



## **A G E N D A**

**REGULAR MEETING OF THE STUART CITY COMMISSION  
TO BE HELD April 13, 2020  
AT 5:30 PM Commission Chambers & Virtual via Zoom  
121 SW FLAGLER AVE.  
STUART, FLORIDA 34994**

### **CITY COMMISSION**

**Mayor Michael J. Meier  
Vice Mayor Eula R. Clarke  
Commissioner Becky Bruner  
Commissioner Kelli Glass Leighton  
Commissioner Merritt Matheson**

### **ADMINISTRATIVE**

**City Manager, David Dyess  
City Attorney, Michael J. Mortell  
City Clerk, Mary R. Kindel**

Agenda items are available on our website at <http://www.cityofstuart.us>  
Phone: (772) 288-5306 . Fax: (772) 288-5305 . E-mail: [mkindel@ci.stuart.fl.us](mailto:mkindel@ci.stuart.fl.us)

In compliance with the Americans with Disabilities Act (ADA), anyone who needs a special accommodation to attend this meeting should contact the City's ADA coordinator at 772-288-5306 at least 48 hours in advance of the meeting, excluding Saturday and Sunday.

If a person decides to appeal any decision made by the Board with respect to any matter considered at this meeting, he will need a record of the proceeding, and that for such purpose he may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

**(RC)** next to an item denotes there is a City Code requirement for a Roll Call vote.  
**(QJ)** next to an item denotes that it is a quasi-judicial matter or public hearing.

**WHAT IS CIVILITY?** *Civility is caring about one's identity, needs and beliefs without degrading someone else's in the process. Civility is more than merely being polite. Civility requires staying "present" even with those persons with whom we have deep-rooted and perhaps strong disagreements. It is about constantly being open to hear, learn, teach and change. It seeks common ground as a beginning point for dialogue. It is patience, grace, and strength of character. Civility is practiced in our City Hall.*

## **ROLL CALL**

### **THIS MEETING WILL BE A HYBRID IN PERSON/VIRTUAL MEETING.**

**\*\*\*PUBLIC COMMENT - Comment will be taken at the beginning of the meeting for ALL agenda items. This is done to help control the virtual nature of the meeting.\*\*\***

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JOIN MEETING:  
<https://zoom.us/j/417912820>

If you wish to speak during public comment, click participants then click raise hand at bottom of window. Your microphone will be unmuted when you are called to speak and you will be invited to activate your camera if you wish. Both will be deactivated once you have completed your comment.

Meeting ID: 417 912 820

Dial In numbers:

- +1 312 626 6799 US
- +1 646 558 8656 US
- +1 253 215 8782 US
- +1 301 715 8592 US

If you wish to speak during public comment press \*9 to raise your hand. You will be called by your partially displayed phone number so please listen for that number. The host will lower your hand and mute your line after speaking.

## **PLEDGE OF ALLEGIANCE**

## **PROCLAMATIONS**

1. WATER CONSERVATION MONTH - APRIL 2020
2. GUARDIAN AD LITEM MONTH - APRIL 2020

## **PRESENTATIONS**

3. SERVICE AWARDS - MARCH AND APRIL
4. COVID-19 CITY UPDATE BY CAPTAIN DEREK ORTADO

## **COMMENTS BY CITY COMMISSIONERS**

## **COMMENTS BY CITY MANAGER**

## **APPROVAL OF AGENDA**



**COMMENTS FROM THE PUBLIC (5 Minutes Max.) (ALL COMMENTS FOR EVERY AGENDA ITEM TAKEN AT THIS TIME)**

**PUBLIC COMMENT:** *If a member of the public wishes to comment upon ANY subject matter, including quasi-judicial matters, please submit a Request to Speak form. These forms are available in the back of the Commission Chambers, and should be given to the City Clerk prior to introduction of the item number you would like to address.*

**CONSENT CALENDAR**

**CONSENT CALENDAR:** *Those matters included under the Consent Calendar are self-explanatory, non-controversial, and are not expected to require review or discussion. All items will be enacted by one motion. If discussion on an item is desired by any City Commissioner that item may be removed by a City Commissioner from the Consent Calendar and considered separately. If an item is quasi-judicial it may be removed by a Commissioner or any member of the public from the Consent Calendar and considered separately.*

5. RFP #2020-102, PROFESSIONAL ARCHITECTURAL, ENGINEERING AND RELATED SERVICES FOR THE PUBLIC WORKS COMPLEX (RC):

RESOLUTION No. 36-2020; A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA REQUESTS AUTHORIZATION TO NEGOTIATE FOR RFP #2020-102, PROFESSIONAL ARCHITECTURAL, ENGINEERING AND RELATED SERVICES FOR THE PUBLIC WORKS COMPLEX TO THE TOP RANKED FIRM, CAPTEC ENGINEERING OF STUART, FLORIDA PROVIDING AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

6. APPROVAL OF 03/09/2020 CCM MINUTES (RC)

**END OF CONSENT CALENDAR**

**COMMISSION ACTION**

7. SAINT LUCIE ESTUARY LAKE DISCHARGE ELIMINATION VISION STATEMENT (RC):

RESOLUTION No. 37-2020; A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, ADOPTING A SAINT LUCIE ESTUARY LAKE DISCHARGE ELIMINATION VISION STATEMENT FOR THE PURPOSE OF DEFINING A FOCUSED VISION FOR THE CITY IN ALL FUTURE CORRESPONDENCE WITH THE UNITED STATES ARMY CORPS OF ENGINEERS, SOUTH FLORIDA WATER MANAGEMENT DISTRICT, AND OTHER LOCAL, STATE, AND FEDERAL AGENCIES CONCERNING THE MANAGEMENT OF LAKE OKEECHOBEE; REQUESTING THE UNITED STATES ARMY CORPS OF ENGINEERS ADOPT AN OPERATIONAL GOAL TARGETING AN 11 FOOT LAKE OKEECHOBEE ELEVATION (NGVD) BY JUNE 1ST EACH YEAR; PROVIDING FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

**ORDINANCE FIRST READING**

8. ABANDONMENT OF RIGHT OF WAY AT OSCEOLA STREET (RC):

ORDINANCE No. 2431-2020; AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA TO PROVIDE FOR THE ABANDONMENT OF CERTAIN PUBLIC RIGHT-OF-WAY WITHIN THE CITY BEING THAT CERTAIN 50-FOOT RIGHT-OF-WAY, AS SET FORTH ON THE PLAT OF KRUEGER PARK, AS RECORDED IN PLAT BOOK 1, PAGE 25, PALM BEACH (NOW MARTIN) COUNTY, FLORIDA PUBLIC RECORDS RUNNING EAST TO

WEST, DESCRIBED IN EXHIBIT "A" ATTACHED HERETO AND DEPICTED IN EXHIBIT "B" ATTACHED HERETO; PROVIDING FOR PAYMENT OF A PRIVILEGE FEE; PROVIDING FOR SEVERABILITY; PROVIDING AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

## **ORDINANCE SECOND READING**

9. AMENDMENT TO CITY TREE REPLACEMENT CODE TO COMPLY WITH STATE STATUTE AND INNOVATIVE STORMWATER DESIGN (RC):

ORDINANCE No. 2432-2020; AN ORDINANCE OF THE CITY OF STUART, FLORIDA, AMENDING THE EXISTING CHAPTER V OF THE CITY'S LAND DEVELOPMENT CODE ENTITLED 'RESOURCE PROTECTION RELATED DEVELOPMENT STANDARDS' TO COMPLY WITH STATE STATUTE REGARDING TREE REMOVAL PERMITS AND TO PROMOTE INNOVATIVE STORMWATER TREATMENT AND LOW IMPACT DEVELOPMENT PRACTICES AND TO ALLOW THE CITY'S TREE REPLACEMENT FUND TO BE UTILIZED FOR INNOVATIVE STORMWATER TREATMENT SYSTEMS ON PUBLIC LANDS; PROVIDING FOR REPEAL OF CONFLICTING ORDINANCES; PROVIDING FOR SEVERABILITY; PROVIDING FOR CODIFICATION; AND PROVIDING FOR AN EFFECTIVE DATE, AND FOR OTHER PURPOSES.

10. AVONLEA PUD AMENDMENT PARCEL B (PARCEL 16) (QUASI-JUDICIAL)(RC):

ORDINANCE No. 2434-2020; AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, BEING THE THIRD AMENDMENT OF ORDINANCE NO. 2307-2015, ALSO KNOWN AS THE "NEW AVONLEA PLANNED UNIT DEVELOPMENT (PUD)" CONSISTING OF 12.40 ACRES ZONED RESIDENTIAL PLANNED UNIT DEVELOPMENT (RPUD), 16.24 ACRES ZONED COMMERCIAL PLANNED UNIT DEVELOPMENT (CPUD), AND 20.4 ACRES OF WETLAND/UPLAND PRESERVE ZONED RPUD, FOR A TOTAL OF 49.04 ACRES; SAID PUD BEING GENERALLY LOCATED BETWEEN NE DIXIE HIGHWAY TO THE SOUTH, LAND ON BOTH SIDES OF GREEN RIVER PARKWAY ON THE WEST, LAND ON BOTH SIDES OF CARDINAL AVENUE ON THE EAST AND THE CITY BOUNDARY TO THE NORTH, BEING MORE FULLY DESCRIBED BY EXHIBIT "A" ATTACHED; AMENDING SAID PUD TO PROVIDE FOR THE APPROVAL OF THE MASTER PARCEL SITE PLAN FOR THE AVONLEA CROSSINGS PARCEL B (PARCEL 16); PROVIDING FOR A MASTER OFF-SITE INFRASTRUCTURE PLAN FOR THE ENTIRE PUD; PROVIDING FOR REVISED AND ADDITIONAL DEVELOPMENT CONDITIONS OF APPROVAL; PROVIDING FOR AMENDED AND NEW TIMETABLES FOR DEVELOPMENT, DECLARING THE PLAN TO BE CONSISTENT WITH THE CITY'S COMPREHENSIVE PLAN; PROVIDING DIRECTIONS TO THE CITY CLERK; PROVIDING FOR REPEAL OF ALL ORDINANCES IN CONFLICT; PROVIDING FOR SEVERABILITY; PROVIDING FOR AN EFFECTIVE DATE, AND FOR OTHER PURPOSES.

**QUASI-JUDICIAL HEARINGS:** *Some of the matters on the Agenda may be "quasi-judicial" in nature. City Commissioners will disclose all ex-parte communications, and may be subject to voir dire by any interested party regarding those communications. All witnesses testifying will be "sworn" prior to their testimony. However, the public is permitted to comment without being sworn. Unsworn testimony will be given appropriate weight and credibility by the City Commission.*

## **DISCUSSION AND DELIBERATION**

## **ADJOURNMENT**

**CITY OF STUART, FLORIDA  
AGENDA ITEM REQUEST  
CITY COMMISSION**

**Meeting Date:** 4/13/2020

**Prepared by:** David Dyess, City Manager

**Title of Item:**

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**Summary Explanation/Background Information on Agenda Request:**

**Funding Source:**

**Recommended Action:**





# CITY OF STUART, FLORIDA AGENDA ITEM REQUEST CITY COMMISSION

**Meeting Date:** 4/13/2020

**Prepared by:** RCAVO

**Title of Item:**

WATER CONSERVATION MONTH - APRIL 2020

**Summary Explanation/Background Information on Agenda Request:**

The State of Florida, Water Management Districts, and the City of Stuart are working together to increase awareness about the importance of water conservation.

**Funding Source:**

N/A

**Recommended Action:**

Issue the Proclamation.

**ATTACHMENTS:**

|   | <b>Description</b>                                 | <b>Upload Date</b> | <b>Type</b>  |
|---|----------------------------------------------------|--------------------|--------------|
| ▯ | Proclamation - Water Conservation Month April 2020 | 2/3/2020           | Proclamation |

**PROCLAMATION  
WATER CONSERVATION MONTH  
APRIL 2020**

**WHEREAS,** water is a basic and essential need for every living creature; and

**WHEREAS,** the State of Florida, Water Management Districts, and the City of Stuart are working together to increase awareness about the importance of water conservation; and

**WHEREAS,** the City of Stuart and the State of Florida has designated April, typically a dry month when water demands are most acute, Florida's Water Conservation Month, to educate citizens about how they can help save Florida's precious water resources; and

**WHEREAS,** the City has always encouraged and supported water conservation, through various educational programs, most recently Water Fest; and

**WHEREAS,** every business, industry, school and citizen can make a difference when it comes to conserving water and can help by saving water and thus promote a healthy economy and community.

**NOW, THEREFORE,** I, MICHAEL J. MEIER, Mayor of the City of Stuart, Florida do hereby proclaim the Month of April, 2020, as

**WATER CONSERVATION MONTH**

in the City of Stuart, Florida and is calling upon each citizen and business to help protect our precious resource by practicing water saving measures and becoming more aware of the need to save water.

**IN WITNESS WHEREOF,** I have set my hand and caused the seal of the City of Stuart, Florida to be affixed this 13<sup>th</sup> day of April, 2020.

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MICHAEL J. MEIER  
MAYOR

## CITY OF STUART, FLORIDA AGENDA ITEM REQUEST CITY COMMISSION

**Meeting Date:** 4/13/2020

**Prepared by:** Ryanne Cavo

**Title of Item:**

GUARDIAN AD LITEM MONTH - APRIL 2020

**Summary Explanation/Background Information on Agenda Request:**

The Guardian ad Litem Program is a partnership of volunteers and staff who advocate for the best interest of abused, abandoned, and neglected children within our community.

**Funding Source:**

N/A

**Recommended Action:**

Issue the Proclamation.

**ATTACHMENTS:**

|   | <b>Description</b>                                  | <b>Upload Date</b> | <b>Type</b>  |
|---|-----------------------------------------------------|--------------------|--------------|
| ▯ | Proclamation - Guardian ad Litem Month (April 2020) | 3/6/2020           | Proclamation |

**PROCLAMATION  
GUARDIAN AD LITEM MONTH  
APRIL 2020**

**WHEREAS**, April has been designated National Child Abuse Prevention Month;  
and

**WHEREAS**, April 19 through April 25, 2020, has been designated as National  
Volunteer Appreciation Week; and

**WHEREAS**, the Guardian ad Litem Program is a partnership of volunteers and  
staff who advocate for the best interest of abused, abandoned, and  
neglected children within our community; and

**WHEREAS**, there are at least 200 children in Martin County involved in the court  
system through no fault of their own; and

**WHEREAS**, there are 82 citizens of Martin County advocating for their  
community's children.

**NOW, THEREFORE**, I, Michael J. Meier, Mayor of the City of Stuart, do hereby  
proclaim April 2020 as **GUARDIAN AD LITEM MONTH** in the City of Stuart  
and urge all citizens to give of their time to make a difference in the lives of our  
most vulnerable children by volunteering with the Guardian ad Litem Program.

IN WITNESS WHEREOF, I have hereto set my hand and caused the seal of  
the City of Stuart Florida to be affixed this 13<sup>th</sup> day of April, 2020.

---

MICHAEL J. MEIER  
Mayor



# CITY OF STUART, FLORIDA AGENDA ITEM REQUEST CITY COMMISSION

**Meeting Date:** 4/13/2020

**Prepared by:** R. Johnson

**Title of Item:**

SERVICE AWARDS - MARCH AND APRIL

**Summary Explanation/Background Information on Agenda Request:**

**March**

|                      |                     |          |
|----------------------|---------------------|----------|
| Bradford Blankman    | Technology Services | 15 years |
| Courtney Jonas       | Police              | 5 years  |
| Zachary Pecci        | Police              | 5 years  |
| Anthony Pesaturo     | Fire Rescue         | 5 years  |
| Christopher Ruediger | Police              | 5 years  |

**April**

|                  |              |         |
|------------------|--------------|---------|
| Michael Goldberg | Public Works | 5 years |
|------------------|--------------|---------|

**Funding Source:**

General Fund

**Recommended Action:**

Present Awards

**CITY OF STUART, FLORIDA  
AGENDA ITEM REQUEST  
CITY COMMISSION**

**Meeting Date:** 4/13/2020

**Prepared by:** Tumminelli

**Title of Item:**

COVID-19 CITY UPDATE BY CAPTAIN DEREK ORTADO

**Summary Explanation/Background Information on Agenda Request:**

COVID-19 City update by Captain Derek Ortado

**Funding Source:**

N/A

**Recommended Action:**

N/A

## CITY OF STUART, FLORIDA AGENDA ITEM REQUEST CITY COMMISSION

**Meeting Date:** 4/13/2020

**Prepared by:** Alaina Knofla

**Title of Item:**

RFP #2020-102, PROFESSIONAL ARCHITECTURAL, ENGINEERING AND RELATED SERVICES FOR THE PUBLIC WORKS COMPLEX (RC):

RESOLUTION No. 36-2020; A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA REQUESTS AUTHORIZATION TO NEGOTIATE FOR RFP #2020-102, PROFESSIONAL ARCHITECTURAL, ENGINEERING AND RELATED SERVICES FOR THE PUBLIC WORKS COMPLEX TO THE TOP RANKED FIRM, CAPTEC ENGINEERING OF STUART, FLORIDA PROVIDING AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

**Summary Explanation/Background Information on Agenda Request:**

Request for Proposals #2020-102 was advertised in the Palm Beach Post on January 6, 2020: Simultaneously released on-line by Onvia (www.DemandStar.com) who notified 1298 potential proposers and issued seventy two (72) RFP packages. Nine (9) proposals were received by the closing time and date of 2:30 pm, Wednesday February 19, 2020.

A five (5) member selection committee met on March 10, 2020, to discuss and evaluate the proposals based on the following criteria; the firm's Qualifications, Experience, Project Approach and Schedule, Project Understanding, and Quality of submittal. The selection committee determined that Captec Engineering's submittal ranked number one and it is in the best interests of the City to authorize negotiations with this firm.

The selection committee requests authorization to commence negotiations with the top-ranked firm, Captec Engineering of Stuart, Florida.

**Funding Source:**

1790/563

**Recommended Action:**

Adopt Resolution No. 36-2020.

**ATTACHMENTS:**

| Description | Upload Date | Type       |
|-------------|-------------|------------|
| □ R36-2020  | 3/11/2020   | Cover Memo |



BEFORE THE CITY COMMISSION  
CITY OF STUART, FLORIDA

RESOLUTION NUMBER 36-2020

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA REQUESTS AUTHORIZATION TO NEGOTIATE FOR RFP #2020-102, PROFESSIONAL ARCHITECTURAL, ENGINEERING AND RELATED SERVICES FOR THE PUBLIC WORKS COMPLEX TO THE TOP RANKED FIRM, CAPTEC ENGINEERING OF STUART, FLORIDA PROVIDING AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

\* \* \* \* \*

NOW THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA that:

SECTION 1: The City Commission of the City of Stuart hereby approves the authorization to negotiate for RFP #2020-102, Professional Architectural, Engineering and Related Services for Public Works Complex to the top ranked firm, Captec Engineering of Stuart, Florida.

SECTION 2: This resolution shall take effect upon adoption.

Resolution No. 36-2020

Authorization to Negotiate for RFP #2020-102, Professional Architectural, Engineering and Related Services for the Public Works Complex.

Commissioner \_\_\_\_\_ offered the foregoing resolution and moved its adoption. The motion was seconded by Commissioner \_\_\_\_\_ and upon being put to a roll call vote, the vote was as follows:

MICHAEL J. MEIER, MAYOR  
EULA R. CLARKE, VICE MAYOR  
BECKY BRUNER, COMMISSIONER  
KELLI GLASS LEIGHTON, COMMISSIONER  
MERRITT MATHESON, COMMISSIONER

| YES | NO | ABSENT | ABSTAIN |
|-----|----|--------|---------|
|     |    |        |         |
|     |    |        |         |
|     |    |        |         |
|     |    |        |         |
|     |    |        |         |

ADOPTED this \_\_\_\_ day of \_\_\_\_\_, 2020.

ATTEST:

\_\_\_\_\_  
MARY R. KINDEL  
CITY CLERK

\_\_\_\_\_  
MICHAEL J. MEIER  
MAYOR

APPROVED AS TO FORM  
AND CORRECTNESS:

\_\_\_\_\_  
MICHAEL J. MORTELL  
CITY ATTORNEY



**CITY OF STUART, FLORIDA  
AGENDA ITEM REQUEST  
CITY COMMISSION**

**Meeting Date:** 4/13/2020

**Prepared by:** Mary Kindel, City Clerk

**Title of Item:**

APPROVAL OF 03/09/2020 CCM MINUTES (RC)

**Summary Explanation/Background Information on Agenda Request:**

N/A

**Funding Source:**

N/A

**Recommended Action:**

Approve Minutes

**ATTACHMENTS:**

| Description            | Upload Date | Type       |
|------------------------|-------------|------------|
| 03/09/2020 CCM Minutes | 3/13/2020   | Attachment |

**MINUTES  
REGULAR MEETING OF THE STUART CITY COMMISSION  
HELD March 9, 2020  
AT 5:30 PM Commission Chambers  
121 SW FLAGLER AVE.  
STUART, FLORIDA 34994**

**CITY COMMISSION**

**Mayor Michael J. Meier**

**Vice Mayor Eula R. Clarke (Late 5:36 PM)**

**Commissioner Becky Bruner**

**Commissioner Kelli Glass Leighton**

**Commissioner Merritt Matheson**

**ADMINISTRATIVE**

**City Manager, David Dyess**

**City Attorney, Michael J. Mortell**

**City Clerk, Mary R. Kindel**



**5:30 PM ROLL CALL**

**Present: Mayor Meier, Vice Mayor Clarke, Commissioner Bruner, Commissioner Glass Leighton, Commissioner Matheson**

**PLEDGE OF ALLEGIANCE**

**1. ARTS MOMENT - PRESENTATION OF THE 1895 CHURCH OF ART BY ROBERT AND OLGA HAMILTON**

**Robert and Olga Hamilton presented a photo slide show of the Church's history and their current restoration project to display art.**

**PROCLAMATIONS**

**2. VIETNAM VETERANS DAY - MARCH 29, 2020**

**Lynn Jensen, Regent for the Halpatiokee Chapter of the National Society of the Daughters of the American Revolution accepted the Proclamation and announced their observance of veterans with a lapel pin ceremony of family chapter members and thanked the City.**

### **3. 2020 CENSUS PARTNERSHIP**

**Jessica Tharp, Community Services Program Leader and Census Coordinator, came forward to accept the Proclamation and commented on the importance and the City's commitment to collecting the census data.**

### **4. GOVERNMENT FINANCE PROFESSIONALS WEEK - MARCH 16-20, 2020**

**Judy Browning, Sr. Accountant accepted the Proclamation on behalf of the Financial Services Department and thanked the City for the recognition.**

## **PRESENTATIONS**

### **COMMENTS BY CITY COMMISSIONERS**

#### **Commissioner Glass Leighton**

- **Commented per missing the last Commission Meeting and the Springtree discussion in which it was tabled to tonight's meeting, she reached out to County Commissioner Heatherington to participate in a joint Town Hall. Heard that some residents were upset about the Town Hall and wanted to clarify for the record that she felt she was doing due diligence and that listening to all sides was appropriate. Feels she listens to all directly impacted, regardless of City or County residents. She encouraged anyone who has any questions, to contact her directly.**

#### **Commissioner Matheson**

- **Complimented Commissioner Glass Leighton on her comment.**
- **Wished David Peters and Jessica Tharp a Happy Birthday.**
- **Announced Lake Okeechobee levels, in good position this time of year.**
- **Commented that the NAACP will be hosting the Freedom Fun Gala at St. Mary's on Saturday, March 14<sup>th</sup> with guest speaker Desmond Mead, tickets still available.**
- **Commented on proper hand washing.**

#### **Commissioner Bruner**

- **No comments.**

#### **Vice Mayor Clarke**

- **Announced that she was honored by North County Little League, Champion of Little League 2020 and displayed the trophy.**
- **Reported that there will be a Neighborhood Cleanup this weekend to collect household hazardous waste, do our best to keep community clean.**

#### **Mayor Meier**

- **Commented on a relationship with the County and other gov agencies and was glad Commissioner Glass Leighton was working with County Commissioner to have a Town Hall.**

## **COMMENTS BY CITY MANAGER**

**City Manager Dyess requested Captain Darek Ortado come forward to report on the Coronavirus.**

**Police Capt. Ortado gave Emergency Management Report on the Coronavirus: 18 Cases in Florida, 2 deaths. 3 cases in Broward, 2 workers from the Port and Cruise ships are being held offshore. He is attending all conference calls and meetings, updating all plans preparations. Second employee email will go out this week, external public information is being shared per the CDC and the Florida Department of Health.**

**For public concerns or to be tested, do not go to the hospital as this may spread the virus, contact the Florida Department of Health and someone will come to your residence within 24-hours to test you.**

## **APPROVAL OF AGENDA**

**Vice Mayor Clarke requested to pull Item #7.**

 **6:06 PM MOTION: Motion to approve pulling Item #7.**  
**Moved by: Commissioner Glass Leighton**  
**Seconded by: Vice Mayor Clarke**  
**Motion passed unanimously.**

## **COMMENTS FROM THE PUBLIC**

- 1) Arnie Beaman – Flagler Ave; Commented on the City’s tennis courts; happy with the cleanliness of the courts but not pleased with the new pickleball lines painted on the courts.**
- 2) Al VanWormer – Palm City Rd.; Concerned with the new pickleball lines on the tennis courts.**
- 3) Chuck Ellis – Island Cove Way; Commented on the tennis courts and suggested the City use the 10<sup>th</sup> Street area for pickleball courts instead of the current tennis courts.**
- 4) Jacqui Thurlow-Lippisch – On behalf of the South Florida Water Management District; providing color coded maps for the Commission showing the structures that belong to the SFWMD and the Army Corp. of Engineers.**
- 5) Michael Green – Commented on the tennis courts and would like to see the City use the courts at the East 10<sup>th</sup> Street Recreation Center to make them look like the courts at Langford Park. The group that plays at the courts would be happy to help as a task force.**
- 6) Frank McCrystal – Flamingo Ave.; Commented that tennis deserves to be taken over by pickleball because it is a dying sport but feel the color of the lines are distracting.**



## **CONSENT CALENDAR**

### **5. APPROVAL OF 02/24/2020 CCM MINUTES**

### **6. ANNUAL CHILDREN'S SERVICES COUNCIL GRANT APPLICATION:**

RESOLUTION No. 34-2020; A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA AUTHORIZING THE APPLICATION, AS THE LEAD AGENCY, WITH THE CHILDREN'S SERVICES COUNCIL OF MARTIN COUNTY FOR THE EAST STUART YOUTH INITIATIVE; IF APPROVED, AUTHORIZING THE ACCEPTANCE AND EXPENDITURE OF THIS GRANT, AND EMERGENCY FUNDING, PROVIDING AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

### **(PULLED) 7. FLORIDA DEPARTMENT OF ECONOMIC OPPORTUNITY (FDEO) COMMUNITY DEVELOPMENT BLOCK GRANTS (CDBG):**

RESOLUTION No. 35-2020; A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA AUTHORIZING THE CITY MANAGER TO APPLY FOR THE COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) PROGRAM AND ECONOMIC DEVELOPMENT PROGRAM AND ESTABLISH A REQUEST FOR PROPOSAL TO HIRE A CONSULTANT FOR COMMUNITY DEVELOPMENT BLOCK GRANT WRITING AND GRANT ADMINISTRATION SERVICES; PROVIDING AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

## **END OF CONSENT CALENDAR**

### **Public Comment:**

- 1) Ora Solomon – 16<sup>th</sup> Court; Asked questions about grant in Item #7, how much the grant was for and to whom, what part is going to be used in East Stuart? Commented that she does not want to see pickleball on 10<sup>th</sup> Street and wants update on other East 10<sup>th</sup> Street changes.**

**City Manager Dyess responded to Ms. Solomon's questions.**

 **6:28 PM MOTION: Move approval of the Consent Calendar pulling Item #7.  
Moved by: Commissioner Matheson  
Seconded by: Vice Mayor Clarke  
Motion passed unanimously.**

### **7. FLORIDA DEPARTMENT OF ECONOMIC OPPORTUNITY (FDEO) COMMUNITY DEVELOPMENT BLOCK GRANTS (CDBG):**

RESOLUTION No. 35-2020; A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA AUTHORIZING THE CITY MANAGER TO APPLY FOR THE COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) PROGRAM AND ECONOMIC DEVELOPMENT PROGRAM AND ESTABLISH A REQUEST FOR PROPOSAL TO HIRE A CONSULTANT FOR COMMUNITY DEVELOPMENT BLOCK GRANT WRITING AND

GRANT ADMINISTRATION SERVICES; PROVIDING AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

**Vice Mayor Clarke pulled this item to ask for a review and update so the public is aware of all the ways this grant will affect the 10<sup>th</sup> Street Center.**

**Pinal Gandhi-Savdas, CRA Administrator explained the grant funds and what can be applied for. The City plans to apply for the housing revitalization program and announced that a presentation will be given at the March 23<sup>rd</sup> meeting on the criteria, eligibility and the process. The final application will go before the board the 2<sup>nd</sup> meeting in April.**



**6:35 PM MOTION: Approve Resolution No. 35-2020.**

**Moved by: Vice Mayor Clarke**

**Seconded by: Commissioner Glass Leighton**

**Motion passed unanimously.**

## **COMMISSION ACTION**

### **8. INTENTION TO ABANDON A PORTION OF OSCEOLA STREET RIGHT-OF-WAY:**

RESOLUTION No. 16-2020; A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA DECLARING PURSUANT TO CHAPTER 36 OF THE CODE OF ORDINANCES OF THE CITY OF STUART, FLORIDA THE INTENTION OF THE CITY COMMISSION TO ABANDON AND TO SET PUBLIC HEARINGS ON MARCH 23, 2020, AND APRIL 13, 2020, AT 5:30 P.M. IN THE CITY COMMISSION CHAMBERS TO CONSIDER THE ABANDONMENT OF A 50' WIDE PUBLIC RIGHT-OF-WAY WITHIN THE CITY, BEING THE PORTION OF S.E. OSCEOLA STREET, MORE CLEARLY DESCRIBED IN EXHIBIT "A" ATTACHED; AND FOR OTHER PURPOSES.

**City Attorney Mortell briefly explained the purpose of the tonight's hearing, explaining that it is not to actually abandon any property but to pass a Resolution to declare it not being used, and potentially being abandoned, then City staff would create and advertise the Ordinance for abandonment addressing the amount of the privilege fee, if any.**

**Stephen Mayer, Development Department Planner briefly reviewed the Osceola Street Right-of Way Abandonment and introduced Don Cuozzo, representing Mr. and Mrs. Richard Baron who owned property to south.**

**Don Cuozzo presented with a power point displaying plats of Snug Harbor and photographs of the neighborhood. Have meet with Mr. Fry and the Snug Harbour Commodore.**

**David Peters, Public Works Director stated that they ask is for an easement granted for FPL for maintenance and a Utility easement along the front that would encompass water and sewer lines. Peters confirmed the property is in the County FPL could get to the property to the north and south.**



Commissioner Matheson commented that he objects to abandoning property when people object to it.

**Public Comment:**

- 1) Jim Savastano – St. Lucie Blvd.; Commodore of Snug Harbour; Residents reject this and do not feel positive about the abandonment.
- 2) Steve Fry – Wells Drive; Opposes the proposal, uses the property personally but feels it is negative for the neighborhood. Feels this should be put off until the legalities are understood.
- 3) Annie McMillan – Snug Harbour resident for 40 years, represents the majority of homeowners with petition to oppose giving up this public right-of-way.
- 4) Cheryl Cook – Wells Drive; Neighbor of Mr. Fry, feels the 10 ft. FPL easement is not going to do it, personally she would like the lot to be there.
- 5) William Fry – Monterey Ave.; Uses the lot personally and opposes the abandonment.

City Attorney Mortell clarified that the abandonment has not come before the City Commission before, this is the first time. He explained the abandonment process and what the results would be based on the approval of the Resolution.

Mayor Meier noted that there are two signs posted on the City's right-of-way property stating, "No Trespassing per the Snug Harbour Property Association".

 7:12 PM MOTION: Motion to continue this item to next meeting until we get more information.

Moved by: Vice Mayor Clarke

Seconded by: -----

Motion died for lack of second.

 7:18 PM Public Comment:

- 6) Roger Bernot – Harbour Point; Commented that the City is mistaken but the property is being used FPL and by the City, apologized about the trespassing signs but did not know about them and said they can be taken down. Do not want the City to abandon it and noted the City needs a place to park its vehicles in emergencies.
- 7) Helen McBride - Flamingo Ave; Concerning FPL but during hurricanes, they may not be allowed to get back to the poles with the big trucks and it's a safety issue.
- 8) Mary Shaw – Harbour Point Dr.; Commented that the pervious vote did not pass because it was premature as they did not have enough information but was not because they did not want the property. The trespassing signs were put up to keep homeless people out.

 **7:15 PM MOTION:** Move intention to abandon, approve Resolution No. 16-2020, Commissioner Glass Leighton seconded with requested amendment to direct our City Attorney to get come back with answers.

**Mortell clarified amendment:** [Get legal opinion as it relates to if we do the abandonment, can we charge the privilege fee, if yes, because Snug Harbour rejected, the privilege fee and the offer of abandonment, if they still do not want it, can we give the whole thing to the southern abutter or if we do not do a privilege fee, does Snug Harbour then want the northern portion and southern, all three options.]

**Moved by:** Commissioner Bruner

**Seconded by:** Commissioner Glass Leighton

**Motion passed 4/1.**  **7:24 PM**

|                |     |
|----------------|-----|
| Meier          | YES |
| Clarke         | YES |
| Bruner         | YES |
| Glass Leighton | YES |
| Matheson       | NO  |

## **ORDINANCE FIRST READING**

 **7:24 PM 9.** AMENDMENT TO CITY TREE REPLACEMENT CODE TO COMPLY WITH STATE STATUTE AND TO INCORPORATE INNOVATIVE STORMWATER DESIGN.:

ORDINANCE No. 2432-2020; AN ORDINANCE OF THE CITY OF STUART, FLORIDA, AMENDING THE EXISTING CHAPTER V OF THE CITY'S LAND DEVELOPMENT CODE ENTITLED 'RESOURCE PROTECTION RELATED DEVELOPMENT STANDARDS' TO COMPLY WITH STATE STATUTE REGARDING TREE REMOVAL PERMITS AND TO PROMOTE INNOVATIVE STORMWATER TREATMENT AND LOW IMPACT DEVELOPMENT PRACTICES AND TO ALLOW THE CITY'S TREE REPLACEMENT FUND TO BE UTILIZED FOR INNOVATIVE STORMWATER TREATMENT SYSTEMS ON PUBLIC LANDS; PROVIDING FOR REPEAL OF CONFLICTING ORDINANCES; PROVIDING FOR SEVERABILITY; PROVIDING FOR CODIFICATION; AND PROVIDING FOR AN EFFECTIVE DATE, AND FOR OTHER PURPOSES.

**Kevin Freeman, Development Director, presented on the tree placement code amendment, promoting the natural habitat environment of native 590 acres of right-of-way and the proposal of innovative project plans.**

**Commissioner Matheson requested to add two trees to the list; the Sabal Palm and the Royal Poinciana Tree.**

**Mayor Meier commented that he recently heard that the Royal Poinciana tree is being looked at as an invasive tree. The City will check into this.**

 **7:33 PM MOTION: Move approval of Ordinance No. 2432-2020 to include those two trees [Sabal Palm and the Royal Poinciana].**  
**Moved by: Commissioner Glass Leighton**  
**Seconded by: Vice Mayor Clarke**  
**Motion passed unanimously.**

**10. AVONLEA PUD AMENDMENT PARCEL B (PARCEL 16) (QUASI-JUDICIAL):**

ORDINANCE No. 2434-2020: AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, BEING THE THIRD AMENDMENT OF ORDINANCE NO. 2307-2015, ALSO KNOWN AS THE "NEW AVONLEA PLANNED UNIT DEVELOPMENT (PUD)" CONSISTING OF 12.40 ACRES ZONED RESIDENTIAL PLANNED UNIT DEVELOPMENT (RPUD), 16.24 ACRES ZONED COMMERCIAL PLANNED UNIT DEVELOPMENT (CPUD), AND 20.4 ACRES OF WETLAND/UPLAND PRESERVE ZONED RPUD, FOR A TOTAL OF 49.04 ACRES; SAID PUD BEING GENERALLY LOCATED BETWEEN NE DIXIE HIGHWAY TO THE SOUTH, LAND ON BOTH SIDES OF GREEN RIVER PARKWAY ON THE WEST, LAND ON BOTH SIDES OF CARDINAL AVENUE ON THE EAST AND THE CITY BOUNDARY TO THE NORTH, BEING MORE FULLY DESCRIBED BY EXHIBIT "A" ATTACHED; AMENDING SAID PUD TO PROVIDE FOR THE APPROVAL OF THE MASTER PARCEL SITE PLAN FOR THE AVONLEA CROSSINGS PARCEL B (PARCEL 16); PROVIDING FOR A MASTER OFF-SITE INFRASTRUCTURE PLAN FOR THE ENTIRE PUD; PROVIDING FOR REVISED AND ADDITIONAL DEVELOPMENT CONDITIONS OF APPROVAL; PROVIDING FOR AMENDED AND NEW TIMETABLES FOR DEVELOPMENT, DECLARING THE PLAN TO BE CONSISTENT WITH THE CITY'S COMPREHENSIVE PLAN; PROVIDING DIRECTIONS TO THE CITY CLERK; PROVIDING FOR REPEAL OF ALL ORDINANCES IN CONFLICT; PROVIDING FOR SEVERABILITY; PROVIDING FOR AN EFFECTIVE DATE, AND FOR OTHER PURPOSES.

**7 People sworn; Kevin Freeman and Stephen Mayer of City of Stuart Development Department, Nik Schroth, Frank Wacha, Tim Hernandez, Andrew Vancilin, Kevin Rickard New Urban Communities.**

**\*Commissioner Matheson completed Form B and will be abstaining from this vote.**

**Tim Hernandez presented the site plan to include the townhomes, single-family cottages, parking, landscaping, and amenities on the 4-acre site, reviewed the features to connect to Haney Creek and**

**Stephen Mayer introduced the Avonlea PUD with the staff timelines, requesting the deadline extension to Dec. 31, 2021 and the three revised conditions recommended by LPA on 2/20/2020.**

 **8:01 PM MOTION: Move approval of Ordinance No. 2434-2020.**  
**Moved by: Commissioner Glass Leighton**  
**Seconded by: Vice Mayor Clarke**  
**Motion passed 4/0 (Matheson – Abstain)**



## **11. STUART SPRINGTREE RPUD - FLUM AND RE-ZONING (QUASI-JUDICIAL):**

ORDINANCE No. 2427-2020; AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, AMENDING THE FUTURE LAND USE MAP OF THE CITY'S COMPREHENSIVE PLAN THEREBY ASSIGNING A FUTURE LAND USE DESIGNATION OF "MULTI-FAMILY RESIDENTIAL" FOR THREE PARCELS EQUALING 13.59 ACRES ANNEXED BY ORDINANCE NO. 2352-2017, OWNED BY STUART 13 ACRES, LLC, TIERRA DEL LAGO, INC. AND STUART HARBOR MARINA AND YACHT CLUB, LOCATED WEST OF S.E. FEDERAL HIGHWAY, SOUTH OF S.E. HARRISON STREET, AND NORTH OF THE NATALIE ESTATES MOBILE HOME PARK WITH SAID LANDS BEING MORE FULLY DESCRIBED IN EXHIBIT "A" ATTACHED; AND FURTHER PROVIDING THAT SAID LANDS SHALL CONCURRENTLY ESTABLISH THE STUART-SPRINGTREE RESIDENTIAL PLANNED UNIT DEVELOPMENT RPUD CONSISTING OF TWO HUNDRED EIGHTY (280) MULTI-FAMILY UNITS WITHIN SEVEN (7) INDIVIDUAL FOUR-STORY APARTMENT BUILDINGS; APPROVING A DEVELOPMENT SITE PLAN; PROVIDING FOR DEVELOPMENT CONDITIONS AND A TIMETABLE FOR DEVELOPMENT; DECLARING THE PLAN TO BE CONSISTENT WITH THE CITY'S COMPREHENSIVE PLAN; PROVIDING DIRECTIONS TO THE CITY CLERK; PROVIDING FOR REPEAL OF ALL ORDINANCES IN CONFLICT; PROVIDING FOR SEVERABILITY; PROVIDING FOR AN EFFECTIVE DATE, AND FOR OTHER PURPOSES.

**Terry McCarthy, representative of the applicant; request to continue to March 23, 2020 as they have upcoming meeting with FDOT and working to address issues.**



### **8:06 PM Public Comment:**

- 1) Dawn Miller – Harrison St.; Opposes the Springtree project and feels the County residents are getting the negative effects, traffic issues.**
- 2) Katherine Dorman – Madison St.; Thanked Commissioner Glass Leighton for the Town Hall as she feels that caused this to be continued and Commissioner Matheson for speaking with her about the additional traffic (1500 more cars per day) and read from HJA document.**
- 3) Melissa Lemudo – Harrison St; Feels the project should be modified to be less than 4 stories, have ingress and egress on US1.**
- 4) Mark O'Quinn – Winter Haven Ct.; Commented that the project is not compatible and too invasive.**
- 5) John Bros – Gem Dr.; Feels Springtree is not compatible and will change Stuart from a jewel to gaudy zirconia.**
- 6) Alek Laudakus – Winter Haven Ct.; Feels it will be too big even at three stories and too much traffic.**
- 7) Katie Mendoza – Summer Ave.; Attorney with Ross Earl Bowman and Enzer, representing the Intervener and noted the main issues they presented last week being safety, the exits, traffic, and the density.**
- 8) Thomas Smart – Monroe St.; Commented on how nice the Avonlea project was but the question about affordability was not answered.**

 **8:05 PM MOTION: Accept clients request to continue item to March 23<sup>rd</sup>.**  
**Moved by: Vice Mayor Clarke**  
**Seconded by: Commissioner Matheson**  
**Motion passed unanimously.**

## **ORDINANCE SECOND READING**

### **12. SAFE AND SECURE SELF STORAGE AT STUART CPUD MINOR AMENDMENT (QUASIJUDICIAL):**

ORDINANCE No. 2430-2020; AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA APPROVING A MINOR AMENDMENT TO "SAFE AND SECURE SELFSTORAGE AT STUART" COMMERCIAL PLANNED UNIT DEVELOPMENT (CPUD) AT 700 SW FEDERAL HIGHWAY; THEREBY AMENDING THE CONDITIONAL OF APPROVAL FOR THE ART COMPONENT, ACCEPTANCE OF MINOR AMENDMENTS TO THE SITE PLAN, LANDSCAPE PLAN, ARCHITECTURE AND FLOOR PLAN; AMENDING THE CONDITIONS OF DEVELOPMENT ACCORDINGLY; PROVIDING AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

**4 People sworn; Kevin Freeman, Stephen Mayer, City of Stuart, Todd Troxell of HJA Design Studios, and Brandon Ulmer of Thomas Engineering.**

 **8:31 PM MOTION: Move approval.**  
**Moved by: Vice Mayor Clarke**  
**Seconded by: Commissioner Bruner**  
**Motion passed unanimously.**

## **DISCUSSION AND DELIBERATION**

 **8:40 PM ADJOURNMENT**

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**Mary R. Kindel, City Clerk**

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**Michael J. Meier, Mayor**

**Minutes to be approved at the Regular Commission Meeting this 23<sup>rd</sup> day of March, 2020.**



## CITY OF STUART, FLORIDA AGENDA ITEM REQUEST CITY COMMISSION

**Meeting Date:** 4/13/2020

**Prepared by:** bhogarth

**Title of Item:**

SAINT LUCIE ESTUARY LAKE DISCHARGE ELIMINATION VISION STATEMENT (RC):

RESOLUTION No. 37-2020; A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, ADOPTING A SAINT LUCIE ESTUARY LAKE DISCHARGE ELIMINATION VISION STATEMENT FOR THE PURPOSE OF DEFINING A FOCUSED VISION FOR THE CITY IN ALL FUTURE CORRESPONDENCE WITH THE UNITED STATES ARMY CORPS OF ENGINEERS, SOUTH FLORIDA WATER MANAGEMENT DISTRICT, AND OTHER LOCAL, STATE, AND FEDERAL AGENCIES CONCERNING THE MANAGEMENT OF LAKE OKEECHOBEE; REQUESTING THE UNITED STATES ARMY CORPS OF ENGINEERS ADOPT AN OPERATIONAL GOAL TARGETING AN 11 FOOT LAKE OKEECHOBEE ELEVATION (NGVD) BY JUNE 1ST EACH YEAR; PROVIDING FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

**Summary Explanation/Background Information on Agenda Request:**

The City of Stuart was approached by Dr. Gary Goforth on February 7th, 2020 with a draft vision statement to help focus local efforts on protecting human health, the economy, and the environment from toxic discharges out of Lake Okeechobee. Staff utilized the initial draft language to facilitate discussions with members of the community and other agencies in order to identify further priorities and language to consider in the vision statement.

The enclosed vision statement reflects on the catastrophic damage the Saint Lucie Estuary and surrounding community have experienced due to U.S. Army Corps of Engineers historical prioritization of water supply needs over the health and human safety of communities affected by Lake Okeechobee discharges. Resiliency of the Northern Estuaries is a primary objective in Lake Okeechobee System operations, but the St. Lucie Estuary has lost much of its resiliency due to decades of destructive discharges and operational decisions by the Army Corps. In order for the estuary to rebound and recover, damaging discharges must be prevented in their entirety for at least 10-15 years.

The visions statement also identifies the primary goal in achieving this end requires the Corps to target an 11 foot elevation (NGVD) of Lake Okeechobee by June 1st each year. To accomplish this objective, the Corps should prioritize sending maximum beneficial flows west to the Caloosahatchee, and south through to Florida Bay throughout the year. Equally as important will be for the Corps to ensure the majority of necessary discharges are released earlier in the dry season as opposed to later, when periodic rainfall events may occur and prohibit achieving this 11 foot target.

The language included within the vision statement will be used by staff as the primary focus for all future discussions with local, state, and federal agencies.

**Funding Source:**

N/A

**Recommended Action:**

Recommend approval of Resolution 37-2020 and adoption of Vision Statement as written.

