK (ORB) 1929 PAGE 0975 SAID CLAY COUNTY PUBLIC RECORDS; RUN THENCE S69°25'02"E, 183.36' (DEED S70°46'22"E, 183.36') TO A ½" IRON ROD #4889 ON THE SOUTHERLY RIGHT-OF-WAY LINE OF SAID COOK LANE; RUN THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE N67°26'25"E, 440.66' (DEED N65°01'38"E, 437.27') TO A ½" IRON PIPE "MEM" #2933; RUN THENCE S46°38'42"E, 215.09' (DEED S48°05'50"E, 222.34') TO A ½" IRON PIPE-NO NUMBER IS ATTACHED AT THE EASTERNMOST CORNER OF SAID PARCEL 2 AND THE NORTHERNMOST CORNER OF SAID PARCEL 1 ABOVE; RUN THENCE S21°59'37"E, 430.20' (DEED S23°24'38"E, 430.00') ALONG THE EAST LINE OF SAID PARCEL 1 AND THE WEST LINE OF THOSE LANDS DESCRIBED IN ORB 3752, PAGE 612, SAID CLAY COUNTY PUBLIC RECORDS TO A ½" IRON ROD #4889 AT THE NW CORNER OF THOSE LANDS DESCRIBED IN ORB 2549, PAGE 1875, SAID CLAY COUNTY PUBLIC RECORDS; THENCE CONTINUING ALONG THE EAST LINE OF SAID PARCEL 1 AND THE WEST LINE OF SAID ORB 2549 PAGE 1875 LANDS, RUN THENCE S34°32'09"E, 254.40' (DEED SOUTHEREASTERLY 265' +/-) TO A ½" IRON PIPE "MILLER" AT THE SE CORNER OF SAID PARCEL 1 AND THE SW CORNER OF SAID ORB 2549 PAGE 1875 LANDS; RUN THENCE N80°59'41"W, 329.18' (DEED N81°54'30"W, 328.94') ALONG THE SOUTH LINE OF SAID PARCEL 1 AND THE NORTHERLY LINE OF ORB 4356 PAGE 1599 AND THEN ORB 3879 PAGE 2091 LANDS TO A ½" IRON PIPE; RUN THENCE THE FOLLOWING COURSES AND DISTANCES ALONG SAID DIVIDING LINE BETWEEN SAID PARCEL 1 AND THE NORTHERLY LINE OF SAID ORB 3879 PAGE 2091 LANDS: N26°09'10"W, 41.53' (DEED N27°53'40"W, 41.77') TO A ½" IRON PIPE- NO NUMBER ATTACHED; S67°40'38"W, (DEED S66°54'50"W, 62.39') TO A ½" IRON PIPE – NO NUMBER ATTACHED; N78°55'42"W, 77.43' (DEED N78°55'10"W, 77.14') TO A ½" IRON PIPE – NO NUMBER ATTACHED; S63°19'50"W, 127.02' (DEED S61°04'17", 127.47') TO A ½" IRON PIPE #1381 AT THE NW CORNER OF SAID ORB 3879 PAGE 2091 LANDS AND THE SOUTHWESTERLY CORNER OF SAID PARCEL 1; RUN THENCE N35°43'54"W, 330.45' (DEED N37°05'14"W, 423.50') ALONG THE WESTERLY LINE OF SAID PARCEL 1 TO THE POINT OF BEGINNING. CONTAINING 8.9141 ACRES, MORE OR LESS

GENERAL SURVEYOR NOTES:

1. Legal Description has been furnished or by confirmed the Client or His/her Agents.
2. The Surveyor hereon is not responsible for easements of record other than those shown on a Plat if applicable, or in a Title Commitment provided at the time of order. Any condition that might represent an unrecorded easement is shown hereon and marked as a Point of Interest. (POI) Above-Ground evidences of Utilities may or may not represent an unrecorded easement.
3. Measurements shown hereon are in US Standard feet and decimals thereof.
4. TYPE OF SURVEY: Florida Boundary with Above-Ground Improvements shown.
5. STATED PURPOSE OF THIS SURVEY: Mortgage, Purchase, Sale, Permits, Planning.
6. Main Building and Ancillary Structure measurements are to the exterior of those buildings, so may not be adequate for Engineered or Architectural additions. Design Professionals should make their own measurements for attachments to Buildings shown hereon.
7. This survey does not show any underground improvements, foundations, or utilities, etc. No underground investigation of any feature including Septic Tank has been performed.
8. Any underground Septic or Well feature shown has been uncovered by the seller or his Agents.
9. All ABOVE-GROUND evidences of Utility Easements lie within their Respective Easements unless noted.
10. This Survey is not intended to Reflect or Determine Ownership.
11. Construct Improvements to Iron Markers as described only. Wood Laths and Wire Flags ARE NOT Property Corners.
12. This survey is COPYRIGHTED and is not intended for, nor Insured for multiple uses by multiple parties. Other than a Lender who assumes a Mortgage Note for a Certifyee hereon, use is restricted to Certifyees hereon for the Purposes listed in Note #5 above. It is illegal to copy or alter this survey drawing without permission.
13. Streets shown hereon are Centered in R/W provided unless otherwise noted and dimensioned.
14. Water shorelines shown on this drawing are current for date shown only. This is NOT a "Mean High Water Survey" as per Chapter 177.39 F.A.C. or any other relevant Local, State, or Federal rule.
15. State Plane Coordinates shown, if any, are based on the North American Datum (NAD) of 1983, Florida East Zone (941)-(2011)-(epoch 2010.0000)
16. Elevations, if shown, are based on the North American Vertical Datum (NAVD) 1988.
17. All dimensions hereon reflect the DeedPlat call AND the corresponding field measured value. Calculated values are shown if reference irons are set.
18. Electronic (PDF) files are valid with Chapter 5J-17.032 (3) F.A.C and FS 0425.025 conforming Electronic (PDF) Seal attached. As per rules listed, the electronic signature file name/number is present on the invoice presented to the client or his/her agents. Hard sealed copies of the drawing are stored at the Surveyor's office and will be furnished on request (gratis) to certifyees hereon for 60 days from date of signature. Hard copies will be furnished to said Certifyees for an Archival Fee after 60 days.
19. Symbols hereon may differ in scale from the Legend and Abbreviations/Symbols list hereon for clarity.
20. Pursuant to F.S. 558.0035, no individual employee or Agent may be held personally liable for Negligence.
21. This drawing reflects information gathered, analyzed, presented and preserved solely by River City Surveying, LLC. Third Party references, Business Cards etc. attached do not infer or create liability in any form.
22. Fence Ownership is Not Determined



GRAPHIC SCALE

50 0 50 100 200

(IN FEET)
1 inch = 50 ft.

ID	TYPE	DBH (IN)
1	sweetgum	12.0
2	sweetgum	15.0
3	laurel oak	26.0
4	live oak	28.0
5	live oak	48.0
6	live oak	38.0
7	live oak	17.0
8	laurel oak	15.0
9	laurel oak	13.0
10	laurel oak	12.0
11	laurel oak	15.0
12	laurel oak	16.0
13	laurel oak	16.0
14	laurel oak	15.0
15	laurel oak	14.0
16	laurel oak	20.0
17	laurel oak	20.0
18	cabbage palm	17.0
19	cabbage palm	12.0
20	live oak	25.0
21	laurel oak	17.0
22	laurel oak	14.0
23	laurel oak	37.0
24	laurel oak	14.0
25	red maple	17.0
26	red maple	13.0
27	live oak	19.0
28	laurel oak	23.0
29	red maple	13.0
30	laurel oak	16.0
31	laurel oak	25.0
32	laurel oak	13.0
33	laurel oak	15.0
34	laurel oak	16.0
35	laurel oak	14.0
36	laurel oak	14.0
37	laurel oak	26.0
38	laurel oak	15.0
39	laurel oak	24.0
40	red maple	16.0
41	laurel oak	14.0
42	live oak	64.0
43	cabbage palm	13.0
44	american elm	15.0
45	red maple	22.0
46	live oak	38.0
47	cabbage palm	13.0
48	cabbage palm	13.0
49	southern magnolia	13.0
50	live oak	23.0
51	live oak	16.0
52	live oak	25.0
53	sweetgum	15.0
54	southern magnolia	17.0
55	live oak	15.0
56	laurel oak	12.0
57	laurel oak	16.0
58	live oak	15.0
59	water oak	14.0
60	laurel oak	33.0
61	sweetgum	13.0
62	sweetgum	13.0
63	live oak	33.0
64	live oak	63.0
65	live oak	28.0
66	live oak	47.0
67	live oak	45.0
68	cabbage palm	12.0
69	cabbage palm	12.0
70	laurel oak	14.0
71	red maple	23.0
72	cabbage palm	16.0
73	cabbage palm	13.0
74	american elm	13.0
75	laurel oak	24.0
76	red maple	15.0
77	laurel oak	24.0
78	american elm	15.0
79	red maple	33.0
80	red maple	23.0
81	cabbage palm	13.0
82	laurel oak	23.0

ID	TYPE	DBH (IN)
83	live oak	20.0
84	live oak	54.0
85	laurel oak	16.0
86	red maple	14.0
87	laurel oak	13.0
88	laurel oak	27.0
89	live oak	56.0
90	live oak	28.0
91	live oak	24.0
92	live oak	37.0
93	cabbage palm	13.0
94	cabbage palm	12.0
95	cabbage palm	12.0
96	laurel oak	13.0
97	cabbage palm	13.0
98	cabbage palm	13.0
99	cabbage palm	13.0
100	cabbage palm	14.0
101	cabbage palm	12.0
102	live oak	19.0
103	live oak	27.0
104	live oak	23.0
105	cabbage palm	12.0
106	live oak	25.0
107	live oak	80.0
108	live oak	27.0
109	laurel oak	19.0
110	laurel oak	24.0
111	live oak	37.0
112	laurel oak	33.0
113	live oak	24.0
114	live oak	16.0
115	laurel oak	18.0
116	laurel oak	16.0
117	live oak	48.0
118	laurel oak	23.0
119	live oak	13.0
120	live oak	13.0
121	southern magnolia	16.0
122	live oak	26.0
123	live oak	26.0
124	live oak	26.0
125	laurel oak	20.0
126	laurel oak	18.0
127	laurel oak	13.0
128	laurel oak	12.0
129	southern magnolia	14.0
130	live oak	45.0
131	live oak	15.0
132	live oak	34.0
133	laurel oak	29.0
134	live oak	22.0
135	live oak	38.0
136	live oak	28.0
137	laurel oak	14.0
138	laurel oak	21.0
139	laurel oak	14.0
140	laurel oak	18.0
141	laurel oak	22.0
142	laurel oak	15.0
143	laurel oak	16.0
144	live oak	24.0
145	laurel oak	13.0
146	laurel oak	14.0
147	laurel oak	14.0
148	laurel oak	26.0
149	laurel oak	18.0
150	laurel oak	17.0
151	laurel oak	30.0
152	laurel oak	14.0
153	laurel oak	21.0
154	laurel oak	28.0
155	laurel oak	27.0
156	laurel oak	14.0
157	laurel oak	13.0
158	laurel oak	12.0
159	laurel oak	15.0
160	laurel oak	14.0
161	laurel oak	14.0
162	live oak	16.0
163	live oak	24.0
164	live oak	48.0
165	cabbage palm	13.0

2510 US 1 SOUTH SUITE D
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MAI ENGINEERING SERVICES, INC.

LICENSED ENGINEER
QUOC H. MAI
FL.#64006 CA#28162

REVISIONS

#	DATE	REVISION
0	10/17/22	REVISION PER CITY REVIEW
1	04/12/2023	REVISION PER CITY AND RMD RAI
2	06/20/2023	REVISION PER CITY COMMENTS
3	01/22/2024	REVISION PER RMD COMMENTS
4	04/04/2024	REVISION PER CITY COMMENTS
5	04/17/2024	REVISION PER CITY COMMENTS

SHEET TITLE: TREE SURVEY

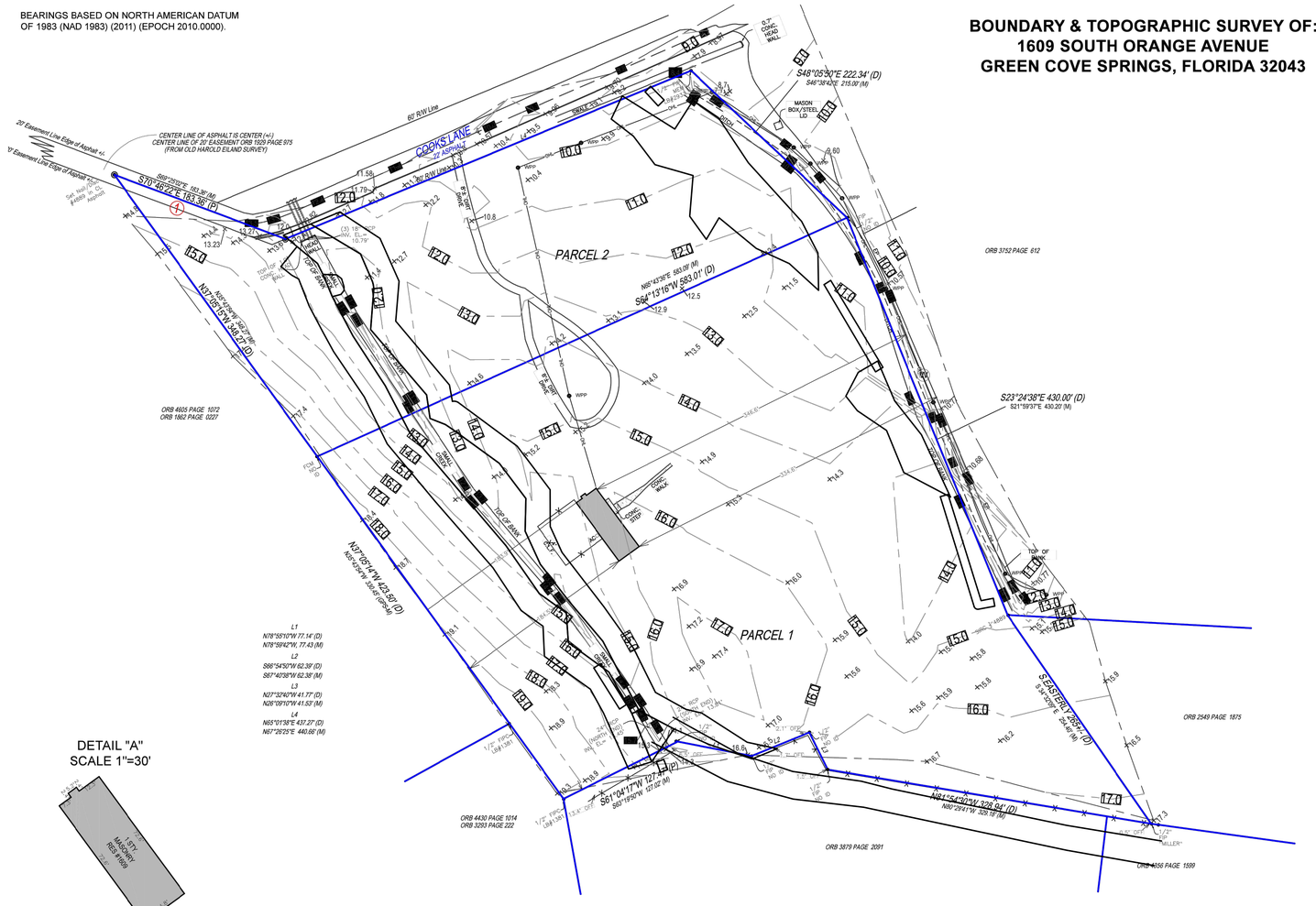
RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA

PREPARED FOR
RIVER OAKS OUTDOOR, LLC

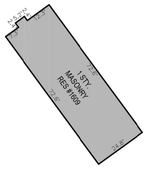
DSGN BY:	QHM
DWG BY:	GMG
CHK BY:	QHM
DATE:	4/18/2024
JOB No.:	1369
SHEET No.:	3

BEARINGS BASED ON NORTH AMERICAN DATUM OF 1983 (NAD 1983) (2011) (EPOCH 2010.0000).

BOUNDARY & TOPOGRAPHIC SURVEY OF:
1609 SOUTH ORANGE AVENUE
GREEN COVE SPRINGS, FLORIDA 32043



DETAIL "A"
SCALE 1"=30'



L1
N78°35'10"W 77.14' (D)
N78°39'42"W, 77.43 (M)
L2
S66°54'50"W 62.39' (D)
S67°40'38"W 62.38' (M)
L3
N27°32'40"W 41.77' (D)
N26°09'10"W 41.53' (M)
L4
N65°01'38"E 437.27' (D)
N67°28'25"E 440.68' (M)

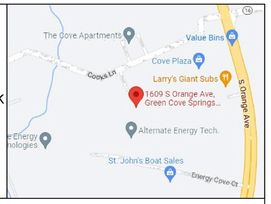
SURVEYOR'S LEGEND

AC = Air Conditioner
BLDG = Building
BRL = Building Restriction Line
CM = Concrete Monument
C/P = Covered Porch
CONC = Concrete
D.B. = Deed Book
D.&A.E. = Drainage & Access Easement
EC = Edge of Concrete
EP = Edge of Asphalt/Pavement
ESMT = Easement
FT. = Feet
F.I.P. = Found Iron Pipe (Size Delineated)
F.I.R = Found Iron Rod (Size Delineated)
LS = Licensed Surveyor
nof = now or formerly (owened by)
OHL = Overhead Wire/Line
ORB = Official Records Book
ORV = Official Record Volume
PC = Point of Curvature
PCPt = Permanent Control Point
Pg = Page
PI = Point Of Intersection
PK = Parker- Kalon or Mag Nail
POB = Point Of Beginning
POC = Point Of commencement
POI = Point Of interest
PRC = Point of Reverse Curvature
MF = Metal Fence
WF = Wood Fence
CLF = Chain Link Fence
RES. = Residence

Δ = Delta or Central Angle
RAD = Radius
CH = Chord Bearing Distance
L = Arc Length
ID = Identification
(P) = Plat Call
(M) = Field Measured Value
(C) = Calculated Value
(D) = Deed Call
IP = Iron Pipe
IR = Iron Rod
LB = Licensed Survey Business
LS = Licensed Surveyor
RLS = Registered Licensed Surveyor
PLS = Professional Licensed Surveyor
PSM = Professional Licensed Mapper
CCEC = Clay County Electric Cooperative
COJ = City of Jacksonville
JEA = Jacksonville Electric Authority
FCM = Found Concrete Monument
F.A.C. = Florida Administrative Code
F = Face Side of Wood Fence
FPLE = Florida Power & Light Easement
P = Past Side of Wood Fence
POI = Point Of interest
PRC = Point of Reverse Curvature
PRM = Permanent Reference Monument
PT = Point Of Tangency
RBL = Reference Bearing Line
PVC = PVC/Plastic Fence
EL. = Elevation

RCP = Reinforced Concrete Pipe
CL = Centerline
INV. = Invert
EL = Elevation
R/W = Right -Of -Way Line
SQ = Square
STY = Story
S = Section
T = Township
R = Range
PF = Pool Filter/Machinery on Pad
AC = Air Conditioner/ Heat Pump on Pad
WPP = Wood Power Pole
= Guy Anchor (If - Dimension to Ground Entry Point - Underground Extent not Determined)
= Water Meter
= Fire Hydrant
= Sanitary Sewer Manhole
= Stormwater Drainange Manhole
JEA = JEA Manhole
W = Well
= SIRC 1/2" 4889

N
60 0 30 60
GRAPHIC SCALE (In Feet)
1 inch = 60' ft.

THIS SPACE INTENTIONALLY LEFT BLANK	THIS SPACE INTENTIONALLY LEFT BLANK	

(904) 998-9733
www.landmarktitle.com

PROPERTY ADDRESS: 1609 SOUTH ORANGE AVENUE, GREEN COVE SPRINGS, FLORIDA 32043

LEGAL DESCRIPTION:

PARCEL 1
PART OF SECTIONS 29 AND 30, BLOCK 1, CLINCH ESTATES A/K/A PART OF LOTS 1 AND 2, BLOCK 1, BAYARD TRACT, AND PART OF BLOCK 3, SOUTH GREEN COVE SPRINGS, AS MORE PARTICULARLY DESCRIBED IN O. R. BOOK 330 PAGES 62 AND 63, AND O. R. BOOK 417 PAGE 451, EXCEPT THOSE PARTS DESCRIBED IN O. R. BOOK 403 PAGES 28 TO 36.0. R. BOOK 511 PAGE 397,O. R. BOOK 528 PAGE 137 AND 139,O. R. BOOK 549 PAGE 346,O. R. BOOK 653 PAGE 510, AND O. R. BOOK 1052 PAGE 51, PUBLIC RECORDS OF CLAY COUNTY, FLORIDA.

PARCEL 2
PORTION OF LOTS 1 AND 2, BLOCK 1, BAYARD TRACT, CLAY COUNTY, FLORIDA, ACCORDING TO MAP BY CHARLES F. SMITH RECORDED IN THE PUBLIC RECORDS OF SAID COUNTY IN DEED BOOK "J", PAGES 273 AND 274 (SAID LOT 1, BLOCK 1, IS ALSO KNOWN AS SECTION 29, BLOCK 1, CLINCH ESTATE, ACCORDING TO MAP BY GOULD T. BUTLER RECORDED IN PAID RECORDS IN PLAT BOOK 1, PAGES 31, 32, 33 AND 34, THE WEST 1/2 OF SAID LOT 2, BLOCK 1, IS ALSO KNOWN AS SECTION 30, BLOCK 1 OF SAID CLINCH ESTATE) ALL IN THE G. I. F. CLARK GRANT, SECTION 38, TOWNSHIP 6 SOUTH, RANGE 26 EAST, CLAY COUNTY, FLORIDA; SAID PARCEL. BEING MORE PARTICULARLY, DESCRIBED AS FOLLOWS: COMMENCE AT THE SOUTHWEST CORNER OF SAID LOT 1, BLOCK 1, BAYARD TRACT; THENCE ON THE WEST LINE OF SAID LOT 1 AND ON-THE CENTERLINE OF PALM AVENUE RUN, NORTH 24 DEGREES 21 MINUTES 05 SECONDS WEST 47.0 FEET THENCE NORTH 61 DEGREES 51 MINUTES 10 SECONDS EAST 1,099.34 FEET; THENCE NORTH 37 DEGREES 05 MINUTES 14 SECONDS WEST 423.50 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 37 DEGREES 05 MINUTES 14 SECONDS WEST 348.27 FEET; THENCE SOUTH 70 DEGREES 46 MINUTES 22 SECONDS EAST 183.36 FEET; THENCE NORTH 65 DEGREES 01 MINUTE 38 SECONDS EAST 437.27 FEET; THENCE SOUTH 48 DEGREES 05 MINUTES 50 SECONDS EAST 222.34 FEET; THENCE SOUTH 64 DEGREES 13 MINUTES 16 SECONDS WEST 583.01 FEET TO THE POINT OF BEGINNING.
MORE PARTICULARLY DESCRIBED AS:
BEGIN AT A 4" SQUARE CONCRETE MONUMENT AT THE SW CORNER OF SAID PARCEL 2 LANDS AS DESCRIBED ABOVE AND RUN THENCE (BEARINGS AND DISTANCE ARE NORTH AMERICAN DATUM OF 1983-2011-EPOCH 2010.0000) N35º43'54"W, 348.27' (DEED N37º05'15"W 348.27') TO A NAIL AND DISC #4889 IN THE CENTERLINE OF COOK ROAD, A 60 FOOT WIDE PUBLIC R/W TRANSITIONING INTO A 20 FOOT WIDE EASEMENT AS PER OFFICIAL RECORDS BOOK (ORB) 1929 PAGE 0975 SAID CLAY COUNTY PUBLIC RECORDS; RUN THENCE S69º25'02"E, 183.36' (DEED S70º46'22"E, 183.36') TO A ½" IRON ROD #4889 ON THE SOUTHERLY RIGHT-OF-WAY LINE OF SAID COOK LANE; RUN THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE N67º26'25"E, 440.66' (DEED N65º01'38"E, 437.27') TO A ½" IRON PIPE "MEM" #2933; RUN THENCE S46º38'42"E, 215.00' (DEED S48º05'50"E, 222.34') TO A ½" IRON PIPE-NO NUMBER IS ATTACHED AT THE EASTERNMOST CORNER OF SAID PARCEL 2 AND THE NORTHERNMOST CORNER OF SAID PARCEL 1 ABOVE; RUN THENCE S21º59'37"E, 430.20' (DEED S23º24'38"E, 430.00') ALONG THE EAST LINE OF SAID PARCEL 1 AND THE WEST LINE OF THOSE LANDS DESCRIBED IN ORB 3752, PAGE 612, SAID CLAY COUNTY PUBLIC RECORDS TO A ½" IRON ROD #4889 AT THE NW CORNER OF THOSE LANDS DESCRIBED IN ORB 2549, PAGE 1875, SAID CLAY COUNTY PUBLIC RECORDS; THENCE CONTINUING ALONG THE EAST LINE OF SAID PARCEL 1 AND THE WEST LINE OF SAID ORB 2549 PAGE 1875 LANDS, RUN THENCE S34º32'09"E, 254.40' (DEED SOUTHEREASTERLY 265' +/-) TO A ½" IRON PIPE "MILLER" AT THE SE CORNER OF SAID PARCEL 1 AND THE SW CORNER OF SAID ORB 2549 PAGE 1875 LANDS; RUN THENCE N80º29'41"W, 329.18' (DEED N81º54'30"W, 328.94') ALONG THE SOUTH LINE OF SAID PARCEL 1 AND THE NORTHERLY LINE OF ORB 4356 PAGE 1599 AND THEN ORB 3879 PAGE 2091 LANDS TO A ½" IRON PIPE; RUN THENCE THE FOLLOWING COURSES AND DISTANCES ALONG SAID DIVIDING LINE BETWEEN SAID PARCEL 1 AND THE NORTHERLY LINE OF SAID ORB 3879 PAGE 2091 LANDS:
N26º09'10"W, 41.53' (DEED N27º32'40"W, 41.77') TO A ½" IRON PIPE- NO NUMBER ATTACHED; S67º40'38"W, (DEED S66º54'50"W, 62.39') TO A ½" IRON PIPE – NO NUMBER ATTACHED; N78º55'10"W, 77.14') TO A ½" IRON PIPE – NO NUMBER ATTACHED; S63º19'50"W, 127.02' (DEED S61º04'17", 127.47') TO A ½" IRON PIPE #1381 AT THE NW CORNER OF SAID ORB 3879 PAGE 2091 LANDS AND THE SOUTHWESTERLY CORNER OF SAID PARCEL 1; RUN THENCE N35º43'54"W, 330.45' (DEED N37º05'14"W, 423.50') ALONG THE WESTERLY LINE OF SAID PARCEL 1 TO THE POINT OF BEGINNING. CONTAINING 8.9141 ACRES, MORE OR LESS

GENERAL SURVEYOR NOTES:

1. Legal Description has been furnished or by confirmed the Client or His/her Agents.
2. The Surveyor hereon is not responsible for easements of record other than those shown on a Plat if applicable, or in a Title Commitment provided at the time of order. Any condition that might represent an unrecorded easement is shown hereon and marked as a Point of Interest. (POI) Above-Ground evidences of Utilities may or may not represent an unrecorded easement.
3. Measurements shown hereon are in US Standard feet and decimals thereof.
4. TYPE OF SURVEY: Florida Boundary with Above-Ground Improvements shown.
5. STATED PURPOSE OF THIS SURVEY: Mortgage, Purchase, Sale, Permits, Planning.
6. Main Building and Ancillary Structure measurements are to the exterior of those buildings, so may not be adequate for Engineered or Architectural additions. Design Professionals should make their own measurements for attachments to Buildings shown hereon.
7. This survey does not show any underground improvements, foundations, or utilities, etc. No underground investigation of any feature including Septic Tank has been performed.
8. Any underground Septic or Well feature shown has been uncovered by the seller or his Agents.
9. All ABOVE-GROUND evidences of Utility Easements lie within their Respective Easements unless noted.
10. This Survey is not intended to Reflect or Determine Ownership.
11. Construct Improvements to Iron Markers as described only. Wood Laths and Wire Flags ARE NOT Property Corners.
12. This survey is COPYRIGHTED and is not intended for, nor Insured for multiple uses by multiple parties. Other than a Lender who assumes a Mortgage Note for a Certifyee hereon, use is restricted to Certifyees hereon for the Purposes listed in Note #5 above. It is illegal to copy or alter this survey drawing without permission.
13. Streets shown hereon are Centered in R/W provided unless otherwise noted and dimensioned.
14. Water shorelines shown on this drawing are current for date shown only. This is NOT a "Mean High Water Survey" as per Chapter 177.39 F.A.C. or any other relevant Local, State, or Federal rule.
15. State Plane Coordinates shown, if any, are based on the North American Datum (NAD) of 1983, Florida East Zone (941)-(2011)-(epoch 2010.0000)
16. Elevations, if shown, are based on the North American Vertical Datum (NAVD) 1988.
17. All dimensions hereon reflect the Deed/Plat call AND the corresponding field measured value. Calculated values are shown if reference irons are set.
18. Electronic (PDF) files are valid with Chapter 5J-17.032 (3) F.A.C and FS 0425.025 conforming Electronic (PDF) Seal attached. As per rules listed, the electronic signature file name/number is present on the invoice presented to the client or his/her agents. Hard sealed copies of the drawing are stored at the Surveyor's office and will be furnished on request (gratis) to certifyees hereon for 60 days from date of signature. Hard copies will be furnished to said Certifyees for an Archival Fee after 60 days.
19. Symbols hereon may differ in scale from the Legend and Abbreviations/Symbols list hereon for clarity.
20. Pursuant to F.S. 558.0035, no individual employee or Agent may be held personally liable for Negligence.
21. This drawing reflects information gathered, analyzed, presented and preserved solely by River City Surveying, LLC. Third Party references, Business Cards etc. attached do not infer or create liability in any form.
22. Fence Ownership is Not Determined

TIMOTHY L. BLACKMON LICENSE NUMBER 4889 STATE OF FLORIDA PROFESSIONAL SURVEYOR & MAPPER

Timothy L. Blackmon
State of Florida Professional Surveyor and Mapper
License Number 4889
RIVER CITY SURVEYING & MAPPING | LB#8484

SURVEYORS CERTIFICATION:

REPRODUCTIONS OF THIS SKETCH ARE NOT VALID UNLESS SEALED WITH FLORIDA PSM EMBOSSED SEAL. THE SKETCH OF SURVEY DEPICTED HEREON CONFORMS TO THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA BOARD OF LAND SURVEYORS IN ACCORDANCE WITH CHAPTER 5J-17.050-17.053, PURSUANT TO CHAPTER 472, FLORIDA STATUTES, AND WAS DONE UNDER MY DIRECT SUPERVISION.

POINTS OF INTEREST:

① ASPHALT STREET IN EASEMENT ALONG NORTH LINE IN THIS AREA

DATE SIGNED: 08/17/2022
FIELD WORK DATE: 08/01/2022
REVISION DATE(S): 08/17/2022
SURVEY NUMBER: 051722.1

CERTIFIED TO:

**FIDELITY NATIONAL TITLE INSURANCE COMPANY
BARWICK BANKING COMPANY, ISAOA ATIMA
LANDMARK TITLE**

**RIVER CITY SURVEYING & MAPPING
LB#8484
904-487-9054 | F. 904-998-9736
7220 FINANCIAL WAY | JACKSONVILLE, FL 32256**

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FAX (904)794-1768
quoc@maiengineer.com

MAI ENGINEERING SERVICES, INC.

LICENSED ENGINEER
QUOC H. MAI
FL.#64006 CA#28162

REVISIONS

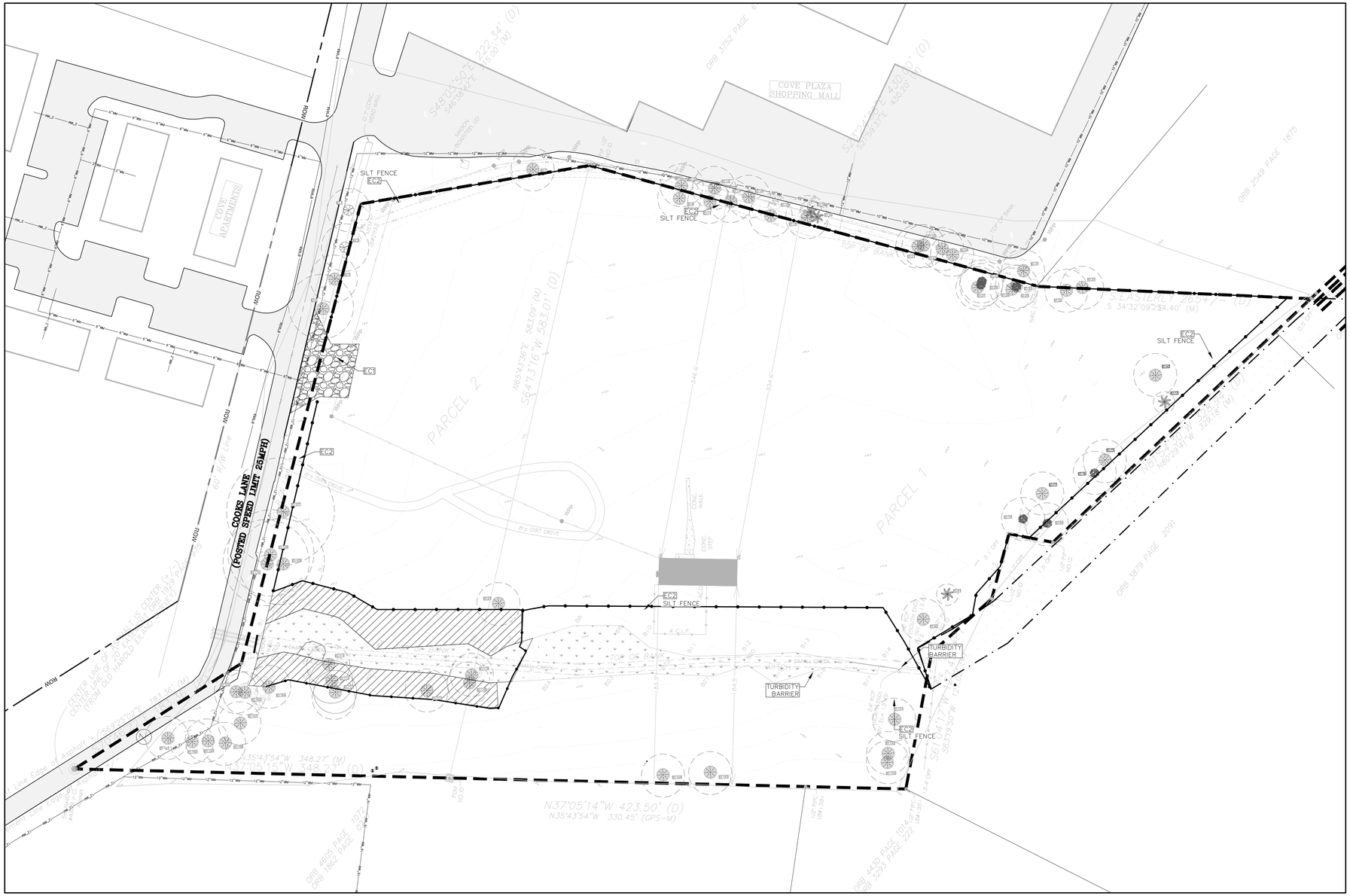
#	DATE	REVISION
0	10/17/22	REVISION PER CITY REVISET
1	04/12/2023	REVISION PER CITY AND IND RJ
2	06/28/2023	REVISION PER CITY COMMENTS
3	01/22/2024	REVISION PER IND COMMENTS
4	04/04/2024	REVISION PER CITY COMMENTS
5	04/17/2024	REVISION PER CITY COMMENTS

SHEET TITLE: TOPO SURVEY

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA

PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DSGN BY: QHM
DWG BY: GMG
CHK BY: QHM
DATE: 4/18/2024
JOB No.: 1369
SHEET No.: 4



GRAPHIC SCALE

50 0 50 100 200

(IN FEET)
1 inch = 50 ft.

EROSION CONTROL DETAILS

EC1	STABILIZED CONSTRUCTION ENTRANCE
EC2	TYPE III SILT FENCE
EC3	WATTLE INLET PROTECTION
EC4	TURBIDITY BARRIER

LEGEND

- PROPERTY LINE
- ROADWAY CENTERLINE
- DRAINAGE EASEMENT
- PROPOSED PAVEMENT
- PROPOSED CONCRETE
- PROPOSED GRAVEL
- TURBIDITY BARRIER
- SILT FENCE

EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION CONTROL WITHIN BEST MANAGEMENT PRACTICES FOR THE DURATION OF THE PROJECT UNTIL SUCH TIME AS THE PROJECT HAS BEEN CERTIFIED AS COMPLETE.

2. THE CONTRACTOR SHALL SEED & MULCH OR SOD ALL OPEN SPACE AREAS TO BE GRASSED IMMEDIATELY FOLLOWING FINAL GRADING AND COMPLETION OF ALL UNDERGROUND UTILITIES.

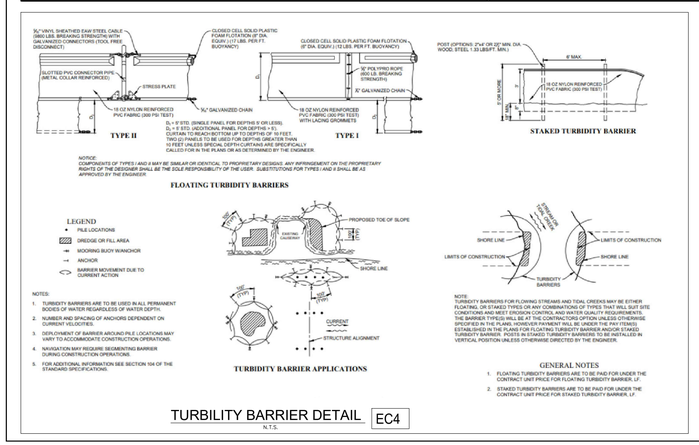
3. SILT FENCES SHALL BE INSTALLED ALONG LIMITS OF CONSTRUCTION .

4. SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND REPAIRED IMMEDIATELY IF DAMAGED.

5. ALL SIDE SLOPES OF STORM WATER MANAGEMENT AREAS SHALL BE SODDED UPON COMPLETION OF FINAL GRADING.

6. ALL INLETS SHALL BE PROTECTED FROM COLLECTION OF ERODED MATERIALS BY INSTALLATION OF TEMPORARY FILTER FABRIC AND/OR HAYBALES.

7. FLOATING TURBIDITY BARRIERS SHALL BE INSTALLED WITHIN ALL WATER BODIES DOWNSTREAM OF CONSTRUCTION ACTIVITIES WHERE PROTECTION AGAINST TURBID WATERS DISCHARGE MAY OCCUR.



TURBILITY BARRIER DETAIL EC4
N.T.S.

2510 US 1 SOUTH SUITE D
ST. AUGUSTINE, FL 32086
PHONE (904)794-1760
FAX (904)794-1768
quoc@maiengineer.com

MAI ENGINEERING SERVICES, INC.

LICENSED ENGINEER
QUOC H. MAI
FL.#64006 CA#28162

REVISIONS

#	DATE	REVISION
0	12/17/23	REVISION PER CITY REVIEW
1	04/26/2024	REVISION PER CITY AND RMD RAI
2	06/26/2024	REVISION PER CITY COMMENTS
3	07/22/2024	REVISION PER RMD COMMENTS
4	08/14/2024	REVISION PER CITY COMMENTS
5	09/17/2024	REVISION PER CITY COMMENTS

SHEET TITLE: EROSION CONTROL PLAN

RIVER OAKS INDUSTRIAL PARK

GREEN COVE SPRINGS, FLORIDA

PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DSGN BY:	QHM
DWG BY:	GMG
CHK BY:	QHM
DATE:	4/18/2024
JOB No.:	1369
SHEET No.:	5

GRAPHIC SCALE

50 0 50 100 200

(IN FEET)
1 inch = 50 ft.

DEMOLITION NOTES

D02 PRESERVED WETLANDS.

D03 TO BE REMOVED.

D06 EXISTING DITCHES ARE TO BE FULLY CLEARED AND DEMUCKED UNTIL SOLID SOILS REACHED. FILL DITCH WITH SUITABLE MATERIAL AND COMPACT TO 95% DENSITY IN MAXIMUM 12" LIFTS.

D07 100' X 50' GRAVEL CONSTRUCTION ENTRANCE.

LEGEND

- SILT FENCE
- DOUBLE ROW SILT FENCE
- X-XX GEOTECH BORING LOCATION
- NGWL NATURAL GROUND WATER LEVEL
- SHGWL SEASONAL HIGH GROUND WATER LEVEL.

GENERAL NOTES

1. FOR DEMO/PRESERVED TREES AND TREE PROTECTION SEE LANDSCAPE PLAN SHEET.
2. ALL DISCHARGE POINTS SHALL RECEIVE RIP RAP AND/OR TURBIDITY BARRIERS TO PREVENT OFFSIDE EROSION.
3. ALL ROAD CUTS MUST BE RESTORED BY MILLING AND RESURFACING A MINIMUM OF 25 FEET FROM EACH SIDE OF CUT.
4. EXISTING CONCRETE/ASPHALT PAVEMENT AREA: 4,288.52 SF, TO BE REMOVED
5. WETLAND IMPACT AND ANALYSIS FOR MITIGATION, PLEASE SEE THE ENVIRONMENTAL CONSULTANT REPORT.

HATCH LEGEND	
PRESERVED WETLANDS	
IMPACTED WETLANDS	
TO BE REMOVED	
UPLAND BUFFER	
ISOLATED WETLAND	
UPLAND CUT DITCH IMPACT	
WETLAND REMAIN	
OUTFALL IMPACT	
100 YR FLOOD PLAIN	

SUMMARY TABLE	
	AREA (AC.)
PROJECT AREA	± 8.92 AC.
WETLAND IMPACT	± 0.40 AC.
OUTFALL IMPACT	± 0.01 AC.
WETLAND REMAINING	± 0.34 AC.
ISOLATED	< 0.50-ACRE ±0.02 AC.
UPLAND BUFFER	± 0.91 AC.
UPLAND CUT DITCH IMPACT	± 0.03 AC.

REMOVED TREES TABLE

ID#	TYPE	DBH (IN)	REPLACE CREDIT
5	LIVE OAK	48.0	48.0
6	LIVE OAK	38.0	38.0
11	LAUREL OAK	15.0	5.0
17	LAUREL OAK	20.0	6.67
34	LAUREL OAK	16.0	5.33
35	LAUREL OAK	14.0	4.67
36	LAUREL OAK	14.0	4.67
37	LAUREL OAK	26.0	8.67
38	LAUREL OAK	15.0	5.0
39	LAUREL OAK	24.0	8.0
40	RED MAPLE	16.0	5.33
41	LAUREL OAK	14.0	4.67
42	LIVE OAK	64.0	64.0
43	CABBAGE PALM	13.0	4.33
44	AMERICAN ELM	15.0	5.00
45	RED MAPLE	22.0	7.33
46	LIVE OAK	38.0	38.0
47	CABBAGE PALM	13.0	4.33
48	CABBAGE PALM	13.0	4.33
49	SOUTHERN MAGNOLIA	13.0	4.33
50	LIVE OAK	23.0	23.0
51	LIVE OAK	16.0	16.0
52	LIVE OAK	25.0	25.0
53	SWEETGUM	15.0	5.0
54	SOUTHERN MAGNOLIA	17.0	5.67
55	LIVE OAK	15.0	15.0
56	LAUREL OAK	12.0	4.0
57	LAUREL OAK	16.0	5.33
58	LIVE OAK	15.0	15.0
59	WATER OAK	14.0	4.67
60	LAUREL OAK	33.0	11.0
61	SWEETGUM	13.0	4.33
62	SWEETGUM	13.0	4.33
63	LIVE OAK	33.0	33.0
64	LIVE OAK	63.0	63.0
65	LIVE OAK	28.0	28.0
66	LIVE OAK	47.0	47.0
67	LIVE OAK	45.0	45.0
68	CABBAGE PALM	12.0	4.0
69	CABBAGE PALM	12.0	4.0
70	LAUREL OAK	14.0	4.67
71	RED MAPLE	23.0	7.67
74	AMERICAN ELM	13.0	4.33
75	LAUREL OAK	24.0	8.0
76	RED MAPLE	15.0	5.0
77	LAUREL OAK	24.0	8.0

REMOVED TREES TABLE

ID#	TYPE	DBH (IN)	REPLACE CREDIT
78	AMERICAN ELM	15.0	5
83	LIVE OAK	20.0	20.0
84	LIVE OAK	54.0	54.0
89	LIVE OAK	56.0	56.0
90	LIVE OAK	28.0	28.0
92	LIVE OAK	37.0	37.0
93	CABBAGE PALM	13.0	4.33
94	CABBAGE PALM	12.0	4
95	CABBAGE PALM	12.0	4
96	LAUREL OAK	13.0	4.33
97	CABBAGE PALM	13.0	4.33
98	CABBAGE PALM	13.0	4.33
99	CABBAGE PALM	13.0	4.33
100	CABBAGE PALM	14.0	4.67
101	CABBAGE PALM	12.0	4
102	LIVE OAK	19.0	19.0
103	LIVE OAK	27.0	27.0
104	LIVE OAK	23.0	23.0
105	CABBAGE PALM	12.0	4
106	LIVE OAK	25.0	25.0
114	LIVE OAK	16.0	16.0
115	LAUREL OAK	18.0	6
116	LAUREL OAK	16.0	5.33
126	LAUREL OAK	18.0	6
127	LAUREL OAK	13.0	4.33
128	LAUREL OAK	12.0	4
129	SOUTHERN MAGNOLIA	14.0	4.67
130	LIVE OAK	45.0	45.0
134	LIVE OAK	22.0	22.0
135	LIVE OAK	38.0	38.0
136	LIVE OAK	28.0	28.0
137	LAUREL OAK	14.0	4.67
138	LAUREL OAK	21.0	7
139	LAUREL OAK	14.0	4.67
140	LAUREL OAK	18.0	6
141	LAUREL OAK	22.0	7.33
147	LAUREL OAK	14.0	4.67
149	LAUREL OAK	18.0	6
152	LAUREL OAK	14.0	4.67
153	LAUREL OAK	21.0	7
154	LAUREL OAK	28.0	9.33
155	LAUREL OAK	27.0	9
156	LAUREL OAK	14.0	4.67
8	LAUREL OAK	15.0	5
9	LAUREL OAK	13.0	4.33
20	LIVE OAK	25.0	25.0
131	LIVE OAK	15.0	15.0

REMOVED TREES TABLE

ID#	TYPE	DBH (IN)	REPLACE CREDIT
132	LIVE OAK	34.0	34.0
133	LAUREL OAK	29.0	9.67
142	LAUREL OAK	15.0	5
143	LAUREL OAK	16.0	5.33
144	LIVE OAK	24.0	24.0
145	LAUREL OAK	13.0	4.33
146	LAUREL OAK	14.0	4.67
148	LAUREL OAK	26.0	8.67
150	LAUREL OAK	17.0	5.67
151	LAUREL OAK	30.0	10
164	LIVE OAK	48.0	48.0
157	LAUREL OAK	13.0	4.33
158	LAUREL OAK	12.0	4
159	LAUREL OAK	15.0	5
160	LAUREL OAK	14.0	4.67
81	CABBAGE PALM	13.0	4.33
85	LAUREL OAK	16.0	5.33
86	RED MAPLE	14.0	4.66
87	LAUREL OAK	13.0	4.33
88	LAUREL OAK	27.0	9
120	LIVE OAK	13.0	13.0
121	SOUTHERN MAGNOLIA	16.0	5.33
122	LIVE OAK	26.0	26
123	LIVE OAK	26.0	26
124	LIVE OAK	26.0	26
125	LAUREL OAK	20.0	6.66
165	CABBAGE PALM	13.0	4.33
72	CABBAGE PALM	16.0	5.33
73	CABBAGE PALM	13.0	4.33
TOTAL	122	2567	1638

NOTES:

1) PER CITY ORDINANCE SECTION 113-279 (a), TREE REPLACEMENT REQUIRED FOR ALL REMOVED TREES. REPLACE TOTAL INCHES FOR LIVE OAKS TREES. REPLACE ONE THIRD FOR ALL OTHER TREES THAT ARE 12 INCH DBH.

TOTAL TREE INCHES OF REMOVED TREES ARE: 2,567 INCHES
TOTAL OF REPLACEMENT CREDIT INCHES REQUIRED: 1,638 INCHES

2) SAVED TREES PER CITY ORDINANCE SECTION 113-279 (b). TREES ARE PRESERVED SHALL RECEIVED CREDIT AGAINST THE LANDSCAPE REQUIREMENTS ACCORDING TO THE FOLLOWING SCHEDULE: TREES 12 TO 18 INCH DBH: LIVE OAK, ONE INCH CREDIT, OTHERS 50% TREES 19 TO 30 INCH DBH: LIVE OAK, 1.25 INCH CREDIT, OTHERS 75% TREES ABOVE 30 INCH DBH: LIVE OAK, 1.5 INCH CREDIT, OTHER 100%

TOTAL TREE INCHES OF SAVED TREES: 941 INCH
TOTAL SAVED TREES CREDIT INCHES: 871 INCH

SAVED TREES TABLE

ID#	TYPE	DBH	TREE CREDIT
1	SWEETGUM	12.0	6.0
2	SWEETGUM	15.0	7.5
3	LAUREL OAK	26.0	19.5
4	LIVE OAK	28.0	35.0
7	LIVE OAK	17.0	17.0
10	LAUREL OAK	12.0	6.0
12	LAUREL OAK	16.0	8
13	LAUREL OAK	16.0	8
14	LAUREL OAK	15.0	7.5
15	LAUREL OAK	14.0	7
16	LAUREL OAK	20.0	15
18	CABBAGE PALM	17.0	8.5
19	CABBAGE PALM	12.0	6
21	LAUREL OAK	17.0	8.5
25	RED MAPLE	17.0	8.5
26	RED MAPLE	13.0	6.5
27	LIVE OAK	19.0	23.75
28	LAUREL OAK	23.0	17.25
29	RED MAPLE	13.0	6.5
30	LAUREL OAK	16.0	8
32	LAUREL OAK	13.0	6.5
33	LAUREL OAK	15.0	7.5
79	RED MAPLE	33.0	33
80	RED MAPLE	23.0	17.25
82	LAUREL OAK	23.0	17.25
91	LIVE OAK	24.0	30
107	LIVE OAK	80.0	120
108	LIVE OAK	27.0	33.75
109	LAUREL OAK	19.0	14.25
110	LAUREL OAK	24.0	18
111	LIVE OAK	37.0	55.5
112	LAUREL OAK	33.0	33
113	LIVE OAK	24.0	30
117	LIVE OAK	48.0	72
118	LAUREL OAK	23.0	17.25
119	LIVE OAK	13.0	13
161	LAUREL OAK	14.0	7
162	LIVE OAK	16.0	16
163	LIVE OAK	24.0	30
TOTAL	43	941	871

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LICENSED ENGINEER
QUOC H. MAI
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REVISIONS

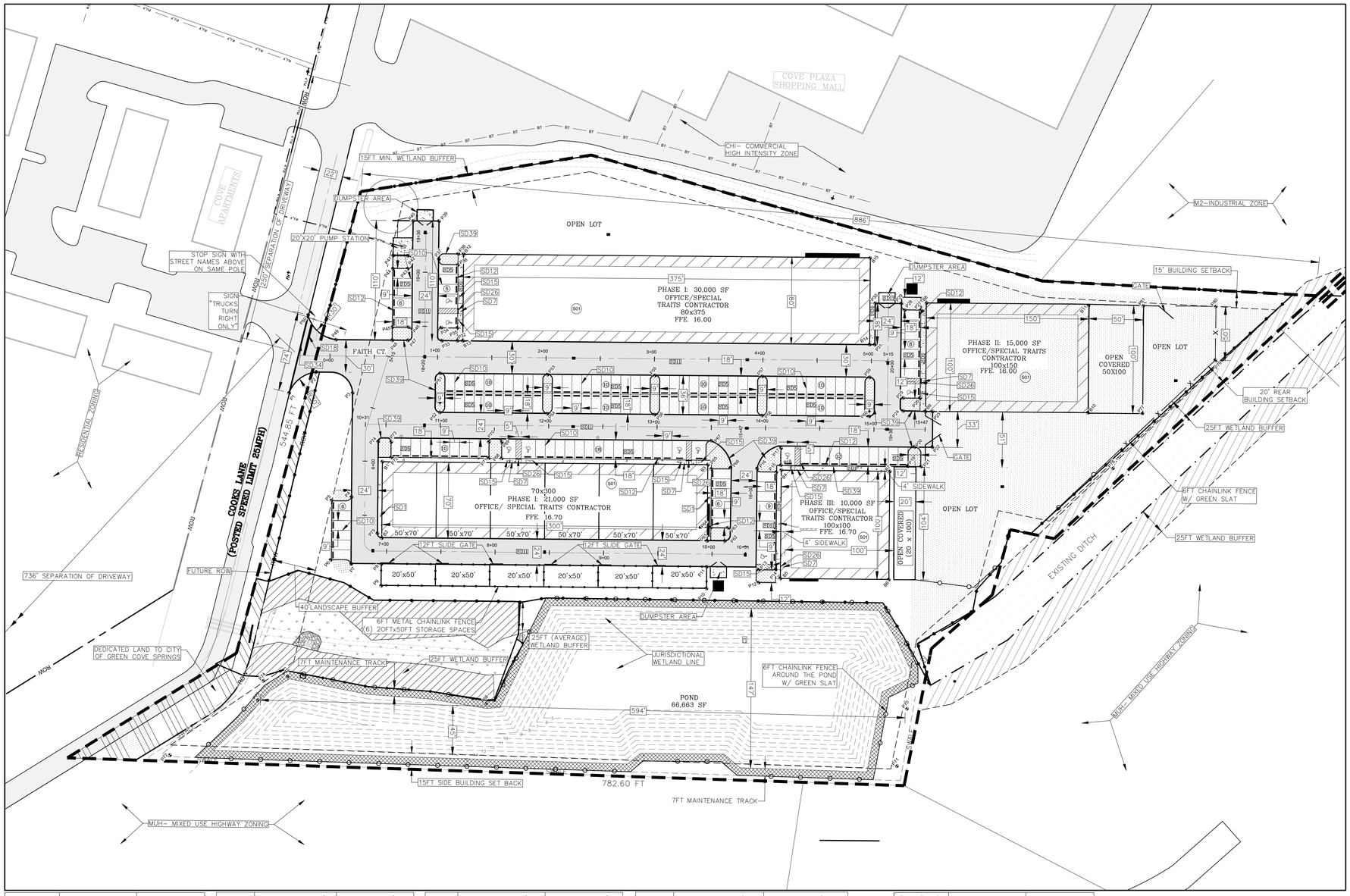
#	DATE	REVISION
0	12/17/22	REVISION PER CITY REVIEW
1	04/12/2023	REVISION PER CITY AND RMD
2	06/26/2023	REVISION PER CITY COMMENTS
3	01/26/2024	REVISION PER RMD COMMENTS
4	04/04/2024	REVISION PER CITY COMMENTS
5	04/17/2024	REVISION PER CITY COMMENTS

SHEET TITLE: DEMOLITION PLAN

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA

PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DSGN BY: QHM
DWG BY: GMG
CHK BY: QHM
DATE: 4/18/2024
JOB No.: 1369
SHEET No.: 6



GRAPHIC SCALE

50 0 50 100 200

(IN FEET)
1 inch = 50 ft.

SITE DETAILS

	SD1	CONCRETE SIDEWALK DETAIL
	SD4	18" STANDARD CURB & GUTTER (REVERSE PITCH)
	SD5	PAVERS PARKING DETAIL
	SD7	WHEELCHAIR RAMP IN SIDEWALK
	SD8	STOP SIGN
	SD9	WHEELCHAIR RAMP IN SIDEWALK AT CURB RETURN
	SD10	PARKING PAINT STRIPPING
	SD11	TYPICAL PAVEMENT SECTION
	SD12	PRECAST CONCRETE WHEEL STOP
	SD15	ACCESSIBLE PARKING SIGN
	SD16	VALLEY CURB
	SD18	STOP BAR
	SD26	DETECTABLE WARNING DETAIL
	SD34	CONNECTION TO EXISTING PAVEMENT
	SD36	CONCRETE PAVEMENT SECTION
	SD39	HEADER CURB
	SD45	HEAVY PAVEMENT SECTION
		WETLAND BUFFER

SITE NOTES

S01 BUILDING – SEE ARCHITECTURAL PLANS (TBD BY OTHERS)

DEVELOPMENT DATA

MAX ALLOWABLE IMPERVIOUS COVERAGE: 70%
PROPOSED IMPERVIOUS COVERAGE: 56.6%
BUILDING SETBACK: FRONT 25FT, SIDE 15FT, REAR 20FT
ROAD DRIVEWAY CONNECTION POSTED SPEED LIMIT 25MPH
MINIMUM DRIVEWAY CONNECTION SPACING: 245FT.

TOTAL PROJECT AREA = 366,775SF = 8.42 ACRES
TOTAL PROPOSED BUILDING AREA = 76,000SF
TOTAL PROPOSED CONCRETE AREA = 4,271SF
TOTAL PROPOSED ASPHALT DRIVE = 51,717SF
TOTAL PROPOSED PAVERS AREA = 26,191SF
TOTAL PROPOSED POND = 66,663SF
TOTAL PERVIOUS AREA = 141,933SF

TOTAL PROPOSED IMPERVIOUS AREA = 158,179SF (INCLUDE BUILDING)
IMPERVIOUS COVERAGE = 43.1 %

FAR = 14.9%

PHASE I:
PROPOSED BUILDING AREA: 51,000SF
(WAREHOUSE: 35,000SF; OFFICE: 16,000SF)
PROPOSED TOTAL PAVEMENT AREA: 65,440SF

PHASE II:
PROPOSED BUILDING AREA: 15,000SF
(WAREHOUSE: 10,000SF; OFFICE: 5,000SF)
PROPOSED TOTAL PAVEMENT AREA: 0SF

PHASE III:
PROPOSED BUILDING AREA: 10,000SF
(WAREHOUSE: 5,000SF; OFFICE: 5,000SF)
PROPOSED TOTAL PAVEMENT AREA: 1,814SF

GENERAL PROJECT INFORMATION

PARCEL #: 38-06-26-016564-002
ADDRESS: 1609 COOKES LANE.
FUTURE LAND USE: MUH–MIXED USE HIGHWAY
ZONING: C2 & M1

STATEMENT OF USE: OFFICE AND INDUSTRIAL WAREHOUSE AND OFFICES.

PARCEL AREA: 8.92 ACRES

CURRENT LAND OWNER:
WILLIAM KRIEG
RIVER OAKS OUTDOOR, LLC
P.O. BOX 7902
JACKSONVILLE, FL 32238

DESIGN ENGINEER AGENT:
QUOC H. MAI, P.E. #64006
MAI ENGINEERING SERVICES, INC.
2510 US 1 S, SUITE D
ST. AUGUSTINE, FL 32086

GENERAL NOTES

1. ALL DIMENSIONS ARE LISTED TO THE EDGE OF PAVEMENT AND/OR FACE OF CURB.
2. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
3. SCREENING OF ALL MECHANICAL EQUPMENT SHALL BE IN ACCORDANCE WITH SJC LDC SEC.6.01.03.H.2. AND 6.06.04.B.9.
4. DUMPSTER/SOLID WASTE SCREENINGS STANDARDS SHALL BE IN ACCORDANCE WITH SJC LDC SEC 6.06.04.B.8.
5. SCREENING OF OUTDOOR STORAGE AREAS SHALL BE IN ACCORDANCE WITH SJC LDC SEC 6.06.04.B.7.

PARKING CALCULATIONS

PARKING REQUIREMENT PER CITY CODE:
OFFICE: 1/250SF
WAREHOUSE: 1/5,000SF

TOTAL PARKING REQUIRED = 114 SPACES
TOTAL PARKING PROVIDED = 160 SPACES
TOTAL ACCESSIBLE SPACES = 9 SPACES

PHASE I:
OFFICE PARKING REQUIRED = 16,000/250 = 64 SPACES
WAREHOUSE PARKING REQUIRED = 35,000/5,000 = 7 SPACES
TOTAL PARKING REQUIRED = 71 SPACES

PHASE II:
OFFICE PARKING REQUIRED = 5,000/250 = 20 SPACES
WAREHOUSE PARKING REQUIRED = 10,000/5,000 = 2 SPACES
TOTAL 2 PHASES REQUIRED = 22 SPACES

PHASE III:
OFFICE PARKING REQUIRED = 5,000/250 = 20 SPACES
WAREHOUSE PARKING REQUIRED = 5,000/5,000 = 1 SPACES
TOTAL 3 PHASES REQUIRED = 21 SPACES

APPROVED SPECIAL EXCEPTION SE-23-003 ZONING NOTES:

1. PROVIDE A 40' LANDSCAPE BUFFER CONSISTING OF LANDSCAPING AS REQUIRED BY CITY LDC SEC. 113-244(D)(3).
2. PROVIDE SIGNAGE TO LIMIT TRUCK TRAFFIC TO INGRESS AND EGRESS FROM US 17 BY REQUIRING ACCESS LIMITATION.
3. ALL OUTDOOR STORAGE MUST BE COMPLETELY SCREENED FROM PUBLIC VIEW.
4. BUILDINGS FRONTING COOKS LANE SHALL HAVE A BRICK FAÇADE.
5. SIGNAL TIMING IMPROVEMENTS AS SET FORTH IN THE TRAFFIC STUDY REPORT SHALL BE IMPLEMENTED PRIOR TO DEVELOPMENT APPROVAL.
6. ADDITIONAL RIGHT OF WAY AS SHOWN ON THE ATTACHED DRAFT SITE PLAN SHALL BE DEDICATED TO THE CITY PRIOR TO DEVELOPMENT APPROVAL.

CONTROL POINTS	NORTHING	EASTING
P1	2053949.3069'	441169.2324'
P2	2053941.3694'	441199.6896'
P3	2053903.0075'	441204.8628'
P4	2053851.2623'	441136.5716'
P5	2053863.0573'	441121.4136'
P6	2053830.0746'	441078.6531'
P7	2053807.7833'	441079.3086'
P8	2053785.7026'	441096.0842'
P9	2053773.6287'	441080.1495'
P10	2053534.5911'	441261.2693'
P11	2053546.6650'	441277.2041'
P12	2053499.8616'	441294.8890'
P13	2053507.1024'	441304.4582'
P14	2053494.7561'	441314.0028'
P15	2053549.0466'	441385.5815'
P16	2053565.1830'	441377.3728'
P17	2053559.0857'	441405.6557'
P18	2053549.6980'	441393.1466'
P19	2053456.5046'	441463.8802'
P20	2053462.4318'	441481.7413'
P21	2053446.7482'	441471.0209'

P22	2053449.3463'	441491.6597'
P23	2053469.2003'	441517.8483'
P24	2053490.9688'	441501.6380'
P25	2053498.2037'	441511.2120'
P26	2053485.9642'	441520.4790'
P27	2053534.7144'	441585.1613'
P28	2053546.6320'	441576.1445'
P29	2053552.7185'	441579.1248'
P30	2053571.8548'	441564.6477'
P31	2053548.9480'	441534.1113'
P32	2053855.8806'	441301.9275'
P33	2053867.2451'	441293.3306'
P34	2053875.0361'	441302.4880'
P35	2053863.1123'	441311.5100'
P36	2053898.1138'	441357.7486'
P37	2053915.3431'	441351.2436'
P38	2053904.2992'	441365.9568'
P39	2053936.6599'	441378.9859'
P40	2053955.7377'	441364.6656'
P41	2053950.8481'	441327.9824'
P42	2053940.0462'	441336.1158'
P43	2053932.8145'	441326.5404'
P44	2053943.5758'	441318.3890'

P45	2053910.9930'	441275.3267'
P46	2053899.0855'	441284.3454'
P47	2053892.4150'	441274.3537'
P48	2053903.7278'	441265.7247'
P49	2053945.1135'	441234.4658'
P50	2053979.3696'	441236.8018'
P51	2053850.1226'	441268.6104'
P52	2053828.3553'	441239.8421'
P53	2053771.0675'	441327.9579'
P54	2053749.2592'	441299.2377'
P55	2053692.1583'	441387.7452'
P56	2053670.3804'	441359.0020'
P57	2053613.3103'	441447.4862'
P58	2053591.3751'	441418.8621'
P59	2053534.4316'	441507.2504'
P60	2053512.6383'	441478.5188'
P61	2053561.0031'	441296.4400'
P62	2053548.0748'	441306.5005'
P63	2053553.2040'	441317.6648'
P64	2053565.6778'	441308.1993'
P65	2053598.2831'	441351.3101'
P66	2053585.1254'	441363.0401'
P67	2053614.1223'	441371.9846'

P68	2053757.2856'	441241.0786'
P69	2053766.2691'	441252.9511'
P70	2053775.8368'	441245.7085'
P71	2053766.9130'	441233.9120'
P72	2053838.6242'	441179.5319'
P73	2053847.2325'	441190.9094'
P74	2053856.9471'	441183.8537'
P75	2053805.8600'	441116.3438'

BUILDING CONTROL POINTS	NORTHING	EASTING
B1	2053842.6239'	441171.4113'
B2	2053800.0255'	441115.3316'
B3	2053603.3180'	441352.4809'
B4	2053546.5984'	441389.8498'
B5	2053486.3026'	441310.1644'
B6	2053406.5005'	441370.4275'
B7	2053466.6890'	441449.9714'
B8	2053534.7786'	441593.6408'
B9	2053474.5607'	441513.8051'
B10	2053355.0943'	441604.3206'
B11	2053414.9811'	441682.9824'
B12	2053900.3261'	441368.9547'
B13	2053851.8554'	441304.9192'
B14	2053552.8187'	441531.1826'
B15	2053601.1990'	441594.6123'

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LICENSED ENGINEER
QUOC H. MAI
FL.#64006 CA#28162

REVISIONS

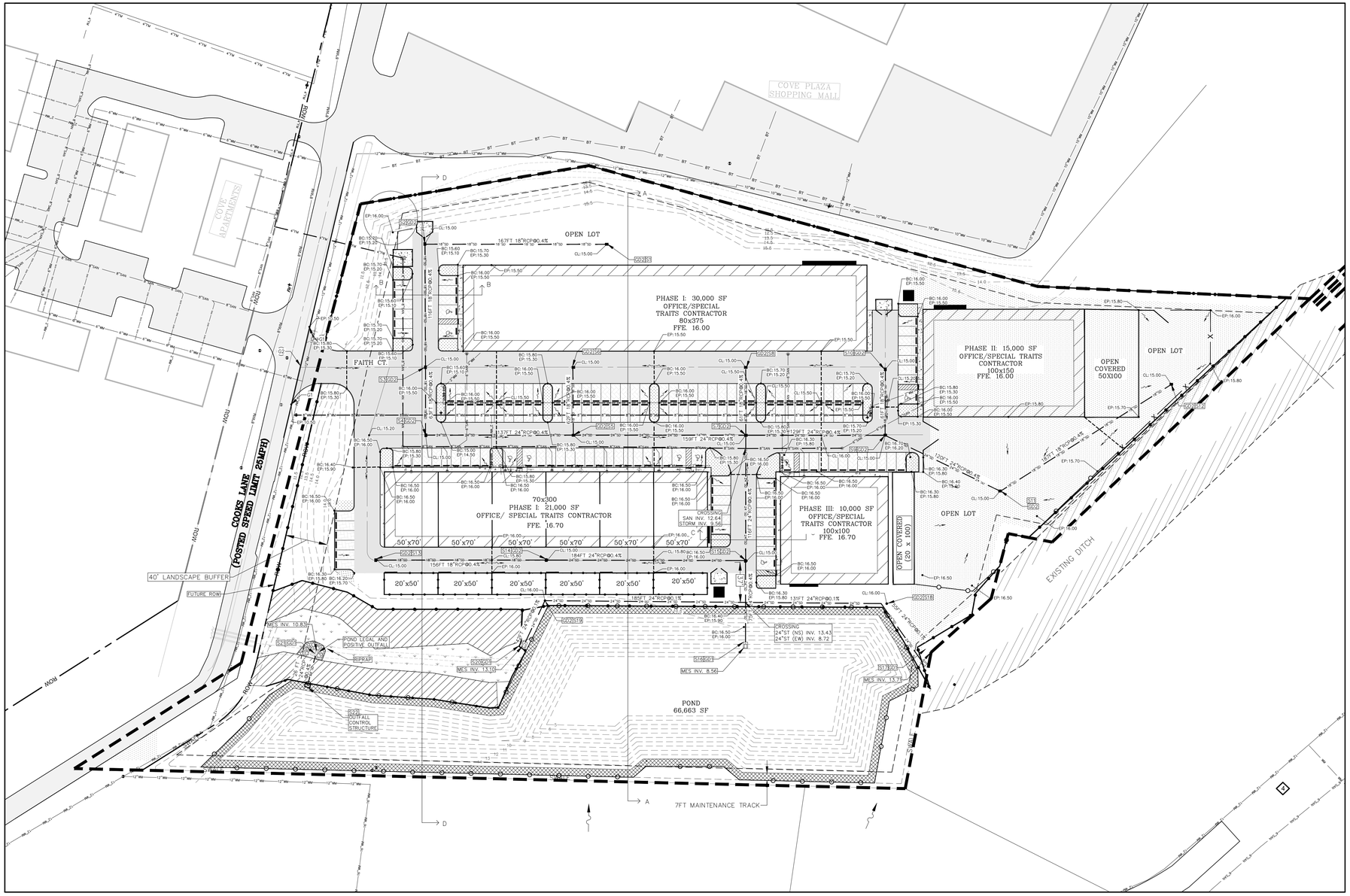
#	DATE	REVISION
0	12/17/22	REVISION PER CITY REVIEW
1	04/20/2023	REVISION PER CITY AND WD DLI
2	09/28/2023	REVISION PER CITY COMMENTS
3	01/22/2024	REVISION PER RMD COMMENTS
4	04/04/2024	REVISION PER CITY COMMENTS
5	04/17/2024	REVISION PER CITY COMMENTS

SHEET TITLE: SITE PLAN

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA

PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DSGN BY: QHM
DWG BY: GMG
CHK BY: QHM
DATE: 4/18/2024
JOB No.: 1369
SHEET No.: 7



GRAPHIC SCALE

50 0 50 100 200

(IN FEET)
1 inch = 50 ft.

GRADING DETAILS

GD1 MITERED END SECTION
GD2 PRECAST TYPE "C" INLET
FLOW ARROW

GRADING NOTES

G1 MATCH EXISTING ASPHALT
G2 CONNECT TO ACCESS ROAD (TO BE DESIGNED AND PERMITTED WITH SEPARATE PLAN SET)

SIDEWALK & ADA ACCESS NOTES

REQUIREMENTS ALONG ADA ACCESSIBLE ROUTES

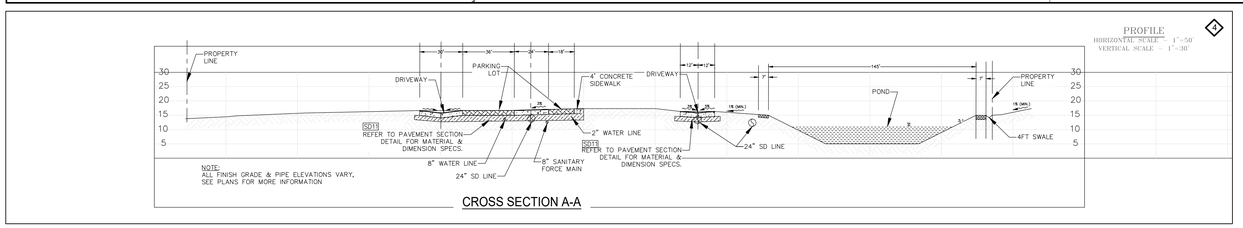
1. CROSS SLOPES SHALL NOT EXCEED 2%
2. RUNNING SLOPES SHALL NOT EXCEED 5%
3. SLOPES BETWEEN 5% & 8.33% SHALL MEET THE RAMP REQUIREMENTS OF ADA.
4. ACCESSIBLE PARKING AND ACCESS AISLES SHALL NOT EXCEED 2% IN ANY DIRECTION.
5. INTERSECTING SIDEWALKS SHALL NOT EXCEED 2% IN ANY DIRECTION.
6. ANY SLOPE GREATER THAN 8.33% SHALL NOT BE PART OF AN ACCESSIBLE ROUTE.

STRUCTURE TABLE

STRUCTURE	TYPE	RIM	INV. IN	INV. OUT
S1	INLET	15.00		12.50 (W)
S2	INLET	15.00	11.97 (E)	11.87 (S)
S3	INLET	15.00	11.40 (N)	11.30 (S)
S4	INLET	15.00	11.05 (N)	10.95 (E)
S5	INLET	15.00	10.40 (W) 12.25 (N)	10.30 (E)
S6	INLET	15.00		12.50 (S)
S7	INLET	15.00	12.26 (N) 10.64 (E) 9.67 (W)	9.57 (S)
S8	INLET	15.00		12.50 (S)
S9	INLET	15.00	12.26 (N) 11.25 (E)	11.15 (W)
S10	INLET	15.00		12.50 (S)
S11	INLET	15.00	12.24 (E)	12.14 (W)
S12	INLET	15.00		12.50 (W)
S13	INLET	15.00		12.50 (E)
S14	INLET	15.00	11.88 (W)	11.78 (E)
S15	INLET	15.00	8.96 (N) 11.03(W)	8.86 (S)
S16	MES		8.56	
S17	MES			13.71
S18	MH1	16.00	13.66 (S)	13.56 (N)
S19	MH2	16.00	13.24 (S)	13.14 (W)
S20	MES		13.10	
S21	MES			10.83
S22	OUTFALL CONTROL STRUCTURE		10.72	

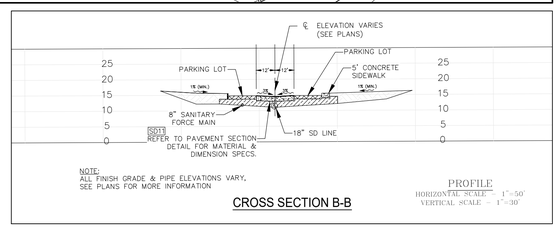
POND AREA TABLE

ELEVATION	AREA (SF)
15	66,663
14	60,570
13	54,633
12	48,853
11	43,229
10	37,762
9	32,463
8	27,298
7	24,228
6	21,284
5	18,468



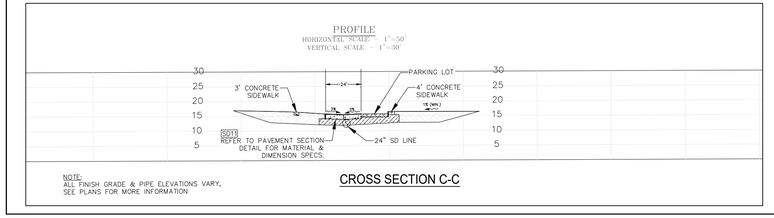
NOTE:
ALL FINISH GRADE & PIPE ELEVATIONS VARY, SEE PLANS FOR MORE INFORMATION

CROSS SECTION A-A



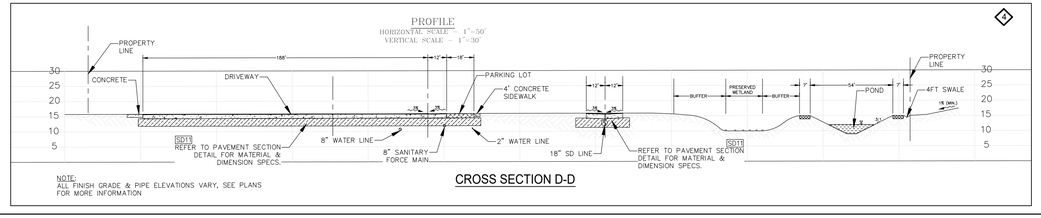
NOTE:
ALL FINISH GRADE & PIPE ELEVATIONS VARY, SEE PLANS FOR MORE INFORMATION

CROSS SECTION B-B



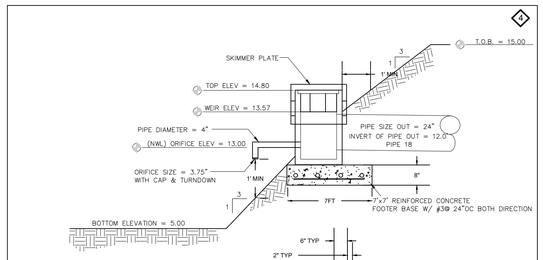
NOTE:
ALL FINISH GRADE & PIPE ELEVATIONS VARY, SEE PLANS FOR MORE INFORMATION

CROSS SECTION C-C



NOTE:
ALL FINISH GRADE & PIPE ELEVATIONS VARY, SEE PLANS FOR MORE INFORMATION

CROSS SECTION D-D



NO GRATE IS PROPOSED
THERE IS (3) 3.3" WEIRS

OUTFALL CONTROL STRUCTURE
N.T.S

2510 US 1 SOUTH SUITE D
ST. AUGUSTINE, FL 32086
PHONE (904)794-1760
FAX (904)794-1768
quoc@maiengineer.com

MAI ENGINEERING SERVICES, INC.

LICENSED ENGINEER
QUOC H. MAI
FL.#64006 CA#28162

REVISIONS

#	DATE	REVISION
6	10/17/24	REVISION PER CITY REVISET
5	04/30/2024	REVISION PER CITY AND RWD RAI
4	04/30/2024	REVISION PER CITY COMMENTS
3	01/02/2024	REVISION PER RWD COMMENTS
2	04/04/2024	REVISION PER CITY COMMENTS
1	04/17/2024	REVISION PER CITY COMMENTS

GRADING PLAN

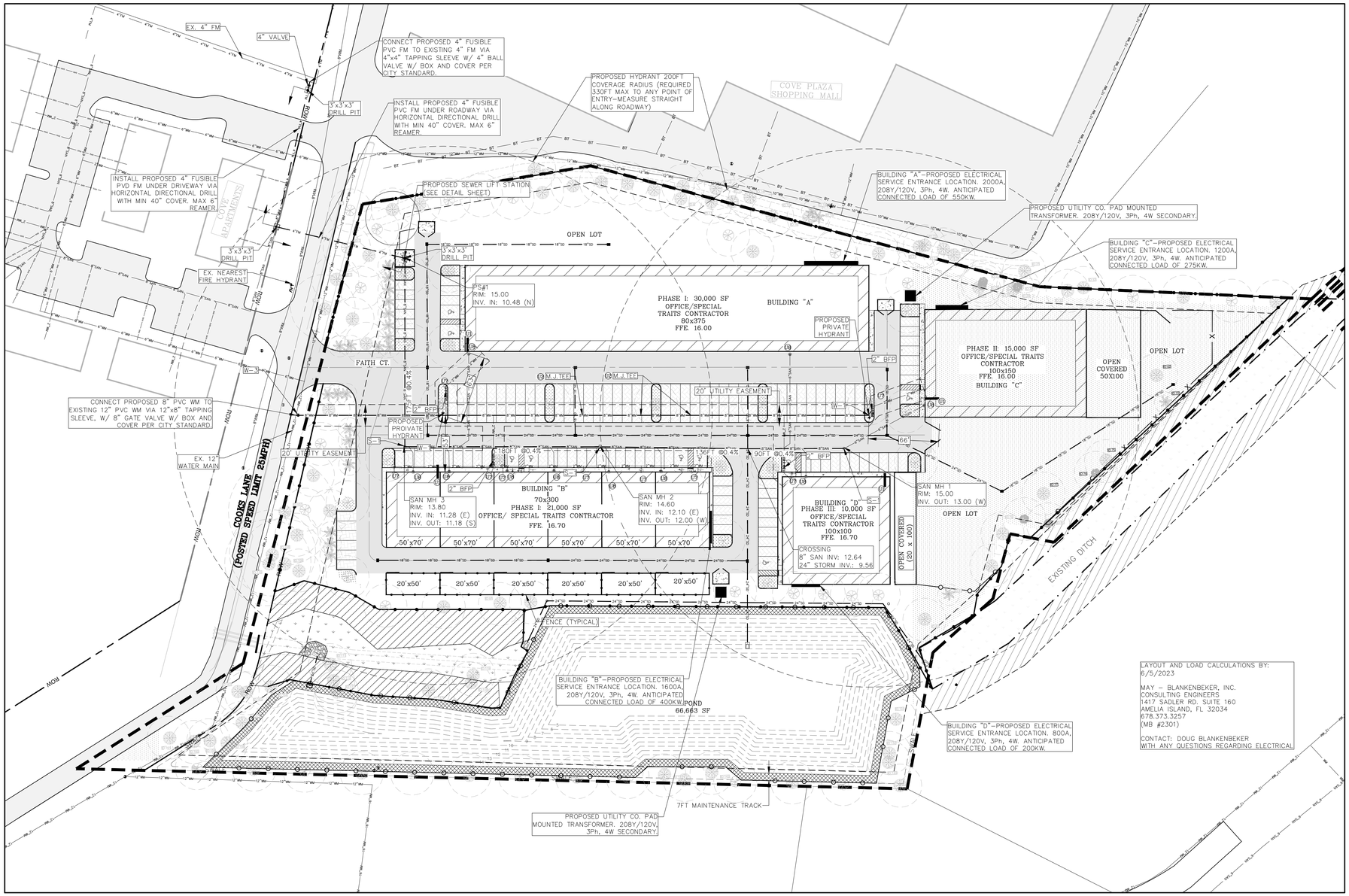
RIVER OAKS INDUSTRIAL PARK

GREEN COVE SPRINGS, FLORIDA

PREPARED FOR
RIVER OAKS OUTDOOR, LLC

SHEET TITLE

DSGN BY:	QHM
DWG BY:	GMG
CHK BY:	QHM
DATE:	4/18/2024
JOB No.:	1369
SHEET No.:	8



GRAPHIC SCALE

50 0 50 100 200

(IN FEET)
1 inch = 50 ft.

UTILITY DETAILS-WATER & SEWER

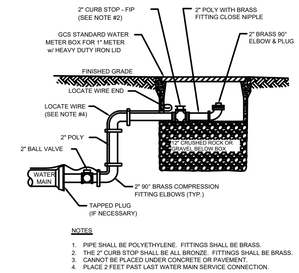
S-1 SANITARY SEWER MANHOLE FRAME & COVER
W-1 FIRE HYDRANT INSTALLATION
W-3 GATE VALVE AND BOX

UTILITY NOTES

U1 FDC CONNECTION TO BUILDING, AT MAX 100FT FROM HYDRANT.
U2 M.J. TEE
U7 PROPOSED LOCATION FOR WATER SERVICE LATERAL TO TIE INTO BUILDING.
U8 PROPOSED LOCATION FOR SANITARY SERVICE LATERAL TO TIE INTO BUILDING.

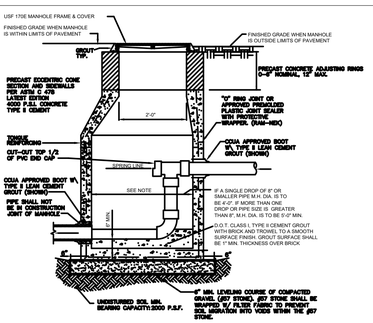
SANITARY SEWER STRUCTURE TABLE

ID	RIM	INV. IN	INV. OUT	NORTHING	EASTING
MH1	15.00		13.00 (W)	2053513.2381'	441436.0417'
MH2	14.60	12.10 (E)	12.00 (W)	2053694.7740'	441300.5134'
MH3	13.80	11.28 (E)	11.18 (S)	2053839.8280'	441190.9021'
PS#1	15.00		10.48 (N)		



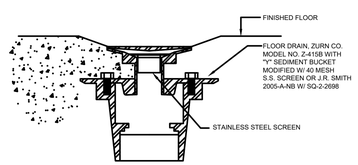
NOTES
1. PIPE SHALL BE POLYETHYLENE. FITTINGS SHALL BE BRASS.
2. THE 2" CURB STOP SHALL BE ALL BRONZE. FITTINGS SHALL BE BRASS.
3. CANNOT BE PLACED UNDER CONCRETE OR PAVEMENT.
4. PLACE 2 FEET PAST LAST WATER MAIN SERVICE CONNECTION.

FLUSHING VALVE BELOW GRADE



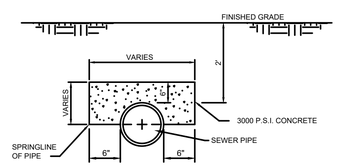
NOTE: FOR ADDITIONAL MANHOLE SPECIFICATIONS, SEE "SANITARY SEWER MANHOLE" DETAIL THIS SHEET.
MAXIMUM ALLOWABLE DIFFERENCE IN INVERT ELEVATION WITHOUT INTERNAL DROP CONNECTION IS 24".
SEE "ELEVATION DIFFERENCE ACROSS MANHOLE" THIS SHEET.

TYPICAL GRAVITY SEWER DROP PIPE CONNECTION TO MANHOLE



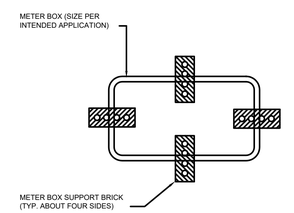
NOTE:
FACILITIES WITH FLOOR DRAINS AND WITHOUT A GREASE TRAP SHALL INSTALL THIS MODEL FLOOR DRAIN AND ONLY WITH PRIOR APPROVAL FROM THE CLAY COUNTY UTILITY AUTHORITY.

FLOOR DRAIN WITH STRAINER DETAIL



REQUIRED WHERE TOP OF SEWER PIPE IS WITHIN 2' OF FINISHED GRADE UNLESS ALTERNATE DETAIL IS APPROVED BY THE CLAY COUNTY UTILITY AUTHORITY.

CONCRETE CAP FOR SEWER PIPES



METER BOX SUPPORT DETAIL

2510 US 1 SOUTH SUITE D
ST. AUGUSTINE, FL 32086
PHONE (904)794-1760
FAX (904)794-1768
quoc@maiengineer.com

MAI ENGINEERING SERVICES, INC.

LICENSED ENGINEER
QUOC H. MAI
FL. #64006 CA#28162

REVISIONS

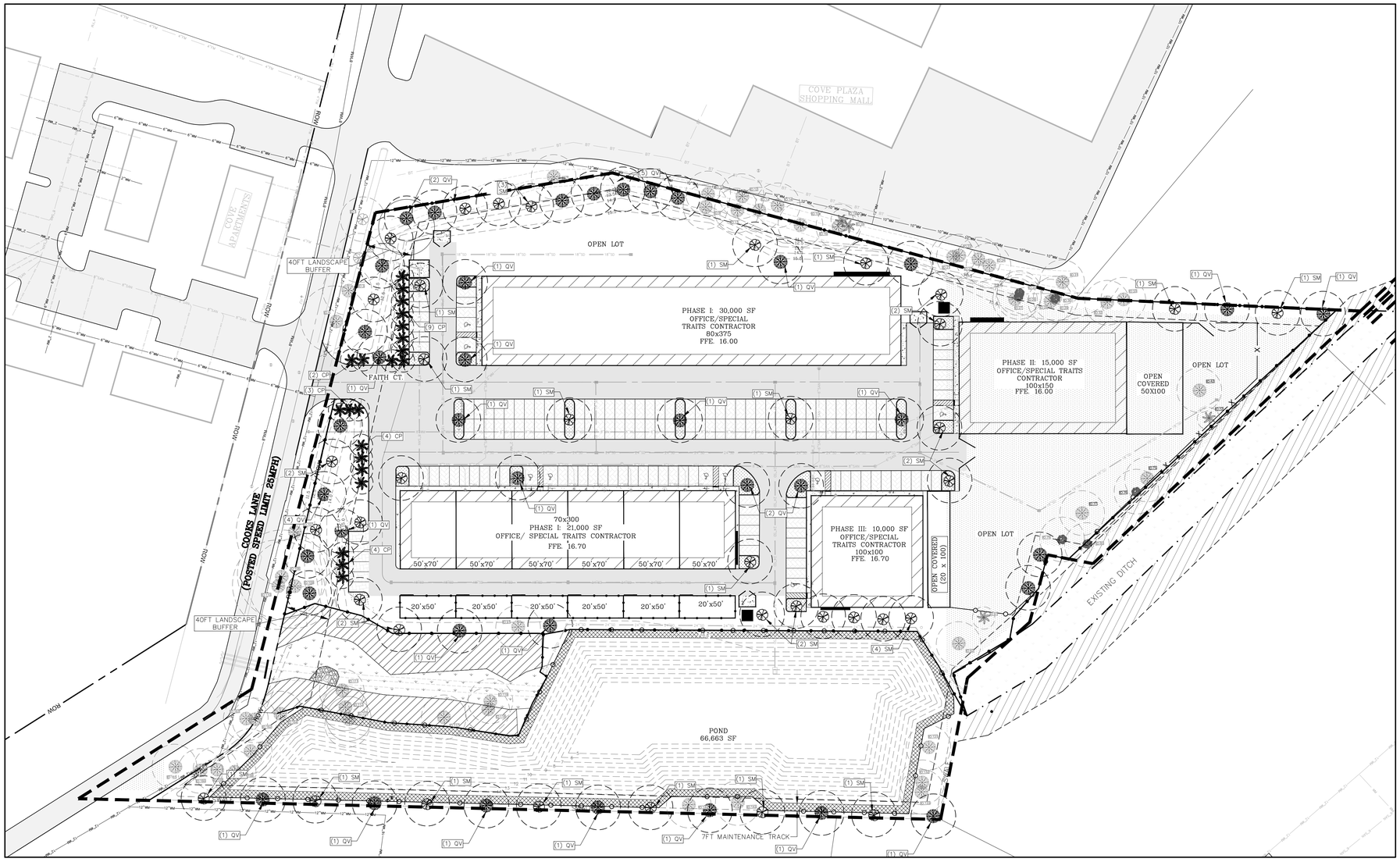
#	BY/DATE	REVISION
0	12/11/23	REVISION PER CITY REVISED
1	04/22/2023	REVISION PER CITY AND WMD MJ
2	05/26/2023	REVISION PER CITY COMMENTS
3	07/26/2024	REVISION PER WMD COMMENTS
4	04/04/2024	REVISION PER CITY COMMENTS
5	04/17/2024	REVISION PER CITY COMMENTS

SHEET TITLE: UTILITIES PLAN

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA

PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DSGN BY:	QHM
DWG BY:	GMG
CHK BY:	QHM
DATE:	4/18/2024
JOB No.:	1369
SHEET No.:	9



GRAPHIC SCALE

50 0 50 100 200

(IN FEET)
1 inch = 50 ft.

GENERAL LANDSCAPE NOTES

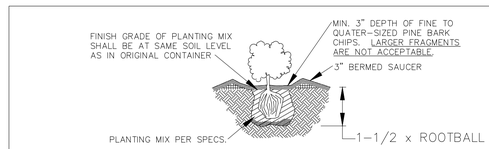
1. THIS LANDSCAPE PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH THE CLAY COUNTY LDC.
2. LOCATE ALL UTILITIES AND SITE LIGHTING CONDUITS BEFORE LANDSCAPE CONSTRUCTION BEGINS.
3. NOTIFY LANDSCAPE ARCHITECT OR DESIGNATED REPRESENTATIVE OF ANY LAYOUT DISCREPANCIES PRIOR TO ANY PLANTING. SINGLE TREES OR SHRUBS SHALL BE MULCHED TO THE OUTSIDE EDGE OF THE SAUCER OR LANDSCAPE ISLAND (SEE PLANTING DETAILS).
4. WEEDS ARE TO BE ADEQUATELY AND PROPERLY TREATED AND REMOVED PRIOR TO LANDSCAPE INSTALLATION. ALL SOIL AMENDMENTS SHOULD BE CERTIFIED AS WEED-FREE FROM THE SUPPLIER.
5. ALL TREES AND SHRUBS ARE TO BE POSITIONED VERTICALLY REGARDLESS OF THE SLOPE OF THE GROUND IN WHICH THEY ARE PLANTED. BERMS ARE TO CONSTRUCTED AT RIGHT ANGLES TO THE TREE OR SHRUB OR IN A MANNER IN WHICH THEY WILL MOST EFFECTIVELY SERVE THE PURPOSE OF RETAINING WATER AT THE BASE OF THE PLANT.
6. FERTILIZE ALL PLANTS AT THE TIME OF PLANTING WITH TIME RELEASE FERTILIZER. A QUALITY COMPOST / LEAF DEBRIS FROM A RELIABLE SOURCE IS RECOMMENDED IN ALL PLANTING AREAS.
7. MULCH ALL LANDSCAPE AREAS WITH 3" OF PINE STRAW MULCH UNLESS SPECIFIED OTHERWISE.
8. PLANT MATERIAL SHALL CONFORM TO THE STANDARDS FOR GRADE #1 OR BETTER AS GIVEN IN THE LATEST "GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II", FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES OR TO THE STANDARDS AS GIVEN IN THE LATEST "AMERICAN AGRICULTURE AND CONSUMER SERVICES OR TO THE STANDARDS AS GIVEN IN THE LATEST "AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN NATIONAL STANDARDS INSTITUTE".
9. PLANT SIZE IS TO TAKE PRECEDENCE OVER CONTAINER SIZE.
10. PRUNE ALL EXISTING SAVED TREES ON SITE TO A HEIGHT OF 15' ABOVE GRADE, AND REMOVE ALL DEAD WOOD, PRUNE TREES ACCORDING TO THE PRUNING GUIDELINES BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE, 1995 EDITION, IF ARBORIST BELIEVES A LIMB SHOULD NOT BE REMOVED THE ARBORIST SHALL CONTACT THE LANDSCAPE ARCHITECT. REMOVE ALL DEBRIS FROM THE SITE TO AN APPROVED OFF-SITE LOCATION. FOLLOW THE "AMERICAN NATIONAL STANDARDS FOR TREE CARE OPERATIONS" AND ANSI Z133.1 GUIDELINES.
11. ALL TREES MUST MEET MINIMUM 2" CALIPER SIZE, AND SHRUB LINE PLANT HEIGHT (18"MIN.).
12. ALL DISTURBED AREAS MUST BE STABILIZED BY MEANS OF MULCH, SEEDING, OR SOD AS CALLED OUT ON THIS PLAN. IF DISTURBED AREA IS OUTSIDE OF THE LIMITS OF THIS PLAN, AREAS MUST BE STABILIZED WITH EXISTING MATERIAL OR BETTER. I.E. SEEDED OR SODDED.
13. LANDSCAPE MATERIAL IS TO BE MAINTAINED BY THE LANDSCAPE CONTRACTOR (INCLUDING MOWING, PRUNING, AND WEEDING). THE LANDSCAPE CONTRACTOR MUST PROVIDE: (A.) A WARRANTY ON ALL TREES AND PALMS FOR A PERIOD OF (1) ONE YEAR. (B.) A WARRANTY ON ALL SHRUBS AND GROUND COVERS FOR A PERIOD OF (1) ONE YEAR. (C.) GUIDELINES FOR PROPER MAINTENANCE.
14. ALL LANDSCAPE AREAS SHALL BE PROVIDED WITH AN IRRIGATION SYSTEM THAT SUPPLIES HOSE BIBS LOCATED WITHIN 75' OF ANY LANDSCAPED AREAS. IF AUTOMATIC SYSTEM IS INSTALLED (OPTIONAL), SYSTEM SHALL BE WATER EFFICIENT AND SHALL ACHIEVE 100% COVERAGE. NOTE THAT SUCH A SYSTEM SHALL ALSO SEPARATELY IRRIGATE TURF VS. SHRUBS. A RAIN SENSOR SHALL BE INSTALLED WITH SUCH A SYSTEM.
15. MINIMUM OF 10 FEET SEPARATION SHALL BE MAINTAINED BETWEEN TREES AND OVERHEAD UTILITIES AND MINIMUM OF 5 FEET SEPARATION TO UNDERGROUND LINES.
16. WHEN ANY ROOT OF EXISTING TREES ARE ENCOUNTERED DURING CONSTRUCTION, THE ROOTS MUST BE CUT OFF EVENLY WITH SHARP CLEAN PRUNING TOOL.
17. ANY PROPOSED TREE LOCATED BETWEEN THE BUILDING AND RIGHT OF WAY SHALL BE A MINIMUM OF FOUR INCHED IN CALIPER AT THE TIME OF PLANTING.
18. SHRUBS/HEDGES SHALL BE A MINIMUM OF 30 INCHES IN HEIGHT WITHIN ONE YEAR OF PLANTING AND A MINIMUM OF OF 30 INCHES ON CENTER.
19. GUYING, PROPPING AND STAKING SHALL BE PROVIDED PER 14-2-94(E)(4)(b).
20. UPLAND BUFFER WILL REMAIN NATURAL AND UNDISTURBED AND WILL BE FULLY RESTORED IF IMPACTED.
21. NO TREE OR SHRUB SHALL BE PLANTED IN SUCH A MANNER THAT AT THE TIME OF PLANTING THE BASE OF THE TREE IS WITHIN THREE FEET OF ANY PUBLIC SIDEWALK OR BIKEWAY FOR SMALL TREES OR FIVE FEET FOR LARGE TREES.
22. LANDSCAPING MUST BE INCORPORATED AT A MINIMUM DEPTH OF 36 INCHES AROUND THE BASE OF ALL GROUND SIGNS TO INCLUDE LOW GROWING SHRUBS AND GROUND COVER AND/OR FLOWERING ANNUAL TO PROMOTE COLOR.

LANDSCAPE CALCULATION:

INTERIOR TREE REQUIREMENT: 1 TREE FOR EVERY 1,500SF, FOR FIRST 10500SF (7 TREES), THEN 1 TREE FOR EVERY 4,000SF FOR THE REMAINING, TREES SHALL BE 50% CANOPY AND 50% UNDERSTORY TREES.
PROJECT INTERIOR AREA = 342,102SF REQUIRED TOTAL: 90 TREES, 50% (45 TREES SHALL BE CANBOPY)
REQUIRED CANOPY TREES = 45 TREES, PROVIDED = 56 CANOPY TREES

PROJECT TOTAL SAVED TREES: 50 TREES, 1,135 CREDIT INCHES (SEE TABLE BELOW)
PROJECT TOTAL PROPOSED NEW TREES: 96 TREES, 468 INCHES DBH (SEE PLANTED TABLE BELOW)
PROJECT TOTAL PROVIDED TREES: 146 TREES, 1,603 INCHES DBH (EXCEED REQUIRED 90 TREES)

TOTAL OF REMOVED TREE REPLACEMENT INCHES REQUIRED: 1,390 INCHES (SEE TABLE BELOW)
TOTAL REMAINING REMOVED TREE INCHES FOR MITIGATION: (1,390-1,603) = (-213) INCHES TO BE PAID TO CITY TREE MITIGATION FUND.



SHRUB PLANTING
N.T.S.

LANDSCAPE PLANTING SCHEDULE

	KEY	QTY	SYMBOL	BOTANICAL/COMMON NAME	SPECIFICATION	NATIVE
PALM	CP	21 (168 INCH)		Cabbage Palm Sabal Palmetto	12'-14' h x 5' spd., 8"OD	Native/ Florida Friendly
OAK	QV	38 (152 INCH)		Quercus virginiana (Southern Live Oak)	4" Cal., 10'-12' h x 5' spd., 45 gal. matched heights	Native/ Florida Friendly
MAGNOLIA	SM	37 (148 INCH)		(Southern Magnolia)	4" Cal., 10'-12' h x 5' spd., 45 gal. matched heights	Native/ Florida Friendly
TOTAL		96 (468 INCH)				

ADDITIONAL LANDSCAPE NOTES:

a. VEGETATION THAT EXCEEDS TWENTY-FIVE (25) FEET IN HEIGHT AT MATURITY SHOULD NOT BE PLANTED CLOSER THAN FIFTEEN (15) FEET OF THE VERTICAL PLANE OF AN EXISTING POWER LINE, EXCLUDING SERVICE WIRES.

b. BALLED AND BURLAPPED STRAPPING WIRE, AND ANY SYNTHETIC MATERIAL SHALL BE REMOVED PRIOR TO FINAL INSPECTION. WIRE BASKETS SHOULD BE CUT AWAY FROM TOP ONE-THIRD OF ROOT BALL.

c. NON-CANOPY TREES SHALL NOT BE PLANTED CLOSER THAN 10 FEET FROM OTHER TREES AND CANOPY TREES NO CLOSER THAN 20-30 FEET, DEPENDING ON SPECIES.

d. PLANT MATERIAL SHALL CONFORM TO THE STANDARDS FOR GRADE #1 OR BETTER AS GIVEN IN THE LATEST "GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II," FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES OR TO THE STANDARDS AS GIVEN IN THE LATEST "AMERICAN STANDARD FOR NURSERY STOCK," AMERICAN NATIONAL STANDARDS INSTITUTE.

e. PINE BARK OR PINE STRAW MULCH SHALL BE PROVIDED A MINIMUM OF TWO TO THREE INCHES IN DEPTH AROUND ALL NEWLY PLANTED LANDSCAPING.

f. A MULCH RING FOR ALL NEWLY PLANTED TREES SHALL BE PROVIDED AT LEAST FIVE (5) FEET IN DIAMETER AND NOT CLOSER THAN SIX (6) INCHES FROM THE TREE TRUNK.

g. IRRIGATION WILL BE PROVIDED WITH AN AUTOMATIC IRRIGATION SYSTEM.

h. TREES SHALL HAVE A MINIMUM HEIGHT OF (8) EIGHT TO (10) FEET AND (2) TWO INCHES OF CALIPER.

i. SHRUB LINES ARE TO BE PLANTED AT THE REQUIRED MINIMUM HEIGHT, NOT BY CONTAINER SIZE.

j. SOIL IN TREE ISLANDS SHALL HAVE AT LEAST 12" OF SUITABLE SOIL FOR TREE PLANTINGS, AND BE VOID OF ANY CONSTRUCTION DEBRIS OR UNSUITABLE MATERIALS.

k. TREES SHALL NOT BE PLANTED CLOSER THAN 7.5' FROM THE CENTERLINE OF UNDERGROUND UTILITIES.

REMOVED TREES TABLE

ID#	TYPE	DBH (IN)	REPLACE CREDIT
5	LIVE OAK	48.0	48.0
6	LIVE OAK	38.0	38.0
8	LAUREL OAK	15.0	5
17	LAUREL OAK	20.0	6.67
20	LIVE OAK	25.0	25.0
34	LAUREL OAK	16.0	5.33
35	LAUREL OAK	14.0	4.67
36	LAUREL OAK	14.0	4.67
37	LAUREL OAK	26.0	8.67
38	LAUREL OAK	15.0	5.0
39	LAUREL OAK	24.0	8.0
40	RED MAPLE	16.0	5.33
41	LAUREL OAK	14.0	4.67
43	CABBAGE PALM	13.0	4.33
44	AMERICAN ELM	15.0	5.00
45	RED MAPLE	22.0	7.33
46	LIVE OAK	38.0	38.0
47	CABBAGE PALM	13.0	4.33
48	CABBAGE PALM	13.0	4.33
49	SOUTHERN MAGNOLIA	13.0	4.33
50	LIVE OAK	23.0	23.0
51	LIVE OAK	16.0	16.0
52	LIVE OAK	25.0	25.0
53	SWEETGUM	15.0	5.0
54	SOUTHERN MAGNOLIA	17.0	5.67
55	LIVE OAK	15.0	15.0
56	LAUREL OAK	12.0	4.0
57	LAUREL OAK	16.0	5.33
58	LIVE OAK	15.0	15.0
59	WATER OAK	14.0	4.67
60	LAUREL OAK	33.0	11.0
61	SWEETGUM	13.0	4.33
62	SWEETGUM	13.0	4.33
63	LIVE OAK	33.0	33.0
64	LIVE OAK	63.0	63.0
65	LIVE OAK	28.0	28.0
66	LIVE OAK	47.0	47.0
67	LIVE OAK	45.0	45.0
68	CABBAGE PALM	12.0	4.0
69	CABBAGE PALM	12.0	4.0
70	LAUREL OAK	14.0	4.67
71	RED MAPLE	23.0	7.67
73	CABBAGE PALM	13.0	4.33
74	AMERICAN ELM	13.0	4.33

REMOVED TREES TABLE

ID#	TYPE	DBH (IN)	REPLACE CREDIT
78	AMERICAN ELM	15.0	5
83	LIVE OAK	20.0	20.0
84	LIVE OAK	54.0	54.0
85	LAUREL OAK	16.0	5.33
86	RED MAPLE	14.0	4.66
87	LAUREL OAK	13.0	4.33
88	LAUREL OAK	27.0	9
89	LIVE OAK	56.0	56.0
90	LIVE OAK	28.0	28.0
92	LIVE OAK	37.0	37.0
93	CABBAGE PALM	13.0	4.33
94	CABBAGE PALM	12.0	4
95	CABBAGE PALM	12.0	4
96	LAUREL OAK	13.0	4.33
97	CABBAGE PALM	13.0	4.33
98	CABBAGE PALM	13.0	4.33
99	CABBAGE PALM	13.0	4.33
100	CABBAGE PALM	14.0	4.67
101	CABBAGE PALM	12.0	4
102	LIVE OAK	19.0	19.0
103	LIVE OAK	27.0	27.0
104	LIVE OAK	23.0	23.0
105	CABBAGE PALM	12.0	4
106	LIVE OAK	25.0	25.0
114	LIVE OAK	16.0	16.0
115	LAUREL OAK	18.0	6
116	LAUREL OAK	16.0	5.33
120	LIVE OAK	13.0	13.0
121	SOUTHERN MAGNOLIA	16.0	5.33
122	LIVE OAK	26.0	26
123	LIVE OAK	26.0	26
124	LIVE OAK	26.0	26
125	LAUREL OAK	20.0	6.66
126	LAUREL OAK	18.0	6
127	LAUREL OAK	13.0	4.33
128	LAUREL OAK	12.0	4
129	SOUTHERN MAGNOLIA	14.0	4.67
130	LIVE OAK	45.0	45.0
134	LIVE OAK	22.0	22.0
135	LIVE OAK	38.0	38.0
136	LIVE OAK	28.0	28.0
137	LAUREL OAK	14.0	4.67
138	LAUREL OAK	21.0	7
139	LAUREL OAK	14.0	4.67
140	LAUREL OAK	18.0	6
141	LAUREL OAK	22.0	7.33
142	LAUREL OAK	15.0	5

REMOVED TREES TABLE

ID#	TYPE	DBH (IN)	REPLACE CREDIT
145	LAUREL OAK	13.0	4.33
146	LAUREL OAK	14.0	4.67
147	LAUREL OAK	14.0	4.67
148	LAUREL OAK	26.0	8.67
149	LAUREL OAK	18.0	6
150	LAUREL OAK	17.0	5.67
151	LAUREL OAK	30.0	10
152	LAUREL OAK	14.0	4.67
153	LAUREL OAK	21.0	7
154	LAUREL OAK	28.0	9.33
155	LAUREL OAK	27.0	9
156	LAUREL OAK	14.0	4.67
165	CABBAGE PALM	13.0	4.33
TOTAL	104	2163	1390

NOTES:

1) PER CITY ORDINANCE SECTION 113-279 (a), TREE REPLACEMENT REQUIRED FOR ALL REMOVED TREES. REPLACE TOTAL INCHES FOR LIVE OAKS TREES; REPLACE ONE THIRD FOR ALL OTHER TREES THAT ARE 12 INCH DBH.

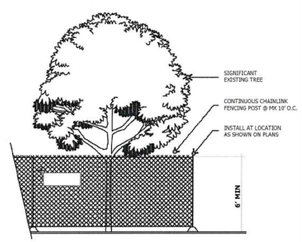
TOTAL TREE INCHES OF REMOVED TREES ARE: 2,227 INCHES
TOTAL OF REPLACEMENT CREDIT INCHES REQUIRED: 1,454 INCHES

2) SAVED TREES PER CITY ORDINANCE SECTION 113-279 (b). TREES ARE PRESERVED SHALL RECEIVED CREDIT AGAINST THE LANDSCAPE REQUIREMENTS ACCORDING TO THE FOLLOWING SCHEDULE:
TREES 12 TO 18 INCH DBH: LIVE OAK, ONE INCH CREDIT, OTHERS 50%
TREES 19 TO 30 INCH DBH: LIVE OAK, 1.25 INCH CREDIT, OTHERS 75%
TREES ABOVE 30 INCH DBH: LIVE OAK, 1.5 INCH CREDIT, OTHER 100%

TOTAL TREE INCHES OF SAVED TREES: 1,154 INCH
TOTAL SAVED TREES CREDIT INCHES: 1,135 INCH

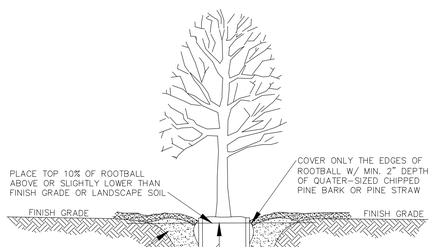
SAVED TREES TABLE

ID#	TYPE	DBH	TREE CREDIT
2	SWEETGUM	15.0	7.5
3	LAUREL OAK	26.0	19.5
4	LIVE OAK	28.0	35.0
9	LAUREL OAK	13.0	6.5
11	LAUREL OAK	15.0	7.5
13	LAUREL OAK	16.0	8
15	LAUREL OAK	14.0	7
16	LAUREL OAK	20.0	15
21	LAUREL OAK	17.0	8.5
25	RED MAPLE	17.0	8.5
26	RED MAPLE	13.0	6.5
27	LIVE OAK	19.0	23.75
28	LAUREL OAK	23.0	17.25
29	RED MAPLE	13.0	6.5
30	LAUREL OAK	16.0	8
32	LAUREL OAK	13.0	6.5
33	LAUREL OAK	15.0	7.5
42	LIVE OAK	64.0	96
72	CABBAGE PALM	16.0	8
75	LAUREL OAK	24.0	18
76	RED MAPLE	15.0	7.5
77	LAUREL OAK	24.0	18
81	CABBAGE PALM	13.0	6.5
79	RED MAPLE	33.0	33
80	RED MAPLE	23.0	17.25
82	LAUREL OAK	23.0	17.25
91	LIVE OAK	24.0	30
107	LIVE OAK	80.0	120
108	LIVE OAK	27.0	33.75
109	LAUREL OAK	19.0	14.25
110	LAUREL OAK	24.0	18
111	LIVE OAK	37.0	55.5
112	LAUREL OAK	33.0	33
113	LIVE OAK	24.0	30
117	LIVE OAK	48.0	72
118	LAUREL OAK	23.0	17.25
119	LIVE OAK	13.0	13
131	LIVE OAK	15.0	15.0
132	LIVE OAK	34.0	51
133	LAUREL OAK	29.0	21.75
143	LAUREL OAK	16.0	8
144	LIVE OAK	24.0	30
157	LAUREL OAK	13.0	6.5
158	LAUREL OAK	12.0	6
159	LAUREL OAK	15.0	7.5
160	LAUREL OAK	14.0	7
161	LAUREL OAK	14.0	7
162	LIVE OAK	16.0	16
163	LIVE OAK	24.0	30
164	LIVE OAK	48.0	72
TOTAL	50	1154	1135



1. MINIMUM SIX (6) FOOT HIGH TEMPORARY CHAINLINK FENCE SHALL BE PLACED AT THE CRITICAL ROOT ZONE OR DESIGNATED LIMIT OF DISTURBANCE OF THE TREE TO BE SAVED. FENCE SHALL COMPLETELY ENCIRCLE TREE(S). INSTALL FENCE POSTS USING PIER BLOCK ONLY. AVOID POST OR STAKES INTO MAJOR ROOTS. MODIFICATIONS TO FENCING MATERIAL AND LOCATION MUST BE APPROVED BY PLANNING OFFICIAL.
2. TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION: FOR ROOTS OVER ONE (1) INCH DIAMETER DAMAGED DURING CONSTRUCTION, MAKE A CLEAN STRAIGHT CUT TO REMOVE DAMAGED PORTION OF ROOT. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING AND COVERED WITH SOIL AS SOON AS POSSIBLE.
3. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING. FENCING SHALL NOT BE MOVED OR REMOVED UNLESS APPROVED BY THE CITY PLANNING OFFICIAL. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY UNDER THE SUPERVISION OF THE ON-SITE ARBORIST AND WITH PRIOR APPROVAL BY THE CITY PLANNING OFFICIAL.
4. FENCING SIGNAGE AS DETAILED ABOVE MUST BE POSTED EVERY FIFTEEN (15) FEET ALONG THE FENCE.

TREE PROTECTION FENCING DETAIL
(for public and private trees)



NOTES:

1. TREES SHALL NOT BE HANDLED BY THE TRUNK.
2. CAREFULLY POSITION THE ROOTBALL IN HOLE AND STRAIGHTEN TREE VERTICALLY BEFORE BACKFILLING WITH EXISTING SOIL.
3. DO NOT PLACE ADDITIONAL SOIL OR MULCH OVER THE TOP OF THE ROOTBALL.
4. IN POORLY DRAINED SOILS, POSITION THE ROOTBALL SHALLOWER THAN INDICATED TO FIT SITE CONDITIONS.
5. UNFASTEN STRING/BURLAP FROM TRUCK AND TOP OF ROOTBALL.

TREE PLANTING
N.T.S.

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MAI ENGINEERING SERVICES, INC.

LICENSED ENGINEER
QUOC H. MAI
FL.#64006 CA#28162

REVISIONS

#	DATE	DESCRIPTION
0	12/17/20	
1	04/26/2023	RESPONSE PER CITY REQUEST
2	06/26/2023	RESPONSE PER CITY AND RWD RAI
3	09/28/2023	RESPONSE PER CITY COMMENTS
4	01/22/2024	RESPONSE PER RWD COMMENTS
5	04/04/2024	RESPONSE PER CITY COMMENTS
6	04/17/2024	RESPONSE PER CITY COMMENTS

SHEET TITLE: LANDSCAPE PLAN

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA

PREPARED FOR
RIVER OAKS OUTDOOR, LLC

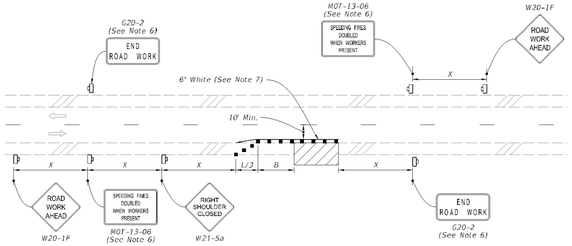
DSGN BY:	QHM
DWG BY:	GMG
CHK BY:	QHM
DATE:	4/18/2024
JOB No.:	1369
SHEET No.:	10

NOTE:

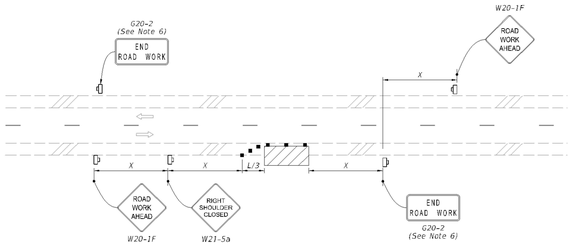
1. This Index applies to Two-Lane, Two-Way and Multilane Roadways, including Medians of divided roadways, with work on the shoulder.
2. L = Taper Length
   X = Work Zone Sign Spacing
   B = Buffer Length
   See Index 102-600 for "L", "X", "B", and channelizing device spacing values.
3. Where work activities are between 2' and 15' from the edge of traveled way, the Engineer may omit signs and channelizing devices for work operations 60 minutes or less.
4. When four or more work vehicles enter the through traffic lanes in a one hour period (excluding establishing and terminating the work area), use a flagger or lane closure to accommodate work vehicle ingress and egress.
5. For work less than 2' from the traveled way and work zone speed is greater than 45 MPH, use a lane closure.
6. The "Speeding Fines Doubled When Workers Present" signs (MOT-13-06) and "End Road Work" Signs (G20-2) along with the associated work zone sign spacing distances may be omitted when the work operation is in place for 24 hours or less.
7. Temporary pavement markings may be omitted when the work operation is in place for 3 days or less.
8. Omit "Shoulder Closed" signs (W21-5a) along with associated work zone sign spacing distances for work on the median.
9. When there is no paved shoulder, the "Worker" sign (W21-1) may be used instead of the "Shoulder Closed" sign (W21-5a).

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Lane Identification and Direction of Traffic



TWO-LANE ROADWAY
SHOULDER WORK LESS THAN 2' FROM THE TRAVELED WAY
WITH WORK ZONE SPEED OF 45 MPH OR LESS



TWO-LANE ROADWAY
SHOULDER WORK BETWEEN 2' AND 15' FROM THE TRAVELED WAY

LAST REVISION	DESCRIPTION:
11/01/21	

FDOT FY 2023-24 STANDARD PLANS

TWO-LANE AND MULTILANE, WORK ON SHOULDER

INDEX 102-602 | SHEET 1 of 2

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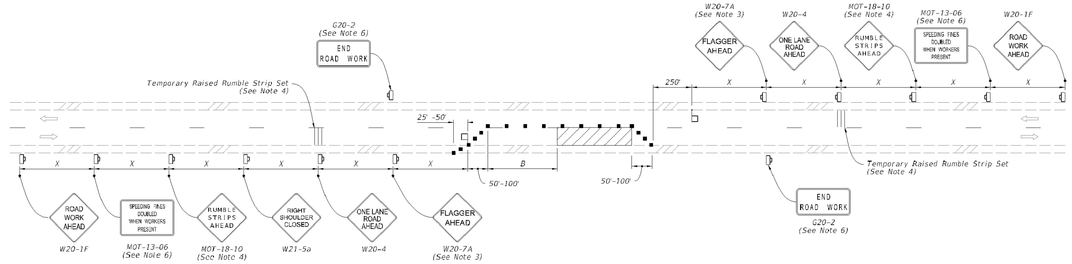


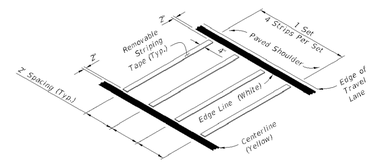
NOTES:

1. This Index applies to Two-Lane, Two-Way Roadways with work within the traveled way.
2. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Spacing
   See Index 102-600 for "L", "B", "X" and channelizing device spacing values.
3. Optionally, use "Flagger Ahead" sign with symbol (W20-7) instead of "Flagger Ahead" sign with text (W20-7A).
4. Use temporary raised rumble strips when the existing posted speed is 55 mph or greater and the work duration is greater than 60 minutes. If temporary raised rumble strips are not used, omit "Rumble Strips Ahead" signs (MOT-18-10) and associated work zone sign spacing.
5. Additional one-way control may be provided by the following means:
   a. Flag-carrying vehicle
   b. Official vehicle
   c. Pilot vehicles
   d. Traffic signals

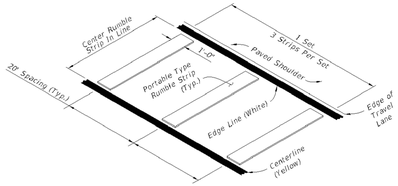
   When flaggers are the sole means of one-way control, the flaggers must be in sight of each other or in direct communication at all times.
6. The "Speeding Fines Doubled When Workers Present" signs (MOT-13-06) and "End Road Work" signs (G20-2), along with associated work zone sign spacing, may be omitted when the work operation will be in place for 24 hours or less.
7. Automated Flagger Assistance Devices (AFADs) may be used in accordance with Specification Sections 102, 990 and the APL vendor drawings.
8. Railroad Crossings:
   a. If an active railroad crossing is located closer to the Work Area than the queue length plus 300 feet, extend the Buffer Space as shown on Sheet 2.
   b. If the queuing of vehicles across an active railroad crossing cannot be avoided, provide a uniformed traffic control officer or flagger at the highway-rail grade crossing to prevent vehicles from stopping within the highway-rail grade crossing, even if automatic train warning devices are in place.

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Flagger
- Lane Identification and Direction of Traffic



OPTION - 1
REMOVABLE STRIPING TYPE



OPTION - 2
PORTABLE TYPE

RUMBLE STRIP SETS

LAST REVISION	DESCRIPTION:
11/01/21	

FDOT FY 2023-24 STANDARD PLANS

TWO-LANE, TWO-WAY
WORK WITHIN THE TRAVEL WAY

INDEX 102-603 | SHEET 1 of 2

10/6/2023 1:24:56 PM

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MAI ENGINEERING SERVICES, INC.

LICENSED ENGINEER
QUOC H. MAI
FL.#64006 CA#28162

REVISIONS

#	DATE	REVISION
0	12/17/22	REVISION PER CITY REVIEW
1	04/12/2023	REVISION PER CITY AND FDOT COMMENTS
2	06/26/2023	REVISION PER CITY COMMENTS
3	01/22/2024	REVISION PER FDOT COMMENTS
4	04/04/2024	REVISION PER CITY COMMENTS
5	04/17/2024	REVISION PER CITY COMMENTS

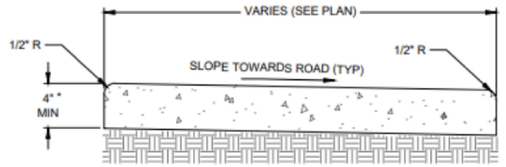
MOT INDEX

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA

PREPARED FOR
RIVER OAKS OUTDOOR, LLC

SHEET TITLE

DSGN BY:	QHM
DWG BY:	GMG
CHK BY:	QHM
DATE:	4/18/2024
JOB No.:	1369
SHEET No.:	11

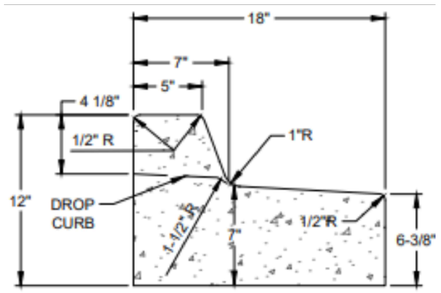


NOTES:

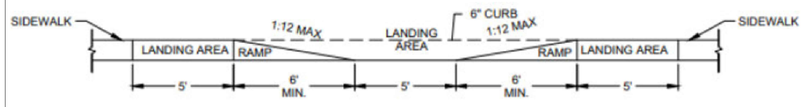
1. DISTANCE BETWEEN SCORE LINE NOT TO EXCEED 5' IN LONGITUDINAL & TRAVERSE DIRECTION IN SIDEWALK.
2. SIDEWALK IS TO BE CONCRETE WITH A MINIMUM STRENGTH OF 3,000 PSI.
3. MAX 2% CROSS SLOPE PER ADA

* SIDEWALK SHALL BE 6" THICK AT DRIVEWAY.

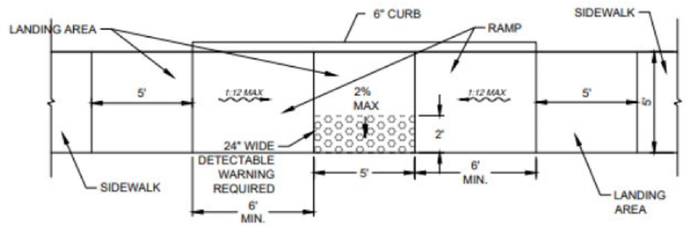
CONCRETE SIDEWALK DETAIL SD1
N.T.S



18" STANDARD CURB & GUTTER DETAIL (REVERSE PITCH) SD4
N.T.S



CROSS SECTION

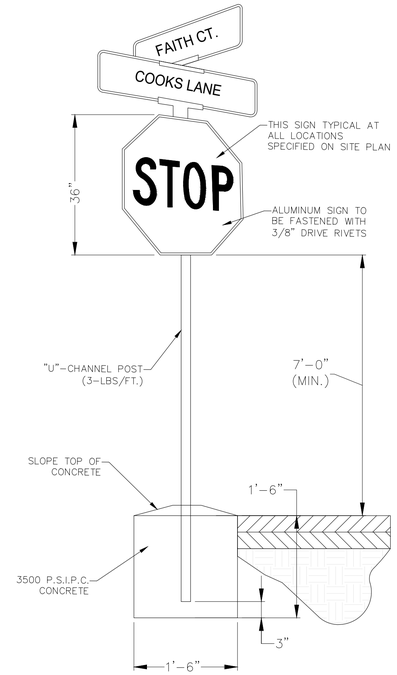


PLAN - RAMP IN SIDEWALK

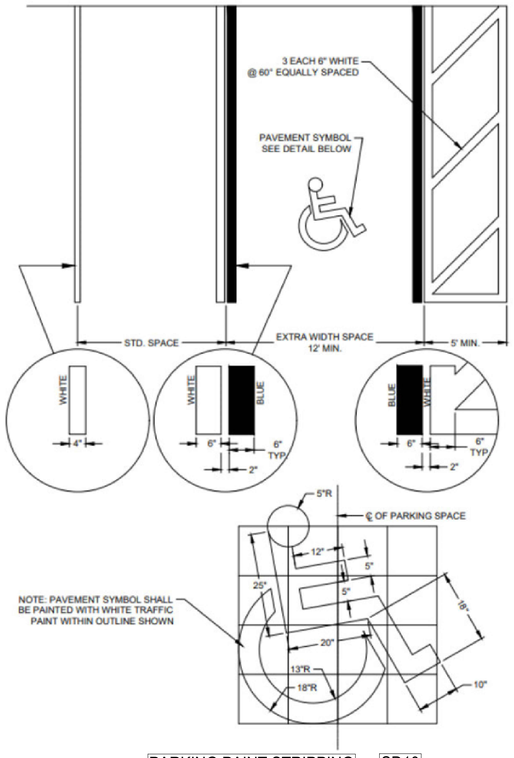
NOTES:

1. THE SURFACE OF RAMP SHALL HAVE A TRANSVERSE BROOMED SURFACE TEXTURE ROUGHER THAN THE SURROUNDING SIDEWALK.
2. RAMP SIDE SLOPE VARIES UNIFORMLY FROM A MAXIMUM OF UP TO 8% AT CURB TO CONFORM WITH LONGITUDINAL SIDEWALK SLOPE ADJACENT TO TOP OF THE RAMP.
3. CONSTRUCT PER A.D.A. STANDARDS.
4. DETECTABLE WARNING SURFACE SHALL BE "SAFETY YELLOW" COMPOSITE MATERIAL ANCHORED IN THE RAMP. WARNING SURFACE SHALL BE SET INTO THE CONCRETE AND BE FLUSH WITH CONCRETE SURFACE ALONG ALL FOUR SIDES.
5. DETECTABLE WARNING SURFACE TO BE CAST IN PLACE COMPOSITE TACTILE BY ADA SOLUTIONS, INC. OR CAST IN PLACE DETECTABLE WARNING PANEL BY ARMORCAST.
6. DETECTABLE WARNING AREA SHALL CONFORM TO FDOT STANDARD INDEX 522-002 AND 28 CFR PART 36 APPENDIX A, LATEST REVISION.

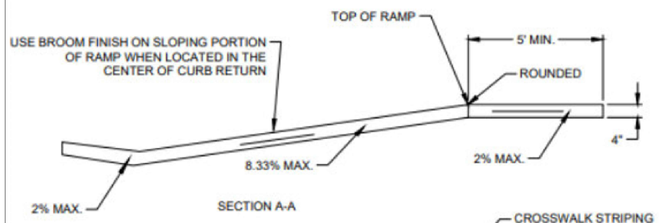
WHEELCHAIR RAMP IN SIDEWALK SD7
N.T.S



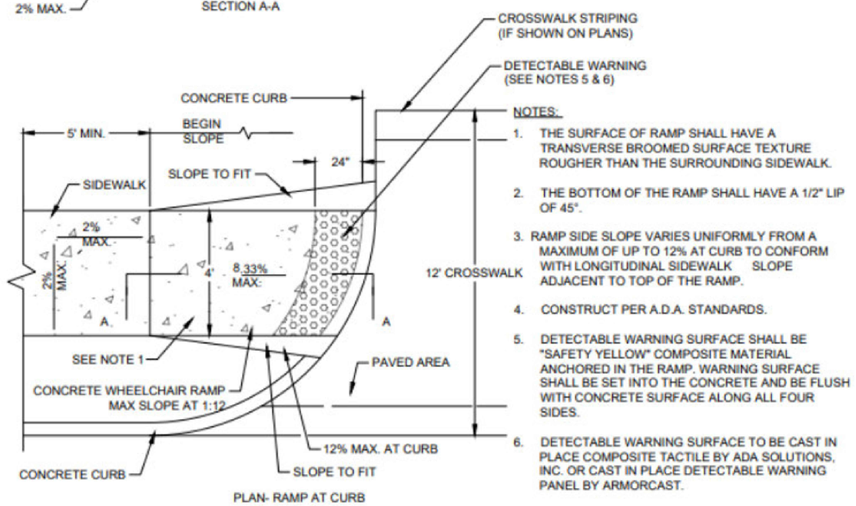
STOP SIGN SD8
N.T.S



PARKING PAINT STRIPPING SD10
N.T.S



SECTION A-A

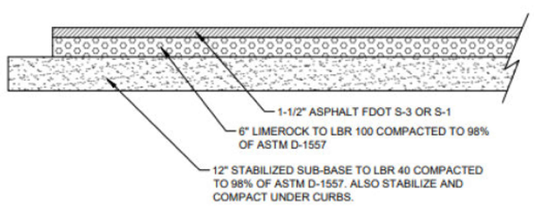


PLAN- RAMP AT CURB

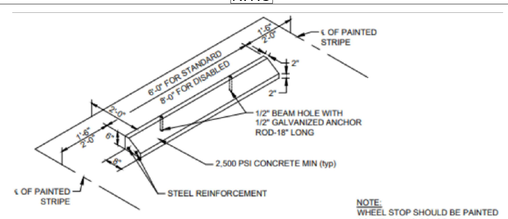
NOTES:

1. THE SURFACE OF RAMP SHALL HAVE A TRANSVERSE BROOMED SURFACE TEXTURE ROUGHER THAN THE SURROUNDING SIDEWALK.
2. THE BOTTOM OF THE RAMP SHALL HAVE A 1/2" LIP OF 45°.
3. RAMP SIDE SLOPE VARIES UNIFORMLY FROM A MAXIMUM OF UP TO 12% AT CURB TO CONFORM WITH LONGITUDINAL SIDEWALK SLOPE ADJACENT TO TOP OF THE RAMP.
4. CONSTRUCT PER A.D.A. STANDARDS.
5. DETECTABLE WARNING SURFACE SHALL BE "SAFETY YELLOW" COMPOSITE MATERIAL ANCHORED IN THE RAMP. WARNING SURFACE SHALL BE SET INTO THE CONCRETE AND BE FLUSH WITH CONCRETE SURFACE ALONG ALL FOUR SIDES.
6. DETECTABLE WARNING SURFACE TO BE CAST IN PLACE COMPOSITE TACTILE BY ADA SOLUTIONS, INC. OR CAST IN PLACE DETECTABLE WARNING PANEL BY ARMORCAST.
7. DETECTABLE WARNING AREA SHALL CONFORM TO FDOT STANDARD INDEX 304 AND 28 CFR PART 36 APPENDIX A, LATEST REVISION.

WHEELCHAIR RAMP IN SIDEWALK AT CURB RETURN SD9
N.T.S

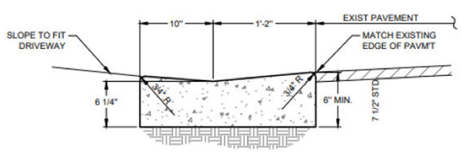


TYPICAL PAVEMENT SECTION SD11
N.T.S

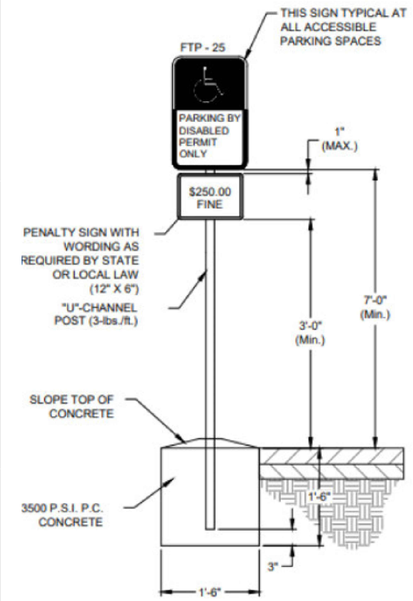


NOTE:
WHEEL STOP SHOULD BE PAINTED CONTRASTING COLOR TO SURROUNDING PAVEMENT.

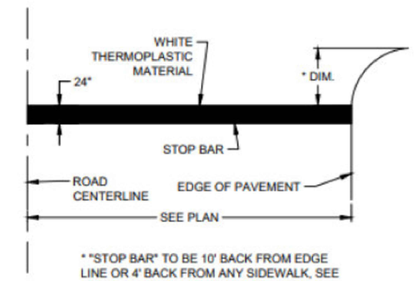
PRECAST CONCRETE WHEEL STOP SD12
N.T.S



VALLEY CURB SD16
N.T.S

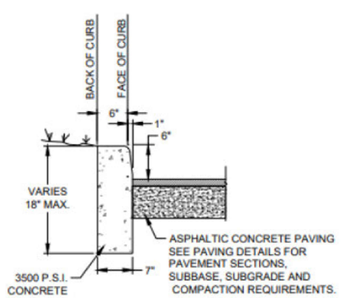


ACCESSIBLE PARKING SIGN SD15
N.T.S



* "STOP BAR" TO BE 10' BACK FROM EDGE LINE OR 4' BACK FROM ANY SIDEWALK, SEE CONSTRUCTION PLANS FOR EXACT LOCATION OF STOP BAR.

STOP BAR SD18
N.T.S



HEADER CURB SD39
N.T.S

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MAI ENGINEERING SERVICES, INC.

LICENSED ENGINEER
QUOC H. MAI
FL.#64006 CA.#28162

REVISIONS

#	DATE	REVISION
0	10/27/22	REVISION PER CITY REVISIT
1	01/10/2023	REVISION PER CITY AND IND RJ
2	01/30/2023	REVISION PER CITY COMMENTS
3	01/30/2024	REVISION PER IND COMMENTS
4	04/04/2024	REVISION PER CITY COMMENTS
5	04/17/2024	REVISION PER CITY COMMENTS

SHEET TITLE: GENERAL DETAILS

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA
PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DSGN BY:	Q.H.M
DWG BY:	G.M.G
CHK BY:	Q.H.M
DATE:	4/18/2024
JOB No.:	1369
SHEET No.:	13

STORM WATER POLLUTION PREVENTION PLAN

GENERAL NOTES

THE CONTRACTOR SHALL AT A MINIMUM IMPLEMENT THE CONTRACTOR'S REQUIREMENTS OUTLINED BELOW AND THOSE MEASURES SHOWN ON THE CLEARING AND EROSION CONTROL PLAN. IN ADDITION THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES REQUIRED TO BE IN COMPLIANCE WITH APPLICABLE PERMIT CONDITIONS AND STATE WATER QUALITY STANDARDS.

SEQUENCE OF MAJOR ACTIVITIES

THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
2. INSTALL SILT FENCES, SYNTHETIC BALES AND OTHER EROSION/SEDIMENTATION CONTROLS AS REQUIRED.
3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN IF REQUIRED.
4. CONSTRUCT SEDIMENTATION BASIN IF REQUIRED.
5. CONTINUE CLEARING AND GRUBBING.
6. STOCK PILE TOP SOIL IF REQUIRED.
7. PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED.
8. STABILIZE DENUDED AREAS AND STOCKPILES AS SOON AS PRACTICABLE.
9. INSTALL STORM SEWER, WATER, SEWER AND IRRIGATION.
10. COMPLETE GRADING AND INSTALL PERMANENT SEEDING/SOD AND PLANTING.
11. REMOVE ACCUMULATED SEDIMENT FROM BASIN.
12. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED.

TIMING OF CONTROLS / MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, THE SILT FENCES AND SYNTHETIC BALES, STABILIZED CONSTRUCTION ENTRANCE AND SEDIMENT BASIN WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED PERMANENTLY IN ACCORDANCE WITH THE PLANS. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAPS AND THE EARTH DIKE/SWALES WILL BE REGRADED/REMOVED AND STABILIZED IN ACCORDANCE WITH THE CLEARING AND EROSION CONTROL PLAN.

CONTROLS

IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN ON THE PLANS. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED, MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS SHOWN ON THE PLANS AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED, TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE IMPLEMENTED BY THE CONTRACTOR AS REQUIRED BY THE PLANS AND AS REQUIRED TO MEET THE EROSION AND TURBIDITY REQUIREMENTS IMPOSED ON THE PROJECT SITE BY THE REGULATORY AGENCIES.

STABILIZED CONSTRUCTION ENTRANCE:

1. CONTRACTOR SHALL INSTALL AND MAINTAIN FOR THE DURATION OF THE CONSTRUCTION A STONE STABILIZED PAD LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS TO THE CONSTRUCTION SITE. AGGREGATE SHALL BE FDOT SIZE NO. 1 COARSE AGGREGATE.

EROSION AND SEDIMENT CONTROLS STABILIZATION PRACTICES:

1. SYNTHETIC BALE BARRIER: SYNTHETIC BALE BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS:
   - A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.
   - B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.
   - C. WHERE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS.
   - D. EVERY EFFORT SHOULD BE MADE TO LIMIT THE USE OF SYNTHETIC BALE BARRIERS CONSTRUCTED IN LIVE STREAMS OR IN SWALES WHERE THERE IS THE POSSIBILITY OF A WASHOUT. IF NECESSARY, MEASURES SHALL BE TAKEN TO PROPERLY ANCHOR BALES TO INSURE AGAINST WASHOUT.
   - E. REFER TO THE DETAILS FOR CONSTRUCTING THE SYNTHETIC BALE BARRIER. ALSO, REFER TO THE DETAILS FOR PROPER LOCATION, MATERIAL AND USAGE.
2. FILTER FABRIC BARRIER: FILTER FABRIC BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS:
   - F. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.
   - G. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.
   - H. REFER TO THE DETAILS FOR PROPER CONSTRUCTION OF THE FILTER FABRIC BARRIER.
3. BRUSH BARRIER WITH FILTER FABRIC: BRUSH BARRIER MAY BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WHERE ENOUGH RESIDUE MATERIAL IS AVAILABLE ON SITE.
4. LEVEL SPREADER: A LEVEL SPREADER MAY BE USED WHERE SEDIMENT-FREE STORM RUNOFF IS INTERCEPTED AND DIVERTED AWAY FROM THE GRADED AREAS ONTO UNDISTURBED STABILIZED AREAS. THIS PRACTICE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE CONSTRUCTED ON UNDISTURBED SOIL AND THE AREA BELOW THE LEVEL LIP IS STABILIZED. THE WATER SHOULD NOT BE ALLOWED TO RECONCENTRATE AFTER RELEASE. LEVEL SPREADER SHALL BE CONSTRUCTED IN ACCORDANCE TO THE DETAILS.
5. STOCKPILING MATERIAL: NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORM WATER COLLECTION FACILITY.
6. EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 10 ACRES. THIS REQUIREMENT MAY BE WAIVED FOR LARGE PROJECTS WITH AN EROSION CONTROL PLAN WHICH DEMONSTRATES THAT OPENING OF ADDITIONAL AREAS WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS.
7. INLET PROTECTION: INLETS AND CATCH BASINS WHICH DISCHARGE DIRECTLY OFF-SITE SHALL BE PROTECTED FROM SEDIMENT-LADEN STORM RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.
8. TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE-EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 7 DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING.
9. TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 8 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH.
10. TEMPORARY GRASSING: THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDRO MULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER. TEMPORARY GRASSING SHALL BE THE SAME MIX AND AMOUNT REQUIRED FOR PERMANENT GRASSING IN THE CONTRACT SPECIFICATIONS.
11. TEMPORARY REGRASSING: IF AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75 PERCENT GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER.
12. MAINTENANCE: ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.
13. PERMANENT EROSION CONTROL: THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES.
14. PERMANENT SEEDING: ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEEDED. THE SEEDING MIX MUST PROVIDE BOTH LONG-TERM VEGETATION AND RAPID GROWTH SEASONAL VEGETATION. SLOPES STEEPER THAN 4:1 SHALL BE SEEDED AND MULCHED OR SODDED.

CONTROLS *(CONTINUED)*

STRUCTURAL PRACTICES:

1. TEMPORARY DIVERSION DIKE: TEMPORARY DIVERSION DIKES MAY BE USED TO DIVERT RUNOFF THROUGH A SEDIMENT-TRAPPING FACILITY AND IT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS.
2. TEMPORARY SEDIMENT TRAP: A SEDIMENT TRAP SHALL BE INSTALLED IN A DRAINAGE WAY AT A STORM DRAIN INLET OR AT OTHER POINTS OF DISCHARGE FROM A DISTURBED AREA. THE FOLLOWING SEDIMENT TRAPS MAY BE CONSTRUCTED EITHER INDEPENDENTLY OR IN CONJUNCTION WITH A TEMPORARY DIVERSION DIKE:
   - A. BLOCK AND GRAVEL SEDIMENT FILTER – THIS PROTECTION IS APPLICABLE WHERE HEAVY FLOWS AND/OR WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE. REFER TO THE DETAILS FOR CONSTRUCTION OF A CURB INLET SEDIMENT FILTER, AND FOR CONSTRUCTION OF A DROP INLET SEDIMENT FILTER.
   - B. GRAVEL SEDIMENT TRAP – THIS PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED SEDIMENT TRAP.
   - C. DROP INLET SEDIMENT TRAP – THIS PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (S < 5%) AND WHERE SHEET OR OVERLAND FLOWS (Q < 0.5 CFS) ARE TYPICAL. THIS METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS SUCH AS IN STREET OR HIGHWAY MEDIANS. REFER TO THE DETAILS FOR CONSTRUCTION OF SYNTHETIC BALE AND FABRIC SEDIMENT FILTER.
3. OUTLET PROTECTION: APPLICABLE TO THE OUTLETS OF ALL PIPES AND PAVED CHANNEL SECTIONS WHERE THE FLOW COULD CAUSE EROSION AND SEDIMENT PROBLEM TO THE RECEIVING WATER BODY. SILT FENCES AND SYNTHETIC BALES ARE TO BE INSTALLED IMMEDIATELY DOWNSTREAM OF THE DISCHARGING STRUCTURE AS SHOWN ON THE OUTLET PROTECTION DETAIL.
4. SEDIMENT BASIN: WILL BE CONSTRUCTED AT THE COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH 10 OR MORE DISTURBED ACRES AT ONE TIME, THE PROPOSED STORM WATER PONDS (OR TEMPORARY PONDS) WILL BE CONSTRUCTED FOR USE AS SEDIMENT BASINS. THESE SEDIMENT BASINS MUST PROVIDE A MINIMUM OF 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED UNTIL FINAL STABILIZATION OF THE SITE. THE 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED DOES NOT APPLY TO FLOWS FROM OFFSITE AREAS AND FLOWS FROM ONSITE AREAS THAT ARE EITHER UNDISTURBED OR HAVE UNDERGONE FINAL STABILIZATION WHERE SUCH FLOWS ARE DIVERTED AROUND BOTH THE DISTURBED AREA AND THE SEDIMENT BASIN. ANY TEMPORARY SEDIMENT BASINS CONSTRUCTED MUST BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL FILL. ALL SEDIMENT COLLECTED IN PERMANENT OR TEMPORARY SEDIMENT TRAPS MUST BE REMOVED UPON FINAL STABILIZATION.

OTHER CONTROLS

WASTE DISPOSAL:

WASTE MATERIALS:
ALL WASTE MATERIALS EXCEPT LAND CLEARING DEBRIS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER WILL BE EMPTIED AS NEEDED AND THE TRASH WILL BE HAULED TO A STATE APPROVED LANDFILL. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT. THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTE:
ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE SITE SUPERINTENDENT. THE INDIVIDUAL WHO MANAGES DAY-TO-DAY OPERATIONS WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.

SANITARY WASTE:
ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NEEDED TO PREVENT POSSIBLE SPILLAGE. THE WASTE WILL BE COLLECTED AND DEPOSED OF IN ACCORDANCE WITH STATE AND LOCAL WASTE DISPOSAL REGULATIONS FOR SANITARY SEWER OR SEPTIC SYSTEMS.

OFFSITE VEHICLE TRACKING:
A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEPT DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN.

MAINTENANCE / INSPECTION PROCEDURES

EROSION AND SEDIMENT CONTROL INSPECTIONS AND MAINTENANCE PRACTICES:

THE FOLLOWING ARE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.

- NO MORE THAN 10 ACRES OF THE SITE WILL BE DENUDED AT ONE TIME WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.
- ALL CONTROL MEASURES WILL BE INSPECTED BY THE SUPERINTENDENT, THE PERSON RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATION OR SOMEONE APPOINTED BY THE SUPERINTENDENT, AT LEAST ONCE A WEEK AND FOLLOWING ANY STORM EVENT OF 0.25 INCHES OR GREATER.
- ALL TURBIDITY CONTROL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT.
- BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.
- SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.
- THE SEDIMENT BASINS WILL BE INSPECTED FOR THE DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 10 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB, WHICHEVER COMES FIRST.
- DIVERSION DIKES/SWALES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.
- TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
- A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION.
- THE REPORTS WILL BE KEPT ON SITE DURING CONSTRUCTION AND AVAILABLE UPON REQUEST TO THE OWNER, ENGINEER OR ANY FEDERAL, STATE OR LOCAL AGENCY APPROVING SEDIMENT AND EROSION PLANS, OR STORM WATER MANAGEMENT PLANS. THE REPORTS SHALL BE MADE AND RETAINED AS PART OF THE STORM WATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED AND THE NOTICE OF TERMINATION IS SUBMITTED THE REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE.
- THE SITE SUPERINTENDENT WILL SELECT UP TO THREE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
- PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE SITE SUPERINTENDENT. THEY WILL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER.

NON-STORM WATER DISCHARGES:

IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:

- WATER FROM WATER LINE FLUSHING.
- PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED).
- UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION).

ALL NON-STORM WATER DISCHARGES WILL BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE. ALL SUCH DISCHARGES SHALL MEET STATE WATER QUALITY STANDARDS AND ALL NECESSARY PERMITS SHALL BE OBTAINED.

SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES:

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

GENERAL:

- AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.
- ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
- PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
- SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER..
- WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
- MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
- THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ONSITE RECEIVE PROPER USE AND DISPOSAL.

HAZARDOUS PRODUCTS:

THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:

- PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
- ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION.
- IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

PRODUCT SPECIFIC PRACTICES:

THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ONSITE:

PETROLEUM PRODUCTS:

ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

FERTILIZERS:

FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED AREA. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

PAINTS:

ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

CONCRETE TRUCKS:

CONCRETE TRUCKS SHALL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONLY AT DISCHARGE POINT PROVIDED. NO OFFSITE DISCHARGE WILL BE PERMITTED.

SPILL CONTROL PRACTICES:

IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED ON SITE AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.

MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS INCLUDE BUT ARE NOT LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, LIQUID ABSORBENT (I.E. KITTY LITTER OR EQUAL), SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.

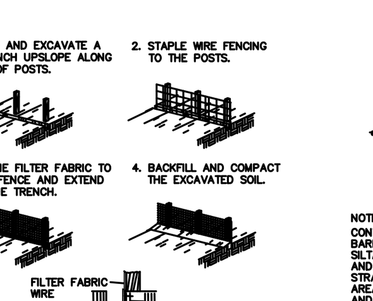
ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

SPILL OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE OF THE SPILL.

THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.

THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.