**ATTACHMENTS:**

|   | <b>Description</b>                                                                  | <b>Upload Date</b> | <b>Type</b>               |
|---|-------------------------------------------------------------------------------------|--------------------|---------------------------|
| ▢ | R37-2020 Adopting a Saint Lucie Estuary Lake Discharge Elimination Vision Statement | 3/13/2020          | Resolution add to Y drive |
| ▢ | Saint Lucie Estuary Lake Discharge Elimination Vision Statement                     | 3/13/2020          | Attachment                |



**BEFORE THE CITY COMMISSION  
CITY OF STUART, FLORIDA**

**RESOLUTION NUMBER 37-2020**

**A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, ADOPTING A SAINT LUCIE ESTUARY LAKE DISCHARGE ELIMINATION VISION STATEMENT FOR THE PURPOSE OF DEFINING A FOCUSED VISION FOR THE CITY IN ALL FUTURE CORRESPONDENCE WITH THE UNITED STATES ARMY CORPS OF ENGINEERS, SOUTH FLORIDA WATER MANAGEMENT DISTRICT, AND OTHER LOCAL, STATE, AND FEDERAL AGENCIES CONCERNING THE MANAGEMENT OF LAKE OKEECHOBEE; REQUESTING THE UNITED STATES ARMY CORPS OF ENGINEERS ADOPT AN OPERATIONAL GOAL TARGETING AN 11 FOOT LAKE OKEECHOBEE ELEVATION (NGVD) BY JUNE 1<sup>ST</sup> EACH YEAR; PROVIDING FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.**

\* \* \* \* \*

**WHEREAS**, the U.S. Army Corps of Engineers have conveyed destructive freshwater discharges from Lake Okeechobee into the Saint Lucie Estuary since 1923; and

**WHEREAS**, the City of Stuart was the epicenter of the 2013, 2016, and 2018 algae crises, harmful algal bloom events spurred by decades of manmade conditioning, and proliferated by freshwater discharges from Lake Okeechobee; and

**WHEREAS**, it is the sense of the City of Stuart that these man-made disasters could have been avoided with a reformed approach to Lake Okeechobee management in which the health and

safety of the people, and the preservation of the natural environment, are paramount to maintaining an overabundance of water supply for agriculture and commercial users; and

**WHEREAS**, the United States Army Corps of Engineers have the opportunity to undo decades of catastrophic damage to the Saint Lucie Estuary, and to the communities it effects by modifying all future Lake Okeechobee System operations in a way that will allow for the natural ecosystem within the St. Lucie Estuary to reestablish biodiversity and resiliency, a primary objective within the Lake Okeechobee Regulation Schedule; and

**WHEREAS**, the City of Stuart requests the U.S. Army Corps of Engineers target level of 11 foot elevation (NGVD) of the Lake by June 1<sup>st</sup> each year as its operational goal, while maximizing beneficial flows west and south of the Lake throughout the dry season, thereby providing the Saint Lucie Estuary, its natural environment and ecology, and the residents of the City of Stuart the critical relief that is so urgently needed.

NOW THEREFORE BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, THAT:

**SECTION 1:** The foregoing precatory language is adopted as being true and correct and is incorporated herein.

**SECTION 2:** The City Commission of the City of Stuart, Florida adopts the enclosed vision statement for the purpose of identifying a focus for all future correspondence with the U.S. Army Corps of Engineers, South Florida Water Management District, and other local, state, and federal agencies concerning the management of Lake Okeechobee.

**SECTION 3:** The City Commission requests the U.S. Army Corps of Engineers adopt an operational goal targeting an 11 foot Lake Okeechobee elevation (NGVD) by June 1<sup>st</sup> each year, while providing maximum beneficial flows both south and west of the Lake in order to eliminate the need to discharge water to the Saint Lucie Estuary and to provide time for this ecosystem to recover and rebuild its resiliency.

**SECTION 4:** This Resolution shall become effective upon its adoption.

Resolution No. 37-2020

Resolution adopting a St. Lucie Estuary Lake Discharge Elimination Vision Statement

Commissioner \_\_\_\_\_ offered the foregoing resolution and moved its adoption. The motion was seconded by Commissioner \_\_\_\_\_ and upon being put to a roll call vote, the vote was as follows:

MICHAEL J. MEIER, MAYOR  
EULA R. CLARKE, VICE MAYOR  
BECKY BRUNER, COMMISSIONER  
KELLI GLASS LEIGHTON, COMMISSIONER  
MERRITT MATHESON, COMMISSIONER

| YES | NO | ABSENT | ABSTAIN |
|-----|----|--------|---------|
|     |    |        |         |
|     |    |        |         |
|     |    |        |         |
|     |    |        |         |
|     |    |        |         |

ADOPTED this \_\_\_\_ day of \_\_\_\_\_, 2020.

ATTEST:

\_\_\_\_\_  
MARY R. KINDEL  
CITY CLERK

\_\_\_\_\_  
MICHAEL J. MEIER  
MAYOR

APPROVED AS TO FORM  
AND CORRECTNESS:

\_\_\_\_\_  
MICHAEL J. MORTELL  
CITY ATTORNEY



## **St. Lucie Estuary Lake Discharge Elimination Vision Statement**

Lake Okeechobee discharges have been impacting the City of Stuart since 1923.

**Human health has suffered.** As a result of harmful, polluted freshwater discharges, the citizens of Stuart and surrounding areas have been exposed to dangerous toxins that have adversely impacted human health. A recent study from The Ohio State University found that our region experiences deaths due to nonalcoholic liver diseases nearly twice that of the national average. This higher rate of death is correlated to Lake Okeechobee discharges containing or otherwise proliferating toxic cyanobacteria in the region (OSU 2015). Other studies raise concerns over potential increased risk of both cancers and neurological and neurodegenerative diseases resulting from human contact with the cyanobacterial toxin microcystin.

**Our economy has suffered.** In addition, polluted discharges from Lake Okeechobee have adversely impacted the region's economy through depressed retail and commercial business revenue, loss of water-related jobs, and other partial or total losses to businesses that rely on clean water in the St. Lucie Estuary. A recent economic analysis by (Martin County, 2017) determined that not only have both sales revenues and hotel occupancy rates been impacted by algae bloom events, but overall visitations can be reduced regionally for up to 10 years following these environmental and health-related crises.

**Our environment has suffered.** Furthermore, the region's estuarine and near-shore ecosystems have been significantly degraded with catastrophic impact and potentially irreversible damage caused by the transport and deposition of millions of tons of sediment (muck) and nutrients from Lake Okeechobee, into the Saint Lucie Estuary. Infrequent and intermittent relief from these damaging discharges has failed to allow aquatic life in the Saint Lucie Estuary to rebound to the point of reestablished biodiversity and resiliency, thereby compounding the man-made threat posed to this ecosystem.

**The U.S. Army Corps of Engineers (Corps) is primarily responsible for sending polluted water to the St. Lucie Estuary.** Since 2008, operations by the Corps have exacerbated the human health, economic, and environmental impacts as a result of discharging greater volumes of polluted lake water during the summer and fall months when toxic algae are more prevalent. However, during 2019, the Corps and the South Florida Water Management District moved enough lake water west and south during the dry season to sufficiently allow the lake to drop below 11.0 ft by June 1st. No Lake Okeechobee Service Area (LOSA) water supply users experienced significant damages by having the lake at that level; in addition, submerged aquatic vegetation in the lake rebounded by fivefold, and further expansion is critical to both the recovery and resiliency of this fragile ecosystem. As a result of achieving this low stage at the beginning of the rainy season, it was not necessary to make damaging releases to the St. Lucie Estuary during the summer and fall of 2019.

**Operational Goal.** While lake stage on June 1st is not the sole determinant, lowering Lake Okeechobee's water level below the nominal target of 12.5 ft by June 1st will reduce the potential for discharges of potentially toxic lake water to the City of Stuart and the St. Lucie Estuary. *The fastest, simplest, and cheapest way to minimize toxic and damaging discharges to the estuaries is to lower the lake by sending maximum beneficial freshwater flows south to the Everglades National Park and west to the Caloosahatchee River throughout the dry season, and not to the St. Lucie River with a goal of bringing Lake Okeechobee to a target level of 11 feet NGVD or lowest achievable level by June 1st, the start of the wet season. To accomplish this goal, the U.S. Army Corps of Engineers should prioritize sending maximum beneficial flows south and west earlier in the dry season. Any and all freshwater discharges to the St. Lucie Estuary should be identified as a "measure of last resort" in all operational parameters within the Lake Okeechobee water management system.*

This operational goal is within the current operational flexibility of the U.S. Army Corps of Engineers, as defined in the Lake Okeechobee Regulation Schedule (LORS08).

The City of Stuart is committed to continued coordination with the Corps, the District, and other local, state, and federal agencies to achieve this goal.

#### **References:**

**The Ohio State University, 2015.** Zhang, F., Lee, J., Liang, S. *et al.* Cyanobacteria blooms and non-alcoholic liver disease: evidence from a county level ecological study in the United States. *Environ Health* 14, 41 (2015). <https://doi.org/10.1186/s12940-015-0026-7>.

**Tourism Economics, An Oxford Economics Company, on behalf of Martin County, FL 2017.** The Impact of the 2016 Algae Blooms in Martin County, FL. Losses Suffered by the Tourism Sector and Overall Economy.

## CITY OF STUART, FLORIDA AGENDA ITEM REQUEST CITY COMMISSION

**Meeting Date:** 4/13/2020

**Prepared by:** Stephen Mayer

**Title of Item:**

ABANDONMENT OF RIGHT OF WAY AT OSCEOLA STREET (RC):

ORDINANCE No. 2431-2020; AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA TO PROVIDE FOR THE ABANDONMENT OF CERTAIN PUBLIC RIGHT-OF-WAY WITHIN THE CITY BEING THAT CERTAIN 50-FOOT RIGHT-OF-WAY, AS SET FORTH ON THE PLAT OF KRUEGER PARK, AS RECORDED IN PLAT BOOK 1, PAGE 25, PALM BEACH (NOW MARTIN) COUNTY, FLORIDA PUBLIC RECORDS RUNNING EAST TO WEST, DESCRIBED IN EXHIBIT "A" ATTACHED HERETO AND DEPICTED IN EXHIBIT "B" ATTACHED HERETO; PROVIDING FOR PAYMENT OF A PRIVILEGE FEE; PROVIDING FOR SEVERABILITY; PROVIDING AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

**Summary Explanation/Background Information on Agenda Request:**

The applicant, Richard Baron, owner of real property at 181 SE Monterey Avenue, has requested the abandonment of a 50-foot unutilized portion of Osceola Street public Right-of-Way. The 50-foot right of way is located north of 181 SE Monterey Avenue, east of Monterey Road and between PCN# 02-38-41-001-003-00150-1 and 03-38-41-006-006-00010-7.

The City's Public Works Department has determined that the use of the Right of Way is no longer in the public's best interest and does not object to the abandonment of the City's interest. A fair market appraisal of the real property has determined that the market value of the property is \$26,000.

As provided in Section 36-2 of the City's Code of Ordinances, staff recommends payment of a privilege fee in the amount of 100% of the market value, or \$26,000, prior to the abandonment of the City's interest.

The procedure for abandonment of City owned Right-Of-Way is set out in Section 36-3 of The City's Code of Ordinances which requires the city commission to first pass a resolution declaring intent to abandon right-of-way.

The vacation or change of any street, alley, road or public way shall be accomplished by Ordinance. The city commission, in vacating any street or part of a street or changing the name of any street, may include in one ordinance the changes of name or vacation or narrowing of more than one street, avenue or alley, but before vacating any street or part thereof, or narrowing any street, avenue or alley. At its meeting of March 9th 2020, the City commission voted to pass Resolution 16-2020 declaring its intention to abandon the subject ROW. During the initial meeting, it was determined that Snug Harbor wrote a letter to the City declining the offer to receive 1/2 of the property. It was later stated by a Snug Harbor resident that the vote was related to the payment of the privilege fee and if there was no privilege fee the outcome might be different. As a result, the Commission asked Snug Harbor to determine if it would accept the property if there was no privilege fee.

**Funding Source:**

N/A

**Recommended Action:**

Move to approve Ordinance No 2431-2020, declaration the abandonment certain Right-of-Way within the City's limits and acceptance of a \$26,000 privilege fee.

**ATTACHMENTS:**

| <b>Description</b>       | <b>Upload Date</b> | <b>Type</b>        |
|--------------------------|--------------------|--------------------|
| ▣ Ordinance 2431-2020    | 3/13/2020          | DRAFT<br>ORDINANCE |
| ▣ Sketch of Right of Way | 2/27/2020          | Exhibit            |
| ▣ Krueger Park Plat      | 2/27/2020          | Attachment         |





**BEFORE THE CITY  
COMMISSION CITY OF  
STUART, FLORIDA**

**ORDINANCE NUMBER 2431-2020**

**A ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA TO PROVIDE FOR THE ABANDONMENT OF CERTAIN PUBLIC RIGHT-OF-WAY WITHIN THE CITY BEING THAT CERTAIN 50-FOOT RIGHT-OF-WAY, AS SET FORTH ON THE PLAT OF KRUEGER PARK, AS RECORDED IN PLAT BOOK 1, PAGE 25, PALM BEACH (NOW MARTIN) COUNTY, FLORIDA PUBLIC RECORDS RUNNING EAST TO WEST, DESCRIBED IN EXHIBIT “A” ATTACHED HERETO AND DEPICTED IN EXHIBIT “B” ATTACHED HERETO; PROVIDING FOR PAYMENT OF A PRIVILEGE FEE; PROVIDING FOR SEVERABILITY; PROVIDING AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.**

**\* \* \* \* \***

WHEREAS, Richard Baron (The “Applicant”) have filed a petition for abandonment relating to the public right-of-way described below that conforms to the requirements of Section 36 of the Code of Ordinances of the City of Stuart, Florida; and

WHEREAS, at the public hearing to consider the requested abandonment the City Commission has determined that it is the best public interest that the said right-of-way be abandoned as said right-of-way is needed for continuity of existing parcels; and

WHEREAS, Cooper Osteen (License #: RI22707) conducted a fair market appraisal of



said property on November 16, 2013, and determined that the market value of the real property is **TWENTY-SIX THOUSAND DOLLARS (\$26,000)**.

NOW, THEREFORE, THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA ordains, as follows:

SECTION 1: That any interest vested with the City of Stuart in that certain 50-foot right-of-way, as set forth as a portion of Osceola Street, running east to west, abutting Lot 1 of Block 6, according the Plat of KREUGER PARK, as recorded in Plat Book 1, Page 25, Palm Beach (Now Martin) County, Florida Public Records running east to west through the Property described in **Exhibit “A”** attached hereto and depicted in **Exhibit “B”** attached hereto is hereby abandoned.

SECTION 2: A location map depicting the subject area is hereby attached as **Exhibit “C.”**

SECTION 3: The Applicants agree to pay the privilege fee in the amount of **TWENTY-SIX THOUSAND DOLLARS (\$26,000)** to be received and deposited into the city’s property management fund within 90 days of approval, otherwise this Ordinance shall become null and void.

SECTION 4: Conflicts. All ordinances or parts of ordinances in conflict herewith shall be repealed.

SECTION 5: Severability: If any word, clause, sentence, paragraph, section or part thereof contained in this Ordinance is declared to be unconstitutional, unenforceable, void or inoperative by a court of competent jurisdiction, such declaration shall not affect the validity of the remainder of this ordinance.

SECTION 6: Effective Date: This Ordinance shall become effective immediately upon adoption.

Passed on first reading the \_\_\_\_ day of \_\_\_\_\_, 2020.

Commissioner \_\_\_\_\_ offered the foregoing Ordinance and moved its adoption. The motion was seconded by Commissioner \_\_\_\_\_ and upon being put to a roll call vote, the vote was as follows:

MICHAEL J. MEIER, MAYOR  
EULA R. CLARKE, VICE MAYOR  
BECKY BRUNER, COMMISSIONER  
KELLI GLASS LEIGHTON, COMMISSIONER  
MERRITT MATHESON, COMMISSIONER

| YES | NO | ABSENT | ABSTAIN |
|-----|----|--------|---------|
|     |    |        |         |
|     |    |        |         |
|     |    |        |         |
|     |    |        |         |
|     |    |        |         |

ADOPTED on second and final reading this \_\_\_\_ day of \_\_\_\_\_, 2020.

ATTEST:

\_\_\_\_\_  
MARY R. KINDEL  
CITY CLERK

\_\_\_\_\_  
MICHAEL J. MEIER  
MAYOR

APPROVED AS TO FORM  
AND CORRECTNESS:

\_\_\_\_\_  
MICHAEL J. MORTELL  
CITY ATTORNEY

WITNESSES:

Richard Baron, Owner

\_\_\_\_\_  
Print Name: \_\_\_\_\_

By: \_\_\_\_\_

\_\_\_\_\_  
Print Name: \_\_\_\_\_

PETITIONER'S ACKNOWLEDGMENT

The above Ordinance, Acceptance and Agreement was acknowledged before me this \_\_\_\_\_ day  
of \_\_\_\_\_, 2020, by Richard Baron.

\_\_\_\_\_  
Notary Public, State of Florida

My Commission Expires:

Notary Seal

Personally Known \_\_\_\_\_ OR Produced Identification \_\_\_\_\_

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

CITY'S ACKNOWLEDGMENT

The above Ordinance, Acceptance and Agreement was acknowledged before me this \_\_\_\_\_ day  
of \_\_\_\_\_, 2020, by Michael J. Meier, Mayor, and Mary R. Kindel, City Clerk,  
respectively, of the City of Stuart, Florida, a Florida municipal corporation.

\_\_\_\_\_  
Notary Public, State of Florida

My Commission Expires:

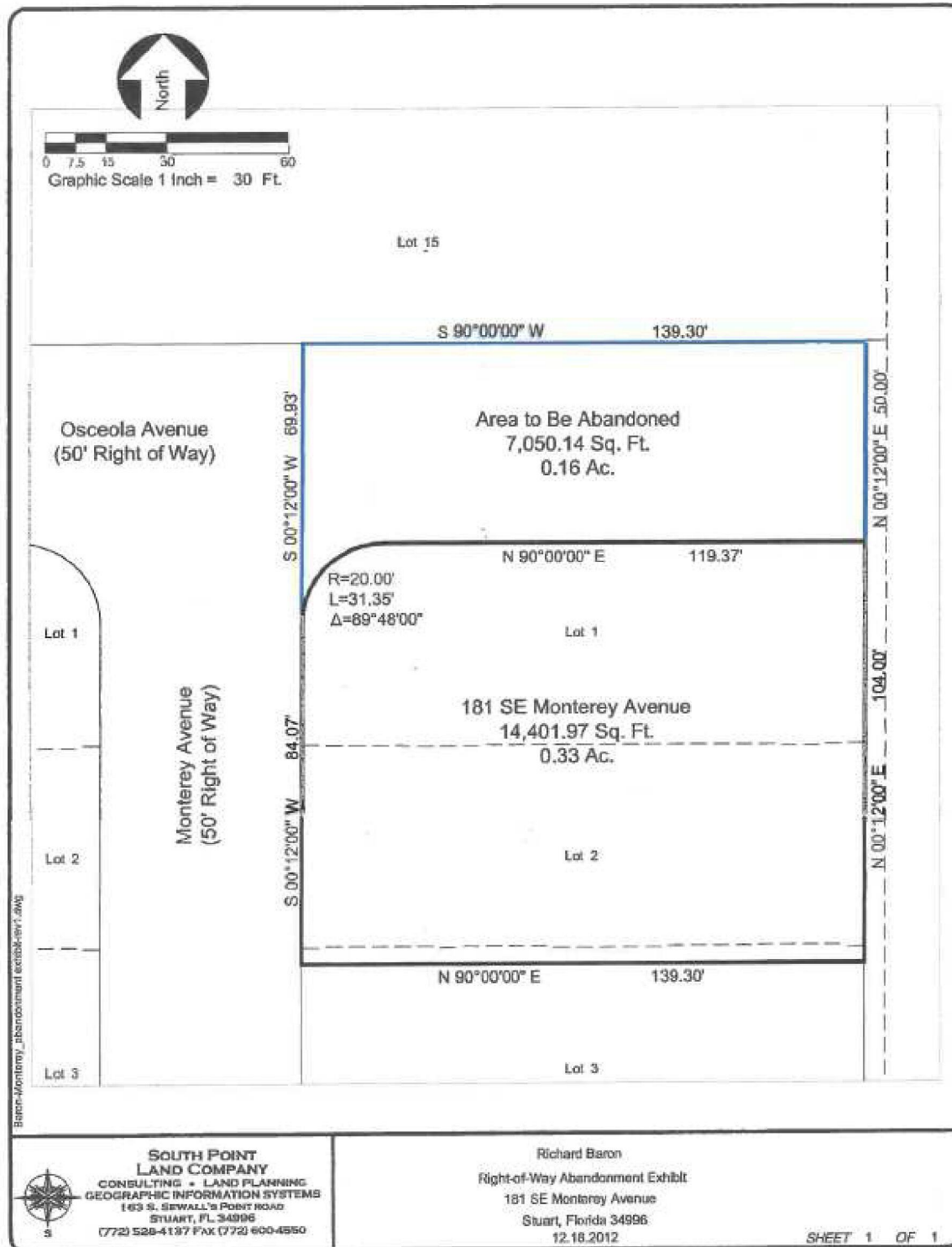
Notary Seal

Personally Known \_\_\_\_\_ OR Produced Identification \_\_\_\_\_

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



## EXHIBIT “B”





## EXHIBIT “C”





0 7.5 15 30 60  
Graphic Scale 1 Inch = 30 Ft.

Lot 15

S 90°00'00" W 139.30'

Osceola Avenue  
(50' Right of Way)

Area to Be Abandoned  
7,050.14 Sq. Ft.  
0.16 Ac.

N 00°12'00" E 50.00'

N 00°12'00" E 104.00'

Lot 1

S 00°12'00" W 69.93'

R=20.00'  
L=31.35'  
Δ=89°48'00"

N 90°00'00" E 119.37'

Lot 1

181 SE Monterey Avenue  
14,401.97 Sq. Ft.  
0.33 Ac.

Lot 2

S 00°12'00" W 84.07'

Lot 2

N 90°00'00" E 139.30'

Lot 3

Lot 3

Monterey Avenue  
(50' Right of Way)

Baron-Monterey\_abandonment exhibit-rev1.dwg

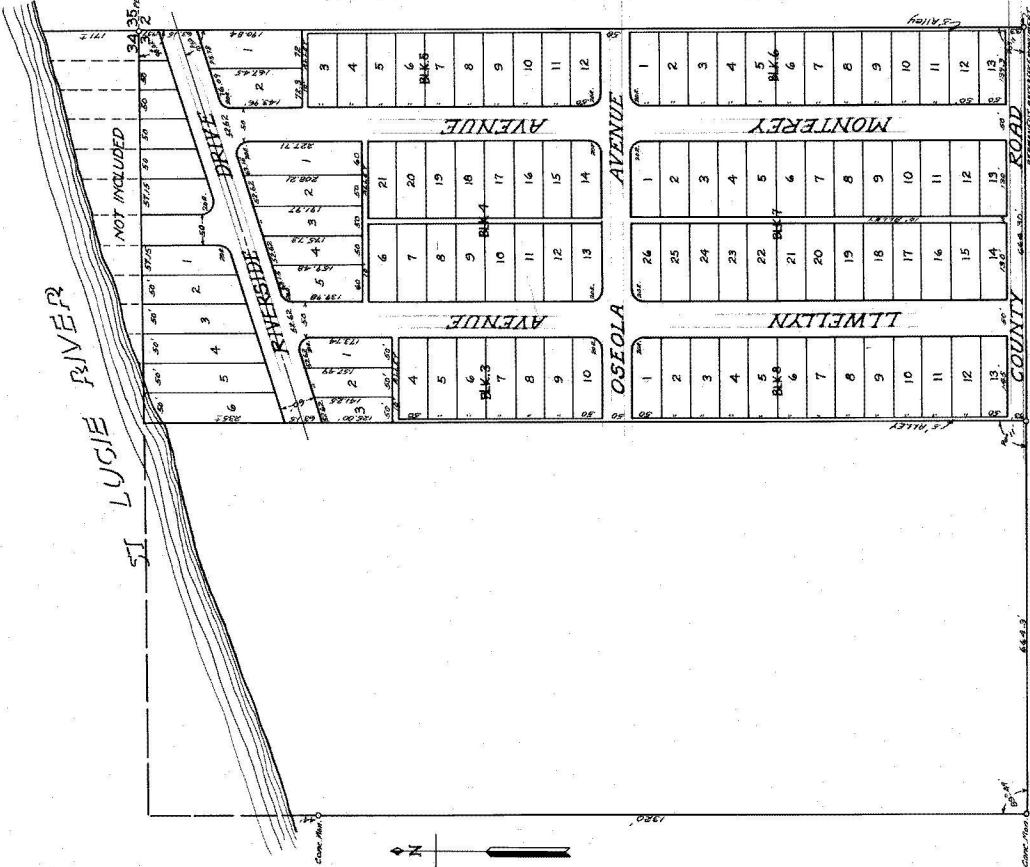


**SOUTH POINT  
LAND COMPANY**  
CONSULTING • LAND PLANNING  
GEOGRAPHIC INFORMATION SYSTEMS  
163 S. SEWALL'S POINT ROAD  
STUART, FL 34996  
(772) 528-4137 FAX (772) 600-4550

Richard Baron  
Right-of-Way Abandonment Exhibit  
181 SE Monterey Avenue  
Stuart, Florida 34996  
12.18.2012

SHEET 1 OF 1

# KRUEGER PARK STUART, FLORIDA MARTIN COUNTY



EXAMINED AND CHECKED AND RECOMMENDED FOR APPROVAL

STUART FLA Dec 30 1925 CITY ENGINEER

APPROVED AS RECOMMENDED

CHARITAN J. C. Taylor

ATTEST

Clara J. S. S. S.

CITY CLERK

APPROVED

STUART FLA Jan 6th 1926 COUNTY SURVEYOR MARTIN CO.

RECOMMENDED TO CITY COMMISSION FOR APPROVAL

STUART FLA Jan 4th 1926 CITY PLAT BOARD

LOCATION

CRUEGER

SECRETARY

CRUEGER

CRUEGER

CRUEGER

CRUEGER

CRUEGER

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This is a true copy of the Original Plat of Record of KRUEGER PARK, Plat Book 2, Page 85 Martin County, Florida.

Notary Public for Florida

Notary Public for Florida

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## ENGINEERS CERTIFICATE

We certify that the location measurements and grades of the boundary lines of the above described land have been made and found to be correct and that the same have been duly recorded in the public records of the County of Martin, Florida, and that the same are now a part of the public records of the County of Martin, Florida.

Notary Public for Florida

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## CITY OF STUART, FLORIDA AGENDA ITEM REQUEST CITY COMMISSION

**Meeting Date:** 4/13/2020

**Prepared by:** Kev Freeman

**Title of Item:**

AMENDMENT TO CITY TREE REPLACEMENT CODE TO COMPLY WITH STATE STATUTE AND INNOVATIVE STORMWATER DESIGN (RC):

ORDINANCE No. 2432-2020; AN ORDINANCE OF THE CITY OF STUART, FLORIDA, AMENDING THE EXISTING CHAPTER V OF THE CITY'S LAND DEVELOPMENT CODE ENTITLED 'RESOURCE PROTECTION RELATED DEVELOPMENT STANDARDS' TO COMPLY WITH STATE STATUTE REGARDING TREE REMOVAL PERMITS AND TO PROMOTE INNOVATIVE STORMWATER TREATMENT AND LOW IMPACT DEVELOPMENT PRACTICES AND TO ALLOW THE CITY'S TREE REPLACEMENT FUND TO BE UTILIZED FOR INNOVATIVE STORMWATER TREATMENT SYSTEMS ON PUBLIC LANDS; PROVIDING FOR REPEAL OF CONFLICTING ORDINANCES; PROVIDING FOR SEVERABILITY; PROVIDING FOR CODIFICATION; AND PROVIDING FOR AN EFFECTIVE DATE, AND FOR OTHER PURPOSES.

**Summary Explanation/Background Information on Agenda Request:**

This amendment to the land development code sets out the following changes:

1. Compliance with HB1159 (adopted as Florida Statute Section 163.45) which prevents a municipality from requiring a tree removal permit on residential properties when an arborist or landscape architect provides documentation that the tree presents a danger to persons or property.
2. Promote the implementation of Innovative Stormwater Design. This amendment allows credits to the required tree mitigation to be allowed subject to the removal of certain percentages of Nitrates and Phosphates on site. The higher the amount of removal the higher the potential credit. The amount of credit is based on the probable cost of construction of the additional stormwater treatment installation.
3. Promote the use of Low Impact Development (LID) practices that incorporate practices such as bio-swales, rain gardens and pervious pavements. This amendment allows credits to the required tree mitigation. Reference material published by the University of Florida IFAS and entitled Field Guide to Low Impact Development (2008) is attached.
4. Promote additional tree canopy coverage by the use of shade trees within landscape design. This amendment allows credits to the required tree replacement fund based on the proportion of tree canopy coverage provided.
5. Promote a natural habitat environment by providing that additional inches required under the tree replacement calculation may be credited through the planting of native understory shrubs that are made in addition to landscaping code requirements. Credit is calculated based on shrub size.
6. Extend the use of the City's Tree Replacement fund to include potential use of the fund for innovative stormwater treatment and living shoreline projects within the City's right of way and City property.

This item was heard by the Local Planning Agency on February 20, 2020, and was recommended for approval

The LPA had comments regarding the use of palms to replace slash pine. The ordinance has been amended to expand the potential to use additional trees and shrub species. The Item was presented to the City Commission on March 9th, 2020 and was approved with the incorporation of Royal Poinciana and Sabal Palm trees added to the allowable tree species list.

**Funding Source:**

N/A

**Recommended Action:**

Motion to Approve

**ATTACHMENTS:**

| Description                            | Upload Date | Type            |
|----------------------------------------|-------------|-----------------|
| ▣ House of Representatives Memo HB1159 | 1/24/2020   | Backup Material |
| ▣ Florida Statutes adopting HB 1159    | 3/2/2020    | Backup Material |
| ▣ LID- IFAS Bio Swales                 | 1/29/2020   | Backup Material |
| ▣ LID- IFAS Bio Retention              | 1/29/2020   | Backup Material |
| ▣ LID- IFAS Cisterns                   | 1/29/2020   | Backup Material |
| ▣ LID- IFAS Stormwater Basins          | 1/29/2020   | Backup Material |
| ▣ LID- IFAS Exfiltration               | 1/29/2020   | Backup Material |
| ▣ LID- IFAS Eco Roofs                  | 1/29/2020   | Backup Material |
| ▣ LID- IFAS Site Preparation           | 1/29/2020   | Backup Material |
| ▣ LID- IFAS Permeable Surfaces         | 1/29/2020   | Backup Material |
| ▣ LID- IFAS Resource Efficiency        | 1/29/2020   | Backup Material |
| ▣ LID- IFAS Moisture Sensors           | 1/29/2020   | Backup Material |
| ▣ LID- IFAS Stormwater Reuse           | 1/29/2020   | Backup Material |





## The Florida House of Representatives

Office of the Speaker

### MEMORANDUM

**To:** Local Government Officials  
**From:** Jose R. Oliva, Speaker  
Florida House of Representatives  
**Date:** January 07, 2020  
**Re:** Private Property Rights, Chapter 2019-155, Laws of Florida

Please take note of legislation passed in the 2019 session and signed into law by Governor Ron DeSantis. CS/HB 1159 prohibits a local government from requiring a notice, application, approval, permit, fee, or mitigation for the pruning, trimming, or removal of a tree on residential property when an arborist or landscape architect documents that the tree presents a danger to persons or property.

Continued enforcement of local regulations in conflict with this provision will constitute illegal requirements under this new law. I strongly encourage you to review your local ordinances that may restrict property owners' ability to remove or prune trees. Staff of the House of Representatives are available to discuss any questions you may have about the bill.

Please expect the House to be diligent in executing its oversight responsibilities in order to protect the rights of property owners and prevent any illegal governmental actions that interfere with these rights.

Thank you for your attention to this important issue.

RECEIVED

JAN 21 2021

CITY OF STUART-CITY MGR.

ENROLLED

CS/HB 1159

2019 Legislature

1  
2       An act relating to private property rights; creating  
3       s. 163.045, F.S.; prohibiting local governments from  
4       requiring notices, applications, approvals, permits,  
5       fees, or mitigation for the pruning, trimming, or  
6       removal of trees on residential property if a property  
7       owner obtains specified documentation; prohibiting  
8       local governments from requiring property owners to  
9       replant such trees; providing an exception for  
10      mangrove protection actions; amending s. 163.3209,  
11      F.S.; deleting a provision that authorizes electric  
12      utilities to perform certain right-of-way tree  
13      maintenance only if a property owner has received  
14      local government approval; creating s. 70.002, F.S.;  
15      creating a Property Owner Bill of Rights; requiring  
16      county property appraisers to provide specified  
17      information on their websites; providing an effective  
18      date.

19  
20   Be It Enacted by the Legislature of the State of Florida:

21  
22       Section 1.   Section 163.045, Florida Statutes, is created  
23   to read:

24       163.045   Tree pruning, trimming, or removal on residential  
25   property.—

Page 1 of 6

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

hb1159-02-er

ENROLLED

CS/HB 1159

2019 Legislature

26       (1) A local government may not require a notice,  
27 application, approval, permit, fee, or mitigation for the  
28 pruning, trimming, or removal of a tree on residential property  
29 if the property owner obtains documentation from an arborist  
30 certified by the International Society of Arboriculture or a  
31 Florida licensed landscape architect that the tree presents a  
32 danger to persons or property.

33       (2) A local government may not require a property owner to  
34 replant a tree that was pruned, trimmed, or removed in  
35 accordance with this section.

36       (3) This section does not apply to the exercise of  
37 specifically delegated authority for mangrove protection  
38 pursuant to ss. 403.9321-403.9333.

39       Section 2. Section 163.3209, Florida Statutes, is amended  
40 to read:

41       163.3209 Electric transmission and distribution line  
42 right-of-way maintenance.—After a right-of-way for any electric  
43 transmission or distribution line has been established and  
44 constructed, no local government shall require or apply any  
45 permits or other approvals or code provisions for or related to  
46 vegetation maintenance and tree pruning or trimming within the  
47 established right-of-way. The term "vegetation maintenance and  
48 tree pruning or trimming" means the mowing of vegetation within  
49 the right-of-way, removal of trees or brush within the right-of-  
50 way, and selective removal of tree branches that extend within



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CS/HB 1159

2019 Legislature

51 the right-of-way. The provisions of this section do not include  
52 the removal of trees outside the right-of-way, which may be  
53 allowed in compliance with applicable local ordinances. Prior to  
54 conducting scheduled routine vegetation maintenance and tree  
55 pruning or trimming activities within an established right-of-  
56 way, the utility shall provide the official designated by the  
57 local government with a minimum of 5 business days' advance  
58 notice. Such advance notice is not required for vegetation  
59 maintenance and tree pruning or trimming required to restore  
60 electric service or to avoid an imminent vegetation-caused  
61 outage or when performed at the request of the property owner  
62 adjacent to the right-of-way, ~~provided that the owner has~~  
63 ~~approval of the local government, if needed.~~ Upon the request of  
64 the local government, the electric utility shall meet with the  
65 local government to discuss and submit the utility's vegetation  
66 maintenance plan, including the utility's trimming  
67 specifications and maintenance practices. Vegetation maintenance  
68 and tree pruning or trimming conducted by utilities shall  
69 conform to ANSI A300 (Part I)-2001 pruning standards and ANSI  
70 Z133.1-2000 Pruning, Repairing, Maintaining, and Removing Trees,  
71 and Cutting Brush-Safety Requirements. Vegetation maintenance  
72 and tree pruning or trimming conducted by utilities must be  
73 supervised by qualified electric utility personnel or licensed  
74 contractors trained to conduct vegetation maintenance and tree  
75 trimming or pruning consistent with this section or by Certified

Page 3 of 6

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

hb1159-02-er

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CS/HB 1159

2019 Legislature

76 | Arborists certified by the Certification Program of the  
77 | International Society of Arboriculture. A local government shall  
78 | not adopt an ordinance or land development regulation that  
79 | requires the planting of a tree or other vegetation that will  
80 | achieve a height greater than 14 feet in an established electric  
81 | utility right-of-way or intrude from the side closer than the  
82 | clearance distance specified in Table 2 of ANSI Z133.1-2000 for  
83 | lines affected by the North American Electric Reliability  
84 | Council Standard, FAC 003.1 requirement R1.2. This section does  
85 | not supersede or nullify the terms of specific franchise  
86 | agreements between an electric utility and a local government  
87 | and shall not be construed to limit a local government's  
88 | franchising authority. This section does not supersede local  
89 | government ordinances or regulations governing planting,  
90 | pruning, trimming, or removal of specimen trees or historical  
91 | trees, as defined in a local government's ordinances or  
92 | regulations, or trees within designated canopied protection  
93 | areas. This section shall not apply if a local government  
94 | develops, with input from the utility, and the local government  
95 | adopts, a written plan specifically for vegetation maintenance,  
96 | tree pruning, tree removal, and tree trimming by the utility  
97 | within the local government's established rights-of-way and the  
98 | plan is not inconsistent with the minimum requirements of the  
99 | National Electrical Safety Code as adopted by the Public Service  
100 | Commission; provided, however, such a plan shall not require the

Page 4 of 6

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

hb1159-02-er



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CS/HB 1159

2019 Legislature

planting of a tree or other vegetation that will achieve a height greater than 14 feet in an established electric right-of-way. Vegetation maintenance costs shall be considered recoverable costs.

Section 3. Section 70.002, Florida Statutes, is created to read:

70.002 Property Owner Bill of Rights.-Each county property appraiser office shall provide on its website a Property Owner Bill of Rights. The purpose of the bill of rights is to identify certain existing rights afforded to property owners but is not a comprehensive guide. The Property Owner Bill of Rights does not create a civil cause of action. The Property Owner Bill of Rights must state:

PROPERTY OWNER

BILL OF RIGHTS

This Bill of Rights does not represent all of your rights under Florida law regarding your property and should not be viewed as a comprehensive guide to property rights. This document does not create a civil cause of action and neither expands nor limits any rights or remedies provided under any other law. This document does not replace the need to seek legal advice in matters relating to property law. Laws relating to your rights are found in the State Constitution, Florida Statutes, local ordinances, and court decisions. Your rights and protections

ENROLLED

CS/HB 1159

2019 Legislature

include:

1. The right to acquire, possess, and protect your property.

2. The right to use and enjoy your property.

3. The right to exclude others from your property.

4. The right to dispose of your property.

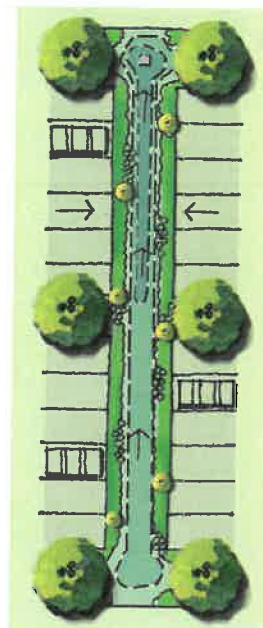
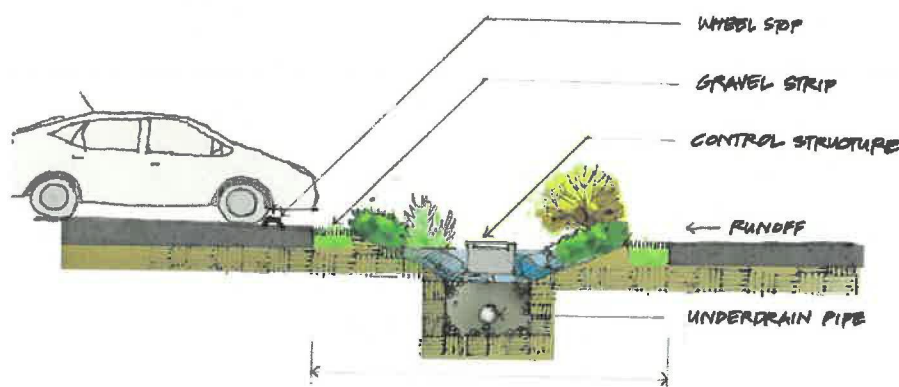
5. The right to due process.

6. The right to just compensation for property taken for a public purpose.

7. The right to relief, or payment of compensation, when a new law, rule, regulation, or ordinance of the state or a political entity unfairly affects your property.

Section 4. This act shall take effect July 1, 2019.

## Bioswales/Vegetated Swales



This bioswale cross section (left) depicts the swale with an underdrain, which may not be necessary in naturally well drained soils. Surface runoff from the adjacent impervious area enters the swale diffusely through an energy reducing gravel strip and then flows through vegetative buffers along the edge of the bioswale. Swales can be designed with swale blocks (dashed lines perpendicular to flow arrows in plan view (right)) if there is a significant slope or by setting the discharge elevation of the control structure higher than the swale bottom if the swale has little relief.

### Definition:

A bioswale or vegetated swale is a form of bioretention used to partially treat water quality, attenuate flooding potential and convey stormwater away from critical infrastructure. These systems are linear, with length to width dimensions much greater than the more typical 2:1 applied to bioretention cells.

### Applications

- Parking lot island and medians
- Residential roadside swales
- Highway medians
- Landscape buff

### Objectives:

The function of these open-channel (broad) drainageways is to convey stormwater runoff. They are often used as an alternative to, or an enhancement of, traditional stormwater piping. Bioswales are often integrated into parking lot and road medians and parallel to roadways to infiltrate and treat a portion of the stormwater volume. These systems can often be integrated into existing ditch and swale systems to increase their treatment function. Where soils are well drained, infiltration can also be facilitated in the swale by placing ditch blocks or weirs perpendicular to the flow path, causing small volumes of water to be captured in the swale and allowing more time for infiltration.



## Overview:

Conveyance systems are often required to move stormwater away from critical infrastructure. The purpose of a bioswale is to increase the function of these conveyance systems by integrating features that improve water quality, reduce runoff volume and enhance landscape aesthetics. By creating in-swale storage opportunities, small storm volumes can be captured and allowed to infiltrate within the bioswale. Where soils are poorly drained, under drain systems may be used to attenuate peak flows and force water stored within the swale through a soil filter media before continuing downstream. For larger flow events, vegetation within the swale and ditch blocks helps to stabilize soils and increase sedimentation potential. The shape and location of the bioswale and selection of vegetation can also be integrated into the site's overall landscaping design to create a multifunctional system. The size of the bioswale will determine the volume of runoff that can be stored or reduced, as well as the treatment benefits. Where the volume of runoff exceeds that of the bioswale(s), further stormwater devices will be required to handle the design storm.

Bioswales can be found in an open area or within a restricted area like a parking lot. Two types of vegetated swales are commonly used. Dry swales provide both quantity (volume) and quality control by facilitating stormwater infiltration. Wet swales use residence time and natural growth to reduce peak discharge and provide water quality treatment. A wet swale typically has water tolerant vegetation permanently growing in the retained body of water. Swales are most effective when used in conjunction with other IMPs, such as bioretention basins and infiltration trenches.

## Water Protection Benefits:

**Water conservation implications** – Like bioretention basins/rain gardens, vegetated swales are designed to capture and retain stormwater in recessed drainageways, which typically do not need irrigation beyond plant establishment. These areas can provide significant aesthetic benefit while avoiding water requirements associated with other landscape types. They can also conserve biodiversity when native plants are used.

**Stormwater implications** – Bioretention swales provide both stormwater treatment and conveyance functions. The swale component provides pre-treatment of stormwater to

### Benefits:

- Treat water quality using soil, vegetation and microbes
- Reduce total volume of stormwater runoff
- Increase infiltration and groundwater recharge
- Multifunctional conveyance system
- Can be aesthetic part of landscape and improve biodiversity

remove coarse to medium sediments, while the bioretention system removes finer particulates and associated contaminants. Bioretention swales filter stormwater via the following processes: 1) passing through surface vegetation; 2) percolating through prescribed filter media, which provides treatment through fine filtration, extended detention treatment and some biological uptake; 3) disconnecting impervious areas from downstream waterways; and 4) providing protection to natural wetland systems from frequent storm events by reducing storm flow velocities when compared to pipe systems.

## Design Considerations:

This is an infiltration dependent practice affected by soil type, groundwater table, size of the area serviced, imperviousness of the contributing watershed, and dimensions and slope of the swale system. Swales are impractical for areas with very flat grades or steep slopes, and should be used to serve areas of less than 10 acres with slopes no greater than 5%. As a simple rule of thumb, the total surface area of the swale should be one percent of the area from which it is receiving stormwater. Large areas should be divided and treated using multiple swales. Vegetated swales should not be installed in areas with high water tables where groundwater reaches the bottom of the swale.

Plant material selection and location are critical design choices. Additional considerations include the following:

- ◆ Bioswale function and treatment is improved when applied in areas with well drained soils.



### Design Keys:

- The design of a bioswale is a balance of stormwater conveyance function with storage, infiltration and soil and biological treatment processes. That means there must be consideration of:
- Swale design, including outlet design
- Location in the treatment train
- Plant material selection
- Soil composition
- On-going management

- ◆ Poorly drained sites require an underdrain system.
- ◆ Slopes greater than 5% require multiple ditch blocks or weirs perpendicular to the flow to facilitate storage volume and extend time for infiltration.
- ◆ Where phosphorus control is important, soils used in construction should have a low phosphorus content and high phosphorous sorption capacity.
- ◆ Where nitrogen control is important, mulch and organic matter incorporated into the soil should have a high carbon to nitrogen ratio.
- ◆ A high flow bypass (outlet or control structure) should be included to safely convey high flows.

Vegetation is ideally a fine, close-growing water-tolerant species that provides high amounts of vegetative surface area for contact with stormwater. Plants should be selected specifically for their nutrient uptake ability and site appropriateness. Where possible, use native plants to improve biodiversity.

Check dams, slight slopes, permeable soils, dense vegetative cover, increased contact time, and small storm events all aid pollutant removal. On the other hand, compacted soils, short runoff contact time, large storm events, steep slopes, and high runoff velocities and discharge rates reduce the effectiveness of swales.

### Operations and Maintenance:

It is important that the storage capacity and functional integrity of the bioswale be maintained through regular monitoring and maintenance of vegetation, infiltration capacity, and structures. Regular inspection of bioswales should be conducted to identify signs of erosion, accumulation of debris around structures and signs of excessive sedimentation. Soil infiltration capacity should be tested annually to determine if soils are becoming clogged. Maintenance requirements include seasonal trimming of vegetation and removal of debris and trash that may foul downstream structures.

### HOA or Regulatory Considerations:

To receive permit credit for a bioswale under Florida's current stormwater regulations requires infiltration of 80% of the runoff from a 3-year, 1 hour storm (2.5 inches).