SILT FENCE CONSTRUCTION
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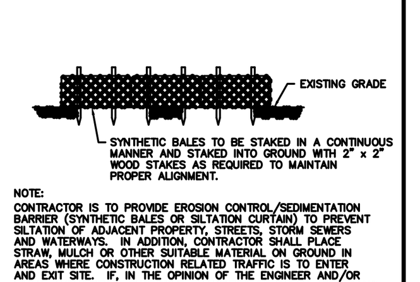

SEDIMENT BARRIER
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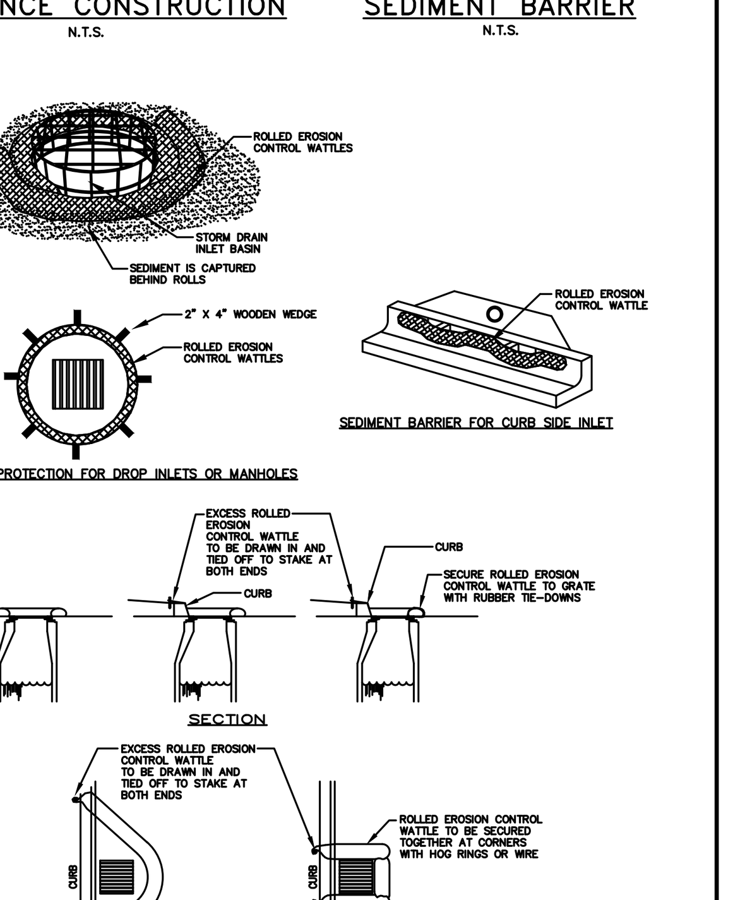

NOTES
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. SECURE ROLLED EROSION CONTROL PRODUCT TO GROUND AT EACH END.
3. ROLLS SHOULD BE INSPECTED AFTER EVERY SIGNIFICANT STORM EVENT TO CLEAN AND DISPOSE OF SEDIMENT AND DEBRIS.
4. USE 12" DIAMETER, 20' LONG WATTLE ROLLS FOR STANDARD CIRCULAR DRAINAGE STRUCTURES. PLACE THE ROLL AROUND THE STRUCTURE AND JOIN THE ENDS TOGETHER WITH HOG RINGS OR WIRE. USE 2"x2"x24" WOODEN WEDGES TO HOLD DOWN WATTLE ROLLS.

ROLLED EROSION AND SEDIMENTATION CONTROL PRODUCTS
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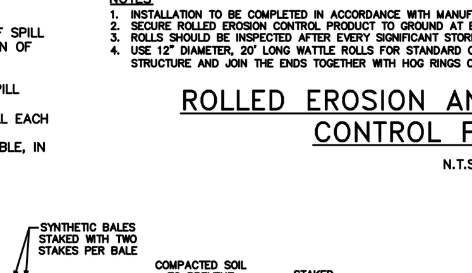
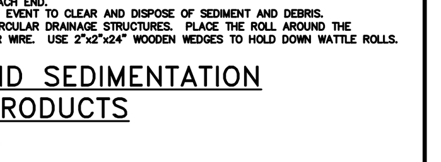


SPECIFIC APPLICATION
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT) WHERE SHEET OR OVERLAND FLOWS ARE TYPICAL.

SYNTHETIC BALE DROP INLET SEDIMENT FILTER
N.T.S.



CATCH BASIN SEDIMENT PROTECTION DETAIL
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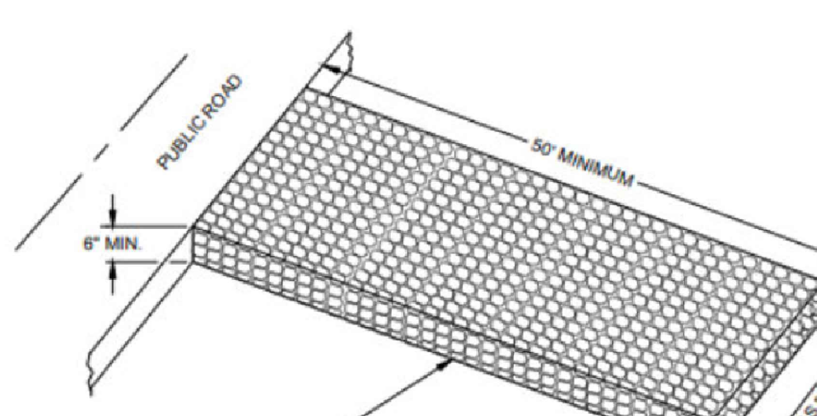

STABILIZED CONSTRUCTION ENTRANCE EC1
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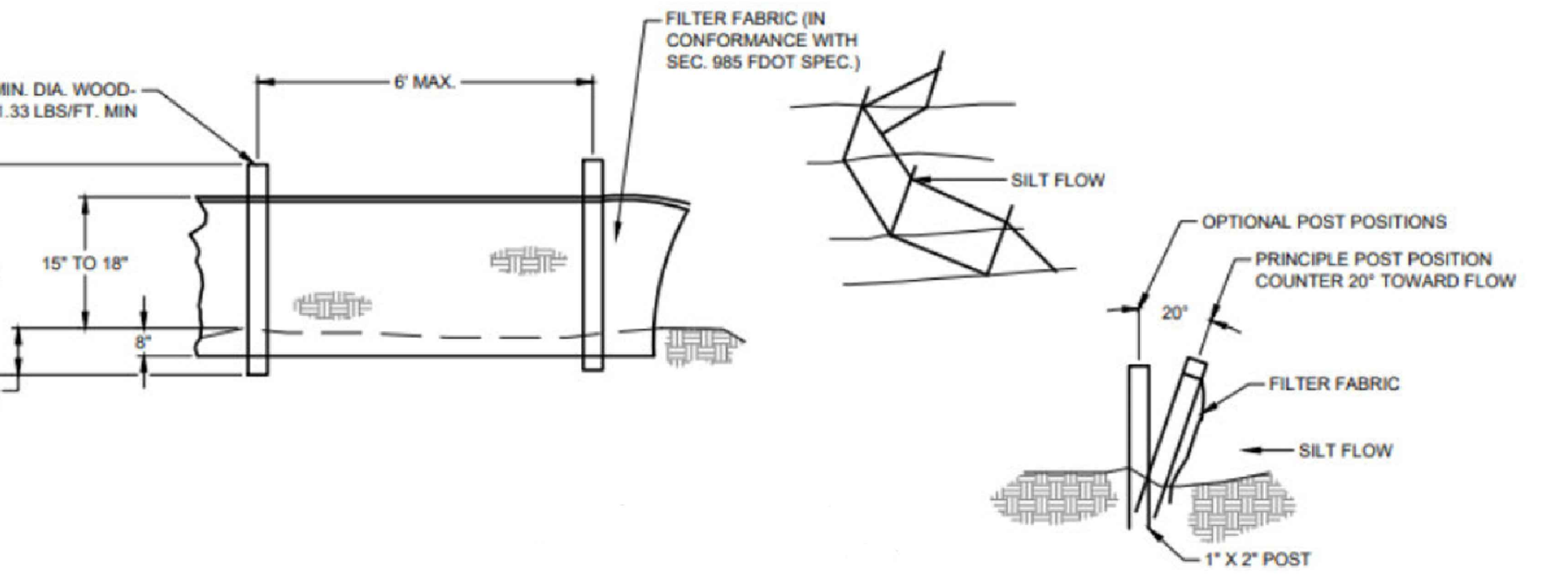

TYPE III SILT FENCE EC2
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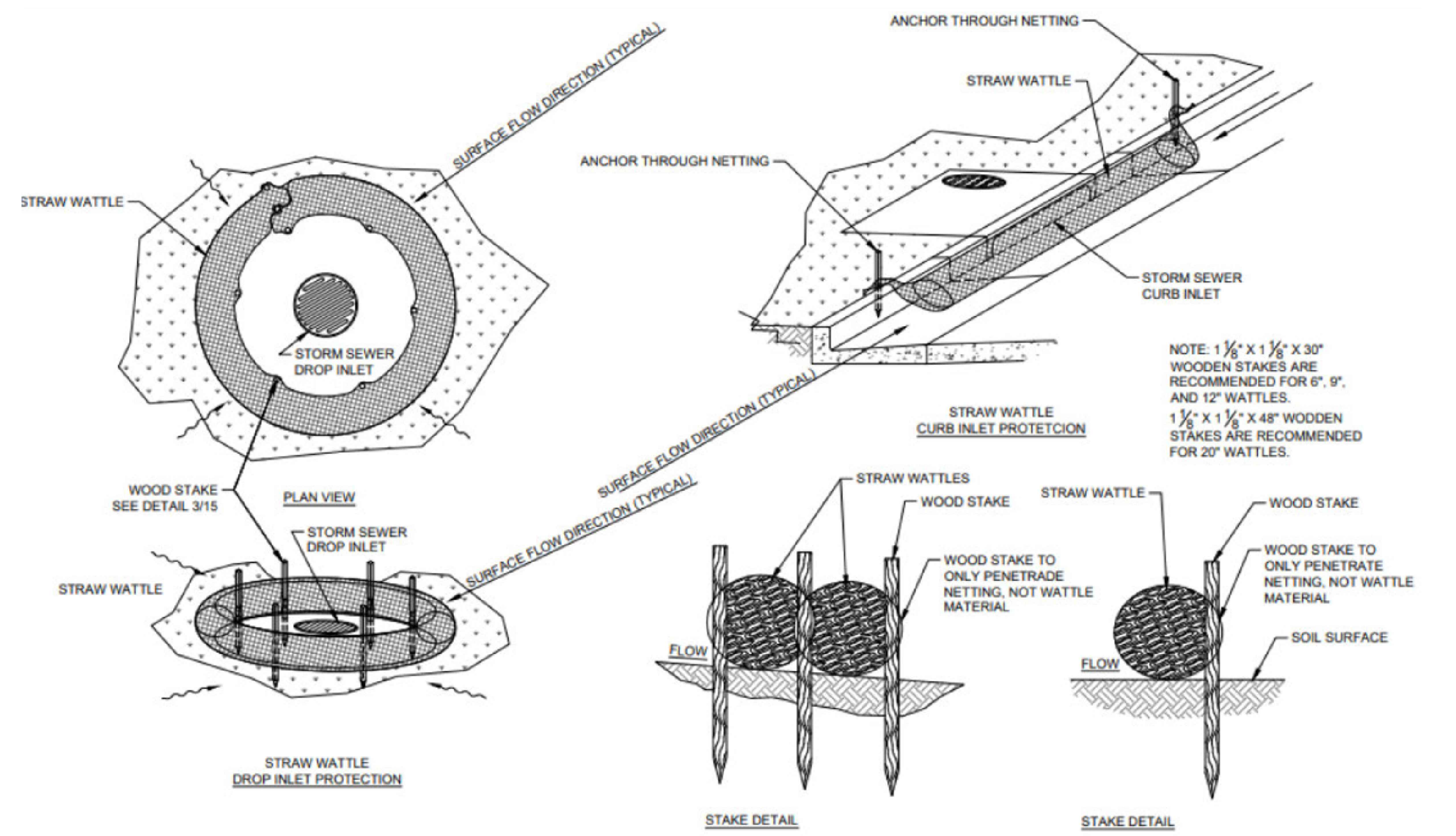

WATTLE INLET PROTECTION EC3
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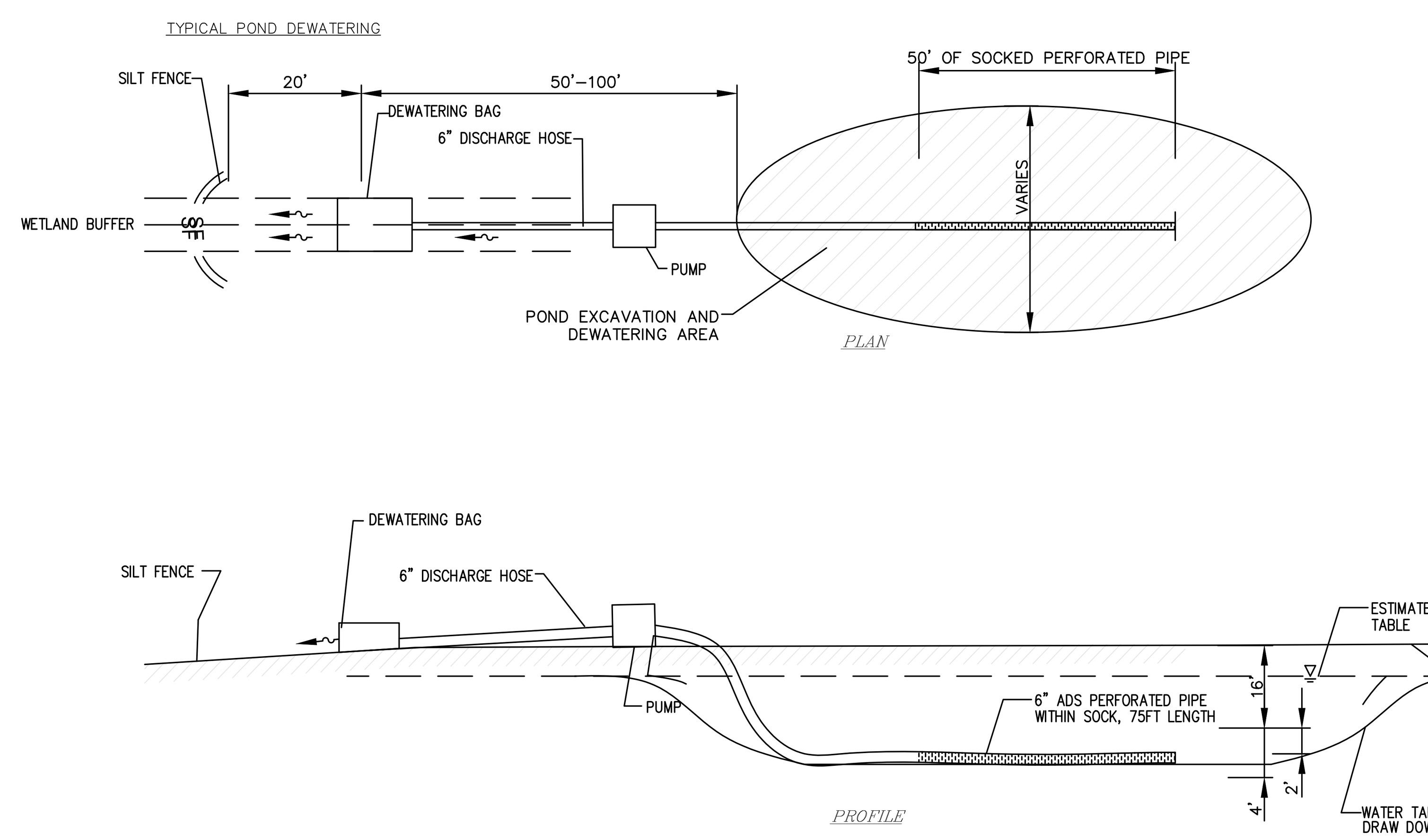
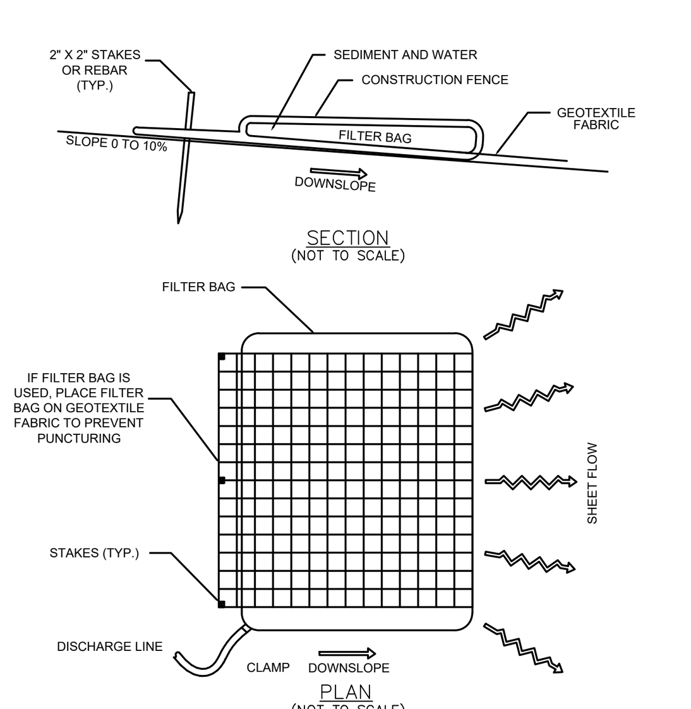


TYPICAL PIT DEWATERING PLAN & PROFILE



DEWATERING. IF USED FILTER BAGS SHALL BE INSTALLED AS SPECIFIED BY THE MANUFACTURER OR AS MODIFIED BY NOTE 2.

SITE CONDITIONS.

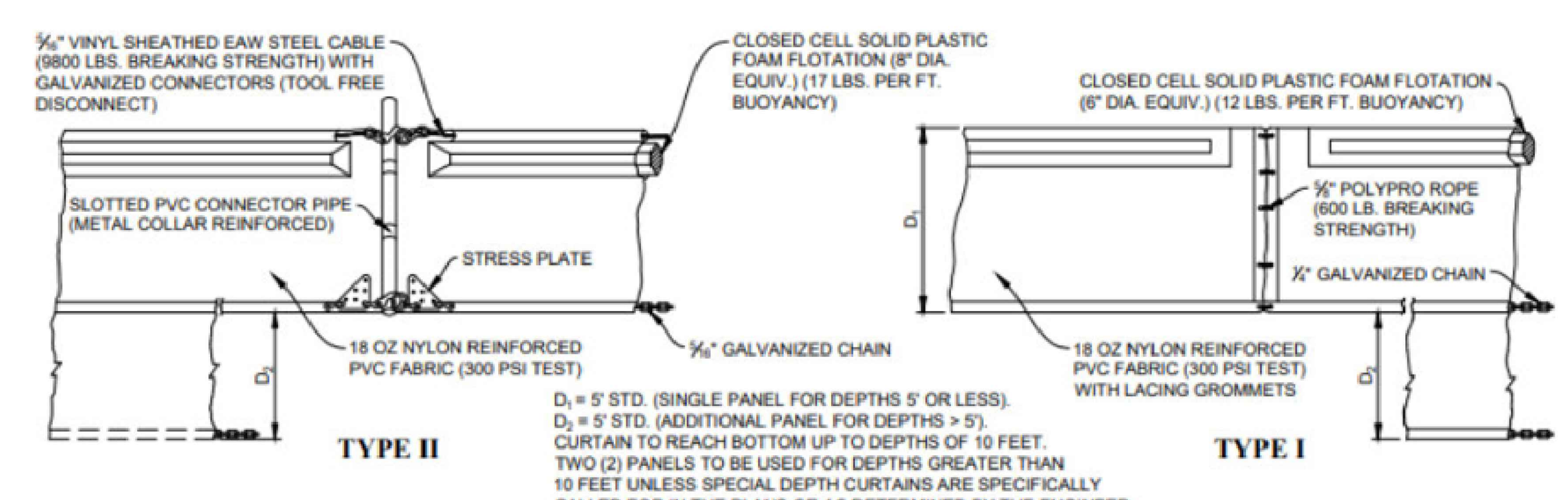
DEWATERING BAG DETAIL

DEWATERING SUMMARY

EST. GROUNDWATER DEPTH	FROM EXISTING SURFACE TO APPROXIMATELY 36" DEEP.
REQUIRED DEWATERING DEPTH	APPROXIMATELY 15 FEET BELOW EXISTING GROUND
DEWATERING AREA	2'x75'x15'
DURATION OF PUMPING	1–3 DAYS FOR EACH EXCAVATION
PUMPS	THOMPSON PUMP MODEL 6TSV-DJDS-45T-M, 6" VACUUM ASSISTED DRY PRIME PUMP(OR EQUIVALENT)
DISCHARGE LOCATIONS	ALL PUMPS DISCHARGE TO GRASS SWALE ALONG THE ROAD
EST. GROUNDWATER EXTRACTION	43.7 GPM TOTAL FOR 75FT OF 6"PERORATED PIPE
EROSION CONTROL	PROPOSED SILT FENCE, AND DEWATERING FILTER BAG

GENERAL NOTES:

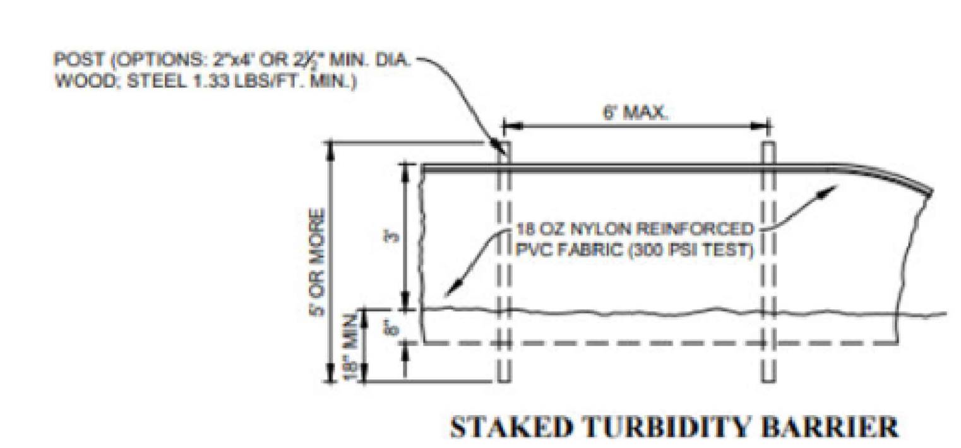
1. IF REQUIRED, CONTRACTOR SHALL APPLY DEWATERING PLAN WHEN WATER TABLE IS ENCOUNTERED AT TIME OF CONSTRUCTION.
2. IF DEWATERING IS REQUIRED THIS DEWATERING PLAN REPRESENTS THE MAX. PUMP CAPACITY THE CONTRACTOR MAY USE.
3. THE DISCHARGE PIPE LENGTH IS APPROXIMATELY 100FT FROM PUMP TO THE FILTER BAG. THE DIRECTIONS FOR THE DISCHARGE PIPE IS TOWARD THE EAST.
4. ADDITIONAL SILTFENCE SHALL BE INSTALLED PRIOR TO ENTERING WETLAND BUFFER.
5. LOCATION OF THE DEWATERING PERFORATED PIPE SHALL IN INSTALLED EITHER DIRECTLY AT THE BOTTOM OF THE EXCAVATION PIT.



D_1 = 5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS).
D_2 = 5' STD. (ADDITIONAL PANEL FOR DEPTHS > 5').
CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET.
TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS ARE SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

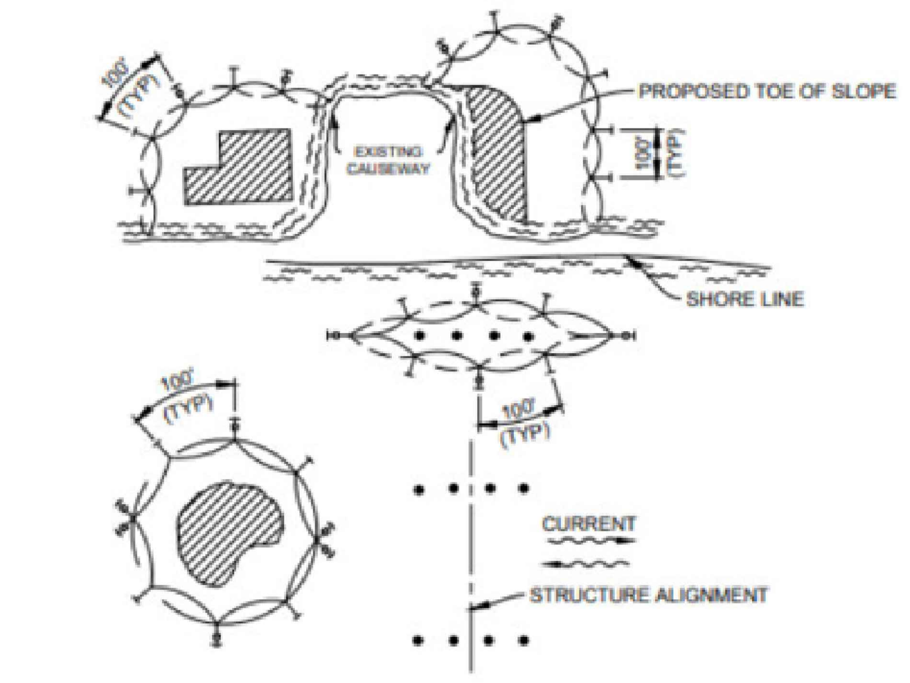
NOTICE:
COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

FLOATING TURBIDITY BARRIERS

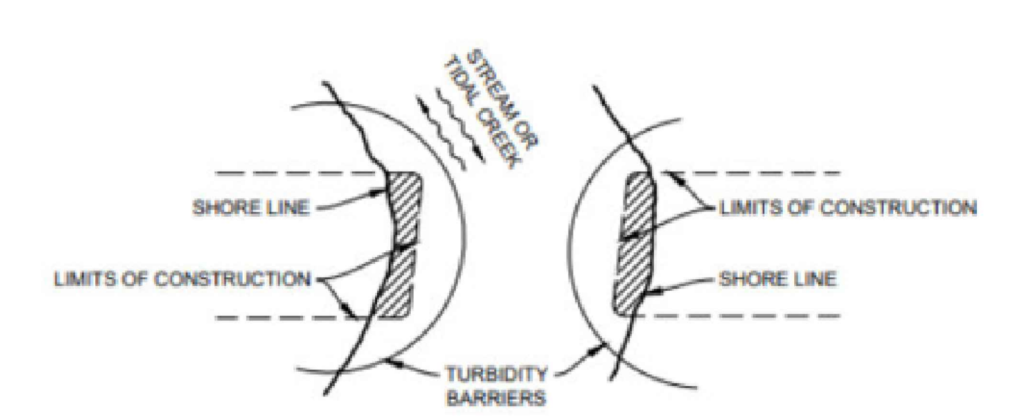


STAKED TURBIDITY BARRIER

LEGEND
- PILE LOCATIONS
- DREDGE OR FILL AREA
- MOORING BUOY W/ANCHOR
- ANCHOR
- BARRIER MOVEMENT DUE TO CURRENT ACTION



TURBIDITY BARRIER APPLICATIONS



NOTES:
1. TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
2. NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
3. DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
4. NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.
5. FOR ADDITIONAL INFORMATION SEE SECTION 104 OF THE STANDARD SPECIFICATIONS.

NOTE:
TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATIONS OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTORS OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS, HOWEVER PAYMENT WILL BE UNDER THE PAY ITEM(S) ESTABLISHED IN THE PLANS FOR FLOATING TURBIDITY BARRIER AND/OR STAKED TURBIDITY BARRIER. POSTS IN STAKED TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

GENERAL NOTES
1. FLOATING TURBIDITY BARRIERS ARE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR FLOATING TURBIDITY BARRIER, LF.
2. STAKED TURBIDITY BARRIERS ARE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED TURBIDITY BARRIER, LF.

TURBIDITY BARRIER EC4
N.T.S

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MAI ENGINEERING SERVICES, INC.

LICENSED ENGINEER
QUOC H. MAI
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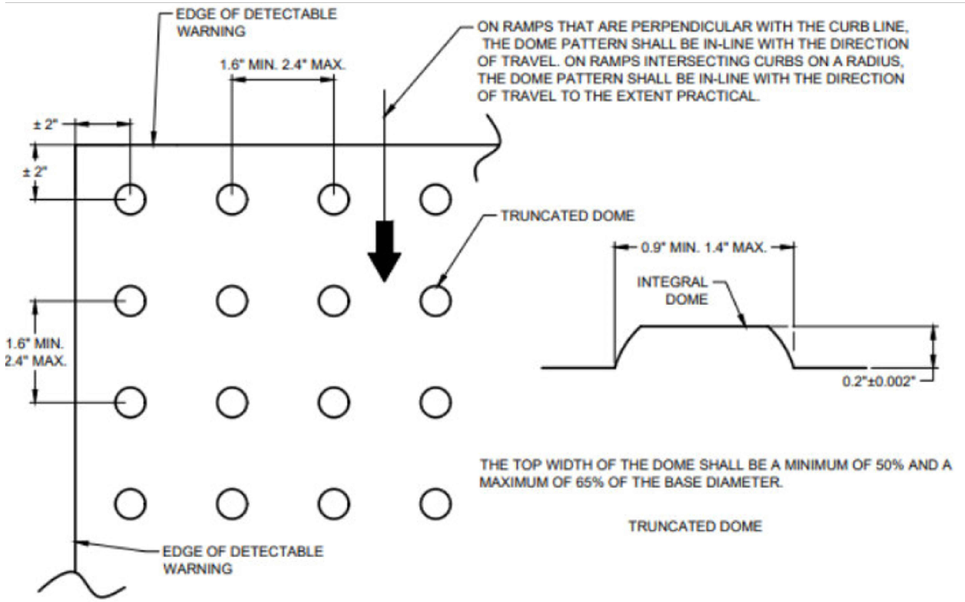
REVISIONS

#	DATE	REVISION
1	12/17/22	REVISION PER CITY REQUEST
2	04/12/2023	REVISION PER CITY AND WMD RAI
3	06/28/2023	REVISION PER CITY COMMENTS
4	01/22/2024	REVISION PER WMD COMMENTS
5	04/04/2024	REVISION PER CITY COMMENTS
6	04/17/2024	REVISION PER CITY COMMENTS

SHEET TITLE: EROSION CONTROL DETAILS

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA
PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DSGN BY: QHM
DWG BY: GMG
CHK BY: QHM
DATE: 4/18/2024
JOB No.: 1369
SHEET No.: 12



BASE-TO BASE SPACING SHALL BE 0.65" MINIMUM BETWEEN DOMES.

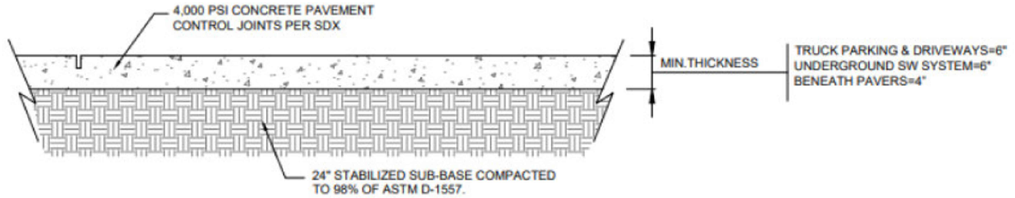
PLAN VIEW

NOTES:

1. ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES THAT EXTEND THE FULL WIDTH OF THE RAMP AND IN THE DIRECTION OF TRAVEL 24 INCHES FROM THE BACK OF CURB.
2. SEE FDOT STANDARD INDEX 522-002, LATEST EDITION FOR MORE DETAILS.
3. DETECTABLE WARNING SURFACE SHALL BE "SAFETY YELLOW" COMPOSITE MATERIAL ANCHORED IN THE RAMP. WARNING SURFACE SHALL BE SET INTO THE CONCRETE AND BE FLUSH WITH CONCRETE SURFACE ALONG ALL FOUR SIDES.
4. DETECTABLE WARNING SURFACE TO BE CAST IN PLACE COMPOSITE TACTILE BY ADA SOLUTIONS, INC. OR CAST IN PLACE DETECTABLE WARNING PANEL BY ARMORCAST.

DETECTABLE WARNING DETAIL SD26

N.T.S



RECOMMENDED MAX. JOINT SPACINGS

PAVEMENT THICKNESS (INCHES)	RECOMMENDED MAXIMUM JOINT SPACING (FEET)
3.5 (FOR WHITETOPPING ONLY)	6
4.0	10
4.5	10
5.0	12
5.5	12
6.0	15
OVER 6.0	15

CURBS:

1. ALL CURBING SHALL BE CONSTRUCTED OF CONCRETE THAT WILL OBTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
2. ALL CONCRETE CURBS SHALL BE SPACED WITH A FULL-DEPTH, ¼" WIDTH ISOLATION JOINT MATERIAL (UNLESS OTHERWISE NOTED) PRIOR TO PLACEMENT OF ADJACENT CONCRETE PAVEMENT.
3. THERE SHALL BE CONTROL JOINTS, EITHER TOOL OR SAW-CUT, MATCH PAVEMENT JOINTS, UNLESS OTHERWISE SPECIFIED; JOINTS SHALL BE FORMED WITHIN 12 HOUR OF PLACEMENT.
4. ALL CURB ENDS THAT DO NOT TIE INTO OTHER FACILITIES SHALL TRANSITION DOWN TO PAVEMENT GRADE IN 24 INCHES.
5. CONSTRUCTION JOINT SHALL BE TIED WITH A No.4 TIE BAR EXTENDED 6 INCHES INTO EACH CURB SECTION AND SHALL BE SPACED WITH A FULL-DEPTH ¼" WIDTH ISOLATION JOINT MATERIAL.

GENERAL NOTES:

1. USE ACI 330 GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS.
2. USE ACI 330.1 STANDARD SPECIFICATION FOR PLAIN CONCRETE PARKING LOTS.
3. ALL CONCRETE USED IN PARKING LOT, UNLESS OTHERWISE INDICATED, SHALL HAVE A COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
4. PREPARE THE SUBGRADE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEEER'S RECOMMENDATIONS FOR RIGID PAVEMENTS. SUBGRADE SOIL DENSITY TESTING MUST BE COMPLETED AND VERIFIED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONCRETE PLACEMENT.
5. IMPORTED SOIL USE FOR BACK FILL SHOULD BE FREE OF HEAVY CLAY, SILTS, STONES, PLANT ROOT OR OTHER FOREIGN MATERIAL GREATER THAN 1½" IN DIAMETER IN ORDER TO ACHIEVE ADEQUATE COMPACTION AROUND ANY FIXED OBJECT IN GROUND. ALTERNATE WILL BE TO USE FLOWABLE FILL.
6. CURE CONCRETE IMMEDIATELY AFTER FINISHING OPERATION IS COMPLETED BY USING ONE OF THE FOLLOWING METHODS: WATER, PIGMENTED WATER-BASED CURING COMPOUND OR VISQUEEN AND BURLAP.

JOINT SPACING DETERMINATION:

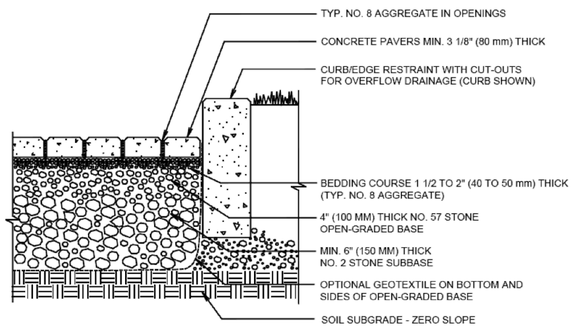
1. LAYOUT CONTROL JOINT BY STARTING WITH ANY DRAINAGE INLET WITHIN THE PAVEMENT SECTION AND WORK TOWARD EDGE OF PAVEMENT.
2. KEEP ALL JOINTS CONTINUOUS.
3. CONTROL JOINTS SHALL BE FORMED OR SAWED WITHIN 12 HOURS FROM TIME OF PLACEMENT;
   A. SIDEWALK-SPACING SHALL BE SAME AS WIDTH OF PAVEMENT AND LESS THAN 5 FEET IN LENGTH.
   B. PAVEMENT-MAXIMUM SPACING SHALL BE 2.5 TIMES THICKNESS IN UNIT OF FEET AND LESS THAN 15 FEET IN LENGTH (E.G. D=5 INCHES, SPACING AT 12'x12').

COMPACTED SUBGRADE:

1. SUBGRADE FOR PAVEMENT AREAS SHALL BE COMPACTED TO A MINIMUM OF 98% OF MAXIMUM DRY DENSITY USING STANDARD EFFORT AS DETERMINED BY ASTM D 698 FOR A MINIMUM DEPTH OF 12 INCHES.

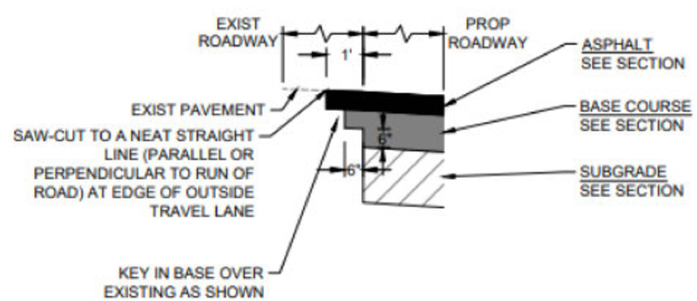
CONCRETE PAVEMENT SECTION SD36

N.T.S



PARKING STALL PAVER DETAIL SD5

N.T.S



CONNECT TO EXISTING PAVEMENT SD34

N.T.S

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Item # 5.

REVISIONS

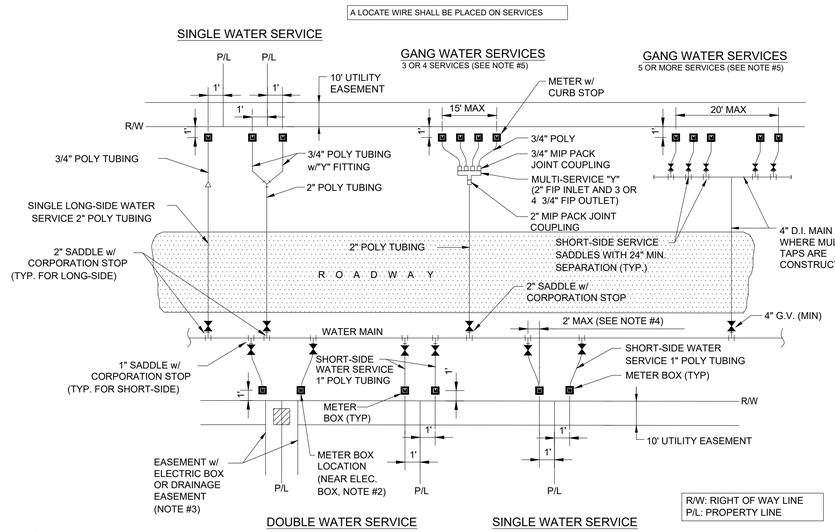
#	DESCRIPTION	DATE
0	ISSUED FOR CITY REVIEW	12/17/23
1	REVISION PER CITY AND RMD	04/30/2024
2	REVISION PER CITY COMMENTS	05/20/2024
3	REVISION PER RMD COMMENTS	05/22/2024
4	REVISION PER CITY COMMENTS	05/24/2024
5	REVISION PER CITY COMMENTS	06/17/2024

SHEET TITLE: GENERAL DETAILS

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA

PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DSGN BY:	QHM
DWG BY:	GMG
CHK BY:	QHM
DATE:	4/18/2024
JOB No.:	1369
SHEET No.:	14



NOTES

1. THE SKETCHES ABOVE INDICATE TYPICAL WATER SERVICE AND METER BOX LOCATIONS. ACTUAL LOCATIONS OF BOXES MAY VARY SLIGHTLY ACCORDING TO FIELD CONDITIONS ENCOUNTERED. TYPICALLY, THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE.

2. UNLESS SPECIFIED OTHERWISE BY THE CITY OF GREEN COVE SPRINGS, THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE, AND 1.0' FOOT INSIDE OF THE PROLONGATION OF ONE OF THE SIDE PROPERTY LINES. IF A CONFLICT EXISTS WITH OTHER UTILITIES, THE METER BOX MAY BE ADJUSTED TO FOUR FEET (MAX.) INSIDE PROPERTY LINES (IN LIEU OF 1.0' FEET), UNLESS APPROVED OTHERWISE BY THE CITY, THE WATER METER BOX SHALL BE LOCATED IN NON-TRAFFIC AREAS (NOT IN SIDEWALKS OR DRIVEWAYS). IF AN UNAPPROVED METER BOX IS IDENTIFIED BY THE CITY, THEN THE CONTRACTOR OR CUSTOMER SHALL BE RESPONSIBLE FOR THE COST OF RELOCATING ANY METER BOX WHICH IS LOCATED IN THE SIDEWALK OR DRIVEWAY OR THE COST TO PROVIDE THE CORRECT METER BOX. THE CITY SHALL APPROVE ALL DEVIATIONS TO THE ABOVE PRIOR TO CONSTRUCTION.

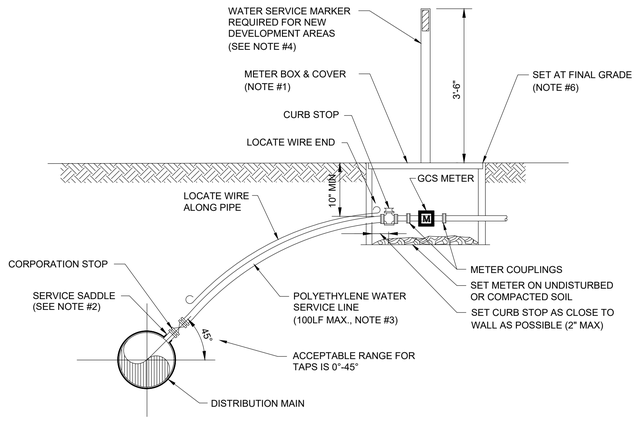
3. IF DRAINAGE OR OTHER EASEMENT IS LOCATED BETWEEN LOTS, METER BOXES SHALL BE LOCATED AT THE EASEMENT LINE BUT OUTSIDE THE EASEMENT AREA.

4. FOR SINGLE SERVICES, THE HORIZONTAL DISTANCE (PERPENDICULAR TO THE MAIN) BETWEEN THE SERVICE'S SADDLE AND THE METER BOX SHALL BE 2 FEET MAXIMUM. FOR DOUBLE 3/4 " SERVICES, THE 2 " POLY MAIN SHALL BE LOCATED CENTERED BETWEEN THE TWO METER BOXES. LOCATE WIRE IS REQUIRED ON ALL SERVICES. THE WIRE SHALL RUN FROM THE METER BOX TO THE MAIN (WITH NO CONNECTION TO MAIN WIRE WITH THE LAST 24 INCHES STRIPPED OF INSULATION/BARE WIRE AS GROUND). ALL EXCEPTIONS TO THIS REQUIREMENT MUST BE APPROVED BY THE CITY OF GREEN COVE SPRINGS. THIS WILL ASSIST IN LOCATING EXISTING SERVICE LINES IN THE FUTURE.

5. GANG WATER SERVICES: FOR 3 OR 4 SERVICES IN ONE AREA, A DUCTICLE IRON PIPE (D.I.P.) WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS. LOCATE WIRE SHALL EXTEND FROM ONE METER BOX TO CURB STOP AT WATER MAIN. FOR 5 OR MORE SERVICES IN ONE AREA, A WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS (TAPS STAGGERED AND AT 2 FEET ON CENTER (MIN). FOR WATER SUPPLY HEADERS WHERE 5 OR MORE TAPS ARE CONSTRUCTED, THE HEADER PIPE SHALL BE 4" AT A MINIMUM. EXAMPLE: CONSTRUCT A 4" MAIN D.I. CROSSING THE STREET FOR 5 RESIDENTIAL CUSTOMERS, UTILIZING 4" G.V., 4" PIPE, 4"X1" SADDLES AND 1" CURB STOPS (NO GLUED TEE FITTINGS). THE 4" OR LARGER D.I.P. WATER MAIN MUST BE SIZED AND DESIGNED BY THE ENGINEER.

6. ALL COMMERCIAL WATER SERVICES SHALL BE 2" POLYETHYLENE PIPING CONNECTED TO 2" CURB STOP IN METER BOX, UNLESS OTHERWISE APPROVED BY THE CITY.

WATER SERVICE INSTALLATIONS 2" AND SMALLER METER



NOTES

1. SEE CITY OF GREEN COVE SPRINGS APPROVED MATERIALS MANUAL AND SYSTEM DETAILS FOR REQUIREMENTS.

2. SINGLE BAND SADDLES MAYBE UTILIZED ON NEW 1" WATER SERVICES WHICH ARE INSTALLED ON A DRY 10" SIZE OR SMALLER WATER MAIN (NEW WATER MAIN CONSTRUCTION). FOR WET TAPS OR WATER MAINS 12" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED.

3. NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY CITY OF GREEN COVE SPRINGS. CONSTRUCT POLY LINE WITH 36" (MIN.) COVER UNDER ROADWAYS. THE POLY WATER SERVICE LINE SHALL BE SAME SIZE AS THE METER (3/4" MINIMUM) AND BE INSTALLED PERPENDICULAR TO THE MAIN AND NOT EXCEED 100LF UNLESS OTHERWISE APPROVED BY CITY OF GREEN COVE SPRINGS.

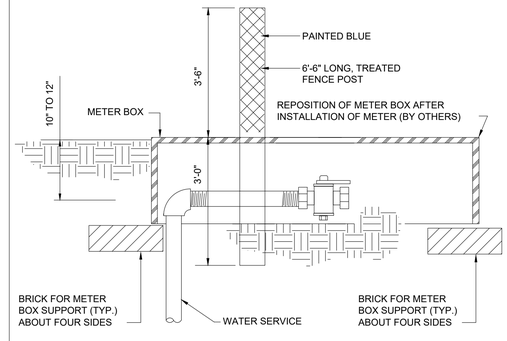
4. INSTALL PVC PLUG IN ALL CURB STOPS IF WATER SERVICE IS "NOT IN USE" (I.E.: IF NO METER IS INSTALLED). IN ADDITION, INSTALL A 6', 6" P.T. FENCE POST (TOP PAINTED BLUE) 12" OFF SIDE OF METER BOX. THE REMOVAL OR TRANSFER OF A WATER SERVICE SHALL INCLUDE BRASS METER COUPLINGS (HEX ON BARREL TYPE).

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE BOXES, METERS OR ELECTRONIC DEVICES IF DAMAGED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.

6. METER BOX AND TOP SHALL BE CLEAR OF ALL DEBRIS TO ALLOW FULL ACCESS TO BOX (I.E., NO DIRT, TRASH OR OTHER DEBRIS PLACED ON TOP OF BOX).

7. LOCATE WIRING REQUIRED ON ALL LONG AND SHORT SERVICES.

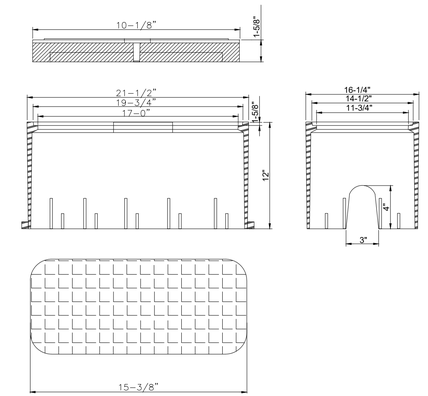
WATER SERVICE DETAIL- 2" AND SMALLER METER



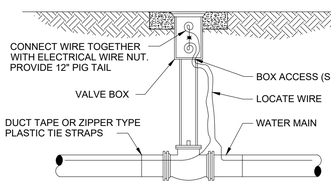
WATER SERVICE MARKER POST

NOTE:
ALL SERVICES ARE TO BE CLEARLY MARKED BY A TREATED 6'-6" LONG MARKER POST PAINTED BLUE. ALL SERVICES ARE TO BE EXTENDED ABOVE GRADE UNTIL COMPLETION OF ALL GRADING ACTIVITIES. ONCE FINAL ROAD GRADING IS COMPLETE, LOWER SERVICES BY CUTTING OFF RISER 10" TO 12" BELOW FINAL GRADE AND INSTALL 90° BEND, NIPPLE AND LW BALL VALVE AT THAT ELEVATION. SET METER BOX OVER ENTIRE HORIZONTAL SECTION OF SERVICE LINE FROM LAST 90° BEND TO THE END OF THE CURB STOP. BOX TO BE REPOSITIONED WHEN THE METER IS INSTALLED. MARKER POST TO BE INSTALLED ADJACENT TO AND LOCATED AT THE MID SECTION OF THE METER BOX.

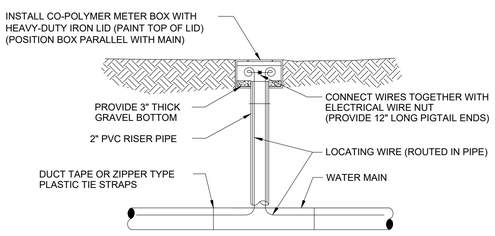
NOTE:
MIN. WALL THIKNESS: .25"
DOUBLE WALL BODY w/STRUCTURAL SUPPORT RIBS
w/MIN. THINCKNESS: 3/16"
1" BOTTOM FLANGE
BOX IS INJECTED MOLDED STRUCTURAL FOAM RECYCLED POLYPROPYLENE MATERIAL



METER BOX & SOLID BLUE LID



LOCATE WIRE BOX UTILIZING VALVE BOX

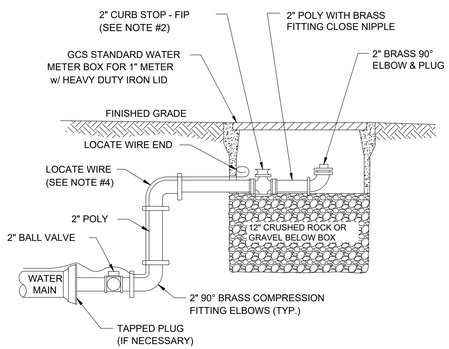


LOCATE WIRE BOX UTILIZING METER BOX

NOTES

1. LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE.

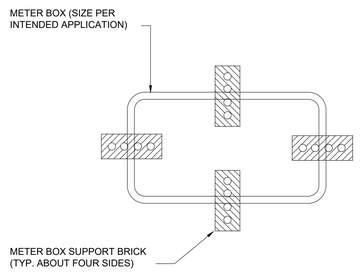
LOCATE WIRE BOX



NOTES

1. PIPE SHALL BE POLYETHYLENE. FITTINGS SHALL BE BRASS.
2. THE 2" CURB STOP SHALL BE ALL BRONZE. FITTINGS SHALL BE BRASS.
3. CANNOT BE PLACED UNDER CONCRETE OR PAVEMENT.
4. PLACE 2 FEET PAST LAST WATER MAIN SERVICE CONNECTION.

FLUSHING VALVE BELOW GRADE



METER BOX SUPPORT DETAIL

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MAI ENGINEERING SERVICES, INC.
LICENSED ENGINEER
QUOC H. MAI
FL.#64006 CA#28162

REVISIONS

0	12/21/22	REVISION PER CITY REVISET
1	04/20/2023	REVISION PER CITY AND RWD RAI
2	06/20/2023	REVISION PER CITY COMMENTS
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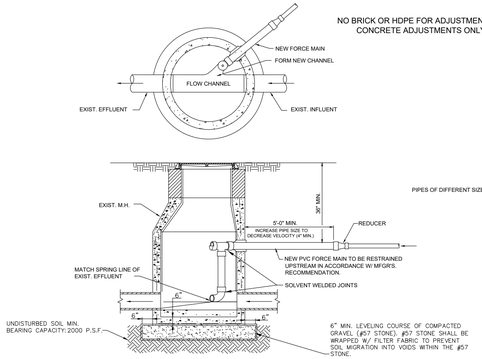
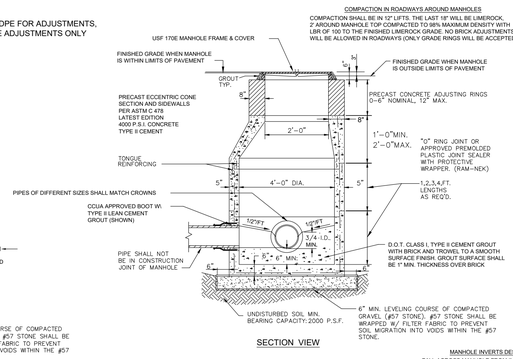
SHEET TITLE: WATER SERVICE DETAILS

PREPARED FOR
RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA
RIVER OAKS OUTDOOR, LLC

DSGN BY:	QHM
DWG BY:	GMG
CHK BY:	QHM
DATE:	4/18/2024
JOB No.:	1369
SHEET No.:	15



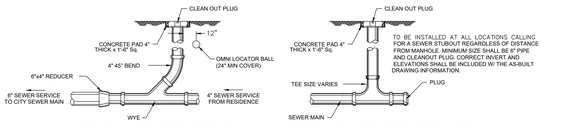
TYP. FORCE MAIN CONNECTION TO MANHOLE



SECTION VIEW

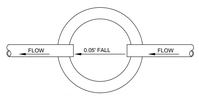
SANITARY SEWER MANHOLE

MANHOLE INVERTS DESIGN CRITERIA
FALL ACROSS MANHOLE FROM INFLUENT TO EFFLUENT OF IN LINE PIPES SHALL BE 0.05 FT. MIN. INFLUENT TO EFFLUENT PIPES THAT ARE AT AN ANGLE SHALL BE 0.10
SEE "ELEVATION DIFFERENCE ACROSS MANHOLE" THIS SHEET.

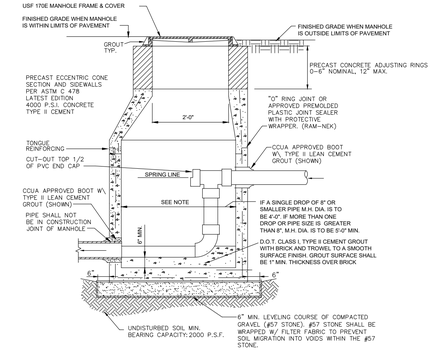


CLEANOUT DETAIL
N.T.S.

STANDARD STUBOUT SURVEY ACCESSIBLE CLEANOUT
N.T.S.



ELEVATION DIFFERENCE ACROSS MANHOLE



NOTE: FOR ADDITIONAL MANHOLE SPECIFICATIONS, SEE "SANITARY SEWER MANHOLE" DETAIL THIS SHEET.
MAXIMUM ALLOWABLE DIFFERENCE IN INVERT ELEVATION WITHOUT INTERNAL DROP CONNECTION IS 24".
SEE "ELEVATION DIFFERENCE ACROSS MANHOLE" THIS SHEET.

TYPICAL GRAVITY SEWER DROP PIPE CONNECTION TO MANHOLE

NOTE:
1. THIS MANHOLE AND THE NEXT TWO MANHOLES DOWNSTREAM (AS REQUIRED BY UTILITY) ARE TO HAVE POLYETHYLENE LINER AS MANUFACTURED BY STANDARD PRECAST CO. (AGRU SURE GRIP) OR APPROVED EQUAL.
2. IF CONNECTION IS BEING MADE TO AN EXISTING MANHOLE, THAT MANHOLE AND THE NEXT TWO MANHOLES DOWNSTREAM (AS REQUIRED BY UTILITY), SHALL BE LINED WITH "SPECTRASHIELD" OR APPROVED EQUAL.
3. SIZE OF DROP PIPE CONNECTION TO MANHOLE SHALL BE DESIGNED BY THE PROJECT ENGINEER. MINIMUM SIZE SIZE SHALL BE 4". CONNECTION AND DROP PIPE SHALL BE SIZED TO REDUCE THE VELOCITY AND PREVENT "SPLASHOVER" WITHIN THE MANHOLE. 5'-0" MINIMUM DISTANCE FROM MANHOLE TO REDUCER MAY BE INCREASED TO ASSIST IN THIS VELOCITY REDUCTION.

SECTION VIEW

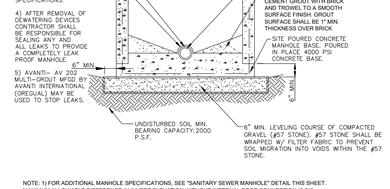
SHALLOW SANITARY SEWER MANHOLE

REQUIRED WHERE TOP OF SEWER PIPE IS WITHIN 2' OF FINISHED GRADE UNLESS ALTERNATE DETAIL IS APPROVED BY THE CLAY COUNTY UTILITY AUTHORITY.

CONCRETE CAP FOR SEWER PIPES

NOTE:
FACILITIES WITH FLOOR DRAINS AND WITHOUT A GREASE TRAP SHALL INSTALL THIS MODEL FLOOR DRAIN AND ONLY WITH PRIOR APPROVAL FROM THE CLAY COUNTY UTILITY AUTHORITY.

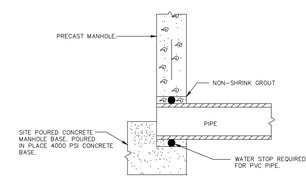
FLOOR DRAIN WITH STRAINER DETAIL



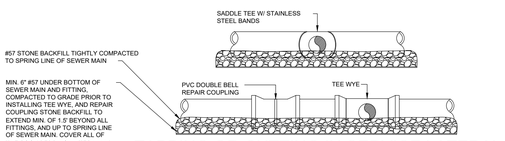
NOTE: 1) FOR ADDITIONAL MANHOLE SPECIFICATIONS, SEE "SANITARY SEWER MANHOLE" DETAIL THIS SHEET.
MAXIMUM ALLOWABLE DIFFERENCE IN INVERT ELEVATION WITHOUT INTERNAL DROP CONNECTION IS 24".

SADDLE MANHOLE DETAIL

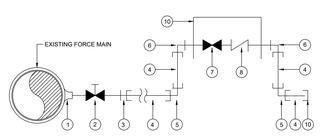
THIS DETAIL IS ONLY TO BE USED WITH SPECIFIC APPROVAL BY CITY OF GCS.



SADDLE MANHOLE DETAIL SECTION



TAPPING OR CUTTING IN SERVICE LATERAL TO EXISTING SEWER MAIN

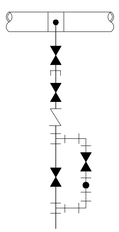


MATERIAL LIST

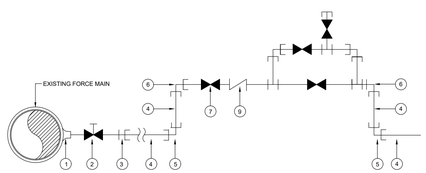
1. STAINLESS STEEL TAPPING SADDLE
2. 2" H.D. BRONZE BALL VALVE CORP STOP (FULL OPENING)
3. 2" SCH.80 FEMALE ADAPTER (S x FIPT)
4. 2" SCH.80 PIPE
5. 2", 90° SCH.80 BEND (S x S)
6. 2", 90° SCH.80 BEND (S x T)
7. 2" BRONZE BALL VALVE W/ LOCKING WING (SEE TABLE ON WATER SHEET)
8. 2" TRU-UNION PVC BALL CHECK VALVE
9. RUSSELL C.I. VALVE BOX W/ "SEWER" ON LID
10. 2" SCH.40 CAP (S)

NOTE: ENGINEER TO VERIFY THAT THE SIZE OF SERVICE IS ADEQUATE AND IS TO ADJUST ACCORDING TO HIS FINDING.

2" SEWAGE FORCE MAIN MANIFOLD SERVICE CONNECTION DETAIL FOR MEDIUM TO HIGH PRESSURE CONNECTION SYSTEMS



TOP VIEW

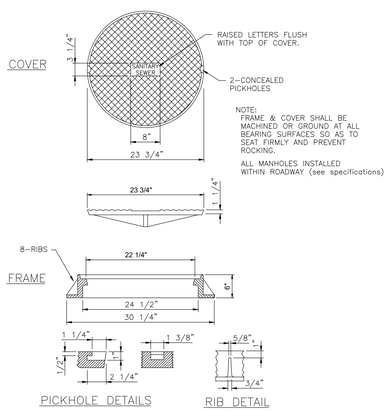


MATERIAL LIST

1. STAINLESS STEEL TAPPING SADDLE
2. 2" H.D. BRONZE BALL VALVE CORP STOP (FULL OPENING)
3. 2" SCH.80 FEMALE ADAPTER (S x FIPT)
4. 2" SCH.80 PIPE
5. 2" SCH.80 PIPE
6. 2", 90° SCH.80 BEND (S x S)
7. 2", 90° SCH.80 BEND (S x T)
8. (3) 2" BRONZE BALL VALVE CURB STOP W/ LOCKING WING (SEE TABLE ON WATER SHEET)
9. 2" TRU-UNION PVC BALL CHECK VALVE
10. RUSSELL C.I. VALVE BOX W/ "SEWER" ON LID
11. 2" SCH.40 CAP (S)
12. 2" TEE W/ 2 X 1/2" BUSHING
13. 1/2" STAINLESS STEEL NIPPLE W/ BALL VALVE & PLUG

NOTE: ENGINEER TO VERIFY THAT THE SIZE OF SERVICE IS ADEQUATE AND IS TO ADJUST ACCORDING TO HIS FINDING.

" SEWAGE FORCE MAIN MANIFOLD SERVICE CONNECTION / WITH PRESSURE GAUGE FITTING / FOR LOW PRESSURE RECEIVING SYSTEMS FOR CREATING ARTIFICIAL HEAD PRESSURE



MANHOLE FRAME AND COVER SHALL BE USF CO. MOD. NO. 170E

SANITARY SEWER MANHOLE FRAME & COVER S-1

2510 US 1 SOUTH SUITE D
ST. AUGUSTINE, FL 32086
PHONE (904)794-1760
FAX (904)794-1768
quoc@maiengineer.com
MAI ENGINEERING SERVICES, INC.
LICENSED ENGINEER
QUOC H. MAI
FL.#64006 CA#28162

REVISIONS

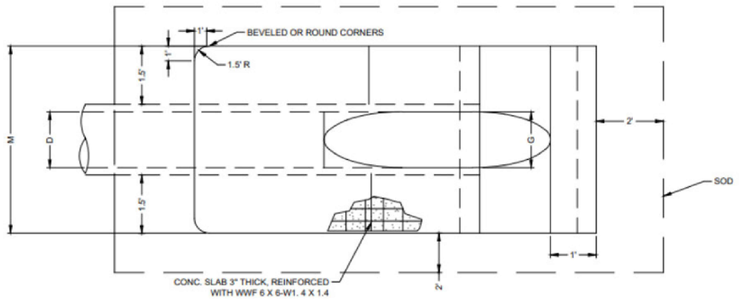
	BY	REVISION PER CITY REQUEST
1	12/17/24	
2	04/26/2025	REVISION PER CITY AND RMD RAI
3	06/26/2025	REVISION PER CITY COMMENTS
4	07/28/2025	REVISION PER RMD COMMENTS
5	04/04/2024	REVISION PER CITY COMMENTS
6	04/17/2024	REVISION PER CITY COMMENTS

SEWER SYSTEM DETAILS

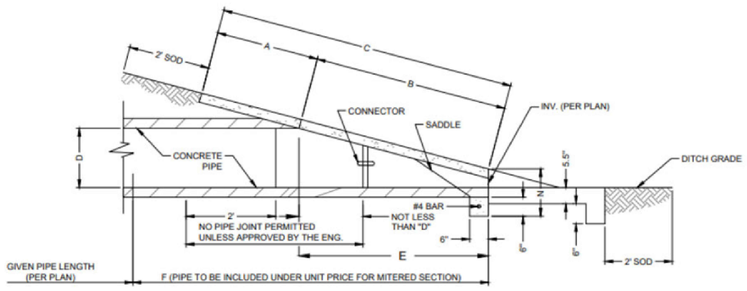
RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA
PREPARED FOR
RIVER OAKS OUTDOOR, LLC

SHEET TITLE

DSGN BY: QHM
DWG BY: GMG
CHK BY: QHM
DATE: 4/18/2024
JOB No.: 1369
SHEET No.: 16



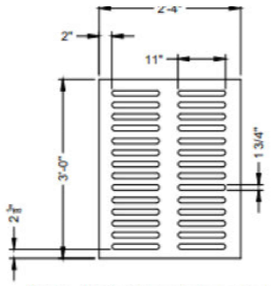
TOP VIEW - SINGLE PIPE



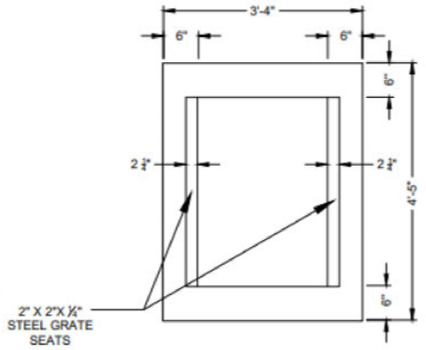
SECTION

D	A	B	C	E	F	G	M	N	X	CONC. (CY)	SOD (SY)
8"	2.5'	0.72'	3.22'	0.7'	4.0'	0.58'	3.75'	1.04'	-	.52	7
15"	2.5'	3.09'	5.59'	3.0'	7.0'	1.23'	4.33'	1.04'	-	.64	8
18"	2.5'	4.12'	6.62'	4.0'	8.0'	1.41'	4.58'	1.04'	-	.69	9
24"	2.5'	6.18'	8.68'	6.0'	10.0'	1.73'	5.08'	1.04'	-	.83	10
30"	2.5'	8.25'	10.75'	8.0'	12.0'	2.00'	5.58'	1.04'	-	.96	11
36"	2.5'	10.31'	12.81'	10.0'	14.0'	2.24'	6.08'	1.04'	-	1.08	12

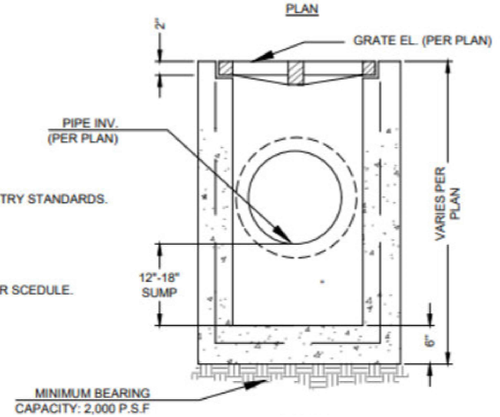
MITERED END SECTION | GD1
N.T.S.



GRATE - APPROXIMATE WEIGHT = 235 LBS.



PLAN



NOTES:
1.PRECAST IN ACCORDANCE WITH LATEST INDUSTRY STANDARDS.
2. GROUT OR "RAM-NEK" JOINTS AS REQUIRED.
3. CONCRETE DESIGN STRENGTH: 4,000 PSI
4. PIPE MUST NOT BE IN CONSTRUCTION JOINT.
5. TYPE II CEMENT TO BE USED.
6.PIPES SHALL BE FLUSH WITH INSIDE WALL.
7. SEE FDOT INDEX 201 FOR REINFORCEMENT BAR SCEDULE.

RECOMMENDED MAXIMUM PIPE SIZE:
2'-0" WALL-18" PIPE
3'-1" WALL-24" PIPE

PRECAST TYPE "C" INLET | GD2
N.T.S.

2510 US 1 SOUTH SUITE D
ST. AUGUSTINE, FL 32086
PHONE (904)794-1760
FAX (904)794-1768
quoc@maiengineer.com

MAI ENGINEERING SERVICES, INC.

LICENSED ENGINEER
QUOC H. MAI
FL.#64006 CA#28162

Item # 5.

REVISIONS

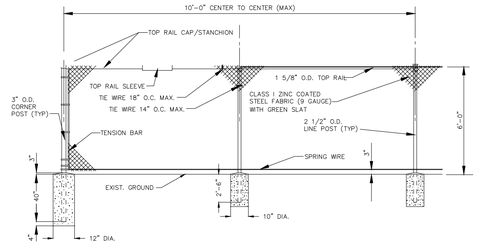
#	DATE	REVISION
0	12/17/22	REVISION PER CITY REQUEST
1	04/10/2023	REVISION PER CITY COMMENTS
2	09/20/2023	REVISION PER CITY COMMENTS
3	01/22/2024	REVISION PER CITY COMMENTS
4	04/04/2024	REVISION PER CITY COMMENTS
5	04/17/2024	REVISION PER CITY COMMENTS

DRAINAGE DETAILS

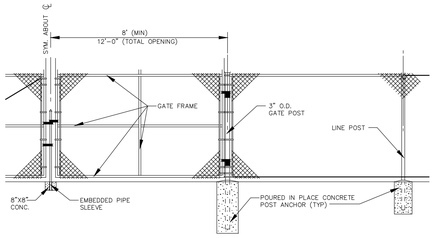
SHEET TITLE

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA
PREPARED FOR
RIVER OAKS OUTDOOR, LLC

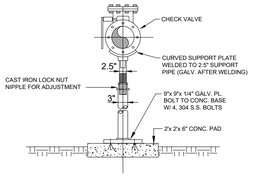
DSGN BY:	QHM
DWG BY:	GMG
CHK BY:	QHM
DATE:	4/18/2024
JOB No.:	1369
SHEET No.:	17



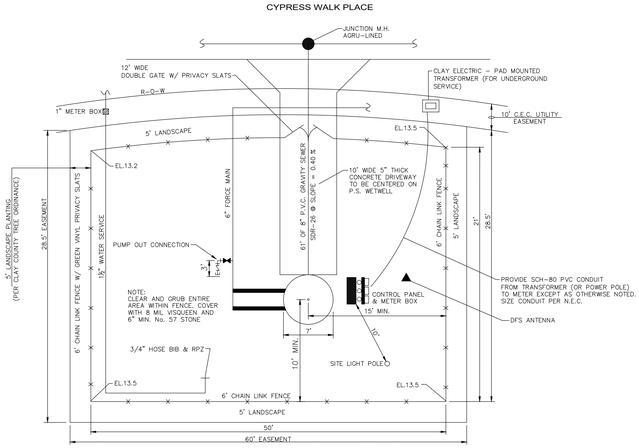
CHAIN LINK FENCE+CORNER POST DETAIL



GATE DETAIL



PIPE SUPPORT DETAIL



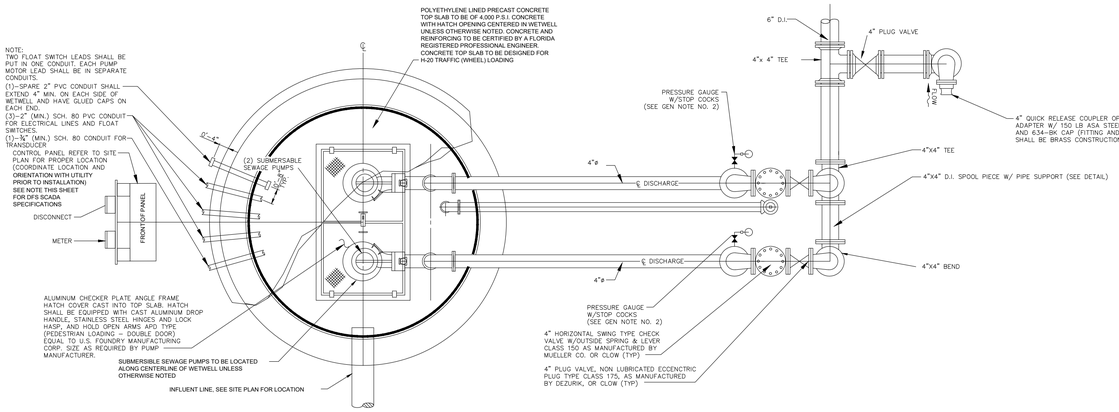
TYPICAL PERMANENT PUMP STATION SITE PLAN

N.T.S.

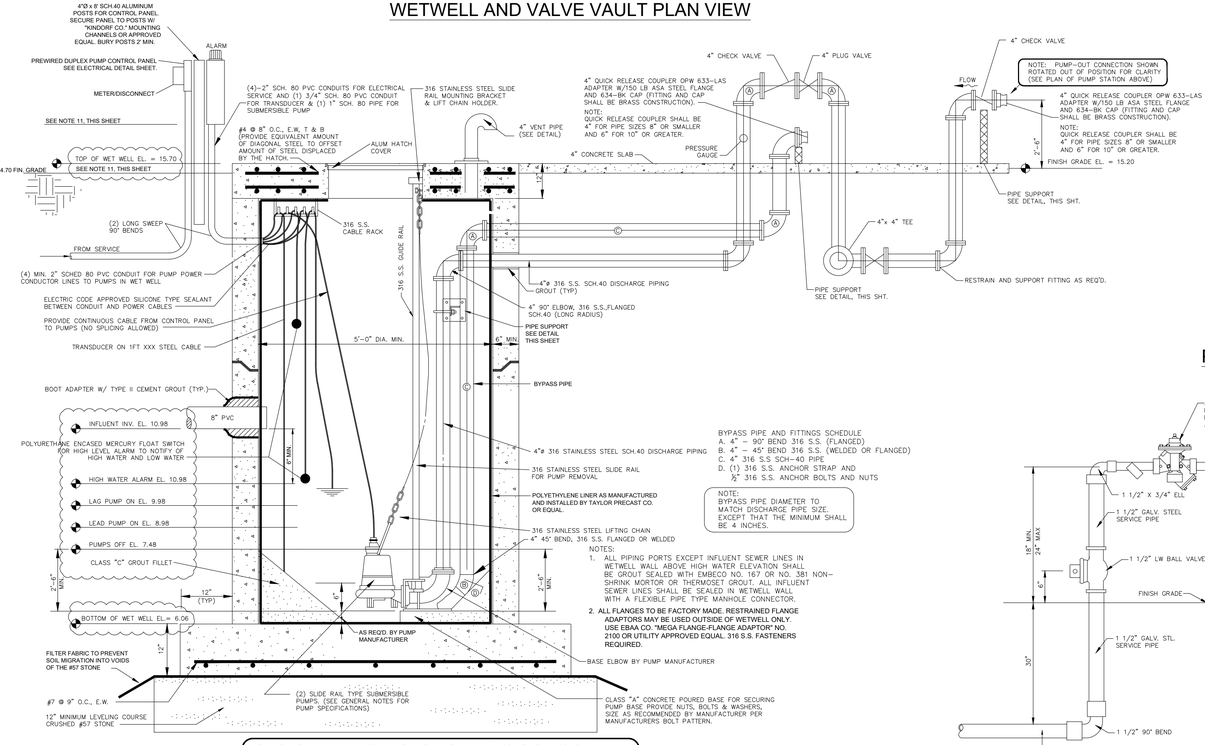
GENERAL NOTES:

1. PUMPS: TWO (2) OR THREE (3) TOTALLY SUBMERSIBLE FLYGT (OR APPROVED SUBSTITUTE) SEWAGE PUMPS WITH INTEGRAL MOTORS. DISCHARGE CONNECTION AND ELECTRICAL REQUIREMENTS AS DETERMINED.
2. GAUGES: GAUGES SHALL BE FURNISHED WHERE SHOWN MOUNTED FACE UP. GAUGES SHALL BE 4" N DIAMETER BOURDON TUBE TYPE WITH BRASS MOVEMENTS, COMPLETELY SEALED UNBREAKABLE PLEXIGLASS CRYSTAL, WITH NOT LESS THAN 90% GLYCERIN-FILLED STAINLESS STEEL CASES. GAUGE SHALL HAVE A MINIMUM SCALE OF 1 PSI BETWEEN GRADUATIONS AND AN APPROXIMATE SCALE RANGE OF 1 1/2 TIMES RANGE. GAUGES SHALL BE EQUIPPED WITH A SAFELY BLOW-OUT PLUG AND DAMPENING SCREW. GAUGES SHALL BE MOUNTED USING ¼" (NPT) STEEL PIPE WITH DIAPHRAM PROTECTORS WITH STAINLESS STEEL DIAPHRAGM AND STOP COCKS BETWEEN DISCHARGE PIPES AND GAUGES. GAUGES SHALL BE EQUAL TO THOSE MANUFACTURED BY THE LENZ COMPANY.
3. FENCING: ALL PARTS FOR CONSTRUCTION OF THE FENCE AND NECESSARY TO MAKE A COMPLETE INSTALLATION SHALL BE FURNISHED AND INSTALLED. FENCING SHALL COMPLY WITH ASTM A392–68T LATEST SPECIFICATIONS FOR ZINC COATED STEEL CHAIN LINK FENCE FABRIC AND AS DETAILED ON THE DRAWING. FITTINGS SHALL BE MALLEABLE IRON OR PRESSED STEEL FORGINGS. ALL FERROUS MATERIALS SHALL BE THOROUGHLY GALVANIZED BY THE HOT-DIP METHOD.
   A. PRIVACY SLATS: SLATS SHALL BE FLAT,TUBULAR IN SHAPE, THERMOPLASTIC WITH A WALL THICKNESS F 0.030" ±0.003"). LENGTH AND WIDTH OF SLATS SHALL BE PROVIDED TO ACCOMMODATE CHAIN–LINK FENCE FABRIC AS SPECIFIED HEREIN. SLATS SHALL HAVE A HORIZONTAL LOCKING STRIP TO PROVIDE SECURE ATTACHMENT TO CHAIN–LINK FABRIC, AND PROVIDE A PRIVACY FACTOR OF 89 % THE MINIMUM WIDTH SLAT SHALL BE 1–1/8". ACCEPTABLE MANUFACTURER: PATRICIAN PRODUCTS, OR EQUAL.
   B. PRIVACY SCREENING: ENVIRONMENTAL PRIVACY SCREENING SHALL BE B6 TO 90% KNIT RASCHEL, 100% POLYETHYLENE UV STABILIZED FIBER, COLOR GREEN. SCREENING SHALL BE ATTACHED TO THE FENCE FABRIC WITH SUFFICIENT TIES TO SECURE THE SCREEN. ACCEPTABLE SCREEN: PRIVACY PLUS OR EQUAL.
4. ALL PRECAST REINFORCED CONCRETE PRODUCTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C478 (LATEST), WITH CLASS A CONCRETE UNLESS OTHERWISE NOTED. ALL CONCRETE AND REINFORCING SHALL BE CERTIFIED BY AN ENGINEER REGISTERED WITH THE STATE OF FLORIDA.
5. ALL DISCHARGE PIPING FROM THE PUMPS THROUGH TO THE VALVE VAULT SHALL BE 316 GRADE, SCH.40 STAINLESS STEEL THIS INCLUDES ALL FITTINGS WITHIN THIS PRESCRIBED LIMIT.
6. ALL DISCHARGE PIPE FITTINGS 6" AND LARGER (AFTER THE VALVE VAULT) SHALL BE POLY-LINED (40 MIL THICKNESS DUCTILE IRON. ALL DISCHARGE PIPE FITTINGS 4" AND SMALLER SHALL BE EPOXY LINED OR POLY-LINED (40 MIL THICKNESS) DUCTILE IRON.
7. PUMP STATION SITE SHALL BE COVERED (INSIDE OF FENCED AREA) WITH NO. 57 LIMESTONE 6" THICK WITH 8 MIL VISQUEEN BETWEEN ROCK AND GRADE. DRIVEWAY SHALL BE 5"–2500 PSI CONCRETE.
8. ALL DUCTILE IRON FITTINGS AND PIPE SHALL BE HOLIDAY TESTED PRIOR TO INSTALLATION.
9. DUCTILE IRON PIPE, FITTINGS AND BOLTS SHALL RECEIVE A THOROUGH EXTERIOR COATING OF BITUMINOUS COATING AS SPECIFIED IN A.N.S.I. SPECIFICATIONS A21.51.
10. ALL EXTERIOR JOINTS OF PRECAST CONCRETE WETWELLS SHALL BE SEALED WITH A RUBBERIZED ASPHALT MEMBRANE TAPE. TAPE SHALL BE PERM–A–BARRIER BY W.R. GRACE, ELASTOPLY BY KARNAK OR EQUAL.
11. ENGINEERS SHALL PROVIDE VERIFICATION THAT THE TOP OF THE WETWELL BOTTOM OF CONTROL PANELS, GENERATOR RECEPTACLE AND GENERATOR SLAB ARE ALL ABOVE THE 100 YR. FLOOD ELEVATION. THEREFORE, I DO HEREBY CERTIFY THAT THE ABOVE ELEVATIONS HAVE BEEN MET.
12. ALL PUMP STATIONS SHALL BE CONTROLLED BY DATA FLOW SYSTEMS SCADA, OR OTHERWISE APPROVED BY THE CITY OF GREEN COVE SPRINGS.

(PROFESSIONAL ENGINEERS SIGNATURE)



WETWELL AND VALVE VAULT PLAN VIEW



BYPASS PIPE AND FITTINGS SCHEDULE.
A. 4" – 90° BEND 316 S.S. (FLANGED)
B. 4" – 45° BEND 316 S.S. (WELDED OR FLANGED)
C. 4" 316 S.S SCH–40 PIPE
D. (1) 316 S.S. ANCHOR STRAP AND ⅝" 316 S.S. ANCHOR BOLTS AND NUTS

NOTE: BYPASS PIPE DIAMETER TO MATCH DISCHARGE PIPE SIZE. EXCEPT THAT THE MINIMUM SHALL BE 4 INCHES.

NOTES:
1. ALL PIPING PORTS EXCEPT INFLUENT SEWER LINES IN WETWELL WALL ABOVE HIGH WATER ELEVATION SHALL BE GROUT SEALED WITH EMBECO NO. 167 OR NO. 381 NON–SHRINK MORTOR OR THERMOSET GROUT. ALL INFLUENT SEWER LINES SHALL BE SEALED IN WETWELL WALL WITH A FLEXIBLE PIPE TYPE MANHOLE CONNECTOR.
2. ALL FLANGES TO BE FACTORY MADE. RESTRAINED FLANGE ADAPTORS MAY BE USED OUTSIDE OF WETWELL ONLY. USE EBAA CO. "MEGA FLANGE-FLANGE ADAPTOR" NO. 2100 OR UTILITY APPROVED EQUAL. 316 S.S. FASTENERS REQUIRED.

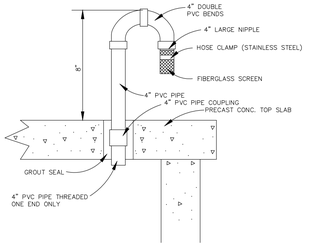
NOTE TO ENGINEER: THE TYPE OF PUMP STATION ALLOWED AND THE SPECIFIC PUMPS TO BE USED WILL BE MUTUALLY AGREED TO BY ENGINEER AND UTILITY AT THE TIME OF DESIGN DEPENDING ON THE SPECIFIC APPLICATION. ALSO PIPE SIZES AND SPACING DIMENSIONS ARE TO BE DETERMINED FOR EACH SPECIFIC PUMP STATION INSTALLATION.

PERMANENT POLYETHYLENE LINED SUBMERSIBLE PUMP STATION WITH VALVE PIT - ELEVATION

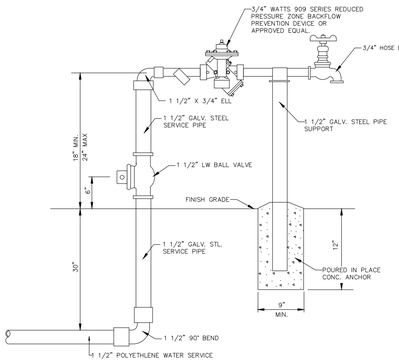
(NOTE: PIPE SIZES, WETWELL SIZES AND INSIDE DIMENSIONS OF VALVE PIT TO BE VERIFIED BY ENGINEER AND MODIFIED AS NECESSARY.)

PIPE ATTACHMENT TO WALL DETAIL

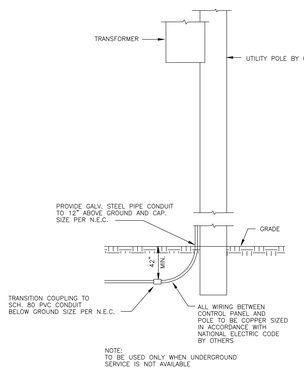
SITE LIGHT STANDARD DETAIL



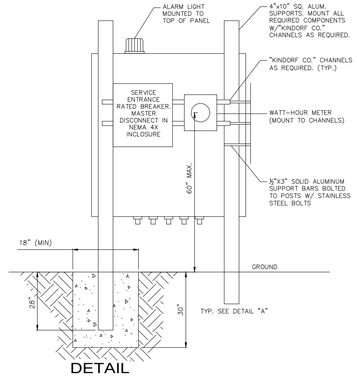
VENT PIPE DETAIL



WATER SERVICE



POWER RISER DETAIL



DETAIL "A"

TYPICAL DISCONNECT PANEL

2510 US 1 SOUTH SUITE D
ST. AUGUSTINE, FL 32086
PHONE (904)794–1760
FAX (904)794–1768
quoc@maiengineer.com

MAI ENGINEERING SERVICES, INC.

LICENSED ENGINEER
QUOC H. MAI
FL.#64006 CA#2862

REVISIONS

#	DATE	REVISION
0	10/17/22	REVISION PER CITY REQUEST
1	04/26/2023	REVISION PER CITY COMMENTS AND IND PAI
2	06/26/2023	REVISION PER CITY COMMENTS
3	08/28/2023	REVISION PER IND COMMENTS
4	01/22/2024	REVISION PER CITY COMMENTS
5	04/04/2024	REVISION PER CITY COMMENTS
6	04/17/2024	REVISION PER CITY COMMENTS

SHEET TITLE: PUMP STATION DETAILS

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA

PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DSGN BY:	QHM
DWG BY:	GMG
CHK BY:	QHM
DATE:	4/18/2024
JOB No.:	1369
SHEET No.:	18

City of Green Cove Springs Site Plan Application

FOR OFFICE USE ONLY

P Z File #_____

Application Fee:_____

Filing Date: _____ Acceptance Date:_____

Review Type: SRDT ☐ P & Z ☐ CC ☐

A. PROJECT

1. Project Name: RIVER OAKS DEVELOPMENT
2. Address of Subject Property: 1609 S Orange Ave., Green Cove Springs, FL 32043
3. Parcel ID Number(s): 016564-002-00
4. Existing Use of Property: Single Family (0100)
5. Future Land Use Map Designation : MIN
6. Zoning Designation: Commercial
7. Acreage: 8.88

B. APPLICANT

1. Applicant's Status ☐ Owner (title holder) ☒ Agent
2. Name of Applicant(s) or Contact Person(s): Quoc H. Mai Title: Project Engineer

   Company (if applicable): MAI Engineering Services, Inc.

   Mailing address: 2510 US1 South, Suite D

   City: St. Augustine State: Florida ZIP: 32086

   Telephone: (904) 794-1760 FAX: (904) 794-1768 e-mail: Quoc@maiengineer.com
3. If the applicant is agent for the property owner*:

   Name of Owner (title holder): William Krieg

   Company (if applicable): 1609 South Orange Avenue, LLC

   Mailing address: PO Box 7902

   City: Jacksonville State: Florida ZIP: 32238

   Telephone: (904) 234-1551 FAX: (___)_____ e-mail: Will@riveroaksoutdoor.com

* Must provide executed Property Owner Affidavit authorizing the agent to act on behalf of the property owner.

C. ADDITIONAL INFORMATION

1. Is there any contract for sale of, or options to purchase the subject property? ☐ Yes ☒ No

   If yes, list names of all parties involved: _____

   If yes, is the contract/option contingent or absolute? ☐ Contingent ☐ Absolute

D. ATTACHMENTS (One copy reduced to no greater than 11 x 17, plus one copy in PDF format)

1. Site Plan and Survey including but not limited to:
   a. Name, location, owner, and designer of the proposed development.
   b. Vicinity map - indicating general location of the site and all abutting streets and properties.
   d. Complete legal description.
   e. Statement of Proposed Uses.
   f. Location of the site in relation to adjacent properties, including the means of ingress and egress to such properties and any screening or buffers along adjacent properties.
   g. Location of nearest fire hydrant, adjacent pedestrian sidewalks and bicycle paths.
   h. Date, north arrow, and graphic scale (not to exceed one (1) inch equal to fifty (50) feet).
   i. Area and dimensions of site.
   j. Location of all property lines, existing right-of-way approaches, sidewalks, curbs, and gutters.
   k. Access and points of connection to utilities (electric, potable water, sanitary sewer, gas, etc.).
   m. Location and dimensions of all existing and proposed parking areas, loading areas, curb cuts.
   n. Location and size of any lakes, ponds, canals, or other waters and waterways.
   o. Structures and major features – fully dimensioned – including setbacks, distances between structures, floor area, width of driveways, parking spaces, proposed surface materials of driveways and parking areas, property or lot lines, and floor area ratio.
   p. Required buffers.
   q. Location of existing trees, identifying any trees to be removed.
   r. Landscaping plan depicting type, size, and design of landscaped areas, buffers, and tree mitigation calculations.
   s. Percent of pervious surface.
   t. Lighting plan.
   u. Location, design, height, and orientation of signs.
   v. Location of dumpsters and detail of dumpster enclosure.
   w. For development consisting of Multi-family residential;
      i. Tabulation of gross acreage.
      ii. Tabulation of density.
      iii. Number of dwelling units proposed.
      iv. Location and percent of total open space and recreation areas.
      v. Floor area of dwelling units.
      vi. Number of proposed parking spaces.
      vii. Street layout.
2. Stormwater management plan - including the following:
   a. Existing contours at one (1) foot intervals.
   b. Proposed finished floor elevation of each building site.
   c. Existing and proposed stormwater management facilities with size and grades.
   d. Proposed orderly disposal of surface water runoff.
   e. Centerline elevations along adjacent streets.
3. Legal description with tax parcel number.
4. Warranty Deed or other proof of ownership.
5. Permit or Letter of Exemption from the St. Johns River Water Management District.

6. Fee.

   a. Based on size of site:

      i. For sites <10,000 s.f. - $500

      ii. For sites >10,000 s.f.- $1,000 + $20 per acre

   b. All applications are subject 10% administrative fee and must pay the cost of any outside consultants' fees.

No application shall be accepted for processing until the required application fee is paid in full by the applicant. Any fees necessary for technical review or additional reviews of the application by a consultant will be billed to the applicant at the rate of the reviewing entity. The invoice shall be paid in full prior to any action of any kind on the development application.

All 6 attachments are required for a complete application. A completeness review of the application will be conducted within five (5) business days of receipt. If the application is determined to be incomplete, the application will be returned to the applicant.

I/We certify and acknowledge that the information contained herein is true and correct to the best of my/our knowledge:

Signature of Applicant

Quoc H. Mai/Project Engineer & Agent

Typed or printed name and title of applicant

11/4/22

Date

Signature of Co-applicant

Typed or printed name of co-applicant

Date

State of Florida County of St. John's

The foregoing application is acknowledged before me this 4th day of November, 2022, by Quoc H. Mai

_____, who is/are personally known to me or who has/have produced _____

as identification.

NOTARY SEAL

MICHEL GERGELY
Notary Public - State of Florida
Commission # GG 937324
My Comm. Expires Jan 28, 2024
Bonded through National Notary Assn.

Signature of Notary Public, State of Florida

Planning & Zoning
321 Walnut Street, Green Cove Springs, FL 32043 904-297-7051

APPLICATION DEFICIENCY NOTICE

DATE: April 17, 2024

APPLICATION REFERENCE: Quoc Mai, SPL-22-006 - 1609 S Orange Ave

Dear Applicant:

The items you submitted for the above-referenced permit have been reviewed by the City representatives responsible for approving different aspects of your application. Attached to this notice is a list of comments in response to the materials submitted.

Each of the items on the attached list require responses and revised materials be created and re-submitted before any further action can be taken on this permit. A hold is placed on this application and the time it takes you to respond to this list of items is excluded in calculating permit processing timeframes. Once corrected and/or new materials are submitted, your permit processing timeframe will begin again.

A complete response to each of the items on the attached list is required to be submitted ***at the same time.*** As applicable, a complete response is required to include:

1. A written document addressing all of your responses (one paper copy).
2. New and/or updated technical reports (one paper copy).
3. New and/or corrected plans. Please note that revisions to previously submitted plans are required to be identified by clouding, must be noted in a revision list on the plan sheet(s), and are required to be incorporated into a full set of revised plans (one paper copy).
4. A transmittal that itemizes everything being resubmitted (one paper copy).
5. A copy of the entire resubmittal must be provided electronically (either on a thumb drive or uploaded via the permit portal).

Your response must be received by our Department within 180 days of the date noted on this letter to avoid this application being withdrawn from consideration. Withdrawn application must be resubmitted as new applications requiring repayment of all applicable fees and processing requirements.

Thank you for your anticipated cooperation in submitting the items requested by staff. We look forward to working with you as this application continues to be processed.

APPLICATION DEFICIENCY NOTICE

DATE: April 17, 2024

APPLICATION REFERENCE: Quoc Mai, SPL-22-006

PLANNING DIVISION COMMENTS - contact Michael Daniels (mdaniels@greencovesprings.com)

1. Existing Trees shown to be preserved shall have a preserved root area of a minimum of a foot per inch of dbh or to the tree dripline. Some of the trees are still in close proximity to proposed improvements. Very difficult to tell which trees are being saved (in terms of type and size).
2. The existing tree calculation shows a deficiency of over 1,000 inches of trees. Please explain how these trees will be mitigated for.
3. Provide a note showing all outstanding comments from the special exception on the site plan.
4. Parking space located within the buffer must be removed or revised.
5. The drainage retention area must be fenced.

PUBLIC WORKS DIVISION COMMENTS - contact Jason Laurenza (jlaurenza@greencovesprings.com)

1. Connection to existing force main must take place in the ROW. Use gate or plug valve, not ball valve. Create tee connection, not tapping sleeve. Add additional 4" tee with plug at ROW for future use where line crosses Cooks Ln to lift station. City water/sewer responsibility will end at ROW, so we do not need a 20' utility easement through the property. We will only be responsible for the water meters.

City of Green Cove Springs

Phone: (904) 297-7500
Fax: (904) 284-8118
www.greencovesprings.com

321 Walnut Street
Green Cove Springs, FL 32043
Florida Relay – Dial 7-1-1

February 14, 2024

Quoc Mai
MAI Engineering Services, Inc.
2510 US1 South, Suite D
St. Augustine, FL 32086
(904) 794-1760
Quoc@maiengineer.com

RE: Special Exception SE-23-003 River Oaks Warehouse

The City of Green Cove Springs received your application for a special exception for a Warehouse use in a C-2 Zoning District for property located on the south side of the 800 block of Cooks Lane for approximately 8.8 acres of parcel #016564-002-00 on November 15, 2023.

The special exception was approved by the Planning and Zoning Commission on January 23, 2024 subject to the following conditions:

1. Provide a 40' landscape buffer consisting of landscaping as required by City LDC Sec. 113-244(d)(3).
2. Provide signage to limit truck traffic to ingress and egress from US 17 by requiring access limitation.
3. All outdoor storage must be completely screened from public view.
4. Buildings fronting Cooks Lane shall have a brick façade.
5. Signal timing improvements as set forth in the Traffic Study Report shall be implemented prior to development approval.
6. Additional Right of Way as shown on the attached draft site plan shall be dedicated to the City prior to development approval.

Please contact me directly at mdaniels@greencovesprings.com if you have any questions.

Sincerely,

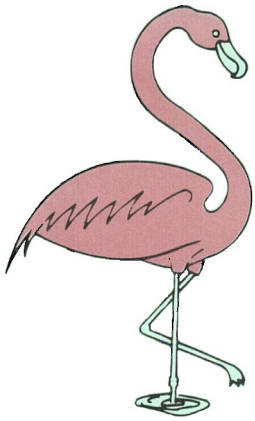
Michael Daniels, AICP
Development Services Director
City of Green Cove Springs

1369-River Oaks Development Renderings

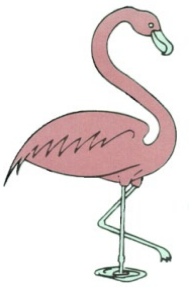
RIVER OAKS OFFICE-WAREHOUSE TRAFFIC STUDY

CLAY COUNTY, FLORIDA

November 2023



BUCKHOLZ TRAFFIC



BUCKHOLZ TRAFFIC
3585 KORI ROAD
JACKSONVILLE, FLORIDA 32257
(904) 886-2171 jwbuckholz@aol.com

November 1, 2023

Ms. Quoc H. Mai, P.E.
MAI Engineering Services, Inc.
2510 US 1 South / Suite D
St. Augustine, Florida 32086

Re: **New River Oaks Office-Warehouse Traffic Study**

Dear Ms. Roth:

Attached is the new traffic study for the revised development. If there are any questions or comments regarding this study, please contact me.

Sincerely,

PRELIMINARY – FOR INTERNAL REVIEW ONLY

Jeffrey W. Buckholz, P.E., PTOE
Principal

INTRODUCTION

The revised River Oaks development will contain four buildings totaling 76,000 sf of commercial space. Building sizes will be 30,000 sf, 21,000 sf, 15,000 sf and 10,000 sf. These buildings will be located on the south side of Cove Lane approximately ¼ mile west of the US 17/SR 16/Cooks Lane intersection in Clay County, Florida. Two existing businesses will be relocated to the site. Van Up-Fitter will occupy the 30,000 sf building and River Oaks Outdoor will occupy the 15,000 sf building. The 21,000 sf building will be composed of warehouse space whereas the 10,000 sf building will contain 5000 sf of warehouse space and 5000 sf of office space.

Access to the development will be provided via one full access driveway on Cooks Lane. Cooks Lane is a two lane undivided major collector with a posted speed limit of 25 mph. US 17 and SR 16 are both urban principal arterials with an FDOT access management classification of 3. The posted speed limit on SR 16 and US 17 to the south of SR 16 is 45 mph while the posted speed limit on US 17 to the north of SR 16 is 45 mph northbound and 35 mph southbound.

Figure 1 shows the site location and surrounding road network while Appendix A contains the proposed site plan. The development is expected to be constructed and fully occupied by the end of 2026, therefore 2026 was chosen as the design year for this study.

EXISTING TRAFFIC VOLUMES

Weekday peak period manual turning movement counts were conducted by Buckholz Traffic personnel during December of 2022 with school in session at the US 17/SR 16/Cove Lane intersection. These counts, which are provided in Appendix B, were conducted during the weekday AM peak period (6:30 to 8:30 AM) and the weekday PM peak period (3:45 – 6:00 PM). The data was recorded at 15-minute intervals and includes a separate tabulation for trucks and pedestrians. Figure 2 graphically summarizes the AM and PM peak hour counts while Figure 3 summarizes the AM and PM peak period counts.

Appendix C provides daily traffic volumes for four nearby FDOT traffic counting stations. The current Average Daily Traffic (ADT) on Cooks lane is approximately 1600 vehicles per day. Also included in Appendix C are the FDOT seasonal adjustment factors for Clay County.

TRIP GENERATION

Trip generation calculations for the warehouse and office space were carried out using the 11th edition of ITE's Trip Generation Manual and referencing land use codes 150 (Warehousing) and 710 (Office). Tables 1 and 2 contain the associated daily, AM peak hour, and PM peak hour trip generation calculations. Trip generation calculations for the two relocated businesses are provided in Tables 3 and 4. The calculations are based on client-provided activity data. During an average weekday, the development is expected to generate 176 total trips (88 entering and 88 exiting) with 31 trips (23 entering and 8 exiting) occurring during the AM peak hour and 33 trips (8 entering and 25 exiting) occurring during the PM peak hour. All of these trips will be new trips.

SITE TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

Weekday AM and PM peak hour site trips were directionally distributed based on peak period turning movement counts and engineering judgment as shown in Figure 4.

FUTURE TRAFFIC VOLUMES

The expected weekday 2026 peak hour background (No Build) traffic volumes and total (Build) traffic volumes at intersections of interest are graphically depicted in Figures 5 and 6. The No Build traffic volumes were obtained by multiplying the existing traffic volumes by the appropriate FDOT seasonal adjustment factor (1.00) and then by a median annual growth rate of 1.8%. A linear regression analysis of recent FDOT daily traffic counts at nearby traffic counting stations was used to identify this rate (see graphs C-1, C-2, C-3 and C-4 in Appendix C). The 2026 Build traffic volumes were obtained by adding the traffic generated by the new development to the 2026 No Build traffic volumes.

TURN LANE EVALUATION

A formal analysis was made to determine if a right turn lane is warranted on eastbound Cooks Lane at the new Site Driveway. The methodology contained in NCHRP Report 279 was used to conduct this analysis. As is indicated in Figure 7, right turn volumes into the site will not be high enough to warrant an exclusive right turn lane. This result is supported by NCHRP Report 420 which requires 80 right turns per hour to warrant a right turn lane on a 2-lane roadway with a posted speed less than 45 mph.

A formal analysis was also made to determine if an exclusive left turn lane is warranted on westbound Cooks Lane at the Site Drive. The methodology contained in a paper written by M.D. Harmelink entitled: "Volume Warrants for Left Turn Storage Lanes at Unsignalized Grade Intersections" was used to conduct this evaluation. The results indicate that left turn volumes under 2026 Build conditions will not be high enough to warrant an exclusive left turn lane at this location. The supporting analysis is provided in Figures 8 and 9.

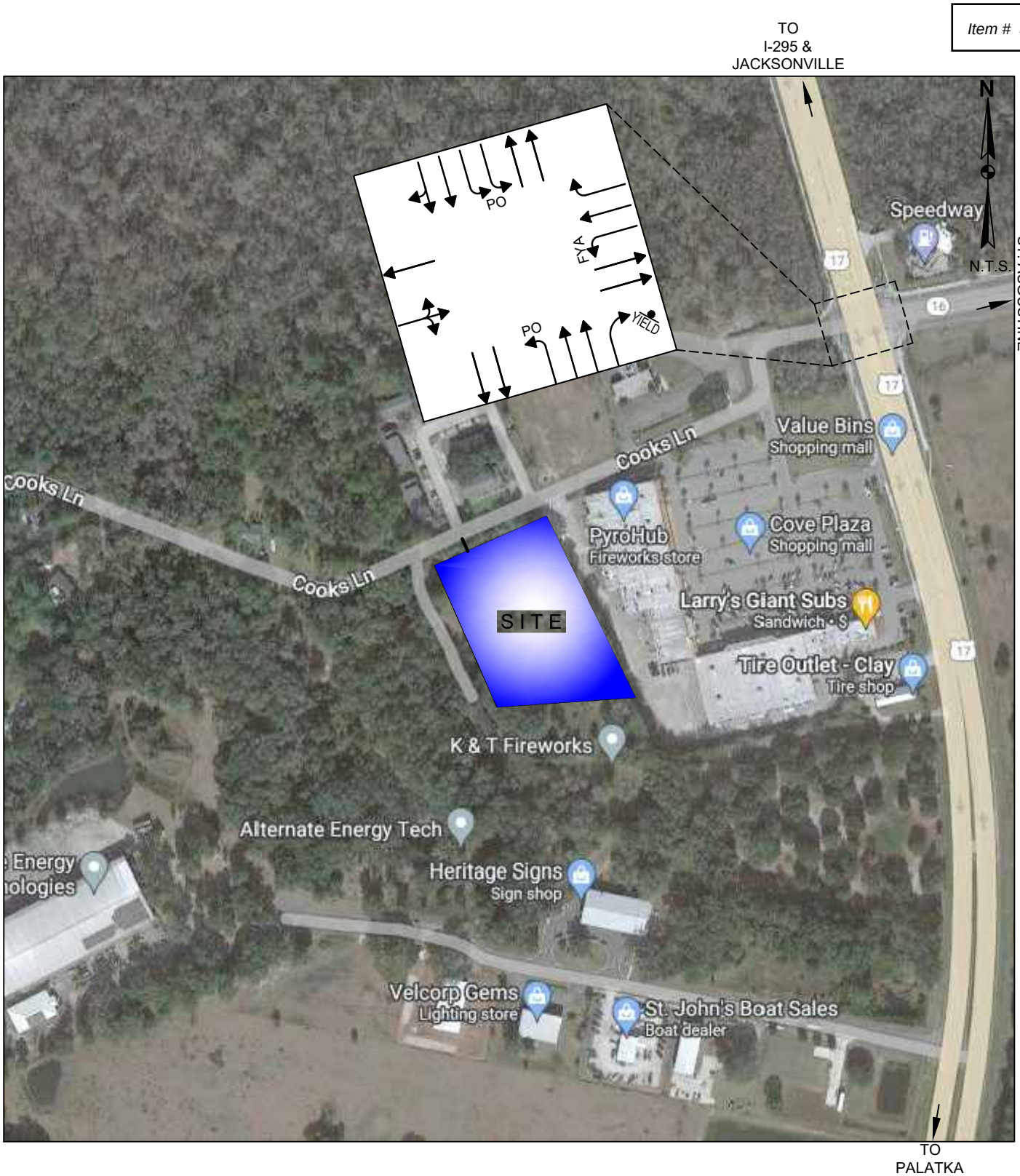
UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS

The unsignalized Cooks Lane/Site Drive intersection was analyzed using the two-way stop control methodology contained in the 2023 version of the Highway Capacity Software. Table 3 summarizes the capacity analysis results under 2026 Build conditions with the supporting calculations provided in Appendix D. All minor movements at the Cooks Lane/Site Drive intersection are expected to operate at level of service A or better during both weekday peak hours with minimal queuing and a volume-to-capacity ratio of well less than one.

SIGNALIZED INTERSECTION CAPACITY ANALYSIS

The signalized US 17/SR 16/Cooks Lane intersection was analyzed using the operational methodology contained in the 2023 version of the Highway Capacity Software. The existing traffic signal timings are provided in Appendix E. Table 4 summarizes the capacity analysis results with the supporting calculations provided in Appendix F.

The US 17/SR 16/Cooks Lane intersection currently operates at level of service C during the weekday AM peak hour and level of service D during the PM peak hour and is expected to continue to operate at these levels of service under 2026 Build conditions. With a more balanced set of timings implemented to even-out individual movement levels of service the overall intersection level of service under 2026 Build conditions is expected to be D for both weekday peak hours.



FYA = FLASHING YELLOW ARROW
PO = PROTECTED ONLY LEFT TURN

FIGURE 1

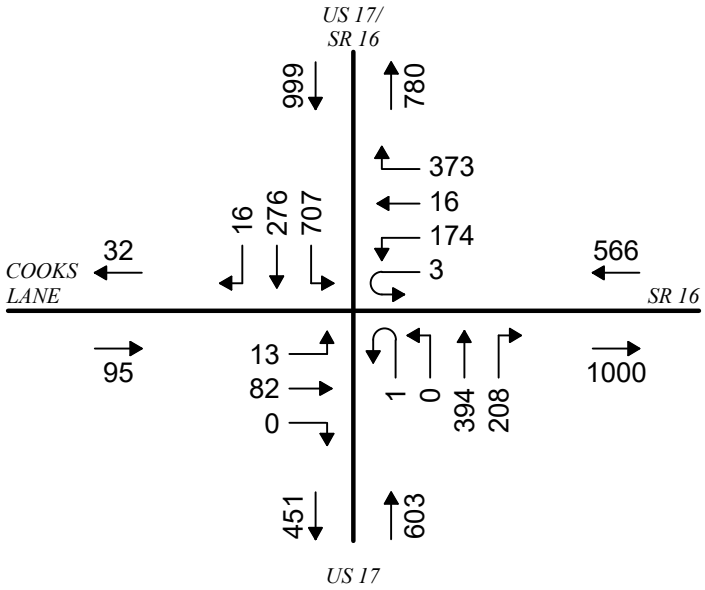
SITE LOCATION

Buckholz Traffic

E:\22-1805\CAD\FIG 01.DWG

N.T.S.

6:45-7:45 AM



4:30-5:30 PM

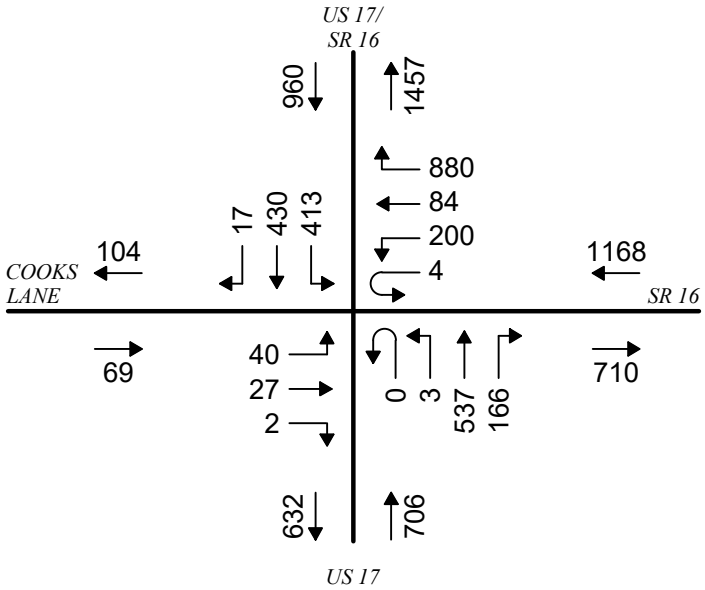


FIGURE 2

TRAFFIC
COUNTS

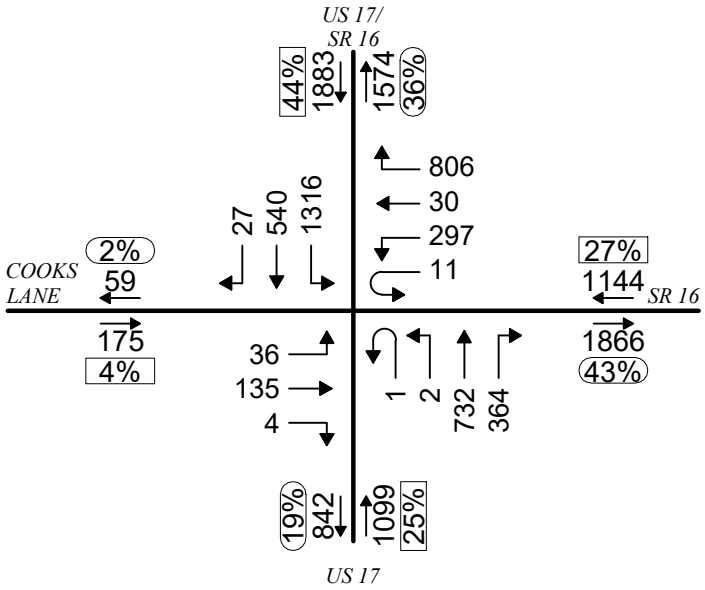
WEEKDAY PEAK HOURS

Buckholz Traffic

E:\22-1805\CAD\FIG_02.DWG

N.T.S.

6:30-8:30 AM



3:45-6:00 PM

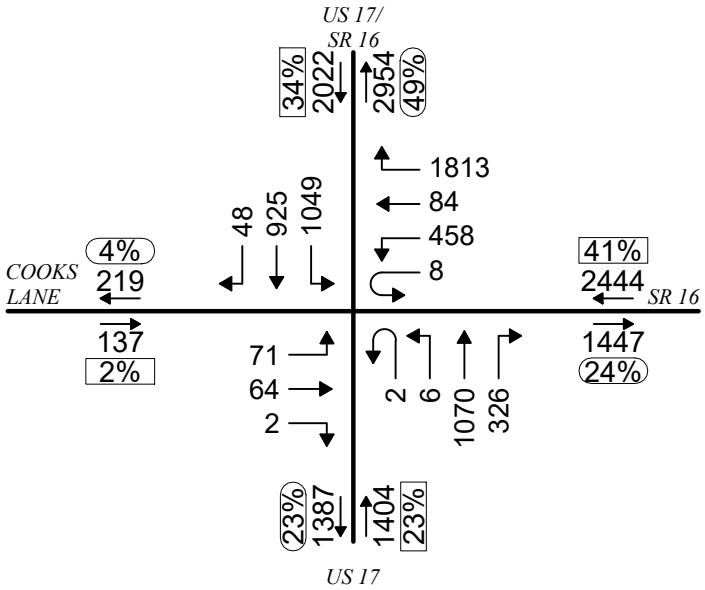


FIGURE 3

TRAFFIC
COUNTS

WEEKDAY PEAK PERIODS

Buckholz Traffic

E:\22-1805\CAD\FIG_03.DWG

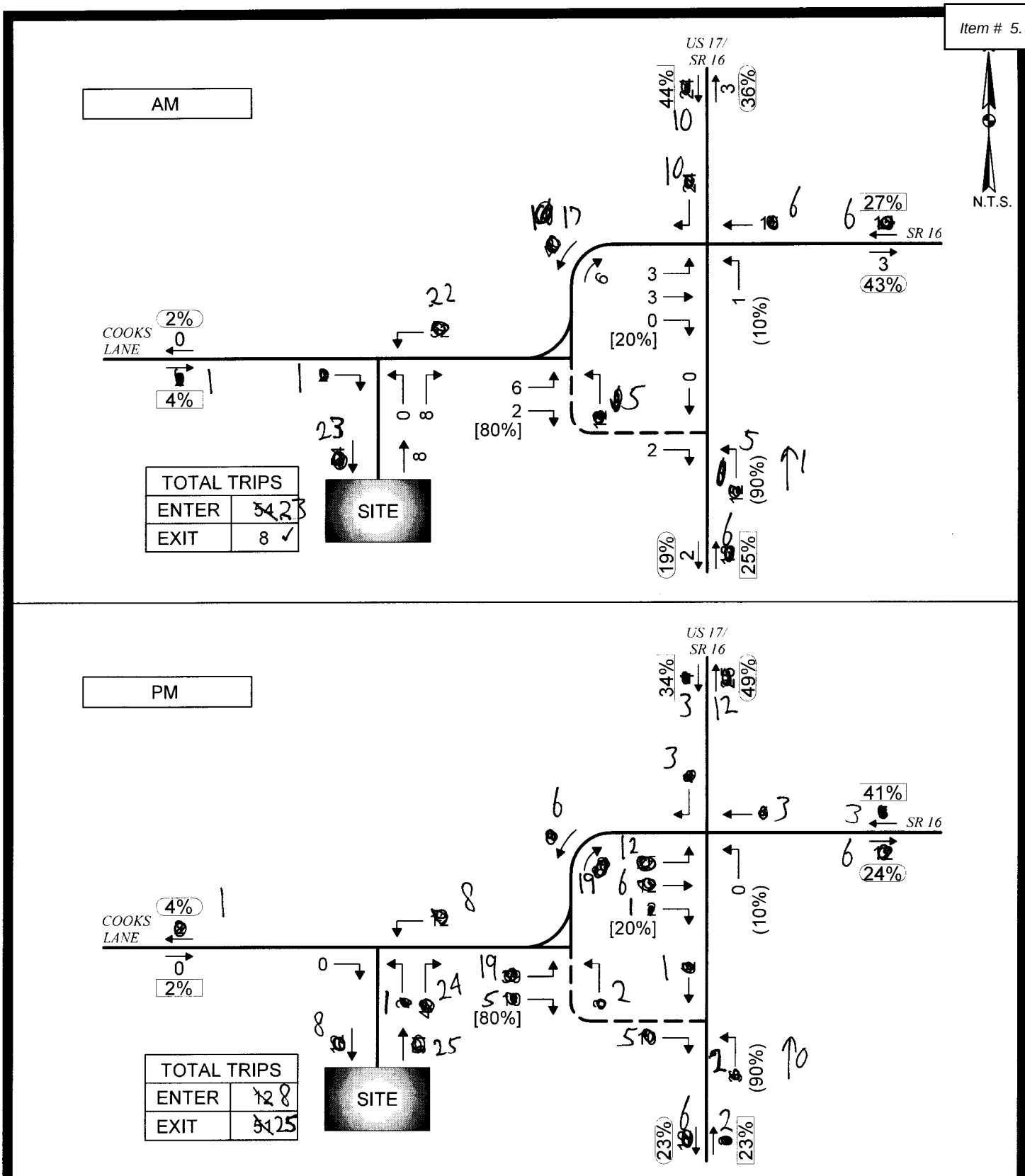


FIGURE 4

SITE TRAFFIC ASSIGNMENT

WEEKDAY PEAK HOURS

Buckholz Traffic

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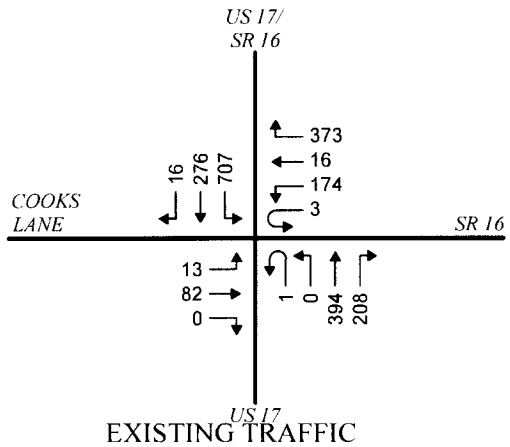
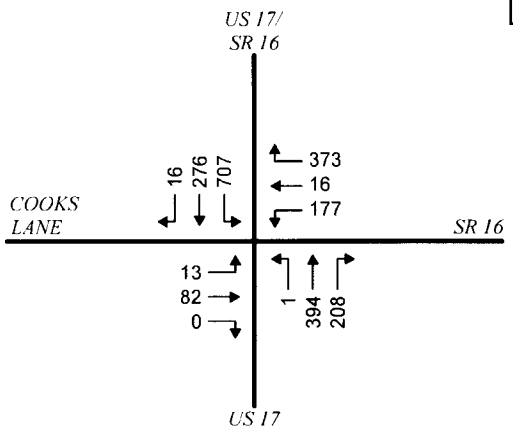
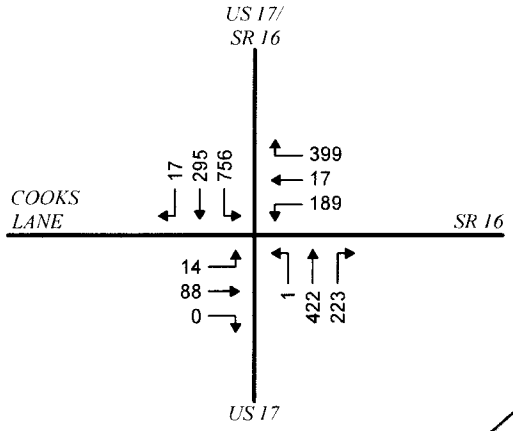


EXISTING TRAFFIC
12/15/22
6:45-7:45 AM

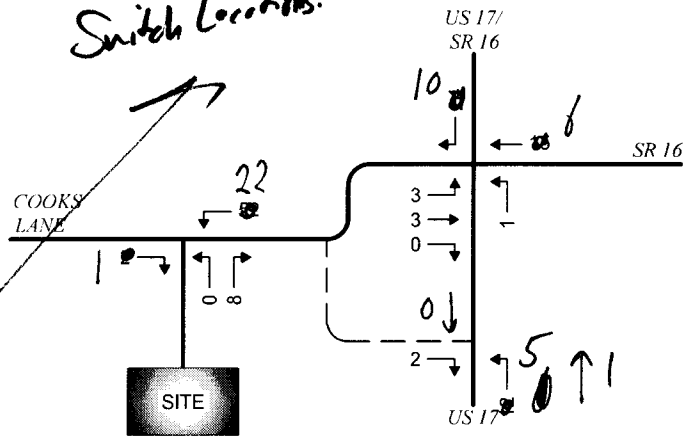


N.T.S.

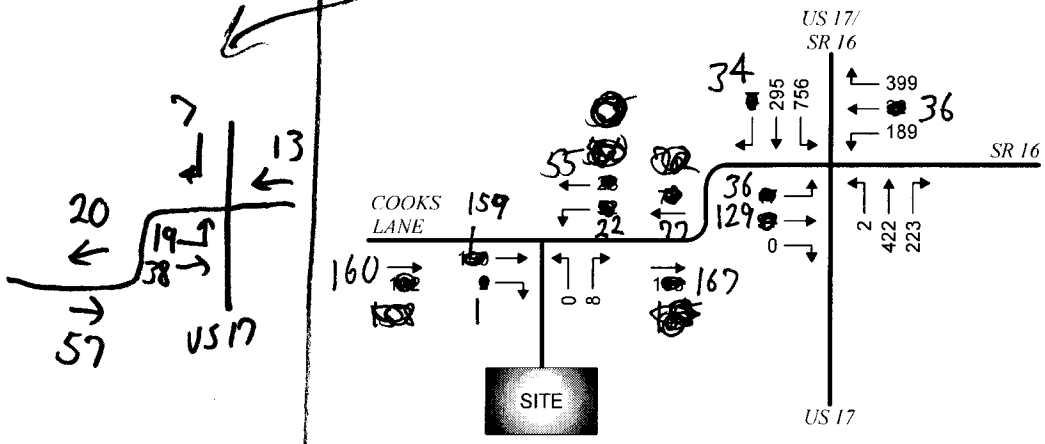
2022 SEASONALLY ADJUSTED TRAFFIC
FDOT SEASONAL CORRECTION FACTOR = 1.00



2026 NO BUILD TRAFFIC
AVERAGE ANNUAL GROWTH RATE = 1.8% (GE=1.07)



SITE TRAFFIC



2026 BUILD TRAFFIC

AYRSHIRE PUD
Phases I & II
TRAFFIC

Buckholz Traffic

FIGURE 5

2026 BUILD TRAFFIC
US 17 / SR 16

WEEKDAY AM PEAK HOUR

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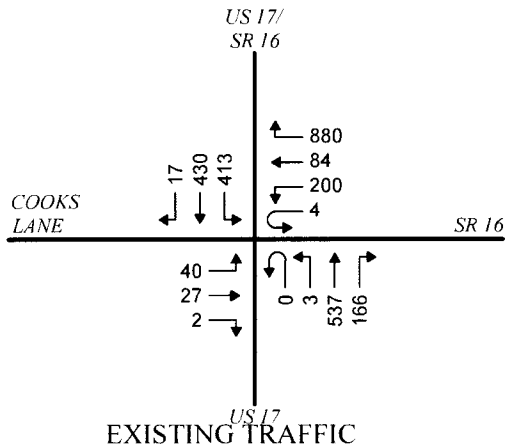
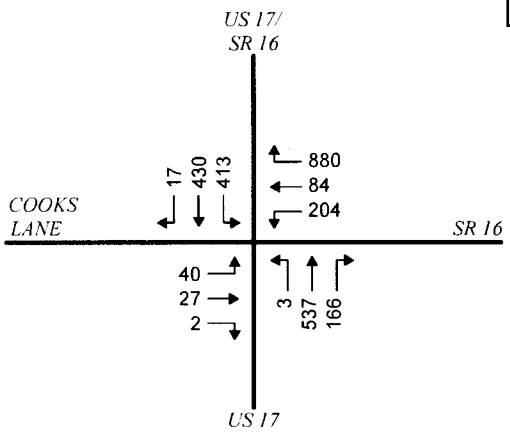
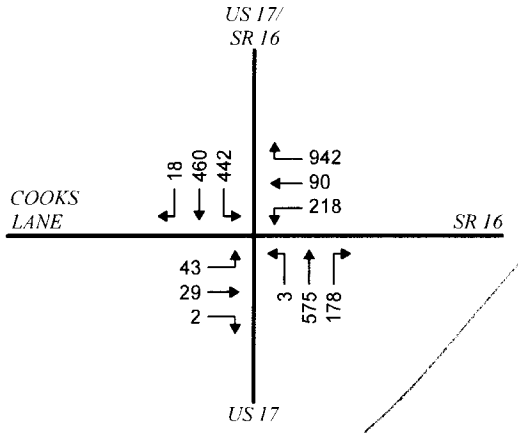


EXISTING TRAFFIC
12/12/22
4:30-5:30 PM



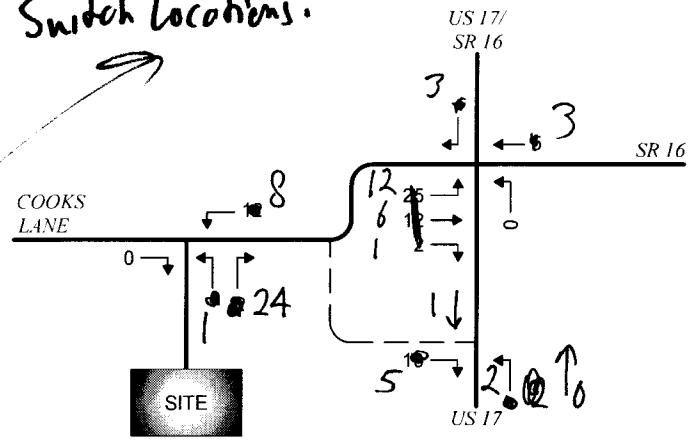
2022 SEASONALLY ADJUSTED TRAFFIC
FDOT SEASONAL CORRECTION FACTOR = 1.00

N.T.S.

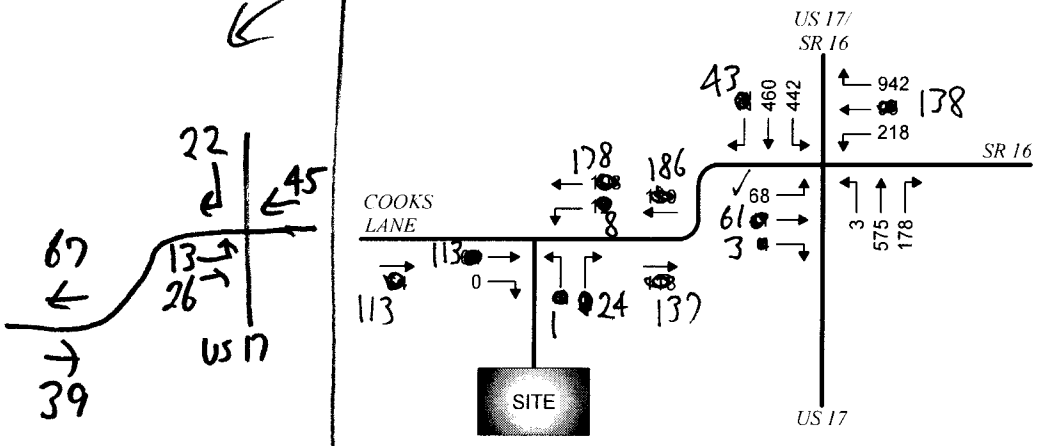


2026 NO BUILD TRAFFIC
AVERAGE ANNUAL GROWTH RATE = 1.8% (GF=1.07)

Switch Locations!



SITE TRAFFIC



2026 BUILD TRAFFIC

AYRSHIRE PUD
Phases I & II
TRAFFIC

Buckholz Traffic

FIGURE 6

2026 BUILD TRAFFIC
US 17 / SR 16

WEEKDAY PM PEAK HOUR

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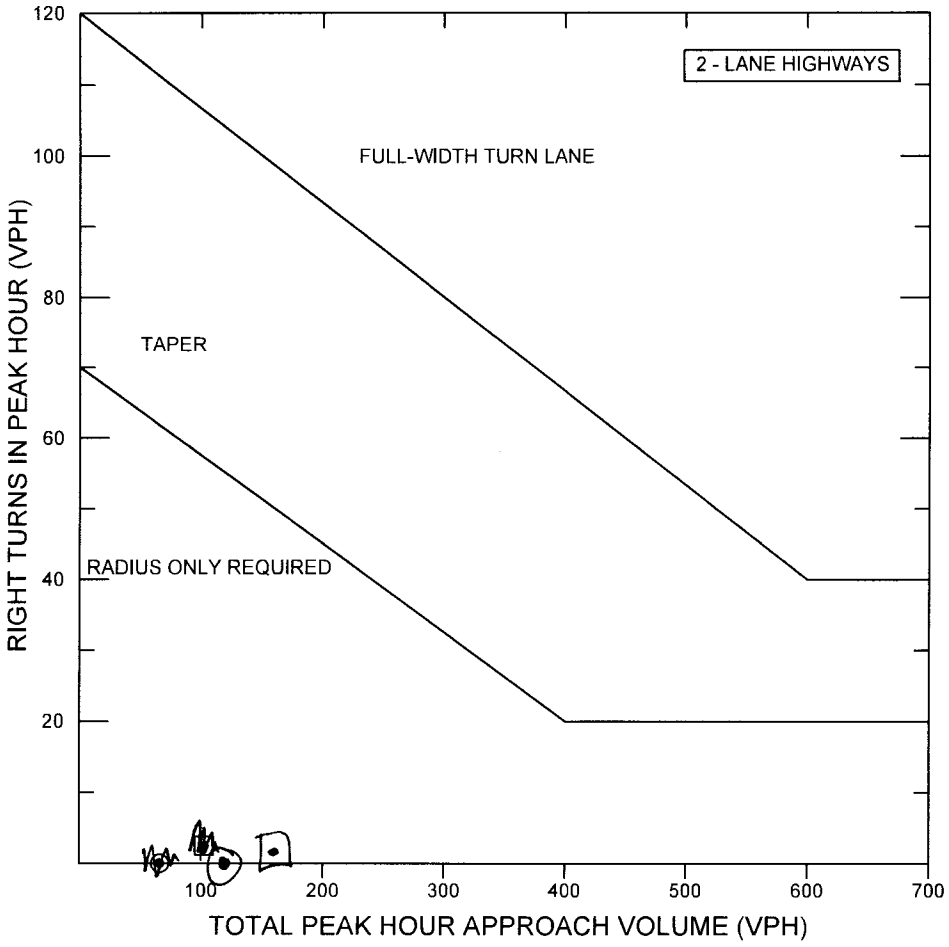
EASTBOUND COOKS LANE @ SITE DRIVEWAY



NOMOGRAPH FOR RIGHT TURN LANES

SOURCE: TRANSPORTATION RESEARCH BOARD NCHRP REPORT #279

☐ WEEKDAY AM PEAK HOUR

V_A	160
V_R	1

◉ WEEKDAY PM PEAK HOUR

V_A	113
V_R	0

NCHRP 420	
2 LANE	≤ 45 MPH

& 0 < 80 REQUIRED

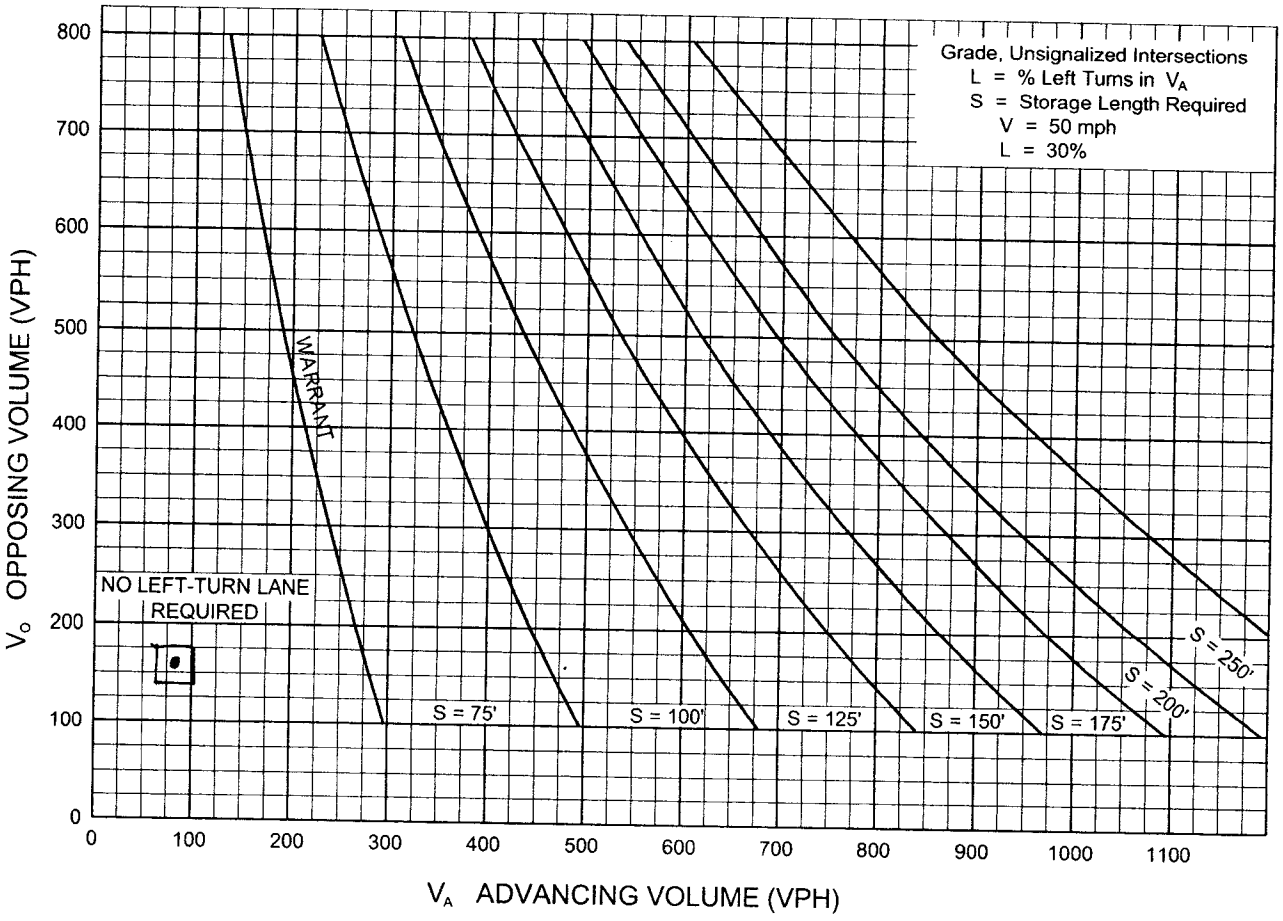
FIGURE 7

RIGHT TURN LANE ANALYSIS

2025 BUILD TRAFFIC

E:\22-1805\CAD\FIG_07.DWG

WESTBOUND COOKS LANE AT SITE DRIVEWAY



WARRANT FOR LEFT-TURN LANES ON TWO-LANE HIGHWAYS

☑ AM PEAK HOUR	⊙ PM PEAK HOUR
V_A = - 777	V_A = -
V_o = - 168	V_o = -
V_L = - 22	V_L = -
%LT = $\frac{V_L}{V_A}$ = 29 %	%LT = $\frac{V_L}{V_A}$ = __ %

FIGURE 8

LEFT TURN LANE ANALYSIS

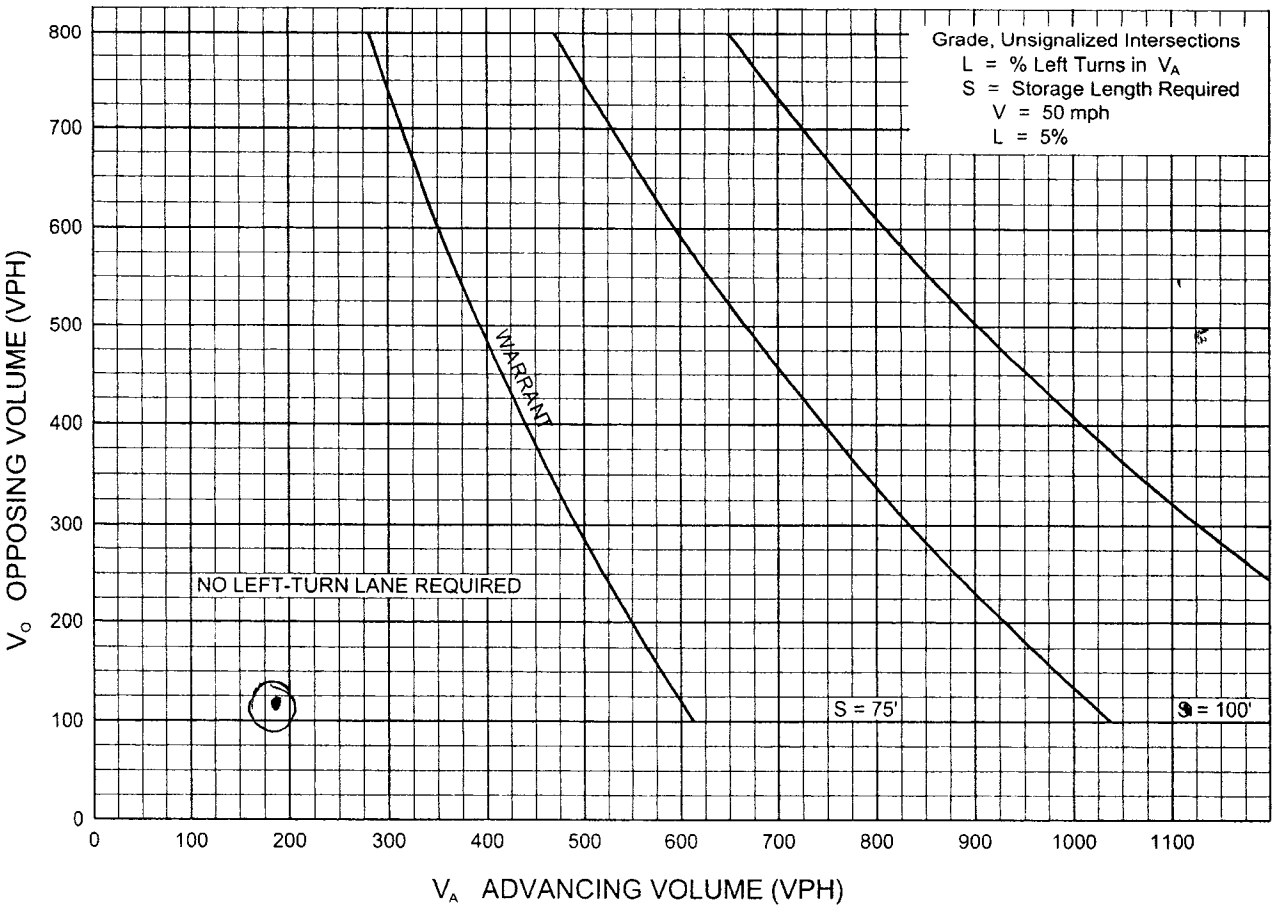
SOURCE: HARMELINK

2025 BUILD TRAFFIC

J:\SYM\WAR_LTL5.dwg Date: 10-27-15 T: 14: 04 By: AVDelacruz

Buckholz Traffic

WESTBOUND COOKS LANE AT SITE DRIVEWAY



WARRANT FOR LEFT-TURN LANES ON TWO-LANE HIGHWAYS

⊡ AM PEAK HOUR	◬ MIDDAY PEAK HOUR	⊙ PM PEAK HOUR
V_A = -	V_A = -	V_A = 186
V_O = -	V_O = -	V_O = 113
V_L = -	V_L = -	V_L = 8
%LT = $\frac{V_L}{V_A}$ = $\frac{-}{-}$ = 0.0%	%LT = $\frac{V_L}{V_A}$ = $\frac{-}{-}$ = 0.0%	%LT = $\frac{V_L}{V_A}$ = $\frac{8}{186}$ = 4%

FIGURE 9

LEFT TURN
LANE ANALYSIS

2025 BUILD TRAFFIC

SOURCE: HARMELINK

TABLE 1

TRIP GENERATION CALCULATIONS

WAREHOUSING

Land Use Code 150

T = Number of Vehicle Trip Ends

Size of Building = 26,000 gsf (X = 26)

TIME PERIOD	TOTAL TRIP GENERATION EQUATION	TOTAL TRIP ENDS	PERCENT ENTERING	PERCENT EXITING	TOTAL TRIP ENDS ENTERING	TOTAL TRIP ENDS EXITING
AVERAGE WEEKDAY						
Daily	T = 1.71 (X)	44	50%	50%	22	22
AM Peak Hour	T = 0.17 (X)	4	77%	23%	3	1
PM Peak Hour	T = 0.18 (X)	5	28%	72%	1	4

SOURCE: Institute of Transportation Engineers, "Trip Generation", 11th Edition (2021)

BUCKHOLZ TRAFFIC

TABLE 2

TRIP GENERATION CALCULATIONS

GENERAL OFFICE BUILDING

Land Use Code 710

T = Number of Vehicle Trip Ends

Size of Building = 5000 gsf (X = 5)

TIME PERIOD	TOTAL TRIP GENERATION EQUATION	TOTAL TRIP ENDS	PERCENT ENTERING	PERCENT EXITING	TOTAL TRIP ENDS ENTERING	TOTAL TRIP ENDS EXITING
AVERAGE WEEKDAY						
Daily	Ln(T) = 0.87 Ln(X) + 3.05	86	50%	50%	43	43
AM Peak Hour	Ln(T) = 0.86 Ln(X) + 1.16	13	88%	12%	11	2
PM Peak Hour	Ln(T) = 0.83 Ln(X) + 1.29	14	17%	83%	2	12

SOURCE: Institute of Transportation Engineers, "Trip Generation", 11th Edition (2021)

BUCKHOLZ TRAFFIC

TABLE 3
VAN UP-FITTER
TRIP GENERATION CALCULATIONS

TRIPS	On-Site Employees 5	Customers 5 per month	Package Delivery 12 per month	Vehicle Pick-Up/Drop-Off 5 per month	EXISTING TOTAL	Expected Percentage Increase	**FUTURE TOTAL**
Daily	5 x 4 = 20 10 ENTER, 10 EXIT	2 1 ENTER, 1 EXIT	2 1 ENTER, 1 EXIT	2 1 ENTER, 1 EXIT	22 11 ENTER, 11 EXIT	10'%	**24** **12 ENTER, 12 EXIT**
AM Peak	5 x 1 = 5 ENTER	0	0	0	5 5 ENTER, 0 EXIT	10'%	**6** **6 ENTER, 0 EXIT**
PM Peak	5 x 1 = 5 EXIT	0	0	0	5 0 ENTER, 5 EXIT	10'%	**6** **0 ENTER, 6 EXIT**

BUCKHOLZ TRAFFIC

TABLE 4
RIVER OAKS OUTDOOR
TRIP GENERATION CALCULATIONS

TRIPS	On-Site Employees 2	Customers 0	Package Delivery 5 per month	Company Vehicles 5 per day	EXISTING TOTAL	Expected Percentage Increase	**FUTURE TOTAL**
Daily	2 x 4 = 8 4 ENTER, 4 EXIT	0	2 1 ENTER, 1 EXIT	10 5 ENTER, 5 EXIT	20 10 ENTER, 10 EXIT	10'%	**22** **11 ENTER, 11 EXIT**
AM Peak	2 x 1 = 2 ENTER	0	0	4 EXIT	6 2 ENTER, 4 EXIT	10'%	**8** **3 ENTER, 5 EXIT**
PM Peak	2 x 1 = 2 EXIT	0	0	4 ENTER	6 4 ENTER, 2 EXIT	10'%	**8** **5 ENTER, 3 EXIT**

BUCKHOLZ TRAFFIC

TABLE 5

UNSIGNALIZED INTERSECTION CAPACITY RESULTS

COOKS LANE / SITE DRIVE

2026 BUILD CONDITIONS	WEEKDAY AM PEAK HOUR			
Movement	LOS	Delay	v/c Ratio	95th % Queue (vehicles)
Westbound Left Turn	A	7.6 sec/veh	0.02	1
Northbound Approach	A	9.1 sec/veh	0.01	1

2026 BUILD CONDITIONS	WEEKDAY PM PEAK HOUR			
Movement	LOS	Delay	v/c Ratio	95th % Queue (vehicles)
Westbound Left Turn	A	7.5 sec/veh	0.01	1
Northbound Approach	A	9.1 sec/veh	0.03	1

BUCKHOLZ TRAFFIC

TABLE 6
SUMMARY OF SIGNALIZED INTERSECTION CAPACITY RESULTS
US 17 / SR 16 / COOKS LANE

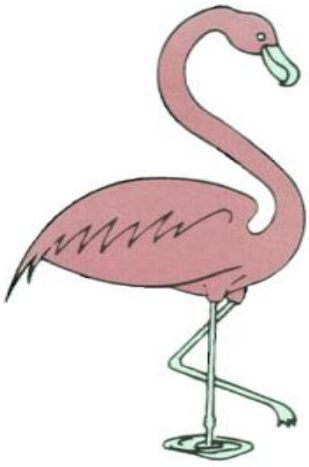
		EXISTING CONDITIONS				
	Highest v/c Ratio	Highest Queue Storage Ratio	Worst Movement Delay & LOS	Intersection Delay & LOS	Approach LOS	Cycle Length
AM PEAK HOUR	0.82 NBRT	0.99 NBRT	NBLT 168.5 sec/veh **LOS F**	30.8 sec/veh LOS C	NB/SB: D/C EB/WB: D/C	99 sec
PM PEAK HOUR	0.97 WBRT	0.52 NBRT	NBLT 106.3 sec/veh **LOS F**	37.9 sec/veh LOS D	NB/SB: D/C EB/WB: D	106 sec

		2026 BUILD CONDITIONS				
	Highest v/c Ratio	Highest Queue Storage Ratio	Worst Movement Delay & LOS	Intersection Delay & LOS	Approach LOS	Cycle Length
AM PEAK HOUR	0.82 SBLT	0.83 NBRT	NBLT 125.6 sec/veh **LOS F**	32.9 sec/veh LOS C	NB/SB: D/C EB/WB: D/C	105 sec
PM PEAK HOUR	**1.02** WBRT	0.95 EBT	NBLT 112.9 sec/veh **LOS F** WBRT 58.3 sec/veh **LOS F**	44.7 sec/veh LOS D	NB/SB: D/C EB/WB: D	117 sec

		2026 BUILD CONDITIONS – BALANCED TIMINGS				
	Highest v/c Ratio	Highest Queue Storage Ratio	Worst Movement Delay & LOS	Intersection Delay & LOS	Approach LOS	Cycle Length
AM PEAK HOUR	0.78 SBLT	**1.23** NBRT	WBLT 69.5 sec/veh **LOS E**	53.8 sec/veh LOS D	NB/SB: **E** EB/WB: **E**/D	193 sec
PM PEAK HOUR	0.99 WBRT	**1.07** EBT	NBT 55.4 sec/veh **LOS E**	50.0 sec/veh LOS D	NB/SB: D EB/WB: **E**/D	140 sec

APPENDIX A

SITE PLAN



LOCATION MAP

Legend

Proposed Location

N
W
E
S

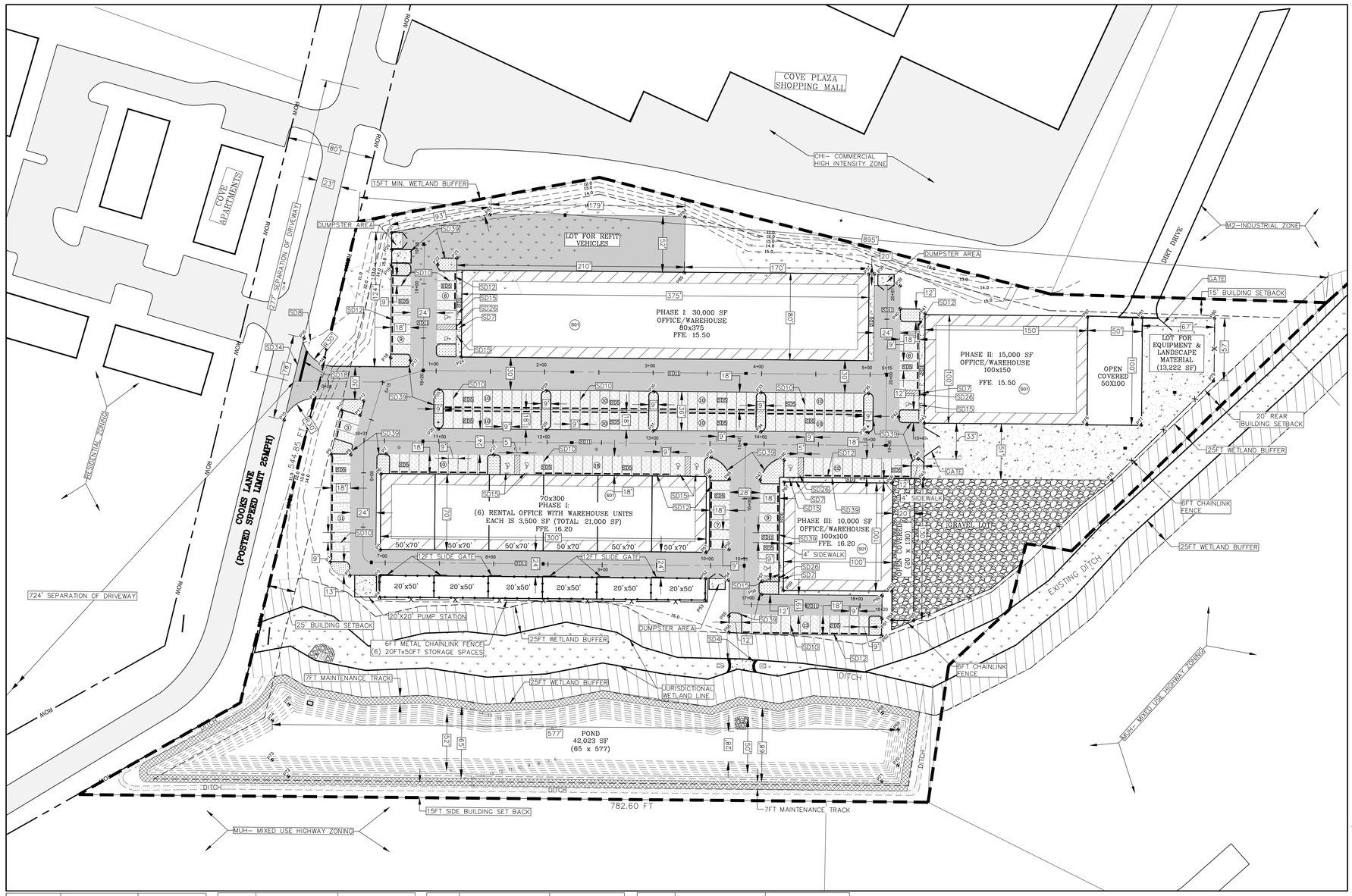
MAI ENGINEERING SERVICES, INC.

2510 U.S. Highway 1, Ste. D
St. Augustine, FL 32086
Ph: (904) 794-1760 • Fax: (904) 794-1768
E-mail: quoc@maiengineer.com

LOCATION MAP

1609 S ORANGE AVE.

GREEN COVE SPRINGS, FL.



GRAPHIC SCALE

50 0 50 100 200

(IN FEET)
1 inch = 50 ft.

SITE DETAILS

SD1	CONCRETE SIDEWALK DETAIL
SD4	18" STANDARD CURB & GUTTER (REVERSE PITCH)
SD5	PAVERS PARKING DETAIL
SD7	WHEELCHAIR RAMP IN SIDEWALK
SD8	STOP SIGN
SD9	WHEELCHAIR RAMP IN SIDEWALK AT CURB RETURN
SD10	PARKING PAINT STRIPPING
SD11	TYPICAL PAVEMENT SECTION
SD12	PRECAST CONCRETE WHEEL STOP
SD15	ACCESSIBLE PARKING SIGN
SD16	VALLEY CURB
SD18	STOP BAR
SD26	DETECTABLE WARNING DETAIL
SD34	CONNECTION TO EXISTING PAVEMENT
SD36	CONCRETE PAVEMENT SECTION
SD39	HEADER CURB
SD45	HEAVY PAVEMENT SECTION

SITE NOTES

S01 BUILDING – SEE ARCHITECTURAL PLANS (TBD BY OTHERS)

DEVELOPMENT DATA

MAX ALLOWABLE IMPERVIOUS COVERAGE: 70%
PROPOSED IMPERVIOUS COVERAGE: 49.6%
BUILDING SETBACK: FRONT 25FT, SIDE 15FT, REAR 20FT
ROAD DRIVEWAY CONNECTION POSTED SPEED LIMIT 25MPH
MINIMUM DRIVEWAY CONNECTION SPACING: 245FT.

TOTAL SITE AREA = 342,102SF = 7.84 ACRES
TOTAL PROPOSED IMPERVIOUS AREA = 161,811SF (INCLUDE BUILDING)
IMPERVIOUS COVERAGE = 47.30 %
TOTAL PROPOSED BUILDING AREA = 76,000SF
TOTAL PROPOSED CONCRETE AREA = 19,497SF
FAR = 14.9%

PHASE I:
PROPOSED BUILDING AREA: 51,000SF
(WAREHOUSE: 35,000SF; OFFICE: 16,000SF)
PROPOSED TOTAL PAVEMENT AREA: 62,733SF

PHASE II:
PROPOSED BUILDING AREA: 15,000SF
(WAREHOUSE: 10,000SF; OFFICE: 5,000SF)
PROPOSED TOTAL PAVEMENT AREA: 0SF

PHASE III:
PROPOSED BUILDING AREA: 10,000SF
(WAREHOUSE: 5,000SF; OFFICE: 5,000SF)
PROPOSED TOTAL PAVEMENT AREA: 1,806SF

GENERAL PROJECT INFORMATION

PARCEL #: 38-06-26-016564-002
ADDRESS: 1609 S ORANGE AVE.
FUTURE LAND USE: MUH-MIXED USE HIGHWAY
ZONING: MUH-MIXED USE HIGHWAY

STATEMENT OF USE: OFFICE AND INDUSTRIAL WAREHOUSE AND OFFICES.

PARCEL AREA: 8.88 ACRES

CURRENT LAND OWNER:
WILLIAM KRIEG
RIVER OAKS OUTDOOR, LLC
P.O. BOX 7902
JACKSONVILLE, FL 32238

DESIGN ENGINEER AGENT:
QUOC H. MAI, P.E. #64006
MAI ENGINEERING SERVICES, INC.
2510 US 1 S, SUITE D
ST. AUGUSTINE, FL 32086

GENERAL NOTES

1. ALL DIMENSIONS ARE LISTED TO THE EDGE OF PAVEMENT AND/OR FACE OF CURB.
2. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
3. SCREENING OF ALL MECHANICAL EQUPMENT SHALL BE IN ACCORDANCE WITH SJC LDC SEC.6.01.03.H.2. AND 6.06.04.B.9.
4. DUMPSTER/SOLID WASTE SCREENINGS STANDARDS SHALL BE IN ACCORDANCE WITH SJC LDC SEC 6.06.04.B.8.
5. SCREENING OF OUTDOOR STORAGE AREAS SHALL BE IN ACCORDANCE WITH SJC LDC SEC 6.06.04.B.7.

PARKING CALCULATIONS

PARKING REQUIREMENT PER CITY CODE:
OFFICE: 1/250SF
WAREHOUSE: 1/5,000SF

TOTAL PARKING REQUIRED = 114 SPACES
TOTAL PARKING PROVIDED = 186 SPACES
TOTAL ACCESSIBLE SPACES = 9 SPACES

PHASE I:
OFFICE PARKING REQUIRED = 16,000/250 = 64 SPACES
WAREHOUSE PARKING REQUIRED = 35,000/5,000 = 7 SPACES
TOTAL PARKING REQUIRED = 71 SPACES

PHASE II:
OFFICE PARKING REQUIRED = 5,000/250 = 20 SPACES
WAREHOUSE PARKING REQUIRED = 10,000/5,000 = 2 SPACES
TOTAL 2 PHASES REQUIRED = 22 SPACES

PHASE III:
OFFICE PARKING REQUIRED = 5,000/250 = 20 SPACES
WAREHOUSE PARKING REQUIRED = 5,000/5,000 = 1 SPACES
TOTAL 3 PHASES REQUIRED = 21 SPACES

CONTROL POINTS	NORTHING	EASTING
P1	2053825.617'	441068.556'
P2	2053803.647'	441069.5256'
P3	2053781.566'	441086.3012'
P4	2053769.493'	441070.3665'
P5	2053795.889'	441105.5487'
P6	2053838.148'	441161.3206'
P7	2053845.377'	441178.9383'
P8	2053871.042'	441158.3004'
P9	2053885.383'	441147.4339'
P10	2053902.706'	441185.4675'
P11	2053886.526'	441192.3233'
P12	2053892.066'	441204.7332'
P13	2053928.702'	441178.3726'
P14	2053941.648'	441207.3143'
P15	2053939.184'	441146.2791'
P16	2053970.784'	441217.1793'
P17	2053880.379'	441260.6959'
P18	2053896.435'	441251.6423'
P19	2053948.00'	441318.6799'
P20	2053956.288'	441331.0936'
P21	2053966.203'	441343.2669'
P22	2053920.019'	441352.290'
P23	2053901.236'	441357.5684'
P24	2053850.863'	441299.2665'
P25	2053846.498'	441259.3833'
P26	2053824.751'	441230.6171'
P27	2053766.429'	441318.9023'
P28	2053767.65'	441319.1244'
P29	2053745.841'	441290.4042'
P30	2053688.741'	441378.9117'
P31	2053666.963'	441350.1685'
P32	2053606.567'	441359.2422'
P33	2053609.893'	441438.6527'
P34	2053587.957'	441410.0286'
P35	2053531.014'	441498.4169'
P36	2053509.221'	441469.6853'
P37	2053600.195'	441588.9686'
P38	2053580.517'	441567.6369'
P39	2053565.24'	441590.9545'
P40	2053552.173'	441574.0863'
P41	2053531.546'	441584.4591'
P42	2053492.224'	441494.1761'
P43	2053470.297'	441503.9465'
P44	2053454.809'	441474.4115'
P45	2053439.226'	441462.9688'
P46	2053551.899'	441398.1857'
P47	2053558.103'	441370.263'
P48	2053580.95'	441353.2832'
P49	2053596.50'	441344.4181'
P50	2053541.742'	441301.9651'
P51	2053556.867'	441286.657'
P52	2053542.529'	441267.4212'
P53	2053530.455'	441251.4863'
P54	2053524.986'	441278.9825'
P55	2053504.195'	441253.3578'
P56	2053495.11'	441241.2275'
P57	2053499.539'	441297.2689'
P58	2053492.585'	441287.4821'
P59	2053478.94'	441302.6199'
P60	2053403.919'	441354.4416'
P61	2053391.155'	441337.5718'
P62	2053381.763'	441325.1591'
P63	2053399.274'	441362.9827'
P64	2053383.053'	441341.5725'
P65	2053366.966'	441353.7605'
P66	2053460.31'	441441.8898'
P67	2053539.183'	441382.1271'
P68	2053337.854'	441268.7599'
P69	2053316.924'	441265.807'
P70	2053297.001'	441239.5135'
P71	2053299.897'	441218.507'
P72	2053735.694'	440888.3013'
P73	2053756.701'	440891.1971'
P74	2053778.717'	440920.2538'
P75	2053775.746'	440941.3175'
P76	2053350.958'	441594.5376'
P77	2053310.866'	441624.7254'
P78	2053301.423'	441568.0198'
P79	2053283.074'	441697.6143'
P80	2053317.502'	441744.0686'
P81	2053370.731'	441703.7387'
P82	2053410.845'	441673.1995'
P83	2053904.571'	441412.0847'
P84	2053761.217'	441520.0993'
P85	2053735.642'	441486.3443'

2510 US 1 SOUTH SUITE D
ST. AUGUSTINE, FL 32086
PHONE (904)794-1760
FAX (904)794-1768
quoc@maiengineer.com

MAI ENGINEERING SERVICES, INC.

LICENSED ENGINEER
QUOC H. MAI
FL.#64006 CA#28162

REVISIONS

#	DESCRIPTION	DATE
1		
2		
3		
4		
5		

SHEET TITLE: SITE PLAN

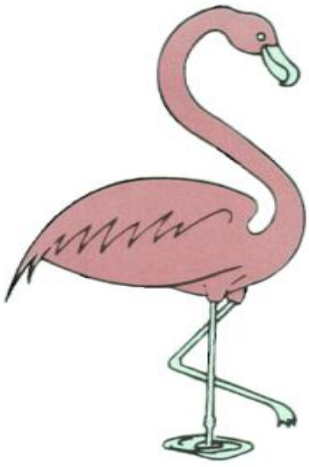
RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA

PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DSGN BY:	QHM
DWG BY:	GMG
CHK BY:	QHM
DATE:	12/9/2022
JOB No.:	1369
SHEET No.:	7

APPENDIX B

TURNING MOVEMENT COUNTS



JW BUCKHOLZ TRAFFIC ENGINEERING INC.

DAY: THURSDAY
DATE: 12/15/22
WEATHER: CLOUDY & LT RAIN
BEGIN TIME (MILITARY): 06:30 Hrs

MANUAL TURNING MOVEMENTS COUNT
US 17 @ SR 16/COOKS LANE
CLAY COUNTY, FLORIDA

Site Code
Start Dat
File I.D. : 12152203
Page : 1

AUTOMOBILES, COMMERCIAL VEHICLES

	US 17 From North				SR 16 From East				US 17 From South				COOKS LANE From West				
	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Total
Date 12/15/22																	
06:30	170	65	1	0	28	2	89	5	0	83	64	0	3	25	0	0	535
06:45	194	83	2	0	37	5	76	0	0	98	73	0	2	20	0	0	590
07:00	186	47	4	0	44	5	75	1	0	111	51	0	5	27	0	0	556
07:15	180	77	7	0	40	3	114	2	0	85	42	1	3	25	0	0	579
Hr Total	730	272	14	0	149	15	354	8	0	377	230	1	13	97	0	0	2260
07:30	147	69	3	0	53	3	108	0	0	100	42	0	3	10	0	0	538
07:45	166	78	1	0	39	8	105	1	0	86	34	0	7	8	1	0	534
08:00	139	65	5	0	32	2	113	1	0	94	34	0	7	9	2	0	503
08:15	134	56	4	0	24	2	126	1	2	75	24	0	6	11	1	0	466
Hr Total	586	268	13	0	148	15	452	3	2	355	134	0	23	38	4	0	2041
TOTAL	1316	540	27	0	297	30	806	11	2	732	364	1	36	135	4	0	4301

Peak Hour Analysis By Entire Intersection for the Period: 06:45 to 07:45 on 12/15/22

Peak start	06:45				06:45				06:45				06:45				
Volume	707	276	16	0	174	16	373	3	0	394	208	1	13	82	0	0	
Percent	71%	28%	2%	0%	31%	3%	66%	1%	0%	65%	34%	0%	14%	86%	0%	0%	
Pk total	999				566				603				95				
Highest	06:45				07:30				06:45				07:00				
Volume	194	83	2	0	53	3	108	0	0	98	73	0	5	27	0	0	
Hi total	279				164				171				32				
PHF	.90				.86				.88				.74				

JW BUCKHOLZ TRAFFIC ENGINEERING INC.

DAY: THURSDAY
DATE: 12/15/22
WEATHER: CLOUDY & LT RAIN
BEGIN TIME (MILITARY): 06:30 Hrs

MANUAL TURNING MOVEMENTS COUNT
US 17 @ SR 16/COOKS LANE
CLAY COUNTY, FLORIDA

Site Code
Start Dat
File I.D. : 12152203
Page : 1

AUTOMOBILES

	US 17 From North				SR 16 From East				US 17 From South				COOKS LANE From West				
	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Total
Date 12/15/22																	
06:30	153	59	0	0	24	2	84	5	0	75	55	0	3	23	0	0	483
06:45	184	72	1	0	30	5	71	0	0	87	61	0	2	20	0	0	533
07:00	166	42	4	0	29	2	72	1	0	103	39	0	5	26	0	0	489
07:15	161	71	6	0	31	3	106	2	0	79	30	1	3	24	0	0	517
Hr Total	664	244	11	0	114	12	333	8	0	344	185	1	13	93	0	0	2022
07:30	129	54	2	0	47	3	91	0	0	91	35	0	3	9	0	0	464
07:45	148	71	1	0	33	7	93	1	0	74	24	0	6	7	1	0	466
08:00	128	47	5	0	24	2	95	0	0	80	32	0	6	7	1	0	427
08:15	118	49	3	0	21	2	108	1	2	63	15	0	6	11	0	0	399
Hr Total	523	221	11	0	125	14	387	2	2	308	106	0	21	34	2	0	1756
TOTAL	1187	465	22	0	239	26	720	10	2	652	291	1	34	127	2	0	3778

Peak Hour Analysis By Entire Intersection for the Period: 06:45 to 07:45 on 12/15/22

Peak start	06:45				06:45				06:45				06:45				
Volume	640	239	13	0	137	13	340	3	0	360	165	1	13	79	0	0	
Percent	72%	27%	1%	0%	28%	3%	69%	1%	0%	68%	31%	0%	14%	86%	0%	0%	
Pk total	892				493				526				92				
Highest	06:45				07:15				06:45				07:00				
Volume	184	72	1	0	31	3	106	2	0	87	61	0	5	26	0	0	
Hi total	257				142				148				31				
PHF	.87				.87				.89				.74				

JW BUCKHOLZ TRAFFIC ENGINEERING INC.

DAY: THURSDAY
DATE: 12/15/22
WEATHER: CLOUDY & LT RAIN
BEGIN TIME (MILITARY): 06:30 Hrs

MANUAL TURNING MOVEMENTS COUNT
US 17 @ SR 16/COOKS LANE
CLAY COUNTY, FLORIDA

Site Code
Start Dat
File I.D. : 12152203
Page : 1

COMMERCIAL VEHICLES

	US 17 From North				SR 16 From East				US 17 From South				COOKS LANE From West				
	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Total
Date 12/15/22																	
06:30	17	6	1	0	4	0	5	0	0	8	9	0	0	2	0	0	52
06:45	10	11	1	0	7	0	5	0	0	11	12	0	0	0	0	0	57
07:00	20	5	0	0	15	3	3	0	0	8	12	0	0	1	0	0	67
07:15	19	6	1	0	9	0	8	0	0	6	12	0	0	1	0	0	62
Hr Total	66	28	3	0	35	3	21	0	0	33	45	0	0	4	0	0	238
07:30	18	15	1	0	6	0	17	0	0	9	7	0	0	1	0	0	74
07:45	18	7	0	0	6	1	12	0	0	12	10	0	1	1	0	0	68
08:00	11	18	0	0	8	0	18	1	0	14	2	0	1	2	1	0	76
08:15	16	7	1	0	3	0	18	0	0	12	9	0	0	0	1	0	67
Hr Total	63	47	2	0	23	1	65	1	0	47	28	0	2	4	2	0	285
TOTAL	129	75	5	0	58	4	86	1	0	80	73	0	2	8	2	0	523

Peak Hour Analysis By Entire Intersection for the Period: 06:45 to 07:45 on 12/15/22

Peak start	06:45				06:45				06:45				06:45				
Volume	67	37	3	0	37	3	33	0	0	34	43	0	0	3	0	0	
Percent	63%	35%	3%	0%	51%	4%	45%	0%	0%	44%	56%	0%	0%	100%	0%	0%	
Pk total	107				73				77				3				
Highest	07:30				07:30				06:45				07:00				
Volume	18	15	1	0	6	0	17	0	0	11	12	0	0	1	0	0	
Hi total	34				23				23				1				
PHF	.79				.79				.84				.75				

JW BUCKHOLZ TRAFFIC ENGINEERING INC.

DAY: THURSDAY
DATE: 12/15/22
WEATHER: CLOUDY & LT RAIN
BEGIN TIME (MILITARY): 06:30 Hrs

MANUAL TURNING MOVEMENTS COUNT
US 17 @ SR 16/COOKS LANE
CLAY COUNTY, FLORIDA

Site Code
Start Dat
File I.D. : 12152203
Page : 1

PEDESTRIAN & BICYCLES

	US 17 From North				SR 16 From East				US 17 From South				COOKS LANE From West				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 12/15/22																	
06:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
06:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1

Peak Hour Analysis By Entire Intersection for the Period: 06:45 to 07:45 on 12/15/22

Peak start	06:45				06:45				06:45				06:45				
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Percent	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Pk total	0				0				0				0				
Highest	06:30				06:30				06:30				06:30				
Volume	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
Hi total	0				0				0				0				
PHF	.0				.0				.0				.0				

JW BUCKHOLZ TRAFFIC ENGINEERING INC.

DAY: MONDAY
DATE: 12/12/22
WEATHER: CLEAR & DRY
BEGIN TIME (MILITARY): 15:45 Hrs

MANUAL TURNING MOVEMENTS COUNT
US 17 @ SR 16/COOKS LANE
CLAY COUNTY, FLORIDA

Site Code
Start Dat
File I.D. : 12122203
Page : 1

AUTOMOBILES, COMMERCIAL VEHICLES

	US 17 From North				SR 16 From East				US 17 From South				COOKS LANE From West				
	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Total
Date 12/12/22																	
15:45	119	109	8	0	48	12	188	1	0	109	40	2	5	8	0	0	649
16:00	114	101	9	0	56	16	194	0	2	102	26	0	7	5	0	0	632
16:15	112	94	12	0	60	23	180	1	1	105	28	0	8	13	0	0	637
16:30	114	112	2	0	50	20	199	1	1	164	41	0	13	4	1	0	722
Hr Total	459	416	31	0	214	71	761	3	4	480	135	2	33	30	1	0	2640
16:45	148	111	5	0	40	15	222	1	1	99	47	0	8	11	0	0	708
17:00	139	108	4	0	59	22	244	2	1	151	45	0	9	3	0	0	787
17:15	112	99	6	0	51	27	215	0	0	123	33	0	10	9	1	0	686
17:30	122	98	1	0	53	20	197	0	0	103	30	0	7	4	0	0	635
Hr Total	521	416	16	0	203	84	878	3	2	476	155	0	34	27	1	0	2816
17:45	69	93	1	0	41	10	174	2	0	114	36	0	4	7	0	0	551
Hr Total	69	93	1	0	41	10	174	2	0	114	36	0	4	7	0	0	551
TOTAL	1049	925	48	0	458	165	1813	8	6	1070	326	2	71	64	2	0	6007

Peak Hour Analysis By Entire Intersection for the Period: 16:30 to 17:30 on 12/12/22

Peak start	16:30				16:30				16:30				16:30				
Volume	513	430	17	0	200	84	880	4	3	537	166	0	40	27	2	0	
Percent	53%	45%	2%	0%	17%	7%	75%	0%	0%	76%	24%	0%	58%	39%	3%	0%	
Pk total	960				1168				706				69				
Highest	16:45				17:00				16:30				17:15				
Volume	148	111	5	0	59	22	244	2	1	164	41	0	10	9	1	0	
Hi total	264				327				206				20				
PHF	.91				.89				.86				.86				

JW BUCKHOLZ TRAFFIC ENGINEERING INC.

DAY: MONDAY
DATE: 12/12/22
WEATHER: CLEAR & DRY
BEGIN TIME (MILITARY): 15:45 Hrs

MANUAL TURNING MOVEMENTS COUNT
US 17 @ SR 16/COOKS LANE
CLAY COUNTY, FLORIDA

Site Code
Start Dat
File I.D. : 12122203
Page : 1

Item # 5.

AUTOMOBILES

	US 17 From North				SR 16 From East				US 17 From South				COOKS LANE From West				
	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Total
Date 12/12/22																	
15:45	112	104	8	0	36	10	166	1	0	99	36	2	5	6	0	0	585
16:00	103	90	9	0	44	11	173	0	2	91	24	0	7	5	0	0	559
16:15	108	88	12	0	49	21	164	1	1	93	25	0	8	13	0	0	583
16:30	109	105	2	0	42	17	182	1	1	153	38	0	9	3	1	0	663
Hr Total	432	387	31	0	171	59	685	3	4	436	123	2	29	27	1	0	2390
16:45	140	104	4	0	38	12	200	1	1	88	40	0	8	11	0	0	647
17:00	135	102	4	0	51	21	225	2	1	137	43	0	8	3	0	0	732
17:15	108	93	6	0	48	26	202	0	0	114	32	0	10	7	1	0	647
17:30	117	90	1	0	52	19	192	0	0	98	29	0	7	4	0	0	609
Hr Total	500	389	15	0	189	78	819	3	2	437	144	0	33	25	1	0	2635
17:45	65	86	1	0	39	10	162	2	0	103	33	0	4	7	0	0	512
Hr Total	65	86	1	0	39	10	162	2	0	103	33	0	4	7	0	0	512
TOTAL	997	862	47	0	399	147	1666	8	6	976	300	2	66	59	2	0	5537

Peak Hour Analysis By Entire Intersection for the Period: 16:30 to 17:30 on 12/12/22

Peak start	16:30				16:30				16:30				16:30				
Volume	492	404	16	0	179	76	809	4	3	492	153	0	35	24	2	0	
Percent	54%	44%	2%	0%	17%	7%	76%	0%	0%	76%	24%	0%	57%	39%	3%	0%	
Pk total	912				1068				648				61				
Highest	16:45				17:00				16:30				16:45				
Volume	140	104	4	0	51	21	225	2	1	153	38	0	8	11	0	0	
Hi total	248				299				192				19				
PHF	.92				.89				.84				.80				

JW BUCKHOLZ TRAFFIC ENGINEERING INC.

DAY: MONDAY
DATE: 12/12/22
WEATHER: CLEAR & DRY
BEGIN TIME (MILITARY): 15:45 Hrs

MANUAL TURNING MOVEMENTS COUNT
US 17 @ SR 16/COOKS LANE
CLAY COUNTY, FLORIDA

Site Code
Start Dat
File I.D. : 12122203
Page : 1

COMMERCIAL VEHICLES

	US 17 From North				SR 16 From East				US 17 From South				COOKS LANE From West				
	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Left	Thru	Right	U-TURN	Total
Date 12/12/22																	
15:45	7	5	0	0	12	2	22	0	0	10	4	0	0	2	0	0	64
16:00	11	11	0	0	12	5	21	0	0	11	2	0	0	0	0	0	73
16:15	4	6	0	0	11	2	16	0	0	12	3	0	0	0	0	0	54
16:30	5	7	0	0	8	3	17	0	0	11	3	0	4	1	0	0	59
Hr Total	27	29	0	0	43	12	76	0	0	44	12	0	4	3	0	0	250
16:45	8	7	1	0	2	3	22	0	0	11	7	0	0	0	0	0	61
17:00	4	6	0	0	8	1	19	0	0	14	2	0	1	0	0	0	55
17:15	4	6	0	0	3	1	13	0	0	9	1	0	0	2	0	0	39
17:30	5	8	0	0	1	1	5	0	0	5	1	0	0	0	0	0	26
Hr Total	21	27	1	0	14	6	59	0	0	39	11	0	1	2	0	0	181
17:45	4	7	0	0	2	0	12	0	0	11	3	0	0	0	0	0	39
Hr Total	4	7	0	0	2	0	12	0	0	11	3	0	0	0	0	0	39
TOTAL	52	63	1	0	59	18	147	0	0	94	26	0	5	5	0	0	470

Peak Hour Analysis By Entire Intersection for the Period: 16:30 to 17:30 on 12/12/22

Peak start	16:30				16:30				16:30				16:30				
Volume	21	26	1	0	21	8	71	0	0	45	13	0	5	3	0	0	
Percent	44%	54%	2%	0%	21%	8%	71%	0%	0%	78%	22%	0%	62%	38%	0%	0%	
Pk total	48				100				58				8				
Highest	16:45				16:30				16:45				16:30				
Volume	8	7	1	0	8	3	17	0	0	11	7	0	4	1	0	0	
Hi total	16				28				18				5				
PHF	.75				.89				.81				.40				

JW BUCKHOLZ TRAFFIC ENGINEERING INC.

DAY: MONDAY
DATE: 12/12/22
WEATHER: CLEAR & DRY
BEGIN TIME (MILITARY): 15:45 Hrs

MANUAL TURNING MOVEMENTS COUNT
US 17 @ SR 16/COOKS LANE
CLAY COUNTY, FLORIDA

Site Code
Start Dat
File I.D. : 12122203
Page : 1

PEDESTRIAN & BICYCLES

	US 17 From North				SR 16 From East				US 17 From South				COOKS LANE From West				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 12/12/22																	
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hr Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2

Peak Hour Analysis By Entire Intersection for the Period: 16:30 to 17:30 on 12/12/22

Peak start	16:30				16:30				16:30				16:30				
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Percent	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Pk total	0				0				0				0				
Highest	15:45				15:45				15:45				15:45				
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hi total	0				0				0				0				
PHF	.0				.0				.0				.0				

APPENDIX C

FDOT TRAFFIC DATA

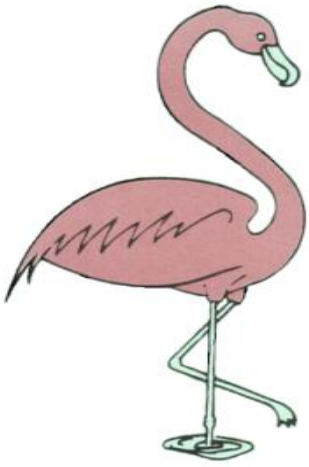
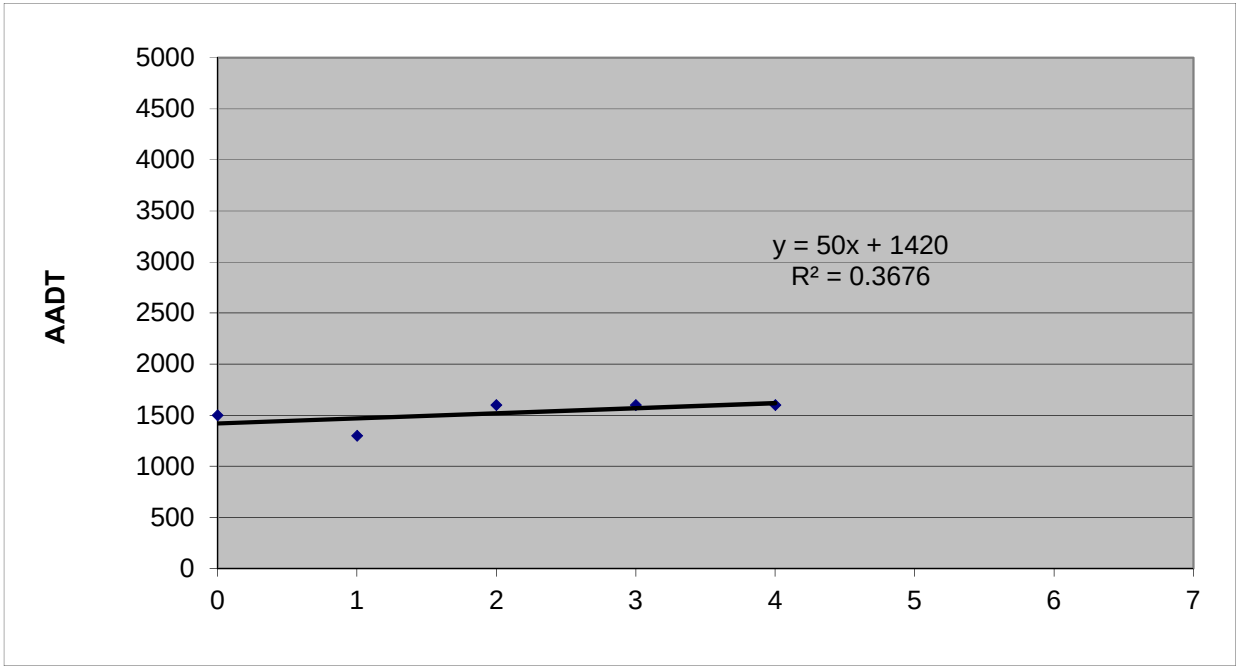


TABLE C-1
LINEAR REGRESSION ANALYSIS

Cooks Lane, West of US 17

Year	X	Actual AADT (Y)	**Predicted AADT**
2017	0	1500	**1420**
2018	1	1300	1470
2019	2	1600	1520
2020	3	1600	1570
2021	4	1600	1620
2022	5		1670
2023	6		1720
2024	7		**1770**

i = 3.2%



BUCKHOLZ TRAFFIC

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 71 - CLAY

SITE: 9115 - GREEN COVE AVE. .1 MI. W. OF US 17

YEAR	AADT	DIRECTION 1		DIRECTION 2		*K FACTOR	D FACTOR	T FACTOR
2021	1600 C	E	0	W	0	9.00	53.50	1.40
2020	1600 C	E	0	W	0	9.00	54.50	1.30
2019	1600 C	E	0	W	0	9.00	54.10	1.30
2018	1300 C	E	0	W	0	9.00	54.20	1.20
2017	1500 C	E	0	W	0	9.00	54.50	1.10
2016	1400 C	E	0	W	0	9.00	54.30	1.70
2015	1300 C	E	0	W	0	9.00	54.50	1.40
2014	1100 C	E		W		9.00	54.50	1.60
2013	1300 S		0		0	9.00	55.10	1.50
2012	1300 F		0		0	9.00	54.60	2.00
2011	1300 C	E	0	W	0	9.00	54.70	1.50

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

COUNTY: 71
STATION: 9115
DESCRIPTION: GREEN COVE AVE. .1 MI. W. OF US 17
START DATE: 11/09/2021
START TIME: 0000

DIRECTION: B

TIME	1ST	2ND	3RD	4TH	TOTAL
0000	0	3	0	0	3
0100	1	1	1	0	3
0200	2	1	0	1	4
0300	1	1	1	3	6
0400	1	8	10	9	28
0500	6	6	9	21	42
0600	29	43	43	50	165
0700	46	38	35	26	145
0800	41	16	20	31	108
0900	31	16	16	15	78
1000	14	16	17	23	70
1100	24	22	24	18	88
1200	27	18	23	23	91
1300	15	9	17	23	64
1400	16	13	30	22	81
1500	22	24	43	34	123
1600	37	43	49	39	168
1700	55	35	40	31	161
1800	27	24	26	14	91
1900	14	9	9	11	43
2000	12	4	11	5	32
2100	3	6	4	7	20
2200	2	4	3	4	13
2300	4	2	3	2	11
24-HOUR TOTALS:					1638

PEAK VOLUME INFORMATION

	HOUR	VOLUME
A.M.	645	169
P.M.	1615	186
DAILY	1615	186

GENERATED BY SPS 5.0.57P

TABLE C-2
LINEAR REGRESSION ANALYSIS

SR 16, East of US 17

Year	X	Actual AADT (Y)	**Predicted AADT**
2017	0	18300	**17920**
2018	1	18300	18160
2019	2	17800	18400
2020	3	17900	18640
2021	4	19700	18880
2022	5		19120
2023	6		19360
2024	7		**19600**

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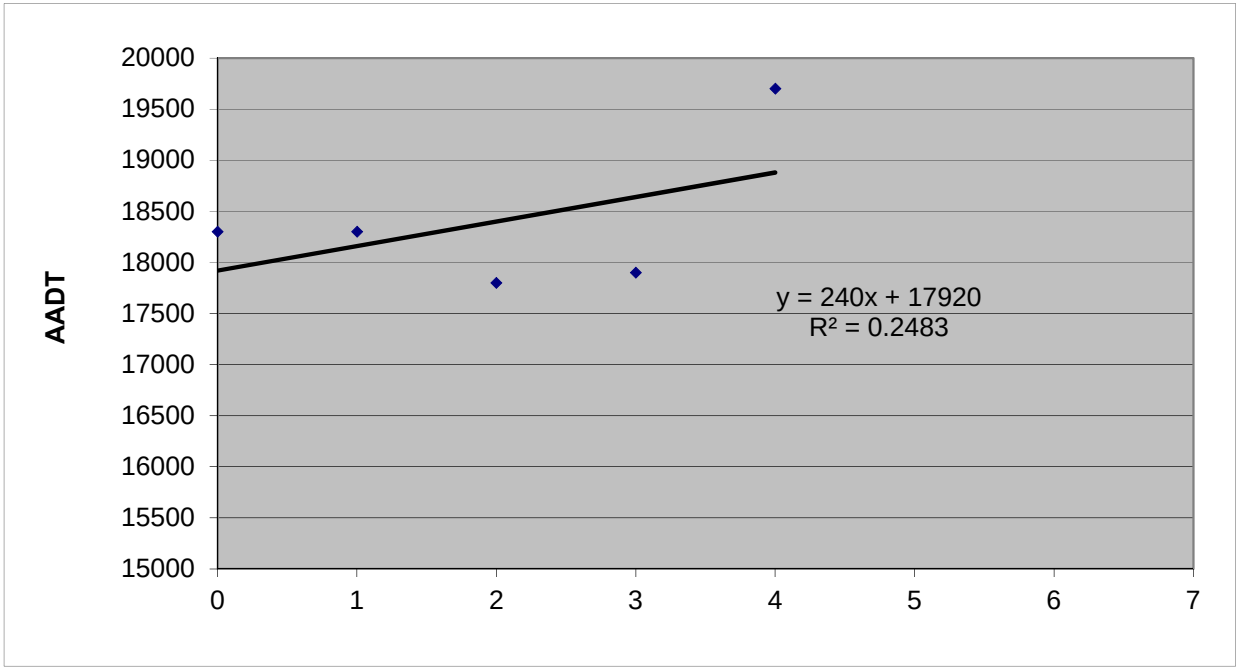


BUCKHOLZ TRAFFIC

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 71 - CLAY

SITE: 0113 - SR 16 .75 MI. E. OF SR 15

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	19700 C	E 9700	W 10000	9.00	53.50	9.50
2020	17900 C	E 8800	W 9100	9.00	54.50	9.30
2019	17800 C	E 8600	W 9200	9.00	54.10	7.00
2018	18300 C	E 9100	W 9200	9.00	54.20	8.10
2017	18300 C	E 9000	W 9300	9.00	54.50	6.50
2016	16200 C	E 7900	W 8300	9.00	54.30	5.80
2015	14400 C	E 7100	W 7300	9.00	54.50	5.70
2014	14300 C	E 7200	W 7100	9.00	54.50	5.50
2013	13700 C	E 6800	W 6900	9.00	55.10	6.20
2012	12400 C	E 6200	W 6200	9.00	54.60	5.50
2011	12300 C	E 6100	W 6200	9.00	54.70	5.40
2010	13300 C	E 6600	W 6700	9.86	54.07	5.40
2009	14300 C	E 7100	W 7200	9.76	54.11	6.50
2008	15400 C	E 7600	W 7800	9.71	55.26	7.60
2007	15500 C	E 7800	W 7700	9.36	55.25	8.80
2006	16600 C	E 8300	W 8300	9.36	55.56	9.20

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

COUNTY: 71
STATION: 0113
DESCRIPTION: SR 16 .75 MI. E. OF SR 15
START DATE: 11/17/2021
START TIME: 0000

	DIRECTION: E					DIRECTION: W					COMBINED
TIME	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL	TOTAL
0000	3	5	3	4	15	7	13	12	3	35	50
0100	1	4	1	1	7	7	2	1	6	16	23
0200	8	2	10	5	25	2	0	5	4	11	36
0300	6	7	5	10	28	2	3	5	5	15	43
0400	12	23	28	32	95	10	6	16	14	46	141
0500	53	74	85	126	338	22	30	64	63	179	517
0600	205	261	274	304	1044	81	115	142	158	496	1540
0700	273	256	230	210	969	170	158	181	165	674	1643
0800	161	173	196	139	669	149	180	144	171	644	1313
0900	129	143	144	140	556	136	127	147	119	529	1085
1000	132	135	131	133	531	101	109	145	113	468	999
1100	106	135	125	137	503	128	149	134	150	561	1064
1200	161	142	151	148	602	162	127	166	172	627	1229
1300	149	153	112	159	573	131	151	160	128	570	1143
1400	157	165	160	154	636	163	148	168	179	658	1294
1500	136	135	168	178	617	209	229	227	270	935	1552
1600	172	180	206	198	756	260	244	256	276	1036	1792
1700	223	180	181	124	708	306	274	283	266	1129	1837
1800	113	102	77	88	380	239	211	142	97	689	1069
1900	82	57	71	47	257	90	81	65	57	293	550
2000	34	38	37	42	151	45	47	61	58	211	362
2100	38	25	27	26	116	48	32	35	36	151	267
2200	19	18	15	17	69	30	19	24	22	95	164
2300	9	9	5	8	31	20	13	12	15	60	91
24-HOUR TOTALS:					9676					10128	19804

PEAK VOLUME INFORMATION

	DIRECTION: E		DIRECTION: W		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	645	1063	730	675	645	1730
P.M.	1615	807	1645	1139	1645	1921
DAILY	615	1112	1645	1139	1645	1921

TRUCK PERCENTAGE 9.02 9.89 9.47

CLASSIFICATION SUMMARY DATABASE

DIR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TOTTRK	TOTVOL
E	67	5433	3303	5	179	211	30	69	243	130	1	5	0	0	0	873	9676
W	60	5522	3544	5	232	231	19	101	336	68	3	3	4	0	0	1002	10128

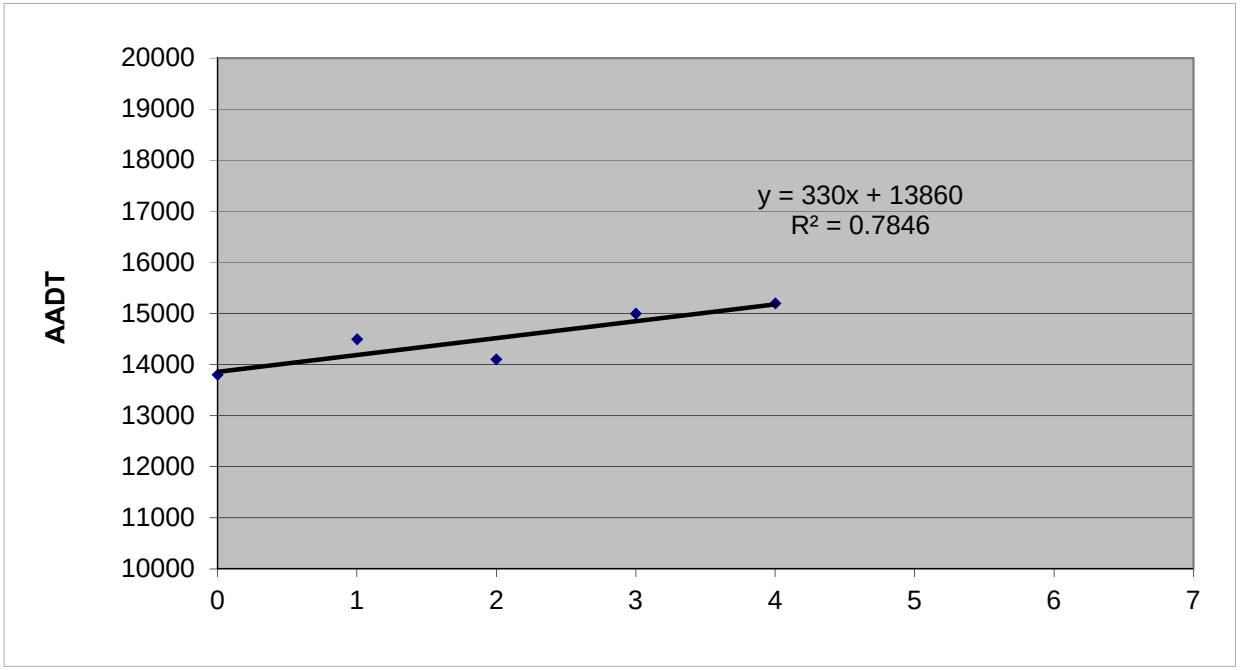
GENERATED BY SPS 5.0.57P

TABLE C-3
LINEAR REGRESSION ANALYSIS

US 17, South of SR 16

Year	X	Actual AADT (Y)	**Predicted AADT**
2017	0	13800	**13860**
2018	1	14500	14190
2019	2	14100	14520
2020	3	15000	14850
2021	4	15200	15180
2022	5		15510
2023	6		15840
2024	7		**16170**

i = 2.2%



BUCKHOLZ TRAFFIC

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 71 - CLAY

SITE: 0196 - SR 15/US 17 .3 MI. S. OF SR 16 TO E.

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	15200 C	N 7600	S 7600	9.00	53.50	12.10
2020	15000 C	N 7500	S 7500	9.00	54.50	14.00
2019	14100 C	N 7100	S 7000	9.00	54.10	10.70
2018	14500 C	N 7200	S 7300	9.00	54.20	11.80
2017	13800 C	N 6900	S 6900	9.00	54.50	9.70
2016	12900 C	N 6500	S 6400	9.00	54.30	10.50
2015	11600 C	N 5800	S 5800	9.00	54.50	11.20
2014	11100 C	N 5600	S 5500	9.00	54.50	10.90
2013	11200 C	N 5700	S 5500	9.00	55.10	12.30
2012	11400 C	N 5800	S 5600	9.00	54.60	11.10
2011	11400 C	N 5700	S 5700	9.00	54.70	11.80
2010	11600 C	N 5800	S 5800	9.86	54.07	11.10
2009	11800 C	N 5900	S 5900	9.76	54.11	10.90
2008	12400 C	N 6700	S 5700	9.71	55.26	13.00
2007	13500 C	N 6800	S 6700	9.36	55.25	12.50
2006	14400 C	N 7200	S 7200	9.36	55.56	14.80

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

COUNTY: 71
STATION: 0196
DESCRIPTION: SR 15/US 17 .3 MI. S. OF SR 16 TO E.
START DATE: 11/17/2021
START TIME: 0000

	DIRECTION: N					DIRECTION: S					COMBINED
TIME	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL	TOTAL
0000	2	5	5	3	15	9	8	7	3	27	42
0100	4	9	2	17	32	9	5	2	4	20	52
0200	26	5	3	4	38	1	2	6	1	10	48
0300	4	5	32	10	51	5	4	8	14	31	82
0400	21	22	38	43	124	16	28	41	83	168	292
0500	39	65	63	85	252	41	50	105	93	289	541
0600	128	148	163	154	593	89	120	131	148	488	1081
0700	141	153	154	135	583	112	112	130	128	482	1065
0800	116	111	100	97	424	126	126	129	92	473	897
0900	113	127	101	96	437	107	91	123	88	409	846
1000	127	114	109	107	457	100	77	96	96	369	826
1100	105	133	123	134	495	83	116	111	130	440	935
1200	151	109	118	92	470	132	125	123	150	530	1000
1300	110	102	107	101	420	115	127	122	106	470	890
1400	110	96	124	119	449	116	107	110	128	461	910
1500	102	115	206	164	587	129	160	152	169	610	1197
1600	130	132	186	162	610	177	134	152	169	632	1242
1700	217	150	198	128	693	171	163	136	146	616	1309
1800	143	98	89	63	393	137	108	76	90	411	804
1900	63	44	49	26	182	66	67	46	57	236	418
2000	38	31	45	29	143	43	49	79	58	229	372
2100	23	20	19	21	83	37	23	30	28	118	201
2200	17	16	9	14	56	17	18	15	13	63	119
2300	11	5	4	5	25	15	16	8	8	47	72
24-HOUR TOTALS:					7612					7629	15241

PEAK VOLUME INFORMATION

	DIRECTION: N		DIRECTION: S		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	645	602	730	510	645	1104
P.M.	1645	727	1515	658	1630	1370
DAILY	1645	727	1515	658	1630	1370

TRUCK PERCENTAGE 11.78 12.32 12.05

CLASSIFICATION SUMMARY DATABASE

DIR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TOTTRK	TOTVOL
N	67	4155	2493	5	131	197	17	105	418	22	0	1	1	0	0	897	7612
S	34	4076	2579	6	128	216	15	85	404	82	1	1	2	0	0	940	7629

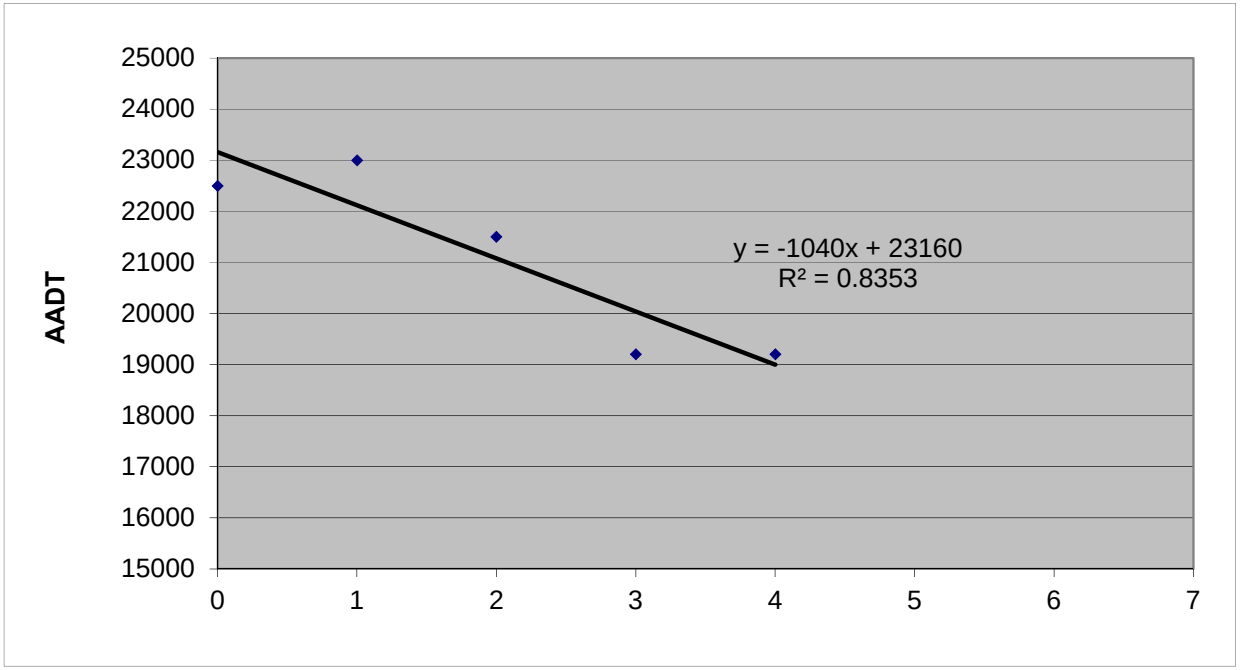
GENERATED BY SPS 5.0.57P

TABLE C-4
LINEAR REGRESSION ANALYSIS

US 17, North of SR 16

Year	X	Actual AADT (Y)	**Predicted AADT**
2017	0	22500	**23160**
2018	1	23000	22120
2019	2	21500	21080
2020	3	19200	20040
2021	4	19200	19000
2022	5		17960
2023	6		16920
2024	7		**15880**

i = - 5.2%



BUCKHOLZ TRAFFIC

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 71 - CLAY

SITE: 0142 - SR 15 .1 MI. N. OF SR 16 TO E.

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	19200 F	N 9700	S 9500	9.00	53.50	12.10
2020	19200 C	N 9700	S 9500	9.00	54.50	21.90
2019	21500 C	N 11000	S 10500	9.00	54.10	18.10
2018	23000 C	N 11500	S 11500	9.00	54.20	11.80
2017	22500 C	N 11000	S 11500	9.00	54.50	9.70
2016	20000 C	N 10000	S 10000	9.00	54.30	10.50
2015	19100 C	N 9700	S 9400	9.00	54.50	11.20
2014	17900 C	N 9000	S 8900	9.00	54.50	10.90
2013	17500 C	N 8800	S 8700	9.00	55.10	12.30
2012	16600 C	N 8400	S 8200	9.00	54.60	11.10
2011	17900 C	N 9200	S 8700	9.00	54.70	11.80
2010	18100 C	N 9200	S 8900	9.86	54.07	11.10
2009	18500 C	N 9300	S 9200	9.76	54.11	10.90
2008	19600 C	N 9900	S 9700	9.71	55.26	13.00
2007	21000 C	N 10500	S 10500	9.36	55.25	12.50
2006	23000 C	N 11500	S 11500	9.36	55.56	14.80

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

2021 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7100 CLAY COUNTYWIDE

MOCF: 0.96

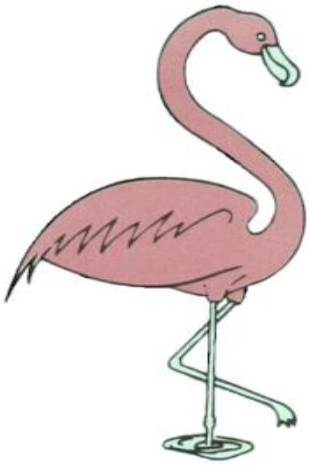
WEEK	DATES	SF	PSCF
1	01/01/2021 - 01/02/2021	1.00	1.04
2	01/03/2021 - 01/09/2021	1.06	1.10
3	01/10/2021 - 01/16/2021	1.11	1.16
4	01/17/2021 - 01/23/2021	1.11	1.16
5	01/24/2021 - 01/30/2021	1.10	1.15
6	01/31/2021 - 02/06/2021	1.09	1.14
7	02/07/2021 - 02/13/2021	1.09	1.14
8	02/14/2021 - 02/20/2021	1.08	1.13
9	02/21/2021 - 02/27/2021	1.05	1.09
10	02/28/2021 - 03/06/2021	1.02	1.06
11	03/07/2021 - 03/13/2021	1.00	1.04
12	03/14/2021 - 03/20/2021	0.97	1.01
*13	03/21/2021 - 03/27/2021	0.96	1.00
*14	03/28/2021 - 04/03/2021	0.96	1.00
*15	04/04/2021 - 04/10/2021	0.96	1.00
*16	04/11/2021 - 04/17/2021	0.96	1.00
*17	04/18/2021 - 04/24/2021	0.95	0.99
*18	04/25/2021 - 05/01/2021	0.95	0.99
*19	05/02/2021 - 05/08/2021	0.95	0.99
*20	05/09/2021 - 05/15/2021	0.95	0.99
*21	05/16/2021 - 05/22/2021	0.96	1.00
*22	05/23/2021 - 05/29/2021	0.96	1.00
*23	05/30/2021 - 06/05/2021	0.96	1.00
*24	06/06/2021 - 06/12/2021	0.97	1.01
*25	06/13/2021 - 06/19/2021	0.97	1.01
26	06/20/2021 - 06/26/2021	0.98	1.02
27	06/27/2021 - 07/03/2021	0.99	1.03
28	07/04/2021 - 07/10/2021	1.00	1.04
29	07/11/2021 - 07/17/2021	1.01	1.05
30	07/18/2021 - 07/24/2021	1.02	1.06
31	07/25/2021 - 07/31/2021	1.02	1.06
32	08/01/2021 - 08/07/2021	1.02	1.06
33	08/08/2021 - 08/14/2021	1.02	1.06
34	08/15/2021 - 08/21/2021	1.03	1.07
35	08/22/2021 - 08/28/2021	1.02	1.06
36	08/29/2021 - 09/04/2021	1.01	1.05
37	09/05/2021 - 09/11/2021	1.01	1.05
38	09/12/2021 - 09/18/2021	1.00	1.04
39	09/19/2021 - 09/25/2021	0.99	1.03
40	09/26/2021 - 10/02/2021	0.98	1.02
41	10/03/2021 - 10/09/2021	0.97	1.01
42	10/10/2021 - 10/16/2021	0.96	1.00
43	10/17/2021 - 10/23/2021	0.97	1.01
44	10/24/2021 - 10/30/2021	0.98	1.02
45	10/31/2021 - 11/06/2021	0.99	1.03
46	11/07/2021 - 11/13/2021	0.99	1.03
47	11/14/2021 - 11/20/2021	1.00	1.04
48	11/21/2021 - 11/27/2021	1.00	1.04
49	11/28/2021 - 12/04/2021	1.00	1.04
50	12/05/2021 - 12/11/2021	1.00	1.04
51	12/12/2021 - 12/18/2021	1.00	1.04
52	12/19/2021 - 12/25/2021	1.06	1.10
53	12/26/2021 - 12/31/2021	1.11	1.16

* PEAK SEASON

08-MAR-2022 12:36:24 830UPD 2_7100_PKSEASON.TXT

APPENDIX D

CAPACITY CALCULATIONS
UNSIGNALIZED INTERSECTIONS



HCS Two-Way Stop-Control Report

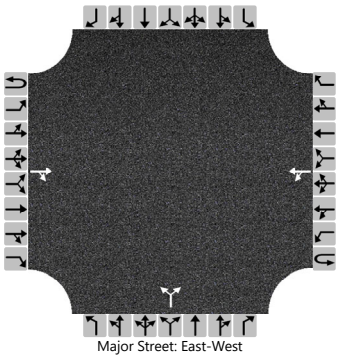
General Information

Analyst	J. Buckholz
Agency/Co.	BUCKHOLZ TRAFFIC
Date Performed	10/30/2023
Analysis Year	2026
Time Analyzed	AM Peak Hr. BUILD Traffic
Intersection Orientation	East-West
Project Description	#22-1805

Site Information

Intersection	Cooks Lane / Site Driveway
Jurisdiction	Clay County
East/West Street	Cooks Lane
North/South Street	Site Driveway
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			159	1		22	55			0		8				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						23					8					
Capacity, c (veh/h)						1411					878					
v/c Ratio						0.02					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.6	0.1				9.1					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)						2.3				9.1						
Approach LOS						A				A						

HCS Two-Way Stop-Control Report

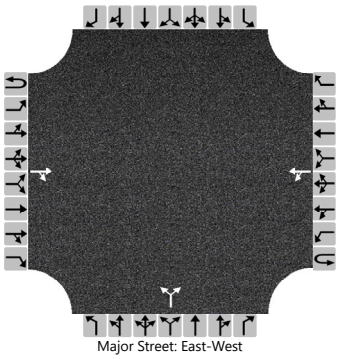
General Information

Analyst	J. Buckholz
Agency/Co.	BUCKHOLZ TRAFFIC
Date Performed	10/30/2023
Analysis Year	2026
Time Analyzed	PM Peak Hr. BUILD Traffic
Intersection Orientation	East-West
Project Description	#22-1805

Site Information

Intersection	Cooks Lane / Site Driveway
Jurisdiction	Clay County
East/West Street	Cooks Lane
North/South Street	Site Driveway
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			113	0		8	178			1		24				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

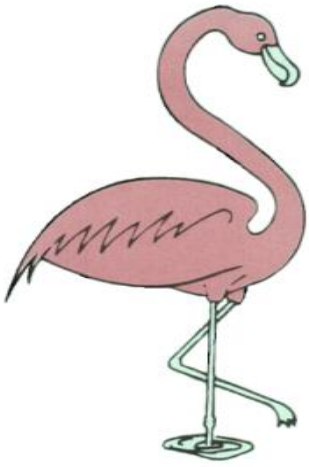
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						9					27					
Capacity, c (veh/h)						1464					913					
v/c Ratio						0.01					0.03					
95% Queue Length, Q_{95} (veh)						0.0					0.1					
Control Delay (s/veh)						7.5	0.0				9.1					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)						0.4				9.1						
Approach LOS						A				A						

APPENDIX E

TRAFFIC SIGNAL TIMINGS



Location Details			
Signal ID:	**45**	Date:	**November 19, 2022**
Major Street:	**US 17**	Orientation:	**N-S**
Minor Street:	**Cooks Ln-SR 16**	Orientation:	**E-W**

Controller Timings (seconds)

Movement # (Controller Phase Ø)	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Notes
Direction	NBLT	SB		WB	SBLT	NB	WBLT	EB									
Turn Type	Prot				Prot		FYA										
Min Green	4	18		6	4	18	4	6									
Ext	3.0	4.0		6.0	4.0	4.0	4.0	3.0									
Yellow	4.9	4.9		4.8	4.9	4.9	4.8	4.8									
All Red	2.0	2.0		2.5	2.0	2.0	2.0	2.5									
Max I	15	50		40	55	35	25	30									
Max II	15	50		40	55	35	25	30									
Walk		7		7		7		7									
Flashing Don't Walk		21		34		26		30									
Detector Memory																	
Det. Switching to:																	
Recall		MIN				MIN											
CNA																	

Coordination Timings (seconds)

Pattern	C-S-O	Cycle Length	Splits																Offset	Seq	Coord Ø
			Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16			

Offset Reference Point	Phase Mode
End of Green of first through movement	STD8

SEQ 1

Ring - 1	1	2	4	
Ring - 2	5	6	7	8

Notes:
1) Use 'Max I' during FREE Operation.
2) 3 second delay on FYA

Signal ID:	**45**
Major Street:	**US 17**
Minor Street:	**Cooks Ln-SR 16**

Day Plans

Monday-Friday			
Day Plan 1			
Hr	Min	Patt	Cycl
00	00	254	Free

Saturday			
Day Plan 2			
Hr	Min	Patt	Cycl
00	00	254	Free

Sunday			
Day Plan 3			
Hr	Min	Patt	Cycl
00	00	254	Free

Day Plan 4			
Hr	Min	Patt	Cycl

Day Plan 5			
Hr	Min	Patt	Cycl

Day Plan 6			
Hr	Min	Patt	Cycl

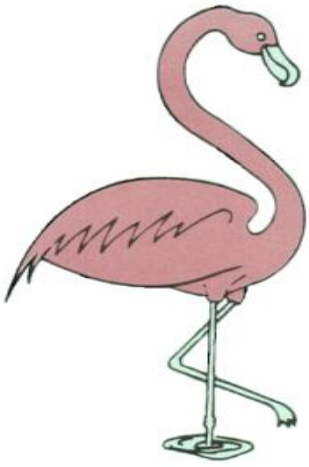
Day Plan 7			
Hr	Min	Patt	Cycl

Day Plan 8			
Hr	Min	Patt	Cycl

Patt	Force Mode	Alt Opt Table	Alt Time Table	Coord Max Plan	Alt Time Table Max Values (Seconds)														
					Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16

APPENDIX F

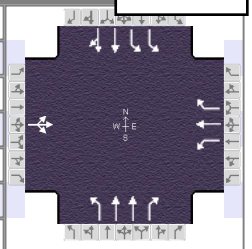
SIGNALIZED INTERSECTION CAPACITY CALCULATIONS



AM PEAK HOUR

HCS Signalized Intersection Results Summary

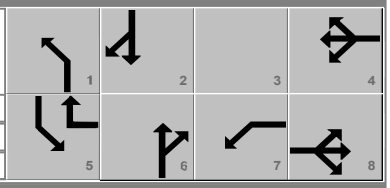
General Information				Intersection Information	
Agency	BUCKHOLZ TRAFFIC			Duration, h	0.250
Analyst	J. Buckholz	Analysis Date	Jan 24, 2023	Area Type	Other
Jurisdiction	Clay County	Time Period	AM Peak Hour	PHF	0.96
Urban Street	US 17	Analysis Year	2022	Analysis Period	1> 6:45
Intersection	SR 16 / Cooks Lane	File Name	2022_AM_US17_SR16_CoveLn.xus		
Project Description	2022 AM Peak Hr Traffic				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	13	82	0	177	16	373	1	394	298	707	276	16

Signal Information			
Cycle, s	99.3	Reference Phase	2
Offset, s	110	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	0.1	21.0	22.4	13.2	7.7	0.0
Yellow	4.9	4.9	4.9	4.8	4.8	0.0
Red	2.0	2.0	2.0	2.0	2.5	0.0



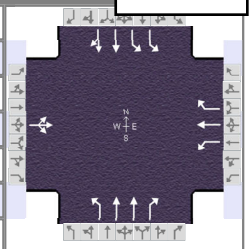
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8	7	4	1	6	5	2
Case Number		8.3	1.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s		15.0	20.0	35.1	7.0	29.3	35.0	57.2
Change Period, ($Y+R_c$), s		7.3	6.8	7.3	6.9	6.9	6.9	6.9
Max Allow Headway (*MAH*), s		4.1	4.9	7.1	3.9	4.5	4.9	4.4
Queue Clearance Time (g_s), s		7.5	12.6	15.3	2.1	19.4	22.8	6.9
Green Extension Time (g_e), s		0.3	0.6	4.1	0.0	2.9	5.2	1.3
Phase Call Probability		1.00	0.99	1.00	0.03	1.00	1.00	1.00
Max Out Probability		0.00	0.01	0.03	0.00	0.05	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		99		184	17	350	1	410	248	736	153	151
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1735		1513	1618	1497	1810	1682	1346	1634	1693	1660
Queue Service Time (g_s), s		2.6		10.6	0.7	13.3	0.1	10.7	17.4	20.8	4.9	4.9
Cycle Queue Clearance Time (g_c), s		5.5		10.6	0.7	13.3	0.1	10.7	17.4	20.8	4.9	4.9
Green Ratio (*g/C*)		0.08		0.23	0.28	0.56	0.00	0.23	0.23	0.28	0.51	0.51
Capacity (*c*), veh/h		177		300	453	842	2	758	304	924	858	842
Volume-to-Capacity Ratio (*X*)		0.560		0.614	0.037	0.416	0.495	0.541	0.817	0.797	0.178	0.180
Back of Queue (*Q*), ft/ln (95 th percentile)		116.6		207.6	15.1	201.4	4.3	205.2	297.1	347.4	90.1	83.6
Back of Queue (*Q*), veh/ln (95 th percentile)		4.6		7.1	0.5	7.5	0.2	7.7	10.2	13.0	3.2	3.2
Queue Storage Ratio (*RQ*) (95 th percentile)		0.52		0.44	0.00	0.00	0.02	0.00	0.99	0.51	0.00	0.00
Uniform Delay (d_1), s/veh		44.8		33.8	26.1	12.4	49.7	34.0	36.6	33.1	13.3	13.3
Incremental Delay (d_2), s/veh		2.8		2.9	0.1	1.2	118.8	0.9	8.2	2.3	0.1	0.1
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		47.5		36.7	26.2	13.6	168.5	34.9	44.8	35.3	13.4	13.4
Level of Service (LOS)		D		D	C	B	F	C	D	D	B	B
Approach Delay, s/veh / LOS	47.5	D		21.7	C		38.8	D		28.9	C	
Intersection Delay, s/veh / LOS	30.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS								
Bicycle LOS Score / LOS								

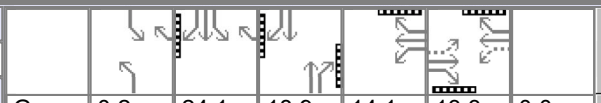
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	BUCKHOLZ TRAFFIC			Duration, h	0.250
Analyst	J. Buckholz	Analysis Date	Oct 30, 2023	Area Type	Other
Jurisdiction	Clay County	Time Period	AM Peak Hour	PHF	0.96
Urban Street	US 17	Analysis Year	2026	Analysis Period	1> 6:45
Intersection	SR 16 / Cooks Lane	File Name	2026_B_AM_US17_SR16_CooksLn.xus		
Project Description	2026 AM Peak Hr BUILD Traffic				

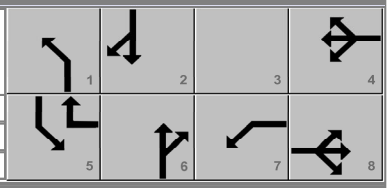


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	36	129	0	189	36	399	2	422	223	756	295	34

Signal Information			
Cycle, s	105.4	Reference Phase	2
Offset, s	110	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	0.2	24.1	18.9	14.1	13.3	0.0
Yellow	4.9	4.9	4.9	4.8	4.8	0.0
Red	2.0	2.0	2.0	2.0	2.5	0.0



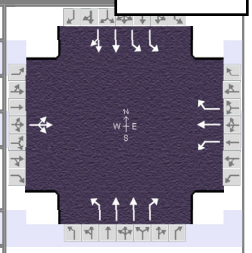
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8	7	4	1	6	5	2
Case Number		8.3	1.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s		20.6	20.9	41.5	7.1	25.8	38.1	56.8
Change Period, (*Y+R c*), s		7.3	6.8	7.3	6.9	6.9	6.9	6.9
Max Allow Headway (*MAH*), s		4.2	4.9	7.1	3.9	4.5	4.9	4.4
Queue Clearance Time (*g s*), s		12.8	13.4	15.3	2.1	15.9	25.6	8.5
Green Extension Time (*g e*), s		0.5	0.7	4.7	0.0	2.9	5.5	1.5
Phase Call Probability		1.00	1.00	1.00	0.06	1.00	1.00	1.00
Max Out Probability		0.00	0.02	0.05	0.00	0.01	0.01	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		172		197	38	374	2	440	186	788	173	170
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1624		1513	1618	1497	1810	1682	1346	1634	1693	1631
Queue Service Time (*g s*), s		7.4		11.4	1.7	13.3	0.1	13.0	13.9	23.6	6.3	6.5
Cycle Queue Clearance Time (*g c*), s		10.8		11.4	1.7	13.3	0.1	13.0	13.9	23.6	6.3	6.5
Green Ratio (*g/C*)		0.13		0.28	0.32	0.62	0.00	0.18	0.18	0.30	0.47	0.47
Capacity (*c*), veh/h		247		296	525	930	4	603	241	969	802	772
Volume-to-Capacity Ratio (*X*)		0.696		0.665	0.071	0.402	0.506	0.729	0.772	0.813	0.216	0.219
Back of Queue (*Q*), ft/ln (95 th percentile)		209.3		223.8	33.9	194.5	6.2	246.7	250.2	387.5	121.3	111.3
Back of Queue (*Q*), veh/ln (95 th percentile)		8.2		7.7	1.2	7.3	0.2	9.2	8.6	14.5	4.4	4.3
Queue Storage Ratio (*RQ*) (95 th percentile)		0.93		0.47	0.00	0.00	0.03	0.00	0.83	0.57	0.00	0.00
Uniform Delay (*d 1*), s/veh		44.8		32.5	24.7	10.1	52.7	40.9	41.3	34.5	16.3	16.3
Incremental Delay (*d 2*), s/veh		3.5		3.6	0.2	1.0	72.9	2.4	7.3	2.4	0.2	0.2
Initial Queue Delay (*d 3*), s/veh		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		48.3		36.1	24.9	11.1	125.6	43.4	48.6	36.9	16.5	16.5
Level of Service (LOS)		D		D	C	B	F	D	D	D	B	B
Approach Delay, s/veh / LOS	48.3	D		20.1	C		45.2	D		30.7	C	
Intersection Delay, s/veh / LOS	32.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS								
Bicycle LOS Score / LOS								

HCS Signalized Intersection Results Summary

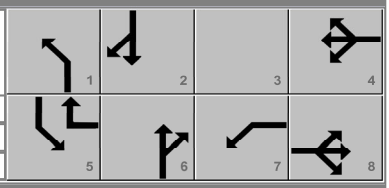
General Information				Intersection Information	
Agency	BUCKHOLZ TRAFFIC			Duration, h	0.250
Analyst	J. Buckholz	Analysis Date	Oct 30, 2023	Area Type	Other
Jurisdiction	Clay County	Time Period	AM Peak Hour	PHF	0.96
Urban Street	US 17	Analysis Year	2026 w/ Balanced Timings	Analysis Period	1> 6:45
Intersection	SR 16 / Cooks Lane	File Name	BAL_2026_B_AM_US17_SR16_CooksLn.xus		
Project Description	2026 AM Peak Hr BUILD Traffic				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	36	129	0	189	36	399	2	422	223	756	295	34

Signal Information			
Cycle, s	192.9	Reference Phase	2
Offset, s	110	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	30.0	23.1	50.0	15.0	40.0	0.0
Yellow	4.9	4.9	4.9	4.8	4.8	0.0
Red	2.0	2.0	2.0	2.0	2.5	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8	7	4	1	6	5	2
Case Number		8.3	1.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s		47.3	21.8	69.1	36.9	56.9	66.9	86.9
Change Period, ($Y+R_c$), s		7.3	6.8	7.3	6.9	6.9	6.9	6.9
Max Allow Headway (*MAH*), s		4.2	4.9	7.1	3.9	4.5	4.9	4.4
Queue Clearance Time (g_s), s		19.5	17.0	25.7	2.2	25.0	44.2	15.1
Green Extension Time (g_e), s		0.5	0.0	3.6	0.0	3.1	4.5	1.4
Phase Call Probability		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability		0.00	1.00	0.29	0.00	0.00	0.13	0.00

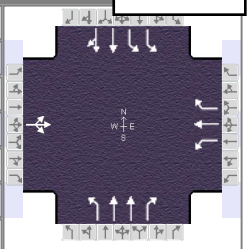
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		172		197	38	374	2	440	186	788	173	170
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1601		1513	1618	1497	1810	1682	1346	1634	1693	1631
Queue Service Time (g_s), s		10.4		15.0	3.1	23.7	0.2	21.5	23.0	42.2	12.9	13.1
Cycle Queue Clearance Time (g_c), s		17.5		15.0	3.1	23.7	0.2	21.5	23.0	42.2	12.9	13.1
Green Ratio (*g/C*)		0.21		0.30	0.32	0.63	0.16	0.26	0.26	0.31	0.41	0.41
Capacity (*c*), veh/h		355		279	518	945	281	872	349	1016	702	676
Volume-to-Capacity Ratio (*X*)		0.485		0.705	0.072	0.396	0.007	0.504	0.534	0.775	0.247	0.251
Back of Queue (*Q*), ft/ln (95 th percentile)		314.3		184.5	67	350	4	380.3	369.9	672.5	260.1	239.5
Back of Queue (*Q*), veh/ln (95 th percentile)		12.3		6.3	2.3	13.1	0.2	14.2	12.7	25.1	9.4	9.2
Queue Storage Ratio (*RQ*) (95 th percentile)		1.40		0.39	0.00	0.00	0.02	0.00	1.23	1.00	0.00	0.00
Uniform Delay (d_1), s/veh		67.2		60.9	45.6	17.5	68.9	60.9	61.4	60.3	36.8	36.9
Incremental Delay (d_2), s/veh		1.0		8.6	0.2	1.0	0.0	0.7	2.1	4.0	0.3	0.3
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		68.2		69.5	45.8	18.4	68.9	61.5	63.5	64.4	37.1	37.1
Level of Service (LOS)		E		E	D	B	E	E	E	E	D	D
Approach Delay, s/veh / LOS	68.2	E		36.7	D		62.2	E		56.1	E	
Intersection Delay, s/veh / LOS	53.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS								
Bicycle LOS Score / LOS								

PM PEAK HOUR

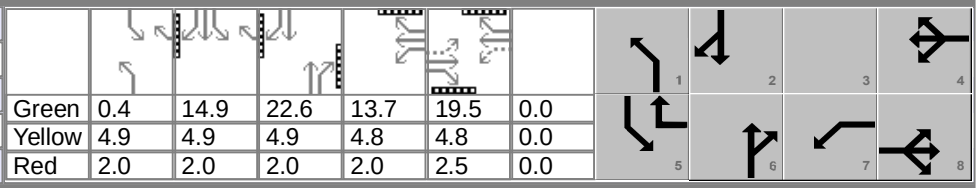
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	BUCKHOLZ TRAFFIC			Duration, h	0.250
Analyst	J. Buckholz	Analysis Date	Jan 24, 2023	Area Type	Other
Jurisdiction	Clay County	Time Period	PM Peak Hour	PHF	0.92
Urban Street	US 17	Analysis Year	2022	Analysis Period	1> 16:30
Intersection	SR 16 / Cooks Lane	File Name	2022_PM_US17_SR16_CoveLn.xus		
Project Description	2022 PM Peak Hr Traffic				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	40	27	2	204	84	880	3	537	166	513	430	17

Signal Information			
Cycle, s	105.8	Reference Phase	2
Offset, s	110	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	0.4	14.9	22.6	13.7	19.5	0.0
Yellow	4.9	4.9	4.9	4.8	4.8	0.0
Red	2.0	2.0	2.0	2.0	2.5	0.0

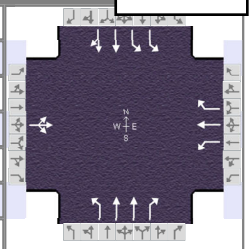
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8	7	4	1	6	5	2
Case Number		8.3	1.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s		26.8	20.5	47.3	7.3	29.5	29.1	51.3
Change Period, ($Y+R_c$), s		7.3	6.8	7.3	6.9	6.9	6.9	6.9
Max Allow Headway (*MAH*), s		6.0	4.9	7.1	3.9	4.4	4.9	4.4
Queue Clearance Time (g_s), s		9.4	12.9	42.0	2.2	19.3	18.4	11.6
Green Extension Time (g_e), s		0.4	0.8	0.0	0.0	3.2	3.8	2.2
Phase Call Probability		1.00	1.00	1.00	0.09	1.00	1.00	1.00
Max Out Probability		0.00	0.02	1.00	0.00	0.05	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		75		222	91	861	3	584	145	558	244	242
Adjusted Saturation Flow Rate (*s*), veh/h/ln		831		1654	1752	1510	1810	1696	1510	1702	1811	1786
Queue Service Time (g_s), s		6.0		10.9	3.6	40.0	0.2	17.3	8.8	16.4	9.6	9.6
Cycle Queue Clearance Time (g_c), s		7.4		10.9	3.6	40.0	0.2	17.3	8.8	16.4	9.6	9.6
Green Ratio (*g/C*)		0.18		0.33	0.38	0.59	0.33	0.21	0.21	0.21	0.42	0.42
Capacity (*c*), veh/h		207		427	662	887	6	723	322	713	759	749
Volume-to-Capacity Ratio (*X*)		0.363		0.519	0.138	0.971	0.519	0.807	0.449	0.782	0.322	0.323
Back of Queue (*Q*), ft/ln (95 th percentile)		88		208.5	72	821.4	8	309.6	155.6	292	189.3	186
Back of Queue (*Q*), veh/ln (95 th percentile)		3.2		7.7	2.7	30.9	0.3	11.6	5.8	11.3	7.2	7.2
Queue Storage Ratio (*RQ*) (95 th percentile)		0.39		0.44	0.00	0.00	0.04	0.00	0.52	0.43	0.00	0.00
Uniform Delay (d_1), s/veh		37.8		27.8	21.6	21.0	52.7	39.6	36.2	39.6	20.6	20.6
Incremental Delay (d_2), s/veh		1.1		1.4	0.3	23.7	53.6	3.4	1.4	2.7	0.3	0.4
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		38.8		29.1	22.0	44.7	106.3	42.9	37.6	42.3	21.0	21.0
Level of Service (LOS)		D		C	C	D	F	D	D	D	C	C
Approach Delay, s/veh / LOS	38.8	D		40.0	D		42.2	D		32.4	C	
Intersection Delay, s/veh / LOS	37.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS								
Bicycle LOS Score / LOS								

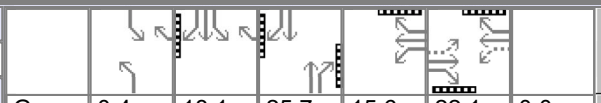
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	BUCKHOLZ TRAFFIC			Duration, h	0.250
Analyst	J. Buckholz	Analysis Date	Oct 30, 2023	Area Type	Other
Jurisdiction	Clay County	Time Period	PM Peak Hour	PHF	0.92
Urban Street	US 17	Analysis Year	2026	Analysis Period	1> 16:30
Intersection	SR 16 / Cooks Lane	File Name	2026_B_PM_US17_SR16_CooksLn.xus		
Project Description	2026 PM Peak Hr BUILD Traffic				

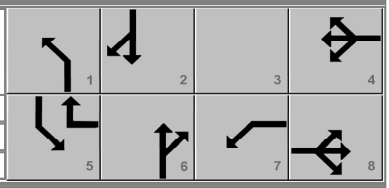


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	68	61	3	218	138	942	3	575	178	549	460	43

Signal Information			
Cycle, s	116.6	Reference Phase	2
Offset, s	110	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	0.4	18.1	25.7	15.6	22.1	0.0
Yellow	4.9	4.9	4.9	4.8	4.8	0.0
Red	2.0	2.0	2.0	2.0	2.5	0.0



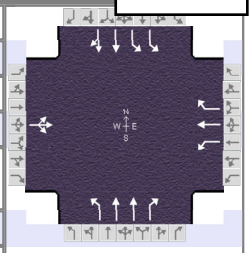
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8	7	4	1	6	5	2
Case Number		8.3	1.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s		29.4	22.4	51.8	7.3	32.6	32.3	57.5
Change Period, (*Y+R c*), s		7.3	6.8	7.3	6.9	6.9	6.9	6.9
Max Allow Headway (*MAH*), s		6.1	4.9	7.1	3.9	4.4	4.9	4.4
Queue Clearance Time (*g s*), s		21.6	14.9	46.4	2.2	22.5	21.4	14.0
Green Extension Time (*g e*), s		0.5	0.8	0.0	0.0	3.2	4.0	2.5
Phase Call Probability		1.00	1.00	1.00	0.10	1.00	1.00	1.00
Max Out Probability		0.34	0.07	1.00	0.00	0.15	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		143		237	150	922	3	625	154	597	277	270
Adjusted Saturation Flow Rate (*s*), veh/h/ln		826		1654	1752	1510	1810	1696	1510	1702	1811	1756
Queue Service Time (*g s*), s		17.7		12.9	6.7	44.4	0.2	20.5	10.3	19.4	11.9	12.0
Cycle Queue Clearance Time (*g c*), s		19.6		12.9	6.7	44.4	0.2	20.5	10.3	19.4	11.9	12.0
Green Ratio (*g/C*)		0.19		0.34	0.38	0.60	0.00	0.22	0.22	0.22	0.43	0.43
Capacity (*c*), veh/h		203		309	668	904	6	746	332	741	786	762
Volume-to-Capacity Ratio (*X*)		0.707		0.768	0.225	1.020	0.525	0.837	0.465	0.806	0.352	0.354
Back of Queue (*Q*), ft/ln (95 th percentile)		214.1		252.8	136.7	1052.2	8.5	365.6	184.7	337.6	228.9	223.1
Back of Queue (*Q*), veh/ln (95 th percentile)		7.8		9.3	5.1	39.6	0.3	13.7	6.9	13.1	8.7	8.6
Queue Storage Ratio (*RQ*) (95 th percentile)		0.95		0.53	0.00	0.00	0.04	0.00	0.62	0.50	0.00	0.00
Uniform Delay (*d 1*), s/veh		45.3		32.0	24.4	23.4	57.9	43.4	39.5	43.2	22.0	22.0
Incremental Delay (*d 2*), s/veh		6.5		6.5	0.6	35.0	55.0	5.4	1.4	3.0	0.4	0.4
Initial Queue Delay (*d 3*), s/veh		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		51.8		38.5	25.0	58.3	112.9	48.8	40.9	46.2	22.4	22.4
Level of Service (LOS)		D		D	C	F	F	D	D	D	C	C
Approach Delay, s/veh / LOS	51.8	D		50.9	D		47.5	D		34.8	C	
Intersection Delay, s/veh / LOS	44.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS								
Bicycle LOS Score / LOS								

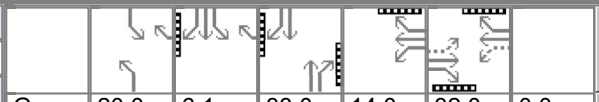
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	BUCKHOLZ TRAFFIC			Duration, h	0.250
Analyst	J. Buckholz	Analysis Date	Oct 30, 2023	Area Type	Other
Jurisdiction	Clay County	Time Period	PM Peak Hour	PHF	0.92
Urban Street	US 17	Analysis Year	2026 w/ Balanced Timings	Analysis Period	1> 16:30
Intersection	SR 16 / Cooks Lane	File Name	BAL_2026_B_PM_US17_SR16_CooksLn.xus		
Project Description	2026 PM Peak Hr BUILD Traffic				

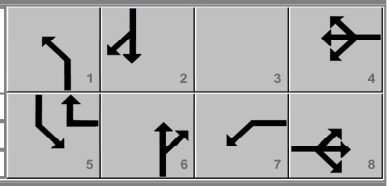


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	68	61	3	218	138	942	3	575	178	549	460	43

Signal Information			
Cycle, s	139.9	Reference Phase	2
Offset, s	110	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	20.0	6.1	33.0	14.0	32.0	0.0
Yellow	4.9	4.9	4.9	4.8	4.8	0.0
Red	2.0	2.0	2.0	2.0	2.5	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8	7	4	1	6	5	2
Case Number		8.3	1.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s		39.3	20.8	60.1	26.9	39.9	39.9	52.9
Change Period, ($Y+R_c$), s		7.3	6.8	7.3	6.9	6.9	6.9	6.9
Max Allow Headway (*MAH*), s		6.1	4.9	7.1	3.9	4.4	4.9	4.4
Queue Clearance Time (g_s), s		24.8	16.0	54.8	2.2	26.1	24.7	19.1
Green Extension Time (g_e), s		0.5	0.0	0.0	0.0	2.2	2.3	2.4
Phase Call Probability		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability		0.60	1.00	1.00	0.00	0.56	0.43	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		143		237	150	922	3	625	154	597	277	270
Adjusted Saturation Flow Rate (*s*), veh/h/ln		800		1654	1752	1510	1810	1696	1359	1702	1811	1756
Queue Service Time (g_s), s		20.9		14.0	8.2	52.8	0.2	24.1	13.7	22.7	16.9	17.1
Cycle Queue Clearance Time (g_c), s		22.8		14.0	8.2	52.8	0.2	24.1	13.7	22.7	16.9	17.1
Green Ratio (*g/C*)		0.23		0.34	0.38	0.61	0.14	0.24	0.24	0.24	0.33	0.33
Capacity (*c*), veh/h		222		298	661	926	259	800	320	803	595	578
Volume-to-Capacity Ratio (*X*)		0.647		0.794	0.227	0.996	0.013	0.781	0.482	0.743	0.465	0.467
Back of Queue (*Q*), ft/ln (95 th percentile)		240		317.7	170	1173	4.4	423.7	219.3	393.9	318.8	310.5
Back of Queue (*Q*), veh/ln (95 th percentile)		8.8		11.7	6.3	44.1	0.2	15.9	8.2	15.3	12.2	11.9
Queue Storage Ratio (*RQ*) (95 th percentile)		1.07		0.67	0.00	0.00	0.02	0.00	0.73	0.58	0.00	0.00
Uniform Delay (d_1), s/veh		49.4		39.8	29.7	26.9	51.5	50.1	46.1	49.5	37.2	37.2
Incremental Delay (d_2), s/veh		6.4		14.4	0.6	28.5	0.0	5.3	1.6	4.0	0.8	0.8
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		55.8		54.1	30.3	55.4	51.5	55.4	47.7	53.6	38.0	38.1
Level of Service (LOS)		E		D	C	E	D	E	D	D	D	D
Approach Delay, s/veh / LOS	55.8	E		52.3	D		53.8	D		46.1	D	
Intersection Delay, s/veh / LOS	50.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS								
Bicycle LOS Score / LOS								

STAFF REPORT

CITY OF GREEN COVE SPRINGS, FLORIDA

TO: Planning and Zoning Commission **MEETING DATE:** April 23, 2024

FROM: Gabriel Barro, Planning and Zoning

SUBJECT: Site Development Plan for the Development of Gustafson Park to the East of County Road 15A on a portion of parcel 016515-008-01

PROPERTY DESCRIPTION

APPLICANT: Colby Smith, Halff Associates, Inc. **OWNER:** City of Green Cove Springs

PROPERTY LOCATION: County Road 15A

PARCEL NUMBER: 016515-008-01

FILE NUMBER: SPL-24-001

CURRENT ZONING*:* Recreation and Conservation

FUTURE LAND USE DESIGNATION*:* Public

SURROUNDING EXISTING LAND USE

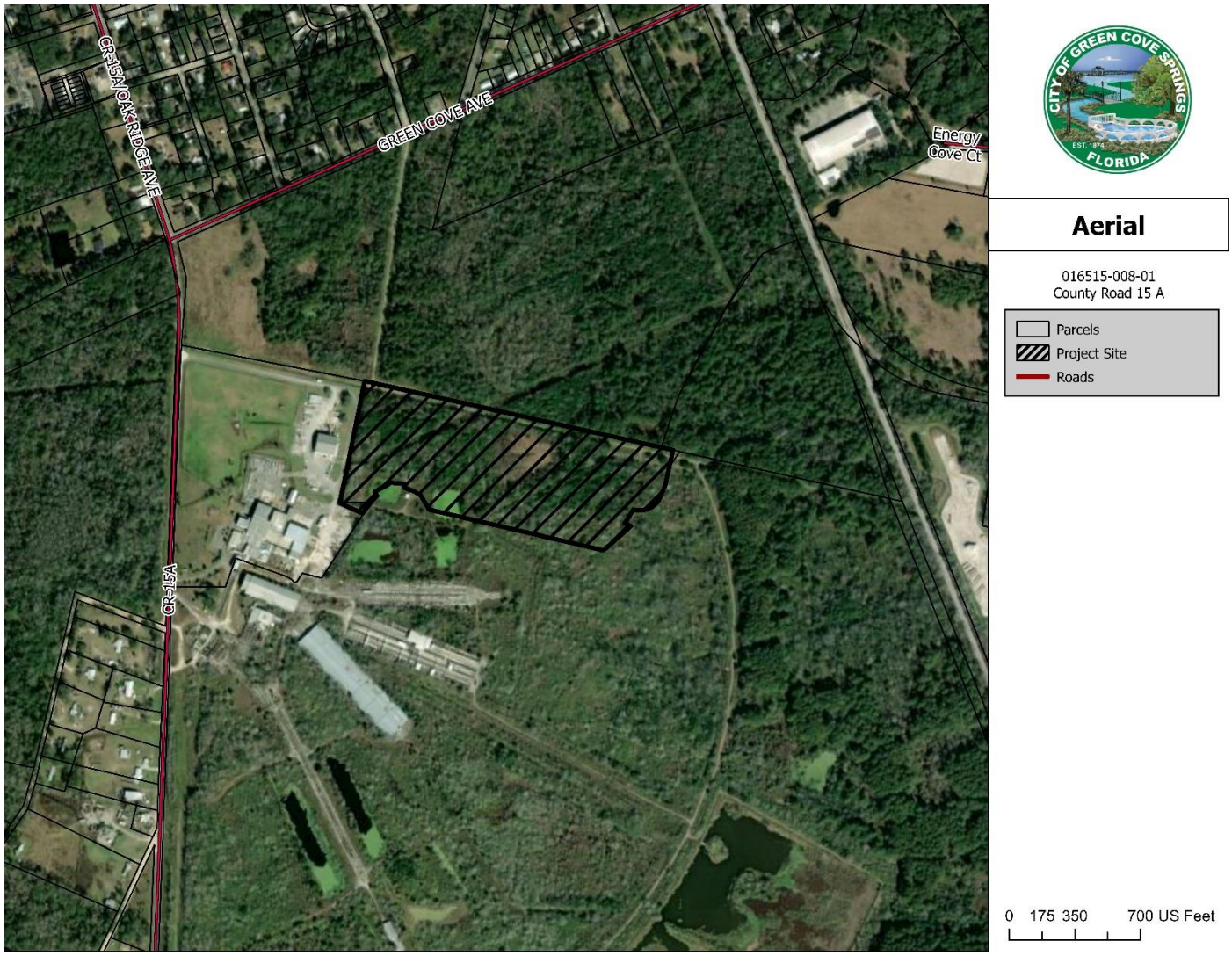
NORTH:	**FLU**: Neighborhood **Z**: R-1 **Use**: Single Family Housing	**SOUTH:**	**FLU**: Neighborhood **Z**: PUD **Use**: Single Family Housing
EAST:	**FLU**: Industrial **Z**: MUH **Use**: Vacant Non-Residential	**WEST:**	**FLU**: Industrial (County) **Z**: Heavy Industrial **Use**: Truemont

BACKGROUND

The applicant has submitted a Site Development Application for the development of Gustafson Park on 2.57 acres of the parcel located east of County Road 15A. As set forth in Section 5D of the enclosed Rookery Development Agreement, a stipulation was included to require the developer that required the development of a park. Once the site is completed, it will be handed over to the City of Green Cove Springs for future maintenance. This is the first phase of a larger regional park development.

Development Description

The application is for the development of 2 tennis courts and a parking lot. There will be a prefabricated restroom facility on the site. The remaining site will be used for a detention pond and accompanying drainage ditches.



STAFF RECOMMENDATION

Staff is recommending approval of this request because the application complies with the requirements of the City's Land Development and Comprehensive Plan and is compatible with the surrounding neighborhood.

RECOMMENDED MOTION:

Motion to recommend to City Council approval of the Gustafson Site Development Plan located to the east of County Road 15A at the Rookery Development.

CIVIL AND LANDSCAPE PERMIT PLANS

FOR

GUSTAFSON PARK

COUNTY ROAD 15A, GREEN COVE SPRINGS 32043
CLAY COUNTY, FL

PREPARED FOR:

CITY OF GREEN COVE SPRINGS
321 WALNUT STREET
GREEN COVE SPRINGS, FL
32043

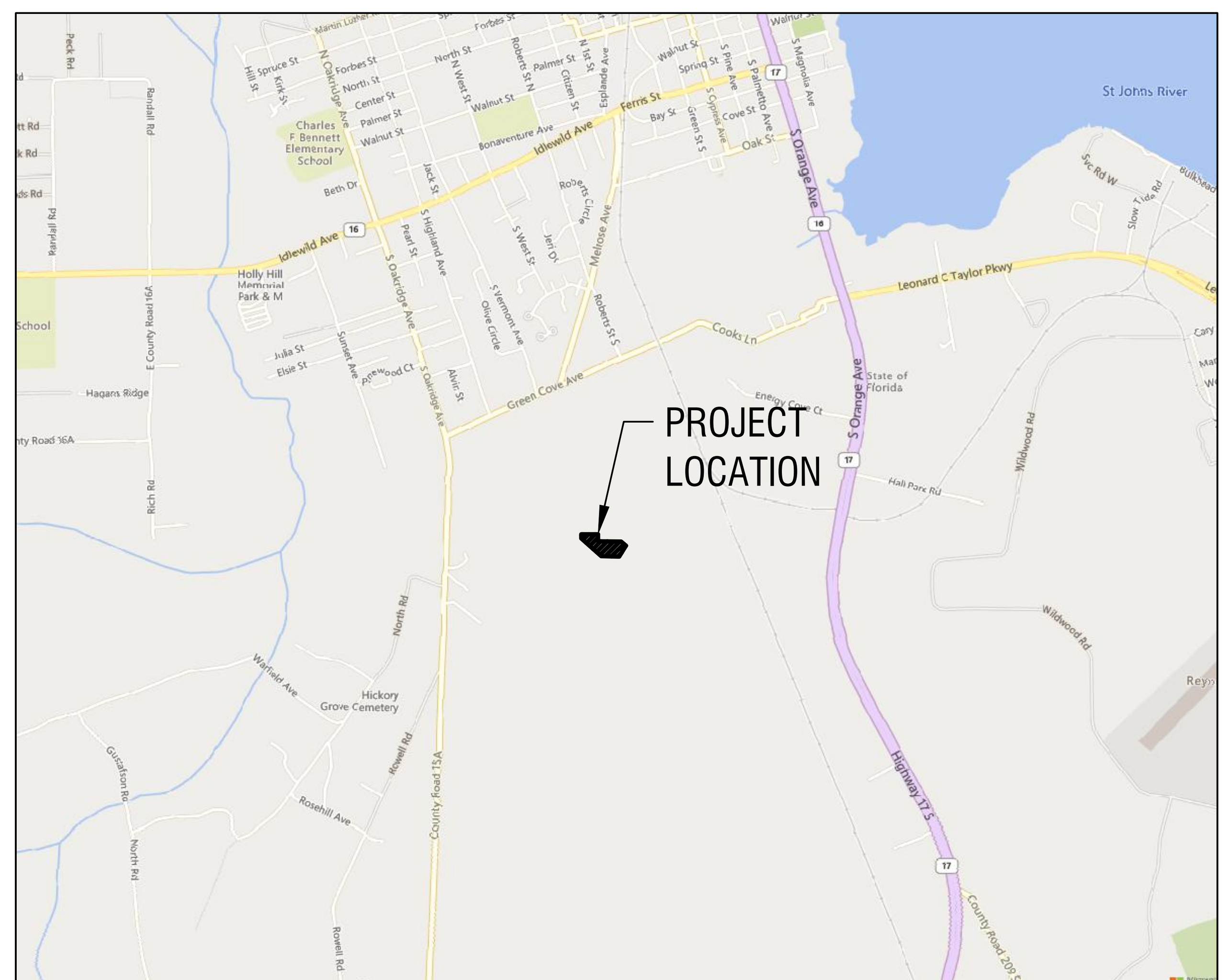
DEVELOPER:

DR. HORTON, INC.
4220 RACE TRACK ROAD
ST. JOHNS COUNTY, FL 32259

ENGINEER AND LANDSCAPE ARCHITECT:

halff

9995 GATE PARKWAY N, SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL CA 33380FL LC 26000645



SECTION 38, TOWNSHIP 6 SOUTH, RANGE 26 EAST

VICINITY MAP
1" = 2000'
N

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
C-000	COVER SHEET
C-001	SIGNATURE SHEET
C-002	GENERAL NOTES
C-003	GENERAL NOTES
C-004	EXISTING CONDITIONS & DEMOLITION PLAN
C-005	EROSION & SEDIMENTATION CONTROL PLAN
C-100	OVERALL SITE PLAN
C-101	SITE PLAN
C-102	SITE STANDARD DETAILS
C-103	SITE STANDARD DETAILS
C-200	GRADING & DRAINAGE PLAN
C-201	GRADING & DRAINAGE PLAN
C-202	STORM DRAINAGE STANDARD DETAILS
C-300	UTILITY PLAN
C-301	WATER AND SEWER GENERAL NOTES
C-302	WATER AND SEWER STANDARD DETAILS
C-400	E&SC GENERAL NOTES AND DETAILS
C-401	SWPPP GENERAL CONDITIONS
C-402	SWPPP FORMS
TM-100	TREE MITIGATION PLAN
TM-101	TREE MITIGATION CALCULATIONS
LS-200	LANDSCAPE PLAN
LS-201	LANDSCAPE CODE REQUIREMENTS
LS-202	LANDSCAPE NOTES AND SPECIFICATIONS

PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

halff
9995 GATE PARKWAY N, SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL CA 33380 FL LC 26000645

REVISIONS		
NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.:	037756.094
ISSUED:	2/14/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	N/A

COVER SHEET

C-000

A:\37000s\37756\094\LD\CADD\Sheets\C-000 Cover.dwg Cody Smith 1:10:19 PM 2/14/2024

THIS ITEM HAS BEGINNING DIGITALLY SIGNED AND SEALED BY CODY B. SMITH ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

CODY B. SMITH LICENSE No. 81393 STATE OF FLORIDA PROFESSIONAL ENGINEER

CODY B SMITH

Digitally signed by CODY B SMITH
Date: 2024.02.14 13:20:59 -05'00'

HALFF ASSOCIATES, INC.
9995 GATE PARKWAY N., SUITE 200
JACKSONVILLE, FL 32246
CERTIFICATE OF AUTHORIZATION: 33380
CODY B. SMITH, FL P.E. NO. 81393

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61GI5-23.004, F.A.C.

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
C-002	GENERAL NOTES
C-003	GENERAL NOTES
C-004	EXISTING CONDITIONS & DEMOLITION PLAN
C-005	EROSION & SEDIMENTATION CONTROL PLAN
C-100	OVERALL SITE PLAN
C-101	SITE PLAN
C-102	SITE STANDARD DETAILS
C-103	SITE STANDARD DETAILS
C-200	GRADING & DRAINAGE PLAN
C-201	GRADING & DRAINAGE PLAN
C-202	STORM DRAINAGE STANDARD DETAILS
C-300	UTILITY PLAN
C-301	WATER AND SEWER GENERAL NOTES
C-302	WATER AND SEWER STANDARD DETAILS
C-400	E&SC GENERAL NOTES AND DETAILS
C-401	SWPPP GENERAL CONDITIONS
C-402	SWPPP FORMS

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

JORDAN P. LIMBURG No. 6667021 STATE OF FLORIDA LANDSCAPE ARCHITECT

Jordan P Limburg

Digitally signed by Jordan P Limburg
Date: 2024.02.14 13:51:15 -05'00'

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC DOCUMENTS.

HALFF ASSCOIATES, INC.
9995 GATE PARKWAY N., SUITE 200
JACKSONVILLE, FL 32246
JORDAN P. LIMBURG, RLA FL LA-6667021

THE ABOVE NAMED REGISTERED LANDSCAPE ARCHITECT SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G10-11.011, F.A.C.

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
TM-100	TREE MITIGATION PLAN
TM-101	TREE MITIGATION CALCULATIONS
LS-200	LANDSCAPE PLAN
LS-201	LANDSCAPE CODE REQUIREMENTS
LS-202	LANDSCAPE NOTES AND SPECIFICATIONS

PROJECT NAME: GUSTAFSON PARK

PREPARED FOR: CITY OF GREEN COVE SPRINGS

halff
9995 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL CA 33380 FL LC 26000645

REVISIONS		
NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.:	037756.094
ISSUED:	2/14/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	N/A

SIGNATURE SHEET

C-001

GENERAL CONSTRUCTION NOTES

A. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AGENCIES, THE ENGINEER, AND THE ARCHITECT. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, AND SCHEDULE ANY NECESSARY INSPECTIONS ACCORDING TO AGENCY INSTRUCTIONS.

B. CONTRACTOR IS RESPONSIBLE FOR PREPARING AND PERMITTING ANY REQUIRED DEWATERING PLAN.

C. ALL SPECIFICATIONS AND DOCUMENTS REFERRED TO IN THESE PLANS SHALL BE OF THE LATEST REVISION.

D. ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK. ALL CONSTRUCTION, MATERIALS AND WORKMANSHIP ARE TO BE IN ACCORDANCE WITH THE STRICTER OF CITY OF GREEN COVE SPRINGS AND FDOT SPECIFICATIONS (LATEST EDITION).

E. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRE-CAST AND MANUFACTURED ITEMS TO THE OWNER'S ENGINEER FOR REVIEW AND APPROVAL. PRIOR TO SUBMITTING SHOP DRAWINGS FOR APPROVAL THE CONTRACTOR SHALL CONFIRM THAT THE MOST CURRENT PLANS WERE USED TO PREPARE THE SHOP DRAWINGS AND REVIEW THE SHOP DRAWINGS TO CONFIRM DIMENSIONS, ELEVATIONS, CONNECTIONS, AND MATERIALS. FAILURE TO OBTAIN APPROVAL BEFORE FABRICATION AND/OR INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT CONTRACTOR'S EXPENSE.

F. WORK PERFORMED UNDER THIS CONTRACT SHALL INTERFACE SMOOTHLY WITH OTHER WORK BEING PERFORMED BY OTHER CONTRACTORS AND UTILITY COMPANIES. IT WILL BE NECESSARY FOR THE CONTRACTOR TO COORDINATE AND SCHEDULE HIS ACTIVITIES, WHERE NECESSARY, WITH OTHER CONTRACTORS AND UTILITY COMPANIES (INCLUDE LIGHTING, POWER, TELEPHONE, CABLE, GAS, IRRIGATION, ETC...).

G. THE WATER, SANITARY SEWER, AND STORM DRAINAGE FACILITIES ARE SUBJECT TO THE REVIEW AND APPROVAL OF APPLICABLE AGENCIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY ADDITIONALLY REQUIRED PERMITS IN ORDER TO PERFORM THE PROPOSED WORK.

H. IT WILL BE NECESSARY TO EXAMINE, COORDINATE AND ADJUST ACCORDINGLY THE PROPOSED LOCATIONS OF THE VARIOUS COMPONENTS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUBMIT COORDINATION DRAWINGS (SHOP DRAWINGS) SHOWING PIPE SIZES, STRUCTURES, AND ELEVATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SCHEDULING AND COORDINATION OF THE UNDERGROUND WORK ASSOCIATED WITH THIS PROJECT.

I. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY ENVIRONMENTAL PROTECTION AGENCY (EPA) PERMITTING WHERE REQUIRED. THIS INCLUDES FILING A NPDES NOTICE OF INTENT OR NOTICE OF TERMINATION, IF REQUIRED.

J. ALL CONSTRUCTION SHALL CONFORM TO CURRENT ZONING REQUIREMENTS. CONTRACTOR MAY REQUEST A COPY OF THESE CONDITIONS FROM THE OWNER OR ENGINEER OF RECORD.

K. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, EITHER ABOVE OR BELOW GROUND, WHICH MAY OCCUR AS A RESULT OF THE WORK PERFORMED BY THE CONTRACTOR.

L. ALL UNDERGROUND STORMWATER INFRASTRUCTURE AND UTILITIES (INCLUDING CONDUIT & SLEEVES) MUST BE IN PLACE, TESTED, AND AS-BUILT PRIOR TO BASE AND PAVEMENT CONSTRUCTION. CONTRACTOR SHALL PROVIDE SAID AS-BUILTS TO THE ENGINEER OF RECORD FOR PRELIMINARY REVIEW PRIOR TO PAVING. FAILURE TO FOLLOW THIS PROCEDURE MAY RESULT IN REMOVAL AND REPLACEMENT OF BASE AND/OR PAVEMENT AT THE CONTRACTOR'S EXPENSE.

M. CONTRACTOR SHALL COORDINATE PRE-CONSTRUCTION CONFERENCE WITH AGENCIES HAVING JURISDICTION (AHJ) OVER WORK TO BE PERFORMED.

N. CONSTRUCTION SHALL ADHERE TO THE APPLICABLE GOVERNMENT AGENCY CRITERIA, PERMIT CONDITIONS, APPROVED PLANS, AND SUPPLEMENTAL SPECIFICATIONS PROVIDED BY OWNER. IN THE CASE OF CONFLICTS THE STRICTER REQUIREMENT WILL PREVAIL.

O. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE OWNER AND ENGINEER OF RECORD CONCERNING LIMITS OF CONSTRUCTION, TRANSITIONS, ETC. WHICH MAY NOT BE SHOWN ON THESE PLANS.

P. ANY PUBLIC LAND CORNER OR BENCH MARK WITHIN THE LIMITS OF CONSTRUCTION TO BE PROTECTED.

Q. EXISTING VERTICAL AND HORIZONTAL GEOMETRY, SUPERELEVATION RATES, TAPERS, AND TRANSITION RATES ASSOCIATED WITH EXISTING ROADWAYS SHALL BE MAINTAINED UNLESS OTHERWISE SHOWN ON THE PLANS.

R. ANY ON-SITE WELLS NOT PROPOSED TO REMAIN ARE TO BE SEALED BY A LICENSED WELL CONTRACTOR IN ACCORDANCE WITH 40D-3.517.

S. ALL PRACTICABLE AND NECESSARY EFFORT SHALL BE TAKEN DURING CONSTRUCTION TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT MATERIAL TO INLETS, SURFACE DRAINS, WETLANDS AND LAKE AREAS. CONTRACTOR IS RESPONSIBLE FOR PREPARING, IMPLEMENTING, AND MAINTAINING A STORMWATER POLLUTION PREVENTION PLAN MEETING ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESTORATION EFFORTS THAT MAY BE REQUIRED.

T. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.

U. SEE FDOT DESIGN STANDARDS INDEX 001 FOR STANDARD ABBREVIATIONS DENOTED IN THIS PLAN SET.

V. CONTRACTOR SHALL CALL SUNSHINE 811 48 HOURS BEFORE BEGINNING EXCAVATION.

W. CONTRACTOR SHALL NOT STORE CONSTRUCTION MATERIALS, VEHICLES, OR HEAVY EQUIPMENT NEAR WETLAND AREAS OR TREES PROPOSED TO REMAIN.

X. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH OWNER'S ENGINEER WITH COMPLETE "AS-BUILT" INFORMATION CERTIFIED BY A REGISTERED LAND SURVEYOR. UPON COMPLETION, THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH A COMPACT DISK CONTAINING THE ELECTRONIC COPY OF THE AUTOCAD DRAWING FILE OF EACH SHEET AND FIVE SETS OF SIGNED AND SEALED PRINTS. THE ELECTRONIC FILES SHALL BE GEO-FREFERENCED (STATE PLANE COORDINATE SYSTEM) AND INCLUDE TIES TO AN ESTABLISHED LOCAL BENCHMARK. THE "AS-BUILT" SURVEY INFORMATION SHALL BE SUPPLEMENTED BY THE CONTRACTOR AS NECESSARY TO CLEARLY AND ACCURATELY REPRESENT ALL CONSTRUCTED ITEMS INCLUDING, BUT NOT LIMITED TO:

X.1. WATER/WASTEWATER/RECLAIMED WATER AND OTHER PRESSURE PIPES:
- OFFSETS FROM EDGE OF PAVEMENT AND R-O-W TO PIPE LINES SHALL BE SHOWN AT NOT GREATER THAN 100 FEET INTERVALS.
- LOCATION OF CASING PIPE, CONCRETE ENCASEMENT, AND SHEETING BY STATION AND ELEVATION. INCLUDE SIZE, LENGTH, MATERIAL TYPE AND WALL THICKNESS OF CASING.
- ELEVATIONS AT ALL CHANGES IN VERTICAL OR HORIZONTAL DIRECTION. ELEVATIONS AT ALL VALVES, BENDS AND CHANGES TO FINISHED GRADE OVER PIPE.
- ELEVATION FOR TOP OF PIPE AND GRADE SHALL OCCUR AT A MINIMUM OF 200 FEET FOR STRAIGHT RUNS OF PIPE AND AT SUFFICIENT INTERVALS TO ESTABLISH CURVATURE FOR ANY PIPE DEFLECTIONS IN A CURVED ALIGNMENT.
- ANY CHANGES IN ALIGNMENT OR ELEVATION OF OTHER UTILITIES DUE TO CONSTRUCTION.
- LOCATION OF ANY FOUND UTILITIES.
- INSTALLED PIPE DIAMETER, MATERIAL TYPE, AND AWWA/ASTM/ANSI CLASSIFICATION.
- MATERIAL TYPE AND SERIAL NUMBERS OF ALL VALVES, METERS, ASSEMBLIES
- IF ABANDONMENT OF EXISTING FACILITIES IS INCLUDED IN PROJECT, PROVIDE SIZE, TYPE, DEPTH, LOCATION, AND LIMITS OF ANY ABANDONED PIPE. ALSO INCLUDE THE METHOD OF ABANDONMENT (I.E., MORTAR FILLED, ETC.).
- ANY VERTICAL IMPROVEMENTS WITHIN EXISTING RIGHTS-OF-WAY THAT ARE IN IMMEDIATE PROXIMITY OF THE UTILITY SYSTEM (I.E. MONUMENT SIGNS ,WALLS AND BRIDGES)
- CROSS-SECTIONAL DETAILS SHALL BE PROVIDED WHERE UTILITIES CROSS.
- HORIZONTAL AND VERTICAL LOCATION AND TYPE OF ALL FITTINGS, BENDS, REDUCERS, SLEEVES, PLUGS, CAPS, TEES, CROSSES, TAPS, RESTRAINED JOINTS, VALVES, BLOW-OFFS, HYDRANTS, HIGH AND LOW POINTS, ETC.
- STATION ALL CONNECTIONS WHEN THEY ARE NOT ON PROPERTY LINES.

X.1. GRAVITY SEWER LINES:
- LOCATION AND ELEVATIONS OF ALL SANITARY SEWER STRUCTURES, TO INCLUDE TOP ELEVATIONS, BOTTOM ELEVATIONS, AND INVERTS. INCLUDING FIELD MEASURED PIPE LENGTHS, PIPE TYPES SLOPES AND PIPE SIZES.
- SHOW LOCATION OF LATERAL SERVICE CONNECTIONS BY STATION AND INCLUDE DEPTH OF COVER AT LOT LINES (CLEANOUT)
- SHOW SIZE, LENGTH INVERT ELEVATION AND GRADE OF STUB-OUTS FOR FUTURE CONNECTIONS.

X.1. STORMWATER SYSTEM:
- LOCATION AND ELEVATIONS OF ALL STORM SEWER OUTFALL STRUCTURES (AKA CONTROL STRUCTURES), TO INCLUDE ELEVATIONS, DIMENSIONS, SKIMMERS, INVERTS, WEIRS DIMENSIONS AND INVERTS, PIPE SIZES, PIPE TYPES, OPENING DIMENSIONS AND SLABS.
- LOCATION AND ELEVATIONS OF ALL STORM STRUCTURES, PIPES, CONDUITS, SLEEVES, ETC. INCLUDING CALCULATED SLOPE SIZE AND MATERIAL TYPE OF ALL PIPES.
- HORIZONTAL AND VERTICAL CONTROL OF ALL TOP OF BANKS, TOE OF SLOPES LITTORAL ZONES, DITCHES, PAVEMENT, CURB AND ALL GRADE BREAKS.

X.1. PUMP/LIFT STATIONS:
- HORIZONTAL AND VERTICAL CONTROL ELEVATIONS OF ALL ELEMENTS OF PUMP/LIFT STATIONS INCLUDING TOP AND BOTTOM ELEVATIONS, PIPE INVERTS, PIPE SIZES AND PIPE TYPES.
- LOCATION AND ELEVATION OF ANY PAVEMENT MATERIALS ASSOCIATED WITH THE STATION.
- LOCATION AND TYPE OF ANY VERTICAL ELEMENTS ASSOCIATED WITH THE STATION, TO INCLUDE, PANELS, LIGHT POLES, FENCING, BACK FLOW ASSEMBLIES, METERS, ALL VALVES AND ASSOCIATED APPURTENANCES.
- ELEVATIONS AT WHICH THE FLOAT SWITCHES ENGAGE.

X.1. BUILDING AND OTHER VERTICAL STRUCTURES:
- LOCATION OF ALL CORNERS AND FINISHED FLOOR ELEVATIONS
- OVERHANG LOCATIONS

W. NO ENGINEER'S CERTIFICATIONS CAN BE SUBMITTED TO OBTAIN A CERTIFICATE OF OCCUPANCY UNTIL THE "AS-BUILT" INFORMATION IS RECEIVED, REVIEWED, AND APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ALLOW THE ENGINEER A MINIMUM OF FOUR WEEKS TO COMPLETE THE REVIEW OF THE "AS-BUILT" INFORMATION UPON RECEIPT, PRIOR TO SUBMITTAL TO APPLICABLE AGENCIES.

ROADWAY LIGHTING NOTES

A. ROADWAY LIGHTING SHALL CONFORM TO ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA), FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT), NATIONAL ELECTRICAL CODE (NEC) AND COUNTY STANDARDS FOR ALL AREAS; THIS INCLUDES CROSSWALKS, INTERSECTIONS AND THOROUGHFARES.

B. ROADWAY LIGHTING FIXTURES, POLES, MOUNTING HEIGHT AND SPACING (LOCATION) TO BE DETERMINED UPON SELECTION OF FIXTURE.

C. DRAWINGS AND PRODUCT SAMPLE SHALL BE SUBMITTED TO OWNER AND OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO ORDERING AND INSTALLATION.

ON-SITE FIRE PROTECTION NOTES

A. ALL NEW PRIVATE SERVICE MAINS SHALL BE TESTED HYDROSTATICALLY AT NOT LESS THAN 200 PSI (13.8 BARS) PRESSURE FOR TWO HOURS, OR AT 50 PSI (3.4 BARS) IN EXCESS OF THE MAXIMUM STATIC PRESSURE (WHICHEVER IS GREATER). (NFPA 24)

B. FIRE PUMP ROOM (IF APPLICABLE) SHALL CONTAIN APPROVED BACKFLOW PREVENTION DEVICE TO PREVENT RE-CIRCULATION WHEN FDC IS PRESSURIZED USING ON-SITE HYDRANT.

TESTING SCHEDULE

ITEM	TEST	TEST FREQUENCY
EMBANKMENT	OPTIMUM MOISTURE/MAXIMUM DENSITY	PER SOIL TYPE
	100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T99-57(METHOD C) NO TOLERANCE	ONE PER 500' HORIZONTALLY, IN ONE (1) FOOT LIFTS
	GRADATION 1-T027	1/500' SECTION PER LIFT
	PROCTOR 1-T180	PER MATERIAL TYPE
	PROCTOR 5-525	PER MATERIAL TYPE
	DENSITY 1-T238	1/500' SECTION PER LIFT
UTILITY TRENCH BACKFILL- OVER PIPELINES AND AROUND STRUCTURES FROM R.O.W. LINE TO R.O.W. LINE	OPTIMUM MOISTURE/MAXIMUM DENSITY	PER SOIL TYPE
	100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T99-57(METHOD C) NO TOLERANCE	REFER TO NOTE A & NOTE B
UTILITY TRENCH BACKFILL- OVER PIPELINES AND AROUND STRUCTURES OUTSIDE R.O.W. LINE	OPTIMUM MOISTURE/MAXIMUM DENSITY	PER SOIL TYPE
	95% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T99-57(METHOD C) NO TOLERANCE	REFER TO NOTE A
STABILIZED SUBGRADE	OPTIMUM MOISTURE/MAXIMUM DENSITY	PER SOIL TYPE
	MINIMUM 40 LBR	PER MATERIAL TYPE. REFER TO NOTE D
	MINIMUM 20 LBR (FOR SOIL CEMENT ONLY)	SAME AS FOR 40 LBR. REFER TO NOTE D
	98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70) NO TOLERANCE	REFER TO NOTE C
BASE (OTHER THAN SOIL CEMENT OR CRUSHED CONCRETE)	OPTIMUM MOISTURE/MAXIMUM DENSITY	PER SOIL TYPE
	MINIMUM 100 LBR	PER SOURCE
	98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70) NO TOLERANCE	REFER TO NOTE C
	GRADATION, ATTERBERG LIMITS	PER SOURCE
SOIL CEMENT BASE	MIX DESIGN	PER MATERIAL TYPE
	OPTIMUM MOISTURE/MAXIMUM DENSITY	PER MATERIAL TYPE DAILY
	PROCTOR 1-T180	PER MATERIAL TYPE
	COMPRESSIVE STRENGTH SPECIMENS	ONE SET OF THREE (3) PER MATERIAL TYPE DAILY
	TEST CORES-THICKNESS	REFER TO NOTE C
	97% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T134 - NO TOLERANCE	REFER TO NOTE C
CONCRETE	SLUMP TEST	ONE PER SET OF CYLINDERS
	COMPRESSIVE STRENGTH CYLINDERS	ONE SET OF THREE(3) CYLINDERS FOR 100 CUBIC YARDS OF FRACTION THEREOF
	AIR CONTENT	ONE PER SET OF CYLINDERS
CRUSHED CONCRETE BASE	MINIMUM LBR 130	3/STREET TO OBTAIN AN AVGERAGE OF 150
	LIQUID LIMIT (AS DETERMINED BY AASHTO T80) (LESS THAN 25)	PER MATERIAL TYPE
	PLASTICITY INDEX (AS DETERMINED BY AASHTO T90) (LESS THAN 4)	PER MATERIAL TYPE
	ABRASION	PER LOS ANGELES ABRASION (FM-1TO90) (50 MIN) PER MATERIAL TYPE
	DENSITY 100% OF MAXIMUM DENSITY (AS DETERMINED BY AASHTO T-180)	PER MATERIAL TYPE
SUPERPAVE ASPHALT	AGGREGATE ANALYSIS	PER FDOT
	DESIGN MIX	ONE PER FDOT APPROVED TYPE
	BITUMEN CONTENT	PER FDOT
	THICKNESS	REFER TO NOTE C
	MAXIMUM SPECIFIC GRAVITY (Gmm)	PER FDOT
	90% OF LAB DENSITY FOR LOCAL ONSITE ROADWAYS (REMOVE AND REPLACE IF NOT MET) 92% OF LAB DENSITY FOR COLLECTORS AND ARTERIALS (REMOVE AND REPLACE IF NOT MET)	REFER TO NOTE C

NOTES

A) TESTS SHALL BE LOCATED NO MORE THAN 500FT APART. TESTS SHALL BE PERFORMED ON EACH LIFT, EXCEPT THAT TESTS SHALL NOT BE FURTHER APART THAN ONE FOOT VERTICALLY. FIELD DENSITIES SHALL BE TAKEN OVER ALL ROAD CROSSINGS. FIELD DENSITIES FOR SANITARY LINES SHALL BE STAGGERED TO INCLUDE RESULTS OVER SERVICE LATERALS. THERE SHALL BE A MINIMUM OF ONE TEST SERIES FOR EACH ONE FOOT OF LIFT OVER PIPELINE BETWEEN MANHOLES. TESTS AROUND STRUCTURES SHALL BE SPIRALED IN ONE FOOT LIFTS. FOR ALL TYPE PIPE, FILL TO BE COMPACTED BENEATH THE HAUNCHES USING SUITABLE TAMPERS. FOR PIPE LESS THAT 24 INCHES IN DIAMETER, BACKFILL IN APPROPRIATE LIFTS AND TEST FROM THE TOP OF THE PIPE AND EVERY ONE FOOT VERTICALLY THEREAFTER. FOR PIPE 24 INCHES TO 72 INCHES IN DIAMETER, BACKFILL IN APPROPRIATE LIFTS AND TEST FROM THE SPRINGLINE AND EVERY ONE FOOT VERTICALLY THEREAFTER. FOR PIPE LARGER THAN 72 INCHES, TESTS SHALL BEGIN ONE FOOT ABOVE THE BASE OF THE TRENCH.

B) FOR FLEXIBLE PIPE (CORRUGATED STEEL OR ALUMINUM), 95% OF MAXIMUM DENSITY (AASHTO-T99) PER FDOT SPECIFICATIONS SUBARTICLE 125-9.2.1

C) TESTS SHALL BE LOCATED NO MORE THAN 500 FEET APART. THERE SHALL BE NO LESS THAN ONE TEST PER STREET. NO CORE SHALL BE LESS THAN SPECIFIED MINIMUM THICKNESS.

D) TESTING FOR THE SUBGRADE BEARING CAPACITY AND COMPACTION SHALL BE LOCATED NO MORE 500 FEET APART AND SHALL BE STAGGERED TO THE LEFT, RIGHT, AND ON THE CENTERLINE OF THE ROADWAY. THERE SHALL BE NO LESS THAN THREE TESTS PER STREET TO OBTAIN AN AVERAGE LBR 40 VALUE. THE AUTHORITY HAVING JURISDICTION (AHJ) MAY RESERVE THE RIGHT TO SAMPLE AND TEST ANY MATERIAL UTILIZED IN THE CONSTRUCTION OF THE SUBGRADE. TESTING SHALL BE IN ACCORDANCE WITH THE TESTING SCHEDULE OF THE AHJ AND APPLICABLE FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION (EXCEPT FOR THE REQUIREMENTS OF CQC). IN THE EVENT OF A CONFLICT BETWEEN SPECIFICATIONS, THE MOST STRINGENT SHALL PREVAIL. INSPECTION OF THE SUBGRADE SHALL BE CONDUCTED BY THE ENGINEER OF RECORD, THE AHJ INSPECTOR, AND SHALL BE APPROVED BY THE PROJECT MANAGER PRIOR TO BASE CONSTRUCTION.

ADDITIONAL NOTE: THE AHJ RESERVES THE RIGHT TO SAMPLE AND TEST ANY MATERIAL DURING CONSTRUCTION

DEMOLITION NOTES

A. CONTRACTOR TO REMOVE AND DISPOSE OF ALL EXISTING OCCUPATION AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.

B. CONTRACTOR TO ESTABLISH AND PROPERLY FLAG PROPERTY LINES PRIOR TO DEMOLITION.

C. THE CONTRACTOR SHALL INSTALL EROSION CONTROL PRIOR TO DEMOLITION AND MAINTAIN DURING CONSTRUCTION, REFER TO GENERAL CONSTRUCTION NOTES.

D. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIAL GENERATED FROM THE SITE CLEARING / DEMOLITION PROCESS, INCLUDING BUT NOT LIMITED TO: TREES, STUMPS, TRASH, VEGETATION, ASPHALT AND CONCRETE PAVEMENT, REINFORCED CONCRETE PAVEMENT, SITE STRUCTURES AND WALLS, PVC AND DIP PIPE. THIS MATERIAL SHALL BE DISPOSED OF OFF-SITE AT A PERMITTED SITE SELECTED BY THE CONTRACTOR. BURYING OF THESE MATERIALS ON-SITE SHALL NOT BE PERMITTED. BURNING OF VEGETATION IS ACCEPTABLE PROVIDED THE CONTRACTOR OBTAIN ALL REQUIRED STATE AND LOCAL PERMITS.

E. INFORMATION TAKEN FROM SURVEY(S) PREPARED BY PROJECT SURVEYOR (SEE SURVEY NOTES).

F. UTILITIES TO BE PLUGGED SHALL BE FILLED WITH A MINIMUM 1.0 CUBIC FT. OF NON SHRINK GROUT OR AS OTHERWISE APPROVED BY ENGINEER, PRESSURE MAINS SHOULD BE CAPPED OR PLUGGED AND RESTRAINED WITH A REVERSE DEADMAN. RCP SHOULD RECEIVE A BRICK AND MORTAR PLUG.

G. TREES SHOWN TO REMAIN SHALL MAINTAIN PROTECTIVE BARRIERS AT ALL TIMES. THESE BARRIERS SHALL BE IN ACCORDANCE WITH CURRENT CITY OF GREEN COVE SPRINGS STANDARDS.

H. ALL TREE ROOTS EXISTING WITHIN APPROVED IMPROVEMENT AREAS AND ORIGINATING FROM A PROTECTED TREE, SHALL BE SEVERED CLEAN AT THE LIMITS OF THE PRESERVED AREA WHERE INDICATED. ROOT PRUNING TO BE CONDUCTED BY LICENSED ARBORIST IN ACCORDANCE WITH ANSI A300 STANDARDS.

I. THE CONTRACTOR SHALL COORDINATE THE REMOVAL/RELOCATION OF EXISTING UTILITIES WITH THE OWNER OF SAID UTILITY. THIS SHALL INCLUDE BUT NOT BE LIMITED TO WATER, SEWER, GAS, CABLE TV, POWER AND TELEPHONE.

J. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO DEMOLITION AND WILL BE RESPONSIBLE FOR THE DAMAGE OF ANY ON-SITE OR OFF-SITE UTILITIES THAT ARE NOT A PART OF THIS PROJECT OR ARE NOT IDENTIFIED TO BE REMOVED.

K. THE CONTRACTOR SHALL BARRICADE THE SITE AND CONTROL TRAFFIC PER CURRENT FDOT TRAFFIC CONTROL STANDARDS.

L. ALL ABOVE GROUND IMPROVEMENTS (IE: PAVEMENT, CURBING, BUILDINGS, SIGNAGE, CONCRETE WALKS, POLES, INLETS, ETC...) AND BELOW GROUND IMPROVEMENTS (IE: SANITARY, STORM, WATER, CABLE, ELECTRIC, PHONE, ETC...) SHALL REMAIN UNLESS OTHERWISE NOTED.

M. UNSUITABLE MATERIAL IS TO BE REMOVED FROM LANDSCAPE AREAS. (SEE LANDSCAPE PLANS FOR PLANTING SOIL REQUIREMENTS).

N. THE OWNER RESERVES THE RIGHT TO RETAIN ANY ITEM FROM THE DEMOLITION OF THE SITE DEEMED VALUABLE.

O. ALL EXISTING CONCRETE/ASPHALT OCCUPATION DESIGNATED TO BE REMOVED IS TO BE SAWCUT ALONG THE LIMITS OF DEMOLITION.

SIGNING AND PAVEMENT MARKING NOTES

A. ALL SIGNS AND PAVEMENT MARKING SHALL CONFORM TO THE U.S. DEPARTMENT OF TRANSPORTATION 'MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES' 2009 EDITION INCLUDING REVISION DATED MAY 2012 AND THE FLORIDA DEPARTMENT OF TRANSPORTATION 'DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM' (DATED 2017-2018).

B. ALL FLORIDA ROUTE MARKERS MUST CONFORM TO FDOT DESIGN STANDARDS INDEX NO. 700-102.

C. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LENGTH OF COLUMN (POST) SUPPORTS IN THE FIELD PRIOR TO FABRICATION. COLUMN HEIGHTS AND DIMENSION SHALL CONFORM TO FDOT STANDARDS.

D. REFER TO FDOT DESIGN STANDARDS INDEX NO. 17352 FOR RETRO-REFLECTIVE PAVEMENT MARKER PLACEMENT DETAILS.

E. PAINT ALL MEDIAN NOSES AND RAISED ISLAND NOSES REFLECTIVE WHITE OR REFLECTIVE YELLOW. COLOR IS AS INDICATED IN THE PLANS. ABSENCE OF A CALLOUT RELATED TO THIS DETAIL DOES NOT ELIMINATE THIS REQUIREMENT.

F. CAUTION MUST BE EXERCISED WHILE RELOCATING EXISTING SIGNS SO AS TO PREVENT DAMAGE TO THE SIGNS. IF THE SIGNS ARE DAMAGED BEYOND USE, AS DETERMINED BY THE ENGINEER OR AUTHORITY HAVING JURISDICTION THEN THEY SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE. IF SIGNS ARE IN POOR CONDITION PRIOR TO REMOVAL, THE ENGINEER OF RECORD AND OWNER SHALL BE NOTIFIED IN WRITING AND ADVISED OF ANY POTENTIAL CHANGE ORDER.

G. ANY EXISTING SIGN TO REMAIN THAT ARE DISTURBED DURING CONSTRUCTION OR RELOCATED SHALL BE RESET TO CURRENT FDOT STANDARDS FOR HEIGHT, OFFSET, AND METHOD OF INSTALLATION. IF THE EXISTING SIGN CANNOT BE RELOCATED DURING THE CONSTRUCTION IMPROVEMENTS, THE CONTRACTOR SHOULD TAKE CAREFUL PRECAUTION TO STORE AND PROTECT THE EXISTING SIGN UNTIL THE SIGN CAN BE INSTALLED AT ITS FINAL LOCATION. COST OF THIS WORK SHALL BE REFLECTED IN THE BID ITEM OR RELATED WORK.

H. THE SIGN LOCATIONS SHOWN ARE APPROXIMATE AND SHOULD BE INSTALLED IN ACCORDANCE WITH MUTCD PLACEMENT CRITERIA, AND MAY REQUIRE FIELD ADJUSTMENT AS DIRECTED BY THE LOCAL GOVERNMENT AGENCY OR BY THE ENGINEER OF RECORD.

I. ALL ROUTE MARKER AUXILIARIES SHALL MATCH THE COLOR COMBINATION OF THE RESPECTIVE MARKER WHICH THEY SUPPLEMENT.

J. CONTRACTOR SHALL USE W-SHAPE STEEL POSTS FOR MULTI-POST SIGNS AND ALUMINUM ROUND TUBES FOR SINGLE COLUMN / POSTS (UNLESS OTHERWISE NOTED IN THE PLANS OR REQUIRED BY THE LOCAL JURISDICTION).

K. ANY EXISTING SIGNS LOCATED WITHIN PUBLIC RIGHT-OF-WAY (WITHIN PROJECT LIMITS SHALL) SHALL REMAIN UNLESS OTHERWISE NOTED IN THE PLANS.

L. ALL SINGLE COLUMN SIGNS WITHIN THE LIMITS OF CLEARING AND GRUBBING SHALL BE REMOVED UNLESS OTHERWISE NOTED IN THE PLANS.

B. PAVEMENT MARKINGS SHALL BE PLACED AS SHOWN IN THE PLANS AND THE APPROPRIATE FDOT DESIGN STANDARDS INDEX. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD IN WRITING.

C. THE CONTRACTOR SHALL APPLY THERMOPLASTIC AS THE FINAL TRAFFIC STRIPES AND MARKINGS A MINIMUM OF 14 DAYS AFTER THE FIRST APPLICATION OF PAINT BUT PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. THERMOPLASTIC SHALL BE LEAD-FREE, NON-SOLVENT BASED, COMPLIANT WITH SECTION 711 OF THE STANDARD SPECIFICATIONS, AND LISTED ON QPL.

D. ON CONCRETE SURFACE, INCLUDING BRIDGE DECKS, ALL SKIP STRIPE PAVEMENT MARKINGS SHALL BE ALTERNATE WHITE (THERMOPLASTIC) AND BLACK (PAINT) (10' WHITE/10' BLACK/20' SKIP).

E. IN PARKING LOTS STRIPING AND SIGNAGE SHALL CONFORM TO FDOT STANDARDS. PAINTED OR THERMOPLASTIC STRIPING SHALL BE USED AS DESIGNATED ON THE PLANS. WHEN STRIPING WITH WHITE ON CONCRETE SURFACES THE CONTRACTOR SHALL APPLY BLACK PAINT FIRST ON THE PAVEMENT PRIOR TO PAINTING WHITE STRIPING.

F. PAINTED PAVEMENT MARKINGS SHALL COMPLY WITH SECTION 710 OF THE STANDARD SPECIFICATIONS AND BE LISTED ON QPL. (TWO COATS APPLIED 14 DAYS APART).

G. ACCESSIBLE PARKING SPACES SHALL BE MARKED AND SIGNED IN ACCORDANCE WITH FDOT INDEX 711-001 (UNLESS OTHERWISE NOTED).

H. ALL PAVEMENT MARKING TO BE REMOVED SHALL BE PERFORMED BY HYDROBLASTING (UNLESS PROHIBITED BY THE AHJ).

SAFETY NOTES

A. DURING THE CONSTRUCTION AND MAINTENANCE OF THIS PROJECT, ALL SAFETY REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS PERSONNEL.

B. CONTRACTOR SHALL REMAIN IN COMPLIANCE WITH ALL OCCUPATION SAFETY AND HEALTH REGULATIONS AS WELL AS THE ENVIRONMENTAL PROTECTION LAWS.

C. NEITHER THE ENGINEER OF RECORD NOR OWNER ARE RESPONSIBLE FOR PROJECT SAFETY.

D. THE CONTRACTOR'S MAINTENANCE OF TRAFFIC (MOT) PLAN MUST BE PREPARED BY A PROFESSIONAL WITH FDOT ADVANCED MOT CERTIFICATION. THE PLAN MUST THEN BE SUBMITTED AND APPROVED BY APPLICABLE GOVERNING AGENCIES PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES WITHIN OR IMMEDIATELY ADJACENT TO THE EXISTING RIGHT-OF-WAY.

E. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION.

F. CONTRACTOR SHALL PROVIDE AND MAINTAIN IT'S OWN SAFETY EQUIPMENT IN ACCORDANCE WITH IT'S HEALTH & SAFETY PROGRAM AND ALL OTHER APPLICABLE LEGAL AND HEALTH AND SAFETY REQUIREMENTS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROVIDING ITS EMPLOYEES AND SUB-CONTRACTORS WITH ADEQUATE INFORMATION AND TRAINING TO ENSURE THAT ALL EMPLOYEES AND SUB-CONTRACTORS AND SUB-CONTRACTOR'S EMPLOYEES COMPLY WITH ALL APPLICABLE SAFETY CODE REQUIREMENTS.

G. ALL EXCAVATIONS BY THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF THE DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS AND FLORIDA TRENCH SAFETY ACT.

H. THE MINIMUM STANDARDS AS SET FORTH IN THE CURRENT EDITION OF "THE STATE OF FLORIDA, MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS" SHALL BE FOLLOWED IN THE DESIGN APPLICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND WORKMEN FROM HAZARDS WITHIN THE PROJECT LIMITS.

I. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS CONTAINING BURIED UTILITIES AND SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE UTILITY COMPANIES PRIOR TO CONSTRUCTION TO OBTAIN FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES. CALL SUNSHINE STATE ONE CALL AT SUNSHINE 811 BEFORE YOU DIG.

J. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATIONS.

TRAFFIC CONTROL GENERAL NOTES

A. THE MAINTENANCE OF TRAFFIC SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD)" LATEST EDITION" AND FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS (CURRENT STANDARDS).

B. THE MINIMUM TEMPORARY LANE WIDTH ALLOWED WILL BE 10 FEET. THE CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION AND THE ENGINEER OF RECORD ALONG WITH ALL LOCAL LAW ENFORCEMENT AND EMERGENCY/RESCUE AGENCIES LOCATED IN THE PROJECT VICINITY A MINIMUM OF 24 HOURS IN ADVANCE OF ANY PROPOSED LANE CLOSURES AND/OR DETOURS.

C. TEMPORARY REFLECTIVE PAVEMENT MARKERS SHALL BE PROVIDED ON ALL TEMPORARY LANE LINES AND MEDIAN EDGE LINES IN ACCORDANCE WITH FDOT INDEXES.

D. ALL TRAFFIC LANES MUST REMAIN OPEN FOR TRAFFIC DURING AN EVACUATION NOTICE FROM HURRICANES OR OTHER CATASTROPHIC EVENTS AND SHALL REMAIN OPEN FOR THE DURATION OF THE EVACUATION OR EVENT AS DIRECTED BY THE ENGINEER OF RECORD OR LOCAL JURISDICTION.

E. THE CONTRACTOR SHALL MAINTAIN AND KEEP STREET NAME IDENTIFICATION VISIBLE DURING CONSTRUCTION OPERATIONS IN ORDER TO FACILITATE EMERGENCY VEHICLE TRAFFIC.

F. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICES TO ALL PROPERTY OWNER'S NOT LESS THEN THREE (3) DAYS IF DRIVEWAYS ARE TO BE CLOSE OR REMOVED AS PART OF THE PROJECT IMPROVEMENTS.

SITE PLAN AND COORDINATE GEOMETRY NOTES

A. ALL POINTS AND MONUMENTS SHALL BE SURVEYED UPON MOBILIZATION TO VERIFY THEIR ACCURACY. ANY DISCREPANCIES DISCOVERED MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION.

B. MONUMENTS AND OTHER SURVEY CONTROL POINTS SHALL BE PROTECTED FROM DAMAGE AND DISTURBANCE. IF ANY CONTROL POINTS ARE DAMAGED OR DISTURBED, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER AND REPLACE THE CONTROL POINTS TO THEIR ORIGINAL CONDITION AT HIS OWN EXPENSE.

C. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THIS WORK PRIOR TO CONSTRUCTION.

D. DIGITAL OR ELECTRONIC REPRESENTATION OF THESE CONSTRUCTION PLANS DOES NOT CONSTITUTE A COORDINATE CONTROL MAP OR MATHEMATICALLY CONTROLLED INFORMATION FOR THE USE OF CONSTRUCTION STAKEOUT. IT IS THE RESPONSIBILTY OF THE CONTRACTOR AND/OR THE CONTRACTOR'S SURVEYOR TO ENSURE THAT ANY DIGITAL OR ELECTRONIC REPRESENTATION OF THESE PLANS IS IN COMPLETE CONFORMANCE WITH ALL OF THE NOTATIONS, SPECIFICATIONS, DETAILS AND OTHER DATA APPEARING ON OR AS MAY BE DERIVED FROM THESE CONSTRUCTION PLANS.

E. ALL DIMENSIONS SHOWN ON PLAN ARE TO FACE OF BUILDING, EDGE OF PAVEMENT, FACE OF CURB OR CENTERLINE OF STRUCTURE, UNLESS NOTED OTHERWISE.

NOTE:
CONTRACTOR TO REFER TO FDOT DESIGN STANDARDS FOR ADDITIONAL INDEX INFORMATION NOT SHOWN ON THESE PLANS

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PREPARED FOR
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REVISIONS

NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.:	037756.094
ISSUED:	2/14/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	N/A

GENERAL NOTES

C-002

2/14/2024 10:36:06 AM Tyler Keppel A:\37000s\37756\094\LD\CADD\Sheets\C-000 Notes and Detail Sheets.dwg

PAVING AND GRADING NOTES

1. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) IS TO BE EXCAVATED IN ACCORDANCE WITH THESE PLANS OR AS DIRECTED BY THE OWNER, THE OWNER'S ENGINEER, OR OWNER'S SOIL TESTING COMPANY. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS TO BE BACK FILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND SHALL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.
3. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOIL TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS OR THE REFERENCED SOILS REPORT. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES, WHICH INCLUDE BUT ARE NOT LIMITED TO EARTHWORK ACTIVITIES, SUB GRADE PREPARATION, ETC... CONFORM WITH THE GEOTECHNICAL REPORT.
4. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON DRAWINGS.
5. CONTRACTOR SHALL TRIM, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
6. CURBING WILL BE PLACED AT THE EDGE OF ALL PAVEMENT, AS SHOWN ON THE PLANS.
7. REFER TO THE LATEST IMPERIAL EDITION OF F.D.O.T. "ROADWAY AND TRAFFIC DESIGN STANDARDS" FOR DETAILS AND SPECIFICATIONS OF ALL F.D.O.T. TYPE CURBING AND GUTTERS CALLED FOR IN THESE PLANS.
8. CONTRACTOR TO PROVIDE A 1/2" TO 1" BITUMINOUS EXPANSION JOINT MATERIAL WITH SEALER AT ABUTMENT OF CONCRETE AND OTHER MATERIAL, CONTRACTOR TO PROVIDE A 1'(W) RIBBON CURB AT THE ABUTMENT OF SPECIALTY PAVEMENT AND ASPHALT; REFER TO PLANS.
9. CONTRACTOR IS TO PROVIDE EROSION CONTROL AND SEDIMENTATION BARRIER TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES.
10. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.
11. THE CONTRACTOR WILL STABILIZE BY SEED AND MULCH, SOD OR OTHER APPROVED MATERIALS AS REQUIRED ANY DISTURBED AREAS WITHIN ONE WEEK FOLLOWING CONSTRUCTION OF THE UTILITY SYSTEMS AND PAVEMENT AREAS. CONTRACTOR SHALL MAINTAIN SUCH AREAS UNTIL FINAL ACCEPTANCE BY OWNER.
12. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE SOILS TESTING AND SUBMITTING TESTING TO OWNER'S ENGINEER ON A WEEKLY BASIS. TESTS WILL BE REQUIRED PURSUANT WITH THE TESTING SCHEDULE REQUIRED BY THE GOVERNMENTAL AGENCY HAVING JURISDICTION OVER THIS WORK. UPON THE COMPLETION OF THIS WORK, SOILS ENGINEER WILL SUBMIT CERTIFICATIONS TO THE OWNER'S ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MET.
13. A QUALIFIED TESTING LABORATORY SELECTED BY THE OWNER SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN PLACE MATERIALS AS REQUIRED BY THESE PLANS AND THE VARIOUS AGENCIES. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THE REQUIREMENTS, THE CONTRACTOR WILL BEAR ALL COSTS OF SAID RETESTING.
14. MIXING IN PLACE OF SOIL CEMENT WILL NOT BE ALLOWED.
15. CONTRACTOR TO FINISH ALL EXPOSED BACK OF CURB.
16. COMPACTED SUB-GRADE SHALL BE MECHANICALLY MIXED TO THE SPECIFIED DEPTH PRIOR TO GRADING, COMPACTION AND TESTING.
17. DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIPLINE OF A TREE TO REMAIN ON SITE UNLESS OTHERWISE APPROVED BY THE COUNTY.

DRAINAGE NOTES

1. STANDARD INDEXES REFER TO THE LATEST EDITION OF FDOT "ROADWAY AND TRAFFIC DESIGN STANDARDS" aka "DESIGN STANDARDS" AND/OR "FDOT INDEX". REFER TO THIS MANUAL FOR ADDITIONAL DETAILS AND INFORMATION NOT SHOWN OR REFERENCED ON THESE PLANS.
2. ALL STORM SEWER PIPE SHALL BE CLASS III (ASTM C-76) UNLESS OTHERWISE NOTED ON PLANS.
3. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH FDOT INDEX UNLESS OTHERWISE NOTED ON PLANS. STRUCTURE BOTTOMS SHALL BE ADJUSTED OR MODIFIED PER FDOT INDEX WHEN LARGER PIPES ARE INDICATED
4. ALTERNATIVE DRAINAGE PIPE MATERIALS AND SUBSTITUTIONS MUST BE LISTED AS A BID ALTERNATE MATERIAL DURING THE INITIAL BIDDING PHASE FOR CONSIDERATION. SUBSTITUTION OF PIPE MATERIALS DURING THE CONSTRUCTION PHASE IS NOT PERMISSIBLE WITHOUT SPECIFIC WRITTEN APPROVAL FROM THE ENGINEER OF RECORD AND OWNER. THE USE OF PLASTIC STORMWATER PIPE MATERIALS (PVC, HDPE, ETC) SHALL REQUIRE THE USE OF WATERTIGHT BOOTED CONNECTIONS AT ALL STORMWATER STRUCTURES. NO GROUTING OF STRUCTURE OPENINGS WILL BE PERMITTED WHEN USING FLEXIBLE PIPE MATERIALS.
5. PIPE LENGTHS SHOWN ARE APPROXIMATE AND MEASURED TO CENTER OF DRAINAGE STRUCTURE WITH THE EXCEPTION OF MITERED END SECTION (MES) AND FLARED END SECTION (FES) WHICH ARE NOT INCLUDED IN LENGTHS. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES AS SHOWN ON THE PLANS OR BID SCHEDULE (IF PROVIDED BY OWNER) PRIOR TO FINALIZING THEIR SUBMITTAL OF BIDS/PROPOSAL, AND INFORM THE ENGINEER OF ANY DISCREPANCIES.
6. ALL STORM DRAINAGE PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER OR ENGINEER'S REPRESENTATIVE PRIOR TO THE PLACEMENT OF BACK FILL.
7. THE CONTRACTOR MUST PROVIDE CCTV VIDEO (IN DVD FORMAT) OF THE NEWLY CONSTRUCTED STORMWATER PIPELINE FOR REVIEW AND ACCEPTANCE. THE CONTRACTOR SHALL PROVIDE AT LEAST 48 HOURS NOTIFICATION TO THE ENGINEER AND TO THE APPLICABLE AGENCIES TO SCHEDULE INSPECTIONS. PRIOR TO SUBMITTING VIDEOS TO THE ENGINEER FOR REVIEW, THE CONTRACTOR SHALL REVIEW THE VIDEOS FIRST FOR DISCREPANCIES AND FOR COMPLETENESS TO MAKE SURE THAT ALL PIPELINE SECTIONS ARE INCLUDED.
8. THE CONTRACTOR SHALL PROVIDE EROSION CONTROL TO MAINTAIN AND PROTECT THE STORM DRAINAGE SYSTEM FROM MUD, DIRT, DEBRIS, ETC. THE SYSTEM SHALL BE PROTECTED UNTIL THE ADJACENT LAND AREAS ARE DEEMED STABLE AND WRITTEN FINAL ACCEPTANCE OF THE PROJECT HAS BEEN PROVIDED. THE CONTRACTOR MAY BE REQUIRED TO PRESSURE CLEAN PIPES AND INLETS FOR THESE PURPOSES.
9. ALL FDOT DITCH BOTTOM INLETS IN THE PROPOSED PAVEMENT AREAS AND WITHIN THE DESIGNATED EASEMENTS OR PUBLIC ROW SHALL BE MODIFIED FOR TRAFFIC BEARING WITH HOT DIPPED GALVANIZED STEEL GRATES AND METAL ANGLE FRAMES SUPPORT FOR GRATES. ANGLE FRAME SHALL BE PART OF THE PRECAST CONCRETE STRUCTURES, INDICATED ON THE SHOP DRAWINGS AND THE PRECAST SHALL BE ACCORDANCE WITH FDOT SPECIFICATIONS.
10. ALL DRAINAGE STRUCTURE STEEL GRATES AND COVERS TO BE TRAFFIC RATED FOR A MINIMUM H-20 LOADING.
11. ALL MITERED END SECTIONS FOR SIDE DRAIN PIPES AT DRIVEWAY ENTRANCES ON COUNTY OR FDOT ROADWAYS MUST BE CONSTRUCTED WITH A CONCRETE TOE FOUNDATION IN ACCORDANCE WITH FDOT INDEX 273.
12. NO POND/LAKE EXCAVATION (FOR ANY PURPOSE) SHALL EXTEND BEYOND OR BELOW THE PERMITTED DESIGN DEPTHS/ELEVATIONS SHOWN ON THE DRAWINGS. NO LOWER SEMI-CONFINING UNIT CLAYEY MATERIALS AND NO WEATHERED LIMESTONE MATERIALS SHALL BE EXCAVATED, REGARDLESS IF THESE MATERIALS ARE ENCOUNTERED WITHIN THE PERMITTED EXCAVATION DEPTHS/ELEVATIONS SHOWN ON THE PLANS. TEMPORARY DEWATERING DITCHES OR SUMPS (FOR POND/LAKE EXCAVATION) SHALL NOT EXTEND BELOW THE PERMITTED DESIGN DEPTHS/ELEVATIONS SHOWN ON THE DRAWINGS. IF ANY LOWER SEMI-CONFINING UNIT CLAYEY MATERIALS OR WEATHERED LIMESTONE MATERIALS ARE ENCOUNTERED ABOVE THE PERMITTED EXCAVATION DEPTHS/ELEVATIONS, THEN EXCAVATION OPERATIONS IN THAT POND/LAKE AREA SHALL IMMEDIATELY CEASE IN THE GENERAL AREA, AND THE GEOTECHNICAL CONSULTANT AND ENGINEER OF RECORD SHALL BE NOTIFIED TO PROVIDE SUBSEQUENT EVALUATIONS / RECOMMENDATIONS, AS APPROPRIATE, WHICH SHALL BE IMPLEMENTED BY THE CONTRACTOR. EPC (OR FDEP) MUST BE CONTACTED PRIOR TO ANY EXCAVATION OF CLAYS OR EXCEEDING THE PERMITTED EXCAVATION DEPTH.