### Credits in Green Building Certification Programs:

- ◆ FGBC-Home Standard (waterfront prerequisite: use of terraces, swales or berms to slow stormwater)
- ◆ Florida Yards & Neighborhoods (stormwater runoff: swales, terraces and/or rain gardens created to catch and filter stormwater; all rain and storm water drains away from the building foundation using legal drainage conveyance systems on-site)
- ◆ LEED for Homes (SS 4.3 management of runoff from roof)
- ◆ LEED for Neighborhood Development Pilot (GCT Credit 9: Stormwater Management)
- ◆ NAHB Model Green Home Building Guidelines (1.3.5 Manage storm water using low-impact development when possible)

### Relative Costs:

Swales are inexpensive relative to traditional curb and gutter treatment or underground stormwater systems. Maintenance is required more frequently but is considerably less costly than curb and gutter system maintenance. Cost of this practice compares favorably to other LID practices. In a U.S. Army Corps of Engineers study from 2004, costs per square foot were \$0.50 (source: [www.wbdg.org](http://www.wbdg.org)).

## References and Resources:

*EPA Stormwater BMP Fact Sheet: Grassed Swales* <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=75>

*EPA Storm Water Technology Fact Sheet: Vegetated Swales* <http://www.epa.gov/owm/mtb/vegswale.pdf>

*California Stormwater BMP Handbook – Vegetated Swales* <http://www.cabmphandbooks.com/Documents/Development/TC-30.pdf>

*Massachusetts LID Toolkit – LID Factsheet – Vegetated Swales*

[http://www.mapc.org/regional\\_planning/LID/swales.html](http://www.mapc.org/regional_planning/LID/swales.html)

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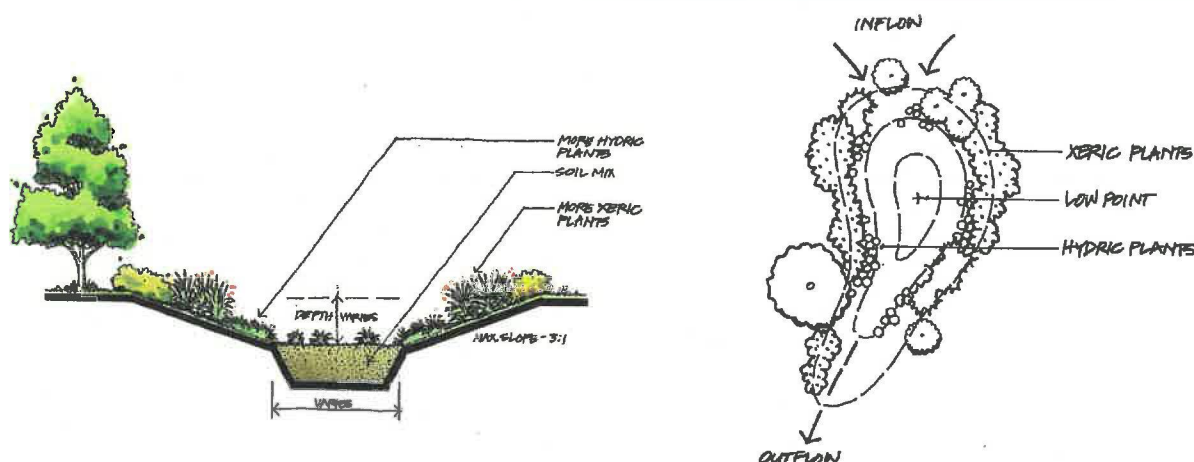
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## Bioretention Basins/Rain Gardens



Depiction of typical bioretention area design illustrating shallow slopes, well drained soil profile and location of plant material along hydrologic gradient. Basins with large catchments should include an over drain or provide a spillway in case of high flow event, and underdrains can be used in areas with low conductivity soils.

### Definition:

A bioretention area or rain garden is a shallow planted depression designed to retain or detain stormwater before it is infiltrated or discharged downstream. While the terms “rain garden” and “bioretention basin” may be used interchangeably, they can be considered along a continuum of size, where the term “rain garden” is typically used to describe a planted depression on an individual homeowner’s lot, where the lot comprises the extent of the catchment area. Bioretention basins serve the same purpose but that more technical term typically describes larger projects in community common areas as well as non-residential applications.

### Applications

- Residential yards (most common in smaller, urban sites)
- Commercial developments
- Parking lot islands
- Roadways (off-line cells adjacent to roadways accessed by curb cut)

### Objectives:

Bioretention basins/rain gardens retain, filter, and treat stormwater runoff using a shallow depression of conditioned soil topped with a layer of mulch or high carbon soil layer and vegetation tolerant of short-term flooding. Depending on the design, they can provide retention or detention of runoff water and will trap and remove suspended solids and filter or absorb pollutants to soils and plant material.

### Overview:

Bioretention basins can be installed at various scales, for example, integrated with traffic calming measures in suburban parks and in retarding basins. In larger applications, it is considered good practice to have pretreatment measures (e.g. vegetated strips and swales) upstream of the basin to capture sediment and reduce the maintenance frequency of a bioretention basin.

The size of the rain garden or bioretention area will determine the volume of runoff that can be stored or reduced, as well as the treatment benefits. Where the volume of runoff exceeds that of the bioretention area, additional stormwater devices will be required in the treatment train to handle the design storm.



**Benefits**

- Pollutant removal through infiltration and plant absorption
- Reduction of water runoff from site
- Reduced irrigation for planting beds
- Increased biodiversity in the landscape with wildlife and aesthetic values

**Water Protection Benefits:**

Bioretention basins use vegetation in retention areas to reduce nutrient export through plant uptake, filtering and sorption. The vegetation also improves soil infiltration.

**Water conservation implications** – Bioretention basins are designed to capture and retain stormwater in recessed gardens that typically do not need irrigation beyond plant establishment.

**Stormwater implications** – Infiltration processes and adsorption to plant roots remove pollutants from the flow stream. This is a key practice in the LID suite for improving stormwater quality. This also reduces the quantity of water flowing off-site into the larger municipal stormwater system.

**Design Considerations:**

This is an infiltration dependent practice affected by soil type and groundwater table. Where soils are well drained and groundwater tables are well below the surface, an under drain is not required. Where soils have low conductivity, underdrains can be used to reduce ponding time and increase treated volume. There is no specific slope requirement for bioretention, although size of the basin will typically decrease or become narrower and follow the elevation contour as slopes increase above 5%.

Determination of ponding depth should consider inflow characteristics (inflow rate, total volume, etc.), soil infiltration rate, and total ponding volume available. The ponding depth should not be greater than 12 inches, with 6-8 inch depths preferred. The duration of ponding after a storm should also not exceed 24 hours to reduce the likelihood of mosquito breeding or safety hazards.

A bioretention area/rain garden is used to encourage infiltration, so place it in an area where infiltration is good, not where water normally pools. It should be at least 10 ft. from any building, to avoid moisture around the building's foundation. Don't place a rain garden over a septic system. Consider how it can be integrated into existing and future landscaping. When adding plant material, do not place woody plants in the inflow path. Use native plants to improve the site's biodiversity.

**Operations and Maintenance:**

When rain gardens are installed on individual lots, it is important to implement educational programming to homeowners on proper maintenance. It is also important that the storage capacity of the rain garden/bioretention area be maintained through regular maintenance of vegetation and removal of debris that may compromise any structures during a high flow event. Regular visual inspection of the basin, looking for signs of erosion, excessive sediment deposits or dead and diseased vegetation, should be conducted. Mulch in the bioretention area should also be monitored for bare spots and should be replaced every 2-3 years. Plant selection is critical to aid operation, and other considerations may include gravel or stone to limit volunteer growth that can reduce storage area.

**Design Keys**

- The design of a bioretention area/rain garden is a balance of stormwater function with biological functions. That means there must be consideration of:
- Basin design (soil type, drainage, groundwater table, slope, outfall device)
- Location in the treatment train
- Plant material selection and placement
- On-going management



## HOA or Regulatory Considerations:

There is presently no regulatory "presumption of compliance" granted to rain gardens or bioretention basins in stormwater permits. Although not significantly different than a conventional dry retention basin except for size, spatial distribution and landscape integration of this practice requires them to be submitted as an "alternative" management practice during the permitting process. Water management districts are also cautious about giving credit toward volume storage for any structure installed on a homeowner's property without sufficient guarantee that the structure will be adequately maintained in the long-term.

## Credits in Green Building Certification Programs:

- ◆ FGBC-Home Standard (S-15 onsite designated retention areas)
- ◆ Florida Yards & Neighborhoods (stormwater runoff: swales, terraces and/or rain gardens created to catch and filter stormwater)
- ◆ LEED for Homes (SS 4.3 management of runoff from roof)
- ◆ LEED for Neighborhood Development Pilot (GCT Credit 9: Stormwater Management)
- ◆ NAHB Model Green Home Building Guidelines (1.3.5 Manage storm water using low-impact development when possible)

## Relative Costs:

While this practice may create additional site work costs as compared to conventional practices, it can be offset by reduced infrastructure such as stormwater pipes, storm drains and stormwater ponds. Costs per acre of development range from \$5,000 to \$10,000 for larger areas and costs per square foot range from \$3 to \$15. In some cases it has been found that bioretention can yield a 50% savings over conventional systems for overall site drainage. In most cases the area would have been landscaped, so the cost of installing and maintaining a bioretention area should be compared to the cost of otherwise landscaping the area.

## References and Resources:

- Bannerman, R. and E. Considine. 2003. *Rain Gardens, A How-To Manual for Homeowners*. University of Wisconsin. <http://clean-water.uwex.edu/pubs/pdf/home.rgmanual.pdf>
- Bioretention Basins Factsheet* (Lake Superior Streams.Org) <http://www.lakesuperiorstreams.org/stormwater/toolkit/bioretention.html>
- Bioretention (Rain Gardens) Fact Sheet* (EPA) <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=72>
- Clar, M., A.P. Davis, W.F. Hunt, and R.G.Traver, 2007. *Bioretention Technology: An Overview of Current Practice and Future Needs*, Paper presented at the 2nd National Low Impact Development (LID) Conference, sponsored by North Carolina State University, Wilmington, NC.
- Engineering Technologies Associates and Biohabitats. 1993. *Design Manual for Use of Bioretention in Stormwater Management*. Prepared for Prince George's County Government, Watershed Protection Branch, Landover, MD.
- LID BMP Fact Sheet – Bioretention Basins* (Fairfax County) [http://www.lowimpactdevelopment.org/ffxcty/1-1\\_bioretentionbasin\\_draft.pdf](http://www.lowimpactdevelopment.org/ffxcty/1-1_bioretentionbasin_draft.pdf)
- Winogradoff, Derek A. 2002. *Bioretention Manual*. Programs & Planning Division, Department of Environmental Resources, Prince George's County, Maryland. <http://www.princegeorgescountymd.gov/Government/AgencyIndex/DER/ESG/Bioretention/bioretention.asp>

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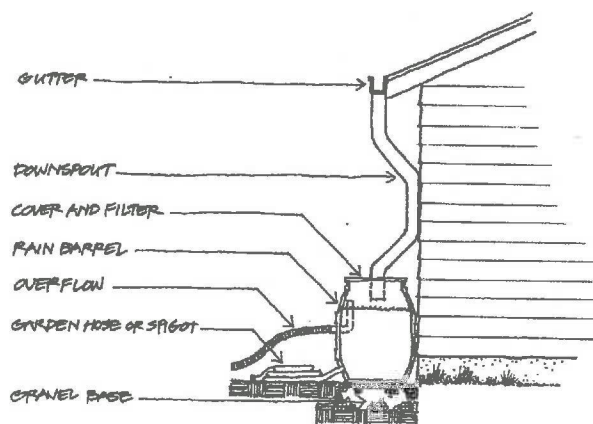
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## Cisterns/Rain Barrels



*Rainbarrel rainfall harvesting system fitted with overflow pipe, spigot and hose for watering. To increase pressure, the rainbarrel can be elevated above the ground, but it must be secured. A rainbarrel full of water weighs over 400 lbs.*

### Definition:

Cisterns and rain barrels are storage tanks that capture runoff water from a catchment area such as a rooftop. Cisterns are essentially large-scale rain barrels.

### Objectives:

Cisterns are typically used as commercial or industrial catchment devices for rainwater harvesting, storage, and reuse. Rain barrels are used for the same purposes by homeowners. Cisterns are more costly but can hold significantly more water.

### Benefits

- Reduces use of potable water for irrigation
- On site reuse reduces quantity of stormwater runoff

### Applications

- New construction
- Retrofits
- Commercial
- Residential communities

### Overview:

Cisterns can be located above or below ground, depending on site conditions and the preferred use of the harvested rainwater. Runoff collected from roof tops is often relatively clean and can be used for irrigation or for flushing toilets. Rain barrels, often made from 55-gallon plastic drums, are becoming popular with homeowners as a supplemental irrigation source. The University of Florida's Florida Yards & Neighborhoods program offers rain barrel workshops in a growing number of counties (find your county's Extension office at <http://solutionsforyourlife.ufl.edu/map/>).

### Water Protection Benefits:

**Water conservation implications** – When cistern-harvested rainwater is used for landscape irrigation, which can account for as much as 50% of household potable water use in Florida, the potential to offset potable water demands is significant. The quality of water harvested by cisterns is dependent on a variety of factors, including rainfall quality, catchment debris that may have accumulated on the roof since the last rain, and inclusion of a first flush diversion device. The amount of water captured and therefore the amount of water available for use will depend on the size of the cistern and rainfall pattern. Cistern size can range from hundreds to thousands of gallons. A typical size for residential application in Florida is around 5,000 gallons.

**Stormwater implications** – Similar to the benefits of green roofs, rainwater harvesting with cisterns reduces stormwater runoff through interception, reducing stress on downstream management and treatment systems.



## Design Considerations:

Cisterns or rain barrels can be applied across various site conditions. Because they function independent of soil types and site slopes, the possibilities for residential and commercial application of cisterns throughout Florida are widespread. Their sizing is based on expected water demands, rainfall pattern, and cistern system cost. A general rule of thumb is that 1" of rain on 1000 sq. ft. of roof will yield approximately 600 gallons. Rain barrels are often elevated on stands to improve water pressure of the outflow. Cisterns and rain barrels are placed near the catchment site. Cisterns should not be placed near trees whose roots may damage the cistern walls. A spigot is usually attached to the rain barrel or cistern for use and drainage. Submersible or surface pumps can also be used with cisterns to increase pressure for use in most irrigation systems.

### Design Keys

- Size of roof
- Water demand
- Rainfall pattern
- Cistern capacity
- Overflow device
- First flush bypass

## Operations and Maintenance:

Rain barrels and cisterns require minimal maintenance. The tank should be cleaned out about once a year if debris is present. Gutters and downspouts should be inspected regularly and kept clear. If a first flush bypass system is used, remove debris from the bypass and make sure drain holes are kept open so that the system functions properly. No maintenance is required to prevent mosquito breeding in a rain barrel if all surfaces at the downspout entrance are sealed. However, the seals should be inspected periodically, and if mosquitoes become a problem, mosquito dunks [floating donut-shaped briquettes containing the biological insecticide *Bacillus thuringiensis* (Bt)] can be used.

## Credits in Green Building Certification Programs:

- ◆ FGBC-Home Standard (W10-11 rainwater harvesting)
- ◆ Florida Yards & Neighborhoods (stormwater runoff: storage provided for harvested water in a rain barrel, cistern or above ground tank; underground distribution tanks installed to collect stormwater)
- ◆ LEED for Homes (SS 4.3 management of runoff from roof)
- ◆ LEED for Neighborhood Development Pilot (GCT Credit 9: Stormwater Management)
- ◆ NAHB Model Green Home Building Guidelines (1.3.5 Manage storm water using low-impact development when possible; 4.1 indoor/outdoor water use)

## Relative Costs:

Materials and installation costs vary substantially across cistern applications, depending on the source (e.g., manufactured or pre-fabricated vs. constructed on site), storage capacity (size), location (above or below ground), and structural material. A single residential rain barrel with typical attachments and accessories costs around \$50 for the parts for self assembly and \$200 assembled, whereas cisterns costs can start at about \$1,500 and a large commercial cistern can cost thousands or tens of thousands of dollars. These upfront costs can be partially offset by reduced demand for potable water, but they do not directly offset regularly incurred materials and installation costs of conventional stormwater system components.





*Two 1,550 gallon cisterns are used to harvest rainwater that has filtered through the Perry Construction Yard green roof at the University of Florida in Gainesville*

### References and Resources:

Bucklin, Ray. 2003. Cisterns To Collect Non-Potable Water For Domestic Use. University of Florida/ IFAS, Agricultural and Biological Engineering Department. EDIS # AE64.

Hillsborough County UF Extension. *Rain Barrels*. [http://hillsborough\\_fyn.ifas.ufl.edu/RainBarrels.html](http://hillsborough_fyn.ifas.ufl.edu/RainBarrels.html)

*Rainwater Harvesting from Rooftop Catchments* (Organization of American States Department of Sustainable Development): [www.oas.org/dsd/publications/Unit/oea59e/ch10.htm](http://www.oas.org/dsd/publications/Unit/oea59e/ch10.htm).

Southwest Florida Water Management District. *Recycle the Rain: A How-to For Installing a Rain Barrel*: <http://www.swfwmd.state.fl.us/conservation/rainbarrel/>

Specifications of Rain Barrels and Cisterns (Low Impact Development Center, Inc.): [www.lid-stormwater.net/raincist/raincist\\_specs.htm](http://www.lid-stormwater.net/raincist/raincist_specs.htm).

Tampa Bay Water. 2007. *A Review of Applicable Policies and Permitting Requirements For Non-Potable Use of Cisterns*. <http://www.tampabaywater.org/documents/conservation/cisterns.pdf>

Texas Water Development Board. 2005. *The Texas Manual on Rainwater Harvesting*. [http://www.twdb.state.tx.us/publications/reports/RainwaterHarvestingManual\\_3rdedition.pdf](http://www.twdb.state.tx.us/publications/reports/RainwaterHarvestingManual_3rdedition.pdf)

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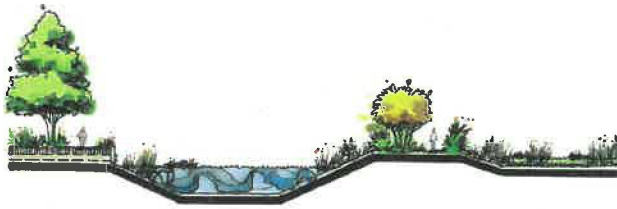
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## Enhanced Stormwater Basins



*The Stormwater Ecological Enhancement Project (SEEP) on the University of Florida campus in Gainesville was created by re-contouring and introducing new vegetation to a 3-acre retention pond. Over a period of seven years, the number of vegetative species on the site increased four-fold, and pollutant treatment has improved.*



### Definition:

Stormwater basins are designed to store stormwater runoff temporarily (detention) or permanently (retention) to reduce flooding potential and to improve water quality. Also known as stormwater wetlands, enhanced stormwater basin designs facilitate increased vegetative diversity and complexity of biogeochemical processes to improve water treatment, biodiversity, aesthetics. Enhanced stormwater basins can be considered along the same continuum of biophysically enhanced stormwater practices where rain gardens are followed by bioretention basins, with enhanced stormwater basins falling at the highest end of the continuum.

### Applications

- Common areas in residential communities
- Commercial development

### Objectives:

An enhanced basin design creates a multipurpose area serving the need to reduce flooding while adding vital wetland functions such as unique plant and wildlife habitat, recreational opportunities, aesthetics and the potential to treat stormwater to a higher level of quality. By adding lower topographic areas for open-water habitat and berms to temporarily impound entering stormwater, a greater hydrologic diversity within the basin is created. Planting species known to take up heavy metals and remove nutrients as well as introducing a wide range of species that can become established within the basin increases the viability of the basin and its ability to optimize natural processes and resources.

### Overview:

Enhanced stormwater basins are engineered to mimic the treatment and runoff attenuation properties of natural wetlands. This is done by integrating two essential elements into a stormwater basin design: increased topographic relief and vegetative diversity. Irregular perimeters, varying basin depths, meandering internal conveyance channels, multiple cells and undulating bottom contours are key features that increase the topographic variability of a retention basin, improving stormwater retention and treatment capacity. Introduction of diverse plantings suited



to site conditions (i.e., inundation tolerant native species) improve the stormwater treatment performance while simultaneously providing ecological, wildlife, and aesthetic amenities. Enhanced stormwater basins typically use berms to partition the main basin into multiple zones or cells. Cells can be designed in series resulting in each zone having a different depth, duration and frequency of flooding. These varied hydrologic characteristics result in different treatment processes and long-term development of different vegetative communities.

#### **Benefits**

- Retention
- Detention
- Sedimentation
- Metals and nutrient retention
- Increases wildlife habitat and biodiversity
- Community amenity
- Passive recreation
- Educational opportunity
- Aesthetics

#### **Water Protection Benefits:**

**Water conservation implications** – Enhanced stormwater basins do not provide direct potable water benefits, although they do facilitate groundwater recharge and improve downstream water quality.

#### **Stormwater implications –**

##### **Quantity**

Because these basins use conventional design volume specifications they are as effective as conventional basins at controlling volume.

##### **Quality**

As the name implies, the modified design of these stormwater basins enhances and improves upon the pollutant treatment and runoff attenuation properties of traditional retention ponds. Pollutant uptake is increased and peak discharges are reduced. Construction of a forebay and creation of multiple cells within the basin slows water movement and increases particulate

settling in designated areas. Planting of species known to assimilate contaminants and creating longer duration flooding conditions in these areas facilitates sediment accumulation, trapping contaminants in the soil. Establishing a variety of plant species and hydrologic conditions diversifies the biogeochemical processes within the basin, increasing the system's ability to reduce contaminants and respond to dynamic environmental conditions.

#### **Design Considerations:**

If a site has low permeability, is prone to flooding, or is sensitive to groundwater input, a conventional stormwater basin might be the only viable management option. However, increasing research has developed methods for more naturally-mimicked systems. As with traditional stormwater retention basins, the treatment and volume control performance of ecologically enhanced stormwater ponds is dependent upon the infiltration capacity of site soils. Relatively large land areas are required to construct a suitable treatment basin, but the principles of enhanced stormwater basins can be applied to existing retention ponds of varying sizes and locations. When designing an enhanced stormwater basin, the goal is to optimize multiple functions so that under varying conditions the basin can continue to protect water quality.

Enhanced stormwater basins can become effective teaching opportunities to educate people about the relationship between their activities and water quality, stormwater and ultimately the natural environment. By integrating trails around the edge of the basin or a boardwalk through the basin, these educational opportunities can be enhanced and should be incorporated where possible into the management of these systems. As such, enhanced stormwater basins can become valued community amenities.

#### **Design Keys**

- Infiltration capacity of site soils
- Large land area
- Type of plant material
- Construction equipment
- Limit compaction
- Types of soils



*Diagram of enhanced stormwater basin design depicting varied water depth, internal partition, vegetative planting zones and integrated boardwalk and trail to facilitate public access. The "birds eye view" (right) illustrates irregular and elongated basin edge, extended flow path facilitated by internal berm and complex basin topography resulting in multiple cells in series and a wide range in hydrologic conditions within the basin.*

### Operations and Maintenance:

Increased trapping of sediments and other contaminants within the basin may need to be removed periodically at inlets. By creating multiple cells within the basin, increased detention time and sedimentation in a small portion of the basin is facilitated. This allows for any periodic maintenance requirements to disturb only a small portion of the basin. Care of plantings, especially during initial establishment may also be required depending on aesthetic expectations, including management of invasive plants.

### Credits in Green Building Certification Programs:

- ◆ LEED for Neighborhood Development Pilot (SLL Credit 10: Restoration of Habitat or Wetlands; GCT Credit 9: Stormwater Management)
- ◆ NAHB Model Green Home Building Guidelines (1.3.5 Manage storm water using low-impact development when possible)

### Relative Costs:

Although costs and benefits will vary depending upon site conditions, local climate and topography, etc., the Center for Watershed Protection ([www.cwp.org](http://www.cwp.org)) estimates that average construction costs for an enhanced stormwater basin range from \$0.60 to \$1.25 per cubic foot. Maintenance costs are relatively low compared to those for conventional stormwater retention basins.

### References and Resources:

*EPA Stormwater BMP Fact Sheet: Stormwater Wetland* <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=74>

*Stormwater Ecological Enhancement Project* (University of Florida Natural Area Teaching Laboratory): <http://natl.ifas.ufl.edu/seep.htm>

*Stormwater Wetland Fact Sheet* (Stormwater Manager's Resource Center) [http://www.stormwatercenter.net/Assorted%20Fact%20Sheets/Tool6\\_Stormwater\\_Practices/Wetland/Wetland.htm](http://www.stormwatercenter.net/Assorted%20Fact%20Sheets/Tool6_Stormwater_Practices/Wetland/Wetland.htm)



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## Exfiltration Tanks/Trenches



*The modular system shown here was installed at the Madera subdivision in Gainesville in 2003; together with permeable pavers, this system captures and exfiltrates, on average, one-third of the roof's runoff.*

### Definition:

Exfiltration tanks and trenches (or dry wells) are sub-surface engineered detention and infiltration cells with significant volume or pore space to store and control site runoff. They are sometimes referred to as subsurface detention or retention, infiltration or percolation tanks, soakaways or underground infiltration basins. While infiltration trenches are usually rock filled ditches into which stormwater enters from the top, exfiltration trenches often involve a pipe in the middle of the trench through which stormwater enters.

### Objectives:

These structures capture and discharge stormwater at a controlled rate. They function in concert with pervious surfaces by enhancing the infiltration and storage capacity of on-site soils and treating runoff before it recharges the groundwater. Exfiltration systems act as small, distributed, underground stormwater retention ponds.

### Overview:

Exfiltration tanks and trenches can be used to convey and distribute captured runoff across a lot or subdivision. These exfiltration structures provide a storage area for rapid runoff during a storm, then allow it to infiltrate gradually through the soil into the groundwater. Runoff water enters the underground chamber at the inlet and a physical filtration process removes pollutants as the exfiltrate enters the surrounding soil. However, some pollutants can remain in the exfiltrate water, so additional source control is needed where groundwater contamination is a concern.

Exfiltration tanks and trenches can vary considerably in size. Large underground exfiltration designs generally utilize concrete and large pipe systems. Modular products are available that are usually constructed of lightweight but durable plastic wrapped in a geo-textile. Modular

### Applications

- Residential lots
- Commercial development
- Parking lots
- Green spaces
- Golf courses

**Benefits**

- Detention
- Infiltration
- Stormwater reuse
- Groundwater recharge
- Runoff attenuation
- Reduction in peak velocity
- Reduction in stormwater runoff volume
- Possible reduction in size of centralized stormwater retention ponds

products are the best option for individual homes, which on a per lot basis, typically have very small stormwater volumes. These products take up little space and can be buried under the lawn areas. The modular design allows for flexibility in applications and integration with existing site features. They are lightweight and easy to install and are engineered to be resistant to very high loads.

**Water Protection Benefits:**

**Water conservation implications** – Exfiltration systems do not benefit potable water supplies directly, but do assist in groundwater recharge and reducing some demand by on site vegetation.

**Stormwater implications** – Sub-surface infiltration systems such as exfiltration tanks reduce peak velocity and volume of stormwater runoff. When significant storage volumes and mitigation of peak runoff velocity are attained, zero stormwater discharge from the lot may be achieved. This in turn can reduce the size of centralized stormwater retention ponds..

**Design Considerations:**

Underground exfiltration is infiltration dependant and can be incorporated into most site designs having well drained soils. Application of this practice is particularly beneficial where land costs are high or space availability is low. This practice can also be applied in high water table conditions, but the effective vertical storage volume is reduced requiring greater area coverage for similar volume capacity.

**Operations and Maintenance:**

Exfiltration trenches can become clogged, so it is important to prevent sediments and materials from entering the system as much as possible and periodically remove those that accumulate. Access for maintenance should be considered in the design, potentially including an observation well of PVC pipe leading to the bottom of the trench to allow for monitoring of the drawdown rate. Some systems incorporate an underdrain below the filtering system, which can be used as an overflow should clogging occur.

**Credits in Green Building Certification Programs:**

- ◆ LEED for Homes (SS 4.3 management of runoff from roof)
- ◆ LEED for Neighborhood Development Pilot (GCT Credit 9: Stormwater Management)
- ◆ NAHB Model Green Home Building Guidelines (1.3.5 Manage storm water using low-impact development when possible)

**Relative Costs:**

Materials are the highest percentage of the overall exfiltration system costs. The modular system installed at *Madera* for a single-family residential lot cost just over \$1000 and is part of an LID treatment train at both the lot and community scales. When evaluating costs, consider that the use of exfiltration tanks or trenches can reduce or eliminate the costs of monitoring effluent because of reductions in runoff/discharge.

**Design Keys**

- Good where land costs are high or space availability is low
- Well-drained soils
- Low water table



## References and Resources:

*Atlantis® Infiltration Tank System* (Atlantis Corp – Australia): [http://www.atlantiscorp.com.au/applications/infiltration\\_tank](http://www.atlantiscorp.com.au/applications/infiltration_tank)

*EPA Stormwater BMP Fact Sheet: Infiltration Trench* <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=70>

Livingston, Eric H., Robert Baldwin, and Brian Clevenger. "Lessons Learned About Successfully Using Infiltration Practices." National Conference on Tools for Urban Water Resource Management and Protection Proceedings. Chicago, IL, February 7-10, 2000. EPA/625/R-00/001, pp. 141-161. July 2000.

*Sub-Surface Infiltration Areas* (Pennsylvania Association of Conservation Districts' Best Management Practices Fact Sheet): [http://www.pacd.org/resources/pollution\\_solutions/Dauphin/InfiltrationArea.pdf](http://www.pacd.org/resources/pollution_solutions/Dauphin/InfiltrationArea.pdf)

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## Green Roofs/Eco-roofs

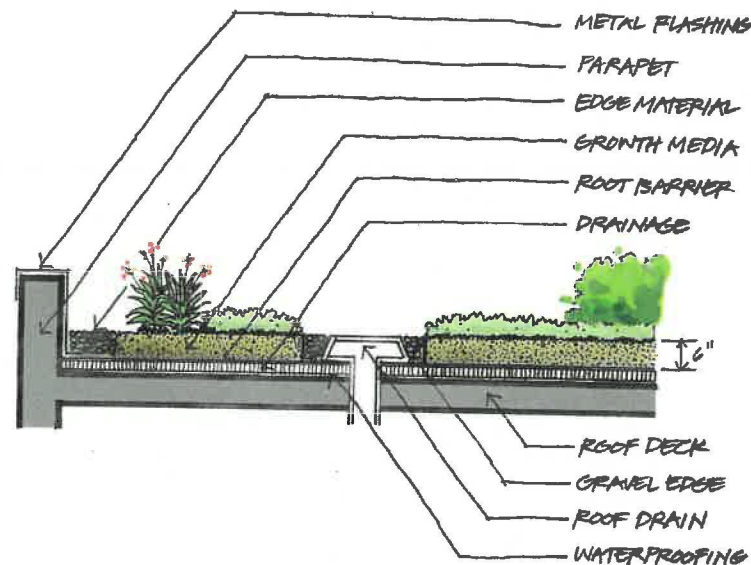


Diagram illustrates layered components of a typical green roof.

### Definition:

A green roof or eco-roof is a planted roof top that provides benefits of water harvesting, stormwater management, energy conservation, pollution abatement, and aesthetic value.

Green roofs vary in depth of growing media, types of plants (climate-dependent), infrastructure, and intended use.

### Objectives:

Green roofs reduce total stormwater runoff volume and peak flows, improve building insulation properties (reducing heat island effects), and extend the expected life of the roof's base material.

### Applications

- ♦ Commercial buildings
- ♦ Industrial buildings
- ♦ Residential buildings

### Overview:

Green roofs are generally categorized into two types: extensive and intensive. Extensive green roofs have a shallow (<6" depth) growing media and are light-weight structures (approximately 10-35 lbs./sq.ft. when wet) that cover large expanses of rooftop, requiring minimal maintenance. Intensive green roofs, or "rooftop gardens," use deeper growing media (>6") and can include small trees and shrubs, creating park-like settings that are more accessible. They tend to be more expensive and their heavier weight on the roof (approx. 50-300 lbs./sq.ft. when wet) must be considered in the design. Intensive green roofs are more common in tropical climates than extensive green roofs.

Examples of Florida applications of green roofs include: a 2400 ft<sup>2</sup> storage facility in the Bonita Bay Group's master-planned community Shadow Wood Preserve (Lee County); the University of Central Florida Student Union roof (1600 ft<sup>2</sup>); and the University of Florida Charles R. Perry Construction Yard roof (2600 ft<sup>2</sup>) in Gainesville. The University of Central Florida has monitored pollutants in roof filtrate water on a green roof designed for stormwater treatment and found that the green roof effectively reduced pollutants, including nitrate and ammonia, relative to a conventional roof.

### Benefits

- Reduces stormwater volume (50% to 85%)
- Improves stormwater quality through load reduction
- Saves water by harvesting rain
- Reduces heat island effect
- Lowers surface temperatures by 40°-50° F
- Energy savings can reach 15%-30%
- Reduces noise for building occupants
- Increases the life of the roof and reduces roof maintenance costs
- Contributes to biodiversity and creates habitats for birds and invertebrates
- Filters air pollutants and captures airborne particles

### Water Protection Benefits:

**Water conservation implications** – When used in conjunction with cisterns for stormwater management, green roofs can allow for more consistent capture and provision of harvested rainwater, with the potential to indirectly reduce potable water demands for landscape irrigation.

**Stormwater implications** – By intercepting, retaining, detaining, and filtering rainwater at the beginning of the stormwater treatment train, green roofs can play an important role in source control stormwater management, reducing stress on downstream treatment systems.

### Design Keys

- Infrastructure
- Type of growing media
- Depth of growing media
- Species of plants
- Rainwater collection
- Irrigation
- Intended purpose

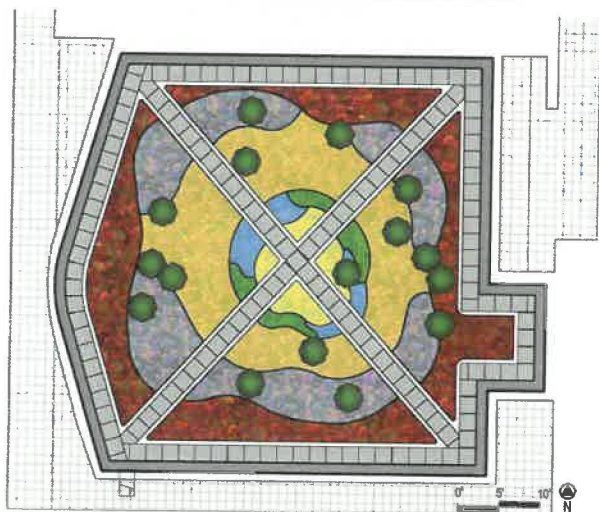
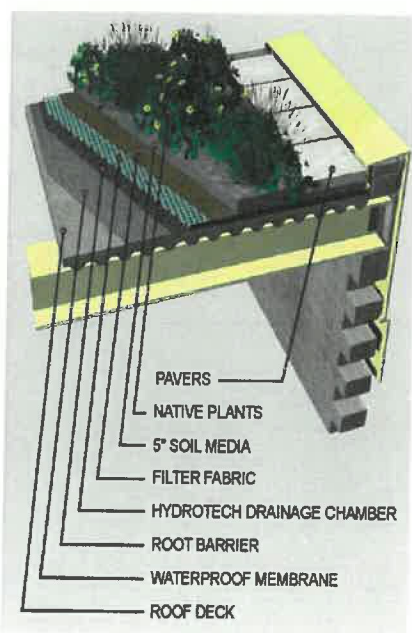
### Design Considerations:

Green roofs function independent of the infiltration capacity of the site soils and can be applied to residential buildings, although they are most appropriate for commercial and industrial use. Extensive and intensive green roofs require a minimum slope of 2%; those with slopes less than 2% require additional drainage measures to avoid water logging. Additional requirements include good drainage, lightweight growth media, good waterproofing, additional structural support, rainwater harvesting and the use of drought/heat tolerant plants. While it may be challenging, it is important to engineer for proper drainage, which will avoid root rot on the plants. A thicker substrate needed if drainage is not adequate will also mean higher load bearing, which adds to the cost.

Components of green roofs include: 1.) waterproofing membranes; 2.) insulation (if the building is heated or cooled); 3.) a root barrier to protect the membrane (made of gravel, impervious concrete, pvc, tpo, hdpe, or copper); 4.) a drainage system; 5.) a filter cloth (polyester fiber mats, polypropylene mats or non-biodegradable fabrics); 6.) a growing medium, consisting of inorganic matter (expanded slate, pumice, vermiculite, volcanic rock, etc.), organic material (straw, peat, wood, grass, sawdust, etc.), and air (cavities); 7.) plants.

There are several considerations when choosing the plant material. Overall, plants should be selected for their ability to thrive with minimal to no inputs (water, fertilizers, etc.) after establishment. Appropriate natives are recommended, and all should prefer full-sun and be drought tolerant. Plants should also be cold tolerant and have no severe pest susceptibility or maintenance needs. Root systems should be shallow. Use pollen/nectar producers when possible, which will help not only in pollination but also to attract beneficial insects for biological pest management.





The green roof on the Perry Construction Yard building at the University of Florida is an extensive green roof of 2,600 square feet with a media depth of 5". All plants are less than 30" tall. Two 1,550 gallon cisterns harvest rainwater and serve as the main source of the roof's drip irrigation system, with the campus' reclaimed water system as a backup

## Operations and Maintenance:

Although plants should be chosen to be maintenance free after establishment, plants will need some maintenance, particularly during establishment, including irrigation system inspections. Annual maintenance walks should be performed until plants fill in.

## Credits in Green Building Certification Programs:

- ◆ LEED for Homes (SS 4.3 management of runoff from roof)
- ◆ LEED for Neighborhood Development Pilot (GCT Credit 9: Stormwater Management)
- ◆ NAHB Model Green Home Building Guidelines (1.3.5 Manage storm water using low-impact development when possible)

## Relative Costs:

Materials and installation of a typical green roof in the U.S. cost between \$15 and \$20 per square foot, with the soil substrate, growing medium, and planting materials accounting for the largest portion of these costs. When considering the cost of a green roof, it is important to compare it to the cost of a conventional roof and consider energy cost savings. As a result of the improved insulation properties of a building with a green roof, most applications result in cost savings from improved energy efficiency. A one-story building with a green roof can be expected to save 20%-30% in cooling costs.

## References and Resources:

EPA Stormwater BMP Fact Sheet: Green Roof:  
<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=114>

Green Roofs for Healthy Cities: [www.greenroofs.org](http://www.greenroofs.org).

Green Roofs 101 (The Greenroof Industry Research Portal): <http://www.greenroofs.com/Green-roofs101/index.html>.

Wanielista, Marty, Mike Hardin, and Matt Kelly. 2007. *The Effectiveness of Green Roof Stormwater Treatment Systems Irrigated With Recycled Green Roof Filtrate to Achieve Pollutant Removal With Peak and Volume Reduction in Florida*. Final Report to FDEP, Project Number WM 864. University of Central Florida, Stormwater Management Academy.

Worden, Eva, Diana Guidry, Annabel Alonso Ng, and Alex Schore. 2004. *Green Roofs in Urban Landscapes*. UF/IFAS EDIS Publication ENH 984, Department of Environmental Horticulture. <http://edis.ifas.ufl.edu/pdffiles/EP/EP24000.pdf>

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## Low Impact Site Preparation

### Definition:

Low impact site preparation is a suite of practices that seek to preserve the site's natural hydrological and biological characteristics.

#### Benefits

- Lower irrigation and fertilizer requirements
- Reduction in runoff volume
- Preserving quality of stormwater
- Enhanced biodiversity

### Objectives:

The overall goal is to conserve natural areas, minimize development impacts and maintain site runoff rate and volume so that post-development conditions match pre-development conditions to the greatest extent possible. Therefore, low impact site preparation focuses on four main objectives. First, existing rainfall interception

should be retained and new interception should be promoted. Second, infiltration capacity should be preserved, which requires minimized compaction and impervious surface area. Third, existing depressional storage should be retained, and new depressional storage should be created in conjunction with infiltration. Finally, stormwater treatment by soils and vegetation should be promoted through maximization of contact area and time.

### Overview:

Conventional development processes often drastically alter natural landscapes and their capacity to treat and infiltrate stormwater. Removing trees or replacing large ones with smaller ones, leveling and grading topography, disturbing soil profiles and compacting soils all are common land development activities that significantly affect the functioning of important natural hydrological services in the landscape. Low impact site preparation requires comprehensive development planning, ranging from thoughtful site layout to strict land clearing practices on the ground.

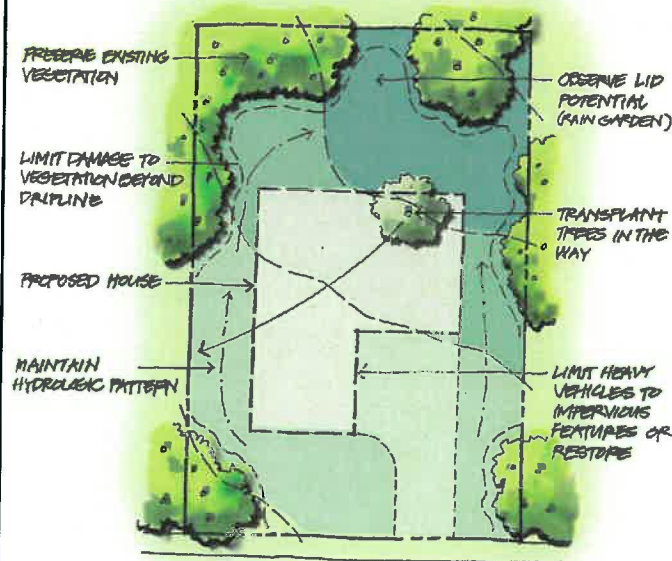
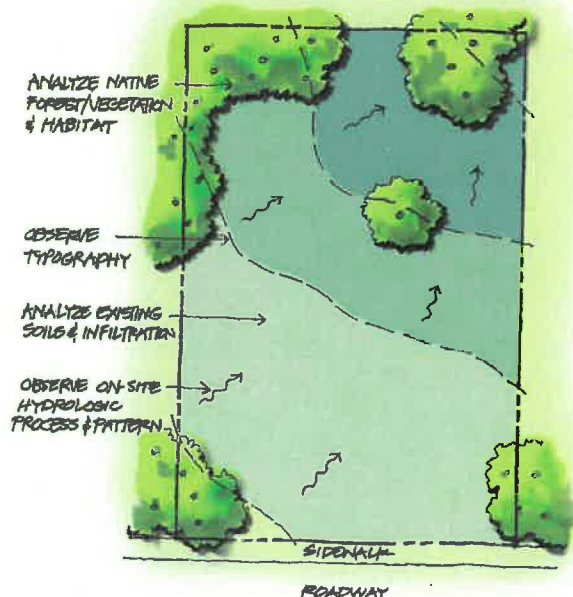


Diagram of site considerations before and after placement of house on site. Integrity of drainage pattern and canopy cover are maintained and soils are evaluated for placement of on-site LID practices such as a rain garden, permeable surfaces or exfiltration system.

These principles require non-conventional land development practices such as minimized clearing, minimized grading, preservation of high infiltration soils, and limited lot-level disturbance. Practices should be integrated into a holistic process that begins with definition of the development envelope and protected areas. Ultimately, it is ideal to reduce the total area that is cleared and graded and the number and size of structure footprints on the site. This process begins with identifying, mapping, and avoiding wetlands and floodplains and using stem wall or pier construction. Implementing these practices as an alternative to site grading and slab on grade construction complements floodplain avoidance and reduces the amount of excavation and fill required during site preparation and construction.

Specific LID site preparation practices include:

- Minimal paving and compaction of permeable soils (including limiting movement of construction equipment to specific areas)
- Reduced size of construction easements and material storage areas
- Stockpiles sited within the development envelope during the construction phase of a project
- Siting the building layout and clearing and grading to avoid removal of existing trees
- Marking off tree protection areas to prevent compaction and mounding around roots during construction
- Disconnected impervious areas to increase opportunities for infiltration and reduce stormwater runoff flows
- Maintenance of existing topography and associated drainage divides to encourage dispersed flow paths
- Using hydrology/drainage as a design element
- Saving topsoil for reapplication before landscape planting, and applying soil amendments before planting

### Applications

- New construction
- Residential communities
- Commercial

## Water Protection Benefits:

**Water conservation implications** – Minimal site disturbance that retains existing vegetation and soil characteristics can result in lower irrigation requirements. Retention of existing trees leads to higher moisture levels throughout the landscape and less need for irrigation.

**Stormwater implications** – Preserving and promoting interception, infiltration, depressional storage, and on-site treatment are essential elements to reducing the runoff quantity and preserving the quality of stormwater.

### Quantity

Minimal impervious area, retention of infiltration capacities, preservation of depressional storage and other benefits from LID site preparation greatly increase the ability of the landscape to manage stormwater at the source. This reduces dependence on the conventional stormwater system, and if done correctly, LID site preparation can reduce piping size and length as well as the land area allocated to conventional stormwater ponds.

### Quality

By reducing and treating stormwater at the source, there is significant improvement of water quality percolating into the aquifer or running into downstream water bodies. Retained vegetation preserves natural interception processes and helps cleanse water. In addition, soil compaction can make establishing new landscapes very difficult and can substantially decrease infiltration rates (up to 99% in one north central Florida study). Removing or burying topsoil can have similar impacts on infiltration and provides poor soil quality for establishment of new landscape plant material. By maintaining native, uncompacted soils, plant stress is lower and less fertilizer is likely to be applied or run off, resulting in greater source control.



### Design Keys

- **Preservation of:**
- **Interception**
- **Infiltration**
- **Depressional storage**
- **Soil and vegetation treatment**

### Design Considerations:

Pre-development site preparation options are determined largely by existing site constraints. LID site preparation practices are designed to preserve existing natural features. A site with streams, floodplains, wetlands, or steep slopes will require very careful land development planning. Because there can be no single strategy of low impact site preparation, it is important to focus on preservation of four key features: interception; infiltration; depressional storage; and soil and vegetation treatment.

### Operations and Maintenance:

By applying the concept of low impact site preparation, long term maintenance costs of stormwater infrastructure and landscaping can be significantly reduced. For example, grading and applying disturbed fill soil to a site often results in poor establishment and quality of installed plants, requiring replacement and resulting in perpetual maintenance problems. By preserving native soils and minimizing compaction, plant stress is reduced and the need for added water, fertilizer and pesticides can be significantly reduced. Similarly, creating protection zones around existing trees during construction can reduce or eliminate the incidence of damage to tree roots that often results in tree death later on. Implementing invasive exotic control when needed will provide biodiversity benefits.