EROSION/TURBIDITY CONTROL NOTES

1. THE INSTALLATION OF TEMPORARY EROSION CONTROL BARRIERS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE PERMANENT EROSION CONTROL FEATURES TO THE EXTENT NECESSARY TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL OF EROSION AND WATER POLLUTION THROUGHOUT THE LIFE OF THE CONSTRUCTION PHASE.
2. THE TYPE OF EROSION CONTROL BARRIERS USED SHALL BE GOVERNED BY THE NATURE OF THE CONSTRUCTION OPERATION AND SOIL TYPE THAT WILL BE EXPOSED. SILTY AND CLAYEY MATERIAL USUALLY REQUIRE SOLID SEDIMENT BARRIERS TO PREVENT TURBID WATER DISCHARGE, WHILE SANDY MATERIAL MAY NEED ONLY SILT SCREENS OR HAY BALES TO PREVENT EROSION. FLOATING TURBIDITY CURTAINS SHALL BE USED IN OPEN WATER SITUATIONS. DIVERSION DITCHES OR SWALES MAY BE REQUIRED TO PREVENT TURBID STORM WATER RUNOFF FROM BEING DISCHARGED TO WETLANDS OR OTHER WATER BODIES. IT MAY BE NECESSARY TO EMPLOY A COMBINATION OF BARRIERS, DITCHES AND OTHER EROSION/TURBIDITY CONTROL MEASURES IF CONDITIONS WARRANT.
3. THE CONTRACTOR SHALL SCHEDULE HIS OPERATIONS SUCH THAT THE AREA OF UNPROTECTED ERODIBLE EARTH EXPOSED AT ANY ONE TIME IS NOT LARGER THAN THE MINIMUM AREA NECESSARY FOR EFFICIENT CONSTRUCTION OPERATIONS, AND THE DURATION OF EXPOSED, UNCOMPLETED CONSTRUCTION TO THE ELEMENTS SHALL BE AS SHORT AS PRACTICABLE. CLEARING AND GRUBBING SHALL BE SO SCHEDULED AND PERFORMED THAT GRADING OPERATIONS CAN FOLLOW IMMEDIATELY THEREAFTER, AND GRADING OPERATIONS SHALL BE SCHEDULED AND PERFORMED THAT PERMANENT EROSION CONTROL FEATURES CAN FOLLOW IMMEDIATELY THEREAFTER IF CONDITIONS ON THE PROJECT PERMIT.
4. THE CONTRACTOR AND/OR OWNER'S REPRESENTATIVE SHALL PROVIDE ROUTINE MAINTENANCE OF PERMANENT AND TEMPORARY EROSION CONTROL FEATURES UNTIL THE PROJECT IS COMPLETE AND ALL BARED SOILS ARE STABILIZED.
5. ALL GREEN AND/OR DISTURBED AREAS TO BE SODDED/RESODDED WITH LIKE SOD.
6. ANY SOD PLACED ON SLOPES EXCEEDING 3:1 TO BE ANCHORED BY STAKES, NETS, AND/OR ENGINEER'S APPROVED METHOD.
7. REQUIRED TREE BARRICADES AND EROSION CONTROL MUST REMAIN INTACT THROUGHOUT CONSTRUCTION. ENCROACHMENT INTO OR FAILURE TO MAINTAIN THESE BARRICADES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS AND/OR PERMIT REVOCATION AS PROVIDED BY LOCAL JURISDICTION
8. ROOT PRUNING SHALL BE CONDUCTED AFTER STAKING FOR, AND PRIOR TO INSTALLATION OF SILT FENCE, A CERTIFIED ARBORIST, INTERNATIONAL SOCIETY OF ARBORICULTURE-CERTIFIED, SHALL CONDUCT OR OVERSEE ROOT PRUNING ACTIVITIES. THE CERTIFIED ARBORIST SHALL DETERMINE SPECIFIC EQUIPMENT AND METHODS TO BE USED. THE CERTIFIED ARBORIST SHALL REVIEW ROOT PRUNING SHOWN ON THE PLANS, AND SHALL VERIFY OR MODIFY AS NEEDED THE LIMITS AND LOCATIONS OF ROOT PRUNING TO MINIMIZE IMPACTS TO AFFECTED TREES. THE CERTIFIED ARBORIST SHALL RECOMMEND ANY ASSOCIATED TREATMENTS SUCH AS FERTILIZERS, FUNGICIDES, PESTICIDES, ETC. TO THE OWNER FOR REVIEW AND APPROVAL

UTILITY NOTES

1. ALL UTILITY WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CCUA WATER & WASTEWATER STANDARDS MANUAL, ALL STATE AND FEDERAL REGULATIONS, OR THOSE AGENCIES HAVING JURISDICTION.
2. ALL WATER AND SEWER CONSTRUCTION SHALL BE PERFORMED BY AN UNDERGROUND UTILITY CONTRACTOR LICENSED UNDER THE PROVISIONS OF CHAPTER 489 OF THE FLORIDA STATUTES.
3. ALL NEW PIPE SHALL HAVE A MINIMUM DEPTH OF COVER OF 36 INCHES MEASURED FROM THE TOP OF THE PIPE TO THE PROPOSED FINISHED GROUND SURFACE, EXCEPT AS OTHERWISE NOTED ON THE DRAWINGS. VERTICAL AND HORIZONTAL ALIGNMENT MAY BE ADJUSTED TO MEET ADVERSE FIELD CONDITIONS UPON APPROVAL BY THE ENGINEER AND LOCAL REGULATORY AGENCY.
4. ALL UNDERGROUND UTILITIES MUST BE INSTALLED PRIOR TO FINAL PREPARATION OF SUBGRADE FOR PAVEMENT.
5. ALL BEDDING SHALL BE CLASS B, TYPE I BEDDING UNLESS INDICATED OTHERWISE ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

WASTEWATER NOTES

1. SANITARY SEWERS, FORCE MAINS AND STORM SEWERS SHOULD ALWAYS CROSS UNDER WATER MAINS. SANITARY SEWERS, FORCE MAINS AND STORM SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHENEVER POSSIBLE. WHERE SANITARY SEWERS, FORCE MAINS AND STORM SEWERS MUST CROSS A WATER MAIN WITH LESS THAN 18 INCHES VERTICAL DISTANCE, THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE LEAK FREE AND MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT THE CROSSING. ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING). WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE, THE NEW PIPE SHALL BE CONSTRUCTED OF DIP AND THE CROSSING SHALL BE ARRANGED TO MEET THE REQUIREMENTS ABOVE.
2. SANITARY SEWER SERVICE CONNECTION LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. SANITARY SEWER SHOULD BE CONSTRUCTED FIRST AND PROPOSED WATER SERVICES AND STORMWATER SHOULD BE ADJUSTED AROUND THE SANITARY LATERALS AND/OR BUILDING CLEANOUTS.
3. PRIOR TO COMMENCING WORK WHICH REQUIRES CONNECTING NEW SANITARY SEWER LINES TO EXISTING LINES OR APPURTENANCES, THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES NEAR THE POINT OF CONNECTION AND NOTIFY OWNER'S ENGINEER OF ANY CONFLICTS OR DISCREPANCIES WITH DESIGN INFORMATION SHOWN IN THESE PLANS.
4. CONTRACTOR SHALL NOTIFY ENGINEER AND THE APPLICABLE AGENCIES AT LEAST 48 HOURS IN ADVANCE OF SCHEDULED WORK.
5. AT LEAST 3 WEEKS PRIOR TO CONNECTION TO THE EXISTING SANITARY FORCE MAIN, CONTRACTOR SHALL NOTIFY THE OWNER'S ENGINEER AND THE APPLICABLE AGENCIES AND SUPPLY THEM WITH THE CONNECTION DETAIL, THE CONTRACTOR'S NAME, STARTING DATE, PROJECTED SCHEDULE AND OTHER INFORMATION AS REQUIRED. THEY SHALL ALSO BE CONTACTED 5 DAYS PRIOR TO CONSTRUCTION TO ENSURE AVAILABILITY OF INSPECTION PERSONNEL. ANY WORK PERFORMED PRIOR TO NOTIFYING FIELD ENGINEERING OR WITHOUT A DEPARTMENT INSPECTOR PRESENT MAY BE SUBJECT TO REMOVAL AND REPLACEMENT.
6. THE CONTRACTOR SHALL PERFORM AN INFILTRATION/EXFILTRATION TEST ON ALL GRAVITY SEWERS AND A PRESSURE TEST ON ALL FORCE MAINS (AS APPLICABLE) IN ACCORDANCE TO APPLICABLE AGENCIES REGULATIONS. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE APPLICABLE AGENCIES FOR APPROVAL. THE SCHEDULING, COORDINATION AND NOTIFICATION TO ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.
7. ONE OR MORE OF THE FOLLOWING CERTIFICATES/SHOP DRAWINGS, DEPENDING ON THE TYPE OF CONNECTION, WILL BE REQUIRED. THIS SHOULD BE REVIEWED WITH THE DESIGN DIVISION PRIOR TO APPROVAL FOR CONSTRUCTION.
   - DIP/PVC CERTIFICATE OF MANUFACTURE.
   - JACKING PIT DETAIL.
   - MANHOLE SHOP DRAWINGS AND STRENGTH REPORT.
   - CRUSHED STONE SUBMITTAL.
   - FRAME AND COVER SHOP DRAWINGS.
   - VALVE SHOP DRAWING.
   - FLEXIBLE COUPLING SHOP DRAWINGS.
   - MANHOLE DROP
   - CASING PIPE CERTIFICATE.
   - CONNECTION DETAIL.
8. THE CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL THE FOLLOWING HAS BEEN COMPLETED:
   - FINAL INSPECTION IN CONJUNCTION WITH DEPARTMENT PERSONNEL COMPLETED.
   - AS-BUILTS HAVE BEEN SUBMITTED AND ACCEPTED.
   - ALL NECESSARY TESTING COMPLETED AND CERTIFIED.
   - PAYMENT OF ALL CAPACITY FEES.
9. THE CONTRACTOR SHALL PERFORM AT HIS OWN EXPENSE AN INFILTRATION OR EXFILTRATION TEST, A TELEVISION INSPECTION (CCTV), AND A MANDREL (GO, NO GO) TEST ON ALL GRAVITY SEWERS IN ACCORDANCE WITH THE ENGINEER OF RECORD'S REQUIREMENTS AND/OR THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE WITNESSED AND CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. COORDINATION OF TESTING AND NOTIFICATION OF ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.
10. 20. ALL SANITARY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER PRIOR TO THE PLACEMENT OF BACK FILL. CONTRACTOR TO NOTIFY THE ENGINEER AND APPLICABLE AGENCIES 48 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS
11. THE SANITARY SEWER COLLECTION SYSTEM SHALL NOT BE PLACED INTO SERVICE UNTIL APPROVAL FOR CONNECTION IS OBTAINED FROM CCUA. THE CONTRACTOR SHALL SUBMIT TO THE OWNER'S ENGINEER SANITARY SEWER SYSTEM AS-BUILT DRAWING INFORMATION AT LEAST SIX WEEKS PRIOR TO ANTICIPATED DATE OF CERTIFICATE OF COMPLETION APPLICATION. FAILURE TO OBTAIN EPC APPROVAL PRIOR TO PLACING THE SYSTEM IN OPERATION MAY RESULT IN SUBSTANTIAL FINES.
12. THREE (3) FEET FROM JOINTS IN VACUUM TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPE LINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610 FAC.
13. SIX (6) FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE TYPE SANITARY SEWER , WASTEWATER FORCE MAINS OR PIPE LINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART II OF CHAPTER 62-610 FAC.
14. ALL 4 INCH GRAVITY SANITARY SEWER LINES SHALL BE SCHEDULE SDR-26 PVC AND ALL SANITARY SEWER LINES 6 INCHES AND LARGER SHALL BE SDR-26 PVC.
15. SEWER LINES ARE DESIGNED TO FINISHED GRADE AND SHALL BE PROTECTED FROM DAMAGE UNTIL ALL WORK IS COMPLETE.
16. AT A MINIMUM , ALL SANITARY SEWER LINES 8 INCHES AND LARGER SHALL BE INSPECTED BY REMOTE VIDEO RECORDING SYSTEM AND COPES OF THE VIDEO SHALL BE PROVIDED TO THE ENGINEER FOR THEIR REVIEW AND APPROVAL. THE STATE AND / OR LOCAL REGULATORY AGENCY REGULATING THE CONSTRUCTION OF THE SYSTEM MA REQUIRE ADDITIONAL TESTING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL TESTING REQUIRED TO THE ENGINEER FOR FINAL APPROVAL BY REGULATORY AGENCIES.
17. ALL SANITARY SEWER FORCE MAINS SHALL BE DR 18 PVC.
18. THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL AIR RELEASE VALVES ON FORCE MAINS AT CHANGES IN ELEVATION OF 2 FEET DUE TO ACTUAL FIELD CONDITIONS OR CONFLICTS NOT IDENTIFIED ON THESE PLANS.
19. A 4 INCH PUMP-OUT MEETING LOCAL REGULATORY STANDARDS SHALL BE PROVIDED ON ALL FORCE MAINS LOCATED ADJACENT TO RIGHT-OF-WAYS ON PRIVATE PROPERTY. PUMP-OUT MUST BE ACCESSIBLE BY LOCAL UTILITY FORCES FROM ADJACENT PUBLIC STREET OR RIGHT-OF-WAY.
20. CONTRACTOR SHALL GROUT FLOW CHANNELS IN ALL SANITARY SEWER MANHOLES.
21. CONTRACTOR SHALL GROUT FLOW CHANNELS IN ALL SANITARY SEWER MANHOLES.
22. CONTRACTOR SHALL PERFORM THE ON-SITE PRESSURE TEST AT THE POINT OF CONNECTION FOR MANIFOLD FORCEMAINS. THIS PRESSURE SHALL BE REPORTED TO THE ENGINEER OF RECORD FOR VERIFICATION PURPOSES, PRIOR TO THE SHOP DRAWING SUBMITTAL FOR THE PUMP EQUIPMENT. DVR

POTABLE WATER NOTES

1. WHERE WATER MAIN IS LAID UNDER DITCHES, CULVERTS OR OTHER PIPELINES WITHOUT FITTINGS, THE MAXIMUM DEFLECTION AT ANY JOINT SHALL NOT EXCEED 50% OF THE MAXIMUM DEFLECTION RECOMMENDED BY THE MANUFACTURER OF THE PIPE FURNISHED.
2. NEW OR RELOCATED, UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT WILL BE LAID TO PROVIDE:
   - 2.1. A HORIZONTAL DISTANCE OF AT LEAST THREE (3) FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE ON ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER, STORM SEWER, STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.;
   - 2.2. A HORIZONTAL DISTANCE OF AT LEAST SIX (6) FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER, OR A HORIZONTAL DISTANCE OF AT LEAST THREE (3) FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER IF THE BOTTOM OF THE WATER MAIN WILL BE LAID AT LEAST SIX (6) INCHES ABOVE THE TOP OF THE SEWER;
   - 2.3. A HORIZONTAL DISTANCE OF AT LEAST SIX (6) FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND
   - 2.4. A HORIZONTAL DISTANCE OF AT LEAST TEN (10) FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM."
3. CROSSINGS:
   - 3.1. WATER MAINS THAT CROSS ANY EXISTING OR PROPOSED GRAVITY OR VACUUM TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 6 INCHES BELOW THE OTHER PIPE LINE.
   - 3.2. WATER MAINS THAT CROSS ANY EXISTING OR PROPOSED PRESSURE TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCEMAIN OR PIPE LINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OTHER PIPE LINE.
4. DISINFECTION OF THE POTABLE WATER AND FIRE MAINS SHALL BE PERFORMED IN ACCORDANCE WITH AWWA C651.
5. ALL WATER MAINS SHALL BE PRESSURE TESTED AT 150 PSI FOR 2 HOURS AND FORCE MAINS SHALL BE TESTED AT 150 PSI FOR 2 HOURS IN ACCORDANCE WITH SECTION 'A' OF AWWA STANDARD C600 WITH LEAKAGE LIMITED TO THAT DETERMINED BY THE APPROPRIATE FORMULA. ALL PRESSURE TESTING SHALL BE SCHEDULED WITH THE LOCAL REGULATORY AGENCY AND ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE.
6. ALL D.I. FITTINGS FOR WATER MAINS SHALL BE THIN CEMENT LINED. THE LINING SHALL COMPLY WITH ANSI STANDARD A21.4 (AWWA C104, LATEST "CEMENT-MORTAR LINING FOR DUCTILE IRON PIPE AND FITTINGS FOR WATER." ALL BOLTS, NUTS, STUDS AND OTHER UNCOATED PARTS OF JOINTS FOR UNDERGROUND INSTALLATION SHALL BE COATED WITH ASPHALT OR COAL-TAR PRIOR TO BACKFILLING.
7. THE CONTRACTOR SHALL FOLLOW THE PROVISIONS OF FLORIDA STATUTE 386 IF ANY WATER LINE IS BROKEN OR WATER SYSTEM IS SHUT OFF DURING CONSTRUCTION. FLORIDA STATUTE 386 STATES THAT THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) OR THE LOCAL REGULATORY AGENCY DESIGNATED AUTHORITY BY DEP, SHALL ISSUE A BOIL WATER / BOTTLED WATER NOTICE FOR ALL AFFECTED CUSTOMERS OF A PUBLIC WATER SUPPLY SYSTEM WHEN AN INTERRUPTION IN SERVICE OCCURS (WHICH RESULTS IN A COMPROMISE OF THE SYSTEM INTEGRITY WHEN THE HEALTH OR LIFE OF AN INDIVIDUAL OR THE HEALTH OF LIVES OF INDIVIDUALS MAY BE THREATENED OR IMPAIRED OR BY WHICH DISEASE MAY BE CAUSED) OR WHEN A HISTORY OF UNSATISFACTORY BACTERIOLOGICAL SAMPLES RESULT OR WHEN THE SYSTEM PRESSURE DROPS BELOW 20 PSI. THIS BOIL WATER / BOTTLED WATER NOTICE WILL BE LIFTED BY THE DESIGNATED REGULARITY AGENCY WHEN THE SYSTEM PRESSURE AND MICROBIOLOCICALS ARE DOCUMENTED THROUGH CERTIFIED DRINKING WATER LABORATORY ANALYSIS RESULTS. IN THE CASE WHERE THE SUPPLIER OF WATER ISSUES THE BOIL WATER / BOTTLED WATER NOTICE, LOCAL HEALTH DEPARTMENT SHALL BE NOTIFIED AS SOON AS POSSIBLE AND PREFERABLY IN ADVANCE OF THE EVENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUPPLY BOTTLED WATER INDIVIDUALS AND BUSINESS AFFECTED AT THE CONTRACTORS COST.
8. ALL BACKFLOW PREVENTERS SHALL BE LOCATED ADJACENT TO RIGHT-OF-WAY ON PRIVATE PROPERTY UNLESS OTHERWISE APPROVED BY THE LOCAL REGULATORY AGENCY AND THE ENGINEER.
9. AT THE TIME OF OR PRIOR TO FINAL APPROVAL, A DETECTOR CHECK AFFIDAVIT SHALL BE PROVIDED TO THE LOCAL REGULATORY AGENCY AND THE ENGINEER.
10. AT ALL UTILITY CROSSINGS REGARDLESS OF VERTICAL SEPARATION ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPE LINE SO THE WATER MAIN JOINTS ARE AS FAR AS POSSIBLE FROM THE OTHER PIPE LINE OR PIPES SHALL BE ARRANGED SO ALL WATER MAIN JOINTS ARE AT LEAST:
11. THE WATER TAPS DEPICTED ON THESE DESIGN PLANS SHALL BE CONSTRUCTED AS FOLLOWS; ALL POTABLE AND IRRIGATION WATER TAPS, FIRE LINE SERVICES AND FIRE HYDRANT INSTALLATIONS SHALL BE PERFORMED BY A LICENSED MASTER PLUMBER OR LICENSED UNDERGROUND UTILITY CONTRACTOR UNDER THE FOLLOWING SPECIAL CONDITIONS:
   - 11.1. THE TAPS ARE TO BE SCHEDULED 48 HOURS IN ADVANCE BY THE CONTRACTOR WITH THE LOCAL REGULATORY AGENCY AND ENGINEER.
   - 11.2. TAPS REQUIRING METER INSTALLATIONS OF SIZE 2 INCHES AND BELOW MUST INCLUDE THE SERVICE PIPE, METER BOX, CORPORATION STOP SIZED READY TO ACCEPT THE METER INSTALLATION BY THE LOCAL UTILITY COMPANY.
   - 11.3. LOCAL UTILITY FORCES WILL INSTALL THE METER UPON APPLICATION AND PAYMENT BY LICENSED MASTER PLUMBER OR LICENSED UTILITY CONTRACTOR.
   - 11.4. ALL TAPS REQUIRING METER INSTALLATIONS OF SIZE 3 INCHES AND ABOVE SHALL TERMINATE SIZED READY FOR VAULT, METER AND BYPASS INSTALLATION BY LOCAL UTILITY COMPANY.
12. ALL PIPELINE AND APPURTENANCE MATERIAL IN CONTACT WITH POTABLE WATER MUST BE NSF-61 CERTIFIED
13. HYDRANTS SHALL BE LOCATED WITHIN ONE FOOT OF THE SIDE LOT LINES, BETWEEN ADJACENT PROPERTIES. HYDRANTS SHALL NOT BE LOCATED WITHIN ONE PIPE LENGTH (20 FEET) FROM AN INTERSECTION CORNER.
14. HYDRANTS SHALL BE A MINIMUM OF 5 - 20' FROM BACK OF CURB. THE PUMPER DISCHARGE WILL FACE THE NEAREST ROADWAY.
15. PER NFPA 1, CLEARANCES OF SEVEN AND ONE HALF FEET (7-1/2 FT.) IN FRONT OF AND TO THE SIDES OF THE FIRE HYDRANT, AND FOUR FEET (4 FT.) TO THE REAR OF THE HYDRANT MUST BE MAINTAINED.
16. HYDRANTS SHALL BE A MINIMUM OF 4 FEET FROM BACK OF VALLEY GUTTER (MIAMI CURB) AND 2 FEET FROM BACK OF UPRIGHT CURB. FOR RURAL SECTIONS, FDOT INDEX 700 CLEAR ZONE CRITERIA SHALL BE MET. HYDRANTS SHALL BE A MINIMUM OF 10 FEET FROM EDGE OF PAVEMENT.
17. HYDRANTS ADJACENT TO PARKING AREAS WHERE THE NOZZLE CAP IS 5 - 20 FEET FROM BACK OF CURB. THE EDGE OF PAVEMENT SHALL BE PROTECTED BY BOLLARDS OF 4-INCH (MIN) STEEL PIPE THREE FEET ABOVE AND BELOW GRADE FILLED WITH CONCRETE AND SET IN A CUBIC YARD OF CONCRETE, PLACED AS REQUIRED. BOLLARDS SHALL BE PAINTED OSHA SAFETY YELLOW. BOLLARDS SHALL NOT BLOCK ACCESS TO THE FIRE HYDRANT.
18. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF ALL UTILITY CONNECTIONS PRIOR TO ORDERING MATERIALS OR PRE-CASTING STRUCTURES. VARIATIONS AFFECTING THE DESIGN OF THE SYSTEM SHOULD BE REPORTED TO THE ENGINEER OF RECORD IMMEDIATELY. FAILURE TO PROVIDE DUE DILIGENCE FOR FIELD INVESTIGATION OF TIE-IN CONNECTIONS COULD RESULT IN REJECTION OF WORK AND NON PAYMENT.
19. UTILITY CONFLICTS: CONFLICTS BETWEEN WATER AND STORM OR SANITARY SEWER TO BE RESOLVED BY ADJUSTING THE WATER LINES AS NECESSARY.
20. CONTRACTOR IS HEREBY ADVISED THAT THE WATER CERTIFICATION AND CLEARANCE PROCESS MUST BE COMPLETED PRIOR TO ANY TEMPORARY OR PERMANENT BUILDING CERTIFICATE OF OCCUPANCY. THIS PROCESS TYPICALLY REQUIRES A MINIMUM OF 30 DAYS FROM ACCEPTANCE BY THE ENGINEER OF RECORD OF ALL REQUIRED INFORMATION. IN SOME CASES THIS PROCESS CAN TAKE SIGNIFICANTLY LONGER IF AS-BUILT OR TESTING INFORMATION IS INACCURATE OR MISSING OR IF ITEMS ARE NOT CONSTRUCTED PER THE APPROVED PLANS. THIS DELAY MAY RESULT IN A NEED TO RE-TEST THE SYSTEM AT THE CONTRACTOR'S EXPENSE.

ADA/ACCESSIBILITY NOTES

1. ALL SIDEWALKS, CURB RAMPS, ACCESSIBLE PARKING SPACES AND ACCESS AISLES, AND ACCESSIBLE ROUTES SHALL BE CONSTRUCTED IN ACCORDANCE WITH ADA STANDARDS FOR ACCESSIBLE DESIGN AND THE FLORIDA BUILDING CODE ACCESSIBILITY, LATEST EDITIONS.
2. ALL SIDEWALK SLOPES SHALL CONFORM TO THE FOLLOWING CRITERIA:
   - 2.1. CROSS SLOPE SHALL NOT EXCEED 1V:48H PERPENDICULAR TO THE DIRECTION OF TRAVEL
   - 2.2. LONGITUDINAL SLOPE SHALL NOT EXCEED 1V:20H IN THE DIRECTION OF TRAVEL OR HANDRAIL SHALL BE INSTALLED, EXCEPT FOR CURB RAMPS.
   - 2.3. CURB RAMP SLOPES SHALL NOT EXCEED 1V:12H
   - 2.4. ALL CURB RAMPS SHALL INCLUDE LANDING AT THE TOP OF THE CURB RAMPS, WITH MINIMUM LENGTH OF 3 FT AND MINIMUM WIDTH EQUAL TO THE WIDTH OF THE CURB RAMP, WITH SLOPES NOT TO EXCEED 2% IN ANY DIRECTION

PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

halff
9995 GATE PARKWAY N, SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL CA 33380 FL LC 26000645

REVISIONS NO.	DATE	DESCRIPTION

SEAL

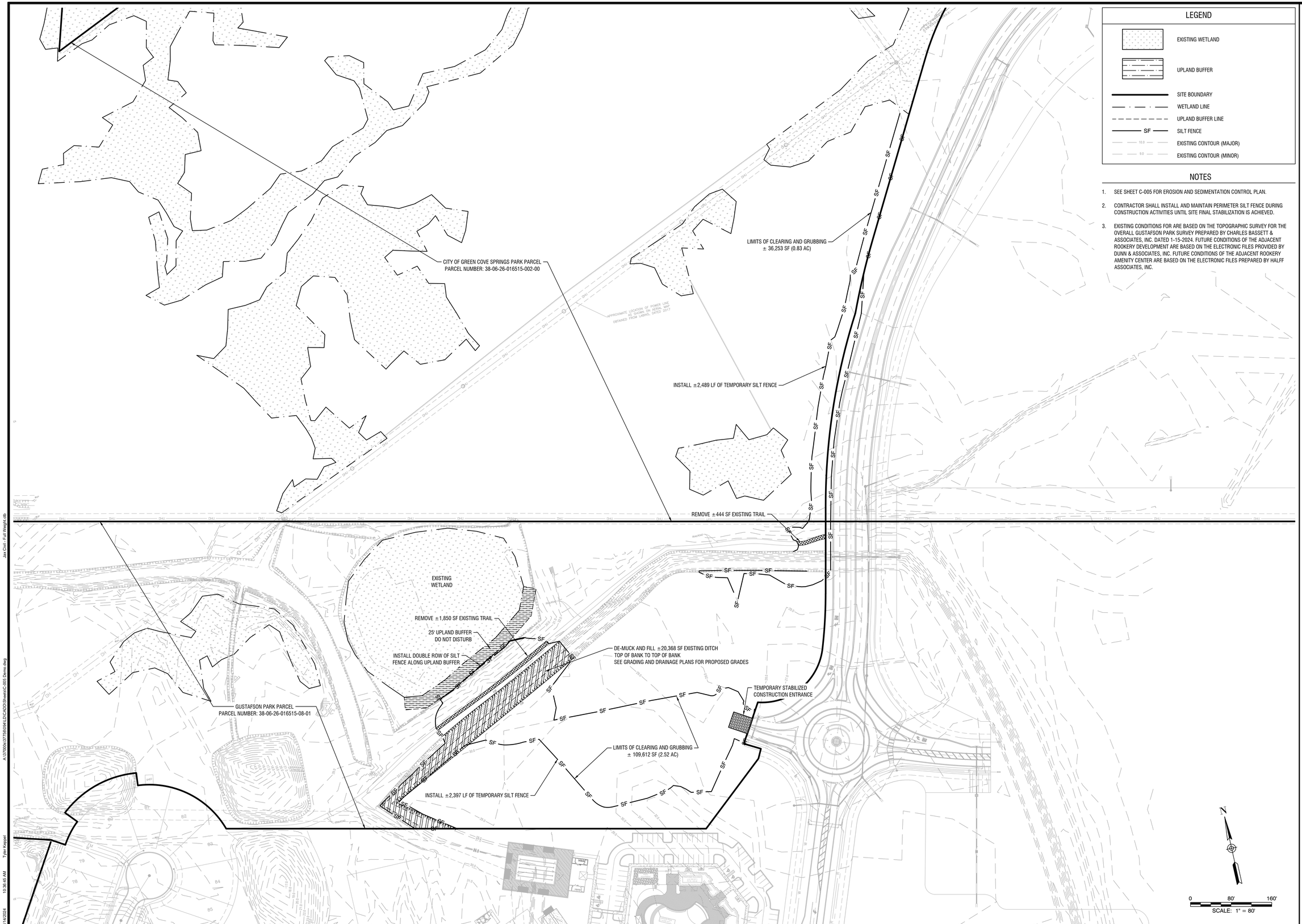
CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.:	037756.094
ISSUED:	2/14/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	N/A

GENERAL NOTES

C-003



LEGEND

- EXISTING WETLAND
- UPLAND BUFFER
- SITE BOUNDARY
- WETLAND LINE
- UPLAND BUFFER LINE
- SF — SILT FENCE
- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)

NOTES

1. SEE SHEET C-005 FOR EROSION AND SEDIMENTATION CONTROL PLAN.
2. CONTRACTOR SHALL INSTALL AND MAINTAIN PERIMETER SILT FENCE DURING CONSTRUCTION ACTIVITIES UNTIL SITE FINAL STABILIZATION IS ACHIEVED.
3. EXISTING CONDITIONS FOR ARE BASED ON THE TOPOGRAPHIC SURVEY FOR THE OVERALL GUSTAFSON PARK SURVEY PREPARED BY CHARLES BASSETT & ASSOCIATES, INC. DATED 1-15-2024. FUTURE CONDITIONS OF THE ADJACENT ROOKERY DEVELOPMENT ARE BASED ON THE ELECTRONIC FILES PROVIDED BY DUNN & ASSOCIATES, INC. FUTURE CONDITIONS OF THE ADJACENT ROOKERY AMENITY CENTER ARE BASED ON THE ELECTRONIC FILES PREPARED BY HALFF ASSOCIATES, INC.

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SCALE:	1" = 80'

EXISTING CONDITIONS & DEMOLITION PLAN

C-004

LEGEND

- EXISTING WETLAND
- UPLAND BUFFER
- SITE BOUNDARY
- WETLAND LINE
- UPLAND BUFFER LINE
- SF — SILT FENCE
- FTB — FLOATING TURBIDITY BARRIER
- ST — PROPOSED STORM SEWER PIPE
- EXISTING STORM SEWER PIPE
- 10.0 — EXISTING CONTOUR (MAJOR)
- 9.0 — EXISTING CONTOUR (MINOR)
- 10.0 — PROPOSED CONTOUR (MAJOR)
- 9.0 — PROPOSED CONTOUR (MINOR)

NOTES

1. SEE SHEET C-002 - C-003 FOR GENERAL NOTES.
2. SEE SHEETS C-400 THROUGH C-402 FOR EROSION AND SEDIMENTATION CONTROL AND SWPPP DETAILS.
3. CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENTATION CONTROL MEASURES IN PLACE PRIOR TO COMMENCEMENT OF ANY EARTHWORK AND SHALL REMAIN IN PLACE UNTIL FINAL SITE STABILIZATION IS ACHIEVED.
4. ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEED AND MULCH AFTER FINAL GRADING
5. EXISTING CONDITIONS FOR ARE BASED ON THE TOPOGRAPHIC SURVEY FOR THE OVERALL GUSTAFSON PARK PREPARED BY CHARLES BASSETT & ASSOCIATES, INC. DATED 1-15-2024. FUTURE CONDITIONS OF THE ADJACENT ROOKERY DEVELOPMENT ARE BASED ON THE ELECTRONIC FILES PROVIDED BY DUNN & ASSOCIATES, INC. FUTURE CONDITIONS OF THE ADJACENT ROOKERY AMENITY CENTER ARE BASED ON THE ELECTRONIC FILES PREPARED BY HALFF ASSOCIATES, INC.

PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SspringS

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EROSION & SEDIMENTATION CONTROL PLAN

C-005

LEGEND

- SITE BOUNDARY
- WETLAND LINE
- UPLAND BUFFER LINE

NOTES

1. EXISTING CONDITIONS FOR ARE BASED ON THE TOPOGRAPHIC SURVEY FOR THE OVERALL GUSTAFSON PARK PREPARED BY CHARLES BASSETT & ASSOCIATES, INC. DATED 1-15-2024. FUTURE CONDITIONS OF THE ADJACENT ROOKERY DEVELOPMENT ARE BASED ON THE ELECTRONIC FILES PROVIDED BY DUNN & ASSOCIATES, INC. FUTURE CONDITIONS OF THE ADJACENT ROOKERY AMENITY CENTER ARE BASED ON THE ELECTRONIC FILES PREPARED BY HALFF ASSOCIATES, INC.

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SCALE:	1" = 200'

OVERALL SITE PLAN

C-100

CENTERLINE SEGMENT TABLE

LINE/CURVE #	LENGTH	BEARING/DELTA	RADIUS
L2	14.18	N51° 39' 02.47"W	
C1	46.98	6.73	400.00
L1	150.81	N38° 20' 57.53"E	
L4	42.42	N38° 20' 57.53"E	
L3	37.00	N51° 39' 02.47"W	

SITE PARKING DATA TABLE

PROPOSED USE	PUBLIC PARK
ZONING	RECREATION
PROPOSED BUILDING AREA	±344 S.F. (0.008 AC)
PROPOSED COURTS	2

PARKING	REQUIRED	MAXIMUM	PROVIDED
TOTAL VEHICLE	4	-	19
STANDARD	3	-	17
ADA	1	-	2
MOTORCYCLE	0	-	0
BICYCLE	0	-	0

NOTES:
1. REQUIRED VEHICLE PARKING RATES PER GREEN COVE SPRINGS LDC: TENNIS, HANDBALL, AND RACQUETBALL FACILITIES: 2 SPACES/COURT

SITE DATA TABLE

OVERALL SITE AREA (PARCEL AREA)	± 953,528 Sq. Ft. (21.89 AC)
PARCEL NUMBER	38-06-26-016515-008-01
SITE AREA (DISTURBED AREA)	± 119,799 Sq. Ft. (2.75 AC)
OFF SITE AREA (DISTURBED AREA)	±26,066 Sq. Ft. (0.60 AC)
BUILDING AREA	± 344 Sq. Ft. (0.008 AC)
IMPERVIOUS AREA	± 27,043 Sq. Ft. (0.62 AC)
PERVIOUS AREA	± 118,822 Sq. Ft. (2.73 AC)

YARD REQUIREMENTS	REQUIRED	PROVIDED
MINIMUM FRONT	NMR	± 169'
MINIMUM SIDE	NMR	±145'
MINIMUM REAR	NMR	± 1,366'
SIGN SETBACK	NMR	

LOT REQUIREMENTS	MAXIMUM	PROVIDED
FLOOR AREA RATIO (FAR)	20%	0.2%
IMPERVIOUS SURFACE RATIO (ISR)	70%	2.8%

NOTES:
1. NMR - NO MINIMUM REQUIRED

KEY NOTES

1. 6' WIDE, 6" HEIGHT TURNDOWN SIDEWALK
2. ADA PARKING SPACES (CONCRETE PAVEMENT), SIGNAGE AND STRIPING, SEE DETAIL SHEETS
3. PROPOSED FENCE, SEE HARDSCAPE PLANS
4. STANDARD CURB AND GUTTER, SEE DETAIL SHEETS
5. CONCRETE VALLEY GUTTER, SEE DETAIL SHEETS
6. 3' CURB TRANSITION TO FLUSH, SEE DETAIL SHEETS
7. CONCRETE FLUME, SEE DETAIL SHEETS
8. STOP SIGN AND 24" STRIPING BAR, SEE DETAIL SHEETS
9. 6" STRIPE, SOLID WHITE
10. 6" STRIPE, SOLID YELLOW
11. SWALE, SEE C-200 GRADING AND DRAINAGE PLAN FOR DETAILS
12. CONSERVATION AREA SIGN (TYP.), SEE DETAIL SHEETS
13. (3) OM4-1 OBJECT MARKERS
14. EXISTING DITCH AND OFF-SITE EXTENSION, SEE GRADING AND DRAINAGE PLAN FOR DETAILS
15. WHEEL STOP (TYP.), SEE DETAIL SHEETS

LEGEND

- EXISTING WETLAND
- UPLAND BUFFER
- BUILDING EXTENTS
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED GRAVEL PARKING SURFACE
- SITE BOUNDARY
- WETLAND LINE
- UPLAND BUFFER LINE

NOTES

1. SEE SHEET C-003 - C-004 FOR GENERAL NOTES.
2. SEE SHEET C-102 FOR SITE STANDARD DETAILS.
3. SEE HARDSCAPE PLANS FOR TURF BLOCK, GRAVEL, PAVER TYPICAL SECTIONS, AND FENCE DETAILS.
4. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS INDICATED OTHERWISE.
5. ALL ROADWAY AND DRIVE AISLE PAVEMENT STRIPING SHALL BE THERMOPLASTIC, IN ACCORDANCE WITH FDOT STANDARD DETAILS AND STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. ALL PARKING SPACE STRIPING SHALL BE REFLECTIVE PAVEMENT PAINT.
6. SEE DETAIL SHEETS FOR CONCRETE PAVEMENT TYPICAL CONTROL JOINT SPACING
7. EXISTING CONDITIONS FOR ARE BASED ON THE TOPOGRAPHIC SURVEY FOR THE OVERALL GUSTAFSON PARK PREPARED BY CHARLES BASSETT & ASSOCIATES, INC. DATED 1-15-2024. FUTURE CONDITIONS OF THE ADJACENT ROOKERY DEVELOPMENT ARE BASED ON THE ELECTRONIC FILES PROVIDED BY DUNN & ASSOCIATES, INC. FUTURE CONDITIONS OF THE ADJACENT ROOKERY AMENITY CENTER ARE BASED ON THE ELECTRONIC FILES PREPARED BY HALFF ASSOCIATES, INC.

EXISTING WETLAND
UPLAND BUFFER
20' UPLAND BUFFER
WET DETENTION POND
WP-1
TOB = 30.0'
NWL = 27.0'
BOT = 15.0'
TENNIS COURT (±2,808 S.F.)
TENNIS COURT (±2,808 S.F.)
PREFABRICATED RESTROOM BUILDING (± 344 S.F.)
6.0 (TYP.)
4 SPACES @ 10' = 40.0
3 SPACES @ 10' = 30.0
10 SPACES @ 10' = 100.0
18.0
24.0
12.0
5.0
R35.0
R25.0
R5.0
L1
L2
L3
C1

0 30' 60'
SCALE: 1" = 30'

PROJECT NAME: GUSTAFSON PARK
PREPARED FOR: CITY OF GREEN COVE SPRINGS

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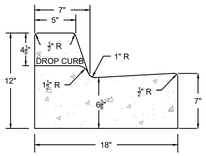
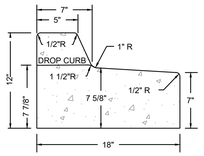
SITE PLAN

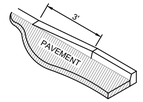
C-101



STANDARD 18" CURB AND GUTTER



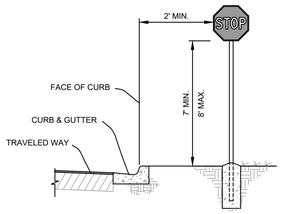
STANDARD 18" CURB AND GUTTER (SPILL CURB)



CURB TRANSITION TO GRADE

NOTES:
1. WHEN USED ON HIGH SIDE OF ROADWAYS SPILL CURB SHALL BE USED; THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT.
2. ALL CURB AND GUTTER SHALL BE 3,000 PSI CONCRETE.
3. SUBGRADE SHALL BE PREPARED AS DESCRIBED IN THE TYPICAL PAVEMENT SECTION.
4. CONTRACTION JOINTS SHALL BE SPACED AT INTERVALS OF 10 FT; WHERE CLOSER JOINT SPACING IS NECESSARY THE MINIMUM INTERVAL SHALL BE 4 FT.
5. EXPANSION JOINTS SHALL BE USED ADJACENT TO STRUCTURES AND EVERY 500 FT MAXIMUM.

TYPICAL CURB DETAILS
(NTS)



TYPICAL SITE SIGN INSTALLATION

MUTCD No. R1-1
SIZE: 30"x 30"

STOP SIGN

NOTES:
1. ALL SIGNS SHOULD BE SHEETED WITH DIAMOND GRADE HIGH REFLECTIVITY MATERIAL.
2. ALL SIGNS SHALL BE IN ACCORDANCE WITH CURRENT MUTCD GUIDELINES.
3. ALL SIGNS SHALL BE DOUBLE BOLTED TO POST W/STAINLESS STEEL HARDWARE.

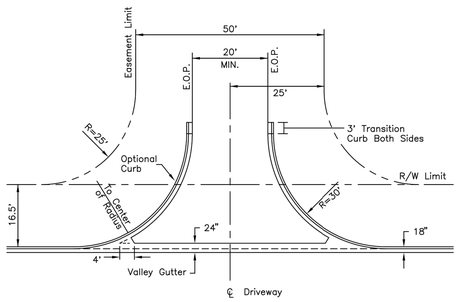
TYPICAL SIGNAGE DETAILS
(NTS)

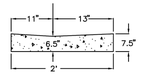
DRIVEWAY CROSSWALK STRIPING

STOP BAR

NOTES:
1. ALL ON-SITE STRIPING SHALL BE REFLECTIVE WHITE UNLESS INDICATED OTHERWISE.
2. ALL STRIPING IN THE ROW SHALL BE THERMOPLASTIC AND CONFORM TO FDOT STANDARD PLANS AND SPECIFICATIONS, LATEST EDITIONS.

TYPICAL STRIPING DETAILS
(NTS)

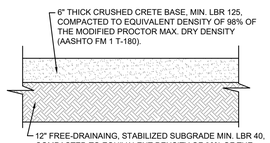




TYPICAL CONC. VALLEY
(MIN. 3500 PSI CONC.)

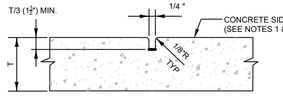
NOTE:
THAT PORTION OF DRIVEWAY THAT EXTENDS INTO PUBLIC R/W SHALL HAVE 1 1/4" ASPHALTIC CONCRETE ON 6" LIMEROCK BASE/ 12" STABILZED SUBGRADE OR 12" LIMEROCK BASE ON COMPACTED SUBGRADE.

TYPICAL CONCRETE VALLEY DETAILS
(NTS)

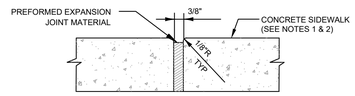


TYPICAL GRAVEL PAVEMENT SECTION

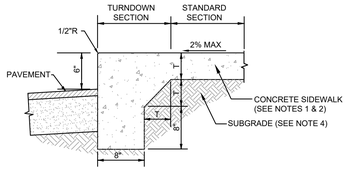
NOTES:
1. UNIFIED SOIL CLASSIFICATION SYSTEM CLASSIFICATION OF SP OR SP-SM (WITH LESS THAN 10% FINES) IS CONSIDERED FREE DRAINING.
2. STABILIZED SUBGRADE SHALL EXTEND 12" PAST EDGE OF PAVEMENT. BASE SHALL EXTEND 6" PAST EDGE OF PAVEMENT (OR PAST BACK OF CURB IF CURBING IS INSTALLED ADJACENT TO PAVEMENT)
3. IF EXISTING SUBGRADE CANNOT OBTAIN LBR 40, MIXING MAY BE REQUIRED.
4. MODIFICATIONS TO THE PAVEMENT SECTION MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION
5. STABILIZED SUBGRADE AND BASE SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
6. SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
7. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL PAVEMENT REQUIREMENTS.



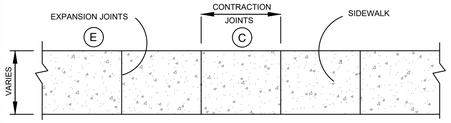
CONTRACTION JOINT Ⓒ SECTION



EXPANSION JOINT Ⓔ SECTION



6" TURNDOWN SIDEWALK SECTION AT PAVEMENT



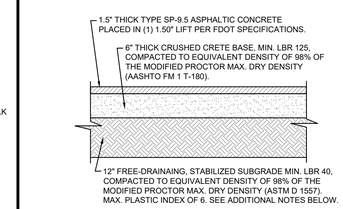
TYPICAL JOINT LAYOUT

JOINT SPACING (ON CENTER)					
SIDEWALK WIDTH	4'	5'	6'	8'	10'
CONTRACTION JT	4'	5'	6'	8'	10'
EXPANSION JOINT	48'	50'	60'	64'	80'

SIDEWALK AND CONCRETE ISLAND NOSING NOTES:

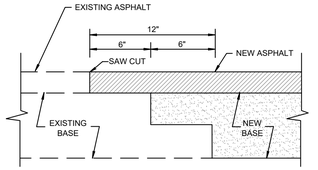
1. SIDEWALK AND CONCRETE ISLAND NOSING SHALL BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE, CLASS I, 3,000 PSI, W/FIBER MESH ADDITIVE (MIN. 5 LBS PER CUBIC YARD). MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
2. SIDEWALK AND CONCRETE ISLAND NOSING STANDARD THICKNESS (T) SHALL BE FOUR (4) INCHES.
3. EXPANSION JOINTS SHALL BE USED BETWEEN SIDEWALK/CONCRETE ISLAND NOSING AND CURBING, DRIVEWAYS, STRUCTURES AND ALL FIXED OBJECTS, AND TO SEPARATE THE NEW CONCRETE SIDEWALK FROM OTHER NEW OR EXISTING CONSTRUCTION.
4. SUBGRADE SHALL BE 12" STABILIZED SUBGRADE MIN LBR 40, COMPACTED TO EQUIVALENT DENSITY OF 98% OF THE MODIFIED PROCTOR MAX. DRY DENSITY (ASTM-D1557) AND SHALL EXTEND (1) FOOT PAST THE EDGE OF SIDEWALK/CONCRETE ISLAND NOSING.

TYPICAL CONCRETE SIDEWALK DETAILS
(NTS)



TYPICAL ASPHALT PAVEMENT SECTION

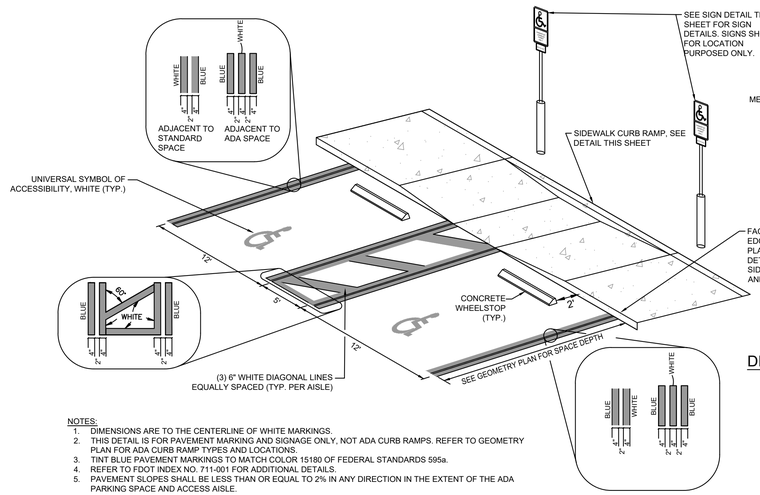
NOTES:
1. UNIFIED SOIL CLASSIFICATION SYSTEM CLASSIFICATION OF SP OR SP-SM (WITH LESS THAN 10% FINES) IS CONSIDERED FREE DRAINING.
2. STABILIZED SUBGRADE SHALL EXTEND 12" PAST EDGE OF PAVEMENT. BASE SHALL EXTEND 6" PAST EDGE OF PAVEMENT (OR PAST BACK OF CURB IF CURBING IS INSTALLED ADJACENT TO PAVEMENT)
3. CONCRETE PAVEMENT MAY BE SUBSTITUTED FOR ASPHALT AT THE OWNER'S DISCRETION. CONSULT ENGINEER FOR REQUIRED CONCRETE PAVEMENT SECTION
4. IF EXISTING SUBGRADE CANNOT OBTAIN LBR 40, MIXING MAY BE REQUIRED.
5. MODIFICATIONS TO THE PAVEMENT SECTION MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION
6. STABILIZED SUBGRADE AND BASE SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
7. ASPHALT MIX DESIGN SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
8. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL PAVEMENT REQUIREMENTS.



NOTE:
THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT AND BASE WILL BE CONNECTED TO EXISTING PAVEMENT AND BASE.

TYPICAL ASPHALT PAVEMENT JOINT

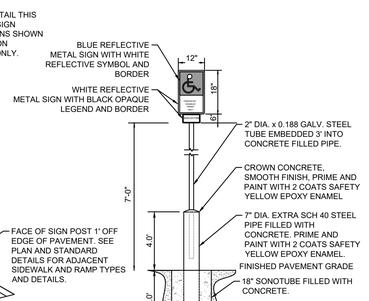
TYPICAL ASPHALT PAVEMENT DETAILS
(NTS)



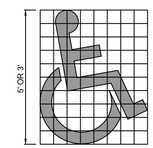
NOTES:
1. DIMENSIONS ARE TO THE CENTERLINE OF WHITE MARKINGS.
2. THIS DETAIL IS FOR PAVEMENT MARKING AND SIGNAGE ONLY, NOT ADA CURB RAMPS. REFER TO GEOMETRY PLAN FOR ADA CURB RAMP TYPES AND LOCATIONS.
3. TINT BLUE PAVEMENT MARKINGS TO MATCH COLOR 15180 OF FEDERAL STANDARDS 595a.
4. REFER TO FDOT INDEX NO. 711-001 FOR ADDITIONAL DETAILS.
5. PAVEMENT SLOPES SHALL BE LESS THAN OR EQUAL TO 2% IN ANY DIRECTION IN THE EXTENT OF THE ADA PARKING SPACE AND ACCESS AISLE.

TYPICAL ADA PARKING SPACE DETAIL

TYPICAL ADA PARKING SPACE DETAILS
(NTS)



DISABLED PARKING / SIGNING TYPICAL DETAIL



NOTE:
SYMBOL SHALL BE 3' OR 5' HIGH AND WHITE IN COLOR.

UNIVERSAL SYMBOL OF ACCESSIBILITY

PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

halff
9995 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL CA 33380 FL LC 26000645

REVISIONS NO.	DATE	DESCRIPTION

SEAL

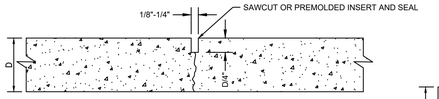
CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.:	037756.094
ISSUED:	2/14/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	N/A

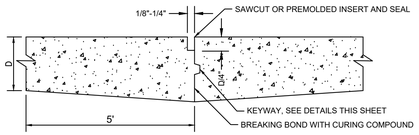
SITE STANDARD DETAILS

C-102

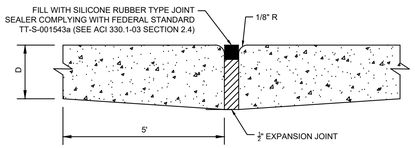


CONTRACTION JOINT Ⓒ SECTION

TRANSVERSE CONTRACTION OR LONGITUDINAL JOINT, SAWED OR PRE-MOLDED, TYPICAL SPACING 12 FEET, MAXIMUM 15 FEET, EACH WAY.

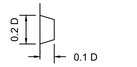


CONSTRUCTION JOINT Ⓐ SECTION

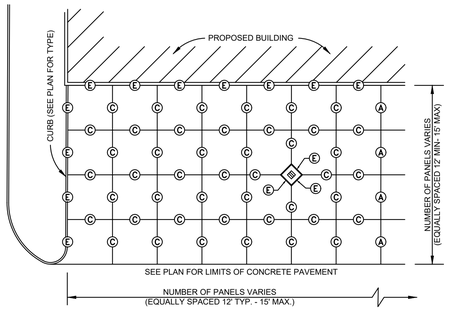


EXPANSION JOINT Ⓔ SECTION

HALF ROUND KEYWAY



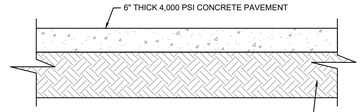
TRAPEZOIDAL KEYWAY



NOTES:
1. LOCATION OF JOINTS ARE PROVIDED AS A GUIDE TO THE CONTRACTOR. CONTRACTOR IS TO LOCATE JOINTS TO ASSURE THEY DO NOT ALIGN WITH BUILDING DOWNSPOUTS.
2. CONTRACTOR TO PREVENT TRAFFIC (INCLUDING CONCRETE DELIVERY TRUCKS) FROM RUTTING AND SOFTENING FINISHED COMPACTED SUB-BASE PRIOR TO CONCRETE PLACEMENT.
3. ALL CONTRACTION JOINTS SHALL BE EQUALLY SPACED, 12 FEET TYPICAL AND 15 FEET MAXIMUM EACH WAY.
4. ALL COLD CONSTRUCTION JOINTS TO UTILIZE TYPE 'A' CONSTRUCTION JOINT WITH KEYWAY.
5. ACUTE ANGLES OF LESS THAN 45° BETWEEN INTERSECTING JOINTS SHALL BE PROHIBITED
6. APPLY CURING COMPOUND IN ACCORDANCE WITH ASTM C 309, TYPE 2, CLASS A (SEE ACI 330.1-03 SECTION 2.3).
7. EXPANSION MATERIAL INSTALLED BETWEEN EXISTING OR PROPOSED STRUCTURES AND THE NEW POUR.

TYPICAL CONCRETE PAVEMENT JOINTING DETAILS

(NTS)



CONCRETE PAVEMENT SECTION

NOTES:
1. UNIFIED SOIL CLASSIFICATION SYSTEM CLASSIFICATION OF SP OR SP-SM (WITH LESS THAN 10% FINES) IS CONSIDERED FREE DRAINING.
2. STABILIZED SUBGRADE SHALL EXTEND 12" PAST EDGE OF PAVEMENT. BASE SHALL EXTEND 6" PAST EDGE OF PAVEMENT (OR PAST BACK OF CURB IF CURBING IS INSTALLED ADJACENT TO PAVEMENT)
3. IF EXISTING SUBGRADE CANNOT OBTAIN CBR 30, MIXING MAY BE REQUIRED.
4. MODIFICATIONS TO THE PAVEMENT SECTION MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION
5. STABILIZED SUBGRADE AND BASE SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
6. CONCRETE MIX DESIGN SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
7. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL PAVEMENT REQUIREMENTS.

TYPICAL CONCRETE PAVEMENT DETAILS

(NTS)

PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

halff
9995 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL CA 33380 FL LC 26000645

REVISIONS

NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

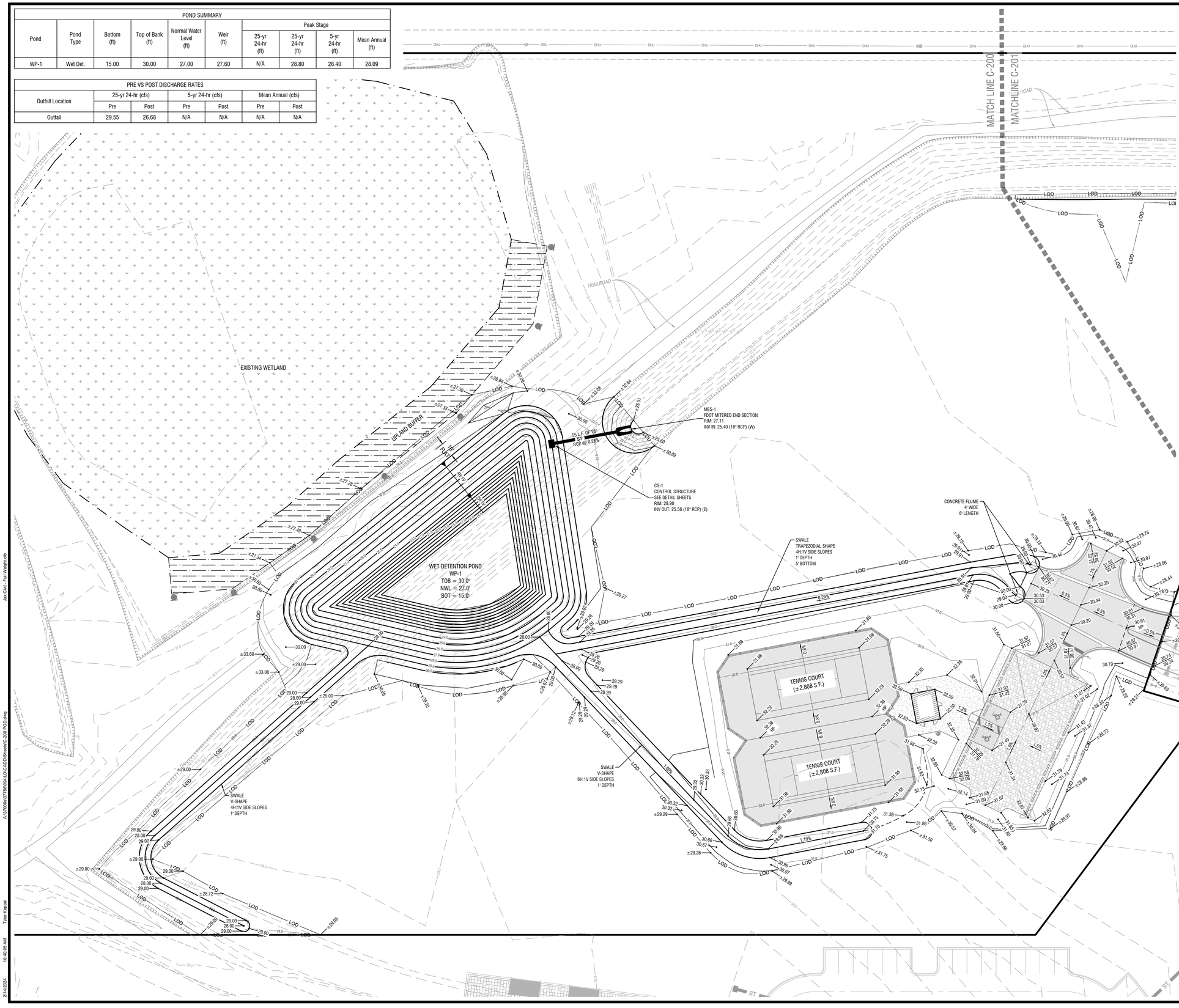
PROJECT NO.:	037756.094
ISSUED:	2/14/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	N/A

SITE STANDARD DETAILS

C-103

POND SUMMARY									
Pond	Pond Type	Bottom (ft)	Top of Bank (ft)	Normal Water Level (ft)	Weir (ft)	Peak Stage			
						25-yr 24-hr (ft)	25-yr 24-hr (ft)	5-yr 24-hr (ft)	Mean Annual (ft)
WP-1	Wet Det.	15.00	30.00	27.00	27.60	N/A	28.80	28.40	28.09

PRE VS POST DISCHARGE RATES						
Outfall Location	25-yr 24-hr (cfs)		5-yr 24-hr (cfs)		Mean Annual (cfs)	
	Pre	Post	Pre	Post	Pre	Post
Outfall	29.55	26.68	N/A	N/A	N/A	N/A



LEGEND

- EXISTING WETLAND
- UPLAND BUFFER
- PROPOSED BUILDING EXTENTS
- SITE BOUNDARY
- WETLAND LINE
- UPLAND BUFFER LINE
- ST — PROPOSED STORM SEWER PIPE
- EXISTING STORM SEWER PIPE
- 10.0 — EXISTING CONTOUR (MAJOR)
- 9.0 — EXISTING CONTOUR (MINOR)
- 10.0 — PROPOSED CONTOUR (MAJOR)
- 9.0 — PROPOSED CONTOUR (MINOR)
- ±30.00 — PROPOSED ELEVATION
- ±30.00 — PROPOSED ELEVATION (MEET EXISTING)
- 30.00 / 30.00 — PROPOSED ELEVATION (TOP OF CURB) (EDGE OF PAVEMENT)
- ±30.00 / ±30.00 — EXISTING ELEVATION (TOP OF CURB) (EDGE OF PAVEMENT)
- 1.58% — PROPOSED GRADE DIRECTION AND SLOPE

NOTES

1. SEE SHEET C-002 AND C-003 FOR GENERAL NOTES.
2. SEE SHEET C-201 FOR STORM DRAINAGE STANDARD DETAILS.
3. EXISTING CONDITIONS FOR ARE BASED ON THE TOPOGRAPHIC SURVEY FOR THE OVERALL GUSTAFSON PARK PREPARED BY CHARLES BASSETT & ASSOCIATES, INC. DATED 1-15-2024. FUTURE CONDITIONS OF THE ADJACENT ROOKERY DEVELOPMENT ARE BASED ON THE ELECTRONIC FILES PROVIDED BY DUNN & ASSOCIATES, INC. FUTURE CONDITIONS OF THE ADJACENT ROOKERY AMENITY CENTER ARE BASED ON THE ELECTRONIC FILES PREPARED BY HALFF ASSOCIATES, INC.

0 30' 60'
SCALE: 1" = 30'

PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE Ssprings

halff
9995 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL CA 33380 FL LC 26000645

REVISIONS		
NO.	DATE	DESCRIPTION

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CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.:	037756.094
ISSUED:	2/14/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	1" = 30'

GRADING & DRAINAGE PLAN

C-200

LEGEND

- EXISTING WETLAND
- UPLAND BUFFER
- PROPOSED BUILDING EXTENTS
- SITE BOUNDARY
- WETLAND LINE
- UPLAND BUFFER LINE
- ST — PROPOSED STORM SEWER PIPE
- EXISTING STORM SEWER PIPE
- 10.0 — EXISTING CONTOUR (MAJOR)
- 9.0 — EXISTING CONTOUR (MINOR)
- 10.0 — PROPOSED CONTOUR (MAJOR)
- 9.0 — PROPOSED CONTOUR (MINOR)
- 25.00 — PROPOSED ELEVATION
- 25.00 — PROPOSED ELEVATION (MEET EXISTING)
- 30.00 / 29.50 — PROPOSED ELEVATION (TOP OF CURB) (EDGE OF PAVEMENT)
- 25.00 / ±25.50 — EXISTING ELEVATION (TOP OF CURB) (EDGE OF PAVEMENT)
- 1.58% — PROPOSED GRADE DIRECTION AND SLOPE

LOCATION OF POWER LINE AS SHOWN ON AERIAL MAP FROM LABINS, DATED 2017

MATCH LINE THIS SHEET

MATCH LINE C-200
MATCHLINE C-201

MATCHLINE THS SHEET

SWALE
TRAPEZODIAL SHAPE
4H:1V SIDE SLOPES
DEPTH VARIES
5' BOTTOM

0 30' 60'
SCALE: 1" = 30'

N

PROJECT NAME
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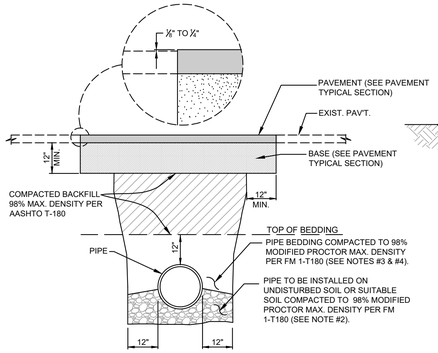
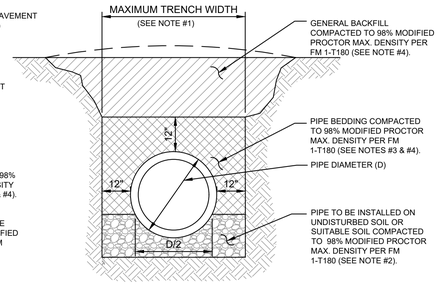
CHECKED BY:	CBS
SCALE:	1" = 30'

GRADING & DRAINAGE PLAN

C-201



IN IMPERVIOUS AREA



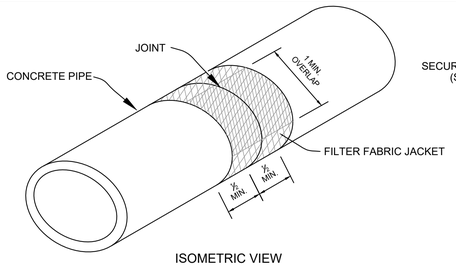
IN NON-IMPERVIOUS AREA

NOTES:

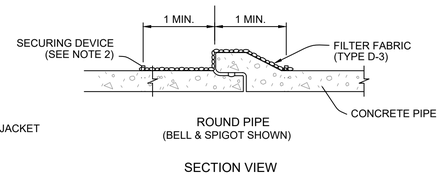
1. TRENCH SIDES SHALL BE APPROXIMATELY VERTICAL BETWEEN AN ELEVATION OF 1 FOOT ABOVE THE TOP OF THE PIPE AND THE CENTER LINE OF THE PIPE; OTHERWISE, TRENCH SIDES SHALL BE AS VERTICAL AS POSSIBLE OR AS REQUIRED BY OSHA STANDARDS.
2. BELL HOLE SHALL BE DUG TO PERMIT THE ENTIRE STRAIGHT BARREL OF THE PIPE TO REST ON THE UNDISTURBED TRENCH BOTTOM. BOULDERS OR LOOSE ROCKS LARGER THAN 3/4 INCH IN SIZE WILL NOT BE PERMITTED IN BACKFILL UP TO 1 FOOT ABOVE THE TOP OF THE PIPE.
3. PIPE BEDDING MATERIAL UP TO A LEVEL OF 1 FOOT OVER THE PIPE SHALL CONSIST OF AASHTO CLASS A-3 SOIL (SUITABLE SOIL) AND SHALL EXCLUDE CLAY MATERIALS AND LOOSE ROCKS LARGER THAN 3/4 INCH SIZE.
4. PIPE BEDDING MATERIAL AND GENERAL BACKFILL MATERIAL OVER THE PIPE OR UNDER STRUCTURES SHALL BE PLACED IN 6 INCH COMPACTED THICKNESS LAYERS AND SHALL BE COMPACTED TO 98% OF IT'S MODIFIED PROCTOR MAXIMUM DENSITY AS DETERMINED BY FM 1-T180.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH THE BELL FACING UPSTREAM TO THE DIRECTION OF FLOW.
7. SEE SITE GEOTECH REPORT FOR ADDITIONAL DETAILS.

TYPICAL PIPE BEDDING DETAILS

(NTS)



ISOMETRIC VIEW

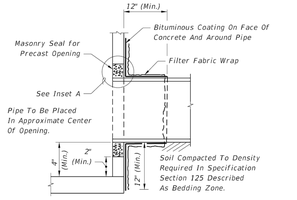


ROUND PIPE
(BELL & SPIGOT SHOWN)

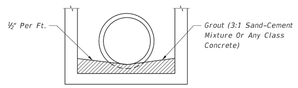
SECTION VIEW

TYPICAL STORM PIPE FILTER FABRIC JACKET DETAIL

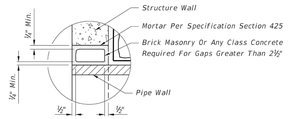
(NTS)



FILTER FABRIC WRAP ON GROUTED PIPE TO STRUCTURE JOINT



FOR ALL STRUCTURES UNLESS EXCLUDED BY SPECIAL DETAIL
ALL PIPE TYPES
DRAINAGE STRUCTURE INVERT

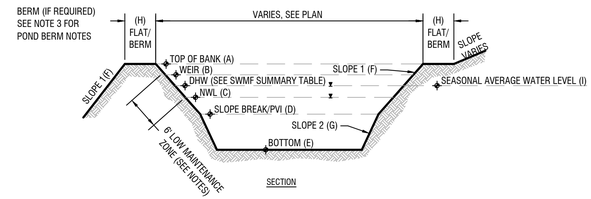


INSET A

TYPICAL STORM STRUCTURE PIPE INSTALLATION DETAILS

(NTS)

POND SUMMARY									
Pond	Pond Type	Bottom (ft)	Top of Bank (ft)	Normal Water Level (ft)	Weir (ft)	Peak Stage			
						25-yr 24-hr (ft)	25-yr 24-hr (ft)	5-yr 24-hr (ft)	Mean Annual (ft)
WP-1	Wet Det.	15.00	30.00	27.00	27.60	N/A	28.80	28.40	28.09



SECTION

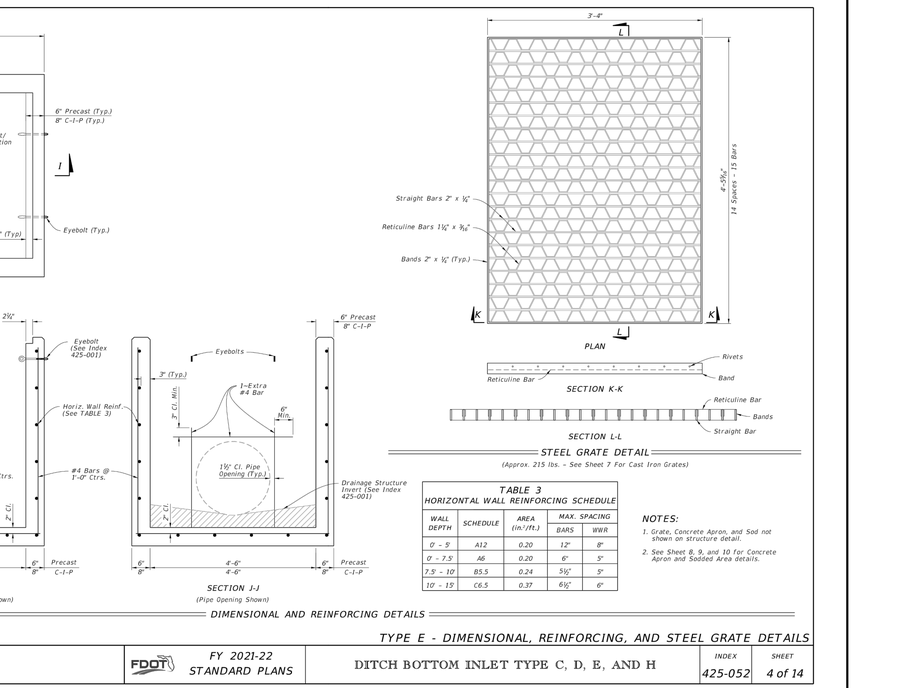
SIDE SLOPE & FILL MATERIAL NOTES:
1. SIDE SLOPES NOT TO EXCEED 4:1 UNTIL SLOPE BREAK AT A MINIMUM 2' BELOW NWL.
2. FILL MATERIAL TO BE TESTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT TO VERIFY MEETING FILL MATERIAL SPECIFICATIONS.
3. SEE SITE-SPECIFIC GEOTECHNICAL REPORT FOR ADDITIONAL EARTHWORK REQUIREMENTS.

BANK STABILIZATION & LOW MAINTENANCE ZONE NOTES:
1. ALL POND BANKS SHALL BE STABILIZED WITH VEGETATIVE COVER FROM NWL TO TOP OF BANK.
2. BAHIA GRASS TO BE PLANTED AND MANAGED TO MINIMIZE THE NEED FOR FERTILIZATION, WATERING, MOWING, ETC.
3. NO MOWED OR CUT VEGETATIVE MATERIAL SHALL BE DEPOSITED OR LEFT REMAINING IN THE LOW MAINTENANCE ZONE OR WATER.
4. CARE SHOULD BE TAKEN TO PREVENT THE OVER-SPRAY OF AQUATIC WEED PRODUCTS INTO THE LOW MAINTENANCE ZONE.

POND SECTION DATA									
POND	(A) FT. EL.	(B) FT. EL.	(C) FT. EL.	(D) FT. EL.	(E) FT. EL.	(F) H:V	(G) H:V	(H) FT.	(I) FT. EL.
WP-1	30.00	27.60	27.00	23.00	15.00	4H:1V	2H:1V	10.00	27.00

TYPICAL WET POND SECTION DETAILS

(NTS)



STEEL GRATE DETAIL

(Approx. 215 lbs. - See Sheet 7 For Cast Iron Grates)

TABLE 3
HORIZONTAL WALL REINFORCING SCHEDULE

WALL DEPTH	SCHEDULE	AREA (in²/ft.)	MAX. SPACING	
			BARS	WWR
0' - 5'	A12	0.20	12"	8"
0' - 7.5'	A6	0.20	6"	5"
7.5' - 10'	B5.5	0.24	5½"	5"
10' - 15'	C6.5	0.37	6½"	6"

NOTES:
1. Grate, Concrete Apron, and Sod not shown on structure detail.
2. See Sheet 8, 9, and 10 for Concrete Apron and Sodded Area details.

DIMENSIONAL AND REINFORCING DETAILS

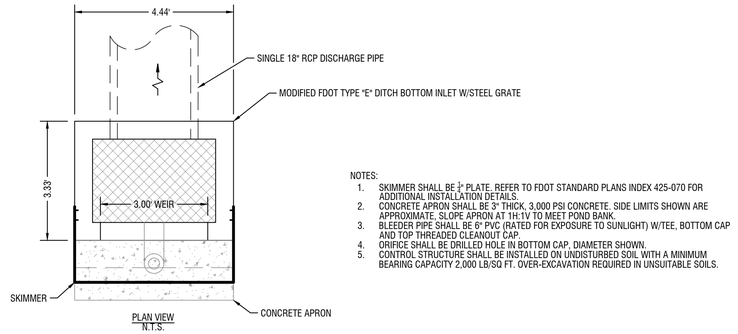
TYPE E - DIMENSIONAL, REINFORCING, AND STEEL GRATE DETAILS

LAST REVISION	DESCRIPTION:	FDOT FY 2021-22 STANDARD PLANS	DITCH BOTTOM INLET TYPE C, D, E, AND H	INDEX	SHEET
11/01/20	REVISION			425-052	4 of 14

TYPICAL FDOT TYPE E INLET DETAILS

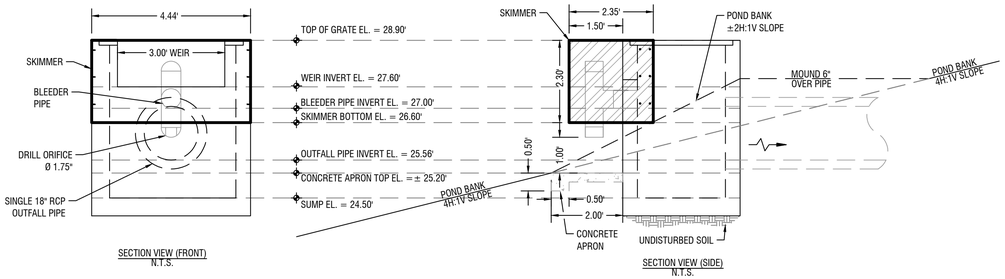
(NTS)

NOTES:
1. ALL STORM STRUCTURES SHALL BE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS AND STANDARD PLANS, LATEST EDITION.



PLAN VIEW
N.T.S.

NOTES:
1. SKIMMER SHALL BE ¼" PLATE. REFER TO FDOT STANDARD PLANS INDEX 425-070 FOR ADDITIONAL INSTALLATION DETAILS.
2. CONCRETE APRON SHALL BE 9" THICK, 3,000 PSI CONCRETE. SIDE LIMITS SHOWN ARE APPROXIMATE. SLOPE APRON AT 1H:1V TO MEET POND BANK.
3. BLEEDER PIPE SHALL BE 6" PVC (RATED FOR EXPOSURE TO SUNLIGHT) W/TEE, BOTTOM CAP AND TOP THREADED CLEANOUT CAP.
4. ORIFICE SHALL BE DRILLED HOLE IN BOTTOM CAP. DIAMETER SHOWN.
5. CONTROL STRUCTURE SHALL BE INSTALLED ON UNDISTURBED SOIL WITH A MINIMUM BEARING CAPACITY 2,000 LB/SQ FT. OVER-EXCAVATION REQUIRED IN UNSUITABLE SOILS.



SECTION VIEW (FRONT)
N.T.S.

SECTION VIEW (SIDE)
N.T.S.

TYPICAL POND CONTROL STRUCTURE DETAILS

(NTS)

PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

halff
9995 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL CA 33380 FL LC 26000645

REVISIONS NO.	DATE	DESCRIPTION

SEAL

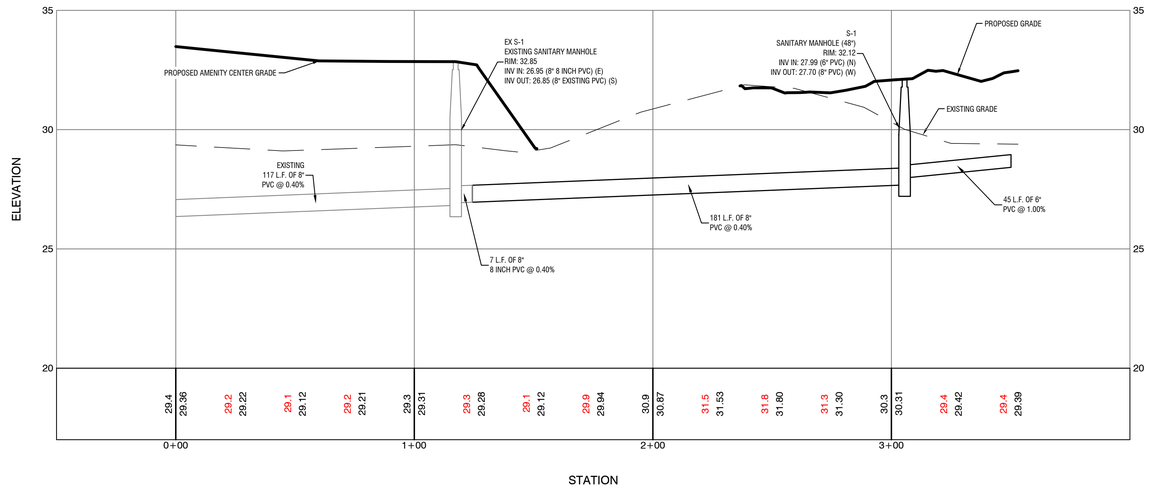
CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.:	037756.094
ISSUED:	2/14/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	N/A

STORM DRAINAGE STANDARD DETAILS

C-202



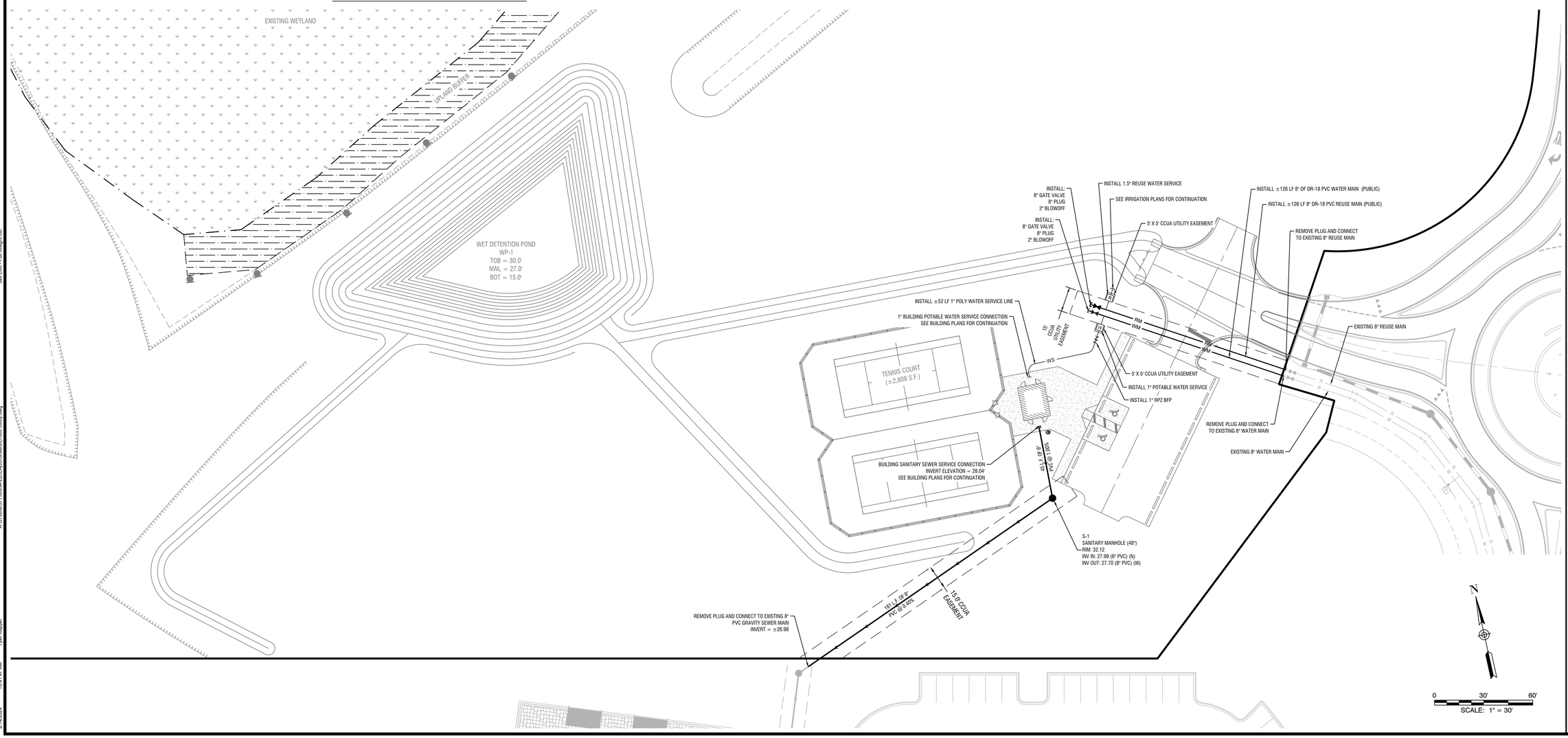
PROPOSED GRAVITY SEWER PROFILE

NOTES

1. SEE SHEET C-002 AND C-003 FOR GENERAL NOTES.
2. SEE SHEET C-301 AND C-302 FOR UTILITIES STANDARD NOTES AND DETAILS.
3. ALL SANITARY SEWER PVC PIPE AND FITTINGS SHALL BE SDR-26 PVC, GREEN IN COLOR.
4. ALL RECLAIMED WATER MAIN LINES SHALL BE DR-18 PVC (AWWA C900, 235 PSI), PURPLE IN COLOR.
5. ALL POTABLE WATER MAIN LINES SHALL BE DR-18 PVC (AWWA C-900, 235 PSI), BLUE IN COLOR.
6. ALL POTABLE WATER SERVICE LINES SHALL BE SDR-9 HDPE (AWWA C901, 250 PSI), BLUE IN COLOR.
6. ALL RECLAIMED WATER SERVICE LINES SHALL BE SDR-9 HDPE (AWWA C901, 250 PSI), PURPLE IN COLOR.
7. REFER TO THE BUILDING PLANS FOR ADDITIONAL DETAILS AND EXACT LOCATIONS OF BUILDING SERVICE CONNECTIONS.
8. ALL WATER AND SEWER CONSTRUCTION SHALL COMPLY WITH THE LATEST CLAY COUNTY UTILITY AUTHORITY CONSTRUCTION STANDARDS AND SPECIFICATIONS.
9. ALL UTILITIES SHALL BE LOCATED UNDERGROUND.
10. EXISTING CONDITIONS FOR ARE BASED ON THE TOPOGRAPHIC SURVEY FOR THE OVERALL GUSTAFSON PARK PREPARED BY CHARLES BASSETT & ASSOCIATES, INC. DATED 1-15-2024. FUTURE CONDITIONS OF THE ADJACENT ROOKERY DEVELOPMENT ARE BASED ON THE ELECTRONIC FILES PROVIDED BY DUNN & ASSOCIATES, INC. FUTURE CONDITIONS OF THE ADJACENT ROOKERY AMENITY CENTER ARE BASED ON THE ELECTRONIC FILES PREPARED BY HALFF ASSOCIATES, INC.

LEGEND

- EXISTING WETLAND
- UPLAND BUFFER
- PROPOSED BUILDING EXTENTS
- SITE BOUNDARY
- WETLAND LINE
- UPLAND BUFFER LINE
- W — EXISTING WATER MAIN
- WM — PROPOSED WATER MAIN
- WS — PROPOSED WATER SERVICE LINE
- R — EXISTING RECLAIMED WATER MAIN
- RM — PROPOSED RECLAIMED WATER MAIN
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER



PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

halff
9995 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL CA 33380 FL LC 26000645

REVISIONS NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.:	037756.094
ISSUED:	2/14/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	1" = 30'

UTILITY PLAN

C-300

OUTLINE SPECIFICATIONS FOR CONSTRUCTION OF SEWAGE COLLECTION SYSTEM

01. INTENTION. It is the declared and acknowledged intention to secure a new sewerage system, complete, in accordance with the plans, specifications, and contract documents. All new work shall be in accordance with Clay County Utility Authority Specifications and Details and with Clay County Utility Authority Approved Materials Manual and Clay County Engineering Department Details and Specifications and any other Government Regulatory Agency. All work shall conform to the above, whether or not specifically called out or noted on the plans.

02. GENERAL. All materials shall be of those listed in the CCUA Approved Materials Manual. The installation shall be warranted by the Contractor as to materials, workmanship and accuracy of the As-built drawings for a period of two years from the date of completion of the work or beneficial use of the facilities. Workmanship shall be of good quality; i.e., sewers shall be laid true to line and grade, fittings shall be properly installed and restrained, trenches shall be properly excavated and backfilled, manholes shall be installed at locations and to elevations shown on the plans.

02.1 Contractor LICENSE AND APPROVAL. Utility reserves the right to approve or deny approval of Contractor prior to construction of any on-site or off-site utility facilities. Contractor must hold a State Of Florida Underground Utility Contractors license, that named contracting company being the one doing the work on project, and demonstrate acceptable experience in the field of utility construction.

03. SURVEYS. The Utility Contractor shall provide all surveys necessary for the layout and construction of the work of his contract.

04. EARTHWORK. Earthwork shall include all excavation, fill and backfill (hand/machine), compaction and rough grading of materials encountered. No unsuitable materials clay, muck, or peat removed from pipe trenches are to be used for backfill. All fill or backfill shall be either sand or sandy clay, free of roots, trash or other debris. All backfill alongside of and to a height twenty-four inches above all pipe shall be free of clay or organic material, compacted in lifts, the first of which shall be to the spring line of the pipe by either hand or machine operation carefully to 98%. All other backfill shall be compacted by either hand or machine operation carefully to 95% (outside of paving), 98% (under paving) of its optimum moisture content as determined by ASTM D698, latest. Copies of compaction density test reports from a licensed testing agency shall be made available to CCUA if requested.

05. MANHOLES. Manhole bases, sections, and cones shall conform to the requirements of ASTM C478, Specifications for Precast Reinforced Concrete Manhole Sections. Cement shall meet the requirements of ASTM C150, Specifications for Portland Cement, Type II. Concrete shall meet the minimum requirements for Class "A" Concrete Work. Minimum wall thickness shall be 1/12 the inside diameter in inches plus one (1) inch. Bases for manholes shall be cast integrally with the bottom manhole section. Joint contact surfaces shall be formed with machined castings; they shall be exactly parallel with a 2 degree slope and nominal 1/16 inch clearance with the tongue equipped with a proper recess for the installation of an O-ring rubber gasket, conforming to ASTM C443, Joints for circular Concrete sewer and Culvert pipe using Rubber gasket, or RAM-NEK premolded Plastic Joint Sealer with joints Manhole adjustment materials shall be sound, hard, and pre-primed. Precast concrete adjustment rings as manufactured by Taylor Precast Co. (or equal) may be utilized in lieu of brick adjustment. Field mixed mortar for brick shall be composed of portland cement Type II, sand and clean water. Mortar shall be one part cement Type II and two parts sand; lime shall not be used. The outside faces of brick masonry shall be plastered with mortar from 1/4" to 3/8" thick. Precast manhole walls shall not be coated unless otherwise noted. Cement grout for manhole bottoms shall be a stiff rich mix of Type II Portland Cement and sharp plaster sand. Calcium chloride may be added (maximum of 2%) to aid in obtaining a faster set. At permanent pump station locations, the first upstream manhole from the station shall be lined with a polyethylene liner as manufactured and installed by Taylor Precast Co., or approved equal.

05.1 CAST IRON MANHOLE FRAMES AND COVERS. Cast iron manhole frames and covers shall be as detailed on drawings. Castings shall meet the requirements of ASTM A48, Specifications for Gray Iron Castings, Class No. 30, or Grade 65-45-12, Ductile Iron meeting the requirements of ASTM A536, Standard Specification for Ductile Iron Castings. In either case, manhole frame and cover shall be designed to withstand an HS20-44 loading defined in the AASHTO Specifications. Frames and covers shall be machined or ground at touching surfaces so as to seat firmly and prevent crocking.

05.2 FLEXIBLE MANHOLE CONNECTOR. All connections between sewer pipe and pre-cast concrete manholes shall be accomplished by a Flexible Connector, "Kor-N-Seal", as manufactured by National Pollution Control Systems, Inc., or approved equal.

05.3 FLOW CHANNELS. Flow channels in manhole base shall be formed of D.O.T. Class I Type II cement grout with brick and trowel to a smooth surface finish. Grout surface shall be 1" min. thickness over brick or rubble. While the manholes are under construction, cut off pipes at inside face of the manhole and construct the invert to the shape and sizes of pipe indicated.
All inverts shall provide a constant gradient from influent pipe to effluent pipe through manhole. Changes in direction of the sewer and entering branch or branches shall be laid out in smooth curves of the longest possible radius which is tangent to the center lines of adjoining pipelines.

05.4 DROP INLETS. Where shown on the drawings, drop inlets to the manholes shall be constructed as shown on the drawings and specified herein.

06. POLYVINYL CHLORIDE PIPE. Polyvinyl Chloride Sewer Pipe shall conform to the requirements of ASTM D-3034, SDR 26. The PVC compound conforming to ASTM D-1784. Pipe shall be early marked in 5 ft. intervals or less, indicating Manufacturers name, nominal size, cell classification and legend. Joints shall be push-on rubber gasketed, conforming to ASTM 3212. Pipe and fittings shall be installed in accordance with recommended practice ASTM D-2321. All pipe and sewer fittings shall be SDR-26 heavy wall, installed up to a depth of 13' from finish grade to invert of pipe. Maximum depth of gravity sewer without prior approval shall be 13 feet. Sewer pipe and fittings over 13' in depth shall be DR-18 P.V.C. Design of sewer installation over 13' in depth shall have CCUA's prior approval.

07. PIPE BETWEEN MANHOLES. All piping installed between manholes shall be the same material and class. No dissimilar pipe material will be allowed anywhere within a single run of pipe.

08. SANITARY SERVICE LATERALS. Sanitary service laterals shall be Polyvinyl Chloride Pipe conforming to the requirements of ASTM D-3034, SDR 26 where cover over top of pipe is 36 inches or greater. Where cover over top of pipe is less than 36 inches, specific construction conditions shall be directed by the Clay County Utility Authority. All sanitary service laterals shall be a minimum of 4'-0" deep at the right-of-way line to top of pipe. Any sanitary service lateral which must be more than 6'-0" deep shall not be installed prior to obtaining permission from the CCUA field inspector or CCUA Engineering Department. All sanitary service laterals shall be 6-inch diameter from the main to the right-of-way line with a minimum slope of 0.60% (0.6 feet per hundred feet). In single family residential developments, services shall reduce to 4" in size at the property line utilizing the proper fittings for the type of pipe specified. All sewer service laterals over 13' deep shall be constructed of DR-18 PVC pipe, and DR-18 pipe fittings, per CCUA standard sewer system details.

09. FORCE MAINS. Force mains shall be C900 DR-18 PVC and conform to the requirements of ASTM D-1784, D-2241, D-3139 and F-477. Pipe shall be color coded and marked "FORCE MAIN" on at least two sides and at every 12" along the barrel of the pipe. Ductile iron pipe for force main service shall be polylined. Ductile iron pipe is not to be used without prior approval of the Clay County Utility Authority. Fittings shall be C110 gray iron and shall be polylined. Force mains less than 3" shall be SCH80 PVC. All force mains shall be installed with tracer wire per CCUA standard location wire details. All force mains should be installed 5 feet to top of pipe, unless approved by CCUA.

09.1 LIFT STATION VALVES. See CCUA Approved Materials Manual for acceptable plug valves and check valves.

09.2 FORCE MAIN VALVE. Gate valve, resilient seated, same as specified in Water Distribution System Specifications Section 11 at right. Except valve bodies shall be gray iron. Valve box shall have the word "SEWER" cast into the cover.

09.3 FORCE MAIN JOINT RESTRAINT. All fittings shall be properly and adequately restrained against lateral movement at all force main tees, crosses, valves and bends. See CCUA Approved Materials Manual for acceptable restrainers. (SEE RESTRAINED JOINT SCHEDULE)

09.4 FORCE MAIN PIPE FLUSHING. All force main piping shall be flushed with clean water utilizing full pipe diameter. In cases where the water supply is inadequate to flush the full pipe diameter, flushing shall occur to the extent of the water supply that is available.

10. INSTALLATION. All sewer lines, manholes, and appurtenances shall be constructed to the dimensions and elevations indicated on the drawings. Trenches shall be excavated to a width approximately twelve inches greater than the outside diameter of the pipe. Machine excavation shall be to a depth one-fourth pipe diameter above proposed pipe grade; the remaining depth shall be hand excavated and shaped to give full support to the lower one-fourth of each pipe.
Each section of pipe shall be inspected for defects prior to being lowered into the trench. The inside of each bell and the outside of each spigot shall be thoroughly cleaned of all foreign matter prior to making the joint. All sewer lines shall be constructed with the spigot ends pointing in the direction of the flow. Both the bell and the spigot of each joint shall be lubricated with the lubricant recommended by the pipe Manufacturer. All sewer lines shall be cleaned of foreign matter as construction progresses, and shall be in a clean condition upon completion of construction operations. Pipe materials shall remain the same on runs between manholes and/or other structures.

11. INSPECTIONS. Each section of the completed sewer system shall be inspected for proper alignment. Any section of the sewer system which does not display true, concentric alignment shall be reinstalled at no additional expense to the Owner. A written log of inspection shall be kept indicating location of test, potential problems in sewer, dips and depth of water, service locations, and other irregularities in the pipe lines. An image in DVD format shall be made of the television inspection and submitted to the Engineer and the Clay County Utility Authority. Copies of compaction density test reports from a licensed testing agency shall be made available to CCUA if requested.

11.1 TELEVISION INSPECTIONS Television inspection will be required on all new gravity sewers constructed. This service shall be provided by the Contractor as a part of this Contract. The newly constructed sewers shall be televised in the presence of the Inspector of the Clay County Utility Authority. A full report as to the condition of pipe, type, depth, location of services, length, joint and distance between manholes, etc. shall be furnished to the CCUA inspector prior to the final acceptance of the system. Any pipe found to be cracked, leaking or otherwise defective shall be removed and replaced with new pipe at no additional costs to the Owner. Deflection testing with 5% mandrel also required. Any section not passing the mandrel test shall be corrected. Sewer mains shall be televised after curb and lime rock are in place but prior to paving. Curb and limerock shall be installed, finish graded prior to televising the gravity sewer. Limerock priming and paving operations shall not take place until the CCUA inspector has reviewed the television recorded DVD and approves the gravity sewer system. This will be strictly enforced. All gravity sewers must be flushed no sooner than 4 hours prior to any television inspection. Force main lines shall be pressure tested and approved prior to paving, but not prior to subgrade mixing operation and limerock installation, finish graded and compacted. Sewer services shall be viewed by a camera capable of viewing into service lateral connections. Adequate water must be placed within the upstream manhole to flow through the downstream manhole before inspecting with the camera. All work must be accomplished in the presence of the CCUA inspector. Contractor shall provide CCUA with a 48 hr. notice of intent to televise and inspect sewer main. CCUA inspector shall report to job site at the time specified by Contractor at the time of the call-in. CCUA inspectors will wait at the job site no more than one hour for the televising to begin before leaving the job site. Contractor shall reschedule televising giving CCUA 48 hrs. notice if the above occurs. Inspections start at manhole invert.

11.2 INFILTRATION TEST After completion, the sewers or sections thereof, shall be tested and gauged for infiltration. To check the amount of infiltration, the Contractor, at no added compensation over the contract price for the sewers, shall furnish, and install and maintain a V-notch sharp crested weir in a wood frame on the main sewers as directed by the Engineer. Maximum allowable infiltration shall be 50 gallons per mile, per inch of dia. of sewer per 24 hour day, at any time.

11.3 EXFILTRATION TEST In areas where ground water is not encountered in sewer construction, or it is desired to run exfiltration tests, the Contractor shall furnish and install all necessary materials, equipments, shall supply water, etc., and shall run exfiltration tests to determine acceptance of the sewer. The maximum allowable exfiltration shall be 50 gallons per mile per inch of diameter of sewer per 24 hour day at any time based on two foot minimum internal head.

11.4. A "dip" is defined as any water holding depth which is equal or greater than the minimum depth as listed below. There shall not be any more than 1 "dip" per 135 linear feet of sewer pipe installed. The defective pipe sections, or those dip/sections over the allowable limit, shall be removed and replaced (at no cost to CCUA). Each run of pipe, between two manholes, shall be evaluated independently for compliance. Any "dip" which is greater than the "maximum" "dip" depth listed below are not acceptable and shall be removed and replace at no cost to CCUA. Regardless of the number of "dips" in the line section, if, in the option of the CCUA inspector, the number and/or location of the "dips" is believed to create an unacceptable operating condition, then the defective pipe section(s) shall be removed and replaced at no cost to CCUA. Any deviation from these "dip" limitation must be approved by the CCUA Service Availability Manager.

WATER HOLDING DEPTH (INCHES)		
PIPE SIZE	MINIMUM	MAXIMUM
8-10 INCH	.50	1.00
12-15 INCH	.75	1.50
18-21 INCH	1.00	2.00
24 INCH AND GREATER	1.25	2.50

12. Demarcation box shall be used as an isolation point between the wet well and the motor control center panel. All wiring between the motor control center and wet well shall be interconnected at this point. Install malleable seal off conduits at the demarcation box end, in conduits between the demarcation box and the MCC. All internal hardware including terminal strips, blocks and backplane shall be stainless steel.

12.1 Demarcation box shall be 24" wide, 24" tall and 12" deep nema 4x enclosure manufactured of 316 stainless steel. Enclosure shall have a hinged cover and removable backplane for terminal blocks. The box shall be mounted so that the cover faces away from the wet well.

12.2 Terminal blocks will need to be mounted for each wire passing through the demarcation box. Terminal strips will be rated at 600 volts, sized according to the load served. Antioxidant compound shall be used on all terminal connections, (nolox or equal). Nameplates as specified on the electrical standards sheet shall be provided at the terminal blocks to identify each circuit.

12.3 All wires including spares shall be identified with heat shrink labels. All control wires shall have spade lugs. Wires shall be 600 volt rated thhn/mtw/thhw.

13. SEPARATION OF WATER AND SEWER MAINS. Horizontal and vertical separation between potable water system mains and or appurtenances and sanitary or storm sewers, wastewater or storm water force mains, and reclaimed water mains shall be in accordance with Rule 62-555.314 FAC.
a. New or relocated underground water mains shall be laid to provide a horizontal distance of at least three feet between the outside of the water main and the outside of any existing or proposed storm sewer, storm water force main, reclaimed water main regulated under Part III of Chapter 62-610, F.A.C, or proposed vacuum-type sanitary sewer.
b. New or relocated, underground water mains shall be laid to provide a horizontal distance of at least six feet, and preferably ten feet, between the outside of the water main and the outside of any existing or proposed gravity- or pressure-type sanitary sewer, wastewater force main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C. The minimum horizontal separation distance between water mains and gravity-type sanitary sewers shall be reduced to three feet where the bottom of the water main is laid at least six inches above the top of the sewer.
c. New or relocated underground water mains crossing any existing or proposed gravity- or vacuum-type sanitary sewer or storm sewer shall be laid so the outside of the water main is at least six inches, and preferably 12 inches, above, or at least 12 inches below, the outside of the other pipeline. However, it is preferable to lay the water main above the other pipeline (see Crossing "A" as shown on detail sheet WAT-02).
d. New or relocated underground water mains crossing any existing or proposed pressure-type sanitary sewer, wastewater or storm water force main, or pipeline conveying reclaimed water shall be laid so the outside of the water main is at least 12 inches above or below the outside of the other pipeline. However, it is preferable to lay the water main above the other pipeline.
e. At the utility crossings described in paragraphs (c) and (d) above, one full length of water main pipe shall be centered above or below the other pipeline so the water main joints will be as far as possible from the other pipeline. Alternatively, at such crossings, the pipes shall be arranged so that all water main joints are at least three feet from all joints in vacuum-type sanitary sewers, storm sewers, storm water force mains, or pipelines conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C., and at least six feet from all joints in gravity- or pressure-type sanitary sewers, wastewater force mains, or pipelines conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.

14. NEW CONNECTION TO EXISTING MAIN. New connection to existing main in service shall be accomplished by the "wet tap" method utilizing full circle stainless steel tapping sleeve and mechanical joint tapping valve. Tapping sleeve shall be rated at 200 p.s.i., non-shock working pressure conforming to AWWA Standard C110, latest revision. Stainless steel tapping sleeves shall be from those listed in CCUA approved material manual. Tapping valve shall be mechanical joint on one end and standard flanged joint on other end. Valve shall conform to Section 09.2 of these specifications.

15. JOBSITE SAFETY. While on the job site, the Contractor shall at all times observe all Federal, State and local safety rules, regulations and laws. This includes, but is not limited to, confined spaces and excavation protection systems as per O.S.H.A. standards.

16. CCUA SHOP DRAWING AND SUBMITTAL PROCESS. A signed acknowledgment by the Contractor and the Material Supplier, on the "Shop Drawings and CCUA's Approved Materials List Form", that all materials will be in accordance with CCUA's Specifications, CCUA's Details and CCUA's Approved Materials Manual, is the only submittal CCUA will require for each item of materials with the following exception: any alternate materials requested by the Engineer; any materials not listed in the CCUA Materials Manual; and materials associated with pumping stations and plant installations. Those exceptions shall have an individual shop drawing submitted for CCUA's review and approval prior to any installation of said materials. This is CCUA's procedure and it does not preclude the Design Engineer from requiring additional submittals and shop drawings as he deems necessary for the project.

17. PUMP STATIONS (TEMPORARY OR PERMANENT). All pump stations shall be constructed in accordance with CCUA standards, rules and regulations and be approved by CCUA All work and materials shall meet the requirements of CCUA Standard Pump Station Details and Specifications or the plans, details and specifications for that specific pump station. A driveway shall be provided from the street (roadway) to within 2 feet of the pump station wetwell, minimum 10 feet wide x 6 inches thick 3,500 p.s.i. concrete. Submersible pump stations shall be fenced completely about the perimeter of the pump station site (location of the pump station site as noted on the plans), including gates and all other items required to make a completely fenced installation. The entire pump station site within the fenced area shall be covered with #57 stone, 6 inch thick minimum, placed over filter cloth.

18. Information shown on the Drawings as to the location of existing utilities has been prepared from the most reliable data available to the Engineer. The Contractor shall be responsible for requesting underground utility locates and shall assist the utility companies by every means possible to determine said locations and the locations of recent additions to the systems not shown. Extreme caution shall be exercised to eliminate any possibility of any damage to utilities resulting from Contractor's activities. The locations of all overhead utilities shall also be verified by the Contractor. The Engineer shall be notified of any conflict that may occur. The Contractor shall be responsible for determining which poles will need shoring during excavation and shall provide such shoring and support as required.

19. CCUA details and specifications (latest available copy) shall be included in all plans submitted for work within the CCUA utility system. No person shall modify, change, omit, or replace any portion of those details and specifications without the express written consent of CCUA. In any instance where the Design Engineer has included his written specifications or details in the plans then the more stringent of the two shall govern.

20. All materials to be used for any project within CCUA'S utility system shall conform to those materials listed in the CCUA approved material manual in effect at the time final plans for that project are approved by CCUA

21. Under no circumstance shall any trees be planted within a CCUA utility easement without:
a. CCUA approving landscape and irrigation plans.
b. CCUA being notified prior to the planting of trees and giving approval.
c. CCUA inspecting the installation of root barrier material (required at all trees which are closer than 7.5' to any CCUA utility line) as shown in CCUA approved material manual and CCUA roadway cross section details, whether or not shown on the plans.

22. At all Jack & Bore locations a CCUA inspector shall inspect the casing spacers to verify they are the correct size and have been installed correctly on the pipe prior to the pipe being installed into the pipe casing. The pipe casing shall be clean and free of all dirt, and shall be cleaned with a Vac-Con if necessary. A CCUA inspector shall be present at all time during this work. Contractor shall be responsible to establish the correct elevation of the Jack and Bore carrier pipe and pipe casing. Contractor shall compact the bottom of the excavation to assure the density of earth is adequate to prevent any settlement of equipment used to perform the Jack and Bore operation. Contractor shall, at all Jack and Bore pits, provide and utilize the necessary de-watering equipment to keep the excavation dry and free from water in accordance with Paragraph 7 of the General Notes. Contractor shall, at all Jack and Bore excavations, provide a rock bed of #57 stone (a minimum of 8-inches thick) to support the track and rail system of the Jack and Bore equipment. This shall be inspected by a CCUA inspector and approved by the inspector prior to beginning the placement of the pipe casing. Contractor shall replace, at his/her expense, any Jack and Bore installed which CCUA refuses to accept for Ownership and which does not meet the requirements of CCUA, due to incorrect grading, damaged or faulty materials, poor workmanship, or anything that CCUA deems as inadequate to perform its intended use.

GENERAL NOTES

1. AS-BUILT DRAWINGS AND ASSOCIATED COSTS. All cost records pertaining to the cost of water, reclaim and sewer facilities donated to the utility shall be provided to the Utility by applicant. Prior to acceptance of any extension to the Utility's system that is completed by a licensed underground utility Contractor, the Utility will require that the applicant's Contractor provide the Utility, to retain for its permanent records, all field as-built data which shall be provided in accordance with the Utility's `As-built Specifications Standards Manual`, which can obtained from the Utility's website (www.clayutility.org).

2. CONSTRUCTION WARRANTY AND WARRANTY SECURITY PERIOD. Developer's Contractor shall warranty Utility against defects in material and workmanship for the portion of the onsite system to be owned by the Utility for two (2) years. Developer shall secure from its Contractor a written and fully assignable warranty that the system installed will be and remain free from all defects, latent or otherwise, with respect to workmanship. materials, installation, and accuracy of his as-built drawings in accordance with the Utility approved plans and specifications for a period of two years from the date of the system acceptance by the Utility and immediately assign the same and the right to enforce the same to Utility on or before the date of the Utility's acceptance of the system for Ownership and maintenance.

3. CLEAN-UP. All surplus materials of construction shall be removed from the site and disposed of by the Contractor as part of his contract with the Owner.

4. RESTORATION. New Sanitary Sewer and Water Main Construction in earthen areas shall be seeded and mulched in accordance with Section 570 of Standard Specifications of the Florida Dept. of Transportation (latest edition). In locations where existing grassed (sodded) areas are disturbed, sod shall be replaced to preconstruction condition and to limits of construction or where directed by the engineer.

5. PERMITS. The Contractor shall be responsible for obtaining and providing records of all permits required for performing work under this contract, except that the FDEP permits, and wetland permits, if required, will be secured by the Owner or Developer.

6. PIPE BEDDING. In the event unsuitable or unstable bedding material is encountered at or below the limits of the excavation required for installation, such material shall be removed and replaced with suitable compacted backfill material specified by the Design Engineer and approved by the CCUA so as to provide a stable trench bedding surface suitable for proper pipe installation.

6.1. PIPE BEDDING (ROCK BEDDING MATERIAL) Rock material used for pipe bedding shall be #57 stone or crushed concrete (crush-crete) in a #57 size. Rock bedding material shall be completely wrapped in a heavy filter fabric material, overlapped a minimum of one foot. Rock bedding shall be installed to the correct grade and compacted to a density which will prevent any settlement, either by mechanical tamping equipment or by compressing the rock using the bottom of the backhoe bucket. The compaction shall be approved by CCUA inspector. The Contractor shall be required to have submittal approved by Design Engineer and CCUA prior to use of such rock bedding material.

7. DEWATERING. The Contractor shall at all times during construction provide ample means and equipment with which to promptly remove and dispose of all water entering the trench and structure excavations and shall keep said excavations acceptably dry until the piping and / or structures to be built therein are completed. All water pumped or drained from the work area shall be disposed of in a manner as to not damage sewer, water, electrical or any other piping, structures or property. No pipe shall be laid in water and no water shall be allowed to rise above the bottom of any pipe while it is being jointed, except as may be approved in writing by the CCUA

8. HYDROSTATIC TESTING. After all pressure pipes (water mains, services, and force mains) are laid, the joints completed, and the trench backfilled, the newly laid pipe and appurtenances shall be subjected to a hydrostatic test of 150 p.s.i. for a period of at least two hours. The engineer and the Clay County Utility Authority must be notified 48 hours before a test is to be performed. Test shall be as set forth in AWWA standard C600. Any leaks detected shall be corrected and the section of pipeline retested. The two hour test period shall begin when all joints have been determined to be water tight. Leakage shall be limited to that allowance set forth in Section 4 of AWWA Standard C600-87. Hydrostatic and leakage test and blow-down (zeroing of gage) must occur before sampling for bacteriological test. The maximum allowable pressure loss is 5 p.s.i. regardless of the length of pipe.

9. REPORTS. Reports of hydrostatic and leakage tests and sterilization of the newly completed systems shall be submitted to the Clay County Utility Authority prior to requesting acceptance of the system.

10. DENSITY TESTING. In-place density tests are required at intervals not to exceed 150' along pipelines for every other lift. A minimum of one test between manholes is required for every other lift regardless of the distance between sanitary sewer manholes.

11. CONCRETE. All Portland Cement concrete shall be of Type II Portland Cement, 2,500 p.s.i. minimum, ready mixed. All concrete shall be placed before the initial set has taken place. Stale or retempered concrete shall not be used.

12. GATE VALVES AND BOXES. Gate valves shall have a 2" operating nut and open left. Gate valves shall have joints suitable for the type main on which installed. Valves 2" and 3" shall be iron body, bronze fitted. Valves 4" and larger shall be iron body, bronze fitted with resilient seat. The word "WATER" on water boxes and "SEWER" on force main boxes shall be cast in the covers.

13. PIPE AND PIPE JOINTING FOR FUSED & HDPE PIPE:
a. Heat Fusion Jointing:
Joints between plain end pipes and pipe fittings shall be made by butt fusion when possible. Electro fusion welding may also be used to complete when the location is not accessible to butt fusion welding equipment. The on-site welder making the joints (butt fusion or electro fusion) shall have received specific training from the Manufacturer of the fittings and/or pipe being welded and shall have written proof of proper training/certification from the associated Manufacturers. Only certified welders who have written training certifications from the fitting and/or pipe Manufacturer will be allowed to perform this work. To weld a fitting or electro fusion coupling in place, the on-site welder (employee) must be trained and certified by the fitting Manufacturer. To butt weld pipe, the on-site welder (employee) must be trained and certified by the pipe Manufacturer. The fusion work shall be accomplished (welding and cool-down/closing times) in accordance with the fitting and pipe Manufacturers' recommendations, at a minimum. CCUA reserves the right to require the Contractor to remove from or not permit an employee to work on the welding or fusing portion of the work if in the opinion of CCUA that person is not properly trained or cannot perform the welding or fusion process in high quality and professional workmanship manner.

b. External and internal beads shall only be removed when required by CCUA. The internal bead shall be removed from all fused joints of a pipe that is to be used as a gravity sewer line, or as a sewer force main line or as a sleeve or host pipe which will have another pipe installed inside it. The external bead shall be removed from all fused joints of a pipe which will be installed inside of a sleeve or host pipe and the external bead shall be removed from all fused joints of a pipe to be pulled through a reamed Horizontal Directional Drill hole which may have a possible catch point such as extreme rocky ground conditions or other hazards. The Contractor shall be required to follow the requirements and recommendations of the pipe Manufacturer and Clay County Utility Authority.

OUTLINE SPECIFICATIONS FOR CONSTRUCTION OF WATER DISTRIBUTION SYSTEM

01. INTENTION. It is the declared and acknowledged intention to secure a new water distribution system, complete, in accordance with the plans and specifications, and contract documents. All new work shall be in accordance with Clay County Utility Authority Specifications and Details and Approved Materials Manual and Clay County Engineering Department Details and Specifications and any other Government Regulatory Agency. All work shall conform to the above whether or not specifically called out or noted on the plans.

02. GENERAL. All materials shall be in conformance to National Sanitation Foundation (NSF) 61 and those listed in the CCUA Approved Materials Manual. Materials shall be warranted by the Contractor as to materials, workmanship and accuracy of As-built drawings for a period of two years from the date of completion of the work or beneficial use of the facilities. Workmanship shall be of good quality; i.e., mains shall be laid in a uniform alignment, fittings shall be properly restrained, trenches shall be properly excavated and backfilled, fire hydrants and valve boxes shall be adjusted to finished grade. All water mains shall be installed with tracer wire per CCUA standard location wire details.

02.1 Contractor LICENSE AND APPROVAL. Utility reserves the right to approve or deny approval of Contractor prior to construction of any on-site or off-site utility facilities. Contractor must hold a State Of Florida Underground Utility Contractors license, that named contracting company being the one doing the work on project, and demonstrate acceptable experience in the field of utility construction.

03. SURVEYS. The Utility Contractor shall provide all surveys necessary for the layout and construction of the work of his contract.

04. EARTHWORK. Earthwork shall include all excavation, fill and backfill (hand/machine), compaction and rough grading of materials encountered. No unsuitable materials clay, muck, or peat removed from pipe trenches are to be used for backfill. All fill or backfill shall be either sand or sandy clay, free of roots, trash or other debris. All backfill alongside of and to a height twenty-four inches above all pipe shall be free of clay or organic material, compacted by either hand or machine operation carefully to 98%. All other backfill shall be compacted by either hand or machine operation carefully to 95% (outside of paving), 98% (under paving) of its optimum moisture content as determined by ASTM D698, latest. Copies of compaction density test reports from a licensed testing agency shall be made available to CCUA if requested.

05. JOINT RESTRAINT. All fittings shall be properly and adequately restrained against lateral movement at all water main tees, crosses, valves, bends and fire hydrants. Restrainers shall be Uni-Flange Series 1300, 1350, 1390 or approved equal installed per Manufacturer's recommendations and Clay County Utility Authority Details and Specifications (SEE RESTRAINED JOINT SCHEDULE). See CCUA Approved Materials Manual for acceptable restraints.

06. DUCTILE IRON PIPE. Ductile iron pipe shall conform to ANSI Specification A21.50 (AWWA C150) latest, "Thickness Design of Ductile Iron Pipe", Table 50.5, laying condition Type 2, internal operating pressure of 250 p.s.i. for an 8-foot depth of cover, Class 51 minimum and shall be ANSI A21.51 (AWWA C151), latest centrifugally cast pipe. Laying lengths shall be 20 feet or less in length, and shall be clearly marked with pressure rating, thickness, class, height of pipe without lining, length, and Manufacturer. Ductile iron pipe for water service shall be furnished with cement lining per AWWA C110, C115 and C151. The pipe shall have design values of 60,000 p.s.i. minimum tensile strength, and 42,000 p.s.i. minimum yield strength. Ductile iron pipe for water or service lines shall be used in any easement, right-of-way, between lots, and any instance where a building foundation or other permanent appurtenance is within 10' of the water main or a service line larger than 3".

07. DUCTILE IRON FITTINGS shall be C153 cement lined and suitable for the type and class of pipe to which connected. Gaskets shall be suitable for potable, domestic water service. Minimum working pressure shall be 150 p.s.i.

08. POLYVINYL CHLORIDE PIPE. Polyvinyl chloride pipe for water mains 4 inch through 24 inches in diameter, shall be DR18 (C900) Pressure Class 235 psi PVC 1120; water distribution mains above 24 inches in diameter shall be DR25 (C900) PVC 1120, Pressure Class 165 psi, conforming to ASTM D-1784, D-2241, D-3139 and F-477, latest, or P.V.C. C900, Class 165, DR-25, conforming to ASTM D-1784, Cell Class 12454, ASTM F-477, ASTM D-3139, latest, and shall bear the seal of the National Sanitation Foundation. Pipe shall be color coded and marked "WATER" at every 12" along the barrel of the pipe, with lettering facing up. Couplings shall be rubber gasketed, push-on type conforming to ASTM D-2122. DR-18 shall be used for fire mains.

09. STEEL CASING PIPE. Steel casing pipe shall be of size indicated on the Drawings and shall conform to ASTM A139, with a minimum yield strength of 35,000 p.s.i.

10. POLYVINYL CHLORIDE (PVC 1120, SCHEDULE 80) PIPE shall conform to the requirements of ASTM D 1785. Fittings shall be suitable for type of installation required. All piping smaller than 4" shall be Schedule 80 PVC.

11. GATE VALVES AND BOXES. Gate valves shall be non-rising stem type and shall be suitable for a 200 p.s.i. non-shock working pressure. Gate valves shall be mechanical joint, flanged or screwed. Gate valves shall have a 2" operating nut and open left. Gate valves shall have joints suitable for the type of main on which installed. Valves 3" and larger shall be iron body, bronze fitted with resilient seat. Boxes shall be of cast iron construction, 7/32" minimum wall thickness and shall be nontacky tar enamel coated. The word "WATER" shall be cast in the cover. Other gate valves smaller than 3" shall be heavy-duty bronze ball valves. See CCUA Approved Materials Manual for acceptable valves.

12. WATER METER BOXES. Developer shall be responsible for installation of meter boxes on all water services as part of the water main installation. All curb stops shall be adjusted to the proper elevation and shall be accessible for the installation of the water meter. The Contractor shall be required to open all boxes for the Authority's inspector at the final inspection. A treated 6'-6" fence post marker shall be painted blue for identification. Meter boxes shall not be placed in any sidewalk or driveway without the approval of CCUA.

13. CURB STOPS. Curb stops shall be cast bronze, inverted key stop, roundway, with check, lock wing type, for locking in the closed position. See CCUA Approved Materials Manual for acceptable curb stops.

14. FIRE HYDRANTS. Fire hydrants shall be traffic type, 150 pound working pressure, AWWA Standard C502, latest revisions, with two 2 1/2" nozzles, one 4 1/2" nozzle and one 5 1/4" main valve. Fire hydrant shall be be compression type with breakable coupling and bolts. Pipe connection shall be mechanical joint. Fire hydrants shall be painted silver, BLP Mobile Paints, Liquid Aluminum, 1151 alkyd weight 56.6% x volume 41.2% VOC 3.76 lb. per gallon with 1 1/2" penta nuts, opening left. See CCUA Approved Materials Manual for acceptable fire hydrants.

15. INSTALLATION. The minimum cover over top of potable water main shall be 36". All water lines and appurtenances shall be thoroughly cleaned of all foreign matter before being lowered into the trench and shall be kept clean during laying operations by means of plugs or other approved methods. All pipe shall be checked for defects before being lowered into the trench. Defective pipe shall not be used. Pipe found to be defective after installation, shall be removed and replaced with sound pipe at no additional expense to the Owner. The full length of each section of pipe shall rest solidly upon the pipe bed, with recesses excavated to accommodate the bells and joints. All pipe that has the grade or joint disturbed after laying shall be taken up and reinstalled. The pipe shall not be laid in water or when trench or weather conditions are unsuitable for the work. All joints shall be cleaned of all foreign matter before making the joint. Fittings at bends in the pipe shall be properly restrained with joint restrainers adequately sized to prevent movement and dislocating or blowing off when the line is under pressure. Service laterals shall terminate at the point noted in the details.

16. TESTS. After the pipe is laid, the joints completed, and the trench backfilled, the newly laid pipe and appurtenances shall be subjected to a Hydrostatic and Leakage test of 150 pounds per square inch for a period of at least two hours. During this period, all joints shall be inspected to determine water tightness of the system. Any leaks detected shall be corrected. tests shall be in accordance with the CCUA's requirements and specifications. Water main lines shall be pressure tested and approved prior to paving, but not prior to subgrade mixing operation and limerock installation, finish graded and compacted. If CCUA inspector detects the water main has been damaged during priming or paving, he shall require the Contractor to repair the water main and retest the water main.

17. STERILIZATION. After completion of construction and testing, the water system shall be sterilized with chlorine in accordance with AWWA Standard C651 latest, and State of Florida Department of Environmental Protection requirements before acceptance for domestic operation. The amount of chlorine applied shall be sufficient to provide a dosage of 50 parts per million or more, for a period of at least 24 hours. A CCUA inspector must be present for the below referenced sterilization procedures. After completion of sterilization procedures, the system shall be flushed using chlorinated water from a domestic water source having a chlorine residual of at least 1 part per million. The Contractor shall obtain all bacteriological clearances as required by the Florida Department of Environmental Protection. After bacteriological clearances, the pressure in the main shall not drop below 20 p.s.i. Clearance report to be submitted to the Engineer. The Contractor should be aware that there is a timing maximum related to bacteriological clearance of the main, completion of as-built drawings and Engineer/CCUA completion of Certificate of Completion. In any project where the bacteriological clearances are greater than 30 days old at the time of submittal of Certificate of Completion to FDEP or CCUA, the Contractor may be required to pull more samples and obtain more bacteriological clearances. Prior to introducing the chlorine solution, the lines shall be thoroughly flushed with clean water utilizing full pipe diameter. In cases where the water supply is inadequate to flush the full pipe diameter, flushing shall occur to the extent of the water supply that is available. Dechlorination of flushing water may be required to be in compliance with the State of Florida Surface Water Quality Standards (F.A.C. 63-302.530). Dechlorination is necessary if the flushing of highly chlorinated water is to be discharged directly to a surface water or to a storm water system. If the water can be sheet flowed over a large area or discharged to a holding pond, dechlorination may be avoided. See note number 4 of Special Notes below.

18. BACTERIOLOGICAL SAMPLING. Contractor shall ensure the project construction is completely finished prior to any bacteriological sampling and testing.

19. FIRE LINES/MAINS. All fire lines or mains connecting to Clay County Utility Authority owned potable water main shall be installed by a State of Florida Licensed Fire Installation Contractor, and shall meet all requirements of the local Authority, State Fire Marshal, County Fire Marshal, and the National Fire Protection Association. Work performed must meet all requirements of NFPA 24, Standard for the Installation of Private Fire Service Mains and Their Appurtenances.

19.1 The Fire Marshal shall have the right to deny acceptance or use of any fire line, installed and connected to a Clay County Utility Authority owned and maintained water main until such time that the Contractor installing the fire line can produce proof to the Fire Marshal that all paperwork, fees due, or close out documents have been satisfactorily prepared and approved by Clay County Utility Authority.

20. POLYETHYLENE TUBING SERVICE LINES AND MAINS (2 INCH AND SMALLER): Tubing shall be manufactured of PE 4710, High Density Polyethylene (HDPE), in accordance with AWWA C901, ASTM D1248, ASTM D2239, ASTM D3737 and ASTM D3350. The tubing shall have a minimum working pressure of 250 psi. Polyethylene tubing shall be copper tube size SDR-9 and shall be colored blue. HDPE pipe shall have ultraviolet (UV) inhibitors for protection against direct sunlight for 1 year. Inserts for polyethylene tubing may be utilized, at Contractors options, and, if used, shall be 316 stainless steel. The use of no-lead brass couplings, tees and "Y" fittings are acceptable on poly service tubing, if not located under a roadway. Tubing shall be approved for use with potable water by the National Sanitation Foundation (NSF-14) and shall be continuously marked at intervals of not more than four feet with the following:
Nominal size
Pressure rating
NSF seal
Manufacturer's name or trademark
Standard dimension ratio
ASTM specification

SPECIAL NOTES

1. The installation of all pipe regardless of the type or size shall be installed in accordance with the Manufacturer's specifications or recommended criteria for the pipe being installed. No pipe shall be installed with the joints over-assembled or over-homed. The reference mark (home-line) shall not be installed into the bell beyond the Manufacturer's recommendation. The Contractor shall be responsible to mark any pipe cut to length with a reference mark (home-line) placed at the correct location on the pipe according to the type and size pipe being installed. CCUA will not permit any pipe joint to be left in place if the joint is over-homed. It shall be the Contractor's responsibility to obtain the information pertaining to installation of pipe to be installed from the Supplying Manufacturer and to install the pipe accordingly.

2. Deflection of all pipe regardless of the type or size shall be installed in accordance with the Manufacturer's specifications or recommended criteria for the pipe being installed. Any pipe which has been installed and does not meet the above listed criteria shall be removed and replaced with new pipe. All costs of removal and reinstallation of said pipe shall be at the Contractor's expense, with no cost to the Owner, and shall meet all CCUA requirements.

3. Any utility pipe regardless of the type or size which has been abandoned, or taken out of service or out of use for any reason, shall either be removed from the ground for its entire length and disposed of in a legal manner, or shall be grout filled in place for its entire length. A CCUA inspector shall be present and witness the grout filling of the pipe from start to finish of the process. If the abandoned pipe is being removed, a CCUA inspector shall be present or be able to view the open ditch where pipe was removed from prior to backfilling that ditch.

4. Disinfection Notes:
a. Only CCUA staff is authorized to change or adjust existing CCUA valves.
b. The General Superintendent of the Distribution and Collection System must be informed of any changes to existing CCUA valves.
c. The scheduling of the disinfection process for new developments installing water mains must be coordinated with CCUA at least seven (7) days in advance.
d. CCUA inspectors must be present to observe and monitor the disinfection process.

5. CLOSE OUT/COMPLETION. Minimum items required for Close Out / Completion for submittal to the Clay County Utility Authority will include:
a. Construction Warranty from Developer in the form of a Bond, Letter of Credit or Cashier's Check for a two-year period.
b. Warranty Certificate for a two-year warranty from the Contractor to the Developer and assignment of same to the Clay County Utility Authority (CCUA).
c. Developer's Affidavit certifying there is no outstanding debt against utility assets to be deeded to CCUA
d. Value of Acceptance Report showing value of assets to be deeded to the CCUA
e. Bill of Sale to CCUA
f. Bacteriological Test(s)
g. Pressure Test(s)
h. Television Reports and Recorded DVDs
i. Density Reports
j. Locate Wire test
k. Final As-Built Drawings and disks

FINAL INSPECTION PROCEDURES

PRIOR TO FINAL INSPECTION, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:

1. The sewer line T.V. report, and recorded DVD.
2. All manhole rings and covers have to be adjusted to finish grade.
3. The pressure test and bacteriological clearance analysis report.
4. Water services must be lowered and meter boxes installed, valve boxes must be set on all gate valves.
5. Locate Wire test.
6. Not less than 10 business days Prior to Final Inspection, Contractor shall submit as-built drawings showing at least the following:
   a. Location of valves, mains, services, manholes and locate wire boxes.
   b. Elevation of sewer lines in the manhole, and stub-outs.
7. As-built drawings shall have been updated to accommodate the Clay County Utility Authority's comments and the final elevation of the manhole tops must be included (shall comply to the guidance set forth in Utility's As-built Specifications Standards Manual, which can be obtained from the Utility's website www.clayutility.org).
8. The Engineer of Record certification to FDEP. This can be done with completed as-builts.
9. As-builts, must be accepted and approved by the Clay County Utility Authority.
10. All valves, locate wire boxes, sewer, water and reclaimed services shall be scribed in curb and painted the correct color.
11. All services and valves to be plainly marked with a treated fence post, and electronic locate marker on all sewer lateral and sewer stubs.
12. Pump station start-up report with draw down data for each pump and with both pumps in operation. All electrical components to be completely installed and in proper working condition.

PRIOR TO FINAL ACCEPTANCE FOR OWNERSHIP, THE FOLLOWING MUST BE COMPLETED:

1. A preliminary inspection must be coordinated by the underground utility Contractor and held a minimum of fifteen (15) working days prior to the final inspection/start-up. The preliminary inspection will compare the approved design drawings to the actual site installation, noting any deficiencies.
2. The following must be represented at the preliminary and final inspection:
   a. The Clay County Utility Authority's inspection and distribution and collection departments
   b. The project's Developer and/or general Contractor
   c. The Underground Utility Contractor
   d. All subcontractors associated with the lift station (electrical, pump Manufacturer, control panel Manufacturer, etc.)
3. All manhole rings and covers have to be adjusted to finish grade.
4. Water services must be lowered and meter boxes installed, valve boxes must be set on all gate valves.
5. As-built drawings shall have been updated to accommodate the Clay County Utility Authority's comments and the final elevation of the manhole tops must be included (shall comply to the guidance set forth in utility's `as-built specifications standards manual`, which can be obtained from the utility's web site (www.clayutility.org).
6. All valves, locate wire boxes, sewer, water and reclaimed services shall be scribed in curb and painted the correct color
7. As-builts must be accepted by the Clay County Utility Authority.

PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

halff
9995 GATE PARKWAY N, SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL CA 33380 FL LC 26000645

REVISIONS		
NO.	DATE	DESCRIPTION

SEAL

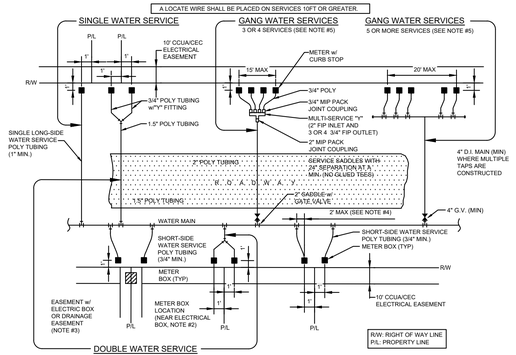
CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.:	037756.094
ISSUED:	2/14/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	N/A

WATER AND SEWER GENERAL NOTES

C-301



NOTES

1. THE SKETCHES ABOVE INDICATE TYPICAL WATER SERVICE AND METER BOX LOCATIONS. ACTUAL LOCATIONS OF BOXES MAY VARY SLIGHTLY ACCORDING TO FIELD CONDITIONS ENCOUNTERED. TYPICALLY, THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE.

2. UNLESS SPECIFIED OTHERWISE BY THE APPLICABLE COUNTY (CLAY OR BRADFORD), THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE, AND 1.0' FOOT INSIDE OF THE PROLONGATION OF ONE OF THE SIDE PROPERTY LINES. IF A CONFLICT EXISTS WITH OTHER UTILITIES, THE METER BOX MAY BE ADJUSTED TO FOUR FEET (MAX.) INSIDE PROPERTY LINES (IN LIEU OF 1.0' FEET). UNLESS APPROVED OTHERWISE BY CCUA, THE WATER METER BOX SHALL BE LOCATED IN NON-TRAFFIC AREAS (NOT IN SIDEWALKS OR DRIVEWAYS). IF AN UNAPPROVED METER BOX IS IDENTIFIED BY CCUA, THEN THE CONTRACTOR OR CUSTOMER SHALL BE RESPONSIBLE FOR THE COST OF RELOCATING ANY METER BOX WHICH IS LOCATED IN THE SIDEWALK OR DRIVEWAY OR THE COST TO PROVIDE THE CORRECT METER BOX. CCUA SHALL APPROVE ALL DEVATIONS TO THE ABOVE PRIOR TO CONSTRUCTION.

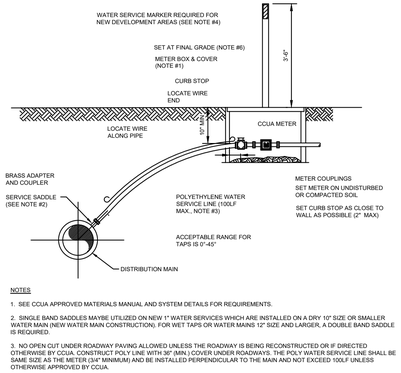
3. IF DRAINAGE OR OTHER EASEMENT IS LOCATED BETWEEN LOTS, METER BOXES SHALL BE LOCATED AT THE EASEMENT LINE BUT OUTSIDE THE EASEMENT AREA.

4. FOR SINGLE SERVICES, THE HORIZONTAL DISTANCE (PERPENDICULAR TO THE MAIN)BETWEEN THE SERVICE'S SADDLE AND THE METER BOX SHALL BE 2 FEET MAXIMUM. FOR DOUBLE 3/4" SERVICES, THE 1 ½" POLY MAIN SHALL BE LOCATED CENTERED BETWEEN THE TWO METER BOXES. LOCATE WIRE IS REQUIRED ON ALL SERVICES 10' OR GREATER IN LENGTH. IF LOCATE WIRE IS REQUIRED, THE WIRE SHALL RUN FROM THE METER BOX TO THE MAIN (WITH NO CONNECTION TO MAIN WIRE WITH THE LAST 24 INCHES STRIPPED OF INSULATION/BARE WIRE AS GROUND). ALL EXCEPTIONS TO THIS REQUIREMENT MUST BE APPROVED BY CCUA. THIS WILL ASSIST IN LOCATING EXISTING SERVICE LINES IN THE FUTURE.

5. GANG WATER SERVICES: FOR 3 OR 4 SERVICES IN ONE AREA, A DUCTICLE IRON PIPE (D.I.P.) WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS. LOCATE WIRE SHALL EXTEND FROM ONE METER BOX TO CURB STOP AT WATER MAIN. FOR 5 OR MORE SERVICES IN ONE AREA, A WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS (TAPS STAGGERED AND AT 2 FEET ON CENTER-MIN). FOR WATER SUPPLY HEADERS WHERE 5 OR MORE TAPS ARE CONSTRUCTED, THE HEADER PIPE SHALL BE 4" AT A MINIMUM. EXAMPLE: CONSTRUCT A 4" MAIN D.I. CROSSING THE STREET FOR 5 RESIDENTIAL CUSTOMERS. UTILIZING 4" G.V., 4" PIPE, 4"X1" SADDLES AND 1" CURB STOPS (NO GLUED TEE FITTINGS). THE 4" OR LARGER D.I.P. WATER MAIN MUST BE SIZED AND DESIGNED BY THE ENGINEER.

6. RECLAIMED WATER METER BOXES OR SERVICES SHALL BE CONSTRUCTED SIMILAR TO THE ABOVE AND SHALL BE LOCATED AT A MIN. OF 10' FROM THE POTABLE WATER SERVICE AND/OR BOX, AND NOT ALLOWED IN CONCRETE OR ASPHALT UNLESS APPROVED OTHERWISE BY CCUA.

POLYETHYLENE WATER SERVICE DETAILS
(NTS)



NOTES

1. SEE CCUA APPROVED MATERIALS MANUAL AND SYSTEM DETAILS FOR REQUIREMENTS.

2. SINGLE BAND SADDLES MAYBE UTILIZED ON NEW 1" WATER SERVICES WHICH ARE INSTALLED ON A DRY 10" SIZE OR SMALLER WATER MAIN (NEW WATER MAIN CONSTRUCTION). FOR WET TAPS OR WATER MAINS 12" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED.

3. NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY CCUA. CONSTRUCT POLY LINE WITH 36" (MIN.) COVER UNDER ROADWAYS. THE POLY WATER SERVICE LINE SHALL BE SAME SIZE AS THE METER (3/4" MINIMUM) AND BE INSTALLED PERPENDICULAR TO THE MAIN AND NOT EXCEED 100LF UNLESS OTHERWISE APPROVED BY CCUA.

4. INSTALL PVC PLUG IN ALL CURB STOPS IF WATER SERVICE IS "NOT IN USE" (I.E.: IF NO METER IS INSTALLED). IN ADDITION, INSTALL A 6' 4"X 1" FENCE POST (TOP PAINTED BLUE) 12" OFF SIDE OF METER BOX. THE REMOVAL OR TRANSFER OF A WATER SERVICE SHALL INCLUDE BRASS METER COUPLINGS (HEX ON BARREL TYPE).

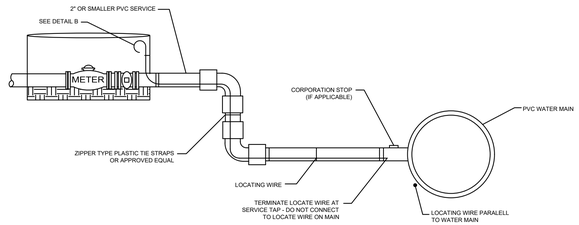
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE METER OR ELECTRONIC DEVICES IF DAMAGED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.

6. METER BOX AND TOP SHALL BE CLEAR OF ALL DEBRIS TO ALLOW FULL ACCESS TO BOX (I.E., NO DIRT, TRASH OR OTHER DEBRIS PLACED ON TOP OF BOX).

7. LOCATE WIRING REQUIRED ON ALL SERVICES 10' OR GREATER IN LENGTH / OFFSET GREATER THAN 2.0'.

WATER SERVICE DETAIL- 2" AND SMALLER METER

METER BOX SUPPORT DETAIL



CONNECTION TO PVC MAINS

2" OR SMALLER WATER SERVICE
(LONG SERVICES ONLY)

DETAIL - A

LOCATE WIRE

LOCATE WIRE TESTING REQUIREMENTS
Installed locate wiring shall be tested by the contractor as part of the final inspection procedure, using a certified tester and approved testing equipment. The Contractor shall notify CCUA at least 48 hours in advance of the testing period. At this time the Contractor shall tell CCUA the number of locate personnel to be used for the wire testing, so that CCUA can assign an inspector to work with each locate wire tester. If CCUA has not been notified of the correct number of testing personnel to be used, then the only testers allowed to test the wire shall be those who have a CCUA assigned inspector to work with them. The CCUA inspector shall have the plans on-site, as shall the testing personnel, for the purpose of recording the required test information (ie passed and failed sections) and for as-built preparation. The CCUA field representative or inspector shall be present during the testing period, and have the authority to request tester to retest sections if inspector suspects any problems within that section. The contractor shall provide the Certified Tester a copy of the project site drawings (as-builts preferred). A tone shall be put on the locate wire. The technician shall trace the entire length of the installed wire and spot paint the location at least at 100-foot intervals along the route. The depth shall be tested at 100-foot intervals and tester shall record the depth of pipe/wire on the report at each 100' interval. The certified tester shall report (show on drawings), where the pipe/wire has less than the allowable minimum cover (36 inches) or more than the maximum allowable cover (60 inches) unless called for on the plans or requested and approved by CCUA during the installation of said piping. All lateral stub-outs shall be marked with pain and the depth recorded. A final Locate Wire Report (statement by the certified tester), shall be submitted to CCUA for review and approval. The report shall include a signed statement from the certified tester which certifies that all installed wire (where shown on the drawing), was successfully (sounded), traced with no open breaks. The report shall also include a copy of the project site drawings which indicate all field notes, breaks found/repaired, depths (if installed outside the acceptable cover limits), and other applicable field remarks by the certified tester. A Certified copy of the report and marked-up drawings shall be furnished to CCUA prior to final acceptance of the project or as approved otherwise by CCUA.

Definitions:
Approved Testing Equipment shall include variable frequency controls, digital depth read-out and tone continuity. The following is a list of approved equipment - Dynatel (3M)-2273 Cable/Fault Locator, Metrotech 9800XT, Ditch Witch 950 R/T or CCUA pre-approved equal.

Certified Tester - A person or company that has been certified by the Manufacturer of the approved testing equipment as proficient in the use of the equipment has 8 months experience in the use of the equipment including documented proof of past performance.

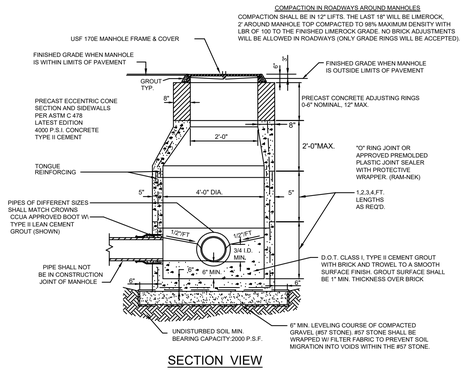
CCUA Approval: Clay County Utility Authority shall have the authority to approve Certified Tester, or deny the approval of Certified Tester to work on Utility's System. CCUA shall have the authority to remove any previously Certified Tester from its approved list of Certified Testers as CCUA deems necessary.

LOCATE WIRE INSTALLATION
Contractor shall furnish and install locate wiring on all water mains, sewer force mains, and reclaimed water mains (both PVC and ductile 1" inch size and greater. Locate wire must be attached to mains and services with duct tape or approved iron) and on all service mains 1 z plastic zipper ties, (pulled tight to keep wire from rotating out of location), at each side of bell joint or fitting and at 10 foot intervals along pipeline (at a minimum). Locate wire shall be brought to grade within a valve box or locating station box, as required, at 475 foot intervals (see note # 2 this page). Locate wire shall be installed in box and along pipeline as detailed in the CCUA Standard Details. Locate wire shall be installed beneath the pipe line at the 5:00 to 7:00 o'clock position on the pipe. Connection or splices underground which are not inside a locate box (or valve box), shall be prohibited unless approved otherwise by CCUA. The request to make an underground connection or wire splice shall be done in writing to CCUA. The request shall contain the complete job name, name of street, station number as shown on plans and scaled as close as possible to the location of splice or connection, and the reason for request. CCUA shall have at least 48 hrs. to respond verbally and 5 working days to respond in writing. If an underground connection is unavoidable and approved by CCUA, then the wire shall be first tied in a knot (to minimize future separation), then the wire ends shall be connected utilizing an electric wire nut, then make the connection water tight by using either vinyl mastic tape (4" wide X 0.09" thick by 3M-Scotch 2210), or plastic enclosure (Snaploo Model LV 9500/951-4 large by TKH) or CCUA approved equipment.

LOCATE WIRE BOX INSTALLATION
Where utility mains are to be installed beneath sidewalks, valve boxes shall be installed instead of locate wire boxes. The valve box lids shall indicate the type of line (i.e. water, sewer, or reclaimed water). The valve box shall be adjusted so the top of valve box is flush with the finished sidewalk grade. If for any reason a locate wire box must be offest from the C/L of pipeline, then the contractor shall have installed an adequate length of wire to avoid splices and the exact location of the locate box including the amount of the offset distance shall be recorded on the As-builts.

AS-BUILT DRAWINGS
Shall comply to the guidance set forth in CCUA's 'As-built Specifications Standards Manual', which can be obtained from CCUA's website (www.clayutility.org).

CLAY COUNTY UTILITY AUTHORITY STANDARD DETAILS
WATER

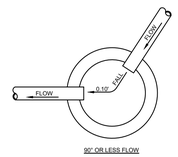


SECTION VIEW

SANITARY SEWER MANHOLE

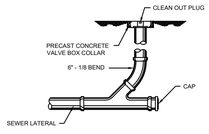
NOTE: THIS DETAIL IS SHOWN FOR CONNECTION AND BENCHING DETAILS ASSOCIATED WITH CORING OF EXISTING MANHOLE AND INSTALLATION OF NEW 6" SERVICE LATERAL INTO MANHOLE.

MANHOLE INVERTS DESIGN CRITERIA
FALL ACROSS MANHOLE FROM INFLUENT TO EFFLUENT OF IN LINE PIPES SHALL BE 0.05 FT. MIN. INFLUENT TO EFFLUENT PIPES THAT ARE AT AN ANGLE SHALL BE 0.10
SEE "ELEVATION DIFFERENCE ACROSS MANHOLE" THIS SHEET.

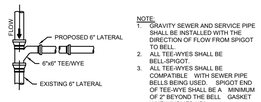


ELEVATION DIFFERENCE ACROSS MANHOLE

CLAY COUNTY UTILITY AUTHORITY STANDARD DETAILS
SEWER

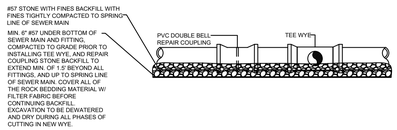


CLEANOUT DETAIL
N.T.S.

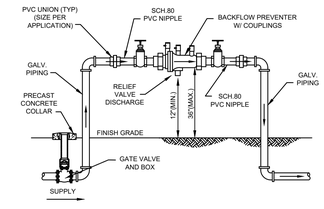


NOTE:
1. GRAVITY SEWER AND SERVICE PIPE SHALL BE INSTALLED WITH THE DIRECTION OF FLOW FROM SPIGOT TO BELL
2. ALL TEE-WYES SHALL BE BELL-SPIGOT.
3. ALL TEE-WYES SHALL BE COMPATIBLE WITH SEWER PIPE BELLS BEING USED. SPIGOT END OF TEE-WYE SHALL BE A MINIMUM OF 2" BEYOND THE BELL GASKET WHEN "HOMED UP".

SANITARY SEWER SERVICE LATERAL DETAIL



CUTTING IN SERVICE LATERAL TO EXISTING SERVICE LATERAL



REDUCED PRESSURE BACKFLOW PREVENTER 2" DIAMETER AND SMALLER (NTS)

BACKFLOW PREVENTER NOTE:
DESIGNS SHOWN FOR BACKFLOW PREVENTER INSTALLATIONS ARE REQUIRED FOR CCUA OWNED INSTALLATIONS - SEE CCUA APPROVED MATERIALS MANUAL. THE BOTTOM OF THE BACKFLOW PREVENTER VALVE IS TO BE NO LESS THAN 12" OR MORE THAN 36" ABOVE THE NATURAL FLOOD GRADE. (SEE CCUA PUMP STATION DETAIL SHEETS (ALL) FOR BACKFLOW PREVENTERS AT PUMP STATIONS)

PRIVATE SEWER LATERAL STANDARD DETAILS

PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

halff
9995 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL CA 33380 FL LC 26000645

REVISIONS NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.:	037756.094
ISSUED:	2/14/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	N/A

WATER AND SEWER STANDARD DETAILS

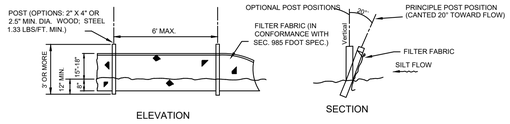
C-302

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

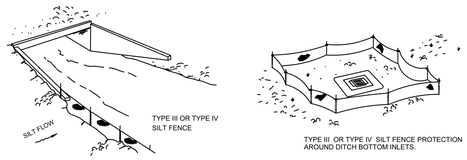
EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
2. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
3. ADDITIONAL PROTECTION - ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
4. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
5. WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, THE STRIPS SHALL BE OVERLAPPED.
6. FDOT NO. 1 COARSE AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED IN D-903. THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.
7. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.
8. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
9. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
10. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-THIRD THE HEIGHT OF THE BARRIER.
11. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
12. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
13. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/3 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
14. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES.
15. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL - A GUIDE TO SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (F.D.E.R.) CHAPTER 6.
16. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. SEE DETAIL SHEET FOR TYPICAL CONSTRUCTION.
17. ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED, MULCHED AND MAINTAINED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED.
18. SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.
19. ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER WHICH PREVEN.T.S. EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALL.
20. DEWATERING PUMPS SHALL NOT EXCEED THE CAPACITY OF THAT WHICH REQUIRES A CONSUMPTIVE USE PERMIT FROM THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
21. ALL DISTURBED AREAS ARE TO BE STABILIZED THROUGH COMPACTION, SILT SCREENS AND GRASSING. ALL FILL SLOPES 3:1 OR STEEPER TO RECEIVE STAKED SOLID SOD.
22. ALL DEWATERING, EROSION, AND SEDIMENT CONTROL TO REMAIN IN PLACE AFTER COMPLETION OF CONSTRUCTION AND REMOVED ONLY WHEN AREAS HAVE STABILIZED.
23. THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.
24. THE CONTRACTOR SHALL BE REQUIRED TO RESPOND TO ALL WATER DEP INQUIRIES, RELATIVE TO COMPLIANCE OF DEP FOR EROSION AND SEDIMENTATION CONTROL. THE COST OF THIS COMPLIANCE SHALL BE PART OF THE CONTRACT.

NOTE:
WHERE FDOT SPECS AND INDEX ARE REFERENCED, PLEASE REFER TO FDOT ROADWAY & TRAFFIC DESIGN STANDARDS, AND FDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION.

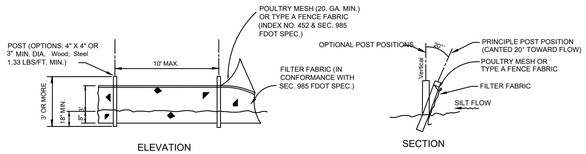


TYPE III SILT FENCE



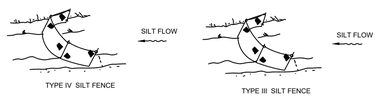
TYPE III OR TYPE IV SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS.

DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.



NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT LUMP SUM PRICE FOR EROSION AND SEDIMENT CONTROL.

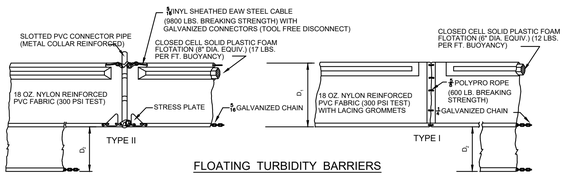
TYPE IV SILT FENCE



NOTE: SPACING FOR TYPE III & TYPE IV FENCE TO BE IN ACCORDANCE WITH CHART 1, SHEET 1 OF 3, FDOT INDEX NO. 102 AND DITCH INSTALLATIONS AT DRAINAGE STRUCTURES SHEET 2 OF 3, FDOT INDEX NO. 102.

SILT FENCE APPLICATIONS

SILT FENCE TYPE III & IV
N.T.S.

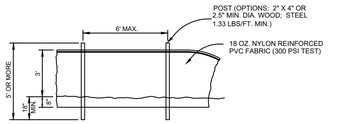


FLOATING TURBIDITY BARRIERS

NOTICE:
COMPONENTS OF TYPES I & TYPE II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

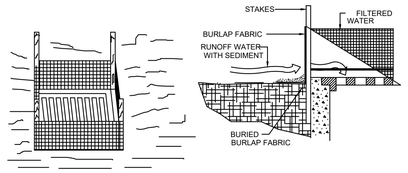
NOTES:
1. TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
2. NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
3. DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
4. NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.
5. FOR ADDITIONAL INFORMATION SEE SECTION 104 OF THE FDOT STANDARD SPECIFICATIONS.

TURBIDITY BARRIERS
N.T.S.



STAKED TURBIDITY BARRIER

NOTE:
TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATIONS OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTORS OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS, HOWEVER, PAYMENT WILL BE UNDER THE CONTRACT LUMP SUM PRICE ESTABLISHED IN THE BID PROPOSAL FOR EROSION AND SEDIMENT CONTROL POSTS IN STAKED TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

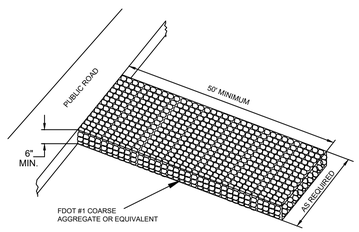


FABRIC SEDIMENT FILTER

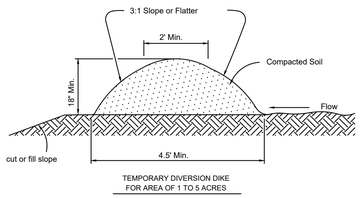
SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 cfs) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS. SUCH AS IN STREET OR HIGHWAY MEDIANS.

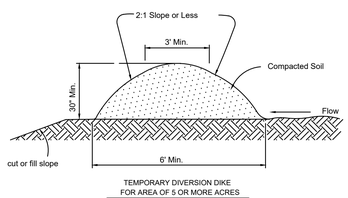
DROP INLET SEDIMENT TRAP
N.T.S.



STABILIZED CONSTRUCTION ENTRANCE
N.T.S.

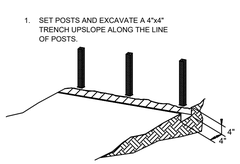


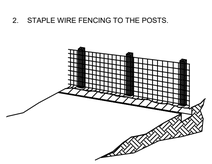
TEMPORARY DIVERSION DIKE FOR AREA OF 1 TO 5 ACRES

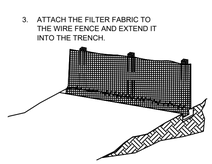


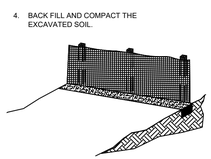
TEMPORARY DIVERSION DIKE FOR AREA OF 5 OR MORE ACRES

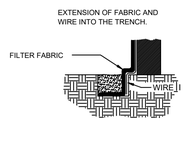
DIVERSION DIKE
N.T.S.











NOTE: SEE EROSION AND SEDIMENTATION CONTROL PLANS FOR LOCATION OF ALL SILT FENCE.

SILT FENCE CONSTRUCTION DETAILS
N.T.S.

PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

halff
9995 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
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REVISIONS NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.:	037756.094
ISSUED:	2/14/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	N/A

E&SC GENERAL NOTES AND DETAILS

C-400

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

GUSTAFSON PARK

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

STRUCTURAL CONTROLS

DATE:_____

EARTH DIKES/SWALES

DIKE OR SWALE	FROM	TO	IS DIKE/SWALE STABILIZED ?	IS THERE EVIDENCE OF WASHOUT OR OVERTOPPING

MAINTENANCE REQUIRED FOR EARTH DIKE/SWALE:

_____

_____

_____

_____

TO BE PERFORMED BY:_____ ON OR BEFORE:_____

CATCH BASIN/CURB INLET/OUTFALL TURBIDITY CONTROLS

STRUCTURE/ OUTFALL	ARE TURBIDITY CONTROLS IN PLACE	ANY EVIDENCE OF CLOGING/WASHOUT OR BYPASSING ?	ARE TURBIDITY CONTROLS IN NEED OF REPLACING	DOES SILT NEED TO BE REMOVED FROM AROUND CONTROL

MAINTENANCE REQUIRED FOR CATCH BASIN/CURB INLETS/OUTFALLS TURBIDITY CONTROLS:

_____

_____

_____

_____

TO BE PERFORMED BY:_____ ON OR BEFORE:_____

GUSTAFSON PARK

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN:

_____

_____

_____

_____

_____

_____

_____

_____

REASONS FOR CHANGES:

_____

_____

_____

_____

_____

_____

_____

_____

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS:

SIGNATURE:_____

DATE:_____

NOTE TO CONTRACTOR:
THIS IS THE CONTRACTORS CERTIFICATION REQUIRED BY THE EPA'S NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES), STORM WATER POLLUTION PREVENTION PLAN FOR CONSTRUCTION SITES OF 1 ACRE OR MORE. THIS CERTIFICATION MUST BE COMPLETED WEEKLY AND AFTER EVERY RAINFALL EVENT OVER 0.25 INCHES. IT IS SUGGESTED THAT THIS SHEET BE REMOVED FROM THE PLAN SET AND DUPLICATED AS NEEDED BY THE CONTRACTOR.

GUSTAFSON PARK

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

TO BE COMPLETED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT OF 0.25 INCHES OR MORE

INSPECTOR:_____ DATE:_____

INSPECTOR'S QUALIFICATIONS:

_____

_____

_____

_____

DAYS SINCE LAST RAINFALL:_____ AMOUNT OF LAST RAINFALL _____ INCHES

STABILIZATION MEASURES

.

INSPECTION AREA (DESCRIPTION OF LOCATION)	DATE SINCE LAST DISTURBED	DATE OF NEXT DISTURBANCE	STABILIZED ? (YES/NO)	STABILIZED WITH	CONDITION

STABILIZATION REQUIRED:

_____

_____

_____

_____

TO BE PERFORMED BY:_____ ON OR BEFORE:_____

GUSTAFSON PARK

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

SEDIMENT BASIN

DEPTH OF SEDIMENT IN BASIN	DEPTH OF SEDIMENT SIDE BASIN	ANY EVIDENCE OF OVERTOPPING OF THE EMBANKMENT ?	CONDITION OF OUTFALL FROM SEDIMENT BASIN

MAINTENANCE REQUIRED FOR SEDIMENT BASIN:

_____

_____

_____

_____

TO BE PERFORMED BY:_____ ON OR BEFORE:_____

OTHER CONTROLS

STABILIZED CONSTRUCTION ENTRANCE

DOES MUCH SEDIMENT GET TRACKED ON TO ROAD ?	IS THE GRAVEL CLEAN OR IS IT FILLED WITH SEDIMENT?	DOES ALL TRAFFIC USE THE STABILIZED ENTRANCE TO LEAVE THE SITE ?	IS THE CULVERT BENEATH THE ENTRANCE WORKING? (IF APPLICABLE)

MAINTENANCE REQUIRED FOR STABILIZED CONSTRUCTION ENTRANCE:

_____

_____

_____

_____

TO BE PERFORMED BY:_____ ON OR BEFORE:_____

PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

halff
9995 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
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SWPPP GENERAL CONDITIONS

C-401

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

OWNER'S REQUIREMENTS

SITE DESCRIPTION

PROJECT NAME AND LOCATION:
GUSTAFSON PARK
COUNTY ROAD 15A, GREEN COVE SPRINGS 32043
CLAY COUNTY

OWNER NAME AND ADDRESS:
CITY OF GREEN COVE SPRINGS
4220 RACE TRACK ROAD
ST. JOHNS COUNTY, FL 32259

DESCRIPTION:
PROPOSED PUBLIC PARK WITH A RESTROOM, TWO TENNIS COURTS, PARKING LOT AND ASSOCIATED INFRASTRUCTURE.

SOIL DISTURBING ACTIVITIES WILL INCLUDE:
CLEARING, EXCAVATION, EARTHWORK, PAVEMENT INSTALLATION AND GRADING.

RUNOFF CURVE NUMBERS:
1. PRE-CONSTRUCTION = ± 80
2. DURING CONSTRUCTION = ± 87.1
3. POST-CONSTRUCTION = ± 87.1

SOILS:
SEE MASTER DEVELOPMENT GEOTECHNICAL REPORT FOR SOILS DATA

SITE MAPS:
SEE EROSION AND SEDIMENTATION CONTROL PLAN IN THIS PLAN SET FOR LIMITS OF CONSTRUCTION AND LOCATION OF EROSION CONTROL MEASURES.

SEE E&SCP GENERAL NOTES AND DETAILS FOR REQUIREMENTS FOR TEMPORARY AND PERMANENT STABILIZATION.

SITE AREA:
1. TOTAL AREA OF SITE = ± 21.89 ACRES
2. TOTAL AREA TO BE DISTURBED = ± 2.57 ACRES

NAME OF RECEIVING WATERS: ST. JOHNS RIVER

1. ANTICIPATED START DATE OF CONSTRUCTION:
2. ANTICIPATED END DATE OF CONSTRUCTION:
(CONSTRUCTION DATES ARE TO BE FILLED IN BY CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION)

CONTROLS

THIS PLAN UTILIZES BEST MANAGEMENT PRACTICES TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN OFF. AN EROSION AND TURBIDITY PLAN HAS BEEN PREPARED TO INSTRUCT THE CONTRACTOR ON PLACEMENT OF THESE CONTROLS. IT IS THE CONTRACTORS RESPONSIBILITY TO INSTALL AND MAINTAIN THE CONTROLS PER PLAN AS WELL AS ENSURING THE PLAN IS PROVIDING THE PROPER PROTECTION AS REQUIRED BY FEDERAL, STATE AND LOCAL LAWS. REFER TO "CONTRACTORS RESPONSIBILITY" FOR A VERBAL DESCRIPTION OF THE CONTROLS THAT MAY BE IMPLEMENTED.

STORM WATER MANAGEMENT

STORM WATER DRAINAGE WILL BE PROVIDED BY (DESCRIPTION:) THE PROJECT WILL CONSTRUCT A STORMWATER CONVEYANCE SYSTEM THAT WILL ULTIMATELY CONNECT TO A STORMWATER POND LOCATED ON SITE.

WHERE PRACTICAL, TEMPORARY SEDIMENT BASINS WILL BE USED TO INTERCEPT SEDIMENT BEFORE ENTERING THE PERMANENT DETENTION BASIN. THE WET DETENTION SYSTEM IS DESIGNED WITH A TWO DAY MINIMUM RESIDENCE VOLUME. THIS IS IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT FOR THIS TYPE OF DEVELOPMENT AT THE TIME OF PERMITTING.

TIMING OF CONTROLS/MEASURES

REFER TO "CONTRACTORS REQUIREMENTS" FOR THE TIMING OF CONTROL/MEASURES.

CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS RELATED TO STORM WATER MANAGEMENT AND EROSION AND TURBIDITY CONTROLS, THE FOLLOWING PERMITS HAVE BEEN OBTAINED (TO BE FILLED IN BY CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION).

D.E.R. DREDGE/FILL PERMIT # _____

C.O.E. DREDGE/FILL PERMIT # _____

S.J.R.W.M.D. M.S.S.W. PERMIT # _____

N.P.D.E.S PERMIT # _____

POLLUTION PREVENTION PLAN CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNED:_____
OWNER/OPERATOR OR CONTRACTOR

DATED:_____

CONTRACTOR'S REQUIREMENTS

GENERAL

THE CONTRACTOR SHALL AT A MINIMUM IMPLEMENT THE CONTRACTOR'S REQUIREMENTS OUTLINED BELOW AND THOSE MEASURES SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IN ADDITION THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES REQUIRED TO BE IN COMPLIANCE WITH APPLICABLE PERMIT CONDITIONS AND STATE WATER QUALITY STANDARDS. DEPENDING ON THE NATURE OF MATERIALS AND METHODS OF CONSTRUCTION THE CONTRACTOR MAY BE REQUIRED TO ADD FLOCCULANTS TO THE RETENTION SYSTEM PRIOR TO PLACING THE SYSTEM INTO OPERATION.

SEQUENCE OF MAJOR ACTIVITIES:

THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE
2. INSTALL SILT FENCES AND HAY BALES AS REQUIRED
3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN
4. CONSTRUCT SEDIMENTATION BASIN
5. CONTINUE CLEARING AND GRUBBING
6. STOCK PILE TOP SOIL IF REQUIRED
7. PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED
8. STABILIZE DENUDED AREAS AND STOCKPILES AS SOON AS PRACTICABLE
9. INSTALL UTILITIES, STORM SEWER, CURBS & GUTTER.
10. APPLY BASE TO PROJECT
11. COMPLETE GRADING AND INSTALL PERMANENT SEEDING/SOD AND PLANTING
12. COMPLETE FINAL PAVING
13. REMOVE ACCUMULATED SEDIMENT FROM BASINS
14. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED

TIMING OF CONTROLS/MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, THE SILT FENCES AND HAY BALES, STABILIZED CONSTRUCTION ENTRANCE AND SEDIMENT BASIN WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED PERMANENTLY IN ACCORDANCE WITH THE PLANS. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAPS AND THE EARTH DIKE/SWALES WILL BE REGRADED/REMOVED AND STABILIZED IN ACCORDANCE WITH THE EROSION & TURBIDITY CONTROL PLAN.

CONTROLS

IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED , MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED,TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE IMPLEMENTED BY THE CONTRACTOR AS REQUIRED BY THE EROSION AND TURBIDITY CONTROL PLAN AND AS REQUIRED TO MEET THE EROSION AND TURBIDITY REQUIREMENTS IMPOSED ON THE PROJECT SITE BY THE REGULATORY AGENCIES.

EROSION AND SEDIMENT CONTROLS
STABILIZATION PRACTICES

1. FILTER FABRIC BARRIER: FILTER FABRIC BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS:
   A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.
   B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.
   REFER TO CITY STANDARD DETAIL D-910 FOR PROPER CONSTRUCTION OF THE FILTER FABRIC BARRIER.
2. BRUSH BARRIER WITH FILTER FABRIC: BRUSH BARRIER MAY BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WHERE ENOUGH RESIDUE MATERIAL IS AVAILABLE ON SITE.
3. LEVEL SPREADER: A LEVEL SPREADER MAY BE USED WHERE SEDIMENT-FREE STORM RUNOFF IS INTERCEPTED AND DIVERTED AWAY FROM THE GRADED AREAS ONTO UNDISTURBED STABILIZED AREAS. THIS PRACTICE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE CONSTRUCTED ON UNDISTURBED SOIL AND THE AREA BELOW THE LEVEL LIP IS STABILIZED. THE WATER SHOULD NOT BE ALLOWED TO RECONCENTRATE AFTER RELEASE. LEVEL SPREADER SHALL BE CONSTRUCTED IN ACCORDANCE TO CITY STANDARD DETAIL D-914.

CONTROLS CONT'D.

5. STOCKPILING MATERIAL: NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORM WATER COLLECTION FACILITY.
6. EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 10 ACRES. THIS REQUIREMENT MAY BE WAIVED FOR LARGE PROJECTS WITH AN EROSION CONTROL PLAN WHICH DEMONSTRATES THAT OPENING OF ADDITIONAL AREAS WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS.
7. INLET PROTECTION: INLETS AND CATCH BASINS WHICH DISCHARGE DIRECTLY OFF-SITE SHALL BE PROTECTED FROM SEDIMENT-LADEN STORM RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.
8. TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE-EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 30 DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING.
9. TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 8 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH.
10. TEMPORARY GRASSING: THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDROMULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER. TEMPORARY GRASSING SHALL BE THE SAME MIX & AMOUNT REQUIRED FOR PERMANENT GRASSING IN THE CONTRACT SPECIFICATIONS.
11. TEMPORARY REGRASSING : IF, AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 85 PERCENT UNIFORM GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER.
12. MAINTENANCE: ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.
13. PERMANENT EROSION CONTROL: THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES.
14. PERMANENT SEEDING: ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEEDED. THE SEEDING MIX MUST PROVIDE BOTH LONG-TERM VEGETATION AND RAPID GROWTH SEASONAL VEGETATION. SLOPES STEEPER THAN 4:1 SHALL BE SEEDED AND MULCHED OR SODDED.

STRUCTURAL PRACTICES

1. TEMPORARY DIVERSION DIKE: TEMPORARY DIVERSION DIKES MAY BE USED TO DIVERT RUNOFF THROUGH A SEDIMENT-TRAPPING FACILITY. AND IT SHALL BE CONSTRUCTED IN ACCORDANCE TO D-914.
2. TEMPORARY SEDIMENT TRAP: A SEDIMENT TRAP SHALL BE INSTALLED IN AN DRAINAGEWAY AT A STORM DRAIN INLET OR AT OTHER POINTS OF DISCHARGE FROM A DISTURBED AREA.
   THE FOLLOWING SEDIMENT TRAPS MAY BE CONSTRUCTED EITHER INDEPENDENTLY OR IN CONJUNCTION WITH A TEMPORARY DIVERSION DIKE:
   A. BLOCK & GRAVEL SEDIMENT FILTER - THIS PROTECTION IS APPLICABLE WHERE HEAVY FLOWS AND/OR WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE. REFER TO D-902 FOR CONSTRUCTION OF A CURB INLET SEDIMENT FILTER, AND D-904 FOR CONSTRUCTION OF A DROP INLET SEDIMENT FILTER.
   B. GRAVEL SEDIMENT TRAP - THIS PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES & UNPROTECTED AREAS. REFER TO D-903 FOR CONSTRUCTION OF CURB INLET & DROP SEDIMENT TRAP.
   C. DROP INLET SEDIMENT TRAP - THIS PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (S < 5%) AND WHERE SHEET OR OVERLAND FLOWS (Q < 0.5 CFS) ARE TYPICAL. THIS METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS SUCH AS IN STREET OR HIGHWAY MEDIANS. REFER TO D-905 FOR CONSTRUCTION OF HAY BALE & FABRIC SEDIMENT FILTER.
3. OUTLET PROTECTION: APPLICABLE TO THE OUTLETS OF ALL PIPES AND PAVED CHANNEL SECTIONS WHERE THE FLOW COULD CAUSE EROSION & SEDIMENT PROBLEM TO THE RECEIVING WATER BODY. SILT FENCES & HAY BALES ARE TO BE INSTALLED IMMEDIATELY DOWNSTREAM OF THE DISCHARGING STRUCTURE AS SHOWN ON THE OUTLET PROTECTION DETAIL.
4. SEDIMENT BASIN: WILL BE CONSTRUCTED AT THE COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH 10 OR MORE DISTURBED ACRES AT ONE TIME. THE PROPOSED STORM WATER PONDS (OR TEMPORARY PONDS) WILL BE CONSTRUCTED FOR USE AS SEDIMENT BASINS. THESE SEDIMENT BASINS MUST PROVIDE A MINIMUM OF 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED UNTIL FINAL STABILIZATION OF THE SITE.

NOTE:
THE 3,600 CUBIC FEET OF STORAGE AREA PER ACRE DRAINED DOES NOT APPLY TO FLOWS FROM OFFSITE AREAS AND FLOWS FROM ONSITE AREAS THAT ARE EITHER UNDISTURBED OR HAVE UNDERGONE FINAL STABILIZATION WHERE SUCH FLOWS ARE DIVERTED AROUND BOTH THE DISTURBED AREA AND THE SEDIMENT BASIN. ANY TEMPORARY SEDIMENT BASINS CONSTRUCTED MUST BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL FILL. ALL SEDIMENT COLLECTED IN PERMANENT OR TEMPORARY SEDIMENT TRAPS MUST BE REMOVED UPON FINAL STABILIZATION.

OTHER CONTROLS

WASTE DISPOSAL

ALL WASTE MATERIALS EXCEPT LAND CLEARING DEBRIS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER WILL BE EMPTIED AS NEEDED AND THE TRASH WILL BE HAULED TO A STATE APPROVED LANDFILL. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT. THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTE

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE SITE SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS,WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.

SANITARY WASTE

ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NEEDED TO PREVENT POSSIBLE SPILLAGE. THE WASTE WILL BE COLLECTED AND DEPOSED OF IN ACCORDANCE WITH STATE AND LOCAL WASTE DISPOSAL REGULATIONS FOR SANITARY SEWER OR SEPTIC SYSTEMS.

OFFSITE VEHICLE TRACKING

A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEPT DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN.

INVENTORY FOR POLLUTION PREVENTION PLAN

THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:

[X] Concrete	[X] Fertilizers	[X] Wood
[X] Asphalt	[X] Petroleum Based Products	[X] Masonry Blocks
[ ] Tar	[X] Cleaning Solvents	[X] Roofing Materials
[ ] Detergents	[X] Paints	[X] Metal Studs
[ ] _____	[ ] _____	[ ] _____

SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF:

GOOD HOUSEKEEPING

THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT:

* AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.
* ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
* PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
* SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
* WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
* MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
* THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ONSITE RECEIVE PROPER USE AND DISPOSAL.

HAZARDOUS PRODUCTS

THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.

* PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
* ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION.
* IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

SPILL PREVENTION CONT'D.

PRODUCT SPECIFIC PRACTICES
THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ONSITE:

PETROLEUM PRODUCTS
ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

FERTILIZERS
FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED AREA. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

PAINTS
ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURERS' INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

CONCRETE TRUCKS
WASHING OF VEHICLES SHOULD BE CONDUCTED USING PRACTICES THAT WILL PREVENT DIRECT, UNTREATED DISCHARGES OF WASTEWATER AND HAZARDOUS WASTES TO SURFACE AND GROUND WATERS. A DESIGNATED AREA MUST BE CREATED SPECIFICALLY FOR WASHING VEHICLES THAT WILL BE LAID WITH FILTER FABRIC, CRUSHED STONE (DOT GRAVEL #2 AND UP) AND COVERED WITH LINED BERM.

SPILL CONTROL PRACTICES
IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED ON SITE AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.

MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, LIQUID ABSORBENT (i.e. KITTY LITTER OR EQUAL), SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.

ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

SPILL OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE OF THE SPILL.

THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.

THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.

MAINTENANCE/INSPECTION PROCEDURES

EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES

THE FOLLOWING ARE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.

* NO MORE THAN 10 ACRES OF THE SITE WILL BE DENUDED AT ONE TIME WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.
* ALL CONTROL MEASURES WILL BE INSPECTED BY THE SUPERINTENDENT, THE PERSON RESPONSIBLE FOR THE DAY TO DAY SITE OPERATION OR SOMEONE APPOINTED BY THE SUPERINTENDENT, AT LEAST ONCE A WEEK AND FOLLOWING ANY STORM EVENT OF 0.25 INCHES OR GREATER.
* ALL TURBIDITY CONTROL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF
* BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.
* SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.
* DIVERSION DIKES/SWALES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.

MAINT./INSP. PROCEDURES CONT'D.

* THE SEDIMENT BASINS WILL BE INSPECTED FOR THE DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 10 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB, WHICHEVER COMES FIRST.
* TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
* A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. A COPY OF THE REPORT FORM TO BE COMPLETED BY THE INSPECTOR IS ATTACHED.
  THE REPORTS WILL BE KEPT ON SITE DURING CONSTRUCTION AND AVAILABLE UPON REQUEST TO THE OWNER, ENGINEER OR ANY FEDERAL, STATE OR LOCAL AGENCY APPROVING SEDIMENT AND AND EROSION PLANS, OR STORM WATER MANAGEMENT PLANS.
  THE REPORTS SHALL BE MADE AND RETAINED AS PART OF THE STORM WATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED AND THE NOTICE OF TERMINATION IS SUBMITTED THE REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE.
* THE SITE SUPERINTENDENT WILL SELECT UP TO THREE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
* PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE SITE SUPERINTENDENT, THEY WILL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER.

NON-STORM WATER DISCHARGES

IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:

* WATER FROM WATER LINE FLUSHING
* PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED).
* UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION).

ALL NON-STORM WATER DISCHARGES WILL BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE.

CONTRACTOR'S CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND AND SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THERE UNDER.

BUSINESS NAME AND ADDRESS OF CONTRACTOR & ALL SUBS	DATE	SIGNATURE
RESPONSIBLE FOR/DUTIES		
GENERAL CONTRACTOR		
SUB-CONTRACTOR		
SUB-CONTRACTOR		
SUB-CONTRACTOR		
SUB-CONTRACTOR		
SUB-CONTRACTOR		

PROJECT NAME: GUSTAFSON PARK

PREPARED FOR: CITY OF GREEN COVE SPRINGS

halff
9995 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
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REVISIONS NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.:	037756.094
ISSUED:	2/14/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	N/A

SWPPP FORMS

C-402

TENNIS COURT (±2,808 S.F.)

TENNIS COURT (±2,808 S.F.)

N

0 30' 60'

SCALE: 1" = 30'

PROJECT NAME

GUSTAFSON PARK

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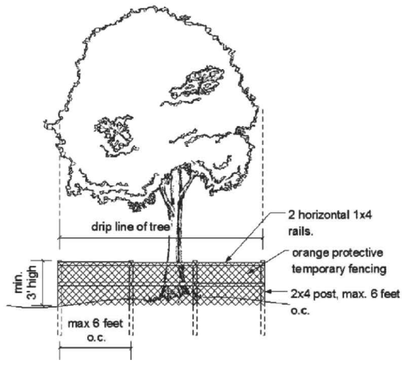
TREE MITIGATION PLAN

TM-100

CITY OF GREEN COVE SPRINGS TREE PRESERVATION DURING DEVELOPMENT AND CONSTRUCTION (SECTION 113-248)

(A) PROTECTIVE BARRIERS
(1) DURING CONSTRUCTION, PROTECTIVE BARRIERS SHALL BE PLACED, AS NECESSARY AND/OR AS DIRECTED BY THE DEVELOPMENT SERVICES DIRECTOR, TO PREVENT THE DESTRUCTION OR DAMAGING OF TREES.
(2) TREES DESTROYED OR RECEIVING MAJOR DAMAGE MUST BE REPLACED BEFORE OCCUPANCY OR USE UNLESS APPROVAL FOR THEIR REMOVAL HAS BEEN GRANTED DURING THE SITE PLAN APPROVAL PROCESS
(3) ALL TREES NOT DESIGNATED FOR REMOVAL MAY BE REQUIRED TO BE PROTECTED BY BARRIER ZONES ERECTED PRIOR TO CONSTRUCTION OF ANY STRUCTURES, ROADS, UTILITY SERVICE, OR OTHER IMPROVEMENTS,
(B) THE PROTECTIVE BARRIER SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
(1) THE PROTECTIVE BARRIER SHALL BE CONSTRUCTED OUTSIDE THE DRIP LINE OF THE TREE, WHEN POSSIBLE (SEE FIGURE A). THE PROTECTIVE BARRIER SHALL HAVE A MINIMUM OF A SIX-INCH RADIUS, PLUS ONE INCH FOR EACH ONE INCH OF CALIPER.(
(2) THE PROTECTIVE BARRIER SHALL BE A MINIMUM OF THREE FEET HIGH.
(3) PROTECTIVE BARRIER POSTS SHALL BE TWO INCHES BY FOUR INCHES OR LARGER AND SHALL BE NO MORE THAN SIX FEET APART.
(4) THE BARRIER SHALL HAVE TWO ONE-BY-FOUR-INCH HORIZONTAL RAILINGS AFFIXED SECURELY TO THE POSTS.
(5) THE ENTIRE PROTECTIVE ZONE SHALL BE WRAPPED IN ORANGE SAFETY FENCING MATERIAL, A MINIMUM OF THREE FEET IN HEIGHT.
(6) THE PROTECTIVE BARRIERS SHALL BE INSPECTED BY THE DEPARTMENT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
(A) NO GRADE CHANGES SHALL BE MADE WITHIN THE PROTECTIVE BARRIER ZONES WITHOUT PRIOR APPROVAL OF THE CITY DEVELOPMENT SERVICES DIRECTOR.
(D) WHERE ROOTS GREATER THAN ONE-INCH DIAMETER ARE EXPOSED, THEY SHALL BE CUT CLEANLY.
(E) PROTECTIVE BARRIER ZONES SHALL REMAIN IN PLACE AND INTACT UNTIL SUCH TIME AS LANDSCAPE OPERATIONS BEGIN OR CONSTRUCTION IS COMPLETE, WHICHEVER OCCURS FIRST.
(F) THE DEVELOPMENT SERVICES DIRECTOR MAY CONDUCT PERIODIC INSPECTIONS OF THE SITE BEFORE WORK BEGINS AND DURING CLEARING, CONSTRUCTION AND POST-CONSTRUCTION PHASES OF DEVELOPMENT IN ORDER TO ENSURE COMPLIANCE.
(G) NO BUILDING MATERIALS, MACHINERY OR TEMPORARY SOIL DEPOSITS SHALL BE PLACED WITHIN PROTECTIVE BARRIER ZONES DEFINED ABOVE.
(H) NO ATTACHMENTS OR WIRES OTHER THAN THOSE OF A PROTECTIVE OR NON-DAMAGING NATURE SHALL BE ATTACHED TO ANY TREE.



1 / KS-1 TREE PROTECTION DETAIL
N.T.S.

PHASE 2B MITIGATION CALCULATIONS FOR ARBORISTS

SAMPLE TREE SURVEY (PH. 1)
TO DETERMINE BASIS

Factors		
Phase 1 Survey Results		
Acres	Tree In.	In/ac.
64.94	5135	79
Planted Pine Canopy Sample		
Acres	Plot In	In/ac.
4	29	7
Hammock Canopy Sample		
Acres	Plot In	In/ac.
1	172	172

Gustafson Park Estimates		
Shrub Dominated Area*		
Acres	In/Ac	Total In.
2.57**	79	203

* PROPOSED PARK IMPROVEMENTS ARE IN A SHRUB DOMINATED AREA
** ACRES DETERMINED BY LIMITS OF DISTURBANCE (LOD); SEE TREE MITIGATION PLAN FOR DEMARCATION

Note* ATV and drone surveys found no protected trees 35 inches or greater DBH within Gustafson Parcel.

CARTER ENVIRONMENTAL SERVICES

REQUIRED REPLACEMENT INCHES CALCULATIONS

TREES INCHES IN SHRUB DOMINATED AREA (ESTIMATES BASED ON PHASE 1)*	203*
PERCENTAGE OF LIVE OAKS BASED ON INTERIOR PHASE 1 (203 X 11%)	23
REMAINING TREES THAT ARE NOT LIVE OAKS IN SHRUB DOMINATED AREA (203-23)	180
REPLACEMENT INCHES REQUIIRED FOR LIVE OAKS (1 TO 1)	23
REPLACEMENT INCHES REQUIRED FOR ALL OTHER PROTECTED TREES (1 TO 3)	60 (180 / 3)
TOTAL REPLACEMENT INCHED REQUIRED	83 (23 + 60)

* SEE ESTIMATES BY ARBORIST TO THE LEFT OF THIS CHART

CALL 48 HOURS BEFORE YOU DIG
It's the Law!
1-800-432-4770
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

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CHECKED BY:	JL
SCALE:	1" = 30'

TREE MITIGATION CALCULATIONS

TM-101

PLANT SCHEDULE

SYMBOL	CODE	COMMON NAME
TREES		
	TD	Bald Cypress
	SP	Cabbage Palmetto
	QV	High Rise Live Oak
	LI	Muskogee Crape Mrytle
SYMBOL	CODE	COMMON NAME
SHRUBS		
	PMP	Dwarf Podocarpus
	MC	Pink Muhly
GROUND COVERS		
	TA	Asiatic Jasmine
	JBP	Blue Pacific Juniper
	RM	Coral Drift Rose
	AA	Lily of the Nile

(7) TD

TENNIS COURT (±2,808 S.F.)

TENNIS COURT (±2,808 S.F.)

REQUIRED TREE LOCATION OBSTRUCTED BY UTILITIES; LOCATED AS CLOSE AS POSSIBLE.

REQUIRED TREE LOCATION OBSTRUCTED BY UTILITIES; LOCATED AS CLOSE AS POSSIBLE.

(81) RM
(3) SP
(71) MC
(80) RM
(3) SP
(21) MC
(3) LI
(145) TA
(138) AA
(204) TA
(82) AA
(87) AA
(76) TA
(1) QV
(41) PMP
(2) QV
(83) TA
(3) LI
(41) RM
(21) MC
(161) AA
(21) PMP
(73) MC
(3) SP
(91) RM
(3) SP
(71) MC
(81) RM
(90) MC
(203) JBP
(2) QV

0 30' 60'
SCALE: 1" = 30'

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LANDSCAPE PLAN

LS-200

LANDSCAPE CODE REQUIREMENTS (CGCS)

LANDSCAPE BUFFER AREA (SECTION 113-244(d)(3))

TYPE	REQUIRED	PROVIDED
A MINIMUM 10 FT. STRIP ALONG R.O.W.	YES	YES
A MINIMUM OF ONE ROW OF CANOPY TREES WITH A MINIMUM OF A 2.5 DBH PLANTED 50 FT. O.C. (STAGGERED)	YES	YES

REQUIRED LANDSCAPING (SECTION 113-244(b)

TYPE	REQUIRED	PROVIDED	
PERIMETER LANDSCAPING : ONE SHADE TREE FOR EACH 50 LF OF PERIMETER OF SITE			
NORTHERN PERIMETER	N/A	N/A	N/A
EASTERN PERIMETER	N/A	N/A	N/A
SOUTHERN PERIMETER	N/A	N/A	N/A
WESTERN PERIMETER	N/A	N/A	N/A
INTERIOR LANDSCAPING: ONE TREE PER EVERY 1,500 SF FOR THE FIRST 10,500 SF OF PROJECT, THEN ONE TREE PER EVERY 4,000 SF OF THE REMAINDER OF THE PROJECT	34	34	145,865 SF; 10,500 / 1,500 = 7 TREES; 145,865 - 10,500 = 135,365 / 4,000 = 25 TREES; 34 TOTAL TREES REQUIRED

BUFFER ZONES FOR INCOMPATIBLE LAND USES (SECTION 113-246(5))

TYPE	REQUIRED	PROVIDED	COMMENTS
BUFFER TO SCREEN PERIMETER FROM AN INCOMPATIBLE LAND USE	N/A	N/A	N/A

PARKING AREA LANDSCAPE REQUIREMENTS (113-246)

TYPE	REQUIRED	PROVIDED	COMMENTS
LANDSCAPE AREA FOR PARKING AREA SHALL COVER TEN PERCENT OF THE PARKING AREA.	611 SF	611+ SF	6,113 SF x 10% = 611 SF REQUIRED
A LANDSCAPE AREA SHALL BE PROVIDED AT EACH END OF ALL ROWS OF PARKING.	YES	YES	
EACH LANDSCAPE AREA WILL BE A MINIMUM OF 5 FT. WIDE INSIDE CURB.	YES	YES	
AT LEAST ONE CANOPY TREE OR TWO SUB CANOPY TREES WILL BE REQUIRED IN EACH LANDSCAPE AREA FOR THE ROW OF PARKING.	YES	YES	
EACH LANDSCAPE AREA WILL HAVE FIVE SHRUBS PER EACH REQUIRED TREE.	YES	YES	

FLORIDA NO. 1 QUALITY REQUIREMENT:

ALL REQUIRED PLANT MATERIALS, INCLUDING, BUT NOT LIMITED TO, TREES AND SHRUBS, SHALL EQUAL OR EXCEED THE STANDARDS FOR FLORIDA NO. 1 AS ESTABLISHED AND REVISED BY THE STATE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES.

CGCS LANDSCAPE DESIGN AND MATERIALS:

ALL LANDSCAPING G SHALL COMPLY WITH SECTION 113-247 OF THE CITY CODE.

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	NATIVE	TREE INCHES	REMARKS
TREES									
	LI	7	Lagerstroemia x `Muskogee`	Muskogee Crape Mrytle	45G	3"		21"	10-12` Ht., 5-6` Spd., 6" Cal., Min. of 3 Stems, 2" Min. Per Stem, F.L.S.
	QV	5	Quercus virginiana `High Rise`	High Rise Live Oak	65G	4"	Native	20"	12-14` Ht., 6-7` spd., 4" Cal., F.L.S.
	SP	15	Sabal palmetto	Cabbage Palmetto	B&B	3"	Native	45"	C.T. Noted on Plan, Florida #1, F.L.S.
	TD	7	Taxodium distichum	Bald Cypress	65G	4"	Native	20"	12-14' Ht., 6'-8' Sprd., 4" Cal., F.L.S.
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	FIELD2	NATIVE	PLANTING AREA - SF	PLANTING AREA - SF
SHRUBS									
	MC	347	Muhlenbergia capillaris	Pink Muhly	3G		Native	1,856 SF	24-30" ht., 18-24" spd., 30" O.C.
	PMP	62	Podocarpus macrophyllus `Pringles`	Dwarf Podocarpus	3G			388 SF	18-24" ht., 18-24" spd., 30" O.C.
GROUND COVERS									
	AA	468	Agapanthus africanus	Lily of the Nile	1G			1,053 SF	12-15" ht., 12-15" spd., 10-12 bibs, 18" O.C.
	JBP	203	Juniperus conferta `Blue Pacific`	Blue Pacific Juniper	3G			812 SF	6-8" ht., 15-18" spd., 2` O.C.
	RM	374	Rosa x `Meidrifora`	Coral Drift Rose	3G			1,816 SF	8-10" HT., 12-15" spd.,. 2` O.C.
	TA	508	Trachelospermum asiaticum	Asiatic Jasmine	1G			508 SF	4-6" ht., 6-8" spd., 12" O.C.

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LANDSCAPE CODE REQUIREMENTS

LS-201

LANDSCAPE SPECIFICATIONS

MATERIALS:

1. PLANTING SOIL BACKFILL MIX: TREE PITS, SHRUBS AND GROUNDCOVERS: MIX 50% EXISTING TOPSOIL TO 50% SOIL ADMIXTURE COMPRISED OF 1/3 PARTS DECOMPOSED PINE BARK OR PEAT MOSS, 1/3 PARTS COW MANURE, AND 1/3 PARTS IMPORTED TOPSOIL AND SOIL AMENDMENTS AS REQUIRED TO BRING THE pH TO BETWEEN 5.5 TO 6.5. ALTERNATE PLANTING SOIL BACKFILL MIXTURE: MIX 50% EXISTING TOPSOIL AND 50% 'FLORIDA MUCK' AND SOIL AMENDMENT AS REQUIRED TO BRING pH TO BETWEEN 5.5 AND 6.5.

2. TOP SOIL SHALL BE DEFINED AS THE UPPER 4" TO 6" OF NATURALLY OCCURRING SOILS SUITABLE FOR AGRICULTURAL PRODUCTION AND ARE WITHOUT DRAINAGE LIMITATIONS. IMPORT TOPSOIL FROM OFF-SITE SOURCES, IF REQUIRED. OBTAIN TOPSOIL FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4" DEEP. UNDER NO CIRCUMSTANCES SHOULD TOPSOIL BE OBTAINED FROM BOGS OR MARSHES.

3. PLANTING BED AND TREE MULCH: MINI PINE NUGGETS TO MATCH COMMUNITY LANDSCAPE PLAN REQUIREMENTS. PROVIDE FOR 3" LAYER, AFTER SETTLING.

4. SOD: SEE PLANT SCHEDULE

5. SEEDING: QUICK GROWING / TEMPORARY COVER
MARCH-APRIL PLANTING: ANNUAL RYEGRASS
MAY PLANTING: BROWN TOP MILLET
JUNE-AUGUST PLANTING: MIX 50% RYE GRAIN AND 50% WINTER WHEAT
SEPTEMBER-OCTOBER PLANTING: ANNUAL RYEGRASS

6. FERTILIZER: FOR PLANT BEDS USE 8-8-8 RATIO, AND FOR LAWN AREAS USE 16-4-8 RATIO, EACH WITH AT LEAST 25% OF THE NITROGEN IN A WATER INSOLUBLE ORGANIC FORM.

7. TREE GUYING: STRAPS SHALL BE MINIMUM 1" WIDE NYLON OR POLYPROPYLENE, ALL WOOD STAKES SHALL BE LOCATED BEYOND THE EDGE OF THE ROOT BALL.

SUBMITTALS:

1. SOD CERTIFICATE FROM GROWER.

2. SAMPLE OF PREPARED SOIL BACKFILL MIX (1/2 CU. FOOT).

3. SOIL TEST REPORT FOR pH WITH RECOMMENDATIONS FOR pH ADJUSTMENT (ALL LANDSCAPE PLANTING AREAS AND PLANTING BACKFILL MIX)

4. WRITTEN PLANT GUARANTEE.

5. SUBMIT MANUFACTURER DATA WITH INSTRUCTIONS FOR APPLICATIONS FOR ALL HERBICIDES.

6. PLANTING AREA / BED PREP HERBICIDES
A. FOR GRASS AND WEEK KILL PRIOR TO TILLING, TOP DRESSING OR MULCHING: ROUNDUP BY MONSANTO

7. PALM FERTILIZER
A. BALANCE OF NITROGEN (N), POTASH (P), POTASSIUM (K), AND MAGNESIUM (Mg), IN A 2N-1P-3K-1Mg RATIO, AND ALSO CONTAINING 1-2% MANGANESE (Mn), 1-2% IRON (Fe), SULFUR (S), AND TRACE AMOUNTS OF ZINC (Zn), COPPER (Cu) AND BORON (B). PROVIDE 100% OF N, K AND Mg IN CONTROLLED-RELEASE FORM (RESIN OR SULFUR COATED).

8. FUNGICIDE
A. FOR ROT AND WILT DISEASES: BROAD SPECTRUM SYSTEMIC FUNGICIDE THAT IS ALSO LABELED FOR THE CONTROL OF PHYTOPHTHORA BUD ROT. B. FOR GRAPHILOA LEAF SPOT: MANEB, MANCOZEB OR BROAD SPECTRUM COPPER FUNGICIDE SUCH AS KOCIDE 101. COPPER (Cu) AND BORON (B). PROVIDE 100% OF N, K AND Mg IN CONTROLLED-RELEASE FORM (RESIN OR SULFUR COATED).

9. INSECTICIDE
A. SYSTEMIC INSECTICIDE SUCH AS LINDANE OR SEVIN.

EXECUTION:

1. PERFORM ALL WORK AS SHOWN AND IN STRICT ACCORDANCE WITH SOUND HORTICULTURAL PRACTICE.

2. PLANTING PREPARATION:
A. INCORPORATE BACKFILL MIX AS SPECIFIED AND AS SHOWN ON DETAILS AND DRAWINGS.
B. ADJUST SOIL AND BACKFILL pH TO 5.5 AND 6.5.
C. ADJUST SOIL pH TO 5.5-6.5 AS RECOMMENDED BY THE SOIL TEST. USE ALUMINUM SULFATE OR IRON SULFATE TO LOWER THE pH AND USE HYDRATED LIME OR DOLOMITE TO RAISE THE pH.

3. PLACE ALL PLANT MATERIALS WHERE SHOWN ON DESIGN PLANS.

4. AFTER PLANTS ARE INSTALLED EACH TREE SHALL HAVE 1/4 LBS. OF 8-8-8 FERTILIZER APPLIED PER CALIPER INCH.

5. ALL TREES SHALL BE STAKED AND GUYED AS SHOWN TO MAINTAIN VERTICAL ALIGNMENT.

6. APPLY 2-1/2 INCHES OF MULCH (AFTER SETTLING) TO ALL TREES, SHRUB AND GROUNDCOVER BEDS. REDUCE MULCHING TO 1-1/2" DEPTH IN ANNUAL PLANTING AREAS.

7. ALL TREES PLACED IN LAWN AREAS SHALL UTILIZE A 3-FOOT DIAMETER CIRCLE OF LANDSCAPE MULCH BENEATH-SOD SHALL BE REMOVED.

GRASSING:

1. SOIL PREPARATION:
A. REMOVE STONES OVER 1-1/2" IN DIAMETER, STICKS, ROOTS, RUBBISH AND OTHER EXTRANEOUS MATTER FROM ALL LAWN AREAS.
B. ADJUST SOIL pH AS RECOMMENDED BY THE SOIL TEST FOR GRASS SPECIFIED.
C. ROTO-TILL SOIL 4" DEEP AND RAKE LAWN AREAS TO A SMOOTH EVEN SURFACE. IN AREAS TO BE SODDED, ALLOW FOR SOD THICKNESS, PROVIDING A FINISH GRADE 2" BELOW ADJACENT PAVEMENTS.
D. MOISTEN PREPARED LAWN AREAS PRIOR TO PLANTING IF DRY.

2. SEEDING:
A. ALL DISTURBED AREAS OF THE PROJECT SITE THAT ARE NOT IDENTIFIED TO BE SODDED SHALL BE SEEDED.
B. APPLY QUICK GROWING / TEMPORARY SEED UNIFORMLY AT A RATE OF 10 POUNDS PER 1000 SQUARE FEET.
C. RAKE SOIL LIGHTLY TO LOOSEN SURFACE PRIOR TO SEED APPLICATION. COVER SEEDED AREAS WITH THIN LAYER OF OAT OR WHEAT STRAW AND ROLL LIGHTLY. WATER THOROUGHLY WITH A FINE SPRAY TO ESTABLISH SOIL MOISTURE TO 4" DEPTH. MAINTAIN APPROPRIATE SOIL MOISTURE LEVEL TO OPTIMIZE SEED ESTABLISHMENT.

3. SODDING:
A. INSTALL SOD WHERE SHOWN ON DESIGN PLANS.
B. APPLY FERTILIZER OVER PREPARED SOIL IN ALL AREAS TO BE SODDED, EXCEPT SLOPES ADJACENT TO WATER'S EDGE. APPLY MATERIAL AT A RATE OF 6 LBS. PER 1,000 SQUARE FEET. SECOND APPLICATION-AS SPECIFIED UNDER LAWN MAINTENANCE AND WARRANTY.
C. LAY SOD WITHIN 36 HOURS OF HARVESTING TIME.
D. LAY SOD IN STRAIGHT, (NOT CURVED) PARALLEL ROWS TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS, WITHOUT OVERLAP. STAGGER STRIPS TO OFFSET JOINTS. WORK TOPSOIL INTO MINOR CRACKS.
E. ROLL ENTIRE SODDED AREA WITH A 200 LB. ROLLER.
F. WATER SOD IMMEDIATELY AFTER ROLLING, THEREAFTER WATER SUFFICIENTLY TO KEEP SOIL MOIST TO A DEPTH OF 4" UNTIL ESTABLISHED.

CLEANUP:

1. AT THE END OF EACH WORK DAY, REMOVE ALL DEBRIS RESULTING FROM THE WORK, CLEAN PAVED SURFACES AND BARRICADE ALL HAZARDS.

2. RESTORE ANY DAMAGED AREAS CAUSED BY THE WORK.

INITIAL INSPECTION AND ACCEPTANCE:

1. THE WARRANTY SHALL BEGIN AFTER INITIAL LANDSCAPE INSPECTION AND ACCEPTANCE.

2. INSPECTION SHALL BE MADE BY THE OWNER OR OWNER'S REPRESENTATIVE WITHIN ONE WEEK OF WRITTEN NOTIFICATION FROM THE LANDSCAPE CONTRACTOR THAT INSTALLATION IS COMPLETE. PLANTS ARE SUBJECT TO INSPECTION AT ANY TIME.

PLANT GUARANTEE:

1. ALL TREES, SHRUBS AND GROUNDCOVERS SHALL BE GUARANTEED BY THE LANDSCAPE CONTRACTOR TO BE HEALTHY, AND IN FLOURISHING CONDITION OF ACTIVE GROWTH FOR A PERIOD OF (1) ONE YEAR FROM INITIAL INSPECTION AND ACCEPTANCE. SOD SHALL BE GUARANTEED TO BE HEALTHY, FREE OF NOXIOUS WEEDS, DISEASE AND INSECT INFESTATION FOR A PERIOD OF SIXTY (60) DAYS FROM THE DATE OF INITIAL ACCEPTANCE.

MAINTENANCE AND WARRANTY:

1. BEGIN MAINTENANCE OF LANDSCAPE WORK IMMEDIATELY AFTER EACH AREA IS PLANTED AND CONTINUE FOR THE MAINTENANCE PERIOD SPECIFIED.

2. PLANT MAINTENANCE AND WARRANTY:
A. CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AND MAINTAINING PLANT MATERIAL FOR THE DURATION OF THE ESTABLISHMENT PERIOD.
B. THE ESTABLISHMENT PERIOD FOR PLANT MAINTENANCE AND WARRANTY SHALL BE 365 DAYS AFTER INITIAL ACCEPTANCE.
C. INSPECTIONS WILL BE CONDUCTED ON 90 DAY INTERVALS THROUGHOUT THE ESTABLISHMENT PERIOD TO ASSURE ALL PLANTINGS ARE BEING MAINTAINED IN A CONDITION OF GOOD HEALTH AND ACTIVE GROWTH. ANY DEAD OR DYING PLANTS SHALL BE PROMPTLY REMOVED AND REPLACED WITHIN 2 WEEKS FOLLOWING THE DATE OF INSPECTION. RESET SETTLED PLANTS TO PROPER GRADE AND POSITION AND TIGHTEN OR REPAIR GUYS AND STAKES AS NECESSARY. RE-MULCH TREES, SHRUBS AND GROUNDCOVER BEDS AS NECESSARY TO MAINTAIN THE SPECIFIED MULCH LAYER THROUGHOUT THE ESTABLISHMENT PERIOD.

D. ONE MONTH PRIOR TO THE END OF THE 365 DAY ESTABLISHMENT PERIOD, THE CONTRACTOR SHALL NOTIFY THE OWNER TO COORDINATE A DATE FOR FINAL INSPECTION OF ALL PLANTINGS AS BASIS FOR FINAL ACCEPTANCE.

3. LAWN MAINTENANCE AND WARRANTY:
A. MAINTAIN LAWNS FOR A MINIMUM PERIOD OF 60 DAYS AFTER INITIAL ACCEPTANCE.
B. WATER LAWN SUFFICIENTLY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES UNTIL FINAL ACCEPTANCE.
C. MOW LAWNS WHEN SOD IS FIRMLY ROOTED AND TOP GROWTH EXCEEDS 4 INCHES. MOW TO A HEIGHT OF NO LESS THAN 2-1/2 INCHES.
D. FERTILIZE LAWNS 6 WEEKS AFTER PLANTING WITH 16-4-8 AT A RATE OF 6 LBS. PER 1000 SQUARE FEET.

REPLACEMENTS AND CONDITIONS:

1. REPLACEMENTS FOR TREES, SHRUBS, AND GROUNDCOVERS SHALL BE MADE WITHIN 2 WEEKS FOLLOWING EACH 90 DAY ESTABLISHMENT PERIOD INSPECTION, INCLUDING THE FINAL INSPECTION.

2. A REPLACEMENT WILL BE OF THE SAME SIZE AS THE ORIGINAL WITH NO ADDITIONAL SOIL ADDITIVES TO BE USED.

3. AFTER INITIAL INSPECTION THE LANDSCAPE CONTRACTOR WILL NOT BE RESPONSIBLE FOR PLANT MATERIAL THAT HAS BEEN DAMAGED BY VANDALISM, FIRE, THEFT, RELOCATION OR OTHER ACTIVITIES BEYOND THE LANDSCAPE CONTRACTOR'S CONTROL.

4. THE LANDSCAPE CONTRACTOR WILL NOT BE RESPONSIBLE FOR PLANT LOSSES DUE TO ABNORMAL WEATHER CONDITIONS SUCH AS FLOODS, EXCESSIVE WIND DAMAGE OR SEVERE FREEZING.

FINAL INSPECTION AND ACCEPTANCE:

1. FINAL INSPECTION: THE LANDSCAPE CONTRACTOR WILL CONDUCT A FINAL INSPECTION WITH THE OWNER OR OWNER'S REPRESENTATIVE AT THE END OF THE ESTABLISHMENT PERIOD FOR LAWNS AND PLANT MATERIALS.

2. PLANT MATERIALS:
A. REPLACE ANY MATERIAL NOT IN HEALTHY CONDITION OR WHICH FAILS TO MEET SPECIFICATIONS.
B. DECIDUOUS MATERIAL WILL BE GUARANTEED TO BREAK DORMANCY IF PLANTED IN DORMANT SEASON.

3. LAWNS:
A. AT THE TIME OF FINAL INSPECTION, SODDED LAWNS WILL BE ACCEPTABLE PROVIDED A HEALTHY, WELL-ROOTED, EVEN-COLORED, LAWN IS ESTABLISHED, FREE OF WEEDS, DISEASE AND INSECT INFESTATION. THERE SHALL BE NO OPEN JOINTS OR BARE AREAS.
B. SEEDED AREAS SHALL EXHIBIT NO LESS THAN 85% COVERAGE, UNIFORMLY THROUGHOUT. GRASS STANDS SHALL BE WELL ROOTED, EVEN-COLORED AND FREE OF WEEDS, DISEASE AND INSECT INFESTATION.

PLANT INSTALLATION NOTES

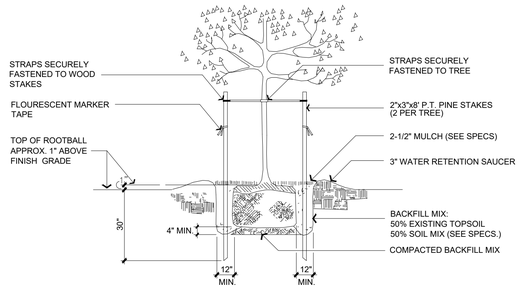
1. CONTRACTOR SHALL VERIFY LOCATION OF UTILITIES, EXISTING TREES AND VEGETATION PRIOR TO COMMENCEMENT OF THE PLANT INSTALLATION.
2. CONTRACTOR SHALL ANTICIPATE THE POSSIBILITY OF THE LANDSCAPE ARCHITECT ADJUSTING THE LOCATIONS OF CERTAIN PLANTS AND TREES IN THE FIELD.
3. ALL TREES AND SHRUBS SHALL BE OF THE SIZES AS CALLED FOR IN THE PLANT MATERIALS SCHEDULE. ANY PLANT MATERIALS AS DETERMINED BY THE LANDSCAPE ARCHITECT AS NOT MEETING THE SIZES AND QUALITY AS CALLED FOR SHALL BE REMOVED FROM THE SITE.
4. ALL PLANT MATERIALS SHALL BE EQUIVALENT TO FLORIDA #1 OR BETTER AS OUTLINED BY GRADES AND STANDARDS FOR NURSERY PLANTS, DIVISION OF PLANT INDUSTRY, FLORIDA DEPT. OF AGRICULTURE AND CONSUMER SERVICES.
5. IF QUANTITIES DIFFER BETWEEN THE PLAN AND SCHEDULE, THOSE ON THE SCHEDULE SHALL GOVERN. THE CONTRACTOR SHALL VERIFY THAT THE QUANTITIES INDICATED WILL PROVIDE THE COVERAGE AS SPECIFIED AND REPORT ANY DISCREPANCIES AT THE TIME OF BIDDING TO THE LANDSCAPE ARCHITECT.
6. ALL SHRUB MATERIAL SHALL BE PLANTED IN STAGGERED ROWS, SPACED ON CENTER (O.C.) AS SPECIFIED, UNLESS OTHERWISE SHOWN ON DESIGN PLANS.
7. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONDITIONS THAT MAY ADVERSELY AFFECT PLANTING OPERATIONS IMMEDIATELY UPON SUCH FINDINGS.

IRRIGATION NOTES

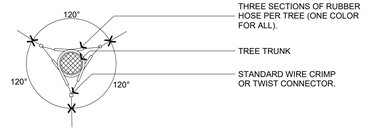
1. AN AUTOMATIC IRRIGATION SYSTEM WILL BE INSTALLED PROVIDING 100% COVERAGE FOR ALL NEWLY INSTALLED PLANT MATERIAL. BUBBLERS WILL BE USED ON ALL NEWLY PLANTED TREES IN THE COMMON AREAS (LOW VOLUME IRRIGATION). BAHIA GRASS WILL BE USED IN ALL LOW PROFILE COMMON AREAS AND WON'T BE IRRIGATED. HIGH VOLUME IRRIGATION WILL BE LIMITED TO HIGH PROFILE COMMON AREAS (I.E. AMENITY CENTER) WHERE THE USE OF ST. AUGUSTINE GRASS WILL BE USED. THE HIGH PROFILE AREAS WILL BE LIMITED TO NO MORE THAN 50% OF THE OVERALL COMMON AREA.

NOTE:

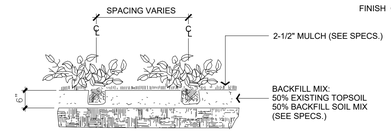
CONTRACTOR MUST CHECK STRAP TENSION 2-4 WEEKS AFTER INSTALLATION. STRAPPING SHOULD BE RETIGHTENED IF LOOSE. CONTRACTOR MUST PERIODICALLY CHECK STRAP TENSION FOR TWELVE MONTHS FOLLOWING INSTALLATION. ROOTBALL SYSTEM PROVIDES PROTECTION FROM HIGH WIND EVENTS, PROVIDED PROPER STRAP TENSION IS MAINTAINED. ROOTBALL SYSTEM SHOULD NOT BE REMOVED; IT DETERIORATES OVER TIME AND IS CONCEALED FROM VIEW BY MULCH.



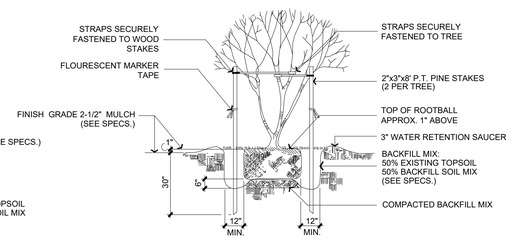
1 LS-202 TYPICAL TREE PLANTING AND GUYING
1" - 3 1/2" Caliper Tree Planting N.T.S.



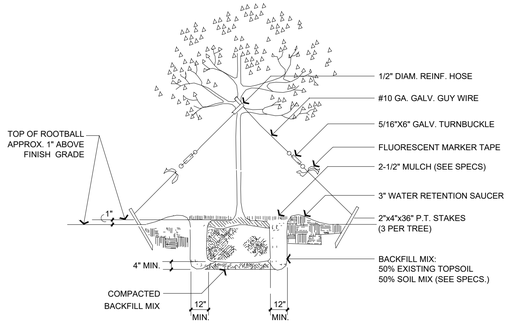
2 LS-202 TYPICAL SHRUB PLANTING
N.T.S.



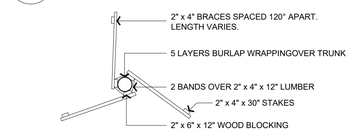
3 LS-202 TYPICAL GROUNDCOVER PLANTING
N.T.S.

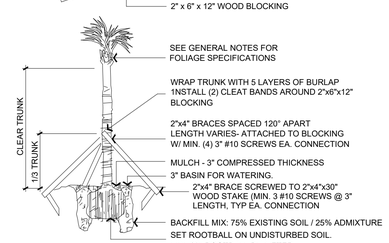


4 LS-202 TREE PLANTING (MULTI-TRUNK)
N.T.S.

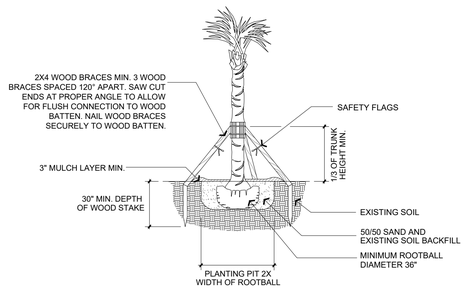


5 LS-202 TYPICAL TREE PLANTING AND GUYING
Trees 4" and Greater N.T.S.





6 LS-202 'REGENERATED ROOTS' SABAL PALM PLANTING DETAIL
N.T.S.



7 LS-202 TYPICAL WASHINGTONIA PALM DETAIL
N.T.S.

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PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

halff
9995 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL CA 33380 FL LC 26000645

REVISIONS
NO. | DESCRIPTION | DATE

SEAL

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.:	037756.094
ISSUED:	2/14/2024
DRAWN BY:	KH
CHECKED BY:	JL
SCALE:	1" = 30'

LANDSCAPE NOTES AND SPECIFICATIONS

LS-202

DRAINAGE DESIGN REPORT
FOR
GUSTAFSON PARK

PREPARED FOR

D.R. Horton, Inc.
4220 Race Track Road
Saint Johns, FL, 32259

PREPARED BY

Halff Associates, Inc.
9995 Gate Parkway North, Suite 200
Jacksonville, FL 32246
(904) 730-9360

DRAINAGE DESIGN REPORT
FOR
GUSTAFSON PARK

PROJECT INFORMATION

Parcel in Section 38, Township 6 South, Range 26 East
County Road 15A,
Green Cove Springs, Florida 32043
Project No. 37756.094

SUBMITTED BY

Halff Associates, Inc.
9995 Gate Parkway North, Suite 200
Jacksonville, FL 32246
Ph. (904) 730-9360
www.Halff.com
FL Cert. Nos. CA 33380 * LC 26000645

COMPUTER PROGRAMS USED

Streamline Technologies, Inc. ICPR v4.0701
Autodesk AutoCAD Civil 3D 2020
WinTR-55
Flowmaster
BMP Trains_4_3_5

ENGINEER

Cody B. Smith, PE (#81393 FL)

ENGINEER'S SEAL:

Cody B. Smith, State of Florida, Professional Engineer, License No. 81393

This item has been digitally signed and sealed by Cody B. Smith on the date indicated here.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

CODY B SMITH Digitally signed by CODY B SMITH Date: 2024.02.14 13:27:00 -05'00'

TABLE OF CONTENTS

APPENDIX LIST

1.0 EXECUTIVE SUMMARY

The project site is located in Green Cove Springs, Clay County, FL, southeast of the intersection of Green Cove Avenue and County Road 15A. The project site is currently partially developed as part of the previous cattle farming operations associated with the old Gustafson Farm. The proposed project includes one prefabricated restroom building, two tennis courts, an entrance roadway, a parking lot, and associated infrastructure. The project site includes one parcel (#38-06-26-016515-008-01) totaling approximately 21.89 acres. Off-site downstream drainage improvements are also proposed on the adjacent parcel (#38-06-26-016515-002-00) which is under the same ownership.

Stormwater management design for the project includes one wet detention pond (WP-1) for stormwater treatment and attenuation. WP-1 discharges into an existing on-site ditch, then north through the proposed off-site ditch to an existing wetland. It appears this wetland drains northeast to the St. Johns River. The applicable criteria from the St. Johns River Water Management District (SJRWMD) and the City of Green Cove Springs were utilized to design the stormwater management facilities and the stormwater conveyance system. A summary of the pre- and post-development peak discharge rates, stormwater management facility maximum stage, and detailed calculations and modeling results is provided in the Appendix.

2.0 PRE-DEVELOPMENT DRAINAGE CONDITION

2.1 DRAINAGE CONDITION SUMMARY

The project site generally slopes east to west to an existing on-site ditch, which drains east towards the railroad right of way and ultimately to the St. Johns River. Existing elevations (NAVD 88) range from approximately 32 feet at the southeast end down to 29 feet at the northwest end of the project site. The project site is part of the larger historical cattle farming operation associated with Gustafson Farm, which has an extensive man-made ditch system throughout the property.

2.2 LAND USE

The project site is part of the larger historical cattle farming operation associated with Gustafson Farm, which is no longer on operation. The site also includes a mix of wetlands and uplands, with the uplands dominated by brush. The site is bound to the east by Pearce Boulevard, to the west by County Road 15A, to the north of future Gustafson Regional Park and to the south by Rookery Amenity Center Phase 1 and Future Phase 2 Rookery Amenity Center Area.

2.3 SOILS

Review of a Soil Resource Report generated from the United States Department of Agriculture (USDA) National Resource Conservation Service (NRCS) indicates the project site consists primarily of Sapelo fine sand. The soil report describes Sapelo fine sands as somewhat poorly drained with a Hydrologic Soil Group (HSG) classification of B/D. A copy of the soil report is included in the Appendix.

A site-specific geotechnical investigation was conducted for the project by ECS Florida, LLC to assess the soil profile, groundwater elevations, and wet detention pond design parameters. The

findings were documented in a geotechnical report dated January 29, 2021. According to the report, seasonal high groundwater levels in the project area are generally within 5' from existing ground. A copy of the geotechnical report is provided under separate cover.

According to the USDA NRCS National Engineering Handbook, Part 630 Hydrology, Chapter 7 Hydrologic Soil Groups, dual hydrologic soil groups are assigned when the water table is within 24-inches of the surface, even though the saturated hydraulic conductivity may be favorable for water transmission. Due to the site-specific Geotech report findings which indicate the seasonal-high water table is generally within a few feet the ground surface, the project site soils were considered to be in HSG D in both the pre- and post-development conditions for the purposed of stormwater design calculations.

2.4 FLOODWAYS AND FLOODPLAINS

The project site lies primarily in zone "A" according to FEMA FIRM Panels 12019C0281E effective March 17, 2014. Flood zones rated "A" include areas inside of the 100-year floodplain with an undetermined base flood elevation. A copy of the FEMA FIRMette is included in the Appendix.

2.5 WETLANDS AND OTHER SURFACE WATERS

Wetlands are present on the site, generally to the west of the proposed development area. There are also existing manmade ditches and ponds on the site.

2.6 DRAINAGE BASIN AND RECEIVING WATERBODIES

The site appears to lie in the St. Johns River basin, a hydraulically open basin. According to the Florida Department of Environmental Protection (FDEP) Basin 411 website lists the St. Johns River as a Class 3F waterbody with a TMDL for total phosphorous and nitrogen.

2.7 EXISTING PERMITS

Based on review of the St. Johns River Water Management District's E-permitting website the project is adjacent to ERPs associated with Gustafson Farms and later the Rookery residential subdivision (#142441 various sequences); however, the project site is excluded from any proposed stormwater management systems.

3.0 POST-DEVELOPMENT DRAINAGE CONDITION

3.1 DRAINAGE CONDITION SUMMARY

In the post-developed condition, the developed portion project site will be served by proposed wet detention pond WP-1. Runoff from the project site will be collected and conveyed through swales to WP-1 for treatment and attenuation, which discharges through a control structure into the existing on-site ditch. The existing on-site ditch is proposed to be extended off-site to the north to daylight to an existing wetland to provide positive drainage. A portion of the existing on-site ditch is proposed to be filled upstream of the proposed development, since this ditch is]proposed to be filled further upstream with the Rookery subdivision.

WP-1 has 4H:1V side slopes with a slope break at 4' below the normal water level, with 2H:1V side slopes to the pond bottom. Detailed basin characteristics and wet detention pond calculations are provided in the appendix.

3.2 WATER QUALITY TREATMENT CRITERIA

Stormwater quality criteria will be met using on-line wet detention. A summary of the applicable design criteria is included below.

SJRWMD

- Treatment volume: First 1" of runoff or 2.5" of runoff from the impervious area (excluding waterbodies, whichever is greater
- Treatment volume recovery time: The outfall structure shall be designed to drawdown one-half the required treatment volume within 24 and 30 hours following a storm event, but no more than one-half of this volume will be discharged within the first 24 hours.
- A nutrient loading analysis for net improvement of phosphorus and nitrogen was performed

3.3 ATTENUATION CRITERIA

Stormwater quantity criteria will be met using on-line wet detention. The project lies in an open basin, therefore peak discharge rates were compared only and not total discharge volume. The post-development discharge rate was designed not to exceed the pre-development discharge rate for the required storm events provided below. Since the site is previously developed the mean annual 24-hour storm event does not apply.

SJRWMD and City of Green Cove Springs Discharge Rate Criteria

- 25-Year 24-Hour Storm Event

3.4 CONVEYANCE CRITERIA

The on-site stormwater conveyance system was designed for the 5-year 24-hour storm event using the FDOT Zone 4 intensity-duration-frequency curves.

3.5 METHODOLOGY

SCS TR-55 hydrology procedures and the SCS Type II Florida Modified rainfall distribution were used for pre- and post-development peak discharge calculations. Rainfall amounts were obtained from SJRWMD technical publications. Curve Numbers and Time of Concentration values were calculated in accordance with SCS TR-55. Streamline Technologies, Inc.'s ICPR v4.0701 software was used for peak discharge and routing modeling. Supporting calculations and modeling inputs/outputs are provided in the Appendix.

The stormwater conveyance system was designed using the Modified Rational Method. Runoff coefficients were calculated in accordance with the FDOT Drainage Handbook. The stormwater

pipe network was modeled using Autodesk AutoCAD Civil 3D's Hydraflow Storm Sewers Extension v12. Swales and ditches were sized using Bentley Flowmaster. Supporting calculations and modeling inputs/outputs are provided in the Appendix.

3.6 TAILWATER JUSTIFICATION

For post-development routing modeling the following tailwater elevations were used:

- On-site ditch: Seasonal high water level
- Wetland: existing ground elevation at the wetland limits

3.7 FLOODWAY AND FLOODPLAIN IMPACTS

The project site lies in a Flood Zone A with an undetermined Base Flood Elevation. A flood study is being prepared by others for the overall Rookery subdivision. Compensating cut/fill calculations were not completed for the project. There are no proposed floodway impacts.

3.8 WETLAND AND OTHER SURFACE WATER IMPACTS

There are no wetland impacts proposed. Proposed surface water impacts include the partial filling of the existing on-site ditch. See environmental report for details.

3.9 HYDROLOGY AND ROUTING CALCULATION RESULTS

The stormwater management facilities and conveyance system maintain post-development peak discharge rates below the pre-development level for the required design storm events. Wet detention pond maintains a minimum 12-inches of freeboard during the 25-yr, 24-hr storm event. Treatment requirements are met with the proposed wet detention pond. Detailed drainage calculations and modeling results are provided in the Appendix.

3.10 STORMWATER MANAGEMENT FACILITY OWNERSHIP AND MAINTENANCE

The wet detention pond lies on a tract which will be owned and maintained by the City of Green Cove Springs. The following is a summary of minimum recommended maintenance activities associated with wet detention ponds. Reference the Florida Stormwater Erosion and Sedimentation Control Inspector's Manual for additional information.

Inspections

All stormwater systems should be routinely inspected to ensure that they are functioning properly. Major inspections should be conducted semiannually, and brief inspections should always be conducted following storms with over 1 inch (25 mm) of rainfall. It is also advisable to ensure that vegetation (sod) is growing well and that all construction is according to approved design.

Safety

All permanent impoundments and structures should be inspected periodically by a Florida

registered professional engineer to ensure that they remain structurally sound and mechanically efficient. An annual safety inspection is recommended where the potential for downstream damage and loss of life due to impoundment failure is high. Look for signs of burrowing animals, especially on or near embankments. All structures should also be inspected for scour, erosion, settlement, and structural failure following major storms. Many jurisdictions require fences around impoundments with side slopes of 3:1 or steeper. Fencing, gates, and locks should be inspected quarterly, and a list of key holders should be kept.

Public Health

Precautions should be taken to minimize the production of fast-breeding insects in and around ponded areas. Possible control measures include controlling the growth of vegetation at shorelines.

Routine Maintenance - Turf

Turf is used for erosion protection, water treatment, velocity reduction, and aesthetics. Regular mowing and occasional fertilization are required to maintain desired growth. Avoid cutting turf too short; as this may damage the plant, reduce the desirable friction in channels, and reduce the protection to soil. A lack of mowing can lead to invasion by weeds. In areas that impound or convey stormwater, clippings should be bagged and removed to reduce the organic loading.

Routine Maintenance – Inlets

Pipe inlets should be inspected for clogging and/or structural integrity after each major storm, and accumulated debris and sediment should be removed as required. Trash racks should be cleaned and should be replaced if missing.

Routine Maintenance - Control Structures

In addition to inlets and outlets, many stormwater management facilities have control structures to regulate the rate and/or water level in the facility. These structures must be inspected frequently for sediment and debris. Control structures should be checked annually by the design engineer for structural integrity.

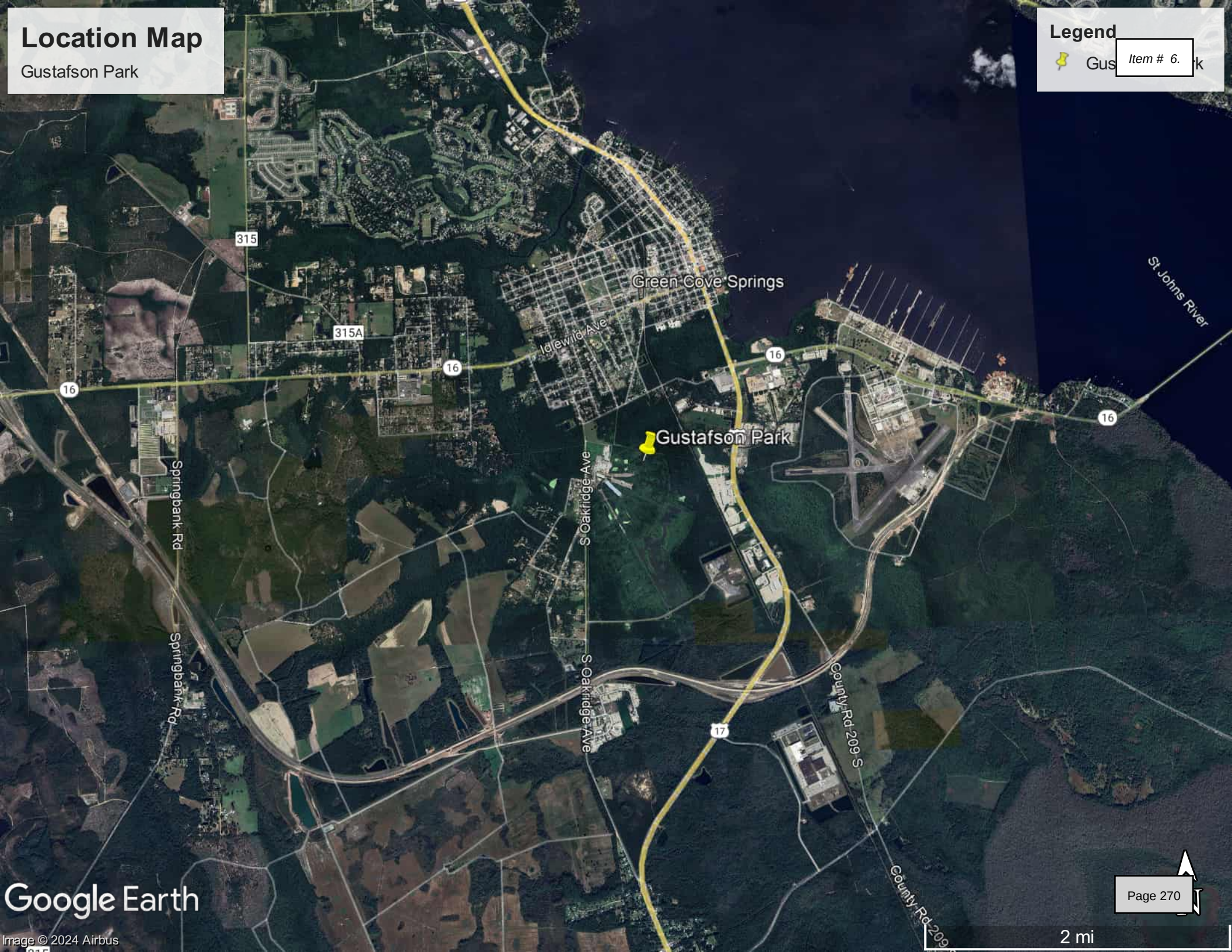
Routine Maintenance - Outlet Protection

Outlets should be inspected after every major storm. Outlet pipes should be in sound structural condition and free of sediment accumulation. Energy dissipators, splash pads, and riprap aprons should be kept free of debris. Look for scour below the outlet. Wherever such erosion is detected, effective measures should be taken quickly to stabilize and protect the affected area.

I. Location Map

Location Map

Gustafson Park



II. Results Summary

GUSTAFSON PARK
STORMWATER ROUTING RESULTS SUMMARY

POND SUMMARY

Pond	Pond Type	Bottom (ft)	Top of Bank (ft)	Normal Water Level (ft)	Weir (ft)	Peak Stage			
						25-yr 24-hr (ft)	25-yr 24-hr (ft)	5-yr 24-hr (ft)	Mean Annual (ft)
WP-1	Wet Det.	15.00	30.00	27.00	27.60	N/A	28.80	28.40	28.09

Notes:

1. Peak stage data from ICPR results, see report Section 8 for detailed results.

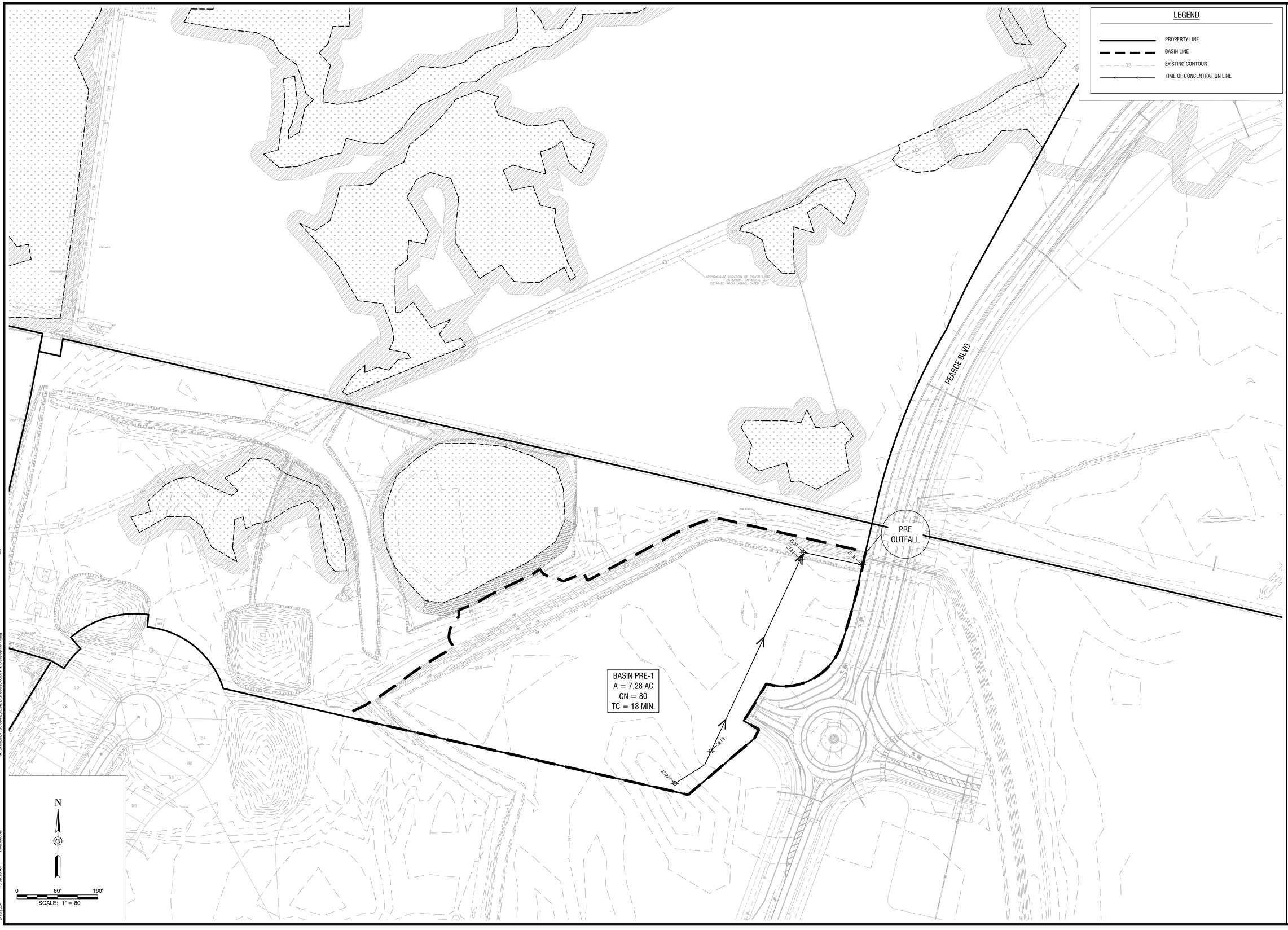
PRE VS POST DISCHARGE RATES

Outfall Location	25-yr 24-hr (cfs)		5-yr 24-hr (cfs)		Mean Annual (cfs)	
	Pre	Post	Pre	Post	Pre	Post
Outfall	29.55	26.68	N/A	N/A	N/A	N/A

Notes:

1. Data from ICPR results. See report section 8 for detailed results.

III. Pre-Development Drainage Plan



PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

halff
9995 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9380 WWW.HALFF.COM
FL LC 26000645

REVISIONS NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.:	037756.094
ISSUED:	2/08/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	1" = 30'

PRE DEVELOPMENT DRAINAGE MAP

C-006

IV. Post-Development Drainage Plan

LEGEND

- PROPERTY LINE
- BASIN LINE
- 32 EXISTING CONTOUR
- 32 PROPOSED CONTOUR

PRE VS POST DISCHARGE RATES						
Outfall Location	25-yr 24-hr (cfs)		5-yr 24-hr (cfs)		Mean Annual (cfs)	
	Pre	Post	Pre	Post	Pre	Post
Outfall	29.55	26.68	N/A	N/A	N/A	N/A

POST WETLAND

PROPOSED DITCH

APPROXIMATE LOCATION OF POWER LINE AS SHOWN ON AERIAL MAP OBTAINED FROM LABINS, DATED 2017

EXISTING DITCH

CONTROL STRUCTURE

WET DETENTION POND WP-1

POST OUTFALL

BASIN POST-3
A = 3.15 AC
CN = 80.0
TC = 18 MIN.

BASIN POST-2
A = 1.28 AC
CN = 80.0
TC = 16.56 MIN.

BASIN POST-1
A = 2.57 AC
CN = 87.1
TC = 10 MIN.

N

0 80' 160'
SCALE: 1" = 80'

PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

halff
9995 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL LC 26000645
FL CA 33380

REVISIONS

NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.:	037756.094
ISSUED:	2/08/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	1" = 30'

POST DEVELOPMENT DRAINAGE MAP

C-007

A:\37000s\037756094\LDC\ADD\Sheets\C-XXX Post Development.dwg
Tyler Keipel
10:36:29 AM
2/13/2024

V. Pre-Development Basin Characteristics

GUSTAFSON PARK
PRE DEVELOPMENT CURVE NUMBER CALCULATIONS

Prepared by

Basin Pre-1

Land Use	HSG	Area (SF)	Area (AC)	Impervious %	CN Pervious	CN Impervious	CN Weighted
Open Space (Good Cond.)	D	317,115	7.28	0%	80	98	80.0
-	-	0	0.00	0%	80	98	80.0
-	-	0	0.00	0%	80	98	80.0
Total		**317,115**	**7.28**	**0.0%**			**80.0**

Time of Concentration (Tc)	0.3 hr	**18 min**

Note: Tc calculated using WinTR-55. See WinTR-55 output for details.

ND 37756.094
GUSTAFSON PARK
CLAY County, Florida

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Pre-1							
SHEET	100	0.0327	0.130				0.104
SHALLOW	568	0.0025	0.050				0.196
						Time of Concentration	0.300

VI. Post-Development Basin Characteristics

GUSTAFSON PARK
POST DEVELOPMENT CURVE NUMBER CALCULATIONS

Basin Post-1

Land Use	HSG	Area (SF)	Area (AC)	Impervious %	CN Pervious	CN Impervious	CN Weighted
Asphalt Pavement	B/D	4,935	0.11	100%	80	98	98.0
Gravel Parking Lot	B/D	5,591	0.13	100%	80	98	98.0
Concrete Sidewalk	B/D	2,142	0.05	100%	80	98	98.0
Pond NWL	B/D	17,300	0.40	0%	98	98	98.0
Building	B/D	344	0.01	100%	80	98	98.0
Tennis Courts	B/D	14,000	0.32	100%	80	98	98.0
Open Space (Good Cond.)	B/D	67,434	1.55	0%	80	98	80.0
-	-	0	0.00	0%	80	98	80.0
-	-	0	0.00	0%	80	98	80.0
-	-	0	0.00	0%	80	98	80.0
Total		**111,746**	**2.57**	**24.2%**			**87.1**

Time of Concentration (Tc) 0 hr **10 min**

Note: Minimum Tc of 10 minutes used

Basin Post-2

Land Use	HSG	Area (SF)	Area (AC)	Impervious %	CN Pervious	CN Impervious	CN Weighted
Open Space (Good Cond.)	B/D	55,778	1.28	0%	80	98	80.0
	-	0	0.00	0%	80	98	80.0
	-	0	0.00	0%	80	98	80.0
Total		**55,778**	**1.28**	**0.0%**			**80.0**

Time of Concentration (Tc) 0.276 hr **16.56 min**

Note: Tc calculated using WinTR-55. See WinTR-55 output for details.

Basin Post-3

Land Use	HSG	Area (SF)	Area (AC)	Impervious %	CN Pervious	CN Impervious	CN Weighted
Open Space (Good Cond.)	B/D	137,382	3.15	0%	80	98	80.0
	-	0	0.00	0%	80	98	80.0
	-	0	0.00	0%	80	98	80.0
Total		**137,382**	**3.15**	**0.0%**			**80.0**

Time of Concentration (Tc) 0.3 hr **18 min**

Note: Tc calculated using WinTR-55. See WinTR-55 output for details.

ND

37756.094
GUSTAFSON PARK
CLAY County, Florida

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Post-2							
SHEET	100	0.0310	0.130				0.107
SHALLOW	392	0.0016	0.050				0.169
						Time of Concentration	.276

VII. Stormwater Management Facility Calculations

GUSTAFSON PARK
WET DETENTION POND CALCULATIONS

Prepared by

WP-1

Drainage Area

Area	On-Site	Off-Site	Total
Pervious (ac)	1.95	0.00	1.95
Impervious (ac)	0.22	0.00	0.22
Pond NWL (ac)	0.40	0.00	0.40
Total (ac)	2.57	0.00	2.57

On-Site % Impervious (Excludes Pond Area): 10.3%

Runoff Coefficient	Basin 1	Off-Site	Total
Pervious	0.30	0.30	-
Impervious	0.95	0.95	-
Pond NWL	1.00	1.00	-
Weighted Average	0.46	0.00	0.46

Pond Data

Description	Elevation (ft)	Area (ft^2)	Area (ac)	Cumulative Volume (ac-ft)	Cumulative Permanent Pool Volume (ac-ft)	Cumulative Storage Volume (ac-ft)
Bottom	15.00	3,869.00	0.09	-	2.45	-
Grade Change	23.00	9,494.00	0.22	1.23	1.22	-
	24.00	11,284.00	0.26	1.47	0.98	-
	25.00	13,188.00	0.30	1.75	0.70	-
	26.00	15,194.00	0.35	2.07	0.37	-
NWL	27.00	17,300.00	0.40	2.45	-	-
Weir	28.00	19,506.00	0.45	2.87	-	0.42
	29.00	21,813.00	0.50	3.34	-	0.90
Top of Bank	30.00	24,221.00	0.56	3.87	-	1.43

Design Tailwater Elevation 27.00 ft *Ditch SHWL*
Discharge Location Ditch

Treatment Volume

1" Runoff Over Entire Drainage Area:	0.21	ac-ft
2.5" Runoff Over Impervious Area:	0.05	ac-ft
Required Treatment Volume:	**0.21**	**ac-ft**
Minimum Weir Elevation:	27.51	ft
Use Weir Elevation:	27.60	ft
Provided Treatment Volume:	**0.25**	**ac-ft**

Permanent Pool Volume

Wet Season Rainfall Depth:	30	in
Length of Wet Season:	153	days (June-October)
Littoral zone:	No	yes/no
Residence time:	21	days
Required Permanent Pool Volume:	**0.41**	**ac-ft**
Provided Permanent Pool Volume:	**2.45**	**ac-ft**

Pond Configuration

Pond Length 2x Width:	Yes	(yes/no)
Pond Average Depth:	6.2 ft	(Between 2-ft and 8-ft required)

Orifice Sizing

Treatment Volume Depth:	0.60	ft
1/2 Treatment Volume Depth:	0.30	ft

Average Discharge Rate to Drawdown 1/2 Provided Treatment Volume:

t = 24 hours:	0.06	cfs
t = 30 hours:	0.05	cfs

Orifice Area at Given Q and Average Depth (@ Invert):

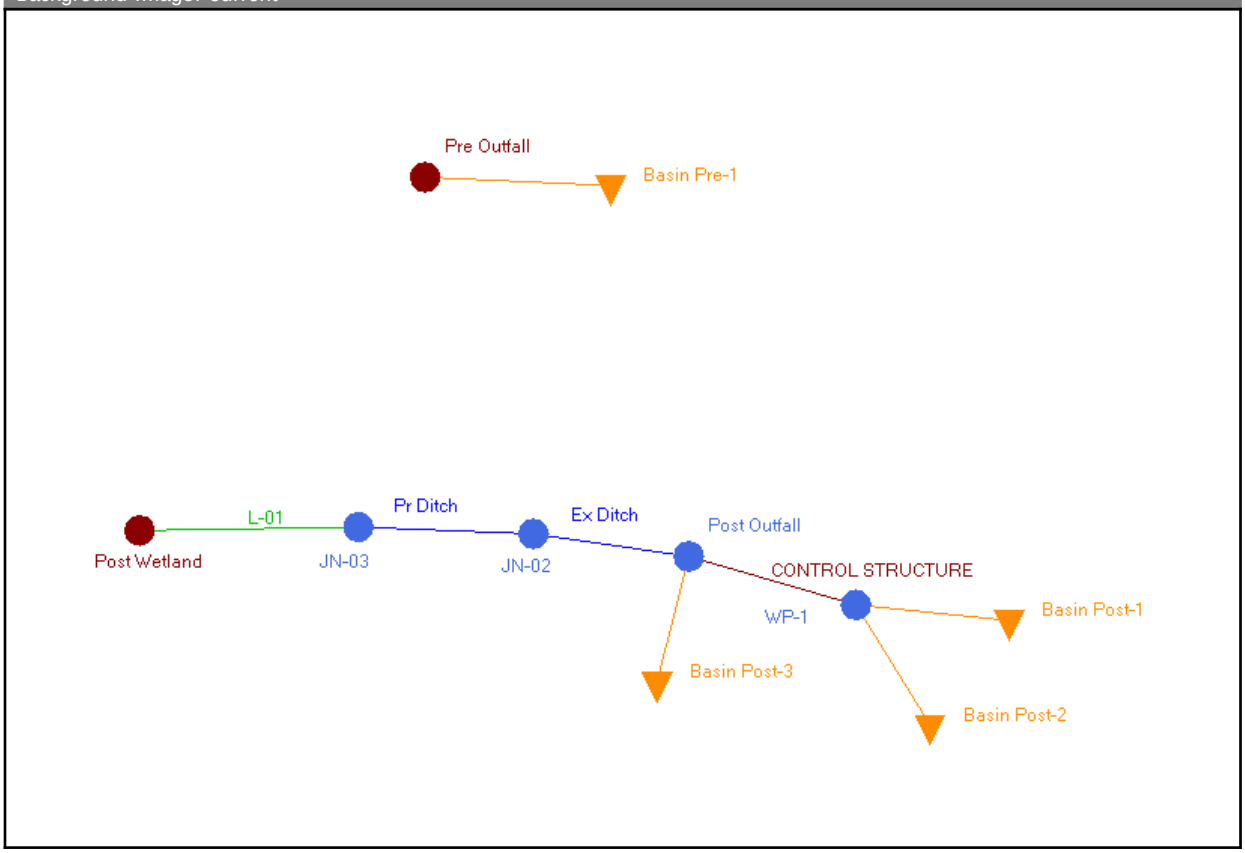
t = 24 hours:	0.02	ft^2	2.85	in^2
t = 30 hours:	0.02	ft^2	2.28	in^2

Orifice Diameter:

t = 24 hours:	1.90	in
t = 30 hours:	1.70	in
Use:	1.75	in

VIII. ICPR Model Results and Inputs

Background Image: Current



Node Max Conditions [Scenario1]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
JN-02	25-Yr, 24-Hr	28.00	27.28	0.0010	24.11	21.01	15037
JN-03	25-Yr, 24-Hr	26.70	26.35	0.0009	21.01	20.87	6745
Post Outfall	25-Yr, 24-Hr	28.00	27.38	0.0010	26.68	24.11	6642
Post Wetland	25-Yr, 24-Hr	26.00	26.00	0.0000	20.87	0.00	0
Pre Outfall	25-Yr, 24-Hr	28.00	26.00	0.0000	29.55	0.00	0
WP-1	25-Yr, 24-Hr	30.00	28.80	0.0010	20.92	11.39	21334
JN-02	5-Yr, 24-Hr	28.00	26.91	0.0010	14.25	12.16	13187
JN-03	5-Yr, 24-Hr	26.70	26.14	0.0004	12.16	12.13	5803
Post Outfall	5-Yr, 24-Hr	28.00	26.99	-0.0010	16.23	14.25	5996
Post Wetland	5-Yr, 24-Hr	26.00	26.00	0.0000	12.13	0.00	0
Pre Outfall	5-Yr, 24-Hr	28.00	26.00	0.0000	19.25	0.00	0
WP-1	5-Yr, 24-Hr	30.00	28.40	0.0010	14.23	7.00	20480
JN-02	Mean Annual, 24-hr	28.00	26.57	0.0010	7.42	6.16	11579
JN-03	Mean Annual, 24-hr	26.70	26.05	0.0001	6.16	6.16	5247
Post Outfall	Mean Annual, 24-hr	28.00	26.62	-0.0010	8.69	7.42	5394
Post Wetland	Mean Annual, 24-hr	26.00	26.00	0.0000	6.16	0.00	0
Pre Outfall	Mean Annual, 24-hr	28.00	26.00	0.0000	12.37	0.00	0
WP-1	Mean Annual, 24-hr	30.00	28.09	0.0010	9.67	3.35	19793

Simple Basin Runoff Summary [Scenario1]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
Basin Post-1	25-Yr, 24-Hr	15.91	12.0167	9.00	7.46	2.5700	87.1	0.00	0.00
Basin Post-2	25-Yr, 24-Hr	5.38	12.1000	9.00	6.59	1.2800	80.0	0.00	0.00
Basin Post-3	25-Yr, 24-Hr	15.89	12.0833	9.00	6.58	3.1500	80.0	0.00	0.00
Basin Pre-1	25-Yr, 24-Hr	29.55	12.1167	9.00	6.58	7.2800	80.0	0.00	0.00
Basin Post-1	5-Yr, 24-Hr	10.98	12.0167	6.50	5.02	2.5700	87.1	0.00	0.00
Basin Post-2	5-Yr, 24-Hr	3.51	12.1000	6.50	4.25	1.2800	80.0	0.00	0.00
Basin Post-3	5-Yr, 24-Hr	10.40	12.1000	6.50	4.24	3.1500	80.0	0.00	0.00
Basin Pre-1	5-Yr, 24-Hr	19.25	12.1167	6.50	4.24	7.2800	80.0	0.00	0.00
Basin Post-1	Mean Annual, 24-hr	7.59	12.0167	4.80	3.40	2.5700	87.1	0.00	0.00
Basin Post-2	Mean Annual, 24-hr	2.26	12.1167	4.80	2.73	1.2800	80.0	0.00	0.00
Basin Post-3	Mean Annual, 24-hr	6.73	12.1000	4.80	2.72	3.1500	80.0	0.00	0.00
Basin Pre-1	Mean Annual, 24-hr	12.37	12.1167	4.80	2.73	7.2800	80.0	0.00	0.00

Link Min/Max Conditions [Scenario1]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
CONTROL STRUCTURE - Pipe	25-Yr, 24-Hr	11.39	0.00	-0.02	0.00	0.00	0.00
CONTROL STRUCTURE - Weir: 1	25-Yr, 24-Hr	11.32	0.00	-0.01	3.24	3.24	3.24
CONTROL STRUCTURE - Weir: 2	25-Yr, 24-Hr	0.09	0.00	0.00	0.00	0.00	0.00
CONTROL STRUCTURE - Weir: 3	25-Yr, 24-Hr	0.00	0.00	0.00	0.00	0.00	0.00
Ex Ditch	25-Yr, 24-Hr	24.11	0.00	-0.07	0.74	0.85	0.79
L-01	25-Yr, 24-Hr	20.87	0.00	0.04	2.49	2.49	2.49
Pr Ditch	25-Yr, 24-Hr	21.01	0.00	0.03	0.89	2.62	1.74
CONTROL STRUCTURE - Pipe	5-Yr, 24-Hr	7.00	0.00	-0.02	0.00	0.00	0.00
CONTROL STRUCTURE - Weir: 1	5-Yr, 24-Hr	6.91	0.00	-0.01	2.87	2.87	2.87
CONTROL STRUCTURE - Weir: 2	5-Yr, 24-Hr	0.09	0.00	0.00	0.00	0.00	0.00
CONTROL STRUCTURE - Weir: 3	5-Yr, 24-Hr	0.00	0.00	0.00	0.00	0.00	0.00
Ex Ditch	5-Yr, 24-Hr	14.25	0.00	-0.06	0.60	0.69	0.64
L-01	5-Yr, 24-Hr	12.13	0.00	0.02	2.08	2.08	2.08
Pr Ditch	5-Yr, 24-Hr	12.16	0.00	0.03	0.73	2.09	1.41
CONTROL STRUCTURE - Pipe	Mean Annual, 24-hr	3.35	0.00	0.01	0.00	0.00	0.00
CONTROL STRUCTURE - Weir: 1	Mean Annual, 24-hr	3.27	0.00	0.01	2.23	2.23	2.23
CONTROL STRUCTURE - Weir: 2	Mean Annual, 24-hr	0.08	0.00	0.00	0.00	0.00	0.00
CONTROL STRUCTURE - Weir: 3	Mean Annual, 24-hr	0.00	0.00	0.00	0.00	0.00	0.00
Ex Ditch	Mean Annual, 24-hr	7.42	0.00	-0.03	0.43	0.49	0.46
L-01	Mean Annual, 24-hr	6.16	0.00	0.01	1.25	1.25	1.25

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
Pr Ditch	Mean Annual, 24-hr	6.16	0.00	0.02	0.54	1.25	0.89

Simple Basin: Basin Post-1

Scenario:	Scenario1
Node:	WP-1
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	0.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH484
Peaking Factor:	484.0
Area:	2.5700 ac
Curve Number:	87.1
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: Basin Post-2

Scenario:	Scenario1
Node:	WP-1
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	16.5600 min
Max Allowable Q:	0.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH323
Peaking Factor:	323.0
Area:	1.2800 ac
Curve Number:	80.0
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: Basin Post-3

Scenario:	Scenario1
Node:	Post Outfall
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	18.0000 min
Max Allowable Q:	0.00 cfs

Time Shift:	0.0000 hr
Unit Hydrograph:	UH484
Peaking Factor:	484.0
Area:	3.1500 ac
Curve Number:	80.0
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: Basin Pre-1

Scenario:	Scenario1
Node:	Pre Outfall
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	18.0000 min
Max Allowable Q:	0.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH323
Peaking Factor:	323.0
Area:	7.2800 ac
Curve Number:	80.0
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Node: JN-02

Scenario:	Scenario1
Type:	Stage/Area
Base Flow:	0.00 cfs
Initial Stage:	26.00 ft
Warning Stage:	28.00 ft

Comment:

Node: JN-03

Scenario: Scenario1
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 26.00 ft
Warning Stage: 26.70 ft

Comment:

Node: Post Outfall

Scenario: Scenario1
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 26.00 ft
Warning Stage: 28.00 ft

Comment:

Node: Post Wetland

Scenario: Scenario1
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 26.00 ft
Warning Stage: 26.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	26.00
0	0	0	9999.0000	26.00

Comment:

Node: Pre Outfall

Scenario: Scenario1
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 26.00 ft
Warning Stage: 28.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	26.00
0	0	0	9999.0000	26.00

Comment:

Node: WP-1

Scenario: Scenario1
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 27.00 ft
Warning Stage: 30.00 ft

Stage [ft]	Area [ac]	Area [ft2]
27.00	0.4000	17424
28.00	0.4500	19602
29.00	0.5000	21780
30.00	0.5600	24394

Comment:

Drop Structure Link: CONTROL STRUCTURE

Scenario: Scenario1
From Node: WP-1
To Node: Post Outfall
Link Count: 1
Flow Direction: Both
Solution: Combine
Increments: 0
Pipe Count: 1
Damping: 0.0000 ft
Length: 55.00 ft
FHWA Code: 0
Entr Loss Coef: 0.00
Exit Loss Coef: 0.00
Bend Loss Coef: 0.00
Bend Location: 0.00 dec
Energy Switch: Energy

Upstream Pipe		Downstream Pipe	
Invert:	25.56 ft	Invert:	25.40 ft
Manning's N:	0.0130	Manning's N:	0.0130
Geometry: Circular		Geometry: Circular	
Max Depth:	1.50 ft	Max Depth:	1.50 ft
Bottom Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000
Top Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000

Pipe Comment:

Weir Component

Weir: 1
Weir Count: 1
Weir Flow Direction: Both

Bottom Clip

Default: 0.00 ft
Op Table:

Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	Rectangular
Invert:	27.60 ft
Control Elevation:	27.60 ft
Max Depth:	1.30 ft
Max Width:	3.00 ft
Fillet:	0.00 ft

Ref Node:	
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment: SLOT

Weir Component

Weir:	2
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	Circular
Invert:	27.00 ft
Control Elevation:	27.00 ft
Max Depth:	0.15 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment: ORIFICE

Weir Component

Weir:	3
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	28.90 ft
Control Elevation:	28.90 ft
Max Depth:	3.00 ft
Max Width:	4.50 ft
Fillet:	0.00 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment: TYPE "E" INLET TOP

Drop Structure Comment:

Simulation: 25-Yr, 24-Hr

Scenario: Scenario1
Run Date/Time: 2/13/2024 10:01:40 AM
Program Version: ICPR4 4.07.01

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: 25-yr 24-hr
Extern Hydrograph Set:
Curve Number Set:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:

Conductivity Set:	
Leakage Set:	

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FLMOD
		Rainfall Amount:	9.00 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment:

Simulation: 5-Yr, 24-Hr

Scenario:	Scenario1
Run Date/Time:	2/13/2024 10:03:55 AM
Program Version:	ICPR4 4.07.01

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: 5-yr 24-hr
Extern Hydrograph Set:
Curve Number Set:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft
Edge Length Option: Automatic
Dflt Damping (2D): 0.0050 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~FLMOD
Rainfall Amount: 6.50 in
Storm Duration: 24.0000 hr
Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: Mean Annual, 24-hr

Scenario: Scenario1
Run Date/Time: 2/13/2024 10:06:01 AM
Program Version: ICPR4 4.07.01

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: Mean Annual
Extern Hydrograph Set:
Curve Number Set:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:

Conductivity Set:	
Leakage Set:	

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FLMOD
		Rainfall Amount:	4.80 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment:

IX. BMPTrains Modeling Results and Inputs

Complete Report (not including cost) Ver 4.3.5

Project: Gustafson Park
Date: 2/14/2024 11:02:35 AM

Site and Catchment Information

Analysis: Net Improvement

Catchment Name	Basin 1
Rainfall Zone	Florida Zone 2
Annual Mean Rainfall	50.00

Pre-Condition Landuse Information

Landuse	Agricultural - General: TN=2.800 TP=0.487
Area (acres)	2.57
Rational Coefficient (0-1)	0.11
Non DCIA Curve Number	80.00
DCIA Percent (0-100)	0.00
Nitrogen EMC (mg/l)	2.800
Phosphorus EMC (mg/l)	0.487
Runoff Volume (ac-ft/yr)	1.189
Groundwater N (kg/yr)	0.000
Groundwater P (kg/yr)	0.000
Nitrogen Loading (kg/yr)	4.104
Phosphorus Loading (kg/yr)	0.714

Post-Condition Landuse Information

Landuse	Low-Intensity Commercial: TN=1.13 TP=0.188
Area (acres)	2.57
Rational Coefficient (0-1)	0.26
Non DCIA Curve Number	80.00
DCIA Percent (0-100)	21.80
Wet Pond Area (ac)	0.28
Nitrogen EMC (mg/l)	1.130
Phosphorus EMC (mg/l)	0.188
Runoff Volume (ac-ft/yr)	2.512
Groundwater N (kg/yr)	0.000
Groundwater P (kg/yr)	0.000

Nitrogen Loading (kg/yr)	3.500
Phosphorus Loading (kg/yr)	0.582

Catchment Number: 1 Name: Basin 1

Project: Gustafson Park
Date: 2/14/2024

User Defined BMP Design

Contributing Catchment Area (acres)	2.290
Provided Nitrogen Treatment Efficiency (%)	43
Provided Phosphorus Treatment Efficiency (%)	65

Watershed Characteristics

Catchment Area (acres)	2.57
Contributing Area (acres)	2.290
Non-DCIA Curve Number	80.00
DCIA Percent	21.80
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.00

Surface Water Discharge

Required TN Treatment Efficiency (%)	
Provided TN Treatment Efficiency (%)	43
Required TP Treatment Efficiency (%)	
Provided TP Treatment Efficiency (%)	65

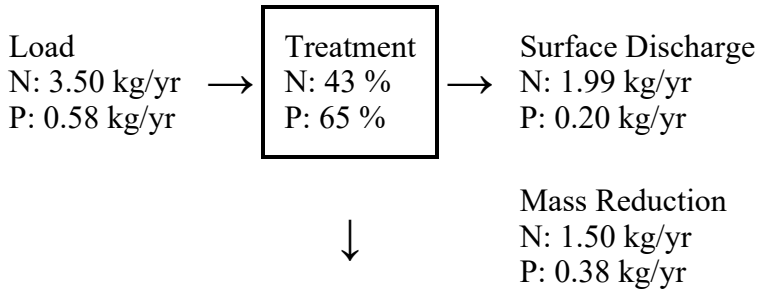
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

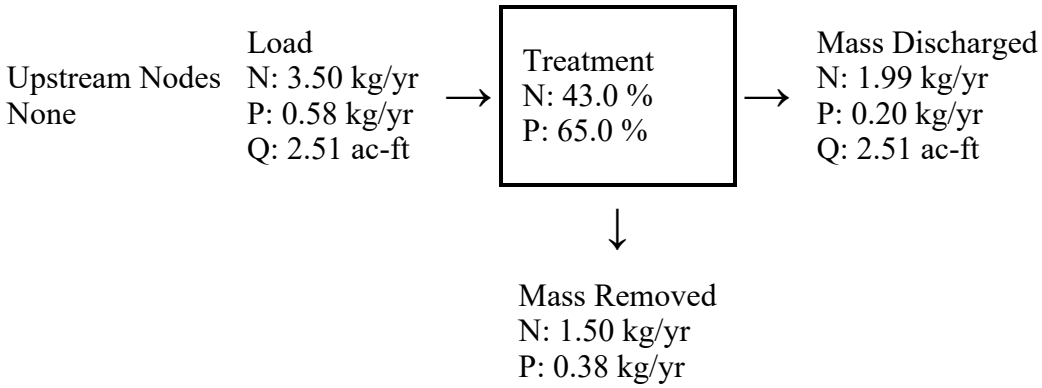
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	0.000
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.000
TP Concentration (mg/L)	0.000

Load Diagram for User Defined BMP (stand-alone)



Load Diagram for User Defined BMP (As Used In Routing)



Summary Treatment Report Version: 4.3.5

Project: Gustafson Park

Analysis Type: Net Improvement Date:2/14/2024
BMP Types:
Catchment 1 - (Basin 1) User Defined **Routing Summary**
BMP Catchment 1 Routed to Outlet
Based on % removal values to the nearest percent
Total nitrogen target removal met? **Yes**
Total phosphorus target removal met? **Yes**

Summary Report

Nitrogen

Surface Water Discharge

Total N pre load	4.1 kg/yr
Total N post load	3.5 kg/yr

Target N load reduction	%	
Target N discharge load	4.1 kg/yr	
Percent N load reduction	43 %	
Provided N discharge load	1.99 kg/yr	4.4 lb/yr
Provided N load removed	1.5 kg/yr	3.32 lb/yr

Phosphorus

Surface Water Discharge

Total P pre load	.714 kg/yr	
Total P post load	.582 kg/yr	
Target P load reduction	%	
Target P discharge load	.714 kg/yr	
Percent P load reduction	65 %	
Provided P discharge load	.204 kg/yr	.45 lb/yr
Provided P load removed	.378 kg/yr	.834 lb/yr

X. Flowmaster Modeling Results and Inputs

Worksheet for North Swale

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.050
Channel Slope	0.003 ft/ft
Left Side Slope	4.000 H:V
Right Side Slope	4.000 H:V
Bottom Width	5.00 ft
Discharge	4.61 cfs

Results	
Normal Depth	7.9 in
Flow Area	5.0 ft²
Wetted Perimeter	10.4 ft
Hydraulic Radius	5.8 in
Top Width	10.28 ft
Critical Depth	3.3 in
Critical Slope	0.060 ft/ft
Velocity	0.91 ft/s
Velocity Head	0.01 ft
Specific Energy	0.67 ft
Froude Number	0.230
Flow Type	Subcritical

Swale Depth = 12"
7.9" < 12"
Therefore swale contains flow and is adequate

GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	7.9 in
Critical Depth	3.3 in
Channel Slope	0.003 ft/ft
Critical Slope	0.060 ft/ft

Swale Flowrate:
Q=CiA
=(.89)(6.4 in/hr)(0.81 ac)
= 4.61 cfs

Note: Precipitation rate "i" obtained from FDOT IDF curves for Zone 4, 5-year storm event, in accordance with City of Green Cove Springs requirements for on-site conveyance.

Worksheet for South Swale

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.050
Channel Slope	0.003 ft/ft
Left Side Slope	6.000 H:V
Right Side Slope	6.000 H:V
Discharge	2.23 cfs

Results	
Normal Depth	8.5 in
Flow Area	3.0 ft²
Wetted Perimeter	8.6 ft
Hydraulic Radius	4.2 in
Top Width	8.52 ft
Critical Depth	4.6 in
Critical Slope	0.064 ft/ft
Velocity	0.74 ft/s
Velocity Head	0.01 ft
Specific Energy	0.72 ft
Froude Number	0.218
Flow Type	Subcritical

Swale Depth = 12"
8.5" < 12"
Therefore swale contains flow and is adequate

GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	8.5 in
Critical Depth	4.6 in
Channel Slope	0.003 ft/ft
Critical Slope	0.064 ft/ft

Swale Flowrate:
Q=CiA
=(.87)(6.4 in/hr)(0.40 ac)
= 2.23 cfs

Note: Precipitation rate "i" obtained from FDOT IDF curves for Zone 4, 5-year storm event, in accordance with City of Green Cove Springs requirements for on-site conveyance.

XI. NRCS Soils Map and Hydrologic Soil Group Map

Hydrologic Soil Group—Clay County, Florida

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

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

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

Soil Survey Area: Clay County, Florida
Survey Area Data: Version 20, Aug 28, 2023

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

Date(s) aerial images were photographed: Jan 6, 2022—Feb 10, 2022

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
8	Sapelo fine sand	B/D	13.3	88.0%
17	Plummer fine sand	A/D	1.8	12.0%
Totals for Area of Interest			**15.1**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

XII. FEMA FIRMette

National Flood Hazard Layer FIRMette

81°41'21"W 29°58'42"N

81°40'44"W 29°58'11"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FO UT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/29/2024 at 11:31 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, commu FIRM panel number, and FIRM effective date unmapped and unmodernized areas cannot regulatory purposes.

PREPARED BY AND RETURN TO:
Ellen Avery-Smith, Esq.
Rogers Towers, P.A.
100 Whetstone Place, Suite 200
St. Augustine, Florida 320286

ROOKERY DEVELOPMENT AGREEMENT

THIS ROOKERY DEVELOPMENT AGREEMENT (the "**Agreement**") is made and entered into on this 31 day of May, 2022, by and between **D.R. HORTON, INC. – JACKSONVILLE**, a Delaware corporation (the "**Applicant**"), and the **CITY OF GREEN COVE SPRINGS**, a municipal corporation organized and existing under the laws of the State of Florida (the "**City**"). City, and Applicant may sometimes be referred to herein, collectively, as the "**Parties**."

A. The Applicant attests and warrants that it is the contract purchaser of the property described in **Exhibit "A-1"** attached hereto and incorporated herein by this reference, which is located within the City of Green Cove Springs, Florida (the "**Property**"), and that Philip A. Fremento, as the Division President of Applicant, is authorized to execute all binding documents on behalf of Applicant.

B. The Applicant applied to voluntarily annex the Property into the City pursuant to Section 171.044, Florida Statutes, and Ordinance No. 0-02-2021 and the City Council approved such annexation.

C. The Property has a Future Land Use Map ("**FLUM**") designation of Residential Low Density. The Property is zoned to Planned Unit Development (the "**PUD**") and will be developed in accordance with the applicable future land use and zoning designations.

D. The Applicant desires to develop a residential project to be called Rookery on the Property, with a maximum of 2,100 single-family and townhome residential units (the "**Development**").

E. The Applicant will construct certain public roadway, utility and other improvements, both on the Property and off-site, to mitigate for impacts of the Development, as set forth herein.

F. The Applicant and the City desire to enter into this Agreement to provide for the provision of certain on-site and off-site improvements that will benefit the Development and the public.

G. This Agreement is consistent with the City Charter, the City 2045 Comprehensive Plan and the City Land Development Code, as well as, with provisions of Chapter 163, Florida Statutes, Chapter 166, Florida Statutes, Chapter 187, Florida Statutes, Article VIII, Section 2(b), Constitution of the State of Florida and other applicable law and serves a public purpose.

H. The City has determined that the requirements of Section 163.3231, Florida Statutes, have been met in that:

i. The City has adopted a local Comprehensive Plan that is in compliance.

ii. The proposed development of the Property is consistent with the City of Green Cove Springs 2045 Comprehensive Plan, including the Future Land Use Map.

iii. This Agreement constitutes a binding commitment on the part of the Applicant, its successors and assigns, to develop the Property consistent with the Comprehensive Plan, applicable provisions of the City of Green Cove Springs Land Development Code (the "**City Code**") and this Agreement.

I. The following is the Public Facility Schedule applicable to the development of the Property through the thirty (30) years of this Development Agreement, to 2052:

i. Transportation. Transportation capacities will be provided by the City or other agency as set forth in its regulations and Capital Improvement Program, as amended from time to time, and in compliance with the provisions of this Agreement and the respective responsibilities of the parties.

ii. Potable Water and Sanitary Sewer. The Clay County Utility Authority (the "**CCUA**") will provide adequate water and wastewater service to the Property in accordance with local government development orders and interlocal agreements that have been and will be issued for development of the Property from time to time. The Applicant will construct water and sewer line extensions necessary to serve the Property, as well as other improvements in compliance with the provisions of this Agreement and the respective responsibilities of the parties.

iii. Solid Waste. The City will provide solid waste disposal to the Property as outlined in Chapter 66 of the City Code.

iv. Electric. The City will provide electric utility service to the Property as set forth in its regulations.

v. Drainage. Concurrently with development of the Property or portions thereof, the Applicant will provide drainage in accordance with St. Johns River Water Management District rules and in accordance with local government development orders that have been and will be issued for development of the Property from time to time, as well as other improvements in compliance with the provisions of this Agreement and the respective responsibilities of the parties.

vi. Parks/Open Space. Concurrently with development of the Property or portions thereof, the Applicant will provide parks and open space as required in applicable provisions of the City Comprehensive Plan and PUD ordinance for the Property.

J. The population density and maximum height possible for the Development under its FLUM, the PUD and current City Code include all uses in the Residential Low Density (R-1) zoning district, up to a maximum of four (4) units per acre, with a maximum of 2,100 single-family and townhome units.

K. This Agreement strengthens the public planning process, encourages sound capital improvement planning and financing, assists in assuring there are adequate capital facilities for the development, encourages private participation and comprehensive planning and reduces the costs of development.

NOW, THEREFORE, in consideration of the mutual terms, covenants, and conditions in this Agreement, and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the Parties agree as follows:

1. **Findings of Fact**. The Recitals set forth above are true and correct and are incorporated herein by reference as Findings of Fact.

2. **Purpose and Intent**. The Applicant and the City desire to enter into this Agreement to address their respective responsibilities for both on-site and off-site improvements related to the Development. The Parties intend to utilize this Agreement to identify the methodology to be used for allocating costs for the potable water system, the sanitary sewer system, the electric system, the stormwater system and the transportation system. In addition, the Agreement identifies the available credits to the Applicant, the potential for future credits, and the City's share of financial responsibility for improvements that may benefit the City's overall utility, stormwater and transportation systems beyond that needed for this Development. The Parties do not intend to vest the Development to current land development regulations, and Applicant or its successors and assigns will be required to meet all applicable codes at the time individual development orders or permits are sought.

3. **Public Facility Improvements**. CCUA will provide water and sanitary sewer services to the Property pursuant to separate utility agreements between CCUA and the Applicant. CCUA is the applicant for temporary City water and sewer service for the site. The Applicant agrees that Applicant or the developer of each parcel, as it is developed, within the Property, shall pay the water/sewer connection/tap costs/fees for lots, units or structures within the project at the time of issuance of a building permit for the particular improvement. The Applicant agrees that Applicant or the developer of each property, as they are developed, within the Property, shall abide by all applicable federal, state and local codes, design, permitting and construction standards, requirements, policies, rules and regulations for civil site plan, utilities, stormwater and buildings. In addition, the Parties agree to the following utility and infrastructure improvements:

A. Potable Water System.

i. Applicant shall comply with all codes, laws and regulations necessary for the development of the Property applicable at the time each development permit is issued and will pay all usual and customary costs

associated with providing potable water on-site to the Property for its intended uses.

ii. Applicant agrees to provide to CCUA any necessary easements on, under and across the Property for the construction, operation and maintenance of the potable water system.

iii. Applicant shall be permitted to temporarily connect to the City water system for the first phase of the Development. If temporary capacity is needed, the Applicant will provide such capacity in coordination with the City's Public Works Department.

B. Sanitary Sewer System.

i. Applicant shall comply with all codes, laws and regulations necessary for the development of the Property applicable at the time each development permit is issued and will pay all usual and customary costs associated with providing sanitary sewer onsite to the Property for its intended uses.

ii. Applicant agrees to provide to CCUA any necessary easements on, under and across the Property for the construction, operation and maintenance of the sanitary sewer system.

iii. Applicant shall be permitted to temporarily connect to the City sewer system for the first phase of the Development. If temporary capacity is needed, the Applicant will provide such capacity in coordination with the City's Public Works Department.

C. Reclaimed Water System.

i. Applicant shall comply with all codes, laws and regulations necessary for the development of the Property applicable at the time each development permit is issued and will pay all usual and customary costs associated with providing reclaimed water service to the Property for its intended uses.

ii. Applicant agrees to provide to CCUA any necessary easements on, under and across the Property for the construction, operation and maintenance of the reclaimed water system.

D. Electric System.

i. Applicant shall comply with all codes, laws and regulations necessary for the development of the Property applicable at the time each development permit is issued and will pay all usual and customary costs associated with providing electric service to the Property for its intended uses.

ii. Applicant agrees to provide to the City any necessary easements on, under and across the Property for the construction, operation and maintenance of the electric system.

E. Stormwater System.

i. Applicant shall comply with all codes, laws and regulations necessary for the development of the Property applicable at the time each development permit is issued and will pay all usual and customary costs associated with providing stormwater capture, retention and treatment on-site to the Property for its intended uses.

ii. Applicant agrees to provide to the City any necessary easements on, under and across the Property for the construction, operation and maintenance of the stormwater system. All stormwater infrastructure within the Property shall be maintained by either a homeowners' association ("**HOA**") or community development district ("**CDD**") in perpetuity.

F. Street Lights.

i. Applicant shall install street lights along all roads within the Property, including the Connector Road (as hereinafter defined), in conformance with all applicable codes, laws and regulations. Applicant or an HOA or CDD shall maintain such street lights, including paying applicable electrical power charges to the City for the same; provided, however, that the City will be responsible for maintenance of the street lights along the Connector Road.

G. Police Substation.

i. Applicant will work with the City on a police substation, as detailed in Section 5.A hereof.

4. **Transportation/Mobility Improvements**. In addition to the public facility improvements provided for in Section 3 hereof, the Applicant and the City will cooperate in providing the following transportation and mobility improvements related to the Development:

A. The Applicant shall construct, at the Applicant's expense, a collector road (the "**Connector Road**" or "**Pearce Boulevard**") that will run west from U.S. Highway 17, abutting the Gustafson regional park site, into the Property and connect to County Road 15A. The four (4)-lane Connector Road section shall begin at U.S. Highway 17 and end at the roundabout, and a three (3)-lane Connector Road section, with center turn lane(s), shall be constructed from the roundabout to County Road 15A, as depicted on the conceptual plan attached hereto as **Exhibit "B"** and incorporated herein by this reference (the "**Conceptual Plan**"). A typical section for the Connector Road is attached hereto as **Exhibit "C"** and incorporated herein by this reference (the "**Connector Road Typical Section**"). The Applicant,

its successors and assigns, shall pay for the cost of designing, permitting and constructing the Connector Road and shall receive road impact fee credits (or proportionate share or mobility fee credits, if applicable) equal to the actual cost of designing, permitting and constructing the Connector Road. Design and construction of the Connector Road will conform to applicable requirements of the Florida Department of Transportation and the City. Once constructed, the Connector Road will be maintained by the City. The City will not issue certificates of occupancy for more than 231 residential units within the Development until either the Applicant completes construction of the Connector Road to U.S. 17 or provides a new traffic study if such connection to U.S. 17 cannot be achieved due to the location of the railroad tracks west of U.S. 17. In the event the Connector Road is not connected to U.S. Highway 17, the Applicant shall provide an updated traffic study that removes the U.S. Highway 17 connection prior to the City's approval of a plat containing the 232nd lot within the Property. Following completion of such traffic study, the City and the Applicant will negotiate in good faith a transportation proportionate share agreement, pursuant to Section 163.3180(5)(h), Florida Statutes, to address roadway improvements needed to mitigate for project traffic impacts.

B. The Applicant shall construct the Connector Road abutting the Gustafson regional park site, at the Applicant's expense. The Applicant will also stub out water and sewer lines it installs within the Property to the southern boundary of the City regional park site, if so requested by the City.

C. The Applicant and the City agree that based on the Applicant's traffic study submitted with the companion Comprehensive Plan Amendment application for the Property, no proportionate fair share, mobility or other similar mitigation payment shall be due related to the Development's projected impacts to the regional roadway network. An interim traffic study addressing traffic distribution shall be required by the Applicant every five (5) years. The interim traffic study shall examine the Development's traffic distribution and its impact on segment and intersection analysis to determine if additional traffic mitigation requirements are required.

D. Notwithstanding that the Development is not legally obligated to make a transportation proportionate fair share or other similar mitigation payment, the Applicant has agreed to make a transportation contribution to the City of $1,000.00 per unit (the "**Per-Unit Transportation Contribution**"). Such per-unit payment shall be made to the City upon the filing of a building permit application for each home. The City shall use the Per-Unit Transportation Contribution to make transportation improvements in the vicinity of the Development, which improvements may include but not be limited to construction of any crosswalks and sidewalks along South Oakridge Avenue, as depicted on **Exhibit "D"** attached hereto and incorporated herein by this reference (the "**Oakridge Avenue Improvements Plan**"), that the Applicant is not able to construct, at the Applicant's expense, due to right-of-way limitations or difficulty in getting landowner consent to construct the crosswalks and sidewalks along South Oakridge Avenue depicted on the Oakridge Avenue Improvements Plan. In the event the City enacts a mobility fee, road impact fee or other similar fee following the effective date of this Agreement, the Development shall not be subject to such fee.

5. **Land Contributions**.

A. Police Substation. The Applicant shall dedicate to the City a parcel of approximately one-half (1/2) acre (the "**Substation Site**") and provide funding to the City for the construction of a 2,000-square-foot police substation (the "**Substation**") prior to the approval of a certificate of occupancy for the 200th residential unit within the Property. The Applicant will work with the City on the location of the Substation Site. Prior to the City's approval of a certificate of occupancy for the 231st residential unit within the Property, the City reserves the option to elect to accept a cash contribution from the Applicant not to exceed Five Hundred Thousand and No/100 Dollars ($500,000.00) for the City to use for law enforcement capital expenses.

B. Schools. The Applicant, its successors and assigns, will comply with applicable provisions of Section 163.3180(6), Florida Statutes, in providing any required school proportionate share mitigation and will pay any applicable school impact fees for the Development in the timing and manner required by law.

C. Land Exchange. In order for the Applicant to construct the Connector Road, it will be necessary for the Applicant and the City to exchange certain real property. The Applicant will exchange an approximately 21.89-acre parcel within the Property, as described in **Exhibit "E"** attached hereto and incorporated herein by this reference **(the "Applicant Exchange Parcel")** and labeled "Land Swap" on the Conceptual Plan, with the City for the 100-foot-wide (minimum) right-of-way for the Connector Road abutting the City's regional park site, which is approximately 21.3 acres, as described in **Exhibit "F"** attached hereto and incorporated herein by this reference (the "**City Exchange Parcel**"), which is depicted on the Conceptual Plan. The Applicant's parcel has a value greater than the City parcel, as required in Rule 62-818.016, Florida Administrative Code, which regulates such land exchanges. The Applicant has prepared all deeds, legal descriptions and sketches of description for the parcel exchange, at its expense. Once the Applicant and the City exchange the Applicant Exchange Parcel and the City Exchange Parcel, the legal description of the Property will be as set forth in **Exhibit "A-2"** attached hereto and incorporated herein by this reference.

D. Exchange Park Improvements. Within a year after the Applicant begins development of the Property, the Applicant will commence the design, permitting and construction of improvements on the Applicant Exchange Parcel (which will then be owned by the City) as part of the Gustafson Regional Park. Such improvements shall include two tennis courts (or like facilities, at the discretion of the City) and a related gravel parking lot and open-air restrooms (the "**Exchange Park Improvements**"). Once the Applicant has completed construction of the Exchange Park Improvements, the City shall be required to maintain such improvements.

E. Gustafson Regional Park Fee. In addition to making the Exchange Park Improvements, the Applicant shall pay a per-unit park fee to the City for construction of other improvements within the Gustafson Regional Park. The per-unit fee shall be $400 per unit (individually, the "**Regional Park Fee**" and collectively, the "**Regional Park Fees**"), which shall be paid by the Applicant to the City upon the filing of a building permit application for each

home. The City shall be responsible for constructing improvements within Gustafson Regional Park with the Regional Park Fees.

6. **Parks**. The Applicant shall pay a per-unit park fee to the City for construction of improvements to Public Parks within the City of Green Cove Springs. The per-unit fee shall be $400 (individually, the "**Public Park Fee**" and collectively, the "**Public Park Fees**"), which shall be paid by the Applicant to the City upon the filing of a building permit application for each home. The Applicant will also provide an approximately ten (10)-acre passive park adjacent to the large pond located in the central portion of the Property that contains bird rookeries (the "**Passive Park**"). The Passive Park will be owned by a community development district and will be available for use by Rookery residents and other residents of Green Cove Springs. The Passive Park will contain walking trails and an observation tower overlooking the rookeries.

7. **Development Timing**. The Property is intended to be developed with the phasing set forth in the PUD, which provides the Development will be constructed in one (1), 20-year phase. Construction will be commenced by December 31, 2024 and shall be completed by December 31, 2044. For purposes of the PUD, "commencement" means securing approved construction drawings for the first portion of the Development and "completion" is defined as the installation of horizontal infrastructure and City approval of as-builts. After Development commencement has occurred, there shall be development activity, which is defined as active building permits for residential development, for a five (5)-year period. If the Applicant fails to obtain a building permit from the City for the first home within the Property within five (5) years from the Applicant commencing the Development, the Applicant will lose its transportation concurrency/reserved roadway capacity for the Property and shall have to reapply for said transportation concurrency/reserved roadway capacity before commencing development. Once the Applicant obtains its first building permit for residential development within the Property, it shall be vested for transportation concurrency/reserved roadway capacity. The City shall review the Development at least once every twelve (12) months to determine if there has been demonstrated good faith compliance with this Agreement, pursuant to Section 163.3235, Florida Statutes.

8. **Authority and Duration**. This Agreement is made and granted pursuant to Sections 163.3220-163.3243, Florida Statutes, and is effective through the twentieth (20th) anniversary of the Effective Date of this Agreement, and any extension of this Agreement.

9. **Amendment, Extension of Agreement**. If state or federal laws are enacted after the execution of this Agreement that are applicable to and preclude the Parties' compliance with the terms of this Agreement, this Agreement shall be modified or revoked as necessary to comply with the relevant State or federal laws, pursuant to Section 163.3241, Florida Statutes, as may be amended from time to time. The duration of this Agreement may be extended by the City pursuant to law and after conducting a public hearing in the manner specified in Section 163.3225, Florida Statutes, as may be amended from time to time.

10. **Necessity to Obtain Permits**. The Applicant acknowledges its obligation to obtain all necessary federal, state and other local development permits (not mentioned herein) for development of the Property. The failure of this Agreement to address any particular permit, condition, term or restriction applicable to development of the Property shall not relieve the

Applicant or any successors or assigns of the necessity of complying with federal, state, and other local permitting requirements, conditions, terms or restrictions as may be applicable.

11. **Agreement Consistent with Comprehensive Plan and Section 163.3180, Florida Statutes (2020).** The City hereby acknowledges and agrees that (i) the Development is consistent with Florida Statutes and with the City's Comprehensive Plan and Land Development Regulations, and (ii) that the City's Comprehensive Plan is in compliance with the State of Florida Comprehensive Plan.

12. **Remedies**. Each party to this Agreement shall be entitled to seek enforcement of this Agreement against the other party consistent with Section 163.3243, Florida Statutes, as may be amended from time to time.

13. **Binding Effect**. The burdens of this Agreement shall be binding upon, and the benefits of this Agreement shall inure to, all successors in interest to the Parties to this Agreement. When Applicant is used in this Agreement, it includes Applicant and any successors and assigns owning any rights to the Property, jointly and severally, assuming all their obligations set out in the Agreement, unless the obligations have been fully discharged.

14. **Applicable Law: Jurisdiction and Venue**. This Agreement and the rights and obligations of the City and Applicant under this Agreement shall be governed by, construed under, and enforced in accordance with the laws of the State of Florida (2021). This Agreement may be enforced as provided in Section 163.3243, Florida Statutes, as may be amended from time to time. Venue for any litigation pertaining to the subject matter of this Agreement shall be exclusively in Clay County, Florida. If any provision of this Agreement, or the application of this Agreement to any person or circumstances, shall to any extent be held invalid or unenforceable by a court of competent jurisdiction, then the remainder of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

The fact that this Agreement does not detail all laws, rules, regulations, permits, conditions, terms and restrictions that must be satisfied to complete the Development contemplated by this Agreement shall not relieve Applicant or its successors in interest of the obligation to comply with the law governing such permit requirements, conditions, terms and restrictions.

Each of the parties hereby voluntarily and intentionally waives any right that it may have to a trial by jury in respect of any litigation based hereon, or arising out of, under or in connection with this Agreement, or in respect of any course of conduct, statements (whether oral or written), or actions of either party in respect hereof. This provision is a material inducement for each of the parties to enter into this Agreement.

15. **Joint Preparation**. Preparation of this Agreement has been a joint effort of the parties and the resulting document shall not, solely as a matter of judicial construction, be construed more severely against one of the parties than the other.

16. **Exhibits**. All exhibits attached to this Agreement contain additional terms of this Agreement and are incorporated into this Agreement by reference.

17. **Captions or Paragraph Headings**. Captions and paragraph headings contained in this Development Agreement are for convenience and reference only, and in no way define, describe, extend or limit the scope of intent of this Agreement, nor the intent of any provision of this Agreement.

18. **Counterparts**. This Agreement may be executed in counterparts, each constituting a duplicate original; such counterparts shall constitute one and the same Agreement.

19. **Effective Date and Recordation**. This Agreement shall become effective fifteen (15) days after it has been recorded in the Public Records of Clay County (the "**Effective Date**").

20. **Amendment**. This Agreement may be amended, cancelled or revoked consistent with the notice and hearing procedures of Section 163.3225, Florida Statutes, and the terms of Section 163.3237, Florida Statutes, as may be amended from time to time.

21. **Further Assurances**. Each party to this Agreement agrees to do, execute, acknowledges and deliver, or cause to be done, executed, acknowledged and delivered, all such further acts, and assurances in a manner and to the degree allowed by law, as shall be reasonably requested by the other party in order to carry out the intent of and give effect to this Agreement. Without in any manner limiting the specific rights and obligations set forth in this Agreement or illegally limiting or infringing upon the governmental authority of the City, the Parties declare their intention to cooperate with each other in effecting the purposes of this Agreement, and to coordinate the performance of their respective obligations under the terms of this Agreement.

22. **Notices**. Any notices or reports required by this Development Agreement shall be sent to the following:

To the City:
City Manager
City of Green Cove Springs
321 Walnut Street
Green Cove Springs, Florida 32043

With copies to:
Jim Arnold, Attorney
City of Green Cove Springs
321 Walnut Street and P.O Box 1570
Green Cove Springs, Florida 32043
cityattorney@greencovesprings.com

To the Applicant:
D.R. Horton, Inc. – Jacksonville
Attn: John R. Gislason
4220 Race Track Road
St. Johns, Florida 32259

With copies to:
Ellen Avery-Smith, Esq.
Rogers Towers, P.A.
100 Whetstone Place, Suite 200
St. Augustine, Florida 32086

Passed and Duly Adopted by the City Council of the City of Green Cove Spring, Florida this 17th day of May, 2022.

Attest:

Erin West, City Clerk

CITY OF GREEN COVE SPRINGS, FLORIDA, a municipal corporation

By: _____
Daniel M. Johnson, Mayor

By: _____
Steve Kennedy, City Manager

Approved as to form, legal sufficiency and execution:

By: _____
L. J. Arnold, III, City Attorney

Signed, sealed and delivered in the presence of:

Witness
Print Name: Deborah McClure

Witness
Print Name: Maria Debarros

D.R. HORTON INC. -JACKSONVILLE,
a Delaware corporation

By: VP
Its: Philip A Framento, Vice President
Date: 5/31/22

STATE OF FLORIDA

COUNTY OF St. Johns

The foregoing instrument was acknowledged before me by means of X physical presence or ___ online notarization on this day 31 of May, 2022, by Philip A Framento, as Vice President of D.R. Horton, Inc. - Jacksonville., a Delaware corporation, on behalf of the corporation, who is (check one) ☒ personally known to me or ☐ has produced a valid driver's license as identification.

Notary Public
Name: Deborah E McClure
Commission Expires: _____

DEBORAH E. MCCLURE
Commission # GG 967814
Expires July 10, 2024
Bonded Thru Budget Notary Services

EXHIBIT "A-1"

The Property Before Land Exchange

A portion of Section 38 of the George I.F. Clarke Grant, Township 6 South, Range 26 East, Clay County, Florida, being a portion of those lands described and recorded in Official Records Book 1545, page 513 of the Public Records of said county and being more particularly described as follows:

For a Point of Reference, commence at the intersection of the Easterly right of way line of County Road 15A, (South Oakridge Avenue), a 100 foot right of way as presently established with the Southerly right of way line of Green Cove Avenue, a variable width right of way as presently established; thence Southerly along said Easterly right of way line and along the arc of a curve concave Westerly having a radius of 1959.86 feet, through a central angle of 14°47'09", an arc length of 505.76 feet to the point of tangency of said curve, said arc being subtended by a chord bearing and distance of South 05°15'37" East, 504.36 feet; thence South 02°07'57" West, continuing along last said Easterly right of way line, 1331.79 feet to the Southwest corner of those lands described and recorded in Official Records Book 3863, page 203 of said Public Records and the Point of Beginning.

From said Point of Beginning, thence Easterly and Northeasterly along the Southerly and Southeasterly boundary of last said lands, the following 12 courses: Course 1, thence South 88°31'42" East, departing last said Easterly right of way line, 282.59 feet; Course 2, thence North 21°17'17" East, 161.55 feet; Course 3, thence South 68°42'43" East, 287.10 feet; Course 4, thence South 58°52'43" East, 32.90 feet; Course 5, thence South 37°48'54" East, 22.40 feet; Course 6, thence North 70°53'31" East, 15.20 feet; Course 7, thence North 34°14'49" East, 52.23 feet; Course 8, thence South 88°17'22" East, 94.17 feet; Course 9, thence North 31°43'31" East, 427.82 feet; Course 10, thence North 73°46'32" West, 158.11 feet; Course 11, thence North 13°06'51" East, 477.10 feet; Course 12, thence North 10°55'57" East, 142.00 feet to a point lying on the Southwesterly line of those lands described and recorded as Parcel "A" in Official Records Book 3316, page 1098 of said Public Records; thence South 77°06'26" East, along last said line, 2932.48 feet to the Northwest corner of those lands described and recorded in Official Records Book 3855, page 1391 of said Public Records; thence Southerly along the westerly line thereof, the following 3 courses: Course 1, thence South 21°54'49" East, 3242.16 feet; Course 2, thence South 68°05'09" West, 1307.43 feet; Course 3, thence South 21°54'51" East, 1003.87 feet to a point lying on the Northerly line of an Access and Maintenance Easement as described an recorded in Official Records Book 3855, page 1394 of said Public Records; thence Westerly along said Northerly line, the following 26 courses: Course 1, thence South 37°01'31" West, 149.07 feet to the point of curvature of a curve concave Northwesterly having a radius of 955.00 feet; Course 2, thence Southwesterly along the arc of said curve, through a central angle of 16°37'06", an arc length of 276.99 feet to a point on said curve, said arc being subtended by a chord bearing and distance of South 45°20'05" West, 276.02 feet; Course 3, thence South 67°24'13" West, along a non-tangent line, 105.10 feet; Course 4, thence South 53°45'05" West, 12.16 feet; Course 5, thence South 13°14'26" West, 24.72 feet; Course 6, thence South 63°07'28" West, 859.11 feet; Course 7, thence North 26°52'32" West, 5.00 feet; Course 8, thence South 63°07'28" West, 382.73 feet; Course 9, thence North 26°52'32" West,

31.65 feet; Course 10, thence South 63°07'28" West, 74.60 feet; Course 11, thence South 26°52'32" East, 36.65 feet; Course 12, thence South 63°07'28" West, 102.14 feet to the point of curvature of a curve concave Northerly having a radius of 955.00 feet; Course 13, thence Westerly along the arc of said curve, through a central angle of 22°47'15", an arc length of 379.82 feet to the point of tangency of said curve, said arc being subtended by a chord bearing and distance of South 74°31'05" West, 377.32 feet; Course 14, thence South 85°54'43" West, 731.91 feet; Course 15, thence North 04°05'17" West, 5.00 feet to a point on a non-tangent curve concave Northerly having a radius of 250.00 feet; Course 16, thence Westerly along the arc of said curve, through a central angle of 05°44'03", an arc length of 25.02 feet to the point of tangency of said curve, said arc being subtended by a chord bearing and distance of South 88°46'45" West, 25.01 feet; Course 17, thence North 88°21'14" West, 61.78 feet; Course 18, thence North 19°49'14" West, 8.30 feet; Course 19, thence North 55°44'57" West, 30.16 feet; Course 20, thence South 67°18'10" West, 29.23 feet; Course 21, thence South 07°09'24" West, 17.00 feet; Course 22, thence North 88°21'14" West, 362.37 feet; Course 23, thence South 01°38'46" West, 5.00 feet; Course 24 thence North 88°21'14" West, 800.00 feet; Course 25, thence North 01°38'46" East, 10.00 feet; Course 26, thence North 88°21'14" West, 355.52 feet to a point lying on the aforementioned Easterly right of way line of County Road 15A; thence North 02°07'57" East, along last said Easterly right of way line, 5150.65 feet to the Point of Beginning.

Containing 560.52 acres, more or less.

EXHIBIT "A-2"

The Property After Land Exchange

A portion of Section 38 of the George I.F. Clarke Grant, Township 6 South, Range 26 East, Clay County, Florida, being a portion of those lands described and recorded in Official Records Book 1545, page 513 and a portion of Parcel "A" as described and recorded in Official Records Book 3316, page 1098, both of the Public Records of said county and being more particularly described as follows:

For a Point of Reference, commence at the intersection of the Southerly right of way line of Green Cove Avenue, a variable width right of way as presently established, with the Westerly right of way line of CSX Railroad, a 100 foot right of way as presently established; thence South 21°54'49" East, along said Westerly right of way line, 1424.74 feet to the Point of Beginning.

From said Point of Beginning, thence South 21°54'49" East, continuing along said Westerly right of way line, 1502.39 feet to the Northeast corner of those lands described and recorded in Official Records Book 3855, page 1391, of said Public Records; thence North 77°06'26" West, departing said Westerly right of way line and along the Northerly line of last said lands, 66.98 feet to the Northwesterly corner thereof; thence Southerly along the Westerly boundary line of last said lands the following 3 courses: Course 1, thence South 21°54'49" East, 3242.16 feet; Course 2, thence South 68°05'09" West, 1307.43 feet; Course 3, thence South 21°54'51" East, 1003.87 feet to a point lying on the Northerly line of that certain Access & Maintenance Easement described and recorded in Official Records Book 3855, page 1394, of said Public Records; thence Westerly along said Northerly line the following 26 courses: Course 1, thence South 37°01'31" West, departing said Westerly boundary line, 149.07 feet to the point of curvature of a curve concave Northwesterly having a radius of 955.00 feet; Course 2, thence Southwesterly along the arc of said curve, through a central angle of 16°37'06", an arc length of 276.99 feet to a point on said curve, said arc being subtended by a chord bearing and distance of South 45°20'05" West, 276.02 feet; Course 3, thence South 67°24'13" West, along a non-tangent line, 105.10 feet; Course 4, thence South 53°45'05" West, 12.16 feet; Course 5, thence South 13°14'26" West, 24.72 feet; Course 6, thence South 63°07'28" West, 859.11 feet; Course 7, thence North 26°52'32" West, 5.00 feet; Course 8, thence South 63°07'28" West, 382.73 feet; Course 9, thence North 26°52'32" West, 31.65 feet; Course 10, thence South 63°07'28" West, 74.60 feet; Course 11, thence South 26°52'32" East, 36.65 feet; Course 12, thence South 63°07'28" West, 102.14 feet to the point of curvature of a curve concave Northerly having a radius of 955.00 feet; Course 13, thence Westerly along the arc of said curve, through a central angle of 22°47'15", an arc length of 379.82 feet to the point of tangency of said curve, said arc being subtended by a chord bearing and distance of South 74°31'05" West, 377.32 feet; Course 14, thence South 85°54'43" West, 731.91 feet; Course 15, thence North 04°05'17" West, 5.00 feet to a point on a non-tangent curve concave Northerly having a radius of 250.00 feet; Course 16, thence Westerly along the arc of said curve, through a central angle of 05°44'03", an arc length of 25.02 feet to the point of tangency of said curve, said arc being subtended by a chord bearing and distance of South 88°46'45" West, 25.01 feet; Course 17, thence North 88°21'14" West, 61.78 feet; Course 18, thence North 19°49'14" West, 8.30 feet; Course 19, thence North 55°44'57" West, 30.16 feet; Course 20, thence South 67°18'10" West, 29.23 feet; Course 21, thence South 07°09'24" West, 17.00 feet; Course 22, thence North 88°21'14" West, 362.37 feet;

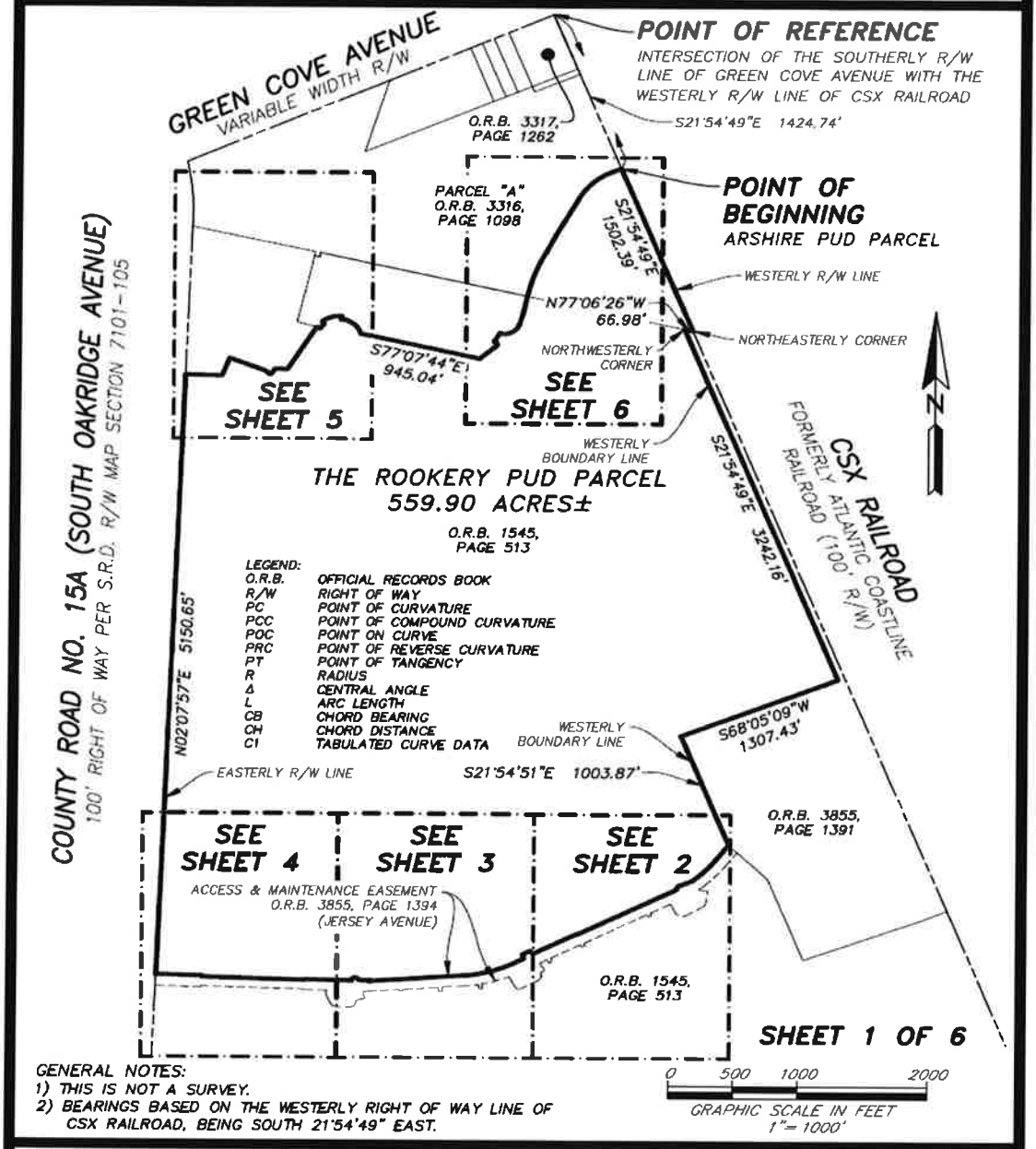
Course 23, thence South 01°38'46" West, 5.00 feet; Course 24, thence North 88°21'14" West, 800.00 feet; Course 25, thence North 01°38'46" East, 10.00 feet; Course 26, thence North 88°21'14" West, 355.52 feet to a point lying on the Easterly right of way line of County Road 15A (South Oakridge Avenue), a 100 foot right of way as presently established; thence North 02°07'57" East, along said Easterly right of way line, 5150.65 feet to the Southwest corner of those lands described and recorded in Official Records Book 3863, page 203, of said Public Records; thence Easterly along the Southerly and Southeasterly lines of last said lands the following 9 courses: Course 1, thence South 88°31'42" East, departing said Easterly right of way line, 282.59 feet; Course 2, thence North 21°17'17" East, 161.55 feet; Course 3, thence South 68°42'43" East, 287.10 feet; Course 4, thence South 58°52'43" East, 32.90 feet; Course 5, thence South 37°48'54" East, 22.40 feet; Course 6, thence North 70°53'31" East, 15.20 feet; Course 7, thence North 34°14'49" East, 52.23 feet; Course 8, thence South 88°17'22" East, 94.17 feet; Course 9, thence North 31°43'31" East, 427.82 feet to the Easterly most corner thereof; thence South 58°16'29" East, departing said Southeasterly line, 30.00 feet to a point on a non-tangent curve concave Southeasterly having a radius of 175.00 feet; thence Northeasterly along the arc of said curve, through a central angle of 16°53'45", an arc length of 51.61 feet to a point on said curve, said arc being subtended by a chord bearing and distance of North 40°10'24" East, 51.42 feet; thence North 41°22'44" West, along a non-tangent line, 29.96 feet to a point on a non-tangent curve concave Southerly having a radius of 198.38 feet; thence Easterly along the arc of said curve, through a central angle of 47°45'50", an arc length of 165.38 feet to a point on said curve, said arc being subtended by a chord bearing and distance of North 73°41'49" East, 160.63 feet; thence South 05°22'04" West, along a non-tangent line, 24.76 feet to a point on a non-tangent curve concave Southwesterly having a radius of 175.00 feet; thence Southeasterly along the arc of said curve, through a central angle of 67°09'24", an arc length of 205.12 feet to a point on said curve, said arc being subtended by a chord bearing and distance of South 51°03'13" East, 193.58 feet; thence South 77°07'44" East, along a non-tangent line, 945.04 feet; thence North 49°36'09" East, 172.16 feet; thence North 27°02'28" East, 20.00 feet; thence North 60°40'11" West, 35.15 feet; thence North 31°37'11" East, 86.00 feet to a point on a non-tangent curve concave Northwesterly having a radius of 120.00 feet; thence Northeasterly along the arc of said curve, through a central angle of 87°21'29", an arc length of 182.96 feet to a point of compound curvature, said arc being subtended by a chord bearing and distance of North 63°04'27" East, 165.75 feet; thence Northerly along the arc of a curve concave Westerly having a radius of 950.00 feet, through a central angle of 06°31'27", an arc length of 108.17 feet to the point of tangency of said curve, said arc being subtended by a chord bearing and distance of North 16°08'00" East, 108.12 feet; thence North 12°52'16" East, 174.12 feet to the point of curvature of a curve concave Easterly having a radius of 1250.00 feet; thence Northerly along the arc of said curve, through a central angle of 17°35'55", an arc length of 383.94 feet to a point on said curve, said arc being subtended by a chord bearing and distance of North 21°40'14" East, 382.43 feet; thence Northeasterly along the arc of a non-tangent curve concave Southeasterly having a radius of 1441.24 feet, through a central angle of 05°53'59", an arc length of 148.41 feet to the point of tangency of said curve, said arc being subtended by a chord bearing and distance of North 26°05'53" East, 148.34 feet; thence North 29°02'53" East, 373.29 feet to the point of curvature of a curve concave Southeasterly having a radius of 517.02 feet; thence Northeasterly along the arc of said curve, through a central angle of 39°09'19", an arc length of 353.33 feet to a point on said curve, said arc being subtended by a chord bearing and distance of

North 48°37'32" East, 346.49 feet; thence North 68°05'11" East, along a non-tangent line, 70.00 feet to the Point of Beginning.

Containing 559.90 acres, more or less.