### Credits in Green Building Certification Programs:

- FGBC Home Standard (S-2 maximize tree survivability; S-3 minimize soil compaction; S-4 25% of site protected from mechanical soils compaction via barrier; saving and reusing topsoil)

- Florida Water Star<sup>SM</sup> (preservation of existing vegetation)
- LEED for Homes (SS 1.2 minimize disturbed area of site)
- LEED for Neighborhood Development Pilot (GCT Prerequisite 1: Construction Activity Pollution Prevention; GCT Credit 6: Minimize Site Disturbance Through Site Design; GCT Credit 7: Minimize Site Disturbance During Construction)
- NAHB Model Green Home Building Guidelines (1.3.4 Minimize soil disturbance and erosion; 1.3.5 Manage storm water using low-impact development when possible; 1.4 Minimize environmental intrusion during onsite construction)

### Relative Costs:

Costs for LID site preparation practices are typically lower than those for conventional practices. In an example from the Madera subdivision in Gainesville, FL, grading and clearing costs were \$1,612 for a LID lot, compared to \$2,016 for a similar-sized conventionally-cleared lot. Labor is spent on more careful clearing of smaller areas instead of rapid clearing of large areas. These two strategies tend to balance out, resulting in similar clearing costs. Less cleared area, however, can result in lower overall costs.

### References and Resources:

EPA Stormwater BMP Fact Sheet: Preserving Natural Vegetation <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=34>

Gregory, J.H., M.D. Dukes, P.H. Jones, and G.L. Miller. 2006. Effect of urban soil compaction on infiltration rate. *Journal of Soil and Water Conservation* 61(3):117-124.

*Low Impact Development (LID) Practices for Storm Water Management* (Toolbase Services): <http://toolbase.org/TechInventory/TechDetails.aspx?ContentDetailID=909&BucketID=6&CategoryID=11>

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## Permeable Surfaces

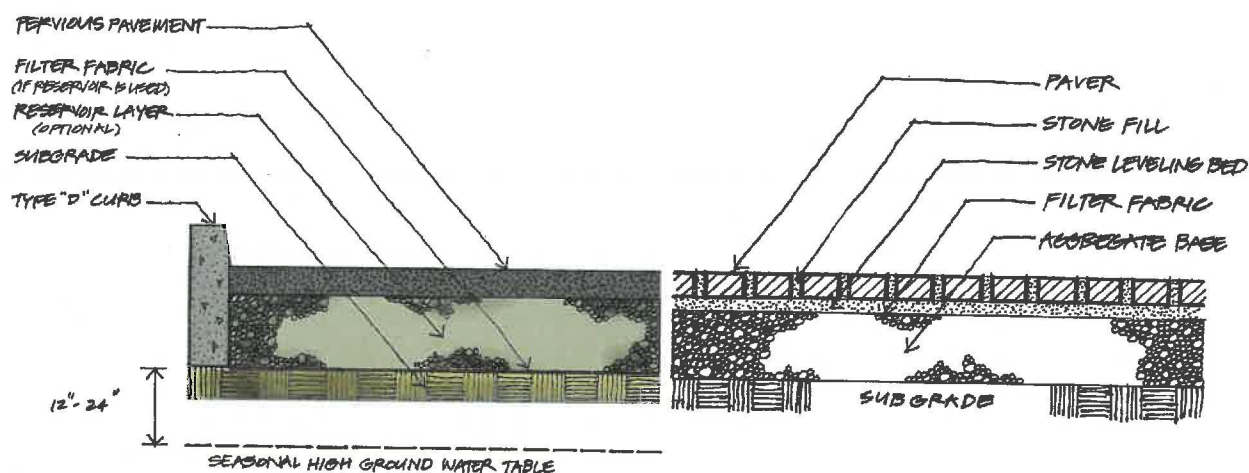


Illustration of two types of pervious surfaces, pervious paving (left) and pervious pavers (right). Although the permeable surfaces are different, they are each layered on the same type of aggregate base and underlying sub base.

### Definition:

Permeable surfaces consist of a variety of types of pavement, pavers and other devices that provide stormwater infiltration while serving as a structural surface.

### Objectives:

Permeable pavements function similarly to sand filters, in that they filter the water by forcing it to pass through different aggregate sizes and typically some sort of filter fabric. Therefore, most of the treatment is through physical (or mechanical) processes. As precipitation falls on the pavement, it infiltrates down into the storage basin where it slowly is released into the surrounding soil.

### Overview:

Permeable, or pervious, pavers refer to unit (block, plastic grid) or poured (concrete) paving systems that incorporate permeable or semi-permeable materials overlaying a gravel storage layer. They are infiltration-

based, volume control IMPs that substitute pervious for impervious surfaces, minimizing flooding and pollutant loads in stormwater runoff. They can be used for roads, driveways, walkways, patios, etc. and rainwater can be conveyed to exfiltration tanks or cisterns beneath

the permeable pavers. Permeable pavers are most effective when used in conjunction with other LID treatment train IMPs (e.g., vegetated swales, cisterns, or exfiltration tanks).

There are several types of pervious paving materials, including permeable interlocking concrete pavers (PICP), concrete grid pavers (CGP), pervious (porous) pavements (PC & PA), and plastic reinforcing grids (PRG). According to the Florida Concrete Products Association, Florida has been a leader in the adoption of pervious pavement, with hundreds of applications across the state. Installation and maintenance of permeable pavers tends to be more labor and time intensive than that for concrete or asphalt paving. Additionally, vacuum sweeping is required as part of routine maintenance to prevent void space clogging.

### Applications

- Parking lots
- Low traffic streets
- Walkways
- Driveways

## Water Protection Benefits:

**Water conservation implications** – As with green roofs and cisterns, permeable pavers can reduce stress on potable water resources by acting as a component of a treatment train for capture, storage, and reuse of stormwater.

**Stormwater implications** – Interconnected void spaces in permeable paving materials (surface, base, and subsurface) allow for infiltration and stormwater percolation to underlying soils, reducing runoff volumes, peak flows, and pollutant loads and facilitating groundwater recharge.

### Design Keys

- Low traffic areas
- Sandy soils
- Shallow slopes ( $<5^\circ$ )
- Low water table
- Retention
- Detention
- Reduce runoff volume
- Reduce pollutant loads

## Design Considerations:

Permeable surfaces are appropriate for both residential and commercial land uses and new construction and retrofit projects. Permeable pavers are most suitable for use in low traffic areas with sandy soils, shallow slopes ( $<5^\circ$ ), and a low water table (i.e., seasonal highs 24" or more beneath paver base). Water will only fill the permeable pavers to the lowest elevation of the surface, and on a slope it could exit the pavement cell through the lower end. Permeable pavers are therefore not recommended for slopes.

Permeable pavements are typically not as strong as traditional cement or asphalt pavements. Permeable pavement is composed of asphalt or concrete without the finer particles that are normally found in the cement mix. The finished product is a strong pavement with a matrix of large pore spaces. The pavement can be designed to provide percolation rates from 5.6 to 18.5 gallons per minute per square foot. Before the pavement is installed, the soil surface is over-laid with a layer of geo-textile fabric and then a layer of stone aggregate. The aggregate forms a reservoir for

retention and enhances infiltration capacity. It is crucial for underlying soils to have an infiltration capacity of  $>0.5$  in/hr. for the pavement to function properly. It is also important to restrict heavy truck traffic to avoid damage. Although traffic of heavy weight vehicles (garbage trucks, fire engines, tractor-trailers) can be accommodated, construction due to excavation and materials increases substantially.

## Operations and Maintenance:

Clogging is the main source of permeable pavements not functioning as well as they should. Large particles trap smaller and smaller particles, reducing the infiltration rate. Sediments can be deposited by vehicle traffic, foot traffic, wind blown sediments, or be transported by runoff.

If clogging occurs in porous pavement and the surface infiltration rate is reduced lower than the rainfall rate, then either water will pond or runoff will be produced. Therefore, periodic maintenance is required for continued functioning. Maintenance should include vacuum sweeping at least four times a year, followed by high-pressure hosing to free pores in the top layer from clogging. Potholes and cracks can be filled with patching mixes unless more than 10% of the surface area needs repair. Spot-clogging may be fixed by drilling half-inch holes through the porous pavement layer every few feet. Estimated cost of maintenance is approximately \$200 per acre per year, which would include four inspections with appropriate jet hosing and vacuum sweeping treatments.

## HOA or Regulatory Considerations:

The porosity of the paving material does not determine the amount of credit received in stormwater permitting, so selection is generally based on cost and aesthetics.





*These interlocking concrete pavers were used on the driveway at the model home of the Madera subdivision in Gainesville.*

### Credits in Green Building Certification Programs:

- ◆ FGBC-Home Standard (S-17 maintain pervious surface area)
- ◆ Florida Yards & Neighborhoods (stormwater runoff: mulch, bricks, flagstones, gravel, or other porous surfaces used on walkways, patios or drives)
- ◆ LEED for Homes (SS 4.1 permeable lot)
- ◆ LEED for Neighborhood Development Pilot (GCT Credit 9: Stormwater Management)
- ◆ NAHB Model Green Home Building Guidelines (1.3.5 Manage storm water using low-impact development when possible)

### Relative Costs:

The amount and type of materials as well as site preparation largely determine the final cost of paver installations. Typical construction costs vary from \$5 to \$10 per square foot. The necessity for deeper drainage/storage basins (typically driven by increased load or frequency of vehicles use) will increase the cost substantially. Though permeable pavement is more expensive than conventional pavement, it can be cost competitive when it reduces the size of, or eliminates, the need for curb and gutter conveyance systems and large stormwater retention ponds.

### References and Resources:

*Pervious Concrete Pavements: The Environmentally Friendly Choice* (Concrete Network):

<http://www.concretenetwork.com/pervious>

*Watershed Benefits of Permeable Pavers* (Low Impact Development Center, Inc.)

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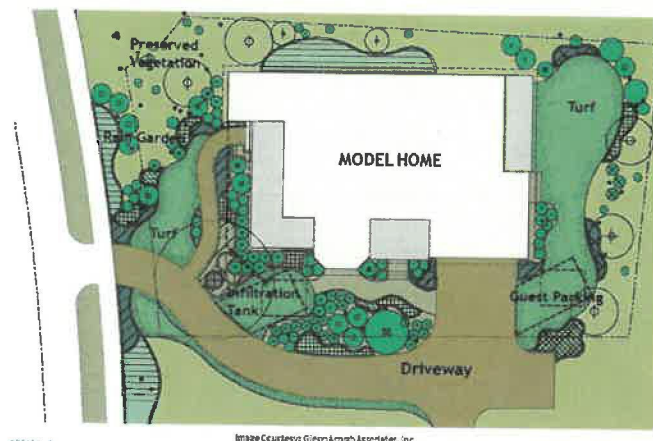
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## Resource Efficient Landscapes and Irrigation



*Landscape design for a resource efficient landscape in the Madera subdivision in Gainesville, FL. Photo illustrates the front yard portion of the installed landscape.*

### Definition:

Resource efficient landscapes in Florida are those Florida-friendly landscapes that minimize environmental impacts to the greatest extent possible. According to the Florida Statutes (FS 373.185), "Xeriscape" or "Florida-friendly landscape" means quality landscapes that conserve water and protect the environment and are adaptable to local conditions and which are drought tolerant. The principles of Xeriscape include planning and design, appropriate choice of plants, soil analysis which may include the use of solid waste compost, efficient irrigation, practical use of turf, appropriate use of mulches, and proper maintenance."

### Objectives:

Resource efficient landscaping entails use of a number of principles and practices that reduce the nutrient, water, and energy inputs and outputs resulting from residential landscapes. The two core goals of resource efficient landscaping and irrigation are nutrient source control and efficient irrigation application.

### Overview:

A principal component of resource efficient landscapes is the adoption of the highest standard (gold level) of the Florida Yards and Neighborhoods (FYN) program, which requires practices such as appropriate fertilization and use

of the "right plant, right place" philosophy. In the last few years, FYN's target audience has expanded to include builders, developers, landscape architects, landscape maintenance professionals and real estate professionals. Currently, FYN has coordinators working (either full or part-time) with builders and developers in nearly two dozen counties, and the state office provides support for those counties that currently do not have a staff person formally in the Builder/Developer Coordinator role.

Additional principles that can help reduce the water quality and quantity impact from landscapes are preservation or planting of tree canopy, reduction of high maintenance turfgrass, use of appropriately sited native plants, and use of reclaimed water for irrigation. All of these integrate with the "reduce, reuse, recycle" philosophy. Technologies such as soil moisture sensors and micro-irrigation can help reduce overwatering. Stormwater and graywater reuse systems can replace potable water use and help mimic natural

### Applications

- New construction
- Retrofits
- Commercial
- Residential communities

hydrological function. Dual metered and piped reclaimed water systems recycle treated wastewater back onto urban landscapes in a controlled and distributed pattern.

#### Benefits

- Reduction of pollutant load
- Reduced water consumption

#### Water Protection Benefits:

**Water conservation implications** – The average Florida household uses approximately 50% of its water for outdoor irrigation. In most cases this is potable water, which is of a quality far above that required for landscape irrigation. Matching landscape design and installation to local soils and natural hydrology can significantly reduce, or eliminate, potable water consumption.

#### Stormwater implications - Quantity

Reducing excessive landscape irrigation minimizes the amount of water running off of the landscape into the stormwater management system. This can translate to reduced nutrient and contaminant concentrations in stormwater runoff.

#### Stormwater implications - Quality

Nutrients added to urban landscapes are likely to be one of the greatest contributors to non-point source nutrient pollution in Florida. For example, high nutrient loading from urban fertilizer use has been implicated as a driving factor contributing to the algal blooms in 2004 and 2005 in the St. Johns River. Limiting or eliminating fertilizer in residential landscapes and applying it correctly when used can help to preserve existing water quality. Additionally, reducing excessive landscape irrigation can translate to reduced nutrient and contaminant concentrations in stormwater runoff.

#### Design Considerations:

Landscape plant suitability is integrally connected to groundwater elevation, slope, soil composition, and a variety of other localized characteristics. Resource efficient landscaping and irrigation can be applied to any home site. The plant palette available depends on climate and varies widely from the Panhandle to south Florida and from

coastal to interior regions. Numerous resources exist for assistance in selecting the right plants for a landscape. Additionally, plant water requirements vary, being lower in cooler northern areas and higher in warmer southern areas.

Under ideal conditions, a resource efficient landscape and irrigation system would far exceed performance of a traditional landscape. This type of “gold standard” landscape is designed and maintained to exist predominantly on rainfall once plants are established. In this case minimal to no supplemental fertilization is used in the landscape and no pesticides are used in the landscape or only biological and biorational pesticides are used when needed. Meeting these standards achieves the highest recognition level from the Florida Yards & Neighborhoods program. This can be achieved in part by starting with adequate soil conditions (avoiding compaction and not planting on fill soil) and preserving existing vegetation or installing drought tolerant, hardy plants that are highly adapted to the site’s conditions.

#### Design Keys

- Selection of plants appropriate to site conditions
- Maintenance practices

#### Operations and Maintenance:

The principles related to resource efficient or Florida friendly landscapes include putting the right plant in the right place, watering efficiently, fertilizing appropriately, mulching, attracting wildlife, managing yard pests responsibly, recycling, reducing stormwater runoff and protecting the waterfront. See the University of Florida’s *A Guide to Florida-Friendly Landscaping: Florida Yards & Neighborhoods Handbook* for detailed information on designing and maintaining a low maintenance landscape using those nine principles.



### HOA or Regulatory Considerations:

F.S. 373.185 requires that "A deed restriction or covenant entered after October 1, 2001, or local government ordinance may not prohibit any property owner from implementing Xeriscape or Florida-friendly landscape on his or her land." This statute also directs the state's water management districts to design and implement incentive programs for local governments to adopt or amend existing ordinances to require Florida friendly landscaping in new developments, including providing a model Florida friendly landscaping code.

In 2002, the Florida Department of Environmental Protection, together with Florida's nursery and landscape industry and the University of Florida, created the *Guidelines for Model Ordinance Language for the Protection of Water Resources in Florida*, which provides example landscape ordinance language for local governments.

In 2006, the University of Florida's Conservation Law Clinic created model CCR language for the FYN program, which was made available as a tool for developers.

### Credits in Green Building Certification Programs:

- ◆ FGBC-Home Standard (waterfront prerequisites: use of native, aquatic vegetation on shoreline, no turf adjacent to water, use of terraces, swales or berms to slow stormwater; W16 drought tolerant turf; W17 drought tolerant plants; W-18 plants compatible with local conditions; W-19 turf less than 50% of landscape; W-20 evenly shaped turf and no turf on berms; W-21 plants with similar maintenance requirements grouped together; W-22 mulch 3-4 inches deep; W-23 non-cypress mulch used; W-24 soil tested and amended where necessary; W-25 no permanent irrigation system; W-26 innovative irrigation technology; W-27 meet or exceed Water Star standards; W-28 irrigated land according to FGBC standard)
- ◆ FGBC-Development Standard (A-4 compost or mulch facility; A6 drought resistant landscape material in non-recreational common areas; CDR-2 no language in CCRs that prohibits green practices)

- ◆ Florida Yards & Neighborhoods New Construction Certification and Homeowner Recognition (points are earned for using various specific resource efficient landscaping practices)
- ◆ Florida Water Star<sup>SM</sup> (points are earned for using various specific resource efficient landscaping practices)
- ◆ LEED for Homes (SS-2 landscaping)
- ◆ LEED for Neighborhood Development Pilot (GCT Credit 3: Reduced Water Use, no permanent irrigation system; GCT Credit 9: Stormwater Management)
- ◆ NAHB Model Green Home Building Guidelines (1.3.5 Manage storm water using low-impact development when possible; 1.3.6 Devise landscape plans to limit water and energy demand while preserving or enhancing the natural environment; 4.1 indoor/outdoor water use )

### Relative Costs:

Costs for resource efficient landscapes can vary greatly depending on homeowner preferences. There is evidence that both upfront and maintenance costs for these practices can be lower when compared to those for conventional practices, particularly over time.

### References and Resources:

Florida Department of Environmental Protection. 2002. *Guidelines for Model Ordinance Language for the Protection of Water Resources in Florida*. <http://fyn.ifas.ufl.edu/materials/fdep%20model%20ordinance%20language%20for%20florida%20friendly%20landscapes.pdf>

Florida Department of Environmental Protection. 2006. *Landscape Irrigation and Florida Friendly Design Standards*. <http://www.dep.state.fl.us/water/waterpolicy/docs/landscapeirrigationfloridafriendlydesign.pdf>

Florida Yards and Neighborhoods. 2006. *A Guide to Florida-Friendly Landscaping: Florida Yards & Neighborhoods Handbook*. University of Florida, IFAS. 104 pp. <http://fyn.ifas.ufl.edu/materials/handbook.pdf>



Fraga, G.M. and Pagidipati, Srujani. 2006. Florida Friendly Landscaping Covenants, Conditions and Restrictions. Prepared for Florida Yards & Neighborhoods by the Conservation Clinic, University of Florida Levin College of Law. <http://fyn.ifas.ufl.edu/materials/florida-friendly%20covenants.%20conditions%20and%20restrictions.doc>

University of Florida IFAS – Florida Yards & Neighborhoods: <http://fyn.ifas.ufl.edu>

Florida Yards.Org – Florida Friendly Landscaping: The Smart Way to Grow: [www.FloridaYards.org](http://www.FloridaYards.org)

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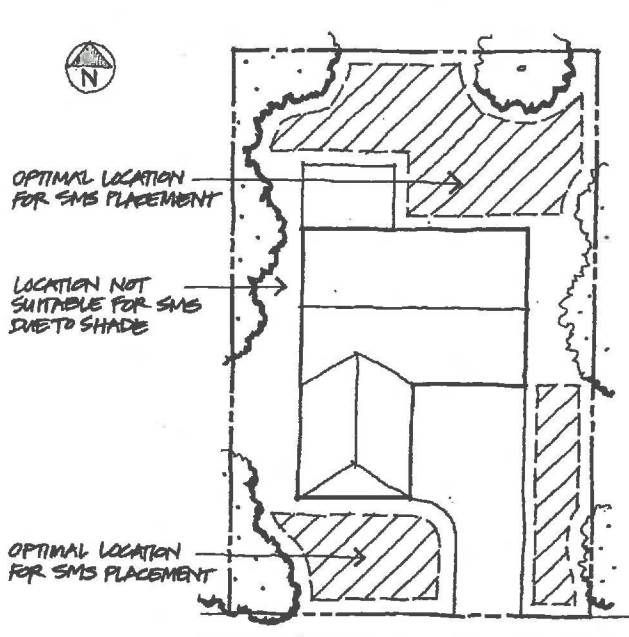
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Florida Yards & Neighborhoods

### *Layout:*

Barbara Haldeman  
Program for Resource Efficient Communities

This fact sheet was produced with funding from The Elizabeth Ordway Dunn Foundation.

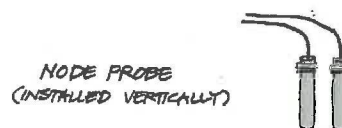
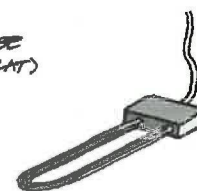
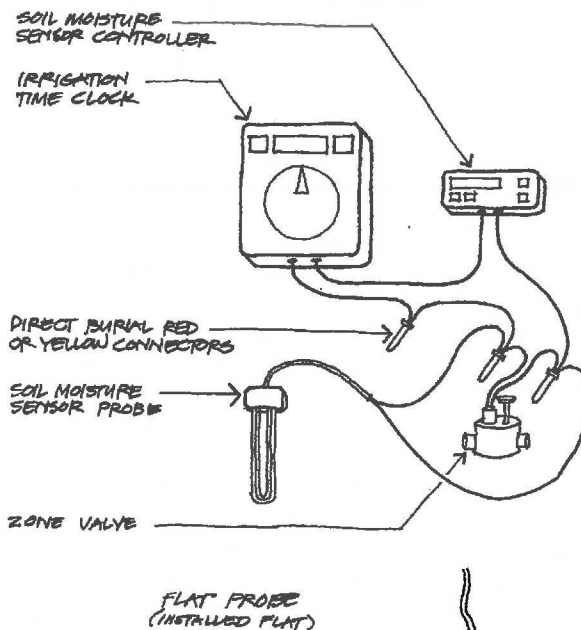
## Soil Moisture Sensors



(Above left) Layout of irrigated areas showing optimal and unsuitable locations for sensor placement.

(Above right) Components of an installed soil moisture sensor system. Distances between components are not representative of final installation and are meant to illustrate the connections between the sensor, the zone valve, the controller and the irrigation time clock.

(Right) Two types of soil moisture probes used in typical soil moisture sensor systems.



### Definition:

The soil moisture sensor (SMS) is a sensor connected to an irrigation system controller that measures soil moisture content in the active root zone before each scheduled irrigation event and bypasses the cycle if soil moisture is above a user-defined set point. Soil moisture sensors, like rain sensors, are considered rain shut off devices, but while rain sensors measure evapotranspiration rates, soil moisture sensors measure real time soil moisture.

### Objectives:

Soil moisture sensors (SMSs) measure soil moisture at the root zone and regulate the existing conventional irrigation timer, resulting in considerable water savings when installed and used properly. A customized soil water content threshold is set, allowing for dryer or wetter soil condition. SMSs function similarly to rain sensors by bypassing irrigation events under rainy conditions, but by measuring soil moisture at the root zone they are more effective at minimizing irrigation when plants do not need additional water.

**Applications**

- **New construction**
- **Retrofits**
- **Commercial**
- **Residential communities**

**Overview:**

When connected to conventional irrigation system time clocks, soil-moisture sensors can override scheduled watering events by interrupting the irrigation controller circuit when adequate moisture is detected in the soil. The sensors have user-adjustable moisture content set-points that allow unique watering regimes based on plant species, soil type, and/or seasonal rainfall. Though each device manufacturer uses their own method, all soil-moisture sensors detect the electrical conductivity of the soil and convert it to moisture units.

**Water Protection Benefits:**

**Water conservation implications** – University of Florida research shows that SMSs can reduce residential irrigation application by 50%. Water savings have been measured between 5% to 88% over typical timer-based irrigation systems, with 59% average savings in one University of Florida study. In another University of Florida study comparing SMSs to water use with and without a rain sensor, the rain sensor resulted in a 34% reduction in water use while the SMS savings ranged from 69-92% for three of the four SMSs tested. In Florida, approximately 50% of residential water use goes to irrigation, meaning that SMSs can reduce overall residential water use by 25%. Use of soil moisture sensors results in greatest water savings during rainy periods.

**Stormwater implications** – The significant reduction in unneeded landscape irrigation translates to reduced runoff. As a result, fewer nutrients from fertilizers and chemicals from pesticides are carried off individual lots and landscaped areas. Additionally, there is a reduction in the overall burden placed on the stormwater conveyance system.

**Design Considerations:**

SMSs appear to be effective in all soil types. However, there is a range in effectiveness, and uniform performance across soil types should not be assumed. There is no strong variance for application and use of SMSs across soil types in Florida. SMSs can be used regardless of slope in Florida.

A SMS should be placed in a location that is representative of the water requirements in the zone(s) it is controlling. Where there are variations due to shade, topography, etc., the sensor should be placed in the driest location (ie., in full sun, on high elevation points). In larger landscapes, use of multiple sensors is most effective, with one sensor per irrigation zone (hydrozone). If one sensor is used for the entire landscape, it should be placed in a turfgrass hydrozone and in a location where it is most representative of the average water requirements of that zone.

SMSs should be placed at least 5 ft. from any structure, from impervious surfaces, from depressions/swales, from the property line (to avoid overspray from neighboring irrigation systems), and from septic tanks/drainfields, and at least 3 ft. from plant beds. They should also be placed to avoid high moisture areas, and so should be at least 5 ft. from downspouts, overhangs, hose bibs, air conditioning condensate lines, tree canopy drip lines, and shade on the north side of a home. Sensors are installed in the root zone, in undisturbed soil when possible. Refer to the *Field Guide to Soil Moisture Use in Florida* for detailed installation and calibration instructions.

**Benefits**

- **Reduced water consumption**
- **Can be set to lower and upper thresholds to maintain optimum soil moisture saturation and minimize plant wilting.**
- **Can contribute to deeper plant root growth, reduced soil runoff/leaching, and less favorable conditions for insects and fungal diseases.**



## Operations and Maintenance:

The SMS overrides the controller's scheduled irrigation events when they are not needed but it does not control the duration of those events. To achieve maximum water use efficiency, the irrigation run time must be set appropriately on the irrigation controller according to application rate, season, region and plant needs.

If the system is applying excessive amounts of irrigation, an irrigation contractor trained in the installation and operation of soil moisture sensors should be called in for an inspection. If the system is running properly, an annual recalibration is recommended along with an inspection. More frequent recalibration may be needed due to changing plant needs (site changes or termination of establishment period), seasonal weather variation, or if the sensors were placed improperly.

When a landscape maintenance company or homeowner makes fertilization or pesticide applications, they may temporarily turn off the SMS controller to allow a watering-in application. The technician or homeowner must make sure that the SMS controller is turned back on following that event.

## HOA or Regulatory Considerations:

Florida Statute 373.62 states that "Any person who purchases and installs an automatic lawn sprinkler system after May 1, 1991, shall install, and must maintain and operate, a rain sensor device or switch that will override the irrigation cycle of the sprinkler system when adequate rainfall has occurred." Soil moisture sensors are considered rain sensor devices.

The SMS reduces water use by having irrigation events determined by soil moisture conditions rather than a predetermined irrigation schedule. However, watering restrictions in many parts of the state limit irrigation to specific days of the week. Be sure to follow local watering restrictions when inputting timer settings.

## Credits in Green Building Certification Programs:

- ◆ FGBC-Development Standard (A-6 water conserving irrigation in common areas)
- ◆ FGBC-Home Standard (W-26 innovative irrigation technology)
- ◆ Florida Water Star<sup>SM</sup>
- ◆ Florida Yards and Neighborhoods
- ◆ LEED for Homes (WE 2.1 high efficiency irrigation system)
- ◆ NAHB Model Green Home Building Guidelines (1.3.5 Manage storm water using low-impact development when possible)

## Relative Costs:

Relative costs for a SMS system are low compared to the quantity of potable saved over the lifetime of the technology. Materials and installation costs currently, range from \$150 to \$400. This is likely the simplest, most cost-effective, and socially acceptable water-efficiency LID practice in Florida. Complex landscapes with multiple hydrozones and plant watering needs may require numerous sensors and increase costs. SMSs can often pay for themselves in as little as 12 months or less as a result of water savings (depending on water use fees and residential consumption).

## References and Resources:

- Baum, Melissa C., Dukes, Michael D., Miller, Grady L. 2005. "Analysis of Residential Irrigation Distribution Uniformity." *Journal of Irrigation and Drainage Engineering*, July/August 2005, 336-341.
- Cardenas-Lailhacar, B., M.D. Dukes, and G.L. Miller. 2008. Sensor-based automation of irrigation on bermudagrass, during wet weather conditions. *Journal of Irrigation and Drainage Engineering* 134(2): 120-128.
- Dukes, Michael D., Cardenas-Lailhacar, Bernardo, and Miller, Grady L. 2005. "Residential Irrigation Based on Soil Moisture." *Resource*, June/July 2005, 4-6.
- Philpot, Brent. 2008. *Field Guide to Soil Moisture Use in Florida*. Produced for the St. Johns River Water Management District by the Program for Resource Efficient Communities, University of Florida. 40 pp.

"Sensors of today...Savings for tomorrow." <http://www.igin.com/Irrigation/pageSensorsToday.htm>  
Soil Moisture Sensor page at the homepage of Dr. Michael Dukes at UF: <http://irrigation.ifas.ufl.edu/SMS/publications.htm>

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This fact sheet was produced with funding from  
The Elizabeth Ordway Dunn Foundation.

## Stormwater Reuse



*Stormwater reuse retrofit project in Cocoa, FL serving a 12-acre downtown drainage basin. Photos courtesy of Eric Livingston.*

### Definition:

Although similar in concept to rainwater harvesting using rainbarrels and cisterns, stormwater reuse systems are typically much larger in size using a surface detention pond or other water storage system to capture water and recycle that water for non-potable needs, especially irrigation.

### Objectives:

This practice can significantly reduce demand on higher quality water sources, but is also considered part of a treatment train by allowing stormwater runoff a second chance to infiltrate into the ground and water is treated by landscape vegetation and soils.

### Overview:

Stormwater reuse entails storing stormwater runoff from a surface pond or underground catchment device and then using it as a source of irrigation water. The philosophy behind the practice is that the lowest quality water should be used for the lowest quality need.

### Applications

- New construction
- Retrofits
- Commercial
- Residential communities



### Benefits

- **Conservation of potable water**
- **Maintains hydrologic balance**
- **Improved water treatment**

### Water Protection Benefits:

**Water conservation implications** – Potable water is directly conserved because stormwater acts as an alternative water source through direct substitution in landscape irrigation.

**Stormwater implications** – By redistributing captured stormwater across an extensive landscape area in a controlled fashion, this practice helps maintain the hydrologic balance and uses natural cleansing processes for improved water treatment.

### Design Considerations:

This practice is somewhat infiltration dependent in the sense that water is applied to the landscape and then infiltrates naturally. Water intake systems should use horizontal wells placed in the subsoil below the storage basin or utilize a post pump filtration system to remove particulate matter. Although water conservation during irrigation should still be practiced, the type of emitter used should take into account the lower quality water supply and increased likelihood of particulate fouling. A backup source of water should be identified and factored into the design of the system.

### Operations and Maintenance:

Stormwater reuse has relatively low requirements for maintenance. Irrigation pumps, filtration system, pipes and other components should be inspected and repaired as needed.

### Credits in Green Building Certification Programs:

- ◆ FGBC-Development Standard (Category U-3: supply irrigation system with storm or reuse water)
- ◆ LEED for Homes (WE 1.1 rainwater harvesting system)
- ◆ LEED for Neighborhood Development Pilot (GCT Credit 3: Reduced Water Use)
- ◆ NAHB Model Green Home Building Guidelines (1.3.5 Manage storm water using low-impact development when possible)

### Relative Costs:

Stormwater reuse is very cost effective for consumers and water utilities. Water costs for stormwater reuse range from \$0.12 - \$0.50 per kgal (thousand gallons) versus \$2.00 - \$5.00 per kgal for potable water. Many Florida-specific examples exist where utilities have profited from selling stormwater for irrigation to both residential and commercial consumers. For utilities, costs are low because of low energy requirements due to reduced stormwater treatment requirements.

### References and Resources:

Shukla, Sanjay and Fouad H. Jaber. 2006. *Stormwater as an Alternative Source of Water Supply: Feasibility and Implications for Watershed Management*. UF/IFAS EDIS Circular 1493, Agricultural and Biological Engineering Department. <http://edis.ifas.ufl.edu/pdf/FILES/AE/AE39800.pdf>

*Stormwater Reuse* (Marty Wanielista) [www.stormwater.ucf.edu/FILES/StC-P\\_Wanielista\\_B104.doc](http://www.stormwater.ucf.edu/FILES/StC-P_Wanielista_B104.doc)

### Design Keys

- **Storage volume**
- **Irrigation demand**
- **Supplemental water source**
- **Water intake, pump, filtration and irrigation emitter selection**

*Stormwater Reuse: The Utility Business Practice* (Gerry Hartman and Marty Wanielista) <http://www.stormwater.ucf.edu/conferences/qthstormwaterCD/documents/StormwaterReuse.pdf>

*Stormwater Reuse: Why? And Examples* (Marty Wanielista)  
<http://www.stormwater.ucf.edu/research/presentations/Reuse,%20Why%20and%20Examples.pdf>

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Program for Resource Efficient Communities

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## CITY OF STUART, FLORIDA AGENDA ITEM REQUEST CITY COMMISSION

**Meeting Date:** 4/13/2020

**Prepared by:** Stephen Mayer

**Title of Item:**

AVONLEA PUD AMENDMENT PARCEL B (PARCEL 16) (QUASI-JUDICIAL)(RC):

ORDINANCE No. 2434-2020; AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, BEING THE THIRD AMENDMENT OF ORDINANCE NO. 2307-2015, ALSO KNOWN AS THE “NEW AVONLEA PLANNED UNIT DEVELOPMENT (PUD)” CONSISTING OF 12.40 ACRES ZONED RESIDENTIAL PLANNED UNIT DEVELOPMENT (RPUD), 16.24 ACRES ZONED COMMERCIAL PLANNED UNIT DEVELOPMENT (CPUD), AND 20.4 ACRES OF WETLAND/UPLAND PRESERVE ZONED RPUD, FOR A TOTAL OF 49.04 ACRES; SAID PUD BEING GENERALLY LOCATED BETWEEN NE DIXIE HIGHWAY TO THE SOUTH, LAND ON BOTH SIDES OF GREEN RIVER PARKWAY ON THE WEST, LAND ON BOTH SIDES OF CARDINAL AVENUE ON THE EAST AND THE CITY BOUNDARY TO THE NORTH, BEING MORE FULLY DESCRIBED BY EXHIBIT “A” ATTACHED; AMENDING SAID PUD TO PROVIDE FOR THE APPROVAL OF THE MASTER PARCEL SITE PLAN FOR THE AVONLEA CROSSINGS PARCEL B (PARCEL 16); PROVIDING FOR A MASTER OFF-SITE INFRASTRUCTURE PLAN FOR THE ENTIRE PUD; PROVIDING FOR REVISED AND ADDITIONAL DEVELOPMENT CONDITIONS OF APPROVAL; PROVIDING FOR AMENDED AND NEW TIMETABLES FOR DEVELOPMENT, DECLARING THE PLAN TO BE CONSISTENT WITH THE CITY’S COMPREHENSIVE PLAN; PROVIDING DIRECTIONS TO THE CITY CLERK; PROVIDING FOR REPEAL OF ALL ORDINANCES IN CONFLICT; PROVIDING FOR SEVERABILITY; PROVIDING FOR AN EFFECTIVE DATE, AND FOR OTHER PURPOSES.

**Summary Explanation/Background Information on Agenda Request:**

The vacant subject property is approximately 4.14 acres and is a part of the New Avonlea PUD. The New Avonlea PUD was approved by the City Commission on June 8, 2015, via Ordinance 2307-2015, and consists of multiple parcels that are zoned CPUD and RPUD as shown on a Master Parcel Plan. The Master Parcel Plan also consisted of development maximum approvals. This request represents the third amendment and is specific to Parcel 16 of the Master PUD.

The Master Parcel Plan (Exhibit D) of the original New Avonlea PUD originally delineated this parcel to be a Commercial Planned Unit Development, allowing for up to 75 residential units and 65,000 square feet of commercial development. The applicant would like to build 69 residential units and no commercial development on the site.

The site is approximately 4.14 acres in size. The property is adjacent to the Haney Creek Natural Area. To the east and across from Green River Parkway are undeveloped parcels of the New Avonlea PUD. To the north and across Baker Road is an unincorporated undeveloped site.

The proposed development for Avonlea Crossings Parcel B – (Parcel 16) consists of 47 two-story, two-bedroom townhouses in 12 buildings and 22 two-story, three-bedroom detached, single-family cottage homes. The New Avonlea Masterplan allows for up to 75 units on Parcel 16, a site density of 18.1 du per acre. The proposed 69 units reduces the site density to 16.7 du per acre.



The stated desire from the developer, New Urban Communities, is to meet a market need for middle-income families who may otherwise have a hard time finding housing in a location in Stuart. With close proximity to downtown Stuart, Jensen Beach, quality schools, and commercial amenities, many middle-income families appear in large numbers to be priced out of the market. The developer seeks to meet this need by providing smaller, efficiently designed cottage units with superior site and landscape design. The site plan and building siting and massing combines to create a unique, intimate community with a real sense of place. The two distinct product types offered will allow a broader spectrum of households to live in the community, consistent with the original concept of Avonlea.

The application has been reviewed for consistency with the City's LDC. Approval of the rezoning to RPUD would allow for attached housing to be constructed at the site. The Master Parcel Plan approved up to 75 units on the CPUD, based on available density. The applicant is proposing 69 units, which is less than the Master Parcel Plan permits. The applicant shall continue to maintain an appropriate mix of Commercial and Residential uses within the entire Master Parcel Plan, by maintaining not less than 10% of the entire PUD as commercial, which is a requirement of the Special Neighborhood Future Land Use designation.

This parcel is included in an existing Avonlea Real Estate Development Accelerator (REDA) agreement which was previously established by a Resolution of the Community Redevelopment Agency. That agreement is currently under review and is linked to the required offsite infrastructure plan.

The Local Planning Agency (LPA) voted to recommend approval of Ordinance 2434-2020 with three additional conditions. 1) Provision of crosswalks at the internal intersections, 2) allow for a portion or all of the off-street parking to be reserved for a bus stop, as needed and 3) add a barrier to the playground area, either fence or foliage. The draft LPA minutes are attached. Staff has included conditions of approval to reflect the LPA recommendations. Staff has added these new conditions to apply for the entire PUD: #41, 42, and 59.

**Funding Source:**

N/A

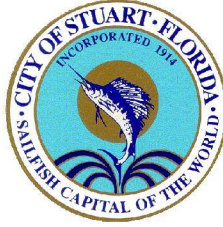
**Recommended Action:**

Motion to recommend approval of Ordinance 2434-2020.

**ATTACHMENTS:**

| Description                                                 | Upload Date | Type                     |
|-------------------------------------------------------------|-------------|--------------------------|
| □ Ordinance 2434-2020 Avonlea Crossing Parcel B - Parcel 16 | 2/28/2020   | Ordinance add to Y drive |
| □ Staff Report                                              | 2/28/2020   | Staff Report             |
| □ Landscape Plan                                            | 2/10/2020   | Exhibit                  |
| □ Site Plan Page 1                                          | 2/10/2020   | Exhibit                  |
| □ Site Plan Page 2                                          | 2/10/2020   | Exhibit                  |
| □ Design Guidelines                                         | 2/10/2020   | Exhibit                  |
| □ Architectural Elevations and footprint                    | 2/10/2020   | Exhibit                  |
| □ Survey Page 1                                             | 2/10/2020   | Exhibit                  |
| □ Survey Page 2                                             | 2/10/2020   | Exhibit                  |

|                                  |           |                 |
|----------------------------------|-----------|-----------------|
| □ Auto Turn Plan                 | 2/10/2020 | Backup Material |
| □ Preliminary Engineering page 1 | 2/10/2020 | Backup Material |
| □ Preliminary Engineering Page 2 | 2/10/2020 | Backup Material |
| □ Master Parcel Plan for Avonlea | 2/10/2020 | Backup Material |
| □ PUD Checklist 1                | 2/13/2020 | Cover Memo      |
| □ PUD Checklist 2                | 2/13/2020 | Cover Memo      |
| □ LPA Minutes 2-20-2020          | 2/28/2020 | Attachment      |



**BEFORE THE CITY COMMISSION  
CITY OF STUART, FLORIDA**

**ORDINANCE NUMBER 2434-2020**

**AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, BEING THE THIRD AMENDMENT OF ORDINANCE NO. 2307-2015, ALSO KNOWN AS THE “NEW AVONLEA PLANNED UNIT DEVELOPMENT (PUD)” CONSISTING OF 12.40 ACRES ZONED RESIDENTIAL PLANNED UNIT DEVELOPMENT (RPUD), 16.24 ACRES ZONED COMMERCIAL PLANNED UNIT DEVELOPMENT (CPUD), AND 20.4 ACRES OF WETLAND/UPLAND PRESERVE ZONED RPUD, FOR A TOTAL OF 49.04 ACRES; SAID PUD BEING GENERALLY LOCATED BETWEEN NE DIXIE HIGHWAY TO THE SOUTH, LAND ON BOTH SIDES OF GREEN RIVER PARKWAY ON THE WEST, LAND ON BOTH SIDES OF CARDINAL AVENUE ON THE EAST AND THE CITY BOUNDARY TO THE NORTH, BEING MORE FULLY DESCRIBED BY EXHIBIT “A” ATTACHED; AMENDING SAID CPUD TO PROVIDE FOR THE APPROVAL OF THE MASTER PARCEL SITE PLAN FOR THE AVONLEA CROSSINGS PARCEL B (PARCEL 16); REZONING SAID CPUD TO A RESIDENTIAL PLANNED UNIT DEVELOPMENT (RPUD); PROVIDING FOR A MASTER OFF-SITE INFRASTRUCTURE PLAN FOR THE ENTIRE PUD; PROVIDING FOR REVISED AND ADDITIONAL DEVELOPMENT CONDITIONS OF APPROVAL; PROVIDING FOR AMENDED AND NEW TIMETABLES FOR DEVELOPMENT, DECLARING THE PLAN TO BE CONSISTENT WITH THE CITY’S COMPREHENSIVE PLAN; PROVIDING DIRECTIONS TO THE CITY CLERK; PROVIDING FOR REPEAL OF ALL ORDINANCES IN CONFLICT; PROVIDING FOR SEVERABILITY; PROVIDING FOR AN EFFECTIVE DATE, AND FOR OTHER PURPOSES.**

**\* \* \* \* \***

**WHEREAS**, on June 8, 2015, the City Commission adopted Ordinance No. 2307-2015, whereby establishing the “New Avonlea PUD” which consists of a Master Parcel Plan and provides



that any future development activities on any of the project’s multiple parcels (with the exception of Phase II of an existing Avonlea Commerce Center Parcel) shall require a master site plan approval thru a major PUD amendment, further requiring that an off-site infrastructure plan be added to the Master Parcel Plan at the time of first amendment.

**WHEREAS**, at the hearing the applicant showed by substantial competent evidence that the application is consistent with the Stuart Comprehensive Plan, and the Land Development Code of the City, and with the procedural requirements of law; and

**WHEREAS**, the Avonlea Crossings Parcel B (Parcel 16) RPUD development, including the New Avonlea Off-Site Infrastructure Plan are consistent with the master PUD and anticipated development;

**WHEREAS**, the foregoing recitals are true and adopted as findings of fact and conclusions of law.

**WHEREAS**, the New Avonlea PUD is legally described in “**Exhibit A**” of this ordinance. A map depicting the New Avonlea PUD is attached hereto as **Exhibit “B”** and made a part hereof by reference; and amended development conditions including revised timetables for development attached hereto as **Exhibit “C”**;

**NOW THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA THAT:**

**SECTION 1:** The following items consisting of documents already approved by Ordinance 2305-2015 and the first Amendment (Ordinance 2366-2018), as well as revised and new documents adopted hereby are on file as public records at the office of the City Clerk in City Hall and are attached hereto as **Exhibit “D”**, hereinafter the “Development Documents”, which shall be deemed a part of this Ordinance:

The following are General New Avonlea PUD Plans and Documents (reinstated by Ordinance 2420-2019):

1. The Master Parcel Plan, Sheet 1 of 1 by Lucido and Associates, dated 5.27.18 (existing)
2. South Florida Water Management District Permit #43-01387-P, issued 6.9.16. (existing)
3. Department of the Army Permit #SAJ-1998-03203. (existing)
4. Drainage Statement, by Grzelka Engineering, Inc. and as built plans for master drainage. (existing)
5. Master Drainage Plan, by DLS Environmental Services, Inc. dated March 2016 (revised)
6. Environmental Assessment Report, prepared by DLS Environmental Services, Inc. dated July 2014 (existing)
7. Preserve Area Management Plan, prepared by DLS Environmental Services, Inc., dated March 2017 (existing)
8. Traffic Impact Analysis prepared by MacKenzie Engineering and Planning, dated October 2014 (existing)
9. 2015 Pattern Book for Avonlea Commerce Center Phase II (existing)
10. PUD Boundary Survey prepared by Velcon Group, Inc., dated 01.08.14 (existing)
11. Avonlea PUD Off-Site Infrastructure Plan, by HJA Design Studio, Sheet 1 and 2 of 2, dated 1.11.16 (existing)
12. Avonlea Typical Cross Section, by Cotleur and Hearing, Inc., dated 4.19.18 (existing)
13. Amended and Restated Declaration of Covenants and Restrictions for the New Avonlea P.U.D., dated 11.30.16. (existing)

**Master Parcel Plans for Avonlea Crossings Parcel A (Parcel 1)**

14. Site Plan for Avonlea Crossing A, by Kuoppala & Associates, dated 9.30.19 (existing)
15. Landscape Plan for Avonlea Crossing A, by Litterick Landscape Architecture, dated 9.30.19 (existing)
16. Architectural Elevations and Floor Plans for Avonlea Crossing A, by Kuoppala & Associates, dated 9.30.19 (existing)

17. Boundary Survey for Avonlea Crossing A, by Velcon Engineering and Surveying, dated 4.30.19 (existing)

The following documents are established by Ordinance 2366-2018 and are not being replaced:

**Master Parcel Plans for Avonlea Preserve Parcel A (Parcel 2) and B (Parcel 12)**

18. Site Plan for Avonlea Preserve A, by Cotleur and Hearing, Inc, dated 11.20.17 (existing)
19. Site Plan for Avonlea Preserve B, by Cotleur and Hearing, Inc., dated 11.20.17 (existing)
20. Lot Plan for Avonlea Preserve A and B, by Cotleur and Hearing, Inc., dated 4.24.18 (existing)
21. Landscape Plan for Avonlea Preserve A, by Cotleur and Hearing, Inc., dated 5.25.18 (existing)
22. Landscape Plan for Avonlea Preserve B, by Cotleur and Hearing, Inc., dated 5.25.18 (existing)
23. Landscape Plan details for Avonlea Preserve A and B, by Cotleur and Hearing, Inc., dated 5.25.18 (existing)
24. Boundary Survey for Avonlea Preserve A, by Velcon Group, Inc., dated 1.27.17 (existing)
25. Boundary Survey for Avonlea Preserve B, by Velcon Group, Inc., dated 2.6.17 (existing)
26. Amenity Package, dated 2.2.18 (existing)

The following documents are being established by Ordinance 2434-2020:

**Master Parcel Plans for Avonlea Crossings Parcel B (Parcel 16)**

27. Site Plan for Avonlea Lot 16, by Peter Wayne Aquart, P.E., SP-1 and SP-2, dated 1.23.20 (new)
28. Landscape Plan for Avonlea New Urban Communities, by Cotleur and Hearing, sheets 1 thru 4, dated 1.23.20 (new)
29. Architectural Elevations and Floor Plans, prepared by Architectural Studio, Inc., Sheets A1-5, dated 1.1.20 (new)
30. Boundary and Topographic Survey, by Richard H Smith, Inc., sheets 1 and 2, dated 8.1.19 (new)
31. Design Guidelines, prepared by New Urban Communities (new)



**SECTION 2:** Except as otherwise provided herein, no development permits, site permits, or building permits shall be issued by the City except in compliance with the City’s Land Development Code and with the aforesaid Development Documents. The failure of an Owner to complete their development, or to comply with the Development Documents, or with any term or condition of development set forth in this ordinance, shall be deemed a zoning violation and no further permits, or other development approvals or orders shall be issued by the City to the owners until the violation has been resolved, and the matter may become the subject of a code enforcement action brought by the City. This section shall not impair the due process or other legal rights of the Owners to seek administrative or judicial redress.