SKETCH TO ACCOMPANY DESCRIPTION OF

A PORTION OF SECTION 38 OF THE GEORGE I.F. CLARKE GRANT, TOWNSHIP 6 SOUTH, RANGE 26 EAST, CLAY COUNTY, FLORIDA, BEING A PORTION OF THOSE LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 1545, PAGE 513, AND A PORTION OF PARCEL "A" AS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 3316, PAGE 1098, BOTH OF THE PUBLIC RECORDS OF SAID COUNTY, BEING MORE PARTICULARLY DESCRIBED IN SEPARATE ATTACHMENT.



GENERAL NOTES:
1) THIS IS NOT A SURVEY.
2) BEARINGS BASED ON THE WESTERLY RIGHT OF WAY LINE OF CSX RAILROAD, BEING SOUTH 21°54'49" EAST.

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED USING A DIGITAL SIGNATURE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

ETM
Surveying & Mapping, Inc.
VISION • EXPERIENCE • RESULTS
14775 Old St. Augustine Road, Jacksonville, FL. 32258
Tel: (904) 642-8550 Fax: (904) 642-4165
Certificate of Authorization No.: LB 3624

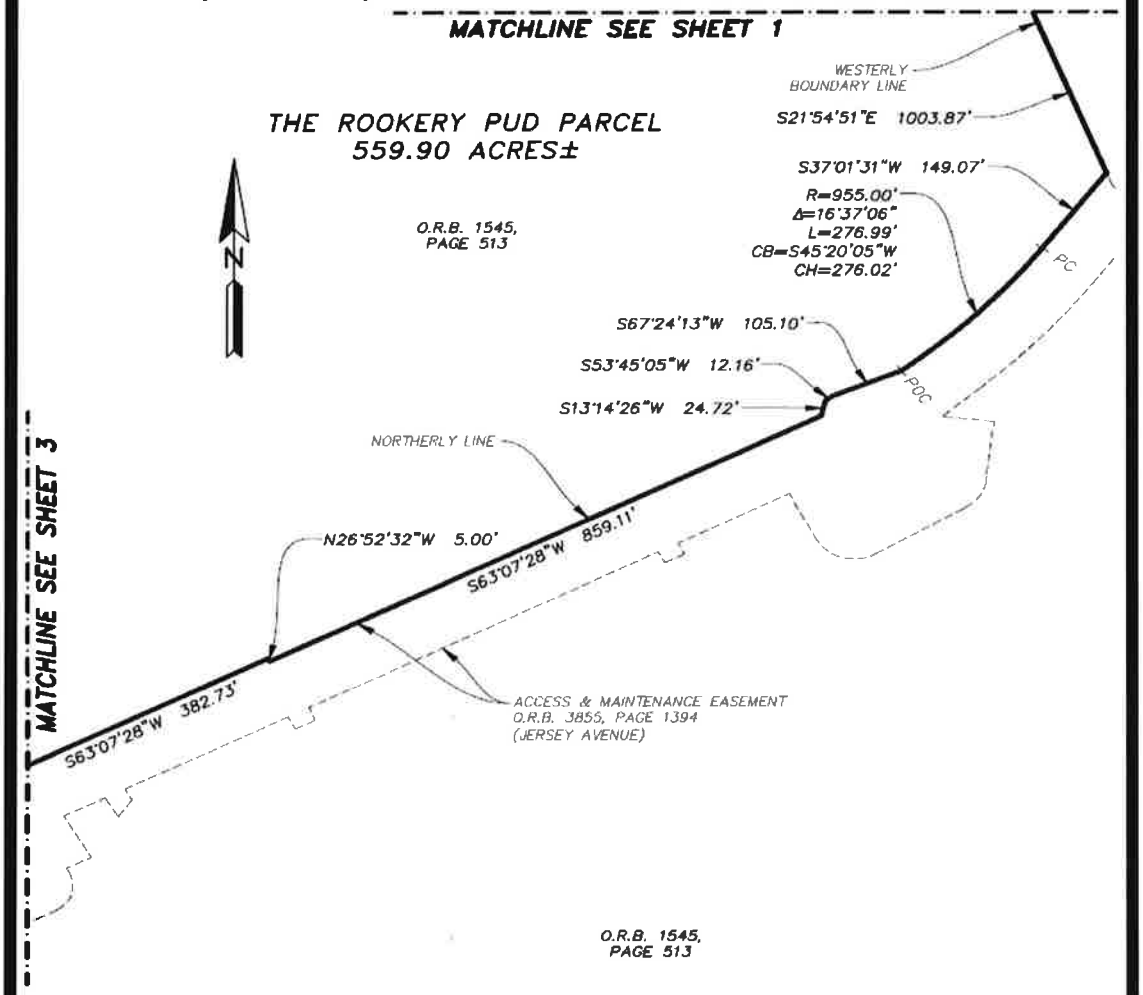
Digital Signature by: Bob L. Pittman, P.S.M.

BOB L. PITTMAN
PROFESSIONAL SURVEYOR AND MAPPER
STATE of FLORIDA PSM No. 4827

SCALE: 1"=1000'
DATE: MARCH 3, 2022

ORDER NO.: 20-355.06 FILE NO.: 127H-15.06A DRAWN BY: JMB/BNC CAD FILE: E:\Survey\RMApro\Custatrons\Sketches\Ayrshire PUD Sketch\ROOKERY PUD.dwg

A PORTION OF SECTION 38 OF THE GEORGE I.F. CLARKE GRANT, TOWNSHIP 6 SOUTH, RANGE 26 EAST, CLAY COUNTY, FLORIDA, BEING A PORTION OF THOSE LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 1545, PAGE 513, AND A PORTION OF PARCEL "A" AS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 3316, PAGE 1098, BOTH OF THE PUBLIC RECORDS OF SAID COUNTY.



LEGEND:

O.R.B.	OFFICIAL RECORDS BOOK
R/W	RIGHT OF WAY
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
POC	POINT ON CURVE
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
R	RADIUS
Δ	CENTRAL ANGLE
L	ARC LENGTH
CB	CHORD BEARING
CH	CHORD DISTANCE
C1	TABULATED CURVE DATA

SHEET 2 OF 6

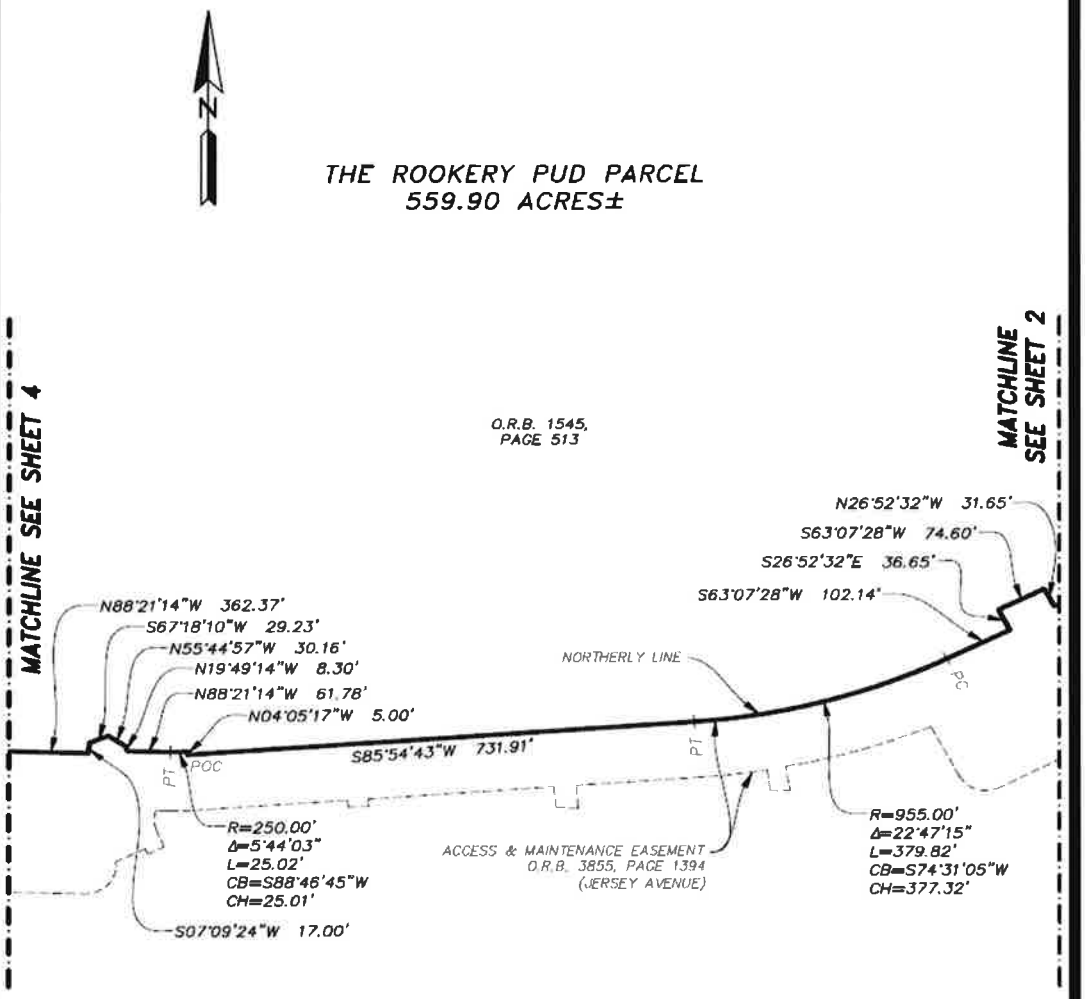
SEE SHEET 1 FOR GENERAL NOTES.

0 100 200 400
GRAPHIC SCALE IN FEET
1" = 200'

PREPARED BY:
ETM SURVEYING & MAPPING, INC.
14775 OLD ST. AUGUSTINE ROAD
JACKSONVILLE, FL 32258 (904) 642-8550
CERTIFICATE OF AUTHORIZATION NO. LB 3624

ORDER NO.: 20-355.06 FILE NO.: 127H-15.06A DRAWN BY: JMB/HNC CAD FILE: E:\Survey\RMAproj\Gustafsons\Sketches\Ayrshire PUD Sketch\ROOKERY PUD.dwg

A PORTION OF SECTION 38 OF THE GEORGE I.F. CLARKE GRANT, TOWNSHIP 6 SOUTH, RANGE 26 EAST, CLAY COUNTY, FLORIDA, BEING A PORTION OF THOSE LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 1545, PAGE 513, AND A PORTION OF PARCEL "A" AS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 3316, PAGE 1098, BOTH OF THE PUBLIC RECORDS OF SAID COUNTY.



LEGEND:

O.R.B.	OFFICIAL RECORDS BOOK
R/W	RIGHT OF WAY
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
POC	POINT ON CURVE
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
R	RADIUS
Δ	CENTRAL ANGLE
L	ARC LENGTH
CB	CHORD BEARING
CH	CHORD DISTANCE
C1	TABULATED CURVE DATA

SHEET 3 OF 6

SEE SHEET 1 FOR GENERAL NOTES.

0 100 200 400
GRAPHIC SCALE IN FEET
1" = 200'

PREPARED BY:
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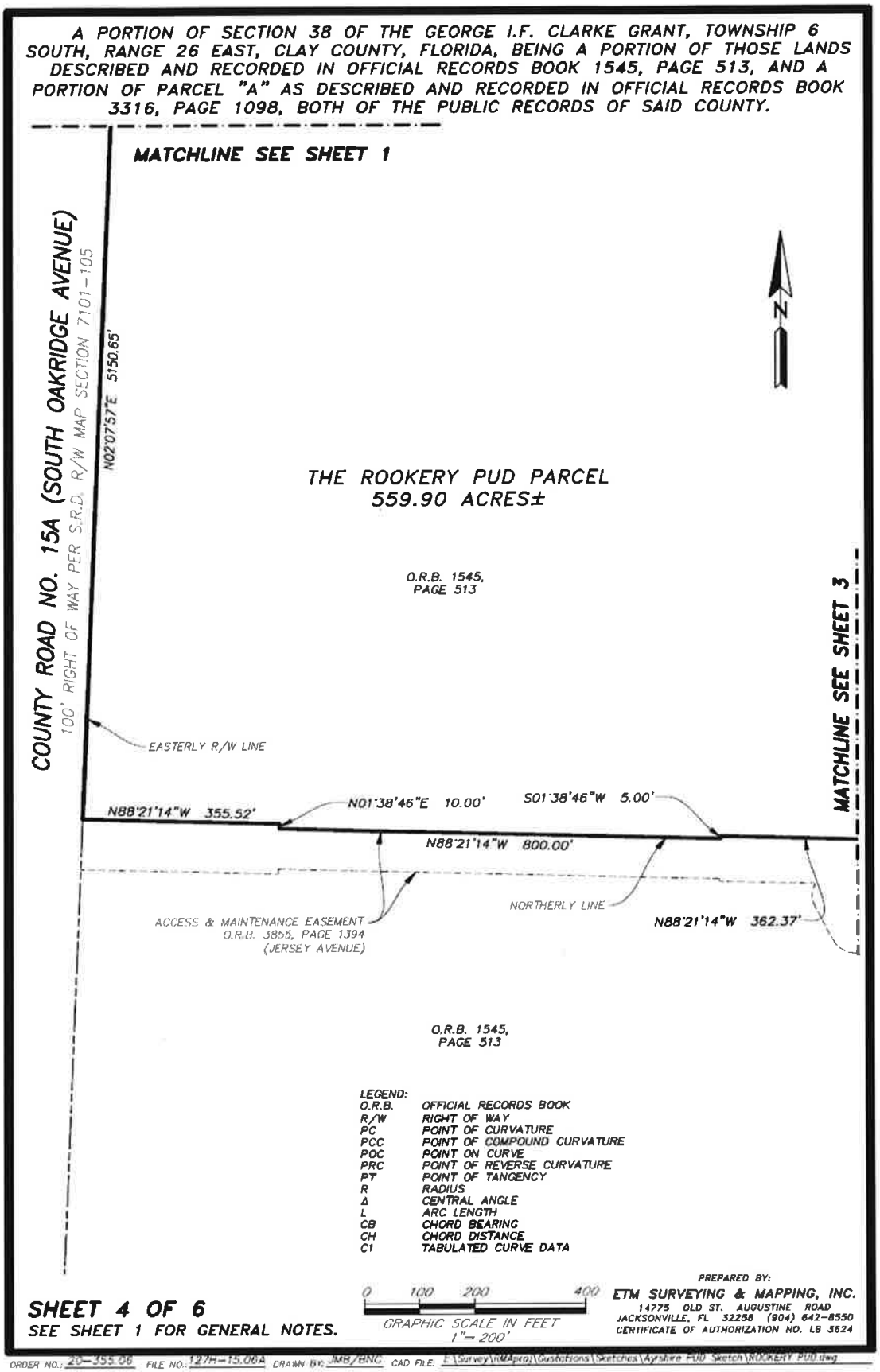
14775 OLD ST. AUGUSTINE ROAD
JACKSONVILLE, FL 32258 (904) 642-8550
CERTIFICATE OF AUTHORIZATION NO. LB 3624

ORDER NO: 20-355.08 FILE NO.: 127H-15.06A DRAWN BY: JMB/HNC CAD FILE: I:\Survey\RMAproj\Custations\Sketches\Ayrshire PUD Sketch\ROOKERY PUD.dwg

A PORTION OF SECTION 38 OF THE GEORGE I.F. CLARKE GRANT, TOWNSHIP 6 SOUTH, RANGE 26 EAST, CLAY COUNTY, FLORIDA, BEING A PORTION OF THOSE LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 1545, PAGE 513, AND A PORTION OF PARCEL "A" AS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 3316, PAGE 1098, BOTH OF THE PUBLIC RECORDS OF SAID COUNTY.



LEGEND:

O.R.B.	OFFICIAL RECORDS BOOK
R/W	RIGHT OF WAY
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
POC	POINT ON CURVE
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
R	RADIUS
Δ	CENTRAL ANGLE
L	ARC LENGTH
CB	CHORD BEARING
CH	CHORD DISTANCE
C1	TABULATED CURVE DATA

0 100 200 400
GRAPHIC SCALE IN FEET
1" = 200'

PREPARED BY:
ETM SURVEYING & MAPPING, INC.
14775 OLD ST. AUGUSTINE ROAD
JACKSONVILLE, FL 32258 (904) 642-8550
CERTIFICATE OF AUTHORIZATION NO. LB 3624

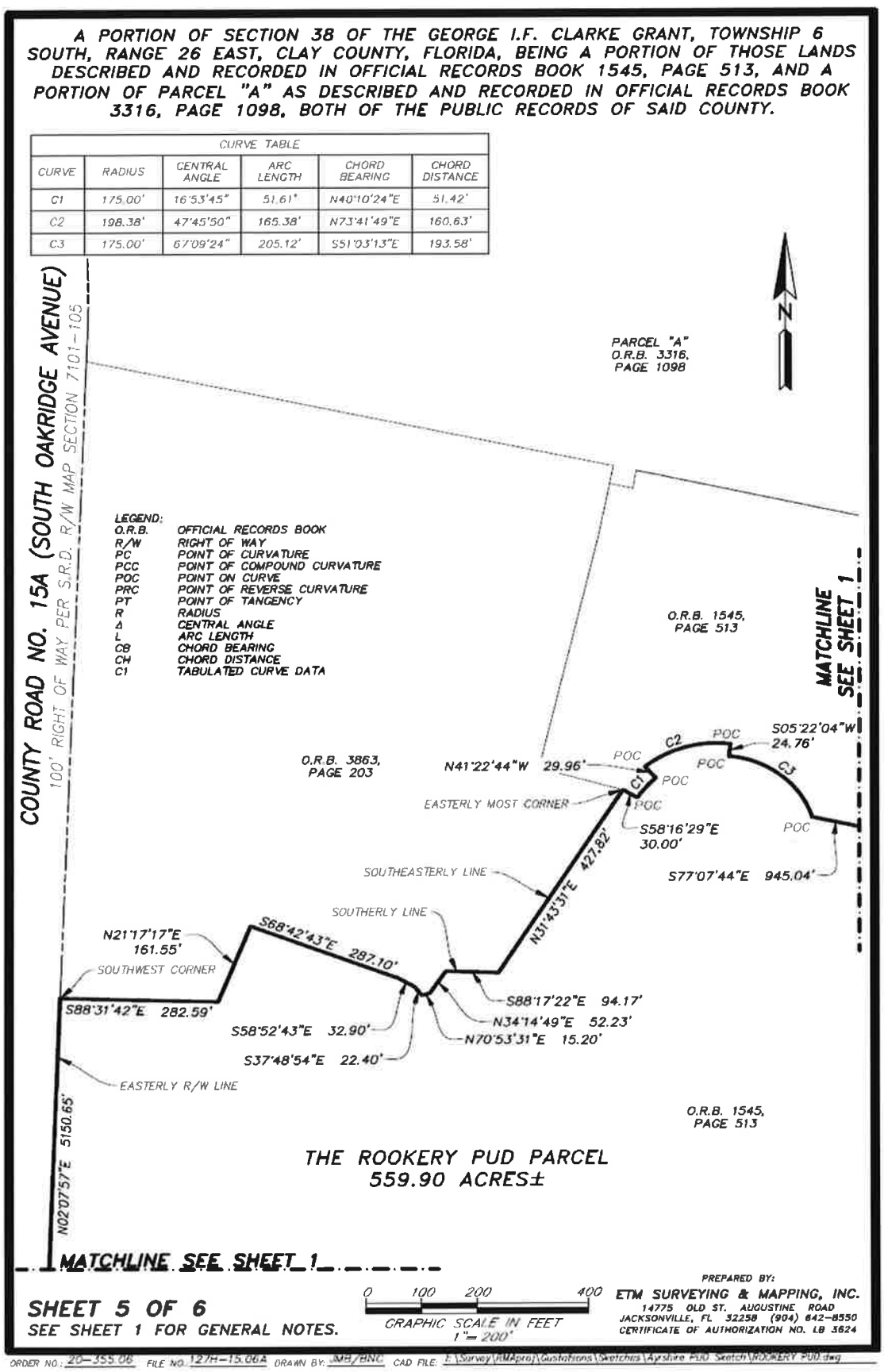
SHEET 4 OF 6

SEE SHEET 1 FOR GENERAL NOTES.

ORDER NO.: 20-355.06 FILE NO.: 127H-15.06A DRAWN BY: JMB/BNC CAD FILE: I:\Survey\MAPS\Gustations\Sketches\Ayrshire PUD Sketch\ROOKERY PUD.dwg

A PORTION OF SECTION 38 OF THE GEORGE I.F. CLARKE GRANT, TOWNSHIP 6 SOUTH, RANGE 26 EAST, CLAY COUNTY, FLORIDA, BEING A PORTION OF THOSE LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 1545, PAGE 513, AND A PORTION OF PARCEL "A" AS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 3316, PAGE 1098, BOTH OF THE PUBLIC RECORDS OF SAID COUNTY.

CURVE TABLE					
CURVE	RADIUS	CENTRAL ANGLE	ARC LENGTH	CHORD BEARING	CHORD DISTANCE
C1	175.00'	16°53'45"	51.61'	N40°10'24"E	51.42'
C2	198.38'	47°45'50"	165.38'	N73°41'49"E	160.63'
C3	175.00'	67°09'24"	205.12'	S51°03'13"E	193.58'



SHEET 5 OF 6

SEE SHEET 1 FOR GENERAL NOTES.

PREPARED BY:
ETM SURVEYING & MAPPING, INC.
14775 OLD ST. AUGUSTINE ROAD
JACKSONVILLE, FL 32258 (904) 642-8550
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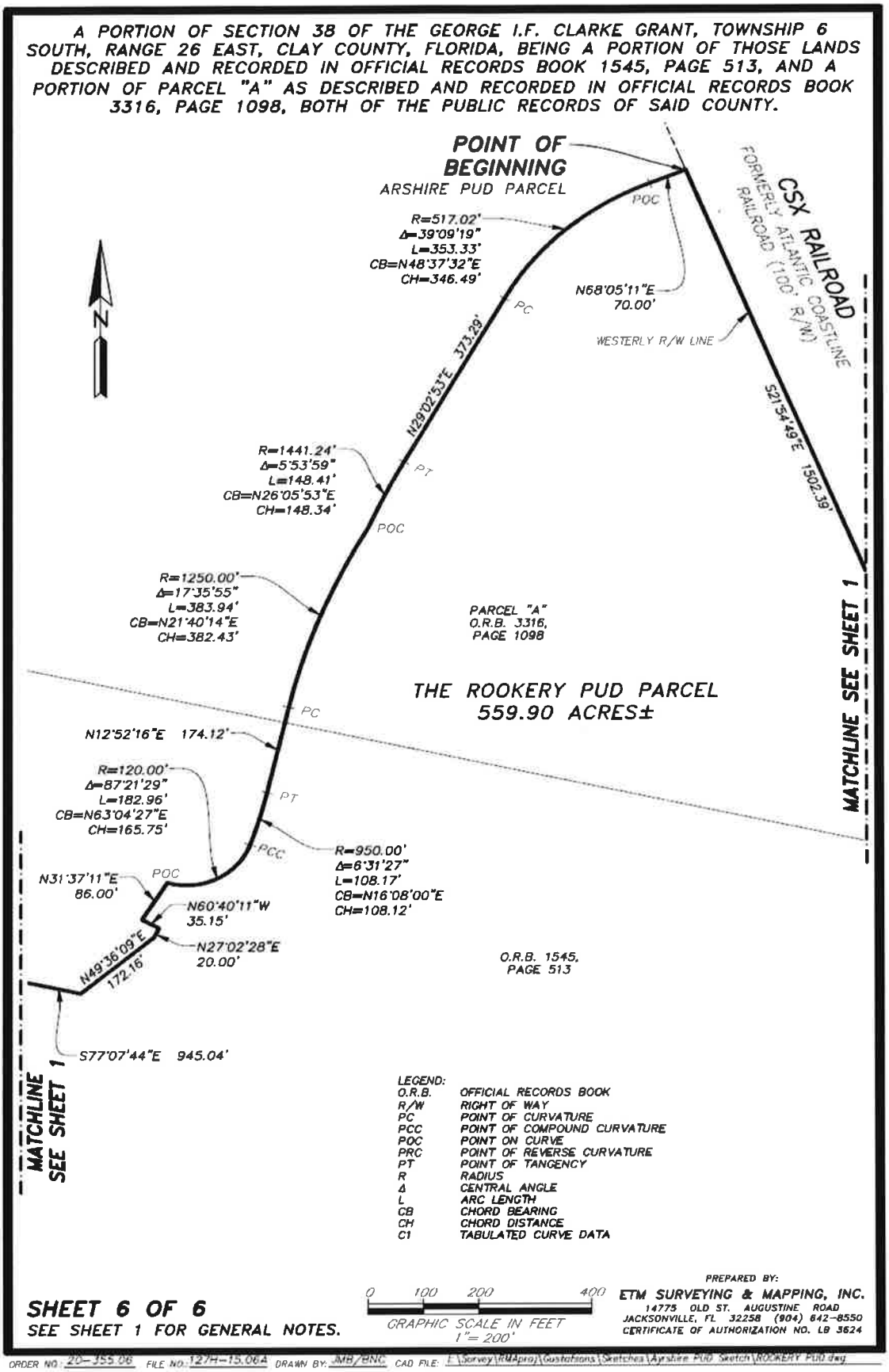


SHEET 6 OF 6

SEE SHEET 1 FOR GENERAL NOTES.

ORDER NO: 20-355.06 FILE NO: 12/H-15.064 DRAWN BY: JMB/ENC CAD FILE: I:\Survey\RUApro\Quotations\Sketches\Ayrshire PUD Sketch\ROOKERY PUD.dwg

EXHIBIT "B"

Conceptual Plan

EXHIBIT "C"

Connector Road Typical Section

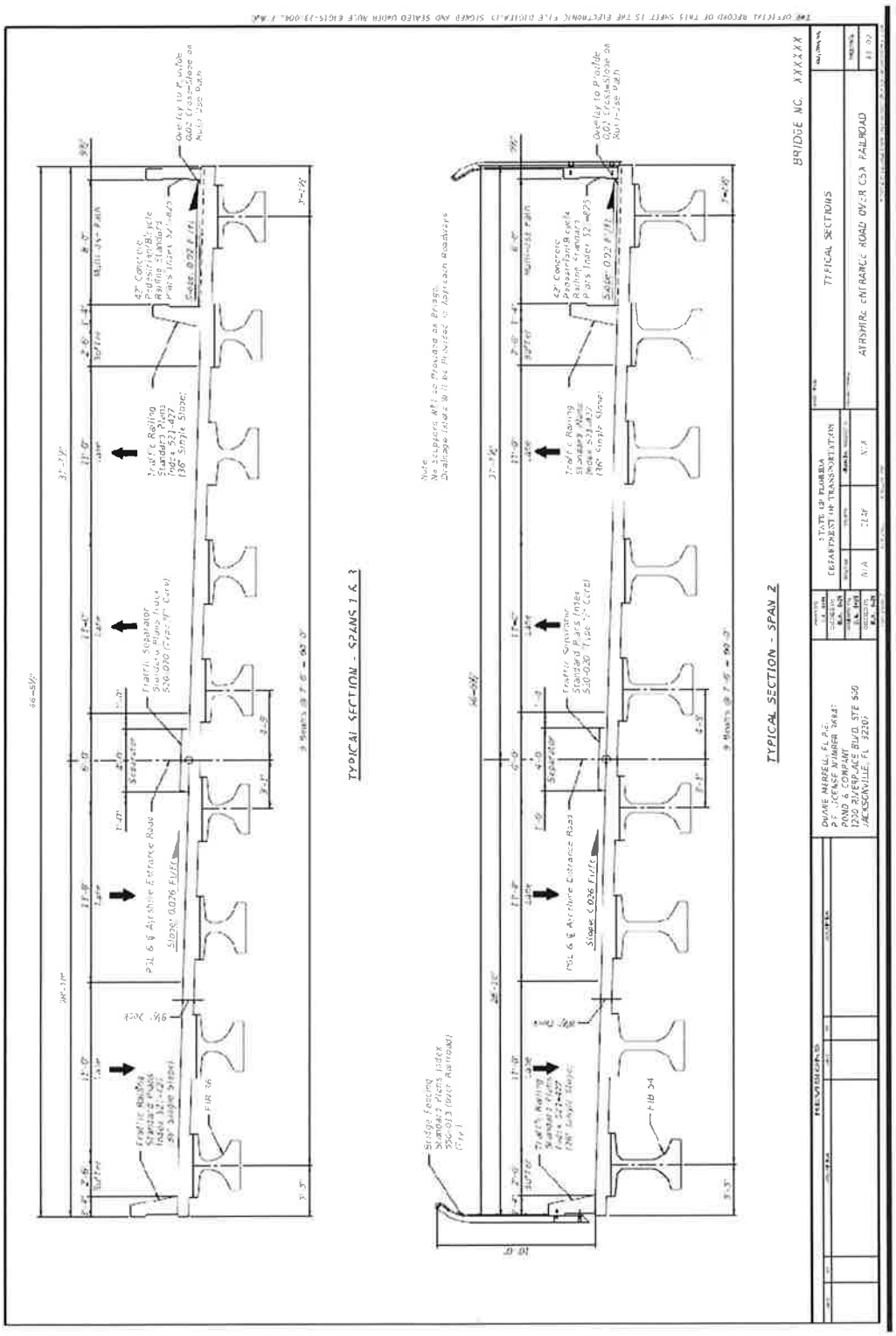
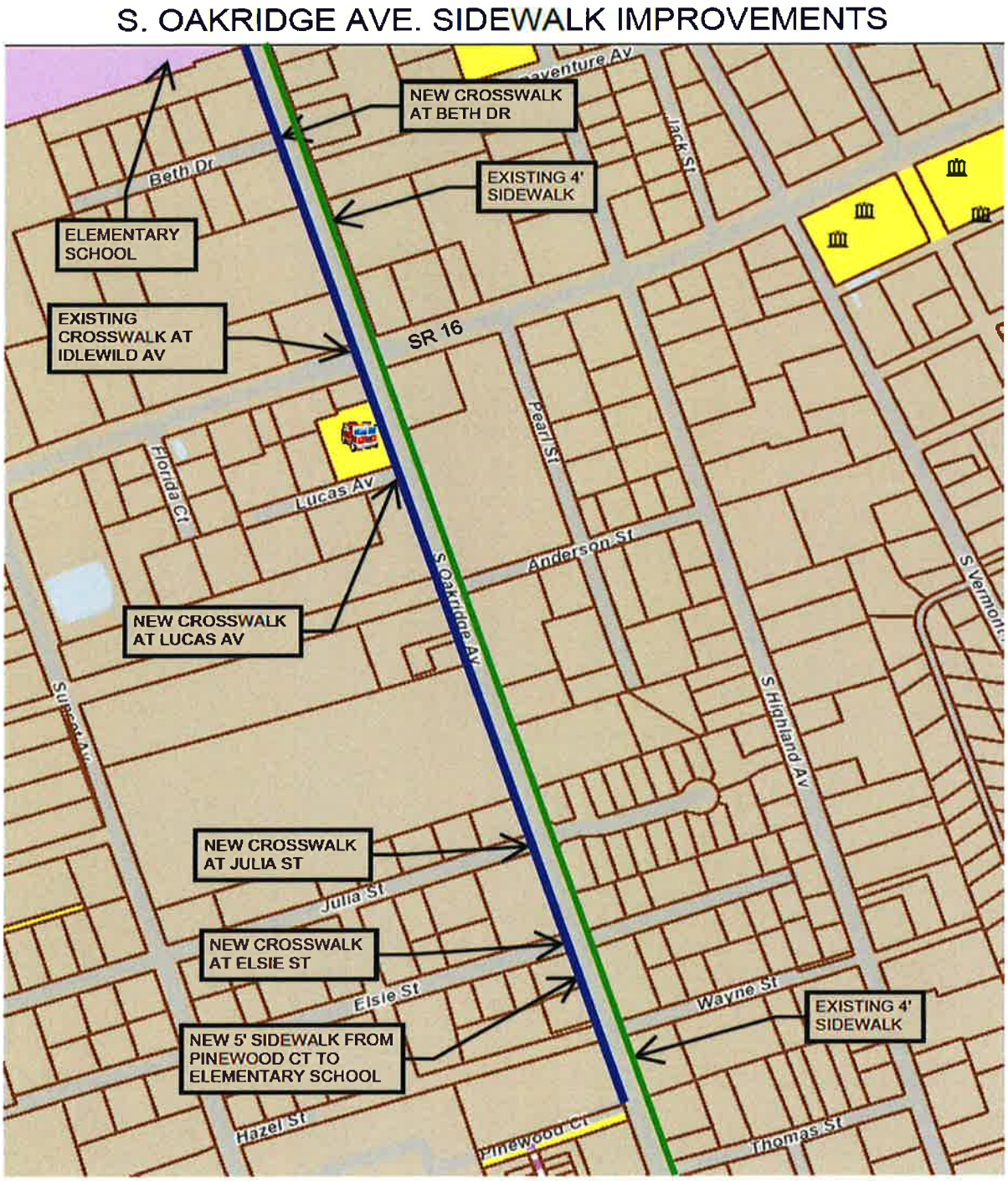


EXHIBIT "D"

Oakridge Avenue Improvements Plan



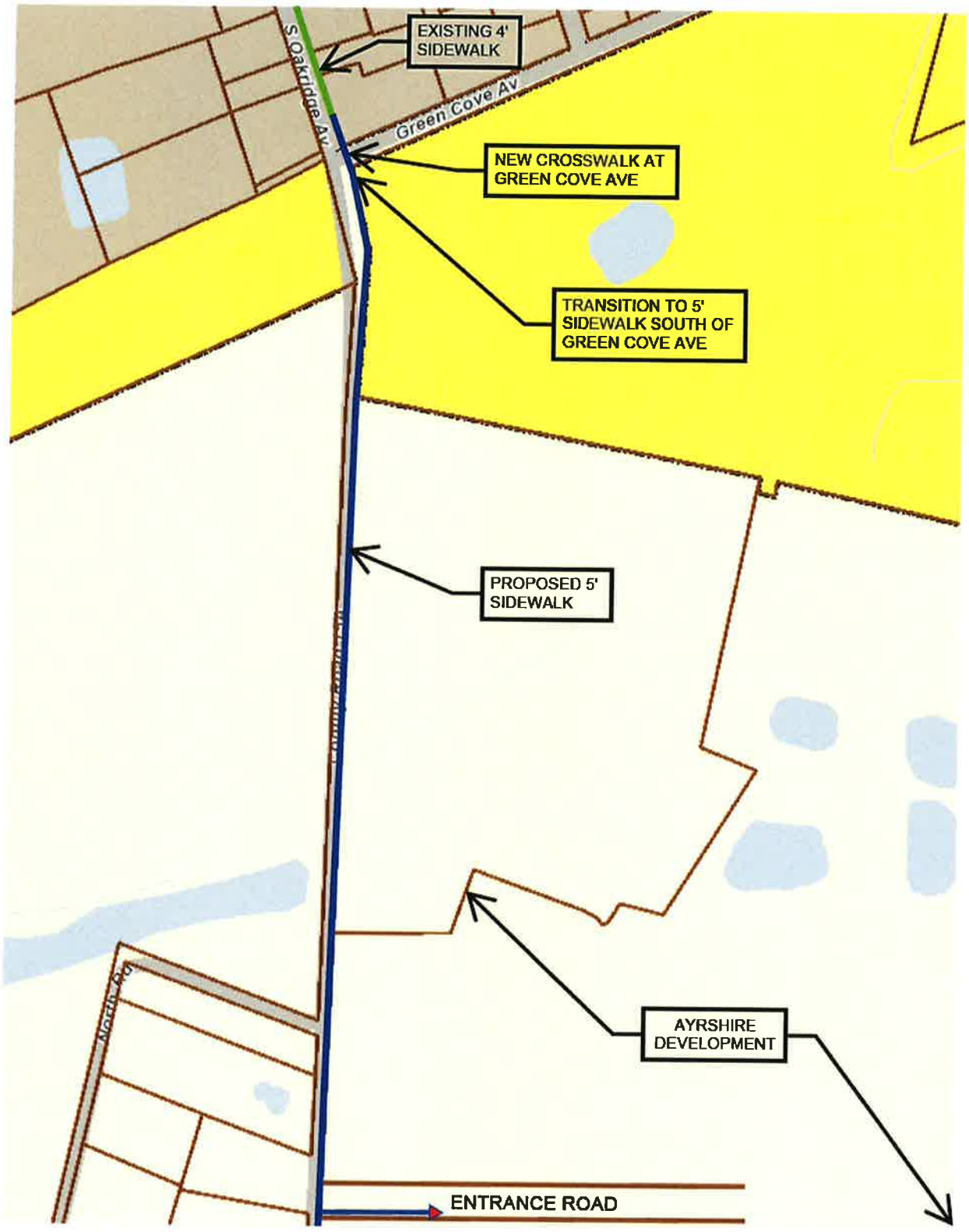

EXISTING 4' SIDEWALK
S Oakridge Av
Green Cove Av
NEW CROSSWALK AT GREEN COVE AVE
TRANSITION TO 5' SIDEWALK SOUTH OF GREEN COVE AVE
PROPOSED 5' SIDEWALK
North Rd
AYRSHIRE DEVELOPMENT
ENTRANCE ROAD

EXHIBIT "E"

Applicant Exchange Parcel

A portion of Section 38 of the George I.F. Clarke Grant, Township 6 South, Range 26 East, Clay County, Florida, being a portion of those lands described and recorded in Official Records Book 1545, page 513, of the Public Records of said county, being more particularly described as follows:

For a Point of Reference, commence at the intersection of the Southerly right of way line of Green Cove Avenue, a variable width right of way as presently established, with the Westerly right of way line of CSX Railroad, a 100 foot right of way as presently established; thence South 21°54'49" East, along said Westerly right of way line, 2927.14 feet to the Southeast corner of those lands described as Parcel "A" and recorded in Official Records Book 3316, page 1098, of said Public Records; thence North 77°06'26" West, departing said Westerly right of way line and along the Southerly line of said Parcel "A", 1313.50 feet to the Point of Beginning.

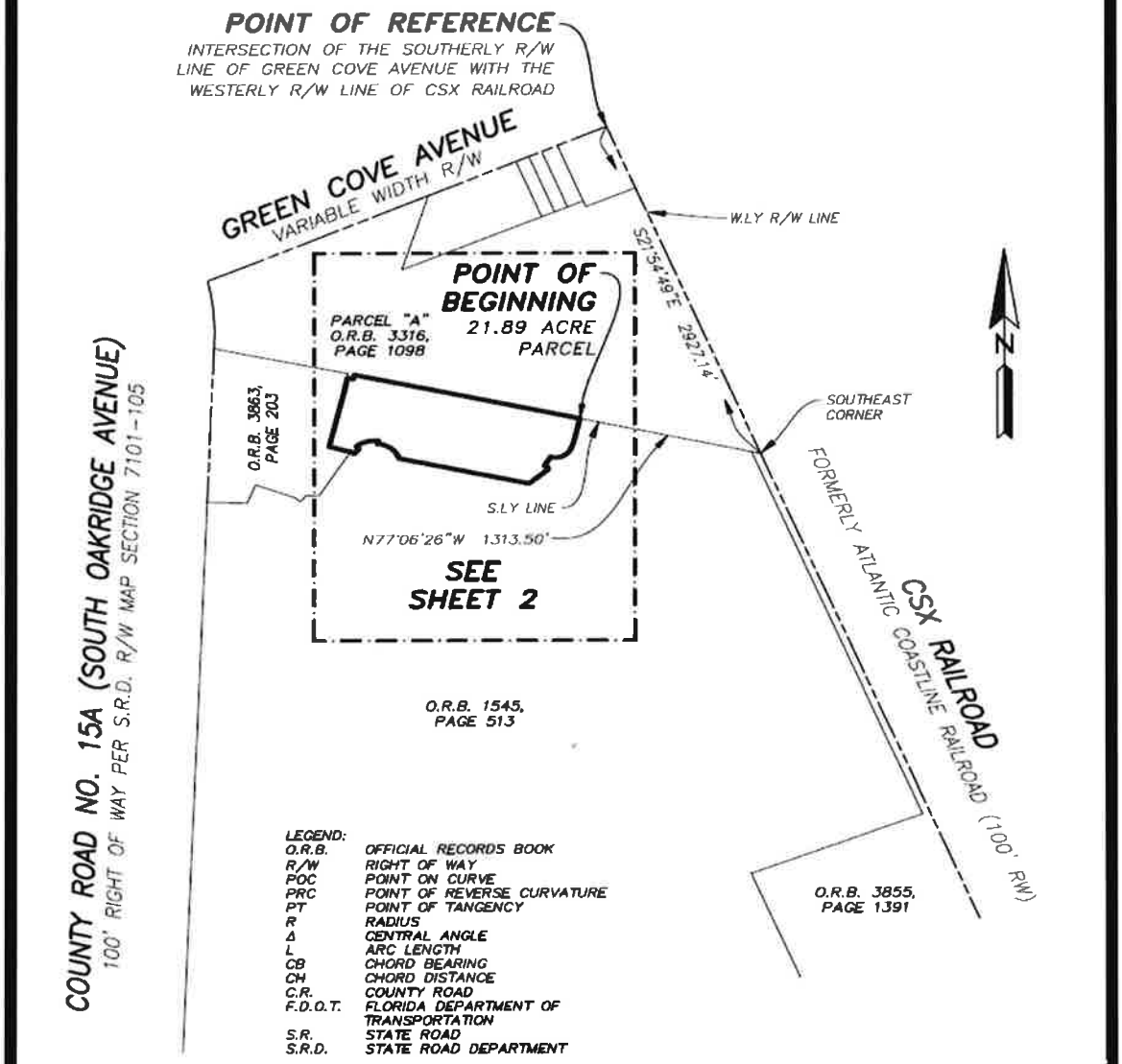
From said Point of Beginning, thence South 12°52'16" West, departing said Southerly line, 142.67 feet to the point of curvature of a curve concave Westerly having a radius of 950.00 feet; thence Southerly along the arc of said curve, through a central angle of 06°31'27", an arc length of 108.17 feet to a point of compound curvature, said arc being subtended by a chord bearing and distance of South 16°08'00" West, 108.12 feet; thence Southwesterly along the arc of a curve concave Northwesterly having a radius of 120.00 feet, through a central angle of 87°21'29", an arc length of 182.96 feet to a point on said curve, said arc being subtended by a chord bearing and distance of South 63°04'27" West, 165.75 feet; thence South 31°37'11" West, along a non-tangent line, 86.00 feet; thence South 60°40'11" East, 35.15 feet; thence South 27°02'28" West, 20.00 feet; thence South 49°36'09" West, 172.16 feet; thence North 77°07'44" West, 945.04 feet to a point on a non-tangent curve concave Southwesterly having a radius of 175.00 feet; thence Northwesterly along the arc of said curve, through a central angle of 67°09'24", an arc length of 205.12 feet to a point on said curve, said arc being subtended by a chord bearing and distance of North 51°03'13" West, 193.58 feet; thence North 05°22'04" East, along a non-tangent line, 24.76 feet to a point on a non-tangent curve concave Southerly having a radius of 198.38 feet; thence Westerly along the arc of said curve, through a central angle of 47°45'50", an arc length of 165.38 feet to a point on said curve, said arc being subtended by a chord bearing and distance of South 73°41'49" West, 160.63 feet; thence South 41°22'44" East, along a non-tangent line, 29.96 feet to a point on a non-tangent curve concave Southeasterly having a radius of 175.00 feet; thence Southwesterly along the arc of said curve, through a central angle of 16°53'45", an arc length of 51.61 feet to a point on said curve, said arc being subtended by a chord bearing and distance of South 40°10'24" West, 51.42 feet; thence North 58°16'29" West, along a non-tangent line, 30.00 feet to a point lying on the Westerly line of those lands described and recorded in Official Records Book 3863, page 203, of said Public Records; thence Westerly and Northerly along said Westerly line the following 3 courses: Course 1, thence North 73°46'32"

West, 158.11 feet; Course 2, thence North 13°06'51" East, 477.10 feet; Course 3, thence North 10°55'57" East, 105.79 feet to a point lying on said Southerly line of Parcel "A"; thence Easterly along said Southerly line the following 3 courses: Course 1, thence South 77°17'55" East, 42.83 feet; Course 2, thence North 08°55'45" East, 36.14 feet; Course 3, thence South 77°06'26" East, 1644.39 feet to the Point of Beginning.

Containing 21.89 acres, more or less.

SKETCH TO ACCOMPANY DESCRIPTION OF

A PORTION OF SECTION 38 OF THE GEORGE I.F. CLARKE GRANT, TOWNSHIP 6 SOUTH, RANGE 26 EAST, CLAY COUNTY, FLORIDA, BEING A PORTION OF THOSE LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 1545, PAGE 513, OF THE PUBLIC RECORDS OF SAID COUNTY, BEING MORE PARTICULARLY DESCRIBED IN SEPARATE ATTACHMENT.



LEGEND:

O.R.B.	OFFICIAL RECORDS BOOK
R/W	RIGHT OF WAY
POC	POINT ON CURVE
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
R	RADIUS
Δ	CENTRAL ANGLE
L	ARC LENGTH
CB	CHORD BEARING
CH	CHORD DISTANCE
C.R.	COUNTY ROAD
F.D.O.T.	FLORIDA DEPARTMENT OF TRANSPORTATION
S.R.	STATE ROAD
S.R.D.	STATE ROAD DEPARTMENT

SHEET 1 OF 2

GENERAL NOTES:
1) THIS IS NOT A SURVEY.
2) BEARINGS BASED ON THE WESTERLY RIGHT OF WAY LINE OF CSX RAILROAD, BEING SOUTH 21°54'49" EAST.

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED USING A DIGITAL SIGNATURE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

ETM Surveying & Mapping, Inc.
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Tel: (904) 642-8550 Fax: (904) 642-4165
Certificate of Authorization No.: LB 3624

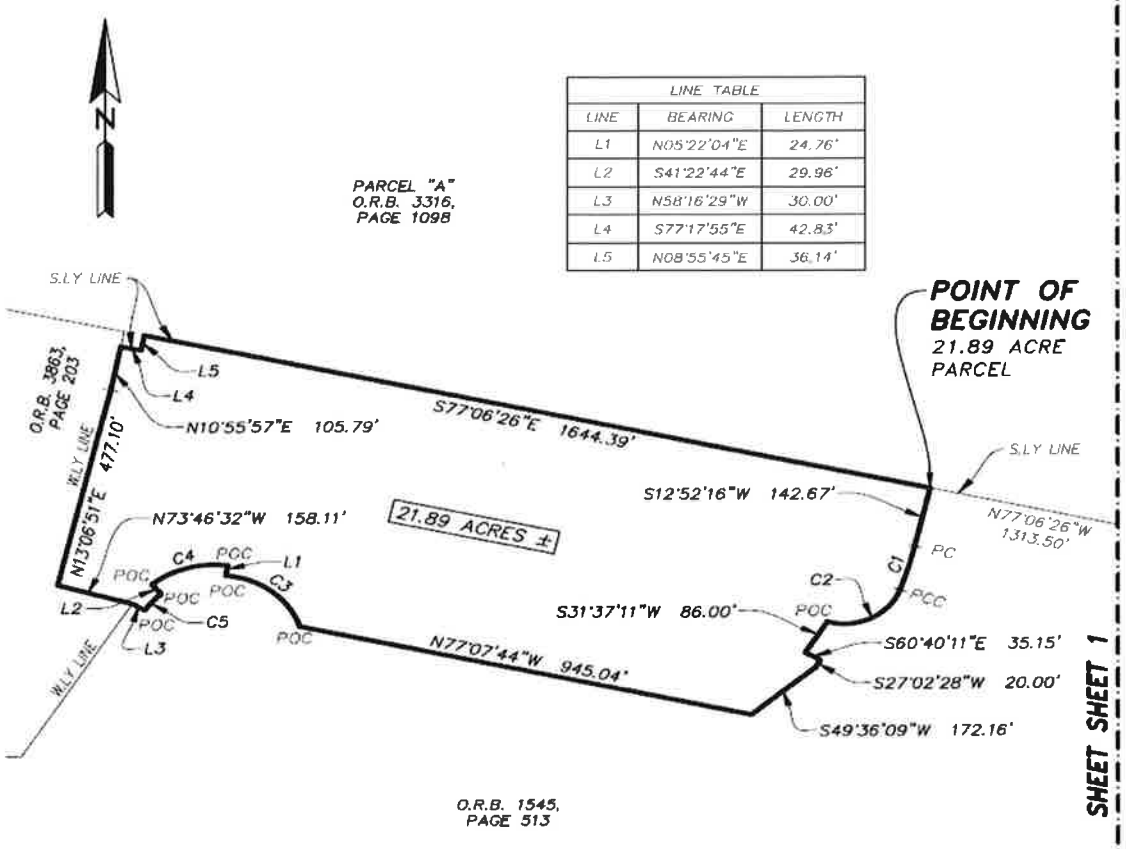
Digital Signature by: Bob L. Pittman, P.S.M.

BOB L. PITTMAN
PROFESSIONAL SURVEYOR AND MAPPER
STATE of FLORIDA PSM No. 4827

SCALE: 1"=1000'
DATE: FEBRUARY 14, 2022

ORDER NO.: 20-355.07 FILE NO.: 127H-15.07A DRAWN BY: JMB CAD FILE: I:\Survey\RMApro\Gustafsons\Sketches\RW LAND SWAP SKETCHES\21.89 ACRE SWAP PARCEL.dwg

A PORTION OF SECTION 38 OF THE GEORGE I.F. CLARKE GRANT, TOWNSHIP 6 SOUTH, RANGE 26 EAST, CLAY COUNTY, FLORIDA, BEING A PORTION OF THOSE LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 1545, PAGE 513, OF THE PUBLIC RECORDS OF SAID COUNTY.



SHEET SHEET 1

LINE TABLE		
LINE	BEARING	LENGTH
L1	N05°22'04"E	24.76'
L2	S41°22'44"E	29.96'
L3	N58°16'29"W	30.00'
L4	S77°17'55"E	42.83'
L5	N08°55'45"E	36.14'

CURVE TABLE					
CURVE	RADIUS	CENTRAL ANGLE	ARC LENGTH	CHORD BEARING	CHORD DISTANCE
C1	950.00'	6°31'27"	108.17'	S16°08'00"W	108.12'
C2	120.00'	87°21'29"	182.96'	S63°04'27"W	165.75'
C3	175.00'	67°09'24"	205.12'	N51°03'13"W	193.58'
C4	198.38'	47°45'50"	165.38'	S73°41'49"W	160.63'
C5	175.00'	16°53'45"	51.61'	S40°10'24"W	51.42'

LEGEND:

O.R.B.	OFFICIAL RECORDS BOOK
R/W	RIGHT OF WAY
POC	POINT ON CURVE
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
R	RADIUS
Δ	CENTRAL ANGLE
L	ARC LENGTH
CB	CHORD BEARING
CH	CHORD DISTANCE
C.R.	COUNTY ROAD
F.D.O.T.	FLORIDA DEPARTMENT OF TRANSPORTATION
S.R.	STATE ROAD
S.R.D.	STATE ROAD DEPARTMENT

0 150 300 600
GRAPHIC SCALE IN FEET
1" = 300'

PREPARED BY:
ETM SURVEYING & MAPPING, INC.
14775 OLD ST. AUGUSTINE ROAD
JACKSONVILLE, FL 32258 (904) 642-8550
CERTIFICATE OF AUTHORIZATION NO. LB 3624

SHEET 2 OF 2

ORDER NO.: 20-355.07 FILE NO.: 127H-15.07A DRAWN BY: JMB CAD FILE: I:\Survey\RMAproj\Customers\Sketches\RW LAND SWAP SKETCHES\21.89 ACRE SWAP PARCEL.dwg

EXHIBIT "F"

City Exchange Parcel

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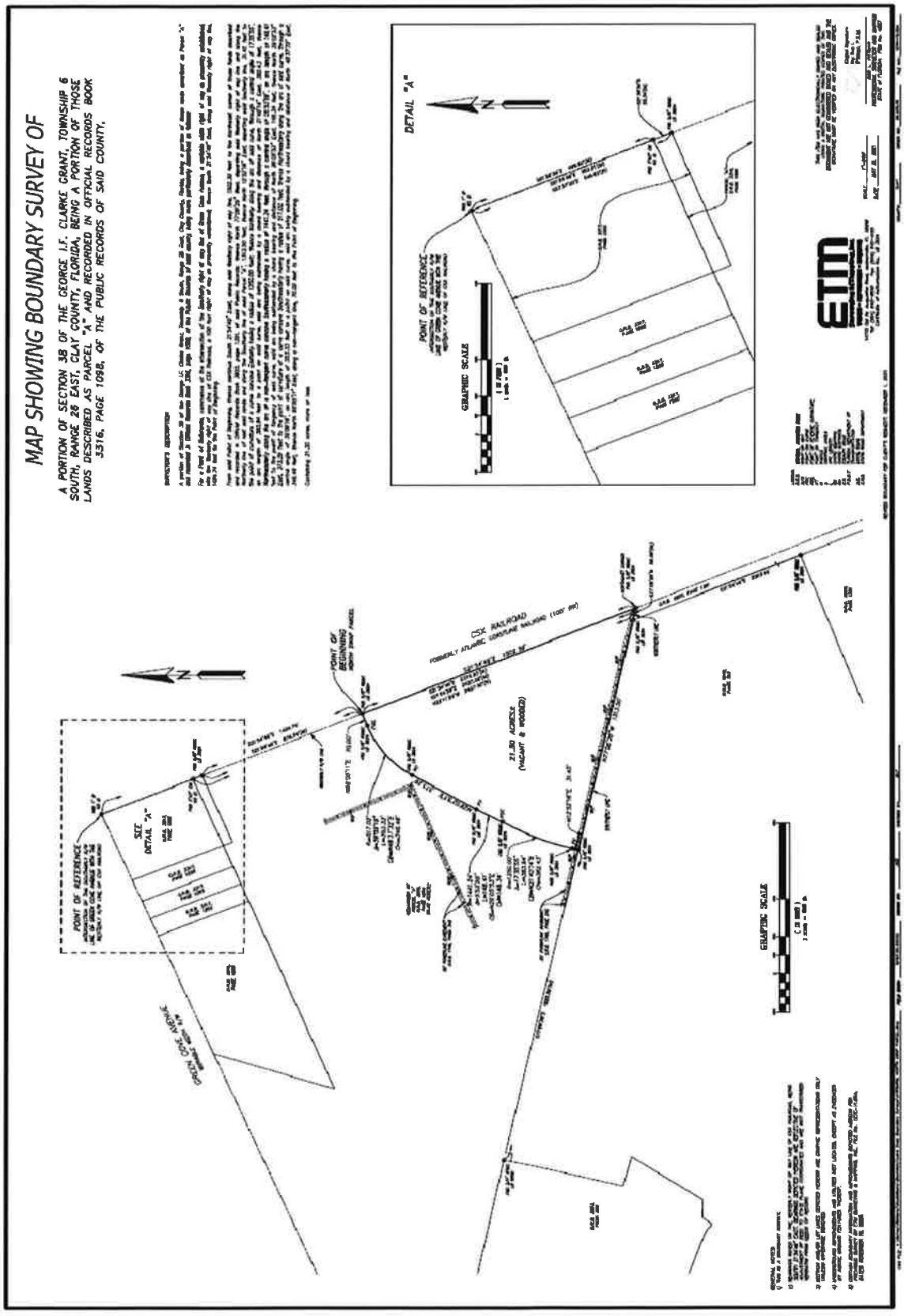
For a Point of Reference, commence at the intersection of the Southerly right of way line of Green Cove Avenue, a variable width right of way as presently established, with the Westerly right of way line of CSX Railroad, a 100 foot right of way as presently established; thence South 21°54'49" East, along said Westerly right of way line, 1424.74 feet to the Point of Beginning.

From said Point of Beginning, thence continue South 21°54'49" East, along said Westerly right of way line, 1502.39 feet to the Northeast corner of those lands described and recorded in Official Records Book 3855, page 1391, of said Public Records; thence North 77°06'26" West, departing said Westerly right of way line and along the Northerly line of last said lands and along the Southerly line of said Parcel "A", 1313.50 feet; thence North 12°52'16" East, departing said Southerly line, 31.45 feet to the point of curvature of a curve concave Easterly having a radius of 1250.00 feet; thence Northerly along the arc of said curve, through a central angle of 17°35'55", an arc length of 383.94 feet to a point on said curve, said arc being subtended by a chord bearing and distance of North 21°40'14" East, 382.43 feet; thence Northeasterly along the arc of a non-tangent curve concave Southeasterly having a radius of 1441.24 feet, through a central angle of 05°53'59", an arc length of 148.41 feet to the point of tangency of said curve, said arc being subtended by a chord bearing and distance of North 26°05'53" East, 148.34 feet; thence North 29°02'53" East, 373.29 feet to the point of curvature of a curve concave Southeasterly having a radius of 517.02 feet; thence Northeasterly along the arc of said curve, through a central angle of 39°09'19", an arc length of 353.33 feet to a point on said curve, said arc being subtended by a chord bearing and distance of North 48°37'32" East, 346.49 feet; thence North 68°05'11" East, along a non-tangent line, 70.00 feet to the Point of Beginning.

Containing 21.30 acres, more or less.


MAP SHOWING BOUNDARY SURVEY OF
A PORTION OF SECTION 38 OF THE GEORGE I.F. CLARKE GRANT, TOWNSHIP 6 SOUTH, RANGE 26 EAST, CLAY COUNTY, FLORIDA, BEING A PORTION OF THOSE LANDS DESCRIBED AS PARCEL "A" AND RECORDED IN OFFICIAL RECORDS BOOK 3316, PAGE 1098, OF THE PUBLIC RECORDS OF SAID COUNTY.
DETAIL "A"
POINT OF REFERENCE
GRAPHIC SCALE
CSX RAILROAD
FORMERLY ATLANTIC COASTLINE RAILROAD
POINT OF BEGINNING
21.80 ACRES
(VACANT & WOODED)
SEE DETAIL "A"
GRAPHIC SCALE
GREEN COVE AVENUE

STAFF REPORT

CITY OF GREEN COVE SPRINGS, FLORIDA

TO: Planning and Zoning Commission **MEETING DATE:** April 23, 2024

FROM: Michael Daniels Development Services Director

SUBJECT: Review of a Site Development Plan for the Clay County Fire Station at 1305 Idlewild Avenue

PROPERTY DESCRIPTION

APPLICANT: Edward Goodson, GBA and Associates

OWNER: Clay County Board of County Comissioners

PROPERTY LOCATION: 1305 Idlewild Avenue

PARCEL NUMBER: 017143-000-00 & a portion of 017150-000-00

FILE NUMBER: SPL-23-009

CURRENT ZONING*:* Institutional

FUTURE LAND USE DESIGNATION*:* Public

SURROUNDING LAND USE

NORTH: **FLU**: Mixed Use
Z: Gateway Corridor Neighborhood
Use: Office/Commercial

SOUTH: **FLU**: Public
Z: Institutional
Use: Carl Pugh Park

EAST: **FLU**: Public
Z: Gateway Corridor Commercial
Use: Lodging

WEST: **FLU**: Public
Z: Institutional
Use: Vacant

BACKGROUND

Ed Goodson, acting as agent for the Clay County Board of County Commissioners has applied for Site Development approval for the subject property for the development of a one story, 18, 847 square feet fire station building.

PROPERTY DESCRIPTION

The property, which is the former location of the County Health Department, is currently vacant and consists of 1.94 acres. There are currently 2 buildings on the site consisting of approximately 14, 000 square feet. Trees currently on the site consist of a pine tree and two small ornamental trees. The south property line abuts Carl Pugh Park.

DEVELOPMENT DESCRIPTION

The applicant has submitted a site development plan for a fire station building totaling 18,847 square feet. They are proposing to demolish the existing building and redevelop the site. The applicant is proposing to provide a Memorial Plaza within the landscape strip on SR 16 to the northeast of the proposed structure.

PARKING, LOADING, & STACKING

The plan shows 47 onsite parking spaces and 2 handicapped spaces. The applicant will need to demonstrate how they are in compliance with the city code parking requirements as set forth in Section 113-157.

DRAINAGE RETENTION

A drainage retention plan has been provided and has been reviewed and approved by the City's consulting engineer. The applicant is required to secure a stormwater permit from the St Johns River Water Management District prior to moving forward with project development.

TRAFFIC AND ACCESS

The plan shows two vehicular access point on Idlewild Avenue. One of the access points is for the fire trucks and one emergency access off of Idlewild Avenue further to the west. The public access will be a new driveway off of South West Street. Pursuant to the Institute of transportation Engineers (ITE)Trip Generation Report 10th Edition, the total number of new trips created by an 18,000 square foot Fire Station is 9 peak hour trips and approximately 90 daily trips.

UTILITY CONNECTIONS & SOLID WASTE

The new buildings will connect to City utilities – verification work orders cannot be completed at this stage. The utility plan (sheet 9) points show location water and sewer connections. Electrical connections and transformer locations have been provided.

Solid Waste will be serviced by a commercial franchise. Dumpster location is provided on the Geometry Plan and is shown on the southeastern portion of the site. The dumpster enclosure shall comply with screening requirements set forth in City Code Sec. 113-246(8).

All lighting shall be shielded and minimized impact on adjacent property pursuant to the standards set forth in the Illumination Society Engineers Society Lighting Handbook.

LANDSCAPE PLAN

The landscape plan is showing 28 new trees and shrubs being planted onsite. The plan shall be required to comply with the landscape requirements as set forth in section 113-244 of the City Code.

Attachments:

1. Site Plan
2. Electric Utility Markup
3. Landscape Plan
4. Written Statement
5. Building Elevation and Floor Plan

STAFF RECOMMENDATION

Staff recommends approval of the Clay County Fire Station Site Development Plan subject to meeting staff comments prior to City Council approval:

1. Comply with City landscaping requirements regarding perimeter and interior landscaping and provide calculations on the landscape plan 113-244 (b)
2. Provide parking calculation pursuant to Sec. 113-157(d).
3. Provide decorative fencing around drainage retention area facing SR 16.

Recommended Motion:

Motion to approve the Clay County Fire Station Site Development Plan subject to meeting staff comments prior to City Council approval:

1. Comply with City landscaping requirements regarding perimeter and interior landscaping and provide calculations on the landscape plan 113-244 (b)
2. Provide parking calculation pursuant to Sec. 113-157(d).
3. Provide decorative fencing around drainage retention area facing SR 16.

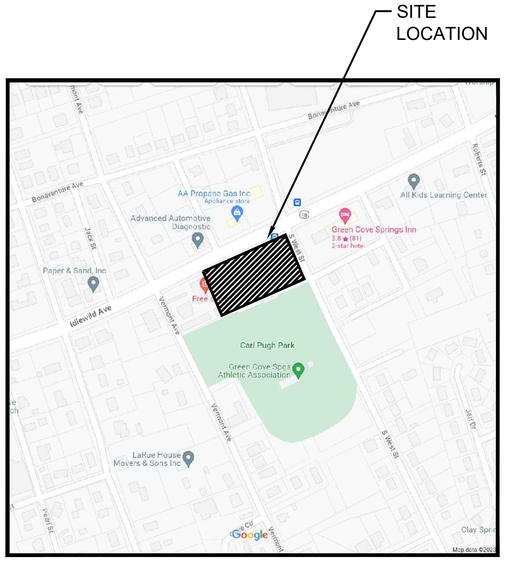
CLAY COUNTY FIRE STATION 20

FOR

CLAY COUNTY FIRE RESCUE

AT

1305 FL-16, GREEN COVE SPRINGS, FL



VICINITY MAP

N

INDEX OF DRAWINGS

SHEET NO.	TITLE
C0.0	COVER SHEET TOPOGRAPHIC SURVEY
C1.0	GENERAL NOTES
C2.0	GENERAL NOTES
C3.0	DEMOLITION NOTES & LEGEND
C4.0	PRE DEVELOPMENT DRAINAGE PLAN
C5.0	POST DEVELOPMENT DRAINAGE PLAN
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C7.0	GEOMETRY AND PAVING PLAN
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C9.0	UTILITY PLAN
C10.0	CONSTRUCTION DETAILS
C11.0	CONSTRUCTION DETAILS
C12.0	CONSTRUCTION DETAILS
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C18.0	NPDES DETAIL SHEET #1
C19.0	NPDES DETAIL SHEET #2
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L2.2	LANDSCAPE SPECIFICATIONS

GEEN COVE SPRINGS UTILITY AUTHORITY STANDARD SHEETS

1	STANDARD WATER SERVICE DETAILS
2	STANDARD SEWER SYSTEM DETAILS
3	GRAVITY SEWER SERVICE DETAILS
4	STANDARD RECLAMED WATER SYSTEM DETAILS
5	STANDARD RECLAMED WATER SYSTEM SPECIFICATIONS & DETAILS
6	STANDARD WATER AND SEWER SYSTEM TECHNICAL SPECIFICATIONS

GENERAL PROJECT INFORMATION

GENERAL	
Parcel ID #	38-06-26-017150-000-00 38-06-26-017143-000-00
Property Use Code	COUNTY IMP (8600)
Unit Type	COMERCIAL
FIRM – Community – Panel	12019C0277E
Flood Zones (Show in Plans)	ZONE X
Base Flood Elev. (Show in Plans)	NA
Vertical Datum Used for Project	N.A.V.D.-1988
UtilityAvailability Number	NA
NON-SUBDIVISION	
New Impervious Area (bldg)	19,120 SF
Total Impervious Area	58,797 SF

ARCHITECT

DASHER HURST ARCHITECTS
1022 PARK STREET, SUITE 208
JACKSONVILLE, FLORIDA 32204
PHONE: 904.425.1190
WWW.DASHERHURST.COM

ENGINEER:

GOODSON, BERGEN AND ASSOCIATES
Consulting Engineers
EDWARD GOODSON/ JEFFREY E. BERGEN, P.E.
11555 CENTRAL PARKWAY, SUITE 103
JACKSONVILLE, FLORIDA 32224
(OFFICE) (904) 519-7770
(FAX) (904) 519-7776

APPLICANT/ DEVELOPER:

CLAY COUNTY BD OF COUNTY COMM
5105 SWEAT RD
GREEN COVE SPRINGS,
FL 32043

LANDSCAPE ARCHITECT:

MEG GAFFNEY-COOKE RLA, LEED AP
BLUE LEAF LANDSCAPE
904-517-1225
www.blueleaflandscape.com

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GBA PROJECT NUMBER 190173
GBA ENGINEERING BUSINESS 32987
NOVEMBER 10, 2023
FL REG # 63060

100% DOCUMENTS

GBA
Goodson Bergen and Associates
CONSULTING ENGINEERS
Engineering License Number: CA32987
11555 CENTRAL PARKWAY, SUITE 103
JACKSONVILLE, FLORIDA 32224
Phone: (904) 519-7770
Fax: (904) 519-7776

FL. PE #63060
JEFFREY E. BERGEN LICENSE No. 63060 STATE OF FLORIDA PROFESSIONAL ENGINEER
Jeffrey Bergen P.E. FL #63060
JEFFREY E. BERGEN, PE
THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY JEFFREY E. BERGEN, PE ON
12/5/2023
USING A SHA AUTHENTICATION CODE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

CLAY COUNTY
CLAY CO FIRE STATION 20
1305 FL-16, GREEN COVE SPRINGS, FL

GOODSON BERGEN & ASSOCIATES
11555 CENTRAL PARKWAY, SUITE 103
JACKSONVILLE, FLORIDA 32224

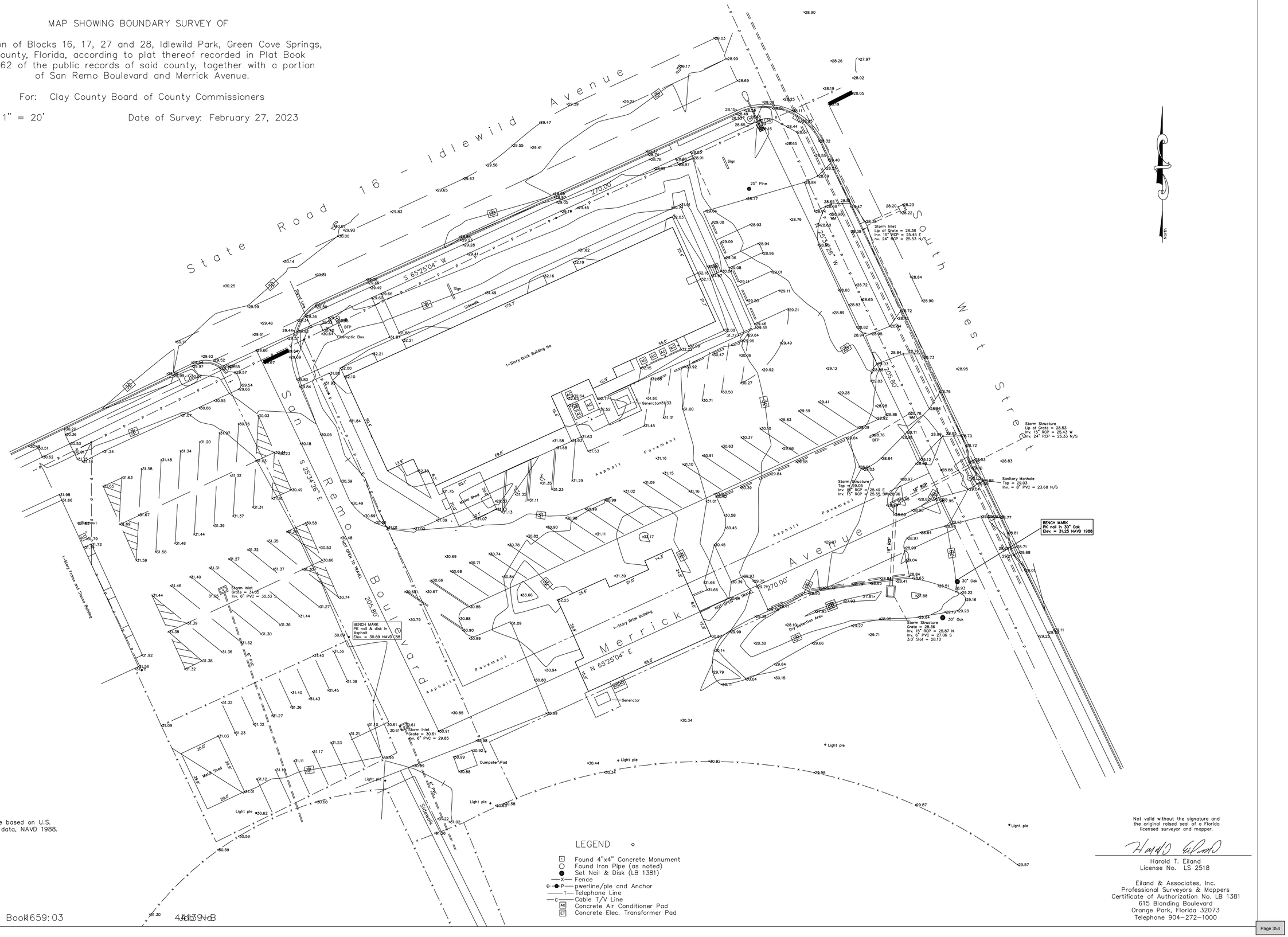
C0.0
SHEET

MAP SHOWING BOUNDARY SURVEY OF

A portion of Blocks 16, 17, 27 and 28, Idlewild Park, Green Cove Springs, Clay County, Florida, according to plat thereof recorded in Plat Book 2, page 62 of the public records of said county, together with a portion of San Remo Boulevard and Merrick Avenue.

For: Clay County Board of County Commissioners

Scale 1" = 20' Date of Survey: February 27, 2023



Note:
Elevations shown hereon are based on U.S. Coast and Geodetic Survey data, NAVD 1988.

LEGEND

- Found 4"x4" Concrete Monument
- Found Iron Pipe (as noted)
- Set Nail & Disk (LB 1381)
- —x— Fence
- —P— powerline/pole and Anchor
- —T— Telephone Line
- —C— Cable T/V Line
- AC Concrete Air Conditioner Pad
- ET Concrete Elec. Transformer Pad

Not valid without the signature and the original raised seal of a Florida licensed surveyor and mapper.

Harold T. Eiland
License No. LS 2518

Eiland & Associates, Inc.
Professional Surveyors & Mappers
Certificate of Authorization No. LB 1381
615 Blanding Boulevard
Orange Park, Florida 32073
Telephone 904–272–1000

FF No. 47:217 Field Book 659:03

GENERAL NOTES:

1. TOPOGRAPHIC BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, SITE TOPOGRAPHY WITH SPOT ELEVATIONS, OUTSTANDING PHYSICAL FEATURES AND EXISTING STRUCTURE LOCATIONS WAS PROVIDED BY OTHERS AND THE FOLLOWING SURVEYOR:
   EILAND & ASSOCIATES, INC.
   PROFESSIONAL SURVEYORS & MAPPERS
   615 BLANDING BOULEVARD ORANGE PARK,
   FLORIDA 32073 TELEPHONE 904-272-1000
2. GOODSON BERGEN AND ASSOCIATES CONSULTING ENGINEERS, AND ITS ASSOCIATES WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF SURVEY OR FOR DESIGN ERRORS OR OMISSIONS RESULTING FROM SURVEY INACCURACIES.
3. ALL PHASES OF SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED COUNTY SITE WORK SPECIFICATIONS.
4. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. IT IS RECOMMENDED THAT THE CONTRACTOR PHOTO/VIDEO THE EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. THE CONTRACTOR SHALL PROVIDE AND COORDINATE ANY AND ALL PEDESTRIAN AND VEHICULAR MAINTENANCE OF TRAFFIC AS NEEDED FOR CONSTRUCTION FOLLOWING FDOT AND COUNTY MOT GUIDELINES.
6. WARRANTY / DISCLAIMER THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS. NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON A TEMPORARY BASIS AT THE SITE.
7. FOR BOUNDARY, ROADWAY AND BUILDING GEOMETRY INFORMATION SEE ENGINEERING SITE PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE BUILDING DIMENSIONS SHOWN ON THE ENGINEERING PLAN AGREES WITH THE DIMENSIONS SHOWN ON THE ARCHITECTURAL PLAN. IF ANY DIMENSIONS DO NOT AGREE, THE ARCHITECT, ENGINEER AND OWNER SHALL BE NOTIFIED AND THE DIMENSIONS ADJUSTED PRIOR TO COMMENCING WITH CONSTRUCTION.
8. ALL CONSTRUCTION WITHIN COUNTY OF RIGHT-OF-WAY SHALL BE COORDINATED WITH THE COUNTY. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION FOR VERIFICATION AND LOCATION OF ALL UTILITIES.
9. CONTRACTOR SHALL FURNISH SHOP DRAWINGS TO ENGINEER INDICATING MATERIALS AND MANNER OF INSTALLATION FOR ALL COMPONENTS OF THE PROJECT PRIOR TO PURCHASE OF MATERIALS AND CONSTRUCTION.
10. THESE ENGINEERING DRAWINGS MAY NOT SHOW ALL OF THE COUNTY, GCSU AUTHORITY, OR FDOT STANDARD DETAILS REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
11.
12. ALL CONTRACTORS SHALL FURNISH CERTIFIED "AS-BUILTS" , SEE AS-BUILT REQUIREMENTS ON SHEET C2.0
13. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER. ALL SAFETY RULES AND GUIDELINES OF OSHA SHALL BE FOLLOWED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY INJURIES OF HIS EMPLOYEES, AND ANY DAMAGE TO PRIVATE PROPERTY OR PERSONS DURING THE COURSE OF THIS PROJECT. ALL COSTS ASSOCIATED WITH COMPLYING WITH OSHA REGULATIONS AND THE FLORIDA TRENCH SAFETY ACT MUST BE INCLUDED IN THE CONTRACTORS BID.
14. ALL IMPROVEMENTS SHOWN ARE TO BE WARRANTED BY THE CONTRACTOR TO THE DEVELOPER FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY THE OWNER, UNLESS OTHERWISE SPECIFIED.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE REQUIRED FOR THE PROJECT.
16. THE CONTRACTOR SHALL COORDINATE THE WORK WITHIN COUNTY RIGHT-OF-WAY WITH THE PROPER AGENCIES FOR MAINTENANCE OF TRAFFIC AND METHOD OF CONSTRUCTION AND REPAIR.
17. THESE PLANS DO NOT STAND BY THEMSELVES. BID DOCUMENTS, UTILITY COMPANY WATER AND SEWER STANDARDS DETAILS & MATERIALS, COUNTY, GCSU AUTHORITY, AND FDOT STANDARD SPECIFICATIONS & DETAILS AND ANY OTHER STANDARDS, LISTED OR REFERENCES, ARE INCLUDED IN THE PROJECT DOCUMENTS.
18. THE CONTRACTOR SHALL NOTIFY COUNTY AT A MINIMUM OF 48 HOURS PRIOR TO STARTING CONSTRUCTION.
19. THE CONTRACTOR SHALL OBTAIN A RIGHT OF WAY PERMIT FROM THE PUBLIC WORKS DEPT.. FOR CURBING, SIDEWALK, DRIVEWAY APRONS, AND ANY UTILITY WORK. THE CONTRACTOR MUST HAVE A SURETY BOND ON FILE IN THE PUBLIC WORKS DEPT. BEFORE THE WATER AND SEWER TAP TICKETS AND RIGHT OF WAY PERMIT CAN BE OBTAINED.
20. THE CONTRACTOR SHALL CORRECT ALL IMPACTS FROM CONSTRUCTION (INCLUDING DRAINAGE) TO THE NEIGHBORING PROPERTIES (INCLUDING PUBLIC RIGHT OF WAYS AND EASEMENTS) TO THE SATISFACTION OF COUNTY PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
21. THE CONTRACTOR SHALL REPAIR ANY BROKEN SIDEWALKS, CURBS ETC., ADJACENT TO PROPERTY, WHICH OCCUR DURING CONSTRUCTION. THE REPAIRS MUST BE MADE BEFORE ISSUANCE OF CERTIFICATE OF OCCUPANCY.
22. ALL SURVEYING SHALL BE PERFORMED BY STATE OF FLORIDA REGISTERED SURVEYORS.
23. IF UNSUITABLE MATERIAL IS FOUND WITHIN THE LIMITS OF THE ROAD OR IF MATERIAL IS HAULED IN FOR ROADWAY FILL AT A DEPTH GRATER THAN ONE-FOOT (1') THEN THE ENTIRE ROADWAY SHALL BE UNDERDRAINED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND INSTALLED PER THE APPROVED COUNTY DETAIL.
24. ALL STORM SEWER PIPES SHALL BE CUT FLUSH WITH THE INTERIOR WALL OF ANY TYPE MANHOLE OR CURB AND DITCH BOTTOM INLETS.
25. COMPACTION DENSITY TESTS FOR ALL WATER AND SEWER CROSSINGS WILL START THREE FEET (3') ABOVE THE PIPE.
26. COMPACTION DENSITY TEST FOR ALL STORM SEWER PIPE SHALL START AT THE SPRING LINE OF THE PIPE.
27. IF THE APPROVED DESIGN REQUIRES THE INLET OR STORM RUN BE SURCHARGED, ALL INLETS SHALL BE INSPECTED BEFORE BEING EXPOSED TO THE SYSTEM.
28. TEST CYLINDERS SHALL BE RUN FOR ALL CONCRETE STRUCTURES. THERE WILL BE THREE (3) TESTS PER EACH DAY POUR WITH A ONE (1) SEVEN (7) DAYBREAK AND TWO (2) TWENTY-EIGHT (28) DAYS BREAKS.
29. THE ASPHALT SHALL BE CORED FOR THICKNESS AND WILL BE GIVEN A ONE-QUARTER INCH (1/4") TOLERANCE. IF HOWEVER THE COUNTY REPRESENTATIVE IS PRESENT AT POUR AND FEELS COMFORTABLE WITH THE REQUIREMENTS THEN THEY MAY WAVE THIS POLICY FOR OFFSITE PAVEMENT ONLY.
30. LIMEROCK BERING RATIOS FOR (LBR) SUBGRADE AT FORTY (40) AND LIMEROCK OR ALTERNATIVE BASE COURSE AT ONE HUNDRED (100) THERE WILL BE NO UNDER TOLERANCE. ALSO SEE GEOTHECNICAL REPORT , IF APPLICABLE.
31. ALL MATERIAL USED FOR BACKFILL SHALL BE A3 FREE DRAINING SAND.
32. THERE ARE TO BE NO OPENED TRENCHES AT DAY'S END.
33. ALL DIRT AND DEBRIS TRACKED OUT OF THE PROJECT SHALL BE CLEANED DAILY AND TO THE DISCRETION OF GBA, OR COUNTY ENGINEERING DEPARTMENT.
34. ANY EROSION PROBLEMS ENCOUNTERED DURING OR AFTER CONSTRUCTION WHICH IS DUE TO LACK OF COMPACTION OR LACK OF ESTABLISHING A PERMANENT GRASS COVER BY THE CONTRACTOR, SHALL BE CORRECTED AND THE MATERIAL REPLACED IN A TIMELY MANNER AT THE CONTRACTORS EXPENSE. ANY SUCH EROSION WHICH DETRIMENTALLY EFFECTS THE WETLANDS, OR PROTECTED UPLANDS, SHALL BE DEALT WITH AND CORRECTED AT THE CONTRACTORS EXPENSE IN A TIMELY MANNER.
35. ALL PERFORATED DRAINAGE PIPES SHALL BE WRAPPED IN FILTER FABRIC.
36. SLOPES GREATER THAN OR EQUAL TO 4:1 SHALL BE SODDED AND IRRIGATED UNTIL A PERMANENT STRAND OF GRASS IS ESTABLISHED. (SOD JOINTS SHALL BE STAGGERED).
37. THE CONTRACTOR SHALL OBTAIN ALL THE PERMITS NECESSARY TO COMPLETE CONSTRUCTION. ALL WORK SHALL BE DONE IN ACCORDANCE W/ PERMIT CONDITIONS.
38. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION, INSPECTIONS AND COORDINATE WITH THE COUNTY PLANNING AND ZONING DEPARTMENT.
39. CONTRACTOR SHALL CONTACT COUNTY PUBLIC WORKS PRIOR TO CONSTRUCTING ANY OFFSITE ELEMENTS.
40. THE CONTRACTOR SHALL SUBMIT MAINTENANCE OF TRAFFIC PLANS TO COUNTY PUBLIC WORKS PRIOR TO THE START OF CONSTRUCTION.
41. GROUTING CAN NOT BEGIN UNTIL REPLACEMENT DRAINAGE PIPE IS INSTALLED AND VERIFIED TO BE FUNCTIONING BY COUNTY/COUNTY.
42. CONTRACTOR SHALL REPAIR ALL DAMAGED PAVEMENT AS NECESSARY TO CONSTRUCT ALL IMPROVEMENTS AT THE CONTRACTORS EXPENSE.
43. ALL LANDSCAPE ISLANDS SHALL BE GRADED TO DISCHARGE WATER, AND SHALL BE FILLED W/ CLEAN, FREE DRAINING SANDY SOIL.
44. ALL DISTURBED EARTH SHALL BE SODDED OR PLANTED LANDSCAPE, SEE LANDSCAPE PLANS FOR DETAIL, IF APPLICABLE.
45. ALL SPOT ELEVATIONS AT CURBING ARE EDGE OF PAVEMENT ELEVATIONS (EP) UNLESS (TC) WHICH IS TOP OF CURBING OR CONCRETE.
46. ALL PIPE LENGTHS ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
47. COORDINATE WITH BUILDING / ROOF PLANS AND CONNECT ALL ROOF DRAIN DOWNSPOUTS, UNLESS OTHERWISE NOTED.
48. SIDEWALKS SHALL NOT EXCEED 5% LONGITUDINAL SLOPE OR 2% CROSS SLOPE UNLESS OTHERWISE NOTED.
49. UNLESS OTHERWISE USE NOTED, A 2' WIDE FLAT SHOULDER SHALL BE ALONE ALL SIDEWALK EDGES.
50. PROPERTY LINE AND RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY CONSTRUCTION. IF DISTURBED, THEY SHALL BE RESET TO THEIR ORIGINAL LOCATIONS AT THE CONTRACTOR'S EXPENSE BY A REGISTERED LAND SURVEYOR.
51. PROOF ROLL BUILDING AND ALL PARKING AREAS. NOTIFY OWNER INC. OF ANY UNACCEPTABLE AREAS. (SEE GEOTECH REPORT)
52. BUILDING DIMENSIONS SHOWN ON THE CIVIL ENGINEERING PLANS ARE FOR REFERENCE PURPOSES ONLY, CONTRACTOR SHALL USE THE ARCHITECTURAL AND STRUCTURAL PLANS FOR EXACT BUILDING DIMENSIONS.
53. ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING UNLESS OTHERWISE NOTED.
54. ALL SIDEWALKS, CURB AND GUTTER, STREET PAVING, CURB CUTS, DRIVEWAY APPROACHES, HANDICAP RAMPS, ETC. CONSTRUCTED OUTSIDE THE PROPERTY LINE IN THE RIGHT-OF-WAY SHALL CONFORM TO ALL MUNICIPAL AND/OR STATE SPECIFICATIONS AND REQUIREMENTS.
55. ALL DISTURBANCE INCURRED TO ANY ADJOINING PROPERTY DUE TO CONSTRUCTION OR DEMOLITION SHALL BE RESTORED TO THE PREVIOUS CONDITION OR BETTER, AND TO THE SATISFACTION OF THE COUNTY OR STATE AUTHORITY
56. THE CONTRACTOR SHALL PROVIDE S&S AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO OWNER INC. AT THE END OF CONSTRUCTION.
57. ALL CURBING SHALL BE IN ACCORDANCE WITH DETAILS.
58. CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS AT CONNECTION POINTS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
59. SEE GEOTECHNICAL REPORT FOR SITE PREPARATION REQUIREMENTS, IF APPLICABLE
60. THE CONTRACTOR SHALL COORDINATE THE GRADING AND DRAINAGE CONSTRUCTION WITH ALL OTHER CONSTRUCTION.
61. CONTRACTOR SHALL FURNISH SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO BEGINNING CONSTRUCTION.
62. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH ALL COUNTY / FDOT STANDARDS
63. THE CONTRACTOR SHALL STAKE THE PROPOSED AND EXISTING STORM SEWER SYSTEM, WATER SYSTEM, RE-USE SYSTEM AND THE SANITARY SEWER SYSTEM AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO INSTALLATION OF ANY PIPE.
64. THE EXISTING UTILITY FACILITIES AND LOCATIONS SHOWN ON THE DRAWINGS ARE TAKEN FROM READILY AVAILABLE INFORMATION. THE ACTUAL LOCATIONS OF THE UTILITY FACILITIES MAY VARY SOMEWHAT FROM THE LOCATIONS SHOWN AND THERE MAY BE UTILITY FACILITIES EXISTING THAT ARE NOT SHOWN OR INDICATED ON THE DRAWINGS. THE SITE UTILITY CONTRACTOR SHALL CONTACT ALL AGENCIES WITH UTILITY FACILITIES IN THE VICINITY OF THE WORK AND SHALL LOCATE ALL UNDERGROUND FACILITIES BEFORE BEGINNING WORK. THE CONTRACTOR SHALL PROTECT ALL UTILITY FACILITIES AND REPAIR ANY DAMAGES RESULTING FROM THEIR WORK IN CONFORMANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS AND RELOCATE IF REQUIRED AT NO COST TO THE OWNER.
65. ALL UNDERGROUND UTILITIES SHALL BE INSTALLED PRIOR TO PREPARATION OF SUBGRADE FOR PAVEMENT.
66. PAVEMENT SUBGRADE SHALL HAVE ALL UNSUITABLE MATERIAL REMOVED TO A DEPTH OF 3.0 FEET BELOW SUBGRADE AND 2.5 FEET BEYOND BACK OF CURB. BACKFILL WITH SUITABLE MATERIAL PER THE GEOTECHNICAL REPORT.
67. ANY UNSUITABLE MATERIAL ENCOUNTERED AND EXCESS SUITABLE FILL MATERIAL SHALL BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL UNSUITABLE MATERIAL AND REPLACEMENT WITH STRUCTURAL FILL. SEE GEOTECHNICAL REPORT.
68. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SUBGRADE, LIMEROCK AND ASPHALT TESTING AS REQUIRED BY FDOT SPECIFICATIONS UNLESS OTHERWISE NOTED.
69. STORMWATER COLLECTION SYSTEM DESIGN IS BASED ON THE 5-YEAR RETURN FREQUENCY STORM (RATIONAL METHOD).
70. ALL RCP PIPE SHALL MEET THE REQUIREMENTS OF ASTM C-76 AND SHALL BE CLASS III, WALL B.
71. ALL PIPE LENGTHS ARE APPROXIMATE AND MEASURED TO THE CENTER OF STRUCTURE OR MITERED END SECTION. ACTUAL LENGTHS MAY VARY.
72. DO NOT SCALE THESE DRAWINGS. USE DIMENSIONS ONLY. (SCALE FOR APPROXIMATE INFORMATION ONLY).
73. A QUALIFIED SOILS LABORATORY SHALL BE ON SITE DURING EXCAVATING TO DETERMINE THE SUITABILITY OF THE EXISTING SUB-GRADE AND EXISTING ON-SITE MATERIAL PRIOR TO BEGINNING ANY FILLING OPERATION.
74. GRADING CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. CONTRACTOR SHALL CONTROL DUST BY SPRINKLING, OR BY OTHER METHODS AS DIRECTED BY ENGINEER AND/OR OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER.
75. CONTRACTOR TO COORDINATE ALL WORK WITH OTHER UTILITY INSTALLATIONS NOT COVERED IN THESE PLANS (ELECTRIC, TELEPHONE, GAS, CABLE, ETC.) AND ALLOW FOR THEIR OPERATIONS AND CONSTRUCTION TO BE PERFORMED.
76. CUT AND FILL SLOPES ARE NOT TO EXCEED 4H:1V UNLESS OTHERWISE NOTED.
77. CONTRACTOR SHALL REPAIR OR REPLACE IN-KIND ANY DAMAGE THAT OCCURS AS RESULT OF HIS WORK.
78. ALL SOILS / DENSITY TEST REPORTS TO BE SUBMITTED TO PROJECT MANAGER.
79. FOR ALL TRENCH EXCAVATIONS WHICH EXCEED FIVE FEET (UTILITIES AND STORM), THE FOLLOWING MUST BE ADHERED TO:
    A. CONTRACTOR MUST FOLLOW OSHA STANDARD 29 CFR, SECTION 1926.650 SUBPART P, WHICH IS NOW A PART OF LAWS OF FLORIDA CHAPTER 90-96.
    B. THE CONTRACTOR SHALL PROVIDE WRITTEN ASSURANCE OF COMPLIANCE WITH THIS LAW.
    C. A SEPARATE PRICE ITEM SHALL BE INCLUDED IN THEIR BASE BID IDENTIFYING THE COST OF COMPLIANCE
    D. A TRENCH SAFETY SYSTEM SHALL BE DESIGNED BY THE CONTRACTOR.
79. THE CONTRACTOR SHALL COORDINATE CONNECTION WITH SITE PIPING AND BUILDING PIPING.
80. ALL AREAS SHOWN TO BE FILLED SHALL BE CLEARED AND GRUBBED IN ACCORDANCE WITH COUNTY STANDARDS AND SHALL BE FILLED WITH CLEAN STRUCTURAL FILL COMPACTED AND TESTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
81. ALL DEBRIS RESULTING FROM ALL ACTIVITIES SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR.
82. ALL EXISTING TREES TO REMAIN SHALL BE PROTECTED AND PRESERVED.
83. BURNING OF TREES, BRUSH AND OTHER MATERIAL SHALL BE APPROVED, PERMITTED AND COORDINATED WITH THE COUNTY FIRE MARSHAL BY THE CONTRACTOR.
84. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER AND THE COUNTY, IF REQUIRED, ON ALL MATERIALS, FOR REVIEW AND APPROVAL, PRIOR TO PURCHASE OR FABRICATION OF ANY UTILITY PIPE OR STRUCTURE.
85. ALL DRAINAGE STRUCTURES SHALL BE CONSTRUCTED TO CONFORM TO FDOT / COUNTY REQUIREMENTS AND SHALL BE CONSTRUCTED TO CONFORM TO CURBING, PROPERTY LINES AND LOW POINTS AS SHOWN ON PLANS.
86. CONTRACTOR SHALL ENSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEAN AND FUNCTIONING PROPERLY AT TIME OF ACCEPTANCE.
87. ALL DRAINAGE PIPE JOINTS (EXCEPT FOR PVC) ARE TO BE FILTER-WRAPPED IN ACCORDANCE WITH FDOT STANDARDS.
88. ALL INVERTS IN DRAINAGE STRUCTURES TO BE PRECAST OR BRICK WITH LAYER OF MORTAR BETWEEN EACH LAYER OF BRICK, OR REDDI-MIX CONCRETE WITH #57 STONE.
89. THE CONTRACTOR SHALL RESTORE ALL CULVERTS, HEADWALLS AND STORM DRAIN INLETS REMOVED OR DISTURBED BY THE CONSTRUCTION OPERATION. THE COST OF THESE ITEMS SHALL BE INCLUDED IN THE PRICE BID FOR FURNISHING AND INSTALLING ANY NEW ITEM CAUSING SUCH DAMAGE.
90. A MINIMUM OF ONE ROW OF SOD SHALL BE INSTALLED ALONG ALL EDGES OF PAVEMENT. SEE LANDSCAPE PLANS FOR LANDSCAPE DETAIL. ALL DISTURBED AREAS WHICH ARE NOT SODDED SHALL RECEIVE GRASS SEED, FERTILIZER, AND MULCH. SEE LANDSCAPE PLANS FOR OTHER REQUIREMENTS. ALL WORK IN THE COUNTY RIGHT-OF-WAY SHALL CONFORM TO FDOT GRASSING STANDARDS.
91. SHOULD THE SURFACE OR SUBSURFACE CONDITIONS DIFFER FROM WHAT IS SHOWN ON THESE PLANS, THE CONTRACTOR SHOULD IMMEDIATELY CONTACT THE ENGINEER.
92. THE CONTRACTOR MUST COORDINATE WITH OWNERS GEOTECHNICAL ENGINEER REGARDING INSTALLATION OF UNDERDRAIN.
93. CORRUGATED POLYETHYLENE PIPE (CPP), SHALL BE PER AASHTO M252 OR 294 WITH SMOOTH INNER LINING TYPE S WITH BELL AND SPIGOT, SILT-TIGHT, RUBBER-GASKETED JOINTS.
94. ALL CONCRETE PAVEMENT WORK SHALL BE IN ACCORDANCE WITH THE MOST CURRENT "AMERICAN CONCRETE INSTITUTE (ACI)"/ FDOT GUIDLINES / SPECIFICATIONS.

PAVEMENTS AND ROADWAY NOTES:

1. ALL WORK PERFORMED WITHIN THE COUNTY RIGHT-OF-WAY SHALL CONFORM TO THE MOST CURRENT EDITION OF THE COUNTY STANDARDS AND SPECIFICATIONS
2. (SHOULD A CONFLICT ARISE BETWEEN THE DETAILS SHOWN IN THE PLANS AND THE COUNTY STANDARDS THE ENGINEER/APPLICANT SHALL IMMEDIATELY CONFER WITH THE COUNTY'S ENGINEER IN ORDER TO RESOLVE THE DISCREPANCY.)
3. ALL TRAFFIC STRIPING AND MARKINGS ARE TO BE LEAD-FREE, NON-SOLVENT BASED THERMOPLASTIC.
4. REMOVAL OF EXISTING STRIPING SHALL BE ACCOMPLISHED USING THE " HYDRO-BLAST" METHOD. IF THIS PROCESS DAMAGES/SCARS PAVEMENT, THEN THE PAVEMENT SHALL BE MILLED AND RESURFACED PER COUNTY/FDOT STANDARDS.
5. ALL DIRECTIONAL ARROWS SHALL BE PLACED AS ONE SEGMENT.
6. ALIGNMENT OF PROPOSED PAVEMENT MARKINGS SHALL MATCH EXISTING PAVEMENT MARKINGS AT PAVEMENT MARKING LIMITS OF CONSTRUCTION.
7. ALL CURB AND GUTTER AND SIDEWALK WILL BE REMOVED AND REPLACED JOINT TO JOINT.
8. ALL BROKEN/CRACKED DRIVEWAYS MUST BE FULLY REMOVED AND REPLACED.
9. ALL DISTURBED AREA WITH THE COUNTY'S RIGHT-OF-WAY WILL BE RESTORED TO ORIGINAL OR BETTER CONDITION BY GRADING AND SODDING THE AREA DISTURBED
10. BURNING OF ANY MATERIAL OR DEBRIS IS PROHIBITED IN ANY RIGHT-OF-WAY.
11. ALL LANES MUST BE OPENED FOR TRAFFIC DURING AN EVACUATION NOTICE OF A HURRICANE OR OTHER CATASTROPHIC EVENT AND SHALL REMAIN OPEN FOR THE DURATION OF THE EVACUATION OR EVENT.

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JEFFREY E. BERGEN, PE
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CLAY COUNTY
CLAY CO FIRE STATION 20
1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

JEFFREY E. BERGEN LICENSE No. 63060 STATE OF FLORIDA PROFESSIONAL ENGINEER
Jeffrey Bergen P.E. FL 63060

DATE: 11/10/2023

GENERAL NOTES

PROJECT NO.: 23002

C1.0
100% DOCUMENTS

SANITARY SEWER NOTES:

1. THE CONTRACTOR SHALL OBTAIN ALL PERMITS TO COMPLETE THE CONSTRUCTION.
2. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF SEWER FACILITIES WITH ALL OTHER CONSTRUCTION.
3. CONTRACTOR SHALL FURNISH SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL BEFORE ORDERING MATERIALS AND BEGINNING CONSTRUCTION.
4. ALL GRAVITY SEWER CONSTRUCTION SHALL CONFORM TO THE LATEST UTILITY AND COUNTY STANDARDS AND SPECIFICATIONS.
5. THE EXISTING UTILITY FACILITIES AND LOCATIONS SHOWN ON THE DRAWINGS ARE TAKEN FROM READILY AVAILABLE INFORMATION. THE ACTUAL LOCATIONS OF THE UTILITY FACILITIES MAY VARY SOMEWHAT FROM THE LOCATIONS SHOWN AND THERE MAY BE UTILITY FACILITIES EXISTING THAT ARE NOT SHOWN OR INDICATED ON THE DRAWINGS. THE SITE UTILITY CONTRACTOR SHALL CONTACT ALL AGENCIES WITH UTILITY FACILITIES IN THE VICINITY OF THE WORK AND SHALL LOCATE ALL UNDERGROUND FACILITIES BEFORE BEGINNING WORK. THE CONTRACTOR SHALL PROTECT ALL UTILITY FACILITIES AND REPAIR ANY DAMAGES RESULTING FROM THEIR WORK IN CONFORMANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS AND RELOCATE IF REQUIRED AT NO COST TO THE OWNER.
6. THE CONTRACTOR SHALL STAKE THE SANITARY SEWER SYSTEM AND THE STORM SEWER SYSTEM AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO INSTALLATION OF ANY PIPE.
7. MANHOLES SHALL BE IN CONFORMANCE WITH CCUA UTILITY STANDARDS
8. GRAVITY SEWER MAINS SHALL BE 8 INCH PVC UNLESS OTHERWISE INDICATED ON THE PLANS. MINIMUM SLOPE SHALL BE 0.4% FOR 8" PVC.
9. TYPE B BEDDING SHALL BE USED FOR THIS PROJECT UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
10. BACKFILLING SHALL BE MADE WITH CLEAN BACKFILL WHICH SHALL BE THOROUGHLY COMPACTED IN 6" LIFTS. COMPACTION SHALL BE A MINIMUM OF 95% MAX DENSITY AT +/- 2% OF THE MODIFIED PROCTOR OPTIMUM MOISTURE CONTENT.
11. UNSUITABLE MATERIALS UNDER SEWER PIPE SHALL BE REMOVED TO A DEPTH OF 18" BELOW THE BOTTOM OF PIPE AND REPLACED WITH SELECTED BACKFILL PROPERLY COMPACTED IN 6" LIFTS. THE MATERIAL SHOULD EXHIBIT MOISTURE CONTENTS WITHIN +/- 2 PERCENT OF THE MODIFIED PROCTOR OPTIMUM MOISTURE CONTENT (ASTM D1557) DURING THE COMPACTION OPERATIONS. COMPACTION SHOULD CONTINUE UNTIL DENSITIES OF AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557) HAVE BEEN ACHIEVED.
12. CONTRACTOR SHALL NOTIFY THE UTILITY COMPANY A MINIMUM OF TWO DAYS PRIOR TO CONNECTION OF FORCE MAIN TO THE EXISTING LINE. ALL NEW WORK MUST BE INSPECTED BY THE ENGINEER OR OTHER AUTHORIZED INSPECTOR. NO TESTS SHALL BE SCHEDULED FOR WEEKENDS. ANY CHANGE FROM THE TECHNICAL REQUIREMENTS MUST BE REVIEWED AND APPROVED BY THE ENGINEER AND OWNER.
13. ALL SEWER CONSTRUCTION SHALL BE ACCOMPLISHED BY AN UNDERGROUND UTILITY CONTRACTOR LICENSED UNDER CHAPTER 489 F.S.
14. ALL PIPE LENGTHS ARE HORIZONTAL DISTANCES AND ARE APPROXIMATE.
15. ALL SANITARY SEWER LATERALS SHALL TERMINATE APPROXIMATELY 5 FEET OUTSIDE THE R-O-W LINE UNLESS OTHERWISE NOTED. THE END OF THESE SERVICE LINES SHALL BE TIGHTLY PLUGGED OR CAPPED AND MARKED UNTIL SUCH TIME AS CONNECTION IS MADE INSIDE THE BUILDING.
16. THE CONTRACTOR SHALL PERFORM A TELEVISION INSPECTION OF THE SEWER SYSTEM. TWO FULL REPORTS, INCLUDING VIDEO TAPE, SHALL INDICATE CONDITIONS OF THE PIPE, LOCATION, TYPE OF PIPE, DIAMETER, LOCATION OF SERVICES, TYPE OF JOINT, DISTANCE BETWEEN MANHOLES AND ANY IRREGULARITIES IN THE PIPELINE. THE TELEVISION INSPECTION SHALL INCLUDE A DEFLECTION TEST WITH A 5% MANDREL. THE SEWER LINES SHALL BE LAMPED AS PART OF THE FINAL INSPECTION.
17. THE CONTRACTOR SHALL COORDINATE THE LOCATION, SIZE AND INVERT ELEVATIONS OF SANITARY SEWER SERVICES WITH THE APPROVED PLUMBING PLANS FOR THE BUILDING.
18. CONTRACTOR SHALL PROVIDE, TO THE ENGINEER, A SCHEDULE OF INVERT ELEVATIONS OF ALL SANITARY MANHOLES PRIOR TO THE PLACEMENT OF THE LIMEROCK BASE COURSE. THIS SCHEDULE IS TO BE PROVIDED BY THE REGISTERED LAND SURVEYOR SUBMITTING THE "AS-BUILT" DRAWINGS FOR THIS PROJECT.
19. ALL SEWER MAINS SHALL BE PVC (ASTM-3034) SDR-26 UNLESS OTHERWISE NOTED.
20. NO "TEES" SHALL BE USED ON THE SEWER COLLECTION PIPING SYSTEM FOR CHANGE IN HORIZONTAL DIRECTION.

STANDARD WATER AND SEWER DESIGN NOTES

1. MAXIMUM DISTANCE FROM THE NEAREST FIRE HYDRANT TO THE MOST REMOTE EXTERIOR POINT OF ANY BUILDING SHALL BE 500 FEET. THE DISTANCE SHALL BE MEASURED ON A ROADWAY SURFACE MEETING THE FIRE DEPARTMENT ACCESS REQUIREMENTS OF 602.6.
2. THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL AIR RELEASE VALVES AT CHANGES IN ELEVATION OF 2 FEET DUE TO ACTUAL FIELD CONDITIONS OR CONFLICTS NOT IDENTIFIED ON THESE DESIGN PLANS.
3. AUTOMATIC SPRINKLER / FIRE MAIN SERVICES (WHERE APPLICABLE):
   A. A METERED DETECTOR CHECK BACKFLOW PREVENTER IS REQUIRED ON ALL A.S. SERVICES AND FIRE MAIN CONNECTIONS INSTALLED FOR ONSITE FIRE PROTECTION.

WATER NOTES:

1. THE CONTRACTOR SHALL OBTAIN ALL PERMITS TO COMPLETE THE CONSTRUCTION.
2. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF WATER FACILITIES WITH ALL OTHER CONSTRUCTION.
3. CONTRACTOR SHALL FURNISH SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.
4. ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO LATEST CC COUNTY UTILITY AUTHORITY AND COUNTY STANDARDS AND SPECIFICATIONS AND APPLICABLE AWWA STANDARDS.
5. THE EXISTING UTILITY FACILITIES AND LOCATIONS SHOWN ON THE DRAWINGS ARE TAKEN FROM READILY AVAILABLE INFORMATION. THE ACTUAL LOCATIONS OF THE UTILITY FACILITIES MAY VARY SOMEWHAT FROM THE LOCATIONS SHOWN AND THERE MAY BE UTILITY FACILITIES EXISTING THAT ARE NOT SHOWN OR INDICATED ON THE DRAWINGS. THE SITE UTILITY CONTRACTOR SHALL CONTACT ALL AGENCIES WITH UTILITY FACILITIES IN THE VICINITY OF THE WORK AND SHALL LOCATE ALL UNDERGROUND FACILITIES BEFORE BEGINNING WORK. THE CONTRACTOR SHALL PROTECT ALL UTILITY FACILITIES AND REPAIR ANY DAMAGES RESULTING FROM THEIR WORK. IN CONFORMANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS AND RELOCATE IF REQUIRED AT NO COST TO THE OWNER.
6. WATER LINES SHALL HAVE A MINIMUM OF 36" COVER FROM FINISHED GRADE. MAXIMUM COVER SHALL BE 60".
7. WATER LINES ARE DESIGNED TO FINISHED GRADE AND SHALL BE PROTECTED UNTIL FINISH WORK IS COMPLETE.
8. ALL WATER MAINS 4" AND LARGER SHALL BE AWWA C900, DR18 PVC. UTILITY COMPANY OWNED WATER MAINS 2" OR 3" IN SIZE SHALL BE HDPE. WATER MAINS 2" IN SIZE SHALL BE SCH. 40 CPVC PIPE WITH SOLVENT JOINTS. WATER SERVICES 2" AND SMALLER SHALL BE POLYETHYLENE, NON JOINT PIPE. ALL WATER PIPES SHALL BE NSF-PW APPROVED AND COMPLY WITH UTILITY AUTHORITY STANDARDS.
9. RESTRAINED JOINTS ARE REQUIRED WHERE WATER MAINS ARE TERMINATED AND AT ALL BENDS, IN ACCORDANCE WITH THE UTILITY AUTHORITY STANDARD DETAILS AND SPECIFICATIONS.
10. ALL GATE VALVES SHALL BE NON-RISING STEM TYPE AND SHALL BE SUITABLE FOR 250 PSI NON-SHOCK WORKING PRESSURE. GATE VALVES SHALL BE MECHANICAL JOINT, IRON BODY, RESILIENT SEAT, BY A UTILITY AUTHORITY APPROVED MANUFACTURER. VALVE BOXES WITH SCREW EXTENSIONS SHALL BE PROVIDED FOR EACH BURIED GATE VALVE. BOXES SHALL BE OF CAST IRON CONSTRUCTION, 3/8" MINIMUM WALL THICKNESS AND SHALL BE NON-TACKY TAR ENAMEL COATED. THE WORD "WATER" SHALL BE CAST IN COVER. ALL GATE VALVES INSTALLED SHALL OPEN BY TURNING TO THE LEFT (COUNTERCLOCKWISE) WHEN VIEWED FROM THE STEM.
11. CLASS B, TYPE I BEDDING SHALL BE USED FOR THIS PROJECT UNLESS INDICATED OTHERWISE ON THE DRAWINGS OR DIRECTED BY THE ENGINEER.
12. UNSUITABLE MATERIALS UNDER WATER PIPE SHALL BE REMOVED TO A DEPTH OF 18" BELOW BOTTOM OF PIPE AND REPLACED WITH SELECTED BACKFILL PROPERLY COMPACTED IN 6" LIFTS. THE MATERIAL SHOULD EXHIBIT MOISTURE CONTENTS WITHIN +/- 2 PERCENT OF THE MODIFIED PROCTOR OPTIMUM MOISTURE CONTENT (ASTM D1557) DURING THE COMPACTION OPERATIONS. COMPACTION SHOULD CONTINUE UNTIL DENSITIES OF AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D 1557) HAVE BEEN ACHIEVED.
13. BACKFILLING SHALL BE MADE WITH CLEAN BACKFILL WHICH SHALL BE THOROUGHLY COMPACTED IN 6" LIFTS. COMPACTION SHALL BE A MINIMUM OF 95% OF MAX. DENSITY AT +/- 2.0% OF THE MODIFIED PROCTOR.
14. WHERE WATER MAINS ARE LAID UNDER DITCHES, CULVERTS, PIPELINES, OR OBSTRUCTIONS WITHOUT FITTINGS, THE MAXIMUM DEFLECTION OF ANY JOINT SHALL NOT EXCEED 50% OF THE MAXIMUM RECOMMENDED BY THE PIPE MANUFACTURER.
15. NO CONNECTION TO EXISTING POTABLE WATER SYSTEM WILL BE ALLOWED UNTIL ALL PROPOSED WATER LINES HAVE BEEN FLUSHED, PRESSURE TESTED, DISINFECTED, AND CLEARED FOR SERVICE BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.
16. CONTRACTOR SHALL NOTIFY UTILITY COMPANY A MINIMUM OF TWO DAYS PRIOR TO CONNECTION OF WATER MAINS TO EXISTING LINES. ALL NEW WORK MUST BE INSPECTED BY THE ENGINEER. NO TESTS SHALL BE SCHEDULED FOR WEEKENDS. ANY CHANGE FROM THE TECHNICAL REQUIREMENTS MUST BE REVIEWED AND APPROVED BY THE ENGINEER AND OWNER.
17. HYDROSTATIC AND LEAKAGE TESTING OF THE WATER MAINS INSTALLED SHALL BE PERFORMED IN ACCORDANCE WITH AWWA STANDARD SPECIFICATIONS C600, SECTION A. A REPRESENTATIVE OF THE UTILITY COMPANY OR THE ENGINEER MUST BE PRESENT DURING THE TESTS. PRESSURE TESTS SHALL BE CONDUCTED AT 150 PSI FOR 2 HOURS FOR WATER MAINS AND 200 PSI FOR 2 HOURS FOR FIRE MAINS. PRESSURE TEST AFTER LIME ROCK IS INSTALLED.
18. THE CONTRACTOR SHALL COORDINATE ALL WATER MAIN FLUSHING WITH THE UTILITY AUTHORITY. FLUSHING AND DISINFECTION PROCEDURES SHALL COMPLY WITH AWWA C-651 FOR MAIN DISINFECTION.
19. UPON COMPLETION OF WATER MAIN FLUSHING, BACTERIOLOGICAL SAMPLES SHALL BE TAKEN. SAMPLES SHALL BE TAKEN FOR 2 CONSECUTIVE DAYS.
20. SAMPLE POINTS FOR BACTERIOLOGICAL SAMPLING SHALL BE LOCATED AS FOLLOWS:
    1. EVERY 1000 FEET AND/OR EVERY DEAD END ON A WATER MAIN.
    2. POINT OF TIE-IN TO EXISTING WATER SYSTEM.
    3. WATER MAIN STUBS MORE THAN 40 FEET IN LENGTH.
21. FIRE HYDRANTS SHALL MEET UTILITY AUTHORITIES STANDARDS.
22. THE SITE UTILITY CONTRACTOR SHALL MAKE APPLICATION TO UTILITY COMPANY FOR THE PROJECT WATER METER AND SHALL PAY FOR ALL METER FEES.
23. ALL NEW OR RELOCATED WATER MAINS:
    A. SHALL PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER, STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER; A HORIZONTAL DISTANCE OF SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER (OR A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER IF THE BOTTOM OF THE WATER MAIN WILL BE LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER) A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM".
    B. THAT WILL CROSS ANY EXISTING OR PROPOSED GRAVITY OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OTHER PIPELINE OR AT LEAST TWELVE INCHES BELOW THE OTHER PIPELINE AND WATER MAINS THAT WILL CROSS ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIM WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN SHALL BE AT LEAST TWELVE INCHES ABOVE OR BELOW THE OTHER PIPELINE.
    C. AT THE UTILITY CROSSINGS DESCRIBED IN 23(A) AND 23(B) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE OR THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
24. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING WATER FOR CONSTRUCTION USE DURING ENTIRE COURSE OF PROJECT.
25. PRESSURE PIPE AND FITTINGS REQUIRING RESTRAINT SHALL BE BRACED WITH RESTRAINED JOINTS PER UTILITY AUTHORITIES STANDARDS AND AWWA STANDARD C509.
26. THE CONTRACTOR SHALL COORDINATE ALL CONNECTIONS WITH SITE PIPING AND BUILDING PIPING.
27. ALL WATER AND SEWER CONSTRUCTION WITHIN COUNTY SHALL BE ACCOMPLISHED BY AN UNDERGROUND UTILITY CONTRACTOR LICENSED UNDER THE PROVISIONS OF CHAPTER 489 FLORIDA STATUTES.
28. IF DEWATERING CAPACOUNTY REQUIRES A CONSUMPTIVE USE PERMIT IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE PERMIT THROUGH THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.
29. IF SOLVENT CONTAMINATION IS FOUND IN THE PIPE TRENCH, WORK SHALL BE STOPPED AND THE PROPER AUTHORITIES NOTIFIED. WITH APPROVAL OF THE PERMITTING AGENCY, DUCTILE IRON PIPE, FITTINGS, AND SOLVENT RESISTANT GASKET MATERIAL SUCH AS FLUOROCARBON SHALL BE USED IN THE CONTAMINATED AREA. THE DUCTILE IRON PIPE SHALL EXTEND AT LEAST 100 FEET BEYOND ANY SOLVENT NOTED. ANY CONTAMINATED SOIL THAT IS EXCAVATED SHALL BE PLACED ON AN IMPERMEABLE MAT AND COVERED WITH A WATERPROOF COVERING. THE PROPER AUTHORITIES WILL BE NOTIFIED AND THE CONTAMINATED SOIL HELD FOR PROPER DISPOSAL.

AS-BUILT REQUIREMENTS:

CONTRACTOR SHALL PROVIDE COMPLETE AS-BUILT INFORMATION TO THE PROJECT ENGINEER IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

1. AS-BUILT DRAWINGS SHALL BE PREPARED IN AUTOCAD FORMAT BY A REGISTERED LAND SURVEYOR AND ELECTRONICALLY SIGNED & SEALED PDF OF THE PROJECT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. SIGNED AND SEALED PRINTS SHALL BE PROVIDED TO THE ENGINEER AS REQUESTED.
2. AS-BUILT DRAWINGS SHALL BE IN ACCORDANCE WITH ALL AUTHORITIES HAVING JURISDICTION. CONTRACTOR SHALL COORDINATE AS-BUILT SUBMITTALS AND APPROVALS WITH JURISDICTIONAL AGENCIES UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER.
3. PROVIDE BUILDING LOCATIONS, FINISH FLOOR ELEVATIONS, PAVEMENT GRADES AND ALL UNDERGROUND FACILITIES.
4. PROVIDE PERIMETER DIMENSIONS AT TOP OF BANK AND AT BOTTOM OF POND/STORMWATER STORAGE SYSTEM.
5. PROVIDE ELEVATIONS AT TOP OF BANK AND BOTTOM OF POND/TOP OF TANK AND BOTTOM OF TANK (IF APPLICABLE).
6. PROVIDE SPECIAL DETAIL DRAWINGS WHERE INSTALLATIONS WERE NOT AS SHOWN ON CONTRACT DRAWINGS DUE TO FIELD CONDITIONS OR WHERE REQUIRED FOR CLARITY.
7. PROVIDE LOCATION, ELEVATION AND DESCRIPTION OF BENCHMARK(S).
8. LOCATE AND PROVIDE ELEVATIONS OF ALL STRUCTURES. LOCATION OF ALL STRUCTURES SHALL BE FROM TWO (2) DIRECTIONS.
9. LOCATE ALL PIPES AND PROVIDE SIZE, ELEVATION, INVERT ELEVATIONS, LENGTH AND TYPE.
10. PROVIDE DIMENSIONS AND ELEVATIONS OF THE POND OUTFALL STRUCTURE(S).
11. WATER AS-BUILTS SHALL INDICATE THE LOCATION OF BACTERIOLOGICAL SAMPLE POINTS. SAMPLE POINTS SHALL BE INDICATED IN RED OR PINK.
12. THE AS-BUILTS SHALL INCLUDE A DETAIL OF EVERY CROSSING OF THE NEW WATER MAIN WITH GRAVITY SEWERS, FORCE MAINS AND STORM PIPES CLEARLY SHOWN & INDICATING THE VERTICAL CLEARANCES AT EACH CROSSING. DETAILS SHALL BE FURNISHED FOR PARALLEL RUNS WHERE THE HORIZONTAL SEPARATION IS LESS THAN 10 FEET.
13. THE CENTERING OF UNCUT LENGTHS OF PIPE AT POINTS OF CROSSING SHALL BE DOCUMENTED ON THE AS-BUILTS AND ALL MITIGATING CONSTRUCTION MEASURES CLEARLY DEPICTED IN CASES WHERE A MINIMUM OF 18" OF VERTICAL CLEARANCE BETWEEN THE WATER AND SEWER (INCLUDING STORM) LINES IS NOT POSSIBLE.
14. THE ABOVE NOTED AS-BUILD REQUIREMENTS SHALL BE IN ADDITION TO ANY GCSU STANDARD AS-BUILD REQUIREMENTS.

MAINTENANCE OF TRAFFIC REQUIREMENTS:

1. ANY MODIFICATION OF THIS MAINTENANCE OF TRAFFIC PLAN SHALL BE SUBMITTED TO THE CITY TRAFFIC ENGINEERING DIVISION FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
2. THE PROJECT WORK HOURS SHALL BE BETWEEN 7:00 AM AND 7:00 PM ON RESIDENTIAL STREETS AND 9:00 AM AND 4:00 PM ON COLLECTOR OR ARTERIAL STREETS.
3. NO LANE CLOSURES ARE ALLOWED FROM 7:00 AM TO 9:00 AM AND 4:00 PM TO 7:00 PM MONDAY THROUGH FRIDAY.
4. CONTRACTOR MUST MAINTAIN EXISTING SIGNAGE. IF SIGNS ARE DAMAGED DUE TO HIS ACTIVITY, THE CONTRACTOR IS REQUIRED TO REPLACE THEM IMMEDIATELY IN ACCORDANCE WITH CURRENT CITY STANDARD SPECIFICATION IMMEDIATELY.
5. THIRTY FOOT RADII ARE REQUIRED AT ALL INTERSECTIONS WHERE THE ROADWAY IS REBUILT.
6. ACCESS TO ALL STREETS AND DRIVEWAYS TO BE MAINTAINED AT ALL TIMES.
7. IF SIDEWALKS ARE DISTURBED AND HAVE TO BE REPLACED, HANDICAP RAMPS ARE TO BE INSTALLED.
8. THE CONTRACTOR SHALL CONFINE HIS WORK AREA TO NO MORE THAN ONE BLOCK AT A TIME.
9. THE ROADWAY SHALL BE RESTORED TO AT LEAST A LIME ROCK SURFACE BEFORE IT IS REOPENED TO TRAFFIC, AND BEFORE THE CONTRACTOR MOVES ON TO THE NEXT CONSTRUCTION ZONE.
10. DUST CONTROL MEASURES SHALL BE IMPLEMENTED ON ALL UNPAVED SURFACES UNTIL PAVED.
11. WHERE CONSTRUCTION PHASING IS NOT SHOWN ON PLANS, OR IF THE CONTRACTOR WANTS TO ALTER THE SPACING SHOWN, CONTRACTOR IS TO SUBMIT PHASING PLAN WITH A PROPOSED CONSTRUCTION SCHEDULE TO TRAFFIC ENGINEERING PRIOR TO CONSTRUCTION.
12. CONTRACTOR SHALL NOTIFY THE TRAFFIC ENGINEERING OFFICE A MINIMUM OF 5 WORKING DAYS PRIOR TO IMPLEMENTATION OF THE M.O.T.
13. TRAFFIC SIGNAL VEHICLE LOOPS SHALL BE RESTORED TO PROPER OPERATION WITHIN 36 HOURS OF BEING DESTROYED OR DAMAGED. CONTACT MASON BOYD AT 255-7549 A MINIMUM OF 48 HOURS PRIOR TO WORKING NEAR A SIGNALIZED INTERSECTION.

SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS**		
	A	B	C
URBAN (low speed)	30 (100)	30 (100)	30 (100)
URBAN (high speed)	100 (350)	100 (350)	100
(350)			
RURAL	150 (500)	150 (500)	150
(500)			
Expressway/Freeway	300 (1,000)	450 (1,500)	0
(2,640)			

* SPEED CATEGORY TO BE DETERMINED BY HIGHWAY AGENCY
** DISTANCES ARE SHOWN IN METERS (FEET), THE COLUMN HEADING A, B, AND C ARE THE DIMENSIONS SHOWN IN FIGURES 6H-1 THROUGH 6H-46 OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE A DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN. THE B DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS. THE C DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS. (THE THIRD SIGN IS THE FIRST ONE IN THE THREE-SIGN SERIES ENCOUNTERED BY A DRIVER APPROACHING A TEMPORARY TRAFFIC CONTROL ZONE).
NOTE: LONGITUDINAL DIMENSIONS ARE TO BE ADJUSTED TO FIT FIELD CONDITIONS. SEE FDOT INDEX No. 600

TAPER LENGTH CRITERIA

TYPE OF TAPER	TAPER LENGTH (L)*
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5L
SHOULDER TAPER	AT LEAST 0.33L
ONE LANE, TWO WAY TRAFFIC TAPER	100 FT. MAXIMUM
DOWNSTREAM TAPER	100 FT PER LANE

*FORMULAS FOR L ARE AS FOLLOWS

FOR SPEED LIMITS OF 40 MPH OR LESS: $L=\frac{WS^2}{60}$

FOR SPEED LIMITS OF 45 MPH OR GREATER: $L=WS$

WHERE: L = TAPER LENGTH IN FEET
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED LIMIT

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JACKSONVILLE, FL 32224

CLAY COUNTY
FIRE STATION 20
1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

JEFFREY E. BERGEN LICENSE No. 63060 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE: 11/10/2023

GENERAL NOTES

PROJECT NO.: 23002

C2.0

DEMOLITION NOTES:

1. ALL WORK TO BE ACCOMPLISHED IN STRICT ACCORDANCE WITH ALL LOCAL ORDINANCES, CITY, COUNTY OR STATE.
2. WITHIN THE WORK AREA, THE INTENT IS TO HAVE A CLEAN, CLEAR SITE, FREE OF ALL EXISTING ITEMS NOTED TO BE REMOVED IN ORDER TO PERMIT THE CONSTRUCTION OF THE NEW PROJECT.
3. REMOVE AND DISPOSE OF ANY SIDEWALKS, FENCES, WALLS, DEBRIS AND RUBBISH REQUIRING REMOVAL FROM THE WORK AREA IN AN APPROVED OFF SITE LANDFILL.
4. THE CONTRACTOR SHALL SECURE ALL PERMITS FOR CLEARING, DEMOLITION, AND DISPOSAL OF THE DEMOLITION MATERIAL TO BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL POST BONDS AND PAY PERMIT FEES AS REQUIRED. BUILDING DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITS AND DISPOSAL OF BUILDING DEMOLITION DEBRIS.
5. THE DETAILED PLANS MAY NOT REFLECT ALL UTILITIES ON THE SITE OR SURROUNDING STREETS AND PROPERTIES. THE CONTRACTOR SHALL VERIFY LOCATIONS AND EXISTENCE OF UTILITY SERVICES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL "SUNSHINE" AT 1-800-432-4770, 48 HOURS PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR TO REMOVE ALL UTILITIES TO EXISTING STRUCTURES WHETHER SHOWN OR NOT OR ARRANGE FOR THE APPROPRIATE UTILITY COMPANY TO CUT AND CAP SERVICE PIPING AT THE PROPERTY LINE OR MAIN (AS REQUIRED). ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN.
7. SEE LANDSCAPE PLANS FOR ALL TREE REMOVAL AND PROTECTION REQUIREMENTS, IF APPLICABLE.
8. FOR ALL ITEMS NOTED TO BE REMOVED - REMOVE NOT ONLY THE ABOVE GROUND ELEMENTS, BUT ALL UNDERGROUND ELEMENTS AS WELL INCLUDING BUT NOT NECESSARILY LIMITED TO: FOUNDATIONS, GRAVEL FILLS, TREE ROOTS, OLD PIPES, ETC.
9. BACK FILL ALL EXCAVATIONS RESULTING FROM THE DEMOLITION WORK TO MEET THE REQUIREMENTS FOR FILL OUTLINED IN THE GEOTECHNICAL REPORT, OR PER FDOT SPECIFICATIONS.
10. THE CONTRACTOR SHALL PROTECT ALL IRON PINS, MONUMENTS AND PROPERTY CORNERS DURING CONSTRUCTION. ANY CONTRACTOR DISTURBED PINS, MONUMENTS, ETC. SHALL BE RESET BY A LICENSED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
11. THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, PIPES, PAVEMENT, CURBS, SIDEWALKS OR LANDSCAPED AREAS DISTURBED DURING DEMOLITION TO THEIR ORIGINAL CONDITION TO THE SATISFACTION THE ENGINEER.
12. ALL BUILDINGS, FOUNDATION WALLS AND FOOTINGS INDICATED ON THIS PLAN TO BE REMOVED FROM SITE. CONTRACTOR SHALL SECURE ANY PERMITS AND PAY ALL FEES AND PERFORM CLEARING AND GRUBBING AND DEBRIS REMOVAL IN ACCORDANCE WITH GEOTECHNICAL REPORT PRIOR TO COMMENCEMENT OF GRADING OPERATIONS.
13. ASBESTOS AND ANY OTHER HAZARDOUS MATERIAL SHALL BE REMOVED BY THE GENERAL CONTRACTOR USING A LICENSED HAZARDOUS MATERIAL CONTRACTOR.
14. SEE SURVEY FOR EXISTING SITE LEGEND.
15. SITE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE SILT FENCE IN ITS DESIGNED POSITION, OR AS NEEDED PER SEDIMENTATION/ TURBIDITY CONTROL UPRIGHT AND WORKING PROPERLY TO STOP EROSION DURING THE DURATION OF THE PROJECT.
16. ALL ELECTRIC DEMOLITION/ WORK SHALL BE PERFORMED BY LICENSED ELECTRICAL CONTRACTORS.
17. CONTRACT TO CONFIRM ALL TREES TO BE IMPACTED WITH LANDSCAPE PLANS PRIOR TO DEMOLITION.
18. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL SYSTEM DEMOLITIONS WITH THE AUTHORITY / ELECTRIC ENGINEER / ELECTRICIAN TO CONFIRM ALL POWER IS OFF AND PROPERLY TERMINATED PRIOR TO ANY ELECTRICAL DEMOLITION.
19. CONTRACTOR SHALL COMPLETELY AND PROPERLY PROTECT ALL TREES , STRUCTURES, ELEMENTS TO REMAIN TO WHATEVER LEVEL NECESSARY PRIOR TO COMMENCEMENT OF DEMOLITION.
20. ALL PAVEMENT DEMOLITION LINES SHALL BE SAW CUT.
21. EXISTING LIGHTING ELEMENTS AND ALL "SALVAGABLE" DEMOLITION FEATURES SHALL BE CONFIRMED WITH THE OWNER FOR DISPOSAL / STORAGE PRIOR COMENCEMENT OF DEMOLITION.
22. PEDESTRIAN FENCING / BARRIERS SHALL BE INSTALLED WHERE NEEDED.
23. COURSES OF SILT FENCE SHALL BE PROVIDE AS NEEDED TO CONTROL STORMWATER SEDIMENT MIGRATION.
24. DETAIL AND INFORMATION SHOWN ON THE PLANS ARE A MINIMUM LEVEL NEEDED . IT IS THE CONTRACTORS RESPONSIBILITY TO INSTALL AND MANAGE TO THE NEEDED ON THE SITE CONTROLLING SEDIMENTATION MIGRATION / TURBID RUNOFF THROUGH THE CONSTRUCTION PROGRESS
25. ALL TURBIDITY / SEDIMENTATION CONTROLS SHALL AT A MINIMUM BE IN ACCORDANCE WITH F.D.E.P STORMWATER EROSION AND SEDIMENTATION CONTROLS GUIDELINES / STANDARDS.
26. DEMOLITION SHALL BE PHASES AS IS SHOWN ON THE PLANS.

GENERAL LEGEND

DRAINAGE PLAN LEGEND

- DRAINAGE FLOW
- DRAINAGE DIVIDE
- LIMITS OF DRAINAGE AREA
- PROPERTY LINE
- IMPERVIOUS AREA
- PRE-DA1 — PRE DEVELOPMENT DRAINAGE AREA
- POST-DA1 — POST DEVELOPMENT DRAINAGE AREA
- TIME OF CONCENTRATION PASS
- SA-X — SUB AREA-X

PAVEMENT LEGEND

- HD — HEAVY DUTY (HD) CONCRETE PAVEMENT (RIGHT OF WAY)
- SD — SUPER DUTY (SD) CONCRETE PAVEMENT (ON SITE)
- STANDARD DUTY (STD) ASPHALT PAVEMENT
- HEAVY DUTY (HD) ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- (8) — # OF PARKING STALLS
- TRUNCATED DOMES DETECTABLE WARNING SURFACE (ADA COMPLIANT)
- CT — CURB TRANSITION

DEMOLITION LEGEND

- GENERAL PAVEMENT, BUILDING, CURBING AND VERTICAL/SURFACE IMPROVEMENT DEMOLITION, SOIL DISTURBANCE
- SF — SILT FENCE
- TB — TURBIDITY BARRIER
- TREE PROTECTION BARRICADE
- LOC — LOC — LOC — LIMITS OF CONSTRUCTION
- TREE TO BE REMOVED
- TREE TO BE PROTECTED
- INLET SEDIMENT PROTECTION
- SIDEWALK CLOSED / SIDEWALK DETOUR BARRICADE / SIGN. SEE INDEX 102-660 (FDOT STANDARDS) ON MAINTENANCE OF TRAFFIC SHEET

SIGN LEGEND

TAG	SIGN	
1	STOP	R1-1 (36"x36")
2	PARKING BY SHERIFF PERMIT ONLY / $100 FINE	(12"x18") / (12"x4")
3	DO NOT ENTER	R5-1 (30")
4	NO PARKING FIRE LANE BY ORDER OF THE FIRE DEPARTMENT	(12"X18")
5	TRAFFIC PATTERN ONLY	(12"x18")
6	TRAFFIC PATTERN ONLY	(12"x18")
A		INDICATES SIGNS TO BE MOUNTED BACK TO BACK

DRAINAGE LEGEND

- EXISTING SPOT ELEVATION
- 64.0 — GROUND ELEVATION
- 64.57 — PAVEMENT SPOT ELEVATION
- 63.35 / 62.85 — TOP OF CURB OR SIDEWALK/ EDGE OF PAVEMENT
- 50.30 (ME) — APPROX. ELEVATION - MATCH EXISTING

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CLAY COUNTY FIRE STATION 20

1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

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THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY JEFFREY E. BERGEN, PE ON
12/5/2023

USING A SHA AUTHENTICATION CODE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

JEFFREY E. BERGEN LICENSE No. 63060 STATE OF FLORIDA PROFESSIONAL ENGINEER

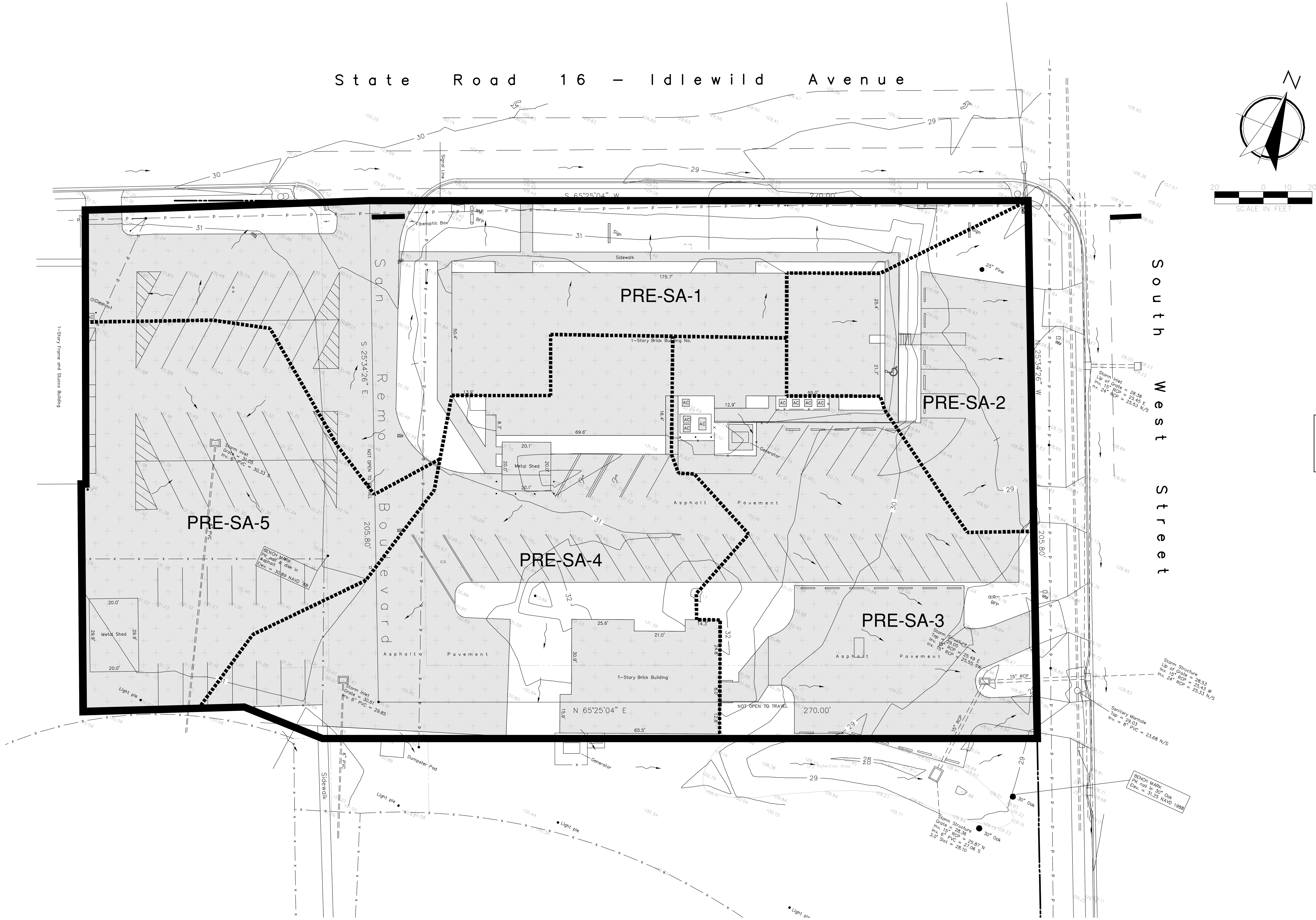
DATE: 11/10/2023

DEMOLITION NOTES & LEGEND

PROJECT NO.: 23002

C3.0

100% DOCUMENTS



* REGADLESS OF WHERE DRAINAGE FLOW OF PRE-DA1 LEAVES PROJECT BOUNDARY, ALL FLOW IS ULTIMATELY SENT SOUTH IN THE SOUTH WEST STREET DRAINAGE SYSTEM

LEGEND

- DRAINAGE FLOW
- DRAINAGE DIVIDE
- LIMITS OF DRAINAGE AREA
- IMPERVIOUS AREA
- PRE-DA1 — PRE DEVELOPMENT DRAINAGE AREA
- TIME OF CONCENTRATION PASS

PRE DEVELOPMENT DRAINAGE AREAS

	AREA (SF)	AREA (AC)	IMP AREA (SF)	IMP AREA (AC)	PERVIOUS AREA (SF)	PERVIOUS AREA (AC)
PRE-SA-1	21,495.36	0.49	13,671.95	0.31	7,823.41	0.18
PRE-SA-2	8,490.66	0.19	6,787.96	0.16	1,702.70	0.04
PRE-SA-3	17,404.18	0.40	14,114.75	0.32	3,289.43	0.08
PRE-SA-4	21,910.15	0.50	17,739.21	0.41	4,170.94	0.10
PRE-SA-5	15,360.06	0.35	15,356.41	0.35	3.65	0.00
TOTAL AREA	84,660.41	1.94	67,670.28	1.55	16,990.13	0.39

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Item # 7.

CLAY COUNTY
CLAY CO FIRE STATION 20
1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

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Jeffrey Bergen P.E. FL 63060

BEFORE YOU DIG !
CALL SUNSHINE STATE ONE CALL OF FLORIDA
AT LEAST TWO FULL BUSINESS DAYS BEFORE DIGGING OR DISTURBING EARTH
1-800-432-4770
811 Know what's below. Call before you dig.

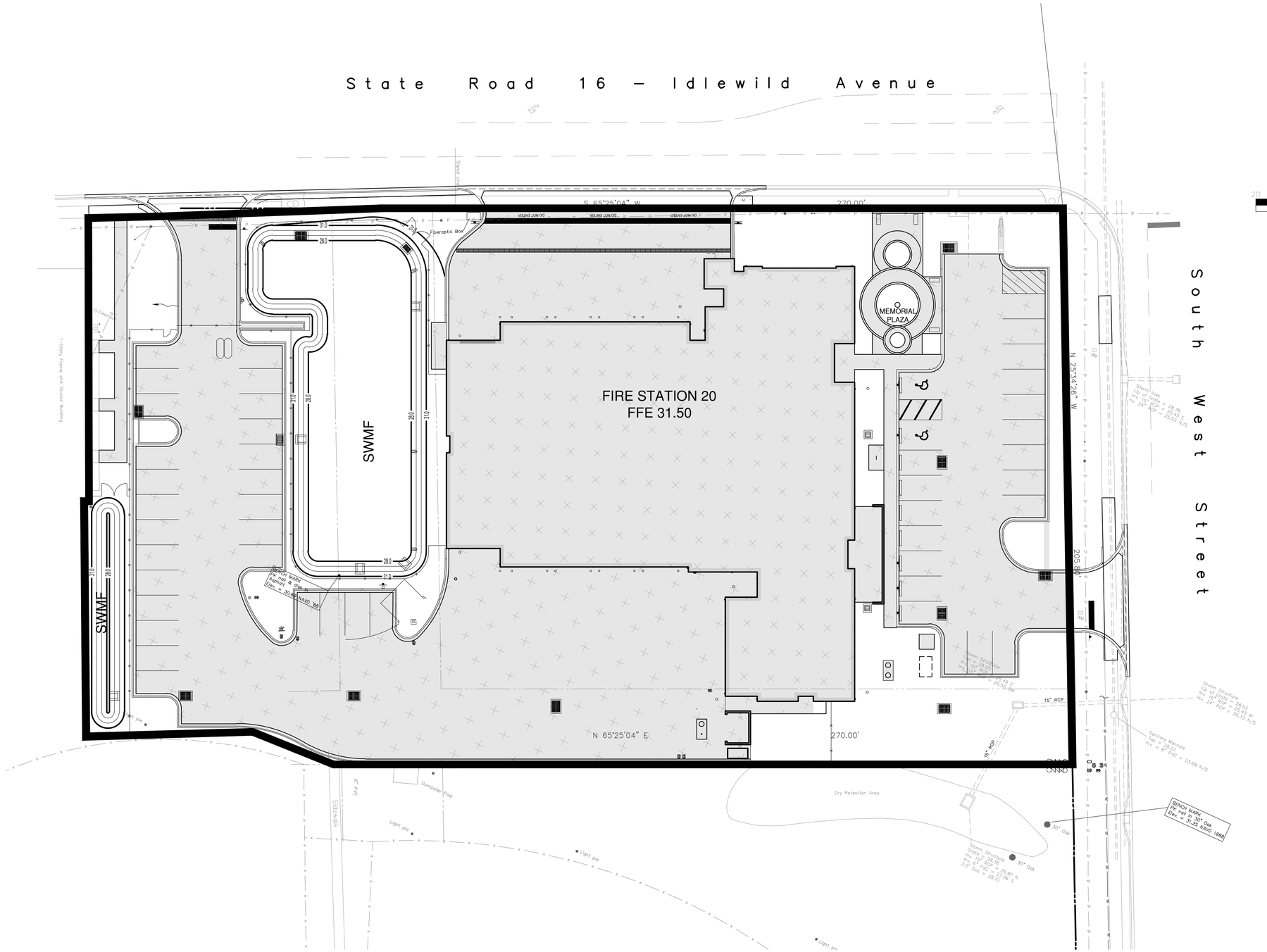
DATE: 11/10/2023

PRE DEVELOPMENT DRAINAGE PLAN

PROJECT NO.: 23002

C4.0

100% DOCUMENTS



POST DEVELOPMENT DRAINAGE AREA (POST-DA1)						
	AREA (SF)	AREA (AC)	IMP AREA (SF)	IMP AREA (AC)	PERVIOUS AREA (SF)	PERVIOUS AREA (AC)
POST-DA1	84,660	1.94	58,797.42	1.35	25,862.99	0.59

LEGEND

- DRAINAGE FLOW
- DRAINAGE DIVIDE
- LIMITS OF DRAINAGE AREA
- IMPERVIOUS AREA
- POST-DA1 — PRE DEVELOPMENT DRAINAGE AREA
- TIME OF CONCENTRATION PASS

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Jeffrey Bergen, P.E. FL 63060

DATE: 11/10/2023

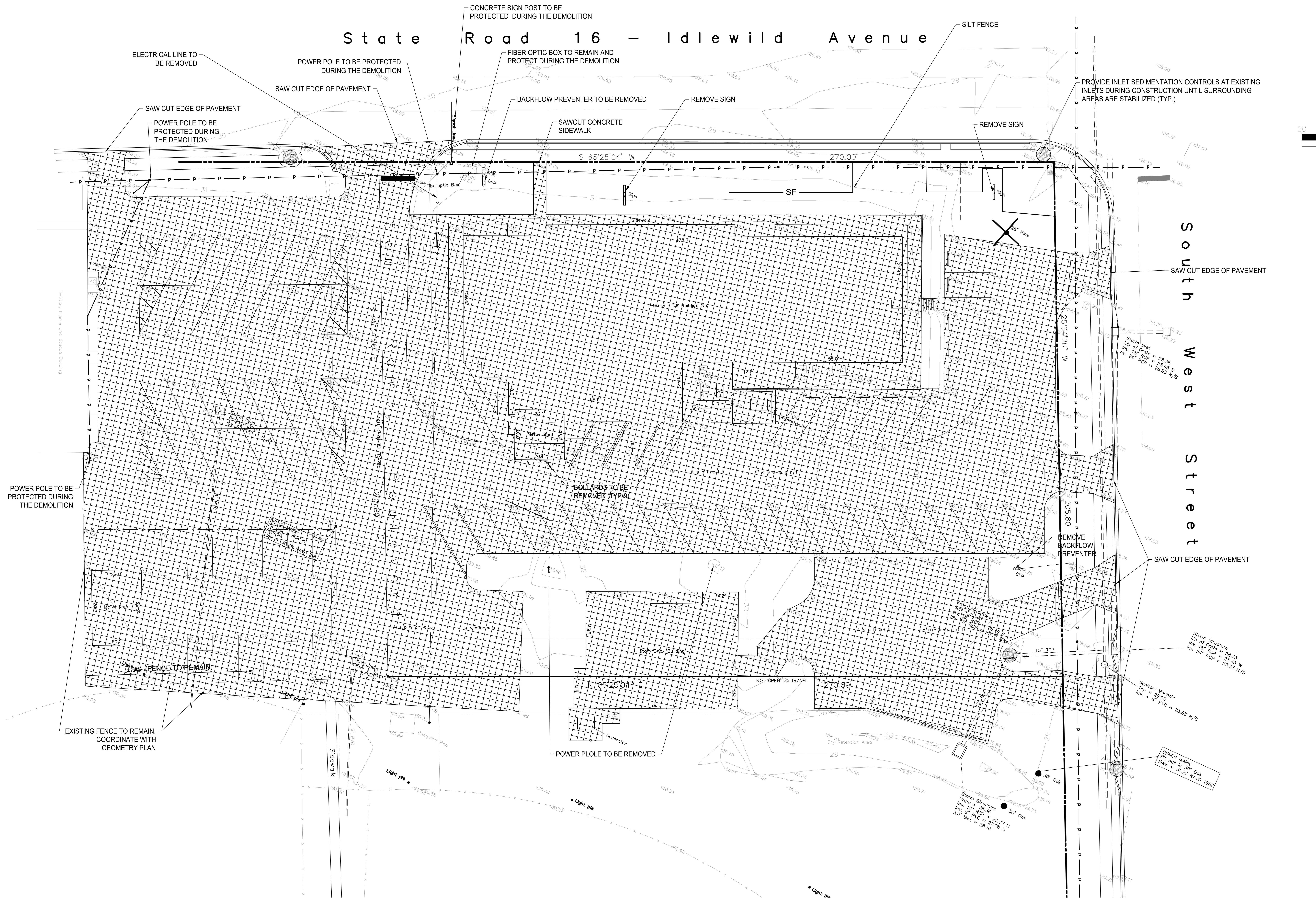
POST DEVELOPMENT DRAINAGE PLAN

PROJECT NO.: 23002

C5.0

100% DOCUMENTS

Item # 7.



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LEGEND

(crosshatch)	GENERAL PAVEMENT, BUILDING, CURBING AND VERTICAL/SURFACE IMPROVEMENT DEMOLITION, SOIL DISTURBANCE
— SF —	SILT FENCE
(X symbol)	TREE TO BE REMOVED

NOTES:

1. CONFIRM ALL TREES IMPACT WITH LANDSCAPE PLANS PRIOR TO DEMOLITION.
2. SEE ADDITIONAL DEMOLITION NOTES AND LEGEND ON SHEET C3.0

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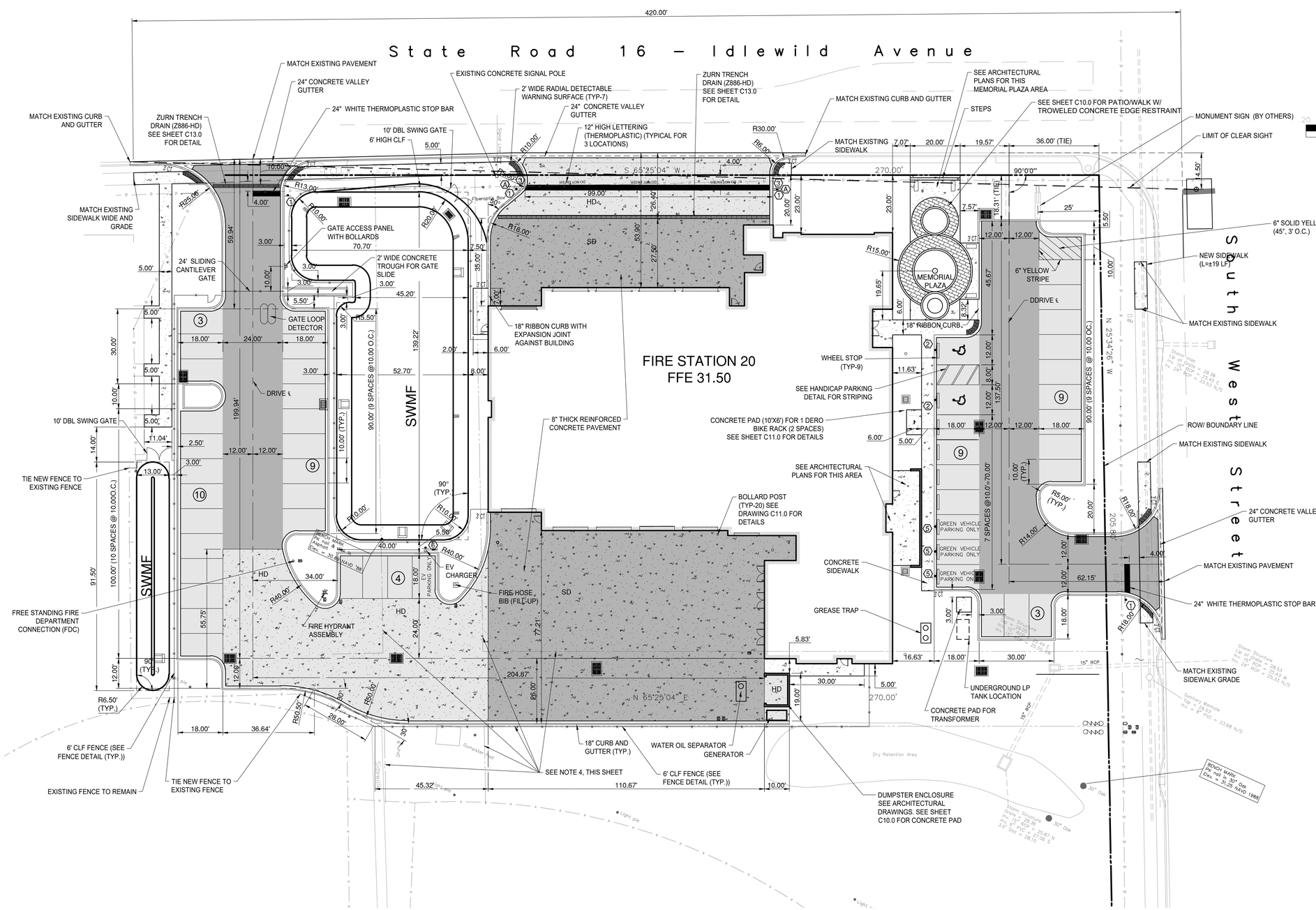
Jeffrey Bergen P.E. FL 63060

DATE: 11/10/2023

DEMOLITION PLAN

PROJECT NO.: 23002

C6.0
100% DOCUMENTS



LEGEND

- HD — HEAVY DUTY (HD) CONCRETE PAVEMENT
- SD — SUPER DUTY (SD) CONCRETE PAVEMENT
- STANDARD DUTY (STD) ASPHALT PAVEMENT
- HEAVY DUTY (HD) ASPHALT PAVEMENT
- 4 — CONCRETE SIDEWALK
- 10 — # OF PARKING STALLS
- TRUNCATED DOMES DETECTABLE WARNING SURFACE (ADA COMPLIANT)
- CT — CURB TRANSITION
- BENCHMARK LOCATION
- RAMP DOWN — SIDEWALK RAMP (SLIP RESISTANT) (ADA COMPLIANT)
- EV — ELECTRIC VEHICLE

SIGN LEGEND

TAG	SIGN	
1	STOP	R1-1 (36"x36")
2	PARKING BY PERMIT ONLY / $250 FINE	(12"x18") (12"x4")
3	DO NOT ENTER	R5-1 (30")
5	LOW EMITTING, FUEL EFFICIENT VEHICLE PARKING ONLY	(18"x12")
6	ELECTRIC VEHICLE PARKING ONLY	(18"x12")
A	INDICATES SIGNS TO BE MOUNTED BACK TO BACK	

PARKING SUMMARY

STANDARD (10'X18') (PUBLIC)..... =19
HC PARKING (12'X18')..... = 2
STANDARD (10'X18') (SECURED).... = 26
TOTAL VEHICLE PARKING..... =47

BICYCLE PARKING..... =2

GEOMETRY NOTES:

1. ALL CURB RADII ARE 5' UNLESS NOTED OTHERWISE.
2. ALL SIDEWALK RADII ARE 5' UNLESS NOTED OTHERWISE.
3. REFER TO ARCHITECTURAL PLAN FOR EXACT BUILDING DIMENSIONS
4. THE EXISTING SHOWN "RIGHT OF WAYS" LINES ARE UNDERSTOOD TO BE CLOSED , THUS DO NOT APPLY. IT IS UNDERSTOOD CLAY COUNTY OWNS ALL ADJACENT PROPERTY SOUTH OF THIS IMPROVEMENT AREA, THUSTHERE IS NO SOUTHTHERLY BOUNDARY LINE SHOWN.

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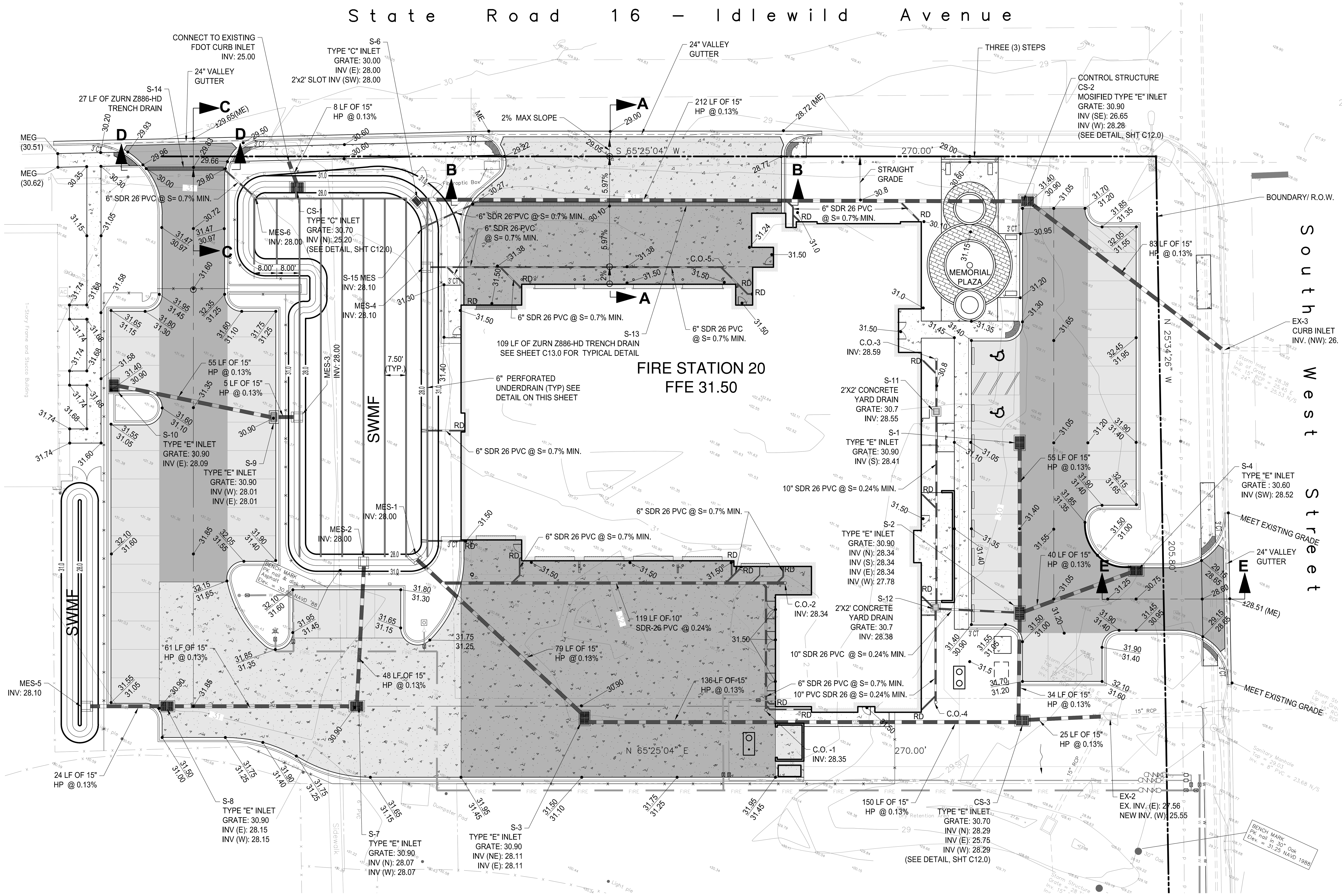
DATE: 11/10/2023

GEOMETRY AND PAVING PLAN

PROJECT NO.: 23002

C7.0



DRAINAGE LEGEND

× 65.46	EXISTING SPOT ELEVATION
65.0	GROUND ELEVATION
65.35	PAVEMENT SPOT ELEVATION
65.20 / 64.70	TOP OF CURB OR SIDEWALK/ EDGE OF PAVEMENT
65.40 / 65.3	TOP OF PAVEMENT OR SIDEWALK/ GROUND ELEVATION
51.00 (ME)	APPROX. ELEVATION - MATCH EXISTING
	DRAINAGE FLOW

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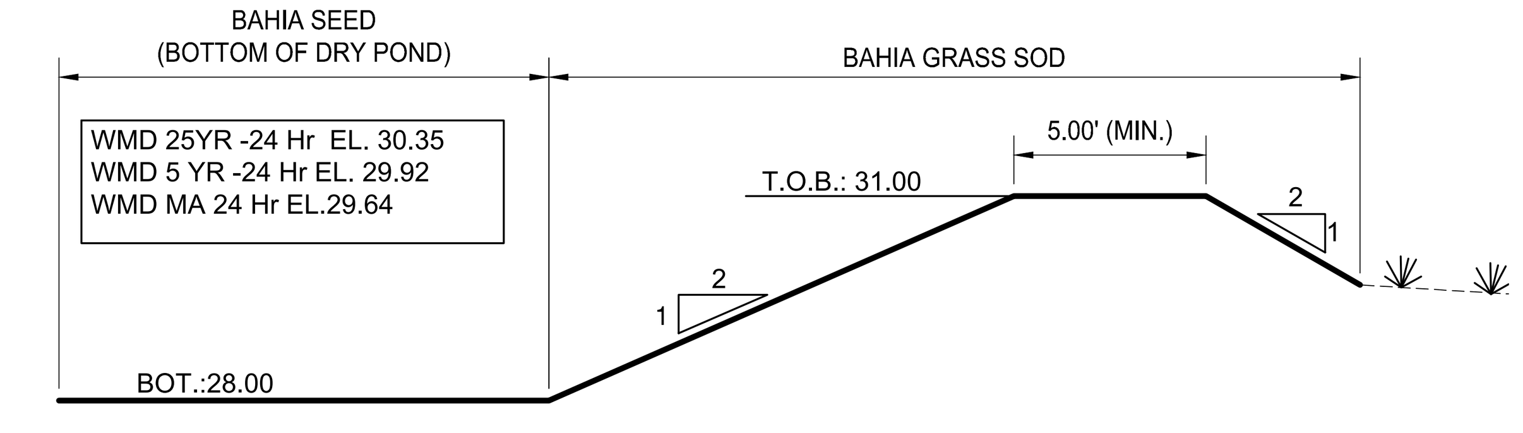
NOTES:

1. UNLESS OTHERWISE NOTED, INSTALL CONCRETE SPLASH BLOCKS AT ALL ROOF DRAIN DOWNSPOUTS
2. COORDINATE ALL EARTHWORK ACTIVITIES WITH GEOTHECNICAL AND ENVIROMENTAL REPORTS
3. ALL DISTURBED AREAS SHALL BE SODDED WITH BAHIA SOD, UNLESS OTHERWISE NOTED ON THE LANDSCAPE PLAN.
4. ALL SIDEWALKS HAVE A MINIMUM 2' WIDE SHOULDER WITH SLOPE MATCHING SIDEWALK CROSS SLOPE.
5. ALL CLEANOUTS IN VEHICLE USE AREAS SHALL HAVE H20 RATED COVERS.



POND TYPICAL SECTION
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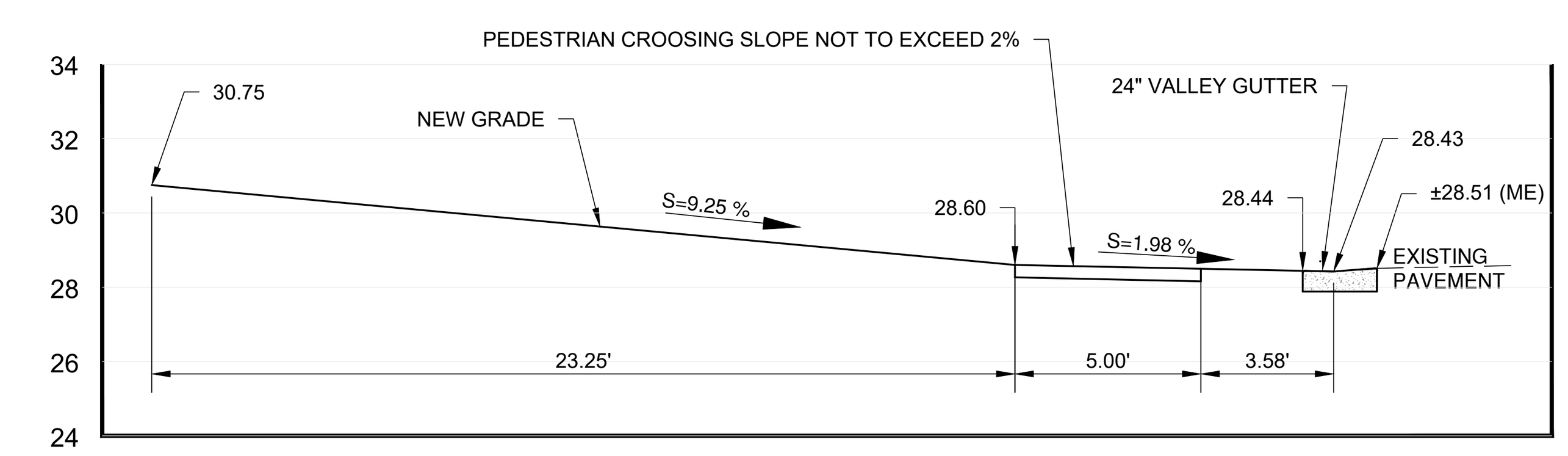
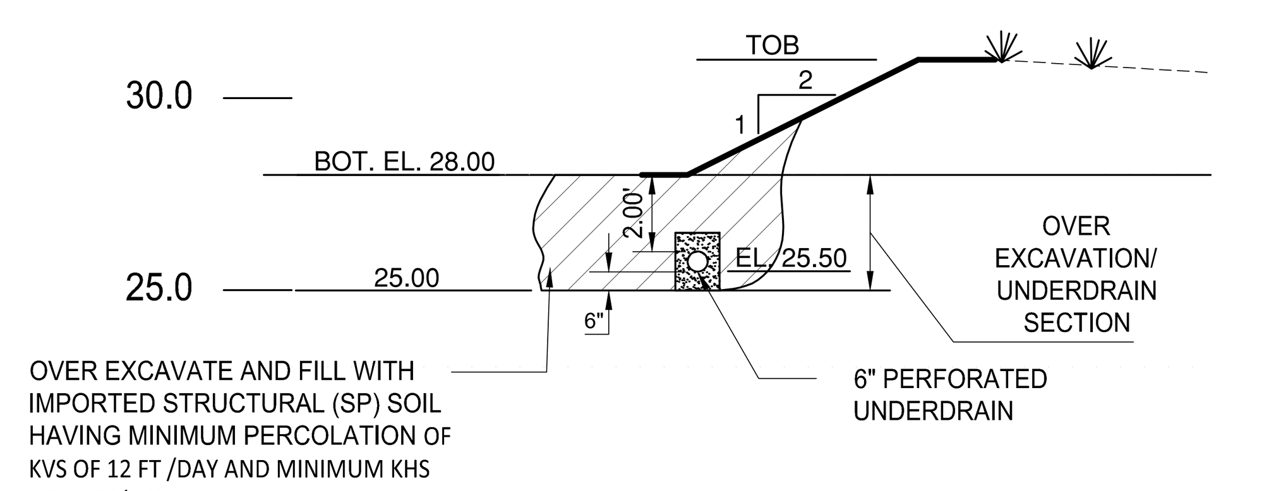


SECTION E-E
SCALE=1:5



POND WITH UNDERDRAIN TYPICAL SECTION
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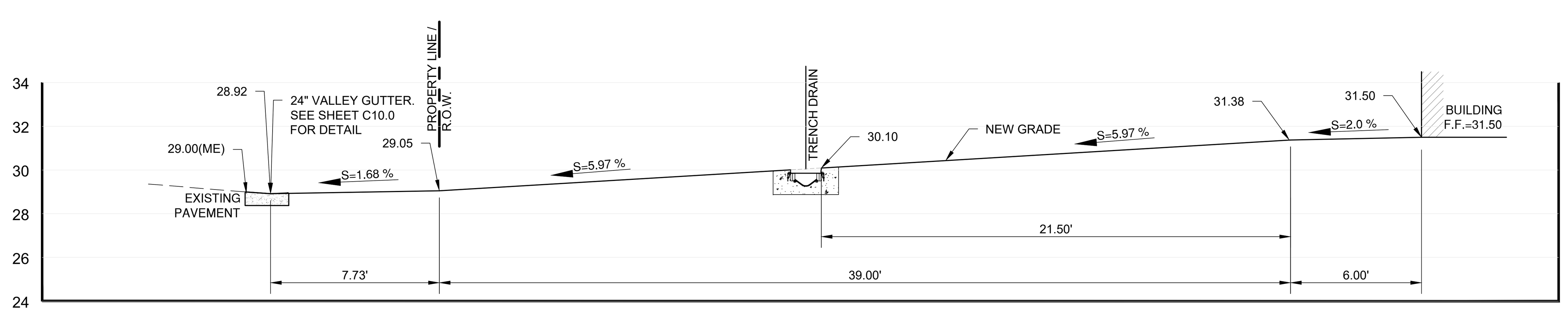

SECTION A-A
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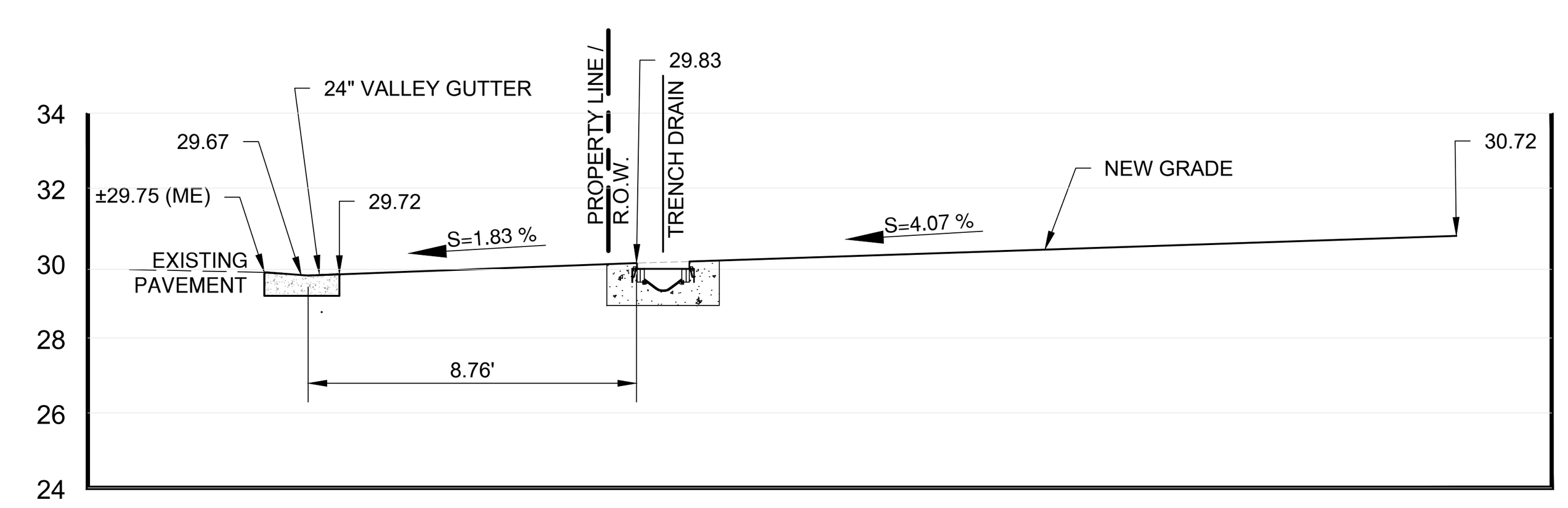

SECTION C-C
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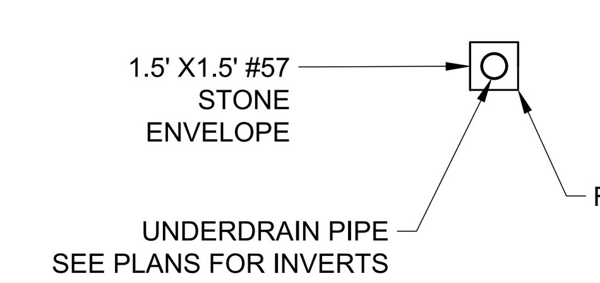

TYPICAL UNDERDRAIN DETAIL
NTS

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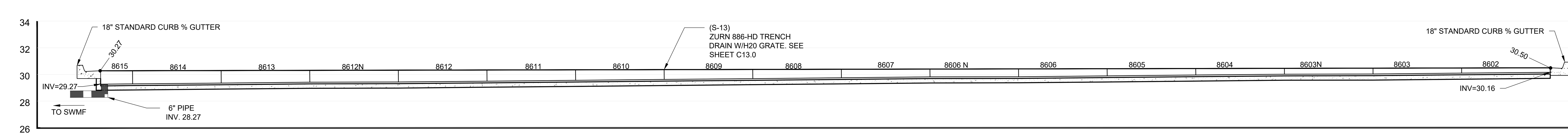

SECTION B-B
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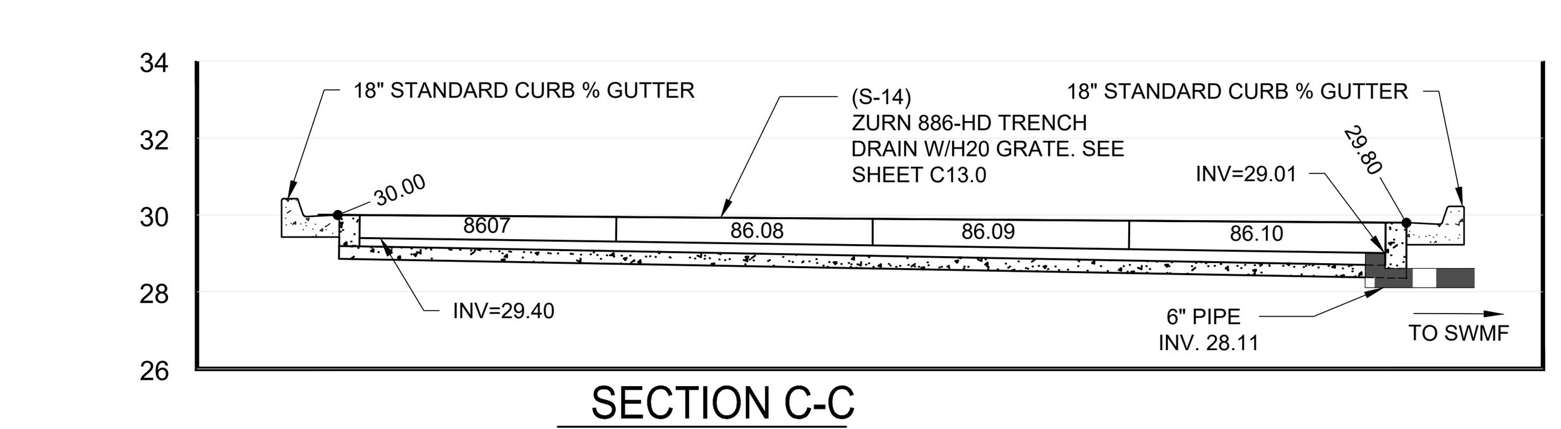


SECTION C-C
SCALE=1:5

Item # 7.

DASHER HURST ARCHITECTS
1022 PARK STREET, SUITE 208
JACKSONVILLE, FLORIDA 32204
PHONE: 904.425.1190
FL LICENSE NUMBER AA26002165
W.W.W. DASHERHURST.COM

STRUCTURAL ENGINEER
G.M. HILL ENGINEERING, INC.
9700 PHILIPS HWY, SUITE 101
JACKSONVILLE, FL 32256

MEP ENGINEER
POWELL & HINKLE ENGINEERING, P.A.
1409 KINGSLEY AVENUE, BLDG 12A
ORANGE PARK, FL 32073

CIVIL ENGINEER
GOODSON BERGEN & ASSOC
11555 CENTRAL PARKWAY, SUITE 103
JACKSONVILLE, FL 32224

CLAY COUNTY
CLAY CO FIRE STATION 20
1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

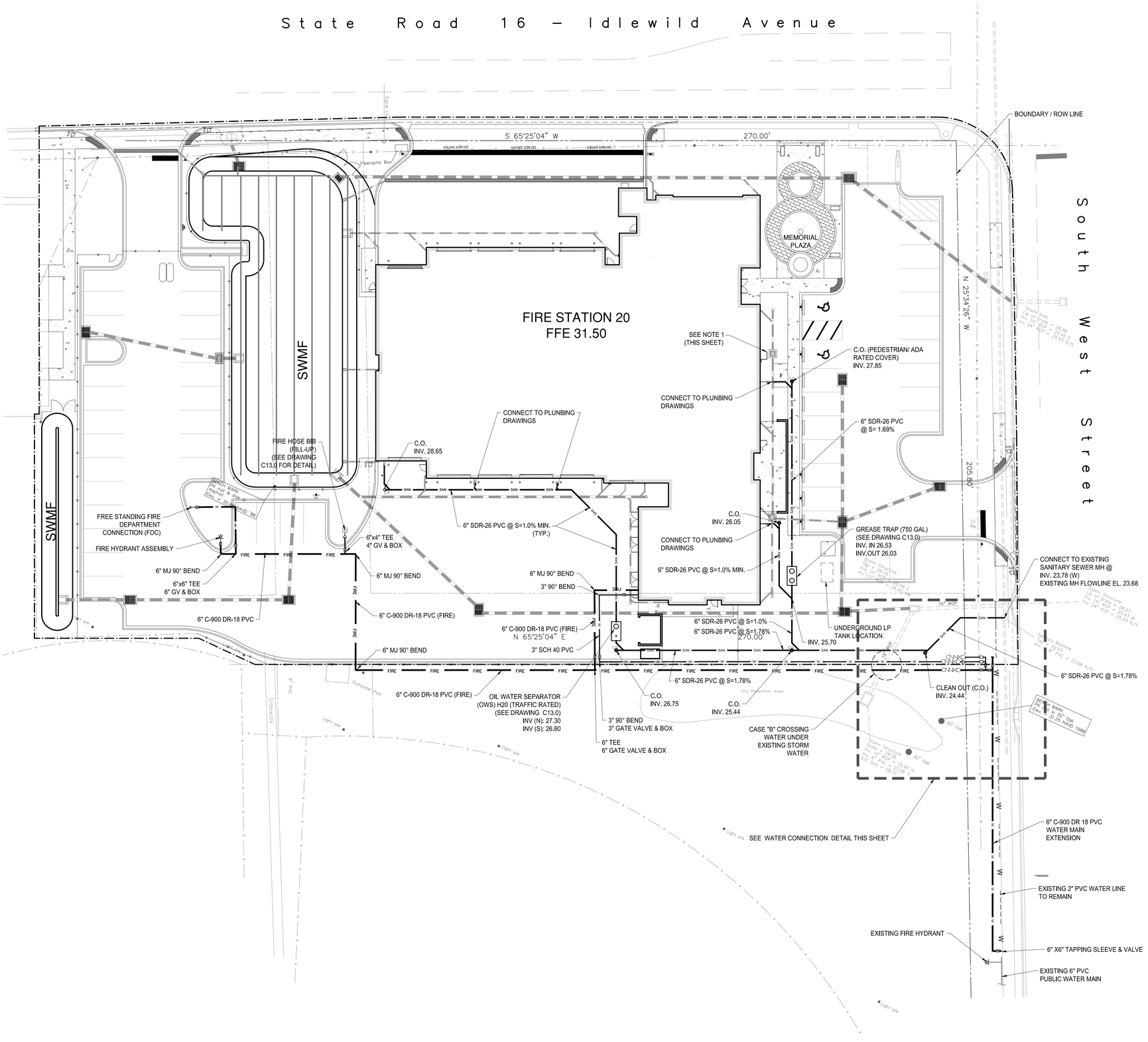
JEFFREY E. BERGEN LICENSE No. 63060 STATE OF FLORIDA PROFESSIONAL ENGINEER
Jeffrey Bergen P.E. FL 63060

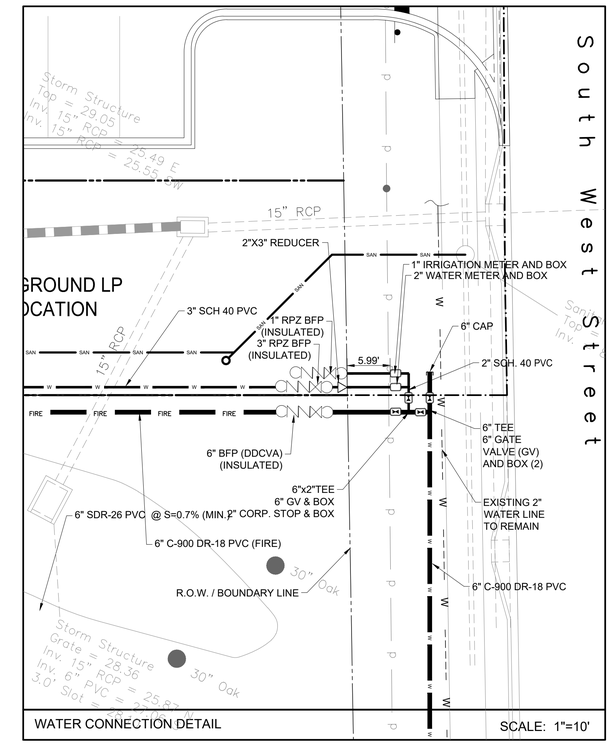
DATE: 11/10/2023

GRADING AND DRAINAGE

PROJECT NO.: 23002

C8.0
100% DOCUMENTS





WATER CONNECTION DETAIL — SCALE: 1"=10'

NOTES :

1. GAS SUPPLY DESIGN TO BUILDING TO BE PROVIDED BY GAS UTILITY / OTHERS.
2. ALL SANITARY SEWER "WYE'S" SHALL BE SWEEPING WYE'S, NOT "T-WYE'S".

SCALE IN FEET: 20 0 10 20

GBA
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Jeffrey E. Bergen, P.E. FL #63060

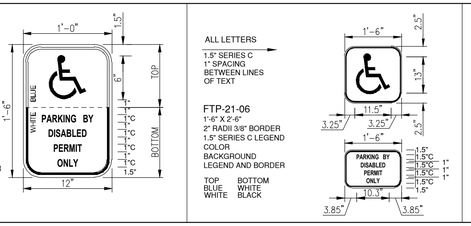
DATE: 11/10/2023

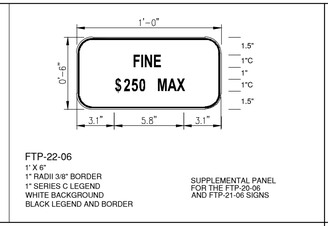
UTILITY PLAN

PROJECT NO.: 23002

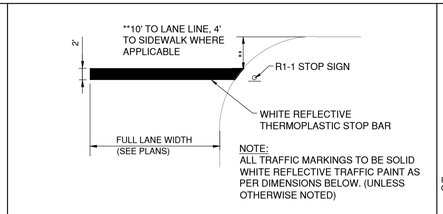
C9.0

100% DOCUMENTS

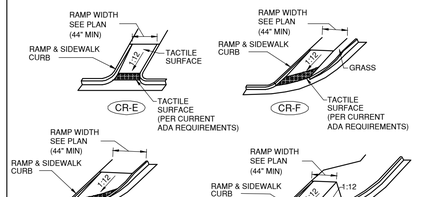




SPECIAL SIGN DETAIL (FDOT INDEX 700-102)



STOP BAR DETAIL



GENERAL NOTES:

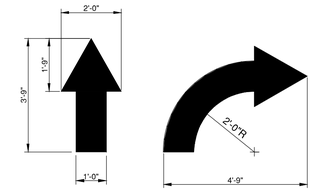
1. CURB CUT RAMPS ARE TO BE CONSTRUCTED ON ALL CURBED FACILITIES, BUT ONLY AT THOSE LOCATIONS WHERE A MARKED CROSSWALK ADJOINS A SIDEWALK; THE CROSSWALK & SIDEWALK EACH CAN BE EITHER EXISTING TO REMAIN OR NEW MARKINGS & CONSTRUCTION.
2. RAMP LOCATIONS ARE TO BE COORDINATED WITH & IN CONFORMANCE WITH CROSSWALK MARKING DETAILS AS SHOWN IN THE PLANS.
3. IF A CURB RAMP IS LOCATED WHERE PEDESTRIANS MUST WALK ACROSS THE RAMP, THEN IT SHALL HAVE FLARED SIDES; THE MAXIMUM SLOPE OF THE FLARE SHALL BE 12:1.
4. RAMPS TO BE CONSTRUCTED AT ALL LOCATIONS SHOWN ON PLANS EVEN WHEN SIDEWALK IS NOT CONSTRUCTED CONCURRENTLY.
5. BASIS OF PAYMENT: CONTRACT UNIT PRICE ESTABLISHED IN THE PROPOSAL FOR CURB & GUTTER.
6. THIS STANDARD IS NOT INTENDED TO BE ABSOLUTE. FINAL DETERMINATIONS TO BE MADE IN THE FIELD.
7. MIAMI CURB WITHIN LIMITS OF WHEEL CHAIR RAMP TO BE "LOW CURB" TO ACCOMMODATE 12:1 MAXIMUM RATE FROM GUTTER TO END OF TRANSITION. MIAMI TYPE CURB & GUTTER DETAILS SIMILAR, CURB TRANSITION LENGTH SHALL BE 3'-0".
8. SIDEWALK WIDTH TO MEET REQUIREMENTS OF THE GOVERNING STANDARDS, REGULATIONS AND SPECIFICATIONS, BUT NOT LESS THAN 4'-0".
9. ALL NEW CONCRETE RAMP SURFACES TO RECEIVE TRUNCATED DOMES.
10. DIAGONAL RAMPS ARE TO BE USED AT RADIUS LESS THAN 50'

DETECTABLE WARNING NOTE:
WHERE SHOWN ON PLANS, A CURB RAMP SHALL HAVE A DETECTABLE WARNING COMPLYING WITH 4.29.2 (F.A.C.B.C.). THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND 2' OF THE CURB RAMP AND SHALL BE CAST-IN-PLACE TACTILE MATS BY ADA SOLUTIONS (TYP). CURB RAMPS SHALL BE STABLE, FIRM, SLIP-RESISTANT, AND SHALL COMPLY WITH 4.5 F.A.C.B.C. RAMP STANDARD WIDTH IS 5'. NO RAMP IN ANY CASE SHALL HAVE A WIDTH LESS THAN 44 INCHES.

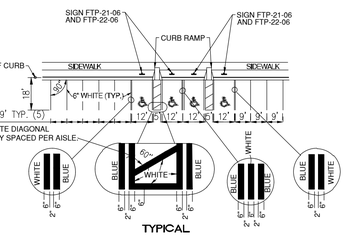
RAMP DETAILS

NOTES:

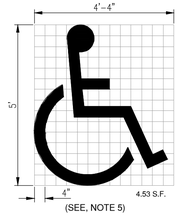
1. ARROWS REVERSED FOR LEFT TURN APPLICATION.
2. ALL TRAFFIC FLOW ARROWS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS BELOW.
3. THERMOPLASTIC PAINT IN ALL PUBLIC RIGHTS-OF-WAY.



TYPICAL PAVEMENT MARKINGS



TYPICAL
PAVEMENT MARKING FOR PARKING



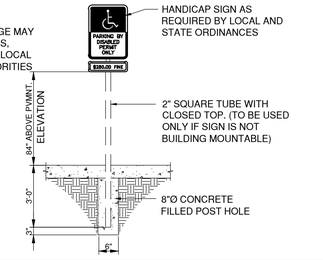
UNIVERSAL SYMBOL OF ACCESSIBILITY

NOTES:

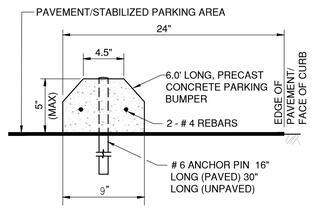
1. DIMENSIONS ARE TO THE CENTERLINE OF MARKINGS.
2. AN ACCESS AISLE IS REQUIRED FOR EACH ACCESSIBLE SPACE WHEN ANGLE PARKING IS USED.
3. CRITERIA FOR PAVEMENT MARKINGS ONLY. NOT PUBLIC SIDEWALK CURB RAMP LOCATIONS. FOR RAMP LOCATIONS REFER TO PLANS.
4. MOUNT FTP-22-06 SIGN BELOW THE FTP-21-06 SIGN.
5. USE OF THE PAVMENT SYMBOL IN ACCESSIBLE PARKING SPACES IS OPTIONAL. WHEN PAVEMENT SYMBOL IS USED, THE SYMBOL IS EITHER 3'-0" OR 5'-0" HIGH AND WHITE IN COLOR.

HANDICAP SPACE DETAIL

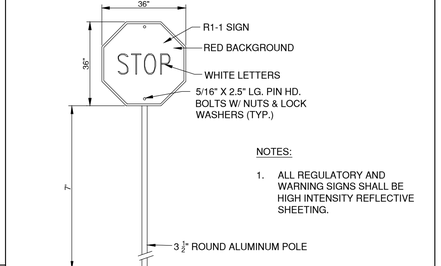
NOTE:
ADDITIONAL SIGNAGE MAY BE REQUIRED (FINES, ETC.) CHECK WITH LOCAL GOVERNING AUTHORITIES



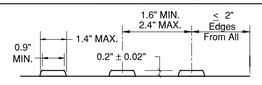
HANDICAP PARKING SIGN DETAIL



CONCRETE WHEELSTOP DETAIL

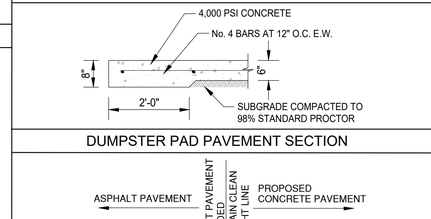


STOP SIGN DETAIL



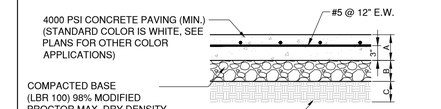
NOTE:
ALL NEW CONCRETE RAMP SURFACES TO RECEIVE TRUNCATED DOME MAT AS INDICATED ON GEOMETRY PLAN.

DETECTABLE WARNING SURFACE DETAIL



DUMPSTER PAD PAVEMENT SECTION

CONCRETE SECTION	A	B	C
HEAVY DUTY (NON-REINFORCED)	7"	SEE NOTE 1	SEE NOTE 1
SUPER DUTY (SD) (REINFORCED)	8"	SEE NOTE 1	SEE NOTE 1
DUMPSTERPAD (SEE NOTE 5)	6"	SEE NOTE 1	SEE NOTE 1



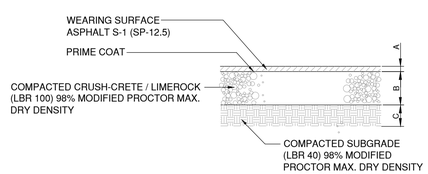
NOTES:

1. COMPACTED BASE/SUBGRADE SHOULD BE AS SPECIFIED IN GEOTECHNICAL REPORT.
2. SEE PORTLAND CEMENT PERVIOUS CONCRETE SPECS BY FCPA. SEE FDOT AND AMERICAN CONCRETE INSTITUTE (ACI) FOR ALL OTHER CONCRETE REQUIREMENTS.
3. SEE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
4. STANDARD DUTY WILL NOT HAVE STEEL REINFORCING.
5. UNLESS NOTED OTHERWISE BY ARCHITECT.

CONCRETE PAVEMENT SECTION

DIMENSION & TYPE

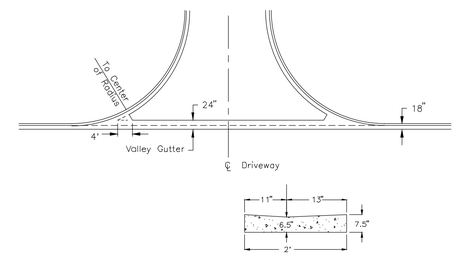
ASPHALT SECTION	A	B	C
HEAVY DUTY (HD)	2.5"	8"	SEE NOTE 1
STANDARD DUTY (STD)	1.5"	6"	SEE NOTE 1



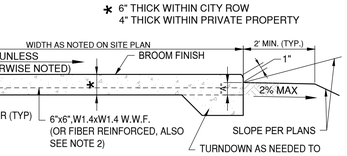
NOTES:

1. COMPACTED SUBGRADE SHOULD BE AS SPECIFIED IN SOILS REPORT.
2. CONTRACTOR SHALL REVIEW GEOTECHNICAL REPORT FOR PAVEMENT SECTION RECOMMENDATIONS AND CONSTRUCT MOST STRINGENT SECTION BASED ON THE REPORT AND THIS DETAIL.
3. CONTRACTOR SHALL PROVIDE SEPARATE PRICE TO DO ALL ASPHALT AREAS WITH CONCRETE SECTION AS SHOWN IN DETAIL ABOVE.

ASPHALT PAVEMENT SECTION



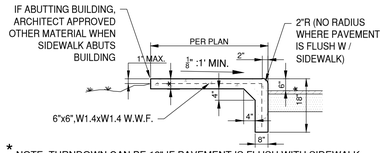
TYPICAL CONCRETE VALLEY (MIN. 3500 PSI CONC.)



ISOLATED SIDEWALK CROSS SECTION

NOTES:

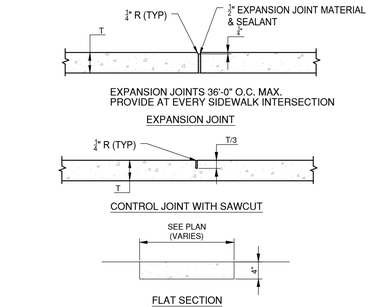
1. WHERE SIDEWALK ABUTS BUILDING, SEPARATE W/ A 1/2" PREMOLDED MASTIC STRIP CONTINUOUS.
2. LONGITUDINAL WALK SLOPE VARIES, SEE SIDEWALK PLAN.
3. UNLESS OTHERWHISE NOTED, IN PUBLIC Y R-O-W SHALL BE FIBER REINFORCED CONCRETE AS WWF IS NOT ALLOWED IN THE R-O-W.



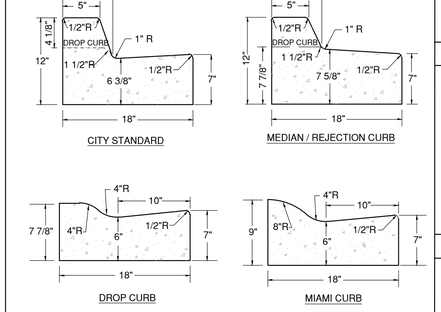
* NOTE: TURNDOWN CAN BE 12" IF PAVEMENT IS FLUSH WITH SIDEWALK

SIDEWALK INTEGRATED AS CURB

CONCRETE SIDEWALK DETAILS



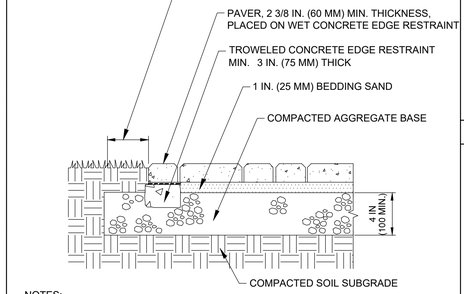
JOINT DETAILS SECTION



NOTES:

1. EARTHWORK SHALL BE PLACED TO TOP OF CURB ON BACKSIDE OF CURB WHERE APPLICABLE.
2. CONCRETE STRENGTH SHALL BE IN ACCORDANCE WITH FDOT STANDARDS

STANDARD CURB TEMPLATES

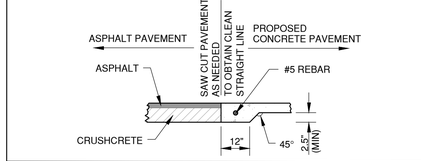


NOTES:

1. USE 5:1 (AGGRGATE: CEMENT) MIX FOR CONCRETE EDGE.
2. RECOMMENDED FOR ONLY NON-FREEZE THAW AREAS OVER WELL DRAINING SOILS.
3. CONSTRUCTION OF THIS DETAIL CAN BE USED ONLY ON RESIDENTIAL DRIVEWAYS IN NON-FREEZE THAW AREAS.
4. THICKNESS OF AGGREGATE BASE WILL VARY SUBGRADE CONDITIONS AND CLIMATE. COLDER CLIMATES MAY REQUIRED THICKER BASES,

PATIO/WALK W/ TROWELED CONCRETE EDGE RESTRAINT

ASPHALT PAVEMENT TO CONCRETE PAVEMENT JOINT DETAIL



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#	DATE	DESCRIPTION

JEFFREY E. BERGEN LICENSE No. 63060 STATE OF FLORIDA PROFESSIONAL ENGINEER

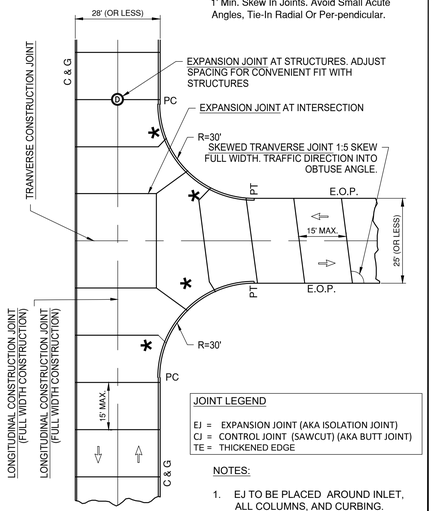
DATE: 11/10/2023

CONSTRUCTION DETAILS

PROJECT NO.: 23002

C10.0

100% DOCUMENTS



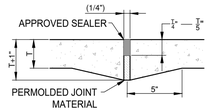
* Note:
1' Min. Skew In Joints. Avoid Small Acute Angles, Tie-In Radial Or Per-pendicular.

JOINT LEGEND

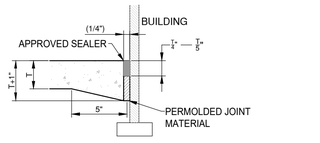
EJ = EXPANSION JOINT (AKA ISOLATION JOINT)
CJ = CONTROL JOINT (SAWCUT) (AKA BUTT JOINT)
TE = THICKENED EDGE

NOTES:

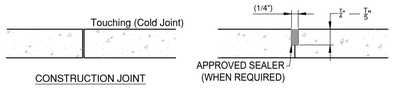
1. EJ TO BE PLACED AROUND INLET, ALL COLUMNS, AND CURBING.
2. ALL JOINTS SHALL BE SEALED.
3. ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACI STANDARDS AND SPECIFICATIONS.
4. CONCRETE SHALL BE 5.5" THICK, 4,000 PSI



EXPANSION JOINT



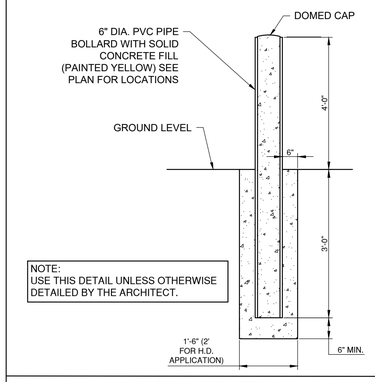
CONCRETE APRON-BULDING INTERFACE EXPANSION JOINT



NOTE

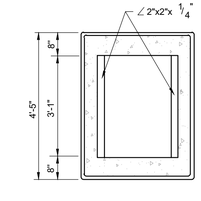
ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACI STANDARDS AND SPECIFICATIONS.

RIGID PAVEMENT JOINT DETAILS

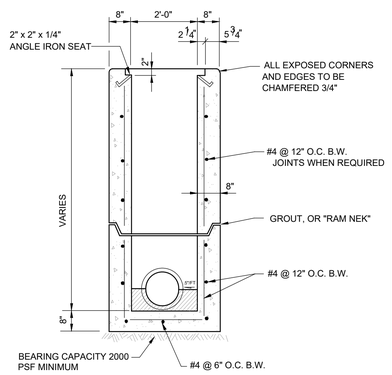


NOTE:
USE THIS DETAIL UNLESS OTHERWISE DETAILED BY THE ARCHITECT.

BOLLARD DETAIL



PLAN

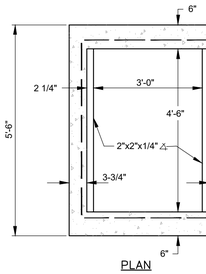


SECTION

NOTES:

1. USE H20 TRAFFIC BEARING GRATE.
2. PIPES MUST NOT BE IN CONSTRUCTION JOINTS.
3. PIPES SHALL BE FLUSH WITH INSIDE WALL STRUCTURE.
4. DIMENSIONS MAY VARY SLIGHTLY BUT H-20 LOADING MUST BE MET.
5. CONCRETE DESIGN STRENGTH 4,000 P.S.I.

TYPE 'C' INLET DETAIL



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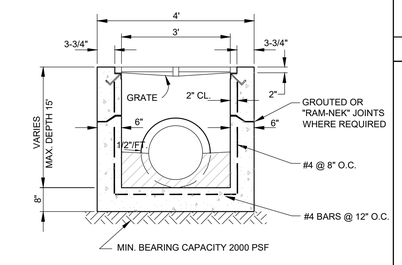
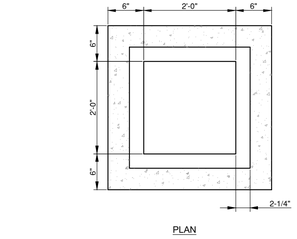


SECTION

NOTES:

1. USE H20 TRAFFIC BEARING GRATE.
2. PIPES MUST NOT BE IN CONSTRUCTION JOINTS.
3. PIPES SHALL BE FLUSH WITH INSIDE WALL STRUCTURE.
4. DIMENSIONS MAY VARY SLIGHTLY BUT H-20 LOADING MUST BE MET.
5. CONCRETE DESIGN STRENGTH 4,000 P.S.I.

TYPE 'E' INLET DETAIL



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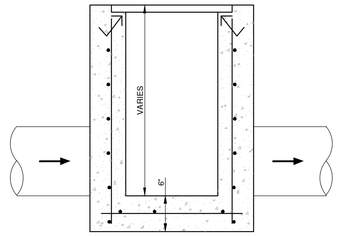
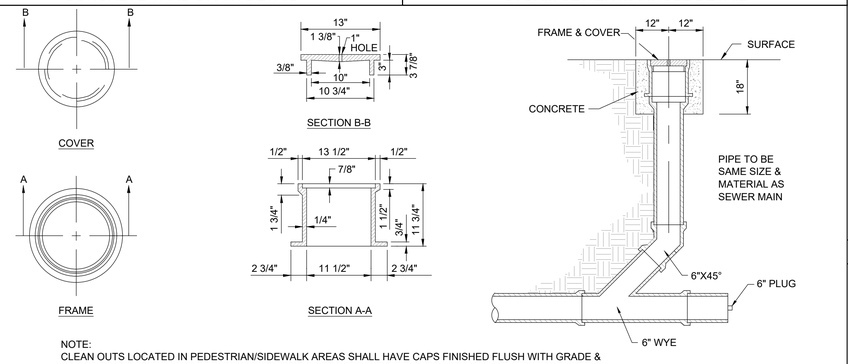


SECTION

NOTES:

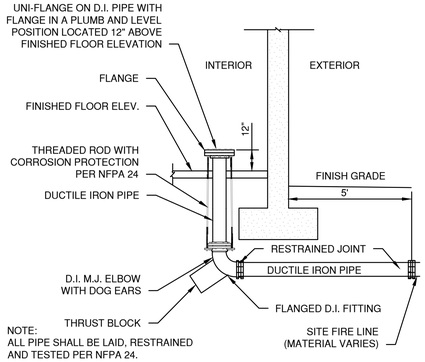
1. USE H-15 TRAFFIC BEARING GRATE, USF 6217 OR EQUAL.
2. PIPES MUST NOT BE IN CONSTRUCTION JOINTS.
3. PIPES SHALL BE FLUSH WITH INSIDE WALL STRUCTURE.
4. DIMENSIONS MAY VARY SLIGHTLY BUT H-15 LOADING MUST BE MET.
5. CONCRETE DESIGN STRENGTH 4,000 P.S.I.
6. PRECAST IN ACCORDANCE WITH LATEST EDITIONS OF ASTM C 478.

CONCRETE YARD DRAIN DETAIL



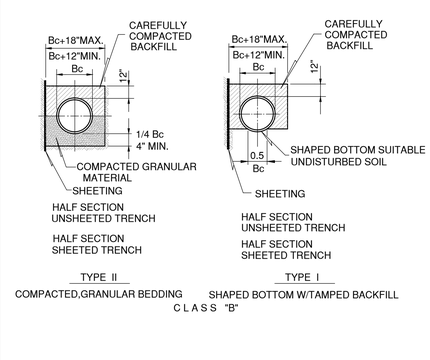
NOTE:
CLEAN OUTS LOCATED IN PEDESTRIAN/SIDEWALK AREAS SHALL HAVE CAPS FINISHED FLUSH WITH GRADE & BE ADA RATED. CLEANOUTS IN VEHICLE TRAFFIC AREAS SHALL BE FLUSHED WITH GRADE AND H-20 RATED.

CLEANOUT DETAIL



NOTE:
ALL PIPE SHALL BE LAID, RESTRAINED AND TESTED PER NFPA 24.

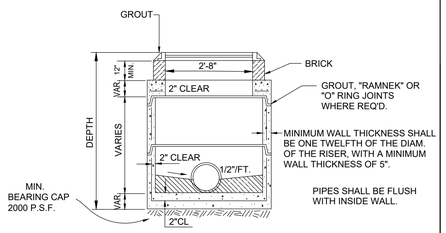
SPRINKLER RISER DETAIL



BEDDING DETAIL

PLAN

MANHOLE COVER AND FRAME PER CITY OF JAX. STD.



SECTION

NOTES:

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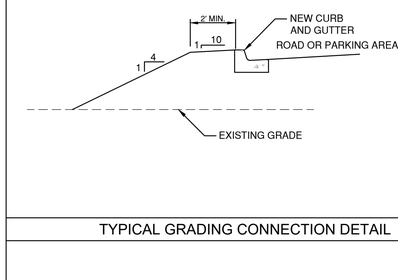
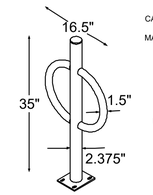
5. CONCRETE DESIGN STRENGTH 4,000 P.S.I.
6. PRECAST IN ACCORDANCE WITH LATEST EDITIONS OF ASTM C 478.

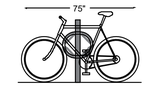
STORM SEWER MANHOLE DETAIL

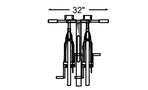


TYPICAL GRADING CONNECTION DETAIL

BIKE HITCH
Submittal Sheet







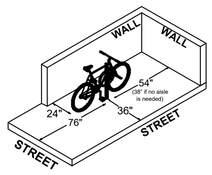
CAPACITY 2 Bikes

MATERIALS
- ☐ Standard — *Centerbeam: 2" schedule 40 pipe (2.375" OD) Ring: 1.5" OD 11 gauge tube*
- ☐ Lightweight — **Powder coat or galvanized only, Surface mount only Centerbeam: 2" schedule 10 pipe (2.375" OD) Ring: 1.5" OD 11 gauge tube*

FINISHES
- ☐ Galvanized — *An after fabrication hot dipped galvanized finish is our standard option.*
- ☐ Powder Coat — *Our powder coat finish assures a high level of adhesion and durability by following these steps: 1. Sandblast 2. Epoxy primer electrostatically applied 3. Final thick TGIC polyester powder coat*
- ☐ PVC Dip (plastisol) — *Other colors available by special order (minimum orders apply)*
- ☐ Stainless — *Stainless Steel: 304 grade stainless steel material finished in either a high polished shine or a satin finish.*

MOUNT OPTIONS
- ☐ **In-ground** — *In ground mount is embedded into concrete base. Specify in ground mount for this option.*
- ☐ Surface — *Foot Mount has a 5"x6"x.25" foot with four anchors per foot. Specify foot mount for this option.*

BIKE HITCH
Space use and Setbacks



Wall Setbacks:
For racks set parallel to a wall:
Minimum:12"
Recommended: 24"

For racks set perpendicular to a wall
Minimum:35" (Centerline Measurement)
Recommended: 38" (54" is aisle is needed between bike and wall)

Distance Between Racks:
For racks set facing one another:
Minimum: 24"
Recommended: 38"

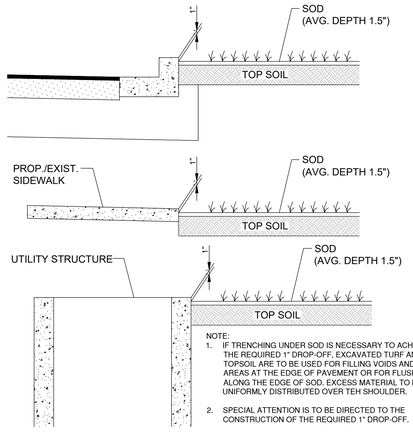
For racks set end to end:
Minimum:90"
Recommended: 111"

Street Setbacks:
Minimum: 36"

DERO +PLANET BIKE

www.dero.com 1-888-337-6729

DERO 2-SPACE BIKE RACK



NOTE:
1. IF TRENCHING UNDER SOD IS NECESSARY TO ACHIEVE THE REQUIRED 1" DROP-OFF, EXCAVATED TURF AND TOPSOIL ARE TO BE USED FOR FILLING VOIDS AND LOW AREAS AT THE EDGE OF PAVEMENT OR FOR FLUSHING ALONG THE EDGE OF SOD. EXCESS MATERIAL TO BE UNIFORMLY DISTRIBUTED OVER TEH SHOULDER.
2. SPECIAL ATTENTION IS TO BE DIRECTED TO THE CONSTRUCTION OF THE REQUIRED 1" DROP-OFF.

SOD DETAILS

GBA
Goodson Bergen and Associates
CONSULTING ENGINEERS
Engineering License Number: CA32987
11555 CENTRAL PARKWAY, SUITE 103
JACKSONVILLE, FLORIDA 32224
Phone: (904) 519-7770
Fax: (904) 519-7776

Item # 7.

DASHER HURST ARCHITECTS
1022 PARK STREET, SUITE 208
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W.W.W. DASHERHURST.COM

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JACKSONVILLE, FL 32256

MEP ENGINEER
POWELL & HINKLE ENGINEERING, P.A.
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ORANGE PARK, FL 32073

CIVIL ENGINEER
GOODSON BERGEN & ASSOC
11555 CENTRAL PARKWAY, SUITE 103
JACKSONVILLE, FL 32224

CLAY COUNTY
CO FIRE STATION 20
1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

JEFFREY E. BERGEN, PE
THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY JEFFREY E. BERGEN, PE ON
12/5/2023
USING A SHA AUTHENTICATION CODE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

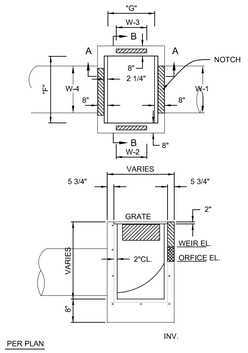
JEFFREY E. BERGEN LICENSE No. 63060 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE: 11/10/2023

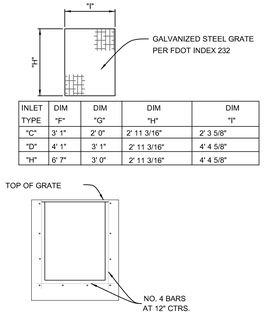
CONSTRUCTION DETAILS

PROJECT NO.: 23002

C11.0

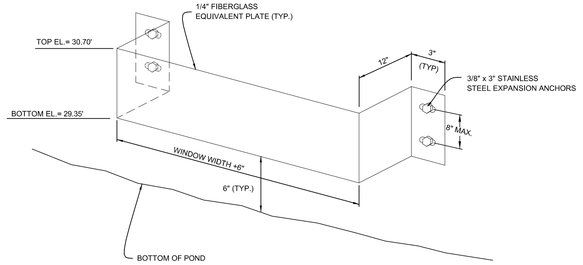


SECTION A-A



INLET TYPE	DIM "F"	DIM "G"	DIM "H"	DIM "I"
"C"	3' 1"	2' 0"	2' 11 3/16"	2' 3 5/8"
"D"	4' 1"	3' 1"	2' 11 3/16"	4' 4 5/8"
"H"	6' 7"	3' 0"	2' 11 3/16"	4' 4 5/8"

SECTION B-B



FLAT PLATE SKIMMER DETAILS FOR CONTROL STRUCTURES

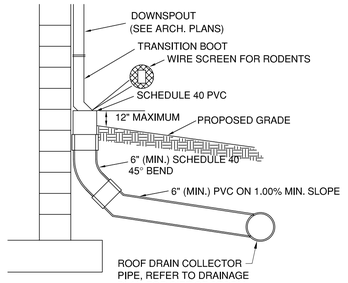
ALL STRUCTURES SHALL HAVE A BENCHMARK PLACED BY A LICENSED PSM & RECORDED WITH THE RECORD DATA.

Structure	FDOT Inlet Type	Grate Elev. (FT)	Notch Elev. (FT)	Notch Width (IN)	Orifice Elev.(FT)	Orifice Dia. (IN)	Weir Elev. (FT)	Weir 1 (W-1) Window Width (IN)	Weir 2 (W-2) Window Width (IN)	Weir 3 (W-3) Window Width (IN)	Weir 4 (W-4) Window Width (IN)	Pipe Size (IN)	Pipe Inv. (FT)	Skimmer Required?
CS-1	C	30.70	N/A	N/A	N/A	N/A	29.85	N/A	N/A	N/A	14.5	15	25.20	YES

CS-1
OUTLET CONTROL STRUCTURE DETAIL

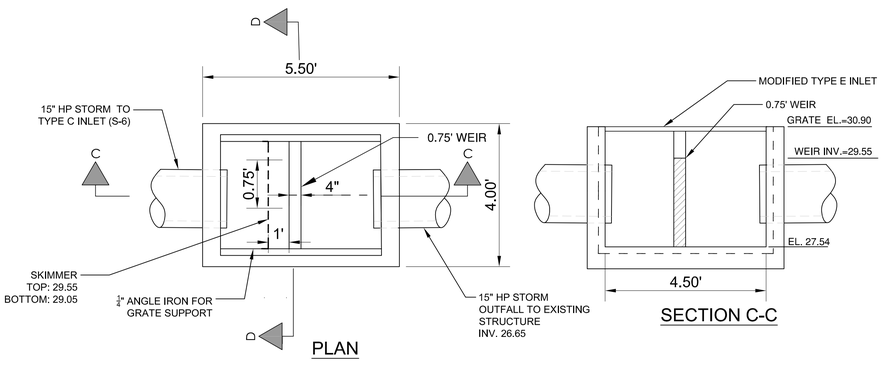
NOTES:

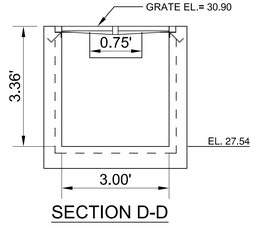
1. EACH GRATE SHALL HAVE A MIN. WEIGHT OF 240 LBS.
2. PRECAST IN ACCORDANCE WITH LATEST EDITIONS OF ASTM C76 AND C478.
3. 6"MIN. CLEARANCE FROM O.D. OF PIPE TO INSIDE WALL OF INLET.
4. GROUT OR "RAM-NEK" JOINTS WHERE REQUIRED.
5. CONCRETE 4000 P.S.I.



NOTE:
ALL DOWNSPOUT COLLECTOR PIPE SHALL BE SCHEDULE 40 PVC UNLESS OTHERWISE NOTED.

DOWNSPOT DETAIL



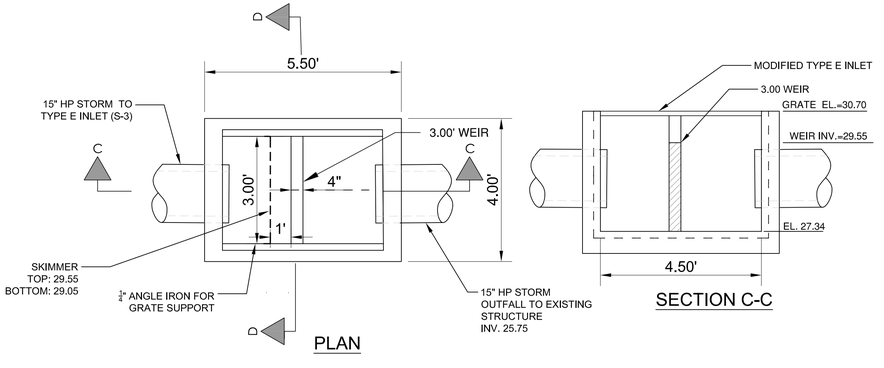


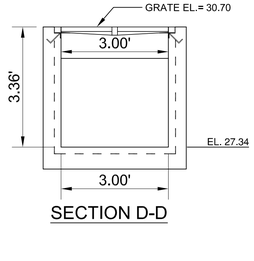
CS-2
MODIFIED TYPE "E"
CONTROL STRUCTURE

SCALE=1:3

NOTES:

1. EACH GRATE SHALL HAVE A MIN. WEIGHT OF 240 LBS.
2. PRECAST IN ACCORDANCE WITH LATEST EDITIONS OF ASTM C76 AND C478.
3. 6"MIN. CLEARANCE FROM O.D. OF PIPE TO INSIDE WALL OF INLET.
4. GROUT OR "RAM-NEK" JOINTS WHERE REQUIRED.
5. CONCRETE 4000 P.S.I.





CS-3
MODIFIED TYPE "E"
CONTROL STRUCTURE

SCALE=1:3

NOTES:

1. EACH GRATE SHALL HAVE A MIN. WEIGHT OF 240 LBS.
2. PRECAST IN ACCORDANCE WITH LATEST EDITIONS OF ASTM C76 AND C478.
3. 6"MIN. CLEARANCE FROM O.D. OF PIPE TO INSIDE WALL OF INLET.
4. GROUT OR "RAM-NEK" JOINTS WHERE REQUIRED.
5. CONCRETE 4000 P.S.I.

GBA
Goodson Bergen and Associates
CONSULTING ENGINEERS
Engineering License Number: CA32987
11555 CENTRAL PARKWAY, SUITE 103
JACKSONVILLE, FLORIDA 32224
Phone: (904) 519-7770
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DASHER HURST ARCHITECTS
1022 PARK STREET, SUITE 208
JACKSONVILLE, FLORIDA 32204
PHONE: 904.425.1190
FL LICENSE NUMBER AA26002165
W. W. W. DASHERHURST.COM

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9700 PHILIPS HWY, SUITE 101
JACKSONVILLE, FL 32256

MEP ENGINEER
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ORANGE PARK, FL 32073

CIVIL ENGINEER
GOODSON BERGEN & ASSOC
11555 CENTRAL PARKWAY, SUITE 103
JACKSONVILLE, FL 32224

CLAY COUNTY FIRE STATION 20

1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

JEFFREY E. BERGEN, PE
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JEFFREY E. BERGEN LICENSE No. 63060 STATE OF FLORIDA PROFESSIONAL ENGINEER
Jeffrey Bergen, P.E. FL 63060

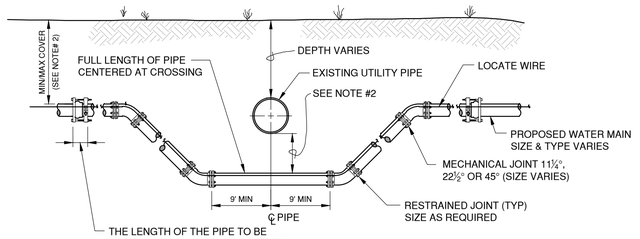
DATE: 11/10/2023

CONSTRUCTION DETAILS

PROJECT NO.: 23002

C12.0

100% DOCUMENTS

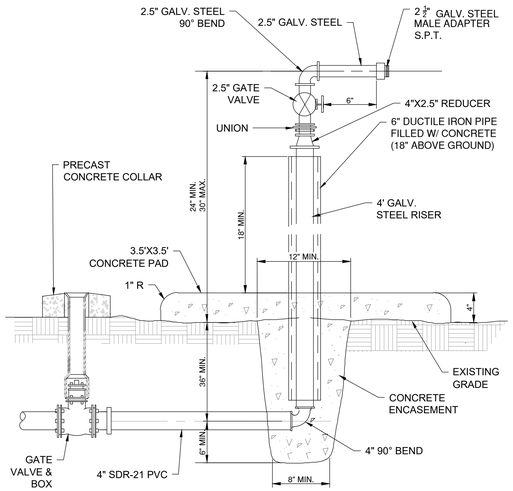


CASE "B" CROSSING

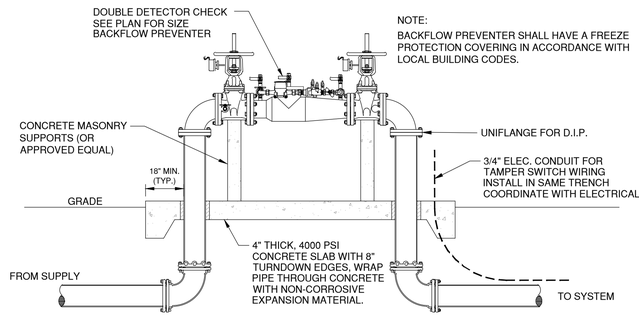
NOTES:

1. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557
2. SEE CITY OF GREEN COVE SPRINGS STANDARD WATER AND SEWER SYSTEM TECHNICALSPECIFICATION

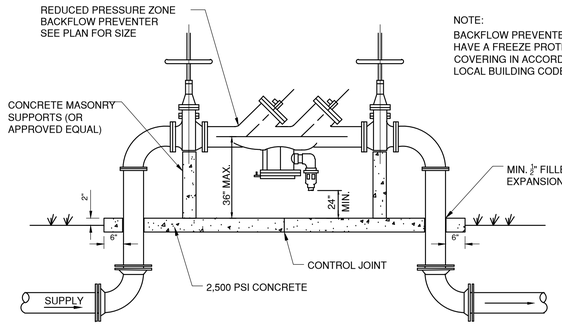
ADJUSTMENT UNDER EXISTING UTILITIES
MECHANICAL RESTRAINTS



FIRE HOSE BIBB DETAIL



DOUBLE DETECTOR CHECK BACKFLOW PREVENTER DETAIL
(INSULATED)



BACKFLOW PREVENTER INSTALLATION DETAIL
(INSULATED)

GBA
Goodson Bergen and Associates
CONSULTING ENGINEERS
Engineering License Number: CA32987
11555 CENTRAL PARKWAY, SUITE 103
JACKSONVILLE, FLORIDA 32224
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ORANGE PARK, FL 32073

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JACKSONVILLE, FL 32224

CLAY COUNTY
CLAY CO FIRE STATION 20
1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

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DATE: 11/10/2023

CONSTRUCTION DETAILS

PROJECT NO.: 23002

C13.0

100% DOCUMENTS

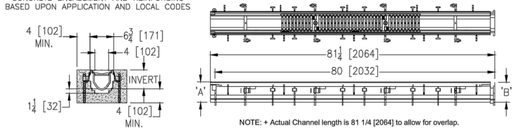
ZURN

Z886-HD
6-3/4 [171] WIDE REVEAL TRENCH DRAIN SYSTEM WITH HEAVY-DUTY FRAME ASSEMBLY

SPECIFICATION SHEET
TAG _____

Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice

SPECIFYING ENGINEER IS RESPONSIBLE FOR CONCRETE ENCASEMENT AND REINFORCING BASED UPON APPLICATION AND LOCAL CODES



NOTE: + Actual Channel length is 81 1/4 [2064] to allow for overlap.

ENGINEERING SPECIFICATION: Zurn Z886-HD
Channels are 80" [2032 mm] long, 6-3/4" [171 mm] wide reveal and have a 4" [102 mm] throat. Modular channel sections are made of 0% water absorbent High Density Polyethylene (HDPE). Channels have a positive mechanical connection between channel sections that will not separate during the installation and mechanically lock into the concrete surround every 10" [254 mm]. Channels weigh less than 2.31 lbs [1.05kg] per linear foot, have a smooth, 1-1/2" [38 mm] radiused self cleaning bottom with a Manning's coefficient of .009 and .75% or neutral 0% built in slope. Channels have rebar clips standard to secure trench in its final location. Channels provided with standard DGC grates that lock down to frame. Zurn 5.375" [137 mm] wide reveal Ductile Iron Slotted Grate conforming to ASTM specification A536-84, Grade 80-55-06. Ductile Iron grate is rated class C per the DIN EN1433 top load classifications. Supplied in 20" [508 mm] nominal lengths with 1/2" [13 mm] wide slots, and 3/4" [19 mm] bearing depth. Grate has an open area of 28.1 sq. in per ft. [59,463 sq. mm per meter]. The .105" [2.67 mm] thick Heavy-Duty Carbon Steel Frame Assembly conforms to ASTM specification A36 with 10 – 4" [102 mm] long concrete anchors per 80" [2032 mm]. Grate lockdown bars are to be integral to the frame. Frame supplied with powder coated finish. All welds must be performed by a certified welder per ASTM standard AWS D1.1. Frames produced in the U.S.A.

PREFIX OPTIONS (Check/specify appropriate options)
____ Z Six-foot, Eight-inch High Density Polyethylene (HDPE)*

SUFFIX OPTIONS (Check/specify appropriate options)

Outlet Adapters Add/Each
____ -E1 Closed End Cap
____ -E2 2 [51] No-Hub End Outlet
____ -E3 3 [76] No-Hub End Outlet
____ -E4 4 [102] No-Hub End Outlet
____ -E6 6 [152] No-Hub End Outlet
____ -U2 2 [51] No-Hub Bottom Outlet
____ -U3 3 [76] No-Hub Bottom Outlet
____ -U4 4 [102] No-Hub Bottom Outlet
____ -U6 6 [152] No-Hub Bottom Outlet

Frame Options
____ -CSF Black Acid Resistant Coated Top Frame
____ -LD Light Duty Grates on Heavy Duty Frame
____ -SW Sidewall Extension - 9 [229] High
____ -SW2 Sidewall Extension - 18 [457] High

Grate Options (Load Classifications are per DIN EN1433)
____ -BDC Black Acid Resistant Epoxy Coated Ductile Grate - Class C
____ -BDE Black Acid Resistant Epoxy Coated Ductile Grate - Class E
____ -BG Galvanized Ductile Iron Bar Grate - Class C
____ -DBG Ductile Iron Cast Bar Grate - Class C
____ -DC Ductile Iron Solid Cover - Class C
____ -DGC Ductile Iron Slotted Grate - Class C *
____ -DGE Ductile Iron Slotted Grate - Class E
____ -GDC Galvanized Ductile Iron Slotted Grate - Class C
____ -GDE Galvanized Ductile Iron Slotted Grate - Class E
____ -GHPDE Galvanized Heel-Proof Ductile Grate - Class E
____ -HPDE Heel-Proof Ductile Slotted Grate - Class E
____ -RFGC Reinforced Slotted Galvanized Grate - Class C
____ -RFSC Reinforced Slotted Stainless Steel Grate - Class C
____ -RPGC Reinforced Perforated Galvanized Grate - Class C
____ -RPGRC Reinforced Perforated Galvanized Reverse Punch Grate - Class C
____ -RPSC Reinforced Perforated Stainless Steel Grate - Class C
____ -RPSRC Reinforced Perforated Stainless Steel Reverse Punch Grate - Class C

Miscellaneous Options
____ -IC Joint Connector
____ -VP Vandal-Proof Lockdown

Decorative Grate Options (Load Classifications are per DIN EN1433)
____ -SBG Stainless Steel Bar Grate - Class E

MADE in the U.S.A.
____ -BDE-USA Black Acid Resistant Epoxy Coated Ductile Grate - Class E
____ -DGC-USA Ductile Iron Slotted Grate - Class C
____ -DGE-USA Ductile Iron Slotted Grate - Class E
____ -GDC-USA Galvanized Ductile Slotted Grate - Class C
____ -GDE-USA Galvanized Ductile Slotted Grate - Class E
____ -GHPDE-USA Galvanized Heel-Proof Ductile Grate - Class E
____ -HPDE-USA Heel-Proof Ductile Slotted Grate - Class E
____ -PPC Plastic Perforated Grate - Class C

Miscellaneous Options
____ -DB Bottom Dome Strainer

Trench No.	'A' Shallow	'A' Inv.	'B' Deep	'B' Inv.	Flow (cfs)	Flow (gpm)	Flow (lps)
8601	3.50 [89]		4.10 [104]		0.21	93	6
8602	4.10 [104]		4.70 [119]		0.27	122	8
8603	4.70 [119]		5.30 [135]		0.34	152	10
8603N	5.30 [135]		5.30 [135]		-	-	-
8604	5.30 [135]		5.90 [150]		0.41	183	12
8605	5.90 [150]		6.50 [165]		0.48	214	13
8606	6.50 [165]		7.10 [180]		0.55	245	15
8606N	7.10 [180]		7.10 [180]		-	-	-
8607	7.10 [180]		7.70 [196]		0.62	276	17
8608	7.70 [196]		8.30 [211]		0.69	308	19
8609	8.30 [211]		8.90 [226]		0.76	339	21
8610	8.90 [226]		9.50 [241]		0.83	371	23
8611	9.50 [241]		10.10 [257]		0.90	403	25
8612	10.10 [257]		10.70 [272]		0.97	435	27
8612N	10.70 [272]		10.70 [272]		-	-	-
8613	10.70 [272]		11.30 [287]		1.04	467	29
8614	11.30 [287]		11.90 [302]		1.11	498	31
8615	11.90 [302]		12.50 [318]		1.18	530	33

* Regularly furnished unless otherwise specified.

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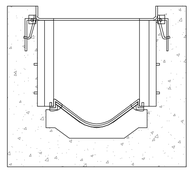
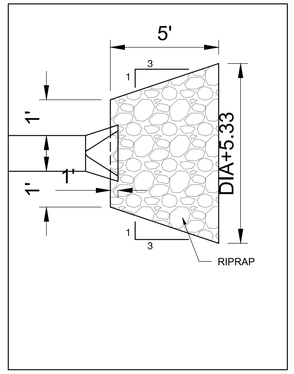
Rev. F
Date: 1/26/2017
C.N. No. 138162
Prod. | Dwg. No. Z886-HD

SEE ZURN 886-HD SPECIFICATIONS AND DETAILS



TRENCH DRAIN



AMERICAN FIRE SUPPLY — Fire Department Connections

Free Standing FDC Inlet

Designed to provide supplemental water to a building's fire protection system. Typically, these units are installed free-standing outside of a building.

250 GPM per inlet

U/L Listed and FM Approved (2-way only)

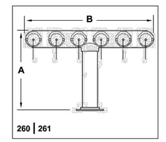
- **Our Free Standing FDCs come furnished with body, plate, 18" sleeve, and plugs & chains.**
- **4" 2-Way units have single swing clapper, all other units utilize individual drop clappers on each inlet.**
- **All 2-Way and 3-Way units use clappered bodies, 4-Way and larger use schedule 40 steel bodies with clappered snoots.**

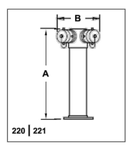
220RBSA

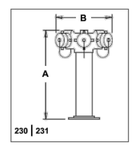
Part #	Type	Size & Configuration	A	B
220	2-Way	4" F NPT x 2½" x 2½"	24"	8½"
221	2-Way	6" F NPT x 2½" x 2½"	24"	12½"
230	3-Way	4" F NPT x 2½" x 2½" x 2½"	24"	14½"
231	3-Way	6" F NPT x 2½" x 2½" x 2½"	24"	14½"
240	4-Way	6" F NPT x 2½" x 2½" x 2½" x 2½"	28"	30"
250	4-Way	6" F NPT x 2½" x 2½" x 2½" x 2½" (Square)	33"	11"
260	6-Way	6" F NPT x 2½" x 2½" x 2½" x 2½" x 2½" x 2½"	28"	44"
261	6-Way	8" F NPT x 2½" x 2½" x 2½" x 2½" x 2½" x 2½"	30"	44"

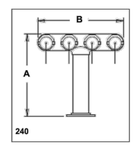
Specify Finish:
- ☐ **-RB** Rough Brass
- ☐ **-AL** Rough Brass w/ Red Plate
- ☐ **-PB** Polished Brass
- ☐ **-PC** Polished Chrome

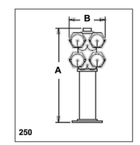
Specify Plate Lettering:
- ☐ **-A** Auto Spkr
- ☐ **-S** Standpipe
- ☐ **-SA** Standpipe & Auto Spkr
- ☐ **-DS** Dry Standpipe











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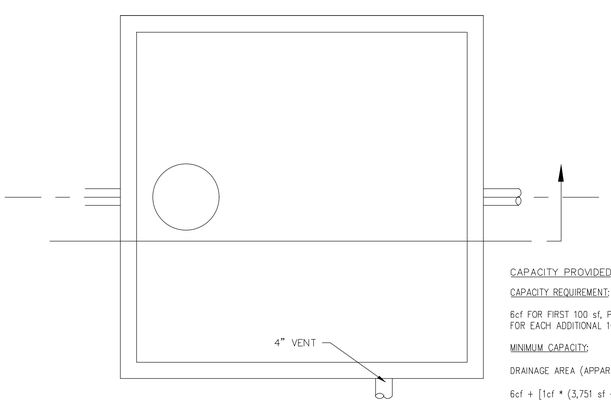


CAPACITY PROVIDED: 500 gal.

CAPACITY REQUIREMENT:

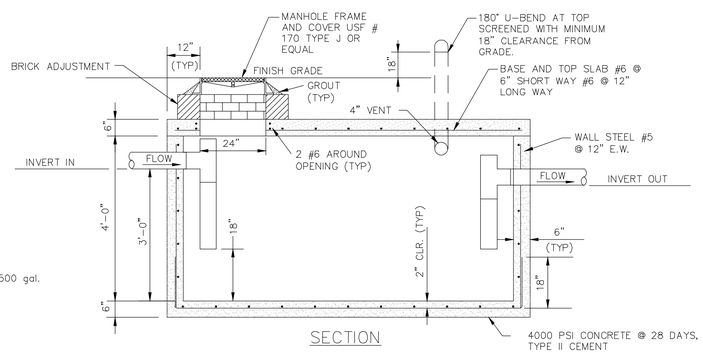
6cf FOR FIRST 100 sf, PLUS 1cf FOR EACH ADDITIONAL 100sf.

MINIMUM CAPACITY:

DRAINAGE AREA (APPARATUS BAY) = 3,751 sf

6cf + [1cf * (3,751 sf – 100sf)/100sf] = 42.5 cf

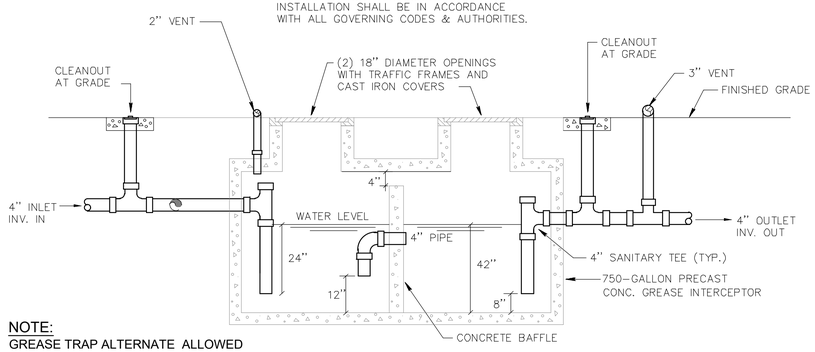
Say 43 cf = 322 gal.



COMPLIES WITH ASTM C 913-79, PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES AND ASTM C 890-78, MIN. STRUCTURAL DESIGN LOADING FOR MONOLITHIC OR SECTIONAL PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES.

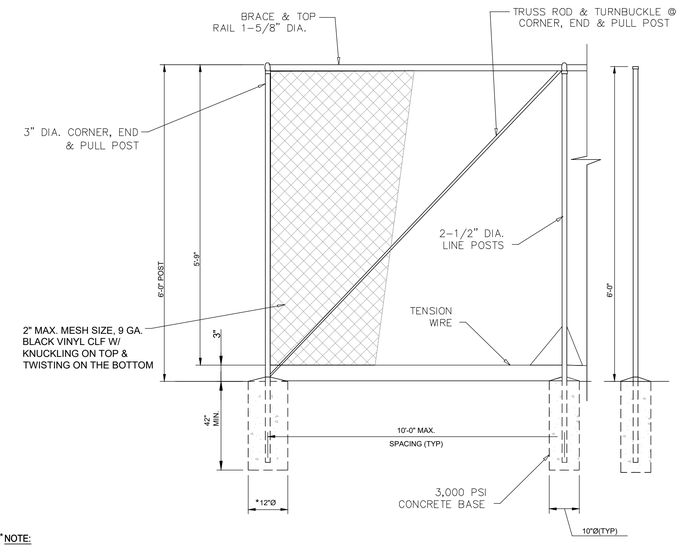
NOTE: PROVIDE LIFTING EYES AS REQUIRED.

OIL/WATER SEPARATOR DETAILS



NOTE:
GREASE TRAP ALTERNATE ALLOWED PROVIDING ALTERNATE GREASE TRAP DRAWINGS

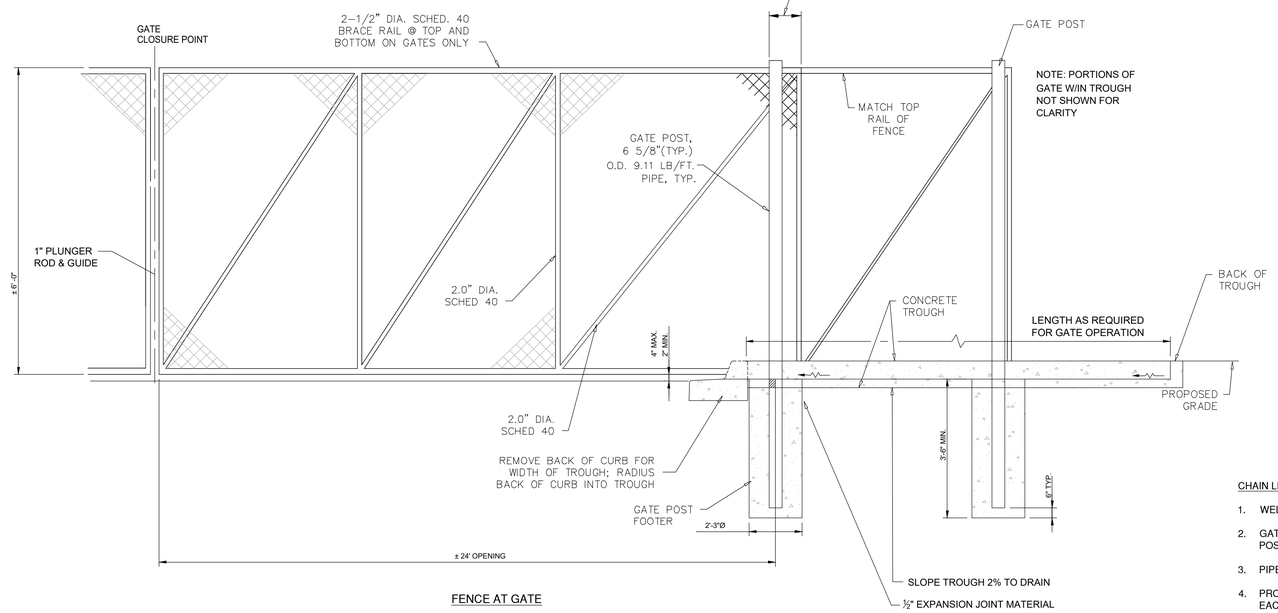
GREASE TRAP DETAIL



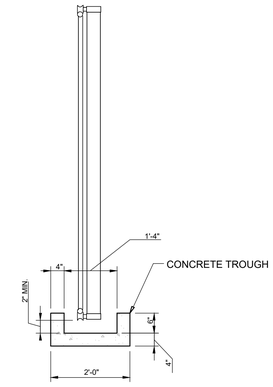
STANDARD FENCE SECTION

*NOTE:

1). 12" DIA. CONCRETE FOOTING @ CORNER, END, & PULL POSTS, 16" ON GATE POSTS. ALL OTHERS SHALL BE 10".
2). USE 3/8"ø EYE HOOK ANCHORED INTO CONCRETE FOOTING IN ADDITION TO THE BOTTOM RAIL CONNECTION.



FENCE AT GATE



FENCE GATE / CONCRETE TROUGH SECTION

CHAIN LINK FENCE GENERAL NOTES:

1. WELD ALL PIPE CONNECTIONS ON GATES ONLY.
2. GATE FABRIC TO MATCH FENCE FABRIC. PROVIDE MATCHING POST CAPS WHERE REQUIRED.
3. PIPE SIZE AND SCHEDULE ARE MINIMUM REQUIREMENTS.
4. PROVIDE EMBEDDED METAL SLEEVE AND HOLD OPEN FOR EACH LEAF OF GATE.

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CIVIL ENGINEER
GOODSON BERGEN & ASSOC
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JACKSONVILLE, FL 32224

CLAY COUNTY
CLAY CO FIRE STATION 20
1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

JEFFREY E. BERGEN, PE
THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY JEFFREY E. BERGEN, PE ON
12/5/2023
USING A SHA AUTHENTICATION CODE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

JEFFREY E. BERGEN LICENSE No. 63060 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE: 11/10/2023

CHAIN LINK FENCE DETAILS

PROJECT NO.: 23002

C14.0

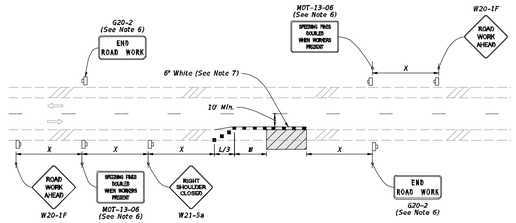
100% DOCUMENTS

NOTE:

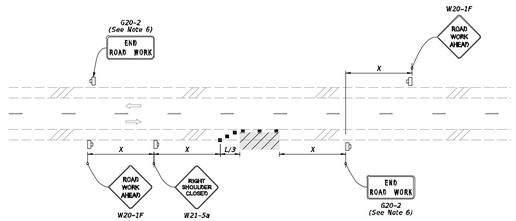
1. This Index applies to Two-Lane, Two-Way and Multilane Roadways, including Medians of divided roadways, with work on the shoulder.
2. L = Taper Length
   X = Work Zone Sign Spacing
   B = Buffer Length
   See Index 102-600 for "L", "X", "B", and channelizing device spacing values.
3. Where work activities are between 2' and 15' from the edge of traveled way, the Engineer may omit signs and channelizing devices for work operations 60 minutes or less.
4. When four or more work vehicles enter the through traffic lanes in a one hour period (excluding establishing and terminating the work area), use a flagger or lane closure to accommodate work vehicle ingress and egress.
5. For work less than 2' from the traveled way and work zone speed is greater than 45 MPH, use a lane closure.
6. The "Speeding Fines Doubled When Workers Present" signs (MOT-13-06) and "End Road Work" Signs (G20-2) along with the associated work zone sign spacing distances may be omitted when the work operation is in place for 24 hours or less.
7. Temporary pavement markings may be omitted when the work operation is in place for 3 days or less.
8. Omit "Shoulder Closed" signs (W21-5a) along with associated work zone sign spacing distances for work on the median.
9. When there is no paved shoulder, the "Worker" sign (W21-1) may be used instead of the "Shoulder Closed" sign (W21-5a).

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Lane Identification and Direction of Traffic

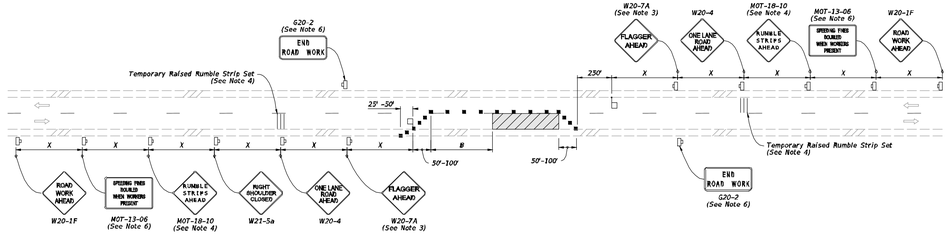


TWO-LANE ROADWAY
SHOULDER WORK LESS THAN 2' FROM THE TRAVELED WAY WITH WORK ZONE SPEED OF 45 MPH OR LESS



TWO-LANE ROADWAY
SHOULDER WORK BETWEEN 2' AND 15' FROM THE TRAVELED WAY

LAST REVISION	DESCRIPTION:	FY 2023-24 STANDARD PLANS	TWO-LANE AND MULTILANE, WORK ON SHOULDER	INDEX	SHEET
11/01/21				102-602	1 of 2



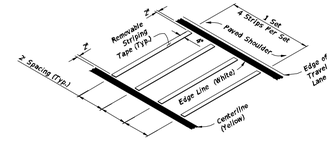
NOTES:

1. This Index applies to Two-Lane, Two-Way Roadways with work within the traveled way.
2. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Spacing
   See Index 102-600 for "L", "B", "X" and channelizing device spacing values.
3. Optionally, use "Flagger Ahead" sign with symbol (W20-7) instead of "Flagger Ahead" sign with text (W20-7A).
4. Use temporary raised rumble strips when the existing posted speed is 35 mph or greater and the work duration is greater than 60 minutes. If temporary raised rumble strips are not used, omit "Rumble Strips Ahead" signs (MOT-18-10) and associated work zone sign spacing.
5. Additional one-way control may be provided by the following means:
   a. Flag-carrying vehicle
   b. Official vehicle
   c. Pilot vehicles
   d. Traffic signals

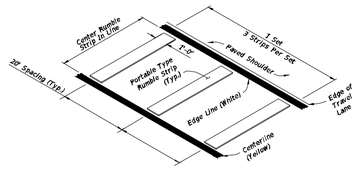
   When flaggers are the sole means of one-way control, the flaggers must be in sight of each other or in direct communication at all times.
6. The "Speeding Fines Doubled When Workers Present" signs (MOT-13-06) and "End Road Work" signs (G20-2), along with associated work zone sign spacing, may be omitted when the work operation will be in place for 24 hours or less.
7. Automated Flagger Assistance Devices (AFADs) may be used in accordance with Specification Sections 102, 990 and the APL vendor drawings.
8. Railroad Crossings:
   a. If an active railroad crossing is located closer to the Work Area than the queue length plus 300 feet, extend the Buffer Space as shown on Sheet 2.
   b. If the queuing of vehicles across an active railroad crossing cannot be avoided, provide a uniformed traffic control officer or flagger at the highway-rail grade crossing to prevent vehicles from stopping within the highway-rail grade crossing, even if automatic train warning devices are in place.

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Flagger
- Lane Identification and Direction of Traffic



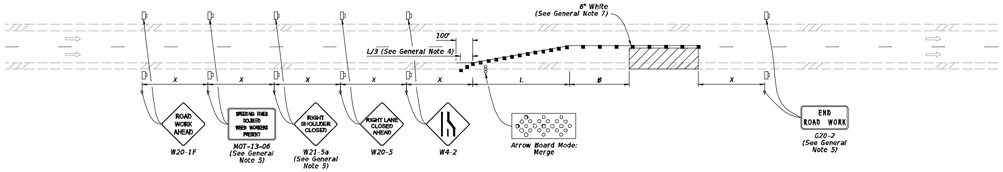
OPTION - 1
REMOVABLE STRIPING TYPE



OPTION - 2
PORTABLE TYPE

RUMBLE STRIP SETS

LAST REVISION	DESCRIPTION:	FY 2023-24 STANDARD PLANS	TWO-LANE, TWO-WAY WORK WITHIN THE TRAVEL WAY	INDEX	SHEET
11/01/21				102-603	1 of 2



SINGLE LANE CLOSURE

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Arrow Board
- Lane Identification and Direction of Traffic

GENERAL NOTE:

1. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Distance
   See Index 102-600 for "L", "B", "X", and channelizing device spacing values.
2. On undivided highways the median signs as shown are to be omitted.
3. On limited access facilities, omit "Right Shoulder Closed" signs (W21-5a) and associated work zone sign spacing distances.
4. If the paved shoulder is less than 4' in width, omit the taper and channelizing devices from the paved shoulder.
5. The "Speeding Fines Doubled When Workers Present" signs (MOT-13-06) and "End Road Work" signs (G20-2) and "Right Shoulder Closed" (W21-5a), along with associated work zone sign distances, may be omitted when the work operation will be in place for 24 hours or less. For Single Lane Closures, arrow boards and buffer (B) may also be omitted when the work operation will be in place for 60 minutes or less and the speed limit is 45 mph or less.
6. Use inverted plan of the illustrations for work on left side of roadways.
7. Temporary pavement markings may be omitted when the work operation is in place for 3 days or less.

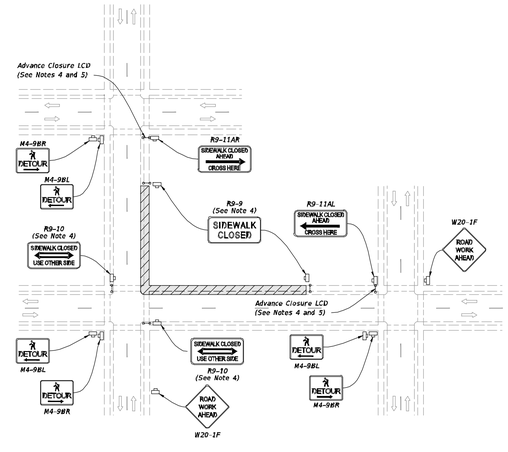
LAST REVISION	DESCRIPTION:	FY 2023-24 STANDARD PLANS	MULTILANE ROADWAY, LANE CLOSURES	INDEX	SHEET
11/01/21				102-613	1 of 5

NOTES:

1. Cover or deactivate pedestrian traffic signal display(s) controlling closed crosswalks.
2. Place pedestrian LCDs across the full width of the closed sidewalk.
3. For post mounted signs located near or adjacent to a sidewalk, maintain a minimum 7' clearance from the bottom of the sign panel to the surface of the sidewalk.
4. "Sidewalk Closed" signs (R9-XX) may be mounted on pedestrian LCDs in accordance with the manufacturer's instructions.
5. Omit the Advance Closure LCD if it blocks access to other pedestrian facilities (e.g., transit stops, residences, or business entrances).

SYMBOLS:

- Work Area
- Work Zone Sign
- Pedestrian Longitudinal Channelizing Device (LCD)
- Lane Identification and Direction of Traffic



PEDESTRIAN DETOUR

LAST REVISION	DESCRIPTION:	FY 2023-24 STANDARD PLANS	SIDEWALK CLOSURE	INDEX	SHEET
11/01/20				102-660	1 of 2

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MEP ENGINEER
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CIVIL ENGINEER
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11555 CENTRAL PARKWAY, SUITE 103
JACKSONVILLE, FL 32224

CLAY COUNTY
FIRE STATION 20
1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

JEFFREY E. BERGEN, PE
THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY JEFFREY E. BERGEN, PE ON
12/5/2023
USING A SHA AUTHENTICATION CODE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

JEFFREY E. BERGEN LICENSE No. 63060 STATE OF FLORIDA PROFESSIONAL ENGINEER

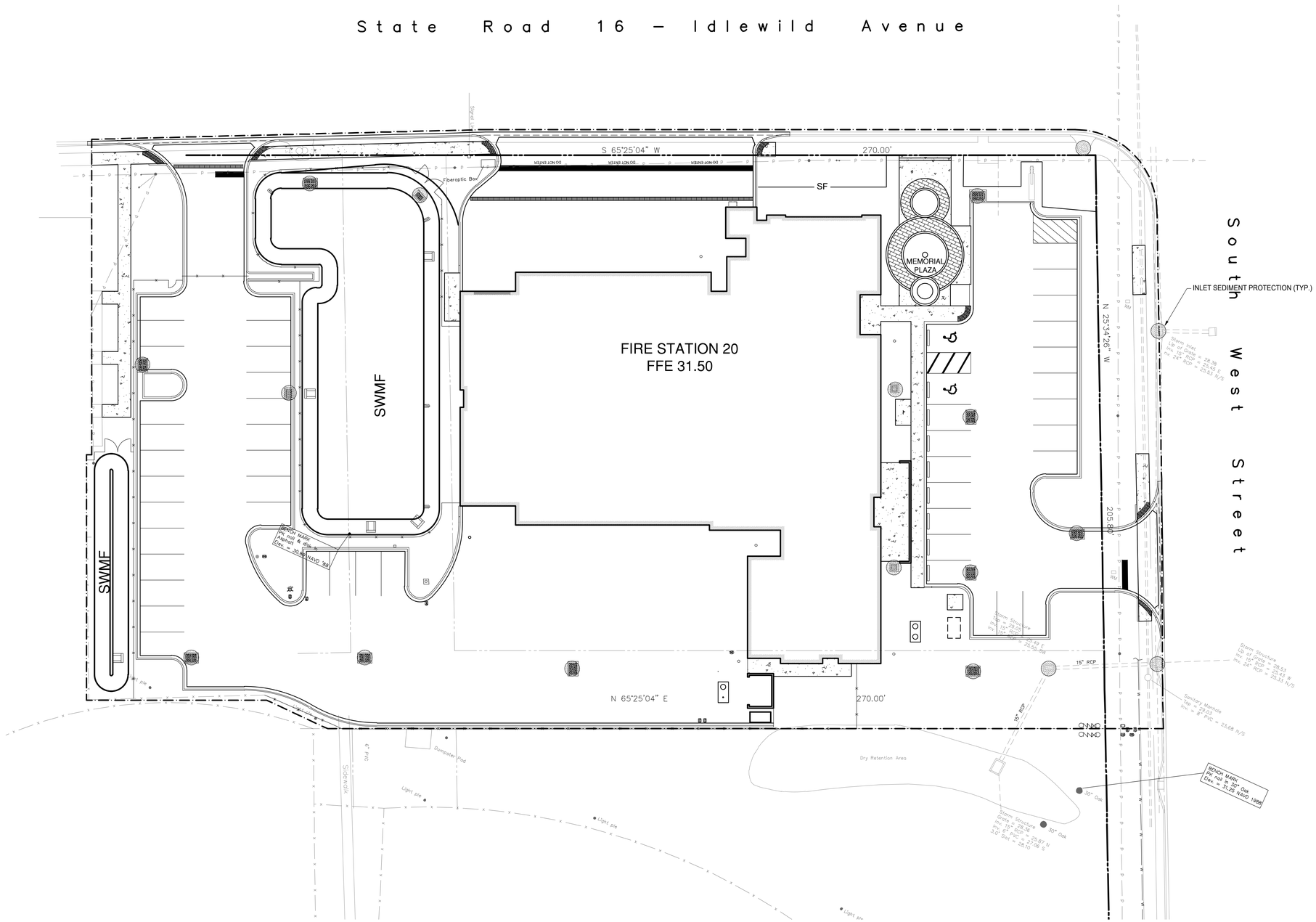
DATE: 11/10/2023

MAINTENANCE OF TRAFFIC PLAN

PROJECT NO.: 23002

C15.0

100% DOCUMENTS



LEGEND	
TB	TURBIDITY BARRIER
SF	SILT FENCE
	INLET SEDIMENT PROTECTION

NOTES :

1. PROPOSED INLETS SHALL RECEIVE INLET PROTECTION AFTER INSTALLATION AND MAINTAINED UNTIL HE SITE IS STABILIZED TO ELIMINATE TURBID RUNOFF.
2. SILT FENCING AND OTHER SEDIMENT CONTROLS SHALL BE PLACED IN AREAS WHERE OFFSITE DISCHARGE OF SEDIMENT MAY OCCUR. THE CONTRACTOR MAY ADJUST AND LIMIT THE LOCATION OF SILT FENCING TO ONLY THOSE AREAS IN WHICH THESE CONDITIONS MAY OCCUR IN ACCORDANCE WITH THEIR OWN SWPPP, AS PREPARED IN THEIR NPDES PERMIT APPLICATION.

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Jeffrey Bergen, P.E. FL #63060

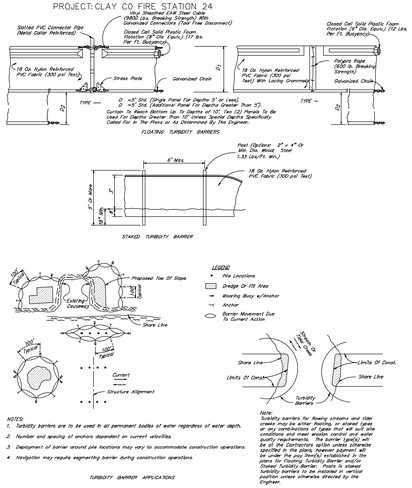
DATE: 11/10/2023

STORMWATER POLLUTION PREVENTION PLAN

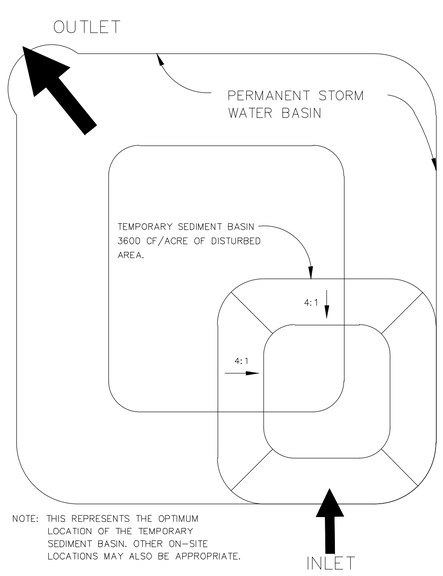
PROJECT NO.: 23002

BEFORE YOU DIG !
CALL SUNSHINE STATE ONE CALL OF FLORIDA
AT LEAST TWO FULL BUSINESS DAYS BEFORE DIGGING OR DISTURBING EARTH
811 Know what's below. Call before you dig.
1-800-432-4770

C16.0



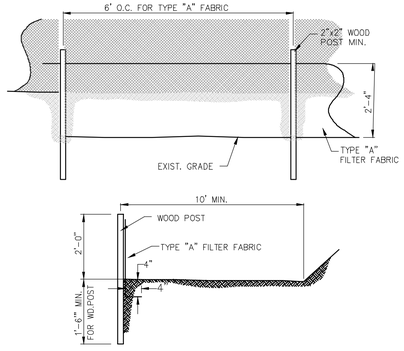
TURBIDITY BARRIERS



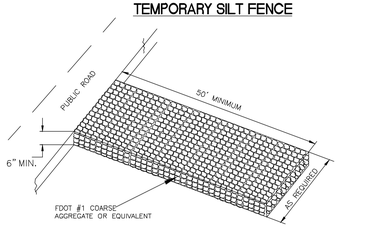
NOTE: THIS REPRESENTS THE OPTIMUM LOCATION OF THE TEMPORARY SEDIMENT BASIN. OTHER ON-SITE LOCATIONS MAY ALSO BE APPROPRIATE.

TEMPORARY SEDIMENT BASIN

N.T.S.

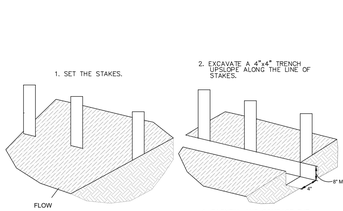


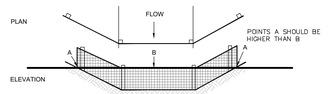
TEMPORARY SILT FENCE



STABILIZED CONSTRUCTION ENTRANCE

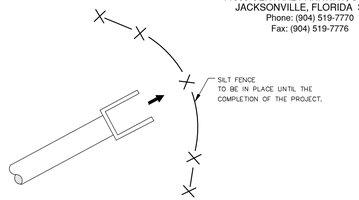
N.T.S.





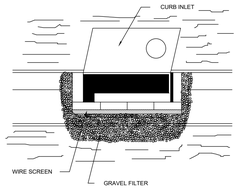
PROPER PLACEMENT OF A FILTER BARRIER IN A DRAINAGE WAY

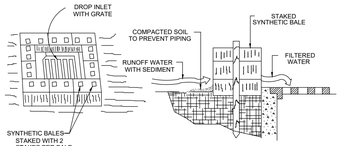
FILTER BARRIER CONSTRUCTION DETAIL



OUTLET PROTECTION

N.T.S.

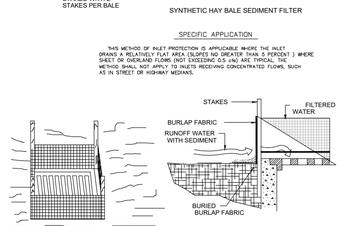




SYNTHETIC HAY BALE SEDIMENT FILTER

SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 cfs) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.



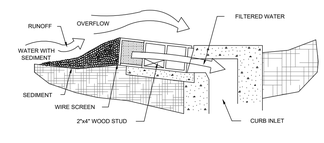
FABRIC SEDIMENT FILTER

SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 cfs) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

DROP INLET SEDIMENT TRAP

N.T.S.



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE AN OVERFLOW CAPABILITY IS NECESSARY TO PREVENT EXCESSIVE PONDING IN FRONT OF THE STRUCTURE.

BLOCK + GRAVEL CURB INLET SEDIMENT FILTER

N.T.S.

Site Conditions	Seeding Mixtures	Seeding Rate: Per Acre	Seeding Rate: Per 1000 ft²	Seeding Dates: N. Fla.	Comments
High Maintenance Lawns					
General Use	1. Bahiagrass	40-60 lbs	1 lb	2/15-6/15	Use 50# scarified seed.
	2. Bahiagrass	40-60 lbs	1 lb	2/15-6/15	Use 50# scarified seed.
	Bermudagrass (hulled)	8-12 lbs	4 oz		
	3. Bahiagrass with one of the following:	20-30 lbs	.5 lb		Use 50# scarified Biahia seed.
	Southern White Clover	1 lbs	1.2 oz	9/1-1/1	Innoculate legumes.
	Annual White Sweetclover	8 lbs	1 oz	9/1-1/1	
	Crimson Clover	12 lbs	4.5 oz	9/1-1/1	
	Arrowleaf Clover	8 lbs	1 oz	9/1-1/1	
	Kobe Clover	8 lbs	1 oz	2/15-7/15	
	Hairy Indigo	4 lbs	1.5 oz	2/15-7/15	
	Aeschynomene	12 lbs	4.5 oz	2/15-7/15	
Slopes	1. Serices lespedeza	a. 40-50 lbs	1.2 lbs	1/1-7/15	For scarified seed.
		b. 75 lbs	1.7 lbs	7/15-1/1	For unhulled seed.
	2. Serica lespedeza with one of the following:				Use seeding rate specified above.
	Bahiagrass	15 lbs	1 oz	2/15-6/15	
	Tall Fescue	30 lbs	8 oz	10/1-11/15	Best adapted to N. Florida
	Weeping Lovegrass	3 lbs	1.2 oz	2/15-6/15	
Droughty Areas	1. Weeping Lovegrass	5 lbs	2 oz	2/15-6/15	Gives quick summer cover.
	2. Weeping Lovegrass with one of the following:				
	a. Bahiagrass (50# scarified seed)	5 lbs	2 oz	2/15-6/15	
	b. Bermudagrass (hulled)	30-40 lbs	12 oz	2/15-6/15	
	c. Hairy panicum	6-12 lbs	4 oz	2/15-6/15	
	d. Serica lespedeza	6-12 lbs	4 oz	2/15-6/15	Use seeding rate and dates specified above.

SEEDING MIXTURES, RATES AND DATES

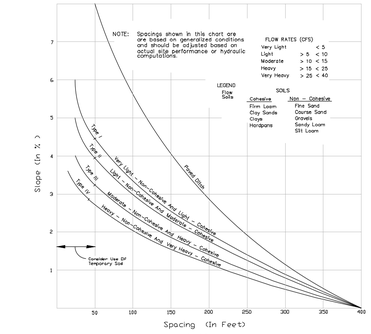
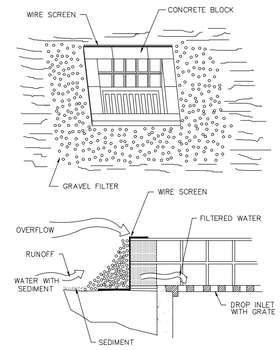


CHART I

RECOMMENDED SPACING FOR TYPE I, TYPE II, TYPE III AND TYPE IV SILT FENCES

SPACING RECOMMENDATION FOR SILT FENCES

N.T.S.



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.

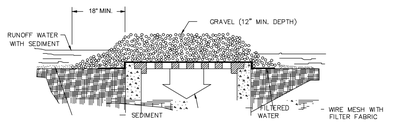
BLOCK + GRAVEL DROP INLET SEDIMENT FILTER

N.T.S.

SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

GRAVEL CURB INLET SEDIMENT FILTER



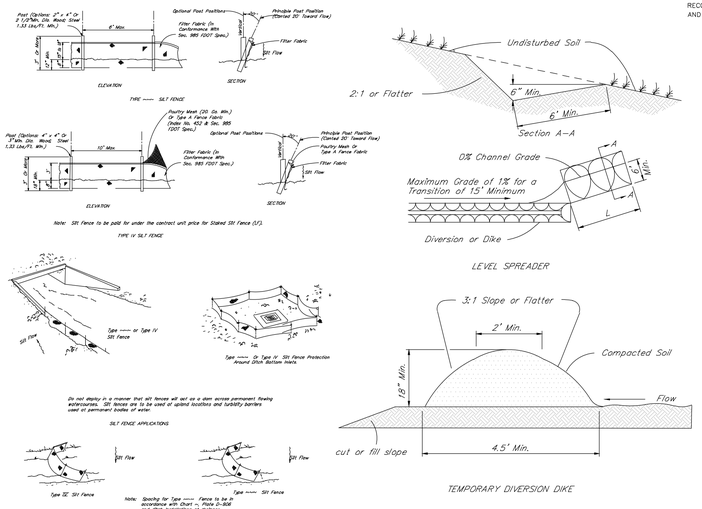
SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER

GRAVEL INLET SEDIMENT TRAP

N.T.S.



TEMPORARY DIVERSION DIKE

DIVERSION DIKE

Common Name (Botanical Name)	Seeding Rate: Acre	Seeding Rate: 1000 ft²	Planting Dates: N. FLA.	Comments
OATS (Avena sativa)	3 Bu (125 lbs)	3 lbs	September–February	Will not tolerate flooding, high water table soils.
RYE (Secale cereale)	3 Bu (170 lbs)	4 lbs	September–February	Tolerates cold and drought.
WHEAT (Triticum sp)	3 Bu (120 lbs)	3 lbs	September–February	
ANNUAL RYEGRASS (Lolium multiflorum)	60 lbs	1.5 lbs	September–February	Volunteers may return.
CRIMSON CLOVER (Trifolium incarnatum)	25 lbs	9 oz	September–November	Annual winter legume. Inoculate seed at 5 times recommended rate. Does poorly on deep dry sands, will not tolerate flooding.
RED CLOVER (Trifolium pretense)	15 lbs	6 oz	September–December	Annual winter legume. Inoculate seed at 5 times recommended rate. Grows best on moist soils, will not tolerate flooding. Easily hurt by drought.
WHITE CLOVER (Trifolium repens)	6 lbs	2.5 oz	September–December	Annual winter legume. Inoculate seed at 5 times recommended rate. Grows best on moist–wet soils, tolerates some flooding.
ANNUAL SWEETCLOVER (Melilotus alissima)	15 lbs	6 oz	September–December	Annual winter legume. Inoculate seed at 3–5 times recommended rate. Grows well on both flatwoods and upland soils. Will not tolerate flooding.
ARROWLEAF CLOVER (Trifolium vesiculosum)	15 lbs	6 oz	September–December	Annual winter legume. Inoculate seed at 3–5 times recommended rate. Grows on soil too wet for crimson, tolerates some flooding. Use scarified seed.
LUANE CLOVER (Lupinus sp.)	60 lbs	1.5 lbs	September–December	Annual winter legume. Inoculate seed at 3 times recommended rate. Susceptible to freeze damage at time of emergence. Use scarified seed.
ALFALFA (Medicago sativa)	22 lbs	8 oz	September–December	Short lived perennial. Some drought resistance. Grows best on well–drained, fertile soils. Will not tolerate wet soils.
AUSTRIAN WINTER PEAS	45 lbs	1 lb	September–December	Grows best on well–drained soils with high clay content.
HAIRY VETCH (Vicia villosa)	25 lbs	9 oz	September–December	Grows best on well–drained, loamy soils.
ALYCECLOVER (Alysicarpus vaginalis)	15 lbs	6 oz	April–July	Warm season annual legume. Grows best on well–drained sandy soils.
COMMON LESPEDEZA (Lespideza striata)	30 lbs	11 oz	March–July	Warm season annual. Needs inoculation on eroded soils. Grows best on sandy loams. Fairly drought resistant.
HAIRY INDIGO (Indigofera hirsuta)	8 lbs (120 ls)	3 oz	March–July	
JOINT VETCH (Aeschynomera americana)	8 lbs	3 oz	March–August	Warm season annual legume. Most suitable of summer legumes for use in low, wet areas.
MILLET (Setaria sp)	30 lbs	11 oz	March–August	Warm season annual. Does not tolerate flooding. Grows best in fertile, moist soils. Pearl and Brownlop are good varieties to use.
SESBANIA (Sesbian macrocarpa)	30 lbs	11 oz	March–July	Warm season annual legume. Grows well under extremely wet conditions.
SORGHAM SUNDIANGRASS HYBRID	30 lbs	11 oz	March–July	Warm season annual. Rapid grower. Tolerates dryer soils than millet. Grows best on well–drained soils. Can also use Sudangrass alone.
WEEPING LOVEGRASS (Eragrostis curvula)	5 lbs	2 oz	March–August	Short–lived perennial, 2–3 years. Tolerates hot, dry slopes and acid, infertile soils.

Usually mixtures of the above plant materials are better than a single plant alone. Each of the legumes discussed above can be grown in mixture with annual ryegrass and/or the small grains. In a two–crop mixture cut the seeding rate of each crop to one–half of the recommended planting rate when grown alone. Similarly three plant types in a mixture requires approximately one–third of the normal seeding rate for each plant. In a three plant mixture containing a single legume, the legume should be planted at one–half of the pure stand seeding rate.

TEMPORARY SEEDING PLANT MATERIALS

NOTES:

1. DETAIL AND INFORMATION SHOWN ON THE PLANS ARE A MINIMUM LEVEL NEEDED . IT IS THE CONTRACTORS RESPONSIBILITY TO INSTALL AND MANAGE TO THE NEEDED ON THE SITE CONTROLLING SEDIMENTATION MIGRATION / TURBID RUNOFF THROUGH THE CONSTRUCTION PROGRESS
2. ALL TURBIDITY / SEDIMENTATION CONTROLS SHALL AT A MINIMUM BE IN ACCORDANCE WITH F.D.E.P STORMWATER EROSION AND SEDIMENTATION CONTROLS GUIDELINES / STANDARDS.

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CLAY COUNTY FIRE STATION 20

1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

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JEFFREY E. BERGEN LICENSE No. 63060 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE: 11/10/2023

EROSION AND SEDIMENT CONTROL DETAILS

PROJECT NO.: 23002

C17.0

OWNER'S REQUIREMENTS

Site Description

Erosion and Sediment Control Notes:

Project name and location
CLAY CO FIRE STATION 20
5105 SWEAT RD, GREEN COVE SPRINGS,
FL 32043

Owner Name and Address
CLAY COUNTY BD OF COUNTY COMM
5105 SWEAT RD
GREEN COVE SPRINGS,
FL 32043

Description:
NEW FIRE STATION BUILDING WITH ASSOCIATED
PARKING, STORMWATER TREATMENT FACILITY
AND UTILITIES

Latitude & Longitude:
Lat: 29° 59' 14" N
Long: 81° 41' 30" W

Soil disturbing activities will include:
EARTHWORK , BUILDING PAD, PARKING AREA
AND ASSOCIATED INFRASTRUCTURE

Runoff Curve Numbers:
1. Pre-Construction = -
2. During-Construction = -
3. Post-Construction = -

Soils

Soil Group : Leon Fine Sand & Ortega-Urban Land Complex

Site Maps:
1. See Demo and Paving & Drainage Plans for grades, areas of soil disturbance and stormwater discharge points.
2. See attached SWPPP for location of temp. stabilization practices and silt fences.
3. See SWPPP details and notes for requirements for temporary and permanent stabilization.

Site Area:
1. Total area of site =2.15 acres
2. Total area to be disturbed = 2 acres

Name of receiving waters:
St. Johns River

1. Anticipated start date of constructioN: August 2023
2. Anticipated end of construction: August 2024

Controls

This plan utilizes best management practices to control erosion and turbidity caused by storm water run off. An erosion and turbidity plan has been prepared to instruct the contractor on placement of these controls. It is the contractors responsibility to install and maintain the controls per plan as well as ensuring the plan is providing the proper protection as required by federal, state and local laws. Refer to "Contractors Responsibility" for a verbal description of the controls that may be implemented.

Storm Water Management

Silt fence shall be installed downstream of all soil disturbance areas. Temporary settling basins will be installed as needed to provide additional turbid runoff controls. A stormwater treatment pond (dry) will be constructed to provide permanent stormwater runoff treatment / controls. These are no single point discharges created by this project.

Timing of Controls / Measures

Refer to "Contractors Requirements" for the timing of control/measures.

Certification of Compliance with Federal, State and Local Regulations

In accordance with federal, state and local laws related to storm water management and erosion and turbidity controls, the following permits have been obtained (to be filled in prior to commencement of construction).

D.E.R. Dredge/Fill Permit #_____

C.O.E. Dredge/Fill Permit #_____

S.J.R.W.M.D. M.S.S.W. Permit #_____

N.P.D.E.S. Permit #_____

Pollution Prevention Plan Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed:_____
Owner/Operator

Date _____

CONTRACTOR'S REQUIREMENTS

General

The contractor shall at a minimum implement the contractor's requirements outlined below and those measures shown on the Erosion and Turbidity Control Plan. In addition the contractor shall undertake additional measures required to be in compliance with applicable permit conditions and state water quality standards. Depending on the nature of materials and methods of construction the contractor may be required to add flocculants to the retention system prior to placing the system into operation.

Sequence of Major Activities

The order of activities will be as follows:

1. Install stabilized construction entrance
2. Install silt fences and hay bales as required
3. Clear and grub for diversion swales/dikes and sediment basin
4. Construct sedimentation basin
5. Continue clearing and grubbing
6. Stock pile top soil if required
7. Perform preliminary grading on site as required
8. Stabilize denuded areas and stockpiles as soon as practicable
9. Install utilities, storm sewer, curbs & gutter.
10. Apply base to project
11. Complete grading and install permanent seeding/sod and planting
12. Complete final paving
13. Remove accumulated sediment from basins
14. When all construction activity is complete and the site is stabilized, remove any temporary diversion swales/dikes and reseed/sod as required

Timing of Controls / Measures

As indicated in the Sequence of Major Activities, the silt fences and hay bales, stabilized construction entrance and sediment basin will be constructed prior to clearing or grading of any other portions of the site. Stabilization measures shall be initiated as soon as practical in portions of the site where construction activities have temporarily or permanently ceased. Once construction activity ceases permanently in an area, that area will be stabilized permanently in accordance with the plans. After the entire site is stabilized, the accumulated sediment will be removed from the sediment traps and the earth dike/swales will be regraded/removed and stabilized in accordance with the Erosion & Turbidity Control Plan.

Controls

It is the contractors responsibility to implement the Erosion and Turbidity Controls as shown on the Erosion and Turbidity Control Plan. It is also the contractors responsibility to ensure these controls are properly installed, maintained and functioning properly to prevent turbid or polluted water from leaving the project site. The contractor will adjust the Erosion and Turbidity Controls shown on the Erosion and Turbidity Control Plan and add additional control measures, as required, to ensure the site meets all federal, state and local erosion and turbidity control requirements. The following best management practices will be implemented by the contractor as required by the Erosion and Turbidity Control Plan and as required to meet the erosion and turbidity requirements imposed on the project site by the regulatory agencies.

Erosion and Sediment Controls
Stabilization Practices

1. Hay Bale Barrier: Hay bale barriers can be used below disturbed areas subject to sheet and rill erosion with the following limitations:
   A. Where the maximum slope behind the barrier is 33 percent.
   B. In minor swales or ditch lines where the maximum contributing drainage area is no greater than 2 acres.
   C. Where effectiveness is required for less than 3 months.
   D. Every effort should be made to limit the use of straw bale barriers constructed in live streams or in swales where there is the possibility of a washout. If necessary, measures shall be taken to properly anchor bales to insure against washout.

2. Filter Fabric Barrier: Filter fabric barriers can be used below disturbed areas subject to sheet and rill erosion with the following limitations:
   E. Where the maximum slope behind the barrier is 33 percent.
   F. In minor swales or ditch lines where the maximum contributing drainage area is no greater than 2 acres.

3. Brush Barrier with Filter Fabric: Brush barrier may be used below disturbed areas subject to sheet and rill erosion where enough residue material is available on site.

4. Level Spreader: A level spreader may be used where sediment-free storm runoff is intercepted and diverted away from the graded areas onto undisturbed stabilized areas. This practice applies only in those situations where the spreader can be constructed on undisturbed soil and the area below the level lip is stabilized. The water should not be allowed to reconcentrate after release.

5. Stockpiling Material: No excavated material shall be stockpiled in such a manner as to direct runoff directly off the project site into any adjacent water body or storm water collection facility.

6. Exposed Area Limitation: The surface area of open, raw erodible soil exposed by clearing and grubbing operations or excavation and filling operations shall not exceed 10 acres. This requirement may be waived for large projects with an Erosion Control Plan which demonstrates that opening of additional areas will not significantly affect off-site deposit of sediments.

7. Inlet Protection: Inlets and catch basins which discharge directly off-site shall be protected from sediment-laden storm runoff until the completion of all construction operations that may contribute sediment to the inlet.

8. Temporary Seeding: Areas opened by construction operations and that are not anticipated to be re-excavated or dressed and receive final grassing treatment within 30 days shall be seeded with a quick growing grass species which will provide an early cover during the season in which it is planted and will not later compete with the permanent grassing.

Controls (Cont.)

9. Temporary Seeding and Mulching: Slopes steeper than 6:1 that fall within the category established in Paragraph 8 above shall additionally receive mulching of approximately 2 inches loose measure of mulch material cut into the soil of the seeded area adequate to prevent movement of seed and mulch.

10. Temporary Grassing: The seeded or seeded and mulched area(s) shall be rolled and watered or hydromulched or other suitable methods if required to assure optimum growing conditions for the establishment of a good grass cover. Temporary grassing shall be the same mix & amount required for permanent grassing in the contract specifications.

11. Temporary regressing: If, after 14 days from seeding, the temporary grassed areas have not attained a minimum of 85 percent uniform good grass cover, the area will be reworked and additional seed applied sufficient to establish the desired vegetative cover.

12. Maintenance: All features of the project designed and constructed to prevent erosion and sediment shall be maintained during the life of the construction so as to function as they were originally designed and constructed.

13. Permanent Erosion Control: The erosion control facilities of the project should be designed to minimize the impact on the offsite facilities.

14. Permanent Seeding: All areas which have been disturbed by construction will, as a minimum, be seeded. The seeding mix must provide both long-term vegetation and rapid growth seasonal vegetation. Slopes steeper than 4:1 shall be seeded and mulched or sodded.

Structural Practices

1. Temporary Diversion Dike: Temporary diversion dikes may be used to divert runoff through a sediment-trapping facility.

2. Temporary Sediment Trap: A sediment trap shall be installed in an drainageway at a storm drain inlet or at other points of discharge form a disturbed area.

The following sediment traps may be constructed either independently or in conjunction with a temporary diversion dike:
A. Block & Gravel Sediment Filter - This protection is applicable where heavy flows and/or where an overflow capacity is necessary to prevent excessive ponding around the structure.
B. Gravel Sediment Trap - This protection is applicable where heavy concentrated flows are expected, but not where ponding around the structure might cause excessive inconvenience or damage to adjacent structures & unprotected areas.
C. Drop Inlet Sediment Trap - This protection is applicable where the inlet drains a relatively flat area (S < 5%) and where sheet or overland flows (Q < 0.5 CFS) are typical. This method shall not apply to inlets receiving concentrated flows such as in street or highway medians.

3. Outlet Protection: Applicable to the outlets of all pipes and paved channel sections where the flow could cause erosion & sediment problem to the receiving water body. Silt fences & hay bales are to be installed immediately downstream of the discharging structure as shown on the Outlet Protection Detail.

4. Sediment Basin: Will be constructed at the common drainage locations that serve an area with 10 or more disturbed acres at one time, the proposed storm water ponds (or temporary ponds) will be constructed for use as sediment basins. These sediment basins must provide a minimum of 3,600 cubic feet of storage per acre drained until final stabilization of the site.

Note:
The N/A cubic feet of storage area per acre drained does not apply to flows from offsite areas and flows from onsite areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. Any temporary sediment basins constructed must be backfilled and compacted in accordance with the specifications for structural fill. All sediment collected in permanent or temporary sediment traps must be removed upon final stabilization.

Other Controls

Waste Disposal

All waste materials except land clearing debris shall be collected and stored in a securely lidded metal dumpster. The dumpster will meet all local and state solid waste management regulations. The dumpster will be emptied as needed and the trash will be hauled to a state approved landfill. All personnel will be instructed regarding the correct procedure for waste disposal. Notices stating these practices will be posted at the construction site by the construction Superintendent, the individual who manages the day-to-day site operations, will be responsible for seeing that these procedures are followed.

Hazardous Waste

All hazardous waste materials will be disposed of in the manner specified by local or state regulation or by the manufacturer. Site personnel will be instructed in these practices and the site Superintendent, the individual who manages the day-to-day site operations, will be responsible for seeing that these procedures are followed.

Sanitary Waste

All Sanitary Waste will be collected from the portable units as needed to prevent possible spillage. The waste will be collected and deposed of in accordance with state and local waste disposal regulations for sanitary sewer or septic systems.

Offsite Vehicle Tracking

A stabilized construction entrance will be provided to help reduce vehicle tracking of sediments. The paved street adjacent to the site entrance will be swept daily to remove any excess mud, dirt or rock tracked from the site. Dump trucks hauling material from the construction site will be covered with a tarpaulin.

Inventory for Pollution Prevention Plan

The materials or substances listed below are expected to be present onsite during construction:

☐ Concrete	☐ Fertilizer	☐ Wood
☐ Asphalt	☐ Petroleum Based Products	☐ Masonry Blocks
☐ Tar	☐ Cleaning Solvents	☐ Roofing Materials
☐ Detergents	☐ Paint	☐ Metal Studs
☐ _____	☐ _____	☐ _____

Spill Prevention

Material Management Practices

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff:

Good Housekeeping

The following good housekeeping practices will be followed onsite during the construction project:

1. An effort will be made to store only enough product required to do the job.
2. All materials stores onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
3. Products will be kept in their original containers with the original manufacturer's label.
4. Substances will not be mixed with one another unless recommended by the manufacturer.
5. Whenever possible, all of a product will be used up before disposing of the container.
6. Manufacturer's recommendations for proper use and disposal will be followed.
7. The site Superintendent will inspect daily to ensure materials onsite receive proper use and disposal.

Hazardous Products

These practices are used to reduce the risks associated with hazardous materials.

1. Products will be kept in original containers unless they are not resealable.
2. Original labels and material safety data will be retained, they contain important product information.
3. If surplus product must be disposed of, manufacturer's or local and state recommended methods for proper disposal will be followed.

Product Specific Practices

The following product specific practices will be followed onsite:

Petroleum Products

All onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used onsite will be applied according to the manufacturer's recommendations.

Fertilizers

Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. Storage will be in a covered area. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

Paints

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be properly disposed of according to manufacturers' instructions or state and local regulations.

Concrete Trucks

Washing of vehicles should be conducted using practices that will prevent direct, untreated discharges of wastewater and hazardous wastes to surface and ground waters. A designated area must be created specifically for washing vehicles that will be laid with filter fabric, crushed stone (DOT gravel #2 and up) and covered with lined berm.

Spill Control Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

Manufacturers' recommended methods for spill cleanup will be clearly posted on site and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.

Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include but not be limited to brooms, dust pans, mops, rags, gloves, goggles, liquid absorbent (i.e. kitty litter or equal), sand, sawdust, and plastic and metal trash containers specifically for this purpose.

All spills will be cleaned up immediately after discovery.

The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

Spill of toxic or hazardous material will be reported to the appropriate state or local government agency, regardless of the size of the spill.

The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.

Spill Prevention (Cont.)

The site Superintendent responsible for the day-to-day site operations, will be the spill prevention and cleanup coordinator. He/she will designate at least one other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and if applicable, in the office trailer onsite.

Maintenance / Inspection Procedures

Erosion and Sediment Control Inspection and Maintenance Practices

The following are inspection and maintenance practices that will be used to maintain erosion and sediment controls.

1. No more than 10 acres of the site will be denuded at one time without written permission from the engineer.
2. All control measures will be inspected by the Superintendent, the person responsible for the day-to-day site operation or someone appointed by the Superintendent, at least once a week and following any storm event of 0.25 inches or greater.
3. All turbidity control measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hour of _____.
4. Built up sediment will be removed from silt fence when it has reached one-third the height of the fence.
5. Silt fence will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
6. Diversion dikes/swales will be inspected and any breaches promptly repaired.
7. The sediment basins will be inspected for the depth of sediment, and built up sediment will be removed when it reaches 10 percent of the design capacity or at the end of the job, whichever comes first.
8. Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth.
9. A maintenance inspection report will be made after each inspection. A copy of the report form to be completed by the inspector is attached. The reports will be kept on site during construction and available upon request to the Owner, Engineer or any federal, state or local agency approving sediment and erosion plans, or storm water management plans. The reports shall be made and retained as part of the storm water pollution prevention plan for at least three years form the date that the site is finally stabilized and the Notice of Termination is submitted. The reports shall identify any incidents of non-compliance.
10. The site Superintendent will select up to three individuals who will be responsible for inspections, maintenance and repair activities, and filling out the inspection and maintenance report.
11. Personnel selected for inspection and maintenance responsibilities will receive training from the site Superintendent. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

Non-Storm Water Discharges

It is expected that the following non-storm water discharges will occur from the site during the construction period:

1. Water from water line flushing.
2. Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
3. Uncontaminated groundwater (from dewatering excavation).

All non-storm water discharges will be directed to the sediment basin prior to discharge.

Contractor's Certification

"I certify under penalty of law that I understand, and comply with the terms and conditions of the State of Florida generic permit for stormwater discharge for large and small construction activities and this stormwater pollution prevention plan prepared thereunder."

RESPONSIBLE FOR / DUTIES	BUSINESS NAME AND ADDRESS OF CONTRACTOR AND ALL SUBS	DATE	SIGNATURE
General Contractor			
Sub-Contractor			
Sub-Contractor			
Sub-Contractor			
Sub-Contractor			
Sub-Contractor			

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CONSULTING ENGINEERS
Engineering License Number: CA32987
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JACKSONVILLE, FLORIDA 32204
PHONE: 904.425.1190
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STRUCTURAL ENGINEER
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JACKSONVILLE, FL 32256

MEP ENGINEER
POWELL & HINKLE ENGINEERING, P.A.
1409 KINGSLEY AVENUE, BLDG 12A
ORANGE PARK, FL 32073

CIVIL ENGINEER
GOODSON BERGEN & ASSOC
11555 CENTRAL PARKWAY, SUITE 103
JACKSONVILLE, FL 32224

Item # 7.

CLAY COUNTY FIRE STATION 20

1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

JEFFREY E. BERGEN, PE
THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY JEFFREY E. BERGEN, PE ON
12/5/2023

USING A SHA AUTHENTICATION CODE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

JEFFREY E. BERGEN LICENSE No. 63060 STATE OF FLORIDA PROFESSIONAL ENGINEER
Jeffrey Bergen P.E. #63060

DATE: 11/10/2023

NPDES DETAIL SHEET #1

PROJECT NO.: 23002

C18.0

100% DOCUMENTS

PROJECT: CLAY CO FIRE STATION 20

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

TO BE COMPLETED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT OF 0.25 INCHES OR MORE

INSPECTOR: _____ DATE: _____

INSPECTOR'S QUALIFICATIONS:

_____

_____

_____

_____

DAYS SINCE LAST RAINFALL: _____ AMOUNT OF LAST RAINFALL _____ INCHES

STABILIZATION MEASURES

INSPECTION AREA (DESCRIPTION OF LOCATION)	DATE SINCE LAST DISTURBED	DATE OF NEXT DISTURBANCE	STABLIZED ? (YES/NO)	STABILIZED WITH	CONDITION

STABILIZATION REQUIRED:

_____

_____

_____

_____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

PROJECT: CLAY CO FIRE STATION 20

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

STRUCTURAL CONTROLS

DATE: _____

EARTH DIKES/SWALES

DIKE OR SWALE	FROM	TO	IS DIKE/SWALE STABILIZED ?	IS THERE EVIDENCE OF WASHOUT OR OVERTOPPING

MAINTENANCE REQUIRED FOR EARTH DIKE/SWALE:

_____

_____

_____

_____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

CATCH BASIN/CURB INLET/OUTFALL TURBIDITY CONTROLS

STRUCTURE/ OUTFALL	ARE TURBIDITY CONTROLS IN PLACE	ANY EVIDENCE OF CLOGING/WASHOUT OR BYPASSING ?	ARE TURBIDITY CONTROLS IN NEED OF REPLACING	DOES SILT NEED TO BE REMOVED FROM AROUND CONTROL

MAINTENANCE REQUIRED FOR CATCH BASIN/CURB INLETS/OUTFALLS TURBIDITY CONTROLS:

_____

_____

_____

_____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

PROJECT: CLAY CO FIRE STATION 20

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

SEDIMENT BASIN

DEPTH OF SEDIMENT IN BASIN	DEPTH OF SEDIMENT SIDE BASIN	ANY EVIDENCE OF OVERTOPPING OF THE EMBANKMENT ?	CONDITION OF OUTFALL FROM SEDIMENT BASIN

MAINTENANCE REQUIRED FOR SEDIMENT BASIN:

_____

_____

_____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

OTHER CONTROLS

STABILIZED CONSTRUCTION ENTRANCE

DOES MUCH SEDIMENT GET TRACKED ON TO ROAD ?	IS THE GRAVEL CLEAN OR IS IT FILLED WITH SEDIMENT?	DOES ALL TRAFFIC USE THE STABILIZED ENTRANCE TO LEAVE THE SITE ?	IS THE CULVERT BENEATH THE ENTRANCE WORKING? (IF APPLICABLE)

MAINTENANCE REQUIRED FOR STABILIZED CONSTRUCTION ENTRANCE:

_____

_____

_____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

PROJECT: CLAY CO FIRE STATION 20

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN:

_____

_____

_____

_____

_____

_____

_____

_____

REASONS FOR CHANGES:

_____

_____

_____

_____

_____

_____

_____

_____

_____

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE: _____

DATE: _____

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CLAY COUNTY FIRE STATION 20

1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

JEFFREY E. BERGEN, PE
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12/5/2023

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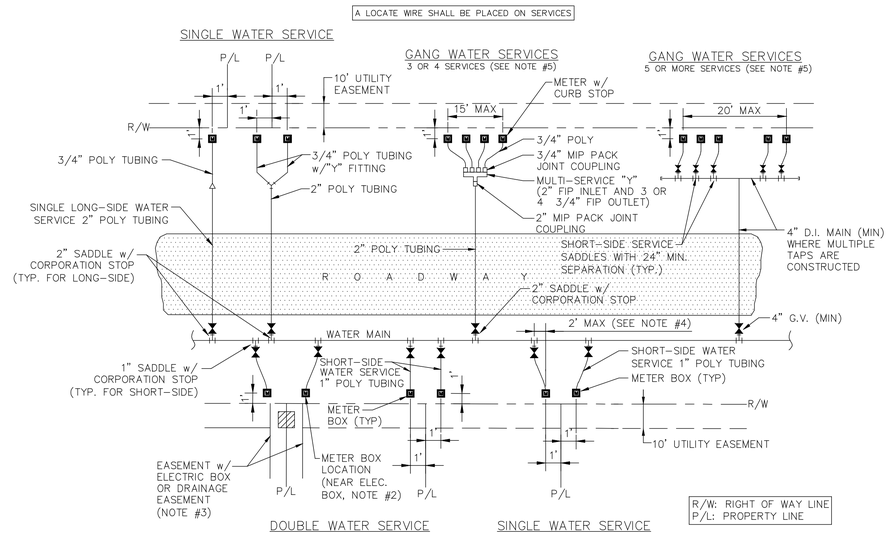
JEFFREY E. BERGEN LICENSE No. 63060 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE: 11/10/2023

NPDES DETAIL SHEET #2

PROJECT NO.: 23002

C19.0



NOTES

1. THE SKETCHES ABOVE INDICATE TYPICAL WATER SERVICE AND METER BOX LOCATIONS. ACTUAL LOCATIONS OF BOXES MAY VARY SLIGHTLY ACCORDING TO FIELD CONDITIONS ENCOUNTERED. TYPICALLY, THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE.

2. UNLESS SPECIFIED OTHERWISE BY THE CITY OF GREEN COVE SPRINGS, THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE, AND 1.0' FOOT INSIDE OF THE PROLONGATION OF ONE OF THE SIDE PROPERTY LINES. IF A CONFLICT EXISTS WITH OTHER UTILITIES, THE METER BOX MAY BE ADJUSTED TO FOUR FEET (MAX.) INSIDE PROPERTY LINES (IN LIEU OF 1.0' FEET). UNLESS APPROVED OTHERWISE BY THE CITY, THE WATER METER BOX SHALL BE LOCATED IN NON-TRAFFIC AREAS (NOT IN SIDEWALKS OR DRIVEWAYS). IF AN UNAPPROVED METER BOX IS IDENTIFIED BY THE CITY, THEN THE CONTRACTOR OR CUSTOMER SHALL BE RESPONSIBLE FOR THE COST OF RELOCATING ANY METER BOX WHICH IS LOCATED IN THE SIDEWALK OR DRIVEWAY OR THE COST TO PROVIDE THE CORRECT METER BOX. THE CITY SHALL APPROVE ALL DEVIATIONS TO THE ABOVE PRIOR TO CONSTRUCTION.

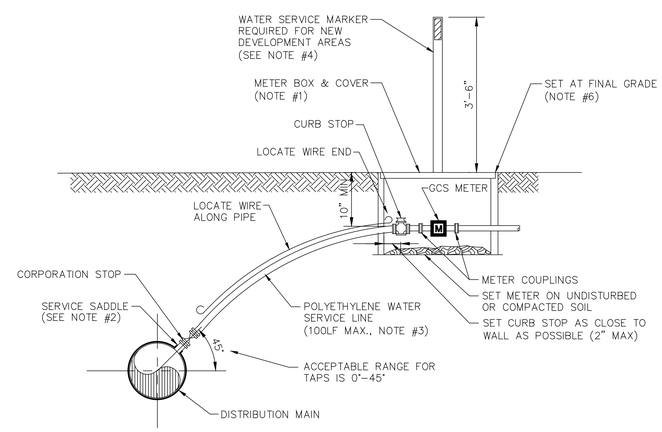
3. IF DRAINAGE OR OTHER EASEMENT IS LOCATED BETWEEN LOTS, METER BOXES SHALL BE LOCATED AT THE EASEMENT LINE BUT OUTSIDE THE EASEMENT AREA.

4. FOR SINGLE SERVICES, THE HORIZONTAL DISTANCE (PERPENDICULAR TO THE MAIN) BETWEEN THE SERVICE'S SADDLE AND THE METER BOX SHALL BE 2 FEET MAXIMUM. FOR DOUBLE 3/4"SERVICES, THE 2"POLY MAIN SHALL BE LOCATED CENTERED BETWEEN THE TWO METER BOXES. LOCATE WIRE IS REQUIRED ON ALL SERVICES. THE WIRE SHALL RUN FROM THE METER BOX TO THE MAIN (WITH NO CONNECTION TO MAIN WIRE WITH THE LAST 24 INCHES STRIPPED OF INSULATION/BARE WIRE AS GROUND). ALL EXCEPTIONS TO THIS REQUIREMENT MUST BE APPROVED BY THE CITY OF GREEN COVE SPRINGS. THIS WILL ASSIST IN LOCATING EXISTING SERVICE LINES IN THE FUTURE.

5. GANG WATER SERVICES: FOR 3 OR 4 SERVICES IN ONE AREA, A DUCTICLE IRON PIPE (D.I.P.) WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS. LOCATE WIRE SHALL EXTEND FROM ONE METER BOX TO CURB STOP AT WATER MAIN. FOR 5 OR MORE SERVICES IN ONE AREA, A WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS (TAPS STAGGERED AND AT 2 FEET ON CENTER (MIN). FOR WATER SUPPLY HEADERS WHERE 5 OR MORE TAPS ARE CONSTRUCTED, THE HEADER PIPE SHALL BE 4" AT A MINIMUM. EXAMPLE: CONSTRUCT A 4" MAIN D.I. CROSSING THE STREET FOR 5 RESIDENTIAL CUSTOMERS, UTILIZING 4" G.V., 4" PIPE, 4"X1" SADDLES AND 1" CURB STOPS (NO GLUED TEE FITTINGS). THE 4" OR LARGER D.I.P. WATER MAIN MUST BE SIZED AND DESIGNED BY THE ENGINEER.

6. ALL COMMERCIAL WATER SERVICES SHALL BE 2" POLYETHYLENE PIPING CONNECTED TO 2" CURB STOP IN METER BOX, UNLESS OTHERWISE APPROVED BY THE CITY.

WATER SERVICE INSTALLATIONS 2" AND SMALLER METER



NOTES

1. SEE CITY OF GREEN COVE SPRINGS APPROVED MATERIALS MANUAL AND SYSTEM DETAILS FOR REQUIREMENTS.

2. SINGLE BAND SADDLES MAYBE UTILIZED ON NEW 1" WATER SERVICES WHICH ARE INSTALLED ON A DRY 10" SIZE OR SMALLER WATER MAIN (NEW WATER MAIN CONSTRUCTION). FOR WET TAPS OR WATER MAINS 12" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED.

3. NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY CITY OF GREEN COVE SPRINGS. CONSTRUCT POLY LINE WITH 36" (MIN.) COVER UNDER ROADWAYS. THE POLY WATER SERVICE LINE SHALL BE SAME SIZE AS THE METER (3/4" MINIMUM) AND BE INSTALLED PERPENDICULAR TO THE MAIN AND NOT EXCEED 100LF UNLESS OTHERWISE APPROVED BY CITY OF GREEN COVE SPRINGS.

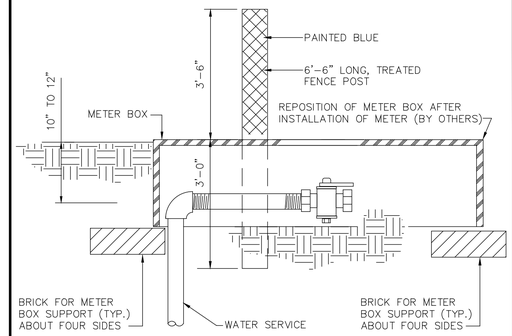
4. INSTALL PVC PLUG IN ALL CURB STOPS IF WATER SERVICE IS "NOT IN USE" (I.E.: IF NO METER IS INSTALLED). IN ADDITION, INSTALL A 6', 6" P.T. FENCE POST (TOP PAINTED BLUE) 12" OFF SIDE OF METER BOX. THE REMOVAL OR TRANSFER OF A WATER SERVICE SHALL INCLUDE BRASS METER COUPLINGS (HEX ON BARREL TYPE).

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE BOXES, METERS OR ELECTRONIC DEVICES IF DAMAGED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.

6. METER BOX AND TOP SHALL BE CLEAR OF ALL DEBRIS TO ALLOW FULL ACCESS TO BOX (I.E., NO DIRT, TRASH OR OTHER DEBRIS PLACED ON TOP OF BOX).

7. LOCATE WIRING REQUIRED ON ALL LONG AND SHORT SERVICES.

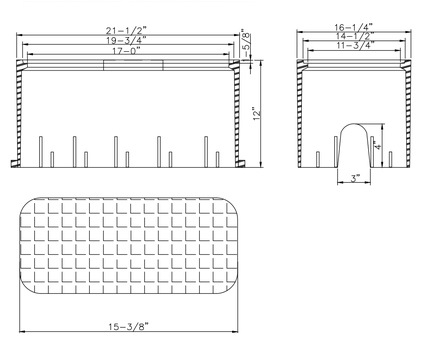
WATER SERVICE DETAIL– 2" AND SMALLER METER



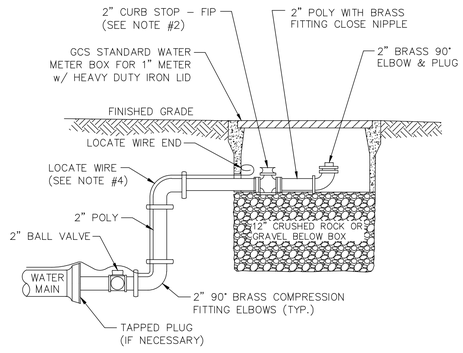
WATER SERVICE MARKER POST

NOTE:
ALL SERVICES ARE TO BE CLEARLY MARKED BY A TREATED 6'-6" LONG MARKER POST PAINTED BLUE. ALL SERVICES ARE TO BE EXTENDED ABOVE GRADE UNTIL COMPLETION OF ALL GRADING ACTIVITIES. ONCE FINAL ROAD GRADING IS COMPLETE, LOWER SERVICES BY CUTTING OFF RISER 10" TO 12" BELOW FINAL GRADE AND INSTALL 90° BEND, NIPPLE AND LW BALL VALVE AT THAT ELEVATION. SET METER BOX OVER ENTIRE HORIZONTAL SECTION OF SERVICE LINE FROM LAST 90° BEND TO THE END OF THE CURB STOP. BOX TO BE REPOSITIONED WHEN THE METER IS INSTALLED. MARKER POST TO BE INSTALLED ADJACENT TO AND LOCATED AT THE MID SECTION OF THE METER BOX.