**SECTION 3:** Following the adoption and acceptance of this ordinance by the Owners, and in addition to any other action for failure by an owner to complete development or otherwise comply with the Development Documents, the City Development Director may obtain a hearing before the City Commission, and shall thereupon give at least five (5) days written notice of the time, date and location of the hearing, along with specific notice of the alleged breach. At the hearing before the City Commission the Owners may appear and may contest the allegation of breach or explain the reason or reasons for the breach. Upon a finding of a material breach of the Development Documents and therefore, the Ordinance(s) adopting the same, the City Commission may impose or do any or all of the following:

- a. Initiate the process to amend or repeal the portion of this or any other ordinance pertaining to the portion of the development in breach.
- b. Direct the City Development Director to initiate the process to rezone the PUD property or any portion of the PUD property in breach.

- c. Impose an administrative penalty of up to \$1,000.00 for each violation, and up to \$5,000.00 for each repeat violation that occurs, along with all reasonable costs, including attorney's fees incurred by the City.

Any breach of any provision or condition of this PUD ordinance by the Owner shall be considered a zoning violation subject to any remedies provided herein, or as otherwise provided by law. In the event a violation found continues from day to day, each day the violation is found to continue shall be deemed a separate violation.

**SECTION 4:** All ordinances or parts of ordinances in conflict with this ordinance or any part thereof is hereby repealed to the extent of such conflict. If any provision of this ordinance conflicts with any contractual provision between the City and the Owner of the site, this ordinance shall prevail.

**SECTION 5:** If any provision of this ordinance or the application thereof to any person or circumstance is held invalid, the invalidity shall not affect other provisions or applications which can be given effect without the invalid provision or application, and to this end the provisions of this ordinance are declared severable.

**SECTION 6:** This ordinance and agreement shall be effective upon the last of the following to occur: adoption by the City Commission, and proper execution and acceptance by the Owners.

**SECTION 7:** The complete execution and recording of this Ordinance by the City Clerk shall occur no later than 60 days from the date of this approval, failing which this ordinance shall be void.

**SECTION 8:** Upon complete execution of this Ordinance, including the Acceptance and Agreement by the Owner, the City Clerk is directed to record a Certified Copy of the same in the Public Records of Martin County, Florida.

Ordinance 2434-2020 – New Avonlea PUD – Amendment No. 3 and Master Site Plan Approval for  
Avonlea Crossings Parcel B (Parcel 16)

PASSED on First Reading this \_\_\_\_ day of \_\_\_\_\_, 2020.

Commissioner \_\_\_\_\_ offered the foregoing Ordinance and moved its adoption. The  
motion was seconded by Commissioner \_\_\_\_\_ and upon being put to a roll call vote, the  
vote was as follows:

MICHAEL J. MEIER, MAYOR  
EULA R. CLARKE, VICE MAYOR  
BECKY BRUNER, COMMISSIONER  
KELLI GLASS LEIGHTON, COMMISSIONER  
MERRITT MATHESON, COMMISSIONER

| YES | NO | ABSENT | ABSTAIN |
|-----|----|--------|---------|
|     |    |        |         |
|     |    |        |         |
|     |    |        |         |
|     |    |        |         |
|     |    |        |         |

ADOPTED on second and final reading this \_\_ day of \_\_\_\_\_, 2020.

ATTEST:

\_\_\_\_\_  
MARY R. KINDEL  
CITY CLERK

\_\_\_\_\_  
MICHAEL J. MEIER  
MAYOR

APPROVED AS TO FORM  
AND CORRECTNESS:

\_\_\_\_\_  
MICHAEL J. MORTELL  
CITY ATTORNEY

ACCEPTANCE AND AGREEMENT



BY SIGNING THIS ACCEPTANCE AND AGREEMENT, THE UNDERSIGNED HEREBY ACCEPTS AND AGREES TO ALL OF THE TERMS AND CONDITIONS CONTAINED IN A RESIDENTIAL PLANNED UNIT DEVELOPMENT AND IN ALL EXHIBITS, ATTACHMENTS AND DEVELOPMENT DOCUMENTS, INTENDING TO BE BOUND THEREBY, AND THAT SUCH ACCEPTANCE AND AGREEMENT IS DONE FREELY, KNOWINGLY, AND WITHOUT ANY RESERVATION, AND FOR THE PURPOSES EXPRESSED WITHIN THE ABOVE ORDINANCE. IF IT IS LATER DISCOVERED THAT THE UNDERSIGNED, OR ITS SUCCESSORS OR ASSIGNS HAVE FAILED IN ANY MATERIAL WAY TO DEVELOP THIS RESIDENTIAL PLANNED UNIT DEVELOPMENT ACCORDING TO THIS ORDINANCE, ITS CONDITIONS, AND THE DEVELOPMENT PLANS AND DOCUMENTS, THE UNDERSIGNED UNDERSTANDS AND AGREES THAT THIS ORDINANCE MAY BE AMENDED OR REPEALED BY THE CITY COMMISSION, AND THAT OTHER ACTIONS MAY BE TAKEN AGAINST THE UNDERSIGNED BY THE CITY, INCLUDING BUT NOT LIMITED TO CODE ENFORCEMENT ACTIONS, PERMIT AND LICENSING REVOCATIONS, AND ALL APPLICABLE CIVIL AND CRIMINAL ACTIONS.

IN WITNESS WHEREOF THE UNDERSIGNED HAS EXECUTED THIS ACCEPTANCE AND AGREEMENT:

WITNESSES:

Frank A. Wacha Jr., Trustee

\_\_\_\_\_

Print Name: \_\_\_\_\_

\_\_\_\_\_

Print Name: \_\_\_\_\_

WITNESSES:

STB Outdoors, LLC

A Florida Limited Liability Company

\_\_\_\_\_

Print Name: \_\_\_\_\_

\_\_\_\_\_

By: \_\_\_\_\_

Nikolas Schroth, Member

Ordinance 2434-2020 – New Avonlea PUD – Amendment No. 3 and Master Site Plan Approval for  
Avonlea Crossings Parcel B (Parcel 16)

Print Name: \_\_\_\_\_

Parcel 1 of Avonlea

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Melissa C. Kindig, Owner

(Continued to next page)

WITNESSES

Parcel 16 of Avonea

Print Name: \_\_\_\_\_

By: \_\_\_\_\_

Tim Hernandez, New Urban Communities, LLC

OWNERS' ACKNOWLEDGMENT

The above Ordinance, Acceptance and Agreement was acknowledged before me this \_\_\_\_\_ day  
of \_\_\_\_\_, 2020, by Frank Wacha, Owner.

\_\_\_\_\_  
Notary Public, State of Florida

My Commission Expires:

Notary Seal

Personally Known \_\_\_\_\_ OR Produced Identification \_\_\_\_\_

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

The above Ordinance, Acceptance and Agreement was acknowledged before me this \_\_\_\_\_ day  
of \_\_\_\_\_, 2020, by Nikolas Schroth.

\_\_\_\_\_  
Notary Public, State of Florida

My Commission Expires:

Notary Seal

Personally Known \_\_\_\_\_ OR Produced Identification \_\_\_\_\_

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

(Continued to next page)

OWNERS' ACKNOWLEDGMENT

(Continued)

The above Ordinance, Acceptance and Agreement was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2020, by Melissa C Kindig.

\_\_\_\_\_  
Notary Public, State of Florida

My Commission Expires:

Notary Seal

Personally Known \_\_\_\_\_ OR Produced Identification \_\_\_\_\_

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

CITY'S ACKNOWLEDGMENT

The above Ordinance, Acceptance and Agreement was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2020, by BECKY BRUNER, Mayor, and Mary R. Kindel, City Clerk, respectively, of the City of Stuart, Florida, a Florida municipal corporation.

\_\_\_\_\_  
Notary Public, State of Florida

My Commission Expires:

Notary Seal



Ordinance 2434-2020 – New Avonlea PUD – Amendment No. 3 and Master Site Plan Approval for  
Avonlea Crossings Parcel B (Parcel 16)

Personally Known \_\_\_\_\_ OR Produced Identification \_\_\_\_\_

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

## EXHIBIT "A" – LEGAL DESCRIPTION

AND LESS, HOWEVER, THAT PART THAT LIES SOUTH OF THE SOUTHERLY RIGHT-OF-WAY OF STATE ROAD #707 AND NE SAVANNAH ROAD.

AND LESS, HOWEVER, THAT PART OF THE NE 1/4 OF THE SE 1/4 OF THE SW 1/4 IN SECTION 28, TOWNSHIP 37 SOUTH, RANGE 41 EAST LYING NORTH OF THE NORTHERLY RIGHT-OF-WAY OF NE SAVANNAH ROAD AND THE EXTENSION OF BAKER ROAD.

AND LESS, HOWEVER, THE EAST 202.00 FEET OF THE NORTHWEST ONE-QUARTER (NW 1/4) OF THE SOUTHEAST ONE-QUARTER (SE 1/4) OF THE SOUTHWEST ONE-QUARTER (SW 1/4) OF SECTION 28, TOWNSHIP 37 SOUTH, RANGE 41 EAST, MARTIN COUNTY, FLORIDA, LYING NORTH ON THE NORTH RIGHT-OF-WAY LINE OF NE BAKER ROAD ACCORDING TO THE PLANS FOR BAKER ROAD EXTENSION (MARTIN COUNTY PROJECT NO. SS-R-5). THE AREA OF THIS PARCEL IS 1.65 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESTRICTIONS, RESERVATIONS AND RIGHT-OF-WAYS OF RECORD, IF ANY.

TOGETHER WITH

### AVONLEA COMMERCIAL CENTER

A PARCEL OF LAND LYING IN SECTION 28, T37S, R41E, MARTIN COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE POINT OF INTERSECTION OF THE WEST LINE OF THE EAST 202.00' OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4 SAID SECTION 28, T37S, R41E OF PARCEL 6 AS DESCRIBED IN OFFICIAL RECORDS BOOK 895, PAGE 19, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA AND THE NORTHERLY RIGHT OF WAY LINE OF BAKER ROAD EXTENSION AS DESCRIBED IN OFFICIAL RECORDS BOOK 726, PAGE 1921, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA FOR THE POINT OF BEGINNING; THENCE N89°28'19"W ALONG SAID NORTHERLY RIGHT OF WAY LINE OF BAKER ROAD EXTENSION, 348.92' TO THE POINT OF INTERSECTION WITH THE EASTERLY RIGHT OF WAY LINE OF N.E.CARDINAL WAY BEING A 60.00' RIGHT OF WAY AS NOW LAID OUT AND IN USE; THENCE N10°56'26"W ALONG SAID EASTERLY RIGHT OF WAY LINE OF N.E.CARDINAL WAY, 381.26' TO THE POINT OF INTERSECTION WITH THE SOUTH LINE OF A PARCEL DESCRIBED IN OFFICIAL RECORDS BOOK 895, PAGE 25 AND 19, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA AND PHYSICALLY DESCRIBED BY MONUMENTS AND OCCUPATION; THENCE S89°15'48"E ALONG SAID OCCUPIED LINE, 426.24' TO THE POINT OF INTERSECTION WITH THE AFORESAID PARCEL 6; THENCE S00°45'39"W ALONG SAID WEST LINE OF THE EAST 202.00' OF PARCEL 6 A DISTANCE OF 372.11' TO THE POINT OF BEGINNING.

TOGETHER WITH

### JENSEN INDUSTRIAL PARK SITE

A PARCEL OF LAND LYING IN SECTION 28, TOWNSHIP 37 SOUTH, RANGE 41 EAST, MARTIN COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 28, THENCE, NORTH 00° 15' 38" EAST, ALONG THE WEST LINE OF SAID SECTION 28, A DISTANCE 861.35 FEET, MORE OR LESS, TO THE INTERSECTION THEREOF WITH SOUTHERLY RIGHT-OF-WAY LINE OF BAKER ROAD EXTENSION; THENCE SOUTH 89° 58' 55" EAST, ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, A DISTANCE 1545.39 FEET FOR A POINT OF BEGINNING (P.O.B.);

THENCE, SOUTH 89° 58' 55" EAST, CONTINUING ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, A DISTANCE OF 520.27 FEET; THENCE, SOUTH 20° 06' 54" EAST CONTINUING ALONG SAID RIGHT-OF-WAY LINE, A DISTANCE OF 142.51 FEET MORE OR LESS, TO THE INTERSECTION THEREOF WITH THE NORTHERLY RIGHT-OF-WAY LINE FOR SAVANNAH ROAD; THENCE, SOUTH 49° 53' 54" WEST, ALONG NORTHERLY RIGHT-OF-WAY LINE, A DISTANCE OF 412.74 FEET, MORE OR LESS, TO THE POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF CARDINAL AVENUE, SAID POINT BEING THE POINT OF CURVATURE OF A CURVE TO THE RIGHT HAVING A RADIUS OF 75.00 FEET, THENCE, SOUTHERLY, WESTERLY, AND NORTHERLY ALONG SAID CURVE AND SAID EASTERLY RIGHT-OF-WAY LINE, THROUGH A CENTRAL ANGLE OF 78° 51' 33", A DISTANCE OF 103.23 FEET TO A POINT OF COMPOUND CURVATURE OF A CURVE CONCAVE EASTERLY HAVING A RADIUS OF 585.00 FEET AND WHOSE RADIUS POINT BEARS NORTH 38° 45' 27" EAST, THENCE, NORTHWESTERLY ALONG SAID CURVE AND CONTINUING ALONG SAID EASTERLY RIGHT-OF-WAY LINE, THROUGH A CENTRAL ANGLE OF 39° 47' 31", A DISTANCE OF 406.28 FEET TO THE POINT OF

**EXHIBIT "A" – LEGAL DESCRIPTION  
(con't.)**

TANGENCY, THENCE, NORTH 11° 27' 12" WEST, CONTINUING ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 1.01 FEET TO THE POINT OF CURVATURE OF A CURVE TO THE RIGHT HAVING A RADIUS OF 50.00 FEET; THENCE, NORTHEASTERLY ALONG SAID CURVE AND CONTINUING ALONG SAID EASTERLY RIGHT-OF-WAY LINE, THROUGH A CENTRAL ANGLE OF 101° 28' 07", A DISTANCE OF 88.55 FEET TO THE POINT OF BEGINNING.

CONTAINING; 4.06 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS, AND RIGHTS-OF-WAY OF RECORD.

THE BEARINGS AS STATED HEREIN ARE BASED ON AN ASSUMED BEARING OF NORTH 00° 15' 38" EAST ALONG THE WEST LINE OF SAID SECTION 28.

LESS, HOWEVER,

LEGAL DESCRIPTION OF A PORTION OF PROPOSED  
GREEN RIVER PARKWAY RIGHT-OF-WAY

A PARCEL OF LAND LYING IN SECTION 28 AND SECTION 29, TOWNSHIP 37 SOUTH, RANGE 41 EAST, MARTIN COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

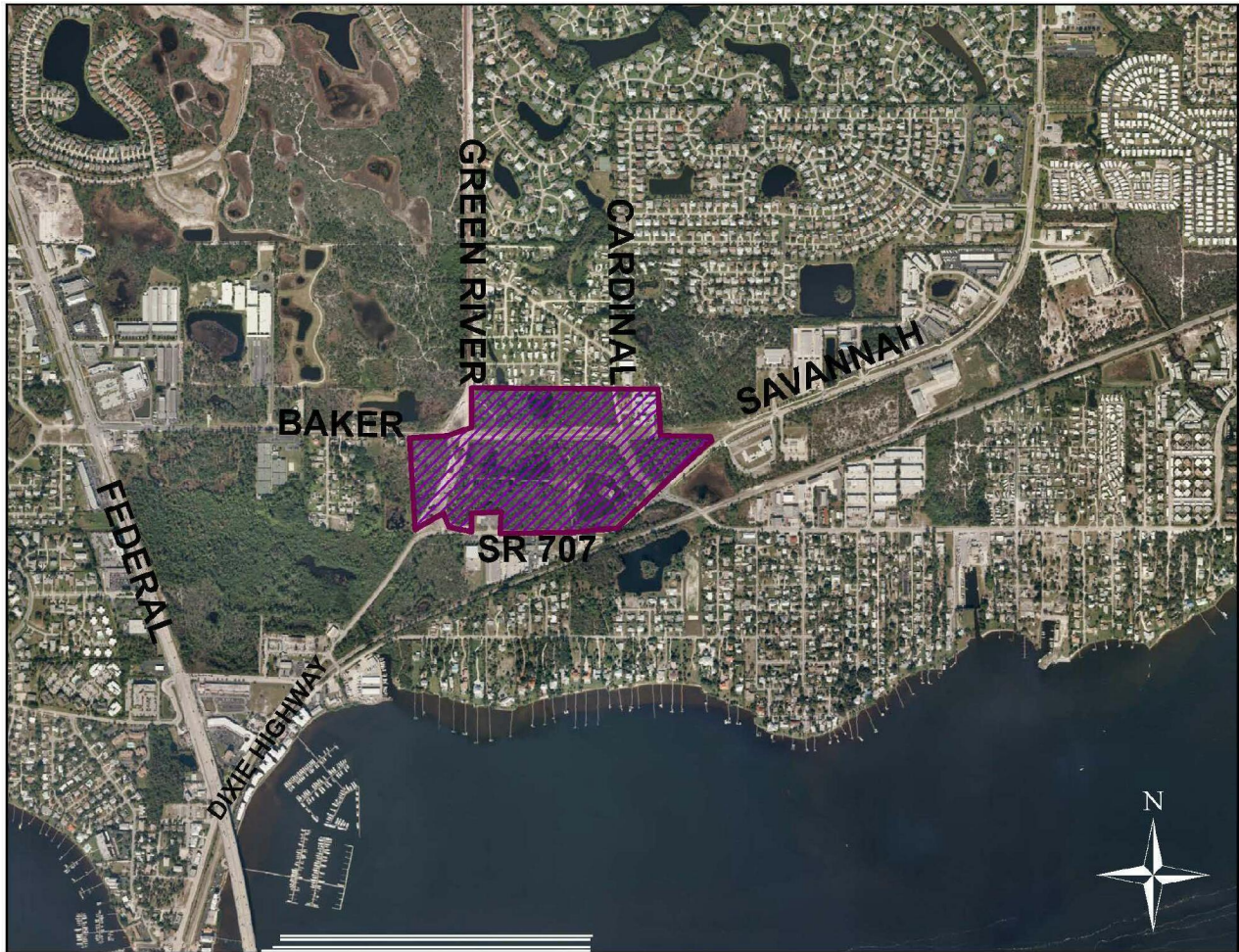
BEGINNING AT THE SOUTHEAST CORNER OF SAID SECTION 29; THENCE, NORTH 88° 48' 22" WEST, ALONG THE SOUTH LINE OF SAID SECTION 29, A DISTANCE OF 500.00 FEET; THENCE, NORTH 00° 15' 52" EAST DEPARTING SAID SECTION LINE, A DISTANCE OF 55.02 FEET; THENCE, NORTH 33° 12' 44" EAST, A DISTANCE OF 172.02 FEET TO THE POINT OF CURVATURE OF A CURVE TO THE LEFT, HAVING A RADIUS OF 2028.75 FEET; THENCE, NORTHERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 27° 30' 11", A DISTANCE OF 973.84 FEET, MORE OR LESS, TO THE INTERSECTION THEREOF WITH THE EASTERLY RIGHT-OF-WAY LINE OF BASELINE ROAD; THENCE, NORTH 30° 40' 07" EAST, ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 238.43 FEET, MORE OR LESS, TO THE INTERSECTION THEREOF WITH THE SOUTH PLAT BOUNDARY LINE OF NORTHWOOD SUBDIVISION, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN THE PLAT BOOK 1, PAGE 55, PUBLIC RECORDS, MARTIN COUNTY, FLORIDA; THENCE, SOUTH 89° 58' 55" EAST, ALONG SAID SOUTH PLAT BOUNDARY LINE, A DISTANCE OF 10.00 FEET, MORE OR LESS, TO A POINT 40.00 FEET EASTERLY OF THE SOUTHWEST CORNER OF SAID PLAT OF NORTHWOOD SUBDIVISION, THENCE, SOUTH 00° 15' 15" WEST, DEPARTING SAID SOUTH PLAT BOUNDARY LINE, A DISTANCE OF 10.21 FEET TO THE POINT OF CURVATURE OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 2148.75 FEET; THENCE, SOUTHERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 28° 34' 54", A DISTANCE OF 1071.89 FEET TO A POINT OF REVERSE CURVATURE OF A CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 180.00 FEET; THENCE, SOUTHEASTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 117° 38' 31", A DISTANCE OF 307.99 FEET TO A POINT OF TANGENCY; THENCE, SOUTH 88° 48' 22" EAST, ALONG A LINE 60.00 FEET NORTH OF, AS MEASURED AT RIGHT ANGLES TO, THE SOUTH LINE OF SAID SECTION 29, A DISTANCE OF 92.47 FEET TO THE INTERSECTION THEREOF WITH THE EAST LINE OF SAID SECTION 29; THENCE, SOUTH 00° 15' 38" WEST ALONG SAID EAST SECTION LINE, A DISTANCE OF 60.00 FEET TO THE SOUTHEAST CORNER OF SAID SECTION 29 AND THE POINT OF BEGINNING.

EXCEPTING THE WEST 50 FEET OF THE EAST 420 FEET OF THE NORTH 100 FEET OF THE SOUTH 133 FEET OF SAID SECTION 29 AND EXCEPTING THE RIGHTS-OF-WAY FOR BAKER ROAD EXTENSION AND STATE ROAD NO. 707.

SUBJECT TO EASEMENTS, RESTRICTIONS, RESERVATIONS AND RIGHTS OF WAY OF RECORD



**EXHIBIT B – LOCATION MAP**



### **EXHIBIT C – DEVELOPMENT CONDITIONS**

All conditions adopted under Ordinance No. 2305-2015 shall remain in effect unless revised or superseded by the conditions below:

#### **Approved Plans and Documents (Exhibit “D”)**

1. All development approved hereby and the use thereof shall comply with the following documents and drawings:

The following are General New Avonlea PUD Plans and Documents (reinstated by Ordinance 2420-2019:

- a. The Master Parcel Plan, Sheet 1 of 1 by Lucido and Associates, dated 5.27.18 (existing)
- b. South Florida Water Management District Permit #43-01387-P, issued 6.9.16. (existing)
- c. Department of the Army Permit #SAJ-1998-03203. (existing)
- d. Drainage Statement, by Grzelka Engineering, Inc. and as built plans for master drainage. (existing)
- e. Master Drainage Plan, by DLS Environmental Services, Inc. dated March 2016 (revised)
- f. Environmental Assessment Report, prepared by DLS Environmental Services, Inc. dated July 2014 (existing)
- g. Preserve Area Management Plan, prepared by DLS Environmental Services, Inc., dated March 2017 (existing)
- h. Traffic Impact Analysis prepared by MacKenzie Engineering and Planning, dated October 2014 (existing)
- i. 2015 Pattern Book for Avonlea Commerce Center Phase II (existing)
- j. PUD Boundary Survey prepared by Velcon Group, Inc., dated 01.08.14 (existing)
- k. Avonlea PUD Off-Site Infrastructure Plan, by HJA Design Studio, Sheet 1 and 2 of 2, dated 1.11.16 (existing)
- l. Avonlea Typical Cross Section, by Cotleur and Hearing, Inc., dated 4.19.18 (existing)
- m. Amended and Restated Declaration of Covenants and Restrictions for the New Avonlea P.U.D., dated 11.30.16. (existing)

#### **Master Parcel Plans for Avonlea Crossings Parcel A (Parcel 1)**

Ordinance 2434-2020 – New Avonlea PUD – Amendment No. 3 and Master Site Plan Approval for Avonlea Crossings Parcel B (Parcel 16)

- n. Site Plan for Avonlea Crossing A, by Kuoppala & Associates, dated 9.30.19 (existing)
- o. Landscape Plan for Avonlea Crossing A, by Litterick Landscape Architecture, dated 9.30.19 (existing)
- p. Architectural Elevations and Floor Plans for Avonlea Crossing A, by Kuoppala & Associates, dated 9.30.19 (existing)
- q. Boundary Survey for Avonlea Crossing A, by Velcon Engineering and Surveying, dated 4.30.19 (existing)

The following documents are established by Ordinance 2366-2018 and are not being replaced:

**Master Parcel Plans for Avonlea Preserve Parcel A (Parcel 2) and B (Parcel 12)**

- r. Site Plan for Avonlea Preserve A, by Cotleur and Hearing, Inc, dated 11.20.17 (existing)
- s. Site Plan for Avonlea Preserve B, by Cotleur and Hearing, Inc., dated 11.20.17 (existing)
- t. Lot Plan for Avonlea Preserve A and B, by Cotleur and Hearing, Inc., dated 4.24.18 (existing)
- u. Landscape Plan for Avonlea Preserve A, by Cotleur and Hearing, Inc., dated 5.25.18 (existing)
- v. Landscape Plan for Avonlea Preserve B, by Cotleur and Hearing, Inc., dated 5.25.18 (existing)
- w. Landscape Plan details for Avonlea Preserve A and B, by Cotleur and Hearing, Inc., dated 5.25.18 (existing)
- x. Boundary Survey for Avonlea Preserve A, by Velcon Group, Inc., dated 1.27.17 (existing)
- y. Boundary Survey for Avonlea Preserve B, by Velcon Group, Inc., dated 2.6.17 (existing)
- z. Amenity Package, dated 2.2.18 (existing)

The following documents are being established by Ordinance 2434-2020:

**Master Parcel Plans for Avonlea Crossings Parcel B (Parcel 16)**

- aa. Site Plan for Avonlea Lot 16, by Peter Wayne Aquart, P.E., SP-1 and SP-2, dated 1.23.20 (new)
- bb. Landscape Plan for Avonlea New Urban Communities, by Cotleur and Hearing, sheets 1 thru 4, dated 1.23.20 (new)



- cc. Architectural Elevations and Floor Plans, prepared by Architectural Studio, Inc., Sheets A1-5, dated 1.1.20 (new)
- dd. Boundary and Topographic Survey, by Richard H Smith, Inc., sheets 1 and 2, dated 8.1.19 (new)
- ee. Design Guidelines, prepared by New Urban Communities (new)

**General PUD Conditions**

- 2. Any modifications to the Master Parcel Plan and individual Master Site Plans of the PUD that does not exceed 10% of the approved building footprint, building setbacks, gross square footage, building location, parking size, location and number of parking, drainage areas, and location of landscaping may be approved by the City's Development Director, provided however, the Development Director may refer the matter to the City Commission for approval via public hearing. (existing)
- 3. This ordinance constitutes a revised Master Parcel Plan which extends development approval to Parcels 1, 2, 12, and 16, and off-site infrastructure improvements only. Development of remaining Parcels shall require future amendments to Ordinance No. 2305-2015. More specifically, Avonlea Crossings A (Parcel 1) shall be built in two phases: Phase 1 is a 4,389 square foot medical office building, Phase 2 is a 4,992 square foot medical or professional office building; Avonlea Preserve A (Parcel 2) shall consist of 30 residential dwelling units and Avonlea Preserve B (Parcel 12) shall consist of 32 residential dwelling units; Parcel 16 shall consist of a single phase: 47 townhomes and 22 single family cottages. (revised)
- 4. The City may elect at any time to assign a future land use designation of "Conservation" to the PUD's preserve areas without objection by the Owners. Said preserve areas shall be identified in the Preserve Area Maintenance Plan (PAMP), as more particularly set forth in condition #6. (existing)

**Environmental and Landscaping**

5. To ensure the integrity and viability of the preserved and restored/enhanced wetland and upland areas on a regular basis, including the submittal of an updated Annual Monitoring and Maintenance Plan, the master property owners association (the “POA”), as formed through the Amended and Restated Declaration of Covenants and Restrictions for the New Avonlea P.U.D. shall be singularly responsible for the perpetual maintenance of wetland and upland areas governed by SFWMD permit #43-01387-P, as well as all other common area improvements. The separate parcels (hereinafter referred to as “Parcel” or collectively as “Parcels) as shown on the Master Parcel Plan shall have the ability to establish separate homeowner’s associations for the purpose of maintaining on site infrastructure and common areas within such Parcels. (existing)
6. Except as follows, the project shall comply with Section 5.05.02 of the “Tree replacement and protection requirements” of the City’s Land Development Code.
  - a. In the event the developer chooses to address tree mitigation by planting in the project’s preserve area or elsewhere on the site, an estimated budget shall be provided to the city at the time of permitting. For plantings in the preserve area, not less than 50% shall consist of pines or hardwoods and 50% of palms. Of the 50% palms which may include Sabal palms, the developer may be permitted to plant half mature palms and half saw palmetto no less than 7 gallons in size. (existing)
7. The preserve Area shall be maintained in perpetuity in accordance with the Preserve Area Maintenance Plan prepared by DLS Environmental Services, Inc., dated 03.17. Any trash, debris, and exotics shall be removed from the preserve area. (existing)
8. Not less than 25% of the PUD shall be open space as defined in the City Land Development Regulations. Required open space may include native vegetation areas, excluding wetlands defined by the SFWMD, and landscape buffers between the PUD and adjacent property. (existing)

9. Plantings in upland preserve areas shall count toward tree replacement in accordance with Section 5.05.02 of the City's Land Development Code. (existing)
10. "Hat racking" of trees is prohibited on the property. (existing)
11. Prior to any site clearing or development activities, compliance with all applicable federal, state and local regulations, including U.S. Army Corps of Engineers, SFWMD, and Florida Fish and Wildlife Conservation Commission (FFWCC) regulations, shall be demonstrated to the City. (existing)
12. Clearing of invasive species, including any required filling incidental to said clearing activities, as per SFWMD Permit #43-01387-P, shall be permitted at any time provided a permit is first obtained from the City. Further, the Owners shall demonstrate to the city coordination with the FFWCC with regard to relocation/conservation permits of protected species. (existing)
13. A tree mitigation plan and tree survey depicting the proposed tree impact and mitigation including preservation, relocation and replacement, shall be submitted with each master parcel site plan approval. A tree removal permit will be required prior to the removal or relocation of existing specimen or historic trees and in the case of the removal of trees in the process of utility construction, such as lift stations, etc. (existing)
14. Subject to Development Department approval, trees planted in public spaces and public rights-of-way may be credited towards tree replacement requirements. The cost of the trees may be deducted from the total amount owed to the City's Tree Trust Fund. (existing)
15. A final landscape plan for each Parcel shall be provided with a master site plan application for such Parcel except the Avonlea Commerce Center Parcels 3 thru 9 and shall be consistent with the SFWMD Permit #43-01387-P. The landscape plan for each Parcel shall include a streetscape plan for public roads adjacent to that Parcel consistent with the approved Off-Site Infrastructure Plan. (existing)
16. A landscape maintenance agreement for each Parcel, executed in accordance with the Land Development Regulations, shall be submitted prior to the issuance of the first Certificate of



Occupancy for such Parcel shown on the Master Parcel Plan. In order to monitor the proper installation of landscape material, material quality and long term maintenance of the site, a Letter of Credit, Certificate of Deposit or bond in the amount of 125% of the fair market value of the new landscape material shall be provided to the city for each Parcel shown on the Master Parcel Plan prior to the issuance of the first Certificate of Occupancy for such Parcel. The security shall be held for two years. (existing)

17. All common buffers and other common areas shall be provided with landscaping with an irrigation system of sufficient capacity to maintain the landscaping in a healthy growing condition. (existing)
18. The City's landscape inspector shall have the opportunity to inspect all trees and/or landscape material with the landscape architect prior to installation. The Owner shall bear the pass-thru fee for landscape consulting fees not to exceed \$1,500.00. (existing)
19. Prior to the development activities on Avonlea Preserve A and B (Parcels 2 and 12), any applicable payment into the City's tree replacement fund based on the City's Tree Replacement Formula, Section 5.05.02, shall be made as followed in the mitigation data requirements provided in the Landscape Plan details for Avonlea Preserve A and B, and prepared by DLS Environmental Services. Solely at the City's discretion, or the applicant may donate and/or locate mitigated trees in a public area designated by the City. (existing)
20. A tree protective barrier plan shall be reviewed, approved and inspected by the landscape architect and by a City staff person on-site prior to construction activity to ensure that all preserve areas are not disturbed. (existing)
21. In addition to the landscaping depicted on the Landscape Plan for Avonlea Preserve Parcel 12, and at the owners discretion, the Owners may (with Development Department approval) provide pedestrian access thru the street frontage landscaping along Baker Road from the front door to the Baker Road sidewalk, so long as each residence is treated with the same access to the Baker Road sidewalk. The potential sidewalk access will not diminish the number of required street trees demonstrated on the landscape plan, but rather will be allowed to shift the landscaping to accommodate the pedestrian access and may result in a small

reduction of ground cover and shrub area. A decision by the Development Department to withhold approval for the pedestrian access plan shall be appealable to the City Commission. (existing)

22. Property owners in Avonlea Preserve A and B (Parcels 2 and 12) may not construct fences or structures (such as sheds) in any yard. The individual POA for the particular Parcel may provide a uniform fencing program acceptable to the Development Department via an administrative amendment, which may allow fences to delineate property boundaries and separate residential property from common areas. (existing)

### **Signage**

23. All signs throughout the PUD must have a consistent treatment, as to number, location, size, height, lighting, and materials with a unified theme throughout the Planned Unit Development. Monument signs shall be grounded mounted, limited to ten feet (10') in height with design criteria conforming to the City's Land Development Code. No cabinet signs or pole signs shall be permitted. (existing)

### **Potable Water and Sewer Utilities**

24. Parcels 1, 2 10, 11 and 12 shall be served by Martin County Utilities, parcels 13, 14, 15 and 16 shall be served by City of Stuart (existing)

### **Off-Site Infrastructure Plan**

25. The Off-Site Infrastructure plan (Avonlea PUD Off-Site Infrastructure Plan, by HJA Design Studio, Sheet 1 and 2 of 2, dated 1.11.16) identifies the phasing of delivery of sidewalks, street and intersections, street furniture, landscaping, parking, lighting, utilities and storm water improvements, which is in addition to the Master Parcel Plan. The Off-Site Infrastructure Plan shall be reviewed for each phase of development of this PUD. Amendments to the Off-Site Infrastructure Plan shall be processed through a minor PUD amendment in order to secure a consistency of improvements throughout the PUD and to account for any off-site infrastructure provided by the City. Any amendment to the Off-Site Infrastructure Plan will necessitate a review and potential updating of the approved REDA

agreement (Resolution 01-2018 CRA Avonlea Real Estate Development accelerator).  
(Revised)

26. Parcel 1 of Avonlea, also known as Kindig Professional Office, is required to build or bond the off-site patio prior to a Certificate of Occupancy in accordance with the attached site plan for Parcel 1, notwithstanding the phasing plan for the Off-Site Infrastructure Plan, which shall remain in full force and effect. (existing)
27. Parcel 16 of Avonlea, applied for by New Urban Communities, LLC, is required to build or bond the off-site sidewalks and a cross walk across Green River Parkway at the traffic circle prior to the first Certificate of Occupancy in accordance with the attached site plan, notwithstanding the phasing plan for the Off-Site Infrastructure Plan, which shall remain in full force and effect (new)
28. All remaining infrastructure improvements within a given phase as required by the Off-Site Infrastructure Plan shall be built or bonded prior to any vertical construction in accordance with the phasing plan for the Off-Site Infrastructure Plan. Vertical construction within a phase of development is not contingent on the completion of off-site infrastructure work within the separate phase indicated in the phasing plan. (existing)
29. All utilities within adjacent rights-of-ways, within a given phase as depicted in the Off-Site Infrastructure Plan, must be buried, except for the existing FPL transmission line, prior to the issuance of a Certificate of Occupancy for any vertical construction. (existing)
30. Sidewalks of at least 8 feet in width, including provisions for bicycles, shall be shown on the Off-Site Infrastructure Plan, which shall demonstrate full connectivity to surrounding pedestrian facilities. Any sidewalk damaged during construction shall be repaired or replaced at the expense of the POA and sub-POA (henceforth known as a “Village Association”) prior to the issuance of a Certificate of Occupancy for such Parcel. The Off-Site Infrastructure Plan and the individual master site plans shall at a minimum demonstrate safe and adequate pedestrian and bicycle circulation, including handicap accessibility and access to public transit. (existing)



31. Any on-street parking constructed by the Owners shall be depicted on the Off-Site Infrastructure Plan and shall be built at the Owners' expense. On-street parking may be creditable toward required parking for individual Parcels as shown on the Master Parcel Plan, but shall not exclude use by the general public. (existing)

### **On-Site Infrastructure**

32. All utilities internal to the development must be buried, except for the existing FPL transmission lines. Prior to the issuance of a Certificate of Occupancy for a Parcel for any vertical construction, any overhead utilities associated with such Parcel shall be buried. (existing)
33. Typical cross-sections for streets and alleys shall be submitted with each master site plan submittal indicating the proposed right-of-way width, pavement width, utilities, drainage, sidewalk, curb and gutter, on street parking and street lighting. (existing)
34. Parking areas shall be interconnected between adjacent CPUDs and through each CPUD Parcel to the extent feasible. (existing)
35. The Owner shall ensure a continuous pedestrian connection between all Parcels of the PUD, whenever practicable. (existing)

### **Prior to Issuance of Site Permits**

36. Applicant shall provide a digital boundary survey and civil plan prior to the issuance of any site permits. (existing)
37. Final Development plans and/or Construction Drawings and Building Plans shall be submitted, reviewed, and approved by the City prior to the issuance of any Development Permits. (existing)
38. Civil Plans shall be reviewed and approved by all applicable City departments prior to the issuance of a site permit. (existing)

39. Where applicable, the Owner shall provide enclosed dumpster details on submitted civil construction plans prior to final site plan approval acceptable to the City's Public Works Department. (existing)
40. All regulatory agency permits, including but not limited to the South Florida Water Management District and Army Corp of Engineers, shall be obtained by the applicant and copies provided to the City prior to the commencement of any development activities. (existing)
41. Prior to building permit approval, the applicant shall provide crosswalks at all internal intersections. (new)
42. Prior to building permit approval, the applicant shall provide a fence or hedge separating playground areas with adjacent roads. (new)

#### **Development and Construction**

43. All applicable state or federal permits must be obtained before the commencement any development activities. Issuance of this development order/permit/approval by the City of Stuart does not in any way create any right on the part of an applicant to obtain a permit from a state or federal agency and does not create any liability on the part of the City of Stuart for the issuance of this order/permit/approval if the applicant fails to obtain requisite approvals or fulfill the obligations imposed by a state or federal agency or undertakes actions that result in a violation of state or federal law. (existing)
44. At the time of every Major Site Plan Amendment application for the remaining Parcels, the Owners' proposed Master Site Plan shall include, but not be limited to, the following features: proposed residential density or non-residential square footage; uses; lot layout and dimensions; typical cross sections for streets and alleys; building locations; accessory structures; dumpster locations; parking stall and aisle dimensions; fences, walls and landscaping; site lighting, pedestrian ways; recreational and other amenities, preserve areas; traffic circulation patterns; access for emergency and sanitation vehicles; utility locations;

storm water facilities; architectural characteristics, appropriate building mass and scale; building elevations; finished floor elevations; color schemes; and signage. (existing)

45. The property is within the Community Redevelopment Area, and accordingly, prior to the issuance of any construction permits for vertical construction on a Parcel, the Owners of such Parcel shall either: A) contribute an amount equal to or greater than one and one-half percent of the value of vertical construction costs for such Parcel into the public art trust fund; or b) provide work of art on the property, the value of which shall not be less than one percent of the vertical construction costs for such Parcel and shall be submitted and approved by the City's Community Redevelopment Board for conformity with the public art standards as required in Sec. 3.01.08 of the City's Land Development Code. (existing)
46. Final site plan construction drawings for each Parcel as shown on the Master Parcel Plan shall be consistent with the approved master site plan. (existing)
47. The maximum front façade width of any proposed Assisted Living Facility, as defined herein, shall be 200 feet. (existing)
48. To sustain harmony, building or tenant improvement plans for business with outdoor speakers and/or entertainment will include a noise mitigation plan consisting of the location and orientation of speakers to contain sound within the business's area including the use of specific sound barriers and absorbs together with the time of use and volume that will meet or exceed the City's code requirements. (existing)
49. Pursuant to City/County/School Board inter-local agreement and for the purposes of determining the applicability of school impact fees, appropriateness of design, and impacts on school concurrency, the Martin County School Board shall be provided an opportunity to review all proposed residential development at the time of application for master site plan approval. (existing)
50. Construction traffic shall be reasonably controlled. The City may impose access management restrictions if deemed necessary. (existing)



51. Construction activity shall be limited from 7:00 a.m. to 6:00 p.m. Monday – Saturday.  
(existing)
52. Erosion and dust control measures to be implemented during construction shall be provided on the civil plans and submitted during site permit review. Water trucks shall be provided by the applicant as necessary during construction in order to reduce dust generated on-site. Prior to and during the construction period, the applicant shall provide a schedule for the inspection and maintenance of barricades and erosion controls. (existing)
53. No trailers, pre-fabricated or modular structures shall be permitted except on a temporary basis to assist in development and with rentals and sales of realty within the PUD. Such trailers or structures shall be removed within thirty (30) days of a direction to do so, as issued by the City Development Director. Failure to remove such a trailer or structure accordingly shall be deemed a violation of the City Code. (existing)
54. Owners shall comply with all requirements of the City's Comprehensive Plan and all applicable provisions of the City's Land Development Code not in conflict herewith.  
(existing)
55. All utility improvements constructed by the Owner within Martin County's right-of-way, shall be constructed in a manner and form acceptable to Martin County's Engineering Department. The Owner shall grant any such utility easements necessary for this site as may be required by Martin County. (existing)
56. Lighting shall comply with Section 6.07.00 of the Land Development Code and reviewed by Police for CEPTED/Crime Prevention recommendations prior to final site plan approval. Lighting shall include shields to direct the light away from residential areas. (existing)
57. The development of Parcels 2 and 12 may occur in up to two phases, or both as one phase. Prior to the issuance of a permit for whichever Parcel(2) constitutes Phase 1, with the exception of two (2) permits for model units on that Phase, the off-site improvements as depicted as Phase 1 of the offsite improvement plan will be completed, inclusive of landscaping to be placed within the right-of-way(s), stormwater drainage, grading and road

base on the parcel(s) shall be in place, and demonstration of connection to City Water and Sewer and power to the parcel shall be completed. Prior to the issuance of the first Certificate of Occupancy within Phase 1, the curbing, first lift of asphalt, and all underground utilities within Phase 1 will be in place. Landscaping within the boundary of the lot being certified shall be completed. And finally, the amenity package and common areas for that phase will be completed. Prior to the issuance of the last five (5) Certificates of Occupancy within Phase 1, site development will be completed inclusive, but not limited to final lift of asphalt, landscaping, street lighting, mail boxes, etc. The timing of construction will apply to Phase 2 in the same manner. (existing)

### **Future Amendments**

58. Any amendments to this agreement shall be governed by the following:

Any amendments to this agreement shall be governed by the following:

The owner of a Parcel, as the Parcels are depicted in Exhibit “D” attached hereto, who seeks to amend this agreement with respect to such Parcel, shall not be required to obtain consent to such amendment from any owner of property, the POA or any home owners association, included in this agreement, provided, however, notice of any hearing before either the City Local Planning Agency, or the City Commission, shall be given to all owners of property subject to this agreement. The determination of whether such amendment is a major or minor amendment, and the hearings required for major or minor amendments, shall be governed by the laws in effect in the City at the time an application to amend this agreement is filed with the City. (existing)

The Avonlea Property Owners Association Inc. and Developers control the Avonlea Property Owners Association “Association” (Master Association). This association has been established to maintain the common areas and elements of the PUD and provide surety of maintenance to the governing bodies regulating the maintenance of the common areas and is regulated in accordance with the Covenants and Restrictions and By Laws recorded in OR Book 2893 Page 2898 as may be amended. At such a time that the Developers turn over the Association to the property owners, “Village Associations” are to make up the voting board of the Association. (existing)

Parcels 2 and 12 are a Village Association within the Association (Master Association). Any future amendments to the Development Conditions of Parcels 2 and 12 shall require the written consent of the Village Association. Until such a time that the Developers have turned over control of the Association to the property owners, written consent of the Association (Master Association) shall be required. (existing)

59. The applicant is permitted to transfer any on-street parking toward the provision of bus stops, as requested by outside agencies such as the Martin County School Board or the Metropolitan Planning Organization, without penalty of reducing required parking calculations. (new)

### **Phase II of existing Commercial Development**

60. Consistent with Ordinance No. 2307-2015, development approval for the remaining undeveloped portion of the Avonlea Commercial Center, located on the northeast corner of Cardinal Road and Baker Road shall be administratively approved, provided the proposed development adhered to the Pattern Book included by reference herein. (existing)

### **Development Timetables**

61. Timetables for development shall be as follows:

#### **Phase One. Off-Site Infrastructure Plan:**

Completion of the Off-Site Infrastructure shall occur in two phases as demonstrated on the Avonlea PUD Off-Site Infrastructure Plan, by HJA Design Studio, dated 12.8.17. The first phase shall be completed prior to the first Certificate of Occupancy for the developments of Avonlea Preserve A and B. The completion of the second phase shall be triggered with an application for a Master Parcel site plan or site plans and shall be completed prior to the first Certificate of Occupancy of the development of said Parcel or Parcels.



Ordinance 2434-2020 – New Avonlea PUD – Amendment No. 3 and Master Site Plan Approval for Avonlea Crossings Parcel B (Parcel 16)

Phase Two. Deadlines for master site plan approval for individual Parcels:

Master site plan approval for all Parcels as depicted on the Master Parcel Plan shall be obtained no later than three years of the completion of the water and sewer infrastructure.

| <u>PARCEL</u> | DEADLINE FOR MASTER PUD SITE PLAN APPROVAL | TIMELINE FOR DEVELOPMENT                               |
|---------------|--------------------------------------------|--------------------------------------------------------|
| 1             | Completed                                  | Phase 1 by June 1, 2022<br>Phase 2 by December 1, 2024 |
| 2             | Completed                                  | July 31, 2021                                          |
| 3-9           | n/a                                        | By administrative approval, no deadline                |
| 10            | December 1, 2020                           | TBD at Major Amendment                                 |
| 11            | December 1, 2020                           | TBD at Major Amendment                                 |
| 12            | Completed                                  | July 31, 2021                                          |
| 13            | December 1, 2020                           | TBD at Major Amendment                                 |
| 14            | December 1, 2020                           | TBD at Major Amendment                                 |
| 15            | December 1, 2020                           | TBD at Major Amendment                                 |
| 16            | Completed                                  | March 31, 2023                                         |

Failure to meet the deadline(s) for master site plan approval identified above for any default under this Ordinance for any particular Parcel(s) shall not constitute a breach on a part of any other Parcel(s) which have met the deadline and have otherwise performed under this Ordinance. (revised)

**Allowable Uses**

62. The following uses, derived in part from the City’s Urban Code, may be permitted individually or in combination in all CPUD parcels, notwithstanding the existing Avonlea Commercial Plaza (Parcels 3 thru 9) in which allowable uses are set forth in the approved Pattern Book: (existing)

- a. Multifamily;
- b. Live-Work unit (for the purposes of this Ordinance “Live-work unit” means a single residential unit consisting of a professional or business office component, the area of which does not exceed 50% of the unit’s total floor space. A professional or business office located within a Live-Work unit shall be solely owned/operated by the tenant/resident of the unit);
- c. Accessory buildings;
- d. Greenhouses;
- e. Public utility stations;
- f. Government buildings;
- g. Hotels/motels;
- h. Bed and breakfast hotels;
- i. Retail sales and services, non-intensive
- j. Retail manufacturing and warehouse for service trades;
- k. Professional and medical offices;
- l. Banks;
- m. Theaters;
- n. Restaurants;
- o. Art Galleries;
- p. Dry cleaning, provided all cleaning is conducted off premises;
- q. Bakeries
- r. Mortuaries without cremation;
- s. Day care facilities;
- t. Home occupations as defined in Section 2.06.10 of the Stuart Land Development Code
- u. Health spas;
- v. Personal services;

- w. Drugstores and pharmacies;
- x. Parking garages;
- y. Nursing Homes;
- z. Assisted Living Facility (for the purposes of this ordinance, “Assisted Living Facility” means a facility operated for profit, which provides housing, meals, and one or more personal services for a period exceeding 24 hours to one or more adults who are unrelated to the owner/administrator.

63. The following uses shall be permitted individually or in combination in all RPUD Parcels:  
(existing)

- aa. Single Family;
- bb. Townhouse;
- cc. Multi-family;
- dd. Assisted Living Facility (for the purposes of this ordinance, “Assisted Living Facility” means a facility operated for profit, which provides housing, meals, and one or more personal services for a period exceeding 24 hours to one or more adults who are unrelated to the owner/administrator.

### **Prohibited**

64. Billboards are prohibited within the entire PUD. (existing)

65. Banners and any other sign or advertising device not in accordance with the City’s Land Development Regulations are prohibited. (existing)

### **Platting**

66. Plat approval per Section 11.01.06.1 of the City’s Land Development Code shall occur prior to any future development permit being issued. (existing)

67. The new Avonlea PUD property may be platted and conveyed to separate owners without further amendment to this Ordinance. Prior to application for any development, the applicants shall form a master POA or other similar entity acceptable to the City Attorney, which shall



be singularly responsible for the perpetual maintenance of the common infrastructure and common areas. (existing)

68. The Avonlea Preserve A and B (Parcels 2 and 12) shall be re-platted with City Commission approval prior to any building permit activity is approved on the respective Parcel. Each Parcel is permitted to be individually platted and developed subject to the specific timetable for development herein. (revised)

### **Densities and Intensities**

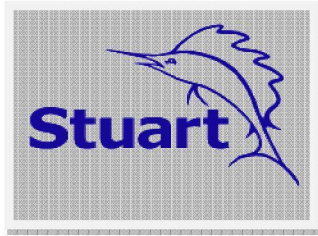
69. Density transfers shall not apply to this PUD. (existing)

70. The property is designated Neighborhood/Special District, which is a mixed-use category within the City's Comprehensive Plan, and accordingly, shall achieve the vertical or horizontal mix of uses through strict adherence to the minimum and maximum ratios of residential and non-residential uses depicted in the City's Comprehensive Plan. The ratios that must be maintained for the entire PUD are 30% to 90% for residential and 10% to 70% for non-residential. (existing)

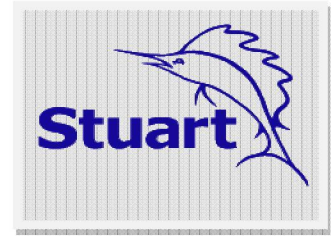
Ordinance 2434-2020 – New Avonlea PUD – Amendment No. 3 and Master Site Plan Approval for Avonlea Crossings Parcel B (Parcel 16)

71. The following matrix shows maximum densities and intensities for each Parcel as depicted on the Master Parcel Plan. However, it should be noted, due to design constraints such as, lot dimensions, building configurations, parking, landscaping, stormwater, and preserve area requirements, etc., this does not guarantee that these maximums will be approved. (revised)

| Avonlea PUD Maximum Density (RPUD and CPUD) |                          |          |                                      |                             |          |                                              |                                     |                                     |
|---------------------------------------------|--------------------------|----------|--------------------------------------|-----------------------------|----------|----------------------------------------------|-------------------------------------|-------------------------------------|
| Parcel                                      | Name                     | PUD Type | Total Acres including preserve areas | Residential/Live work Units |          | Commercial SF                                | Residential Units permitted in CPUD | ALF Beds (Total Maximum within PUD) |
|                                             |                          |          |                                      | Maximum                     | Approved |                                              |                                     |                                     |
| 1                                           | Avonlea Crossings A      | CPUD     | 2.07                                 | N/A                         |          | 20,000<br>Phase 1 – 4,389<br>Phase 2 – 4,992 | N/A                                 | 200                                 |
| 2                                           | Preserve A               | RPUD     | 3.11                                 | 44                          | 30       | N/A                                          | N/A                                 |                                     |
| 3-9                                         | Avonlea Commerce Phase 2 | CPUD     | 0.79                                 | 5                           | TBD      | 33,300                                       | N/A                                 |                                     |
| *                                           | Avonlea Commerce Phase 1 | CPUD     | 2.21                                 | 5 (Complete)                |          | 23,700 sf (Complete)                         | N/A                                 |                                     |
| 10                                          | East Village             | CPUD     | 4.07                                 | 50                          | TBD      | 100,000                                      | 80                                  |                                     |
| 11                                          | Preserve D               | CPUD     | 0.90                                 | N/A                         |          | 15,000                                       | N/A                                 |                                     |
| 12                                          | Preserve B               | RPUD     | 3.07                                 | 46                          | 32       | N/A                                          | N/A                                 |                                     |
| 13                                          | Preserve C               | RPUD     | 6.35                                 | 123                         | TBD      | N/A                                          | N/A                                 |                                     |
| 14                                          | Avonlea Crossings C      | CPUD     | 1.60                                 | N/A                         |          | 20,000                                       | N/A                                 |                                     |
| 15                                          | Avonlea Crossings D      | CPUD     | 0.90                                 | 5                           | TBD      | 5,000                                        | 0                                   |                                     |
| 16                                          | Avonlea Crossings B      | RPUD     | 4.22                                 | 75                          | 69       | 65,000 (none proposed)                       | 80                                  |                                     |



**CITY OF STUART  
CITY COMMISSION**  
March 9, 2020



|                                                                                                                                |                                                         |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| <b>Project Name:</b> Avonlea Crossing<br>Parcel B – Parcel 16 PUD                                                              | <b>Property Owner:</b> New Urban Communities, LLC       |
| <b>Project No.:</b> Z19100017                                                                                                  | <b>Applicant/Petitioner:</b> New Urban Communities, LLC |
| <b>Ordinance No:</b> 2434-2020                                                                                                 | <b>Agent/Representative:</b> Cotluer and Hearing, LLC   |
|                                                                                                                                | <b>Case Planner:</b> Stephen Mayer                      |
| <b>Location:</b> On the Southwest corner of Baker Road and Green River Parkway, east and north of the Haney Creek Natural Area |                                                         |

**Location Map**





| <b>PROJECT SUMMARY</b>                                                                                                                                                                                                                                                                                             |              |                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b><i>Property Size (area)</i></b>                                                                                                                                                                                                                                                                                 |              | 4.14 Acres                                                                                                                                                                                                                                                                                                                       |
| <b><i>Present Use</i></b>                                                                                                                                                                                                                                                                                          |              | Undeveloped                                                                                                                                                                                                                                                                                                                      |
| <b><i>Subject Property Land Use</i></b>                                                                                                                                                                                                                                                                            |              | Neighborhood/ Special District                                                                                                                                                                                                                                                                                                   |
| <b><i>Adjacent FLU</i></b>                                                                                                                                                                                                                                                                                         | <i>North</i> | Martin County – Mobile Home                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                    | <i>South</i> | City – Downtown                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                    | <i>East</i>  | City – Neighborhood/Special District                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                                                    | <i>West</i>  | County – Medium Density                                                                                                                                                                                                                                                                                                          |
| <b><i>Subject Property Zoning</i></b>                                                                                                                                                                                                                                                                              |              | Commercial Planned Unit Development (CPUD)                                                                                                                                                                                                                                                                                       |
| <b><i>Adjacent Zoning</i></b>                                                                                                                                                                                                                                                                                      | <i>North</i> | Martin County - RT                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                    | <i>South</i> | City of Stuart – CPUD                                                                                                                                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                    | <i>East</i>  | City of Stuart – CPUD (New Avonlea PUD)                                                                                                                                                                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                    | <i>West</i>  | Martin County – R-5 and RM-8                                                                                                                                                                                                                                                                                                     |
| <b><i>Proposed Land Use Designation</i></b>                                                                                                                                                                                                                                                                        |              | Neighborhood/Special District                                                                                                                                                                                                                                                                                                    |
| <b><i>Proposed Zoning District</i></b>                                                                                                                                                                                                                                                                             |              | Residential Planned Unit Development RPUD                                                                                                                                                                                                                                                                                        |
| <b><i>Proposed Use</i></b>                                                                                                                                                                                                                                                                                         |              | 47 townhomes and 22 single family cottages (69 units)                                                                                                                                                                                                                                                                            |
| <b><i>City Approvals</i></b>                                                                                                                                                                                                                                                                                       |              | Building Department – No comments at this time.<br>Fire Department – See comments attached<br>Public Works – See comments attached<br>Police Department – No comments at this time                                                                                                                                               |
| <b><i>Brief Explanation</i></b>                                                                                                                                                                                                                                                                                    |              | The intent of this application is to request a major PUD amendment to rezone the property from CPUD to RPUD, allowing the construction of 47 townhomes and 22 single family cottages on a 4.14 acre site, known as the Avonlea Crossing Parcel B – Parcel 16, which was master planned with a potential of 75 residential units. |
| <b><i>Staff Recommendation:</i></b> Staff recommends approval for the Major PUD amendment to rezone the property to RPUD (Residential Planned Unit Development) and accept site and landscape plans, a design guideline for the RPUD and elevations and footprints for 47 townhomes and 22 single family cottages. |              |                                                                                                                                                                                                                                                                                                                                  |

## **STAFF REPORT AND RECOMMENDATION**

### **I. LEGAL NOTICE REQUIREMENTS**

**A. Requirements for Application** – The applications for the Future Land Use amendment to Multi-Family Density Residential, and zoning district designation to RPUD have been noticed in accordance with the requirements set forth in Sections 11.01.02, 11.01.09, and 11.02.00 of the Land Development Regulations.

**B. Site Posting Date:** 2-9-2020

**C. Mail Notice Postmark:** 2-9-2020 to property owners within 300 feet

**D. Publication Date:** 10 days prior to Second Reading

### **II. LARGE SCALE COMPREHENSIVE PLAN AMENDMENT AND ZONING MAP AMENDMENT ORDINANCE NO. 2427-2020**

**III. APPLICATION:** Dated October 21, 2019

### **IV. HISTORY OF THE SITE**

The vacant subject property is approximately 4.14 acres and is a part of the New Avonlea PUD. The New Avonlea PUD was approved by the City Commission on June 8, 2015, via Ordinance 2307-2015, and consists of multiple parcels that are zoned CPUD and RPUD as shown on a Master Parcel Plan. The Master Parcel Plan also consisted of development maximum approvals. This request represents the third amendment and is specific to Parcel 16 of the Master PUD.

### **V. ANALYSIS**

#### **A. Site and Area Characteristics**

The Master Parcel Plan (Exhibit D) of the original New Avonlea PUD, delineated this parcel to be a Commercial Planned Unit Development, allowing for up to 75 residential units and 65,000 square feet of commercial development. The applicant would like to build 69 residential units and no commercial development on the site.

The site approximately 4.14 acres in size and on the south and west is near to the Haney Creek Natural Area. To the east and across from Green River Parkway are undeveloped parcels of the New Avonlea PUD. To the north and across Baker Road is preserve area that is an unincorporated undeveloped site.

#### **B. Project Description**

The proposed development for Avonlea Crossings Parcel B – (Parcel 16) consists of 47 two-story, two-bedroom townhouses in 12 buildings and 22 two-story, three-bedroom detached,

single-family cottage homes. The New Avonlea Masterplan allows for up to 75 units on Parcel 16, a site density of 18.1 du per acre. The proposed 69 units, a site density of 16.7 du per acre.

The stated desire from the developer, New Urban Communities, is to meet a market need for middle-income families who may otherwise have a hard time finding housing in a location in Stuart. With close proximity to downtown Stuart, Jensen Beach, quality schools, and commercial amenities, many middle-income families appear in large numbers to be priced out of the market. The developer seeks to meet this need by providing smaller, efficiently designed cottage units with superior site and landscape design. The site plan and building siting and massing combines to create a unique, intimate community with a real sense of place. The two distinct product types offered will allow a broader spectrum of households to live in the community, consistent with the original concept of Avonlea.

The development's location adjacent to the Haney Creek Natural Area to the West and South will allow residents to experience nature through a direct connection to the Haney Creek Park trail system.

The main access to the community will be from Baker Road. The applicant is providing 34% open space (or 61,378 square feet) where a minimum of 30% is required on site. The natural preserve and wetland areas have been delineated through an overall PUD agreement with the Department of Environmental Protection.

**Landscaping:** The development is fully landscaped with adequate perimeter buffers of the required number of shade trees per 30 linear feet of property. The applicant is providing a full Jamaica Caper hedge at the property line and 26 Live Oak shade trees along the western and northern property lines. The street frontage along the Green River Parkway property line consists of Florida Royal Palms. Other plant coverage includes Silver Buttonwoods, Mahogany and Gumbo Limbos. The landscape plan also includes planting schemes around the perimeter of the townhomes and cottages.

**Traffic Study:** A traffic study was already approved for the Master Site Plan. Because the project is not utilizing all 75 residential units or any of the commercial square footage allowed on the site, the number of trips generated will be significantly less than what the traffic study assumed and approved for Parcel 16.

**Parking Provisions:** City of Stuart Land Development Code, Sec. 6.01.13. - Off-street parking schedule, requires two (2) parking spaces per unit when two (2) or more bedrooms are proposed, for a total 138 parking spaces required. The single-family units will have a driveway with an optional carport and will accommodate two (2) parking spaces each unit. The townhomes will front along the northern and eastern property lines and adjacent to the central amenity feature. An 88-space surface parking lot is provided adjacent to the townhomes, along with six (6) on street parking spaces on site, and an additional five (5) on-street parking spaces along Baker Road. In total, the site will provide 140 parking spaces, or two (2) more than required.



Architectural Details: Architectural details are included on each of the four sides of the proposed townhome and cottage units offering a high standard of design and scale.

### **C. Rezoning and Land Development Code Consistency Review**

The application has been reviewed for consistency with the City's LDC. Approval of the rezoning to RPUD would allow for attached housing to be constructed at the site. The Master Parcel Plan approved up to 75 units on the CPUD, based on available density. The applicant is proposing 69 units, which is less than the Master Parcel Plan permits. The applicant shall continue to maintain an appropriate mix of Commercial and Residential uses within the entire Master Parcel Plan, by maintaining not less than 10% of the entire PUD as commercial, which is a requirement of the Special Neighborhood Future Land Use designation.

The proposed project on Parcel 16 of the New Avonlea PUD is consistent with Element I in the City of Stuart's Comprehensive Plan through its compact residential development pattern (Policy A5.1), compatibility with surrounding existing homes (Policy A5.2, Policy B3.2, and Policy B3.6), provision of market-rate units that are affordable to residents in the moderate-income level (Policy A5.4), compatibility with families (Policy A5.5), and quality landscape and streetscape design (Policy A5.6).

The proposed project is consistent with Element III in the Comprehensive Plan through its provision of housing on adequate residential land to accommodate population growth (Policy A1.2), provision of small-lot homes in a new development (Policy A1.4), provision of market-rate housing that is affordable to those in the moderate-income level (Policy A2.1), provision of a distinct, but compatible housing type that provides a more diverse housing option to residents (Policy A2.6), and provision of a project that can demonstrate a new possibility for the design and construction of housing in Stuart (Policy A2.7).

### **D. Technical Review by Other Agencies**

The City Building, Public Works, Fire, and Police Departments have reviewed the applications and have offered their comments. See attachment to this agenda item. Each department will provide specific comments at final site approval for permitting.

The applicant will be responsible to meet all federal, state and local permitting and environmental standards. Further, the applicant will also be required to demonstrate full compliance at all times.

## **VI. LOCAL PLANNING AGENCY BOARD RECOMMENDATION**

On February 20, 2020, the Local Planning Agency made an advisory recommendation of approval to the City Commission as to the need and justification for the change and as to the relationship of the proposed change to the goals, objectives and policies of the

Comprehensive Plan and of the Land Development Code. The draft minutes of the Local Planning Agency hearing is attached.

## **VII. STAFF and LPA RECOMMENDATION (APPROVAL WITH CONDITIONS)**

Staff and the LPA has determined that the proposed major PUD amendment with a rezoning from CPUD to RPUD is consistent with the goals, objectives and policies of the Comprehensive Plan and the regulations in the Land Development Code. Staff offers no objection to the requests.



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Lic# LC-3800535

# AVONLEA NEW URBAN COMMUNITIES Stuart, Florida

|          |      |
|----------|------|
| DESIGNED | DATE |
| APPROVED | DATE |
| DATE     | DATE |
| DATE     | DATE |

January 23, 2020 10:17:23 a.m.  
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SHEET 1 OF 4

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NOT A SEAL OR LICENSE REQUIRED  
NOT A SEAL OR LICENSE REQUIRED

## Common Areas Landscape Plan

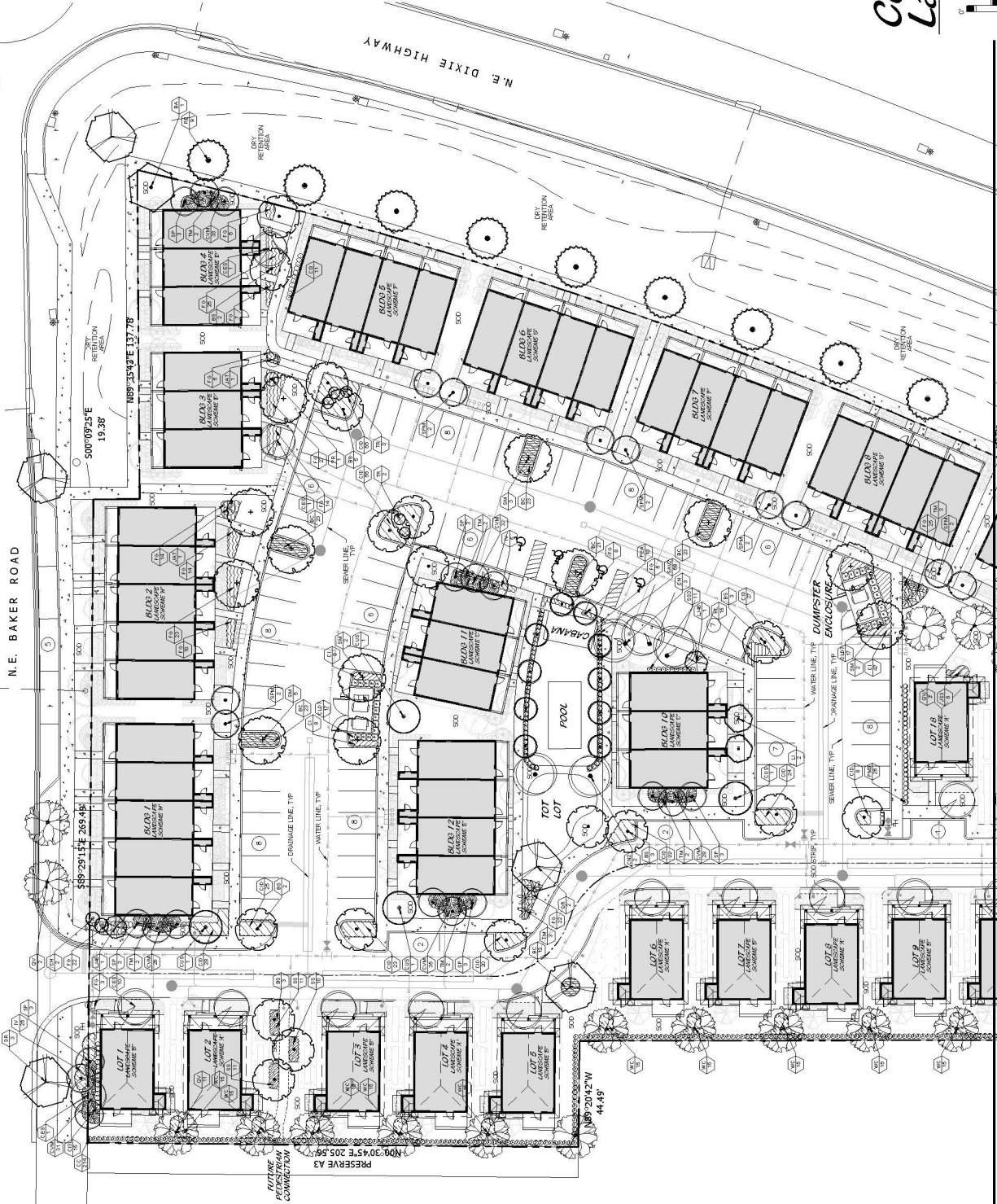


North



Scale: 1" = 20'

MATCH LINE SEE SHEET 2







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# AVONLEA NEW URBAN COMMUNITIES Stuart, Florida

|                |            |
|----------------|------------|
| DESIGNED       | DATE       |
| DRAWN          | DATE       |
| CHECKED        | DATE       |
| APPROVED       | DATE       |
| PROJECT NUMBER | 01-25-2007 |
| REVISIONS      |            |

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SHEET 2 OF 4

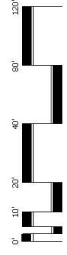
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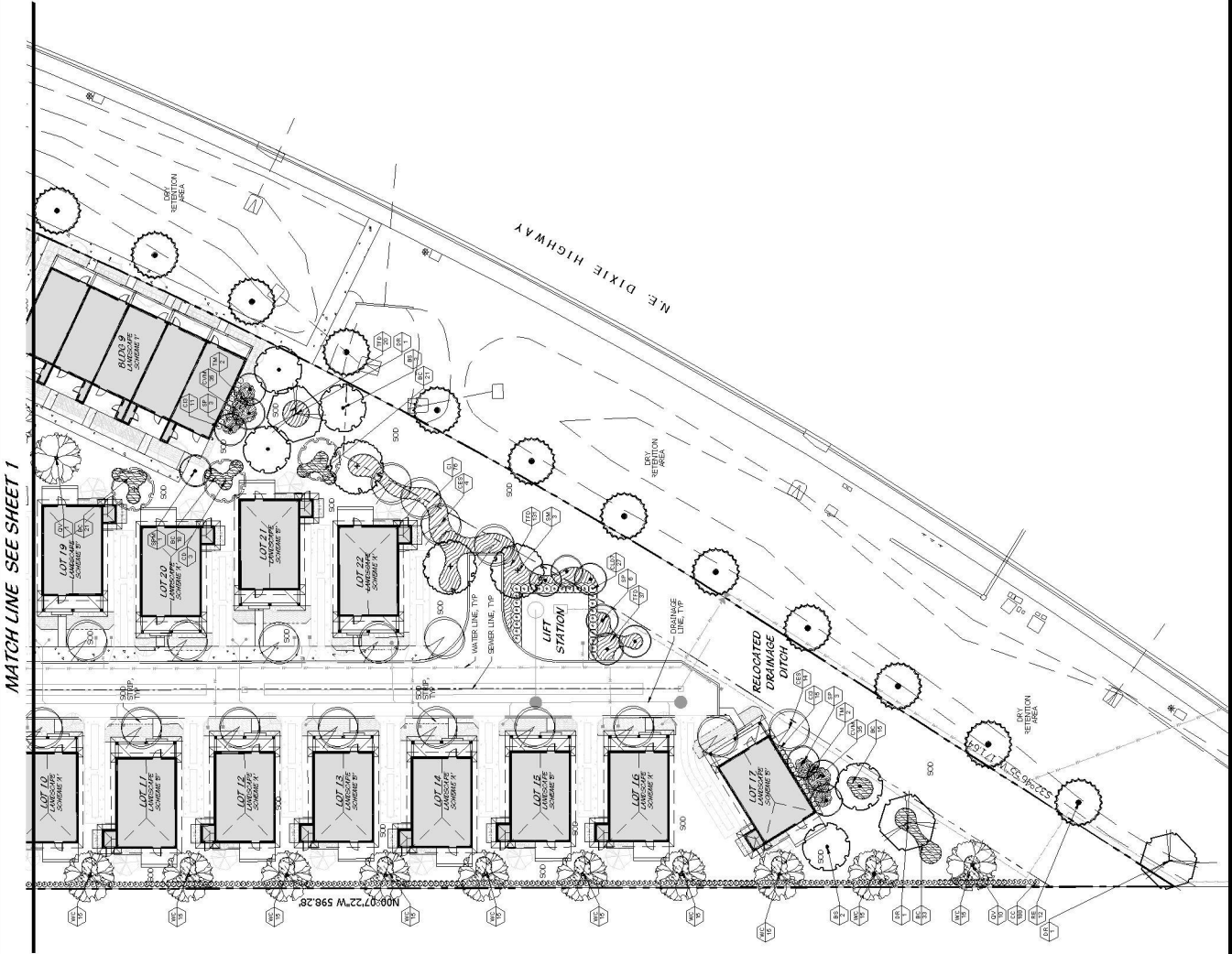
## Common Areas Landscape Plan



North



Scale: 1" = 20'





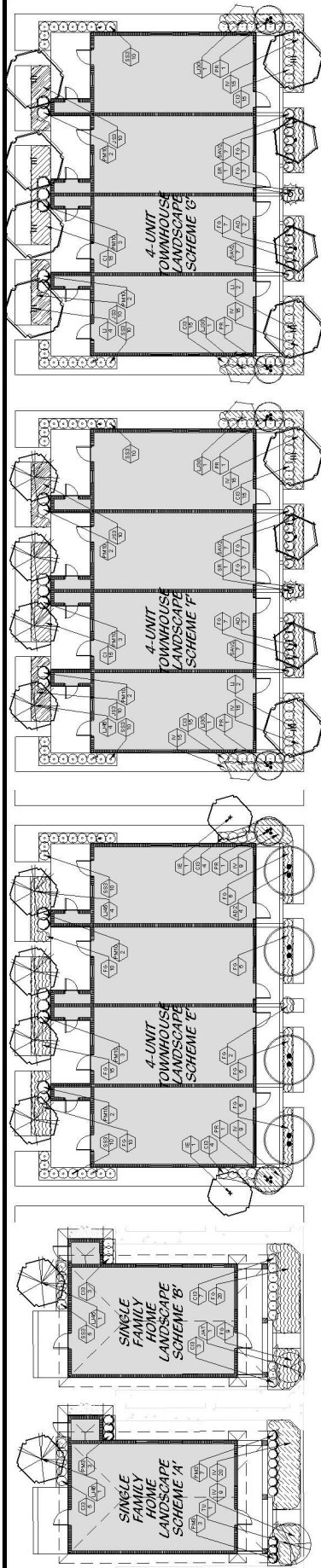
Stuart, Florida

|            |            |
|------------|------------|
| DESIGNED   | DEH        |
| DRAWN      | JAE        |
| APPROVED   | DEH        |
| JOB NUMBER | 19-1014    |
| DATE       | 01-23-2020 |
| REVISIONS  |            |
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SHEET 3 OF 4

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These drawings are the property of the architect and are not to be used for all or part of any other project, except by agreement in writing with the architect. Immediately upon any discrepancy to the architect.



PLANT LIST - SCHEME 'A'

[illegible]

PLANT LIST - SCHEME 'B'

[illegible]

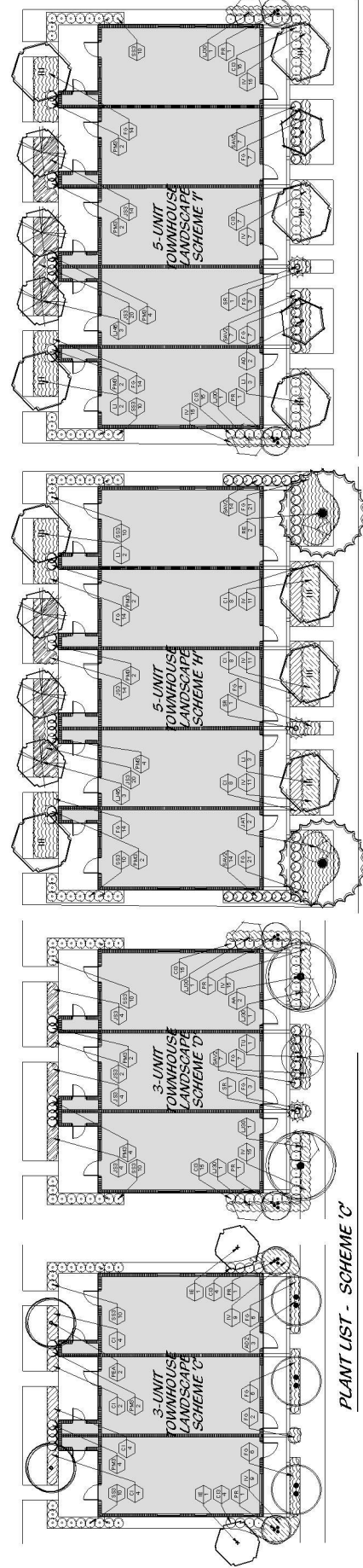
### PLANT LIST - SCHEME 'E'

[illegible]

PLANT LIST - SCHEME 'F'

| Case no. | Age | Sex | Duration of disease | Site of lesion  | Histological features | Immunohistochemical features | Molecular features | Genetic features | Clinical features | Outcome  |
|----------|-----|-----|---------------------|-----------------|-----------------------|------------------------------|--------------------|------------------|-------------------|----------|
|          |     |     |                     |                 |                       |                              |                    |                  |                   |          |
| 1        | 45  | F   | 10 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 2        | 55  | M   | 5 years             | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 3        | 65  | F   | 15 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 4        | 75  | M   | 20 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 5        | 85  | F   | 25 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 6        | 95  | M   | 30 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 7        | 105 | F   | 35 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 8        | 115 | M   | 40 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 9        | 125 | F   | 45 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 10       | 135 | M   | 50 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 11       | 145 | F   | 55 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 12       | 155 | M   | 60 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 13       | 165 | F   | 65 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 14       | 175 | M   | 70 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 15       | 185 | F   | 75 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 16       | 195 | M   | 80 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 17       | 205 | F   | 85 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 18       | 215 | M   | 90 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 19       | 225 | F   | 95 years            | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |
| 20       | 235 | M   | 100 years           | Small intestine | Adenocarcinoma        | CK20, CK7, CD45              | HER2/neu, EGFR     | HER2/neu, EGFR   | Adenocarcinoma    | Survived |

PLANT LIST - SCHEME 'G'

[illegible]

PLANT LIST - SCHEME 'C'

[illegible]

**PLANT LIST - SCHEME 'D'**

[illegible]

PLANT LIST - SCHEME 'H'

[illegible]

PLANT LIST - SCHEME 'T'

[illegible]

## *Landscape Plan Typicals*



[illegible][illegible]

**AVONLEA**  
NEW URBAN COMMUNITIES  
Stuart, Florida

[illegible]

| PROPOSED PLANT TYPE                     | % NATIVE |
|-----------------------------------------|----------|
| TREES                                   | 72%      |
| PALMS                                   | 75%      |
| SHRUBS & GROUNDCOVER /<br>ACCENT PLANTS | 62%      |



WTS


 TREE PROTECTION DETAIL

Diagram illustrating the measurement points for trunk and leaf count:

- POINT OF CONTRACTION: DISCRETE LINE NOT NECESSARILY CORRESPONDING WITH DESIRABLE FORM.
- MINIMUM LEAF COUNT: AS PER GRACES & STANDARDS
- NO ARDLY TRUNK CONTRACTIONS

2"x4" WOOD BRACE  
WITH BOLDS POSTFIXED SIZE 10

POCKET MIDSOLE FOOT BALL WITH STANDARD HOLES IN SHIN WATER HOSE TO ELIMINATE AIR POCKETS.

MIDSOLE FOOT BALL SIZE AS PER GRACES AND STANDARD

WINN, MONTGOMERY, ALEXANDRA, ETC.

## Landscape Details

## Landscape Details







Avonlea Parcel 16

# DESIGN GUIDELINES

New Urban  Communities



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## Purpose & Intent

To maintain a high standard of design through a proper balance of consistency and variety within the community. These design guidelines will help ensure the creation and maintenance of a residential community with a distinct character.

## 1 Single-Family Elevations

## 1.1 Intent

The single-family homes will use a variety of elevations and color palettes with a level of architectural consistency to unify its character, while being varied enough to make for an interesting streetscape.

## 1.2 Single-Family Guidelines

### 1.2.1 Elevation Repetition

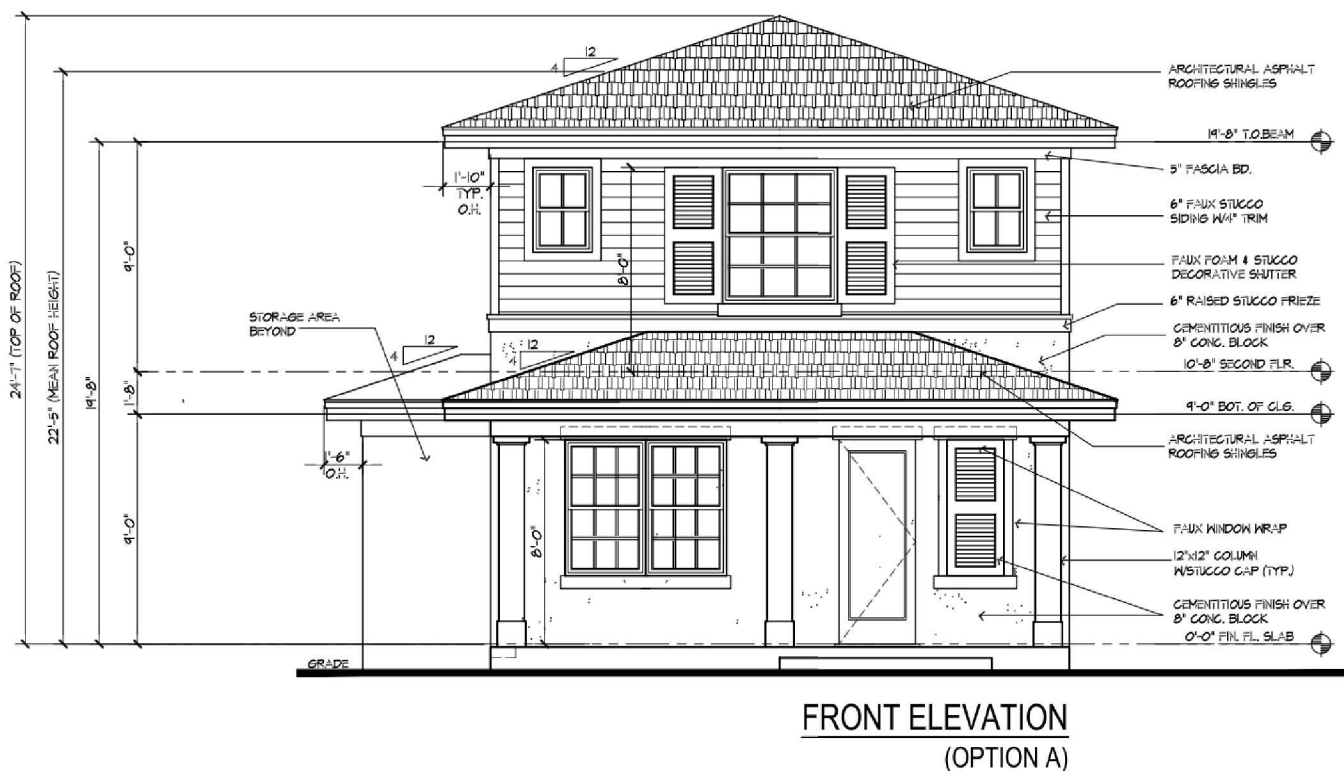
No single-family home shall have the same front elevation design as the home(s) next door or directly across the street.

### 1.2.2 Color Repetition

No single-family home shall have the same color palette as the home(s) next door or directly across the street.

### 1.3 Elevations

### 1.3.1 Option A



### 1.3.2 Option B



**FRONT ELEVATION**  
(OPTION B)

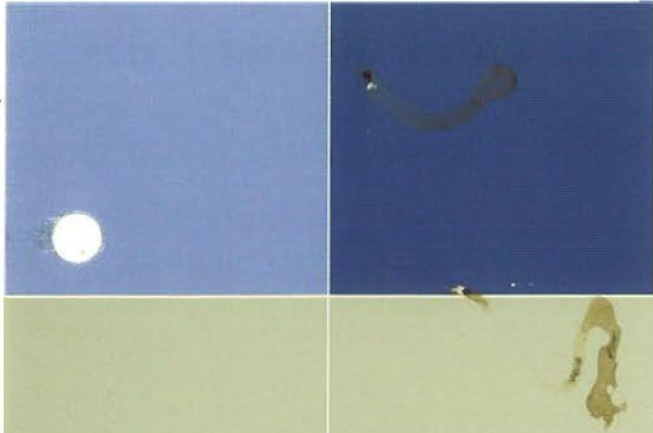
### 1.3.3 Option C



**FRONT ELEVATION**  
(OPTION C)



# 1.4 Color Palettes



# HOMESCAPES™

## Choose Color With Confidence

Welcome to HomeScapes by Sherwin-Williams. It's an exclusive program designed to take the guesswork out of color selection, so you, the homebuyer, can choose your exterior color scheme with confidence.

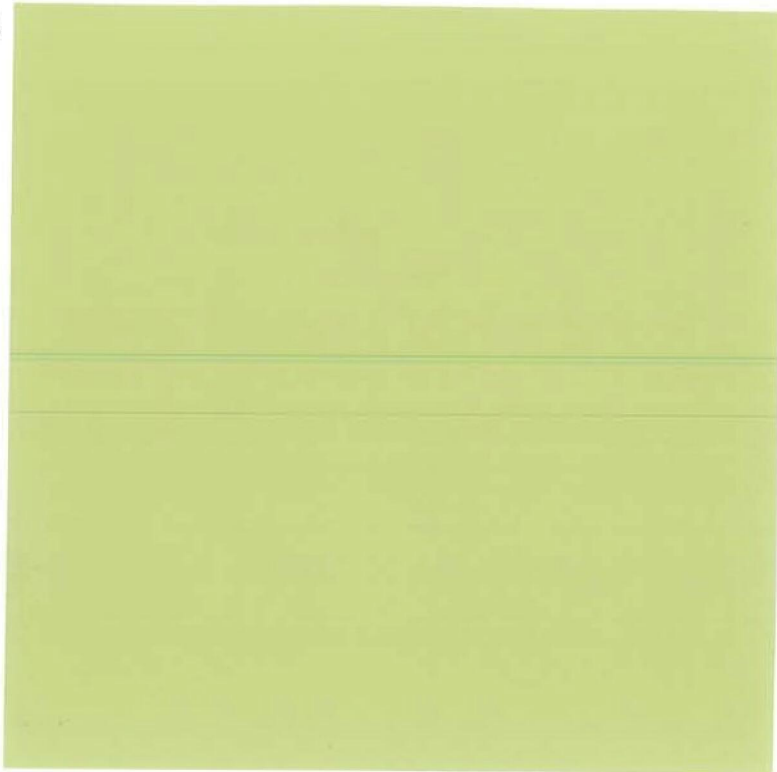
We're proud to partner with Sherwin Williams to provide this unique service. Sherwin-Williams is the largest provider of high-quality paints in North America and a color innovator for more than 130 years, with a complete commitment to service, excellence and quality.

Working with Sherwin-Williams color and design experts, we've put together this signature portfolio of distinct color combinations for you to choose from. The color schemes were selected to complement each other, yet give your home a distinct look that reflects your individual tastes.