NOTE:
MIN. WALL THIKNESS: .25"
DOUBLE WALL BODY w/STRUCTURAL SUPPORT RIBS
w/MIN. THINCKNESS: 3⁄16"
1" BOTTOM FLANGE
BOX IS INJECTED MOLDED STRUCTURAL FOAM RECYCLED POLYPROPYLENE MATERIAL



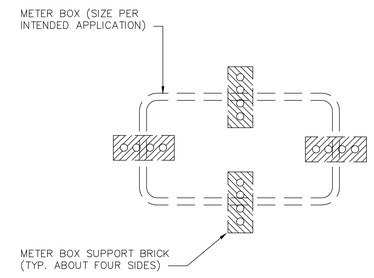
METER BOX & SOLID BLUE LID



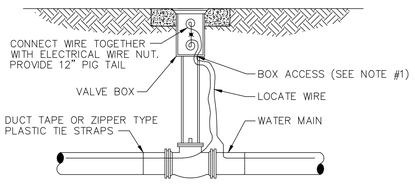
NOTES

1. PIPE SHALL BE POLYETHYLENE. FITTINGS SHALL BE BRASS.
2. THE 2" CURB STOP SHALL BE ALL BRONZE. FITTINGS SHALL BE BRASS.
3. CANNOT BE PLACED UNDER CONCRETE OR PAVEMENT.
4. PLACE 2 FEET PAST LAST WATER MAIN SERVICE CONNECTION.

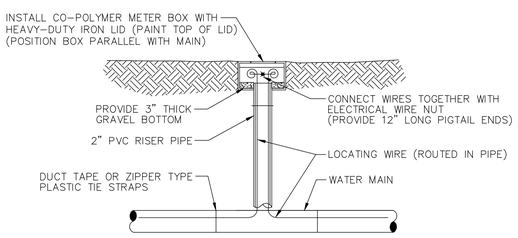
FLUSHING VALVE BELOW GRADE



METER BOX SUPPORT DETAIL



LOCATE WIRE BOX UTILIZING VALVE BOX



LOCATE WIRE BOX UTILIZING METER BOX

NOTES

1. LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE.

LOCATE WIRE BOX

NO	DATE	BY	REVISION DESCRIPTION
1	FEB.2016	SS	GENERAL UPDATES

DESG
DRWN
CHKD
APRV
DATE

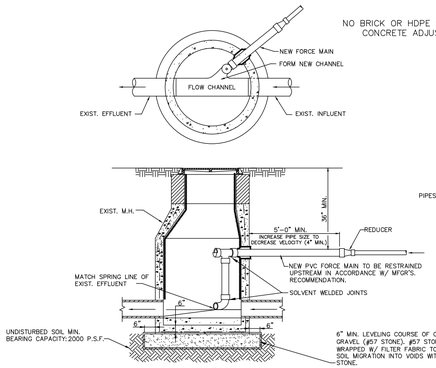
PROJECT:

STANDARD WATER SERVICE DETAILS

CITY OF
GREEN COVE SPRINGS
321 WALNUT STREET
GREEN COVE SPRINGS, FLORIDA 32043

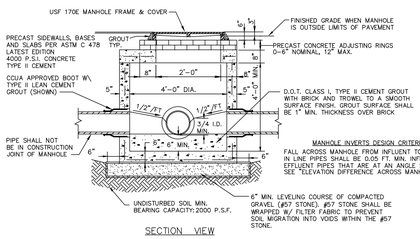
ACAD FILE NAME
SERVICES.DWG
SHEET NO.
1 OF 1

M:\CAD Files\Green Cove Springs\8905191\Standard Utility Details\11-01-2017\SERVICES.dwg, 11/7/2017 1:19:15 PM



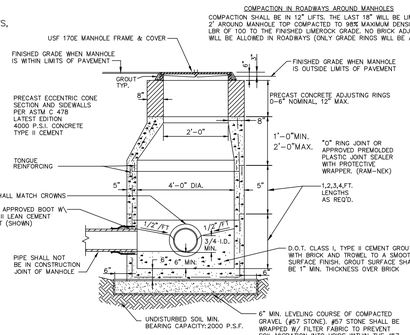
TYP. FORCE MAIN CONNECTION TO MANHOLE

NOTE:
1. THIS MANHOLE AND THE NEXT TWO MANHOLES DOWNSTREAM (AS REQUIRED BY UTILITY) ARE TO HAVE POLYETHYLENE LINER AS MANUFACTURED BY STANDARD PRECAST CO. (AGRU SURE GRIP) OR APPROVED EQUAL.
2. IF CONNECTION IS BEING MADE TO AN EXISTING MANHOLE, THAT MANHOLE AND THE NEXT TWO MANHOLES DOWNSTREAM (AS REQUIRED BY UTILITY), SHALL BE LINED WITH "SPECTRASHIELD" OR APPROVED EQUAL.
3. SIZE OF DROP PIPE CONNECTION TO MANHOLE SHALL BE DESIGNED BY THE PROJECT ENGINEER. MINIMUM SIZE SIZE SHALL BE 4". CONNECTION AND DROP PIPE SHALL BE SIZED TO REDUCE THE VELOCITY AND PREVENT "SPLASHOVER" WITHIN THE MANHOLE. 5'-0" MINIMUM DISTANCE FROM MANHOLE TO REDUCER MAY BE INCREASED TO ASSIST IN THIS VELOCITY REDUCTION.



SECTION VIEW

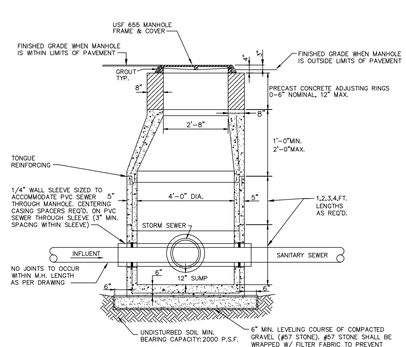
SHALLOW SANITARY SEWER MANHOLE



SECTION VIEW

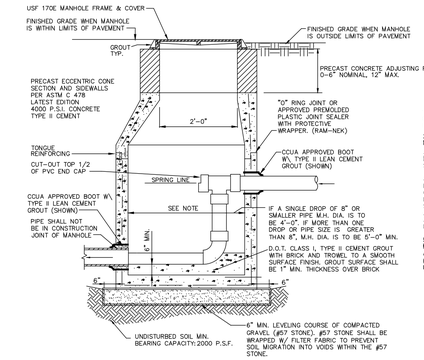
SANITARY SEWER MANHOLE

MANHOLE INVERTS DESIGN CRITERIA
FALL ACROSS MANHOLE FROM INFLUENT TO EFFLUENT OF IN LINE PIPES SHALL BE 0.05 FT. MIN. INFLUENT TO EFFLUENT PIPES THAT ARE AT AN ANGLE SHALL BE 0.10 SEE "ELEVATION DIFFERENCE ACROSS MANHOLE" THIS SHEET.



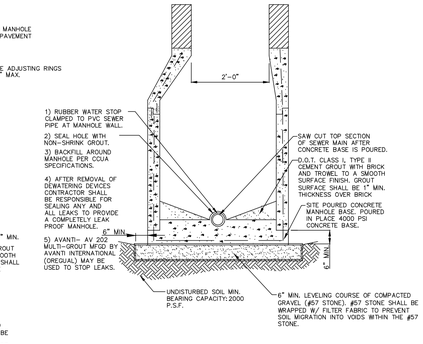
SECTION VIEW

STORM CONFLICT MANHOLE



NOTE: FOR ADDITIONAL MANHOLE SPECIFICATIONS, SEE "SANITARY SEWER MANHOLE" DETAIL THIS SHEET. MAXIMUM ALLOWABLE DIFFERENCE IN INVERT ELEVATION WITHOUT INTERNAL DROP CONNECTION IS 24". SEE "ELEVATION DIFFERENCE ACROSS MANHOLE" THIS SHEET.

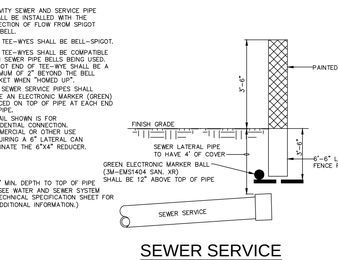
TYPICAL GRAVITY SEWER DROP PIPE CONNECTION TO MANHOLE



NOTE: 1) FOR ADDITIONAL MANHOLE SPECIFICATIONS, SEE "SANITARY SEWER MANHOLE" DETAIL THIS SHEET. MAXIMUM ALLOWABLE DIFFERENCE IN INVERT ELEVATION WITHOUT INTERNAL DROP CONNECTION IS 24".

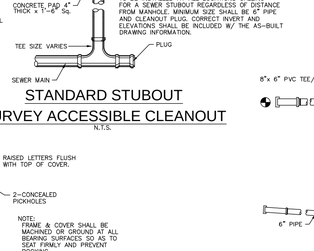
SADDLE MANHOLE DETAIL

THIS DETAIL IS ONLY TO BE USED WITH SPECIFIC APPROVAL BY CITY OF GCS.



CLEANOUT DETAIL

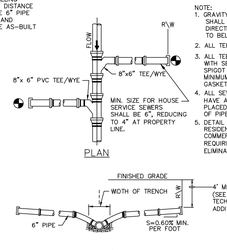
N.T.S.



STANDARD STUBOUT SURVEY ACCESSIBLE CLEANOUT

N.T.S.

TO BE INSTALLED AT ALL LOCATIONS CALLING FOR A SEWER STUBOUT REGARDLESS OF DISTANCE FROM MANHOLE. MINIMUM SIZE SHALL BE 6" PIPE AND CLEANOUT PLUG. CORRECT INVERT AND ELEVATIONS SHALL BE INCLUDED W/ THE AS-BUILT DRAWING INFORMATION.

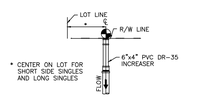


PLAN

NOTE:
1. GRAVITY SEWER AND SERVICE PIPE SHALL BE INSTALLED WITH THE DIRECTION OF FLOW FROM SPIGOT TO BELL.
2. ALL TEE-WYES SHALL BE BELL-SPIGOT.
3. ALL TEE-WYES SHALL BE COMPATIBLE WITH SEWER PIPE BELLS BEING USED. SPIGOT END OF TEE-WYE SHALL BE A MINIMUM OF 2" BEYOND THE BELL GASKET WHEN "HOMED UP".
4. ALL SEWER SERVICE PIPES SHALL HAVE AN ELECTRONIC MARKER (GREEN) PLACED ON TOP OF PIPE AT EACH END OF PIPE.
5. DETAIL SHOWN IS FOR RESIDENTIAL CONNECTION. COMMERCIAL OR OTHER USE REQUIRING A 6" LATERAL CAN ELIMINATE THE 6"X4" REDUCER.

SECTION

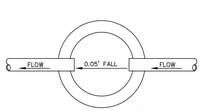
SEWER SERVICE MARKER POST



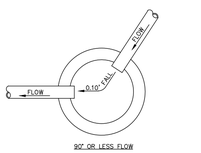
SINGLE FAMILY RESIDENTIAL SERVICE

DENOTES SERVICE MARKER POST

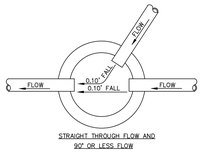
STANDARD SINGLE SEWER SERVICE LATERALS



STRAIGHT THROUGH FLOW AND UP TO 30° OR LESS FLOW

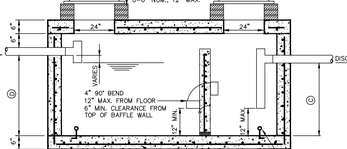


90° OR LESS FLOW



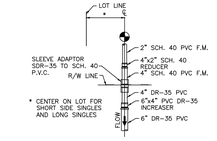
STRAIGHT THROUGH FLOW AND 90° OR LESS FLOW

ELEVATION DIFFERENCE ACROSS MANHOLE



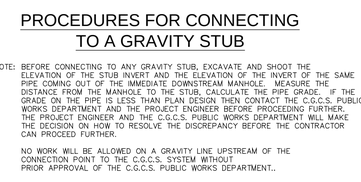
NOTE: FOR ADDITIONAL MANHOLE SPECIFICATIONS, SEE "SANITARY SEWER MANHOLE" DETAIL THIS SHEET. MAXIMUM ALLOWABLE DIFFERENCE IN INVERT ELEVATION WITHOUT INTERNAL DROP CONNECTION IS 24". SEE "ELEVATION DIFFERENCE ACROSS MANHOLE" THIS SHEET.

GRINDER PUMP STATION FORCE MAIN CONNECTION TO SINGLE GRAVITY SERVICE



SINGLE SERVICE

DENOTES SERVICE MARKER POST

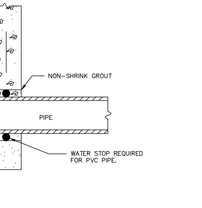


CAPACITY IN GALLONS		
DIM	1,000 MIN.	1,250
A	7'-0"	10'-0"
B	5'-0"	4'-0"
C	4'-0"	4'-3"
D	5'-0"	5'-0"

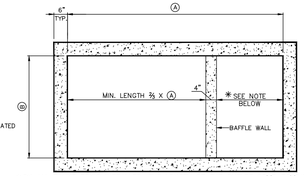
COMPLIES WITH A.S.T.M. C-913, PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES AND A.S.T.M. C-890, MINIMUM STRUCTURAL DESIGN LOADING FOR MONOLITHIC OR SECTIONAL PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES

NOTES:
1. GREASE TRAP SHALL BE SIZED BY THE PROJECT ENGINEER USING THE ANTICIPATED PEAK FLOW OF WATER ENTERING THE GREASE TRAP IN ACCORDANCE WITH THE 2003 STATE OF FLORIDA BUILDING CODE — PLUMBING.
2. ROUND-UP TO MATCH THE CLOSEST CAPACITY IN GALLONS PER THE CHART.

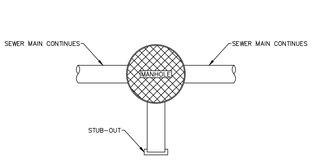
GREASE INTERCEPTOR DETAIL



SADDLE MANHOLE DETAIL SECTION



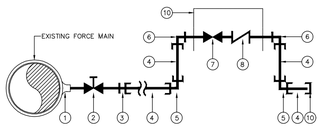
*ON ALL TANKS BEING INSTALLED, THE LENGTH OF THE OUTLET COMPARTMENT SHALL BE AT LEAST ⅓TH OF THE TOTAL LENGTH OF ALL TANKS.



PROCEDURES FOR CONNECTING TO A GRAVITY STUB

NOTE: BEFORE CONNECTING TO ANY GRAVITY STUB, EXCAVATE AND SHOOT THE ELEVATION OF THE STUB INVERT AND THE ELEVATION OF THE INVERT OF THE SAME PIPE COMING OUT OF THE IMMEDIATE DOWNSTREAM MANHOLE. MEASURE THE DISTANCE FROM THE MANHOLE TO THE STUB, CALCULATE THE PIPE GRADE. IF THE GRADE ON THE PIPE IS LESS THAN PLAN DESIGN THEN CONTACT THE C.G.C.S. PUBLIC WORKS DEPARTMENT AND THE PROJECT ENGINEER BEFORE PROCEEDING FURTHER. THE PROJECT ENGINEER AND THE C.G.C.S. PUBLIC WORKS DEPARTMENT WILL MAKE THE DECISION ON HOW TO RESOLVE THE DISCREPANCY BEFORE THE CONTRACTOR CAN PROCEED FURTHER.

NO WORK WILL BE ALLOWED ON A GRAVITY LINE UPSTREAM OF THE CONNECTION POINT TO THE C.G.C.S. SYSTEM WITHOUT PRIOR APPROVAL OF THE C.G.C.S. PUBLIC WORKS DEPARTMENT..

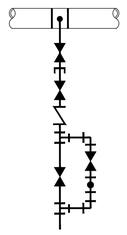


MATERIAL LIST

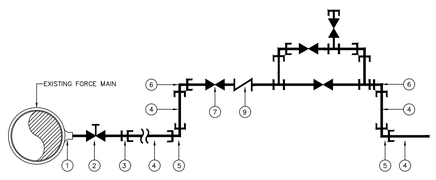
1. STAINLESS STEEL TAPPING SADDLE
2. 2" H.D. BRONZE BALL VALVE CORP STOP (FULL OPENING)
3. 2" SCH.80 FEMALE ADAPTER (S x FIPT)
4. 2" SCH.80 PIPE
5. 2" 90° SCH.80 BEND (S x S)
6. 2" 90° SCH.80 BEND (S x T)
7. 2" BRONZE BALL VALVE W/ LOCKING WING (SEE TABLE ON WATER SHEET)
8. 2" TRU-UNION PVC BALL CHECK VALVE
9. RUSSELL C.I. VALVE BOX W/ "SEWER" ON LID
10. 2" SCH.40 CAP (S)

NOTE: ENGINEER TO VERIFY THAT THE SIZE OF SERVICE IS ADEQUATE AND IS TO ADJUST ACCORDING TO HIS FINDING.

2" SEWAGE FORCE MAIN MANIFOLD SERVICE CONNECTION DETAIL FOR MEDIUM TO HIGH PRESSURE CONNECTION SYSTEMS



TOP VIEW



MATERIAL LIST

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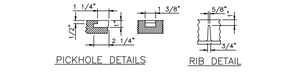
3. 2" SCH.80 FEMALE ADAPTER (S x FIPT)
4. 2" SCH.80 PIPE
5. 2", 90° SCH.80 BEND (S x S)
6. 2", 90° SCH.80 BEND (S x T)
7. (3) 2" BRONZE BALL VALVE, CURB STOP W/ LOCKING WING (SEE TABLE ON WATER SHEET)
8. 2" TRU-UNION PVC BALL CHECK VALVE
9. RUSSELL C.I. VALVE BOX W/ "SEWER" ON LID
10. 2" SCH.40 CAP (S)
11. 2" TEE W/ 2 X 1/2" BUSHING
12. 1/2" STAINLESS STEEL NIPPLE W/ BALL VALVE & PLUG

NOTE: ENGINEER TO VERIFY THAT THE SIZE OF SERVICE IS ADEQUATE AND IS TO ADJUST ACCORDING TO HIS FINDING.

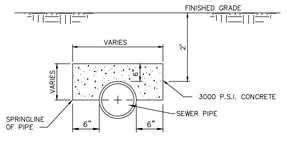
" SEWAGE FORCE MAIN MANIFOLD SERVICE CONNECTION / WITH PRESSURE GAUGE FITTING / FOR LOW PRESSURE RECEIVING SYSTEMS FOR CREATING ARTIFICIAL HEAD PRESSURE



PICKHOLE DETAILS RIB DETAIL

MANHOLE FRAME AND COVER SHALL BE USF CO. MOD. NO. 170E

SANITARY SEWER MANHOLE FRAME & COVER

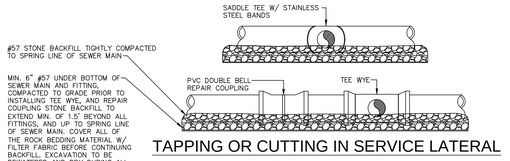


REQUIRED WHERE TOP OF SEWER PIPE IS WITHIN 2' OF FINISHED GRADE UNLESS ALTERNATE DETAIL IS APPROVED BY THE CLAY COUNTY UTILITY AUTHORITY.

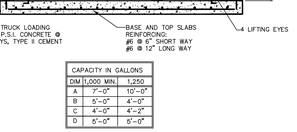
CONCRETE CAP FOR SEWER PIPES

NOTE:
FACILITIES WITH FLOOR DRAINS AND WITHOUT A GREASE TRAP SHALL INSTALL THIS MODEL FLOOR DRAIN AND ONLY WITH PRIOR APPROVAL FROM THE CLAY COUNTY UTILITY AUTHORITY.

FLOOR DRAIN WITH STRAINER DETAIL

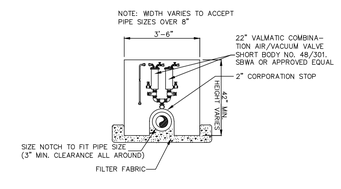


TAPPING OR CUTTING IN SERVICE LATERAL TO EXISTING SEWER MAIN



SANITARY SEWAGE FORCE MAIN AIR RELEASE VALVE VAULT

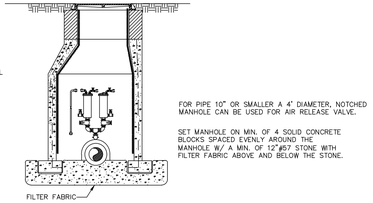
TO BE USED ON ALL PIPES 12" OR LARGER



SANITARY SEWAGE FORCE MAIN AIR RELEASE VALVE VAULT

TO BE USED ON ALL PIPES 10" OR SMALLER

NOTES:
1. CONC. BOX SHALL BE 42" MIN. DEPTH BUT SHALL BE DEEP ENOUGH TO ACCOMMODATE THE SIZE PIPE AND TYPE OF AIR RELEASE VALVE REQUIRED, WITH OPEN BOTTOM. PRECAST WITH NOTCH TO ACCOMMODATE PIPE INSTALLED WITH 36" COVER FROM TOP OF PIPE TO FINISH GRADE, ON 12" OF #57 STONE. WITH FILTER FABRIC ABOVE AND BELOW THE STONE.
2. CONTRACTOR SHALL PROVIDE SHOP DRAWING OF BOX WITH DIMENSIONS FOR APPROVAL BY CITY.
3. DIMENSIONS SHOWN ARE MINIMUM AND SHALL BE INCREASED BASED UPON ACTUAL SIZE OF PIPE INSTALLED



FOR PIPE 10" OR SMALLER A 4' DIAMETER, NOTCHED MANHOLE CAN BE USED FOR AIR RELEASE VALVE.

SET MANHOLE ON MIN. OF 4 SOLID CONCRETE BLOCKS SPACED EVENLY AROUND THE MANHOLE W/ A MIN. OF 12"#57 STONE WITH FILTER FABRIC ABOVE AND BELOW THE STONE.

SANITARY SEWAGE FORCE MAIN AIR RELEASE VALVE VAULT

TO BE USED ON ALL PIPES 10" OR SMALLER

Item # 7.

NO	DATE	BY	REVISION DESCRIPTION
1	FEB 2016	SS	GENERAL UPDATE

DESG
DRWN
CHKD
APRV
DATE

PROJECT:

SEWER SYSTEM DETAILS

STANDARD SEWER DETAILS

CITY OF GREEN COVE SPRINGS
321 WALNUT STREET
GREEN COVE SPRINGS, FLORIDA 32043

ACAD FILE NAME
SEWSTAND.DWG
SHEET NO.
OF

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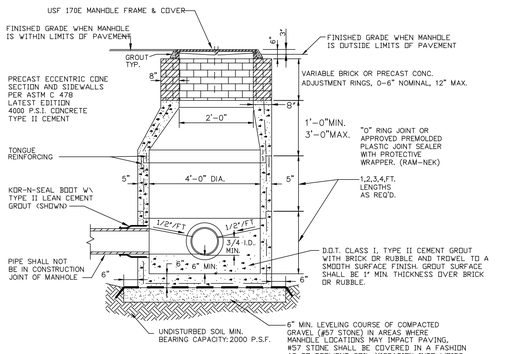
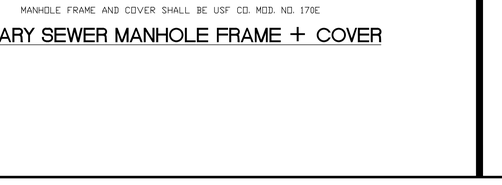
COMPACTION IN ROADWAYS AROUND MANHOLES

COMPACTION SHALL BE IN 12" LIFTS. THE LAST 18" WILL BE LIMEROCK, 2' AROUND MANHOLE TOP COMPACTED TO 98% MAXIMUM DENSITY WITH LBR OF 100 TO THE FINISHED LIMEROCK GRADE. NO BRICK ADJUSTMENTS WILL BE ALLOWED IN ROADWAYS (ONLY GRADE RINGS WILL BE ACCEPTED).



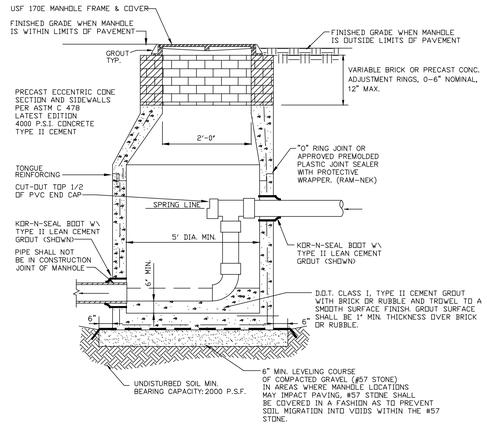
SECTION VIEW

SANITARY SEWER MANHOLE



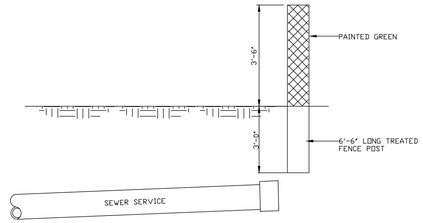
SECTION VIEW

SHALLOW SANITARY SEWER MANHOLE

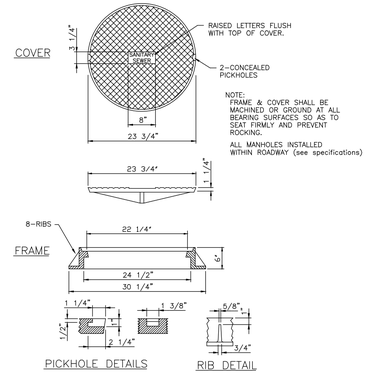


NOTE: FOR ADDITIONAL MANHOLE SPECIFICATIONS, SEE "SANITARY SEWER MANHOLE" DETAIL THIS SHEET.
MAXIMUM ALLOWABLE DIFFERENCE IN INVERT ELEVATION WITHOUT INTERNAL DROP CONNECTION IS 24".

TYPICAL GRAVITY SEWER DROP PIPE CONNECTION TO MANHOLE

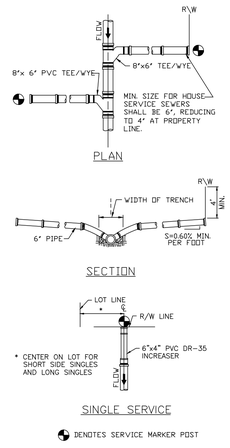


SEWER SERVICE MARKER POST

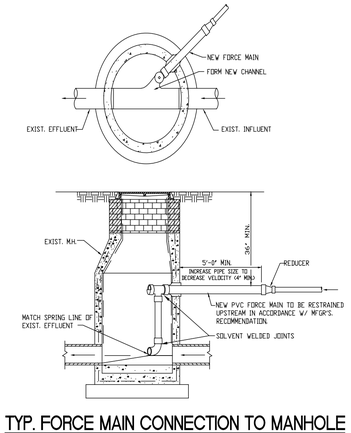


MANHOLE FRAME AND COVER SHALL BE USF CO. MOD. NO. 170E

SANITARY SEWER MANHOLE FRAME + COVER



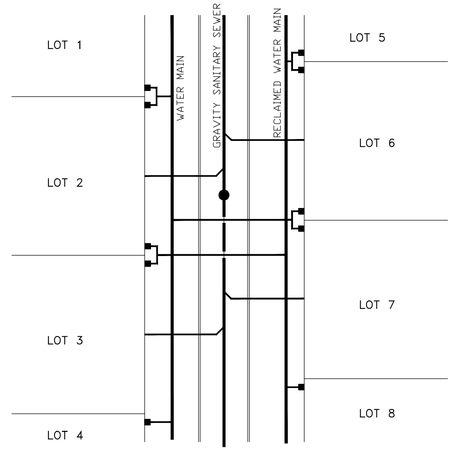
STANDARD SINGLE SEWER SERVICE LATERALS



TYP. FORCE MAIN CONNECTION TO MANHOLE

NOTE: 1. THIS MANHOLE AND THE NEXT TWO MANHOLES DOWNSTREAM (AS REQUIRED BY UTILITY) ARE TO HAVE POLYETHYLENE LINER AS MANUFACTURED BY TAYLOR PRECAST CO. OR APPROVED EQUAL.

2. SIZE OF DROP PIPE CONNECTION TO MANHOLE SHALL BE DESIGNED BY THE PROJECT ENGINEER. MINIMUM SIZE SIZE SHALL BE 4". CONNECTION AND DROP PIPE SHALL BE SIZED TO REDUCE THE VELOCITY AND PREVENT "SPLASHOVER" WITHIN THE MANHOLE. 5'-0" MINIMUM DISTANCE FROM MANHOLE TO REDUCER MAY BE INCREASED TO ASSIST IN THIS VELOCITY REDUCTION.



TYPICAL WATER AND SEWER SERVICE LOCATION PLAN

1.) ALL WATER AND REUSE DOUBLE SERVICES ON PROPERTY LINE.
2.) ANY SINGLE WATER OR REUSE SERVICE LINES ON LOT LINE.
3.) ALL SEWER SERVICES ARE TO CENTER OF LOTS.

NO	DATE	BY	REVISION DESCRIPTION
1	FEB.2016	SS	GENERAL UPDATES

DRWN
CHKD
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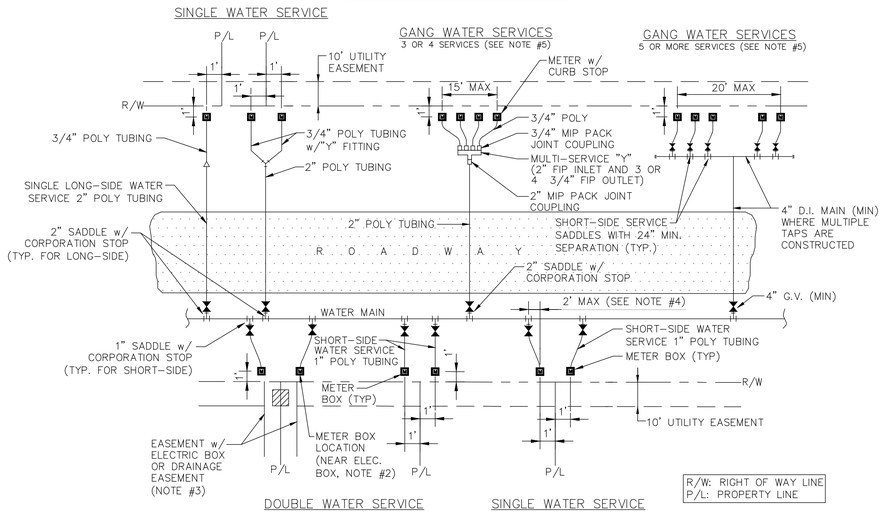
DATE

GRAVITY SEWER SERVICE DETAILS

CITY OF
GREEN COVE SPRINGS
321 WALNUT STREET
GREEN COVE SPRINGS, FLORIDA 32043

ACAD FILE NAME
SERVICES.DWG
SHEET NO.
1 OF 1

A LOCATE WIRE SHALL BE PLACED ON SERVICES



NOTES

1. THE SKETCHES ABOVE INDICATE TYPICAL RECLAIMED WATER SERVICE AND METER BOX LOCATIONS. ACTUAL LOCATIONS OF BOXES MAY VARY SLIGHTLY ACCORDING TO FIELD CONDITIONS ENCOUNTERED. TYPICALLY, THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE.

2. UNLESS SPECIFIED OTHERWISE BY THE CITY OF GREEN COVE SPRINGS, THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE, AND 1.0' FOOT INSIDE OF THE PROLONGATION OF ONE OF THE SIDE PROPERTY LINES. IF A CONFLICT EXISTS WITH OTHER UTILITIES, THE METER BOX MAY BE ADJUSTED TO FOUR FEET (MAX.) INSIDE PROPERTY LINES (IN LIEU OF 1.0' FEET). UNLESS APPROVED OTHERWISE BY THE CITY, THE RECLAIMED WATER METER BOX SHALL BE LOCATED IN NON-TRAFFIC AREAS (NOT IN SIDEWALKS OR DRIVEWAYS). IF AN UNAPPROVED METER BOX IS IDENTIFIED BY THE CITY, THEN THE CONTRACTOR OR CUSTOMER SHALL BE RESPONSIBLE FOR THE COST OF RELOCATING ANY METER BOX WHICH IS LOCATED IN THE SIDEWALK OR DRIVEWAY OR THE COST TO PROVIDE THE CORRECT METER BOX. THE CITY SHALL APPROVE ALL DEVIATIONS TO THE ABOVE PRIOR TO CONSTRUCTION.

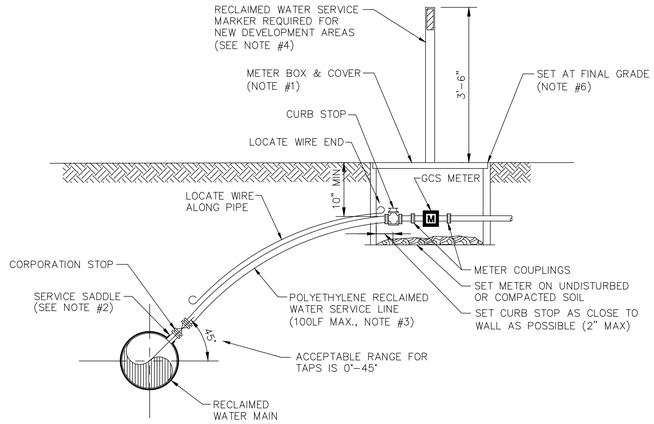
3. IF DRAINAGE OR OTHER EASEMENT IS LOCATED BETWEEN LOTS, METER BOXES SHALL BE LOCATED AT THE EASEMENT LINE BUT OUTSIDE THE EASEMENT AREA.

4. FOR SINGLE SERVICES, THE HORIZONTAL DISTANCE (PERPENDICULAR TO THE MAIN) BETWEEN THE SERVICE'S SADDLE AND THE METER BOX SHALL BE 2 FEET MAXIMUM. FOR DOUBLE 3/4"SERVICES, THE 2"POLY MAIN SHALL BE LOCATED CENTERED BETWEEN THE TWO METER BOXES. LOCATE WIRE IS REQUIRED ON ALL SERVICES. THE WIRE SHALL RUN FROM THE METER BOX TO THE MAIN (WITH NO CONNECTION TO MAIN WIRE WITH THE LAST 24 INCHES STRIPPED OF INSULATION/BARE WIRE AS GROUND). ALL EXCEPTIONS TO THIS REQUIREMENT MUST BE APPROVED BY THE CITY OF GREEN COVE SPRINGS. THIS WILL ASSIST IN LOCATING EXISTING SERVICE LINES IN THE FUTURE.

5. GANG RECLAIMED WATER SERVICES: FOR 3 OR 4 SERVICES IN ONE AREA, A DUCTILE IRON PIPE (D.I.P.) RECLAIMED WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS. LOCATE WIRE SHALL EXTEND FROM ONE METER BOX TO CURB STOP AT RECLAIMED WATER MAIN. FOR 5 OR MORE SERVICES IN ONE AREA, A RECLAIMED WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS (TAPS STAGGERED AND AT 2 FEET ON CENTER (MIN). FOR WATER SUPPLY HEADERS WHERE 5 OR MORE TAPS ARE CONSTRUCTED, THE HEADER PIPE SHALL BE 4" AT A MINIMUM. EXAMPLE: CONSTRUCT A 4" MAIN D.I. CROSSING THE STREET FOR 5 RESIDENTIAL CUSTOMERS, UTILIZING 4" G.V., 4" PIPE, 4"X1" SADDLES AND 1" CURB STOPS (NO GLUED TEE FITTINGS). THE 4" OR LARGER D.I.P. RECLAIMED WATER MAIN MUST BE SIZED AND DESIGNED BY THE ENGINEER.

6. ALL COMMERCIAL WATER SERVICES SHALL BE 2" POLYETHYLENE PIPING CONNECTED TO 2" CURB STOP IN METER BOX, UNLESS OTHERWISE APPROVED BY THE CITY.

RECLAIMED WATER SERVICE INSTALLATIONS 2" AND SMALLER METER



NOTES

1. SEE CITY OF GREEN COVE SPRINGS APPROVED MATERIALS MANUAL AND SYSTEM DETAILS FOR REQUIREMENTS.

2. SINGLE BAND SADDLES MAYBE UTILIZED ON NEW 1" RECLAIMED WATER SERVICES WHICH ARE INSTALLED ON A DRY 10" SIZE OR SMALLER RECLAIMED WATER MAIN (NEW RECLAIMED WATER MAIN CONSTRUCTION). FOR WET TAPS OR RECLAIMED WATER MAINS 12" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED.

3. NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY CITY OF GREEN COVE SPRINGS. CONSTRUCT POLY LINE WITH 36" (MIN.) COVER UNDER ROADWAYS. THE POLY RECLAIMED WATER SERVICE LINE SHALL BE SAME SIZE AS THE METER (3/4" MINIMUM) AND BE INSTALLED PERPENDICULAR TO THE MAIN AND NOT EXCEED 100LF UNLESS OTHERWISE APPROVED BY CITY OF GREEN COVE SPRINGS.

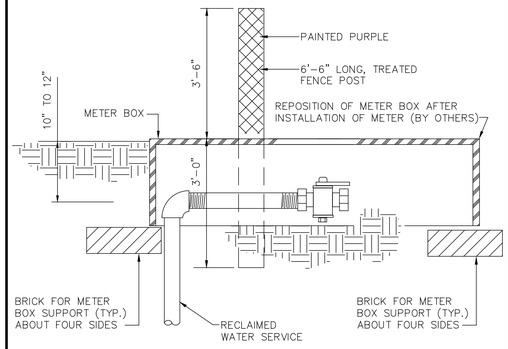
4. INSTALL PVC PLUG IN ALL CURB STOPS IF RECLAIMED WATER SERVICE IS "NOT IN USE" (I.E.: IF NO METER IS INSTALLED). IN ADDITION, INSTALL A 6', 6" P.T. FENCE POST (TOP PAINTED PURPLE) 12" OFF SIDE OF METER BOX. THE REMOVAL OR TRANSFER OF A RECLAIMED WATER SERVICE SHALL INCLUDE BRASS METER COUPLINGS (HEX ON BARREL TYPE).

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE BOXES, METERS OR ELECTRONIC DEVICES IF DAMAGED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.

6. METER BOX AND TOP SHALL BE CLEAR OF ALL DEBRIS TO ALLOW FULL ACCESS TO BOX (I.E., NO DIRT, TRASH OR OTHER DEBRIS PLACED ON TOP OF BOX).

7. LOCATE WIRING REQUIRED ON ALL LONG AND SHORT SERVICES.

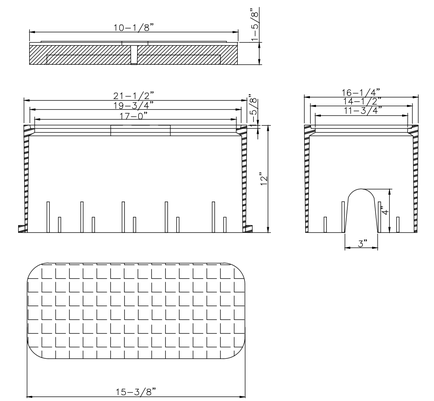
RECLAIMED WATER SERVICE DETAIL 2" AND SMALLER METER



RECLAIMED WATER SERVICE MARKER POST

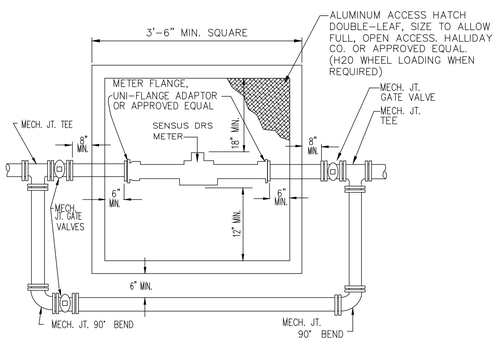
NOTE:
ALL SERVICES ARE TO BE CLEARLY MARKED BY A TREATED 6'-6" LONG MARKER POST PAINTED PURPLE. ALL SERVICES ARE TO BE EXTENDED ABOVE GRADE UNTIL COMPLETION OF ALL GRADING ACTIVITIES. ONCE FINAL ROAD GRADING IS COMPLETE, LOWER SERVICES BY CUTTING OFF RISER 10" TO 12" BELOW FINAL GRADE AND INSTALL 90° BEND, NIPPLE AND LW BALL VALVE AT THAT ELEVATION. SET METER BOX OVER ENTIRE HORIZONTAL SECTION OF SERVICE LINE FROM LAST 90° BEND TO THE END OF THE CURB STOP. BOX TO BE REPOSITIONED WHEN THE METER IS INSTALLED. MARKER POST TO BE INSTALLED ADJACENT TO AND LOCATED AT THE MID SECTION OF THE METER BOX.

NOTE:
MIN. WALL THIKNESS: .25"
DOUBLE WALL BODY w/STRUCTURAL SUPPORT RIBS
w/MIN. THINCKNESS: 3⁄16"
1" BOTTOM FLANGE
BOX IS INJECTED MOLDED STRUCTURAL FOAM RECYCLED POLYPROPYLENE MATERIAL



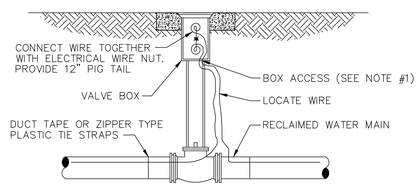
PURPLE METER BOX & SOLID PURPLE LID

METER BOX SUPPORT DETAIL

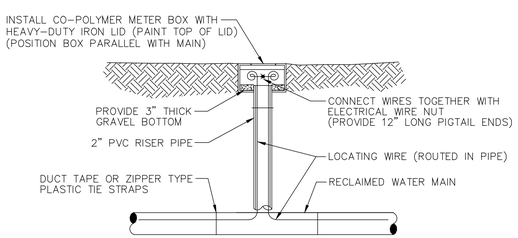


NOTES:
1. ALL PIPE TO BE D.I.
2. ALL VALVES & FITTINGS TO BE DUCTILE IRON.
3. MIMINUM LENGTH OF 8 DIAMETERS OF STRAIGHT PIPE TO BE INSTALLED ON INLET SIDE OF METER.
4. ALL PIPE AND FITTINGS TO BE SAME SIZE AS METER.
5. CONC. BOX SHALL BE 42" DEEP WITH OPEN BOTTOM, PRECAST WITH NOTCH TO ACCOMODATE PIPE INSTALLED 36" DEEP, INSTALLED ON 12" OF #57 STONE
6. CONTRACTOR SHALL PROVIDE SHOP DRAWING OF BOX WITH DIMENSIONS FOR APPROVAL BY C.C.U.A.
7. DIMENSIONS SHOWN ARE MINIMUM AND SHALL BE INCREASED BASED UPON ACTUAL SIZE OF METER PROVIDED.

METER VAULT 3" AND LARGER METERS



LOCATE WIRE BOX UTILIZING VALVE BOX

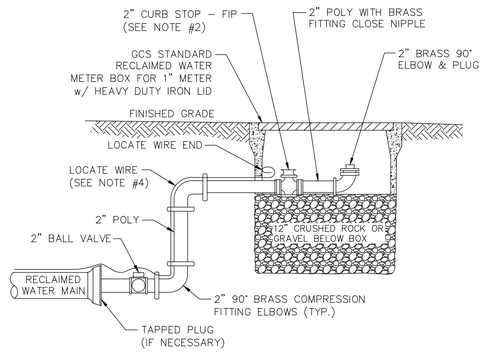


LOCATE WIRE BOX UTILIZING METER BOX

NOTES

1. LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE.

LOCATE WIRE BOX



NOTES

1. PIPE SHALL BE POLYETHYLENE. FITTINGS SHALL BE BRASS.
2. THE 2" CURB STOP SHALL BE ALL BRONZE. FITTINGS SHALL BE BRASS.
3. CANNOT BE PLACED UNDER CONCRETE OR PAVEMENT.
4. PLACE 2 FEET PAST LAST RECLAIMED WATER MAIN SERVICE CONNECTION.

FLUSHING VALVE BELOW GRADE

NO	DATE	BY	REVISION DESCRIPTION
1	FEB.2016	SS	GENERAL UPDATES

DESG
DRWN
CHKD
APRV
DATE

PROJECT:
STANDARD RECLAIMED WATER SYSTEM DETAILS

CITY OF GREEN COVE SPRINGS
321 WALNUT STREET
GREEN COVE SPRINGS, FLORIDA 32043

ACAD FILE NAME
REUSE.DWG
SHEET NO.
1 OF 2

OUTLINE SPECIFICATIONS FOR CONSTRUCTION OF RECLAIMED WATER DISTRIBUTION SYSTEM

01. INTENTION. It is the declared and acknowledged intention to secure a new reclaimed water distribution system, complete, in accordance with the plans and specifications, and contract documents. All new work shall be in accordance with Green Cove Springs Details and Specifications and Approved Materials Manual.

02. GENERAL. All materials shall be new and unused. Materials shall be warranted by the Contractor as to materials, workmanship and accuracy of As-Built drawings for a period of two years from the date of completion of the work or beneficial use of the facilities. Workmanship shall be of good quality; i.e., mains shall be laid in a uniform alignment, fittings shall be properly restrained, trenches shall be properly excavated and backfilled, valve boxes shall be adjusted to finished grade.

03. SURVEYS. The Utility Contractor shall provide all surveys necessary for the layout and construction of the work of his contract.

04. EARTHWORK. Earthwork shall include all excavation, fill and backfill (hand/machine), compaction and rough grading of materials encountered. No unsuitable materials clay, muck, or peat removed from pipe trenches are to be used for backfill. All fill or backfill shall be either sand or sandy clay, free of roots, trash or other debris. All backfill alongside of and to a height twenty-four inches above all pipe shall be free of clay or organic material, compacted by either hand or machine operation carefully to 98%. All other backfill shall be compacted by either hand or machine operation carefully to 95% (outside of paving), 98% (under paving) of its optimum moisture content as determined by ASTM D698, latest.

05. JOINT RESTRAINT. All fittings shall be properly and adequately restrained against lateral movement at all reclaimed water main tees, crosses, valves, bends and fire hydrants. Restrainers shall be Uni-Flange Series 1300, 1350, 1390 or approved equal installed per manufacturer's recommendations and GCS Details and Specifications.

06. DUCTILE IRON PIPE. Ductile iron pipe shall conform to ANSI Specification A21.50 (AWWA C150) latest, "Thickness Design of Ductile Iron Pipe", Table 50.5, laying condition Type 2, internal operating pressure 250 p.s.i. for an 8-foot depth of cover, Class 51 minimum and shall be ANSI A21.51 (AWWA C151), latest centrifugally cast pipe. Laying lengths shall be 20 feet or less, each length clearly marked with pressure rating, thickness class, height of pipe without lining, length, and manufacturer. Ductile iron pipe for reclaimed water service shall be furnished with cement lining per AWWA C110, C115 and C151. The pipe shall have design values of 60,000 PSI minimum tensile strength, and 42,000 P.S.I. minimum yield strength. Ductile iron pipe for reclaimed water service shall be used only with prior approval of the city of GCS. All ductile iron piping shall be wrapped with purple tape and stamped "Reclaimed Water" on at least two sides @ 12" o.c. along pipe barrel.

07. DUCTILE IRON FITTINGS shall be C153 cement lined and suitable for the type and class of pipe to which connected. Gaskets shall be suitable for reclaimed water service. Minimum working pressure shall be 150 P.S.I.

08. POLYVINYL CHLORIDE PIPE. Polyvinyl chloride pipe for reclaimed water mains 4 inch in diameter and larger, shall be P.V.C. C-900, DR-18, conforming to ASTM D-1784, D-2241, D-3139 and F-477, latest, and shall bear the seal of the National Sanitation Foundation. Pipe shall be purple color and marked on at least 2 sides with the word "RECLAIMED WATER" and at every 12" along the barrel of the pipe. Couplings shall be rubber gasketed, push-on type conforming to ASTM D-2122.

09. STEEL CASING PIPE. Steel casing pipe shall be of size indicated on the Drawings and shall conform to ASTM A139, with a minimum yield strength of 35,000 p.s.i.

10. POLYVINYL CHLORIDE (PVC 1120, SCHEDULE 40) PIPE shall conform to the requirements of ASTM D 1785. Fittings and threaded nipples shall be Sch. 80 PVC. All piping smaller than 4" shall be Sch. 80 PVC, shall be purple in color and stamped "Reclaimed Water".

11. GATE VALVES AND BOXES. Gate valves shall be non-rising stem type and shall be suitable for a 200 p.s.i. non-shock working pressure Gate valves shall be mechanical joint, flanged or screwed. Gate valves shall have a 2" operating nut and open left. Gate valves shall have joints suitable for the type of main on which installed. Valves 2" & 3" shall be bronze (distribution mains only). Gate valves 4" and larger shall be iron body, bronze fitted with resilient seat. Valves shall be of domestic (American) manufacture and shall be A.F.C., M&H, Mueller or approved equal. Valves 16" and larger shall be AWWA C-509, M&H Valve Co. Valve boxes with screw extensions shall be provided for all gate valves. Boxes shall be of cast iron construction, 7/32" minimum wall thickness and shall be nontacky tar enamel coated. The word "RECLAIMED WATER" shall be cast in the cover. Other gate valves 2" and smaller shall be heavy-duty bronze, wheel operated gate valves. Box covers to be primed and painted purple.

12. RECLAIMED WATER METER BOXES. Reclaimed water meter boxes for 5/8"x3/4", 3/4"and 1" meters shall be DFW D1200 w/ purple lids. Meter boxes for flushing hydrants and 1" meters shall be Russell D-112, 1 1/2" and 2" meter boxes shall be DFW D1500. Developer shall be responsible for installation of meter boxes on all reclaimed water services as part of the reclaimed water main installation. All curb stops shall be adjusted to the proper elevation and shall be accessible for the installation of the reclaimed water meter. The contractor shall be required to open all boxes for the City's inspector at the final inspection. A treated 6' – 6" long treated fence post marker shall be installed at the side of and centered on the meter box and painted purple for identification. The box lid shall be painted purple.

13. CURB STOPS. Curb stops shall be cast bronze, no lead, inverted key stop roundway, with check, lock wing type, for locking in the closed position. Curb stops shall be Ford Ball Valve or Mueller, with F.I.P.T.

14. CORP STOPS. Corp stops shall be cast bronze, no lead, inverted key stop roundway, with check. Corp stops shall be Ford Ball Valve or Mueller with F.I.P.T.

15. PRESSURE REDUCING VALVES (when and where required) The pressure reducing valve shall maintain a constant delivery pressure as part of the service to each residential irrigation system. Pressure reducing valves shall conform with the standard requirements of the ASSE (Std. 1003) and WPOA Uniform Plumbing Code. Approved model: Watts Series U5B or equal.

16. INSTALLATION. The minimum cover over top of reclaimed water main shall be 36" minimum. All lines and appurtenances shall be thoroughly cleaned of all foreign matter before being lowered into the trench and shall be kept clean during laying operations by means of plugs or other approved methods. All pipe shall be checked for defects before being lowered into the trench. Defective pipe shall not be used. Pipe found to be defective, after installation, shall be removed and replaced with sound pipe at no additional expense to the Owner. The full length of each section of pipe shall rest solidly upon the pipe bed, with recesses excavated to accommodate the bells and joints. All pipe that has the grade or joint disturbed after laying shall be taken up and reinstalled. The pipe shall not be laid in water, or, when trench or weather conditions are unsuitable for the work. All joints shall be cleaned of all foreign matter before making the joint. Fittings at bends in the pipe shall be properly restrained with joint restrainers adequately sized to prevent movement and dislocating or blowing off when the line is under pressure. Service laterals shall terminate at the point noted in the details.

17. SEPARATION OF RECLAIMED WATER MAINS. Maximum separation of reclaimed water lines and potable water lines shall be practiced. A minimum horizontal separation of six feet, center-to-center, or five feet, outside-to-outside, shall be maintained between reclaimed water mains and either potable water mains or sewage collection lines. Reclaimed water lines crossing under water mains shall be laid to provide a minimum vertical separation of 18 inches between the invert of the upper pipe and the crown of the lower pipe. Where the minimum separation cannot be maintained, the crossing shall be arranged such that the reclaimed water main pipe joints and water main joints are equidistant from the point of crossing with no less than ten feet between joints. Alternatively, the reclaimed water main shall be placed in a sleeve to obtain the equivalent of the required ten feet separation. Where there is no alternative to reclaimed water pipes crossing over a water main, the criteria for minimum separation between lines and joints shall be required.

18. PIPE FLUSHING. All reclaimed water system piping shall be flushed with clean water utilizing full pipe diameter flushing for all piping up to and including 8" diameter.

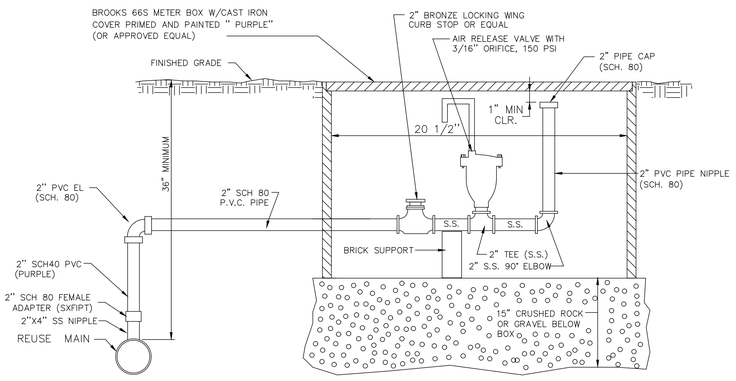
19. TESTS. After the pipe is laid, the joints completed, and the trench backfilled, the newly laid pipe and appurtenances shall be subjected to a Hydrostatic and Leakage test of 150 pounds per square inch for a period of at least two hours. During this period, all joints shall be inspected to determine water tightness of the system. Any leaks detected shall be corrected. Tests shall be in accordance with the City of Green Cove Springs requirements and specifications. Curb and limerock may be installed after construction of the reclaimed water mains, however, limerock priming cannot proceed until such time as the C.C.U.A. inspector approves the reclaimed water distribution system pressure test. This will be strictly enforced. If the reclaimed water system is damaged during any of the operations prior to paving, a follow up test may be required by the City of Green Cove Springs.

20. CURB MARKING. After installation, reclaimed water main valves and service lateral locations shall be scribed in the face of the concrete curb with the appropriate marking (RW-reclaimed service, RV-reclaimed main valve, etc.). Markings shall be a minimum of 3" high.

FINAL INSPECTION PROCEDURES

PRIOR TO FINAL INSPECTION, THE FOLLOWING MUST BE COMPLETED:

1. Pressure test and flushing report.
2. The Engineer of Record Certification to FDEP. This can be done w/ preliminary as-builts.
3. Water services must be lowered and meter boxes installed, valve boxes must be set on all gate valves.
4. As-built drawings shall have been updated to accommodate the C.G.C.S. comments and the final elevation of the manhole tops must be included.
5. All valves, locate wire boxes, sewer, water and reclaimed services shall be scribed in curb and painted the correct color.
6. As-builts, must be accepted and approved by the City of Green Cove Springs Public Works.



AIR RELEASE VALVE DETAIL
NTS

NO	DATE	BY	REVISION DESCRIPTION
1	FEB.2016	SS	GENERAL UPDATES

DESG
DRWN
CHKD
APRV
DATE

PROJECT:
STANDARD RECLAIMED WATER SYSTEM SPECIFICATIONS & DETAILS

CITY OF GREEN COVE SPRINGS
321 WALNUT STREET
GREEN COVE SPRINGS, FLORIDA 32043

ACAD FILE NAME
REUSE.DWG
SHEET NO.
2 OF 2

OUTLINE SPECIFICATIONS FOR CONSTRUCTION OF SEWAGE COLLECTION SYSTEM

01. INTENTION. It is the declared and acknowledged intention to secure a new sewerage system, complete, in accordance with the plans, specifications, and contract documents. All new work shall be in accordance with the City of Green Cove Springs Specifications and Details and with C.G.C.S. Approved Materials Manual and C.G.C.S. Public Works Department Details and Specifications and any other Government Regulatory Agency. All work shall conform to the above whether or not specifically called out or noted on the plans.

02. GENERAL. All materials shall be of those listed in the C.G.C.S. Approved Materials Manual. The installation shall be warranted by the Contractor as to materials, workmanship and accuracy of the As-built drawings for a period of two years from the date of completion of the work or beneficial use of the facilities. Workmanship shall be of good quality; i.e., sewers shall be laid true to line and grade, fittings shall be properly installed and restrained, trenches shall be properly excavated and backfilled, manholes shall be installed at locations and to elevations shown on the plans.

02.1 CONTRACTOR LICENSE AND APPROVAL. Utility reserves the right to approve or deny approval of contractor prior to construction of any on-site or off-site utility facilities. Contractor must hold a State Of Florida Under Ground Utility contractors license, that named contracting company being the one doing the work on project, and demonstrate acceptable experience in the field of utility construction.

03. SURVEYS. The Utility Contractor shall provide all surveys necessary for the layout and construction of the work of his contract.

04. EARTHWORK. Earthwork shall include all excavation, fill and backfill (hand/machine), compaction and rough grading of materials encountered. No unsuitable materials clay, muck, or peat removed from pipe trenches are to be used for backfill. All fill or backfill shall be either sand or sandy clay, free of roots, trash or other debris. All backfill alongside of and to a height twenty-four inches above all pipe shall be free of clay or organic material, compacted in lifts, the first of which shall be to the spring line of the pipe by either hand or machine operation carefully to 98%. All other backfill shall be compacted by either hand or machine operation carefully to 95% (outside of paving), 98% (under paving) of its optimum moisture content as determined by ASTM D698, latest. Copies of compaction density test reports from a licensed testing agency shall be made available to C.G.C.S. if requested.

05. MANHOLES. Manhole bases, sections and cones shall conform to the requirements of ASTM C478, Specifications for Precast Reinforced Concrete Manhole Sections. Cement shall conform to the requirements of ASTM C150, Specifications for Portland Cement, Type II. Concrete shall meet the minimum requirements for Class "A" Concrete Work. Minimum wall thickness shall be 1/12 the inside diameter in inches plus one (1) inch. Bases for manholes shall be poured integrally with the bottom manhole section. Joint contact surfaces shall be formed with machined castings; they shall be exactly parallel with a 2 degree slope and nominal 1/16 inch clearance with the tongue equipped with a proper recess for the installation of an O-ring rubber gasket, conforming to ASTM C443, Joints for circular Concrete sewer and Culvert pipe using Rubber gasket, or RAM-NEK premolded Plastic Joint Sealer with joints Manhole adjustment materials shall be Precast concrete adjustment rings only as manufactured by Taylor Precast Co. (or equal). Precast manhole walls shall not be coated, unless otherwise noted. Cement grout for manhole bottoms shall be a stiff rich mix of Type II Portland Cement and sharp plaster sand. Calcium chloride may be added (maximum of 2%) to aid in obtaining a faster set. At permanent pump station locations, the first upstream manhole from the station shall be lined with a polyethylene liner as manufactured and installed by Taylor Precast Co. or approved equal.

05.1 CAST IRON MANHOLE FRAMES AND COVERS. Cast iron manhole frames and covers shall be as detailed on drawings. Castings shall meet the requirements of ASTM A48, Specifications for Gray Iron Castings, Class No. 30, or Grade 65-45-12, Ductile Iron meeting the requirements of ASTM A536, Standard Specification for Ductile Iron Castings. In either case, manhole frame and cover shall be designed to withstand an HS20-44 loading defined in the AASHTO Specifications. Frames and covers shall be machined or ground at touching surfaces so as to seat firmly and prevent rocking.

05.2 FLEXIBLE MANHOLE CONNECTOR. All connections between sewer pipe and pre-cast concrete manholes shall be accomplished by a Flexible Connector, "Kor-N-Seal", as manufactured by National Pollution Control Systems, Inc. or approved equal.

05.3 FLOW CHANNELS. Flow channels in manhole base shall be formed of D.O.T. Class I, Type II cement grout with brick or rubble and trowel to a smooth surface finish. Grout surface shall be 1" min. thickness over brick or rubble. While the manholes are under construction, cut off pipes at inside face of the manhole and construct the invert to the shape and sizes of pipe indicated. All inverts shall provide a constant smooth flow from influent pipe to effluent pipe through manhole. Changes in direction of the sewer and entering branch or branches shall be laid out in smooth curves of the longest possible radius which is tangent to the center lines of adjoining pipelines.

05.4 DROP INLETS. Where shown on the drawings, drop inlets to the manholes shall be constructed as shown on the drawings and specified herein.

06. POLYVINYL CHLORIDE PIPE. Polyvinyl Chloride Sewer Pipe shall conform to the requirements of ASTM D-3034, SDR 26. The PVC compound conforming to ASTM D-1784. Pipe shall be clearly marked in 5 Ft. intervals or less, indicating manufacturers name, nominal size, cell classification and legend. Joints shall be push-on rubber gasketed, conforming to ASTM D-3034. Pipe and fittings shall be installed in accordance with recommended practice ASTM D-2321. Maximum depth of gravity sewer without prior approval shall be 15 feet. Sewers over 15' in depth shall be DR-18 P.V.C. pipe and shall have C.G.C.S. approval prior to design or installation of said sewer.

07. PIPE BETWEEN MANHOLES. All piping installed between manholes shall be the same material and class. No dissimilar pipe material will be allowed anywhere within a single run of pipe.

08. SANITARY SERVICE LATERALS. Sanitary service laterals shall be Polyvinyl Chloride Pipe conforming to the requirements of ASTM D-3034, SDR 26 where cover over top of pipe is 36 inches or greater. Where cover over top of pipe is less than 36 inches, specific construction conditions shall be directed by the City of Green Cove Springs. All sanitary service laterals shall be a minimum of 4'-0" deep at the right-of-way line to top of pipe. Any sanitary service lateral which must be more than 5'-0" deep shall not be installed prior to obtaining permission from the C.G.C.S. field inspector or C.G.C.S. Public Works Department. All sanitary service laterals shall be 6-inch diameter from the main to the right-of-way line with a minimum slope of 0.60% (0.6 feet per hundred feet). In single family residential developments, services shall reduce to 4" in size and terminate at the property line with a cleanout constructed of a PVC wye and bend with a maximum angle of 45 degrees (see Standard Sewer System Cleanout Detail) utilizing the proper fittings for the type of pipe specified.

09. FORCE MAINS. Force mains shall be C900 DR-18 PVC and conform to the requirements of ASTM D-1784, D-2241, D-3139 and F-477. Pipe shall be color coded and marked "FORCE MAIN" on at least two sides and at every 12' along the barrel of the pipe. Ductile iron pipe for force main service shall be polylined. Ductile iron pipe is not to be used without prior approval of the Clay County Utility Authority. Fittings shall be C110 gray iron and shall be polylined. Force mains less than 3" shall be SCH.80 PVC. All force mains shall be installed with tracer wire per C.G.C.S. standard location wire details.

09.1 LIFT STATION VALVES. Plug valves shall be Dezurik, Clow or M&H. with full port opening. Check valves shall be M&H, Mueller or American Darling.

09.2 FORCE MAIN VALVE. Gate valve, resilient seated, same as specified in Water Distribution System Specifications Section 12 below. Except valve bodies shall be gray iron. Valve box shall have the word "SEWER" cast into the cover.

09.3 FORCE MAIN JOINT RESTRAINT. All fittings shall be properly and adequately restrained against lateral movement at all force main tees, crosses, valves and bends. Restrainers shall be Uni-Flange Series 1300, 1350, 1390 or approved equal installed per manufacturer's recommendations and C.G.C.S. standard details and specifications.

09.4 FORCE MAIN PIPE FLUSHING. All force main piping shall be flushed clean with water utilizing full pipe diameter flushing for all piping up to and including 8" diameter.

10. INSTALLATION. All sewer lines, manholes, and appurtenances shall be constructed to the dimensions and elevations indicated on the drawings. Trenches shall be excavated to a width approximately twelve inches greater than the outside diameter of the pipe. Machine excavation shall be to a depth one-fourth pipe diameter above proposed pipe grade; the remaining depth shall be hand excavated and shaped to give full support to the lower one-fourth of each pipe. Each section of pipe shall be inspected for defects prior to being lowered into the trench. The inside of each bell and the outside of each spigot shall be thoroughly cleaned of all foreign matter, prior to making the joint. All sewer lines shall be constructed with the spigot ends pointing in the direction of the flow. Both the bell and the spigot of each joint shall be lubricated with the lubricant recommended by the pipe manufacturer. All sewer lines shall be cleaned of foreign matter as construction progresses, and shall be in a clean condition upon completion of construction operations. Pipe materials shall remain the same on runs between manholes and / or other structures.

11. INSPECTIONS. Each section of the completed sewer system shall be inspected for proper alignment. Inspection shall consist of "lamping" from manhole to manhole. Any section of the sewer system which does not display true, concentric alignment shall be reinstalled at no additional expense to the Owner. A written log of inspection shall be kept indicating location of defects, potential problems, in sewer, dips and depth of water, service locations, and other irregularities in the pipe lines. A video tape in VCR format shall be made of the television inspection and submitted to the Engineer and the City of GCS. Copies of compaction density test reports from a licensed testing agency shall be made available to City of GCS if requested.

11.1 Television inspection will be required on all new gravity sewers constructed. This service shall be provided by the Contractor as a part of this Contract. The newly constructed sewers shall be televised in the presence of the Inspector of the City of GCS. A full report as to the condition of pipe, type, depth, location of services, length, type, joint and distance between manholes, etc. shall be furnished to the City of GCS inspector prior to the final acceptance of the system. Any pipe found to be cracked, leaking or otherwise defective shall be removed and replaced with new pipe at no additional costs to the Owner. Deflection testing with 7.5% mandrel also required. Any section not passing the mandrel test shall be corrected. Sewer mains shall be televised after curb and lime rock are in place but prior to paving. Curb and limerock shall be installed, finish graded prior to televising the gravity sewers. Limerock priming and paving operations shall not take place until the City of GCS inspector has reviewed the television tape and approves the gravity sewer system. This will be strictly enforced. All gravity sewers must be flushed no sooner than 4 hours prior to any television inspection. Force main lines shall be pressure tested and approved prior to paving, but not prior to subgrade mixing operation and limerock installation, finish graded and compacted. Sewer services shall be viewed by a camera capable of viewing into service lateral connections. Adequate water must be placed within the upstream manhole to flow through the downstream manhole before inspecting with the camera. All work must be accomplished in the presence of the City of GCS inspector and a 48 hour notice must be provided. Contractor shall provide City of GCS with a 48 hr. notice of intent to televise and inspect sewer system. City of GCS inspector shall report to job site at the time specified by contractor at the time of the call-in. City of GCS inspectors will wait at the job site no more than one hour for the televising to begin before leaving the site. Contractor shall reschedule televising giving City of GCS 48 hrs. notice if the above occurs.

11.2 TEST, INFILTRATION: After completion, the sewers or sections thereof, shall be tested and gauged for infiltration. To check the amount of infiltration, the Contractor, at no added compensation over the contract price for the sewers, shall furnish, and install and maintain a V-notch sharp crested weir in a wood frame on the main sewers as directed by the Engineer. Maximum allowable infiltration shall be 50 gallons per mile, per inch of dia. of sewer per 24 hour day at any time.

11.3 TEST, EXFILTRATION: In areas where ground water is not encountered in sewer construction, or it is desired to run exfiltration tests, the Contractor shall furnish and install all necessary materials, equipments, shall supply water, etc., and shall run exfiltration tests to determine acceptance of the sewer. The maximum allowable exfiltration shall be 50 gallons per mile per inch of diameter of sewer per 24 hour day at any time based on two foot minimum internal head.

GENERAL NOTES

1. AS-BUILT DRAWINGS AND ASSOCIATED COSTS. All cost records pertaining to the cost of water, reclaim and sewer facilities donated to the utility shall be provided to the Utility by applicant. Prior to acceptance of any extension to the Utility's system that is completed by a licensed underground utility contractor, the Utility will require that the applicant's contractor provide the Utility, to retain for its permanent records, all field as-built data. During the daily progress of the work, the contractor's job superintendent shall record on his field set of drawings all work installed. All manholes, gravity sewers, force mains, laterals, valves, fittings, fire hydrants, etc. shall be located in two directions. One location shall be referenced perpendicular to the right-of-way lines and or property lines (preferably both) or existing permanent utility structures are acceptable (i.e. manholes, catch basins, fire hydrants, head/end walls, etc.). No power/utility poles may be used for reference. Elevations of manhole inverts and center of cover shall be shown to the nearest hundredth of a foot. Size, type, class and slope of sewer main shall be shown (i.e. 8" PVC, SDR-35). The top elevation of each manhole may be determined by measuring from a surveyed pipe invert to the final adjusted manhole top. Size, type and class of water mains, valves, fittings, fire hydrants, etc. shall be shown (i.e., 8" D.I.P., 6" gate valve). All locations where the top of the water main is less than 36" deep or more than 50" deep shall be noted on the as-builts. Water as-builts, sewer as-builts and reclaim water as-builts shall be on separate sheets. ASBUILTS SHALL BE IN NAD 1983 FL EAST-FOOT-STATE PLANE COORDINATES AND REFERENCE THE BM USED FOR THE PROJECT.

Each page of the as-built drawings shall bear the name, date and original signature of the general contractor responsible for the Work and the name, date, original signature and seal of the registered land surveyor or registered professional engineer who provided the horizontal and vertical dimensions and elevations on the as-built drawing. The signatures shall certify that the as-built drawings do, in fact, reflect the true as-built conditions as located under the direct supervision of the registered surveyor and/or professional engineer. The as-builts shall be at the contractor's expense. A copy of the AutoCAD® ASBUILT DATA SHALL BE FURNISHED ON COMPACT DISK (CD) PLUS (2) SIGNED FULL SIZE PRINTED SET PLUS (1) MYLAR SET by either the design engineer or the applicant's contractor.

2. CONSTRUCTION WARRANTY AND WARRANTY SECURITY PERIOD. Developer shall warranty Utility against defects in material and workmanship for the portion of the onsite system to be owned by the Utility. Developer shall secure from its Contractor a written and fully assignable warranty that the system installed will be and remain free from all defects, latent or otherwise with respect to workmanship, materials, installation, and accuracy of his as-built drawings in accordance with the Utility approved plans and specifications for a period of two years from the date of the system acceptance by the Utility and immediately assign the same and the right to enforce the same to Utility on or before the date of the Utility's acceptance of the system for ownership and maintenance.

3. CLEAN-UP. All surplus materials of construction shall be removed from the site and disposed of by the Contractor as part of his contract with the owner.

4. RESTORATION. New Sanitary Sewer and Water Main Construction in earthen areas shall be seeded and mulched in accordance with Section 570 of Standard Specifications of the Florida Dept. of Transportation (latest edition). In locations where existing grassed (sodded) areas are disturbed, sod shall be replaced to preconstruction condition and to limits of construction or where directed by the engineer.

5. PERMITS. The Contractor shall be responsible for obtaining all permits required for performing work under this contract, except that the F.D.E.P. permits, and wetland permits, if required, will be secured by the owner or developer.

6. PIPE BEDDING. In the event unsuitable or unsuitable bedding material is encountered at or below the limits of the excavation required for installation, such material shall be removed and replaced with suitable compacted backfill material specified by the design engineer and approved by the C.G.C.S so as to provide a stable trench bedding surface suitable for proper pipe installation.

6-A. Pipe Bedding (Rock Bedding Material) Rock material used for pipe bedding shall be #57 stone or crushed concrete (crush-crete) in a #57 size. Rock bedding material shall be completely wrapped in a heavy filter fabric material, overlapped a minimum of one foot, rock bedding shall be installed to the correct grade and compacted to a density which will prevent any settlement, either by mechanical tamping equipment or by compressing the rock using the bottom of the backhoe bucket. The compaction shall be approved by C.G.C.S. inspector. The contractor shall be required to have submittal approved by design engineer and C.G.C.S. prior to use of such rock bedding material.

7. DEWATERING. The contractor shall at all time during construction provide ample means and equipment with vertical to promptly remove and dispose of all water entering the trench and structure excavations and shall keep said excavations acceptably dry until the piping and / or structures to be built therein are completed. All water pumped or drained from the work area shall be disposed of in a manner as to not damage sewer, water, electrical or any other piping, structures or property. No water shall be laid in water and no water shall be allowed to rise above the bottom of any pipe while it is being jointed, except as may be approved in writing by the C.G.C.S.

8. HYDROSTATIC TESTING. After all pressure pipes (water mains, services, and force mains) are laid, the joints completed, and the trench backfilled, the newly laid pipe and appurtenances shall be subjected to a hydrostatic test of 150 P.S.I. for a period of at least two hours. The engineer and the C.G.C.S. Public Works shall be notified 48 hours before a test is to be performed. Test shall be as set forth in AWWA standard C600. Any leaks detected shall be corrected and the section of pipeline retested. The two hour test period shall begin when all joints have been determined to be water tight. Leakage shall be limited to that allowance set forth in Section 4 of AWWA Standard C600-87. Hydrostatic and leakage test and blow-down (zeroing of gage) must occur before sampling for bacteriological test. The maximum allowable pressure loss is 5 P.S.I. regardless of the length of pipe.

9. REPORTS. Reports of hydrostatic and leakage tests and sterilization of the newly completed systems shall be submitted to the C.G.C.S. prior to requesting acceptance of the system.

10. DENSITY TESTING. In-place density tests are required at intervals not to exceed 150' along pipelines for every other lift. A minimum of one test between manholes is required for every other lift regardless of the distance between sanitary sewer manholes.

11. CONCRETE. All Portland Cement concrete shall be of Type II Portland Cement, 2,500 P.S.I. minimum, ready mixed. All concrete shall be placed before the initial set has taken place. Stale or retempered concrete shall not be used.

12. GATE VALVES AND BOXES. Gate valves shall have a 2" operating nut and open left. Gate valves shall have joints suitable for the type main on which installed. Valves 2" and 3" shall be iron body, bronze fitted. Valves 4" and larger shall be iron body, bronze fitted with resilient seat. The word "WATER" on water boxes and "SEWER" on force main boxes shall be cast in the covers.

13. SEPARATION OF WATER AND SEWER MAINS. Horizontal and vertical separation between potable water system mains and or appurtenances and sanitary or storm sewers, wastewater or storm water force mains, and reclaimed water mains shall be in accordance with Rule 62-555.314 FAC.

(a) New or relocated, underground water mains shall be laid to provide a horizontal distance of at least three feet between the outside of the water main and the outside of any existing or proposed storm sewer, storm water force main, reclaimed water main regulated under Part III of Chapter 62-610, F.A.C, or proposed vacuum-type sanitary sewer.

(b) New or relocated, underground water mains shall be laid to provide a horizontal distance of at least six feet, and preferably ten feet, between the outside of the water main and the outside of any existing or proposed gravity- or pressure-type sanitary sewer, wastewater force main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C. The minimum horizontal separation distance between water mains and gravity-type sanitary sewers shall be reduced to three feet where the bottom of the water main is laid at least six inches above the top of the sewer.

(c) New or relocated, underground water mains crossing any existing or proposed gravity- or vacuum-type sanitary sewer or storm sewer shall be laid so the outside of the water main is at least six inches, and preferably 12 inches, above or at least 12 inches below the outside of the other pipeline. However, it is preferable to lay the water main above the other pipeline.

(d) New or relocated, underground water mains crossing any existing or proposed pressure-type sanitary sewer, wastewater or storm water force main, or pipeline conveying reclaimed water shall be laid so the outside of the water main is at least 12 inches above or below the outside of the other pipeline. However, it is preferable to lay the water main above the other pipeline.

(e) At the utility crossings described in paragraphs (c) and (d) above, one full length of water main pipe shall be centered above or below the other pipeline so the water main joints will be as far as possible from the other pipeline. Alternatively, at such crossings, the pipes shall be arranged so that all water main joints are at least three feet from all joints in vacuum-type sanitary sewers, storm sewers, storm water force mains, or pipelines conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C., and at least six feet from all joints in gravity- or pressure-type sanitary sewers, wastewater force mains, or pipelines conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.

14. NEW CONNECTION TO EXISTING MAIN. New connection to existing main in service shall be accomplished by the "wet tap" method utilizing full circle stainless steel tapping sleeve and mechanical joint tapping valve. Tapping sleeve shall be rated at 200 P.S.I., non-shock working pressure conforming to AWWA Standard C110, latest revision. Stainless steel tapping sleeves shall be from those listed in C.G.C.S. approved material manual. Tapping valve shall be mechanical joint one end and standard flanged joint on other end. Valve shall conform to Section 12. of these specifications.

15. JOBSITE SAFETY. While on the job site, the contractor shall at all times observe all Federal, State and local safety rules, regulations and laws. This includes, but not limited to, confined spaces and excavation protection systems as per O.S.H.A. standards.

GENERAL NOTES

16. CLOSE OUT / COMPLETION. Minimum items required for Close Out / Completion for submittal to the City of Green Cove Springs will include:
(a.) Construction Warranty from Developer in the form of a Bond, Letter of Credit or Cashier's Check for a two-year period.
(b.) Warranty Certificate for a two-year warranty from the contractor to the Developer and assignment of same to the City of Green Cove Springs (C.G.C.S.).
(c.) Developer's Affidavit certifying there is no outstanding debt against utility assets to be deeded to C.G.C.S.
(d.) Value of Acceptance Report showing value of assets to be deeded to the C.G.C.S.
(e.) Bill of Sale to C.G.C.S.
(f.) Bacteriological Test(s)
(g.) Pressure Test(s)
(h.) Television Reports and Tapes
(i.) Density Reports
(j.) PROPER Final As-Built Drawings and disks

17. C.G.C.S. Shop Drawing and Submittal Process. A signed acknowledgment by the Contractor and the Material Supplier, on the "Shop Drawings and C.G.C.S.'s Approved Materials List Form", that all materials will be in accordance with C.G.S.S.'s Specifications, C.G.C.S.'s Details and C.G.C.S.'s Approved Materials Manual, is the only submittal C.G.C.S. will require for each item of materials with the following exception: any alternate materials requested by the Engineer; any materials not listed in the C.G.C.S. Materials Manual; and materials associated with pumping stations and plant installations. Those exceptions shall have an individual shop drawing submitted for C.G.C.S.'s review and approval prior to any installation of said materials.

This is C.G.C.S.'s procedure and it does not preclude the design engineer from requiring additional submittals and shop drawings as he deems necessary for the project.

18. PUMP STATIONS (TEMPORARY OR PERMANENT). All pump stations shall be constructed in accordance with C.G.C.S. standards, rules and regulations and be approved by C.G.C.S. All work and materials shall meet the requirements of C.G.C.S. Standard Pump Station Details and Specifications or the plans, details and specifications for that specific pump station. A driveway shall be provided from the street (roadway) to within 2 feet of the pump station wetwell, minimum 10 feet wide x 5 inches thick 3,000 P.S.I. concrete. Submersible pump stations shall be fenced completely about the perimeter of the pump station site (location of the pump station site as noted on the plans), including gates and all other items required to make a completely fenced installation. The entire pump station site within the fenced area shall be covered with #57 stone, 6 inch thick minimum, placed over 8 mil visqueen.

19. Information shown on the Drawings as to the location of existing utilities has been prepared from the most reliable data available to the Engineer. The Contractor shall be responsible for requesting underground utility locates and shall assist the utility companies, by every means possible to determine said locations and the locations of recent additions to the systems not shown. Extreme caution shall be exercised to eliminate any possibility of any damage to utilities resulting from Contractor's activities. The locations of all overhead utilities shall also be verified by the Contractor. The Engineer shall be notified of any conflict that may occur. The Contractor shall be responsible for determining which poles will need shoring during excavation and shall provide such shoring and support as required.

20. C.G.C.S. details and specifications (latest available copy) shall be included in all plans submitted for work within the C.G.C.S. utility system. No person shall modify, change, omit, replace any of those details and specifications without the express written consent of C.G.C.S.. In any instance where the design engineer has included his written specifications or details in the plans then the more stringent of the two shall govern.

21. All materials to be used for any project within C.G.C.S.'s utility system shall conform to those materials listed in the C.G.C.S. approved material manual in effect at the time final plans for that project are approved by C.G.C.S.

22. Under no circumstance shall any trees be planted within a C.G.C.S. utility easement without;
a.) C.G.C.S. approving landscape and irrigation plans.
b.) C.G.C.S. being notified prior to the planting of trees and giving approval.
c.) C.G.C.S. inspecting the installation of root barrier material (required at all trees which are closer than 10' to any C.G.C.S. utility line) as shown in C.G.C.S. approved material manual and C.G.C.S. roadway cross section details, whether or not shown on the plans.

23. At all Jack & Bore locations a C.G.C.S. inspector shall inspect the casing spacers to verify they are the correct size and have been installed correctly on the pipe prior to the pipe being installed into the pipe casing. The pipe casing shall be clean and free of all dirt, and shall be cleaned with a Vac-Con if necessary. A C.G.C.S. inspector shall be present at all time during this work.

FINAL INSPECTION PROCEDURES

PRIOR TO FINAL INSPECTION, THE CONTRACTOR shall PROVIDE THE FOLLOWING:
1. The sewer line T.V. report and tape
2. The pressure test and bacteriological clearance analysis report.
3. The engineer of record certification to D.E.P. This can be done with completed as-builts.
4. Completed as-builts showing at least the following:
a.) Location of valves, mains, services, manholes and locate wire boxes.
b.) Elevation of sewer lines in the manhole, and stub-outs.
5. All services and valves to be plainly marked with a treated fence post, and electronic locate marker when needed.
6. Pump station start-up report with draw down data for each pump and with both pumps in operation. All electrical components to be completely installed and in proper working condition.

PRIOR TO FINAL ACCEPTANCE FOR OWNERSHIP, THE FOLLOWING MUST BE COMPLETED:
1. All manhole rings and covers have to be adjusted to finish grade.
2. Water services must be lowered and meter boxes installed, valve boxes must be set on all gate valves.
3. As-built drawings shall have been updated to accommodate the C.G.C.S. comments and the final elevation of the manhole tops must be included.
4. All valves, locate wire boxes, sewer, water and reclaimed services shall be scribed in curb and painted the correct color.
5. As-builts, must be accepted and approved by the City of Green Cove Springs Public Works.

PRIOR TO FINAL ACCEPTANCE FOR OWNERSHIP, THE FOLLOWING MUST BE COMPLETED:
1. A preliminary inspection must be coordinated by the underground utility contractor and held a minimum of fifteen (15) working days prior to the final inspection/start-up. The preliminary inspection will compare the approved design drawings to the actual site installation, noting any deficiencies.
2. The following must be represented at the preliminary and final inspection:
a.) The C.G.C.S.'s inspection and distribution and collection departments
b.) The project's developer and/or general contractor
c.) The underground utility contractor
d.) All subcontractors associated with the lift station (electrical, pump manufacturer, control panel manufacturer, etc.)

NO	DATE	BY	REVISION DESCRIPTION
1	FEB. 2016	SS	GENERAL UPDATE

DESG
DRWN
CHKD
APRV
DATE

PROJECT:

STANDARD WATER AND SEWER SYSTEM
TECHNICAL SPECIFICATIONS

CITY OF
GREEN COVE SPRINGS
321 WALNUT STREET
GREEN COVE SPRINGS, FLORIDA 32043

ACAD FILE NAME
SPECIF_D.DWG
SHEET NO.
1 OF 1

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Certificate Of Completion

Envelope Id: 8BADA3FF04B24275ACD53925504E98CA
Subject: Complete with DocuSign: CC FS 20.pdf
Source Envelope:
Document Pages: 27
Certificate Pages: 1
AutoNav: Enabled
EnvelopeId Stamping: Enabled
Time Zone: (UTC-05:00) Eastern Time (US & Canada)

Signatures: 20
Initials: 0

Status: Completed

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Signer Events	Signature	Timestamp
Jeffrey Bergen P.E. FL 63060 jbergen@gbacivil.com Vice President Goodson, Bergen & Associates, Inc. Security Level: Email, Account Authentication (None)	Jeffrey Bergen P.E. FL 63060 Signature Adoption: Pre-selected Style Using IP Address: 162.230.50.97	Sent: 12/5/2023 1:20:47 PM Viewed: 12/5/2023 1:20:58 PM Signed: 12/5/2023 1:24:02 PM Freeform Signing

Electronic Record and Signature Disclosure:
Not Offered via DocuSign

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	12/5/2023 1:20:47 PM
Certified Delivered	Security Checked	12/5/2023 1:20:58 PM
Signing Complete	Security Checked	12/5/2023 1:24:02 PM
Completed	Security Checked	12/5/2023 1:24:02 PM

Payment Events	Status	Timestamps

Steven Tye

08/24/2023

Green Cove Springs Electric Utility-UG Commercial Developments (UCD):

Customer will provide and/or install the following per Green Cove Springs Electric (GCSE) Approved Design and Spec:

1) Customer to provide a complete set of final design/service/load plans for new development, for Green Cove Springs Electric to mark up with electric system design to be built by contractor.
2) Customer to provide and install 2-4" Schedule 40 PVC conduits for Three Phase Services. Or 2-2" Schedule 40 PVC conduits for Single Phase Services. From the new point of service at New Riser Pole or UG Cabinet, to the new UG Padmount Transformer Pad location as located by Green Cove Springs Electric.
3) Customer to provide and install the Three Phase Transformer Pad and Bollards as needed. Customer to install the single-phase pad provided by Green Cove Springs Electric.
4) Customer to provide and install all secondary conduit and conductor from new UG transformer to building service.
5) If using, only install Meter Pedestal and CT Meter Can. *NOTE: Meter Pedestal and CT Meter Can provided by Green Cove Springs Electric.
6) Customer to provide and install the 1" Schedule 40 PVC conduit for the potential wires, from CT Meter Can into transformer secondary side of the pad or CT Enclosure.
7) If not, install CT Meter Can, and CT Enclosure on building. *Note: Only CT Meter Can Provided by Green Cove Springs Electric, CT Enclosure provided by customer. All other Meter Cans provided by the customer.
8) If using, Customer to install Primary conduit to UG Switch/Fuse/Junction Cabinets Pad/Pit. Customer to install Green Cove Springs Electric provided Pad/Pit as located by Green Cove Springs Electric.
9) There is an additional Customer in Aid Charge (CIAC) for the service, amount TBD when we have all the final design/service/load info.

Green Cove Springs Electric will provide and install the following after receiving the CIAC Payment:

1) Primary Conductor from New Riser Pole or UG Cabinet to the New UG Transformer Pad location and make up all primary connections. *Note: See #1 and #2 above.
2) UG Padmount Transformer and make up all primary connections. *Note: See #3 above.
3) Make Up all Secondary Conductors in Transformer. *Note: See #4 above.
4) CTs in UG transformer or Customer installed CT Enclosure, CT Meter Can, CT Meter, and CT meter potential wires from CT"s to Meter. *NOTE: See #5, #6 and #7 above.
5) UG Switch/Fuse Cabinets. Make up all primary connections. *Note: See #8 above.

Thanks,

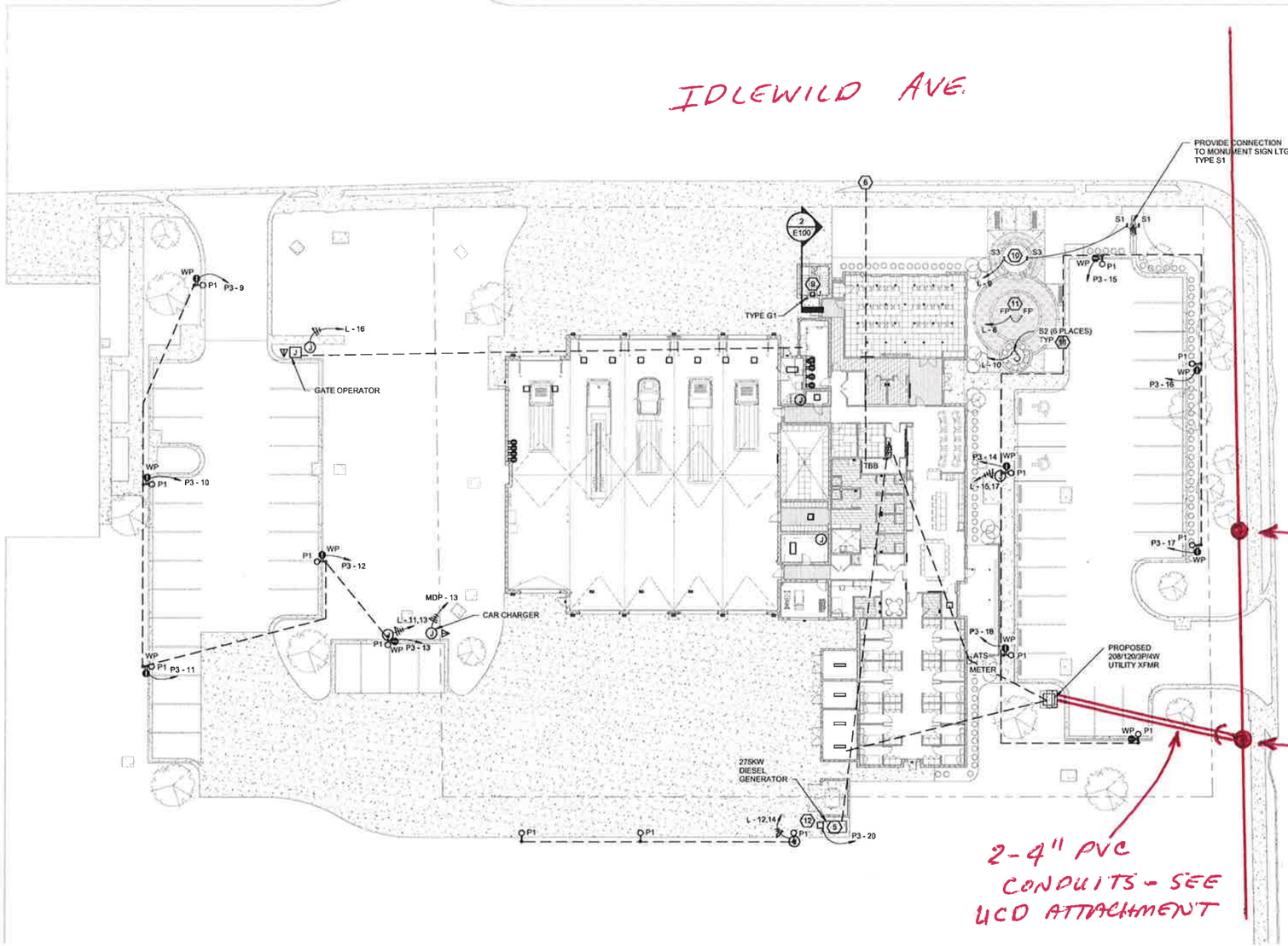
Steve Tye
Engineering
Green Cove Springs Electric
O: (904)297-7095
C: (904)860-9411

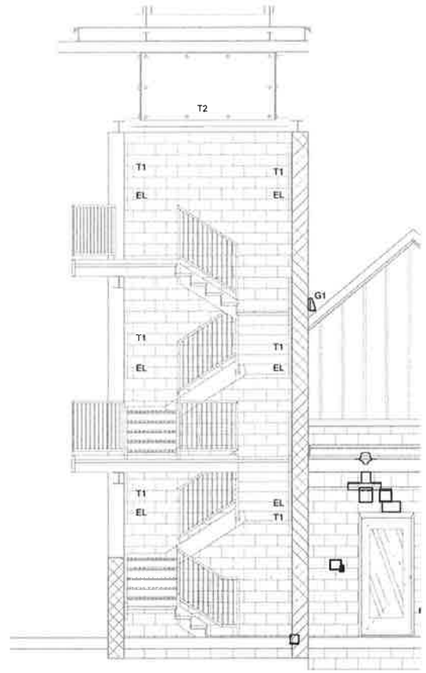
① ELECTRICAL SITE PLAN
1" = 20'-0"

⟨#⟩ 1. ELECTRICAL SITE PLAN NOTES:

1. PRIOR TO START OF ANY WORK OBTAIN WRITTEN APPROVAL FOR LOCATION OF POLE/TRANSFORMERS & CONNECTION POINT PER ELECTRIC UTILITY CO DIRECTION. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND COMPLYING WITH MOST CURRENT UTILITY RULES AND REGULATIONS. PROVIDE SERVICE ENTRANCE CONDUITS W/36" RADIUS ELLS AT POLE & SERVICE CONNECTION POINT. PROVIDE CONDUITS WITH PULLWIRES AND MAINTAIN 42" MINIMUM DEPTH. LOCATION OF POLE/TRANSFORMERS AND SECONDARY CONDUIT/FEEDER(S) ARE CONTINGENT UPON ELECTRICAL UTILITY CO APPROVAL. PROVIDE GROUND RODS PER ELECTRICAL UTILITY CO REQUIREMENTS.SEE 'POWER RISER ' FOR ADDITIONAL REQUIREMENTS. CITY OF GREEN COVE ELECTRICAL DEPARTMENT - 904 XXX-XXXX.
2. PRIOR TO START OF ANY WORK OBTAIN WRITTEN APPROVAL FOR LOCATION OF SERVICE CONDUITS & CONNECTION POINT PER TELEPHONE UTILITY DIRECTION. PROVIDE (2) 2" CONDUITS WITH PULLWIRE TO PROPERTY LINE, STUB UP AND CAP AND MARK 'TELEPHONE'. SEE ALSO 'TELEPHONE BACKBOARD RISER' FOR ADDITIONAL REQUIREMENTS.
3. SERVICE ENTRANCE FROM ELECTRICAL UTILITY CO TRANSFORMER, SEE 'POWER RISER' FOR ADDITIONAL REQUIREMENTS.
4. FIRE PUMP SECONDARY SERVICE. PROVIDE CONNECTION TO FIRE PUMP CONTROLLER.
5. STAND-BY DIESEL GENERATOR WITH PAD. ALL CONDUITS AND WIRING SHALL BE BY ELECTRICAL CONTRACTOR.
6. TO TELECOM PROVIDER PER TELECOM PROVIDER DIRECTION.
7. PROVIDE 1" CONDUIT TO STUB UP INTO WATCH ROOM FROM GATE CONTROLLER.
8. MOUNT FLAGPOLE LIGHTS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
9. TIE CIRCUIT TO TYPE T1 AND T2 LIGHTS IN TOWER. SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS. CIRCUIT SHALL BE PHOTOCELL TIMESWITCH CONTROLLED.
10. MOUNT TREE SPOT LIGHTS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
11. MOUNT IN-GRADE LIGHTS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
12. PROVIDE MECLUBE 090-5070-07X DIESEL TRANSFER SYSTEM 'CAMI DISPENSER' SYSTEM AT GENERATOR DIESEL BASE TANK. INSTALL, POWER AND GROUND PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

IDLEWILD AVE.





② Section 2
1/4" = 1'-0"

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CIVIL ENGINEER
GOODSON BERGEN &
11555 CLINICAL PARKWAY, SUITE 103
JACKSONVILLE, FL 32224

CLAY COUNTY
CLAY CO FIRE STATION 20
1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

THOMAS M. ELDER — LICENSE NO. 59121 — STATE OF FLORIDA — PROFESSIONAL ENGINEER
11/09/2023

DATE: 11/10/2023

ELECTRICAL SITE PLAN

PROJECT NO.: 23002

POWELL & HINKLE ENGINEERING, P.A.
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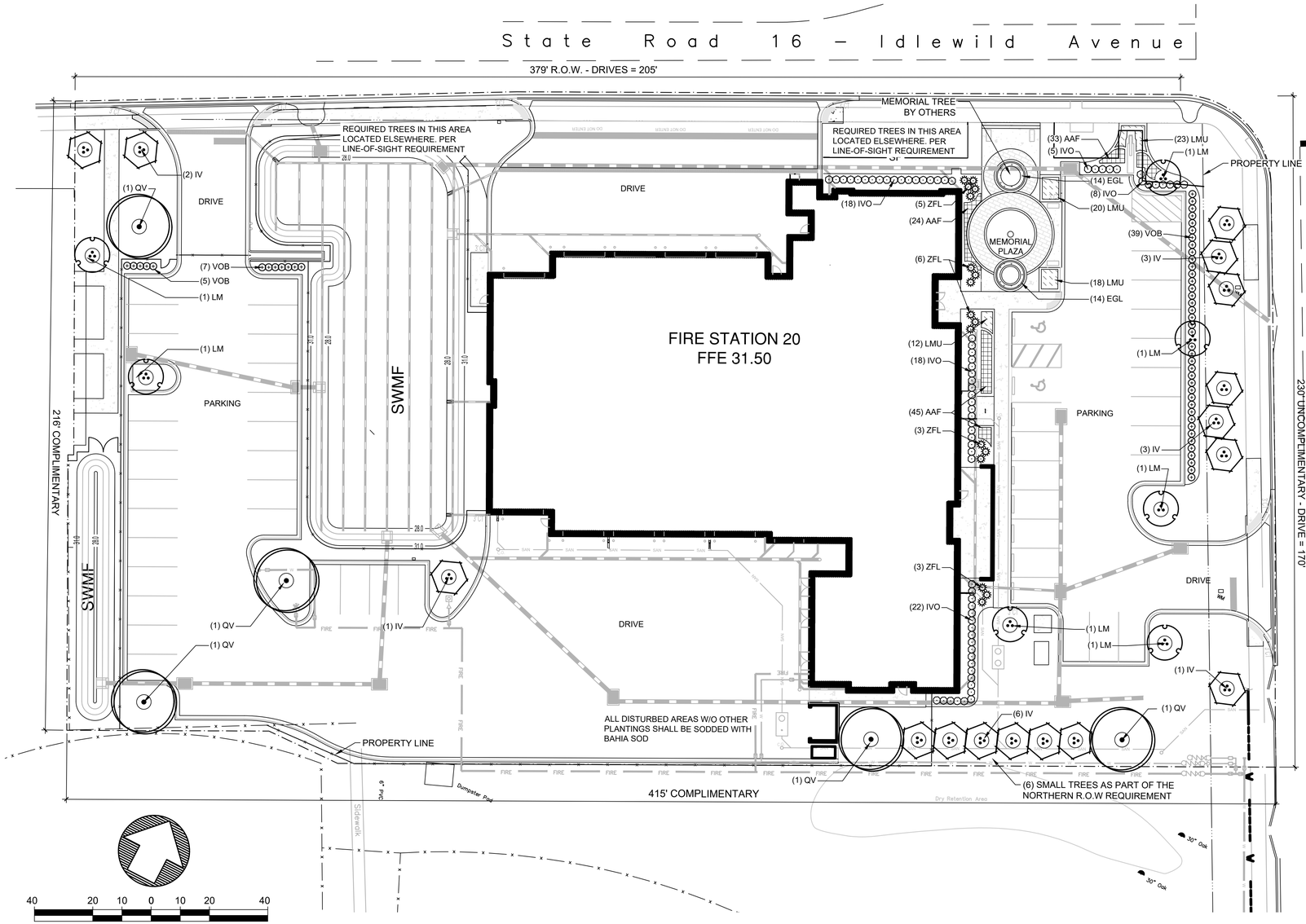
ORANGE PARK, FLORIDA 32073
(904) 264-5570 FAX:(904) 278-2646

ROBERT L. HINKLE PE 29302
GALTON C. MOK PE 33192
LANE R. HINKLE PE 48076
THOMAS M. ELDER PE 59121
RICHARD A. MATHEWS PE 59418
DAVID R. SPELL JR. PE 54729
JAMES L. HENNESSEY PE 80241

E100
100% DOCUMENT



Plant Schedule

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	QTY
TREES				
	IV	ILEX VOMITORIA `PRIDE OF HOUSTON` 3" CAL., 8` HT. X 3` SPRD., (3) 1" TRNKS	PRIDE OF HOUSTON YAUPON	16
	LM	LAGERSTROEMIA X `MUSKOGEE` 3" CAL., 8` HT & 3` SPRD., MULTI.(3) -1" TRK`S	MUSKOGEE CREPE MYRTLE	7
	QV	QUERCUS VIRGINIANA 4" CAL., 14` HT., 6` SPRD., 5` CT	LIVE OAK	5
SHRUBS				
	IVO	ILEX VOMITORIA `SHILLINGS` 24` HT. & 18` SPRD.	DWARF YAUPON HOLLY	71
	VOB	VIBURNUM OBOVATUM `DENSA` 24" HT. MIN., FULL IN POT	DWARF WALTER`S VIBURNUM	51
	ZFL	ZAMIA FLORIDANA 5 GAL. MIN., FULL IN POT	COONTIE PALM	17
GROUND COVERS				
	AAF	AGAPANTHUS AFRICANUS 1 GAL., 8" HT, FULL, 18" O.C.	LILY OF THE NILE	102
	EGL	EVOLVULUS GLOMERATUS `BLUE DAZE` 1 GAL., FULL, 18" O.C.	BLUE DAZE	28
	LMU	LIRIOPE MUSCARI `EMERALD GODDESS` 1 GAL., 14" HT, FULL, 18" O.C.	LIRIOPE	73
	MULCH	MIN. 2" DEPTH ALL PLANTINGS	PINE BARK NUGGETS	SEE DETAILS

Clay County Requirements

Planting Data

TOTAL POINTS PLANTED

QUANTITY	COMMON NAME	TYPE	NATIVE	PTS PER	PTS TOTAL
5	4" Live Oak	Canopy	Y	4.4	22
7	3" Crepe Myrtle	Non-Can	N	3.3	23.1
16	3" Yaupon Holly	Non-Can	Y	3.3	52.8
5				TOTAL	97.9

VUA POINTS PLANTED

QUANTITY	COMMON NAME	TYPE	NATIVE	PTS PER	PTS TOTAL
7	3" Crepe Myrtle	Non-Can	N	3.3	23.1
1	3" Yaupon Holly	Non-Can	Y	3.3	3.3
5	4" Live Oak	Canopy	Y	4.4	22
18				TOTAL	48.4

VUA Canopy Calculations

	TYPE	POINTS	PERCENT
5	Canopy	22	45%
8	Understory	26.4	55%

VUA Native Calculations

	TYPE	POINTS	PERCENT
6	Native	25.3	52%
7	Non Native	23.1	48%

ROW POINTS NORTH

				PTS
8	3" Yaupon Holly	Non-Can	Y	26.4

ROW POINTS EAST

QUANTITY	COMMON NAME	TYPE	NATIVE	PTS PER	PTS TOTAL
7	3" Yaupon Holly	Non-Can	Y	3.3	23.1

ROW Canopy Calculations -Total

	TYPE	POINTS	PERCENT
N/A	Canopy		
16	Understory -Overhead Utility	52.8	100%

ROW Native Calculations -Total

TYPE	POINTS	PERCENT
Native	52.8	100%
Non Native	0	0%

AREA CALCULATIONS

Gross Area 2.15 Acres

Required Shade Coverage Point Calculation

2.15 acres x 16 pts/acre 34.4 pts

Minimum Size Distribution Calculation

20% Small = 0.2 x 34.4 points required 6.9
10% Medium = 0.2 x 34.4 points required 3.4
10% Large = 0.2 x 34.4 points required 3.4

Interior VUA 36018 SF
Green Space: (36018 SF x 0.1) = 3602 SF
Tree Points: (3601.8 SF / 150) x 2 = 48.02 SF

Right of Way Buffer - North
6 PTS/100 LF: 205 /100 LF x 6 = 12.3 PTS
Overhead Utility Dictates: Double Understory = 24.6 PTS
26.4 Pts Provided 8 Understory Trees

Fire department requirement: no trees to be placed in the sight triangle from the building truck exit

Right of Way Buffer - East
6 PTS/100 LF: 170 /100 LF x 6 = 10.2 PTS
Overhead Utility Dictates: Double Understory = 20.4 PTS
23.1 Pts Provided 7 Understory Trees

Planting Notes

1. ENSURE ALL UNDERGROUND PUBLIC AND PRIVATE UTILITIES ARE MARKED PRIOR TO WORK.
2. ALL PLANTINGS MUST BE FREE OF INSECTS, PESTS, DISEASE, WEEDS, ETC.
3. CONTAINER SIZES FOR PLANT MATERIAL ARE STATED AS THE MINIMUM. IF DIMENSIONS ARE NOT AVAILABLE WITHIN THE SPECIFIED CONTAINER IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE DIMENSIONED PLANT MATERIAL IN ANOTHER SIZE POT.
4. CONTRACTOR TO VERIFY ALL QUANTITIES AS SHOWN ON LANDSCAPE PLAN SHEETS.
5. ALL LANDSCAPE AREAS SHALL BE PROVIDED WITH 100% IRRIGATION COVERAGE.
6. ANY EXISTING TREE TO REMAIN WHICH IS DAMAGED OR REMOVED SHALL BE FULLY REPLACED BY MATCHING SIZE. PLANT MATERIAL SHALL CONFORM TO THE STANDARDS FOR FLORIDA #1 AS GIVEN IN THE LATEST "GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II," FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES OR TO THE STANDARDS AS GIVEN IN THE LATEST "AMERICAN STANDARD FOR NURSERY STOCK," AMERICAN STANDARDS INSTITUTE.
7. MULCH: NON-CYPRESS AS SPECIFIED WILL BE PROVIDED A MINIMUM OF TWO TO THREE INCHES IN DEPTH AROUND ALL EXISTING AND NEWLY PLANTED LANDSCAPING. PROVIDE SAMPLES FOR APPROVAL.

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JACKSONVILLE, FL 32224

CLAY COUNTY FIRE STATION 20

1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

MARGARET E. GAFFNEY-COOKE, RLA
REGISTERED LANDSCAPE ARCHITECT
LA 6666918
STATE OF FLORIDA
FL6666918

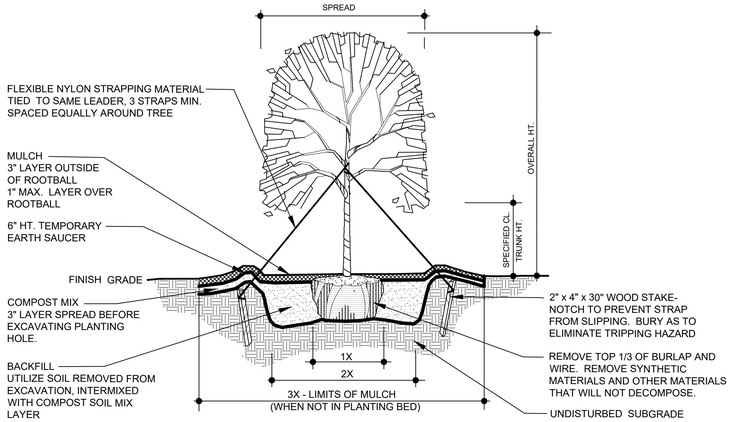
DATE: 11/10/2023

LANDSCAPE PLAN

PROJECT NO.: 23002

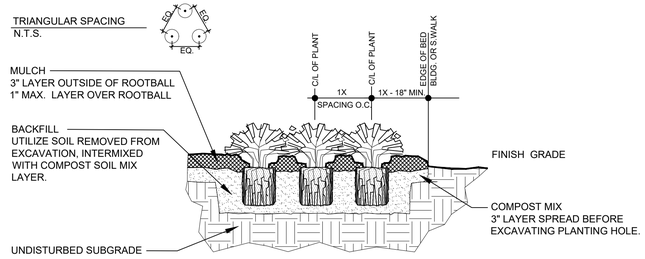
L1.1

90% DOCUMENTS



NOTES:
- PLANT TOP OF ROOT BALL 2" ABOVE FINISH GRADE.
- BOTTOM OF ROOT BALL SHALL BE SEATED DIRECTLY ON UNDISTURBED SUBGRADE.
- TOPMOST ROOT-ROOT FLARE SHALL BE MADE VISIBLE PRIOR TO PLANTING.
- ROOT DEFECTS - INSPECT ROOT BALL FOR ROOT DEFECTS, CUT ROOTS WHERE THEY BEGIN TO KINK OR CIRCLE. ROOT BALL SHALL COMPLY WITH FLORIDA GRADES AND STANDARDS.
- STAKE ABOVE FIRST STRONG BRANCHES TO PROVIDE FIRM SUPPORT.

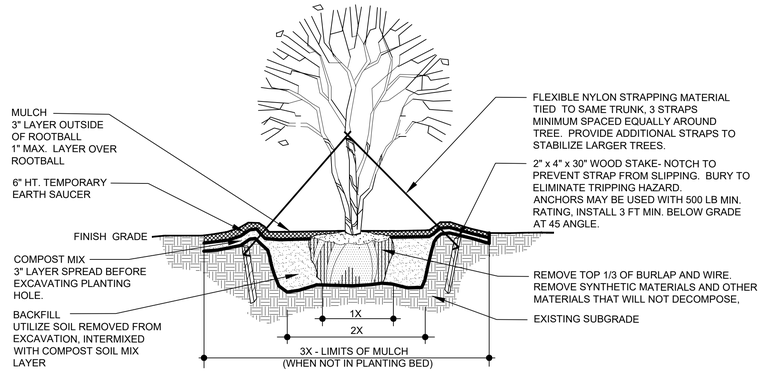
TREE PLANTING - SINGLE TRUNK



NOTES:
- GROUND COVER PLANTS SHALL BE SPACED AS INDICATED ON PROJECT PLANS.
- 6" MIN. BACKFILL AROUND SIDES OF ROOT BALL, 3" ON BOTTOM. WATER AND TAMP TO REMOVE AIR POCKETS.
- PLANT TOP OF ROOT BALL 1" HIGHER THAN TOP OF COMPOST LAYER.
- TOPMOST ROOT SHALL BE MADE VISIBLE PRIOR TO PLANTING.
- ROOT DEFECTS - INSPECT ROOT BALL FOR ROOT DEFECTS, CUT ROOTS WHERE THEY BEGIN TO KINK OR CIRCLE. ROOT BALL SHALL COMPLY WITH FLORIDA GRADES AND STANDARDS.

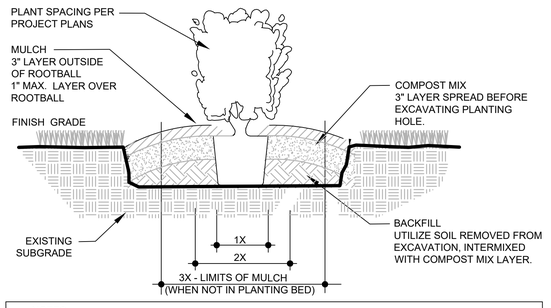
SHRUB AND GROUNDCOVER PLANTING BED

N.T.S.



NOTES:
- PLANT TOP OF ROOT BALL 2" ABOVE FINISH GRADE.
- BOTTOM OF ROOT BALL SHALL BE SEATED DIRECTLY ON UNDISTURBED SUBGRADE.
- TOPMOST ROOT-ROOT FLARE SHALL BE MADE VISIBLE PRIOR TO PLANTING.
- ROOT DEFECTS - INSPECT ROOT BALL FOR ROOT DEFECTS, CUT ROOTS WHERE THEY BEGIN TO KINK OR CIRCLE. ROOT BALL SHALL COMPLY WITH FLORIDA GRADES AND STANDARDS.
- STAKE ABOVE FIRST STRONG BRANCHES TO PROVIDE FIRM SUPPORT.

MULTIPLE STEM TREE PLANTING



NOTES:
- PLANT TOP OF ROOT BALL 1" HIGHER THAN TOP OF COMPOST LAYER.
- 6" MIN. BACKFILL AROUND SIDES OF ROOT BALL, 3" ON BOTTOM. WATER AND TAMP TO REMOVE AIR POCKETS.
- TOPMOST ROOT-ROOT FLARE SHALL BE MADE VISIBLE PRIOR TO PLANTING.
- ROOT DEFECTS - INSPECT ROOT BALL FOR ROOT DEFECTS, CUT ROOTS WHERE THEY BEGIN TO KINK OR CIRCLE. ROOT BALL SHALL COMPLY WITH FLORIDA GRADES AND STANDARDS.

SHRUB PLANTING - NOT IN PLANTING BED

N.T.S.

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CLAY COUNTY FIRE STATION 20

1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

MARGARET E. GAFFNEY-COOKE, *RLA*

REGISTERED LANDSCAPE ARCHITECT LA 6666918 STATE OF FLORIDA

FL6666918

DATE: 11/10/2023

LANDSCAPE DETAILS

PROJECT NO.: 23002

L2.1

90% DOCUMENTS

PART 1- GENERAL

1.1 GENERAL NOTES

A. Contractor shall comply with applicable laws, ordinances and codes; obtain required permits, inspections; pay required fees.
B. Prior to preparing and submitting cost proposal, Bidder shall visit and inspect the project site to become familiar with existing conditions.
C. This contract includes providing and installing plant and landscape materials as described within the contract documents.
D. Contractor shall perform fine grading to establish finish grades in landscape areas. Fine grading shall include only minor grading to correct random or infrequent grade irregularities to 1" or less.
E. Grading-Berming labeled on the project plans shall be the responsibility of the landscape contractor to construct. Landscape contractor shall provide fill and grading for these areas and coordinate fill requirements with general contractor prior to bidding.
F. Bidder-Contractor shall verify all plant quantities shown on plans. Notify Landscape Architect-Owner's Representative of discrepancies.
G. Plant size noted in plant schedule shall be the minimum acceptable size. Container gallon size are minimum. Contractor shall provide the plant material in container size needed to meet plant size specified.

1.2 DEFINITIONS

A. Finish Grade: Top of surface soil and top of planting bed after plant installation.
B. Topsoil: Native or imported surface soil modified with soil amendments per recommendations from commercial soil-testing laboratory.
C. Compost Mix: Homogeneously blended organic material, see Part 2 - Products.
D. Subgrade: Soil below finish grade and soil below finish grade remaining after completing excavation.
E. Final Acceptance: Shall mean that point in time when requirements of contract documents are completed, including punch-list items, to the satisfaction of the Landscape Architect-Owner's Representative. Contractor will be notified in writing of final acceptance by Landscape Architect-Owner's Representative.
F. Warranty Period: Shall begin after notification of final acceptance, continuing for the duration of the specified period.
G. Final Warranty Inspection; Shall occur near the end of the warranty period.
H. Contract Documents: Project plan set, technical specifications and documentation issued during project bidding, award and installation.

1.3 SUBMITTALS

A. Product Data: Each type of product utilized
B. Samples: Mulch
C. Product certificates, confirmation letter that the Contractor has procured all plant materials and products to complete the project plans.
D. Planting Schedule: Indicating anticipated installation dates.
E. Maintenance Instructions: Provide prior to final acceptance.
F. Agronomic Soil Tests for Topsoil and Compost Mix: Soil testing and recommendations shall be performed by a commercial soil-testing laboratory. Areas to be installed with plants and lawn areas shall be tested. Tests shall include a fertility test, pH factor, percentage of organic matter and a suitability analysis. The suitability analysis shall include percolation tests and evaluation of soil composition to determine the soil's suitability to sustain the project's plant materials and to bring the soil to a pH rating between 5.5 to 6.5. Submit copy to Landscape Architect-Owner's Representative of soil tests, written recommendations for soil suitability, soil amendments, fertilizer, chemical conditioner application rates for soil preparation, and a maintenance fertilization program.
G. Manufacturer's Data: Include physical characteristics, application, installation instructions and recommendations to be utilized.
   a. Fertilizer
   b. Each soil amendment to be used
   c. Herbicide
   d. Super absorbent, if to be utilized
   e. Pre-emergent herbicide
   f. Materials identified in contract documents
H. Written plant guarantee
I. Prior to purchase and delivery of plants, Contractor shall provide the Landscape Architect-Owner's Representative with photos of proposed plant materials and coordinate nursery visit.

1.4 QUALITY ASSURANCE

A. Landscape Contractor Qualifications: The Landscape Contractor (Contractor) shall have previous experience installing projects of equal or greater size to the project plans. The Contractor shall have a full-time supervisor with a minimum of 5 years of experience that is on-site during installation process.
B. Soil Analysis: Contractor shall provide soil analysis of the existing surface soil and compost mix. Agronomic soil testing shall be performed by a commercial soil-testing laboratory.
C. Provide quality, size, genus, species, and variety of plants indicated, complying with "Florida Number 1" or better classification in "Grades and Standards for Nursery Plants," latest edition, published by Florida Department of Agriculture, Division of Plant Industry, Gainesville, Florida. To evaluate plants not specifically listed in the "Grades and Standards for Nursery Plants," use the appropriate matrix type.
D. Pre-Installation Conference: Prior to beginning plant installations, conduct conference at project site.
E. Substitutions:
   1. If a plant material or product is not available, the Contractor shall submit to the Landscape Architect-Owner's Representative for approval, proof of non-availability with a recommendation for an equivalent material. When authorized, adjustment of contract amount may be made. No substitutions will otherwise be allowed.
F. Inspection: Landscape Architect-Owner's Representative may inspect plants at nursery and project site prior to planting, for compliance with plans. The Landscape Architect-Owner's Representative may inspect plants at any time for size and condition of balls, root systems, insects, injuries, latent defects, and reject plant materials at any time during progress of work. Contractor shall remove rejected plants from project site. The Landscape Architect-Owner's Representative's preliminary inspection is not to be construed as acceptance until such time as a written final acceptance inspection is received.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Prior to materials being shipped from supplier, Landscape Architect-Owner's Representative may inspect materials on-site or through the submission of photographs. Refer to the plant schedule within the project plan set for specific plants requiring on-site tagging-inspection.
B. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during delivery. Do not drop plant materials.
C. Deliver plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set plants trees in shade, protect from weather and mechanical damage, and keep roots moist.

1.6 WARRANTY

A. Warranty: Contractor shall warrant plants for the warranty period indicated against defects including death and unsatisfactory growth. Contractor will not be responsible for defects resulting from lack of adequate maintenance, abuse by Owner, winds of tropical storm speed per Saffir–Simpson Hurricane Scale or higher winds, or acts of God.
   1. Warranty Period for Plant Materials: 1 year from date of final acceptance
   2. Warranty Period for Sod: 6 months from date of final acceptance

1.7 MAINTENANCE

A. Plant Materials: Maintain until final acceptance by pruning, cultivating, watering, weeding, fertilizing, restoring planting saucers, tightening and repairing stakes and supports, resetting plants to proper grades, vertical position, as required to establish healthy, viable plantings. Spray insecticides to keep plants free of insects and disease.
B. Protect plant materials from damage due to landscape operations, operations by other contractors and others. Maintain protection during installation and final acceptance. Treat, repair, and replace damaged plantings at no additional cost to the Owner.
C. Maintenance of sod areas: The Contractor shall maintain until final acceptance by protecting sod areas against traffic or other use by warning signs and barricades, as approved by the Landscape Architect-Owner's Representative. Damaged sod shall be repaired by re-grading, then re-sod. Contractor shall mow, water and otherwise maintain sod areas in a satisfactory condition until final acceptance of the work.
   1. Maintain sod areas until final acceptance by watering, weeding, mowing, applications of herbicides, fungicides, insecticides, fertilization and re-seeding until a full, uniform stand of grass free of weeds, undesirable grass species, disease, and insects is achieved and accepted by the Landscape Architect-Owner's Representative.
      a. Repair, re-work, and re-sod all areas that have washed out, eroded, or are not a healthy stand of grass.
      b. Mow sod areas when top growth reaches a height where no more than a third of the leaf blade will be removed at any single mowing. Repeat mowing to maintain specified height per recommendations of local agricultural extension agency.

1.8 REPLACEMENTS AND CONDITIONS

A. Promptly remove and replace plant materials that are dead, unhealthy condition, fallen below acceptable quality. Prior to the end of the warranty period, a final warranty inspection of the work may be made by the Landscape Architect-Owner's Representative. The Contractor shall remove and replace plant materials and sod areas found to not be in compliance with contract requirements. Replacement plant material size and species shall be as noted in the project plans. A new warranty period shall commence on each plant replaced during the warranty period, contractor shall maintain plant warranty log.

1.9 FINAL INSPECTION AND ACCEPTANCE

A. Final Inspection: Upon completion of landscape installation, the Contractor shall notify the Landscape Architect-Owner's Representative in writing 10 days prior to requested inspection date. Landscape Architect-Owner's Representative will make an inspection to determine compliance with contract documents. When inspected landscape work does not comply with contract documents, the Contractor shall remove and replace rejected work and continue maintenance. Contractor shall provide 48 hour notice to Landscape Architect-Owner's Representative requesting re-inspection.
Plant Materials:
   a. Replace plant materials not in healthy condition, fails below quality requirements
B. Lawns:
   a. At the time of final warranty inspection, sod areas shall be healthy, well-rooted even colored, lawn is established, weed free without open joints and bare areas.

PART 2 - PRODUCTS

2.1 PLANTS

A. Tree and Shrub Material: Provide nursery-grown tree and shrub materials complying with plant quality requirements, Part 1-General. Provide well-shaped, fully branched, healthy, vigorous plants free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
B. Ground Cover: Provide ground cover species indicated, established and well rooted in pots or similar containers, and complying with plant quality requirements, Part 1-General.
C. Annuals: Provide healthy, disease-free plants of species and variety shown or approved, complying with plant quality requirements, Part 1-General. Provide plants acclimated to the conditions they are to be installed on the project and are in bud with few, if any blooms.
D. Perennials: Provide healthy plants from a commercial nursery, of species and variety shown or approved, complying with plant quality requirements, Part 1-General.
E. Sod: Sod shall be species and locations in the project plans. Sod shall be freshly cut in pads (or rolls with prior approval). Sod shall be derived from an area having a soil type similar to the soil on which it is to be laid. Sod shall be healthy, free of weeds and insects including ground pearls and spittle bugs, in naturally green condition, and shall have an abundance of roots contained within a mat of topsoil derived in the harvesting process from the area where grown. Brown, dry, irregularly smooth, and/or un-fresh sod will be rejected.

2.2 PLANTING MATERIALS

A. Topsoil: pH range of 5.5 to 6.5, a minimum of 6 percent organic material content; free of stones 1 inch or larger in any dimension and extraneous materials harmful to plant growth.
   1. Topoil Source: Amend existing surface soils according to recommendations from soil tests analyzed by commercial soil testing laboratory, see Part-1 General.
B. Soil Amendments: Following are soil amendments that may be utilized to modify existing surface soil according to recommendations from agronomic soil testing analysis.
   a. Lime: Natural dolomitic limestone containing not less than 85 percent of total carbonates with a minimum of 30 percent magnesium carbonates, ground so that not less than 90 percent passes a 10-mesh sieve and not less than 50 percent passes a 100-mesh sieve.
   b. Aluminum Sulfate: Commercial grade.
   c. Peat Humus: Finely divided peat, completely decomposed and free of fibers to eliminate its biological identity. Provide in granular form, free of hard lumps and with pH range suitable for intended use or Florida Muck with a texture and pH range suited for the intended use. Florida Muck shall be delivered in a non-muddy state, reasonably free of clay, roots and litter and other extraneous or toxic matter harmful to plant growth. Florida Muck shall be subject to approval by the Owner.
   d. Bonemeal: Commercial, raw, finely ground; 4 percent nitrogen and 20 percent phosphoric acid.
   e. Superphosphate: Soluble mixture of treated minerals; 20 percent available phosphoric acid.
   f. Sand: Clean, washed builder's sand, free of toxic materials, free of salt, weeds, sticks and other debris. Sand shall conform to ASTM C3 for five aggregates.
   g. Perlite: Conforming to National Bureau of Standards PS 23.
   h. Vermiculite: Horticultural grade, free of toxic substances.
   i. Sawdust: Rotted sawdust, free of chips, stones, sticks, soil, or toxic substances and with 7.5 pounds of nitrogen uniformly mixed into each cubic yard of sawdust.
   j. Manure: Well rotted, unleached stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials and containing no chemicals or ingredients harmful to plants.
   k. Mulch: Organic mulch shall be uniform in size, shape, texture and free from deleterious materials and suitable for top dressing of trees, shrubs, or plants and consisting of one of the following (see plan for mulch type):
      1. Medium-sized (Mini-sized) pine bark chips, clean, bright and free from weeds, moss, sticks and other debris.
      2. Areas indicated as "pine straw mulch" shall include mulch that is clean, bright and free from weeds, moss, sticks and other debris.
      3. "Shredded hardwood mulch" shall be non-cypress and of a color and texture approved by the owner or Landscape Architect: submit samples,

I. Fertilizer:
   1. Fertilizer: Pelletized fertilizer with nitrogen, phosphorous and potassium in 100 percent slow release form, with the following composition:
      a. Composition: 8 percent nitrogen, 2 percent phosphorous, 12 percent potassium + 4 percent magnesium and all micro-nutrients

2.3 COMPOST MIX

A. Compost Mix: Manufactured mix that is weed and disease free, pasteurized composed of:
a. 34% Aged Pine Bark
b. 33% Finished Organic Compost
c. 33% Composted Cow Manure

B. Compost mix shall be sent to an approved agronomic soil-testing laboratory to provide the requirements noted Part 1-General.

C. Seed:
1. Seed: All seed shall be furnished from a certified seed dealer or certified seed grower; meet the requirements of the Florida Department of Agriculture regulations; be labeled in accordance therewith. Seed shall be free of noxious weeds.

D. Sprigging: Sprigs shall be certified to genetic purity, free of pests and disease, delivered in a timely fashion and consist of stems, leaves and stolons. The sprigs shall come from a certified supplier, approved by the Owner's Representative. After being harvested, the sprigs shall be delivered to the planting site within 24 hours. The stock shall contain no weeds, soil, or other debris and shall not be dried out at the time of planting.
Sprigs shall be harvested to facilitate separation and distribution. Sprigs shall average four to six inches in length and carry at least four nodes. Sprigs shall be planted within twenty- four hours after removal from the certified supplier. It shall be the Contractor's responsibility to protect the stolons, keeping them moist and out of the sunlight before and during the planting operation.

PART 3 - EXECUTION

3.1 PLANTING

1. Prior to installing plant materials, Contractor shall perform drainage test excavations one per acre of site planting areas or submit plan of locations for Landscape Architect approval, a minimum of 250 ft on center throughout the planting and sod areas. Test excavations shall be a minimum of 12"dia. and 12" deeper than the largest proposed plant rootball. Test excavations shall be filled with water to finish grade, then monitored to verify excavations have completely drained within a 3 hour period. Landscape Contractor shall notify the Landscape Architect-Owner's Representative of any excavations which fail this test, prior to proceeding with plant installations. Corrective actions may be required, such as but not limited to over-excavation to break sub-surface soil conditions which shall be the Contractor's responsibility and may be considered additional work. Contractor shall seek and obtain approval from Owner's Representative prior to proceeding.
2. Unsuitable Soil Conditions: Absolutely no plastic or clayey soil is to be used in landscape areas. If such a condition is found, the area is to be back-filled with material of suitable sandy gradation which is porous and percolates well with reasonable compaction. If any planting or sod area has a plastic or clayey soil condition which prevents proper drainage, then a system of underdraining, turf drain or other means of releasing underground standing water must be incorporated under the direction of the Landscape Architect-Owner's representative.
3. Upon completion of landscape installation the finish grade of planting beds and lawn areas shall be minimum 6 inches below adjacent structures and slope away from existing structures per the Florida Building Code. Verify compliance with Florida Building Code with General Contractor prior to beginning work. Parking lot islands shall slope at 3% from center of island to curb. Finish grade shall be below sidewalks, curbs and walking surfaces to allow for mulch thickness and sod.
4. Upon completion of landscape installation, the Contractor shall notify the Landscape Architect-Owner's Representative in writing 10 days prior to requested inspection date. Landscape Architect-Owner's Representative will make an inspection to determine compliance with Contract Documents.
5. The Contractor shall be responsible for stability and plumb conditions of all plant materials, be legally liable for damage caused by instability of plant materials. Proper staking and guying is the Contractor's responsibility. Contractor shall under their own discretion provide additional staking and guying above and beyond the requirements of the project plans at no additional expense to the Owner.

A. Plant Material Installation and Planting Bed Preparation:
1. Topsoil shall be modified according to recommendations from agronomic soil-testing laboratory, prior to installation of plants.
2. Spread on top of topsoil a 3 inch layer of compost mix prior to planting. Mix shall be incorporated in planting holes during installation.
3. Do not spread compost mix if topsoil is frozen, muddy, or excessively wet.
4. Planting Pits and Trenches: Excavate circular planting pits with sides sloped inward. Trim base leaving center area raised slightly to support root ball and assist in drainage. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation.
5. Topmost Root: Topmost root-root flare shall be visible prior to planting - Find the topmost root and remove excess soil to expose topmost root-root flare.
6. Root Defects: Inspect root ball for root defects, cut roots at the point where they begin to kink or circle. Root ball shall comply with Florida Grades & Standards.
7. Remove rocks, sticks or other deleterious material greater than 1 inch in any 1 direction prior to backfill process.
8. Set tree, palm and shrubs plumb and in center of tree planting pit or trench with top of root ball 2 inches above finish grade.
   a. Container Grown: Carefully remove root ball from container without damaging root ball or plant.
   b. Ball and Burlaped Root ball: Do not use plant materials if root ball is cracked or broken before or during planting operation. Do not lift plants by the trunk. Remove rope, synthetic burlap, plastic and materials that will not decompose. Remove top 1/3 of wire basket.
   c. Backfill planting excavation incorporating compost mix. Work soil around roots eliminate voids and air pockets. When planting pit is approximately one-half backfilled, water thoroughly before placing remainder of backfill.
   d. Repeat watering until no more water is absorbed. After planting, remove excess soil and rake plant beds to a smooth even surface conforming to required finish grades.
   e. Upon completion of plant installations, fertilize according to specifications.
   f. Tree pits in non-irrigated areas shall be installed with super absorbent, according to manufacturer's recommendations.
9. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
10. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.
11. Finish Grading: Level planting area to a smooth, uniform surface with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.
12. Upon completion of plant installations, fertilize according to specifications.
13. Tree and Shrub Pruning: Prune, trees and shrubs according to International Society of Arboriculture standards. Contractor shall prune trees and shrubs to comply with Florida Grades and Standards. Prune plants to retain natural character.

B. Sod:
1. Topsoil shall be modified according to recommendations from agronomic soil-testing laboratory, prior to installation of sod, see Part 1-General.
2. Remove rocks, sticks or other deleterious material greater than 1 inch in any 1 direction prior to sod installation.
3. Finish grade to receive sod shall be uniformly graded and irrigated prior to sod installation. Sod shall be laid end-to-end and side-to-side to form a uniform layer of un-broken, un-gapped turf. All uneven edges shall be squarely trimmed to allow close and firm fitting of each piece. All gaps or spaces shall be filled to a smooth level with topsoil as specified herein. Edges shall be "heeled-in" and finished smoothly without uneven exposure. Place sod with staggered joints closely butted, tamped or rolled to an even surface to the required finished grade. Avoid continuous seam along line of water flow in swales. Place sod in rows at right angles to slope. Peg sod on slopes greater than 3:1.
4. Upon completion of sod installation, sod areas shall be watered to provide a healthy growing condition. Watering shall be monitored and adjusted by the Contractor to prevent over or under watering.

C. Seed:
1. Seed: All seed shall be furnished from an established seed dealer or certified seed grower; shall meet the requirements of the Florida Department of Agriculture regulations; and shall be labeled in accordance therewith. Seed shall be free of noxious weeds.

2. Seed Planting: At a minimum the contractor shall test the soil to verify conditions are acceptable for turf growth.

2.1. Submit agronomic soil tests for existing soil. Tests shall be performed by an approved agronomic soils testing laboratory and shall include a fertility test with the pH factor and the percentage of organic matter and a suitability analysis. The suitability analysis will include percolation tests and evaluation of soil composition to determine the soil's suitability to sustain healthy turf. Submit written recommendations for soil suitability and all necessary soil amendments, fertilizer and chemical conditioner application rates for soil preparation, and a post maintenance fertilization program. Submit recommendations to bring the soil to a pH rating between 5.5 to 6.5 and to supply necessary nutrients to satisfactory level for planting and sustaining vigorous turf growth. Submit a copy of soil tests with suitability analysis and recommendations to Owner's Representative prior to any planting.
2.2 At a minimum apply 100 lbs/acre of scarified, chemically treated Bahia Seed. Apply by hand, cyclone seeder, drill or hydro-seeding. The final result shall place the seeds ¼" - ½" below the soil.
2.3. At a minimum apply an additional 30 lbs/acre of quick growing rye grass over the entire area.
2.4. Contractor is responsible for utilizing the best application method to prevent erosion of soil during seed growth.
2.5. At a minimum apply mulch (straw, hay, wood, etc.) at a rate of 2.5 tons per acre during seeding.
2.6. At a minimum apply fertilizer during seeding at a rate of 250lbs/acre using a 12-6-8 fertilizer or other ratio recommending by the soil testing. An additive of 4% magnesium is also required and should be verified with soil testing.
2.7. Contractor is responsible for dust control and measure should be taken to minimize movement of dust in addition to seeding and mulching.

3. Watering: At a minimum apply 3/4" to 1" of water each week to the newly seeded areas to help germination until the grass is fully established. The contractor is responsible to monitor rainfall quantities and supplement with watering as necessary. The contractor shall record all watering information and furnish to the Owner's Representative when requested.
3.1. During the maintenance period the contractor shall supplement the rain water amount with hand watering as necessary to maintain an average of ½" of water weekly. At any time the owner's representative may require an immediate watering of areas they find suffering from a lack of water. The contractor will have 2 days to water these areas.

4. Maintenance: At a minimum the contractor shall be responsible for mowing the new established Bahia grass at four (4) different times throughout the 12 month warranty period. The timing of mowing shall be coordinated and approved by the owner's representative.
4.1. At a minimum the contractor shall implement a fertilization program that will adequately assist the continued health of the turfgrass. This should include a spring, summer, and fall fertilization treatment unless proper soil sample analysis is supplied to the owner's representative that warrants no treatment required. The owner's representative shall make the final decision.
4.2. At the request of the owner's representative, at any given time, any area of the project that has not properly been covered by turfgrass, that is undernourished, underwatered, eroded, or in any other way not acceptable to the owner's representative, the contractor will have seven (7) days to fully correct the problem at the contractor's expense.

D. Fertilization, Pre-Emergent and Mulching:
1. Prior to mulching, apply fertilizer specified in Part 2-Products to tree, palm, shrub, groundcover and sod areas at the rate of 1.5 pounds of actual fertilizer per 100 square feet. Fertilizer application shall be witnessed by Landscape Architect-Owner's Representative.

E. Mulching and Pre-Emergent Herbicide:
1. Apply pre-emergent herbicide to tree, palm, shrub, and groundcover areas according to manufacturer's recommendations. Pre-emergent application shall be witnessed by Landscape Architect-Owner's Representative.
2. Mulch surfaces of tree, palm, shrub and groundcover areas. Apply 3 inch depth of settled mulch, level with adjacent finish grades, sidewalks, curbs and sod. Mulch over root ball of plants shall be 1 inch maximum.

F. Plant Protection:
1. Protect plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods, as approved by Landscape Architect-Owner's Representative. Treat, repair, or replace damaged plant materials.

G. Clean Up:
1. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose off Owner's property.

H. Sprigging:
1. The Contractor shall carefully coordinate the sprigging operation being careful not to sprig an area too large or move so swiftly that a reasonable watering operation could not follow. Carelessness on the part of the Contractor, as mentioned above, shall result in the Contractor being liable for the cost of additional sprigs and the replanting of same.
2. A successful planting shall be defined as the insertion of 12 live sprigs per square foot.
3. An automatic planting machine shall be used, the machine shall insert live sprigs at 1-1/2 to 2 inch centers and roll the surface smooth on one pass. A minimum rate for sports field shall be 400 bushels per acre and sprigs shall be "cut in" mechanically.
4. After planting, sprigs must be watered to avoid drying out. Watering must be maintained until the sprigs tack down, about 14 days, then reduced to keep the sprigs well irrigated until complete coverage is obtained. Insects such as army worms are the biggest insect threat and can completely destroy a stand of immature sprigs overnight, it is the Contractors responsibility to monitor and treat all infestations as may be required.
5. The sprigs must be properly fertilized until completely grown in (about 12 weeks in optimum season - do not attempt to sprig past August 1). Apply 1 lb of nitrogen/1,000 square feet per week, applied in 2, 1/2 lb applications for 12 weeks. The nitrogen source shall be 75% water soluble and 25% water insoluble. Test soil and apply lime as needed to meet , then apply a pre-plant "complete" fertilizer, 10-10-10 at least 2lb/M which needs to be lightly incorporated into the soil prior to sprigging.
6. Contractor shall be responsible for the planting and grow-in of all sprigged areas. The grow-in responsibilities shall include all mowing, fertilization monitoring, watering and any additional activities required to produce a weed-free dense turf. The grow-in and maintenance period shall be considered complete when a healthy, well-rooted, even-colored, viable lawn has been established, free of weeds, surface irregularities and no bare areas greater than 2-1/2 square inch/10 square feet, with no bare area greater than 1 sq in each. Contractor shall notify the Landscape Architect-Owner's Representative in writing requesting an inspection with 48 hours notice to determine final acceptance of all the sprigged areas.

Item # 7.

DASHER HURST ARCHITECTS
1022 PARK STREET, SUITE 208
JACKSONVILLE, FLORIDA 32204
PHONE: 904.425.1190
FL LICENSE NUMBER AA26002165
W.W.W. DASHERHURST.COM

STRUCTURAL ENGINEER
G.M. HILL ENGINEERING, INC.
9700 PHILIPS HWY, SUITE 101
JACKSONVILLE, FL 32256

MEP ENGINEER
POWELL & HINKLE ENGINEERING, P.A.
1409 KINGSLEY AVENUE, BLDG 12A
ORANGE PARK, FL 32073

CIVIL ENGINEER
GOODSON BERGEN & ASSOC
11555 CENTRAL PARKWAY, SUITE 103
JACKSONVILLE, FL 32224

CLAY COUNTY
CLAY CO FIRE STATION 20
1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

MARGARET E. GAFFNEY-COOKE, RLA
REGISTERED LANDSCAPE ARCHITECT
LA 6666918
STATE OF FLORIDA
FL6666918

DATE: 11/10/2023

LANDSCAPE SPECIFICATIONS

PROJECT NO.: 23002

L2.2
90% DOCUMENTS

Clay County Fire Station 20 – City of Green Cove Springs - WRITTEN STATEMENT Non-Residential

1. Owner Contact Information:

   Clay County
   Mr. Daniel Loos
   477 Houston St.
   (Mailing P.O. Box 1366)
   Green Cove Springs, FL 32043
   Email: daniel.loos@claycountygov.com
   904-805-9777

2. Applicant Contact Information:

   Edward Goodson
   11555 Central Parkway, Ste 103
   Jacksonville, FL 32224
   Email: EGoodson@GBAcivil.com:
   tom.engineer@design.com
   Phone: (904)519-7770
   c: 904-699-5698

3. Name of Development: Clay County Fire Station 20 (Replacement)

4. Parcel Identification Number: 38-06-26-017150-000-00 and 38-06-26-017143-000-00

5. Future Land Use Category:

6. Zoning: Commercial Land Use: County IMP (8600)

7. Existing Site Description:

   A. Vegetation: A mostly developed site with building and pavement. The vegetation is light with grass with some pine trees along the easterly portion of the site.

   B. Soils: (SCS Unit 9 (Leon) and 14 (Ortega-Urban Land soils, both as SP, SP-SM soils

   C. Jurisdictional Land: (There are no jurisdictional wetlands on this property as related to the improvement area).

   D. Drainage: The improvements will be collected both by means of sheet flow and predominantly inlet collection with culvert conveyance to the new stormwater pond system. The pond will discharge to the current sites discharge point in being the roadside inlet along South West St and some drainage sheet flowing to SR-16.

   E. FEMA Flood Zone: (Not with a 100 year Flood Zone)

8. Proposed Development:

   Site Narrative: (The construction of a new County Fire Station. The new fire station will require the demolition of an existing Clay County facility including parking / vehicular use area. The fire station employees and emergency response vehicles will enter and exit off SR 16 by means of one new ingress / egress driveway and one emergency vehicle response egress only drive connection outside the apparatus bays. The public access will be a new driveway off Sout West St

A. Total Acres Of Site / Project : 1.95 ac.

B. Number Of Buildings Proposed: 1

C. Building Height: less the 35'

D. Type of Construction:
See architectural plans for confirmation but it is understood to be masonry / brick with wood elements.

E. Gross Square Feet (Bldg): 18,847 s.f.

F. Number of Parking Spaces Required: N/A (public safety facility. Parking dictated by county as deemed necessary)

G. Number of Parking Spaces Proposed: 26 secured / firefighter parking, 21 public spaces (19 standard, 2 HC)

H. Number of Handicap Spaces: 2

I. Bicycle Parking Shown: 2 spaces provided.

9. Ground Coverage in Square Feet & Percent of Site:

A. Building: 18,846 SF (FAR 22.26% (max. 30%))

B. Impervious (Vehicle Use Area & Site Work): Total Impervious area (ISR): = 58,797 s.f.(68.20%)

C. Retention / Detention Pond: Dry retention (16,652 s.f.)

10. Landscaping:

A. Landscape Vehicle Use Area: 36,018 s.f.

B. % of Vehicle Use Area Landscaped: 100 % of that required.

11. Utility Service:

A. Sewage Treatment: GCS Utilities

B. Water Supply: GCS Utilities

C. Electricity: (GCS Electric (GCSE))

100% DOCUMENTS

11/10/2023

DASHER HURST
ARCHITECTS

1022 PARK STREET, SUITE 208
JACKSONVILLE, FLORIDA 32204
PHONE: 904.425.1190

FL LICENSE NUMBER AA26002165
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CLAY COUNTY
CLAY CO FIRE STATION 20
1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

DATE: 11/10/2023

COVER SHEET

PROJECT NO.: 23002

TO BE BEST OF THE ARCHITECT'S OR ENGINEER'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE-SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH THIS SECTION AND CHAPTER 633, FLORIDA STATUTES.

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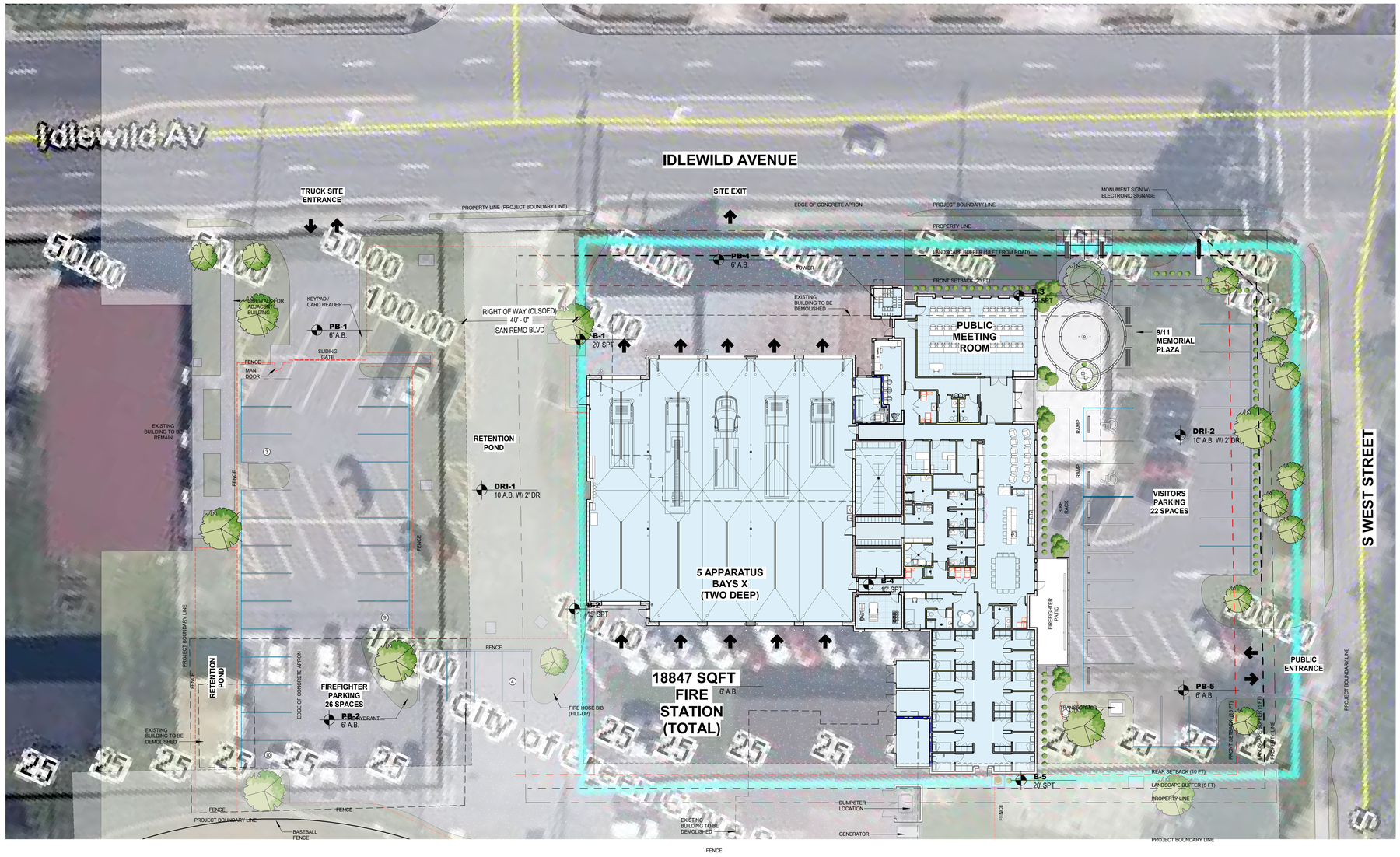

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ARCHITECTURAL SITE PLAN w AERIAL - OPTION 2

1" = 20'-0"

DASHER HURST ARCHITECTS
1022 PARK STREET, SUITE 208
JACKSONVILLE, FLORIDA 32204
PHONE: 904.425.1190
FL LICENSE NUMBER AA26002165
W W W . D A S H E R H U R S T . C O M

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11555 CENTRAL PARKWAY, SUITE 103
JACKSONVILLE, FL 32224

CLAY COUNTY CO FIRE STATION 20

1305 FL-16, GREEN COVE SPRINGS, FL

REVISIONS

#	DATE	DESCRIPTION

STATE OF FLORIDA
THOMAS B. HURST
AR 0017816
REGISTERED ARCHITECT

DATE: 11/10/2023

ARCH SITE PLAN W AERIAL

PROJECT NO.: 23002

A100a

100% DOCUMENTS

Planning & Zoning
321 Walnut Street, Green Cove Springs, FL 32043 904-297-7051

APPLICATION DEFICIENCY NOTICE

DATE: April 18, 2024

APPLICATION REFERENCE: Goodson, Edward, SPL-23-009 - 1305 IDLEWILD Ave

Dear Applicant:

We have received the materials submitted in response to the Application Deficiency Notice previously provided to you. Upon review of the re-submitted items, staff has identified items that need to be corrected. Attached to this notice is a list of comments in response to the re-submitted items.

Each of the items on the attached list require responses and revised materials be created and re-submitted before any further action can be taken on this permit. A hold is placed on this application and the time it takes you to respond to this list of items is excluded in calculating permit processing timeframes. Once corrected and/or new materials are submitted, your permit processing timeframe will begin again.

A complete response to each of the items on the attached list is required to be submitted ***at the same time.*** As applicable, a complete response is required to include:

1. A written document addressing all of your responses (one paper copy).
2. New and/or updated technical reports (one paper copy).
3. New and/or corrected plans. Please note that revisions to previously submitted plans are required to be identified by clouding, must be noted in a revision list on the plan sheet(s), and are required to be incorporated into a full set of revised plans (one paper copy).
4. A transmittal that itemizes everything being resubmitted (one paper copy).
5. A copy of the entire resubmittal must be provided electronically (either on a thumb drive or uploaded via the permit portal).

Your response must be received by our Department within 180 days of the date noted on this letter to avoid this application being withdrawn from consideration. Withdrawn application must be resubmitted as new applications requiring repayment of all applicable fees and processing requirements.

Thank you for your anticipated cooperation in submitting the items requested by staff. We look forward to working with you as this application continues to be processed.

APPLICATION DEFICIENCY NOTICE CYCLE 2

DATE: April 18, 2024

APPLICATION REFERENCE: Goodson, Edward, SPL-23-009

PLANNING DIVISION COMMENTS - contact Michael Daniels (mdaniels@greencovesprings.com)

1. Comply with City landscaping requirements regarding perimeter and interior landscaping and provide calculations on the landscape plan 113-244 (b)
2. Provide parking calculation pursuant to Sec. 113-157(d).
3. Provide decorative fencing around drainage retention area facing SR 16.

WATER/WASTERWATER ENGINEERING COMMENTS - contact Jason Laurenza (jlaurenza@greencovesprings.com)

1. Water main has tee with cap at fire hydrant. Remove cap and carry that line, do not need to tap a new line.