We're delighted to help you put the finishing touch on your new home

# SCHEME#!

2



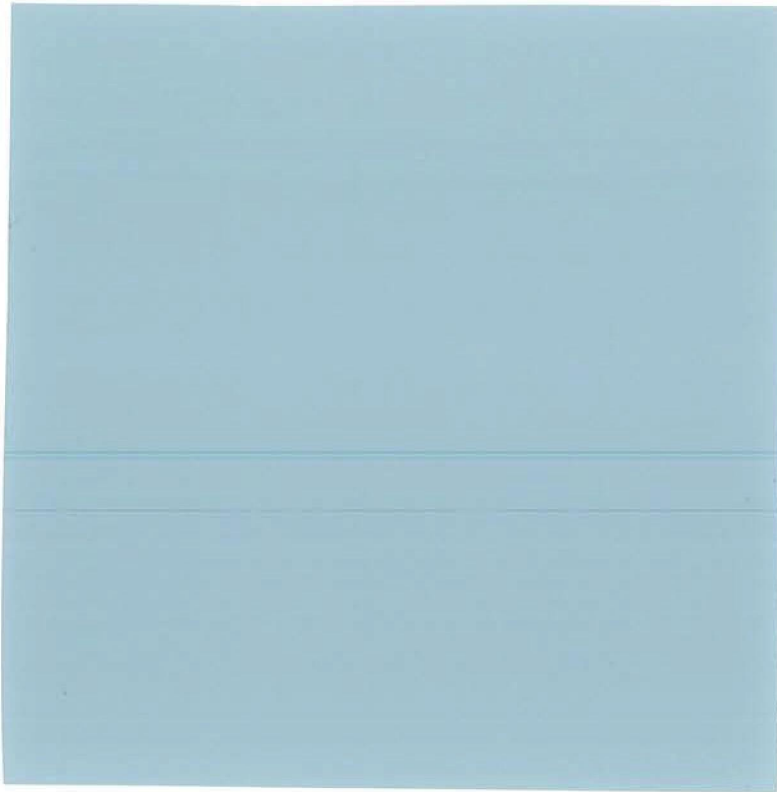
3

SCHEME 1)  
I Lap Siding: Acadia White AC-41  
;. Body:Henderson Buff HC-15  
1  
Y Shutter•:Black

4







- 1 **Body**
- 2 **lap Siding**
- 3 **Trim**
- 4 **Shutter**

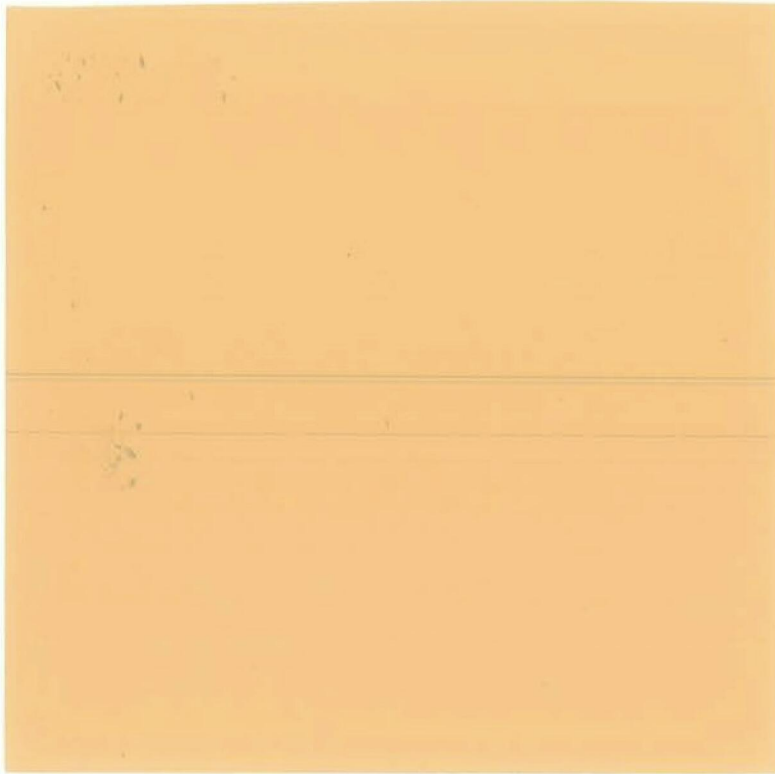
## Botanica

AC-22

AC-4 I

Brilliant White

Block



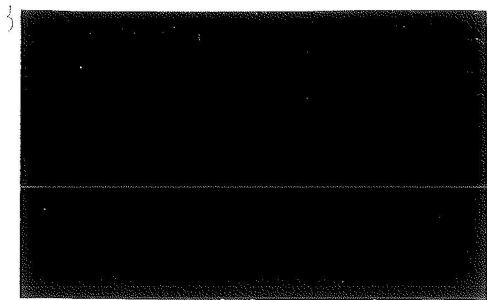
3



## Botanica

|              |                 |
|--------------|-----------------|
| 1 Body       | 2157-40         |
| 2 Lap Siding | AC-41           |
| 3 Trim       | Brilliant White |
| 4 Shutter    | Block           |

scheme 4



- 1 Body
- 2 Trim
- 3 Shutters

Botanica  
2034-70  
Brilliant White  
Black



3

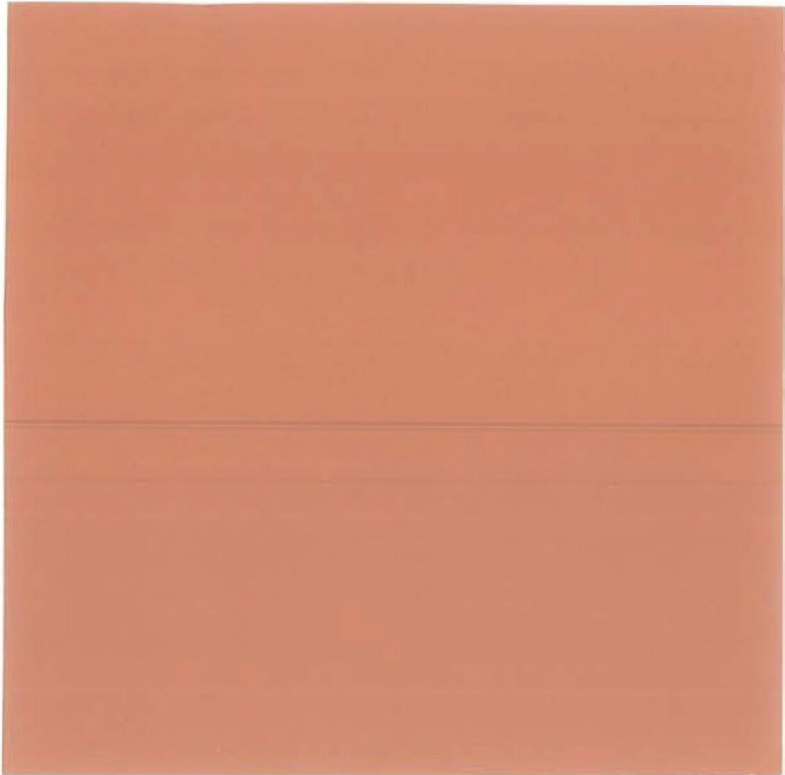


- 1 Body
- 2 Lap Siding
- 3 Trim
- 4 ShuHer

## Botanica

HC-90  
AC-41  
Brilliant White  
HC-159





3

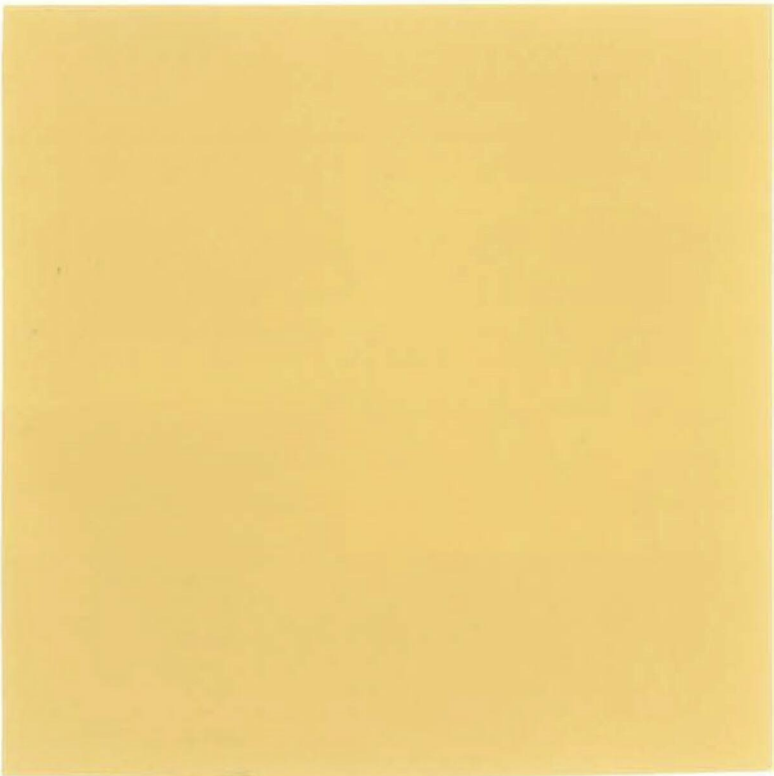


4



Botanica

- |              |                 |
|--------------|-----------------|
| 1 Body       | 2175-40         |
| 2 Lap Siding | AC-41           |
| 3 Trim       | Brilliant White |
| 4 Shutter    | HC-159          |



|              |                 |
|--------------|-----------------|
| Botanica     |                 |
| 1 Body       | 2159-40         |
| 2 Lap Siding | AC-41           |
| 3 Trim       | Brillion! White |
| 4 Shutter    | HC 159          |



## scheme 8



3

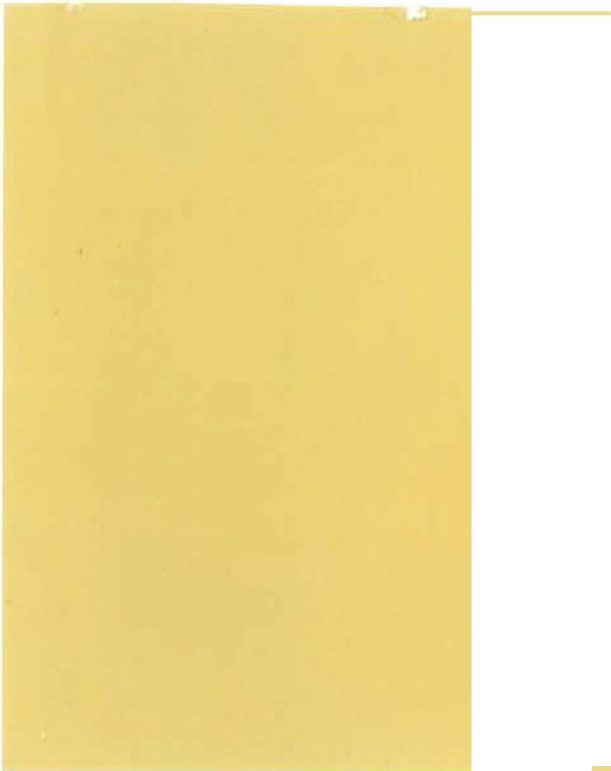




## Botonico

- |                  |                 |
|------------------|-----------------|
| 1 <b>Body</b>    | 2167-40         |
| 2 <b>Trim</b>    | Brilliant White |
| 3 <b>ShuHers</b> | HC-159          |

scheme 9



Botanica

- |              |                 |
|--------------|-----------------|
| 1 Body       | 2154-40         |
| 2 Lap Siding | AC-41           |
| 3 Trim       | Brilliant White |
| 4 Shutter    | HC-113          |

# SCHEME #10



- SCHEME1Q)**
- 1 Lap Siding: Acadia White AC-41
  - 2 Body: Soft Pumpkin 2166-40
  - 3 Trim: Brilliant White
  - i Shutter: Louisburg Green HC-113



# SCHEME#11



3

4



"SCHEME 11)

- 1 Lap Siding: Acadia White AC-41
- 2 Body: Crown Point Sand HC-90
- 3 Trim: Brilliant White
- 4 Shutter: Louisburg Green HC-113

# SCHEME#12

3



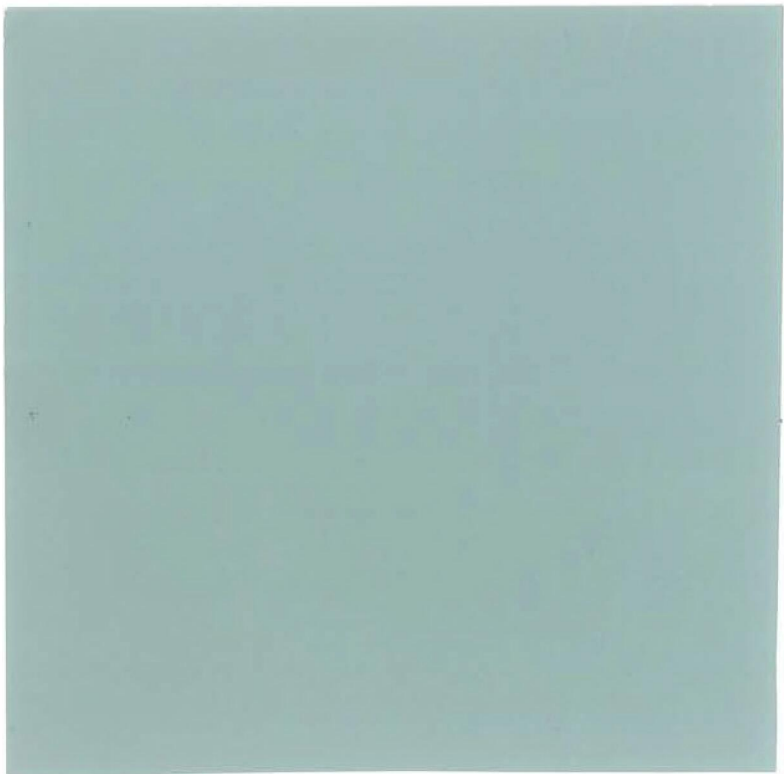
tCHEME 12)

I Body: Straw 2154-50

J Trim: Brilliant White

3 Shuttera:Louisburg Green HC-113

scheme 13



- Body
- 2 lap Siding
- 3 Trim
- 4 Shutter

Botanica

- AC-1 6
- AC-41
- Brilliant White
- HC-154

scheme 14

.1

3



- Body
- 2 Lap Siding
- 3 Trim
- 4 ShuHer

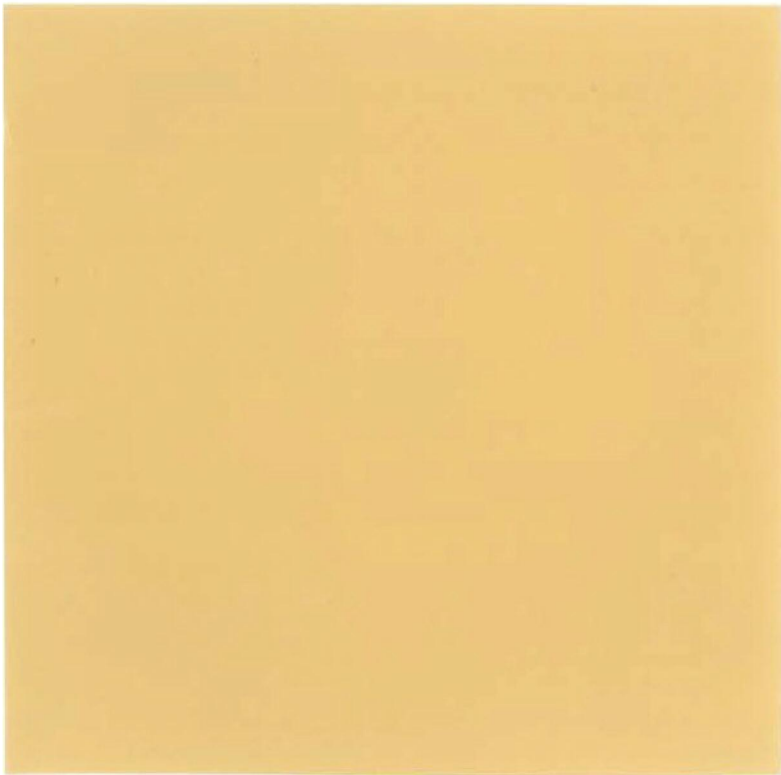
Botanica

- HC-29
- AC-41
- Brilliant White
- HC-154





scheme 15



3

4



- |              |                |
|--------------|----------------|
| 1 Body       | 2158-40        |
| 2 lap Siding | AC-41          |
| 3 Trim       | Brillion!White |
| 4 Shutter    | HC-154         |

Botanica

## scheme 16

3



- 1 Body
- 2 Trim
- 3 Shutters

### Botanica

2146-50  
Brilliant White  
HC-154

# scheme 17



- 1 **Body**
- 2 **Lap Siding**
- 3 **Trim**
- 4 **Shutter**

## Botonico

2170-40

AC-41

Brilliant White

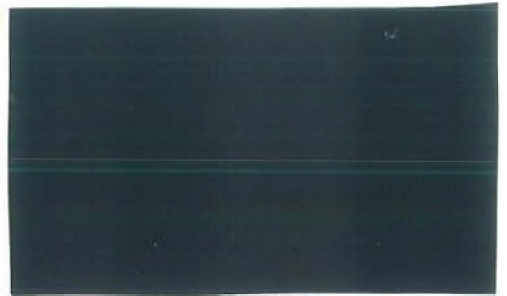
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# SCHEME#18

/

J

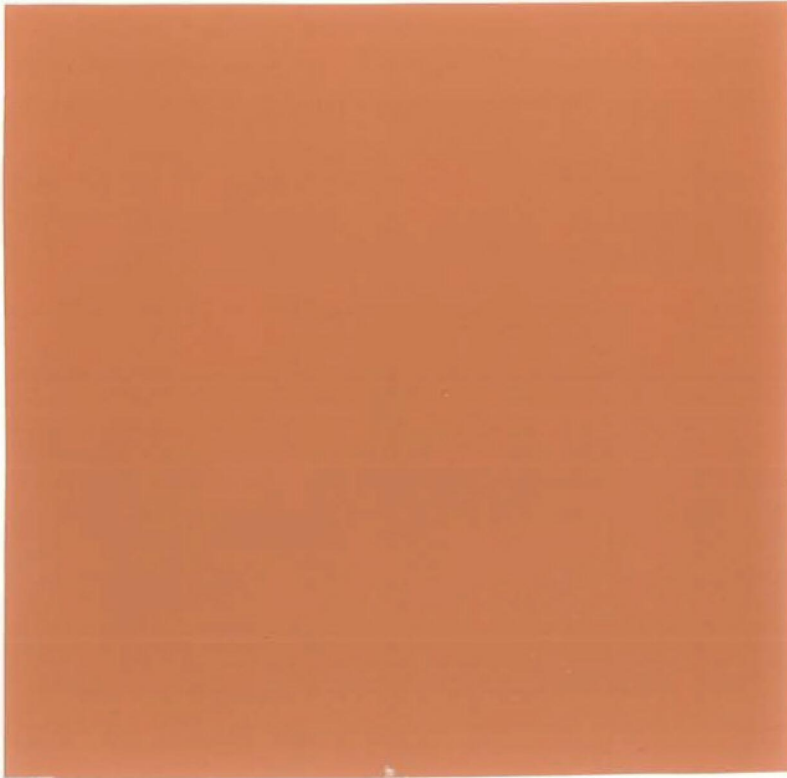
4



SCHEME 18)  
/ Lap Siding:Acadia White AC-41  
J Body:Castleton Mist HC-1  
J Trim:Brilliant Whit  
1 Shutters:Black

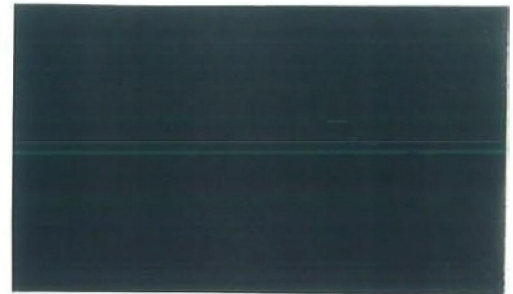


# scheme 1 9



m)

4



- 1 Body
- 2 Lap Siding
- 3 Trim
- 4 Shutter

## Botanica

2167-30

AC-41

Brillion! White

Block

# scheme 20



- 1 Body
- 2 Trim
- 3 Shutters

## Botanica

2027-60

Brilliant White

Black

# scheme 21

3

1--2



## Botanica

- |              |                 |
|--------------|-----------------|
| 1 Body       | 2154 -50        |
| 2 Lap Siding | AC-41           |
| 3 Trim       | Brilliant White |
| 4 ShuHer     | HC-117          |

# scheme 22



- 1 Body
- 2 Lap Siding
- 3 Trim
- 4 Shutter

## Botanica

- HC-24
- AC-41
- Brilliant White
- HC-117



## scheme 23

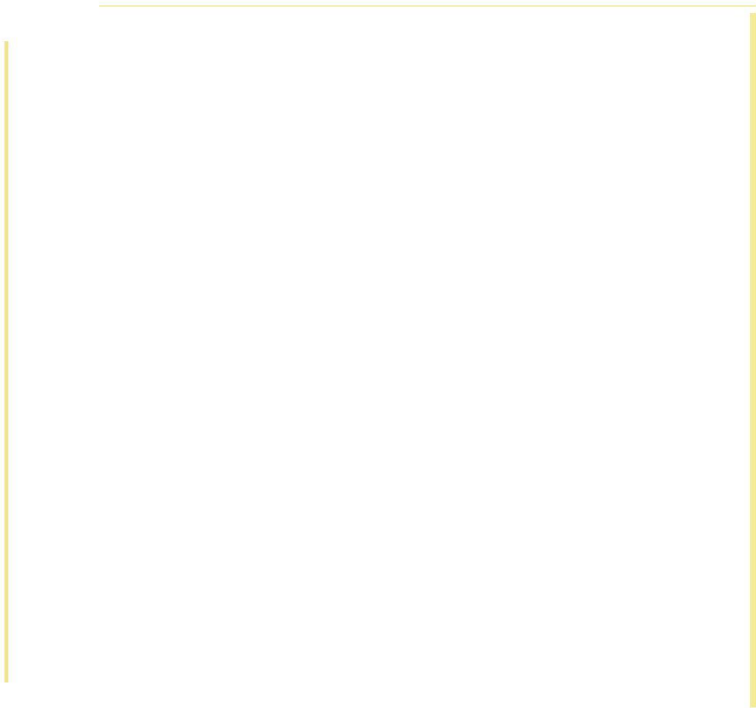


- 1 **Body**
- 2 **Lap Siding**
- 3 **Trim**
- 4 **ShuHer**

### Botanica

- HC-146
- AC-41
- Brilliant White
- HC-117

scheme 24



- 1 **Body**
- 2 **Trim**
- 3 **ShuHers**

Botanica

- HC-12
- Brilliant White
- HC-117

# SCHEME#25

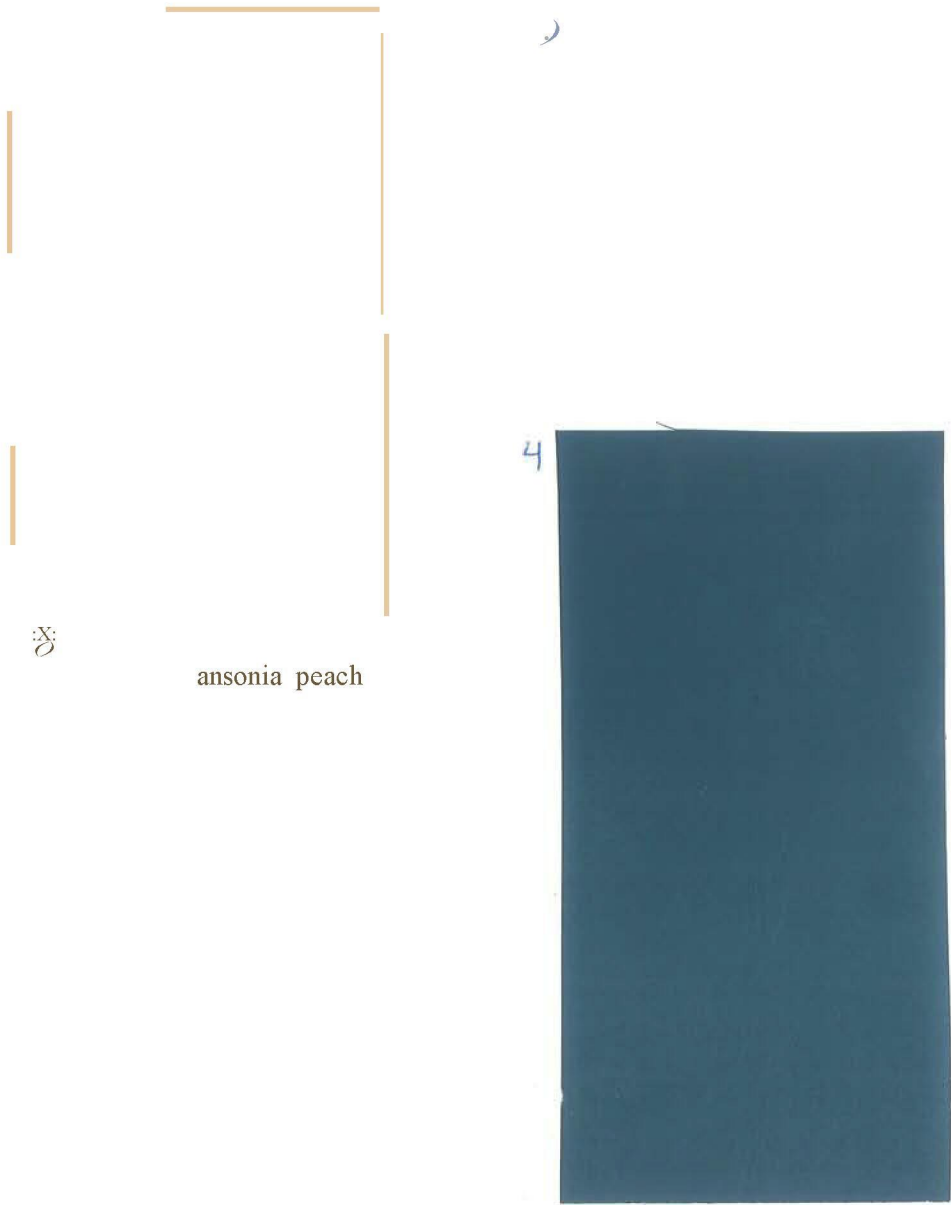
J

- SCHEME25)
- I Lap Siding: Acadia White AC-41
  - = Body : Hawthorn Yellow HC-4
  - ) Trim: Brilliant White ✓
  - 1 Shutter: Van Deusen Blue HC-156

4



scheme 26



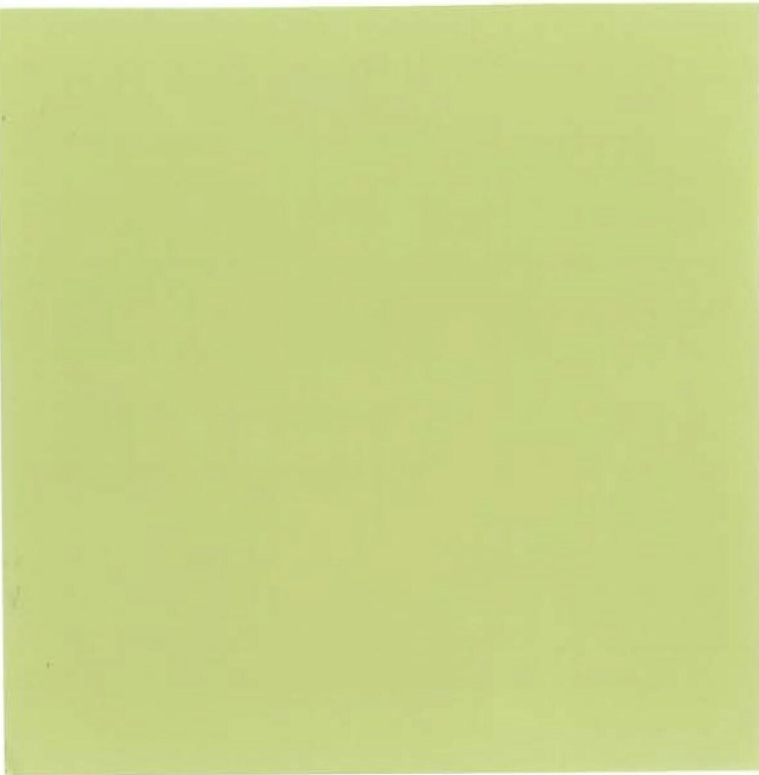
Botanica

- |              |                 |
|--------------|-----------------|
| 1 Body       | HC-52           |
| 2 Lap Siding | AC-41           |
| 3 Trim       | Brilliant White |
| 4 ShuHer     | HC-156          |



# SCHEME#27

2



3

1.f



## - 8SCHEME27)

I Llp Siding: Acadia White AC-41

1 !!ody:Henderson Buff HC-15

J Trim:Brilliant White

tf Shuttera: Van Deusen Blue HC-156"

# scheme 28

1

jumel peachtone

2

jumel peachtone

3



## Botanica

- 1 Body
- 2 Trim
- 3 ShuHers

HC-54  
Brilliant White  
HC-156

# scheme29

*i*



- 1 Body
- 2 lap Siding
- 3 Trim
- 4 Shutter

## Botanica

HC-90

AC-41

Brilliant White

Block



## scheme 30

3



- 1 Body
- 2 Trim
- 3 Shutters

Botanica

2154-50

Brilliant White

11c-1S



## **2 Driveways**

### **2.1 Intent**

Tandem driveways for the single-family homes provide each home with its own parking spaces. The design was inspired by driveways for cottage homes in historic neighborhoods in and around West Palm Beach, as well as some more recent New Urbanist cottage projects around the country. By parking in driveways between each house, the elevations of each home will not be broken up by parked cars.



Figure 1: Driveways between Single-Family Homes in Fayetteville, AR

### **2.2 Driveway Designs**

#### **2.2.1 Ribbon Driveways**

The use of ribbon driveways is preferred so as to lessen the amount of asphalt or other hardscape material.

#### **2.2.2 Paver Driveways**

The use of pavers is allowed as either a ribbon driveway or a single-slab driveway.





Figure 2: Ribbon Driveway with Pavers

## 2.3 Driveway Guidelines

### 2.3.1 Width of Driveway

Each driveway shall have a width of no less than 7 feet and no more than 9 feet measured from the outside edge of one ribbon to the outside edge of the other ribbon.

### 2.3.2 Depth of Driveway

Each driveway shall have a depth of no less than 36 feet and no more than 38 feet, so as to accommodate two automobiles parked in tandem.

### 2.3.3 Width of Each Ribbon

The strips in each ribbon driveway shall be no less than 2 feet and no more than 3 feet in width and located so they are spaced 5 feet apart on center.

### 2.3.4 Between Each Ribbon

The space between each paved ribbon shall be sod, turf, or some other permeable landscape or hardscape material.

## 2.4 Driveway Materials

### 2.4.1 Concrete

Concrete may be used in ribbon driveways, but single-slab concrete driveways are prohibited.





Figure 3: Ribbon Driveway with Concrete, Grandview Heights, West Palm Beach, FL

#### 2.4.2 Pavers

Pavers may be used for either ribbon driveways or single-slab driveways.

### **3 Fencing**

#### **3.1 Intent**

Fences will be used in the rear and side yards of the single-family homes to separate backyards. Every fence shall comply with the design guidelines of this section.

#### **3.2 Fence Guidelines**

##### **3.2.1 Fence Height**

Fences shall be no less than 36 inches and no more than 72 inches in height as measured from grade.

##### **3.2.2 Fence Materials**

Materials shall be PVC, Composite (Trex or approved equivalent) or Aluminum.

##### **3.2.3 Fence Styles**

Styles shall be consistent with the designs illustrated below.





|          |                   |
|----------|-------------------|
| designed | 500               |
| drawn    | LTM               |
| checked  | 500               |
| date     | 01/01/20          |
| scale    | 1/4" = 1'-0" W.G. |
| job no.  | 10444000          |

**Scott Blakeslee Disher**  
AP-0311560 AA-0003246

MODEL I ELEVATION C  
AVONLEA  
CITY OF STUART  
FLORIDA  
by: NEW URBAN COMMUNITIES

ARCHITECTURAL  
Studio, Inc.Architecture  
•  
Planning

300 Avenue of Champions  
Suite 260  
Palm Beach Gardens, Florida 33418  
Phone 561.292.6990  
Fax 561.296.2494  
archstud1.com

drawing  
FLOOR PLANS

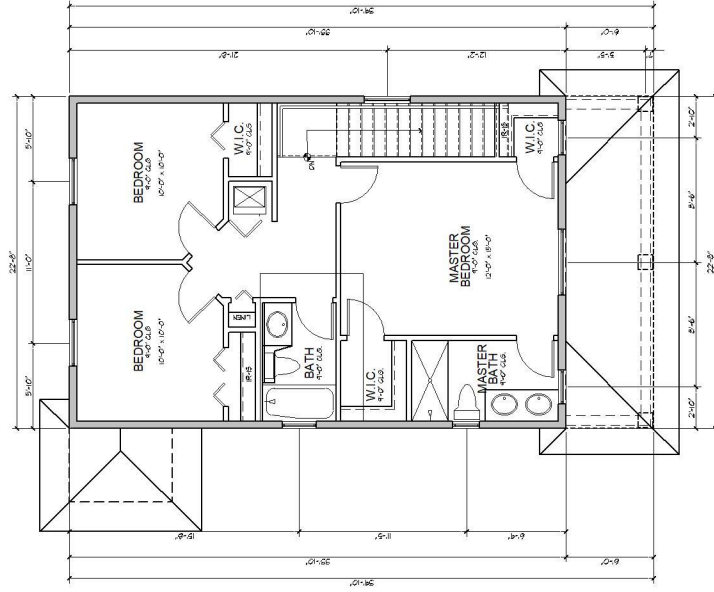
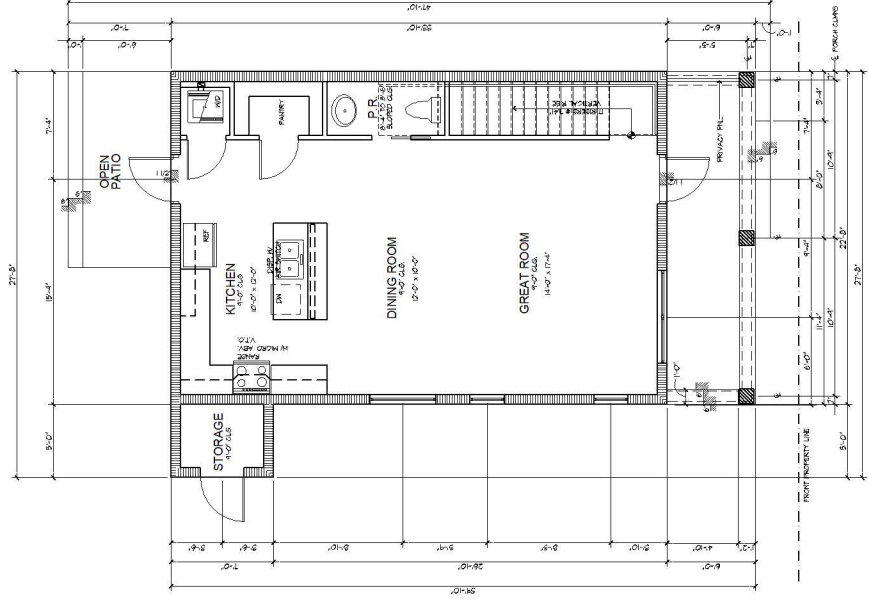
sheet  
A-1

## CALCULATIONS

| AIR CONDITIONED AREAS |   |
|-----------------------|---|
| FIRST FLOOR           | 7 |
| SECOND FLOOR          | 7 |

|                      |   |
|----------------------|---|
| NON CONDITIONED AREA |   |
| STORAGE              | 1 |
| COVERED PORCH        | 1 |

|            |         |
|------------|---------|
| GROSS AREA | 1642 SF |
| GROSS AREA |         |



## SECOND FLOOR PLAN

| revisions | no.               | date |
|-----------|-------------------|------|
| designed  | 960               |      |
| drawn     | LTH               |      |
| checked   | 960               |      |
| date      | 09/03/20          |      |
| scale     | 1/4" = 1'-0" DIA. |      |
| job no.   | PHC-4006          |      |

Scott Blakeslee Disher  
PHC-1011988  
AR-1011988

Project  
MODEL I ELEVATION A  
AVONLEA  
CITY OF STUART  
FLORIDA  
BY: NEW URBAN COMMUNITIES

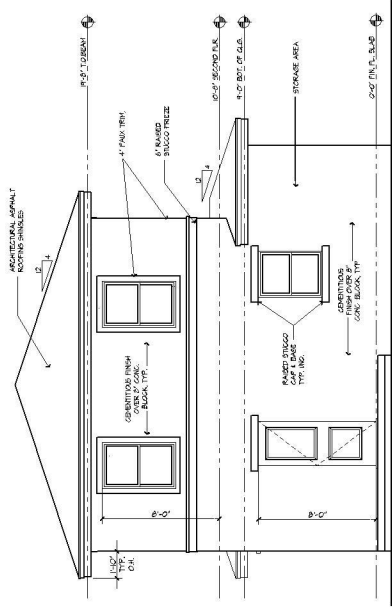
ARCHITECTURAL  
Studio, Inc.

Architecture  
Planning

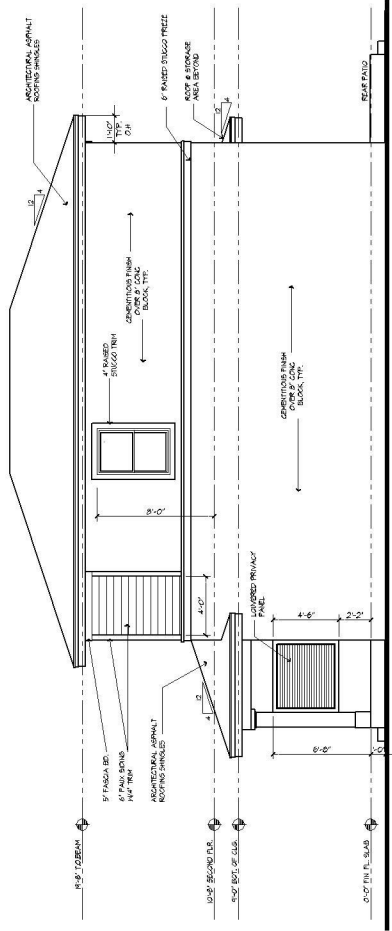
300 Avenue A, Suite 100  
Palm Beach Gardens, Florida 33418  
Phone: 561.331.8890  
Fax: 561.331.8894  
archstudio.com

drawing  
ELEVATIONS  
A

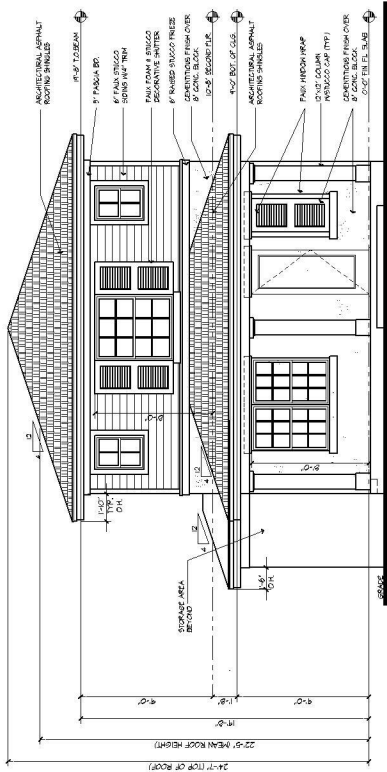
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A-2



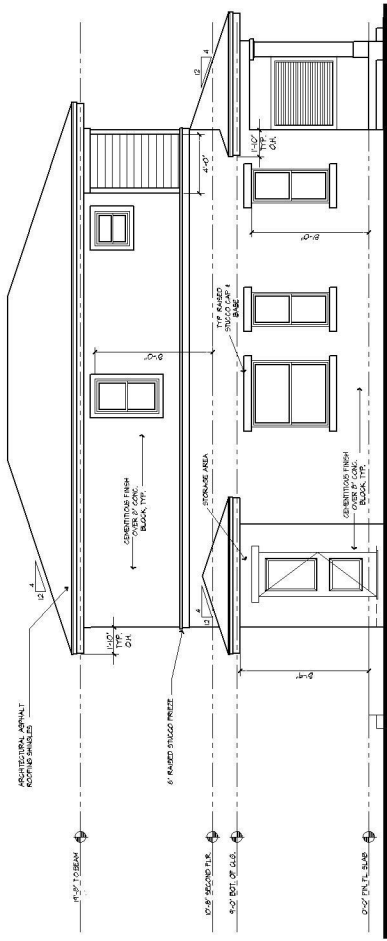
REAR ELEVATION



RIGHT ELEVATION



FRONT ELEVATION  
(OPTION A)



LEFT ELEVATION



|           |              |
|-----------|--------------|
| revisions | date         |
| no.       |              |
| designed  | scd          |
| drawn     | lsh          |
| checked   | scd          |
| inset     | scd          |
| scale     | 1/8" = 1'-0" |
| job no.   | 1000000000   |

MODEL I ELEVATION C

project

AVONLEA  
CITY OF STUART  
FLORIDA

by: NEW URBAN COMMUNITIES

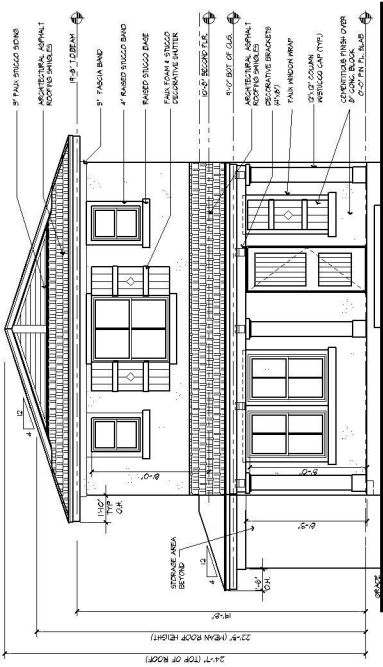
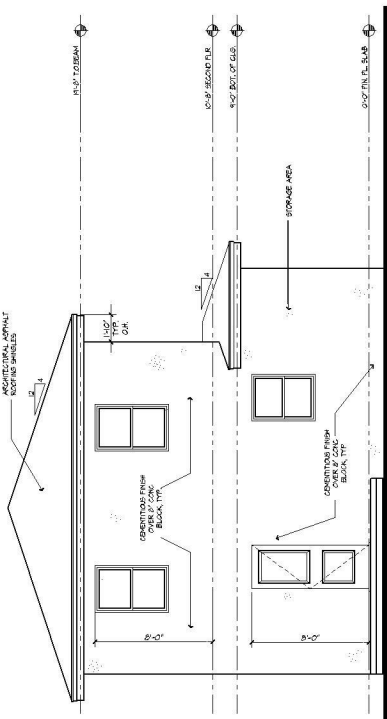
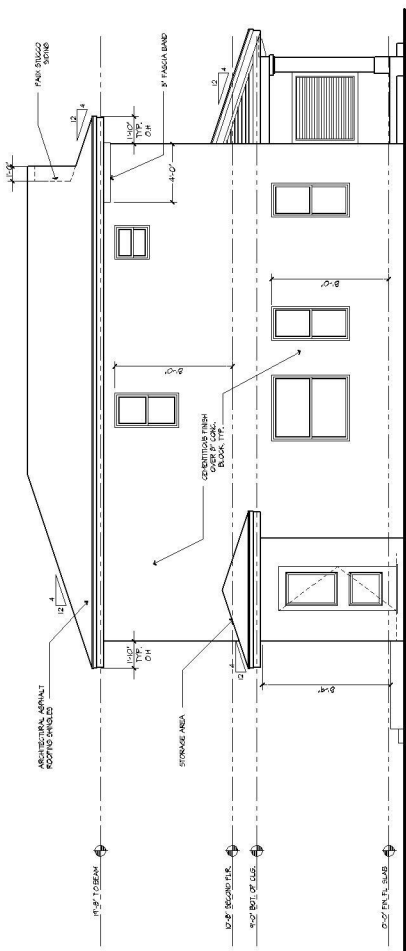
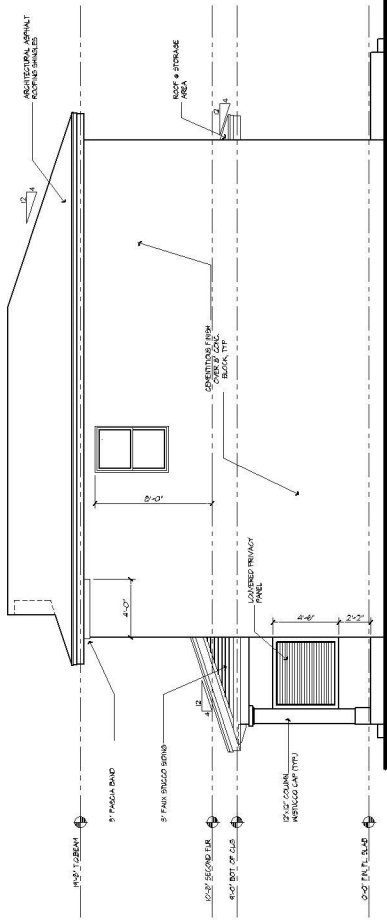
ARCHITECTURAL  
*Studio, Inc.*

Architecture  
Planning

3000 Avenue of Champions  
Suite 300  
Palm Beach Gardens, Florida 33418  
Phone 561.331.8990  
Fax 561.331.7494  
archstudio.com

drawing  
ELEVATIONS  
C

sheet  
A-4





| revisions |  | date |
|-----------|--|------|
| no.       |  |      |
|           |  |      |

|          |                     |
|----------|---------------------|
| designed | 8007                |
| drawn    | LTH                 |
| checked  | 8600                |
| date     | 09/05/20            |
| scale    | 1/4" = 1'-0" (1/4") |
| job no.  | 1024-02-06          |

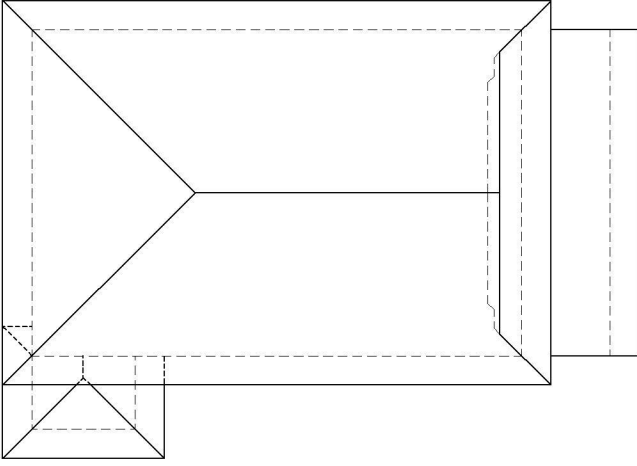
Scott Blakeslee Dagher  
P.E. 12114-0008 AR-00000085

MODEL I  
project  
AVONLEA  
CITY OF STUART  
FLORIDA  
by: NEW URBAN COMMUNITIES

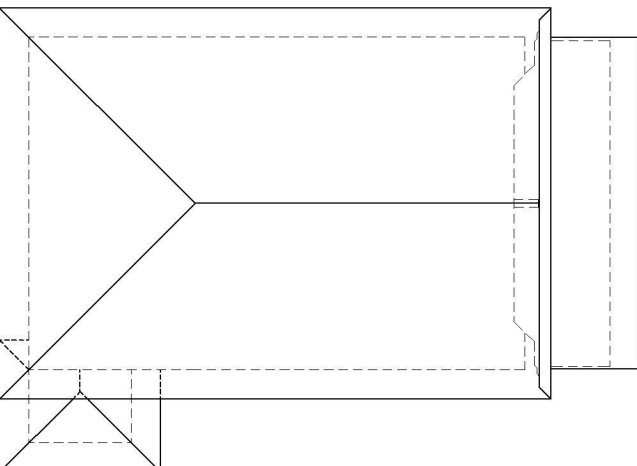
ARCHITECTURAL  
*Studio, Inc.*  
Architecture  
Planning  
300 Avenue of Champions  
Palm Beach Gardens, Florida 33418  
Phone 561-357-0788  
Fax 561-354-8814  
archstudio.com

drawing  
ROOF PLANS

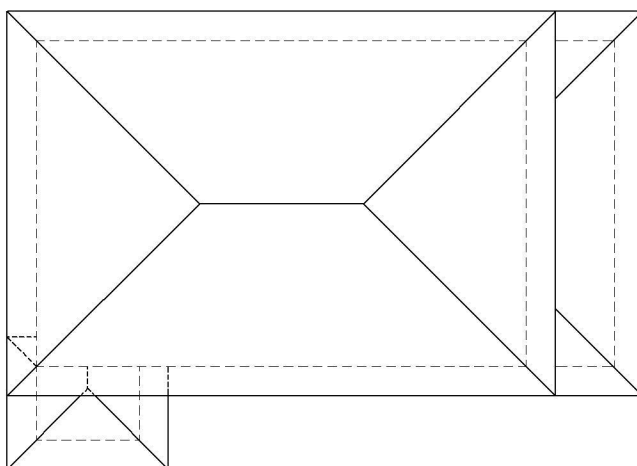
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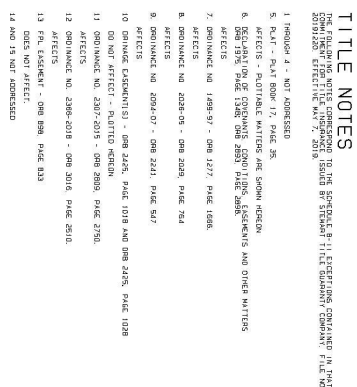
ROOF PLAN  
C



ROOF PLAN  
B



ROOF PLAN  
A



## TITLE NOTES

- [illegible]

## DESCRIPTION

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## NOTES

- [illegible]

CERTIFICATION

**Richard H. Smith**

On file signed by Richard H. Smith, Director of the Florida Department of Transportation, dated 01/05/05.

DATE: 01/05/05

FOR THE FIRM, BY

**RICHARD H. SMITH**  
DIRECTOR AND MAPPER  
FLORIDA DEPARTMENT OF TRANSPORTATION  
TALLAHASSEE, FLORIDA 32309

[illegible]

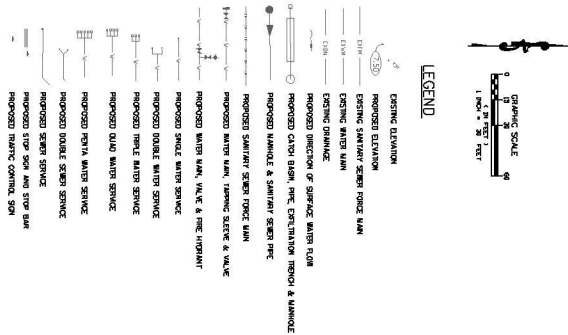
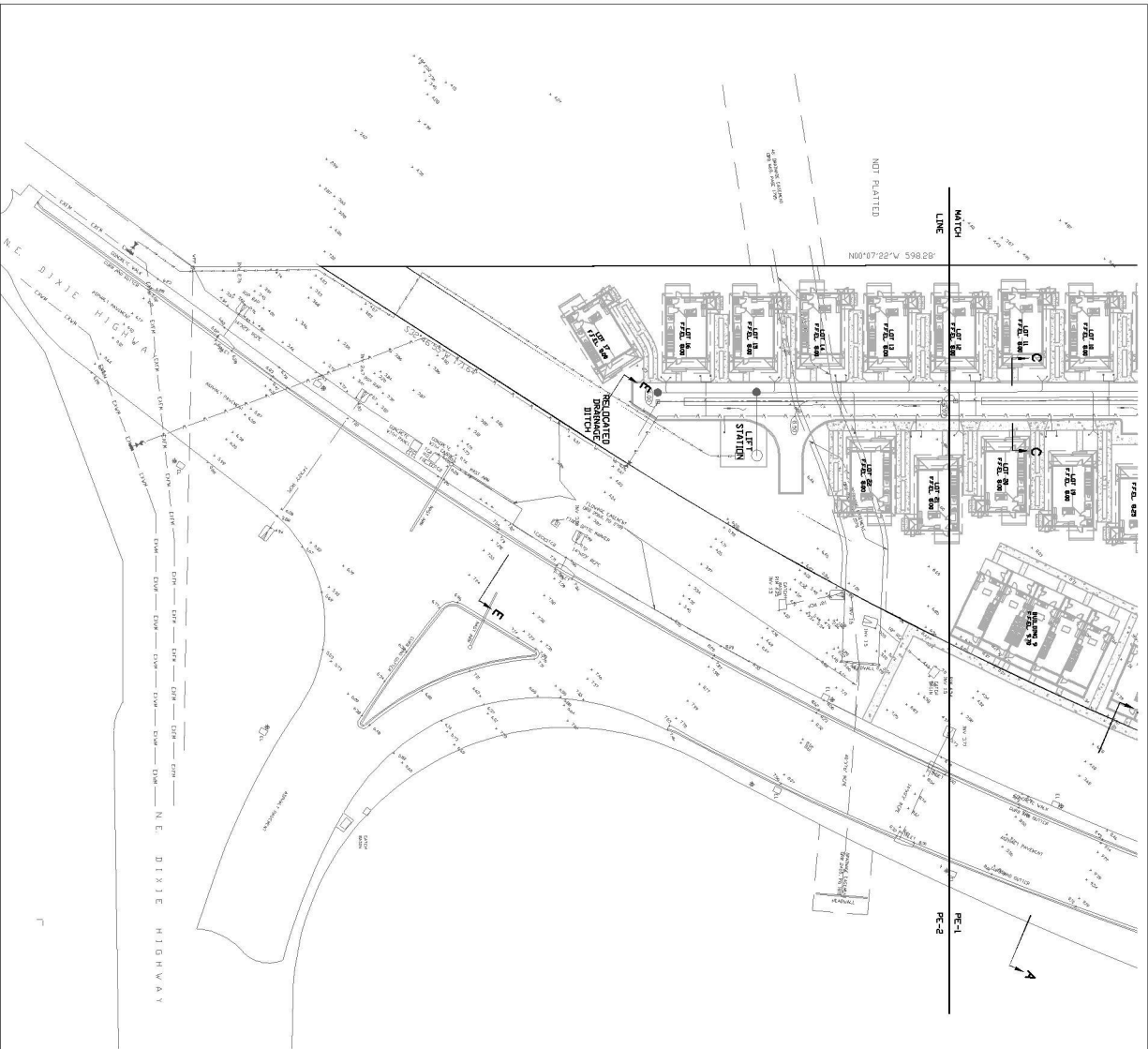
**RICHARD H. SMITH, INC.**  
SURVEYING AND MAPPING  
FLORIDA LICENSE NUMBER 18 7463  
rsmith@rcv1@aol.com  
4002 FOREST DALE DRIVE  
LAKE WORTH, FL 33449  
(561) 536-8139



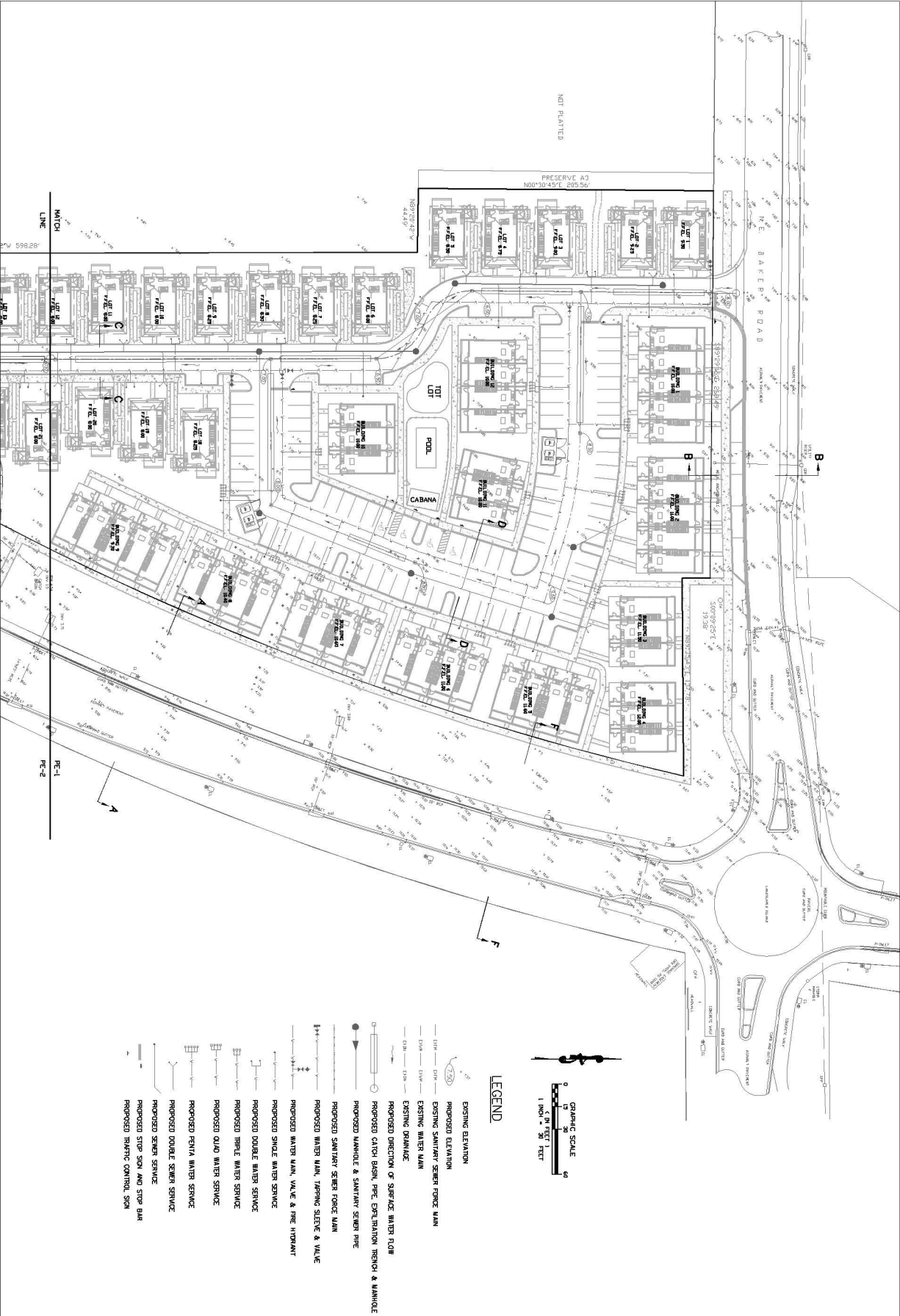




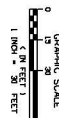




|                                                    |                                               |  |                                                                                                                                                                                                   |  |                                                                                                       |
|----------------------------------------------------|-----------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------|
| AVONLEA PUD<br>LOT 16<br>CITY OF STUART<br>FLORIDA | PREPARED FOR:<br><b>NEW URBAN COMMUNITIES</b> |  | PETER WAYNE AQUART, P.E.<br>CONSULTING CIVIL ENGINEER<br>14032 SW 48TH STREET, MIAMI, FL 33175<br>TEL: (561) 379-2879 E-MAIL: PAQUART@aol.com<br>FLORIDA LICENSED PROFESSIONAL ENGINEER No. 34176 |  | DATE DRAWN: 19OCT19<br>SCALE: 1"=30'<br>DESIGN BY: PWA<br>DRAWN BY: PWA<br>CHECKED BY: PWA<br>BY: PWA |
|                                                    | PRELIMINARY ENGINEERING PLAN                  |  | 1 PER REVIEW COMMENTS: PWA 1/15/2020<br>DESCRIPTION:                                                                                                                                              |  | APPROVED BY: PWA                                                                                      |
|                                                    | PROJECT NO. 105                               |  | SHEET 2 OF 3                                                                                                                                                                                      |  | 19OCT19                                                                                               |
|                                                    | P.E. 2                                        |  | 105                                                                                                                                                                                               |  | 19OCT19                                                                                               |



### LEGEND



- |                                                                                     |                                                           |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------|
|  | PROPOSED ELEVATION                                        |
|  | EXISTING SANITARY SEWER FORCE MAIN                        |
|  | EXISTING WATER MAIN                                       |
|  | PROPOSED DIRECTION OF SURFACE WATER FLOW                  |
|  | PROPOSED CATCH BASIN, PIPE, INFILTRATION TRENCH & MANHOLE |
|  | PROPOSED MANHOLE & SANITARY SEWER PIPE                    |
|  | PROPOSED SANITARY SEWER FORCE MAIN                        |
|  | PROPOSED WATER MAIN, VALVE & FIRE HYDRANT                 |
|  | PROPOSED SINGLE WATER SERVICE                             |
|  | PROPOSED DOUBLE WATER SERVICE                             |
|  | PROPOSED TRIPLE WATER SERVICE                             |
|  | PROPOSED QUID WATER SERVICE                               |
|  | PROPOSED PENNY WATER SERVICE                              |
|  | PROPOSED DOUBLE SEWER SERVICE                             |
|  | PROPOSED SEWER SERVICE                                    |
|  | PROPOSED STOP BOX AND STOP BAR                            |
|  | PROPOSED TRAFFIC CONTROL SIGN                             |

|                                               |                       |  |
|-----------------------------------------------|-----------------------|--|
| PREPARED FOR:<br><b>NEW URBAN COMMUNITIES</b> | AVONLEA PUD<br>LOT 16 |  |
|                                               | CITY OF STUART        |  |
|                                               | FLORIDA               |  |
| PRELIMINARY ENGINEERING PLAN                  |                       |  |

**PETER WAYNE AQUART, P.E.**  
CONSULTING CIVIL ENGINEER  
14032 SW 48TH STREET, MIAMI, FL 33175  
TEL.: (561) 379-2879 E-MAIL: PAQUART@AOL.COM  
FLORIDA LICENSED PROFESSIONAL ENGINEER NO. 34176

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|   |                     |  |     |          |              |         |
|---|---------------------|--|-----|----------|--------------|---------|
|   |                     |  |     |          | DATE DRAWN:  | 18OCT19 |
|   |                     |  |     |          | SCALE:       | 1"=30'  |
|   |                     |  |     |          | DESIGN BY:   | PWA     |
|   |                     |  |     |          | DRAWN BY:    | PWA     |
|   |                     |  |     |          | CHECKED BY:  | PWA     |
| 1 | PER REVIEW COMMENTS |  | PWA | 115 2020 | APPROVED BY: | PWA     |
|   | DESCRIPTION:        |  | BY: | DATE:    |              |         |





**...and Planning / Landscape Architecture**  
(772) 225-2100, Fax (772) 223-0220  
101 E. Ocean Blvd., Stuart, Florida 34994  
(772) 467-1300, Fax (772) 467-1303  
100 Avenue A Suite 2A, Fort Pierce, Florida 34950  
(888) 834-2701, Fax (888) 832-0810  
1000 Highland Avenue, Ocoee, Florida 32673

[illegible]

|                               |          |       |
|-------------------------------|----------|-------|
| <b>Total Development Area</b> | 28.64 ac | 58.4% |
| <b>Total Site Area:</b>       | 49.04 ac | 4.0%  |

| Open Space Calculations:*                  | Acres    |
|--------------------------------------------|----------|
| Total Site Area:                           | 49.04 ac |
| (Less) Wetlands:                           | 12.50 ac |
| Area Subject to Open Space Requirement:    | 36.44 ac |
| Minimum Open Space Required (50%):         | 18.22 ac |
| Open Space Provided by Upland Preserve:    | 10.53 ac |
| Open Space to be Provided Within Preserve: | 7.79 ac  |
| Open Space to be Provided in CPUD:         | 3.14 ac  |
| Open Space to be Provided in CPUD: 1.48 ac |          |
| Open Space to be Provided in CPUD: 1.66 ac |          |

## General Notes

**Legal Description**  
Acres East Village. Street front plat as and divided subdivisions (they could towards the retreat)

**Legend**

Managing Wetland BODIB Under South Florida Water Management Conservation Easement

 Proposed Upland Preserve

1

Figure 1. The effect of the number of trials on the number of correct responses. The number of correct responses (Y-axis) is plotted against the number of trials (X-axis). The data shows a positive correlation between the number of trials and the number of correct responses, with a slight increase in the number of correct responses as the number of trials increases.

|           |  |
|-----------|--|
| 325 units |  |
|-----------|--|

|                    |           |
|--------------------|-----------|
| identical infinite | 160 units |
|--------------------|-----------|

|                                              |                              |
|----------------------------------------------|------------------------------|
| <p><i>For more information, contact:</i></p> | <p><b>1-800-451-7000</b></p> |
|----------------------------------------------|------------------------------|

## New Avonlea Blind

## Master Parcel Plan

---

| Scale | $t = 100$ | Revisions |
|-------|-----------|-----------|
| Drawn | 83.4      |           |
| Rev   |           | 83.4      |

Computer File Computer Station Server  
Project Number 13-571



## Master Parcel Plan

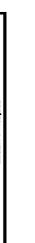
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Drawn by \_\_\_\_\_

Computer Station  
Server

Date 4-06-2015

Page 150 of 210



\_\_\_\_\_

|                |           |
|----------------|-----------|
| Project Number | 13-571    |
| Date           | 4-06-2015 |

## Residential PUD

|          |                        |
|----------|------------------------|
| Project: | Avonlea Parcel 16 RPUD |
| Date     | 2.10.20                |

|                           |                              |
|---------------------------|------------------------------|
| Adjacent N                | County Preserve              |
| Adjacent S                | Haney Creek Natrual Preserve |
| Adjacent E                | Avonlea PUD                  |
| Adjacent W                | Haney Creek Natural Preserve |
| Total Floor Space (sq.ft) | <b>None</b>                  |

| LDR Reference | Land Development Regulations    | RPUD REVIEW STATUS |
|---------------|---------------------------------|--------------------|
| 2.07.00 D.1   | Land Use Designation            | COMPLY             |
| 2.07.00 D.2 a | Uses                            | COMPLY             |
| 2.07.00 D.2 b | Compatible Residential Uses     | COMPLY             |
| 2.07.00 D.2 c | Commercial (<30%)               | NOT APPLICABLE     |
| 2.07.00.D.2.d | Commercial Uses (<30%) vertical | NOT APPLICABLE     |
| 2.07.00.D.3   | Density                         | COMPLY             |
| 2.07.03 D.4.b | Open Space (>30%)               | COMPLY             |
| 2.07.03 D.4.c | FAR                             | COMPLY             |
| 2.07.03.D.4.d | Native Vegetaion (>25%)         | COMPLY             |
|               |                                 |                    |

## AREA, IMPERVIOUS SURFACE, SETBACK AND HEIGHT

|         |                                   |                |
|---------|-----------------------------------|----------------|
| 2.04.03 | Supplemental impervious surface   | COMPLY         |
| 2.04.04 | Supplemental setback requirements | COMPLY         |
| 2.04.05 | Waterfront setbacks               | NOT APPLICABLE |
| 2.04.06 | Certain street setbacks           | NOT APPLICABLE |
| 2.04.07 | Supplemental building height      | COMPLY         |
| 2.06.00 | Supplemental Use standards        | NOT APPLICABLE |

|         |                     |                |
|---------|---------------------|----------------|
| 4.04.01 | Traffic Concurrency | COMPLY         |
| 4.09.00 | School Concurrency  | TO BE REVIEWED |

## RESOURCE PROTECTION

|         |                                 |                       |
|---------|---------------------------------|-----------------------|
| 5.02.00 | Environmental Assessment        | COMPLY                |
| 5.03.02 | Wetland Protection              | COMPLY                |
| 5.04.00 | Environmentally sensitive lands | COMPLY                |
| 5.04.03 | Monitoring & Maintenance        | REVIEWED AT SITE PLAN |
| 5.05.01 | Tree Survey                     | COMPLY                |
| 5.05.02 | Tree removal                    | COMPLY                |



|           |                       |                |
|-----------|-----------------------|----------------|
| 5.06.00   | Mangrove & Shoreline  | NOT APPLICABLE |
| 5.07.00   | Floodplain Management | COMPLY         |
| Comp Plan | Comprehensive Plan    | COMPLY         |

**TRANSPORTATION**

|         |                    |                |
|---------|--------------------|----------------|
| 6.01.04 | Sidewalks/bikeways | COMPLY         |
| 6.01.05 | Bike Ped (LCD)     | COMPLY         |
| 6.01.06 | Access             | COMPLY         |
| 6.01.07 | Drive-through      | NOT APPLICABLE |
| 6.01.08 | Vehicular Access   | COMPLY         |
| 6.01.09 | Parking Code       | COMPLY         |
| 6.01.18 | Off-Street Loading | NOT APPLICABLE |
| 6.01.19 | PILOP              | NOT APPLICABLE |

**STORMWATER**

|         |            |                |
|---------|------------|----------------|
| 6.03.01 | Generally  | TO BE REVIEWED |
| 6.03.04 | Management | TO BE REVIEWED |
| 6.03.08 | Erosion    | TO BE REVIEWED |

**LANDSCAPING**

|              |                              |                       |
|--------------|------------------------------|-----------------------|
| 6.04.02      | General Standards            | COMPLY                |
| 6.04.02 A.1  | Native Landscaping           | COMPLY                |
| 6.06.02 A.2  | Shade Trees Required         | COMPLY                |
| 6.06.02 A.4  | Banyan, Ficus & Rubber Trees | NOT APPLICABLE        |
| 6.06.02 A.5  | Proximity to power lines     | COMPLY                |
| 6.06.02 A.6  | Shrubs                       | COMPLY                |
| 6.06.02 A.7  | Hedges                       | COMPLY                |
| 6.06.02 A.8  | Vines                        | NOT APPLICABLE        |
| 6.06.02 A.9  | Ground cover                 | COMPLY                |
| 6.06.02 A.10 | Grass Area                   | COMPLY                |
| 6.06.02 B    | Irrigation                   | REVIEWED AT SITE PLAN |

**LANDSCAPE DESIGN**

|             |                                       |                |
|-------------|---------------------------------------|----------------|
| 6.04.03 A   | Utility Lines (Existing and Proposed) | COMPLY         |
| 6.04.03 B.1 | Landscaped Area >20%                  | COMPLY         |
| 6.04.03 B.2 | Interior landscaping >50%             | COMPLY         |
| 6.04.03 B.3 | location of impervious                | COMPLY         |
| 6.04.03 B.4 | Mulch                                 | COMPLY         |
| 6.04.03 B.5 | Shoreline protection                  | NOT APPLICABLE |
| 6.04.03 B.8 | Visibility triangles                  | COMPLY         |

|         |                      |        |
|---------|----------------------|--------|
| 6.04.06 | Land Use Transitions | COMPLY |
|---------|----------------------|--------|

**LANDSCAPING - PARKING AREAS**

|              |                                               |                |
|--------------|-----------------------------------------------|----------------|
| 6.04.07 A.1  | Landscaped strip adjacent to street           | COMPLY         |
| 6.04.07 A.2  | Landscaped strip length linear feet           | COMPLY         |
| 6.04.07 A.2a | Parking area adjacent to street               | COMPLY         |
| 6.04.07 A.2b | Hedge/wall/berm on outside of strip           | COMPLY         |
| 6.04.07 A.2c | Other Landscaping                             | COMPLY         |
| 6.04.07 A.2d | Grass                                         | COMPLY         |
| 6.04.07 A.3  | Shrubs/ground cover                           | COMPLY         |
| 6.04.07 B    | parking screened from private property        | NOT APPLICABLE |
| 6.04.07 B.1  | Landscaped strip adjacent to private property | NOT APPLICABLE |
| 6.04.07 B.2a | Parking area adjacent to private property     | NOT APPLICABLE |
| 6.04.07 B.2b | Hedge/wall/berm on outside of strip           | NOT APPLICABLE |
| 6.04.07 B.2c | Other Landscaping                             | NOT APPLICABLE |
| 6.04.07 B.2d | Grass                                         | NOT APPLICABLE |
| 6.04.07 B.3  | Shrubs/ground cover                           | NOT APPLICABLE |
| 6.04.07 C.1  | Parking Area (Major Dev't only)               | COMPLY         |
| 6.04.07 C.2  | Parking area rear and sides of building       | COMPLY         |
| 6.04.07 C.3  | Interior trees                                | COMPLY         |
| 6.04.07 C.4  | Vehicle encroachment                          | COMPLY         |
| 6.04.07 C.5  | Interior landscaped islands                   | COMPLY         |
| 6.04.07 C.6  | Terminal landscaped islands                   | COMPLY         |
| 6.04.07 C.7  | Interior landscaped medians                   | COMPLY         |
| 6.04.07 C.8  | Interior shade trees                          | COMPLY         |
| 6.04.07 D    | Visibility triangles                          | COMPLY         |
| 6.04.08      | Tree Requirements                             | COMPLY         |
| 6.04.10      | Loading Storage                               | NOT APPLICABLE |

**COMMERCIAL DEVELOPMENT STANDARDS**

|           |                         |                |
|-----------|-------------------------|----------------|
| 6.05.02 B | Building Location       | NOT APPLICABLE |
| 6.05.02 C | Building Orientation    | NOT APPLICABLE |
| 6.05.02 D | Façade Design           | NOT APPLICABLE |
| 6.05.02 E | Massing                 | NOT APPLICABLE |
| 6.05.02 F | Other Features          | NOT APPLICABLE |
| 6.05.02 G | Transitional Elevations | NOT APPLICABLE |
| 6.05.03 B | Blank Wall Area         | NOT APPLICABLE |
| 6.05.03 C | Repeating Façade        | NOT APPLICABLE |
| 6.05.04   | Additional Façade       | NOT APPLICABLE |

|         |                                 |                |
|---------|---------------------------------|----------------|
| 6.05.05 | Roof Treatments                 | NOT APPLICABLE |
| 6.05.06 | Entryways and customer entrance | NOT APPLICABLE |
| 6.05.07 | Materials and Color             | NOT APPLICABLE |
| 6.06.00 | Green Development               | NOT APPLICABLE |
| 6.07.00 | Lighting                        | NOT APPLICABLE |
| 6.08.00 | Dumpster & Recycling            | NOT APPLICABLE |
| 6.09.05 | Fences                          | NOT APPLICABLE |
| 6.11.00 | Signs                           | TO BE REVIEWED |

### Trees

|  |                 |
|--|-----------------|
|  | Shade or Canopy |
|  | Palm            |
|  | Flowering       |
|  | Accent          |

| Tree Species                   | Name                      | number | interior |
|--------------------------------|---------------------------|--------|----------|
| (Ptychosperma elegans)         | Alexander Palm*           |        |          |
| (Ilex opaca)                   | American Holly            |        |          |
| (Cordia boissieri)             | Anacahuita, White Corda*  |        |          |
| (Phoenix canariensis)          | Canary Island Date Palm*  |        |          |
| (Prunus caroliniana)           | Cherry Laurel             |        |          |
| (Livistonia chinensis)         | Chinese Fan Palm*         |        |          |
| (Ilex cassine)                 | Dahoon Holly              |        |          |
| (Ilex attenuata 'EastPalatka') | East Palatka Holly        |        |          |
| (Plumeria acuminata)           | Frangipani Plumeria*      |        |          |
| (Cordia sebestena)             | Geiger Tree               |        |          |
| (Cassia surattensis)           | Glaucous Cassia*          |        |          |
| (Duranta repens)               | Golden Dewdrop            |        |          |
| (Koelreuteria formosana)       | Golden Rain Tree*         |        |          |
| (Bauhinia blakeana)            | Hong Kong Orchid*         |        |          |
| (Capparis cynophallophora)     | Jamaica Caper             |        |          |
| (Parkinsonia aculeata)         | Jerusalem Thorn*          |        |          |
| (Quercus laurifolia)           | Laurel Oak                |        |          |
| (Callistemon lanceolata)       | Lemon Bottlebrush*        |        |          |
| (Quercus virginiana)           | Live Oak                  |        |          |
| (Gordonia lasianthus)          | Loblolly Bay              |        |          |
| (Ptychosperma macarthuri)      | MacArthur Palm*           |        |          |
| (Swietenia mahagoni)           | Mahogany                  |        |          |
| (Washingtonia robusta)         | Mexican Washington Palm*  |        |          |
| (Myrsine guianensis)           | Myrsine                   |        |          |
| (Simaruba glauca)              | Paradise Tree             |        |          |
| (Acoelorrhaphe wrightii)       | Paurotis Palm             |        |          |
| (Tabebuia heterophylla)        | Pink Tab or Trumpet Tree* |        |          |
| (Tibouchina grandiflora)       | Princess Flower Tree*     |        |          |
| (Tibouchina grandiflora)       | Princess Flower Tree1*    |        |          |
| (Arecastrum romanzoffianum)    | Queen Palm*               |        |          |
| (Lagerstromia speciosa)        | Queens Crepe Myrtle*      |        |          |
| (Persea borbonia)              | Red Bay                   |        |          |
| (Acer rubrum)                  | Red Maple                 |        |          |
| (Cocothrinax argentata)        | Silver Palm               |        |          |



|                           |                      |          |          |
|---------------------------|----------------------|----------|----------|
| (Tabebuia caraiba)        | Silver Trumpet*      |          |          |
| (Pinus elliottii)         | Slash Pine           |          |          |
| (Magnolia grandiflora)    | Southern Magnolia    |          |          |
| (Magnolia virginiana)     | Sweet Bay            |          |          |
| (Liquidambar styraciflua) | Sweet Gum            |          |          |
| (Plantanus occidentalis)  | Sycamore             |          |          |
| (Myrica cerifera)         | Wax Myrtle           |          |          |
| (Callistemon viminalis)   | Weeping Bottlebrush* |          |          |
| (Tecoma stans)            | Yellow Elder         |          |          |
| Other                     |                      |          |          |
| <b>TOTALS</b>             |                      | <b>0</b> | <b>0</b> |

Shrubs/ground cover

|  |              |
|--|--------------|
|  | Shrub        |
|  | Ground Cover |
|  | Vine         |

| Shrub/Ground cover Species    | Name                | number | native |
|-------------------------------|---------------------|--------|--------|
| (Antigonon leptopus)          | Coral Honeysuckle   |        | 0      |
| (Blechnum serrulatum)         | Swamp Fern          |        | 0      |
| (Catharanthus roseus)         | Periwinkle          |        | 0      |
| (Chrysobalanus icaco)         | Cocoplum            |        | 0      |
| (Conocarpus erectus sericeus) | Silver Buttonwood   |        | 0      |
| (Conocarpus erectus)          | Buttonwood          |        | 0      |
| (Crinum americanum)           | Swamp Lilly         |        | 0      |
| (Forestiera segregata)        | Florida Privet      |        | 0      |
| (Glesminum Sempervirens)      | Carolina Jessamine  |        | 0      |
| (Hamelia patens)              | Firebush            |        | 0      |
| (Helianthus debilis)          | Beach Sunflower     |        | 0      |
| (Hymenocallis latifolia)      | Spider Lily         |        | 0      |
| (Ilex glabra)                 | Gallberry           |        | 0      |
| (Lantana spp.)                | Lantana species     |        | 0      |
| (Lonicera)                    | Trumpet Honeysuckle |        | 0      |
| (Myrcianthes fragrans)        | Simpson's Stopper   |        | 0      |
| (Myrica cerifera)             | Wax Myrtle          |        | 0      |
| (Myrsine guianensis)          | Myrsine             |        | 0      |
| (Nephrolepis cordifolia)      | Erect Swordfern     |        | 0      |
| (Prunus caroliniana)          | Cherry Laurel       |        | 0      |
| (Spartina bakerii)            | Cordgrass           |        | 0      |
| (Sysirinchium)                | Blue Eyed Grass     |        | 0      |
| (Urechites lutea)             | Wild Allamanda      |        | 0      |
| (Vaccinium myrsinites)        | Shiny Blueberry     |        | 0      |

|                     |                    |   |   |
|---------------------|--------------------|---|---|
| (Viburnum obovatum) | Walter's Virburnum |   | 0 |
| (Zamia floridana)   | Coontie            |   | 0 |
| Other               |                    |   | 0 |
| TOTALS              |                    | 0 | 0 |

|           | tree | shrub | shade tree | palms | tree+shrub | Interior Shade |
|-----------|------|-------|------------|-------|------------|----------------|
| native    | 0    | 0     | 0          | 0     | 0          |                |
| other     | 0    | 0     | 0          | 0     | 0          |                |
| Total     | 0    | 0     | 0          | 0     | 0          | 0              |
|           |      |       |            |       |            |                |
| interior  | 0    |       | 0          |       |            |                |
| Perimeter | 0    |       | 0          |       |            |                |

|           | %       |
|-----------|---------|
| Native    | #DIV/0! |
| Shade     | #DIV/0! |
| Int Shade | #DIV/0! |

## **MINUTES**

### **LOCAL PLANNING AGENCY/PLANNING ADVISORY BOARD TO BE HELD JANUARY 30, 2020 AT 5:30PM COMMISSION CHAMBERS 121 SW FLAGLER AVE. STUART, FL 34994**

#### **LOCAL PLANNING AGENCY**

**Chair – Ryan Strom  
Vice Chair – Li Roberts  
Board Member – Michael Herbach  
Board Member – Larry Massing  
Board Member – Campbell Rich  
Board Member – Bill Mathers  
Board Member – Cristina de la Vega  
Ex Officio – Garrett Grabowski**

#### **ADMINISTRATIVE**

**Development Director – Kev Freeman  
Board Secretary – Jordan Pinkston**

#### **CALL TO ORDER**

#### **ROLL CALL**

**Present:** Michael Herbach, Li Roberts, Campbell Rich, Ryan Strom, Bill Mathers, Li Roberts, Larry Massing, Cristina de la Vega

**Absent:**

#### **APPROVAL OF MINUTES**

**Motion: Action:** Approve.

**Moved by:** Massing

**Seconded by:** Herbach

Motion passed unanimously.

**COMMENTS FROM THE PUBLIC ON NON-AGENDA ITEMS:** None.

**COMMENTS FROM THE BOARD MEMBERS:**



Michael Herbach let the board know that he gave copies of the current state statutes and electrical vehicles.

Michael Mortell said that he has been working with staff to update the board by-laws and should have them to the board by the next meeting to adopt.

Ryan Strom changed order of the agenda, making item #1 first, item #3 second and item #2 third.

**ACTION ITEMS:** None.

**ORDINANCES:**

1. Amendment to City Tree Replacement code to comply with State Statue and to incorporate innovative storm water design. (RC)  
Ord 2432-2020: AN ORDINANCE OF THE CITY OF STUART, FLORIDA, AMENDING THE EXISTING CHAPTER V OF THE CITY'S LAND DEVELOPMENT CODE ENTITLED 'RESOURCE PROTECTION RELATED DEVELOPMENT STANDARDS' TO COMPLY WITH STATE STATUTE REGARDING TREE REMOVAL PERMITS AND TO PROMOTE INNOVATIVE STORMWATER TREATMENT AND LOW IMPACT DEVELOPMENT PRACTICES AND TO ALLOW THE CITY'S TREE REPLACEMENT FUND TO BE UTILIZED FOR INNOVATIVE STORMWATER TREATMENT SYSTEMS ON PUBLIC LANDS; PROVIDING FOR REPEAL OF CONFLICTING ORDINANCES; PROVIDING FOR SEVERABILITY; PROVIDING FOR CODIFICATION; AND PROVIDING FOR AN EFFECTIVE DATE, AND FOR OTHER PURPOSES.

**PRESENTATION:** Kev Freeman, Development Director  5:46 PM

**BOARD COMMENT:**

Strom – explained format of meetings

Cristina – issues 24.c replacing pines with palm trees. She does not understand why that was the tree of choice. She thinks the list of palms is a small list and would like to use native palms. Understory develops a large list of palms and understory plants. She also wants clarification 24D, page 19.

Kev said that that is code and they are not proposing changes, we are only suggesting they should be replaced with like species. He said that they are moving palm trees and implanting canopy trees. He would like to explore a wider variety of trees.

Michael Herbach – he thinks that some of the problems are only pines trees and oaks in the flats. Consideration of soil should be considered by a consultant.

Li Roberts clarified what staff is proposing.

Kev clarified that plans will be prepared by licensed architects.

Suitable native species such as...

Li asked about the money that is in the tree fund being anticipated for staff to be using some of the money.

Kev clarified what he is proposing for storm water swells.

Li asked about built out areas that would benefit and what the city's responsibility would be.

Kev Freeman said they are currently looking at matching grant opportunities as well.

**PUBLIC COMMENT:** None.

**MOTION:**

**Action: with change with species E and L**

**Moved by:** Larry Massing

**Second by:** Cristina de la Vega

Motion passed unanimously.

2. STUART OCEAN RPUD - FIRST READING (QUASI-JUDICIAL)(RC): ORDINANCE No. 2435-2020: AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, TO APPROVE A REZONING FROM R-3 MULTIFAMILY/OFFICE TO RESIDENTIAL PLANNED UNIT DEVELOPMENT "RPUD" ON THE CITY'S OFFICIAL ZONING MAP; FOR AN 11.04 ACRES PARCEL, OWNED BY SERRAGUI GROUP INVESTMENTS LLC, LOCATED ON THE SOUTH SIDE OF SE OCEAN BLVD BETWEEN THE POINTE ASSISTED LIVING FACILITY AND KINGSWOOD CONDO ASSOCIATION, SAID LAND BEING MORE FULLY DESCRIBED IN EXHIBIT "A" ATTACHED; ESTABLISHING STUART OCEAN TOWNHOMES RPUD CONSISTING OF EIGHTY (80) ATTACHED HOMES; APPROVING A MASTER SITE PLAN; PROVIDING FOR DEVELOPMENT CONDITIONS AND A TIMETABLE FOR DEVELOPMENT, DECLARING THE PLAN TO BE CONSISTENT WITH THE CITY'S COMPREHENSIVE PLAN; PROVIDING DIRECTIONS TO THE CITY CLERK; PROVIDING FOR REPEAL OF ALL ORDINANCES IN CONFLICT; PROVIDING FOR SEVERABILITY; PROVIDING FOR AN EFFECTIVE DATE, AND FOR OTHER PURPOSES.

**PRESENTATION:** Tom Reetz, Senior Planner

Bob Raynes, Gunster Law Firm – handout given

Mike Houston, HJA Design Studio (Landscape Architect) \*\*\*give me all the names he introduced. \*\*\*\*\*

Todd – trees

Bob Raynes reviewed development conditions and revisions.

**BOARD COMMENT:**

Bob Raynes went over the development conditions and suggested revisions.

Ryan Strom asked if these changes had been discussed with staff.

Herbach asked about parking for mail pickup.

Bon said that he would add that to parking.

Li asked about the #2 change and what they anticipated the mail parking be qualified as.

Massing asked if staff has reviewed the changes before them.

Tom said that they have discussed changes, but have not reviewed the red lines.

Cristina asked how many parking spaces are for visitors.

Houston confirmed where guest spots are 38 on site. ....

.....

Herbach – asked if it was a 55+ community. He asked about additional exists.

Bob Raynes said that we would need an easement for a secondary access.

Herbach asked about bus stops and expressed his concerns about current bus situations. He asked about recreational leases.

Omei Carlson said they are not planning a physical clubhouse and the association will own all of the amenities.

Li Roberts – discussed past project proposal entrances so roads were not staggered. The reason would be for traffic control.

Mortell said that he recalled the past proposal, but the reason that it was difficult was because of negotiations of easements.

Li Roberts – asked about density units 7.25 per acre and the size of the proposed units and greenspace.

Michael Houston said that this pervious, impervious questions because it is two stories.

Li Roberts asked about the B parcel that isn't adjoining.

Tom Reetz confirmed the nearby lots usage.

Li Roberts said that she is concerned about the grade of the lot and drainage and runoff.

Houston explained that they have looked at that.

Li Roberts asked for confirmation about what will be done with the wooden fence. She is concerned about trash collection. Concerned about firetruck turnaround, 11 parking spaces for 80 units, parking that belongs to the Kingswood swimming pool becoming a policing issue, amount of street parking, trail through the preserve area, grills, fences behind the property being too close, school buses.

Bob Raynes addressed the fencing concern.

Li Roberts addressed the error on the elevation of the rear of the building on the floor plans and recommended they update their plans. She said that she thinks it is too much for the site, but appreciates trying to add appealing housing into the City of Stuart.

Herbach – asked HOA that garages not be used for storage.

Massing said that would be difficult to enforce.

Cristina asked about the location of roads for Kingswood.

Houston said that is still an ongoing discussion.

Cristina said that it looks tight and asked about the amount of space the homeowners own behind each unit.

Todd Troxel – said that there are lot lines and they are fee simple lots that will be sold individually with 20 feet.

Cristina asked for a breakdown of the pervious land.

Houston clarified lot lines and open space.

Bob Ryanes clarified the spacing that they are seeing on the renderings.

Todd said that the requirement for open space is... and we are exceeding that.

Larry Massing said that it appears to be tight, parking would have to be enforced.

Ryan Strom is concerned about the amount of code enforcement needed for the existing pool at Kingswood, mail parking spaces, on-street parking, trash pickup

Girl – combined cans throughout the community.

Ryan Strom went into detail about concerns about trash logistics.



Tom Reetz said this is similar to other approved projects and how trash will be coordinated.

Kev Freeman said that those other projects are higher density, more stormwater treatment, etc. than what we are seeing today. Our public works department is not lenient and staff has addressed all of these issues and is very happy about how the project looks.

Ryan – said that he wanted to say that the applicant is only coming in with 2 stories, and I appreciate them not coming in with 3 stories or something with higher density.

Li Roberts – thinks the problems are it looks so tight because the lake piece looks removed, but if it was embedded into the property it would be more appealing to the eye.

Kev Freeman said they are addressing their code and preserving the areas that are important.

Herbach said that there are too many unknowns. He addressed the bus stops being an issue.

Ryan Strom said that it is almost advised to have them come back after changes are made.

Li Roberts advised that the applicant did not want to hear her motion.

Houston addressed the school bus issue.

Li Roberts said she is asking for a location to be carved out of their site of where a bus could stop, so kids or people do not have to go offsite.

Houston addressed parking issue and expressed that this is a great addition to the City. He said that firetruck parking will be strongly enforced.

Herbach asked that the applicant come back once the board's issues are addressed.

Li Roberts said that she is worried about on-street parking.

Bob Raynes said that he has spoken with residents and they want to continue to do so. He offered to hear public comment and agree to a continuous of the item.

Cristina expressed that it is a great thing that the project is so low density compared to what could be put there.

Bob Raynes agreed and said that they want to continue to move forward

## **PUBLIC COMMENTS:**

1. ??? – concerned about safety of young children, traffic.

2. Jane cornett – suggested that this was premature. She described the different Kingswood phases, legal exists from the community, traffic, construction, drainage, lift station, would like to meet with city staff and bob ryane . legal representation for the residents.
3. Judy sabatino – concerned about traffic, school children,
4. Katie Gibbs – Kingswood residents, concerned about children, backyard size, playground area, safety, code enforcement, acreage of site of building.
5. Charles sheer – asked about the noise abatement during the construction phase,
6. ??? – concerned about the environment, addressed an eagles nest on the property
7. Ken Visaki – concerned about the retention pond and water table, storms with water runoff, traffic on roadways because they do not have sidewalks, older community with traffic.
8. Kingswood 3 – emergency access that fire department needs for their community.
9. Celeste zeran – concerned about length of project and open issues, lake with children, noise pollution, construction
10. Jane cooper – concerned about traffic, type of development in a 55+ community, trespassing, code enforcement.
11. Patty Weeling – children in between retirement communities.
12. Laura udobe – concerned about water runoff,
13. Same lady – said that she remembered that Kingswood was willing to move their entrance for the traffic patern, but did not have a board at the time.
14. Ivan –
15. Blanca - Concerned about traffic, no pool on the property
16. Stu Francel – addressed the pond, but thinks that kids will want to come swim in their pool. Concerned about traffic

## **BOARD COMMENT:**

Bob Raynes addressed the traffic study, drainage; lift station, size of backyard, environmental study results,

Herbach said that he could use the pond as an irrigation source.

## **MOTION:**

**Action:** Continue to March 19<sup>th</sup> LPA meeting.

**Moved by:** Michael Herbach

**Second by:** Larry Massing

Motion passed unanimously.

3. ORDINANCE No. 2434-2020: AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, BEING THE THIRD AMENDMENT OF ORDINANCE NO. 2307-2015, ALSO KNOWN AS THE "NEW AVONLEA PLANNED UNIT DEVELOPMENT (PUD)" CONSISTING OF 12.40 ACRES ZONED RESIDENTIAL PLANNED UNIT DEVELOPMENT (RPUD), 16.24 ACRES ZONED

COMMERCIAL PLANNED UNIT DEVELOPMENT (CPUD), AND 20.4 ACRES OF WETLAND/UPLAND PRESERVE ZONED RPUD, FOR A TOTAL OF 49.04 ACRES; SAID PUD BEING GENERALLY LOCATED BETWEEN NE DIXIE HIGHWAY TO THE SOUTH, LAND ON BOTH SIDES OF GREEN RIVER PARKWAY ON THE WEST, LAND ON BOTH SIDES OF CARDINAL AVENUE ON THE EAST AND THE CITY BOUNDARY TO THE NORTH, BEING MORE FULLY DESCRIBED BY EXHIBIT "A" ATTACHED; AMENDING SAID PUD TO PROVIDE FOR THE APPROVAL OF THE MASTER PARCEL SITE PLAN FOR THE AVONLEA CROSSINGS PARCEL B (PARCEL 16); PROVIDING FOR A MASTER OFF-SITE INFRASTRUCTURE PLAN FOR THE ENTIRE PUD; PROVIDING FOR REVISED AND ADDITIONAL DEVELOPMENT CONDITIONS OF APPROVAL; PROVIDING FOR AMENDED AND NEW TIMETABLES FOR DEVELOPMENT, DECLARING THE PLAN TO BE CONSISTENT WITH THE CITY'S COMPREHENSIVE PLAN; PROVIDING DIRECTIONS TO THE CITY CLERK; PROVIDING FOR REPEAL OF ALL ORDINANCES IN CONFLICT; PROVIDING FOR SEVERABILITY; PROVIDING FOR AN EFFECTIVE DATE, AND FOR OTHER PURPOSES. (QJ) (RC)

**PRESENTATION:** Stephen Mayer, Senior Planner  
Tim Hernandez, New urban Communities

**BOARD COMMENT:**

Li Roberts asked about the outside elevations on the townhomes.

Tim confirmed where the rear elevations will be facing.

Li Roberts asked about pricing.

Tim said they are still discussing if they should be for sale or for rent and discussed price points.

Li Roberts suggested changing the look of the road so it seems like an extension of the sidewalk between building 1 and 12. Adding crosswalks.. She asked about locations of mailboxes.

Tim confirmed where the mailboxes will be located.

Li Roberts asked about the existing sidewalks, grills.

Tim said that he would consider putting a grill in the pool area.

Li asked if they could add a bus pull off area in the future if there is a need for one.

Tim said that they are going to build it and the county or city can do whatever they want with it.

Kev Freeman said that we can come up with a condition that gives flexibility.

Ryan Strom asked about the dumpster locations.

Tim explained that they wanted to maximize parking and greenspace.

Li Roberts asked about fencing or foliage around the playground.

Cristina de la Vega asked about the amount and types of plants.

Tim explained the plants and percentages they have in the project.

**PUBLIC COMMENTS:**

**MOTION:**

**Action:** Approve. Flexible bus stop, paving crosswalks, landscaping for playground,

**Moved by:** Li Roberts

**Second by:** Larry Massing

Motion passed unanimously.

**BOARD COMMENT:**

**STAFF UPDATE:**

**ADJOURNMENT:**

**Motion: Action:** Adjourn.

**Moved by:** Herbach

**Seconded by:** cristina

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Ryan Strom, Chair

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Jordan Pinkston, Board Secretary